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AMENDMENTS

The following corrections should be noted:

- | | |
|------------------|------------------|
| Page 40, line 17 | practice |
| Page 42, line 1 | Power's |
| Page 46, line 16 | of Ornithoparcus |
| Page 103, line 2 | than the use... |
| Page 330, line 7 | Gombosi |

Mode in
the *Salve regina* Settings
of
The Eton College Choirbook

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B.A. Hons.

A thesis presented to the Faculty of Arts, Monash University, in
fulfillment of the requirements for the degree of Doctor of Philosophy.

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CONTENTS

VOLUME ONE

| | PAGES |
|------------------|--|
| Synopsis | iv |
| Acknowledgements | vi |
| Abbreviations | vii |
| Chapter One | Introduction 1 |
| Chapter Two | Literature Review 12 |
| Chapter Three | The Establishment of Eton College and an Introduction to the Choirbook and its Composers 54 |
| Chapter Four | Conceptual Framework and Methodology 73 |
| Chapter Five | Analysis of <i>Salve regina</i> Settings – Structure 98 |
| Chapter Six | Analysis of <i>Salve regina</i> Settings – Mode 125 |
| | 1) Modes I and II 132 |
| | i. Lambe's <i>Salve regina</i> 132 |
| | ii. Hacomplaynt's <i>Salve regina</i> 150 |
| | 2) Modes V and VI 158 |
| | i. Browne's first <i>Salve regina</i> 158 |
| | ii. Wylkynson's first <i>Salve regina</i> 168 |
| | iii. Sutton's <i>Salve regina</i> 183 |
| | 3) Modes VII and VIII 196 |
| | i. Davy's <i>Salve regina</i> 196 |
| | ii. Horwood's <i>Salve regina</i> 207 |
| | iii. Hygons' <i>Salve regina</i> 218 |
| | iv. Wylkynson's second <i>Salve regina</i> 226 |
| | v. Huchyn's <i>Salve regina</i> 236 |
| | vi. Cornysh's <i>Salve regina</i> 246 |
| | vii. Fayrfax's <i>Salve regina</i> 263 |
| | viii. Hampton's <i>Salve regina</i> 274 |
| | ix. Browne's second <i>Salve regina</i> 283 |
| Chapter Seven | Conclusion 309 |
| References | 317 |
| Bibliography | 326 |

VOLUME TWO

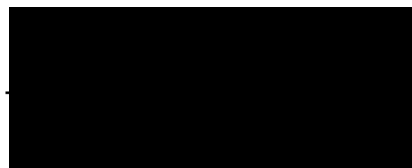
| | PAGES |
|---|-------|
| TABLES | |
| Structural Organisation of Works | 6 |
| Sectionalised Tables - Total Number of Tones per vocal line, for each work | 9 |
| GRAPHS | |
| Total Number of Tones - per work | 18 |
| Total Number of Tones - per vocal line, for each work | 21 |
| Percentages of Adjacent Repeated Tones - per vocal line for each work | 35 |
| Percentages of Frequently Held Tones - per vocal line for each work | 49 |

SYNOPSIS

This study aims to examine the question of mode in the *Salve regina* settings of the Eton College Choirbook. More particularly, however, it will investigate the controversy surrounding whether these works are structured upon the traditional modal system, or if in fact they are based upon some other system of modal organisation. There has been much contention regarding this issue in more recent years, and it is my aim in this study to examine the question at greater length. In order to achieve this aim, these works were subjected to the traditional means of modal analysis, based primarily upon the examination of factors such as internal and final cadences, as well as the prominent species of fourths and fifths apparent within each of the vocal lines. This method of examination was deemed to be unsuccessful however, due to the fact that the data gathered relied almost completely upon subjective observations. Rather, a new methodology was developed in this study, which allows for the examination of mode within each of these settings, in an almost entirely objective manner. This method was conceived from similar procedures used in ethnomusicological studies, and is based upon more objective means of collecting data, such as note counting. Following a detailed examination of all of the results obtained through the use of the newly developed methodology, it was concluded that the *Salve regina* settings under examination in this study were in fact based upon the traditional modal system, as first thought. This methodology was found to be a highly effective means of analysing mode in these works, and could be a useful tool for similar studies in the future.

This thesis contains no material that has been accepted for the award of any other degree or diploma in any university or other institution. To the best of my knowledge, this thesis contains no material previously published or written by another person, except where due reference is made in the text of the thesis.

Signed,

A black rectangular box redacting the signature of Lisa Mackay.

Lisa Mackay

29th January 2002

Date

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ABBREVIATIONS

| | |
|---------|-------------------------|
| T.N.T.: | Total Number of Tones |
| A.R.T.: | Adjacent Repeated Tones |
| F.H.T.: | Frequently Held Tones |
| C.F.: | <i>cantus firmus</i> |

The use of these abbreviations and any other technical terms are normally defined within the text at their first appearance.

The *Salve regina* settings under examination here will be referred to according to their composer. Where a composer has more than one setting attributed to him, the second setting will be distinguished by a raised ² next to the composer's name. For example, Browne and Browne².

The order of the *Salve regina* settings is as they are presented in the Eton manuscript and in F. Ll. Harrison's transcribed version of this manuscript.

Musical examples are taken from Harrison's transcribed edition, in modern notation. Reference to particular pitches within this work follows the system of pitch classes. That is, all notes bearing the name 'C' will be named 'Cs'. This is contrary to the Helmholtz system, as it was found to be an enormously time-consuming task to transpose all of the pitch names mentioned within this work to names as per that system. Pitch is usually discussed with reference to a specific example or vocal line, and as such the exact placement of the pitch in question upon a staff can always be ascertained.

VOLUME ONE

CHAPTER ONE: INTRODUCTION

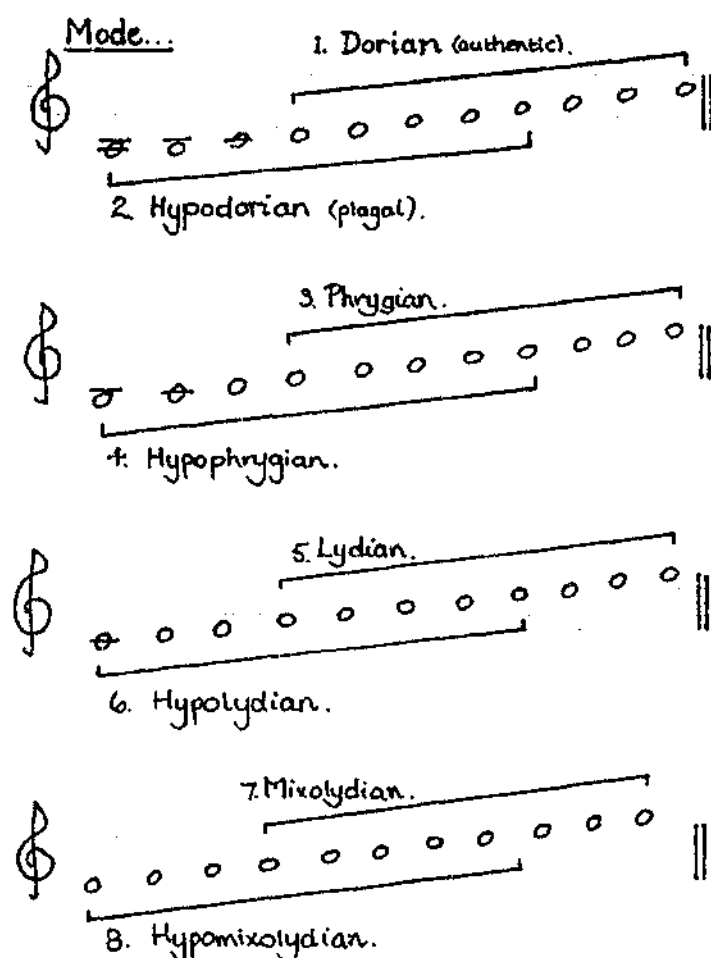
During the Medieval and Renaissance eras a method existed by which melodies could be classified as to their intervallic structure. This method originated in ancient Greece and is known today as the "modal system". Although the system underwent several changes over the centuries, an accepted form eventuated by the eleventh century and remained in place for many centuries thereafter. (Powers 1981: 428)

This system has been described at length by many scholars, including Powers who writes:

Eight modal categories were divided into four classes in each of which the first member (authentic) was in some sense higher in pitch than the second (plagal). The four classes were characterised as pertaining to four diatonic scale degrees labeled D, E, F, and G. A chant melody was deemed to belong to one of these pairs of modal classes according to the scale degree with which it ended (*finalis*), and was assigned to the higher-lying (authentic) or lower-lying (plagal) mode of the pair according to whether its course (*cursus, processus, ambitus*) lay higher or lower with respect to that final degree. (Powers 1981: 428-9)

These eight modes, often referred to as the "Church modes", are illustrated below.

Example 1



(Sternfeld 1973: 64)

Perkins further defines our understanding of the modal system in operation during the 1400s and early 1500s, in his article "Mode and Structure in the Masses of Josquin", stating that:

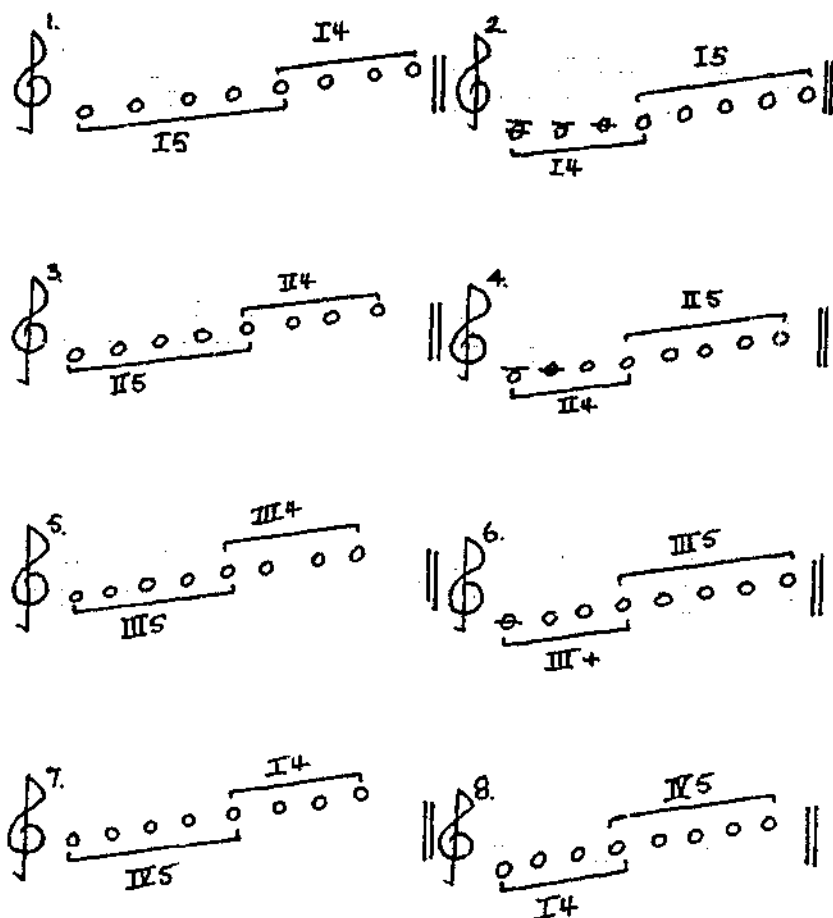
Each of the four pairs of modes is composed of its own distinct species of fifth and fourth joined conjunctly by a common pitch, either the final if the fourth is placed below the fifth as in the plagal modes, or the confinal a fifth higher if that order is reversed as in the authentic modes.

(Perkins 1973: 196)

Thus we have the following scenario:

Example 2

Mode:



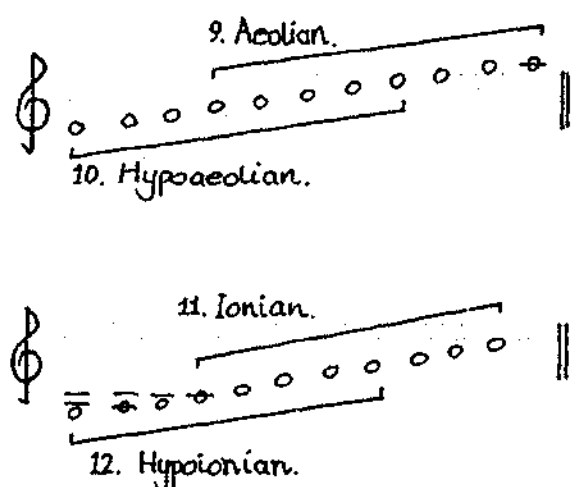
(Zarlino 1983: ix)

During the fifteenth and sixteenth centuries, it became quite common for composers to add traits that were more often associated with modes other than those of their principle mode, to their works. The pitch B-flat had long been used in works to avoid the occurrence of the tritone between F and B-natural, particularly in works with finals of F or D. In fact, by the thirteenth century, the B-flat was quite often included in the signature of the work, rather than notated beside each of the notes in question. (Harman 1958: 138) However, the use of a B-flat in

the signature of a vocal line to indicate the occurrence of a transposition in that line, became more frequent during the late 1400s to 1500s. (Aldrich 1969: 6) That is, it became quite common to have a situation whereby a vocal line could be deemed to have been transposed down a fifth to G (G to G range, G final, D reciting-tone with a B-flat), indicated by the inclusion of a flat in the signature. This vocal line would now be seen as being based upon mode one on G. In fact, it was also possible to have a situation whereby a work could be structured upon two or more variations of the same mode simultaneously, evident by the appearance of contrasting signatures in the vocal lines. Before continuing with this discussion, it should be noted here what is meant by certain terms used throughout this study. In order to differentiate between the various forms of a single mode, with respect to the addition of flats in particular to vocal lines, the following terms will be used. A vocal line which does not make use of any additional flats to its signature, nor makes any significant use of flats within the music itself, will be described as being based upon a particular mode in its regular form (i.e. unchanged in any way). The inclusion of one or more flats to the signature of a vocal line, whereby the voice is seen to remain unaffected by this change, will result in the vocal line being described as being based upon a particular mode in its irregular form (e.g. mode one on D, with a B-flat signature). Finally, the inclusion of one or more flats to the signature of a vocal line, whereby the voice appears to be affected by the change, will result in the vocal line being described as being based upon a particular mode that has been transposed down a fifth (i.e. mode one on G, with a B-flat signature).

By the mid-1500s, there was much dissatisfaction with the modal system. As Powers states, "...the theory connected with the tonal structure of single-line melodies in the Latin liturgy was borrowed and adapted for theorising about the tonal structure of multi-line Renaissance music." (Powers 1981: 429) It was this disappointment with "the inability of the traditional eight-mode system to contain polyphonic procedures" that led to the creation of a more comprehensive system by Heinrich Glarean. (Hiley 1983: 1187) The new system incorporated the original eight modes with a further four modes, those being the Aeolian, Hypoaeolian, Ionian and Hypoionian (see example below). This extended system was further revised by Zarlino a decade later, so that the "names and numbers of the twelve modes ...followed the order of the hexachord: C-D-E-F-G-A." (Hiley 1983: 1187)

Example 3



(Allaire 1972: 72)

The above discussion regarding the traditional modal system and how it is structured has been included here as a means of illustrating my own understanding of this system. As the main focus of this study centres on analysing modal

organisation within a few selected works, it is important to have stated how I believe this system to function, in a broad sense of the word.

This study will attempt to provide the reader with a detailed analysis of the *Salve regina* settings present in the Eton College Choirbook, in order to ascertain whether these works are indeed structured upon the traditional modal system illustrated above. In order to achieve this goal, it has been necessary to develop a more objective method of studying mode within works such as these settings. Hence, during the course of this study I will attempt to propose a new methodology for the examination of mode in English Renaissance works composed around 1500. The method itself will be based upon a more objective analytical approach, rather than be reliant entirely upon the use of subjective observational techniques when analysing the works themselves. It is for these reasons that this study must be seen as an empirical one, due to the fact that it is not based upon any theoretical treatises, but rather upon my own observations and analysis of these works.

The issue of modal use within works composed during the late 1400s and early 1500s, particularly in England, is a contentious one. It has long been assumed that all works, both by English and Continental composers, used the traditional modal system as a means of pitch organisation and structure. However, lately it seems that not all scholars believe this to be true, and there has been much discussion on this matter. It is not my intention to delve into an in-depth discussion on what has been said on this subject, however I will present a few scholars' views here, in order to provide some insight into the issue.

In his work "Solmization in the English Treatises Around the Turn of the Seventeenth Century: A Break from Modal Theory", Johnson makes mention of the fact that "English music theory at the end of the sixteenth and the beginning of the seventeenth centuries diverged from traditional music theory." (Johnson 1990-1: 42) Owens further expands on this idea in her article "Concepts of Pitch in English Music Theory, c.1560 – 1640". She begins by stating that in the early twentieth-century, scholars were attempting to define mode using the language of tonality (i.e. E-flat major, dominant, relative minor et cetera...). In the latter half of the century, she believes there were two new approaches. Firstly, Meier reverted to using the traditional system of eight to twelve modes, which Owens states at least had some validity. However, he then made it a point to try and distinguish between authentic and plagal modes in polyphonic music, which Owens sees as resulting in many problems. Secondly, Owens illustrates the neo-modal approach of "reducing the twelve-mode system down to five transposable scale-types", stating that she sees a problem with this also, as this approach was not documented in the treatises at all. This approach relied heavily upon scholars identifying "...characteristics that differentiate one scale-type or "mode" from another by studying the music...", which she believed would result in different interpretations of the same work. (Owens 1998: 184-8)

Owens goes on further to state that neither of the two approaches outlined here "...employs concepts derived from theoretical writings that originated at approximately the same time and in the same geographical area as the music

itself". (Owens 1998: 188) She believes that if one examined the contemporary English treatises of the time, one would arrive at an approach for determining mode in English works of this period that would be "historically grounded". (Owens 1998: 188)

Owens' arguments so far, I believe, are quite valid. It is misleading to make use of tonal terms when discussing modal theory. Furthermore, I do see the problems associated with firstly, attempting to define a polyphonic composition as being in either the authentic or plagal version of a particular mode, and secondly, the associated problems of arriving at many modal interpretations of the same work. However, if one continues reading through Owens' article it becomes evident the she is discussing a period of composition that is much later than that in which the Eton Choirbook was composed, and is therefore not particularly relevant to the issue at hand here.

Owens does however, in her conclusion, make reference to a couple of very good points that I believe are relevant to this study. Firstly, the fact that there are very few English treatises describing modal practices in the sixteenth century that have survived today. Secondly, those that have survived tell us that English theory between 1560 and 1640 was consistent in itself, and was quite different to that of the Continent. However, and more importantly here, that the existing treatises prior to 1560 illustrate that "...in earlier times, English and Continental theory [seem] to have been much closer". (Owens 1988: 230-1) Owens states that although she sees no reason why pre-Reformation English music was based upon Continental modal theory (i.e. the Continental *gamut* and the Continental version

of modes et cetera...), and post-Reformation English music seems to have developed its own "home-grown" version, that was perhaps "...tied more closely...to the practices of composers and performers", this does indeed appear to be the case. That is, pre-Reformation English music (i.e. the Eton Choirbook) is consistent with Continental modal theory, whilst post-Reformation music exhibits "...a distinctive English theory of music". (Owens 1988: 231-32)

Finally, in his article "Conflicting Views on Conflicting Signatures", Lowinsky makes reference to the fact that "It seems plausible that a circle of musicians, such as created the Cyprus repertory, removed as they were from the mainstream and from the cross-currents of a living tradition, should tend to a crystallisation of ideas, to a systemisation of musical theory, and to idiosyncrasies in style as well as in notation." (Lowinsky 1954: 199)

It is my intention in this study to show that the ideas proposed by such authors as Johnson and Owens are not applicable to the compositions present in the Eton Choirbook, based on the fact that firstly, these works were composed mainly during the late 1400s, a great deal earlier than the repertoires discussed by either author. Secondly, when compared to that of the continent, the works contained within this manuscript were written by composers who lived and worked within the confines of a relatively isolated society. As Kirkman has noted in "The Three-voice Mass in the Later Fifteenth and Early Sixteen-Centuries", English music during this period had already developed its own style. Furthermore, although there seemed to be much transmission of English music to the Continent, the

reverse was not true. (Kirkman 1995: 150-1) This argument will be discussed at greater length in chapter two, but suffice it to say that this situation, perhaps not unlike that of the composers mentioned by Lowinsky, encouraged the development of a very unique style of composition which, although very different from anything happening on the Continent, was still based upon traditional elements such as the modal system.

Hence, this study aims to provide the reader with a detailed discussion and evaluation of research already undertaken in both the areas of late-fifteenth and early-sixteenth century English music, and more particularly the Eton College Choirbook. The establishment of the College will be discussed, and the manuscript itself will be placed in its historical perspective; following which a detailed description of the Choirbook and its composers will take place. An illustration of the research methodology used will precede the presentation and thorough analysis of all data collected during the examination of these *Salve regina* settings. Finally, all conclusions related to the analysis of these works will be discussed, along with my overall summary of what has been concluded as a result of this study.

It is hoped that by following the above course of analysis, my original objectives of

1. presenting a detailed analysis of the *Salve regina* settings present in the Eton College Choirbook;
2. presenting an in-depth analysis of the modal organisation of these settings; and

3. arriving at a reliable and completely objective methodology for studying the modal organisation of both these and other works, particularly those composed between 1450 and 1550,

will be achieved. It should be mentioned here that this study centres solely on the examination of mode in these works and the development of a methodology that may be used to examine works such as these. This study was not intended to provide the reader with any great insight into the stylistic characteristics of these works, and therefore elements such as rhythm, motivic development and text setting will not be discussed. My hypothesis for this study therefore is that through the use of both deductive and inductive methods, these *Salve regina* settings will be found to be modal, according to the traditional modal system.

CHAPTER TWO: LITERATURE REVIEW

Eton College was founded by King Henry VI in 1440-1, and "combined in one institution provision for education, for devotion, and for charity." (Harrison 1953: 152) Henry was then only eighteen years of age and, having recently taken on the government himself, "declared his desire "as a sort of first-fruits", to "show like his ancestors his devotion to the church."" Unlike his ancestors, whose devotion had been revealed in the form of monasteries, Henry's took the shape of a "college or collegiate church in which a school was a leading, in this case a predominant, feature. So by the patent he founded in the parish church of Eton "the King's College of Oure Ladye of Eton beside Wyndesore." (Leach 1915: 252)

Music was an important element of life at Eton College, something that is clearly evident in the organisation of its choirs, which demonstrate the devotion of its members and the great achievements that could result from such dedication. (Mee 1887-8: 156) Harrison writes, "The singing of an antiphon by the choir every evening was prescribed in the statutes of both of Henry VI's foundations of King's College, Cambridge (1443) and Eton (1444). ...In addition the Eton statute laid down that at no time should less than sixteen boys take part in the singing, and that the places of absent choristers should be filled with scholars." (Harrison 1952: 207) Harrison states further that, "The continuity of the tradition of the evening antiphon in educational foundations from the plainsong of the mid-fourteenth century to the choral polyphony of the fifteen-thirties emphasizes the important part played by the

collegiate choirs in the history of English choral music." (Harrison 1952: 208) W.B. Squire, who remarked upon the fact that the music contained within the Eton manuscript was of such complexity that the study of music at Eton must have been of a very high level, has further elaborated upon the emphasis that was placed upon a knowledge and skill of music at Eton. He also notes that the phrase "skill in music" has been marked next to many of the early Eton scholars, further reinforcing the previous argument with respect to the importance placed upon the study of music at Eton, and that many of these scholars are contributors to the Eton Choirbook itself. (Squire 1898: 95) Thus the importance of music within Eton and the significance placed upon the college choir itself was quite considerable, as expressed by Harrison in the following statement:

The size and balance of the choirs of collegiate churches and colleges in the later Middle Ages, as well as what the statutes reveal about the qualifications and training of their members, show that the performance of polyphonic music was an essential part of their function. ...The institution and development of balanced groups of singers was the most significant feature of the musical history of the later Middle Ages, and was comparable in importance to the rise of the orchestra in the eighteenth and nineteenth centuries. It was closely related to the origin and growth of choral polyphony, as distinct from the polyphony of soloists practiced in the larger secular and monastic choirs in earlier centuries.

(Harrison 1963: 44-5)

The repertory of the Eton College Choirbook, the principal manuscript attributed to this institution and the focus of this study, was composed between *circa* 1450 and *circa* 1500. The choirbook itself was copied between c.1500 and 1504/5, with Wylkynson's nine-part *Salve regina* being added to the manuscript around 1515.

This period in Britain's history sees the beginning of much disruption that was to continue throughout the decades to follow.

From the early part of the sixteenth century, England was the scene of much division and rebellion as the Reformations swept the country. As Haigh notes, the three legislative Reformations of 1530-8, 1547-53 and 1559, had as a whole...

...partly for political reasons, changed the constitution, worship, and prescribed beliefs of the English Church. The authority of the Pope in Rome had been rejected, and replaced by a royal supremacy; the independent jurisdiction of the clergy had been broken. The [old] church services... had been banned, most significantly the Mass, in which the communion wafers and wine had changed their substance at the priest's consecration into the holy body and blood of Christ. (Haigh 1993: 2)

Haigh notes that tradition Catholicism was driven from the churches, partly due to government persuasion and partly the result of the pressures of individuals. It was replaced with a Calvinistic Protestantism that, for some, was the beginning of religious and spiritual freedom – those who had long resisted or rejected Catholicism praised the Reformations. For many others, however, these events were devastating – some Catholics openly resisted the new Protestantism whilst others were driven underground and become members of “secret Catholic sects”. For others still, these Reformations had little spiritual affect as they simply shifted from “passive observance of Catholic ritual to passive hearing of sermons and psalm-singing.” (Haigh 1993: 2-3) It is not my intention here to delve into the intricacies of this subject, but merely to place the Eton manuscript into its historical context and to briefly illustrate the great changes happening in the English church during this period.

Despite these disruptions, music in England continued to develop and by the beginning of the sixteenth century it had evolved into a unique style of composition quite different in character from anything on the Continent. As stated by Routley:

It is fair to say that between 1400 and 1600 English church music was the most adventurous and vital music available to the whole Church. That period seems to be split in two by the Reformation...but in fact there is no failure in quality, no slump in invention or inspiration, from Dunstable to Gibbons. Indeed, the music is not only fine music but it is *English* music.

(Routley 1977: 5)

Whilst it is difficult to ascertain exactly what constituted the "English style," or rather what elements within this music resulted in it being decidedly "English", the fact that an English style of composition had emerged by the early 1500s is evident in the practices of Continental scribes.

Andrew Kirkman has noted the fact that there was a "rapid transmission of English music across Europe" during the mid-1400s. (Kirkman 1995: 31) He states further that English music, Masses in particular, were very popular on the Continent, where the majority of them have been found preserved. However, Kirkman notes that:

...although many insular features were enthusiastically copied, the wide range of modifications made to English Masses by Continental scribes leads inevitably to the conclusion that certain others were considered inappropriate and undesirable for use elsewhere. (Kirkman, 1995: xvi-xvii)

Therefore, one can deduce from this that many of the surviving examples of English music that were transmitted to the Continent did comprise certain elements that were seen to be "English" in style and were uncharacteristic of music being composed and performed on the Continent. These elements were often eliminated

by the Continental scribes from the written versions so as to, perhaps, achieve a more suitable arrangement.

Further evidence is detailed by Bukofzer, who notes:

The three most important continental collection – the Trent, Aosta, and Modena manuscripts, containing among them a total of well over 200 English compositions – segregate these from the rest either by presenting them in continuous series of varying length, or by reserving a large section for an exclusively English repertory. (Bukofzer 1960: 165)

Kirkman adds further that an answer to the question of what exactly constituted an English style in the mid-fifteenth century “is fraught with difficulties”. The main problem, he states, is that “a large number of features that have been seen to be characteristically insular also turn up in music which must, or may, be Continental”. Kirkman continues his argument stating:

In view of the almost entirely one-way musical traffic between England and the Continent in the mid-fifteenth century and the great vogue for English music evidenced by the vast scale of Continental copying, this is scarcely surprising: while fragments of English manuscripts continue to turn up, hardly any English sources contain music for which there is reason to suspect Continental origin; conversely, to judge from sources compiled on the Continent between about 1420 and about 1475, the flow of music out of England must have been considerable. (Kirkman 1995: 150-1)

It seems to be that whilst scholars on the Continent found the music being transmitted from England to be of great worth, it was necessary for these works to undergo a certain amount of editing before they could be transcribed into Continental manuscripts. As Kirkman has stated "...the undeniable fact remains that Continental scribes often saw fit to alter the original forms of English works."

He goes on further to note the fact that:

A tangible illustration of Continental awareness of the 'otherness' of English music is provided by the common attribution of 'anglicus' or 'de anglia'; since the inscribers of these epithets were presumably unaware of the actual authorship of the works concerned, such ascription suggests an awareness of something intrinsically English about the music itself. (Kirkman 1995: 151)

This point, I believe, lends more strength to the argument that there was something about the music being composed in England during this period, including the works contained in the Eton manuscript, that gave it a sound or a particular character all of its own, that was classically English. Kirkman's concluding passage sums it up nicely I think:

The existence of an 'English style' in the mid-fifteenth century is surely undeniable, and in spite of the many problems involved in its definition, to avoid this difficult issue would be to paper over many cracks in the complex and fascinating tissue of manuscript transmission of English music, and to perceive a greater homogeneity of style than ever really existed.

(Kirkman 1995: 151)

The Eton College Choirbook, one of only a limited number of manuscripts written during this era to have survived to present day, can be said to be the epitome of this English compositional style. Whilst the Old Hall manuscript is representative of the first half of the fifteenth century in England, the Eton Choirbook covers the concluding years of the century, and can be seen to be an excellent example of the exceptional class of music that was being produced in England during this period. (Young 1967: 73) Although numerous scholars share similar sentiments with respect to this manuscript's historical worth, and its place in the development of an English national style, not all agree upon the extent of its value. For example, Benham writes:

The Eton choirbook is by far the most important of the few English sources surviving from the first part of our period: in fact it is unquestionably one of the greatest monuments of English music in any age.

(Benham 1977: 58)

Furthermore, Squire states:

...this manuscript supplies the missing link, and represents the tendencies of English music from the death of Dunstable until the rise of Fayrfax. As such, its importance cannot be too highly estimated.

(Squire 1898: 102)

On the other hand Hughes, in his article "The Eton Manuscript", refuses to entertain the idea that this manuscript is the sole example of roughly fifty years of English compositional undertakings. He writes:

...for after Dunstable's English career closed...it seems to be admitted by scholars that there was a fifty years' period of stagnation, or even of decline... This may be so: but we are fortunate in being led by scholars...who qualify their statements and do not dogmatise on admittedly

scanty evidence: and they will be the first to admit that it *may* not have been so, that the pre-eminence of Dunstable and other English musicians *may* have continued through the latter part of the century, but that the evidence has been destroyed: and as an incurable optimist I insist on my right to hope that we shall be able to work at filling in this second gap from 1440 to 1490 without being forced to admit the theory of a fifty years' decline. (Hughes 1923-8: 67)

Regardless of whether there was, or was not, a decline in English compositional output during this period, I believe one would find it very difficult to argue against the immense worth of the Eton manuscript.

The Eton Choirbook is representative of twenty-five English composers in total, spanning from the mid 1400s to the early 1500s, many of who are not represented anywhere else. In fact, Harrison makes note of the fact that this manuscript contains the only complete motets, known today, by Browne, as well as works by composers such as Fawkyner, Holyngborne and Kellyk, who have not been found, as yet, to be represented anywhere else. (Harrison 1953: 165) Furthermore, it must be stated here that these composers also represent many of the important musical foundations of the period, such as Magdalen College, Oxford; the Chapel Royal; St. Alban's and St. George's, Windsor. (Harrison 1953: 165)

The English compositional style of the mid to late fifteenth-century saw a heightening in importance of liturgical works, or music closely related to the Church. This fact has been noted by scholars such as Hughes who notes that this close tie between music and the liturgy continued up until the Reformation and was upheld by English composers throughout this period. (Hughes 1965: 306)

Although the link between music and the Church during this era was a close one, this did not result in a style of music that could be seen as being restrained or having regressed in any way. Rather, as Routley has stated, sources such as the Eton Choirbook are evidence of the fact that the music of this period can be seen to be "church music" which was "clearly distinguishable from any other kind of music, and at the same time positively leading the way, far ahead in ingenuity and imagination [than] any other kind of music". (Routley 1977: 12) Furthermore, as Bowers writes:

During the second half of the fifteenth century English composers of church polyphony began to break through and discard certain constraints of vocal scoring and overall compass within which their predecessors had been content to work for well over a hundred years. (Bowers 1987: 20)

Thus, we have a style of music emerging during this century that can only be classified as a truly English approach to the composition of, in particular, liturgical works.

This style has been illustrated in the past by several scholars, such as Walker, who writes of the continuation in English compositions of the fluid melodic and harmonic writing, coupled with a new style characterised by strong ties between the individual vocal lines and a new direction in harmonic writing. (Walker 1952: 32) Further, Abraham notes the fact that although the English composers might have been seen as conservative in the eyes of someone like Tinctoris, they had not "stood still". He writes that:

They clung to the *cantus firmus* principle and made only sporadic and unsystematic use of imitation, but they developed an extremely florid style of their own, seldom writing in fewer than five or six parts, sometimes more, in an intricate counterpoint of rhythms, which has been aptly compared with the equally idiosyncratic Perpendicular style of English architecture. (Abraham 1979: 186)

It was within this same era that the Eton Choirbook emerged, which is perhaps one of the finest examples of this English style of composition that developed during the fifteenth century. The compositional style exhibited by the Eton manuscript is characterised by:

...a richness and brilliance of sonority not found in earlier music or as a rule in Continental work,...outstanding rhythmic vitality and melodic variety [and a] rather distant relationship between words and music.

(Benham 1977: 59)

Several other present-day scholars have also studied and remarked upon the Eton style in great detail. For example, Young notes that the compositions contained within the Eton manuscript descend directly from those in the Old Hall. However, the Eton works can be seen to be "melodically more spacious, and broader both in texture and rhythm". He writes further that a sense of unity in the works was created with the aid of a plainsong melody that was varied upon. The use of a modified *cantus firmus* line in many of the works heralded the beginning of the liberation of vocal writing from the intimate relationship that had existed between the vocal line and the Church. These works also utilised what was regarded as imperfect time, duple time, and demonstrated a newfound freedom in the composition of works for larger choirs, resulting in pieces written for seven, eight and nine vocal parts. (Young 1967: 77-8)

Similar observations are also noted by Walker in A History of Music in England; by Blom in his work Music in England; and by Sternfeld in his article "Music From the Middle Ages to the Renaissance", who adds that the florid and ornate vocal writing in these works, coupled with the use of complex rhythmic passages, resulted in these compositions being regarded as "old-fashioned and somewhat obtuse". (Walker 1952: 33; Blom 1947: 30; Sternfeld 1973: 304)

In Long's The Music of the English Church, he states the following with respect to the Eton style of melodic writing:

...ritual plainsong (usually in the tenor and often decorated and rhythmically varied) was adorned by additional voice-parts differentiated from each other by melody, relative speed of movement, rhythm or phrasing. The development of the melodic lines themselves involved a good deal of thematic repetition, often rhythmically varied; the interplay of different phrase lengths and rhythmic groupings impelled the music forward and at the same time bound it together. Imitation, though often present, was more decorative than formal and so had not the structural importance it was to assume in the latter part of the sixteenth century. Sections for full chorus were contrasted with passages for two, three, of even four, solo voices. (Long 1971: 45)

Finally, Bowers discusses the use of texture in these works in more detail, adding that both the use of additional vocal parts, resulting in compositions for five voices and upwards, coupled with the expansion in the overall compass of works from two octaves to three and one second, led to a "new and grander manner of composition". (Bowers 1987: 20-2) It must be mentioned here that all comments

with respect to the style of the Eton works are seen here to be representative of the music under examination during this study. They were included here in order to present an idea of the overall style of these compositions, as seen through the eyes of a selection of well-respected present-day scholars.

From this it would seem that the compositional techniques exhibited by English composers during the late fifteenth century in particular, led to the development of a very individual and quite unique national style. After all, as Blom notes, Henry VII's composers could not have hoped to have shared in all of the musical developments that were occurring on the Continent. (Blom 1947: 30) Brown gives two factors to explain the reason why this was so. Firstly, he states that "...Franco-Flemish polyphony did not have the same impact on English music that it had on music in Germany and Italy." This can be seen to be the case due to the fact that a strong English style of composition had been developed in England during the early 1400s, which then survived any influence by the post-Josquin style when it reached its shores. This English compositional style was also seen to withstand any great influence from the many musicians who hailed from the Continent, who were working within England during this period. In the second place, Brown states "the growth of a distinctively English style, unlike similar developments in other countries, had comparatively little to do with secular music, if the evidence of the surviving sources can be trusted." (Brown 1976: 243)

Several present-day scholars have also noted major differences between the developing styles in England and on the Continent, and reasons as to why it

occurred in this way seem to concur with Brown's observations, noted above. In Benham's Latin Church Music 1460-1575 he notes that:

The existence of some broad parallelism between the stylistic developments of Continental and English music ...suggests that there was *some* cross-Channel exchanging of ideas until about 1450 or even a little later... But it is clear from the distinctive character of the Eton style that by the 1470s at the latest ...English music was developing more or less in isolation from the "mainstream" of activity in France and the Netherlands.

(Benham 1977: 59)

Benham continues on, stating that:

By 1500 when the choirbook was virtually complete, English music was decidedly insular and conservative; on the Continent Josquin, pioneer of pervasive imitation, was already in middle age. (Benham 1977: 59)

Authors such as Long and Hughes have also noted this "lag" in English music to "keep-up" with developments on the Continent. Long remarks upon the fact that the time it took for a new musical idea to appear in England, which had originally been derived from the Continent, varied from a few years to numerous decades. He equates this with an evolutionary development in terms of compositional practices, rather than a revolutionary one, thus stating that musical progress in England was "safe rather than adventurous." He states further that the composers represented in the Eton Choirbook had more in common, in terms of compositional style, with early renaissance composers such as Dufay and Ockegham, rather than with their contemporary Josquin des Pres. (Long 1971: 45) Continuing along the same line of thought, Hughes states that the reason for this lag in English

compositional style is due to the maintenance on behalf of English composers, of "traditional features and favorite devices." (Hughes 1965: 306)

Finally, one other scholar to be mentioned here, who has also discussed this lag in English compositional development, with respect to the Flemish influence, is Young. In his work A History of British Music, he compares the English and Flemish traditions, noting that Tinctoris labeled the former conservative. He goes on to note that the indifference shown on the part of English composers towards the Flemish style of composition was a little odd, in that it had had so much influence upon other art forms in England, such as illumination, wall-painting and stained glass. (Young 1967: 76-7)

Despite the fact that English music of the late fifteenth and early sixteenth centuries gradually slipped behind in terms of musical progress - as is obviously the case from what present-day scholars have stated - this music was not lacking in any way. The works contained within the Eton manuscript are celebrated examples of the individual and quite distinct style of composition that was prominent in England during this era. For, as Blom has written:

...[this] music was not only highly polished, civilized and learned by comparison with the crude singing in parallel parts once cultivated by the old *organum* and probably still followed in the singing of folksongs; it shows qualities of fluency and euphony which, although they differ from what later traditions have led us to expect, are perfectly capable of moving a modern audience profoundly... For artistic value is not a matter of period; it is a matter of personal creative force. (Blom 1947: 30-1)

The focus of this study is primarily centred upon the works of the Eton Choirbook, more specifically the *Salve regina* settings contained within this manuscript. It is with this in mind that I will now turn my attention towards what has been written by contemporary scholars about the *Salve regina*; its use; and its development throughout the period in question and the years leading up to it.

The *Salve regina* is one of the most renowned Latin antiphons. The term 'antiphon' refers to "...a musical chant with a prose text associated with psalmody sung by two choirs in alternation." (Sadie 1988: 24) Over time, however, the use of this term has been expanded to cover many variations of the original form. As time progressed:

...a new set of independent antiphons arose, such as the *Salve regina* and the *Alma redemptoris*, written in honour of the Blessed Virgin. These occasionally came to be inserted into the psalmody of the Hours, but their proper place was an independent one: arising in the 12th century, they soon became treated as an appendage to the Hours, and it became customary to sing one of these antiphons of Our Lady at the close of Compline. ...Thus the Latin *antiphona* or, as it was called in English, the "anthem" passed into the English Prayer Book, not in connection with the psalmody - for all such use of antiphons was ruthlessly cut away - but in the form of an independent musical composition. (Frere 1954: 171)

Several other scholars have also described the history and development of the anthem in quite detail. I intend, however, only to make reference to a few of these works, which are directly related to the topic at hand. For example, in his work Church Music in History and Practice, Douglas states that the four "Anthems of our Lady" - *Alma redemptoris*, *Salve regina*, *Regina coeli*, and *Ave regina* - were

immensely popular in England, and had been set by several notable composers during this era. He goes on to state "...the Antiphon of our Lady came to be considered *the* anthem, preeminently". (Douglas 1962: 121-2) Fellowes writes, "...the English anthem is a musical form that is distinctively and exclusively national". (Fellowes 1969: 9) Finally Harrison states, "...in the English secular uses the evening antiphon, though sung after Compline, did not become a part of the office, but was treated as a separate devotion." Furthermore, that "...the votive antiphon of the Virgin was an almost invariable observance in colleges and collegiate churches". (Harrison 1963: 82, 84)

The *Salve regina*, as described in Music in the Medieval Liturgy, was

...a votive antiphon of considerable antiquity and prestige, which had also acquired limited liturgical credentials as a processional antiphon. Its presence in a book of hours can almost be taken for granted, and it had been set in polyphony by English composers as early as the mid-fourteenth century, but its long career in English polyphonic settings does seem to have been in decline by the early 1500s. (Sandon 1993: 364-5)

According to Ingram, during this period there were three major groups of Renaissance composers writing polyphonic *Salve regina* settings - the English, Franco-Flemish and Spanish. She states "the majority of English settings were centred around the period encompassed by the Eton College Choirbook." The Franco-Flemish "produced the greatest number" of works, were "actively composing them for longer", and the composers' works were internationally known. Finally, the Spanish compositions were confined to the early sixteenth

century and were "influenced by the Franco-Flemish court and composers".
(Ingram 1973: 2)

According to Harrison, the *Salve regina* was in use in the English liturgy from approximately 1266, when it was sung at Westminster after Compline. He notes further that the troped version of this text can be found in some fourteenth and fifteenth century English liturgical manuscripts and that following the introduction of printed service books, this text appears to have been in widespread use. It appears in the Sarum Horæ of 1498, the Prymers of 1543 and 1548 and the Processional of 1555. (Harrison 1952: 205)

Finally, Harrison has also noted the use of the *Salve regina* text settings in daily life at Eton College in several of his publications. He writes:

The singing of an antiphon by the choir every evening was prescribed in the statutes of both of Henry VI's foundations of King's College, Cambridge (1443) and Eton (1444). In each case the Founder used the expression "meliori modo quo sciverint," which was interpreted at Eton to mean the most elaborate polyphonic technique of the period. No particular antiphon was named in the King's College statute, but the Eton statute specified that the *Salve regina*, with its verses, was to be sung during Lent; and at other times, and on feast days during Lent, another antiphon to the Virgin. In addition the Eton statute laid down that at no time should less than sixteen boys take part in the singing, and that the places of absent choristers should be filled by scholars. (Harrison 1952: 207)

In conclusion, it can be seen that from these writings the *Salve regina* text was of significant importance throughout the era in question, being set by numerous

English composers, not the least of which included those represented by the Eton College Choirbook.

The focus of this study centres not only on the *Salve regina* settings present in the Eton Choirbook, but also more particularly on the function of mode within these works. It is with this in mind that I will now turn my attention towards examining the scholarly writings relevant to this area.

According to The Grove Concise Dictionary of Music, the term "mode" has:

...three main applications, all connected with meanings of the Latin word *modus* ('measure', 'standard', 'manner'). The first is concerned with the relationship between note values in early notation, the second with intervals in early medieval theory and the third with scale type and melody type. In its commonest sense, 'mode' stands for the scale or the selection of notes used as the basis for a composition; this selection has implications about where melodies will end, the shapes they may take and (according to early theory) the expressive character of a piece. (Sadie 1988: 493)

In a similar fashion, Hiley has identified mode in the following passage:

In early Medieval theory the word *modus* was occasionally used to mean 'interval'... There are two other meanings better known today: that of the rhythmic modes...and that of 'scale' or 'melody type'. The latter covers a wide range of definition, from simple scales - arrangements of tones and semitones sometimes without any implication of a 'tonic' or main note - to a particular and typical melodic style or collection of motifs, perhaps with a definite 'tonic' and other notes in a hierarchy of importance... .

(Hiley 1983: 1183)

Similarly, in The Harvard Dictionary of Music, it is stated that:

Mode, in the widest sense of the word, denotes the selection of tones, arranged in a scale, that forms the basic tonal substance of a composition.

(Apel 1969: 535)

It can be seen that these three perspectives on what mode is do not vary a great deal; all seem to be in agreement as to how mode can be defined. One viewpoint that does describe mode a little differently is that by Allaire, in his book entitled The Theory of Hexachords, Solmization and the Modal System. He writes

...the reader [is] urged to think of medieval and renaissance music in terms of modes understood as interlocking hexachords, rather than as scales in the modern sense. A mode is a static series of tones dependent upon the hexachords for structural definition, the mainspring of the system being the hexachord-order - that is, a set of interlocking hexachords. ...A mode ... is more than a simple hexachord-order. It is, rather, a series of tones - such as, for example, that of the Dorian mode: d e f g a b-flat b-natural c d -, the underlying structure of which is expressed through a combination of hexachord-orders, one disjunct (d e f g a b-natural c d), the other conjunct (d e f g a b-flat c d). In short, a mode may be defined as a specific series of tones organised by means of combined sets of interlocking hexachords for the expression of musical ideas.

(Allaire 1972: 63-4)

Whether the term "mode" is defined in terms of tones and semitones, or in relation to scales and Church modes, or even with respect to hexachords, it can be seen that there appears to be no confusion or dispute in the scholarly world as to what mode is and how it may be defined. For the purposes of this study, I have chosen not to follow in Allaire's footsteps, so to speak, with respect to the use of solmisation

syllables and interlocking hexachords to define mode. This is primarily due to the fact that the author here is writing with reference to Continental monophonic works, whilst the pieces under examination in this study are highly complex, English polyphonic works.

Many past and present scholars have discussed the question of how one identifies the mode of a work. It has generally been agreed that there are certain markers one must examine within the music under consideration, in order for one to arrive at a decision as to the modal organisation of the work. The process followed has been described at length in literally dozens of articles and longer works by scholars this century, and is generally regarded as the method one should employ. In The Theory of Hexachords, Allaire has illustrated the strategy mentioned above, and it is from this work that the following passage is drawn:

The modes may be identified by the following: their compass and their intervals of repercussion.

...Although there are numerous ways of identifying a mode, the following three-fold method is especially efficacious for modal recognition: through its final, its range (ambitus), and its melody (melodic characteristics).

(Allaire 1972: 65-7)

Luoma has also illustrated this popular method:

Renaissance theorists explain how the modal structure of a melody is determined by the most salient midpoint within its octave ambitus (often exceeded by auxiliary notes) and the pattern of tones and semitones on each side of this division; a fifth below a fourth (the "harmonic" division) produces an authentic mode, a fourth below a fifth (the "arithmetic"

division) produces a plagal mode, and from these divisions arise the four species of fifths and three species of fourths that are normally used to identify modes. (Luoma 1976: 396-7)

Finally, the following excerpt taken from the Oxford Companion to Music further illustrates this obviously well regarded method for determining the modal organisation of a work:

How to Identify the Mode of a Piece of Music. In order to discover in what mode a piece of plainsong lies, look first at its last note, which is the Final of the mode. If, for instance, this last note is D then the mode is either the First or the Second (Dorian or Hypodorian). Examine now the range of the melody. If it lies (with possibly the exception of an odd note or two) between the two finals this mode is Authentic; if between two dominants it is Plagal. Thus in the case just imagined of a melody in the First or Second Mode, if it lies between D and D the mode is the First; if between A and A the Second. (Scholes 1945: 588)

Thus it can be seen that according to the excerpts noted above, which appear to represent the views of most scholars this century, the modal organisation of a work may be determined by examining the final tones, the range of each part, and the pattern of tones and semitones within this range.

This may be relevant in reference to monophonic works, but how does one arrive at a reliable conclusion as to the modal designation of a polyphonic work, particularly a piece of music as complex as Wylykynson's nine-part *Salve regina* present in the Eton Choirbook?

Strohm has noted in his article "Modal Sounds as a Stylistic Tendency of the Mid-Fifteenth Century" that the "...application of modal theory to polyphonic music of the fifteenth-century is controversial, in contemporary as well as twentieth-century contexts." (Strohm 1996: 149) Often, Strohm writes, modal interpretations of the pitch structures of fifteenth-century works can appear to be erroneous or even irrelevant. With respect to the traditional modal system, Strohm states, "...it does not fit the polyphonic repertory without adjustments." (Strohm 1996: 150)

It wasn't until the middle of the fifteenth-century, in fact, that modal theory ceased to remain virtually separate from theories of counterpoint. (Powers & Wiering 2000: 799) Dean, in his article "Okeghem's Attitude Towards Modality" writes that Tinctoris's "De natura et proprietate tonorum was the first treatise in a hundred years to explain how the tonal classification of plainchant could be applied to polyphony as well." (Dean 1996: 204) Strohm clarifies this apparent gap of information on the use of mode in polyphonic works explaining that "late-medieval theorists usually discussed the church modes in the context of plainchant, as the theory of modes referred to melodic features. There was no need to duplicate these instructions in treatises on polyphony...". He does also make mention of the fact that there is always the possibility that manuscripts were written prior to that of Tinctoris on this very subject, but that they perhaps simply do not survive today. (Strohm 1996: 152, 155) Both Woodley and Wiering have noted that Tinctoris's treatise on mode, written in particular for composers, was greatly influenced by Italian music theory and the humanist movement, and that it "...displays a self-confident application of the modes to polyphony that was unparalleled in his days

but soon became widespread.” (Wiering 1995: 95; Woodley 2000: 498)) Wiering however also observes that modern-day scholarly opinions regarding this treatise do not always agree with one another. For example, Rempp believes Tinctoris’s work to be a “modern” approach to the subject of mode, stating that it is “...an almost complete statement of ‘classical’ polyphonic modal theory.” However, Perkins states that Tinctoris’s work itself “...does not represent a significant departure from well-established doctrine. Quite the contrary, it is clearly rooted in the theoretical tradition of the fourteenth-century... [and is] deeply indebted to the earlier treatment of the topic by Marchetto of Padua.” (Perkins 1996: 182) Powers has “...emphasized its traditional side: the treatise itself...is simply an elaborate exposition of Marchetto’s systematic theory of single-line modality...”. Wiering believes Powers statement to be rather misleading however, noting Rempp’s observation that Tinctoris added elements from the western ecclesiastical tradition to Marchetto’s model. (Wiering 1995: 95; Powers 1981: 432) Finally, Palisca states that “...the *Liber de natura et proprietate tonorum* (1476) said little that was new and did not come to terms with the nature of modality in polyphonic music.” (Palisca 2000: 371)

With respect to determination of mode in a polyphonic work, Horsley, in her article “Fugue and Mode in Sixteenth-Century Vocal Polyphony”, writes:

In Polyphonic music the modal form of each part was judged according to melodic considerations, according to *phrases*, *mixtio* and *commixtio*, initial, and final notes. Ambitus was less important... but the species of fourth, fifth and octave around which the melody centred were stressed. A work might be

made up of melodic lines each in a different mode, or of melodic lines all in the same mode. Yet, throughout the period, there is a consistent effort to arrive at a single mode by which each piece could be identified... .

(Horsley 1967: 409)

She continues, stating:

Throughout the period, it was generally agreed that the mode of the tenor was the mode to be assigned to the whole polyphonic piece. Composers were warned to be particularly careful in composing the tenor, to be sure that it clearly established the mode. By mid-century it was generally accepted, too, that the soprano and tenor would be in the same mode, the dominating mode of the piece, and that the alto and bass would be in the corresponding authentic or plagal mode.

(Horsley 1967: 409)

These ideas may be relevant in reference to what Tinctoris has stated in his work *De natura et proprietate tonorum* and represent many modern-day scholars views on this subject. Before I continue, I believe it is necessary for me to examine Tinctoris's work, in order to gain more insight into the continental views on mode and polyphony. *De Natura et Proprietate Tonorum* was written by Tinctoris in 1476, and represents the scholar's concepts on the use of mode in polyphonic works. Within this treatise, Tinctoris deals with topics such as the types of *diatesseron* and *diapente*, the formation of the tones and the mixture of tones. On this last issue, Tinctoris allows for the "mixture" of tones with one or more unrelated tones, resulting, for example, in a work in which the third tone is mixed

with the seventh, or the fourth with the sixth, and so on. In cases such as these, the types of *diapente* or *diatesseron* would identify the tone. (Tinctoris 1976: 16-19)

Tinctoris also states "that one tone could be mixed with many or all", however it would not be considered a "mixture" of tones if an authentic is put with its plagal, or vice versa. His reason for this, he states being that:

...since the types of *diapente* and *diatesseron* are the same in an authentic and its plagal, it is impossible to mix the one with the other. If it is asked from this what then will be the difference between an authentic and its plagal, I reply that there is absolutely none except as to the arrangement of these types above and below their final... (Tinctoris 1976: 19)

At the heart of this treatise, in terms of the analysis undertaken in this study, are Tinctoris's comments regarding determining mode in polyphonic works. It is indeed interesting to compare here the Continental models presented to us by Tinctoris, against the English practices, represented so clearly in the Eton Manuscript. It is not my intention, however, to delve into any great debate on the processes of transmission and influence of theoretical treatises between the Continent and England, most particularly regarding matters of modal theory.

Tinctoris, following his discussion of the subject of "mingled tones", states that:

It must be noted that mixture and mingling of tones is not made only in simple song, but also in composed, in such a way that, if the song is composed with two, three, four or more parts, one part will be of one tone,

another of another, one of authentic, the other of plagal, one of mingled, the other of mixed. Hence, whenever any mass or cantilena or any other kind of composition will have been put together from different parts of different tones, if anyone when asked may wish to seek absolutely of what tone such a composition may be, he should absolutely reply according to the quality of the tenor, for the reason that it is the principal part of every composition as the foundation of the whole relationship. And if it is specifically sought concerning any other part of this kind of composition as to of what tone it is, he will reply specifically this or that. In other words, if anyone generally would say to me: "Tinctoris, I ask of you of what tone is the song, 'Le serviteur?'", I would reply generally of the first irregular tone, since the tenor, the principal part of this song, is of this type tone. If, however, he would ask specifically of what tone is the supremum or contratenor, I would reply specifically that the former and the latter are also of the second irregular tone. There is no one who doubts that the question must be answered from the tenor in particular just as in general, and it will be fitting to reply, when asked, in a similar way about other situations of a tone.

(Tinctoris 1976: 24-5)

There are numerous examples of collections from that era that are organised according to "modal cycles" employing all eight modes in numerical succession". (Powers & Wiering 2000: 799) It really can, therefore, no longer be disputed that composers of the early part of the sixteenth-century, at the latest, were consciously using modal theory in polyphonic works.

If, as Tinctoris has stated, a polyphonic work can comprise both the authentic and plagal versions of the one mode, could this work then be assigned as a whole to a "mixed mode", such as modes one and two, or modes five and six? Whilst Dahlhaus saw no reason to distinguish between two, resulting in the possibility of a work being categorized as exhibiting an "E mode", Meier argued just the opposite. (Powers 1982: 60-1) It appears, however, that in the fifteenth and sixteenth-centuries the distinction between authentic and plagal modes within a polyphonic composition was in fact maintained. Wiering has commented upon Tinctoris's 'tenor principle', remarking:

To ascribe separate modes to all the voices in a composition... is an essential aspect of the theory, for only in this way can the unwieldy ranges of entire compositions be split up into manageable portions, which can then be described in pseudo-classical terms. (Wiering 1995: 99)

It seems that he too agrees with Tinctoris, recognising the need to separate each of the vocal lines, and to assign each a modal classification.

I too agree wholeheartedly that when examining mode in a polyphonic work there should indeed be a distinction between which voices are of the authentic mode and which are of the plagal. However, it is whether one chooses to categorise the overall mode of a work as that of the tenor that I would question, particularly in reference to the *Salve regina* settings of the Eton Choirbook. Although Tinctoris, and for that matter Gaffurius, have both recognised the tenor as being the "foundation voice" for a piece of polyphonic music, Powers and Wiering have noted other conflicting views on this matter. For example, in describing two ways

in which a chanson could be composed in 1487, Nicolò Burzio directs all of the composer's "primary imaginative effort[s]" to the soprano. In fact, as the article points out, "given Burzio's previously quoted exhortation to the composer that he be familiar with the modes and their affects above all else, the inference that the soprano is the modal voice is inescapable". (Powers & Wiering 2000: 800) The article continues, firstly pointing out the fact that Meier also demonstrates the supremacy of the soprano in his analysis of several of the works contained within a Ferrarese manuscript dating from around 1450.

Secondly, it is stated that "in the *Opus aureum* (Cologne, 1501), freedom to choose a modal voice freely is specifically stipulated: 'Therefore, desiring to compose something, first it is necessary that one put a tenor – or indeed another part [*chorum*] if desired – yet such that it be well formed according to the requirements of the tone under which it is ruled'". (Powers & Wiering 2000: 800) It appears, therefore, that neither Renaissance nor modern-day scholars agree irrefutably that the modal designation of a work should be determined by the tenor voice, and that voice alone, in all music of the Renaissance era. In fact, on commenting upon Tinctoris's work, Ellsworth states:

[Tinctoris] reluctantly assigns the mode of the tenor to the entire composition, but then only if one really wants to know the overall mode.

(Ellsworth 1984: 2)

Therefore, in terms of the modal analysis of the *Salve regina* settings of the Eton manuscript, could it be that in order to arrive at the most reliable conclusions

regarding the modal activity within each of the vocal lines of these settings, it is essential to avoid allocating an authentic or plagal mode to each work as a whole, which is based simply upon the mode of one voice alone – the tenor. The goal of this dissertation was to examine whether or not these settings exhibited characteristics of the traditional system of eight modes and could therefore be deemed to be modal in nature. When considering this, I do not believe it to be necessary to categorise each work in this way at all. The methodology proposed here was developed in order to arrive at a general account of the modal structure of a piece of music, via the use of a methodology that was as objective in nature as was possible. Furthermore, it has been shown that not all composers or scholars see the tenor voice as being the sole representative of mode in a work. Therefore, categorising the modal orientation of a work as a whole according to the tenor voice, and only that voice, could result in a misrepresentation of what the composer was actually trying to achieve. In fact, with reference to the Eton works specifically, I do not believe that they should be categorised in this way at all, simply due to the fact that there is no scholarly evidence to indicate that this was indeed the practise in England during the late fifteenth and early sixteenth-centuries, as it appears to have been on the Continent. Tinctoris, in his *Proportionale* (c.1472-5), pays tribute to the ‘new music’ of the fifteenth-century ‘ars nova’ of England, as represented by John Dunstable. He goes on to say that this new innovative compositional style was inherited by composers such as Dufay and Binchois on the Continent, but that by the time his own contemporary composers such as Okeghem, Busnois and Regis were in favour, “the English [had]... fallen behind stylistically and [were]... now too old-fashioned to bother

with." (Woodley 1987: 214-5) The Eton manuscript, which originally held works by Dunstable, was copied in the 1490s, but reflects an earlier tradition. For this reason alone, it is unlikely that Tinctoris has any relevance for these works. Furthermore, the fact that Tinctoris has recognised that the English sound, as represented by Dunstable, was different from the common Continental style of composition, leads one to argue that it would seem unlikely that his theoretical writings could be easily applied to the Eton works.

When one examines the writings of English theorists during this period, particularly those working in England itself, it is evident that, as noted by Owens in the previous chapter, there is very little that has survived to modern day. In fact, despite an exhaustive search, I found only the works of Leonel Power, John Hothby, an English theorist who spent the majority of his working life in Italy, John Tucke and, in the latter part of the sixteenth-century, Thomas Morley. When the works of these theorists were examined, I found little that shed any light upon the question of mode in polyphonic English music of this era.

Leonel Power (d.1445) was an English composer and theorist whose birth date, it has been suggested, lies somewhere between c.1370 and 1385. (Bent 2000: 243) Power was a fairly prolific composer and is well-represented in the Old Hall manuscript as perhaps the leading composer. (Bukofzer 1960: 1720) He was also the author of a fairly rudimentary discant treatise contained within a larger volume copied by John Wylde, a fifteenth-century preceptor of Waltham Abbey. The volume contains within it twenty musical treatises, of which three, including that of

Power, are in English, the remainder in Latin. (Bent 2000: 246) Powers treatise on discant is, as Bukofzer describes it, "outstanding, because it tries to relax the mechanical improvisation of first inversions by the liberal use of contrary motion, his object being to raise popular practice to a higher level or artistry." (Bukofzer 1960: 177) Power's treatise fails to make mention of issues associated with mode and polyphony, focusing instead upon the English tradition of discant. Perhaps English scholars such as Powers chose to focus their attentions upon English practices, rather than upon issues that were seen to be fundamental by Continental scholars. If this is indeed the case, it would seem that Continental treatises that deal with issues such as mode and polyphony, the treatise by Tinctoris being the focal point here, would not really be applicable in a study whose focus is fifteenth-century English music.

Next we have the work of John Hothby (c1430-1487), an English theorist and composer who at some time in his life became a Carmelite monk. Hothby spent part of his life traveling in Europe, but soon settled in Lucca, where he spent most of his life as a teacher, choirmaster and chaplain from 1467 to 1486. (Blackburn 2000: 749; Reaney 1982: 22) Hothby, as a theorist, represented "...the 15th-century speculative musician still concerned with the maintenance of Boethian and Guidonian thinking". (Seay 1980: 729) It is for this reason that Hothby is most often considered a conservative, as he rejected the innovations of Ramos. (Blackburn 2000: 750) None of Hothby's treatises exist, as noted by Blackburn, "...in definitive form; they survive in multiple version, with different titles, in both Latin and Italian and sometimes a mixture of the two". (Blackburn 2000: 749)

From my examination of a wide range of Hothby's writings, I have found that the majority of them have been preoccupied with the topics of mensuration and proportion. I have found nothing of use with respect to mode and the topic at hand, and can only assume that as Hothby relied heavily upon the theorists of the past and spent the majority of his time in Italy, his views on mode in polyphony were unlikely to provide any insight into what was occurring in England at the time. Hothby was recalled to England by Henry VII in 1486, but he died on the return trip, thus not allowing him the opportunity to comment upon the compositional practices of English composers of the late fifteenth-century. (Seay 1980: 729)

John Tucke (c1482 - after 1539), known primarily for his notebook that survives more or less intact today, is the next English theorist in line following Hothby. Unlike Hothby however, Tucke spent his life in England, primarily studying and then as a teacher. His famous notebook, as stated by Woodley, "...was compiled over a long period of time from his student days at Winchester through to his last years in Gloucester", and focuses primarily upon the notation and compositional processes of early Tudor polyphonic music. (Woodley 2000: 870) The contents of the manuscript appear to be largely "...a reflection of personal curiosity and idiosyncratic taste...", and the notebook itself is one of the few surviving examples of this type of document from around 1500. (Woodley 1993: 40) The contents of the manuscript appear to be largely "...a reflection of personal curiosity and idiosyncratic taste...", and the notebook itself is one the few surviving examples of

this type of document from around 1500. (Woodley 1993: 40) It has little of relevance, however, for a study of modality.

Finally, we come to the English composer, editor, theorist and organist Thomas Morley (c1557/8 – 1602). Although his writings can be considered to be a little late for the Eton tradition, I have included him in this examination in the hope that he can perhaps shed some light on what may have been common practice in the earlier part of the century. Morley's most well known written work is his "Plaine and easie Introduction to practicall musicke", which appeared in 1597 and was dedicated to his master William Byrd. (Wolf 1939: 424) Brett describes this work as being "...a colourful piece of propaganda for Italian music", and probably the most well-known musical treatise in the English language. (Brett 2000: 129-30) He goes on to stat that:

The research it entailed must have been immense; and the lengthy passages on obsolescent matters show that Morley was not entirely willing to spare the reader the pains and labour he himself bemoans in the preface. (The absence of any detailed account of the modes is an intriguing exception...)

(Brett 2000: 130)

Unfortunately however, due to Morley's exclusion of material directly concerning the matter of mode and polyphonic music, this treatise was also found to be most unhelpful. In fact, as Powers states, the topic of mode is barely touched upon, and the issue of mode and polyphony is mentioned only in his section titled "Annotations" at the end of the book, whereby the author suggests it be left to

"some of better skill in letters than myself". (Powers 1998: 334, footnote 2)

Furthermore, modern-day scholars such as Robert Stevenson and Jessie Ann Owens, together with Harold Powers, had criticised this treatise with respect to its consistency as a whole. Stevenson notes the fact that:

Not only does he reserve any treatment of the church modes to the third and last section of his treatise, but he then briefly hurries over the whole topic, as if it were of utterly no moment. ...Morley then gives no actual explanation of the modes, but instead gives examples of what they are. ...he confuses the terms *mode* and *tone* from his very first mention of the topic.

(Stevenson 1952: 180)

Owens has also commented upon the apparent bewilderment of the author, noting the fact that Morley confuses the traditional system of eight modes with the psalm tones. She states:

Morley's choice of psalm tones to illustrate mode suggests a surprising lack of understanding both of earlier theoretical traditions and of contemporary continental practices.

(Owens 1998: 219)

In defense of Morley, Owens notes that he did eventually acknowledge his mistake and add the necessary information regarding the system of eight to twelve modes. More importantly, she points out that Morley was not the only scholar in England during this time that was perhaps unfamiliar with Continental modal practices; there was in fact not much written about mode by English theorists of the day. Owens states that "...the only treatises published in England that discuss mode at all are

translations of continental theorists, Le Roy and Ornithoparcus". (Owens 1998: 219-20) Stevenson has addressed this issue too, deducing that:

...[as Morley] was a well-educated musician as English education went, we must conclude that neither at Oxford in his day, nor in the private tutelage he may have received from Byrd was modal science stressed. And we may also rightly infer he continued to think the modes of small importance even after reading continental authors, where the subject was invariably treated at length. ...If he knew little of modal theory as expounded on the continent, so must his own English colleagues. (Stevenson 1952: 182-3)

Finally, Powers also discusses this issue in his article "From Psalmody to Tonality". He states that "English theory... was never seriously infected with Continental doctrines of polyphonic modality...". He goes on to mention the fact that:

There is a curious naiveté about modal theory in the English music-theoretical writings of the period. For instance, an English translation of the *Micrologus* or Ornithoparcus was published by John Dowland in 1609 more than half a century after its last known edition in 1555, and nearly a century after its first appearance in 1517, as though Glarean's *Dodecachordon* and Zarlino's *Istitutioni harmoniche* and their epigones had never existed.

(Powers 1998: 275, 334)

Thus it appears that not only are there limited resources from which to gain any insight into the issue of mode and polyphony in the late fifteenth and early sixteenth-centuries in England, the resources which do exist do not deal with this

issue. It seems to be, therefore, that the topic of polyphonic modality was either not a significant issue in England during this period, or rather was perhaps not addressed by scholars simply due to the fact that it was already perfectly understood.

Although my search for information pertaining to the use of mode in polyphonic English works in this study was limited to contemporary English treatises, I did look at one continental treatise – the Berkeley manuscript. This work was apparently compiled in Paris in 1375 and is often referred to as being one of the earliest manuscripts to document the use of mode in polyphonic works. (Strohm 1996: 152) The work itself is an anonymous manuscript comprising five treatises. The first of these deals with mode in both chant and polyphony, whilst the remaining four discuss issues such as discant, mensural music, proportions and the division of the tone. (Balensuela 2000: 698)

As Ellsworth has noted, the first treatise supposedly discusses modes and matters associated with them. However, it tends rather to concentrate more upon the “other matters” than the modes themselves. (Ellsworth 1984: 1) The author does refer quite briefly to the issue of mode in polyphony, giving distinct rules for the designation of mode in such works, based upon solmisation syllables and finals. The author makes specific reference here to ballades, rondeaux and virelais; these rules were meant for use in connection with both sacred and secular music, with or without the use of a chant tenor. (Ellsworth 1984: 85, 4) Although this treatise is often seen to be the earliest precursor to that of Tinctoris’s *De natura et proprietate*

tonorum, unlike Tinctoris, the author of the Berkeley manuscript "does not draw a distinction between plagal and authentic modes on the same final". This work is an excellent example of fourteenth-century music theory. However, the information contained within it, specifically within the first treatise, was not found to be particularly helpful, nor relevant, to the study at hand. This was primarily due to the fact that not only did the author fail to deal with the issue of mode in polyphony in any great detail, but also the work itself remains to be an example of Continental theory from a period in history that precedes the Eton manuscript by almost one hundred years.

Therefore, it can be seen that from my examination of the existing English treatises written around the time of the Eton manuscript, the authors of these works did not provide any great insight into the issues facing my own study, with respect to mode and polyphony. Whether this is due to the fact that polyphonic modality was not a significant concern in England during this time, or that perhaps English scholars did not have the knowledge or know how needed to address this matter, or even that English theorists were unacquainted with continental practices and solutions, is not something that I can answer. What I can say is that this investigation into English modal theory, specifically with respect to mode and polyphony, did not prove to be particularly rewarding. In light of this, my own methodology for the investigation of modal practices exhibited by the Eton *Salve regina* settings will, as a result, be an empirical one.

Many modern-day scholars have ventured into the issue of the determination of mode in polyphonic works composed during the fifteenth and early sixteenth-centuries. Two present-day scholars who have proposed new angles at which to look at the determination of mode within a work are Powers and Judd. They have both stated that one should not concentrate on fitting a piece of music into one of the eight church modes, in order to categorise it as being in a particular mode. Rather, we should be examining the music as a whole, with the intention of being able to come to a more general conclusion as to how it may be classified.

In his article "Tonal Types and Modal Categories in Renaissance Polyphony", Powers states that:

...the question of whether polyphony in the late fifteenth and early sixteenth centuries was or ought to be conceived as regularly being "in" modes of the only modal system then known is moot and complex. What is certain is that by 1525 that question had become vital. (Powers 1981: 433)

Powers continues, making reference to Aaron's work *Trattato della natura et cognitione di tutti gli tuoni di canto figurato*, which appeared in that year. He argues that:

[Aaron]...was not telling his readers that such-and-such a piece had been composed in such-and-such a precompositionally selected mode. Rather, he was telling them that such-and-such a piece should be assigned to - should be classified under - such-and-such a mode, in each case carefully adducing his reasons for the choice of modal category.

(Powers 1981: 433)

Powers, in an article entitled "Is Mode Real?", continues this line of argument stating further that:

Conflicting modal assignments for compositionally ordinary 16th-century pieces, in short, while not common, are by no means unknown and unthinkable, whereas the tonality of any piece from 1750 to 1850 is hardly likely to be controversial.

He continues arguing:

A 16th-century piece is not in a "mode" that is part of a "modal system" in a way analogous to the way an 18th-century piece is necessarily in a "tonality" that is part of the "tonal system". That is not to say, of course, that a piece of 16th-century polyphony has no tonality. I would certainly assert that 16th-century tonalities do exist, and they are not 18th-century tonalities; I only urge that they not indiscriminately and unthinkingly be called "modes". (Powers 1991: 11-12)

Although the use of the terms "tonality" and "16th-century music" by Powers here is perhaps with respect to the music of the latter part of that century (i.e. not the music of the Eton Choirbook), his arguments concerning the need by some scholars to categorise a piece as being "in a mode", is not limited to the music of that era alone.

In the same work, Powers gives the following example to further illustrate his argument:

If we could interview three theorists of the late 19th century, of no matter what ontological or epistemological bias - let us say, Hugo Riemann, F.A. Gevaert, and Ebenezer Prout - and ask each to name the tonality of Beethoven's Pastoral Symphony or Tempest Sonata,

their answers would agree: F major and d minor, respectively. Or if we were to show each a diatonic movement or piece, of the period 1750 - 1850, with no key signature and a final root-position Major triad having pitch-class C in the bass, they would agree that those rudimentary and purely objective features - diatonic content, no key-signature, final C-Major triad - minimally marked "the tonality" of the item as "C Major". But let us imagine some item of 16th-century vocal polyphony with the same rudimentary objective markers - that is, diatonic content, no key-signature, and a concluding root-position C-Major triad - and let me add even one further restriction: the piece is set in the so-called "chiavette" (clefs g^2 , c^2 , c^3 , F^3). Now if we could ask three theoretically sophisticated musicians of the late 16th century to name the mode of that piece, we might get three different answers altogether.

(Powers 1991: 10-11)

In her work "Modal Types and *Ut, Re, Mi* Tonalities: Tonal Coherence in Sacred Vocal Polyphony from about 1500", Judd agrees with Powers comments discussed above, stating herself that she feels it "unlikely that Josquin thought of himself as composing "in the modes" in the sense of later composers who published modal cycles...". (Judd" 1992: 441)

Both Powers and Judd have stated the obvious problems associated with the determination of mode in fifteenth and sixteenth-century works. Both scholars have also suggested their own alternatives for discussing mode at this level, using terms such as "tonal types" and "modal types", respectively. However, neither term is applicable to the music of the Eton Choirbook, primarily because these works date from a period a little earlier to that which both authors refer. I do agree

with both authors in that you cannot use the preferred system as a means of identifying mode in works such as those in the Eton Choirbook (i.e. range, species and finals); this method is far too subjective for such complex music - several interpretations of the same work are possible, as was illustrated in Powers' example above.

Similarly, in determining the modal orientation of these works, I have chosen against undertaking a large-scale investigation into the use of cadence. Whilst some scholars believe cadence to be an excellent indicator of mode, from my initial investigations into this area I found that an analysis of cadences, particularly internal ones, resulted in an unconvincing picture of the modal structure of the work under examination that relied too heavily upon subjective means of interpreting the data. Hence, more than one modal interpretation of a work was possible when relying heavily upon the use of cadence as a means of determining mode. For as Horsley notes:

...all agree that the final cadence of a work is not a sufficient guide to the mode. And certainly with the great number of possible cadence and initial tones listed, there is a great overlap in the cadences and beginnings allowed for all the modes, and a problem exists in trying to identify the mode of a work by these means alone. (Horsley 1967: 411)

With respect to this study, my main dilemma proved to be how to arrive at reliable results as to the modal orientation and structure of a particular work, that were gathered via the use of a methodology that avoided one having to make subjective

decisions with respect to the data at hand. The traditional method of determining mode illustrated earlier, which relied heavily upon an examination of characteristics such as range, final and species of fourths and fifths, was not seen to be applicable to the highly complex, polyphonic Eton settings. Data gathered through the use of this method relied too strongly upon subjective judgments, and could result in more than one interpretation of a single work. It was necessary to find a means of examining these works in a way that limited subjective interpretations in the gathering of data to a minimum. I attempted to find a solution to my problem by examining English Renaissance treatises written around the time of the Eton manuscript. This proved to be unsuccessful however, as the treatises examined failed to illustrate a method by which these works could be analysed in order to determine mode. Similarly, an examination of opinions and statements made by modern-day scholars also neglected to provide me with any clear course of action by which to follow. It appears that the issue of modality in polyphonic works of the Renaissance, specifically those written in England, is a subject upon which many scholars hold different views. Whilst some propound the testimonies of continental scholars, others state clearly that these views are not applicable to English works. The latter do not, however, suggest any other particularly useful course of action. The majority of comments in relation to the use of mode in English polyphony are more relevant to works of a later period, than that in which the Eton manuscript was composed. I therefore attempted to devise a new methodology of my own, which could be used to both define and discuss the modal organisation of the Eton works, primarily, and which perhaps may be used in the future to analyse other works of this era. In other words, a

method that, for the most part, is objective in its characteristics, and which if used by three different scholars analysing the modal organisation of the same work, would promote similar conclusions. In order to do this, it was vital that each vocal line of these polyphonic works was examined individually, a process which is supported by Tinctoris in his treatise on modes. However, I chose not to take the next step suggested by the theorist, and categorise each work according to its tenor. This was partly to due the fact that I could not find any evidence in the English treatises of the time which stated that this practice was customary in England. Furthermore, the aim of this study was to identify whether or not the Eton settings were structured around the traditional system of eight modes, and if so, to illustrate how I came to this conclusion – the methodology used. I believe that identifying the modal structure of each vocal line was sufficient in achieving this goal. I was able to ascertain the modal characteristics of each work and can see no reason for then categorising them according to the tenor. In conclusion therefore, I believe that through the use of this new methodology, it is possible to state that the *Salve regina* settings from the Eton Choirbook do in fact quite definitively exhibit modal structures that are based upon the traditional eight church modes.

CHAPTER THREE: THE ESTABLISHMENT OF ETON COLLEGE

AND AN INTRODUCTION TO THE CHOIRBOOK AND ITS

COMPOSERS

In 1422 Henry VI was proclaimed King at the tender age of nine months. He was not crowned until 1429 however and did not undertake the responsibility of kingship until 1437. Henry had a well-known preoccupation with religion and charity whilst on the throne, rather than the usual politics and war. Between the years 1440 and 1441 he established two colleges, each of which encompassed education, devotion and charity in the one institution. The first of these was called "...the College Roiall of Our Ladie of Eton beside Windesor and the second the College Roiall of Our Ladie and St Nicholas of Cambridge". (Harrison 1953: 152-4)

On September 29th 1440, the wheels were put in motion for the establishment of Eton College, when a licence was issued by the Bishop of Lincoln to convert Eton parish church into a collegiate chapel. (Harrison 1953: 154) As the church had been dedicated to the Assumption of the Virgin, it was decided that that dedication would be continued in the chapel. The King laid the foundation stone before Passion Sunday in 1441, just below the future site of the high altar; and the official opening of the college was held in December of 1443. (Harrison 1953: 154)

The Eton Statutes of 1440 provided for a provost, 10 priests (fellows), 4 clerks, 6 chorister boys (to serve daily at divine worship), a schoolmaster, 25 poor and needy scholars (there to learn grammar) and 25 poor and disabled men (to pray for the souls of Henry's father and mother, all of his forefathers and for the faithful departed). These initial statutes were altered over the years to include a greater number of clerks and choristers. (Leach 1915: 252-3; Squire 1898: 94) All of the 10 priests were to be skilled in plainsong and singing and one of them was chosen each year to act as precentor. Of the clerks, four should have good voices and were to be skilled in psalmody, polyphony and reading. One clerk, who was especially skilled in polyphony and plainsong, was appointed by the provost to instruct the choristers; and another was chosen to play the organ. Only the organist was permitted to be married. Finally, of the remaining clerks, one was chosen to be clerk of the vestry, and another, who was competent in the use of Sarum and familiar with the customs of the college, was chosen to be the parish clerk. With respect to the chaplains, all were to be graduates of a faculty, or should have good voices and be competent in plainsong. One chaplain was chosen each year by the provost, vice-provost and precentor, to act as succentor. The poor choristers, if under twelve years of age and of good character with capable voices, were to be admitted free to the college. They were taught by the schoolmaster and had no duties other than to sing in church and to serve at the daily Mass. Choristers had preference for election to the King's scholarships. Finally, the 25 poor scholars were to be impoverished boys of good character, who were skilled in reading, plainsong and the grammar of Donatus. (Leach 1915: 252-3; Harrison 1956, vol X: xv; Harrison 1953: 155-6; Harrison 1963: 34; Squire

1898: 95) These statutes also state in detail, the responsibilities of the provost, fellows, chaplains and choir. As noted by Harrison:

Seven masses and the double cycle of canonical hours and hours of the Blessed Virgin were to be said or sung each day by the chaplains, clerks, and choristers assigned in rotation. ...The chief duty laid upon the choir as a whole, which appears in the statute dealing with the private and corporate devotions of members of the college, was the singing of the evening antiphon: "Every day at a suitable time in the evening... all sixteen choristers of our Royal College if they be present, there may always be sixteen, walking two by two in surplices shall reverently go into chapel, accompanied by the master of the choristers... They shall kneel before the crucifix and say *Pater noster*; then they shall rise and sing before the image of the Blessed Virgin in the time of Lent the antiphon *Salve regina* with its verses; outside of Lent and also on feast days during Lent the sixteen choristers shall likewise sing in the best manner of which they have knowledge some other antiphon of the Blessed Virgin...".

(Harrison 1956, vol X: xv)

By the years 1447-8, Eton College had reached its assigned numbers, with seventy scholars in the college and ten clerks and sixteen choristers in the chapel. (Harrison 1956, vol X: xv)

In 1455 the Wars of the Roses disrupted the progress being made at Eton College, and brought civil strife to England. As the two branches of the royal house, The House of York and the House of Lancaster, fought for the English throne, repercussions were being felt at the college. In 1461 Henry VI was deposed and Edward IV was proclaimed King. This period in history saw the existence of Eton College threatened, when in 1463, at the

King's request, a Bull was issued by the Pope abolishing Eton and granting all of its possessions to St. George's, Windsor. The Provost delivered the vestments, images, jewels, relics, books and furniture of the chapel to St. George's in 1465. Although the college and chapel continued to function, the number of clerks was continually reduced until by the years 1468-70, there were only four. (Harrison 1953: 154-5; Harrison 1963: 34; Harrison 1956, vol. X: xvi)

Although it wasn't until the year 1476 when this Bull was finally reversed with papal authority and the King's approval, and Cardinal Bouchier, the Archbishop of Canterbury, restored to Eton the majority of its possessions and guaranteed the future of the college; the college had in fact been operational since 1466/7. The number of clerks and choristers was increased to seven and ten, respectively; however this can still be seen as a reduction in numbers, when compared with the 1447-8 figures. (Young 1967: 74-5; Harrison 1963: 34-5)

According to Young, the new educational foundations of the fifteenth century, such as Eton College, were "conveniently founded... to carry the best of the medieval traditions across the disruptive period of the Reformation, and unite these with the fresher impulses of the Renaissance. They brought a new energy into society when the ancient religious bodies were going into a decline, both caused and symbolised by complacency." (Young 1967: 73-4) Whatever the reason for the founding of Eton College, it was within this institution during the mid to late 1400s and early 1500s that a group of English composers contributed towards the creation of a manuscript that would later be

recognised as the Eton College Choirbook. This manuscript, with its "theme" being that of the Virgin Mary; was intended for use at the college itself, where it was originally compiled. Some four hundred years later, this manuscript is viewed by many as being one of the most valuable and informative examples of English writing to come from this period in history. Back at the turn of this century, W. Barclay Squire wrote that this manuscript filled a gap in English music history that existed up until the early years of King Henry VIII's reign, and that the Eton school of composers henceforth "...carried the art of composition to an extraordinary pitch of intricacy, if not... perfection, ...of which Robert Fayrfax may be taken as the chief representative". He states further that "...this manuscript supplies the missing link, and represents the tendencies of English music from the death of Dunstable until the rise of Fayrfax. As such its importance cannot be too highly estimated". (Squire 1898: 101-2) Although not all scholars may agree with Squire's observations as to the tremendous significance he places upon the Eton College Choirbook, I would doubt very much that people would fail to recognise the overall importance of this manuscript in the scheme of English Renaissance music.

The Eton College manuscript is in the form of a choirbook - a large volume containing the music for all sections of the choir. The parts are laid out successively, not aligned in the form of a score, so that the full choir could read from the one book. However, although there are some markings on the Eton Choirbook that appear to be performance notes, many scholars argue that these choirbooks were probably not used in performance settings as it would be too difficult for the boys to read their parts which were written at the top of the page. It is argued that these surviving choirbooks were probably library

copies and that rougher copies were produced for rehearsal work. (Benham 1977: 21-2)

On the other hand, others state that the boys may have sung from memory if it was too difficult for them to see their parts, or may not have stood at the front of the choir, but on benches behind the men. (Benham 1977: 22; Wulstan 1985: 254) I do not propose to provide any conclusive answers here, but am merely illustrating one question that remains unanswered. (Harrison 1956, vol. X: xvi)

The Eton College Choirbook is comprised of 126 leaves of vellum and each page measures approximately 590mm by 420mm, with staves 19mm high. The manuscript is not in its original bindings but one made in the 1550s of boards and stamped leather, which have been carefully restored. (Ker 1977: 773-4) As described by Squire, the stamp consists of:

...a band, divided into eight rectangular compartments, four occupied by foliated ornament, the remainder by circular medallions containing the rose, the fleur-de-lys, the portcullis, and the initials H.R. (Squire 1898: 90)

The initials H.R. are those of a binder that was working in London during the second half of the sixteenth century. The covers are lined with eight leaves of a late eleventh century copy of the Epistles, measuring about 12 by 9 inches, in double columns of fifty-one lines each. At the beginning of the manuscript, the page being numbered a⁸, there is an index which gives for each work the composer's surname, number of voices (in red), the compass of each part (e.g., S, A, T, B), and the folio number on which each begins. The composer's full name and the compass, in most cases, are also included on the first page of each work within the manuscript itself. There is also a much shorter index at the end

of the choirbook, which does not include many of the works listed at the beginning. This index most likely lists the contents of the manuscript at an intermediate stage in its production. (Harrison 1953: 162; Squire 1898: 90, 93)

The following extract is taken from Harrison's article entitled "The Eton Choirbook" and gives a good account of the manner in which the manuscript was numbered and constructed:

The folios are numbered on the lower right corner of the recto side, it is thus possible to establish that there were originally 224 parchment leaves, in the following gatherings: a⁷; b⁸ (lacks 3-6); c⁸ (lacks 4, 5); d⁸; e missing; f⁸ (lacks 1, 2, 7, 8); g⁸ — m⁸; n o p missing; q⁸; r⁸ (lacks 4, 5); s missing; t⁸ (lacks 1-3, 6, 7); v⁸; x⁸; y missing; z⁸; aa missing; bb⁸ (lacks 2-7); cc-dd missing; ee⁹ (lacks 4-6). There are 98 leaves missing. They are either complete gatherings or leaves belonging to a double sheet. (Harrison 1953: 162)

If one takes into account the date of the binding, it can be surmised that the manuscript probably became separated from its original binding and was re-bound without the missing leaves, which were by then lost. Harrison speculated that perhaps, "at a time when many such books were being destroyed or sold to book-binders for the value of the parchment, some worthy person... rescued the surviving sheets and had them taken to London. There they were bound...(and) on its return the book was stowed away in the College Library." (Harrison 1956, Vol. X: xiii) There are no signs of pages having been cut or torn out, which suggest perhaps that the missing leaves were possibly even

intentionally removed for some reason, for the remainder of the manuscript was not damaged. (Harrison 1953: 162)

In its original form, the Eton Choirbook contained a total of ninety-three works, which may be divided into the following categories:

- antiphons for 6 - 8 voices
- antiphons for 5 voices
- antiphons for 4 voices
- magnificats for 5 - 7 voices
- magnificats for 4 voices
- the Passion according to St. Matthew

(Harrison 1953: 163)

Originally, the manuscript comprised 67 votive antiphons to the Virgin Mary; 24 magnificats; a 4-part setting of the Passion according to St. Matthew, written by Richard Davy; and a 13-part setting of the Apostles' Creed, in the form of a round, by Robert Wylkynson. Due to the loss of 98 leaves of the manuscript, approximately 29 antiphons, 20 magnificats and the Passion are either partially or completely lacking. (Harrison 1960: 308; Harrison 1963: 162) The following table is a complete account of the Eton Choirbook, listing all works originally contained within it. It provides the reader with the order in which the works were presented; the folio numbers; the title; composer; number of voices and compass of the works.

| <u>Number</u> ¹ | <u>Opening</u> ² | <u>Title</u> | <u>Composer</u> | <u>Voices</u> | <u>Compass</u> |
|----------------------------|-----------------------------|-----------------------------------|-----------------|---------------|----------------|
| | a1 | Index | — | — | — |
| 1 | a2 - 4 | <i>O Maria salvatoris mater</i> | Browne | 8 | 22 |
| 2 | a5 - 7, b1 | <i>Gaude flore virginali</i> | Kellyk | 7 | 23 |
| 3* | b22 - 5 | <i>O Maria plena gracia</i> | Lambe | 6 | 21 |
| 4* | b6 - 8 | <i>Gaude flore virginali</i> | Davy | 6 | 22 |
| 5 | c1 - 3 | <i>Stabat mater dolorosa</i> | Browne | 6 | 22 |
| 6* | c4 - 5 | <i>O Regina celestis glorie</i> | Lambe | 6 | 23 |
| 7* | c6 - 8 | <i>Stabat virgo mater cristi</i> | Browne | 6 | 23 |
| 8 | d1 - 2 | <i>Stabat iuxta cristi crucem</i> | Browne | 6 | 14 |
| 9 | d3 - 5 | <i>O regina mundi clara</i> | Browne | 6 | 15 |
| 10 | d6 - 8 | <i>Gaude virgo mater cristi</i> | Sturton | 6 | 15 |
| 11* | e1 - 3 | <i>O virgo prudentissima</i> | Wylkynson | 6 | 22 |
| [12] | e4 - 6 | <i>Gaude flore virginali</i> | Wylkynson | 6 | 22 |
| [13] | e7 - 8, f1 | <i>Salve regina vas mundicie</i> | Fawkyner | 6 | 23 |
| 14* | f2 - 3 | <i>Gaude flore virginali</i> | Cornysche | 6 | 23 |
| 15 | f4 - 6 | <i>Salve regina</i> | Wylkynson | 9 | (23) |
| 16* | f7 - 8, g1 | <i>Salve regina</i> | Brygeman | 5 | 19 |
| 17 | g2 - 3 | <i>Salve regina</i> | Horwud | 5 | 21 |
| 18 | g4 - 5 | <i>Salve regina</i> | Davy | 5 | 23 |
| 19 | g6 - 7 | <i>Salve regina</i> | Cornysh | 5 | 22 |
| 20 | g8 - h1 | <i>Salve regina</i> | Browne | 5 | 21 |

¹ Complete works are indicated in normal numerals; * indicates piece is fragmentary or incomplete; and [] indicates piece is lost.

² That is, two facing pages, indicated in the manuscript by a letter and number on the bottom right-hand page; L and R are used to indicate the sides of the opening.

| Number ¹ | Opening ² | Title | Composer | Voices | Compass |
|---------------------|----------------------|-------------------------------------|-------------|--------|---------|
| 21 | h2 - 3 | <i>Salve regina</i> | Lambe | 5 | 22 |
| 22 | h4 - 5 | <i>Salve regina</i> | Sutton | 7 | 23 |
| 23 | h6 - 7 | <i>Salve regina</i> | Hacomplaynt | 5 | 22 |
| 24 | h8 - i1 | <i>Salve regina</i> | Howchyn | 5 | 22 |
| 25 | i2 - 3 | <i>Salve regina</i> | Wylkynson | 5 | 22 |
| 26 | i4 - 5 | <i>Salve regina</i> | Fayrfax | 5 | 22 |
| 27 | i6 - 7 | <i>Salve regina</i> | Hygons | 5 | 22 |
| 28 | i8 - k1 | <i>Salve regina</i> | Browne | 5 | 15 |
| 29 | k2 - 3 | <i>Salve regina</i> | Hampton | 5 | 22 |
| 30 | k4 - 6 | <i>O domine celi terreque</i> | Davy | 5 | 22 |
| 31 | k7 - 8, l1 | <i>Salve Jhesu mater vera</i> | Davy | 5 | 22 |
| 32 | l2 - 4 | <i>Stabat mater dolorosa</i> | Davy | 5 | 21 |
| 33 | l5 - 7 | <i>Virgo templum trinitatis</i> | Davy | 5 | 22 |
| 34 | l8, m1 - 2 | <i>In honor:z summe matris</i> | Davy | 5 | 22 |
| 35 | m3 - 5 | <i>O Maria et Elizabeth</i> | Banester | 5 | 21 |
| 36 | m6 - 7 | <i>Gaude flore virginali</i> | Horwud | 5 | 21 |
| 37* | m8 - n1 | <i>Gaude virgo mater cristi</i> | Horwud | 5 | 21 |
| [38] | n2 - 4 | <i>O regina celestis glorie</i> | Lambe | 5 | 20 |
| [39] | n5 - 6 | <i>Gaude flore virginali</i> | Lambe | 5 | 21 |
| [40] | n7 - 8 | <i>Virgo gaude gloriosa</i> | Lambe | 5 | 21 |
| [41] | o1 - 2 | <i>Stabat mater dolorosa</i> | Fayrfax | 5 | 21 |
| [42] | o3 - 4 | <i>Ave cuius concepicio</i> | Fayrfax | 5 | 22 |
| [43] | o5 - 7 | <i>Quid cantemus innocentes</i> | Fayrfax | 5 | 21 |
| [44] | o8, p1 | <i>Gaude flore virginali</i> | Dunstable | 5 | 21 |
| [45] | p2 - 4 | <i>Ave lux totius mundi</i> | Browne | 5 | 21 |

| <u>Number¹</u> | <u>Opening²</u> | <u>Title</u> | <u>Composer</u> | <u>Voices</u> | <u>Compass</u> |
|--|----------------------------|----------------------------------|-----------------|---------------|----------------|
| [46] | p5 - 6 | <i>Gaude flore virginali</i> | Browne | 5 | 22 |
| [47] | p7 - 8 | <i>Stabat mater dolorosa</i> | Cornysh | 5 | 18 |
| 48 | q1 - 3 | <i>Stabat mater dolorosa</i> | Cornysch | 5 | 23 |
| 49 | q4 - 5 | <i>Gaude virgo salutata</i> | Fawkyner | 5 | 22 |
| 50 | q6 - 8 | <i>Gaude rosa sine spina</i> | Fawkyner | 5 | 22 |
| 51 | r1 - 2 | <i>Gaude flore virginali</i> | Turges | 5 | 22 |
| 52 | r3 | <i>Nesciens mater</i> | Lambe | 5 | 22 |
| 53* | r4 | <i>Salve decus castitatis</i> | Wylkynson | 5 | 22 |
| 54* | r5 - 6 | <i>Ascendit cristus</i> | Huchynge | 5 | 21 |
| 55* | r7 - 8, s1 | <i>O Mater venerabilis</i> | Browne | 5 | 18 |
| [56] | s2 - | <i>Ad te purissima virgo</i> | Cornysch | 5 | 22 |
| The intervening openings to t ₄ L, which are missing, were probably blank. There remains t ₄ R, with blank staves. | | | | | |
| 57* | t5 - 6 | <i>Ave lumen gracie</i> | Fayrfax | 4 | 14 |
| [58] | t7 | <i>O virgo virginum preclara</i> | Lambe | 4 | 14 |
| 59* | t8, v1 | <i>Gaude virgo mater cristi</i> | Wylkynson | 4 | 14 |
| 60 | v2 - 3 | <i>Stabat virgo mater cristi</i> | Browne | 4 | 14 |
| 61 | v4 - 5 | <i>Stella celi</i> | Lambe | 4 | 15 |
| 62 | v6 - 7 | <i>Ascendit cristus</i> | Lambe | 4 | 14 |
| 63 | v8 - x1 | <i>Gaude flore virginali</i> | Lambe | 4 | 14 |
| 64 | x2 - 3 | <i>Gaude flore virginali</i> | Turges | 4 | 14 |
| 65 | x4 | <i>Ave maria mater dei</i> | Cornysch | 4 | 15 |
| 66 | x5 - 6 | <i>Gaude virgo mater cristi</i> | Cornysch | 4 | 14 |

| Number ¹ | Opening ² | Title | Composer | Voices | Compass |
|--|----------------------|--|-------------|--------|---------|
| 67* | x7 - 8, y1 | <i>Gaude virgo salutata</i> | Holyngborne | 4 | 15 |
| [68] | y2 - 4 | <i>Et exultavit</i> | Browne | 7 | 22 |
| [69] | y5 - 7 | <i>Et exultavit</i> | Davy | 5 | 22 |
| 70* | y8 - z1 | <i>Et exultavit</i> | Nesbett | 5 | 22 |
| 71 | z2 - 3 | <i>Et exultavit</i> | Horwud | 5 | 23 |
| 72 | z4 - 6 | <i>Et exultavit</i> | Kellyk | 5 | 22 |
| 73 | z7 - 8 | <i>Et exultavit</i> | Lambe | 5 | 21 |
| 74* | aa1 - 2 | <i>Et exultavit</i> | Browne | 5 | 22 |
| 75* | aa3 - 4 | <i>Et exultavit</i> | Fayrfax | 5 | 22 |
| [76] | aa5 - 6 | <i>Et exultavit</i> | Brygeman | 5 | 19 |
| [77] | aa7 | <i>Et exultavit</i> | Wylkynson | 5 | 22 |
| [78] | aa8 | <i>Et exultavit</i> | Mychelson | 5 | 22 |
| 79* | bb1 - 2 | <i>Et exultavit</i> | Wylkynson | 6 | 22 |
| [80] | bb3 - 4 | <i>Et exultavit</i> | Cornysch | 5 | 23 |
| [81] | bb5 - 7 | <i>Et exultavit</i> | Browne | 5 | 22 |
| 82* | bb8 - cc1 | <i>Et exultavit</i> | Sygar | 4 | 21 |
| [83] | cc2 - 3 | <i>Et exultavit</i> | Browne | 4 | 22 |
| [84] | cc4 - 5 | <i>Et exultavit</i> | Turges | 4 | 21 |
| [85] | cc6 - 7 | <i>Et exultavit</i> | Turges | 4 | 17 |
| [86] | cc8, dd1 | <i>Et exultavit</i> | Baldwyn | 4 | 22 |
| [87] | dd2 - 3 | <i>Et exultavit</i> | Sygar | 4 | 22 |
| [88] | dd4 - 5 | <i>Et exultavit</i> | Baldwyn | 4 | 22 |
| [89] | dd6 - 7 | <i>Et exultavit</i> | Turges | 4 | 14 |
| 90* | dd8 - ee1 | <i>Et exultavit</i> | Davy | 4 | 14 |
| 91 | ee2 - 3 | <i>Et exultavit</i> | Stratford | 4 | 14 |
| ee4L has blank staves. | | | | | |
| 92* | ee5? - 9 | <i>Passio domini in Ramis palmarum</i> | Davy | 4 | 22 |
| 93 | ee9v | <i>Jesus autem transiens-- Credo in deum</i> | Wylkynson | 13 | (13) |
| Index, probably for an intermediate stage in the compilation of the ms.. It omits the Magnificats, the Passion, the Creed, and antiphons nos. 13-15 and 56-58. | | | | | |

(Harrison 1956: 180-3)

Although a few of these missing or incomplete works have been found to be present in other manuscripts, the majority of this music has been lost to us forever. (Harrison 1960:

308) As this manuscript once contained music written by composers who were not represented anywhere else, this loss is indeed a great one.

The music and text is written in both black and red notation, whereby red ink, it is assumed, denotes solo sections in the music. At the beginning of each work and at the start of many sub-sections within each piece, there are beautifully illuminated letters. These letters are drawn in a variety of colours - red, black, blue, yellow and brown - and are often quite detailed, many of them comprising both pictures and words and a few being designed around crests. For example, in Squire's paper entitled "On An Early Sixteenth Century Manuscript", he gives the following descriptions of illuminations contained within the manuscript, which comprise heraldic shields:

| | | | | | | | | | |
|----------------|--|---------|---------|-------|-------------------|-------------|--------------------------|--------|---|
| fol. 1b | The initial O to the triplex of John Browne, "O Maria salvatoris mater", contains the arms of Eton College. | | | | | | | | |
| fol. 50a | In the triplex of a <i>Salve regina</i> for seven voices, by John Sutton, are the arms of Eton College. | | | | | | | | |
| fol. 64b & 65a | Five shields in the initials of a five-part motet, "O domine celi terreque creator," by Richard Davy, organist and <i>informator choristarum</i> of Magdalen College, Oxford, between 1490-2. The arms are as follows: <table><tr><td>Triplex</td><td>England</td></tr><tr><td>Tenor</td><td>Westminster Abbey</td></tr><tr><td>Contratenor</td><td>Magdalen College, Oxford</td></tr><tr><td>Medius</td><td>The Arms of Bost (provost of Eton between 1477 and 1504) comprising sable a fess or between three stags heads couped argent</td></tr></table> | Triplex | England | Tenor | Westminster Abbey | Contratenor | Magdalen College, Oxford | Medius | The Arms of Bost (provost of Eton between 1477 and 1504) comprising sable a fess or between three stags heads couped argent |
| Triplex | England | | | | | | | | |
| Tenor | Westminster Abbey | | | | | | | | |
| Contratenor | Magdalen College, Oxford | | | | | | | | |
| Medius | The Arms of Bost (provost of Eton between 1477 and 1504) comprising sable a fess or between three stags heads couped argent | | | | | | | | |

Bassus Eton College (much erased, apparently
willfully)

(Ker 1977: 773; Squire 1898: 91-2; Sadie 1988: 200)

The staves are 19mm high and there are usually fourteen staves to a page. The voices are designated in approximately half of the pieces, mainly at the beginning of each work. The majority of the manuscript is in the same hand and most probably was copied between the years 1500 and 1504/5. Wylkynson's nine-part *Salve regina* is, however, written in a later, less elegant hand (possibly his own), and was almost certainly inserted around 1515 when he was master of choristers at the college. This notion is supported by the fact that firstly, this setting does not appear in either of the two indexes in the choirbook and secondly, the illuminations here have been pasted onto the manuscript and are by a different illuminator to those in the remainder of the choirbook. (Sternfeld 1973: 302; Harrison 1963: 312)

This manuscript originally represented twenty-six named English composers, however works by some of these composers have now been lost, including Dunstable's contributions, and only portions of some works have survived. Upon further examination, it becomes apparent that the composers whose works are present in this manuscript represent a wide variety of English choral institutions. Perhaps then this manuscript can be seen to depict, in some way, the English compositional style of the late fifteenth and early sixteenth centuries. (Harrison 1953: 165; Harrison 1956, vol. X: xvi)

There are fifteen *Salve regina* settings in the Eton Choirbook, representing the work of thirteen composers, making this the most popular text in the manuscript to have survived. As it is this text with which this study is concerned, the following information has been limited to that which concerns the *Salve regina* settings solely. The following table has been included here not to provide the reader with a detailed biography of each composer, but rather to give some insight into the role, activities, previous engagements and dates of the Eton composers of these *Salve regina* settings.

| <u>Composer²</u> | <u>Dates</u> | <u>Institution(s) Represented & Dates</u> | <u>Original no. of works in Eton Ms.</u> | <u>Number of surviving works</u> | <u>Number of <i>salve</i> <i>regina</i> settings</u> |
|-----------------------------|-------------------------------|---|--|--|--|
| John Browne | b.1453? | Eton (elected a King's scholar at age 14, 1467)? | 15 | 10 | 2 |
| William Brygeman | d.1524 | Eton (1503 - 4); All Saints, Bristol (?-1524) | 2 | 1 | 1 |
| William Cornysh, snr. | d. 1502 | Westminster Abbey (1479-1491/2) | 8 | 5 | 1 |
| Richard Davy | b.c1465 - d.c1507 | Magdalen and Exeter (1490 - 1506) | 10 | 9 | 1 |
| Robert Fayrfax | b.1464 - d. 24th October 1521 | St. Albans and Chapel Royal (1496 - 1521) | 6 | 2 | 1 |
| Robert Hacomplaynt | d. 8th Sep. 1528 | King's scholar at Eton (1469 - 1472), King's College, Cambridge (1472 - 1528) | 1 | 1 | 1 |
| John Hampton | ? | Worcester (1484 - 1522) | 1 | 1 | 1 |

² For further information regarding these composers, refer to the following references (Bowers & Wathey 1984: 303; Bowers 2000: 526; Harrison 1960: 309; Harrison 1953: 165-6; Harrison 1963: 307-8; Harrison 1956: vols. X & XI, prefaces and list of contents; Skinner 1997: 5-12; Squire 1898: 95-100; Sternfeld 1973: 302-6; Benham 1977: 74-97; Young 1967: 76-82)

| <u>Composer²</u> | <u>Dates</u> | <u>Institution(s) Represented & Dates</u> | <u>Original no. of works in Eton Ms.</u> | <u>Number of surviving works</u> | <u>Number of <i>salve regina</i> settings</u> |
|-----------------------------|------------------------|--|--|--|---|
| William Horwood | d. 1484 | Lincoln (1476 - 1484) | 4 | 4 | 1 |
| Nicholas Huchyn | ? | Arundel (1476-7 & 1485-1500) | 2 | 2 | 1 |
| Richard Hygons | d.1508/ 9 | Wells (1459 - 1508) | 1 | 1 | 1 |
| Walter Lambe | b. 1451 - d.1499 | King's Scholar at Eton at age 15 (1467), Arundel (1476-7 & 1490-1); St. George's, Windsor (1479-1504 or later), intermittently | 12 | 8 | 1 |
| John Sutton | ? | Magdalen and Eton (1476 - 9) | 1 | 1 | 1 |
| Robert Wylkynson | ? | Eton (1496 - 1515) | 9 | 7 | 2 |

It can be seen from the above table that Browne, Davy and Lambe were the most prolific composers of this group to contribute to the choirbook, many of whose works still survive within the manuscript. With respect to *Salve regina* settings, only two composers, Browne and Wylkynson, have more than one example. It is also apparent that one may differentiate between the Eton composers listed here with respect to date, with Horwood and Hygons representing the oldest school; followed by better-known composers such as

Lambe, Browne Cornysh, Fayrfax and Davy. (Benham 1977: 74-97; Sternfeld 1973: 304-5) Finally, it is worth mentioning once again the diversity of these composers when one notes their various backgrounds, and how this may contribute to the notion that the Eton Manuscript is perhaps representative of the English compositional style during this period.

In conclusion therefore, it is hoped that the inclusion of information pertaining to the historical development of Eton College, accompanied by a brief physical description of the manuscript itself and a look at its composers, will provide the reader with the necessary background information with which to examine in more detail the *Salve regina* settings themselves.

CHAPTER FOUR: CONCEPTUAL FRAMEWORK AND METHODOLOGY

The primary focus of this study is mode. Through an examination of the surviving *Salve regina* settings present in the Eton College Choirbook, I will attempt to provide an answer to the question of whether these pieces are structured around the traditional modal system¹, or whether they are in fact based upon something else and if so, what? In order to achieve this, it has been necessary for me to develop a more objective method for examining mode in works such as these. This method, when followed, results in the development of an almost entirely objective series of data for each work, allowing one to assess the modal organisation of that work with very little subjective bias. Recent discussion surrounding this period in English musical history is proving to be quite contentious.² It was originally thought that works composed in England around 1500 would naturally be structured using the traditional modal system, as on the Continent. However, there has been much discussion in recent times that is suggesting that perhaps this isn't so³. It is my intention in this dissertation to investigate this allegation with respect to the music of Eton College by producing a detailed musical analysis of the *Salve regina* settings present in this manuscript, achievable by following this new methodology.

¹ The phrase "traditional modal system" used here refers to the eight church modes and the organisational system governing each of them, which was in use during the medieval and renaissance eras. For more information regarding this system and the use of the term within this doctorate, see chapter one.

² Many scholars presented very different views with respect to the development of new methodologies with which to analyse early music, at a conference held at the University of Pennsylvania in March of 1996, for example.

³ For a more detailed discussion, see chapter two.

This will, it is hoped, shed some light on the compositional style of the Eton composers and the use of mode within their works, resulting in an answer to the question of modality in the Eton College Choirbook.

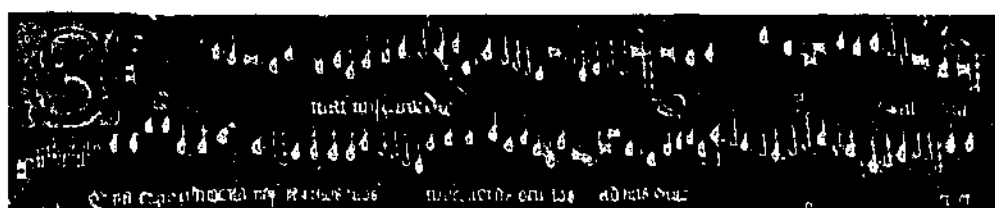
As a result of the analytical process briefly illustrated above, it is hypothesised that through the use of both deductive and inductive methods, these *Salve regina* settings will be found to be modal, according to the traditional modal system. In order to test this hypothesis the following process of examination and analysis has been observed.

Firstly, a comparison of the original manuscript with the transcribed version was necessary in order to eliminate any discrepancies there may have been between the two versions. As it was impossible for me to study the Eton manuscript in person, an exceptionally good colour microfilm copy was obtained instead. This microfilm copy was clear in its presentation of all of the works, eliminating any possibility of discrepancies occurring in my work due to the poor quality of the source under examination. The *Salve regina* settings present in the microfilm copy of the manuscript were compared with those transcribed by Frank Ll. Harrison (Harrison 1956: vols. X-XI) and any inconsistencies between the two as to factors such as line-breaks, signatures or "accidentals"⁴, were noted. That is, firstly, each of the transcribed settings was checked against its original version and brackets were marked onto these settings to indicate the point at which, on the manuscript, each

⁴ The term "accidental" here refers specifically to the signs commonly known nowadays as naturals, flats and sharps. Whether these signs in England during the fifteenth and early sixteenth centuries were used to indicate the chromatic alteration of a note, or something else, has been discussed at more length previously in this dissertation (see chapter one).

line of notation ended (see example one). This process was undertaken, due to the fact that when analysing these works in terms of modality, it is important to know exactly where manuscript lines ended, as it often determines how long a notated "accidental" remains in effect (i.e. in manuscripts such as this, "accidentals" were canceled out automatically at the end of each notated line).

Eg.1 Demonstrates how brackets were marked into the transcribed version of each work, in order to show where line-breaks occurred in the original manuscript version. Here we see the first two lines of the medius vocal line, of Davy's setting.



Next we have the transcribed version. Note the added brackets above the vocal line, denoting line-breaks.

76

with respect to music, to Eton College itself and its choirbook, and more particularly to information regarding mode and modal practice in these works.⁶

From the information gathered, as set out above, I was able to piece together an overall picture of how this manuscript came to be and in what kind of circumstances it was written by the composers of Eton College. Next, in order to familiarise the reader with the *Salve regina* collection itself, I began looking at the overall features of this music, prior to examining the modal orientation of the works.

Firstly, analysis of general musical characteristics of these works, such as text-music relationships, texture, time-signatures and the setting of the *cantus firmus* line (if present) was conducted, in order to gain an overall impression of the structure and surface workings of these settings. Text sections within each work were established according to which text version was used, and the relationship between these, the setting of the music itself, the manipulation of vocal texture and the use of varied mensuration signs, were directly related back to these sections. As a result, tables were created demonstrating the relationship between all of these factors. The setting of the *cantus firmus* line for each work that included one was noted and added to these tables beneath the appropriate vocal line(s). The tables themselves may be found at the beginning of the second volume of this study, and are entitled "Structural Organisation of Works"⁷. They illustrate how the examination of the above mentioned factors could be brought together, in order to arrive at a basic understanding of the overall structure of each work.

⁶ See chapter two for further information regarding this literature review.

Finally, a melodic reduction of all vocal lines, for each work, was also attempted in order to establish the prominent tones. The idea to reduce each melodic line down, so that only the prominent, and perhaps most structurally significant, tones remained, originally came from Schenker. The use of this technique in this dissertation was prompted by the article by David Stern, entitled "Schenkerian Theory and the Analysis of Renaissance Music" (Stern 1990: 45-59). It was hoped that the observations drawn from this process would serve to reinforce my final conclusions with respect to the modal organisation of each of the works, in that the prominent tones and pitch centres for each vocal line would match. The process of melodic reduction however, was not found to be beneficial in my study of these settings, due to its highly subjective nature. It was found that I could almost always manage to inadvertently manipulate each of the vocal lines in my reduction and arrive at the results I had hoped for, therefore quashing any hope for objectivity in my study. This problem can be more effectively illustrated in the example below, which demonstrates two different melodic reductions of the same vocal line.

Eg.2 Shows, firstly, a section taken from the setting by Cornysh, followed by two different melodic reductions of this same section. It is apparent that the reliability of this process is entirely dependent upon which tones are viewed as being more significant at the time the reduction is done; resulting here in two different examples.

⁷ These tables were based upon a format used by Harrison in his work Music in Medieval Britain,

112

C: - de, Vir - go ma - ter ec - cle - si -

T: - de, Vir - go ma - ter ec - cle - si -

B: - de, Vir - go ma - ter ec - cle - si -

116 120

C: - ar, Ae -

T: - ar, Ae -

B: - ar, Ae -

125

C: Ae - ler - na par - ti glo - ri - ar, E - sto no - bis re - fu -

T: - na par - ti glo - ri - ar, E - sto no - bis re - fu -

B: - ler - na par - ti glo - ri - ar, E - sto no - bis re - fu - gi -

130 135

C: - gi - am A - pud pa - trem et fi - li -

T: - gi - am A - pud pa - trem et fi - li -

B: - um A - pud pa - trem et fi - li -

140

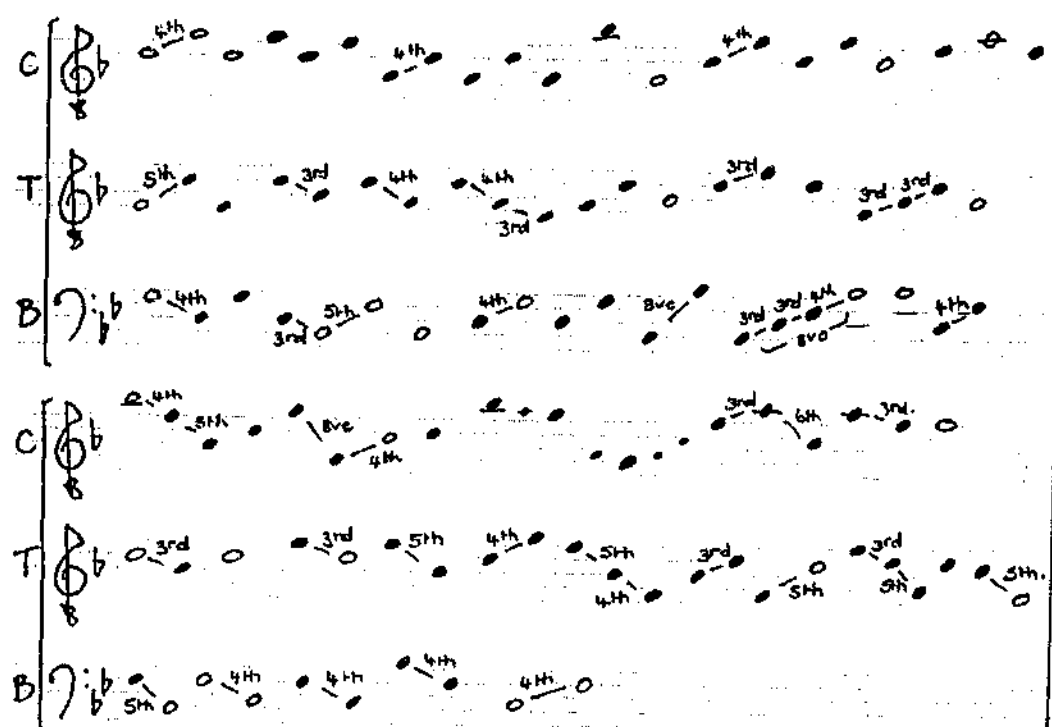
C: - um,

T: - um,

B: - um,

Melodic Reduction One:

Melodic Reduction Two:



Secondly, traditional methods of establishing the mode of a work were used in order to come to some conclusion with respect to the modal orientation of each piece. According to Aaron, cited in articles by both Bergquist (Bergquist 1967: 102-3) and Powers (Powers 1991: 24), the traditional method for establishing the modal structure of a work comprised the examination of three factors: the final, the overall range (*ambitus*) and the structure of fourths and fifths. The study of these elements was usually restricted to the tenor voice, which was traditionally thought to be the founding voice upon which the structure of the work was built (Hiley 1983: 1187). Thus I attempted to study the Eton settings using a similar method, but not restricting my analysis solely to the tenor voice. The initial pitches for each voice, in all settings, were noted and the opening phrases were studied for any clues as to the pitch structure of each of the voices. Furthermore, the species of fourths and fifths apparent within each of the vocal lines were noted. This is

important as they are often clear markers as to both the pitch-structure a composer is working with (i.e. a mode on D or G for example), and whether it appears to be an authentic or plagal mode (example 3).

Eg. 3 Here we see the manner in which species of fourths and fifths were taken into consideration, upon initial examination of these works. This example comes from the setting by Cornysh, with intervals of a fourth and a fifth having been marked with curved brackets.

The image displays two systems of musical notation, likely from a vocal setting by Thomas Cornysh. Each system consists of three staves (Tenor, Alto, and Treble). The notation is in a historical style, possibly 16th-century English. Curved brackets are drawn above the notes to indicate specific intervals: fourths (labeled 'I4') and fifths (labeled 'I5' or 'I6'). Some brackets are numbered, such as '200' and '203'. The lyrics are written below the staves, with some words like 'fun', 'de', 'pre', 'ca', 'lu', 'na', 'ci', 'fi', 'na' visible. The first system covers measures 198 to 203, and the second system covers measures 204 to 209.

In continuing this line of study, overall vocal ranges (*ambitus*) were established for each voice, with the hope of, when this data was combined with the data on fourths and fifths, recognising any obvious patterns (e.g. a prominent G to D range in two voices and D to G in another two perhaps). Also, introductory signatures, changes to them and where they occurred (i.e. in which text section), were noted for each voice individually, in order to ascertain some idea of the influence flats, sharps and notated accidentals had on the modal organisation within these *Salve regina* settings. Finally, a survey of both melodic and final cadences was undertaken in each setting, for each individual vocal line. Cadence tones were established, with more importance obviously being placed upon final cadences heard at the end of text sections, rather than on those cadences that appear within the sections

themselves (i.e. internal cadences). As a result of this quite thorough preliminary analysis, elementary decisions were made as to the apparent pitch centres for each setting.

Due to the recent contention regarding the function of mode in English works composed around 1500, as discussed in chapter two, and the fact that the method of determining mode outlined above is a very subjective one (i.e. it would be very easy for me to arrive at the results that I am hoping for, when looking at factors such as species of fourths and fifths), I chose to employ a more impartial methodology for the study of mode in works such as these, the process of which is discussed at length following the example below.

Eg. 4 This example, taken from the second setting by Browne, displays quite clearly the difficulties encountered when attempting to base the examination of mode in a particular work, upon the species of fourths and fifths displayed within each vocal line. In this case it can be seen that there appears to be two different pitch outlines operating simultaneously (C – F – C and C – G – C), thereby creating confusion as each outline comprises different species of fourths and fifths.

The musical score consists of two systems of staves, measures 13-20 and 21-26. Each system has five staves labeled Tr, M, T, C, and B. The lyrics are written below the staves. The notation includes various musical symbols such as clefs, notes, rests, and accidentals. The lyrics are:
 System 1 (Measures 13-20):
 Tr: sal - vo. Ad te cla - ma - mus ex - su - les fi - li - i E - va. Ad te su - spi - ra -
 M: sal F Ad te cla - ma - mus ex - su - les fi - li - i E - va. Ad te su - spi - ra -
 T: sal - vo. Ad te cla - ma - mus ex -
 C: sal - vo. Ad te cla - ma - mus ex - su - les fi - li - i E - va. Ad te su -
 B: sal - vo. Ad te cla - ma - mus ex - su - les fi - li - i E - va. Ad te -
 System 2 (Measures 21-26):
 Tr: mus, ge - men - tes et flet - tes in hac val - le la - cri - ma -
 M: mus, ge - men - tes et flet - tes in hac val - le la - cri - ma -
 T: su - les in hac val - le la - cri - ma -
 C: spi - ra - mus, ge - men - tes et flet - tes in hac val - le la - cri - ma -
 B: su - spi - ra - mus, ge - men - tes et flet - tes in hac val - le la - cri - ma - rum.

In order to arrive at more reliable results with respect to prominent notes and range in these works, I employed the tedious process of note counting for each work, per voice and text-section. That is, working with one vocal line at a time, tones were

counted for each text-section, taking into account all tones present in each section, including accidentals. Tables were then formulated, again per voice and section, culminating in a detailed picture of the prominent tones, preferred ranges and use of sharps and flats within each vocal line. These tables, entitled "Sectionalised Tables", can be found in the second volume of this study.

Data from these counts was then used to formulate graphs showing the total number of tones for each work, overall. Once again, the graphs are included in the second volume of this study.

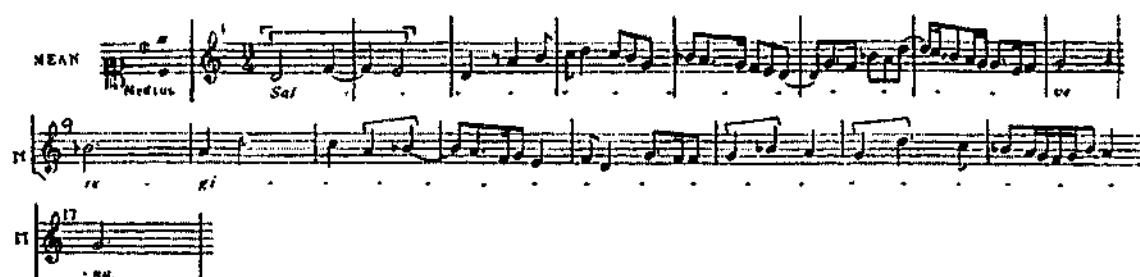
Thus, these results contributed to the presentation of a hierarchy of pitches for each setting, working section-by-section, voice-by-voice. Furthermore, this method of analysis also resulted in the presentation of some interesting data associated with the use of signatures and accidentals within these works, which possibly relates directly to the modal organisation of these settings. Tables constructed from the note-counts were compared with the signatures, per voice and section, resulting in some instances occurring whereby the use of signature conflicted with the notated accidentals within each vocal line (see example below).

Eg. 5 Here we see an example taken from the setting by Cornysh, in which B-flat and E-flat accidentals have been added to the vocal lines, despite the original signatures. This occurrence was first noticed upon initial examination of the sectionalised tables themselves.

The image shows a musical score for three voices: C (Cantus), T (Tenor), and B (Bass). The score is divided into two systems. The first system starts at measure 38 and ends at measure 45. The second system starts at measure 45 and ends at measure 50. The lyrics are: 'Ad te cla-ma-mus ex-an-tes fi-li-i E-ra-tur. Ad te su-spi-ra-tur. Ad te su-spi-ra-tur.' The vocal lines show various accidentals, including B-flat and E-flat, which are noted as additions to the original signatures.

Thus, questions arose regarding the modal reasoning behind instances such as these whereby, for example, the medius vocal line of a setting contained nothing in its signature throughout a particular text section, however the majority of B-naturals in that section had notated flats as accidentals beside them (see example below).

Eg. 6 An example taken from the setting by Horwood (text section O1), in which the situation described on the previous page occurs. Note the added B-flat accidentals.



Instances such as this one lead us to question why the composer would deliberately notate B-flats in the signature of one voice, for example, and then contradict this by notating natural accidentals within the music itself. One would assume this would have something to do with the modal organisation of the entire work itself, and that perhaps the composer was not indicating a simple chromatic alteration of a note, but rather indicating a change in modal orientation, from one mode to another⁸. To sum up, this process of analysis led to the establishment of more precise conclusions with respect to factors such as the overall and preferred ranges for each vocal line within each work, and the determination of a complete hierarchy of pitches for each individual *Salve regina* setting, than the first method of analysis previously discussed. In this respect conclusions regarding the modal organisation of each *Salve regina* setting formulated using this less subjective method, tend to hold more weight than those produced by the first method.

In continuing this line of study, I had to find a method of utilising this new data in order to be able to draw more objective conclusions as to the modal organisation of these works. In order to accomplish this, I decided to use a method conceived by Professor Margaret Kartomi, which was originally created as a means of studying non-Western music. Due to the nature of that music, Professor Kartomi needed a method through which she could establish pitch hierarchies and scales, as objectively and methodically as possible. As a result, the method she developed for her study was also ideal for my own analysis, as it allowed me to analyse my own data free of subjective bias⁹.

Kartomi was studying *Matjapat* songs from Central and Western Java, Indonesia. *Matjapat* is "the term given to songs set to a variety of autochthon Javanese poetic metres." (Kartomi 1973: 191) In particular, Kartomi was looking at elements such as structure, rhythm, metre, tempo, pitch, ornamentation and *patet* in her own transcriptions of dozens of *Matjapat* songs, many of which were transcribed from recordings made both in Java in 1959 and in Europe during 1965-6. The term *patet*, as defined by Kartomi herself, is "a concept similar to mode, *maqam* and *raga*, belonging to the *slendro* and *pelog* tone systems, having to do with hierarchical tonal construction of scales, pitch, melodic formulae, 'transposition' [and] 'modulation'." (Kartomi 1973: 192) Similarly, Sadie states "*patet* refers to 'mode' or 'melody type' in Indonesian music, and involves suggestions about tonality, cadences and compass." (Sadie 1988: 563)

⁹ This issue will be discussed at greater length during my analysis of each relevant work.

Kartomi employed various methods in order to examine these songs in great detail. A process of melodic reduction, for each song, was undertaken, whereby the repeated tones of a work were omitted, leaving one with a somewhat skeletal version of the melody itself – known as a *melos*. Kartomi then used this *melos* to study various elements of the melodic structure of the song, including intervallic structure, ‘level shift’ (the degree of ascent or descent in the melody), and ‘melodic direction’ changes (the number of direction changes a melody underwent within a work).

More importantly, perhaps, Kartomi devised her own method of estimating ‘tone prominence’ in a particular work, in order to “check *patet* analysis of songs”. (Kartomi 1973: 98) She states “the biggest problem of the analyses was to find as infallible a way as possible to determine the *patet* of each song.” (Kartomi 1973: 98) For each individual work, tone prominence was calculated “according to the respective tone’s frequency of occurrence, its number of appearances... as final tone of lines and as initial, final, highest, and lowest tone of the song, its relative time-length and its occurrence in repeated tone passages.” (Kartomi 1973: 98) Kartomi attributed a certain number of points to each tone, based upon how many times it featured in each of the categories listed above. The tones that feature with the highest number of points were found to be ‘the most prominent’ tones, whilst the tone(s) with the lowest point score(s) were known as ‘the enemy tone(s)’. (Kartomi 1973: 98-9)

⁹ See M. Kartomi's work entitled Matjapat Songs in Central and West Java for further information .

Kartomi developed these new methods of research in order to arrive at, as she terms it, infallible results with respect to the determination of a weighted scale for each of the songs she was studying.

The basis of her analysis involves reducing melodies down to their most prominent tones, whereby resulting in a "weighted scale" for each vocal or instrumental line. The method itself relies almost solely upon a system whereby simple mathematical equations are applied to data which has been collected in such a way as to be unaffected by personal interests. It therefore appears to me to be the most satisfactory analytical method by which to determine the mode of a particularly ambiguous work, without the analysis being affected by any preconceived ideas.

Therefore, after studying Kartomi's methods in detail myself, particularly her method for determining tone prominence in a work, it seemed particularly appropriate to transfer the method from the realm of non-western music where it was conceived, to this analysis of mode in early-Renaissance music.

It was not necessary for me to follow Kartomi's method in its entirety. Rather, I chose to test only the method she developed which would result in the formation of a 'weighted scale' for each vocal line, in three of my *Salve regina* settings. Such a small test group was chosen in order for me to establish fairly quickly, whether or not this method would be feasible for my study of these settings. My method, therefore, was limited to only the analysis necessary to follow Kartomi's procedure in order to arrive at conclusions with respect to two variables: Tone Repetition and

Tone Prominence. The following except is taken from Kartomi's work and gives a brief description of each of these terms, in her own words:

- Tone Repetition: successive repeated tones of the same pitch.
- Tone prominence: an estimation of the relative prominence of each tone of a melos, according to the tone's frequency of occurrence, its number of appearances as final tone of lines and initial, final, highest, and lowest tone of a song, its relative time-length and its occurrence in repeated tone passages; the purpose is to assess the usage of each tone of a song in relation to its *patet* and to confirm *patet* identity in ambiguous cases.

(Kartomi 1973: 201)

Thus, by analysing music with the purpose of examining these two factors, one is able to piece together a 'weighted scale' and, as a result, gain some impression of the importance of specific tones, within each vocal line and work, individually.

The three works were chosen on the basis of their seemingly uncomplicated modal organisation, this having been established during my initial study of these works. Firstly, the initial, highest, lowest and final tones were noted for each work and a table was created. This gave me an idea as to the degree of melodic movement within each of the voices. Following this, counts were conducted, again per voice part and work, with respect to the frequency of adjacent repeated tones and the occurrence of frequently held pitches. That is, each time a tone was stated and then

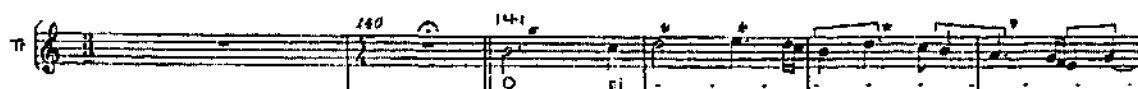
immediately repeated, the pitch and number of repetitions were registered (see example below).

Eg. 7 Shows the manner in which repeated tones were counted, this example having been taken from the setting by Huchyn. The initial presentation of the pitch in question was not counted, rather only the repetitions of that pitch.



Furthermore, each time a tone was presented that had a duration equal to, or greater than, a dotted crotchet, the pitch was again noted (see example below).

Eg. 8 The held pitches in this example, taken from the setting by Huchyn, have been marked by an asterisk. All those marked in such a way were taken into consideration when held tones were counted.



When all of this raw data had been collected and collated, it was used in determining percentages for tone repetition and frequently held pitches, in each of the settings. This was achieved through the use of the relevant formulas, conceived by Kartomi in her own study. The two formulas used were:

Tone Repetition: $\frac{100z}{y}$

y

where: z = the number of adjacent repeated tones in a work;

and

y = the total number of tones in the work.

Frequently Held Pitches: $\frac{100f}{y}$

y

where: f = the number of frequently held pitches, per tone

and

voice; and

y = the total number of tones in the work.

(Kartomi 1973: 181)

Following this, all of the percentages were graphed, for each vocal line and work separately, using bar graphs. Upon examining these graphs I was able to construct a hierarchy of pitches, based entirely upon data collected through the use of an objective method. Furthermore, when both sets of graphs were compared, per voice and work, several features became evident. For example, it was apparent what the overall range and preferred range for each voice was; which tones were most frequently used, both as long notes and as repeated tones; and where the important intervals were located within each of these preferred ranges (e.g. from G to D to G perhaps). It was found, therefore, from my trial testing of this method upon three of the *Salve regina* settings, that it would indeed prove to be a useful tool in the examination of the modal organisation of these works. As a result, this process of data collection and interpretation was repeated for the remaining settings.

Upon examining these graphs I was able to construct a hierarchy of pitches, based entirely upon data collected through the use of an objective method. Furthermore, when both sets of graphs were compared, per voice and work, several features became evident. For example, it was apparent what the overall range and preferred range for each voice was; which tones were most frequently used, both as long notes and as repeated tones; and where the important intervals were located within each of these preferred ranges (e.g. from G to D to G perhaps). It was found therefore, from my trial testing of this method upon three of the *Salve regina* settings, it would indeed prove to be a useful tool in the examination of the modal organisation of these works.

I believe that the results gained from this method of analysis are as unbiased, in terms of unconscious prejudice or preconceived notions, as possible. The method of data collection is purely objective in that notes are counted and tables and/or graphs are created. The result being that a 'weighted scale' can then be formed from these visual pictures that speak for themselves. One could argue, I suppose, that the interpretation of these visual images and the conclusions drawn from them could be subjected to the bias of the interpreter. However, I believe that they provide one with a more reliable and objective means of examining the modal orientation of a work, than simply by relying upon traditional practices that could be affected by the predisposed ideas of the researcher. I found that the 'weighted scale' that was created for each vocal line, of each work studied, was a reliable indicator of the prominent tones within each work. It gave a clear picture as to the

overall and preferred ranges of each vocal line, the most held and repeated tones, and the important intervallic structure that was operating within the separate lines. If mode, traditionally, is to be determined by factors such as range, finals, species of fourths and fifths and the patterns of tones and semitones within this range, how better to determine them as faithfully as possible, than by relying on unprejudiced, scientific means. I see no reason why, therefore, this method should be restricted in its use to the realm of non-western music, as it has been found here to be an invaluable tool, albeit somewhat time-consuming, for the examination of the modal orientation of complex works such as these. As a result of this success, this process of data collection and interpretation was repeated for the remaining *Salve regina* settings.

The main objective of this study is to ascertain whether or not the *Salve regina* settings present in the Eton College Choirbook are structured around the traditional modal system, or if they are in fact utilising a modified method of pitch organisation. The method outlined above relates directly to my hypothesis and therefore to this objective as well. For if it is found that the data presented in the tables and graphs, as a result of the use of note-counts; the determination of a hierarchy of pitches for each work; and the examination of Tone Repetition and Tone Prominence in each work, does in fact correspond with the conclusions drawn from my initial examination of these settings (i.e. as to the modal structure of each setting, determined through the use of the traditional method of establishing mode in a work), it can be said that my hypothesis is in fact supported

and that these settings are structured around the traditional modal system, as was the practice on the Continent during this period.

Sources used for the research and analysis of this study vary widely. Perhaps the most relevant were those written by Frank Llewelyn Harrison. Although his work was not the most recent of my sources, his studies of the Eton Choirbook did give me a place from which to begin.

The manuscript analysis was based upon a colour microfilm copy of the Eton College Choirbook (ms.178), obtained from the college library itself. The transcriptions of the *Salve regina* settings were those by Frank Ll. Harrison, present in his work entitled Musica Britannica: A National Collection of Music, The Eton Choirbook (Harrison 1956: X& XI).

Finally, this study has focused primarily upon the *Salve regina* settings present in the Eton College Choirbook. No works by other composers of the same era, or additional works from this manuscript have been considered. Sources have been limited to those that are relevant to Eton College and the Choirbook itself; to the works under examination; and to the study of mode both in these settings and in works (particularly English), during this period in musical history. The use of transcriptions of these works was limited to those by Frank Ll. Harrison (Harrison 1958: vol. X & XI).

CHAPTER FIVE: ANALYSIS OF *SALVE REGINA*

SETTINGS – STRUCTURE

There are a total of fifteen *Salve regina* settings in the Eton Choirbook, as previously mentioned. Due to the fact that the setting by Brygeman is incomplete however, it was not included in the analytical process followed in this study. Thus, the detailed discussion which follows, regarding the analysis of these works with respect to form, structure and mode, will be concerned only with the fourteen *Salve regina* settings that have survived in their complete form.

The *Salve regina* settings in the Eton Choirbook are extraordinarily complex works, comprising intricate writing that is often highly melismatic. In order to examine the overall structure of these pieces, it was necessary to break the area down into three major sections, which were then analysed in great detail. These three areas were form, texture and use of *cantus firmus*, and the results of this analysis will be presented here in this order.

Form in the Eton *Salve regina* settings is determined by the text, of which there are three different versions. These works make use of the troped version of the text, as was the case with other pre-Reformation polyphonic settings of the *Salve regina*. (Warren 1969: 119) The majority of the Eton works use the same text version, those being the settings by Browre (both works), Cornysh, Davy, Fayrfax, Horwood, Huchyn, Hygons, Lambe, Sutton, and Wylkynson (9 part work). The

second and third text versions differ only slightly, with an additional section at the end. The works that utilise these two text settings are those by Haycomplaynt and Wylkynson (5 part work), and Hampton, respectively. Included on the next page is the most popular text version, with an English translation of the Latin text underneath.

Text version - 1

Salve regina, mater misericordiae;

Hail, O Queen, mother of mercy;

Vita, dulcedo, et spes nostra, salve.

our life, sweetness and hope, hail.

Ad te clamamus exsules filii Evae.

Original Verses

We cry to thee, exiled children of Eve.

Ad te suspiramus, gementes et flentes in hac lacrimarum valle.

We sigh to thee, lamenting and weeping this vale of tears.

Eia ergo, advocata nostra, illos tuos misericordes oculos ad nos converte,

Turn then thou, our advocate, thy merciful eyes towards us.

Et Jesum, benedictum fructum ventris tui, nobis post hoc exsiliu ostende.

And after this exile show to us the blessed fruit of thy womb, Jesus.

Virgo mater ecclesiae, Aeterna porta gloriae, Esto nobis refugium Apud patrem et filium.

Virgin Mother of the Church, eternal gate of glory, be our refuge with the Father and the Son.

O clemens.

O merciful one.

Virgo clemens, Virgo pia, Virgo dulcis, O Maria,

Troped Verses

Merciful virgin, kind virgin, sweet virgin, Mary,

Exaudi preces omnium Ad te pie clamantium.

hear the prayers of all who cry dutifully to thee.

O pia,

O holy one,

Funde preces tuo nato crucifixo, vulnerato,

pour out thy prayers to thy crucified Son,

Et pro nobis flagellato, Spinis puncto, felle potato.

wounded and scourged for us, who was pierced with thorns and who drank gall.

O dulcis Maria, salve.

Sweet Mary, hail.

The *Salve regina* settings in this manuscript are written for between five and nine vocal parts, although five-part works predominate. This music, as noted by Harrison, "shows the extension in the range of pitch in choral music that came with writing for five or more parts, with the highest parts for boy trebles and the lowest in the modern bass range. (Hence) the regular compass of pieces in five or more parts... is twenty-two or twenty-three notes." (Harrison 1963: 311) When looking at these works individually, we find that vocal lines, in general, utilise a pitch range of approximately a tenth or an eleventh. The works themselves range in length from 177 to 285 bars, with the shorter works being those by Wylkynson² (177 bars) and Lambe (185 bars); and the longest works being those by Cornysh (258 bars), Browne² (237 bars) and Sutton (235 bars).

As mentioned previously, form in these settings is determined by the text. That is, firstly, if the text is divided into two main sections (i.e. the original and troped sections, see text example over page), each of which is separated further into six lines, we arrive at the following text divisions. The abbreviations used below may be translated as follows. The "O" in O1 to O6 refers to Original line 1 to 6; the "T" in T1 to 3 refers to Troped line 1 to 3; and the letters "OE" in OE1 to 3 refers to Original Exclamation 1 to 3. Furthermore, the letters "AE", used in reference to text versions two and three, refer to Added Exclamation. These abbreviations will be used in place of the above terms from this point onwards.

Text Version - 1

- O1 *Salve regina, mater misericordiae;*
- O2 *Vita, dulcedo, et spes nostra, salve.*
- O3 *Ad te clamamus exsules filii Evae.*
- O4 *Ad te suspiramus, gementes et flentes in hac lacrimarum valle*
- O5 *Eia ergo, advocata nostra, illos tuos misericordes oculos ad nos converte,*
- O6 *Et Jesum, benedictum fructum ventris tui, nobis post hoc exsilium ostende.*
- T1 *Virgo mater ecclesiae, Aeterna porta gloriae, Esto nobis refugium Apud patrem et
filium.*
- OE7 *O clemens.*
- T2 *Virgo clemens, Virgo pia, Virgo dulcis, O Maria, Exaudi preces omnium Ad te pie
clamantium*
- OE8 *O pia,*
- T3 *Funde preces tuo nato crucifixo, vulnerato, Et pro nobis flagellato, Spinis puncto,
felle potato.*
- OE9 *O dulcis Maria, salve.*

If these text sections are then compared to the works themselves, we see that these divisions are also apparent in the music, through the composers' use of solo-vocal and full-choir writing. That is, in all *Salve regina* settings under examination during this study, it was found that the text section used for each work, was further defined by the use of texture within that work. It should also be noted that changes to mensuration signs also assisted in further delineating these divisions, in that these changes occurred predominately at the ends of text sections. My focus here

however, is upon text settings and vocal texture, as I see these as being more structurally determining than the use of mensuration.

In order to further examine how texture in these works is used to delineate between text sections, it was necessary to analyse each work in more detail. The tables entitled "Structural Organisation of Works", which may be found in Volume II of this study, illustrate the use of texture within the vocal line of each work, separately. They can be seen to demonstrate the distinction between solo and full-vocal sections, and their relationship to the text sections themselves; and the manner in which the vocal parts are organised within each of the solo-vocal sections (i.e. the number and type of voices used). Also visible on these tables, are markings concerned with the use of *cantus firmus* parts, which will be discussed in great detail at a later time.

From these tables it is quite apparent that there is a definite break between sections O6 and T1 in all works, which is marked in the transcriptions with a double bar-line. The majority of works begin with solo sections - the exceptions being both works by Wylkynson and Browne's first setting. Although many of the pieces follow similar formats in section one, with respect to the arrangement of solo-vocal and full-choir sub-sections, there is no set format. In the second half of each work, the process of indicating the textual divisions in the music through the use of solo and full-choir writing is well established. Troped sections are sung by solo voices, whilst the full choir sings the exclamations. All works, except both settings by Browne and the setting by Hampton, clearly define the start and end of both the

exclamation and troped sub-sections with double bar-lines. Some works are further divided, with double bar-lines marked in the middle of the solo sections.

With respect to the use of texture itself in these works, it can be said that "most of the texture may be described as being an intermediate one between note-against-note style and that in which the voices are rhythmically free and independent, but non-imitative". (Warren 1969: 141) That is, in the full-choir sections, we see homophonic writing, typical of that sung by large groups of musicians, whereas in the solo sections, the vocal lines are more polyphonic, displaying much more freedom and individuality. These solo sections mostly comprise three-part writing, with some two-part sections, but very little four-part writing. The table included below illustrates, in terms of percentages, the amount of two-part, three-part, four-part, et cetera, writing in these works.

| Vocal Texture | | | | | | | | |
|------------------------|-----------|--------|--------|--------|--------|--------|--------|--------|
| Composer | No. vces. | 2-part | 3-part | 4-part | 5-part | 6-part | 7-part | 9-part |
| Browne | 5 | 4.17% | 37.50% | 0 | 58.33% | 0 | 0 | 0 |
| Browne ² | 5 | 16.67% | 22.92% | 2.08% | 58.33% | 0 | 0 | 0 |
| Cornysh | 5 | 10.42% | 47.91% | 0 | 41.67% | 0 | 0 | 0 |
| Davy | 6 | 8.33% | 35.42% | 6.25% | 0 | 50.00% | 0 | 0 |
| Fayrfax | 5 | 24.70% | 46.80% | 0 | 28.50% | 0 | 0 | 0 |
| Hampton | 5 | 17.86% | 37.50% | 1.79% | 42.85% | 0 | 0 | 0 |
| Haycomplaynt | 5 | 20.83% | 29.17% | 0 | 50.00% | 0 | 0 | 0 |
| Horwood | 5 | 29.17% | 14.58% | 0 | 56.25% | 0 | 0 | 0 |
| Huchyn | 5 | 33.33% | 10.42% | 0 | 56.25% | 0 | 0 | 0 |
| Hygons | 5 | 4.17% | 37.50% | 2.08% | 56.25% | 0 | 0 | 0 |
| Lambe | 5 | 14.58% | 25.00% | 0 | 60.42% | 0 | 0 | 0 |
| Sutton | 7 | 2.08% | 41.67% | 0 | 4.17% | 0 | 52.08% | 0 |
| Wylkynson | 9 | 6.25% | 33.33% | 4.17% | 0 | 0 | 0 | 56.25% |
| Wylkynson ² | 5 | 14.58% | 27.08% | 0 | 58.34% | 0 | 0 | 0 |

Returning our attention to the tables in Volume II, the following additional observations can be made. The use of full-vocal sections during the exclamations and solo-vocal sections on the troped verses, which is quite obvious here, has already been noted. However, what is interesting are the different approaches to the use of texture in the first half of each work. For example, in the second Browne work and the Hygons setting we see a similar pattern emerging, whereby both works begin with solo sections but move to full-vocal writing fairly quickly.

In contrast to this, the work by Davy alternates between the two textures; whilst the Hampton work commences with solo vocal writing, and remains this way until the O5 section. The work by Sutton begins a little differently, with alternating solo sections between its seven voices.

In the second half of each work, as mentioned, the text sections are quite obvious, due to the use of texture. Hence, the division between O6 and T1 is evident in all works, by the movement in texture between full-choir and solo-vocal writing. Also evident are the smaller sub-sections within the text, particularly in the troped sections, marked in the transcription with double bar-lines. These sub-sections can be seen in the tables as a result of the movement in the vocal lines between either full and solo writing, or between one group of voices and another. For example, in the work by Fayrfax and the second setting by Wylkynson, the textual sub-sections within T2 and T3 are evident by the alternation of voices within these solo-vocal sections. Furthermore, the importance of the words "Et Jesum", which are both preceded and followed by double bar-lines in the transcription, is reflected in these tables by the alternation in texture, in most works, from full-vocal writing during the singing of the words themselves, followed by a brief movement to solo-vocal writing. This movement is short-lived, with a return to full-vocal writing once more, before the T1 section. Thus it can be seen that the Eton composers have used the alternation between solo and full-vocal writing to emphasise divisions in the text settings themselves, in turn creating a solid structure on which to base each work.

The application of pre-existent musical material, such as the use of a *cantus firmus* line, in the composition of these works was quite popular. In fact, just over half of the *Salve regina* settings employ a *cantus firmus* line taken from plainsong. Lambe's work is particularly interesting in that the *cantus firmus* line was taken from the melody of the antiphon, rather than from additional plainsong. The table below illustrates the chant lines, liturgical origin and manuscript order for each of the works that employ a *cantus firmus* line.

| Composer ¹ | <i>cantus firmus</i> text | Liturgical origin & Calendrical position | Order of work as presented in manuscript |
|-----------------------|---------------------------|---|--|
| Huchyn | <i>Ne timeas Maria</i> | Advent, the Octave of the Nativity & the Annunciation of the B.V.M. | 10 |
| Hampton | <i>Gaudeamus omnes</i> | Octave of the Nativity | 15 |
| Browne | <i>Maria ergo unxit</i> | Washing of Feet, Holy Thursday | 6 |
| Hygons | <i>Venit ad petrum</i> | Washing of Feet, Holy Thursday | 13 |
| Sutton | <i>Libera nos</i> | Trinity Sunday and between Trinity & Advent | 8 |
| Wylkynson | <i>Assumpta est Maria</i> | Assumption of the B.V.M. | 1 |
| Browne ² | <i>Venit dilectus</i> | Assumption of the B.V.M. | 14 |

¹ Lambe's *Salve regina* setting was not included in this table as the composer has made use of the melody of the antiphon as opposed to choosing an external *cantus firmus* line.

As can be seen from this table, the *Salve regina* settings in this manuscript do not appear to have been ordered according to the liturgical calendar. Perhaps if one compared all of the Marian antiphons present in this collection with the overall order of the manuscript, a pattern would indeed be found that might suggest a connection with the liturgical calendar. However, this falls outside the realm of this study and therefore will not be investigated here. What is apparent from this table is that the *Salve regina* settings in this manuscript appear to form somewhat of a self-contained collection, in terms of liturgical use. More particularly, with the exception of Browne and Hygons' settings, they cover many of the significant Marian feast days throughout the year. For example, *Ne timeas Maria*, the *cantus firmus* line from Huchyn's setting is sung during Advent, the Octave of the Nativity and for the Annunciation. Hampton's *cantus firmus* line is also used for the Octave of the Nativity. Browne and Hygons' *cantus firmus* lines are both sung on Holy Thursday. Sutton's *cantus firmus* line *Libera nos* is sung on Trinity Sunday and between Trinity and Advent. Finally, the *cantus firmus* lines of Wylkynson's first setting and Browne's second setting are both sung for the Assumption of the B.V.M.. Hence, we have covered the period of twelve months in the liturgical year and many of the significant Marian feast days.

In terms of the manner in which these *cantus firmus* lines were employed within each of these works, the following was found. The tables entitled "Structural Organisation of Works" (Vol. II) demonstrate the manner in which the *cantus firmus* line is presented within each of the eight settings, represented by a solid line underneath each of the relevant tables. From an analysis of these tables, one can see that several of the

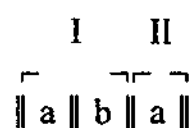
Salve regina settings were written around a *cantus firmus* line taken from plainsong. The exception being the work by Lambe in that, as previously mentioned, the *cantus firmus* line was taken from the melody of the antiphon, rather than from additional plainsong. In the settings that do have a *cantus firmus* line, excluding Lambe's work, this line was confined to, in the majority of instances, the tenor voice and to the full-vocal sections. This occurrence further reinforces the textual divisions in the music itself, and the overall structure of each work as a whole. The work by Lambe is much more complex than those mentioned above, with respect to the setting of the *cantus firmus* line itself. This work does not confine the appearance of the *cantus firmus* to the full-vocal sections, but rather the melody of the antiphon appears in various voices, both during solo-vocal and full-choir sections.

The application of a *cantus firmus* line to the first half of a work was quite varied, in that no two composers did it the same way. The arrangement of the *cantus firmus* during the second half of each work followed much the same pattern however, in that the *cantus firmus* line was confined mostly to the full-vocal sections only (i.e. during the exclamations). The exceptions to this were the settings by Lambe and Wylkynson (nine-part), both of which have *cantus firmus* lines in solo-vocal sections.

From my examination of all eight works that employ a *cantus firmus* line, the following more detailed observations were made. In the majority of these works, the *cantus firmus* line appears in the tenor voice. The exceptions being Wylkynson's nine-part setting, where one statement of the *cantus firmus* line is in the triplex; the work by Huchyn, in which the *cantus firmus* is in the contratenor vocal line during the OE8

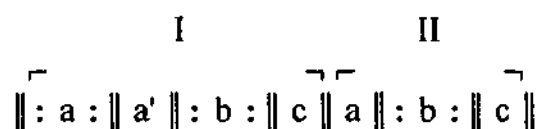
section; and the setting by Lambe, in which the *cantus firmus* is not confined to the tenor, but is dispersed between the lower four voices. The majority of the works are based upon two statements of the *cantus firmus* line, however, again, there are some exceptions. Two works, those by Wylkynson (nine-part) and Sutton, are designed around three statements of the *cantus firmus* line; the setting by Hampton uses only one statement; whilst the settings by Hacomplaynt and Hygons use a different format altogether. Firstly, with respect to the setting by Hacomplaynt, the second statement of the *cantus firmus* line repeats only half of the musical material heard in its first presentation. The following diagram illustrates this format.

Hacomplaynt:



Secondly, the setting by Hygons uses quite a complex format in terms of the arrangement of the *cantus firmus* line within the music itself, which can best be illustrated by the diagram below.

Hygons:



Below are tables for each of the *Salve regina* settings that employ the use of a *cantus firmus* line, along with the *cantus firmus* lines themselves. The tables display quite

clearly the manner in which this line is presented within each work, in terms of the vocal line it appears in, the order in which it is presented, in which part of the work it can be found, and the use of either solo or full-vocal texture at the time of its presentation.²

² Data included below was derived from a combination of my own work, along with that drawn from secondary sources. See Harrison, Music in Medieval Britain (1963: 312-5); and Harrison, "An English 'Caput'" (pp.209-14). The sarum chant used in reference to the Lambe work can be found in Harrison's Musica Britannica vol. X - The Eton Choirbook, Part I, p.141. Identification of Hampton's chant comes from Williamson's work The Eton Choirbook (1997: 327). Finally, the remaining examples have been drawn from Frere's Antiphonale sarisburiense (1901-24: 419, 495, 499), Frere's Graduale sarisburiense (1894: 96-8), the Graduale Romanum (1961: 436-7) and the Antiphonale monasticum (1934: 229-30). Bryden and Hughes work An Index of Gregorian Chant (1969) was also of assistance.

Browne

Cantus firmus line: Maria ergo unxit



| Voice | Text Section | Bars | Texture | C.F. Text | C.F. Tones |
|-------|--------------|---------|------------|------------------------|------------|
| Tenor | O1 | 3-6 | Full-vocal | <i>Maria ergo</i> | 1-7 |
| Tenor | O4 - O6 | 34-75 | Full-vocal | <i>unxit - Amen</i> | 8-67 |
| Tenor | OE7 | 106-15 | Full-vocal | <i>Maria - pedes</i> | 1-12 |
| Tenor | OE8 | 145-155 | Full-vocal | <i>Jesu - capillis</i> | 13-27 |
| Tenor | OE9 | 183-206 | Full-vocal | <i>suis - Amen</i> | 28-67 |

Browne²

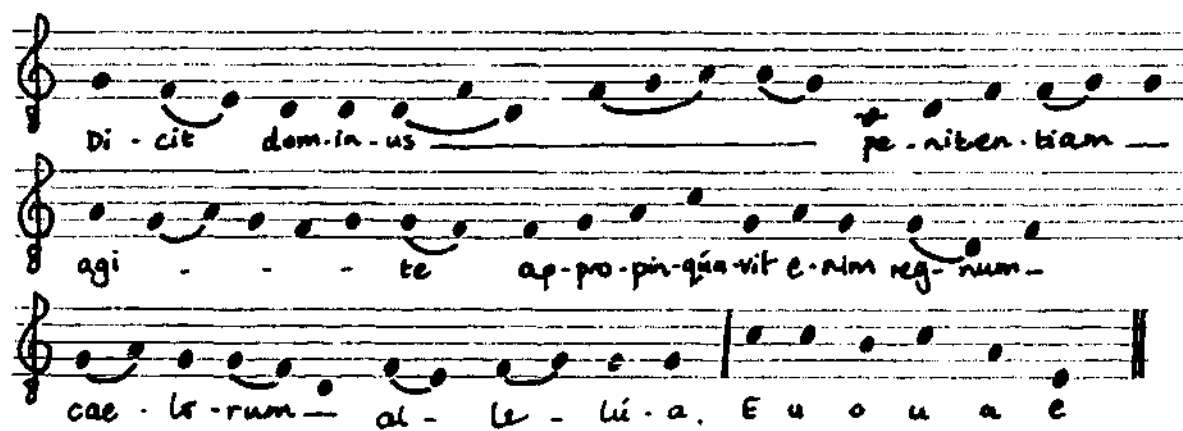
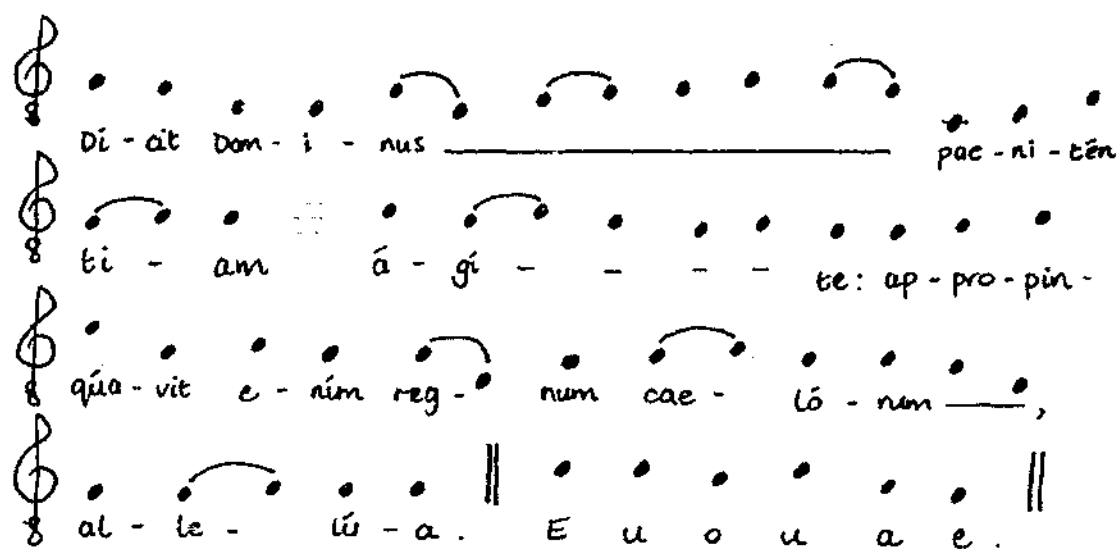
Cantus firmus line: *Venit dilectus*



| Voice | Text Section | Bars | Texture | C.F. Text | C.F. Tones |
|-------|-----------------|---------|------------|----------------------|------------|
| Tenor | end O2 - O5 | 13-38 | Full-vocal | <i>Venit - suum</i> | 1-21 |
| Tenor | O6 | 47-9 | Full-vocal | Ut - commedat | 22-25 |
| Tenor | mid-O6 - end O6 | 60-78 | Full-vocal | commedat - suorum | 26-41 |
| Tenor | OE7 | 114-121 | Full-vocal | Venit - lectus | 1-6 |
| Tenor | OE8 | 161-71 | Full-vocal | Venit - meus | 1-10 |
| Tenor | OE9 | 213-237 | Full-vocal | meus - suorum | 11-41 |

Hacomplaynt

Cantus firmus line: Unknown. Attempts were made to try and identify the *cantus firmus* line utilised in this setting, through the use of the work by Bryden and Hughes entitled An Index of Gregorian Chant. The only possibility was the chant entitled *Dicit Dominus*, which appears in the *Antiphonale monasticum* (1934: 229-230). This chant line is included below, followed by the melody of the antiphon taken from the *Antiphonale sarisburiense* (1901-24: 47), but it should be noted that when these tones are compared with those of the tenor line in Hacomplaynt's setting (commencing at the end of section O2), there is not an exact match.



Hampton

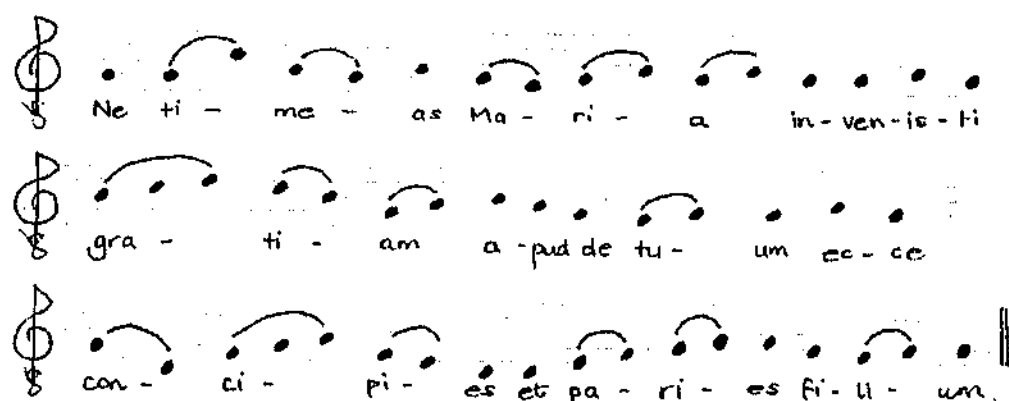
Cantus firmus line: *Gaudeamus omnes*

Gau-de-á . . mus om-nes in Dó-
mi- . . no, di-em fes-tum- oe-le-
brán-tes sub honó- . . re Agathae-
- Nán-ty- ris: de cu-jus passi-ó. . .
ne gau-dent An- . . ge . .
li, et colláu- . . dant Fi-
- li-um De-i.

| Voice | Text Section | Bars | Texture | C.F. Text | C.F. Tones |
|-------|-----------------------------|--------------|------------|-------------------------------|------------|
| Tenor | beg O5 - end O6 | 35 - 62 | Full-vocal | <i>Gaudeamus - honore</i> | 1-29 |
| Tenor | OE7 | 95 - 103 | Full-vocal | <i>Agathae - de cujus</i> | 30-49 |
| Tenor | AE1 | 173 - 181 | Full-vocal | <i>passione - gaudent</i> | 1-15 |
| Tenor | beg OE9 - almost end OE9 | 208 - 118 | Full-vocal | [Fi]lium-De[i] | 16-29 |
| Tenor | final tone OE9 | 221 | Full-vocal | [De]i | 30-49 |

Huchyn

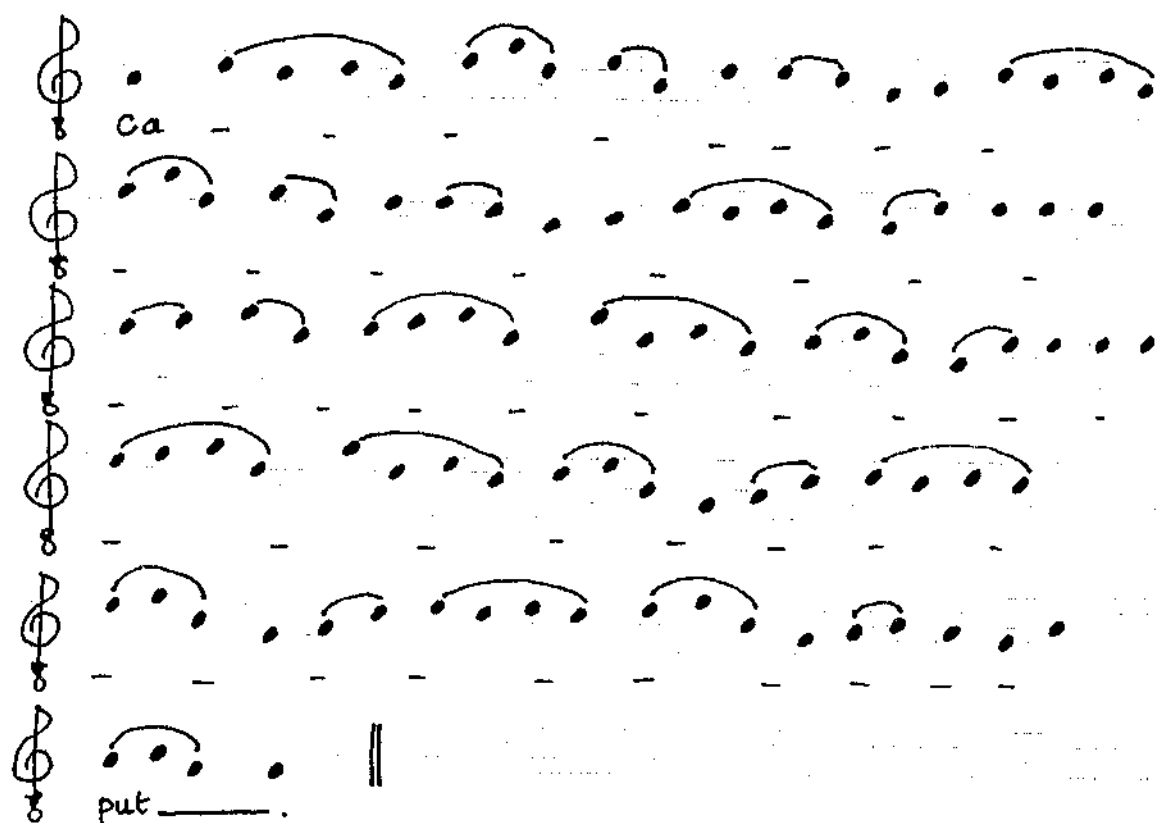
Cantus firmus line: Ne timeas Maria



| Voice | Text Section | Bars | Texture | C.F. Text | C.F. Tones |
|-------------|-----------------|--------|------------|---------------------------------|------------|
| Tenor | O2 - O4 | 15-42 | Full-vocal | <i>Ne timeas -</i> tuum | 1-29 |
| Tenor | mid-O6 - end-O6 | 65-79 | Full-vocal | ecce - filium | 30-49 |
| Tenor | OE7 | 101-12 | Full-vocal | <i>Ne timeas -</i> invenisti | 1-15 |
| Contratenor | OE8 | 141-51 | Full-vocal | invenisti - tuum | 16-29 |
| Tenor | OE9 | 182-99 | Full-vocal | ecce - filium | 30-49 |

Hygons

Cantus firmus line: Venit ad petrum



| Voice | Text Section | Bars | Texture | C.F. Text | C.F. Tones |
|-------|-------------------|---------|------------|--------------|------------|
| Tenor | end O2 - end O3 | 31-40 | Full-vocal | <i>Caput</i> | 1-14 |
| Tenor | O4 - mid-O4 | 41-51 | Full-vocal | <i>Caput</i> | 15-28 |
| Tenor | end O4 | 52-56 | Full-vocal | <i>Caput</i> | 29-34 |
| Tenor | O5 - mid O5 | 57-67 | Full-vocal | <i>Caput</i> | 35-53 |
| Tenor | end O5 - start O6 | 75-82 | Full-vocal | <i>Caput</i> | 54-68 |
| Tenor | end O6 | 94-105 | Full-vocal | <i>Caput</i> | 69-97 |
| Tenor | OE7 | 128-33 | Full-vocal | <i>Caput</i> | 1-14 |
| Tenor | OE8 | 158-64 | Full-vocal | <i>Caput</i> | 35-53 |
| Tenor | start OE9 | 158-93 | Full-vocal | <i>Caput</i> | 54-68 |
| Tenor | mid-OE9 | 195-202 | Full-vocal | <i>Caput</i> | 69-98 |

Lambe

Cantus firmus line: uses the melody of the antiphon

Rowl. liturg. d. 8. fol. 181

7(14)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16(1) 17(1) 18 19 20 21 22 23 24 25 26 27

Sal - ve re - gi - na mi - se - ri - cor - di - e
vi - la dul - ce - do - el spes no - stra sal - ve

28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53

an - te cla - ma - mus e - xu - les - fi - li - i - e - ve ad

54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79

te xu - spi - ra - mus ge - men - tes et - fien - tes in - hac la - cry - ma -

80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105

- rum - val - le e - ya er - gu ad - vo - ca - ta - no - stra il - los

106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131

tu - os - mi - se - ri - cor - des - o - cu - los ad - nos -

132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157

con - ver - te et le - sum - be - ne - di - ctum fru - ctum - ven -

158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184

- tris tu - i no - bis post - hoc e - xi - li - um o - sten - de

185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212

Vir - go - ma - ter - ec - cle - si - e e - ter - na por - ta
Vir - go - cle - mens - vir - go pi - a vir - go dul - cis o
Fun - de - pre - ces - tu - o - na - to cru - ci - fi - xo - vul -
(b) Glo - ri - o - sa - de - i ma - ter cu - ius na - tus ex -
De - le - cul - pas - mi - se - ro - rum ter - ge sor - des - pec -

213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240

glo - ri - e e - sto - no - bis - re - fu - gi - um a - pud
ma - ri - a ex - au - di pre - ces - o - mni - um ad - le
ne - ra - to el pro - no - bis - flag - gel - la - to spi - nis
lat - pa - ter o - ra - pro no - bis - o - mni - bus qui - tu - i
ca - to - rum do - na - no - bis - be - a - to - rum vi - tu - lam

241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266

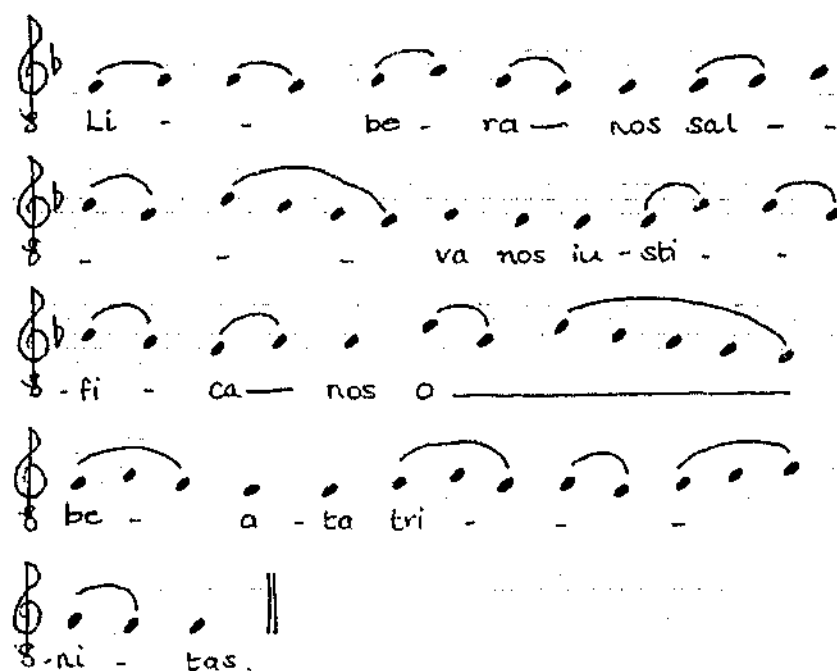
pa - trem - el - fi - li - um O - cle - mens
pi - e - cla - le - man - ci - um O - pi - a
pun - cto - fel - le - po - ta - to O - mi - a
me - mo - ri - am - a - gi - mus O - pul - tis
tu - is - pro - ci - bus - pul - chra

O - dul - cis - ma - ri - a -

| Voice | Text Section | Bars | Texture | C.F. Text | C.F. Tones |
|-------------------|--------------|--------|------------|--------------------------|------------|
| Tenor | O1 | 1-4 | Solo-vocal | <i>Salve</i> | 1-5 |
| Tenor | O2 | 17-23 | Full-vocal | <i>vita - nostra</i> | 1-15 |
| Bassus | end O2 | 24-7 | Full-vocal | <i>salve</i> | 16-27 |
| Tenor | O4 | 38-9 | Full-vocal | <i>suspiramus</i> | 55-8 |
| Bassus | O5 | 47-8 | Full-vocal | <i>eya</i> | 88-90 |
| Tenor & Bassus | mid-O5 | 52 | Full-vocal | <i>illos</i> | 128-9 |
| Tenor | end O5 | 60 | Full-vocal | <i>ad</i> | 128-9 |
| Bassus | start O6 | 62 | Full-vocal | <i>et iesum</i> | 141-4 |
| Contra- tenor | T1 | 76-8 | Solo-vocal | <i>Virgo mater</i> | 185-92 |
| Medius | T1 | 80-6 | Solo-vocal | <i>ecclesie - glorie</i> | 198-218 |
| Tenor | mid-T1 | 90-3 | Solo-vocal | <i>esto nobis</i> | 219-25 |
| Medius | OE7 | 103-4 | Full-vocal | <i>O ____</i> | 256-8 |
| Medius1 | T2 | 112-5 | Solo-vocal | <i>Virgo clemens</i> | 185-97 |
| Medius2 | T2 | 115-20 | Solo-vocal | <i>Virgo pia - Maria</i> | 198-218 |
| Tenor | OE8 | 136-44 | Full-vocal | <i>O pia</i> | 256-66 |

Sutton

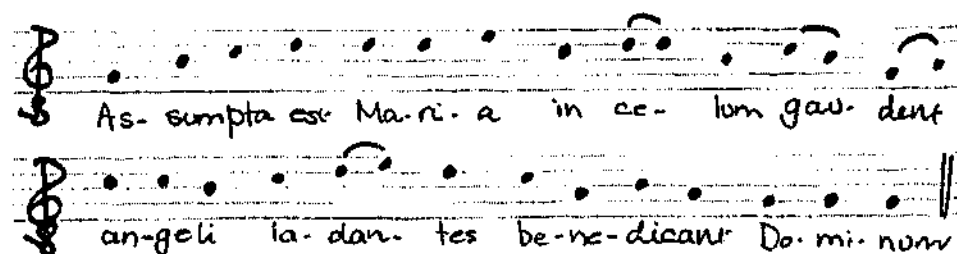
Cantus firmus line: Libera nos



| Voice | Text Section | Bars | Texture | C.F. Text | C.F. Tones |
|-------|--------------|--------|------------|--------------------------|------------|
| Tenor | O3 - O4 | 26-58 | Full-vocal | <i>Libera - trinitas</i> | 1-53 |
| Tenor | O5 | 75-81 | Full-vocal | <i>Libera nos</i> | 1-9 |
| Tenor | end O6 | 90-6 | Full-vocal | <i>salva nos</i> | 10-20 |
| Tenor | OE7 | 124-35 | Full-vocal | <i>iustifica nos</i> | 21-30 |
| Tenor | OE8 | 175-87 | Full-vocal | <i>O beata trinitas</i> | 31-53 |
| Tenor | OE9 | 219-35 | Full-vocal | <i>Libera - trinitas</i> | 1-53 |

Wylkynson

Cantus firmus line: Assumpta est Maria



| Voice | Text Section | Bars | Texture | C.F. Text | C.F. Tones |
|---------|-----------------|---------|------------|---------------------------|------------|
| Tenor | O1 | 1-6 | Full-vocal | <i>Assumpta - celum</i> | 1-11 |
| Tenor | O4 - O6 | 29-52 | Full-vocal | <i>Assumpta - celum</i> | 1-11 |
| Tenor | end O6 | 67-74 | Full-vocal | <i>Gaudent - angeli</i> | 12-17 |
| Tenor | OE7 | 102-8 | Full-vocal | <i>angeli - ladantes</i> | 18-21 |
| Tenor | OE8 | 155-62 | Full-vocal | <i>Ladantes - Dominum</i> | 22-9 |
| Triplex | mid-T3 - end T3 | 185-211 | Solo-vocal | <i>Assumpta - Dominum</i> | 1-29 |
| Tenor | OE9 | 212-29 | Full-vocal | <i>Assumpta - Dominum</i> | 1-29 |

It can be seen from the above tables that the use of *cantus firmus* parts in these eight works provided the pieces with not only a strong foundation upon which to build, but also with an additional element with which to further reinforce the overall structure of these settings. That is, the employment of a *cantus firmus* line during the full-vocal sections, particularly within the second half of each work, aided in distinguishing between the overall styles of the solo versus full-choir sections. In turn, this

intensified the overall structure of each work, the basis of which was governed by the text.

One other important factor that needs to be addressed here is the issue of mode in the *cantus firmus* settings themselves. That is, what affect, if any, do the modal orientations of the *cantus firmus* chants and the melody of the antiphon, have upon the modal orientations of the *Salve regina* settings they appear in? It was found that when the modes of the chant lines were compared with my findings with respect to the modal structures of these nine works, in the majority of cases, both were in agreement. That is, not only did the overall ranges, pitch structures and finals concur, but so did the use of either B-flat signatures (for transposed modes), B-flat accidentals or the absence of a flat in the signature altogether. I do not wish to delve too deeply into the categorisation of the *Salve regina* settings, with respect to mode, here, as this will be examined in great detail in the chapters to follow.

It was found that in the settings by Hygons, Huchyn, Sutton and both works by Browne, the modality of the chant from which each of the *cantus firmus* lines was taken was the same as the modal structure for each of the works as a whole. The same findings were apparent when looking at the modal orientation of the melody of the antiphon and Lambe's *Salve regina* setting. In addition, when looking at the use of notated accidentals in this work, the following was apparent. Lambe has included notated flats that appear in the melody of the antiphon, in the appropriate section of his work, where the *cantus firmus* line is being stated. Furthermore, in the majority of

cases, the B-naturals which appear in the chant line appear as B-naturals in the *Salve regina* setting too. In the few instances where they do not, due to a B-flat signature in the voice that is singing the *cantus firmus* line (e.g. Tenor voice, bars 91 and 140), Lambe has chosen not to include a natural sign to cancel out the flat. If one looks to Harrison's transcription of this work in the Musica Britannica edition, ficta signs have been added above each of these notes, indicating that they should in fact be sung as B-naturals.

Of the remaining three settings, the following has been found. In the nine-part setting by Wylkynson, the *cantus firmus* line has been transposed down a tone to F, with a B-flat added to the signature. This results in the chant line being of the same modal orientation as the work. It is interesting to note here the fact that the composer transposed the *cantus firmus* line to match what he was striving for in his work, and not the other way around. In the setting by Hampton, the *cantus firmus* line has also been transposed, this time up a fourth to G. Although the modal structure of this chant and Hampton's work do not match exactly, mainly due to differences in range (G - D - G versus D - G - D, respectively), the B-flat signatures in both concur, as does a preferred range of G to D, as apparent in the work itself. Finally, with respect to the Hacomplaynt setting, it was found that there was not an exact match with respect to the modal orientation of the chant line and the setting itself. This was not really surprising as the *cantus firmus* line for this work is yet to be identified conclusively and the example given here was never an exact match.

This now leads us to ask whether the mode of the chant line influences the mode of the setting, or vice versa. From my examination of this material, I believe that the modal orientation of each of the works was the governing force and that the composer either chose a chant line that would best fit his compositional ideas, given calendrical considerations; or that he made changes to the chant line so that it would suit. Although I can never presume to be able to prove this conclusively, I believe that there are subtle suggestions for this argument. Firstly, the fact that in two settings the chant lines have been transposed to match the modal structure of the works themselves and secondly, the manner in which Lambe has not bothered to alter his B-flat signatures, nor add a notated natural sign next to the affected Bs, when the antiphon clearly required B-naturals.

One final point must be made here, with reference to those remaining works that do not employ the use of a *cantus firmus* part, nor make use of the melody of the antiphon in its place. From my analysis of these five pieces, it was found that although the tenor voice continued to serve as a strong foundation part within the overall work, it was also given much more freedom of movement, often featuring in solo-vocal sections alongside other vocal lines. This is somewhat contrary to the behaviour of the tenor line in the works that featured a *cantus firmus*, in that the role of the tenor appeared to be more constrained, acting more so as a foundation part with what appeared to be much less solo-vocal involvement.

CHAPTER SIX: ANALYSIS OF *SALVE REGINA*

SETTINGS – MODE

Initially, my attempts to study mode in the *Salve regina* settings of the Eton Choirbook were fraught with problems. This was partially due to the complexity of the music itself, but mostly due to the method that was used to determine the modal organisation of these works. The majority of literature concerned with the identification of mode in Medieval and Renaissance music, as discussed earlier, requires one to examine specific elements of each work, in order to come to some conclusion as to the work's modal organisation. These key elements centre predominantly on the range, final and melodic characteristics of each vocal part. Upon examining these factors in the Eton works, it was found that one could almost always arrive at the desired results, due to the subjective nature of this method. That is, the melodic line of a particular voice could be shown to follow for example, a C - G - C outline, if that was what was hoped for, simply by placing a little more importance on certain pitches and justifying other less desired results (see example one).

Eg.1 Browne² CT bb.1-22 Here we have a vocal line that appears to have two different pitch outlines operating simultaneously. That is, upon initial examination of this example, two different hierarchies can be seen, one based on a C - G - C outline, the other on a C - F - C structure. If for some reason the desired outline was the one based upon a C - G - C structure, it is possible to justify the other tone (i.e. F), simply by placing more importance upon the former, and less on the latter. In other words, the pitches C and G could be seen to be the prominent tones, whilst the pitch F is the neighbouring pitch to G and is used in such a manner as to reinforce that pitch.

In order to examine modal organisation within these settings in a more objective manner, a rather unconventional method was chosen. This method, although usually used in the study of non-Western music, was borrowed in part and then applied to the settings under examination in this study. As a result, a more reliable indication of the hierarchy of pitches for each voice of every setting was arrived at; along with information pertaining to the incidence of held tones and repeated pitches. When all of this information was collated and compared, the end result was a quite in-depth picture of the modal organisation of each work, which was as objective in its formation as was possible.

The examination of mode within these *Salve regina* settings encompasses three major areas. These areas are represented in this study in the form of both tables and bar graphs. The graphs themselves fall under three main categories - Total Number of Tones (T.N.T.); Adjacent Repeated Tones (A.R.T.); and Frequently Held Tones (F.H.T.) - and are primarily the end results of many hours of tedious note counting. As their titles suggest, the T.N.T. graphs represent the number of tones, per voice part and work; the A.R.T. graphs the incidence of repeated pitches, per voice part and work; and the F.H.T. graphs the incidence of long pitches (dotted crotchets and above), again within each voice part and work. The tables are included to show an overall breakdown, for each individual voice part and work, of the number of tones within each text section. This is useful not only to see the use of different pitches in different sections, but I have also included the initial signature and all signature changes for each vocal line. One is therefore able to compare all signature changes with each other and with the three major graph-types (i.e. T.N.T., A.R.T. and F.H.T.), for each voice part as well. These comparisons assist in the formation of conclusions with respect to the modal identity for each work.

It should be noted here that the use of the terms "tone" and "pitch" during my analytical discussion will be seen to be interchangeable in this study. Furthermore, with respect to signature, any reference to "one flat" will refer to a B-flat in the signature, whilst the term "two flats" refers to both a B-flat and an E-flat in the signature. One final explanation is needed for the terms "prominent tones" and "neighbouring pitches". The first refers in this study to either the final or reciting-tone of a particular mode, and the latter to the pitches immediately preceding or

following those tones. That is, the prominent tones in mode one on D, for example, would be D and A, whilst the neighbouring pitches would be C, E, G and B.

It is my intention to present the reader with a detailed discussion of my conclusions regarding the modal organisation of each work. This will entail an examination of all raw data concerning these works, along with a comparison of these results. It is important to note here that during my analysis of these works, similarities between them became quite apparent. That is, certain features of the initial two works under examination were found repeated in all remaining works. In order to avoid repetition during my discussion of each setting, I will attempt to outline these similarities now and will give more detailed examples of these incidences for each work, in the in-depth discussion to follow.

Upon examining the *Salve regina* settings, it was discovered that certain features that stood out in the analysis of these works were repeated within all works studied. These features, or patterns, centred on the relationship between pitches within the overall hierarchy of tones itself. That is, how the pitches themselves are used to enhance the importance of more significant tones within the hierarchy. In order to illustrate this pattern, I will use an example of a simple hierarchical structure, based upon mode one on D.

Let us say therefore, that our work is based upon Dorian on D, with its final being D and its reciting-tone A. Thus, we would be looking at a work exhibiting a D - A - D structure, with these three pitches being the most significant or prominent tones

overall. In order to enhance these pitches, their respective neighbouring tones are used in a variety of ways. By 'neighbouring tones' I am referring to those tones either side of the prominent pitches - C and E for D, and G and B for A. These neighbouring notes are used to approach the prominent tone from above or below (i.e. C rising to D, or E falling to D); they are often repeated numerous times in a variety of cadential figures, before presentation of the prominent tone (i.e. G G G G A); they are used as held tones prior to our prominent tone; and they are often placed immediately preceding a cadence on either of our prominent tones. It is for these reasons that neighbouring pitches in the graphs presented in this study, often appear to be numerically more significant than the prominent tones themselves, when actually they contribute to further enhancement of these significant pitches. Furthermore, the use of thirds, either above or below the prominent tone to achieve a similar goal as the neighbouring pitches, is also apparent from my analysis of these works. (see example below)

Eg. 2 Wylkynson (9 pt.) All vces. bb.29-34 Shows the importance of the interval of a third, seen here in use in all voices to proceed from one prominent tone to another.

The musical score shows nine staves, each representing a different voice part. The lyrics are in Latin and are written below the notes. The music is in a key with two flats (B-flat and E-flat) and is in common time. The score is divided into measures, with the first measure of the example being measure 29. The lyrics for the first measure are: "Ad te su-spi-ra-mus, ge-men-tes et fien-tes in hac la-cri-ma-rum val-". The interval of a third is prominent in all voices, as the notes move from one pitch to another that is a third away.

In fact, Harman even remarks upon the prominence of the interval of a third in British music, stating:

In Britain... the acceptance of the third as a basic interval began a good deal earlier than in the rest of Europe. (Harman 1958: 147)

Thus, thirds are often seen in the same situations described above, resulting in high totals in the graphs presented in this study, which can, as a result, often lead to quite deceptive conclusions. It is for the above reasons that these secondary pitches often display, quite misleadingly, the highest totals in each of the three graph-types, for individual works and vocal lines. Rather, from my analysis, it appears that the role of these secondary tones is to further emphasise the prominent pitches within each voice; a pattern that is maintained throughout all *Salve regina* settings examined.

The information that follows provides the reader with numerous examples of this organisational phenomenon, drawn from all works analysed in this study. The *Salve regina* settings themselves have been grouped into modal categories based upon my analysis of each work in this study. Works will therefore be presented and discussed in modal order, with examples relating to how they were categorised included within this discussion. It is hoped that, following an examination of the material that follows, all conclusions regarding the modal analysis of the works that have been presented in this study will become much clearer to the reader. Furthermore, that the methodology proposed in this study will be seen to be both a successful analytical tool and more objective means of analysing mode in works such as these.

Throughout the previous chapters, a detailed analysis of the structure and character of these settings has been undertaken, coupled with an overview of the analytical method used in this study. It is now my intention to present a comprehensive look at the results obtained over the course of this study; specifically those results pertaining to the identification of mode in these works.

MODES ONE AND TWO

LAMBE'S *SALVE REGINA*

The first work to be examined in this section, is the *Salve regina* setting by Lambe. This setting was shown to be quite complex in its modal organisation, being based predominately upon a mixture of two modes. Upon examining the T.N.T. graph, coupled with the music itself, it was found that the first and second triplex parts and the bassus voice were structured upon an A - D - A outline. The remaining four voices - the first and second medius parts, the contratenor and the tenor - in contrast, were found to be structured upon a D - A - D outline. The internal pitch relationships were found to support this observation, with the prominent tones noted above, being reinforced by more secondary tones. That is, in the vocal parts seen to be based upon an A - D - A framework, we see the pitches C and E moving to D, B falling to A, high G rising to A, and F maintaining a strong position as both the third between D and A and the reciting-tone for this mode. On the other hand, in the voices based upon a D - A - D structure, C and E move to D, G and B/B-flat move to A, whilst F is once again important as the third between D and A. From the sectionaïsed tables it is apparent that there is very little, if at times any, use of the B-flat accidental in the upper five voices, and at no stage does the flat appear in the signature of any of these parts. Furthermore, there is also very little use of any other accidentals within the music of these voices, and when they do appear they are used only to emphasise the key pitches in each voice. The tenor and bassus voices however do make use of a B-flat in their signatures. The flat enters the tenor part mid-way through the 'O6' section and prevails for the remainder of the piece; whilst the bassus voice contains a B-flat in its signature throughout the

work. With respect to the tenor, during the first half of the work (i.e. pre-signature change), there is still some use of a B-flat, as it appears in the manuscript as an accidental. The use of a B-flat increases during the second half, which coincides with the change of signature. The bassus voice displays a consistent use of a B-flat throughout the work, with only one B-natural indicated in the entire piece. Due to the addition of a B-flat to the signatures of the two lowest voices, the conclusions illustrated above regarding the modal classification of this work must be adjusted. It can therefore be said that this work is based upon a combination of mode one in both its regular form and irregular (with the addition of a B-flat signature to the tenor voice during section O6) and mode 2, again in its regular form and irregular (with a B-flat signature in the bassus voice throughout the work). In other words, in their regular forms as mode one on D (a D to D range, a reciting-tone on A and a final on D), and mode two on A (an A to A range, a reciting-tone on F and a D final) and in their irregular forms, with the addition of B-flat signatures. The following discussion illustrates these conclusions more clearly, aided by the use of relevant examples.

The first and second triplex voices, as mentioned above, were seen to be based upon an A - D - A outline, with the pitch D being the final and the pitch F highlighted as the reciting-tone. Due to the fact that the second triplex part appears for just eleven bars during the work, the data gathered as a result of examining this voice was not considered to be quite as weighty as that of the data connected with first triplex voice. Nevertheless, the T.N.T. graphs for each of these voices both demonstrate this overall A - D - A outline, with perhaps the majority of the vocal movement being between the upper D to A fifth. It is also noticeable from these

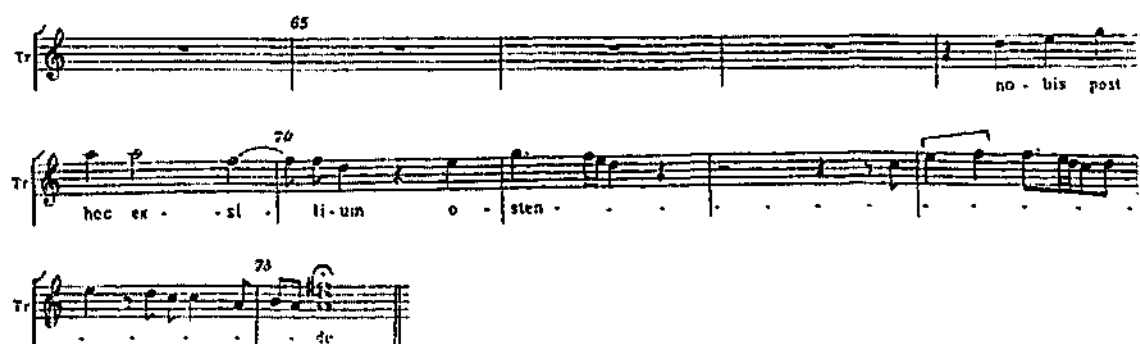
graphs that the columns representing the most prominent pitches (in this case D, A and F), are somewhat overshadowed by those of other pitches. This can, in the majority of cases, be explained by the high repetition of notes other than the key pitches within each vocal line. For instance, if one looks at the graph showing the total number of tones for the first triplex voice, it is apparent that the columns for C and E are greater than those for A, D or F. However, if one then looks at the A.R.T. graph for the same voice, this occurrence is explained by the fact that these two pitches are two of the most frequently repeated tones, along with F, within that voice. This pattern was found to be evident in all works examined in this study, and occurs due to the frequent use of repeated pitches both leading-up to, and immediately preceding, cadences. With respect to the A.R.T graph for the second triplex voice, we see that the most repeated tone in this vocal line was, by far, the pitch C. When looking at the F.H.T. graphs, for each of these two vocal lines, we see that the most frequently held pitches in the first triplex voice were F, C and E, closely followed by D and A. In the second triplex line we see that they were C (used to approach D), F-sharp and A. It is important to note here, with respect to the latter voice, that the apparent importance in the results of the pitch F#, along with C and A, is due to the fact that they were the only three held pitches within the short appearance of this vocal line. Hence, the columns for each of these pitches in the F.H.T. graph result in the false assumption that the three pitches were used as held tones frequently, rather than only once each, as they actually were.

The often exaggerated importance of secondary pitches, displayed in much of the relevant data for these two vocal lines, can be explained more clearly following an examination of the internal pitch structures. From my analysis of the music itself,

it was found that the secondary pitches within each of these vocal lines were used in a variety of ways (e.g. as held and repeated tones), in order to further reinforce the more prominent tones - A, D and F. Thus, we see G and B moving to A; E moving to both D and F; and C has a dual role, both as a third above A and as a step below D.

Thus, it may be concluded that both the first and second triplex parts are based upon a strong A - D - A structure, with an emphasis upon the pitch F. The secondary pitches within each of these vocal parts were found to support the above prominent tones of A, D and F, and neither voice contains anything in their signature. Finally, all data gathered, including the material gained from the relevant graphs, supports the above conclusions. It can therefore be said that these two vocal lines are based upon a mode two structure in its regular form, with a range of A to A, a D final and an F reciting-tone. The examples that follow further illustrate the above conclusions.

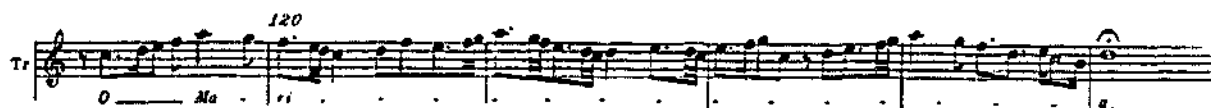
Eg.1 TR1 bb.68-75 Example illustrating the A - D - A outline quite clearly, along with the use of held tones on the upper and lower As. Note also the use of repeated tones on C, just prior to the final cadence upon A, where the use of the upper neighbouring pitch B is also evident.



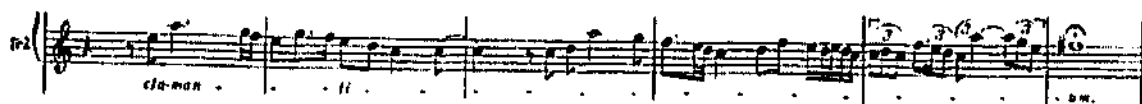
Eg.2 TR1 bb.103-11 Shows the use of held pitches throughout this progression, which centres predominantly on the upper D to A fifth.



Eg.3 TR1 bb.119-24 A rather short example which demonstrates the use of stepwise progressions, both in ascent and decent, to facilitate the movement between the pitches D and A.



Eg.4 TR2 bb.130-5 Example taken from the brief appearance of the second triplex voice, which illustrates the importance of the pitch high A along with the use of stepwise progressions, before the final cadence upon the held pitch F#.



The next two vocal lines, those of the first and second medius parts, are based upon a strong D - A - D outline. As was the case with the previous voices, the second medius vocal line appears only very briefly and, as a result, the two vocal parts will be discussed here together. Upon examining the sectionalised tables for both vocal lines we find that neither voice contains anything in its signature during the work. The first medius vocal line makes some minor use of additional accidentals, however this was not seen to be of any major significance to the overall modal orientation of the work. The strong D - A - D outline exhibited by both vocal lines is apparent when looking at the T.N.T. graph for each of these voices. With respect to the first medius part, it can be seen that the majority of the movement in this voice is centred on the lower D to A fifth. In the graph for the second voice we find the same pattern occurring, however it is not as clear in this example due to the fact that this vocal line appears only very briefly in this work and as a result, the data gained has not been reinforced as strongly as that of the first vocal line.

From an examination of the A.R.T. graphs we can see that the most often repeated tones in the first medius part were A and F (a third above D); whilst in the second vocal part they were A and B. These latter results are not as significant as those

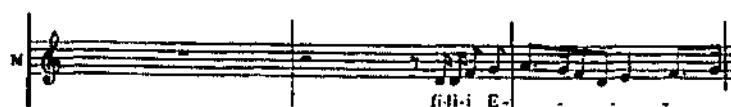
gained from the first vocal part, again due to the fact that the second voice appears only briefly in this work. Hence the two pitches illustrated in the A.R.T. graph for the second voice were the only tones repeated during the presentation of this vocal line, and therefore appear to be of more significance in the graph in question than they really are. Upon examining the F.H.T. graphs for each of these voices, it can be seen that the most frequently held tone in both vocal lines was quite clearly the pitch A - the reciting-tone for this mode.

The important role secondary pitches play in further reinforcing the more significant tones in each vocal line continues in these two voices. Following an analysis of the music itself, coupled with the information presented in the graphs, the following conclusions have been drawn. In terms of which pitches appear to be used to heighten the importance of another tone, we find the same pattern occurring in both vocal parts. Once again, however, this pattern is much clearer in the first vocal part due to the brevity of the second part in this work. Thus, we can see that the pitches C and E move to D; G and B/B-flat are used to approach and reinforce A; and F is significant as both a third above D and a third below A.

To conclude therefore, it can be said that both voices exhibit a D - A - D outline, albeit the first voice a little more strongly. Neither voice contains anything in its signature, nor makes any significant use of other accidentals. Finally, from an examination of all three graph-types, along with the music itself, for each of these voices, the significance of the pitches D, A and high D was reinforced, with the use of secondary tones to heighten their importance. Therefore, it can be said that both vocal lines are based upon a mode one structure in its regular form, with a D to D

range, a D final and an A reciting-tone. The following example has been included here in order to illustrate the above conclusions more clearly.

Eg.1 M1 bb.31-2 Brief example illustrating the strong lower D to A fifth, along with the use of the D to F third.



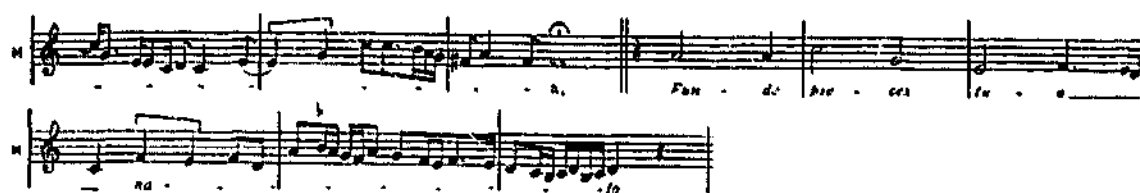
Eg.2 M1 bb.47-55 Demonstrates the use of held tones and repeated pitches, within a strong D to A outline. Note also the use of the pitch B-flat at bar 48 to reinforce the more significant tone A.



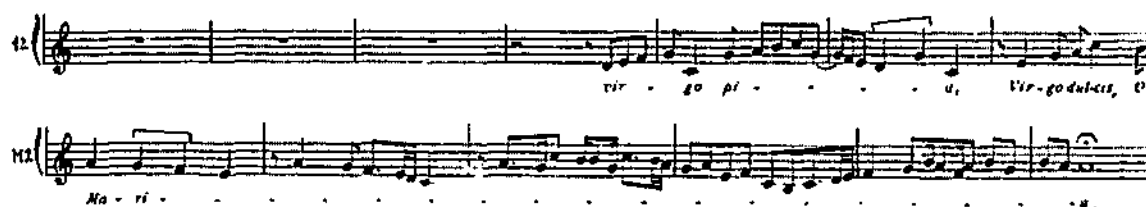
Eg.3 M1 bb.112-5 Again we see the strong D to A fifth being highlighted, this time by the use of step-wise progressions via the neighbouring pitches. Once more, we see the pitch B-flat being used to reinforce the pitch A.



Eg.4 M1 bb.145-50 A final example from this vocal line demonstrating the use of held pitches. Also noticeable is the use of step-wise movements prior to the final cadence on D.



Eg.5 M1 bb.118-24 Shows the importance of the pitch A, in particular, throughout this brief example. Through the use of both step-wise progressions and leaps, this pitch is further highlighted in this vocal line.



The next voice to be discussed here is the contratenor. As previously stated, this vocal line also exhibits a strong D - A - D outline and, as was the case in the preceding vocal lines, does not contain anything in its signature throughout the work. There is some minor use of added accidentals in this voice, but these additions were not found to be significant factors in the overall structure of the vocal part. From an examination of the T.N.T. graph for this voice, it can be seen that the entire D - A - D structure was utilised throughout the work. This structure stands out quite clearly in this graph, as does the apparent importance of the pitch C. Upon studying the A.R.T. graph for the contratenor voice however, it can be seen that this pitch features quite strongly here, along with the tones A, high D and E, as one of the most frequently repeated tones in this vocal line. Hence, the fact that the column for the pitch C in the T.N.T. graph appears to be so significant is mostly due to the frequent repetition of this tone. The F.H.T. graph for this voice

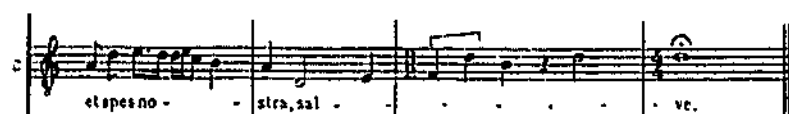
demonstrates that the most often held tones were A, D and C. In this case, the pitch C features so strongly due to its use as a held tone prior to both A (from a third above), and D (from a step below). From my analysis of the music itself, the following internal pitch relationships were found to exist within this vocal line. The pitch E was seen to precede D; G and B/B-flat move to A; F is significant as the third between low D and A; and high C is important as the third above A and the step below high D.

Thus, when all of the above information was compared and analysed, it was concluded that the contratenor vocal line is based upon a mode one structure in its regular form, with a D to D range, a D final and an a reciting-tone. The following examples illustrate this more clearly.

Eg.1 bb.8-17 Example illustrating the use of leaps and step-wise progressions from secondary tones to significant pitches, in this D - A - D outline. Note the use of held tones on F and D at the beginning of the example, highlighting the upper D to F third, along with the ascending step-wise movements prior to the final cadence on D.



Eg.2 bb.25-7 Short example showing the use of held tones to reinforce the significance, in this case, of the D to D octave.



Eg.3 bb.43-63 A rather long progression that demonstrates quite clearly the frequent use of held tones as a means of further reinforcing more significant pitches. In this example, we see held pitches on A and D, the more significant tones, but also on C, as it is used both to precede and follow the pitch D.



Eg.4 bb.90-102 An example that shows the use of repeated tones within the overall D - A - D outline.



Eg.5 bb.143-4 A brief example showing the use of secondary pitches as held tones prior to a cadence, in this case, on D.



Eg.6 bb.171-7 A final example that once more demonstrates the strong D - A - D outline featured in this voice, further reinforced by the use of held tones. Again we see the pitch C being used as a held tone, in this instance to approach the pitch A from a third above.



The tenor voice also exhibits a strong D - A - D outline. Unlike the previous vocal lines however, this voice begins without anything in its signature, but adds a B-flat signature mid-way through section O6. Apart from the use of a C# accidental on one occasion during the T1 section (see sectionalised table for this voice), the only other use of added accidentals is with respect to the pitch B-flat. From the sectionalised table we can see that B-flat accidentals appear on four occasions during section O1 and on seven occasions during section O5. In these instances however, the added accidentals have been used to either precede or follow the pitch A, hence being used as a means of further reinforcing this significant pitch. Following the addition of a B-flat to the signature, we can see that there is only one occasion where a B-natural accidental has been used, this being during the T1 section, again preceding the pitch A. Therefore, it can be seen that this vocal line

appears to comprise two clear sections, the first pre-signature change and the second after the addition of a B-flat to the signature. The observations and conclusions derived from these, which follow, will aid in the decision as to how this sectionalisation affects the overall modal organisation of the tenor voice in this work.

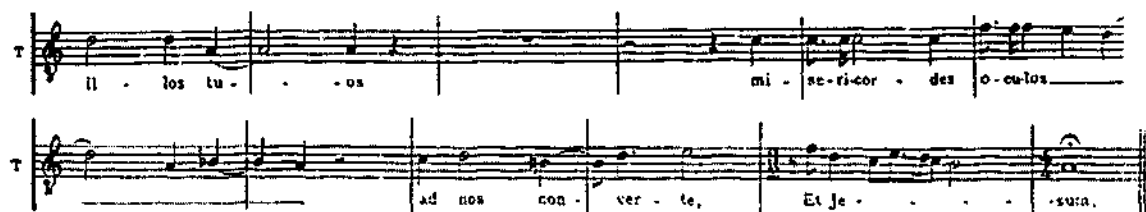
The A.R.T. graph for this voice, like that of the contratenor, exhibits a clear D - A - D outline, with the pitch A representing the highest column. As was found to be the case in the previous voice, the pitch c also appears to be quite significant. This is due once again to its frequent use as both a held tone and more importantly, a repeated tone, in association with the significant pitches A and D. Thus we find that upon examining the F.H.T. and A.R.T. graphs for the tenor voice, the most often held tones were A, D and C; whilst the most frequently repeated tones were A and C. The internal pitch relationships evident in this voice, following an examination of the music itself, were found to be identical to those operating in the previous voice. It is for this reason that they will not be repeated here again. What is important here is the fact that despite a signature change to one flat during the O6 section, the pitch outline and internal relationships established during the beginning of the work, do not alter. That is, the change in signature seen in this vocal line, does not signify a movement to another mode, nor a shift in the vocal line to a different version of the same mode (i.e. a shift from a mode based on D to one based on G, for instance). Thus, we are presented with a vocal line which can be seen as being based upon both mode one in its regular and irregular forms on D (D to D range, D final and A reciting-tone), the latter being true of the second half

of the work, following the addition of the B-flat signature during the O6 section. The following examples illustrate all of the above observations more clearly.

Eg.1 bb.1-17 Opening bars of the work that demonstrates the strong D - A - D outline evident in the tenor voice throughout the work. Note the use of held pitches at the beginning, to further reinforce the significance of the pitch A. Also worth noting is the use of a held tone on high F, to highlight the upper D to F third at bars 9-10.



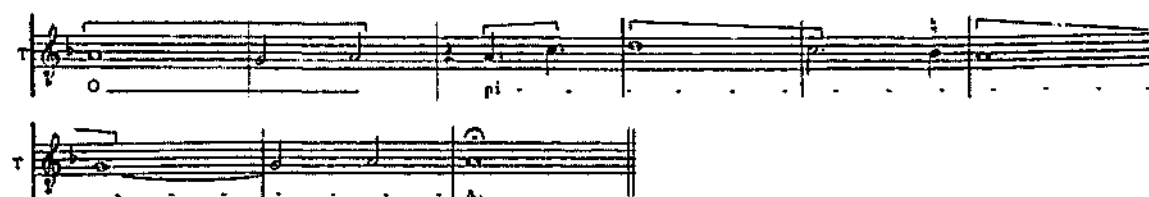
Eg.2 bb.55-63 Note the use of both held and repeated pitches in this upper A to D outline.



Eg.3 bb.70-89 A rather long example that illustrates quite clearly the continuation in importance of the D - A - D outline, despite the addition of a B-flat signature. Note also the use of step-wise progressions at bars 80-1 and 84, to move between D, A and high D.



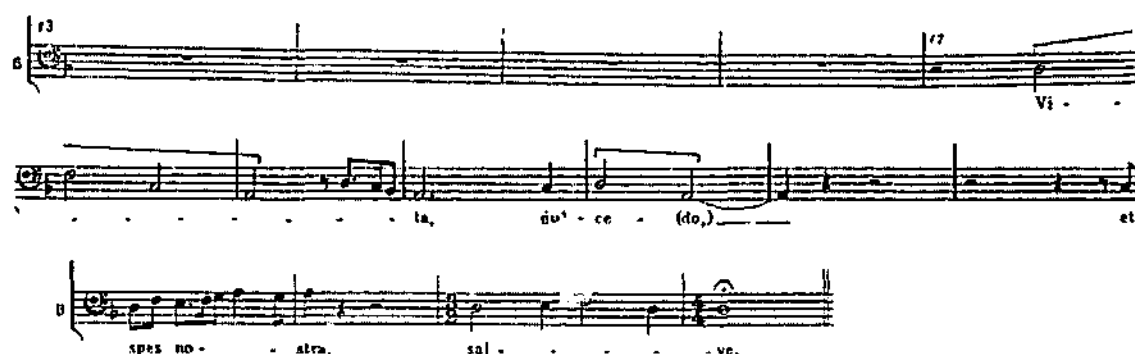
Eg.4 bb.136-44 Example showing the use of held tones to further reinforce the significant pitches of A and high D. Note also the use of held tones on the pitch C, as it moves between A and D.



Finally, the bassus voice was found to exhibit strong similarities with the two upper triplex parts. This vocal line demonstrates a clear A - D - A outline, but unlike the two upper parts, it commences the work with a B-flat signature, which remains throughout the piece. From the relevant sectionalised table, it can be seen that the bassus voice does not make use of any other accidentals whatsoever, apart

from the inclusion of one B-natural during the O1 section. The T.N.T. graph for this voice displays the A - D - A outline very clearly, with the pitch F also being significant as the reciting-tone for this mode. Upon examining the A.R.T. graph, it can be seen that the most often repeated tones in this vocal line were F, D and A. The F.H.T. graph displays similar results, with the most frequently held pitches being D, A and F. The internal pitch relationships evident following an analysis of the music itself, were seen to be the same as those operating within the first and second triplex parts. That is, B-flat moves to A; C and E to D; G rises to high A; and the pitch F is significant as both the third above D and the third below A. When all of the above information was compared and collated, it was concluded that this vocal line was based upon a mode two structure in its irregular form on A, with an A to A range, a D final, an F reciting-tone and a B-flat signature. The examples included below illustrate these conclusions more clearly.

Eg.1 bb.17-27 Here we can see the A - D - A outline quite clearly, further reinforced through the use of held pitches. Note also the importance of the A to C third and the D to F third.



Eg.2 bb.68-75 Example demonstrating the use of repeated and held tones to reinforce the lower A to D fourth. Once again we see the use of the D to F third.

Eg.3 bb.105-11 Illustrates the use of significant intervals seen throughout the work, as a means of progressing to and from the significant pitches. Here we see the appearance of both the A to C third and the D to F third again.

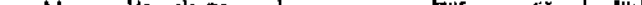
Eg.4 bb.173-85 A final example illustrating once again the strong A - D - A structure exhibited by the bassus voice throughout this work, assisted by the use of held tones. Also evident here is the significance of the pitch F (the reciting-tone) and the thirds between A and C, and D and F.



HACOMPLAYNT'S *SALVE REGINA*

The next work that has been included in this section is the setting by Hacomplaynt. This work also exhibits a structure based upon a combination of both modes one and two on G and D, respectively. This setting appears to be a little less complex than the previous one, with all voices containing a B-flat in their signature throughout the work. There is only very minimal use of any accidentals, those being B-natural and E-flat, whose appearances do not affect the overall hierarchy of pitches whatsoever.

From an examination of the T.N.T. graph for the first voice, it can be seen that the triplex part exhibits a (D) - G - D structure, with the lower D being a significant factor, but not quite as structurally defining as the other two pitches. In this voice, the pitch B-flat has a dual role both as the reciting-tone and as the third between G and D. From my analysis of the A.R.T. graph, it was found that the pitches D, B-flat and A were all frequently repeated tones. The first two due to their significant roles and the latter due to the fact that it is often used both to precede and follow the pitch D (a fourth above A); and to precede G by step from above or below. Finally, when looking at the F.H.T. graph, both D and A were found to be used most frequently as held pitches. This reinforces the issue raised above regarding the significance of the A to D relationship. Thus, it can be said that this vocal line is based upon a mode two structure in its regular form, with a D to D range, a G final, a B-flat reciting-tone and a B-flat signature. These conclusions will be illustrated more clearly, as will the other observations mentioned above, in the following examples.


Tr  Ad te cla-ma-mus ex-au-lis

Tr.

val - le. E - ie er - gu, ad - vo - ca - tu no

Tr.

- stro, il - lus fu - us mi - se - ri - cor - dia

tr  *bis post hoc exal- la- um*

Eg.4 bb.94-100 Shows the use of held pitches to ascend to the significant pitch -

D. Note use of the fourth between A and D; the use of repeated tones on As; the use of neighbouring pitches in a step-wise progression; and the ascent up to high F (upper 3rd) before falling (via use of neighbouring pitch C) to the cadence on D.

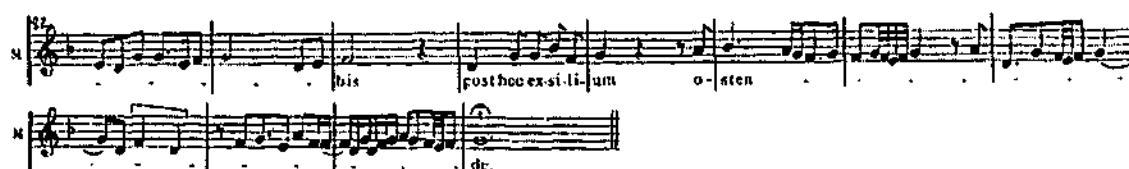


In the second voice, the medius, we are presented with a pitch hierarchy based around mode one on G. From my examination of the T.N.T. graph, it was evident that this voice is structured around a (G) - D - G format, with the D to G outline remaining the strongest organisational force throughout the entire work. The same neighbouring pitch relationships have been maintained here, with C and E moving to D; F and A to G; and the pitch B-flat being important as both the upper third above G and the lower third below D. Upon examining the A.R.T. graph, it was found that both F and G stood out as the most frequently repeated tones, which matched exactly what could be seen in the T.N.T. graph. In the F.H.T. graph, D, F and G were the most held pitches. This was expected, as both D and G are significant pitches, whilst the F is important due to the fact that it is a third above D and a step below G. Thus, it can be said that this voice is based upon a mode one structure in its regular form on G, with a G to G range, a G final, a D reciting-tone and a B-flat signature. The following excerpts are included here as examples of the conclusions that have been drawn above.

Eg.1 bb.65-8 Shows the strong progression between low G, D and high G, the significant tones in this vocal line. Also highlighted are the use of F as a third from D, and the step-wise progressions between notes.



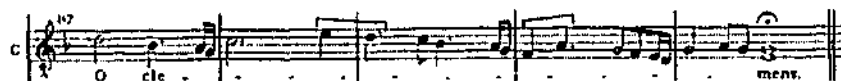
Eg.2 bb.86-93 Gives a good overall feel as to how the pitch hierarchies operate in this voice. The first section - bars 86 to 88 - shows how a held B-flat pitch moves to G, via F, in a step-wise progression; and section two shows the D - G outline, with the D - F third being emphasised, before it final on G.



The next two voices, the contratenor and tenor, both exhibit a very similar structure. Both voices are based upon a D - G - D structure, with the pitch B-flat once again being quite significant in its dual role function. Furthermore, both voices demonstrate the use of the same neighbouring pitch relationships, as a means of further reinforcing the significant tones. That is, we see the pitches F and A moving to G and C moving to D. The pitch F is often used, once again, as a means of approaching high D from a third above, in the tenor voice. In the contratenor, upon examination of both the A.R.T. and F.H.T. graphs it was evident that, in both cases, the pitch that stood out was D. With reference to the latter graph, the pitches A (a fourth above D and a step from G) and C (a step from D), were also frequently held tones. Finally, in the tenor voice we see that the most

often repeated tones were D, A and B-flat (the reciting-tone); whilst the F.H.T. graph showed that G and the pitches surrounding it (i.e. F, A and B-flat), were the most held tones. Thus, it can be seen that despite some minor variations, both voices are based primarily upon the same modal structure, that being mode two on D, in its regular form with a B-flat in their signatures (D to D range, G final and B-flat reciting-tone). The following examples illustrate these conclusions further.

Eg.1 CT bb.117-21 Shows the use of A and C as held pitches, in relation to a progression from upper D down to G.



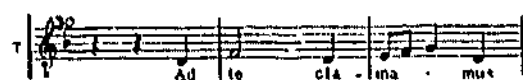
Eg.2 CT bb.145-8 Illustrates quite clearly the pitch outline for this voice, D-G-D, with the use of step-wise progressions via neighbouring pitches and held tones.



Eg.3 CT bb.177-92 Quite a long progression which illustrates the D-G-D outline along with the use of high F as the 3rd above D; held pitches on A and C; and the use of the pitch B-flat as the middle third between G and D, immediately preceding a G to D cadence.



Eg.4 T bb.30-2 Shows the relationship between the D to F third, in this D to G progression.



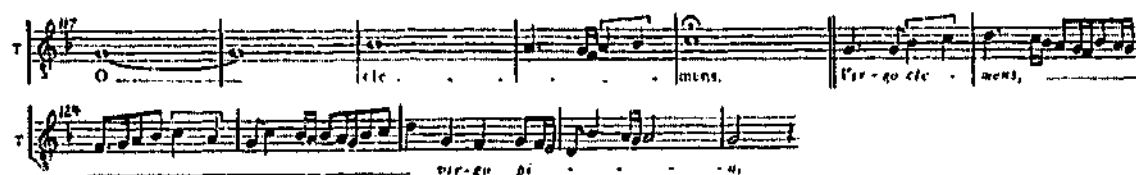
Eg.5 T bb.47-52 Here we see the D-G-D outline, with the use of the pitches F and B-flat as major steps. Note also with the use of a held tone on A, immediately preceding a cadence on G.



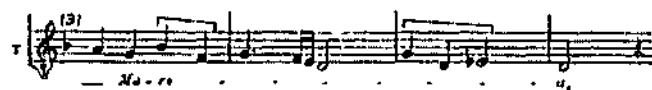
Eg.6 T bb.84-7 Demonstrates the use of repeated tones on B-flat within a passage dominated by the pitch G.



Eg.7 T bb.122-8 Shows a long G to D passage, with frequent use of neighbouring pitches to both ascend and descend between more significant tones, prior to the cadence on G.



Eg.8 T bb.131-4 Example showing the lead-up to the cadence on D, illustrating how the neighbouring pitch, E-flat, is used to step to and from D, as a means of further emphasising the final D.



Eg.9 T bb.145-51 Final example demonstrating the use of held pitches on B-flat and A, to reinforce the D-G-D outline.



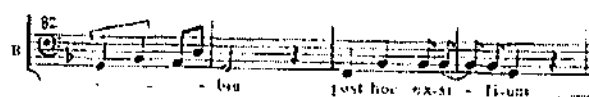
Finally, the bassus voice exhibits a structure that is not unlike that of the medius for this work. The bassus is also based around a G - D - G outline, with the major emphasis being, however, on the lower fifth G to D, rather than the upper fourth D to G. The internal pitch relationships seen in operation in the medius vocal line, remain in force here. From the A.R.T. graph, we see that the pitch D is prominent, but also the pitches B-flat, lower and upper G, C (a step below D), and F. This last pitch, F, is important here both as a step below G and as a third above D. Finally, from the F.H.T. graph it can be seen that G and D again appear as the most held tones, with the pitches in between (i.e. A, B-flat and C) also featuring on this

graph. Thus, the bassus vocal line is based upon a mode one structure in its regular form, on G, with a G to G range, a G final, a D reciting-tone and a B-flat signature. The following are examples illustrating the modal structure exhibited by this voice.

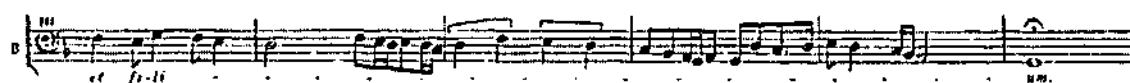
Eg.1 bb.1-7 Example that immediately outlines the G to D hierarchy, but even more so, the use of the fourth between A and D. Note also the use of the thirds between D and F, and B-flat and G.



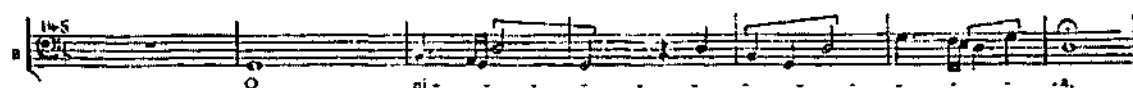
Eg.2 bb.84-5 Shows the use of repeated tones on B-flat, which are used to precede G.



Eg.3 bb.111-6 Illustrates the progression from G, emphasised by F, to D, prior to a cadence on G.



Eg.4 bb.146-51 In this example, the pitch outline is quite visible. Note the use of held tones on G, B-flat and D, prior to a cadence on D. Note also the use of thirds between G and B-flat, and B-flat and D.



MODES FIVE AND SIX

From my analysis of the previous two works, it is already apparent that the manner in which these two composers have utilised the modal system has been quite unconventional. The use of both the authentic and plagal versions of the one mode within a single work is a feature of many polyphonic works of this era. However, the way in which these two composers have moved between the original version of a mode and "transformations" of it (i.e. mode one on D & mode one on G, with a B-flat), gives us a clear indication of the flexibility they have attained whilst still operating within the broad confines of the traditional system. In the analytical sections that follow, it will be shown that all of the Eton *Salve regina* settings exhibit this same flexibility with respect to the use of the eight church modes as a structurally determining feature.

BROWNE'S FIRST *SALVE REGINA*

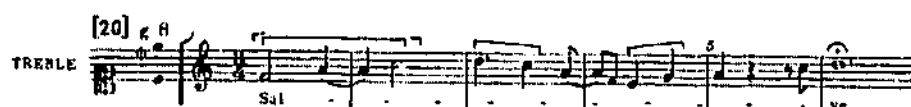
There are three settings that can be classified as being based upon a modes five and six structure, the first being the first five-voice setting by Browne. The triplex voice is the only voice that contains no signature at the beginning of the piece. This remains the case throughout sections O1 to mid-way through O5, during which there is no use of any accidentals, other than one B-flat that immediately precedes the signature change. The pitch B-natural was not found to be a vital tone during this section, as seen in the sectionalised tables, which demonstrate that the pitch was only used on ten occasions. Rather, we see the significance here of the pitches A, C and F, whose importance continues throughout the remainder of the work. During the next 153 bars (sections mid-O5 to OE9), the pitch B-flat is

included in the signature. From its point of introduction onwards, there is no use of a B-natural whatsoever, nor any other accidentals. The remaining voices contain a B-flat signature throughout the work, with very minimal use of an E-flat accidental. Once again, the pitches C, F and A feature within these vocal lines, apparent in both the relevant graphs as well as the music itself. Thus, it can be said that this work is based upon a mixture of irregular mode five and both regular and irregular mode six. The former governs the underlying structure of the bassus line, whilst the latter structures that of the triplex (in both forms), and the central three voices (in its irregular form only).

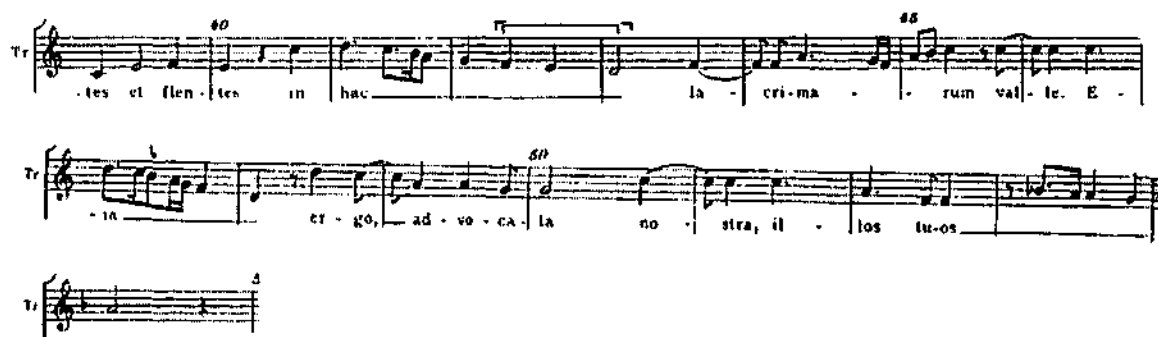
The triplex voice, upon examination, was seen to exhibit a (C) - F - C structure, with a strong emphasis on the pitch A. As mentioned, this voice-part contains nothing in its signature for the first 53 bars of the work. A B-flat is added at bar 54, which remains in place for the continuation of the piece. The T.N.T. graph clearly indicates the (C) - F - C structure, along with the significance of A. The A.R.T. and F.H.T. graphs display the fact that the pitches A, C and D (a step above C) were both the most often repeated pitches and the most often held tones, within this *Salve regina* setting. From an examination of the music itself, the overall F to C structure is quite evident, as is the frequent use of the pitch A. Furthermore, the internal pitch relationships that centre predominately on these three tones, are also quite apparent here, as well as in the relevant graphs examined. That is, if one is to analyse the data collected, it can be seen that both Ds move to each C; G and B-flat to A; low E is a third above C; and low D is a third below F. Finally, from the analysis of the vocal line as a whole, with respect to pitch hierarchy and signature, it was found that despite the change in signature the underlying structure remained

the same. Thus, from the above examination, it can be concluded that this voice is based upon mode six in its regular form during the first 53 bars, and mode six in its irregular form following the addition of a B-flat signature.

Eg.1 bb.1-6 The F - A - C structure is illustrated from the very beginning. Note the use of high D as an upper neighbouring pitch to C.



Eg.2 bb.43-54 Note the use of both repeated and held pitches to reinforce the F - A - C structure. Also visible is the signature change in bar 53, prior to a cadence on A.



Eg.3 bb.60-75 Notice the continuation of the (C) - F - C structure in this passage, along with the importance of A, despite the change in signature. This is another good example of the use of both repeated and held tones to reinforce this structure. Also, here we see high D again being used in reference to C.



The medius voice in this setting was found to be constructed upon a C - F - (C) outline, with the pitch A also showing some significance. This vocal line contains a B-flat in its signature, which remains unchanged throughout the work. Upon examination of the A.R.T. graph, it was seen that the most often repeated pitches were low C and F, both significant tones. The F.H.T. graph demonstrated that the most often held tones were C, F and A, along with D, E and G, the latter being secondary pitches found either a step above or below the three former significant tones. Once again, pitch relationships centre predominately on the prominent tones of C, F and A. Therefore, from an analysis of the music itself, it can be seen that D is used to reinforce C from a step above; E moves to F; G is both a step above F and below G; whilst high B-flat is used to approach A from a step above. Thus, from the above observations it can be said that this vocal line is based upon a mode six structure in its irregular form, with the addition of a B-flat signature throughout.

Eg.1 bb.1-6 Opening bars that outline the C to F structure quite clearly. Note also the use of held pitches to reinforce F and A, and the use of low D to step between the two Fs (i.e. a third below).



Eg.2 bb.59-75 Example showing the use of repeated and held pitches to heighten the importance of the C - F - A outline.



Eg.3 bb.165-83 Long passage illustrating the use of held pitches and repeated tones, accompanied by much stepping to and from neighbouring pitches, in order to further reinforce the underlying C - F - A structure.



The contratenor and tenor vocal lines are structured very similarly in this setting and will therefore be discussed together. Both voices are based upon a C - F - C structure, with the pitch A also featuring as a significant tone. Upon examining the graphs for each work, it was confirmed that the C - F - C outline did indeed form the underlying structure of these works, accompanied by the strong emphasis placed upon the pitch A. The A.R.T. graphs for each setting further emphasised these conclusions. The pitches F, C and A featured in both graphs, along with the pitch D in the contratenor graph (i.e. a step above C) and the pitches G and B-flat (G steps to both F and A; B-flat to both A and C) in the tenor graph. In the relevant F.H.T. graphs, the most often held tones were the pitches F, G (a step above the final, F) and C in the contratenor, and F, A and the upper-neighbouring pitches of these, G and B-flat, in the tenor. When looking at the music itself, it can be seen that both vocal lines contain a B-flat in their signatures, which remain unchanged for the entirety of the work. Furthermore, both vocal lines are seen to be structured very similarly, with the same underlying pitch relationships existing simultaneously throughout the setting. For example, as mentioned, the overall C - F - A - C structure can be seen in both lines. This structure results in the emphasis of these significant pitches - C, F and A - through the use of repeated tones and held pitches. In addition to this, the use of secondary pitches to heighten the importance of the significant tones continues to exist, with the secondary tones often being seen in stepwise progressions as a means of moving between these prominent pitches (i.e. D steps to C; G and B-flat to A; and E and G to C). Therefore, as a result of the above observations, it can be said that both voices exhibit a very strong C - F - C structure, with an emphasis on the pitch A. This is indicative of mode six, but with the inclusion of a B-flat signature in both vocal

lines, it must be concluded that these two voices are based upon a mode six structure in its irregular form, rather than its regular form. The following examples have been included here as a means of further illustrating the above conclusions, with respect to both the contratenor and tenor vocal lines of this setting.

Eg.1 CT bb.60-75 Illustrates the C - F - A - C outline, reinforced by held pitches, particularly on A and C.



Eg.2 CT bb.192-206 Example which shows the use of repeated and held tones on the significant pitches of F, A and C. Note also the use of a stepwise progression at bar 201, to assist in the descent from C to F to C, and the appearance of the upper neighbouring pitch D, prior to the final cadence on C at bar 206.



Eg.3 T bb.9-22 Opening bars which illustrate the overall C - F - A - C outline. Note the held C at bar 11; the use of held and repeated tones on both A and F

at bars 13-15; the stepwise ascent, via the use of secondary pitches, to move from C to C at bars 17-19; and the held pitches on F and A at the end of the example. All of the above points aid in the reinforcement of the significant pitches of C, F and A.



Eg.4 T bb.34-52 Shows the use of both held pitches and neighbouring tones to heighten the importance of the significant pitches of F, A and C (i.e. G to F; B-flat to A; and G to A).



Eg.5 T bb.183-90 Short passage which demonstrates once more, the F - A - C structure, aided by held pitches on both these tones and those between them.



Finally, the bassus voice in this setting was seen to contain a B-flat in its signature throughout the setting, much the same as the two previous works did. This voice

differed from the previous four voices however, in that it was based upon a strong F - C - G outline, which is indicative of an authentic modal presentation, in this case mode five. This is apparent in the T.N.T. graph, which also demonstrates that much of the action in this vocal line is centred upon the lower F to C fifth. When one examines the A.R.T. graph, it can be seen that the pitches F, C and high F feature very strongly here, as the most frequently repeated tones in this line. The F.H.T. graph shows the most often held tones to be F, C and high F also, coupled with those tones surrounding the lower fifth between F and C (i.e. G, a step above F; and B-flat and D, a step below and above C, respectively). Following an analysis of the music itself, it was seen that the internal pitch relationships once again, centred on the most prominent pitches - in this case F and C. Thus, we have G moving to F, B-flat and D to C, and the pitch A being used frequently to step a third between F and C. When all of the above was considered, it was concluded that this vocal line was based on a mode five structure in its irregular form, with a B-flat signature. The following examples further illustrate the above observations.

Eg.1 bb.1-6 Opening bars that demonstrate the descending F - C - G outline, along with the significance of the accompanying B-flat.



Eg.2 bb.49-52 Brief example showing the use of repeated and held pitches to further emphasise the significant tones.



Eg.3 bb.84-91 Again, we see here the use of repeated pitches on C and F, accompanied by the ascending stepwise progression between bars 87-9 which moves, via the use of neighbouring pitches, from F to C to a cadence on B-flat.



Eg.4 bb.183-9 Finally, the F - C - F outline is illustrated here in its entirety, reinforced by the use of held pitches and the F - A - C thirds.



WYLKYNSON'S FIRST *SALVE REGINA*

The second work assigned to this category is the nine-part setting by Wylkynson. From an examination of this work, the following pitch outlines were evident. The quatruplex, triplex, 1st and 2nd contratenors, and 1st and 2nd bassus parts displayed a F - C - F structure, whilst the medius, tenor and 3rd contratenor vocal lines displayed a C - F - C structure. All nine voices contained a B-flat signature at the beginning of the work, which continued throughout the duration of the setting. There was some minimal use of accidentals, with the top five voices making use of a B-natural at times; the medius, contratenors 2 and 3, and bassus parts 1 and 2, an E-flat accidental; and the upper five voices along with the 3rd contratenor part, included a C# accidental occasionally. These accidentals were found to be vital neither to the overall pitch hierarchy nor modal structure of the work. Therefore, it appears that this work is based upon a mixture of both mode five in its irregular form and mode six in its irregular form, both containing a B-flat in the signature. That is, the vocal lines exhibiting a strong F - C - F outline, noticeably the quatruplex, triplex, the first and second contratenors, and the first and second bassus lines, are said to be based upon irregular mode five. The remaining three voices, the medius, tenor and third contratenor, are based upon irregular mode six. The following is a more detailed explanation of the process of analysis that led to the above conclusions. Due to the use of nine voice-parts in this *Salve regina* setting, vocal lines sharing strong similarities will be discussed together.

The two uppermost voices of this work are the quatruplex and triplex, both of which exhibit an F - C - F outline. From an examination of the relevant T.N.T

graphs, it is evident that the majority of the movement in the quatrux vocal line centres upon the upper fourth of the outline, whilst in the triplex it centres on the lower F to C fifth. Hence, the general outline for each voice can be revised to be an (F) - C - F structure for the quatrux and an F - C - (F) structure for the triplex, with the pitches in brackets remaining significant tones, but not as prominent as the ones without brackets. As previously stated, both vocal lines contain a B-flat in their signatures, which remain in force throughout the work. There is some use of accidentals in both voices, but it was found to be quite insignificant in the overall structure of each line. Internal pitch relationships in these two voices centre predominately around the most significant pitches, in this case F and C. That is, we see the pitch G being used to approach F; B-flat and D to C; and the ever-prominent use of thirds apparent as the pitch A is used to either approach F from a third above or C from a third below. This internal pitch hierarchy is quite evident in the T.N.T. graph for each of the two upper voices. However, some of the higher totals in each of these graphs can be explained when looking at the A.R.T. graphs for the quatrux and triplex. In the quatrux we see that the pitches C, F and D (a step from C) were the most frequently repeated tones - providing an explanation for the high D column on the T.N.T. graph, as D is often repeated prior to C. In the A.R.T. graph for the triplex voice we see that the most frequently repeated tones here were not only F and C, but also more secondary tones such as A, B-flat, G and D. This is due to the strong role these secondary tones play in reinforcing the more prominent pitches, according to the internal pitch relationships illustrated earlier¹. From the F.H.T. graphs we see a similar pattern occurring, with the most often held tones in the quatrux being C,

¹ See introductory explanation regarding internal pitch relationships given at the beginning of chapter six.

F and D (a step below C) and A (the all important third between F and C). Therefore, from the above observations, it can be quite convincingly concluded that these two vocal lines are based upon an irregular mode five structure, with a range of F to F, a C final and a B-flat signature. The following examples illustrate this conclusion more clearly.

Eg.1 QT bb.1-6 Opening bars of work showing the upper C to F outline quite clearly. Note the use of the upper C to E third; the inclusion of held tones to aid in the reinforcement of this outline; and the descending stepwise progression between F and C prior to the cadence on F.



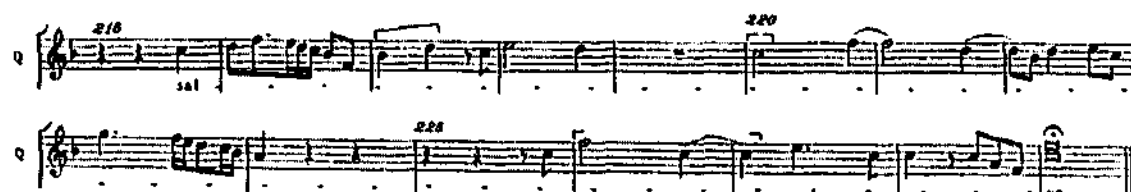
Eg.2 QT bb.36-40 Use of repeated tones on the upper D to F third, which precedes a held note on C, before the final on G.



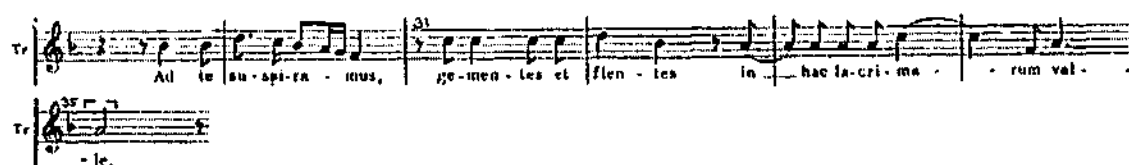
Eg.3 QT bb.66-74 Demonstrates the upper C to F outline very clearly, reinforced by the use of held pitches. Note also the strong role once again of the interval of a third, seen here between C and E, and D and F.



Eg.4 QT bb.215-29 Final bars of work, illustrating once more the overall F - C - F outline, again emphasised by the use of held tones. Also noticeable is the use of thirds to move between the more significant pitches (e.g. bar 217, B-flat - D to C - E; bars 221-2, F - D - B-flat - D to E - C; and towards the end C - E - C - A - F prior to the cadence on C and F).



Eg.5 TR bb.31-5 Good example here of the use of both repeated tones, on C and A, and of held tones, in the lower F to C outline. Again we see the importance of thirds, as the pitch A is used to precede C from a third below.



Eg.6 TR bb.154-62 Progression illustrating the prominent F to C outline, along with the use of secondary tones to heighten the importance of the prominent pitches (i.e. we see here the F to A third and the A to C third; along with thirds between G, B-flat and D).

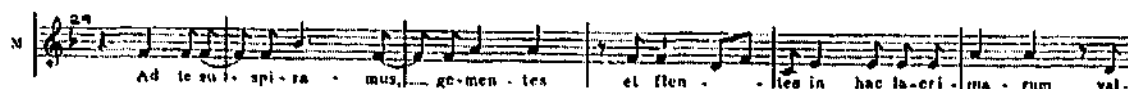


The medius vocal line in this setting contrasts slightly to the above voices, in that it is based upon a plagal presentation of mode five, that being mode six. This results in a vocal line structured around a C to C range, with an F final and a reciting-tone on A. The inclusion of a B-flat signature throughout the vocal line however, leads me to conclude that the medius is based upon the irregular form of mode six, rather than in its regular form. This voice, in much the same way as the quatrux and triplex does make use of accidentals on E-flat, however once again they are not vital pitches. From an examination of the T.N.T. graph, the C - F - C outline is quite apparent, as is the noticeable prominence of the pitch F. If this information is coupled with data gathered from an analysis of the music itself, the following pitch relationships are evident. Once again we see the prominent tones of C and F standing out, with their respective neighbouring pitches (i.e. D, E and G) being used to both approach them from either above or below in a stepwise progression, or as repeated or held tones immediately preceding the prominent pitch. This pattern can be further substantiated upon examining both the A.R.T. and F.H.T. graphs for this voice. Here we see that the most frequently repeated pitches were C and F, along with E and G (both a step from F). The most often held tone was F, followed by G (a step above F), A (a third above F and below C); and low D (a step above C). When all of the above information is taken into account, it can be seen that this vocal line does exhibit a strong C - F - C outline, along with all of the indicators which suggest that the voice is based upon mode six in its irregular form, with a B-flat signature. The examples below demonstrate this conclusion at more length.

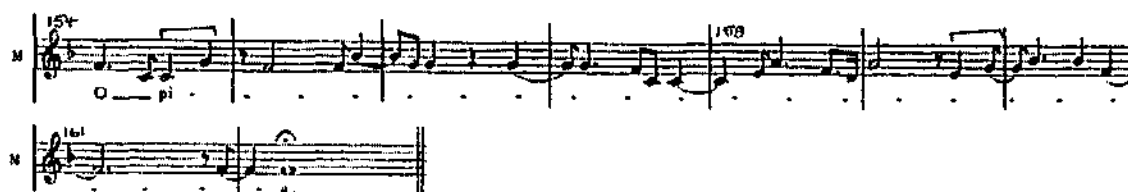
Eg.1 bb.1-6 Opening bars showing the C to F outline, and the significance of the pitch A.



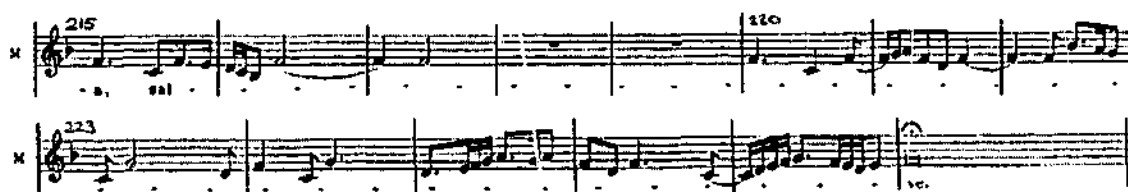
Eg.2 bb.29-34 Illustrates the frequent use of repeated pitches, both on prominent and secondary tones. Note also the F - A and D - F thirds.



Eg.3 bb.154-62 Excellent example showing the use of held pitches, on F and C in particular, within this C to F outline. Note also the prominence of the pitches A (the reciting-tone) and B-flat (the flat included in the signature).



Eg.4 bb.215-229 Final bars illustrating the frequent use of stepwise progressions between the significant pitches of C and F. Note also the use of held tones on particularly F; the often used descending F - D - F thirds; and the final cadence on F, approached from its lower neighbour E.

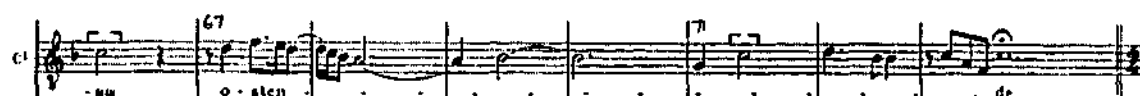


The next two voices, the first and second contratenors, are similar in style and structure to the two upper voices, the quatrux and triplex. This is due predominately to the fact that the two contratenor vocal lines are based upon the same F - C - F outline. These vocal lines also share the same signature - B-flat throughout - and internal pitch structures with the quatrux and triplex, again due to their underlying structures. From an examination of the relevant T.N.T. graphs for these two central voices, it can be seen that both exhibit a strong F - C - F outline in its entirety, unlike the quatrux and triplex whose lower and upper constraints, respectively, were not so prominent. Both the first and second contratenor parts also displayed some use of the lower C, extending the overall range slightly, but this extension was not found to be a significant factor when determining the overall outline for each vocal line. Upon examination of the A.R.T. graph for each voice, it was found that they were quite similar in that the most frequently repeated pitches for each line were F, A, C and D (a step above C). With respect to the F.H.T. graphs, again we see a similar pattern occurring, with the most often held pitches for each vocal line being C, D (a step above C), B-flat (a step below C) and A (a third above F and below C). Thus, we have here two vocal lines which contain a B-flat in their signatures throughout the duration of the work, and which are both based upon a strong F - C - F structure. As a result, it has been determined that the first and second counter-tenor parts are based upon an irregular mode five structure, a conclusion which is further illustrated in the examples below.

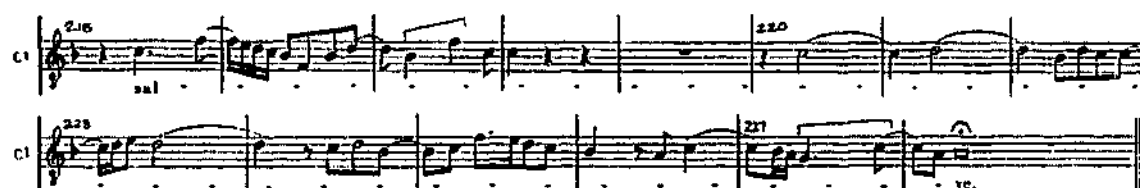
Eg.1 CT1 bb.1-6 Opening bars of work illustrating the extended C - F - C - F outline. Significant use of this low C does not continue, with the pitch low F existing as the fundamental constraint throughout the remainder of the work.



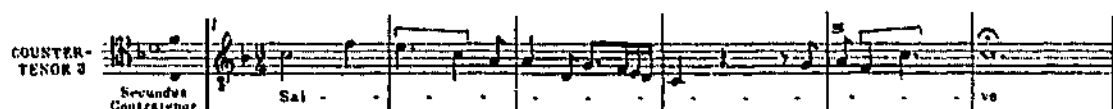
Eg.2 CT1 bb.67-74 Short example displaying this F - C - F outline, along with the significance of tones such as A (the third between F and C) and B-flat (the addition to the signature of this mode).



Eg.3 CT1 bb.215-229 Final bars of work that demonstrate the use of held and repeated tones within this F - C - F structure. Note also the continued importance of stepwise progressions between significant pitches, such as that at bar 216 between F and low F; and of the use of neighbouring pitches to reinforce significant ones (e.g. bars 220-3 between C and its upper neighbour D).



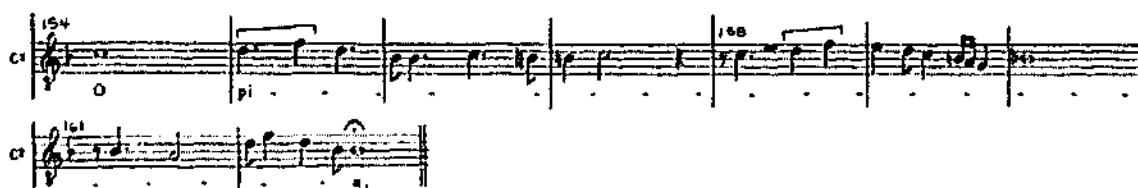
Eg.4 CT2 bb.1-6 Opening bars illustrating the use of an extended range from low C to high F, via A and C. Note the strong C to F fourth at the beginning, with a held pitch on the C; the use of repeated tones on A (a third below C); the descending stepwise progression to low C; and the final cadence on held and repeated Cs.



Eg.5 CT2 bb.30-4 Shows the use of repeated tones on the two prominent pitches, F and C, within this descending F - C - F progression.



Eg.6 CT2 bb.154-162 Interesting example illustrating both the use of thirds and stepwise movements to highlight the prominent tones (i.e. C - D, B-flat - C and thirds between D and F); and the use of the B-natural accidental to further reinforce the pitch C. The B-flat returns towards the end of the example and is emphasised through the use of held pitches, both at bar 160 and at the cadence point at bar 162.



The next two vocal lines, the tenor and third contratenor, see a return to a plagal presentation of the mode, such as that first seen in the medius. These two voices both exhibit a clear C - F - C outline, with a strong accent upon the pitch A (the reciting-tone). Both voices contain a B-flat in their signatures throughout the work, exhibiting much the same internal pitch structures as the medius voice did (i.e. importance of prominent pitches, their neighbouring tones and the thirds between them). Upon examining the A.R.T. graph for each voice, it was found

that in the tenor part, F and C were the most frequently repeated pitches, whilst in the third contratenor voice, it was F. In the relevant F.H.T. graphs, the most often held tones for each vocal line were the same. That is, F and C in the tenor and F in the third contratenor. When the above information was coupled with an analysis of the music itself, these observations were found to be true. However, the music does suggest a revision of the suggested outline for the tenor voice from C - F - C to (C) - F - C, due to the fact that most of the movement in this voice takes place within and around the upper fifth of this outline. Therefore, from all of the above observations it can be said that both the tenor and third contratenor voices are based upon a mode six structure, in its irregular form. See the examples that follow for further insight into these conclusions.

Eg.1 T bb.1-6 Opening bars displaying very clearly the upper F - C outline, reinforced by held pitches on F, C and the reciting-tone A.



Eg.2 T bb.29-52 Longer example illustrating not only the importance of held pitches, particularly those on significant tones, but also the use of stepwise movements and neighbouring tones to reinforce these significant pitches (i.e. B-flat to C and C to D).



Eg.3 T bb.212-29 Yet another long example showing the final bars of the work in which the F - C - F outline is evident. Note the use of held pitches on F and C in particular, as well as the stepwise movements to and from these prominent tones (e.g. bars 223-9, the approach to the final cadence on F).



Eg.4 CT3 bb.38-46 Example illustrating the C - F - C outline, emphasised through the use of held tones and stepwise progressions.



Eg.5 CT3 bb.112-6 Shows the important role played by held pitches within this F to C outline. Note also the continued significance of the pitch A, the reciting-tone.



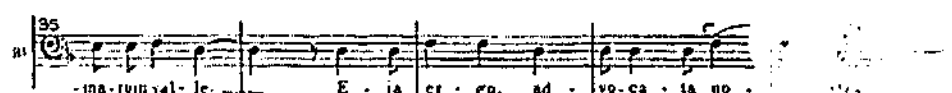
Finally, we come to the two lowest voices in this *Salve regina* setting, the first and second bassus parts. Here we see a return once again to an authentic presentation of our mode. Both voices maintain a strong F - C - F outline throughout the work, accompanied by a B-flat in the signature. Pitch relationships in these voices continue to focus upon the prominent tones of F and C, along with their neighbouring pitches and the central tone A, which is a third above and below F and C, respectively. These two vocal lines, therefore, are based upon much the same structural outline as previously seen in the quatruxplex, triplex and both contratenor voices. The A.R.T. graph for the first bassus line displays the fact that the most frequently repeated tones were D, C and F. The two latter pitches are both significant tones in this work, whilst the D can be seen to have been frequently repeated, due to its close relationship with both each of these tones. That is, it is often repeated prior to C (as a step above) and F (from a third below). The high number of repetitions of this tone also accounts for its significant result in the T.N.T. graph for this voice. In the A.R.T. graph for the second bassus line, it is apparent that the pitches B-flat, D, F and C were the most frequently repeated. Again, the two latter tones are significant pitches, whilst B-flat is seen as a step below C and D both a step above C and a third below F. As with the first bassus voice, this once more accounts for the significant roles these two pitches displayed in the T.N.T. graph.

Upon examining the F.H.T. graph for these two vocal lines it was found that firstly, the most often held tones in the first bassus voice were C and F, followed by D (a step above C and often used to precede this tone). In the second bassus line, the F.H.T. graph for this voice demonstrates that B-flat and both low and high F were the most often held tones. The pitch B-flat is significant here due to the fact that it is a fourth above F and is often used to precede or follow this tone. The remaining pitches forming the lower end of this F - C - F outline (i.e. C, G and D), were also seen to be quite prominent in this graph. This was once again due to their strong influence as either a prominent pitch (as in the case of C), or as a neighbouring tone to one of the more significant pitches (i.e. G precedes F, whilst D is both a step above C and a third below high F). Therefore, from an examination of all of the above data, it has been concluded that these two vocal lines are based upon an irregular mode five structure, with a B-flat in the signature.

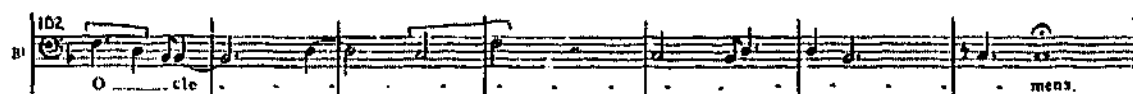
Eg.1 B1 bb.21-8 Example showing the F - C - F outline, reinforced by held tones on C and F, along with stepwise progressions between them.



Eg.2 B1 bb.36-9 Short example displaying both the use of repeated tones and of the continued importance of the interval of the third, seen here between D and F.



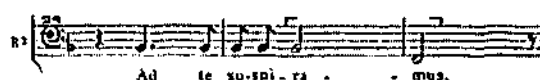
Eg.3 B1 bb.102-8 Demonstrates clearly the upper C to F outline, aided by held tones and intervals such as the third (e.g. between D - F and B-flat - D). Note also the use of B-flat to approach C at the final cadence, in its role as the lower neighbouring pitch.



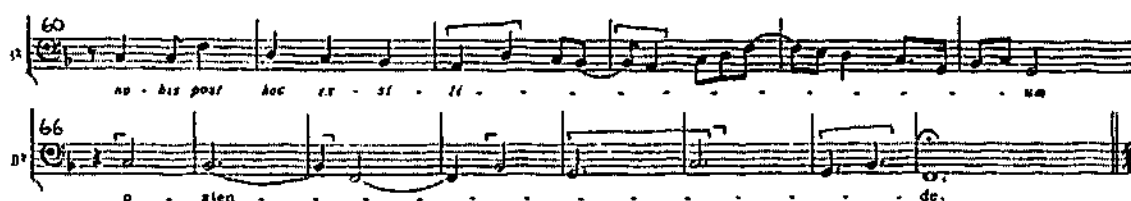
Eg.4 B2 bb.4-6 Very short example, illustrating in just three bars the significant F to C outline, through the use of both held pitches and a stepwise progression.



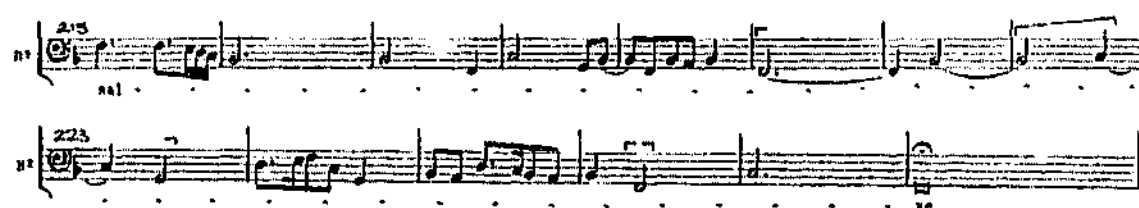
Eg.5 B2 bb.29-31 Yet another brief example showing the close relationship between the pitches low F and B-flat. Here we see B-flat both repeated and held, leading to a held note on F.



Eg.6 B2 bb.60-74 Example displaying the overall F - C - F outline, further reinforced by the initial repeated tones on C, followed by held pitches on F, C and B-flat in particular. Note the close relationship between the lower fourth from F to B-flat once again (bb.67-8 and bb.72-4).



Eg.7 B2 bb.215-29 Final bars of work in which we can see the F - C - F outline quite clearly, along with held tones on F, C and B-flat. Also evident is the use of stepwise progressions to move between the significant pitches (bar 215), the recurring F - B-flat fourth (bb.217, 219, 220-1), and the final B-flat - F - C - F cadence, which is quite indicative of the overall pitch structure of this vocal line.



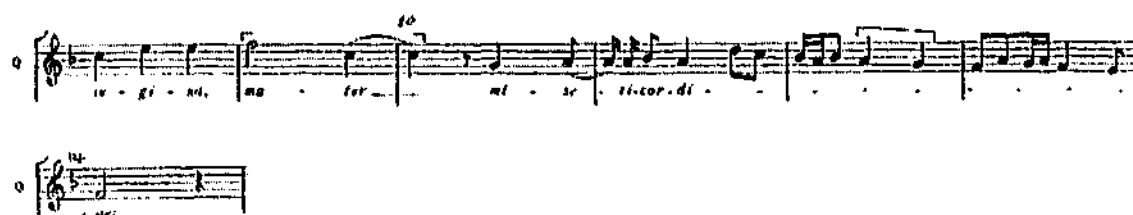
SUTTON'S *SALVE REGINA*

The final work assigned in this "modes five and six" category, is the seven voice setting by Sutton. From my analysis of all data gathered during the study of this work, it was found that the quatruxplex, medius, superior contratenor and bassus exhibited a clear F - C - F outline, whilst the triplex, tenor and inferior contratenor demonstrated a C - F - C structure, within which the pitch A featured strongly. When these observations were compared with the data obtained from the F.H.T. and A.R.T. graphs, coupled with an examination of the music itself, the following conclusions may be drawn. The quatruxplex, medius, superior contratenor and bassus voices all appear to be structured around a mode five framework, both in its regular and irregular forms. That is, due to the inclusion of a B-flat in the signature of each of these voices, coupled with the fact that the F - C - F outline remains constant throughout the work in all four parts, these voices were deemed to be based upon both regular and irregular mode five, with a range of F to F and a C reciting-tone. The remaining three voices, the triplex, tenor and inferior contratenor, display signatures ranging from no flats to, in the case of the inferior contratenor, two flats. Once again, regardless of the signatures, or the changes in them, these three voices are all based upon a C - F - C outline, and continue to be throughout the entirety of the work. The discussion that follows will further illustrate the above conclusions. Once again, vocal lines sharing strong similarities will be discussed together.

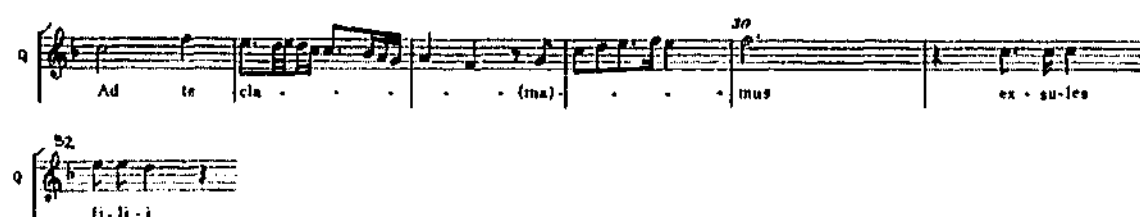
Firstly, the quatruxplex and medius vocal lines are, as previously stated, based around a strong F - C - F outline. The quatruxplex begins with a B-flat in the

signature, which remains until section OE7, where it is removed. The medius also begins with a B-flat signature, which is removed mid-way through section O6 and then reinstated at OE7. Upon examining the T.N.T. graphs for each of these vocal lines, the F - C - F outline is quite apparent. Also noticeable is firstly, the prominence of the pitch A in the quatruxplex graph. This is mostly due to the frequent use of this pitch to approach both F and C from a third above and below, respectively. Secondly, with respect to the T.N.T. graph for the medius voice, it is quite clear that the majority of the movement in this vocal line occurs between the lower F to C fifth. This is further substantiated after analysing the music itself. The A.R.T. graphs for each voice demonstrate that the most frequently repeated pitches in both the quatruxplex and medius voices are quite clearly C. The F.H.T. graphs for each voice were also found to be very similar, with the most often held tones for each of these two vocal lines being A, C and high F. Upon examining the music itself, the following internal pitch relationships became apparent in both vocal lines. As mentioned above, the pitches F, C and high F are seen here as significant, or prominent, pitches. The pitch A is used in a variety of situations, usually as the third between F and C. Finally, the use of upper and lower neighbouring pitches to approach prominent tones, is maintained throughout both vocal lines, with the pitches E and G stepping to F, and B-flat and D to C. Thus, it is quite apparent that both voices exhibit a strong F - C - F outline, which is maintained regardless of the signature changes. This results in the quatruxplex and medius being categorised as having been based upon a mode five structure, both in its regular form and in its irregular, with the addition of a B-flat to the signature. The following examples illustrate these conclusions more clearly.

Eg.1 QT bb.8-14 The F - C - F outline is quite apparent here, aided by the use of held pitches on C and F. Note the appearance of repeated tones on A, and the use of F's lower neighbour, E, at the final cadence.



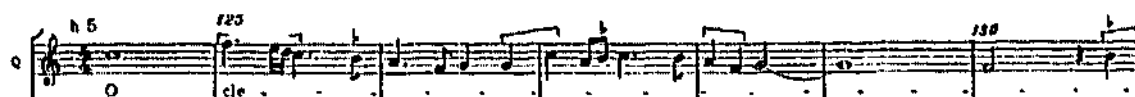
Eg.2 QT bb.31-2 Short example showing the use of repeated pitches on both C, a prominent pitch, and E, the third above.



Eg.3 QT bb.97-110 Example demonstrating the use of held pitches within an F - C - F outline. Note the stepwise progression at the beginning of the example; the use of both the F to A and A to C thirds; and the use of the G to A neighbouring pitch relationship at the cadence.



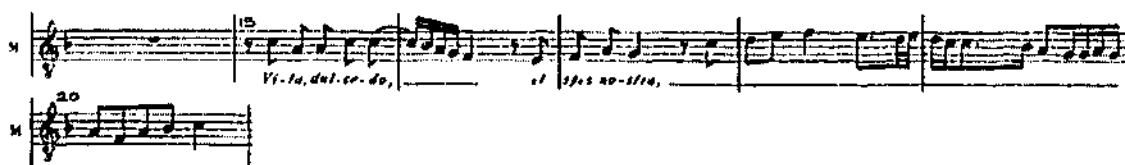
Eg.4 QT bb.124-130 Note the new signature here, following the removal of the B-flat. Also note the continued dominance of the F - C - F outline, despite the signature change.



Eg.5 QT bb.220-235 Final bars of the work, illustrating once again the strong F - C - F outline, reinforced by held pitches on C and F. Note also the use of the F to A third at bars 222 and 228; the A to C third at bar 233; and the E to F step at the final cadence (i.e. use of lower neighbouring pitch).



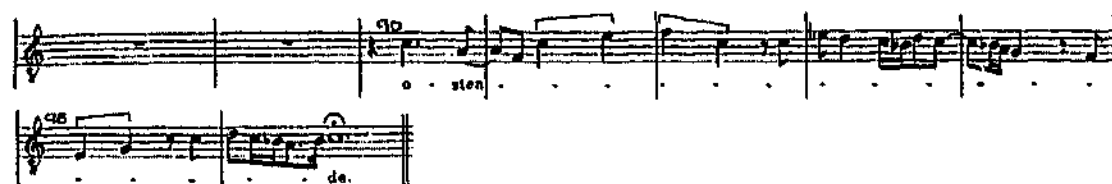
Eg.6 M bb.15-20 Example showing the F - C - F outline being established, accompanied by the use of repeated pitches. Also apparent is the maintenance of the F to A and A to C third, along with the use of stepwise progressions between the prominent pitches.



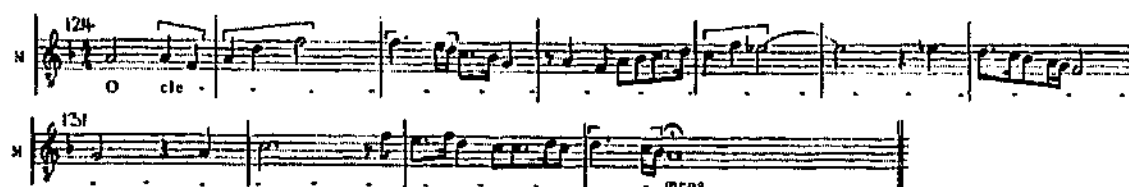
Eg.7 M bb.39-44 A brief example illustrating the use of repeated pitches and the F - A - C thirds, within this F - C - F outline. Note also the use of held pitches on all three prominent pitches.



Eg.8 M bb.90-6 In this example, the signature has changed, with the B-flat removed. Nevertheless, the F - C - F outline is maintained. Note however, the inclusion of B-flat and E-flat accidentals at bat 93.



Eg.9 M bb.124-35 The B-flat has once more returned to the signature, and again the F - C - F outline is maintained. Note the use of held pitches and the appearance of the E-flat accidental once again.



The triplex voice is based upon a C - F - C outline, with a strong emphasis on the pitch A. This voice begins with a B-flat in the signature, which remains constant throughout the entire work. From an examination of the A.R.T. graph, it was found that the most frequently repeated tones were high and low C, F and A (the reciting-tone). The F.H.T. graph shows similar results, with the most often held tones being F and A. From an analysis of the music itself, it was found that the internal pitch relationships once again, centre on the prominent pitches of C, F and A. That is, we see D being used to approach C; E and G move to F; and B-flat rises to C. Thus, it can be said that this work is based upon a mode six structure, in its irregular form, due to the inclusion of a B-flat signature. In other words, this vocal line is indicative of this mode, in that it displays a strong C to C outline, a

significant emphasis upon the pitches A (the reciting-tone) and F (the final), and a B-flat signature which is maintained throughout the duration of the work.

Eg.1 bb.14-20 Example displaying the C - F - C outline and the importance of the pitch A, aided by the use of repeated tones on A and a held tone on F. Notice the use of the thirds between F and A and A and C.



Eg.2 bb.49-58 Demonstrates the use of repeated pitches and neighbouring tones to highlight the C - F - c progression. Note also the use of held pitches on F and A.



Eg.3 bb.83-5 Further example of the use of repeated pitches to move between C and F.



Eg.4 bb.97-102 Shows the use of held pitches on the prominent tone F, and its upper neighbouring pitch G, at the beginning of the example (i.e. G is used to reinforce F). The pitch A (the reciting-tone) is also used as a held tone.



Eg.5 bb.219-35 Example showing the use of held tones and stepwise progressions, in the final C - F - A - C progression.



The next two voices to be examined are the superior contratenor and the bassus. Both vocal parts, upon examination, were found to be based upon a strong F - C - F structure. The two voices both contain a B-flat in their signatures at the beginning of the work, which are maintained throughout the piece. When looking at the A.R.T. graph for the superior contratenor voice, it can be seen that the most often repeated tones were F, C and high F - all prominent pitches. With respect to the bassus voice, the most frequently repeated tones were low F, high F and D. The prominence of the pitch D here is due to the fact that it is frequently repeated prior to both C (a step below) and high F (a third above D). This also accounts for the apparent prominence of this tone in the T.N.T. graph for this voice (i.e. D appears rather important in the T.N.T. graph, being due to its frequent use as a repeated tone within the work).

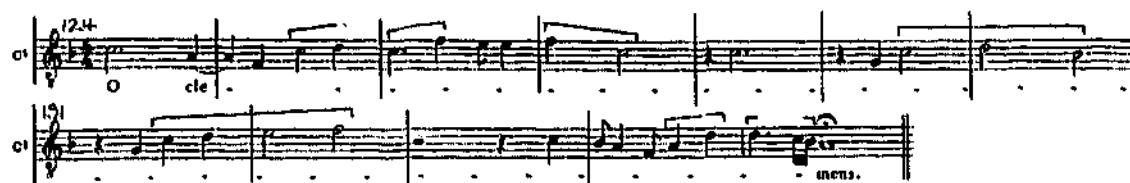
The F.H.T. graphs for the superior contratenor and bassus vocal lines both demonstrate similar data. That is, that the most often held tones within each of these vocal lines were found to be F, C and high F - again, the prominent pitches. The internal pitch relationships existing within each of these vocal lines were

found to be consistent with those exhibited by the previous three voices. That is, G falls to F, B-flat and D move to C, high E rises to F, and D is used in a second role to approach F from a third below. In other words, we have two vocal lines that exhibit strong F - C - F outlines, along with B-flat signatures maintained throughout the duration of each work. Therefore, it may be concluded that both vocal lines, the superior contratenor and bassus, are based upon a mode five structure, in its irregular form, due to the inclusion of a B-flat signature. The examples included below for each of these vocal parts, illustrated the above comments more clearly.

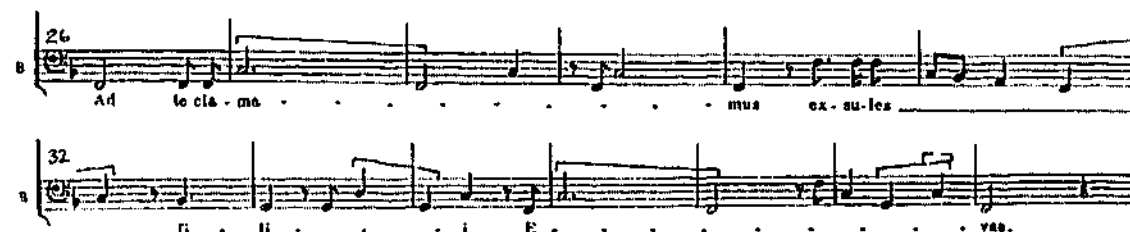
Eg.1 CT1 bb.26-39 Long progression displaying the overall F - C - F outline, further reinforced through the use of repeated and held tones, particularly on C and F.



Eg.2 CT1 bb.124-135 Shows the continued maintenance of the F - C - F outline, again heightened by the use of held tones. Note the use of neighbouring pitches here to move to and from more prominent tones (i.e. D moves to C and E moves to F).



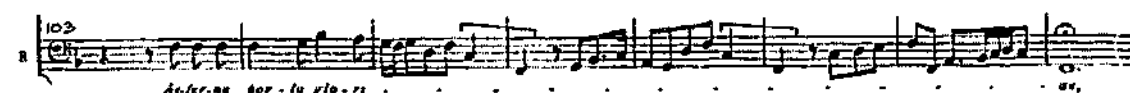
Eg.3 B bb.26-38 Progression which shows the strong F - C - F outline, aided by the use of held tones on F and C, and repeated tones on high F.



Eg.4 B bb.47-58 A second example once more demonstrating the clear dominance of the F - C - F structure, again further reinforced through the use of held tones.



Eg.5 B bb.103-110 Note the use of repeated tones on F at the beginning of this example and the appearance of the F to F octave, prior to the cadence on F. Also noticeable is the use of D to precede F within these stepwise progressions.



Eg.6 B bb.219-235 Final example illustrating the use of both upper and lower E-flat to further reinforce the pitch F, within the F - C - F outline evident here.



Finally, we come to the remaining two voices to be examined - the tenor and inferior contratenor vocal lines. Both voices exhibit C - F - C outlines, with an emphasis placed upon the pitch A. Upon examining both the T.N.T. graph and the music itself, for the tenor voice, it could be seen that the majority of the movement within this vocal line is limited to the upper F to C fifth. Therefore, this voice can be more accurately described as having a (C) - F - C structure, with the lower C being structurally significant, but not as prominent as the upper two tones. With respect to signature, the tenor voice commences the work without one. This voice gains a B-flat signature mid-way through section O3, which is then maintained throughout the work. The second counter-tenor voice is a little more complex. This voice begins with a B-flat signature, which remains in force until section T3, whereby an E-flat is added. This new signature of two flats remains only briefly, with the E-flat being removed at OE9, leaving us once more with a signature of one flat. The changes in signature for both vocal lines do not result in any compensatory changes in the overall pitch structures whatsoever. That is, the pitch outlines and internal structures remain constant throughout the work, in both vocal parts, despite the changes in signature.

The A.R.T. graph for the tenor voice displays the fact that the most often repeated tones were F and A (the reciting-tone); whilst in the inferior contratenor, they were low C and F. All of these tones are seen as prominent pitches in both vocal parts. The F.H.T. graphs for each voice demonstrate similar results. The most frequently held tones in the tenor voice were F, A, C and G (a step between F and A), whilst in the inferior contratenor they were F, A and high C. When looking at the music itself, it was found that the internal pitch relationships exhibited by both voices were once more related directly to the prominent pitches - C, F and A. Therefore, it can be seen that both vocal lines exhibit strong C - F - C outline and maintain the prominence of the pitch A. As a result, it has been concluded that both vocal lines are based upon a mode six structure, both in its regular form and in its irregular, with the addition of a signature containing either one or two flats.

Eg.1 T bb.14-25 Example illustrating quite clearly, the C - F - C outline, accompanied by the importance of the pitch A. Note also the use of repeated tones at the beginning, during the C - A - F passage; the influential use of the C to C octaves at bars 17 and 18; and the use of held pitches towards the end of the example.



Eg.2 T bb.30-42 Here we see the maintenance of the pitch outline, despite the addition of a B-flat signature. Also noticeable are the repeated tones on F; the use of held pitches; and the appearance once more of the use of

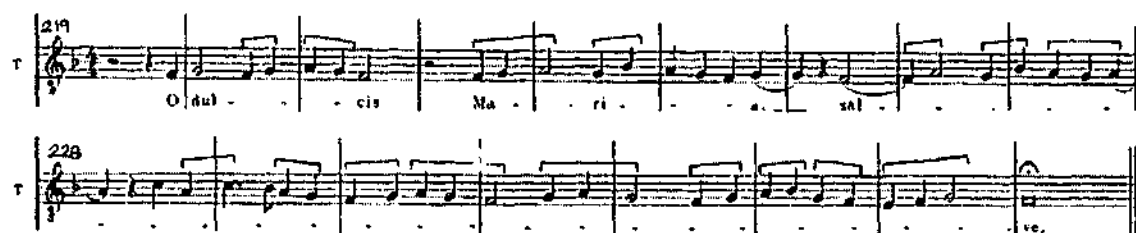
neighbouring pitches to reinforce more prominent tones. In this case we see, in particular, G being used to reinforce F at bars 34-6, and G moving between the two As at bars 41-2.



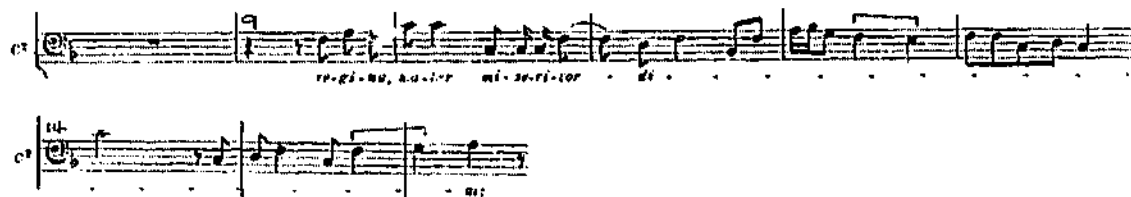
Eg.3 T bb.75-81 Yet another example displaying the use of held pitches and neighbouring tones to heighten the importance of prominent tones (i.e. the use of G to move between F and A).



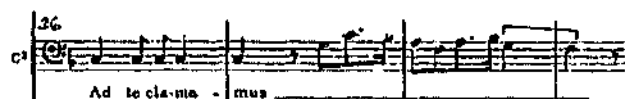
Eg.4 T bb.219-35 Final bars of work which demonstrate, as the previous examples did also, the popular F to C outline maintained in this voice throughout the work, accompanied by the importance of the pitch A. Notice the use of step-wise progressions between these three pitches, further reinforced by the use of held tones on F, A and C. Also visible is the use of G once more, to move to and from both F and A.



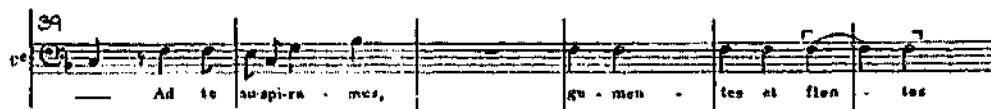
Eg.5 CT2 bb.9-16 Opening bars of this vocal line which illustrate quite clearly the overall C - F - A - C pitch structure, aided by the use of repeated and held tones.



Eg.6 CT2 bb.26-9 Short example demonstrating the use of repeated tones to further enhance the importance of a pitch, in this case C.



Eg.7 CT2 bb.42-4 Yet another brief example displaying the use of both repeated and held tones, this time on F.



MODES 7 AND 8

DAVY'S *SALVE REGINA*

This modal category is the most popular, so to speak, with respect to the *Salve regina* settings of the Eton Choirbook, with the majority of these works being organised upon a combination of both modes seven and eight. The first work to be examined here is the setting by Davy. This piece was found to be one of the most complex settings with respect to modal organisation, to be discussed in this study. This setting has five voices, the majority of which contain at least one change in signature throughout the duration of their vocal line. These signature changes involve the movement both to and from no signature to a B-flat in the signature, and it is predominately due to these changes and the manner in which they affect the respective vocal line, that this setting becomes quite complex.

From my examination of the relevant tables, graphs and the music itself, the following observations can be made. It is useful to note here that although these settings do contain the frequent exchange of B-natural for B-flat, and vice versa, any other use of accidentals by these vocal lines (e.g. F# or E-flat) was not significant to the overall conclusions of this study, as these tones were used to heighten the importance of the prominent pitches D and G, respectively.

Firstly, the two upper parts of this setting, the first and second triplex lines, will be discussed here together, due to their numerous similarities. Both parts appear to be based around a G - D - G outline, with no signature whatsoever during the entirety of the work. The pitch relationships in both voices centre around the intervals low

G to C (a fourth), C and E to high G (a fifth & third respectively), D to F (a third) and A to D (a fourth). All of these can be seen as being important pitch relationships that are often used as a means of progressing either up or down from the two prominent pitches - G and D. Relationships between these significant pitches and their neighbouring tones as seen in the previous works (i.e. F to G, and C and E to D) are still maintained in these voices. From my examination of the A.R.T graphs, it was found that the most often repeated pitches for both voices were D and its neighbouring tones C and E. The F.H.T. graphs displayed the fact that low G, D and high G, coupled with C, E and F, were all frequently held pitches in the first triplex voice. In the second part, the most often held tones were D, G and high F (used to lead up to G); followed by C (leads up to D), B (third below D) and A (fourth below D). Thus, from the above analysis it can be said that these vocal lines are both based upon mode seven in its regular form, with a range of G to G, a final on G, and a D reciting-tone. The examples below illustrate this more clearly.

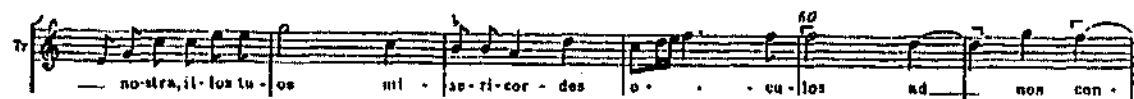
Eg.1 Tr1. bb.1-6 Opening shows G to D outline being established with the use of held and repeated tones, as well as the movement between these two pitches. Also note the appearance of the G - C fourth.



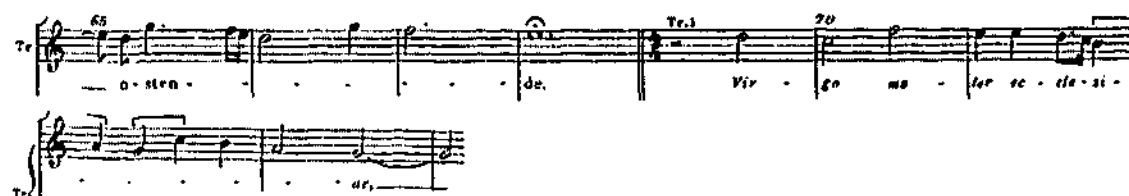
Eg.2 Tr.1 bb.12-18 Shows the use of held pitches (D, C and F) to further reinforce the significant pitch D. Also note the use of the D - F third and the repeated pitches on D at the beginning.



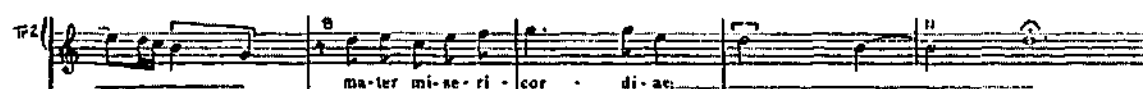
Eg.3 Tr1. bb.46-7 Brief example showing the use of repeated pitches to move from low G to high G. Note the use of the G - C fourth again and the C - G fifth.



Eg.4 Tr.1 bb.69-74 Shows a descending D to G progression, involving the use of held tones on C, F and A - all of which are secondary pitches with some relationship to the more significant tones (i.e. C is a step below D; F is a third from D and A, seen here, is a step from G).

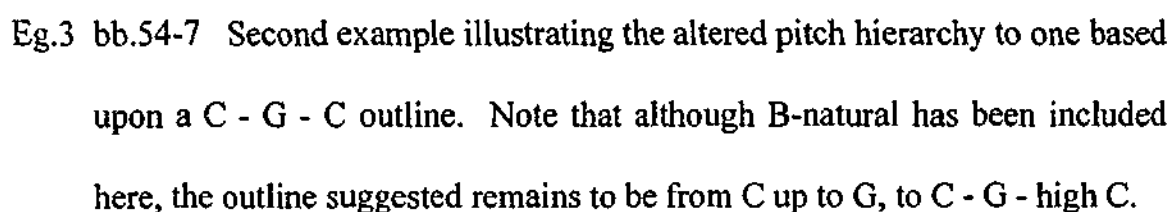
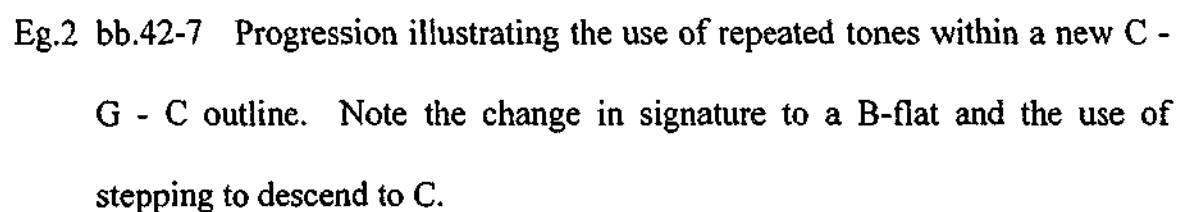


Eg.5 Tr.2 bb.8-11 Use of steps and thirds to progress from D to G. Note also the use of held pitches on G, D and B (third below D).



Secondly, from my examination of all relevant material concerning the next vocal line - the medius - it appears that this voice is based predominately upon a (G) - D - G outline, with a brief movement to C - G - C during the signature change (sections O5 to T1). The F.H.T. graph suggest that the most held tones were D, G

Eg.1 bb.12-18 Shows the D to G outline being established, which tends to be the most significant pitch range for the beginning of the work. One can also see the use of held pitches on the D to F progressions (a frequently used third), and the movement in thirds and steps during the middle of the example (i.e. C - A - F - A and A - B-flat - A - B-flat - A - G - F).





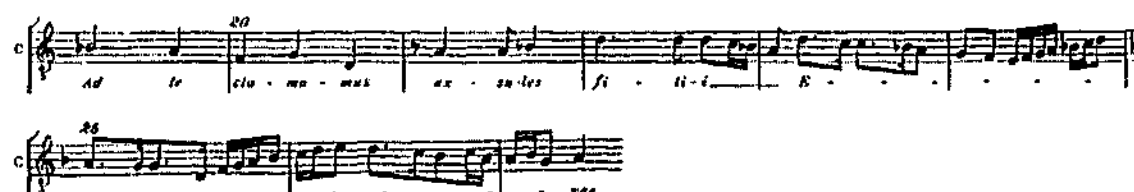
Eg.4 bb.83-7 B-flat has been eliminated here by a B-natural accidental and the pitch outline appears to be readjusted back to G - D - G, as the medius prepares to change back to its original signature of no flats. Note stepping to and from G at the beginning of the example and the stepwise descent to a held G cadence, via neighbouring pitches.



The situation encountered with the contratenor vocal line in this work is quite different to any seen so far. The upper three voices, as previously illustrated, are all based upon the same mode, mode seven, either in its regular form or once transposed to C. This voice, however, appears to be based upon a D - G - D outline, with the appearance of a B-flat in the signature during the middle section of this work. This change in signature carries with it no change in pitch outline whatsoever, as the music continues to be structured as it was at the start. From my examination of both the A.R.T. and F.H.T. graphs it was found that the D - G - D outline was supported, with the most often repeated tones being D and C (a step below); and the most held often held tones C, G and D. Pitch relationships here centre on the obvious prominent tones of D and G, with the use of thirds, neighbouring pitches and the fourth between A and D again being apparent. As a result, it is strongly suggested here that this voice appears to be based upon mode eight, both in its regular form and in its irregular, with the addition of a B-flat

during sections O3 to O6. It is hoped that the following examples will illustrate this modal analysis more clearly.

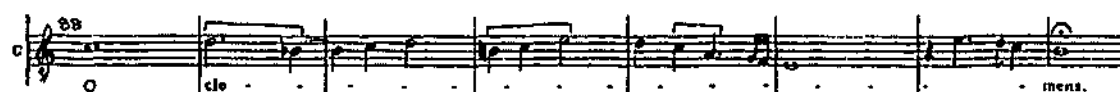
Eg.1 bb.19-27 A long progression showing the strong D - G - D outline, despite the fact that a B-flat has been added to the signature. Note the held B-flat at the start, which leads down a third to G and onto D; the use of repeated tones on D and G; and the frequent use of stepping, both in ascending and descending passages, in order to progress to and from the more significant pitches.



Eg.2 bb.47-50 Shows the use of repeated tones (E and A), the use of both neighbouring pitches (C and D), and the A to D fourth.



Eg.3 bb.88-95 Shows the return of the signature to one with no flat, coupled with the manner in which Davy, due to the rules of *music ficta*, alternates between the descending D to B-flat and the D to B-natural thirds, finally settling on the B-natural.

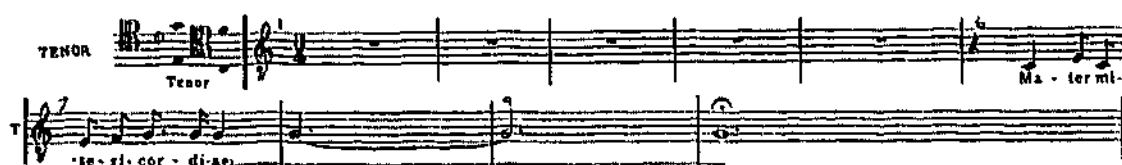


Eg.4 bb.107-15 Another example illustrating the way in which the D - G - D outline is maintained, despite the fact that Davy continues to both add and subtract the B-flat, in the form of an accidental, to and from the vocal line. The use of a B-flat accidental is used quite frequently during the remainder of the work, in much the same way.



The tenor voice in this work is the most complex, due to its many changes in signature throughout the piece. From my examination of all relevant data, it was found that this voice appears to be based upon a D - G - D outline with the same pitch relationships as seen in the contratenor, illustrated above. The A.R.T. graph for this voice demonstrates that the most often repeated pitch was G, followed by F (a step below); whilst the F.H.T. graph shows that the most often held tone was also G. These findings are in agreement with the T.N.T. graph also, as G appears here as the most significant tone in this vocal line. Upon examining the music itself, it can be seen that we have a similar situation here, as to the one seen in the previous voice. The D - G - D outline has once again been maintained throughout the work, despite the fact that there are numerous signature changes. In fact, the signature is modified, from no flats and one flat, no less than four times. Thus, we have another situation whereby the vocal line can be categorised as being structured around mode eight in its regular form, and in its irregular, with a B-flat added to the signature. The following examples illustrate this point more clearly.

Eg.1 bb.6-11 Shows the pitch G is established right from the start as the most significant pitch of this vocal line.



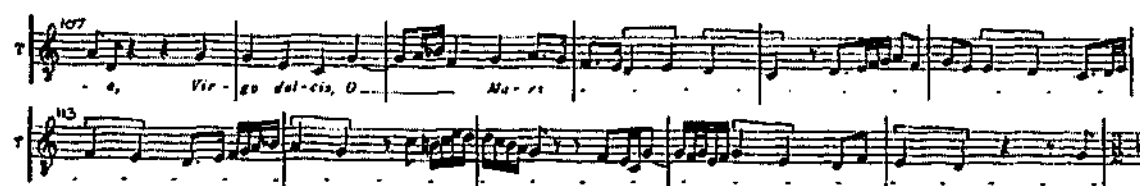
Eg.2 bb.27-30 Shows the D - G - D outline quite clearly, along with both the use of repeated tones on E and stepwise progressions, in order to move between these two significant tones.



Eg.3 bb.58-62 Shows the use of repeated tones, particularly on G.

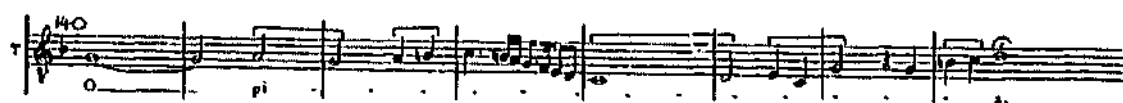


Eg.4 bb.107-17 Long progression showing the way in which Davy, despite the absence of a flat in the signature; inserts and then subtracts a B-flat via the use of an accidental. Note that the D - G - D outline is still maintained.



Eg.5 bb.140-8 Shows the use of held pitches within the D - G - D structure. Also apparent is the use of the upper neighbour (A) as a held pitch, in order to step

to and from G; the use of the B-natural accidental and the ascending steps up to a cadence on D.



Eg.6 bb.182-201 Long example displaying the frequent use of held pitches, stepwise movements and thirds, in order to further enforce the overall structure - D - G - D. Again the pitch G is seen to stand out once more.



Finally, from my analysis of the bassus line in this work, it was seen that we are again presented with a quite unusual situation, as compared to the previous works examined. This vocal line centres on a G - D - G structure, as used by the upper voices in this piece. However, unlike these voices, the bassus voice contains a B-flat signature throughout the entirety of the work. The A.R.T. graph demonstrates that the most repeated pitches were C (step below D), B-flat (third below D) and D; whilst the F.H.T. graph showed G, C and D to be the most often held tones. The pitch relationships for this work centre, once again, predominately around the prominent tones G and D. Other intervals frequently used to move to and from these tones include the fourth from A to D, the G to B-flat third, the G to C fourth and the B-flat to D third. Furthermore, we are often presented with the use of stepwise movements between these prominent pitches and their relevant

neighbouring tones (i.e. A to low G, C to D, and F to high G), as was seen in all works examined thus far. Therefore, from the above analysis, it appears that this voice is based upon mode seven in its irregular form, with a B-flat in the signature. See the example below for further explanation of these observations.

Eg.1 bb.7-11 Shows the use of the G to C fourth and the B-flat to G third, in a short progression that also includes repeated and held tones, in order to reinforce the pitch G.



Eg.2 bb.43-57 A long progression that illustrates the G to D outline, through the use of repeated and held tones.



Eg.3 bb.88-95 Illustrates once again, the G - D - G outline quite clearly. The use of popular intervals such as C to G (a fourth), G to B-flat (a third) and A to D (a fourth) is also apparent, as is the use of held pitches.



Eg.4 bb.135-9 Shows the use of step-wise movements in order to ascend and descend between the prominent pitches.



Eg.5 bb.173-5 Note the use of the upper neighbouring pitch (E-flat) to further emphasise the Ds preceding the G cadence.



HORWOOD'S *SALVE REGINA*

The second work that may be assigned to this modal category, is that by Horwood. This setting is quite complex in that it is a five-voice work, in which each voice seems to be organised around similar pitch outlines, but due to their signatures, may be based on differing modal structures. That is, we are encountered with the range outlines and significant pitches which encompass both G - D - G and D - G - D, but which suggest the use of two different modal structures due to the addition and subtraction of B-flat signature within the vocal lines themselves. The detailed analysis of each vocal line, which follows, illustrates this dual modal structure more clearly.

The first voice, the triplex, is based around a G - D - G outline, with no signature throughout the entirety of the work. The majority of the vocal line is centred on the upper fourth of this range, D to G, as indicated by the T.N.T. graph. From the A.R.T. graph, it can be seen that the most frequently repeated tone is D, followed by E, F and G, the other pitches in the upper fourth of the range. The F.H.T. graph demonstrates that the pitch D is also the most often held tone, again followed by these other three pitches - E, F and G - along with A (a fifth above D). The internal pitch relationships for this vocal line centre on the prominent tones of G and D, and the obvious connections to them (i.e. A and F to G; C and E to D; G to B third; B to D third; D to F third and D to A fifth). Thus it can be said that this vocal line is structured according to mode seven on G, with a G final and a D reciting-tone. The examples below demonstrate this finding more clearly.

Eg.1 bb.23-29 The D to G outline is quite obvious from the very beginning.

Note the use of the repeated and held Ds, followed by the upper (held) and lower neighbouring pitches (i.e. E & C). Also evident is the use of the pitch F to step down from G at the cadence.



Eg.2 bb.59-61 Note the use of repeated neighbouring pitches preceding the D cadence. Also shows the use of stepping in order to progress up to G, then to descend once more to D.



Eg.3 bb.177-91 A long progression illustrating not only the prominent D to G outline, but also the use of frequently seen intervals, in order to heighten the importance of these more significant pitches (i.e. D (held) to A (held) - fourth; D to F - third; and E to G (held) - third). Also evident is firstly the use of stepwise progressions, seen at the beginning of this example in held tones moving from D to G and back to D. Secondly, is the use of neighbouring pitches, noticeably at the end cadence between C and D.

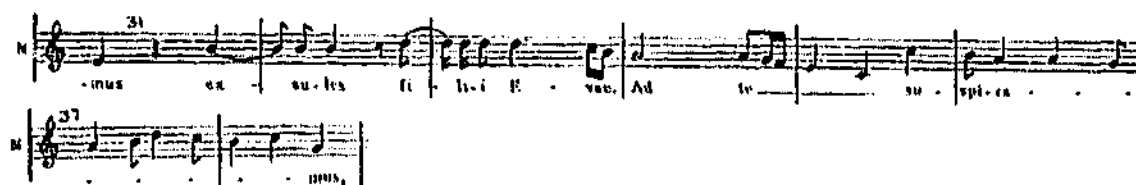


The medius vocal line is based around a D - G - D outline and is similar to the triplex in that it has no signature indicated, along with very minimal use of added accidentals (B-flat and F-sharp). The pitch G remains to be the most significant throughout this vocal line, being the most prominent pitch in the T.N.T., A.R.T. and F.H.T. graphs. The pitch A is also significant, due to its important roles as firstly a step above G, a fifth from low D and a fourth from high D. Once again, pitch relationships centre on D and G, with C and E moving to D and F and A to G. The intervals between D and F (third), B and D (third) and the above mentioned D to A (fifth) and A to D (fourth), are all quite significant in that they assist greatly in heightening the importance of the prominent tones and aid in the movement between them. From these observations, it has been concluded that this voice is structured around mode eight in its regular form, with a range of D to D, a final on G and a reciting-tone of C. The examples that follow are useful in gaining a greater understanding of the modal structure outlined above.

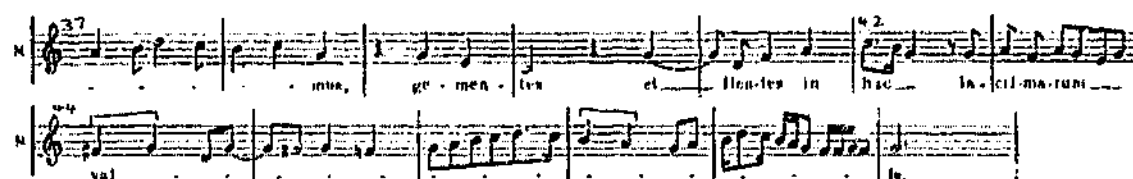
Eg.1 bb.1-8 Shows the D - G - D outline established right from the beginning, assisted by the use of held pitches and intervals such as the D to F third. Note the use of a B-flat accidental here, which is included for this O1 section only. Upon its disappearance, the outline and pitch hierarchies remain the same.



Eg.2 bb.31-8 Note the use of repeated tones at the beginning, with Bs and Ds (a third). Also note the use of both held and repeated pitches on A - a fourth from upper D.



Eg.3 bb.42-9 Shows the use of stepping between the prominent pitches D to G to D, and the use of the F# accidental to reinforce G.



Eg.4 bb.102-4 Short passage outlining the descending D - G - D structure. Includes the use of the D (held) to A (held) fourth and repeated pitches on F, as it steps down to a D - E - D (use of upper neighbouring pitch) conclusion.

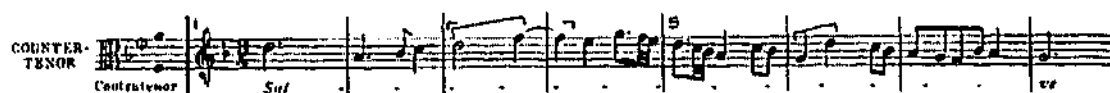


The contratenor vocal line is perhaps the most complex within this work. Its overall structure is based upon a G - D - G outline, as was seen in the triplex voice. However, this vocal line features the use of a B-flat signature on two occasions (O1 to O4 and OE7 to T2), which results in half of the work having no signature at all. What makes this vocal line complex is that although Horwood changes to and from a B-flat signature several times, the pitch relationships and overall structure do not alter in accordance with these changes. Why it is that this occurs, not only

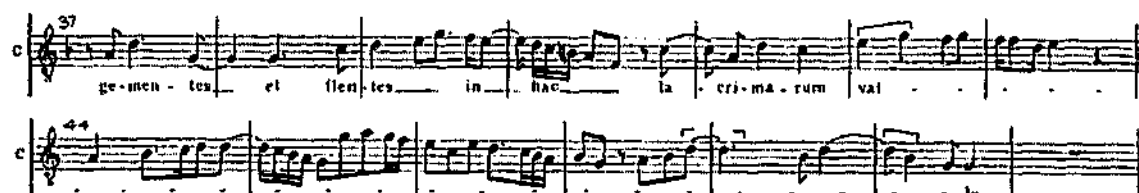
in this setting but also in several of the others, is something that I am unable to answer conclusively. At times, the addition or subtraction of flats in particular, has appeared to herald a change in outline from, for example, mode one on D to mode one on G. However, there are numerous occasions where a signature change has not altered the structure of the music at all, or that the composer has reversed the implication of the signature by adding a flat or natural sign within the music. I can think of no irrefutable reason for this to occur, all I can do is note its occurrence and illustrate what I believe are its implications, if any, within the modal structure of the music itself.

The T.N.T. graph displays this G - D - G outline quite clearly as does the F.H.T. graph. The A.R.T. graph demonstrates that low G and D are the most often repeated pitches, along with F, a step below upper G. During the signature changes, Horwood tends not to cancel out what was indicated by the signature as Davy did (i.e. he rarely adds a B-flat accidental when there is no signature, and vice versa), and there are no indications for the use of any other accidentals within the work. The internal pitch relationships for this vocal line are, as usual, based upon the prominent pitches, with the additional use of thirds and fourths between secondary and more significant tones being quite frequent (e.g. A to D - fourth; G to B - third; and D to F - third). As a result of the above observations, it is quite apparent that this vocal line is based upon mode seven, both in its regular form and in its irregular, with the addition of a B-flat in the signature. The following examples have been included here in order to illustrate these observations more clearly.

Eg.1 bb.1-8 Shows the G - D - G outline quite clearly at the beginning of the work, with B-flat in the signature. Also evident is the use of held pitches on D to A (fourth), D to F (third) and on the final G cadence, which is approached from above by its neighbouring pitch A.



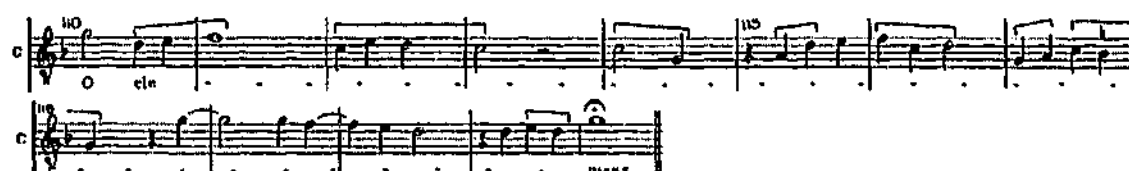
Eg.2 bb.37-50 Long passage that illustrates the G - D - G outline continuing in its importance, despite the removal of the B-flat signature. Note also the use of repeated and held tones and the stepwise progressions between the prominent pitches.



Eg.3 bb.72-82 Shows the use of thirds and fourths to both progress to and from, and heighten the importance of prominent pitches (i.e. B to D third, descending B to G third and descending D to A fourth).



Eg.4 bb.110-21 The flat has returned once more to the signature, and the G - D - G outline remains prominent. Note also the descending stepwise movement prior to the cadence and the use of Ds upper neighbour (E) to reinforce the D to G cadence.



Eg.5 bb.213-9 This final example shows once more the solid G - D - G outline, assisted by held tones and common thirds, despite the absence once more of the B-flat in the signature.

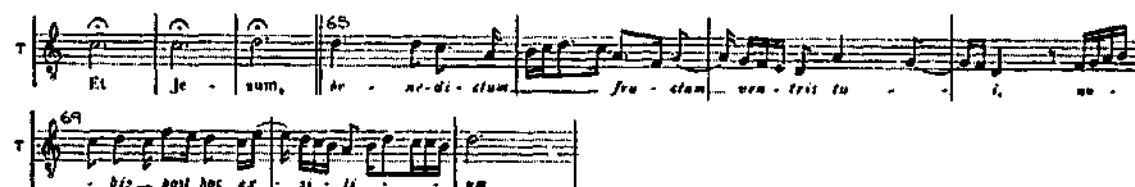


The tenor voice is characterised by a D - G - D outline. The majority of the tenor voice displays nothing in the signature. A B-flat signature is added briefly between the mid-point of section T2 and the end of OE8. During these 44 bars there is evidence to suggest that the vocal line has shifted from mode eight in its regular form, to that in its irregular, with the addition of the B-flat to the signature. The reason for this assumption is the fact that although the signature changes, the overall range and prominent pitches remain the same, D - G - D, with the pitch C also being quite significant as the reciting-tone for this mode. The T.N.T. graph for this voice supports the strong D - G - D structure mentioned above, with the pitch A being important due to the fact that it is a fifth from low D and a fourth from high D. Note also the significance of the pitch C in this graph. The F.H.T. graph demonstrates that these same pitches are the most often held tones, whilst the A.R.T. graph does the same. The internal pitch relationships once again centre on the prominent tones, their immediate neighbours and the obvious thirds and fourths. The examples below illustrate the overall modal structure for this vocal line.

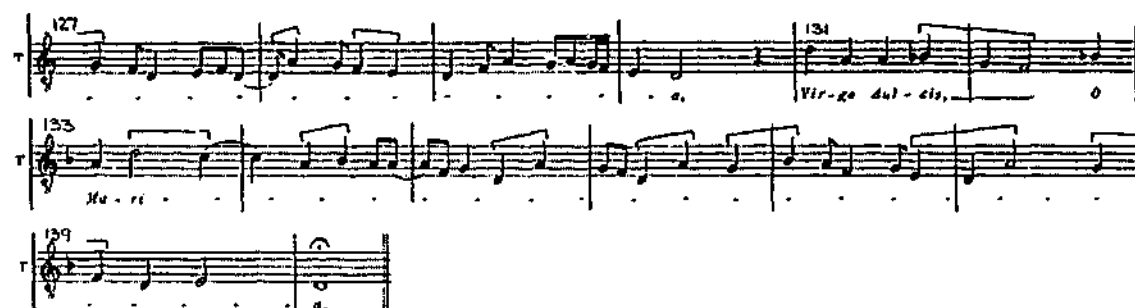
Eg.1 bb.31-4 Brief example showing the use of held and repeated tones, mainly on the prominent tones of G and D. Note also the use of thirds to progress a fifth from D to A.



Eg.2 bb.65-71 Intricate progression, making much use of stepwise progressions, whilst outlining the D - G - D structure. The use of held tones in a descending passage moving from D to A to D and back to G, is worth noting.



Eg.3 bb.131-40 Shows the D - G - D outline continuing in its importance, despite the introduction of a B-flat in the signature. Once again the pitch A is used both to descend to low D and to move to and from G.

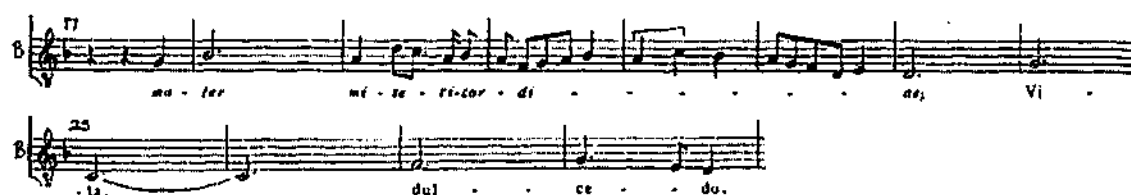


Eg.4 bb.177-91 One final example showing the maintenance of the D - G - D structure, once the B-flat has been removed from the signature. The tones A and C are seen here to continue to be quite important, as a means of moving between the prominent tones.



Finally, the bassus voice begins with a B-flat in the signature, which remains constant until mid-way through the T2 section, where it is omitted for the remainder of the work. The opening bars immediately outline the D - G - D (mode 8) structure and the importance of the pitch C, despite the fact that there is a flat in the signature.

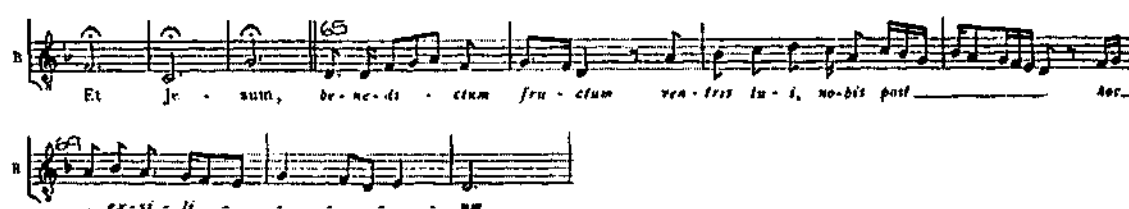
Eg.1 bb.17-28



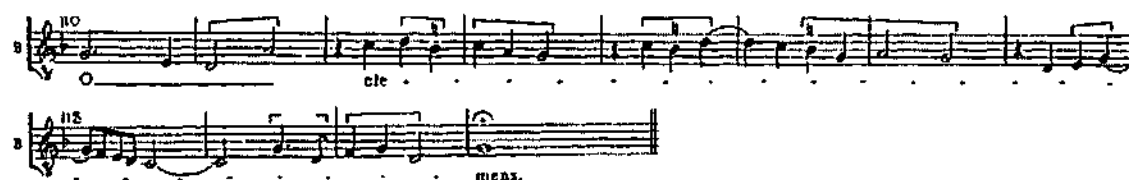
The outline remains constant throughout the work, not altering in any way when the B-flat signature is omitted at bar 177. Furthermore, there is no use whatsoever of any other accidentals in this vocal line. The A.R.T. graph displays the fact that the pitches D, G and high D, along with C, A and high C, were the most often repeated tones. The pitch A stands out once more as it is both a step below G and a central interval between both D pitches; whilst C is a step from D. The F.H.T. graph displays much the same, with the most often held pitches being D, G, D, A and C. The internal pitch relationships are the same as those described in the previous voice. It is interesting to note here the fact that the bassus and tenor

voices in this setting share the same vocal ranges. When the T.N.T., A.R.T. and F.H.T. graphs for both voice-parts are compared, we see that they are almost identical, although the bassus voice does emphasis the lower end of the D – G – D range a little more (evident in the F.H.T. graph). These observations suggest therefore, that this voice is based upon mode eight, both in its regular form and in its irregular, with the addition of a B-flat to the signature. The following examples illustrate the above more clearly.

Eg.1 bb.65-71 Quite a busy progression outlining the D - G - D structure, through the use of intricate stepwise movements between the prominent pitches.



Eg.2 bb.110-21 A second example illustrating this D - G - D structure, in this case, through the use of held pitches, significant intervals such as D to A, and the use of upper and lower neighbouring pitches (e.g. G to A to G).



Eg.3 bb.177-91 A longer progression demonstrating the fact that although the B-flat is no longer present in the signature, Horwood has added it here as an

R
Fur - de - pre - ces in - o na - - - fo rum ci - fi -

H
- no, uni - us re - ra - - - - - to.

192 Et pro no - - - - - bis fla - ge - - - - -

193 to

217

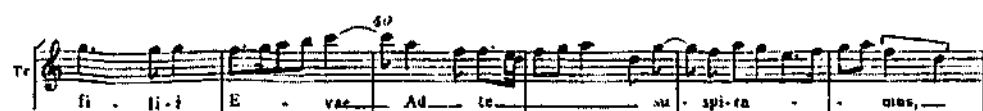
HYGONS' *SALVE REGINA*

The third work to be discussed here is the setting by Hygons. This work has five voices, all of which display neither flats nor sharps in their signatures. The signatures remain vacant so to speak, for the entirety of the work, and there is only very minimal use of accidentals (F#) by the triplex and contratenor voices. Of the five voice parts in this work, the triplex, contratenor and tenor all exhibit strong G - D - G outlines, whilst the medius and bassus are based upon D - G - D structures. Based on these facts, coupled with an examination of the relevant graphs and tables and the music itself, it was concluded that this setting is based upon a combination of both modes seven and eight, in their regular forms with no flats nor sharps in the signatures.

The triplex voice was found to be quite characteristic of the work as a whole, in that the pitch relationships which were established in this vocal line are quite indicative of those seen in the remaining four voices. This voice is based upon a G - D - G structure, with these three pitches being the most prominent tones throughout the work. From the A.R.T. graph it was shown that both D and G, and also F (a third above D and a step from G), were the most often repeated tones; whilst the F.H.T. graph displayed the fact that G stood out as the most frequently held pitch, followed by D, A (step above G and a fifth from D) and B (a third above G). The pitch relationships mentioned above centred predominantly on the two most significant pitches - G and D. When examining the work itself, it was quite evident that low F moves to G; F and A step to high G; and C and E move to D. The pitch B is significant in that it is a third above and below G and D,

respectively; whilst the relationship between D and F and A is quite strong. There are many instances to be found where D moves to F (a third), F to A (also a third) and D to A (a fourth). Thus, it can be said that this vocal line is based upon a mode seven on G structure, with a G to G range, a G final and a D reciting-tone. The following are examples that illustrate the overall pitch structure of this voice, along with the relationships within it.

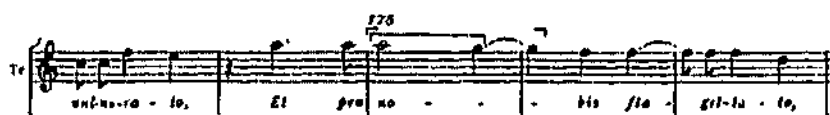
Eg.1 bb.38-43 Demonstrates the use of descending thirds in a progression revolving around the D to G outline. Also displays the use of repeated and held tones to heighten the importance of the prominent tones - in this case G and D.



Eg.2 bb.99-105 Shows the G-D-G outline, and the use of thirds within this structure. Also evident is the use of neighbouring pitches to step between the more prominent tones, and the use of a held tone on G in the middle of this example and at the final cadence.



Eg.3 bb.174-7 Here we see the use of repeated tones, in this case A and F, to further enhance prominent pitches G and D, respectively. Again G is seen as a held pitch and F is used to precede D from a third above.



The next voice, the medius, displays a similar model of organisation as that described above, but is based upon a (D) - G - D structure. The majority of the vocal line however is centred upon the upper fifth in this outline, G to D, as can be seen upon looking at the T.N.T. graph for this vocal line. Also evident from this graph, is the importance of the tone C, the reciting-tone for this mode, which is often used to precede D. From my examination of the A.R.T. graph, it was apparent that the pitches G, A (step above A) and B (third above G) were the most frequently repeated tones; whilst the pitches G, A, B and D were the most often held tones. As mentioned, this voice maintains all pitch relationships described above, with the emphasis remaining on the prominent tones G and D. Therefore, it can be said that this vocal line is based upon a mode eight structure on D, with a D to D range, a G final and a C reciting-tone. The following are relevant examples illustrating this modal structure within the music itself.

Eg.1 bb.30-3 Shows the G to D outline, with the use of the third between G and B, and the fourth between A and D. Both intervals feature in the overall pitch structure of this work..



M

 tes et fil - tes in hac la-ri-ma - rum

M

 val - le.

158

M

O - - - - -

pl - - - - -

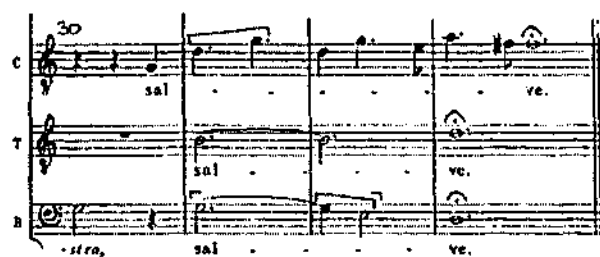
158 159 160 161 162 163

165
Fun - di - pro - ces - su - o na - to tra - ti - fi - so,
170
cul - to - ra - to, Et pro no - bis fli - ge - tu - to,

221

contratenor were G and D, with some use of F - the third above D. The most often held tones for this voice were G, D, F and high G; all pitches being prominent tones bar the F. With respect to the tenor voice, we see that the most repeated tones were also G and D, along with the pitches in between (i.e. A, B and C). The most often held tones were G, D and high G, as well as the A above low G (neighbouring pitch used to step down to G). Thus it is evident that both voices follow much the same path, with their overall pitch hierarchies focusing upon further reinforcing the prominent tones of G and D. It can be said, therefore, that both of these voices are based upon a mode seven structure on G, with a G to G range, a G final and a D reciting-tone. See the following examples in order to obtain a clearer picture of the above model of organisation at work.

Eg.1 All vces. bb.30-33 Gives a clear picture of the overall G-D-G outline, particularly in the contratenor vocal line, which finals on the pitch F# (part of the overall D cadence). Note the use of a descending G to E third in this voice, prior to the ascent of the vocal line to A.



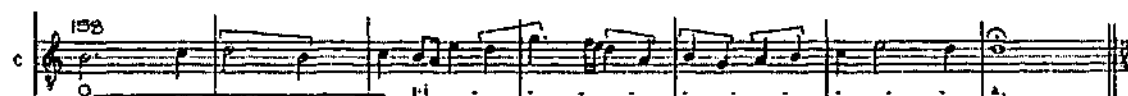
Eg.2 CT bb.45-56 A long progression which illustrates the G-D-G outline and includes the use of repeated tones - particularly on F - to enhance the pitch G.



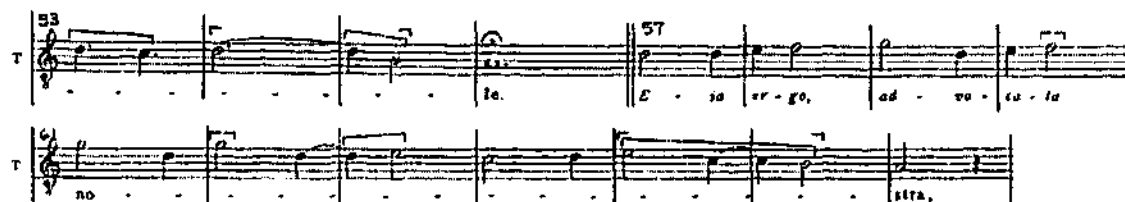
Eg.3 CT bb.154-7 Use of held pitches to precede a cadence on G.



Eg.4 CT bb.158-64 Another instance involving the use of held pitches to reinforce the overall G-D-G structure. Note the use of B-D-B thirds & the use of the upper neighbour note (E) as a held pitch preceding the cadence on D - a very common event.



Eg.5 T bb.57-67 Demonstrates the frequent use of held pitches within predominantly the upper D to G outline. Note the use of the neighbouring pitch F to step to G, and the use of the E to C third. Also note the stepwise decent to the cadence on A.



Eg.6 T bb.94-105 Again another long progression that shows the use of held pitches. Particularly notice the use of C to step to D, and A to G, along with the use of the B to G third.



Finally, upon examination of the bassus voice we see that we are again presented with a D - G - D outline. This voice is organised very similarly to that of the medius, having the same pitch relationships and overall structure. The A.R.T. graph displays the high use of D, G and A (a step above G), as repeated pitches; whilst the F.H.T. graph demonstrates the fact that D and G remain to be the most frequently held pitches. Furthermore, although the pitch C does not appear to be quite as significant in the T.N.T. graph for this voice, as it was in the medius, it still remains an important tone within this vocal line as it is used to both precede and follow the pitch D. In conclusion therefore, this vocal part has been found to be based upon a mode eight structure on D, with a D to D range, a G final and a C reciting-tone. See examples below for an illustration of these observations.

Eg.1 bb.50-6 Shows the use of held pitches and a continuation in the importance of the D to F third, within the D to G outline.



Eg.2 bb.128-33 Illustrates the use of held pitches on G and D and also F, along with the use of A to further enhance G (i.e. the upper neighbour). Can also see the D to F third and the use of step-wise progressions to move G to D.



Eg.3 bb.158-64 Shows the use of thirds and fourths in this passage that outlines the overall D to G structure.



WYLKYNSON'S SECOND *SALVE REGINA*

The fourth work in this category is the second setting by Wylkynson. The work was quite a challenge to analyse with respect to modal organisation, due to its many variations of both structural outlines and signatures. Although some may disagree with the conclusions drawn below, they are I feel, the most reliable when considering the evidence at hand.

Upon examining this five-voice setting, it was evident that each vocal line demonstrated differing characteristics. The triplex voice displayed a G - D - G outline with a signature containing a B-flat for the majority of the work, bar the final three sections. The three central voices, the medius, contratenor and tenor, all appeared to be based upon D - G - D structures, but with differing signatures, all of which were variations between no flats and one flat. Lastly, the bassus voice was found to share similarities with the triplex, in that its pitch relationships centred on a G - D - G structure. However, the bassus voice contained a B-flat signature throughout the entirety of the work. As a result of all of these observations, conclusions were drawn as to the overall modal structures upon which each vocal line was based. These conclusions are discussed below, with appropriate examples included in the hope of further illustrating them. On the whole, however, this work was found to exhibit an overall structure based upon both modes seven and eight, either in their regular forms or as irregular modes, with the addition of B-flat signatures.

As mentioned, the triplex voice exhibits an overall structure based upon a G - D - G outline. This is evident both from an examination of the vocal line itself, and from the T.N.T. graph. The A.R.T. graph displays the fact that G and D are the most often repeated pitches, along with the pitch C, which is a step below D. From the F.H.T. graph it can be seen that the most often held tones are G and D, along with the pitches surrounding D (i.e. C, E and F). These latter three tones are significant here, due to the fact that they are often used to approach cadences on D, either as neighbouring pitches or, in the case of F, from a third above. This vocal line begins with a B-flat in the signature that remains constant until the OE8 section, whereby the flat is eradicated. Upon examining the music itself, it was found that despite this change in signature, the overall G - D - G structure remained constant, as did all internal pitch relationships connected with these prominent tones. Therefore, from the above observations, it has been concluded that this vocal line is based upon a mode seven structure, both in its regular form and as an irregular mode, with the addition of a B-flat signature.

Eg.1 bb.4-16 Example displaying the opening bars of the work, in which the upper D to G outline is established. Note the frequent use of repeated tones on D, along with the use of a D to F third to assist in reinforcing the D.

The musical score consists of three staves: Treble, Tenor, and Bass. The Treble staff begins with a treble clef and a key signature of one flat (B-flat). The Tenor and Bass staves begin with a bass clef. The score is divided into three systems, each containing measures 12, 10, and 16. The lyrics are written below the staves: 'Sol - ve re - gi - na, ma - ter mi - se - ri - cor - di - ae; Vi - ta, dul - ce - do, et spes no - stra, sal - ve.'

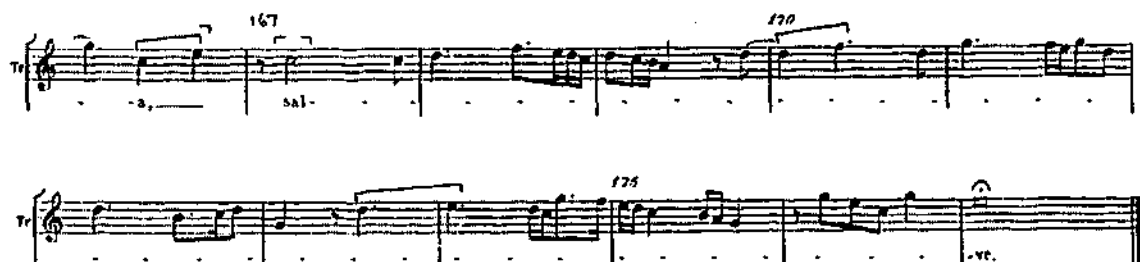
Eg.2 bb.67-77 The overall G - D - G outline is visible here. Note also the use of stepping, especially by neighbouring tones, in order to progress up and down from the significant pitches.



Eg.3 bb.78-85 Shows the use of a B-natural accidental here to cancel out the signature. Despite this, the G - D - G outline remains constant, reinforced by held pitches on both G and D.



Eg.4 bb.167-77 Final bars of work, illustrating once more the continuation in structural importance of the G - D - G outline, in this case despite the absence of a flat in the signature.

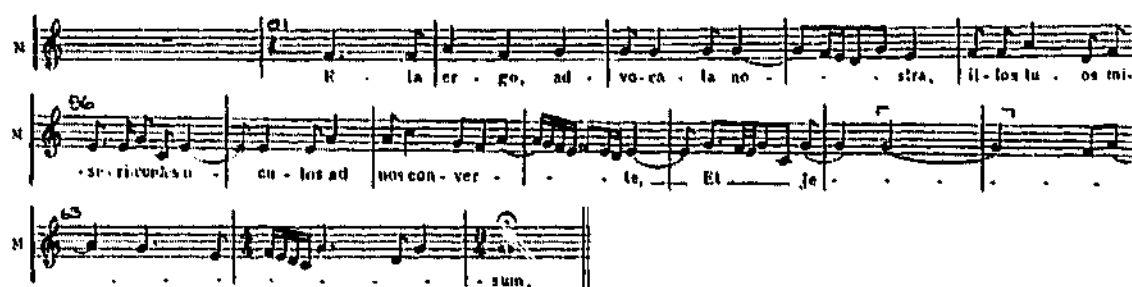


The medius was found to be constructed around a D - G - (D) outline, with the upper D being a significant tone, but not quite as structurally significant as the other two pitches. This voice displays no signature at all for the majority of the work, including a B-flat in its signature for the latter part of the T5 section only. The pitch G is probably the most prominent tone of all, featuring strongly in all three graph-types. In addition to this, the A.R.T. and F.H.T. graphs also demonstrate that the pitch D and those surrounding the G (i.e. F and A), were both the most often repeated and held, throughout the work. The internal pitch relationships for this vocal line centre predominantly on the neighbouring tones and frequently seen thirds that are directly connected with the prominent pitches D and G. Thus, it is possible from the above to conclude that this voice is based primarily upon a mode eight structure in its regular form, with the addition of an irregular mode eight structure when the B-flat signature is added.

Eg.1 bb.1-6 Opening bars illustrating the strong D to G outline, amidst the addition of a B-flat, accidental in the opening G to B-flat third. Note also the use of both held and repeated pitches to reinforce this outline.



Eg.2 bb.51-65 Example showing the frequent use of repeated held pitches, within a D to G progression.



Eg.3 bb.142-52 Eleven-bar progression, in which a B-flat has been added to the signature. Notice the fact that the D to G outline is still maintained. Also evident is the use of stepping between notes, especially via the use of neighbouring pitches.



The contratenor voice is quite complex due to frequent alternations in signature, between one flat and no flats. This voice is based upon a D - G - D structure, which does not falter despite these changes in signature. The pitch G is once more very significant in this vocal line, again featuring in all three graph-types. The A.R.T. graph demonstrates the fact that along with G, the most often repeated tones are A, C and D. The two former pitches are significant here as firstly, A is both a step above G and a fourth below D; and secondly, C is a step below D. The F.H.T. graph displays that A, C and D are the most often held tones. Pitch relationships for this vocal line centre on these prominent tones and their neighbouring pitches. From the above observations, coupled with a detailed examination of the vocal line itself, it was concluded that the contratenor is based

on a mixture of mode eight both in its regular form and in its irregular, with the addition of a flat to the signature.

Eg.1 bb.3-16 Upper pitch outline of G to D is established here. Note the significance of the pitch G, which is repeated at the beginning of this example, along with G to B third. Also worth noting is the use of held, repeated Es prior to the cadence (i.e. Ds upper neighbour).



Eg.2 bb.33-43 Progression illustrating the use of a B-natural accidental prior to the change in signature, and the inclusion of a B-flat accidental once it has changed. Wylkynson often adds B-natural/B-flat accidentals to this voice, which cancel out the signature, for brief interludes at a time. Note also the D to G outline maintained throughout this example.



Eg.3 bb.51-9 Example displaying the use of repeated tones within a G to D progression. The repeated Cs at the beginning of this example are used here as the lower neighbouring pitches leading up to D. Once again, Wylkynson

has included as accidental to cancel out the signature, this time as a means of leading into the next signature change which occurs at bar 63.



Eg.4 bb.66-77 Shows the D - G - D outline clearly illustrated over the duration of the example. Note also the use of repeated and held tones to further enhance the structural significance of this outline. Also evident is the alternation between a B-flat and a B-natural accidental, regardless of the signature at the time.



The tenor voice is based on much the same modal structure as the medius and contratenor. It displays a D - G - D outline throughout the work, with the pitches D and G, and to an extent C, being the most prominent tones. Upon examining the A.R.T. and F.H.T. graphs, it is evident that the pitch G is quite prominent in both graphs, followed by its neighbouring tones F and A, along with C. The internal pitch relationships in this vocal line are the same as those found within the medius and contratenor lines, centring on the prominent pitches. From an examination of the music itself, we can see that this vocal line contains a B-flat signature for the majority of the work. It does eliminate this flat during section O5, but it returns

mid-way through the next section. Therefore, it can be said that this voice is based almost entirely upon mode eight in its irregular form with a B-flat signature. The section denoting no flat in the signature is representative of mode eight in its regular form. See the examples below for a clearer picture as to how these conclusions came to be drawn.

Eg.1 bb.17-24 Shows the D - G - D outline clearly, enhanced by held pitches.

Note also the held E-flat pitch, which is used here to reinforce the D that follows.



Eg.2 bb.50-71 Long progression illustrating the fact that the overall D - G - D

outline, the underlying structure of this vocal line, remains constant despite the changes in signature. Note the repeated As at the beginning of the example, which lead down to G and onto low D. Also evident is the held A to held G step at bar 59 (i.e. use of neighbouring pitch to heighten Gs importance) and the held E to G cadence (a third).

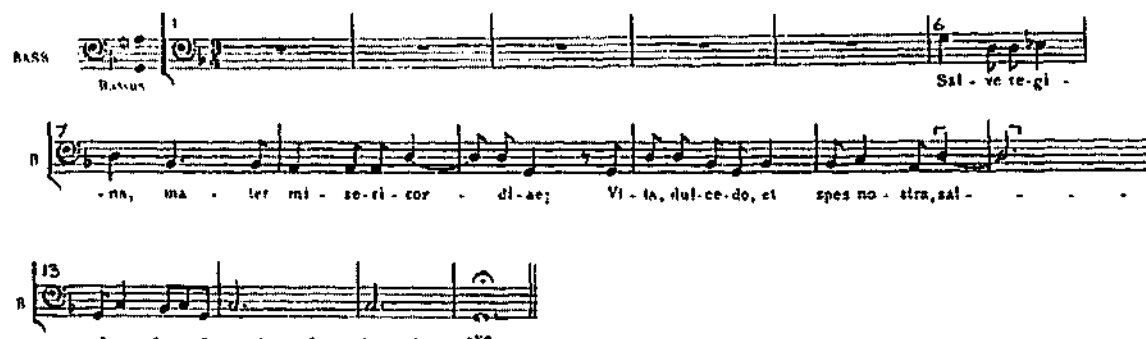


Eg.3 bb.105-17 This progression demonstrates the use of both B-natural and B-flat accidentals by Wylkynson in this vocal line too. Also evident is the use of held and repeated pitches, particularly on G, along with the use of stepping between notes.



Finally, following an examination of the bassus voice, similarities between this vocal line and that of the triplex voice were drawn. Both voices are based around a G - D - G outline, with the internal pitch relationships focusing on these two prominent tones. The A.R.T. graph for the bassus displays that the most often repeated tones were C and D. The frequent use of C as a repeated pitch explains its dominance in the T.N.T. graph. From an examination of the F.H.T. graph, similar results were obtained, with the pitches G, C and D being the most often held tones. Finally, an analysis of the music itself uncovered the fact that this voice, unlike that of the triplex, contains a B-flat in its signature, throughout the duration of the work. Thus, when all of these points are combined, this voice appears to be based upon a mode seven structure, in its irregular form with a B-flat signature.

Eg.1 bb.6-16 A strong G - D - G outline is established in the opening bars, assisted by the use of repeated and held pitches. Note also the use of an E-flat to reinforce D; the A to D fourth; and the descending D - B - G thirds.



Eg.2 bb.66-8 This example illustrates the descending G - D - G outline quite clearly.



Eg.3 bb.134-52 Final example showing the use of repeated and held pitches, particularly on C, to aid in reinforcing the G - D - G outline.



To sum up, this work was found to be based upon the use of modes seven and eight, both in their regular and their irregular, the latter having the addition of a B-flat signature.

HUCHYN'S *SALVE REGINA*

The next work designated as being structured according to this modal category, was the five-voice setting by Huchyn. From my analysis of this work, the following observations have been made.

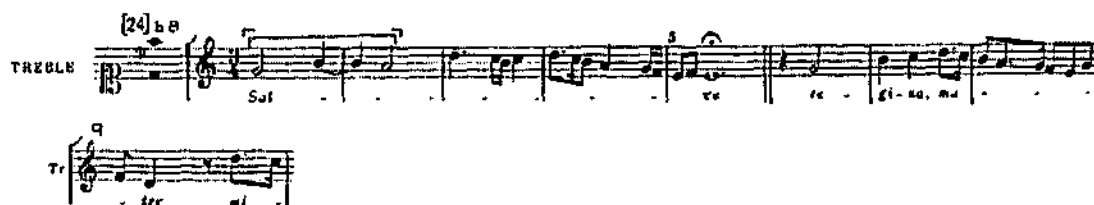
The triplex, medius and tenor voices contain no signature throughout the entirety of the work. The contratenor begins the same way, but mid-way through the section T3, a B-flat is added to the signature. This flat continues to appear in the signature for the remaining thirty-five bars of the work. The bassus voice begins, once again, with no signature. The B-flat is added at section O4, is removed mid-way through O6, and added once more at OE7. From this point onwards the B-flat signature remains constant. No other significant use of any other accidentals within these vocal lines is evident.


From the above observations and a more detailed analysis of these works, it was concluded that this setting is based around a combination of both modes seven and eight, either in their regular or irregular forms, the latter due to the addition of a B-flat signature. The following discussion illustrates this analytical process in much detail, with examples being included for the purpose of demonstrating the modal structure of each vocal line more clearly.

The triplex voice in this setting appears to be based upon a D – G - D outline. This voice contains neither flats nor sharps in its signature, which remains vacant for the entirety of the work. The T.N.T. graph for this voice quite clearly displays this D –

G - D outline, along with the high number of As and Bs within the work. This can be explained by examining the A.R.T. graph that shows that, along with G and D, these two pitches were the most often repeated tones in the vocal line. The relationship of these two pitches to the prominent tones of G and D, also accounts for their popularity in the T.N.T. graph (i.e. B is a third between G and D, whilst A is often used to approach D from a fourth below). The F.H.T. graph supports the above conclusions, with the pitches G, A, B and D once again being featured here. Other internal pitch relationships seen in this vocal line, centre predominately around the use of neighbouring tones to step to and from the more significant pitches (i.e. E & C to D, and F & A to G). Thus, it can be said that this vocal line is based upon a mode eight structure, with a range of D to D, a G final and a C reciting-tone, in its regular form with nothing in its signature.

Eg.1 bb.1-9 Opening bars that illustrate the D - G - D outline, along with the use of held tones to reinforce this. Also note the appearance from the beginning of the significant intervals used within this work to aid in the establishment of the pitch structure D - G - D (i.e. G to B third, A to D fourth and descending F to D third).



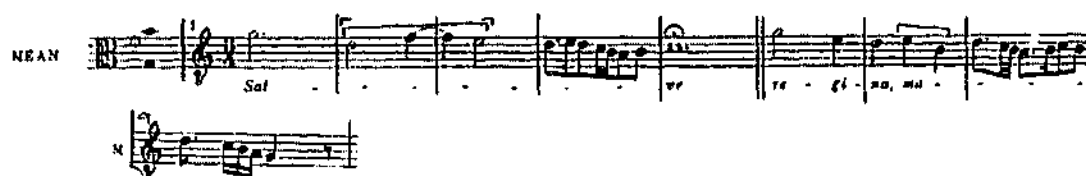
Tr. 
23
ve. Ad tu cla ma - mus ex - su - les fi - li - i E -

Tr *So*
Vie - ta ma - ter ec - cla - si - ca.

238

regular form, with a G to G range, a D final, a C reciting-tone. The following examples illustrate this more clearly.

Eg.1 bb.1-9 This example, featuring the opening bars of this vocal line, displays the G - D - G outline quite clearly, with the emphasis placed upon the upper fourth. Note the use of held pitches at the beginning to emphasise both the descending G to D and the D to G third.



Eg.2 bb.24-6 Shows the descending G to D outline, along with the use of repeated and held pitches, to reinforce this pitch structure.



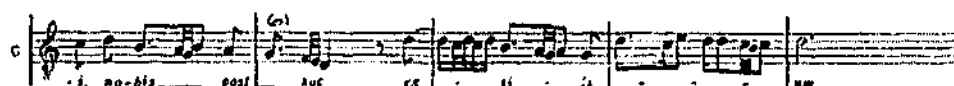
Eg.3 bb.141-51 Longer progression that is an excellent example of the manner in which this voice centres on the upper D to G outline. Note also the use of held tones on significant pitches.



The contratenor vocal line for this setting begins with nothing in its signature. A B-flat is added to the signature half way through section T3, and remains to the very end. Upon examining both the music itself and the T.N.T. graph, it could be



Eg.3 bb.61-3 Short example illustrating the use of neighbouring pitches to step to more prominent tones. Here we see the close relationship between C and D, and A and G.



Eg.4 bb.141-51 This example shows the use of held pitches to progress from G to D and back to G. The pitch C can once again be seen as significant.



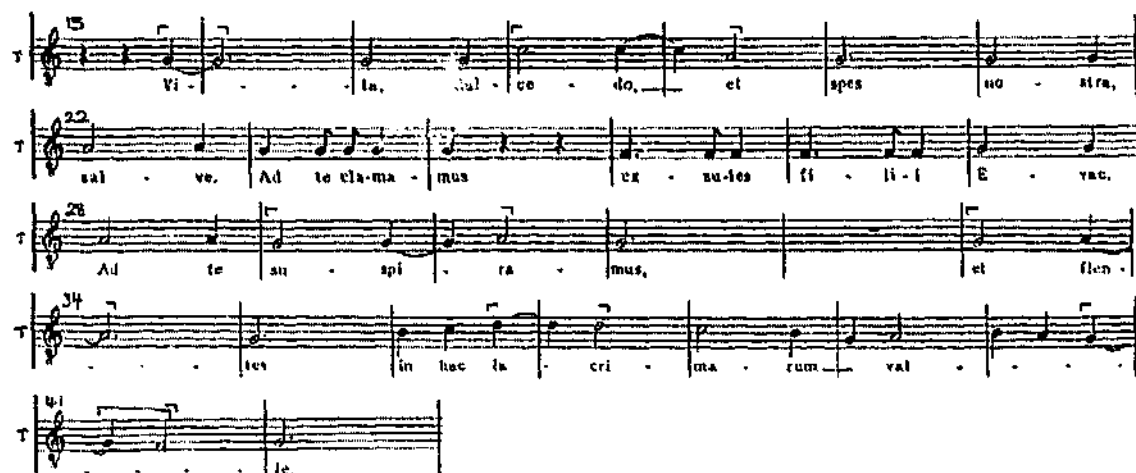
Eg.5 bb.156-72 Long example showing the transition from: no signature to one flat, and how, during this, the vocal line maintains a strong D - G - D structure. This outline is further reinforced by the use of held and repeated notes on significant pitches. Note also the continued importance of the pitch C, both in relation to D and in its own role as the reciting-tone for this mode. This D - G - D structure continues to be reinforced throughout the remainder of the work.



From an examination of the T.N.T. graph for the tenor, it is quite evident that this voice is structured around a D - G - D outline. An analysis of the music itself supports this conclusion. Both the A.R.T. and the F.H.T. graphs also demonstrate this fact, showing also the high significance of the pitch G within this vocal line. This voice begins without a signature and, in a similar fashion to the triplex and medius, does not add one at all during the work. Upon examining the vocal line itself, it was found that the tenor part exhibited to same internal pitch relationships as that seen in the triplex voice. Hence, neighbouring pitches and related thirds continued to be use in such a way as to further reinforce the more significant tones in this vocal line. As a result of the analysis of all data concerned with the tenor part, it was concluded that this vocal line was based upon a mode eight structure in its regular form, with a D to D range, a G final and a C reciting-tone.

Eg.1 bb.15-42 Quite a long progression, illustrating the great importance of the pitch G within this vocal line, whilst outlining the upper G to D structure. Note also the use of the neighbouring pitches either side of G (i.e. F and A) to heighten its significance, along with the importance of the tone C within

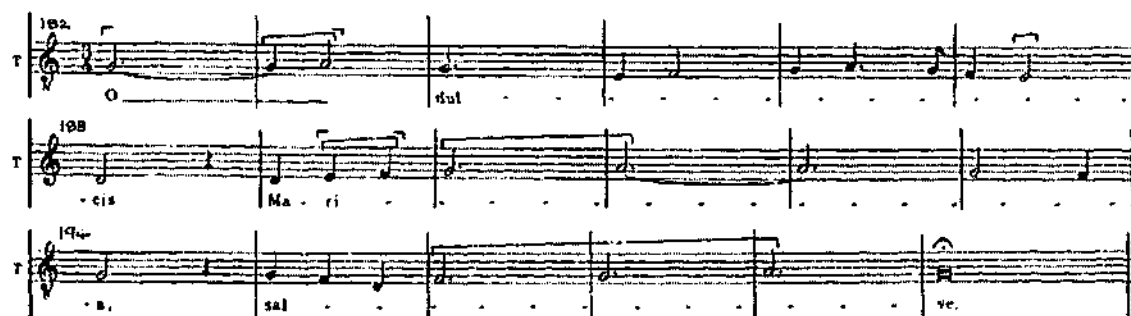
this outline too. Finally, this is also an excellent example of the use of repeated and held tones to further emphasise the significant pitches.



Eg.2 bb.61-4 Example that shows the use of neighbouring pitches and stepwise movements to progress, in descent, from D to G to low D.



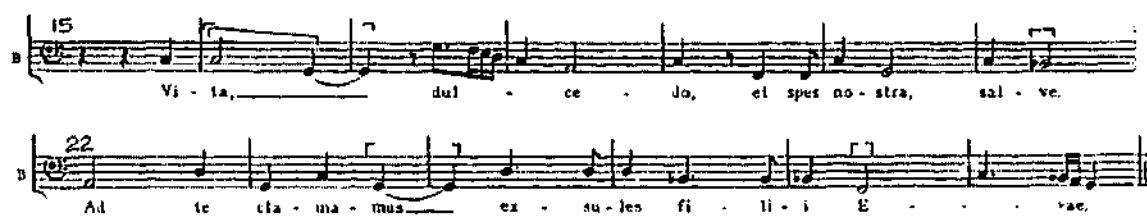
Eg.3 bb.182-199 One final example illustrating the importance of the pitch G, within the D - G - D structure. Once again, we are presented here with the use of held tones and neighbouring tones to further emphasise the significant pitches.



The bassus voice in this setting is assuredly the most complex. This is due solely to the seemingly frequent changes in signature, between that of no flats and one

flat. The work begins without a signature, displaying a strong G to D outline. The B-flat signature comes into force shortly after, at section O4, and remains until the start of the O6 section. This encompasses 41 bars, after which the B-flat once more returns, at section OE7, where it prevails unchanged for the remainder of the work. Throughout these changes in signature, it is evident from the music itself that the G - D - G outline, illustrated at the beginning, continues to be the underlying structure. This is further substantiated by the T.N.T. graph, which also demonstrates this outline quite clearly. From an examination of the A.R.T. and F.H.T. graphs, it can be seen that firstly, the pitches most often repeated were D, G and high D, whilst the most often held tones were D, G, high D and C. Internal pitch relationships for this vocal line centred upon both the usual thirds and fourths associated with these significant tones, along with the relevant neighbouring pitches. Thus, it may be concluded that this voice is based around a mode seven structure, both in its regular form and in its irregular, with the addition of a B-flat signature. The following example illustrates these conclusions more clearly.

Eg.1 bb.15-27 This example shows the G to D outline being established, along with the importance of the pitch C. This is aided here by the use of held tones, such as those on the opening descending C to G. Note also the inclusion of a B-flat accidental towards the end of the example. This is a precursor to the inclusion of a B-flat signature at bar 28, which immediately follows this example.

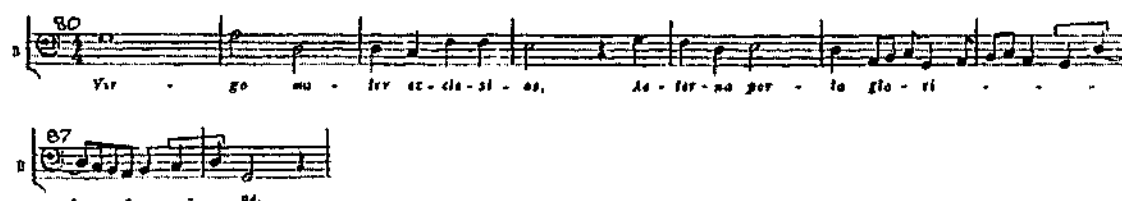


Eg.2 bb.28-36 Here we see the inclusion of the B-flat signature in this voice.

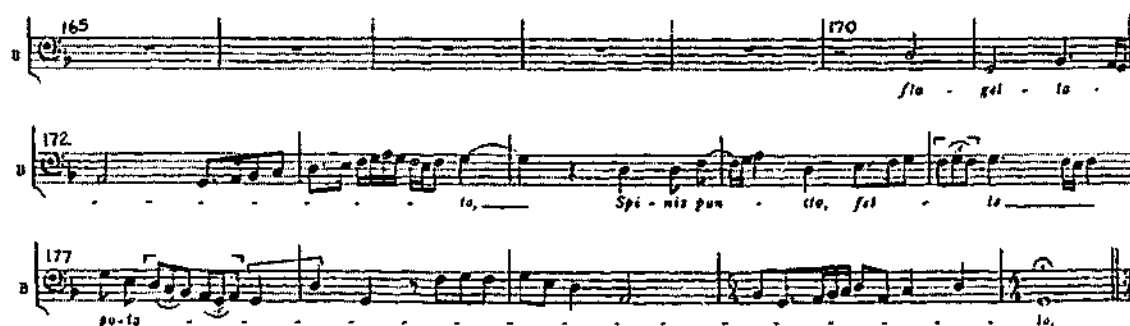
Also noticeable is the very strong G - D - G outline and the important pitch C, all further reinforced through the use of repeated and held pitches.



Eg.3 bb.80-8 Example showing the continuing importance of the G - D - G outline, despite the absence once more of a flat in the signature.



Eg.4 bb.170-81 Final example showing the inclusion of a B-flat in the signature once more, whilst the G - D - G outline is maintained. Note also the stepwise progressions involving the use of neighbouring pitches, along with the use of thirds and fourths to move to and from the significant pitches (e.g. the G to B third; the use of a with G; the D to F third; the common descending A to D fourth; the relationship between F and high G; and the use of C to D prior to the G cadence).



CORNYSH'S *SALVE REGINA*

The next work that falls into this category is the five-voice setting by Cornysh. From my analysis of this work, it has been concluded that it is based upon a combination of both modes seven and eight, either in their regular or irregular forms, the latter resulting from the addition of one or two flats to the signatures. The triplex, contratenor and tenor voices are quite similar, being based upon strong G - D - G outlines. They differ somewhat, however, in that their signatures do not always coincide. That is, the triplex contains a only a B-flat in its signature for most of the work, except for the brief appearance of an E-flat as well, during the second half of section O2. The contratenor's signature contains a B-flat in it throughout the work. Finally, the tenor begins with nothing in its signature, adding a B-flat mid-way through section O4. This signature of one flat continues for the remainder of the work. The medius differs slightly in that although it contains a B-flat signature throughout the work, the pitch structure it appears to be based upon is D - G - D. Lastly, the bassus line in this work is the most complex. This voice commences the work with nothing in its signature, adding two flats during section O4. Both of these flats continue to remain in the signature throughout the duration of the work. What makes this voice more complex than the upper four voices, is the fact that it does not restrict itself to just one pitch structure. Rather, we see three different pitch outlines used in alternation throughout the work - D - G - D, C - G - C and B-flat - F - B-flat - all of which have been derived from both modes seven and eight.

From an examination of all data gathered from an analysis of this work, the following conclusions have been drawn. The triplex and contratenor voices have both been deemed as being based upon mode seven in its irregular form on G. The medius vocal line is seen as being structured around mode eight in its irregular form on D. The tenor voice is based upon mode seven in both its regular and irregular forms on G. Finally, the bassus vocal line is based around a combination of mode eight in its irregular form on D, mode seven in its irregular form on C, and mode seven in both its regular and irregular forms on B-flat. The discussion that follows will provide the reader with a more detailed analysis of the observations and conclusions presented here.

The triplex voice, as mentioned above, is based upon a (G) - D - G outline, with the pitch low G not being perhaps as structurally significant as the other two tones. The vocal line begins with a B-flat in the signature, which is soon added to, with the inclusion of an E-flat mid-way through section O2. This additional flat does not remain for long, being removed just nine bars later. The original signature of one flat continues for the remainder of the work. The sectionalised table for this vocal line also demonstrates the fact that, apart from the inclusion of some notated accidentals in the first two sections of the work, there is no other use of any structurally significant accidentals. With respect to those used at the beginning, the following has been observed. This vocal line, as stated, begins with a B-flat signature. During section O1 it can be seen that the composer has included one E-flat and eight F-sharps as accidentals. The former was used to descend to, and reinforce, the pitch D. The latter additions are all used to heighten the importance of the pitch G, except the final accidental, which is used as the cadence tone,

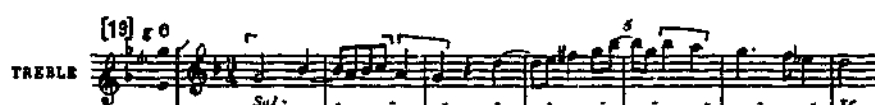
preceded by G. In section O2, we see the addition of one E-flat accidental used to precede D from above, and an F-sharp, again seen here as the lower neighbouring pitch to high G. Following the signature change to two flats, the composer presents us with just two E-flats, before including another two E-naturals prior to the end of the section and the return of the signature to one flat. Hence, it can be seen that the use of additional accidentals here does not signify any major changes in the overall pitch hierarchy of this vocal line.

From an examination of the T.N.T. graph for this vocal line, the (G) - D - G outline is quite clear. Also evident is the fact that the majority of the movement in this voice appears to revolve around the upper G to D fifth, with the columns for these two tones, coupled with that for the pitch F (a third above F and a step below G), representing the most significant tones on this graph. The A.R.T. graph for this voice displays the fact that the most often repeated tones in this vocal part were by far G and D. The F.H.T. graphs show similar results, with the most frequently held tones being G, B-flat (a third above G) and D. From an examination of the music itself, the following internal pitch relationships were observed. The pitches C and E/E-flat are used to reinforce D; A moves to G; the pitch B-flat is both a third between low G and D, as well as a third above high G; the pitch F is used to reinforce both D (from a third above) and G (from a step below); and finally, F-sharp is used to heighten the importance of G. What was also evident from my analysis of the triplex vocal line was the fact that although there was a signature change at section O2, the pitch structures established from the start and continued throughout the remainder of the work, did not alter. Thus, this signature change was not seen as being any indication as to a shift in the modal orientation of this

vocal line, whatsoever. Rather, as mentioned previously, it can be seen that the pitch E-flat, now included in the signature, is only utilised on two occasions, before being eradicated initially by a natural sign and soon after by its removal from the signature itself.

Therefore, when all of these observations were collated and compared, it was concluded that this vocal line is based upon mode seven in its irregular form on G (G to G range, G final and D reciting-tone), with the addition of either one or two flats to the signature. The following examples illustrate this more clearly.

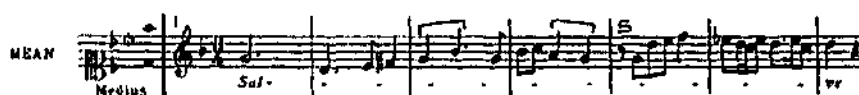
Eg.1 bb.1-7 Opening bars of the work in which the (G) - D - G outline is established. Note the use of the pitch F-sharp to move to G, and the E-flat that leads to D.



with the most frequently held tones being D, G and A (a step above G). From an analysis of the music itself, the following observations have been made with respect to internal pitch relationships operating within this vocal line. The pitches F and A move to G; C and E/E-flat move to D; the pitch F is both a third above low D and a step below G; whilst B-flat is a third between G and high D. Thus, when all of this data was taken into account, it was concluded that the medius vocal line is based upon mode eight in its irregular form on D, with a D to D range, a G final, a C reciting-tone and a signature of one flat. The examples included below illustrate this more clearly.

Eg.1 bb.1-7 Opening bars in which the (D) - G - D outline is first reinforced.

Note the use of the added E-flat accidentals to heighten the importance of the pitch D; the F-sharp accidental to progress to G; and the held tones on low D, G and B-flat (a third above G).



Eg.2 bb.241-258 A long progression in which the (D) - G - D structure is seen in its entirety, reinforced by held tones particularly on G and high D. Note also the use of step-wise progressions to move between structurally significant pitches (D to G, bars 243-4; G to G, bars 247-9; and D to high D, bars 254-5).

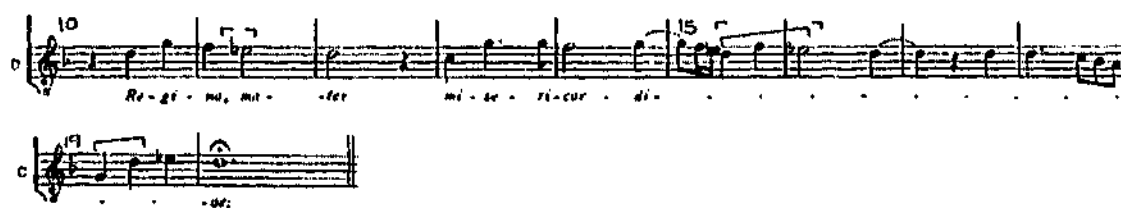


The contratenor and tenor voices are structurally quite similar, with both vocal lines exhibiting strong G - D - G pitch outlines. The contratenor begins with a B-flat signature that continues throughout the work, whilst the tenor commences the work with nothing in its signature, gaining the B-flat during section O4. This new signature of one flat remains in force throughout the remainder of the piece. Apart from some minimal use of added E-flat accidentals on the part of the contratenor, neither vocal line makes any significant use of any other additional accidentals.

The T.N.T. graphs for each of these voices display the G - D - G outlines clearly. The contratenor makes full use of this outline throughout the work, whilst the tenor line restricts its movement somewhat, with the majority of its part surrounding the lower G to D fifth. Hence, it would perhaps be more appropriate to say that the pitch structure for this voice centres on a G - D - (G) outline. The A.R.T. graphs for these voices demonstrate that the most often repeated tones in the contratenor and tenor were G, D and F, and D and B-flat, respectively. In both cases, the significant tones of this mode - G and D - are featured, with the additional pitches of F and B-flat being important due to their roles as secondary pitches (i.e. F is a third above D and a step below G; whilst B-flat is the third between G and D). The F.H.T. graphs display similar results, with the most frequently held tones in the

contratenor line being D and G; whilst in the tenor they were B-flat and G. From an in-depth analysis of the music itself, it was found that the internal pitch relationships operating within each of these vocal lines, were much the same as those identified in the triplex part. That is, F and A move to G; C and E/E-flat reinforce D; B-flat is used to move between G and D, from either a third above or a third below, respectively; and the pitch F is also used in its role as a third above D. Therefore, from all of the above analysis, it has been concluded that, firstly, the contratenor voice is based upon a mode seven structure in its irregular form on G, with a G to G range, a G final, a D reciting-tone and the addition of a B-flat signature. Secondly, the tenor vocal line was found to be based upon a mode seven outline also, both in its regular form (pre-signature change) and in its irregular, following the addition of a B-flat signature. It is important to note here also that, with respect to the tenor voice, the change in signature was not found to coincide with any alterations in pitch structure whatsoever. The G - D - (G) outline which was established at the beginning of the work, was found to continue to be the underlying pitch structure throughout the piece, despite a change in signature - as was found to be the case in the triplex vocal line. The examples that follow have been taken from both the contratenor and tenor vocal lines, in order to aid in the further illustration of the above conclusions.

Eg.1 CT bb.10-20 Opening bars of work that shows the G - D - G outline in its entirety. Note the appearance of held tones on D, E-flat and G, and the use of the pitch E-flat to reinforce D.



Eg.2 CT bb.112-115 Short example showing the use of both held tones and neighbouring pitches, to highlight the upper D to G outline. Here we see the pitch F being used to step to and from high G.



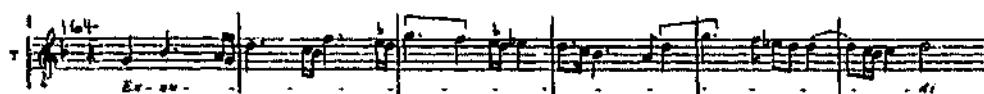
Eg.3 CT bb.178-99 Demonstrates the use of held tones again, this time on significant tones, heightening their own importance, within this G - D - G outline.



Eg.4 T bb.142-8 A rather brief example that illustrates the lower G to D range, further reinforced by the use of held tones. Note the use of the A to D fourth at the start; the step-wise progression from G to D at bar 44; and the held tones on B-flat, the third between G and D (bars 145-7).



Eg.5 T bb.164-9 Again we see the use of held tones, this time in the presentation of the entire G - D - (G) outline. Note the use once again of the pitch E-flat to reinforce D.



Before proceeding with a discussion on the bassus vocal line, one quite interesting feature of this work must be mentioned. As has been previously stated, the upper four voices of this work are structured around two closely related pitch outlines - G - D - G and D - G - D. As has also been mentioned, any changes of signature occurring during the progression of this work, in any of the four voices, has not been related in any way to a similar change in pitch structure. Thus, the vocal lines have always maintained the pitch outlines established at the beginning of the work, regardless of any changes to their signatures. Furthermore, as also noted, but not yet expanded upon, the bassus vocal line is not based upon one, but three, pitch structures, used in alternation throughout the work. The movement to and from these contrasting outlines is once again not related to the change in signature evident in this voice during section O4. The reason for my expanding further upon these observations here is due to the fact that, between roughly sections O3 and O6, the contratenor and tenor voices appear to have altered their pitch outlines and included additional accidentals so as to, perhaps, correlate with what is occurring in the bassus line. Up until this, both the contratenor and tenor lines have previously established strong G - D - G outlines, with the contratenor including a B-flat in its signature and the tenor without anything in its signature. During section O3, we see the gradual movement in these two voices, from their original

G - D - G structures, to what appears to be F - C - G outlines. Accompanying this change is the addition of E-flat accidentals and, prior to the signature change in the tenor, B-flat accidentals. This transformation in the underlying structure of these voices occurs just prior to a signature change in the bassus, whereby the vocal line moves from no flats to two flats, and continues on post-signature change. The bassus vocal line exhibits a clear B-flat - F - B-flat outline throughout this entire episode. This is the only modification to the vocal lines of these two voices, to occur during this work, and it is my opinion that the reason for this brief change lies with what is occurring in the bassus vocal line. The following except has been taken from the section in question and further illustrates what has been described here. Once again, the connections drawn here between these three voices is simply my opinion, others may well interpret this situation quite differently.

Eg.1 CT,T,B bb.38-82 and 92-95 Note the gradual changes in each of the upper voices, as the vocal lines appear to move from a G - D - G structure to an F - C - F outline. Also evident is the addition of accidentals to each of these upper voices, resulting in the overall development of a closer relationship between these two voices and the bassus vocal line.

40

C Ad te cla - ma - mus ex - tu - les fi - li - i E -

T Ad te cla - ma - mus ex - tu - les fi - li - i E - voa...

B Ad te cla - ma - mus ex - tu - les fi - li - i E -

45

C - vae. Ad te su - spi - ra -

T Ad te su - spi - ra -

B - vae. Ad te su - spi - ra -

52

C mus, ge - men - tes in hac la - cri - ma -

T mus, ge - men - tes

B mus, ge - men - tes

60

C et flen - tes in hac la - cri - ma - rum val -

T et flen - tes in hac la - cri - ma - rum val -

B et flen - tes in hac la - cri - ma - rum val -

68

C

T

B

E - ta - er - ga, mi - ta - ca - la,

92

C

T

B

Ei Je - sti - tu, Je - sti - tu, Je - sti - tu,

Finally, it is now my intention to provide a more detailed discussion of the bassus line itself. This vocal line, as previously mentioned, appears to exhibit three different pitch outline, which are used in alternation throughout the work. The bassus part begins without anything in its signature, adding two flats mid-way through section O4. These flats are present in the signature for the remainder of the work. The pitch outlines exhibited by this voice, those being D - G - D, C - G - C and B-flat - F - B-flat; were not found to be influenced in any way by this change in signature, nor any other changes in signature which occur in the upper four voices during the work. Upon examining the sectionalised table for this voice, it can be seen that there is only a very minimal use of added accidentals during this vocal line, none of which were found to be structurally significant. The T.N.T. graph displays somewhat unclear results, with the overall pitch outline stretching between either B-flat and B-flat, or C and C. The pitches G, F and D do appear to be significant tones however, as represented in the graph. The A.R.T. graph shows that the most often repeated tones in this voice were G, high B-flat, F and D; whilst

the F.H.T. graph demonstrates that the most frequently repeated pitches were also F, G, high B-flat and D.

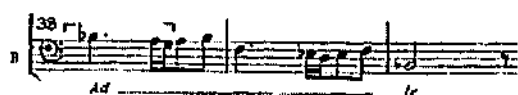
In order to arrive at a clearer picture as to how this vocal line was structured in terms of mode, it was necessary to turn to the music itself. The following is a detailed account with respect to the movement in the bassus part between each of the three pitch outlines. Again, the observations noted here represent my own understanding as to how this vocal line could be interpreted. They are not meant to be representative of all views, as I am sure other scholars given this task would arrive at differing conclusions.

The bassus line commences the work exhibiting a strong B-flat - F - B-flat outline, against a signature that does not contain flats until section O4. This outline continues through to the end of section O5, whereby the vocal line shifts to a structure based upon a C - G - C outline, for the beginning of the O6 section. This new outline continues only until the start of the T1 section, where it moves back to a B-flat - F - B-flat structure (approximately bar 116). The return once again to this pitch structure lasts until the start of the OE7 section, where it moves once more, this time to a D - G - D outline. The new pitch hierarchy remains only until the beginning of the T2 section, whereby we see the return of the B-flat - F - B-flat outline (approximately bar 160), via a brief encounter with the C - G - C outline (around bar 157); before it shifts once again to the D - G - D structure around the middle of the T2 section. This pitch outline does not remain in force for long, with the vocal line being omitted for the end of the T2 section, but returning in the OE8 section with a B-flat - F - B-flat structure once again. This time, despite a brief

pause in the vocal line at the start of the T3 section, the pitch structure remains reasonably constant throughout the remainder of the work. There is some suggestion of the use of the D - G - D outline very briefly during the middle of the T3 section; and the C - G - C outline is possibly seen, again briefly, during bars 251-4, just prior to the final D to G cadence.

Thus, it is quite evident that this vocal line is complex in nature, due to the frequent movements between each of the three pitch structures. Despite this, it is possible to conclude from all of the evidence presented here that this vocal line is based upon a combination of mode eight in its irregular form on D (D to D range, G final, C reciting-tone and two flats in the signature); mode seven in its irregular form on C (C to C range, C final, G reciting-tone and two flats in the signature); and mode seven in both its regular and irregular forms on B-flat (B-flat to B-flat range, B-flat final, F reciting-tone, and a signature which moves from no flats to two flats). The conclusions made with respect to the modal organisation of this vocal line, although complex, do in a manner of speaking, compliment the conclusions drawn from the previous four voices. The examples that follow illustrate these conclusions more clearly.

Eg.1 bb.38-40 A rather brief example that shows the B-flat - F - B-flat outline, which is established at the beginning of the work.

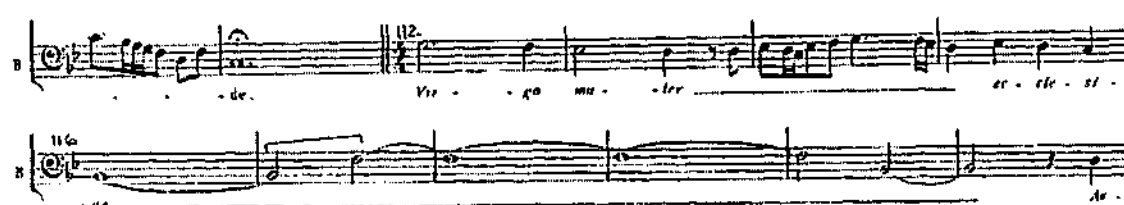


Eg.2 bb.96-103 Here we see the appearance of the C - G - C outline at the beginning of the O6 section. Note the use of stepwise progressions,

neighbouring pitches and repeated tones, to further reinforce this new pitch outline.



Eg.3 bb.112-121 Example showing the demise of the C - G - C outline and the introduction of the B-flat - F - B-flat pitch structure once more. Note the use of held tones to further reinforce this change in pitch structure.



Eg.4 bb.149-63 Demonstrates the shift in the pitch outline from D - G - D to C - G - C (approximately bar 157), before settling on a B-flat - F - B-flat structure at the end of the example. Note here the use of repeated tones (bar 156) and especially held pitches, to aid in the reinforcement of a particular structure as it emerges.



Eg.5 bb.243-58 Final bars of this vocal line, illustrating the possible appearance of a C - G - C outline briefly (bars 252-4), within the overall B-flat - F - B-flat outline that operates until the final cadence on G. Once again, the

composer uses held tones on significant pitches to further reinforce the pitch outline in operation.

The image shows a musical score for two staves, measures 248-251. The notation is in a single system with a common time signature. The first staff (top) contains measures 248 and 249. The second staff (bottom) contains measures 250 and 251. The lyrics are written below the notes. The notes are primarily half notes and quarter notes, with some rests. The lyrics are: "dul - cis bla - ri - sal - ve." The notes are written in a single system with a common time signature. The first staff (top) contains measures 248 and 249. The second staff (bottom) contains measures 250 and 251. The lyrics are written below the notes. The notes are primarily half notes and quarter notes, with some rests. The lyrics are: "dul - cis bla - ri - sal - ve."

FAYRFAX'S *SALVE REGINA*

The *Salve regina* setting by Fayrfax proved initially to be a little taxing when it was examined, due to the fact that the pitch structures exhibited could be seen to be indicative of two different modal types. The triplex, contratenor and tenor all display strong D - G - D outlines, whilst the medius and bassus demonstrate G - D - G structures. Coupled with the fact that, apart from a brief appearance in the bassus line of a signature of two flats, the entire work is written with a B-flat signature. The reason for such confusion lies in the fact that from this initial data, this work can be seen to be based upon either a modes one and two structure, transposed to G and D respectively, or a modes seven and eight structure, in their irregular forms, due to the addition of flats in the signatures. After careful consideration and an in-depth study of the music itself, it was decided that the pitch hierarchies of the latter two modes, seven and eight, best fitted this work. the reasons for this decision are further expanded in the discussion that follows.

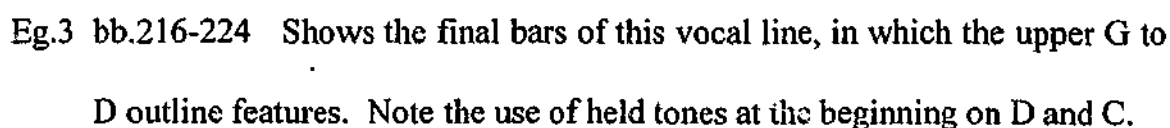
The triplex voice, as mentioned above, exhibits a strong D - G - D outline, with a B-flat signature throughout the work. Upon examining the sectionalised table for this voice, it can be seen that there is no use of any added accidentals in this vocal line whatsoever. The T.N.T. graph for the triplex part demonstrates this D - G - D outline quite clearly, along with the apparent significance of the pitch C. It was the importance of this pitch, which was confirmed following an examination of the music itself for each of the triplex, contratenor and tenor voices, that led me to conclude that this work was based upon a modes seven and eight structure, where the pitch C is the reciting-tone of mode eight, not a transposed version of modes

one and two. The A.R.T. and F.H.T. graphs display quite similar results, with the most often repeated tones in this voice being D and C, whilst the most frequently held pitches were C, D and G. From my examination of the vocal line itself, the following internal pitch relationships were observed. The pitch low E was used to descend to D; low F had a dual role as both the third above D and a step below G; A moved to G; B-flat was the central third between G and D; high E descended to D; and the pitch C was significant both in its own right as the reciting-tone, and as the step below high D. Thus, from all of the above information, it has been concluded that the triplex voice is based upon a mode eight structure on D, in its irregular form with a D to D range, a G final, a C reciting-tone and a B-flat signature. The following examples demonstrate these conclusions more clearly.

Eg.1 bb.12-17 In this example the overall D - G - D outline is quite clear. Note the D to F third at the start of the example, which is followed by a held tone on E, before descending back to D. This is a good example of the use of thirds, neighbouring pitches and held tones, to reinforce a significant pitch - in this case D. Also worth pointing-out is the use of a held tone on C, the reciting-tone, as the vocal line descends from D to G.



Eg.2 bb.28-34 Example showing the use of repeated tones and held pitches, within this G to D outline. Note the held tones on C once again.



The medius vocal line is based upon a (G) - D - G outline, with the lower G being an important tone, but not so structurally significant as those of the upper fourth. This voice contains a B-flat in its signature throughout the work and , as was found to be the case in the triplex, there is no use of added accidentals whatsoever. Although the lowest tone in the pitch outline for this vocal line is G, the pitch low C often features in its place. The T.N.T. graph for this vocal line demonstrates the (G) - D - G outline quite clearly, along with the fact that much of the movement in this voice revolves around the upper D to G fourth. The A.R.T. graph shows that the most often repeated tones were F, G and D, with the pitch F being a prominent secondary tone. The F.H.T. graph displays the fact that the pitches F and G were also the most frequently held tones. Following an examination of the music itself, the pitch A was found to be used to move to G; C and E move to D; low B-flat is the central third between G and D; high B-flat is the third above high G; and F is important as both the step below G and a third above D. Therefore, when all of

this data was compared and collated, it was found that this vocal line is based upon a mode seven structure in its irregular form on G, with a G to G range, a G final, a D recitation tone and a B-flat signature. The examples below are included as a means of further illustrating the above conclusions.

Eg.1 bb.24-34 Example showing the extended G - D - G outline, further enhanced by the use of held tones and step-wise progressions to and from significant pitches.



Eg.2 bb.64-81 Illustrates the use of the pitch low C as a popular tone to descend to, when the vocal line fails to stretch down as far as low G (e.g. bars 66, 67, 68 and 78).



The next two voices, the contratenor and tenor, will be discussed here together, due to their great similarities. Both vocal lines contain a B-flat in their signatures throughout the work, and both exhibit strong D - G - D outlines, within which the pitch C is also of structural significance. The T.N.T. graphs for each of these voices display their D - G - D outlines in their entirety, with the vocal lines making

full use of the entire range. Furthermore, apart from some minor use of the pitch E-flat, evident in the sectionalised tables for each of these voices, neither the contratenor nor the tenor, makes any significant use of additional accidentals. The A.R.T. graph for the contratenor demonstrates that the most often repeated tones in this vocal line were G and D; whilst in the tenor they were G, F and B-flat. The F.H.T. graphs show that the most frequently held pitches were G and A in the contratenor, and G and F in the tenor. It is evident from this information, that the pitch G is quite significant in both vocal lines. Upon examining the music itself, the internal pitch relationships were found to be the same as those operating within the triplex line, with the prominent pitches D, G and high D continually reinforced by their neighbouring tones and associated thirds. There is one interesting feature of these vocal lines that must be noted here however. Although, as stated, both the contratenor and tenor vocal lines are based upon strong D - G - D outlines, it appears that, during the T1 and OE7 sections, these two voices alter their pitch structures. With respect to the contratenor vocal line, there is some confusion on my behalf, as to whether this vocal line shifts, very briefly, during these two sections to a C - F - C outline. This would bring it into line with the bassus voice, which moves to mode seven on F following its change in signature during this same section. The tenor voice also appears to experiment with the new C - F - C outline briefly during these two sections. However the new outline is not quite as clear in this voice as it was in the contratenor, although the pitches C and F do appear to become more prominent during these 36 bars.

Eg.1 CT,T,B bb.82-117 Note the appearance of a C - F - C pitch outline in the upper two voices, against an F - C - F outline in the bassus.

82 85 90 95 100 105 110

C Ver - ge - ma - ter ac - cle - si - ae, A - ter - na por - tu gla - ri - ri

T Ver - ge - ma - ter ac - cle - si - ae, A - ter - na por - tu gla - ri - ri

B Ver - ge - ma - ter ac - cle - si - ae, A - ter - na por - tu gla - ri - ri

C E - sto no - bis re - fu - gi - um

T E - sto no - bis re - fu - gi - um

B E - sto no - bis re - fu - gi - um

C A - pud pa - trem et fi - li - um

T A - pud pa - trem et fi - li - um

B A - pud pa - trem et fi - li - um

C O cle - mens.

T O cle - mens.

B O cle - mens.

To conclude therefore, it can be said that both the contratenor and tenor voices are based upon a mode eight on D structure, in its irregular form due to the B-flat signature (i.e. D to D range, G final, C reciting-tone). With the possibility of a brief shift to mode eight on C, also in its irregular form with one flat in the signature (i.e. C to C range, F final and B-flat reciting-tone). The examples below illustrate what has been discussed above, more clearly.

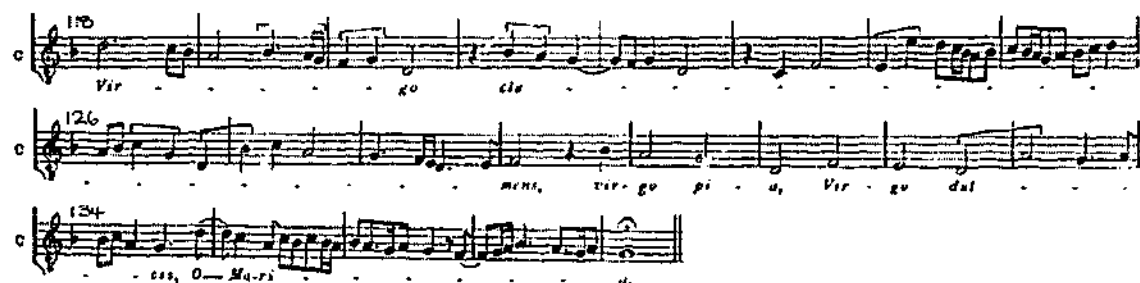
Eg.1 CT bb.2-12 Opening bars of this vocal line, whereby the D - G - D outline is quite clear. Also noticeable are the octave leaps between low and high D at bar 9, and the step-wise progressions between the three significant pitches; both of which combine to further reinforce this D - G - D outline.



Eg.2 CT bb.25-6 A brief example illustrating the use of repeated tones to enhance the lower D to G fourth. Here we see the pitch F, repeated, descending a third to D, prior to the D to A fourth and the descending G to D fourth.



Eg.3 CT bb.118-38 Here we see this vocal line returning once more to a D - G - D outline, following the brief experimentation with a C - F - C pitch structure (see earlier example). The use of held tones in this example is evident, in most cases in order to further reinforce the more prominent tones.



Eg.4 T bb.1-4 Opening bars in which the importance of the upper G to D fourth is stressed, predominately by the use of held pitches on D and the prominence of the pitch C, seen here as a held tone in its role as the lower neighbouring pitch to D.



Eg.5 T bb.12-17 The entire D - G - D outline is utilised here, highlighted once again by held tones.



Eg.6 T bb.173-87 This example has been taken from the tenor line, following the brief appearance of a C - F - C outline during the T1 and OE7 sections. Here we see the return of the D - G - D outline very clearly, along with the importance of the pitch C as both the reciting-tone, and as a step below both low and high D. Note the use of the pitch E-flat at bar 184, to reinforce D.



Eg.7 T bb.221-4 Final bars of this vocal line. Note the use of repeated and held tones to reinforce the significance of the pitch G. Also notice the use of A, as the upper neighbouring pitch to G, to precede the final cadence on G.



Finally, we come to the bassus voice. This vocal line is a little more complex than the upper four voices, in that it contains both a signature change and an alteration in its pitch outline. This voice begins with a B-flat signature, displaying a clear G - D - G outline. Following the addition of an E-flat to the signature during the T1 section, the vocal line appears to shift to an F - C - F pitch structure. Despite the return of the signature to one flat soon after, it appears that the vocal line continues to employ this new F - C - F outline throughout the remainder of the work. At times, during sections T3 and OE9, there is perhaps a short revival of the G - D - G outline, but apart from these brief interludes, the F - C - F pitch structure continues to remain the major force in the bassus line. I should be added here that even though this F - C - F outline continues to operate, despite the return of the signature to one flat, there is no use of any added accidentals - particularly F-flats - to accompany this. That is, the fact that this new pitch outline emerged following the addition of an E-flat to the signature, the fact that the flat was removed soon after did not dissuade the continuation of this pitch structure.

The T.N.T. graph for the bassus voice, illustrates the fact that two pitch outlines are apparent in this work, exhibiting the possibility of both a G - D - G outline or an F - C - F outline in the graph. The A.R.T. graph shows that the most often repeated tones were C and D, the reciting-tones for each of these two pitch outlines. The F.H.T. graph demonstrates similar results, with the pitches C and D also being the most frequently held tones in this vocal line. Finally, upon

examining the vocal line itself, the usual pattern whereby secondary tones are used to further reinforce more prominent pitches, was found to exist, the intricacies of it dependent upon which pitch outline was the governing structure at the time.

Therefore, to conclude, it can be said that this vocal line is based upon both mode seven on G, in its irregular form with a B-flat signature (G to G range, G final and D reciting-tone); and mode seven on F, at first in its regular form with two flats, then following the signature change, in its irregular form with only one flat (F to F range, F final and C reciting-tone). The examples below further demonstrate these conclusions.

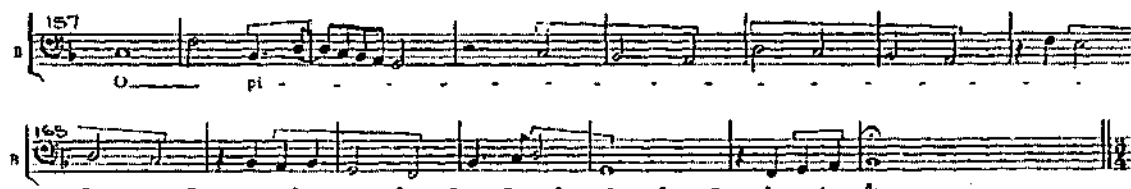
Eg.1 bb.1-12 Example showing the G - D - G outline present at the beginning of this vocal line. Note the use of held pitches to pause on the central pitch D, as the vocal line descends from G to G. Also apparent, is the use of both low and high B-flat, in their roles as the thirds above low and high G, respectively; and the use of the pitch E-flat at bar 4 to reinforce D.



Eg.2 bb.65-98 A rather long example illustrating the gradual change in this vocal line from a G - D - G outline to an F - C - F pitch structure. This appears to be aided by the use of held tones, and the rise in importance of the pitch A - the central third between F and C.



Eg.3 bb.157-71 Illustrates the continuation in importance of the F - C - F outline, well past the removal of the E-flat from the signature. Note the frequent use of held pitches in this example in order to stress prominent tones.



Eg.4 bb.216-224 Here we see what appears to be a subtle alternation between the significance of the pitch G and the F - C - F outline, during the final bars of the work.



Thus, we are presented here with a work which is based upon a combination of both modes seven and eight, in their various forms.

HAMPTON'S *SALVE REGINA*

The next work to be examined, is the setting by Hampton. From an analysis of this work, the following observations were made. The triplex, tenor and contratenor voices all display D - G - D pitch structures, coupled with a B-flat in their signatures. This flat is removed from the triplex signature between sections OE7 and the first half of T3, however this constitutes only 22 bars in total. The medius and bassus voices both demonstrate strong G - D - G outlines, with a signature of one flat in the medius and a movement between one and two flats in the bassus. From these observations, coupled with an analysis of the music itself, it was concluded that this work is based upon a combination of modes seven and eight on G and D, respectively. Due to the significance of the pitch C in the triplex, tenor and contratenor voices, this work was not seen to be based upon a modes one and two structure (i.e. the pitch C is the reciting-tone for mode eight).

The triplex vocal line, as stated above, exhibits a strong D - G - D outline. The voice commences the work with a B-flat in its signature, which is removed at section OE7, and is not reinstated until mid-way through section T3. Due to the fact that this vocal line is absent from the majority of the T2 section and the first half of the T3 section, the period in which this voice is without a flat in its signature, is only 22 bars in total. Furthermore, during these 22 bars, the composer makes use of the pitch B-natural only six times and following an examination of the music itself, it was seen that the D - G - D outline exhibited at the start, continued to be the structural force throughout the work, despite the absence of a

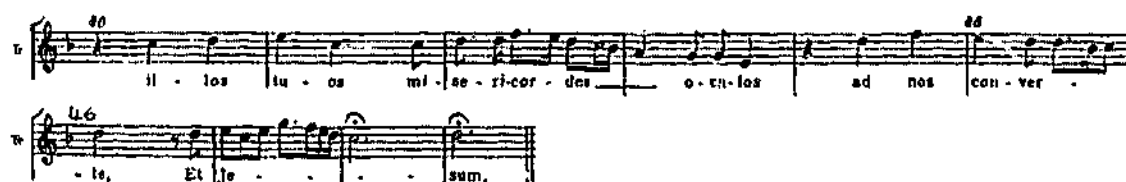
flat in these sections. Thus, the signature change did not result in any shift in the pitch structure of this voice, whatsoever.

The T.N.T. graph for this voice displays the D - G - D outline quite clearly, along with the significance of the pitch D, as the reciting-tone for this mode. The A.R.T graph shows that the most often repeated tones in this voice were D and G, whilst the F.H.T. graph demonstrated similar findings, with the pitches D, E (a step above E), G and C being the most frequently held tones. From an examination of the music itself, the following internal pitch relationships were observed. The pitches E/E-flat are used to descend to, and reinforce, D; F is both the third above D and a step below G; A descends to G; B-flat is the central third between G and D; and the pitch C is both a step below D and the reciting-tone for this mode. Thus, from all of the above information, it was possible to conclude that this voice is based upon a mode eight on D structure (D to D range, G final and C reciting-tone), in both its irregular and regular forms, the former due to the addition of a B-flat signature. The following examples illustrate these conclusions more clearly.

Eg.1 bb.1-5 Opening bars of work demonstrating the establishment of the D - G - D outline; the importance of the D to F third; and the use of repeated pitches and neighbouring tones to further reinforce the more significant pitches.



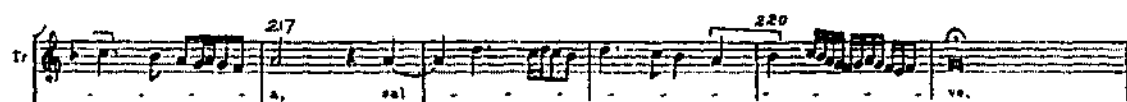
Eg.2 bb.40-9 Illustrates the importance of the pitch C (the reciting-tone), within this upper G to D pitch outline. Notice the use of held tones, particularly on C and D, and repeated pitches on D and G.



Eg.3 bb.95-105 Here we see the D - G - D outline continuing in its prominence, despite the removal of the B-flat signature. Note the use of the D to F third, along with several held tones, again predominantly on G, D and C.



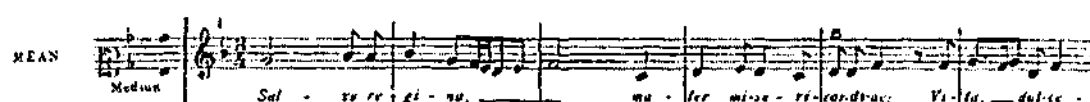
Eg.4 bb.217-221 Final example showing the use of stepwise progressions to precede a cadence, in this case on G.



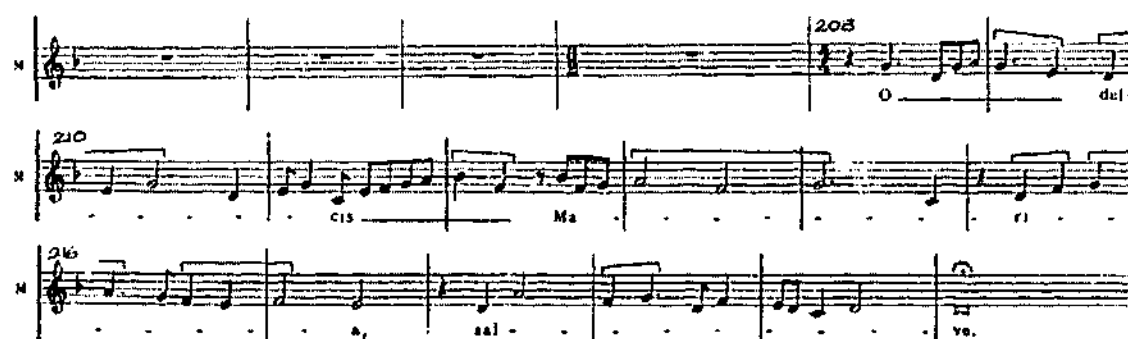
The medius vocal line contains a B-flat in its signature throughout the work, while exhibiting a strong (G) - D - G outline. The pitch low G was seen to be an important tone in this voice part, but not as structurally significant as the other two pitches. Therefore, the majority of the movement in this vocal line occurs between the upper D to G fourth, as is quite evident in the T.N.T. graph for this voice. The A.R.T. graph shows that the most often repeated tones in this voice were D and G,

whilst the most frequently held tones, as demonstrated in the F.H.T. graph, were G and A. Upon examining the music itself, it could be seen that the composer uses the pitches C and E to reinforce D; A moves to G; B-flat is both the central third between low G and D, and the third above high G; and F, as stated, is both a third above D and a step below G. Therefore, it has been concluded that this vocal line is based upon mode seven on G (G to G range, G final and D reciting-tone) in its irregular form, due to the addition of a B-flat signature. See the examples below for further clarification of these conclusions.

Eg.1 bb.1-6 Shows the opening bars of this vocal line, within which the extended (G) - D - G outline features. Also visible is the use of the pitch F to reinforce D from a third above; the use of held tones, particularly on G and D; and the use of repeated tones and stepwise progressions to aid in the reinforcement of the significant pitches of G and D.



Eg.2 bb.208-221 Here we see the frequent use of held tones, within this upper D to G outline.



The tenor and contratenor voices both exhibit strong D - C - D outlines and contain B-flat signatures throughout the work. Due to their great similarity, these voices will be discussed here together. The T.N.T. graphs for each vocal line display the D - G - D outlines quite clearly, along with the significance of the pitch C - the reciting-tone for this mode. The A.R.T. graph for the tenor reinforces the pitch hierarchy, with D and C being the most often repeated tones, whilst in the contratenor they were D, G and A (a step above C), the most frequently held tones in these voices, as displayed in the F.H.T. graphs, were C and D in the tenor, and C and F (a step below the final for this mode, C) in the contratenor. From an examination of the music itself, the internal pitch relationships operating within these two vocal lines, were found to be identical to those mentioned previously for the triplex voice in this work. Thus, when all of the above data was analysed and compared, it was found that both the tenor and contratenor voices were based upon mode eight structures on D (D to D range, G final and C reciting-tone), in their irregular forms, due to the addition of a B-flat in each of their signatures. The examples below illustrate these findings more clearly.

Eg.1 T bb.1-16 Shows the D - G - D outline being emphasised from the very beginning, aided by the use of held tones and step-wise progressions. Note the use of the descending A to D fourth (bars 3-4), and the use of the pitch low C to both follow D and approach G.

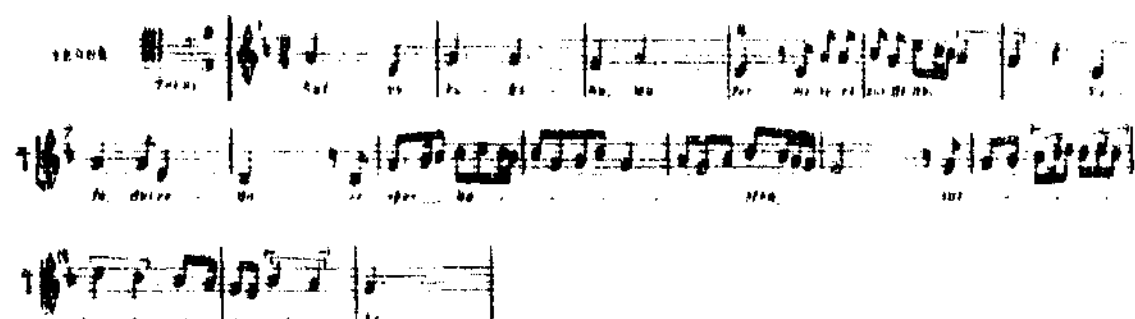


Fig.2.1 bb.116-7 Brief example showing once more the use of neighbouring pitches to further strengthen prominent tones.



Fig.3.C1 bb.16-22 Demonstrates the use of stepping to progress between significant pitches (i.e. G to D, bars 16-8), and the use of secondary pitches such as F, to move to and from more prominent tones (i.e. F to D, bars 19-20, and F to G, bars 21-2)

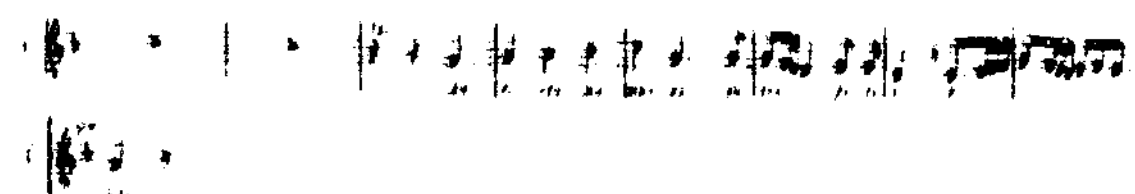
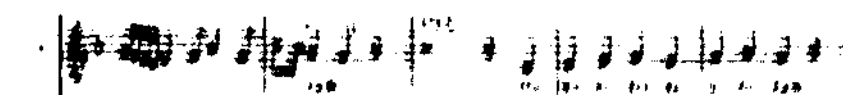


Fig.4.C1 bb.193-5 Brief example demonstrating the use of step-wise progressions and neighbouring pitches, to move between significant tones



Finally, the bassus vocal line for this work exhibits a pitch structure much the same as that of the medius, with a strong G - D - G outline present throughout the work. This voice differs in that although it begins and concludes with a B-flat in its signature, there is a brief episode during section T3, whereby an E-flat is also included in the signature. This additional flat is, however, only present for a total of 12 bars and was not found to affect the pitch outline whatsoever.

The T.N.T. graph for this voice displays the significance of the G - D - G outline quite clearly. The A.R.T. graph shows that the most frequently repeated tones were B-flat and C, both strong secondary pitches, with close relationships to the significant tones of this voice. The F.H.T. graph demonstrates that the most often held pitches were D and C. Upon examining the vocal line itself, the internal pitch relationships were found to be the same as those operating within the medius vocal line for this work. That is, the pitch A is used to reinforce G, F is important both as the step below G and the third above D, C is the step below D and is often used to precede this tone, whilst B-flat is the central third between G and D. From an analysis of all of the above information, it was found that this voice is based upon a mode seven structure on G (G to G range, G final and D reciting-tone), in its irregular form, due to the addition of flats to its signature. The examples that follow will further illustrate what has been discussed above.

Fig.1 bb.16-22 Demonstrates the establishment of the G - D - G outline from the very start. Note the use of the pitch E-flat to reinforce D; and the held tones on C and B-flat, as the vocal line descends to G.

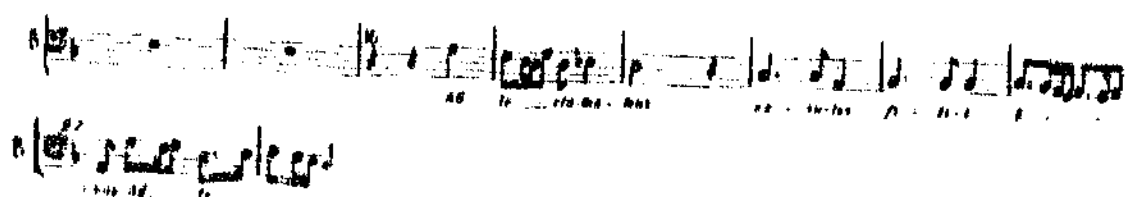


Fig.2 bb.95-106 Here we see the use of held tones to further highlight both the significant pitches themselves, as well as the prominent intervals leading to and from them. For instance, note the use of the G to D fifth at the start; the B-flat to D third at bar 98; the descending D to A fourth at bar 99; and the B-flat to G third in descent at bar 105.

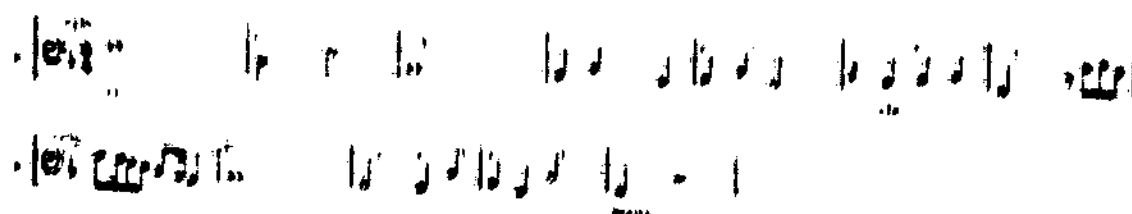


Fig.3 bb.150-73 Illustrates the continuation of the G - D - G outline, despite the addition of two flats to the signature. Note the continued importance of secondary tones and step-wise progressions to further reinforce these significant tones.

BROWNE'S SECOND *SALVE REGINA*

The final work that may be considered as being structured around a modes seven and eight category is the second setting by Browne. This work was found to be quite problematic when initially examined, due both to the frequent changes in signature within each of the voices and the complex nature of the pitch hierarchies within each of the vocal lines. In contrast to all works examined during this study, this setting does not present one with a clear and distinct picture as to the internal pitch structures and overall hierarchies at work in the music. Rather, we see one or two outlines highlighted at a time, often being contrasting presentations of the same mode, beginning on different pitches (e.g. mode seven on both G and C).

In order to arrive at some conclusion as to the modal orientation of this work, a different approach was undertaken. This involved an in depth analysis of the pitch structures presented in each vocal line, within each separate text section. Signatures were also taken into account, such that if a change in signature occurred, an examination of the music was undertaken to see if the change in question had had any significant effect on the vocal line itself. In other words, did a change in signature result in any alteration of the internal pitch structure within the vocal line in question? The data gained from the examination of the music itself was then compiled and any consistent patterns with respect to modal orientation were noted. In addition to this, the approach maintained throughout this study concerning the use of graphs and sectionalised tables to aid in the establishment of conclusions with respect to the modal analysis of each work, was also followed. Thus the graphs for each of the vocal lines that display the total

number of tones, the most frequently repeated pitches and the most held tones, were also taken into consideration, as were the changes in signature. This work, therefore, was analysed in such a way that the subjective approach whereby the modal orientation of a work was identified through an examination of the music itself, was found to be more helpful than the objective method used to analyse all other works in this study. This change in approach was due solely to the nature of the vocal lines themselves, in that the manner in which each voice alternated between differing pitch outlines meant that no clear verdict could be made as to their modal orientation by using the graphs and tables alone. Perhaps the change in nature of this work was due to the move from modality to tonality that was to come. Nevertheless, it is not the purpose of this study to answer this question, but rather to provide a modal analysis of each of these *Salve regina* settings. Therefore, the following is a relatively 't'ailed account of the results gained through the analytical process followed during the study of this second Browne work, along with the conclusions drawn as a result. These conclusions do not represent the only method of interpreting this data as, due to the complexity of the setting, I am sure others could interpret the results quite differently. They do however, represent my own understanding as to the manner in which this work has been structured with respect to mode.

Upon examining this five-voice setting, it was found that all voices contained, at some point, at least one signature change. The triplex voice begins with a B-flat in its signature, which continues for most of the work. There is one change, during the T3 section, whereby an E-flat is added to the signature. This addition is only temporary, with the signature returning to one flat sixteen bars later. The medius


voice begins with nothing in its signature, with a B-flat being added during the O6 section. This new signature remains for the continuation of the work. The tenor voice is a little more complicated than the medius, although it does begin in a similar fashion with nothing in its signature. A B-flat signature is added during the O6 section, however it is removed during the T1 section that follows. The vocal line continues with no signature until mid-way through the T2 section, whereby a B-flat signature once again appears. This signature of one flat continues to operate throughout the remainder of the work. The contratenor also begins with no signature. In this case however, the B-flat signature appears during section O2, and remains for the entire of the piece. Finally, the bassus voice is quite similar to the triplex, in that it begins with a B-flat signature and adds the second flat during the T3 section. It differs however in that this signature of two flats does not alter, and remains in force up until the end of the work. Hence, it is apparent that this setting is quite complex with respect to signature changes, with no significant patterns emerging between the vocal lines.

As stated, this work differs quite noticeably from all other works examined during this study, in both its complexity and its overall modal structure. Whilst it was possible in the previous works to ascertain an idea of the overall pitch outlines for each of the voices, from a brief examination of the relevant music, graphs and tables, this was not so in the case of this work. Rather, upon examining this setting in this way, the end result was one of confusion. Instead of arriving at some idea of the pitch outlines for each of the voices, it appeared that each voice was based upon two or three different outlines, operating almost simultaneously. It was not until each vocal line was broken down into its text sections, and then analysed at

great length, that any conclusions could be made as to the modal structure of the work. Furthermore, this was only achieved once the information gained from the music itself, could be compared with the data exhibited in the relevant graphs and tables. As stated previously, the conclusions drawn during the examination of this work are by no means etched in stone. They are provided here in order to illustrate my interpretation with respect to the modal organisation of the work in question. In order to keep things as comprehensible as possible, each of the vocal lines, which have been broken down and analysed in great detail, will be discussed separately. It is hoped that by presenting the data for each voice one at a time, the conclusions drawn from the analysis undertaken will have been demonstrated more clearly.

The triplex voice, as stated, begins with a B-flat in the signature. There is no use of B-natural whatsoever during the work and the pitch F-flat is used only minimally (it appears as an accidental four times pre-signature change to two flats, and is used five times before the signature changes once more back to one flat). From my initial examination of the music, it was found that there appeared to be several pitch outlines operating simultaneously. Both the pitch high G and high A seemed to dominate the vocal line, with similar importance placed upon the F to A third; the G to G octave; the D - F - A thirds and the pitch B-flat, during the D - F - B-flat thirds within the section governed by two flats. The T.N.T. graph appeared to suggest a possible G to G outline operating within this voice, with the majority of the movement revolving around the upper F to A fourth. When all of these observations were compared, it was difficult to arrive at any sort of conclusion as to how this vocal line was structured in terms of modal organisation.

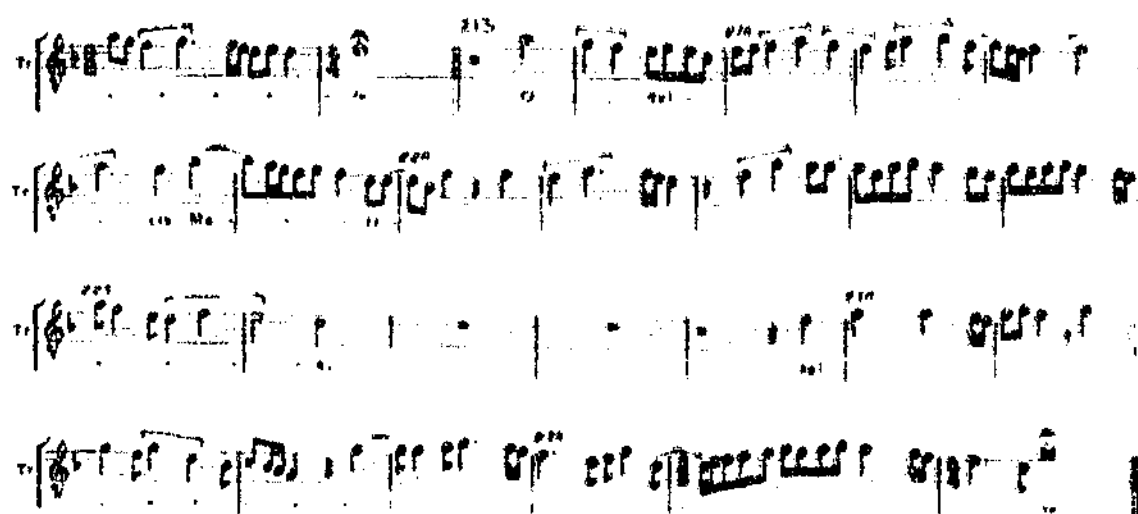
Upon examining the music in more detail however, the following internal pitch structures emerged. As demonstrated in the table relating to pitch outlines for this work, the triplex vocal line begins in the O2 section, with an F to A outline being demonstrated. This outline is expanded during the O3 section, such that we are presented with an A - F - A outline. The O4 section begins with a D - F - A structure, but soon moves to a G - C - G outline, before returning to a modified F - A - F outline. During the O5 section, we see the vocal line shift once more from an A - F - A outline to a G - C - G structure and then onto the upper F to A third. The O6 section begins with a descending A to F outline followed by an descending G to C structure, which soon expands to form an overall G - C - G pitch structure. This vocal line is absent from the T1 section, but returns during the O17 section with a G to C outline. This soon leads to a descending A to A octave, then returns once more to the F to A third. The T2 section sees the continuation of this outline, before moving to a descending G - C - G structure, followed by a descending A to F outline, onto the G - C - G outline, then once more returning to the descending A to F third at the conclusion of the section. The O18 section is a little simpler, exhibiting a strong A - F - A outline throughout. During the first part of the T3 section (i.e. with a signature of one flat), we see what looks to be a B-flat - F - B-flat outline operating, with the addition of an F-flat accidental throughout this section of the vocal line. Despite the addition of the F-flat to the signature, the vocal line continues to exhibit a strong B-flat - D - F - B-flat outline, before moving to a G - C structure. With the return of the signature to one flat once more, the vocal line descends through an A - F outline to a descending G - D - G structure. Finally, during the O19 section, the triplex moves to a descending A - F - C outline, followed by a descending B-flat - D - F - B-flat structure, and onto a

7.  *Ad lo-cha-ma-mu-er li-li E-van Ad lo-nu-ep-ra*

Handwritten musical score for the song "The Rose Tree". The score is written on two staves. The first staff begins with a treble clef and a key signature of one sharp (F#). The melody is written in a simple, folk-like style. The second staff begins with a bass clef and a key signature of one sharp (F#). The bass line is also written in a simple, folk-like style. The lyrics "The Rose Tree" are written below the first staff, and "The Rose Tree" is written below the second staff. The score is written in ink on aged paper.

Handwritten musical score for the song "The Rose Tree". The score is written on three staves. The first staff begins with a treble clef, a key signature of one sharp (F#), and a 2/4 time signature. The melody is written in a simple, folk-like style. The second staff continues the melody, and the third staff concludes the piece. The handwriting is in ink on aged, slightly yellowed paper.

Eg.5 bb.213-237 A rather long progression which illustrates the entire O19 section of this vocal line. Here we see the overall outline moving from a descending A - F - C structure at the beginning of the example, via a B-flat - D - F - B-flat outline and a short F - A outline, to conclude with a structure based upon a G - C - G outline once more.



From an examination of the relevant graphs for this voice, the following observations were made. As stated, the T.N.T. graph is a little ambiguous in that the outline demonstrated here is not as clear as that seen for previous works in this study. The majority of the movement falls between the upper E to A fourth, however the overall outline could be either a G to G structure or an A to A structure. The A.R.T. graph demonstrates that the most frequently repeated tones were G and A; whilst the F.H.T. graph shows that the most often held pitches were also G and A. These results further substantiate my earlier claims regarding the overall structural importance of both of these tones. Hence, I must conclude that the triplex voice in this setting can be said to be based upon a combination of both mode seven transposed twice and three times, and mode eight once transposed. That is, mode seven on both F and B-flat, with the pitch A featuring as the third

between F and C in the former pitch structure, and mode eight on G, the other principle tone in this vocal line.

The next voice, the medius, varies quite considerably in terms of modal organisation, from the triplex voice. This voice begins with no signature, adding a B-flat during the O6 section. The signature alters once more, quite briefly, during the T2 section. Here the B-flat is omitted for fifteen bars, before returning just prior to the O18 section. During the first half of the work, there is only very minimal use of a B-natural (B is used just nine times prior to the signature change), whilst a B-flat accidental appears four times during the first part of the O6 section. Following the signature change, B-natural is only used once, with the pitch B-flat being far more significant. The pitch B-flat is used only very minimally during the entire work (on just four occasions) and was not seen as being a significant tone within this vocal line.

This vocal line, following my initial examination, was found to exhibit the same dual importance placed upon both the pitches A and G. Due to the seemingly contradictory nature of this vocal line, along with the overall complexity of the work itself, the medius voice was subjected to the same analytical process as illustrated in the discussion above, with respect to the triplex voice. As a result, pitch outlines were noted within each text section for the medius vocal line and are presented below.

This vocal line begins in the O1 section, with a C - F - A outline, as can be seen in the table illustrating the vocal outlines for this work. During the O2 section, the

outline shifts to one of G - C - G, before returning to an expanded A - C - F - A in the O3 section. At O4 the G - C - G structure returns once more, however only briefly, before the vocal line moves to a descending A - F - C - A outline. At the end of this section, the G - C - G structure returns once more. During the O5 section we again see another change, with the vocal line first displaying a strong F - A - C - F - A outline, in descent, before moving to a more condensed C to G structure. The O6 section expands this to a G - C - G outline, which leads to an extended F - A - C - F - A outline once more, half way through the signature change. This vocal line is omitted from the T1 section, but reappears at the O7 section demonstrating a descending G - C outline at first, followed by a descending A - F - C - F structure. It concludes with a descending D to G outline. The first part of the T2 section (i.e. with a B-flat signature) continues with this G - D - G outline, before moving to one based upon F - A - C. The vocal line shifts once again just prior to the cadence, to a descending C - G structure. During the central part of this section, following the signature change to no flats, the vocal line returns to a strong F - A - C - F - A outline, in descent, before moving once more to a G - D - G outline this time. The final part of this section, following the return to a signature of one flat, sees the use of the extended F - A - C - F - A outline once again. The OE8 section begins with the upper C to G fifth, before moving to a descending D to G fourth. This is followed by a return to the C - G outline at the end of the section. During the T3 section, an extended G - B-flat - D - F - G outline is apparent, which eventually shifts to a G - C - G structure. Finally the OE9 section is characterised by further changes, beginning with an A - C - F - A outline which moves, via a the upper D - G fourth and the F - A - C - F - A outline, back to the D - G structure. Following this, both the F - C - A thirds and the G - D -

B-flat - G outline are seen in descent, alternating between the two structures. The vocal line eventually concludes with a G - C - G outline, just prior to the final cadence on E. The following examples illustrate the above observations more clearly.

Fig.1 bb.14-29 A rather long example illustrating the shift from an A - C - F - A outline during the O3 section, to a G - C - G structure at the O4 section. This is followed by a return to the A - C - F - A outline, before the section concludes on a G - C - G structure once more.

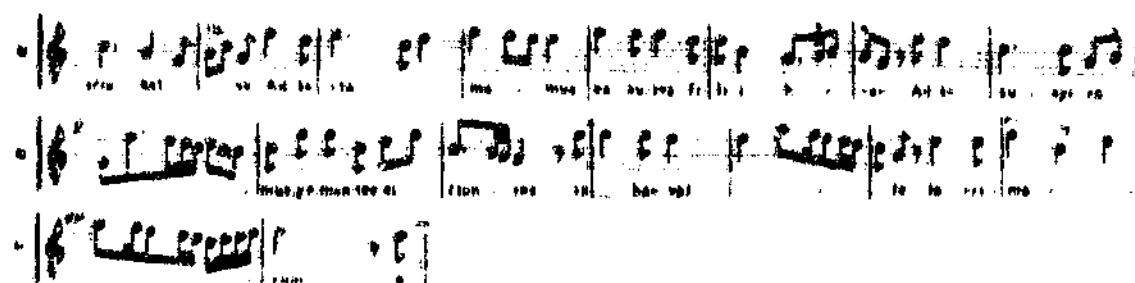


Fig.2 bb.46-78 Another long example which demonstrates the shift from a G - C - G outline at the beginning of section Ob, to an extended F - A - C - F - A outline following the change in signature.

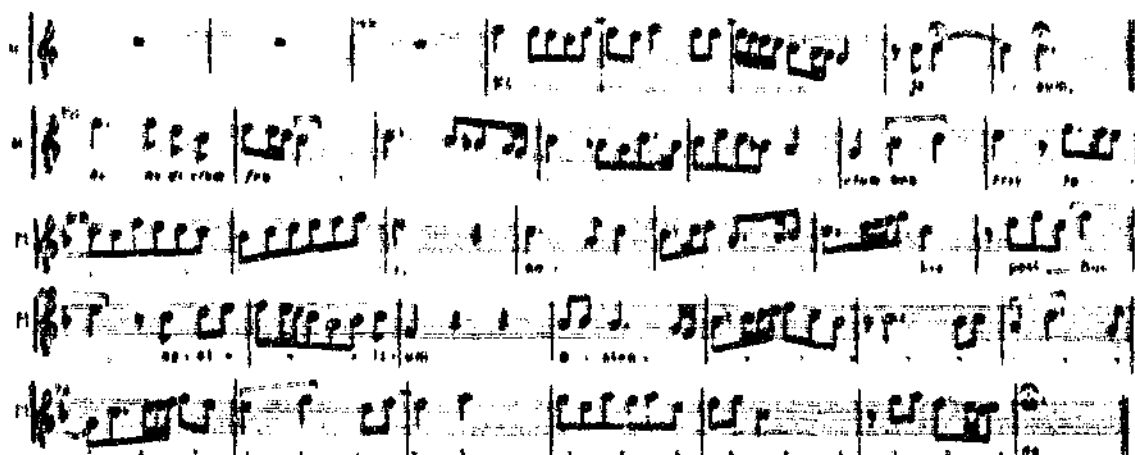


Fig.3 bb.140-161 Example showing the alternating pitch outlines during the T2 section. Here we have an upper C - G outline, with a signature of one flat. Following the signature changes to no flats, we see the vocal line shifting to an extended F - A - C - F - A outline, in descent, before moving once more, this time to a G - D - G outline. Upon returning to a B-flat signature, the vocal line returns to an F - A - C - F - A outline, again in descent. Once again, the signature changes here were not found to be associated with any of the changes in pitch outline that occurred.

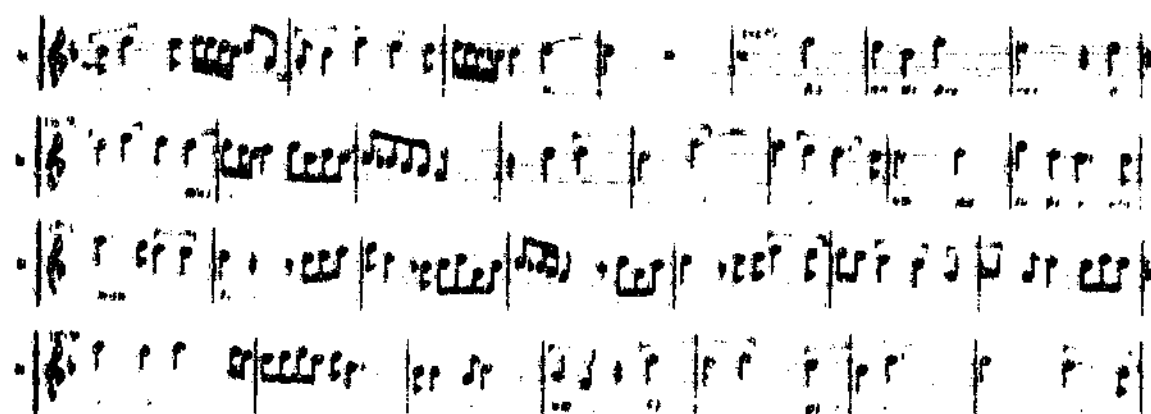
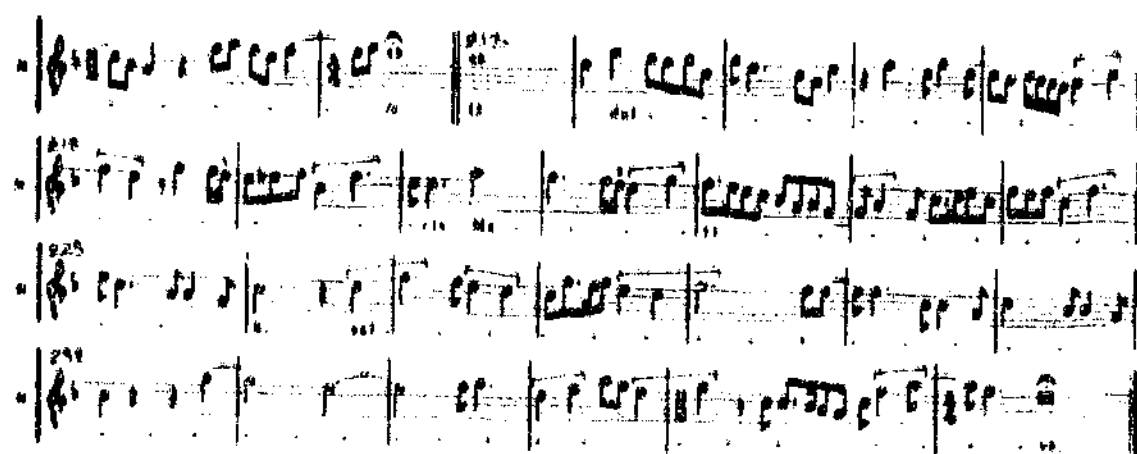


Fig.4 bb.213-34 Final example demonstrating the continuing use of varying pitch outlines, in this case during the O19 section. This example begins with an A - C - F - A outline, which moves to a D - G structure. The vocal line then shifts to an F - A - C - F - A outline, back to the D - G fourth, and on to the alternating F - C - A thirds with the G - D - B-flat - G structure. The concluding G - C - G outline is evident in the final bars of the work.



From an examination of the T.N.T. graph, it is evident that the upper C to G fifth is where most of the movement in this vocal line is situated. Once again, the graph is not as clear as in other works, demonstrating either an F to F outline, with the upper third between F and A being significant. On the other hand, the G to G outline or the A to A outline, could also be significant here. The A.R.T. graph shows that the most frequently repeated tones were F, G and D; whilst the most often held pitches, as demonstrated in the F.H.T. graph, were G, D, C and F. When all of the above data was taken into consideration, it was concluded that this vocal line was based upon a combination of modes seven and eight, either in their regular form or as transposed modes. That is, the C - F - A - C outline, and those closely related to this structure, were seen to be indicative of mode eight twice transposed to C (C to C range, F final and B-flat reciting-tone). The G - C - G outline was seen as being mode eight transposed once to G (G to G range, C final and F reciting-tone). The D - G fifth, first seen during the OE7 section, was categorised as being mode seven in its regular form (G to G range, G final and D reciting-tone); whilst the C to G fifth in the same section, was seen as being mode seven once transposed to C (C to C outline, C final and G reciting-tone). Finally the F - A - C - F - A outline, in its extended form, present from the O5 section, was

seen to be mode seven twice transposed to F (F to F range, F final and C reciting-tone). The significance of the pitch A in this outline is due to its importance as the third between low F and C, and the third above high F.

The tenor voice is simpler in terms of its modal organisation. This vocal line begins with nothing in its signature, adding a B-flat during section O6. This flat remains in force only briefly, being eradicated during section T1. The B-flat signature reappears during the T2 section however, remaining in force throughout the continuation of the work. The pitches B-natural and E-flat were not seen as significant tones within this vocal line, only being used during the second half of the T1 section, on five and four occasions, respectively. Thus, despite the changes in signature throughout the work, the pitch B-flat continues to dominate.

With respect to the internal pitch outlines evident from my analysis of the music itself, the following may be said. This vocal line tended not to shift so frequently from one outline to the next, as was found in the previous two voices. The voice enters during the O2 section, with the brief C to D movement. During the O3 and O4 sections, a C to F outline predominates. This outline is further expanded during the O5 section, whereby we are presented with an F - C - F structure. During the first half of the O6 section (i.e. pre-signature change), the outline is once again reduced, to the C - F fourth. Following the introduction of the B-flat signature, we are presented with a descending G - D outline, followed by a descending F to C outline. The T1 section begins with an A - C - F outline, which remains in force until the eradication of the B-flat signature mid-way through the section, whereby we are presented with a G - D - G structure. The OE7 section

remains a little simpler, characterised by a strong C to F fourth. During the T2 section, the vocal line shifts once more to the G - D - G outline, with B-flat accidentals included, despite the signature of no flats. This leads to an F - C section,⁶ which is followed by a G - D - G section, and then a short A - C - F (descending) outline. The second half of this section is characterised by the reintroduction of the B-flat signature, along with a solid F - A - C - F outline. The OE8 section that follows exhibits a reduced outline of C to F, and cadences quite strongly upon D. This cadence can be seen as a precursor to the next section. The T3 section begins with a G - B-flat - D - G outline, which is alternated with an upper C - G fourth. The section finalises on the pitch C, again pre-empting the next section. Finally, the OE9 section concludes the work with a strong upper C to G structure. The following are examples that demonstrate the process of modal organisation described above.

Fig.1 bb.13-26 Example illustrating the C to F outline exhibited by the tenor voice during the opening bars of this work. The example here includes material spanning the end of section O2 to section O4.

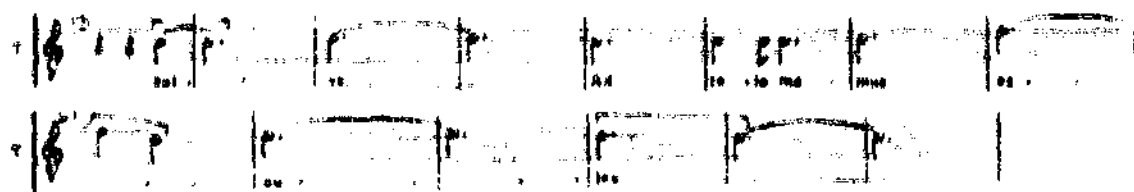


Fig.2 bb.80-113 A long passage demonstrating the shift which occurs in pitch outline during the T1 section. Here we see the vocal line moving from a descending A - C - F outline preceding the signature change at bar 88, whereby the music shifts to a G - D - G structure. The change in signature

here does coincide with the shift in the pitch structure within the vocal line. However, there does not appear to be any relationship between the direction with which the vocal line has moved and the addition of a B-flat.

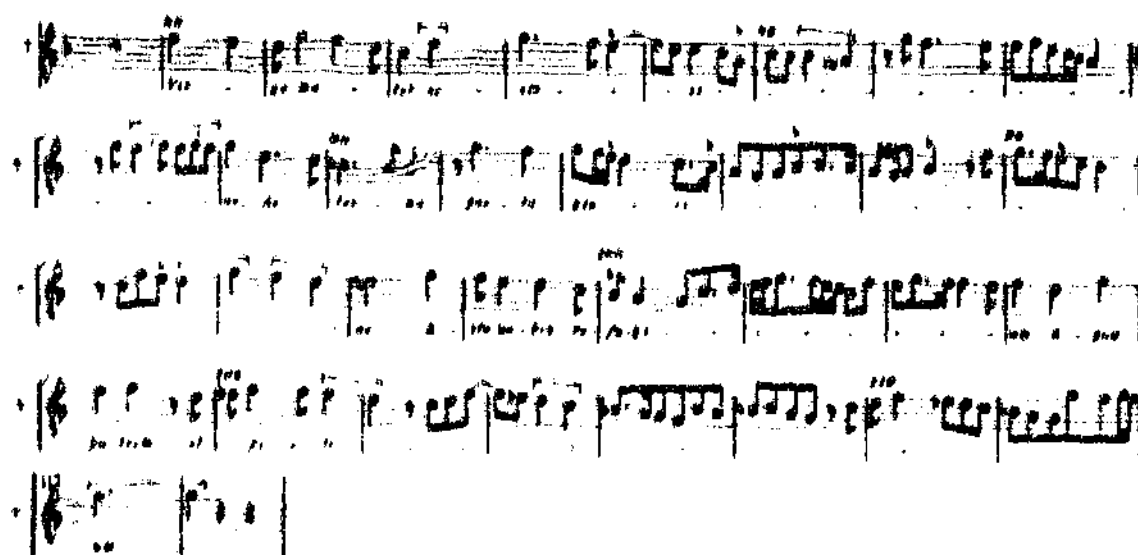


Fig.3 bb.161-171 and bb.190-202 These two examples have been taken from the OE8 and T3 sections, respectively. The first example demonstrates the C' to F' outline in operation during this section, which finals upon a D'. The second example shows the continuation of the tenor line during the next section, whereby the vocal line moves from a G - B-flat - D - G outline to a C' - G' structure. This C' to G' fifth remains the structural force throughout the final OE9 section that follows.



The T.N.T. graph for this vocal line is once more a little vague, in that the overall pitch structure for this voice could be either F to F, G to G or even A to A. The only strong piece of information to be gained from this graph is the fact that the pitches C and D appear to be the most prominent tones. The A.R.T. graph provides an explanation for this occurrence, as these two pitches are the most frequently repeated tones in this vocal line. The F.H.T. graph displays similar result, such that the most often held pitches in this voice were also C and D.

From an examination of all of the above data, the following conclusions have been drawn. The pitch outlines based upon an F - C - F structure within the tenor line, have been deemed to be in mode seven twice transposed to F (F to F range, F final and C reciting-tone). The pitch outlines which centre around a G - D - G structure were said to be mode seven in its regular form on G (G to G range, G final and D reciting-tone). Finally, the C - G - C outline evident in this vocal line during the final two sections, was deemed to be mode seven once transposed to C (C to C range, C final and a reciting-tone on G). Thus, the tenor vocal line can be said to

be based upon a combination of mode seven in its regular form, once transposed and twice transposed.

The next voice to be examined is the contratenor. This vocal line begins with nothing in its signature, but soon adds a B-flat signature mid-way through section O2. The pitch B-natural is incidental within this voice, seen only once during the OE8 section. Similarly, the pitches upper and lower E-flat were not found to be structurally significant either, only appearing on six and two occasions, respectively. The pitch B-flat, however, is quite significant, being a consistently prominent tone throughout the work.

Upon examination of the music itself, the following internal pitch structures were evident. The contratenor vocal line commences in the first section, O1, with a low C to G outline being demonstrated. In the O2 section, this outline is varied such that an upper G to C fourth is prominent. Towards the end of this section, the outline shifts to an F - A - C structure, which is further expanded to include the upper F (i.e. F - A - C - F), during the O3 section. The O4 section begins with a descending A - F outline, which soon leads to a C - G - C structure. The vocal line returns once again to an F - A - C - F outline at the end of the section. This outline dominates the beginning of the O5 section that follows, however the vocal line soon shifts once more, this time to a C - G - C structure. The latter outline is seen at the beginning of the O6 section, with the vocal line moving back to an F - A - C - F structure before the end of the section. The next section, T1, begins with an F - A - C outline, which soon expands to include the upper F once again following a brief presentation of the upper G to C fourth. During section OE7, we are

presented with a strong C - F - A - C outline, which remains in force throughout the entire section. The contratenor vocal line is omitted from the T2 section, but returns once more during the OE8 section with the C - F - A - C structure again. This outline shifts to one revolving around an F to B-flat fourth before the end of the section. Section T3 commences with a D - G - B-flat - D outline, which soon leads to a F - B-flat - D - F structure and, following the use of tertial progressions, eventually arrives at a C - F - C outline. Finally, the OE9 section begins with a D - G - D structure, with a strong emphasis upon the pitch C. The section finals upon the pitch G, but not before a brief presentation of a C - F - A - C outline first. The examples which follow will illustrate a few of these shifts in pitch outline more clearly.

Fig.1 bb.13-23 Example showing the movement from an F - A - C - F outline during section O3, to a C - G - C outline towards the end of O4. Note the frequent leaps of a third, a fifth and an octave, between significant pitches.

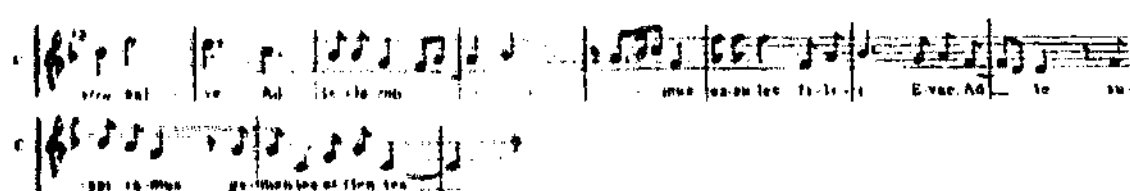
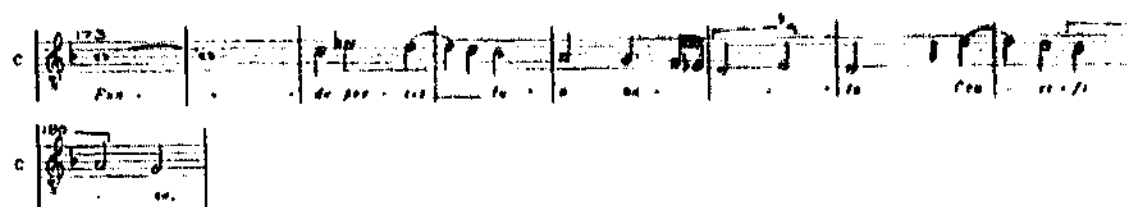


Fig.2 bb.60-78 Demonstrates the shift in the vocal line from a C - G - C outline to an F - A - C - F outline. Again note the importance of the held tones and the significant leaps (i.e. thirds, fifths and octaves).



Eg.3 bb.173-80 Here we see a D - G - B-flat - D outline in use, reinforced by held tones. Notice the use of the pitch E-flat to further reinforce the pitch D.



Following an examination of the T.N.T. graph for the contratenor vocal line, it can be said that the majority of the movement in this voice surround the central F to C fifth. In terms of the overall pitch structure, it is once again not clear. Possibilities include a C to C, D to D, F to F or even G to G outline. The A.R.T. graph for this voice shows that the most frequently repeated tones were upper and lower C and F; whilst the F.H.T. demonstrates that the most often held pitches were those within the upper F to C fifth, including the outer two pitches (i.e. F and C).

Thus, we are again presented with a situation whereby the vocal line is comprised of alternating presentations of varying pitch structures, in no apparent order. From an examination of all available data relevant to the contratenor vocal line, the following conclusions have been made. Pitch structures revolving around the C - G - C outline, have been deemed to be mode seven once transposed to C (C to C

outline, C final and G reciting-tone). The pitch outline F - A - C - F was said to be mode seven twice transposed to F (F to F range, F final and C reciting-tone), with the pitch A being significant due to the fact that it is the third between F and C. The C - F - A - C outline was found to be characteristic of mode eight ~~twice~~ transposed to C (C to C range, F final and B-flat reciting-tone). Finally, the brief appearance of the pitch outline F - B-flat - D - F during the OE8 and T3 sections, was said to be mode eight transposed three times to F (F to F range, B-flat final and E-flat reciting-tone). In conclusion therefore, the contratenor vocal line can be said to be based upon a combination of both modes seven and eight, in their varying positions. That is, mode seven transposed both once and twice, and mode eight transposed both two and three times.

Finally, we come to the lowest voice in this setting - the bassus. This vocal line includes a B-flat in its signature from the very beginning of the work. During the T3 section, an E-flat is added to the signature, which remains in force throughout the continuation of the piece. There is no use of B-natural whatsoever, whilst the pitch B-flat remains consistently prominent throughout the work. The use of the pitch E-flat is quite important during this vocal line. This pitch is seen thirteen times during the second half of section T3, which is not really unusual as this coincides with the change in signature to include an E-flat. However, an E-flat is used sixteen times during the T1 section, as an added accidental. In this case, the inclusion of an E-flat here corresponds with the use of flats (particularly E-flat), in the tenor and contratenor vocal lines during the same section. Upon closer examination, it was found that, in this case, the inclusion of an E-flat in the bassus vocal line during sections T1 and T3 - OE9, whether it be as an accidental or noted in the signature, signifies a shift in the vocal line. That is, upon adding the pitch E-

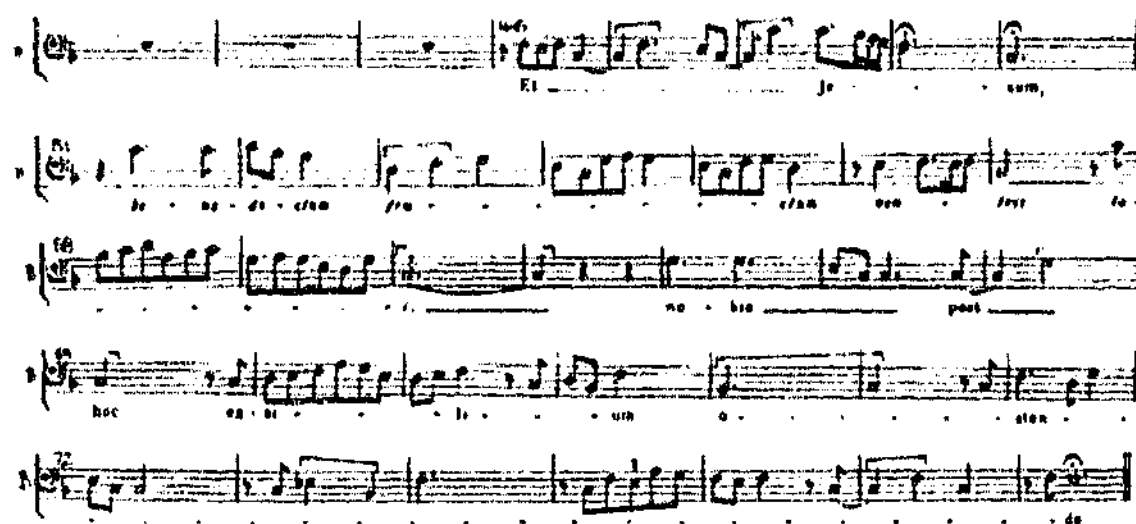
flat to the bassus voice, the vocal outline shifted to a different set of parameters to that of the previous section.

From my examination of the bassus vocal line itself, the following pitch structures were noted. These outlines can be understood more clearly when accompanied by the relevant table, mentioned previously, which illustrates the pitch structures for each vocal line of this work. Once again it was found that there appeared to be a series of different pitch outlines operating within the one vocal line, their motive for changing not always directly associated with the alterations in signature. This vocal line begins in the O2 section exhibiting a C - F outline. During the O3 section, the pitch outline shifts to a B-flat - D - F structure, which continues through to the middle of the O4 section, whereby it moves to a C - G - C outline. At the O5 section, the B-flat - D - F outline returns, accompanied by E-flat accidentals. The vocal line then shifts very briefly to an C - F fourth at the end of this section. During the O6 section, we see the previous outline expanded to include the upper C (i.e. C - F - C), before it shifts once again, in this case to a C - G - C structure. The C - F outline returns at the end of this section. The T1 section opens with a descending B-flat - D - F outline, again accompanied by E-flat accidentals. This outline is further expanded at bar 89, to include the upper B-flat, and it is important to note here that an A-flat accidental has been included here. Following this, a C - G - C structure is evident. The B-flat - D - F - B-flat structure does however, continue throughout the remainder of this section, as an underlying suggestion, and into the OE7 section that follows, as the prominent pitch structure. The bassus vocal line is absent from the T2 section, but does return during the OE8 section with a C - F outline. Once again, the pitch structure does not remain

constant, and soon shifts to a C - G - C outline, followed by an upper D - G fourth. The T3 section begins with a B-flat - D - G structure. Following the addition of an E-flat to the signature, the vocal line moves from the descending B-flat - D - G outline to a B-flat - D - F - B-flat structure. Finally, the OE9 section sees a return to the C - F outline seen at the beginning of the work. This soon leads to a descending G - D outline, onto a B-flat - D - F - B-flat outline, then a C - G - C structure, before cadencing on the pitch C. In order to illustrate these observations more clearly, the following examples have been included.

Eg.1 bb.46-78 A rather long progression which is taken from the O6 section.

Here we see the pitch outline shifting from a C - F - C outline, to a C - G - C outline, before returning once more to the C - F structure.



Eg.2 bb.79-102 Example illustrating the initial B-flat - D - F - B-flat outline, accompanied by E-flat, and at times A-flat, accidentals. The vocal line shifts to a C - G - C outline towards the end of the example.

Following an in-depth analysis of all of the above information, the subsequent conclusions regarding the modal organisation of this vocal line have been made. The pitch outline C - F - C was seen to be mode eight twice transposed to C (C to C range, F final and B-flat reciting-tone). The extended B-flat - D - F - B-flat outline was deemed to be mode seven transposed three times to B-flat (B-flat to B-flat range, B-flat final and F reciting-tone). The fact that the sections of vocal line that exhibited this pitch structure often included the use of three flats further reinforces this conclusion. The pitch outline C - G - C was seen to be mode seven once transposed to C (C to C range, C final and G reciting-tone). The outline characterised by a D - F - A - C structure was concluded as being mode seven twice transposed to F (F to F range, F final and C reciting-tone), with the pitches D and A being a third below F and a third between F and C, respectively. Finally, the B-flat - D - G outline was deemed to be the upper section of mode seven, in its regular form on G (G to G range, G final and D reciting-tone). The pitch B-flat is significant here due to the fact that it is a third below the reciting-tone - D. It is also worth mentioning here that the alternating pitch outlines noted previously during the OE8 section (i.e. C - F to C - G - C to D - G), were concluded to be an extended progression whereby the vocal line was shifting from mode seven transposed three times, to mode seven in its regular form, via its second and first transpositions. This occurrence is quite characteristic of the manner in which the vocal lines of all voices in this work, are constructed.

Thus, it can be said that this vocal line is based upon mode seven, in either its regular form, or transposed once, twice or three times; coupled with mode eight transposed two times.

In conclusion therefore, this work can be said to be constructed around alternating versions of modes seven and eight, whether they be in their regular forms, or as transpositions of each of these two modes. As previously stated however, due to the complexity of this work, accompanied by the fact that the modal organisation of the piece was found to be quite unlike any of the others studied, this conclusion simply represents my thoughts on the matter. The fact that the method used to analyse this work relied so heavily upon my own interpretation of the internal pitch structures of each vocal line, results in the process followed being seen as a very subjective one - in contrast to the objective method followed in the preceding thirteen works. Thus I am sure that many outcomes could be arrived at, as a result of following this analytical method, in some way justifying the use of the more objective method established during the study of the previous works. Nevertheless, the explanation arrived at during the analysis of this work is not proposed to be the only rendition as to how this piece was constructed, but merely a suggestion as to how it may be interpreted.

CHAPTER SEVEN: CONCLUSION

The purpose of this study is to address the question of modal organisation in the Eton *Salve regina* settings. More particularly however, it is my intention to provide the reader with not only a clearer picture with regard to past scholarly opinions on this matter, but to arrive at some conclusions of my own as to how these works were structured modally. As previously mentioned, there is much debate as to whether or not the works in the Eton Choirbook utilise the traditional modal system in its original form, or whether in fact they are based upon some other variation of this system. The methodology employed in this study to examine the use of mode in the *Salve regina* settings was chosen due to its ability to allow an investigation of the modal structure of a work in an almost entirely objective manner. This contrasts significantly with the traditional way in which the mode of a work was determined, in that the method used relied upon the formation of conclusions that were based almost entirely upon subjective observations regarding characteristics such as the significance of internal cadences, species of fourths and fifths, and internal pitch structures. It was decided therefore, that the analytical approach that would generate the most reliable picture with respect to the use of mode in the *Salve regina* settings would have to be the one that employed the most objective methods. Consequently, a new methodology for the study of mode in works such as these was developed, which incorporated an in-depth study of each of the *Salve regina* settings, with particular attention being paid to the overall structure of each work. This methodology is essentially drawn from a process used to analyse non-Western music, but has been adapted so as to be a useful tool for the examination of works such as the Eton settings.

My objectives in this study are threefold. Firstly, to provide the reader with a detailed analysis of the *Salve regina* settings of the Eton Choirbook. Secondly, to present the reader with an in-depth analysis of the modal organisation of these works. Thirdly and lastly, to develop a reliable and completely objective methodology for the study of mode in both these and other works, particularly those composed between 1450 and 1550. It is hoped that by following a course of action aimed at achieving each of these three objectives, a clear picture as to the use of mode in these works, would result.

As was shown in the previous chapter, the methodology developed during this study is a successful one, in terms of arriving at a reasonably clear and quite objective idea as to the use of mode in these works. After examining all data gathered during the analysis of the *Salve regina* settings, the following observations can be made:

1. These works were found to be based upon structures that were characteristic of the traditional system of eight modes. Each work was found to be designed around a combination of both the authentic and plagal versions of a single mode, distributed fairly evenly amongst each of the voice-parts. Although I chose not to reduce the modal classifications assigned to each work down to the mode of the tenor, for reasons illustrated in previous chapters, the fact that all settings exhibited strong modal indicators is clear. This was observed from the very beginning, following my initial attempts to analyse the modal structures of these works. It was not, however, until the newly developed

methodology was applied to these settings that decisive conclusions could be made.

2. The internal system operating within each of the works, whereby prominent pitches were further strengthened by secondary tones, was found to be evident within all works. This occurred predominantly through the use of held tones and repeated pitches, coupled with the frequent use of step-wise progressions moving between prominent tones, all of which led to the development of strong hierarchical pitch structures within each work. This result was quite surprising, in that the use of secondary pitches to further strengthen the prominent tones was not expected to be so extensive, and further that these secondary pitches were not expected to feature more noticeably in the graphs for each of the settings than the prominent tones themselves. Nevertheless, I found that the overall system that appears to operate within each of these works, in terms of the strong relationship between secondary and prominent tones, is an extremely effective one, resulting in the elevation in terms of importance of the prominent pitches for each work.
3. The importance of the interval of a third within these structures was also quite evident, both in terms of the use of the interval to further highlight a particular tone, and as a significant interval within its own right. This additional element served as a supplementary means of strengthening the overall pitch hierarchies within each of the *Salve regina* settings. Of course, this occurrence was not particularly surprising when one takes into account the popularity of the interval of a third in English music during the fifteenth century, though it is

rare that the frequency of this interval in the music of this time is ever objectively measured.

4. Of the fourteen works examined in this study, two works were categorised as being based upon modes 1 and 2 structures; three works upon modes 5 and 6 structures; and nine works upon modes 7 and 8 structures, obviously making this the preferred modal grouping of the three used for these works. It should also be noted that the works that were found to be the most complex in terms of modal analysis, tended to be those constructed around the modes seven and eight grouping. The reason for the increased complexity in this modal grouping is perhaps due to the fact that both modes have similar pitch structures, particularly when transpositions of each mode are taken into account. As to why this modal grouping was found to be the most popular, I can only guess. Perhaps the overall pitch structures encompassing both G – D – G and D – G – D outlines in these modes were preferred by composers, when paired with the very popular addition of a B-flat, often in the signature, that the majority of works in this category include.
5. Works were structured in a similar fashion, both in terms of overall structure and text setting, and more particularly in the sense that the authentic and plagal presentations of a mode were most often split between the voices. That is, in a five-voice work based upon a modes seven and eight structure, for example, it was often the case that three voices were based upon a G – D – G outline, whilst the remaining two voices displayed D – G – D outlines. This arrangement is common amongst polyphonic works of this era and, I believe,

provides a great sense of balance in terms of modal structure within each of the works. It should be noted here, however, that there existed no particular pattern as to which voices were based upon authentic presentations of the mode, and which were based upon plagal presentations. Therefore, patterns such as an alternating sequence of authentic – plagal – authentic – plagal – authentic, for example, were not the norm.

6. The use of flats, both in signatures and as notated accidentals, far outweighed the use of sharps, with the pitch B-flat being quite significant in the majority of the works. In fact, at no time do any of the works studied contain sharps in their signatures. This sign was found to be restricted in its use to that of a notated accidental, appearing in several of the works, but not deemed to be a structurally significant feature. Conversely, the use of the pitch B-flat, evident in the majority of these works, was found to be extremely common both in the signature of a work and as a notated accidental. This occurrence did not come as a surprise, as the prevalence of this pitch was firmly established following my initial examination of these *Salve regina* settings.
7. Finally, with respect to signatures, two major observations have been made. Firstly, the lower voices were found to be the ones containing the highest incidence of flats in their signatures, never the other way around (i.e. it was quite common for a work to display one flat in each of the upper voices and two flats in the lower voices). This phenomenon is not restricted to these settings alone, but is also apparent in numerous works composed on the continent. Secondly, the appearance of conflicting signatures was a common

event amongst the majority of the works examined. More importantly however, was the use of the signatures themselves. It was concluded that these signatures served two major purposes. On one hand, a change in signature could herald a relocation of pitch hierarchy within a particular voice, in that the vocal line moves, for example, from mode one in its regular form on D, to mode one in its irregular form once transposed to G, now with a B-flat signature. On the other hand, a change in signature may signal simply the addition of a new pitch without the relocation of the overall pitch hierarchy. That is, the addition of a B-flat, for example, to a mode seven G - D - G outline, eradicating the original B-natural but having no effect upon the pitch outline whatsoever. This phenomenon whereby the change in the signature of a vocal line may serve two different purposes is, perhaps, the early beginnings of the onslaught of the tonal system.

It can be said, therefore, that the development in this study of an objective means of analysing such structurally determining factors within each individual vocal line and work, led to the formation of justifiable conclusions as to the overall modal structure of each of the works under examination during this study. That is, if it was not for the new methodology developed in the course of this study, I believe that it would not have been possible to arrive at such a clear, and quite objective, picture as to how mode was used within the Eton works. Thus, I feel that this new methodology provides a successful tool for the examination of mode within these settings.

If one then relates the overall conclusions drawn above, from all data gathered during this study, back to the hypothesis proposed at the beginning of this dissertation, it can be seen that this hypothesis has been supported. That is, that through the use of both deductive and inductive methods, the Eton *Salve regina* settings can be shown to be modal, in that they are structured upon the traditional system of eight church modes. The manner in which each of the Eton composers has utilised this system can perhaps be described as being quite innovative and unconventional. The majority of the works were based upon both the authentic and plagal versions of a single mode, something that is common in polyphonic works of this era both on the continent and in England. However, the frequent use of "transformations" of these modes, to use Gallagher's term (Gallagher 1996: 262), whereby a mode was taken up a fourth and a flat was added (i.e. mode one on D, moves up to mode one on G with a B-flat signature), demonstrates quite a flexible system of modality operating in these polyphonic works. The manner in which these composers have adapted the original system of eight modes has been illustrated extensively in this study. It is not the demonstration here of the actual manipulation of this system that is relevant to the central aim of this study, but more importantly the verification of the fact that these works do utilise the church modes as one of their underlying structural forces. It is for this reason that I believe that I can claim to have been successful in this dissertation in validating my original hypothesis. Furthermore, it can also be seen that all objectives outlined in chapter one of this dissertation were successfully achieved.

The methodology proposed during this study was, as stated, found to be an invaluable tool for the examination of mode in these works. There seems to be no

reason why this methodology could not be applied to other works of this era, which display similar complexities with respect to modal organisation, particularly perhaps English works composed between 1450 and 1550.

Finally, as previously mentioned, it was my intention in this study to focus upon the issue of mode in these *Salve regina* settings, particularly the issue of whether these works could be seen as being based upon the traditional modal system, or not. In achieving my objectives, it was necessary to examine both the overall structure of each vocal line and work, as well as the use of mode within each setting, the latter being achieved through the use of the newly developed methodology. It must be stated here, however, that it was not my intention to provide the reader with any great detail with respect to the stylistic characteristics of these works, or with factors pertaining to such features as text setting. Furthermore, this study was limited solely to the examination of the *Salve regina* settings present in the Eton Choirbook, in their complete form. Thus, the incomplete setting by Brygeman was not considered in any analytical terms, nor were any other English or non-English works composed during the same period. Perhaps in the future, the methodology developed in this study may be applied to some of these works, with the intention of examining the modal organisation of other late fifteenth and early sixteenth century compositions.

REFERENCES

- Abraham, G. (ed.), (1979), The Concise Oxford History of Music, Oxford University Press, London.
- Aldrich, P., (1969), "An Approach to the Analysis of Renaissance Music", The Music Review, xxx: 1-21.
- Allaire, G.G., (1972), Theory of Hexachords, Solmization and the Modal System: A Practical Application, Musical Studies and Documents 24, American Institute of Musicology.
- Apel, W. (ed.), (1969), "Modality", Harvard Dictionary of Music, 2nd ed. (rev.), The Belknap Press of Harvard University Press, Cambridge, Mass., U.S.A., 533-534.
- , (1969), "Mode", Harvard Dictionary of Music, 2nd ed. (rev.), The Belknap Press of Harvard University Press, Cambridge, Mass., U.S.A., 535.
- Balensuela, C.M., (2000), "Anonymous Theoretical Writings", The New Grove Dictionary of Music and Musicians 2nd ed., vol. 1, ed. S. Sadie, Macmillan Publishers, London, 698.
- Benham, H., (1977), Latin Church Music in England: c.1460-1575, Barrie & Jenkins Ltd., London.
- Bent, M., (2000), "Leonel Power", The New Grove Dictionary of Music and Musicians, 2nd ed., vol. 20, ed. S. Sadie, Macmillan Publishers, London, 243-8.
- Bergquist, P., (1967), "Mode and Polyphony Around 1500: Theory and Practice", Music Forum, I: 99-161.

- Blackburn, B.J., (2000), "John Hothby", The New Grove Dictionary of Music and Musicians, 2nd ed., vol.11, ed. S. Sadie, Macmillan Publishers, London, 749-751.
- Blom, E., (1947), Music in England, 2nd ed., Pelican Books Ltd., London.
- Bowers, R., (2000), "William Brygeman", The New Grove Dictionary of Music and Musicians, 2nd ed., vol. 4, ed. S. Sadie, Macmillan Publishers, London, 526.
- , (1987), "The Vocal Scoring, Choral Balance and Performing Pitch of Latin Church Polyphony in England, c.1500-58", Journal of the Royal Musical Association, 112: 38-76.
- Bowers, R. & Wathey, A., (1984), "New Sources of English Fifteenth- and Sixteenth-Century Polyphony", Early Music History, 4: 297-346.
- Brett, P., (2000), "Thomas Morley", The New Grove Dictionary of Music and Musicians, 2nd ed., vol.17, ed. S. Sadie, Macmillan Publishers, London, 126-133.
- Brown, H.M., (1976), Music in the Renaissance, Prentice-Hall, Englewood Cliffs, N.J., U.S.A..
- Bryden, J.R. & Hughes, D.G. (eds.), (1969), An Index of Gregorian Chant, vols. I & II, Harvard University Press, Cambridge, Mass., U.S.A..
- Bukofzer, M., (1960), "English Church Music of the Fifteenth Century", in D.A. Hughes & G. Abraham's (eds.) New Oxford History of Music: Ars Nova and the Renaissance, 1300 - 1540, vol. III, Oxford University Press, London, 165-213
- Catholic Church, (1934), Antiphonale monasticum pro diurnis horis, Desclée & Co., Tournai, Belgium.

- , (1901-24, reprint.1966), Antiphonale sarisburiense, vols. IV & V, ed. by W.H. Frere, The Plainsong and Mediaeval Society, London.
- , (1894), Graduale sarisburiense, ed. by W.H. Frere, The Plainsong and Mediaeval Society, London.
- Dean, J., (1996), "Okeghem's Attitude Towards Modality", in U. Gunther, L. Finscher & J. Deans' Modality in the Music of the Fourteenth and Fifteenth Centuries, Musical Studies and Documents 49, American Institute of Musicology, 203-246.
- Douglas, W., (1962), Church Music in History and Practice, rev. by L. Ellinwood, Faber & Faber, London.
- Dyer, J., (2000), "Liturgy", The New Grove Dictionary of Music and Musicians, 2nd ed., vol. 15, ed. S. Sadie, Macmillan Publishers, London, 1-11.
- Ellsworth, O.B., (1984), The Berkeley Manuscript, Nebraska University Press, Lincoln, Nebraska, U.S.A..
- Fellowes, E.H., (1969), English Cathedral Music, rev. by J.A. Westrup, Methuen & Co. Ltd., London.
- Frere, W.H., (1954), "Antiphon", Grove's Dictionary of Music and Musicians, vol. I, 5th ed., rev. D.A. Hughes, ed. Eric Blom, Macmillan & Co. Ltd., London, 169-71.
- Gallagher, S., (1996), "Transposition and Mode in the Motets of Johannes Regis", in U. Gunther, L. Finscher & J. Deans' Modality in the Music of the Fourteenth and Fifteenth Centuries, Musical Studies and Documents 49, American Institute of Musicology, 259-285.
- Haigh, C., (1993), English Reformations: Religion, Politics, and Society Under the Tudors, Clarendon Press, Oxford, U.K..

- Harman, A., (1958), Man and His Music: Medieval and Early Renaissance Music up to c.1525, Burleigh Press, Bristol, U.K..
- Harrison, F.Ll., (1952), "An English Caput", Music and Letters, XXXIII: 203-14.
- , (1960), "English Polyphony: 1470-1540", in D.A. Hughes & G. Abraham's (eds.) New Oxford History of Music: Ars Nova and the Renaissance, 1300-1540, vol. III, Oxford University Press, London, 303-348.
- , (1953), "The Eton Choirbook: Its Background and Contents", Acta musicologica, I: 151-175.
- , (transc. & ed.), (1958), The Eton College Choirbook, vols. X & XI, Musica Britannica, Royal Musical Association, Stainer & Bell Ltd., London.
- , (1963), Music in Medieval Britain, 2nd ed., Routledge & Kegan Paul Ltd., London.
- Hiley, D., (1983), "Mode", The New Oxford Companion to Music, vol. 2, gen. ed. D. Arnold, Oxford University Press, New York, 1183-1187.
- Horsley, I., (1967), "Fugue and Mode in Sixteenth-Century Vocal Polyphony", in J. La Rue's (ed.) Aspects of Medieval and Renaissance Music: A Birthday Offering to Gustave Reese, Oxford University Press, London, 406-442.
- Hughes, A., (1965), "Continuity, Tradition and Change in English Music up to 1600", Music and Letters, 46: 306-315.
- Hughes, rev. D.A., (1927), "The Eton Manuscript", Proceedings of the Royal Musical Association, 50-4: 67-83.
- Ingram, J.S., (1973), "The Polyphonic *Salve Regina*, 1425-1550", Diss., University of North Carolina, Chapel Hill, U.S.A.: UMI. 1975, No.7415353.
- Johnson, T.A., (1990-1), "Solmization in English Treatises Around the Turn of the Seventeenth Century: A Break from Modal Theory", Theoria, 5: 42.

- Judd, C.C., (1992), "Modal Types and *Ut, Re, Mi* Tonalities: Tonal Coherence in Sacred Vocal Polyphony from about 1500", Journal of the American Musicological Society, 45: 428-467.
- Kartomi, M.J., (1973), Matjapat Songs in Central and West Java, Monograph Series no. 13, Monash University, in association with The Faculty of Asian Studies and the Australian National University, A.N.U. Press, Canberra, Australia.
- Ker, N.R., (1977), Medieval Manuscripts in British Libraries, vol. II, Clarendon Press, Oxford, U.K., 773-4.
- Kirkman, A., (1995), The Three-Voice Mass in the Later Fifteenth and Early Sixteenth Centuries, part of J. Caldwell's series Outstanding Dissertations in Music from British Universities, Garland Publishing, London.
- Leach, A.F., (1915), The Schools of Medieval England, rep. 1969, Barnes and Noble Inc., London
- Long, K.R., (1971), The Music of the English Church, St. Martin's Press, New York.
- Lowinsky, E.E., (1954), "Conflicting Views on Conflicting Signatures", Journal of the American Musicological Society, 7: 181-204.
- Luoma, R.G., (1976), "Aspects of Mode in Sixteenth-Century Magnificats", The Musical Quarterly, 62: 395-408.
- Mee, J.H., (1887-8), "Points of Interest Connected with the English School of the Sixteenth-Century", Proceedings of the Music Association, 14: 145-169.
- Owens, J.A., (1998), "Concepts of Pitch in English Music Theory, c.1560-1640", in C.C. Judd's (ed.) Tonal Structures in Early Music, Criticism and Analysis of Early Music, vol.1, Garland Publishing, N.Y., 183-246.

- Palisca, C.V., (2000), "Theory, theorists", New Grove Dictionary of Music and Musicians, 2nd ed., vol. 25, ed. S. Sadie, Macmillan Publishers, London, 370-4.
- Perkins, L.L., (1996), "Modal Species and Mixtures in a Fifteenth-Century Chanson Repertory", in U. Gunther, L. Finscher & J. Deans' Modality in the Music of the Fourteenth and Fifteenth Centuries, Musical Studies and Documents 49, American Institute of Musicology, 177-199.
- , (1973), "Mode and Structure in the masses of Josquin", Journal of the American Musicological Society, 26:189-239.
- Powers, H.S., (1998), "From Psalmody to Tonality", in C.C. Judd's (ed.) Tonal Structures in Early Music, Criticism and Analysis of Early Music, vol. 1, Garland Publishing, N.Y., 275-340
- , (1991, March), "Is Mode Real? Pietro Aron, the Octenary System, and Polyphony", Paper read at the Symposium "Modus und Tonalität", Basel.
- , (1982), "Modal Representation in Polyphonic Offertories", Early Music History, 2: 43-86
- , (1981), "Tonal Types and Modal Categories in Renaissance Polyphony", Journal of the American Musicological Society, 34, 428-70.
- Powers, H. & Wiering, F., (2000), "Mode", The New Grove Dictionary of Music and Musicians, 2nd ed., vol. 16, ed. S. Sadie, Macmillan Publishers, London, 796-823.
- Reaney, G., (1982), "The Manuscript Transmission of Hothby's Theoretical Works", in M.D. Grace's (ed.) A Festschrift for Albert Seay, Colorado College, Colorado Springs, U.S.A., 21-31.

- Routley, E., (1977), A Short History of English Church Music, Mowbrays, The Alden Press, Oxford, U.K..
- Sadie, S. (ed.), (1988), "Antiphon", The Grove Concise Dictionary of Music and Musicians, Macmillan Press, London, 24.
- , (1988), "Richard Davy", The Grove Concise Dictionary of Music and Musicians, Macmillan Press, London, 200.
- , (1988), "Mode", The Grove Concise Dictionary of Music and Musicians, Macmillan Press, London, 493.
- , (1988), "Patet", The Grove Concise Dictionary of Music and Musicians, Macmillan Press, London, 563.
- Sandon, N., (1993), "The Manuscript London, British Library Harley 1709", in S. Rankin & D. Hiley's (eds.) Music in the Mediaeval English Liturgy: Plainsong and Medieval Music Society Centennial Essays, Clarendon Press, Oxford, U.K., 355-379.
- Scholes, P.A., (1945), "Modes", The Oxford Companion to Music, 6th ed. (rev.), Oxford University Press, London, 584-589.
- Seay, A., (1980), "John Hothby", The New Grove Dictionary of Music and Musicians, 1st ed., vol. 11, ed. S. Sadie, Macmillan Publishers, London, 729-30.
- Skinner, D., (1997), "William Cornysh: Clerk or Courtier?", The Musical Times, 138: 5-17.
- Stern, D., (1990), "Schenkerian Theory and the Analysis of Renaissance Music", in H. Siegel's (ed.) Schenker Studies, Cambridge University Press, Cambridge, U.K..

- Sternfeld, F.W. (ed.), (1973), A History of Western Europe: Music From the Middle Ages to the Renaissance, vol. I, Weidenfeld & Nicolson, London.
- Stevenson, R., (1952), "Thomas Morley's "Plaine and Easie" Introduction to the Modes", Musica Disciplina, 6: 177-84.
- Strohm, R., (1996), "Modal Sounds as a Stylistic Tendency of the Mid-Fifteenth Century", in U. Gunther, L. Finscher & J. Deans' Modality in the Music of the Fourteenth and Fifteenth Centuries, Musical Studies and Documents 49, American Institute of Musicology, 149-175.
- Squire, W.B., (1889), "On an Early Sixteenth-Century Manuscript of English Music in the Library of Eton College", Archaeologia, lvi, 89.
- Tinctoris, J., (1976), Concerning the Nature and Properties of Tones, [*De Natura et Proprietate Tonorum*], 2nd ed., trans. by A. Seay, Translations no.2, Colorado College Music Press, Colorado, U.S.A..
- Walker, E., (1952), A History of Music in England, 3rd ed., rev. & enlarged by J.A. Westrup, Clarendon Press, Oxford, U.K..
- Warren, E.B., (1969), Life and Works of Robert Fayrfax: 1464-1521, Musical Studies and Documents 22, American Institute of Musicology.
- Wiering, F., (1995), The Language of the Modes: Studies in the History of Polyphonic Modality, Ph.D diss., University of Amsterdam Press, Amsterdam.
- Williamson, M., (1997), "The Eton Choirbook: Its Institutional and Historical Background", DPhil. Thesis, Oxford University, Oxford, U.K., 327.
- Windsor, Eton College 178 ("Eton Choirbook"), iv + 126 + iv, parchment ff. of an original 224, 59.5 x 42.5cm.. Microfilm copy supplied by Eton College Library. Housed in Monash University Library, Clayton, Australia.

- Wolf, J., (1939), "Early English Musical Theorists", The Musical Quarterly, 25: 420-29.
- Woodley, R., (1987) "Renaissance Music Theory as Literature", Renaissance Studies, i, 209-220.
- , (2000), "Johannes Tinctoris", The New Grove Dictionary of Music and Musicians, 2nd ed., vol. 25, ed. S. Sadie, Macmillan Publishers, London, 498.
- , (2000) "John Tucke", The New Grove Dictionary of Music and Musicians, 2nd ed., vol. 25, ed. S. Sadie, Macmillan Publishers, London, 870.
- , (1993), John Tucke: A Case Study in Early Tudor Music Theory, Clarendon Press, Oxford, U.K..
- Wulstan, D., (1985), Tudor Music. J.M. Dent & Sons Ltd., London.
- Young, P.M., (1967), A History of British Music, Ernest Benn Ltd., London.
- Zarlino, G., (1983), On the Modes, part four of Le istituzioni harmoniche, 1558, trans. V. Cohen, ed. C.V. Palisca, Yale University Press, New Haven, U.S.A..

BIBLIOGRAPHY

- Abraham, G. (ed.), The Concise Oxford History of Music, Oxford University Press, London, 1979.
- Adler, G., "Style Criticism", The Musical Quarterly, 20 (1934): 172-176.
- Aldrich, P., "An Approach to the Analysis of Renaissance Music", The Music Review, xxx (1969): 1-21.
- Allaire, G.G., Theory of Hexachords, Solmization and the Modal System: A Practical Application, Musical Studies and Documents 24, American Institute of Musicology, 1972.
- Andrews, H.K., "Modes", Grove's Dictionary of Music and Musicians, vol.5, 5th ed., ed. E. Blom, Macmillan & Co. Ltd., London, 1954, 797-804.
- , The Technique of Byrd's Vocal Polyphony, Oxford University Press, London, 1966.
- Apel, W. (ed.), "Modality", Harvard Dictionary of Music, 2nd ed. (rev.), The Belknap Press of Harvard University Press, Cambridge, Mass., U.S.A., 1969, 533-534.
- , (ed.), "Mode", Harvard Dictionary of Music, 2nd ed. (rev.), The Belknap Press of Harvard University Press, Cambridge, Mass., U.S.A., 1969, 535.
- Balensuela, C.M., "Anonymous Theoretical Writings", The New Grove Dictionary of Music and Musicians 2nd ed., vol. 1, ed. S. Sadie, Macmillan Publishers, London, 2000, 698.
- Bausano, William, Sacred Latin Texts and English Translation for the Choral Conductor and Church Musician: Propers of the Mass, Music Reference Collection no. 68, Greenwood Press, Connecticut, U.S.A., 1988.

- Benham, H., Latin Church Music in England: c.1460-1575, Barrie & Jenkins Ltd., London, 1977.
- Bent, M., "Leonel Power", The New Grove Dictionary of Music and Musicians, 2nd ed., vol. 20, ed. S. Sadie, Macmillan Publishers, London, 2000, 243-8.
- Bergquist, P., "Mode and Polyphony Around 1500: Theory and Practice", Music Forum, i (1967): 99-161.
- Birley, Sir R., The History of Eton College Library, Cambridge University Printing House, Cambridge, U.K., 1970.
- Blackburn, B.J., "John Hothby", The New Grove Dictionary of Music and Musicians, 2nd ed., vol.11, ed. S. Sadie, Macmillan Publishers, London, 2000, 749-751.
- Blom, E., Music in England, 2nd ed., Pelican Books Ltd., London, 1947.
- Bowers, R., "William Brygeman", The New Grove Dictionary of Music and Musicians, 2nd ed., vol. 4, ed. S. Sadie, Macmillan Publishers, London, 2000, 526.
- , English Church Polyphony, Ashgate Publishing Ltd., Hampshire, U.K., 1999.
- , "The Vocal Scoring, Choral Balance and Performing Pitch of Latin Church Polyphony in England, c.1500-58", Journal of the Royal Musical Association, 112 (1987): 38-76.
- Bowers, R. & Wathey, A., "New Sources of English Fifteenth- and Sixteenth-Century Polyphony", Early Music History, 4 (1984): 297-346.
- Bray, R., "The Interpretation of *Musica Ficta* in English Music c.1490-c.1580", Proceedings of the Royal Musical Association, 97 (1970-1): 29-45.
- Brett, P., "Thomas Morley", The New Grove Dictionary of Music and Musicians, 2nd ed., vol.17, ed. S. Sadie, Macmillan Publishers, London, 2000, 126-133.

- Brown, H.M., "Choral Music in the Renaissance", Early Music, 6, no.2 (April 1978): 164-169.
- , Music in the Renaissance, Prentice-Hall, Englewood Cliffs, N.J., U.S.A., 1976.
- Bryden, J.R. & Hughes, D.G. (eds.), An Index of Gregorian Chant, vols. I & II, Harvard University Press, Cambridge, Mass. U.S.A., 1969.
- Bukofzer, M.F., "English Church Music of the Fifteenth-Century", in D.A. Hughes & G. Abraham's (eds.) New Oxford History of Music: Ars Nova and the Renaissance, 1300-1540, vol.III, Oxford University Press, London, 1960, pp.165-213.
- Bush, H., "The Recognition of Chordal Formation by Early Music Theorists", The Musical Quarterly, 32 (1946): 227-243.
- Catholic Church, Antiphonale monasticum pro diurnis horis, Desclée & Co., Tournai, Belgium, 1934.
- , Antiphonale sarisburiense, vols. IV & V, ed. by W.H. Frere, The Plainsong and Mediaeval Society, London, 1901-24, & reprint. 1966.
- , Graduale sarisburiense, ed. by W.H. Frere, The Plainsong and Mediaeval Society, London, 1894.
- Collins, H.B., "Latin Church Music by Early English Composers", Proceedings of the Musical Association, 39 (1913): 55-83.
- , "Latin Church Music by Early English Composers: Part II", Royal Musical Association Proceedings, (1917): 97-121.
- Crocker, R.L., "Discant, Counterpoint and Harmony", Journal of the American Musicological Society, 15 (1962): 1-21.

- Curtis, G. & Wathey, A., "Fifteenth-Century English Liturgical Music: a List of the Surviving Repertory", Royal Musical Association: Research Chronicle, 27 (1994): 1-69.
- Dean, J., "Okeghem's Attitude Towards Modality", in U. Gunther, L. Finscher & J. Deans' Modality in the Music of the Fourteenth and Fifteenth Centuries, Musical Studies and Documents 49, American Institute of Musicology, 1996, 203-246.
- Doe, P., "Another View of *Musica Ficta* in English music c.1490-c.1580", Proceedings of the Royal Musical Association, 97 (1970-1): 29-45.
- Douglas, W., Church Music in History and Practice, rev. by L. Ellinwood, Faber & Faber, London, 1962.
- Dyer, J., "Liturgy", New Grove Dictionary of Music and Musicians, 2nd ed., vol. 15, ed. S. Sadie, Macmillan Publishers, London, 2000, 2.
- Ellsworth, O.B., The Berkeley Manuscript, Nebraska University Press, Lincoln, Nebraska, U.S.A., 1984.
- Fallows, D., "Words and Music in Two English Songs of the mid-Fifteenth-Century: Charles d'Orléans and John Lydgate", Early Music, V (1977): 38-43.
- Fellowes, E.H., English Cathedral Music, rev. by J.A. Westrup, Methuen & Co. Ltd., London, 1969.
- Frere, W.H., "Antiphon", Grove's Dictionary of Music and Musicians, vol.1, 5th ed., rev. D.A. Hughes, ed. E. Blom, Macmillan & Co. Ltd., London, 1954, 169-171.
- , "Salve Regina", Grove's Dictionary of Music and Musicians, vol.7, 5th ed., ed. E. Blom, Macmillan & Co. Ltd., London, 1954, 389.

- Gaffurius, F., Practica Musicae, trans. & transc. C.A. Miller, Musical Studies and Documents 20, American Institute of Musicology, 1968.
- Gallagher, S., "Transposition and Mode in the Motets of Johannes Regis", in U. Gunther, L. Finscher & J. Deans' Modality in the Music of the Fourteenth and Fifteenth Centuries, Musical Studies and Documents 49, American Institute of Musicology, 1996, 259-285.
- Gambosi, O., "Key, Mode, Species", Journal of the American Musicological Society, 4 (1951): 20-26.
- Glarean, H., Dodecachordon, vols. 1 & 2, Basel, 1547, trans. & transc. C.A. Miller, Musical Studies and Documents 6, American Institute of Musicology, 1965.
- Haigh, C., English Reformations: Religion, Politics, and Society Under the Tudors, Clarendon Press, Oxford, U.K., 1993.
- Harman, A., Man and His Music: Medieval and Early Renaissance Music up to c.1525, Burleigh Press, Bristol, U.K., 1958.
- Harper, J., The Forms and Orders of Western Liturgy, Clarendon Press, Oxford, U.K., 1991.
- Harris, D.G.T., "Musical Education in Tudor Times", Royal Musical Association Proceedings, 65 (1938-9): 109-139.
- Harrison, F.Ll., "An English Caput", Music and Letters, XXXIII (1952): 203-14.
- , "English Polyphony: 1470-1540", in D.A. Hughes & G. Abraham's (eds.) New Oxford History of Music: Ars Nova and the Renaissance, 1300-1540, vol.III, Oxford University Press, London, 1960, 303-348.
- , "The Eton Choirbook: Its Background and Contents", Acta musicologica, I (1953): 151-175.

- , (transc. & ed.), The Eton College Choirbook, vols. X & XI, Musica Britannica, Royal Musical Association, Stainer & Bell Ltd., London, 1958.
- , "Faburdan in practice", Musica disciplina, XVI (1962): 11-32.
- , "Music for the Sarum Rite", Annales musicologiques, vi (1958-63): 99-144.
- , Music in Medieval Britain, 2nd ed., Routledge & Kegan Paul Ltd., London, 1963.
- Hiley, D., "Mode", The New Oxford Companion to Music, vol. 2, gen. ed. D. Arnold, Oxford University Press, New York, 1983, 1183-1187.
- Homan, F.W., "Final and Internal Cadential Patterns in Gregorian Chant", Journal of the American Musicological Society, 17 (1964): 66-77.
- Hoppin, R.H., "Conflicting Signatures Reviewed", Journal of the American Musicological Society, 9 (1956): 97-117.
- , "Partial Signatures and *Musica Ficta* in Some Early Fifteenth-Century Sources", Journal of the American Musicological Society, 6 (1953): 197-215.
- Horseley, I., "Fugue and Mode in Sixteenth-Century Vocal Polyphony", in J. La Rue's (ed.) Aspects of Medieval and Renaissance Music: A Birthday Offering to Gustave Reese, Oxford University Press, London, 1967, 406-442.
- Hothby, Johannes, Opera Omnia de Musica Mensurabili, Corpus Scriptorum de Musica 31, American Institute of Musicology, 1983.
- Hughes, A., "The Choir in Fifteenth-Century English Music: Non-Mensural Polyphony", in G. Reese & R.J. Snow's (eds.) Essays in Musicology in Honour of Dragon Plamenac on His 70th Birthday, University of Pittsburgh Press, Pittsburgh, U.S.A., 1969, 127-145.
- , "Continuity, Tradition and Change in English Music up to 1600", Music and Letters, 46 (1965): 306-315.

- , "Mensural Polyphony for Choir in Fifteenth-Century England", Journal of the American Musicological Society, 19 (1966): 352-369.
- Hughes, rev. D.A., "The Eton Manuscript", Proceedings of the Royal Musical Association, 50-4 (1927): 67-83.
- Ingram, J.S., "The Polyphonic *Salve Regina*, 1425-1550", Diss. 1973, University of North Carolina, Chapel Hill, U.S.A.: UMI. 1975, No.7415353.
- , "*Salve Regina*", The New Grove Dictionary of Music and Musicians, vol.16, ed. S. Sadie, Macmillan Publishers Ltd., London, 1980, 435-436.
- Johnson, T.A., "Solmization in English Treatises Around the Turn of the Seventeenth Century: A Break from Modal Theory", Theoria, 5 (1990-1): 42.
- Judd, C.C., "Josquin des Prez: *Salve Regina* (05)", in M. Everest's (ed.) Models of Musical Analysis: Music Before 1600, Blackwell Publishers, Oxford, U.K., 1992, 114-153.
- , "Modal Types and *Ut, Re, Mi* Tonalities: Tonal Coherence in Sacred Vocal Polyphony from about 1500", Journal of the American Musicological Society, 45 (1992): 428-467.
- Kartomi, M.J., Matjapat Songs in Central and West Java, Oriental Monograph Series no. 13, Monash University, in association with The Faculty of Asian Studies, and the Australian National University, A.N.U. Press, Canberra, 1973.
- Ker, N.R., Medieval Manuscripts in British Libraries, vol. II, Clarendon Press, Oxford, U.K., 1977.
- Kirkman, A., The Three-Voice Mass in the Later Fifteenth and Early Sixteenth Centuries, part of J. Caldwell's series Outstanding Dissertations in Music from British Universities, Garland Publishing, London, 1995.

- Kolinski, M., "The General Direction of Melodic Movement", Ethnomusicology, 9, no.3 (1965): 240-264.
- La Rue, J., Guidelines for Style Analysis, Harmonie Park Press, Michigan, U.S.A., 1992.
- Leach, A.F., The Schools of Medieval England, rep. 1969, Barnes and Noble Inc., London, 1915.
- Lee, E.M., "Cadences and Closes", Proceedings of the Musical Association, xxxi (1905): 66-88.
- Le Huray, P., "Anthem - England", The New Grove Dictionary of Music and Musicians, vol.1, ed. S. Sadie, Macmillan Publishers Ltd., London, 1980, 454-462.
- , Music and the Reformation in England: 1549-1660, Herbert Jenkins, London, 1967.
- Long, K.R., The Music of the English Church, St. Martin's Press, New York, 1971.
- Lowinsky, E.E., "Conflicting Views on Conflicting Signatures", Journal of the American Musicological Society, 7 (1954): 181-204.
- , "The Function of Conflicting Signatures in Early Polyphonic Music", The Musical Quarterly, xxxi (1945): 227-260.
- , "On the Use of Scores by Sixteenth-Century Musicians", Journal of the American Musicological Society, 1 (1948): 17-23.
- , Tonality and Atonality in Sixteenth-Century Music, University of California Press, Berkeley, U.S.A., 1962.
- Luoma, R.G., "Aspects of Mode in Sixteenth-Century Magnificats", The Musical Quarterly, 62 (1976): 395-408.

- Mee, J.H., "Points of Interest Connected with the English School of the Sixteenth-Century", Proceedings of the Music Association, 14 (1887-8): 145-169.
- Miller, C.A., "Erasmus on Music", The Musical Quarterly, 52 (1966): 332-349.
- Morehen, J. (ed.), English Choral Practice, 1400-1650, Cambridge University Press, Cambridge, U.K., 1995.
- Morley, T., A Plain and Easy Introduction to practical Music, 2nd ed., ed. R.A. Harman, Norton, New York, 1963.
- Nutting, G., "Cadence in Late-Renaissance Music", Miscellanea musicologica, 8 (1975): 32-55.
- Octobi, J., Tres tractatuli contra Bartholomeau Ramum, ed. A. Seay, Corpus Scriptorum de Musica 10, American Institute of Musicology, Rome, 1964.
- Owens, J.A., "Concepts of Pitch in English Music Theory, c.1560-1640", in C.C. Judd's (ed.) Tonal Structures in Early Music, Criticism and Analysis of Early Music, vol.1, Garland Publishing, N.Y., 1998, 183-246.
- Palisca, C.V. (ed.), Hucbald, Guido and John on Music: Three Medieval Treatises, trans. W. Babb, Yale University Press, New Haven, U.S.A., 1978.
- , "Mode Ethos in the Renaissance", in L. Lockwood & E. Roesner's (eds.) Essays in Musicology: A Tribute to Alvin Johnson, American Institute of Musicology, Philadelphia, PA., U.S.A., 1990, 126-139.
- , (ed.), Musica enchiriadis and Scolia enchiriadis, trans. R. Erickson, Yale University Press, New Haven, U.S.A., 1995.
- , "Theory, theorists", New Grove Dictionary of Music and Musicians, 2nd ed., vol. 25, ed. S. Sadie, Macmillan Publishers, London, 2000, 370-4.
- Pattison, B., Music and Poetry of the English Renaissance, 2nd ed., Methuen & Co. Ltd., London, 1970.

- Perkins, L.L., "Modal Species and Mixtures in a Fifteenth-Century Chanson Repertory", in U. Gunther, L. Finscher & J. Deans' Modality in the Music of the Fourteenth and Fifteenth Centuries, Musical Studies and Documents 49, American Institute of Musicology, 1996, 177-199.
- , "Mode and Structure in the masses of Josquin", Journal of the American Musicological Society, 26 (1973): 189-239.
- Poultney, D., Dictionary of Western Church Music, American Library Association, Chicago, U.S.A., 1991.
- Powers, H.S., "From Psalmody to Tonality", in C.C. Judd's (ed.) Tonal Structures in Early Music, Criticism and Analysis of Early Music, vol. 1, Garland Publishing, N.Y., 1998, 275-340
- , "Is Mode Real? Pietro Aron, the Octenerv System, and Polyphony", Paper read at the Symposium "Modus und Tonalität", Basel, March 1991.
- , "Modal Representation in Polyphonic Offertories", Early Music History, 2 (1982): 43-86
- , "Mode", The New Grove Dictionary of Music and Musicians, vol.12, ed. S. Sadie, Macmillan Publishers Ltd., London, 1980, 378-415.
- , "Tonal Types and Modal Categories in Renaissance Polyphony", Journal of the American Musicological Society, 34 (1981): 428-70.
- Powers, H. & Wiering, F., "Mode", The New Grove Dictionary of Music and Musicians, 2nd ed., vol. 16, ed. S. Sadie, Macmillan Publishers, London, 2000, 796-823.
- Randel, D.M., "Emerging Triadic Tonality in the Fifteenth-Century", The Musical Quarterly, 62 (1971): 73-86.

- Reaney, G., "The Manuscript Transmission of Hothby's Theoretical Works", in
M.D. Grace's (ed.) A Festschrift for Albert Seay, Colorado College,
Colorado Springs, U.S.A., 1982, 21-31.
- Riemann, H., History of Music Theory, vols. I & II, trans. R.H. Haggh, University
of Nebraska Press, Lincoln, U.S.A., 1962.
- Robertson, A., Sacred Music, Max Parrish & Co., London, 1950.
- Rockstro, W.S. & Dyson, G., "Cadence", Grove's Dictionary of Music and
Musicians, vol.2, 5th ed., ed. E. Blom, Macmillan & Co. Ltd., London, 1954,
8-12.
- Rorem, P., "Canonical Hours", Dictionary of the Middle Ages, vol.3, ed. in chief
J.R. Strayer, American Council of Learned Societies, Charles Scribner's
Sons, New York, 1989, 66-67.
- Routley, E., A Short History of English Church Music, Mowbrays, The Alden
Press, Oxford, U.K., 1977.
- Sadie, S. (ed.), "Antiphon", The Grove Concise Dictionary of Music and
Musicians, Macmillan Press & Co. Ltd., London, 1988, 24.
- , "Richard Davy", The Grove Concise Dictionary of Music and Musicians,
Macmillan Press, London, 1988, 200.
- , "Mode", The Grove Concise Dictionary of Music and Musicians, Macmillan
Press, London, 1988, 493.
- , "Patet", The Grove Concise Dictionary of Music and Musicians, Macmillan
Press, London, 1988, 563.
- Sandon, N., "The Manuscript London, British Library Harley 1709", in S. Rankin
& D. Hiley's (eds.) Music in the Medieval English Liturgy: Plainsong and

- Mediaeval Music Society Centennial Essays, Clarendon Press, Oxford, U.K., 1993, 355-379.
- Scholes, P.A. (ed.), "Modes", The Oxford Companion to Music, 6th ed. (rev.), Oxford University Press, London, 1945, 584-589.
- Schulenberg, D., "Modes, Prolongations and Analysis", Journal of Music Theory, 4, no.3 (1985-6): 303-329.
- Seay, A., "The *Dialogus Johannis Ottobi Anglici in arte musica*", Journal of the American Musicological Society, 8 (1955): 86-100.
- , "Florence: The City of Hothby and Ramos", Journal of the American Musicological Society, 9 (1956): 193-5.
- , "John Hothby", The New Grove Dictionary of Music and Musicians, 1st ed., vol. 11, ed. S. Sadie, Macmillan Publishers, London, 1980, 729-30.
- Skinner, D., "William Cornysh: Clerk or Courtier?", The Musical Times, 138 (1997): 5-17.
- Squire, W.B., "On an Early Sixteenth-Century Manuscript of English Music in the Library of Eton College", Archaeologia, 1vi (1889): 89.
- Stern, D., "Schenkerian Theory and the Analysis of Renaissance Music", in H. Siegel's (ed.) Schenker Studies, Cambridge University Press, Cambridge, U.K., 1990.
- Sternfeld, F.W. (ed.), A History of Western Europe: Music From the Middle Ages to the Renaissance, vol. I, Weidenfeld & Nicolson, London, 1973.
- Stevens, D., Tudor Church Music, Faber & Faber, London, 1966.
- Stevens, J., Music and Poetry in the Early Tudor Court, Methuen & Co. Ltd., London, 1961.

- Stevenson, R., "Thomas Morley's "Plaine and Easie" Introduction to the Modes", Musica Disciplina, 6 (1952): 177-84.
- Strohm, R., "Modal Sounds as a Stylistic Tendency of the Mid-Fifteenth Century", in U. Gunther, L. Finscher & J. Deans' Modality in the Music of the Fourteenth and Fifteenth Centuries, Musical Studies and Documents 49, American Institute of Musicology, 1996, 149-175.
- Strunk, O., Source Readings in Music History, Faber, London, 1981.
- Tinctoris, J., Concerning the Nature and Properties of Tones, [*De Natura et Proprietate Tonorum*], 2nd ed., ed. & trans. by A. Seay, Translations no.2, Colorado College Music Press, Colorado, U.S.A., 1976.
- , Dictionary of Musical Terms, [*Terminorum Musicae Diffinitorium*], trans. & annotated by C. Parrish, The Free Press of Glencoe, The Macmillan Co., London, 1963.
- , Opera Theoretica, vols. I, ed. A. Seay, Corpus Scriptorum de Musica 22, American Institute of Musicology, 1975.
- Treitler, L., "Tone System in the Secular Works of Guillaume Dufay", Journal of the American Musicological Society, 18 (1965): 131-69.
- Turbet, R., Tudor Music: A Research and Information Guide, Garland Publishing Inc., New York, 1994.
- Ultan, L., Music Theory: Problems and Practices in the Middle Ages and Renaissance, University of Minnesota Press, Minneapolis, U.S.A., 1977.
- Van Ficker, R., "The Transition on the Continent", in D.A. Hughes and G. Abraham's (eds.) New Oxford History of Music: Ars Nova and the Renaissance, 1300-1540, vol.III, Oxford University Press, London, 1960, 134-164.

- Wagner, P., Introduction to the Gregorian Melodies: A Handbook of Plainsong, vol. I, 2nd ed., trans. A. Orme & E.G.P. Wyatt, originally published by the Plainsong and Medieval Music Society, London 1901, this edition Da Capo Press, New York, 1986.
- Walker, E., A History of Music in England, 3rd ed., rev. & enlarged by J.A. Westrup, Clarendon Press, Oxford, U.K., 1952.
- Warren, E.B., Life and Works of Robert Fayrfax: 1464-1521, Musical Studies and Documents 22, American Institute of Musicology, 1969.
- Wathey, A., "Lost Books of Polyphony in England: A List to 1500", Royal Musical Association: Research Chronicle, 21 (1988): 1-19.
- Wienpahl, R.W., "Modal Usage in Masses of the Fifteenth-Century", Journal of the American Musicological Society, 5 (1952): 37-52.
- Wiering, F., "Internal and External Views of the Modes", in C.C. Judd's (ed.) Tonal Structures in Early Music, Criticism and Analysis of Early Music, vol.1, Garland Publishing, N.Y., 1998, 89-107.
- , The Language of the Modes: Studies in the History of Polyphonic Modality, Ph.D diss., University of Amsterdam Press, Amsterdam, 1995.
- Williams, C.J., "The Salve Regina Settings in the Eton College Choirbook", Miscellanea musicologica, 10 (1977-80): 28-37.
- Williamson, M., "The Eton Choirbook: Its Institutional and Historical Background", DPhil. Thesis, Oxford University, Oxford, U.K., 1997, p.327.
- Windsor, Eton College, 178 ("Eton Choirbook"), iv + 126 + iv, parchment ff. of an original 224, 59.5 x 42.5cm.. Microfilm copy supplied by Eton College Library. Housed in Monash University Library, Clayton, Australia.

Wolf, J., "Early English Musical Theorists", The Musical Quarterly, 25 (1939):
420-429.

Woodfill, W.L., Musicians in English Society from Elizabeth to Charles I, Da
Capo Press, New York, 1969.

Woodley, R., "Renaissance Music Theory as Literature", Renaissance Studies, i
(1987): 209-220.

---, "Johannes Tinctoris", The New Grove Dictionary of Music and Musicians,
2nd e., vol. 25, ed. S. Sadie, Macmillan Publishers, London, 2000, 498.

---, "John Tucke", The New Grove Dictionary of Music and Musicians, 2nd ed.,
vol. 25, ed. S. Sadie, Macmillan Publishers, London, 2000, 870.

---, John Tucke: A Case Study in Early Tudor Music Theory, Clarendon Press,
Oxford, U.K. 1993.

Wulstan, D., Tudor Music, J.M. Dent & Sons Ltd., London, 1985.

Young, P.M., A History of British Music, Ernest Benn Ltd., London, 1967.

Zarlino, G., On the Modes, part four of Le institutioni harmoniche, 1558, trans. V.
Cohen, ed. C.V. Palisca, Yale University Press, New Haven, U.S.A., 1983.

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Mode in
the *Salve regina* Settings
of
The Eton College Choirbook

Volume Two

by Lisa Mackay

B.A. Hons.

January 2002

CONTENTS

VOLUME TWO

| | PAGES |
|--|-------|
| TABLES | |
| Structural Organisation of Works | |
| - Browne, Browne ² , Cornysh, Davy, Fayrfax | 6 |
| - Hacomplaynt, Horwood, Huchyn, Hygons, Lambe | 7 |
| - Sutton, Wylkynson, Wylkynson ² , Hampton | 8 |
| Sectionalised Tables: | |
| Total Number of Tones per vocal line, for each work | |
| - Browne, Browne ² | 9 |
| - Cornysh, Davy | 10 |
| - Fayrfax, Hampton | 11 |
| - Hacomplaynt, Horwood | 12 |
| - Huchyn, Hygons | 13 |
| - Lambe | 14 |
| - Sutton | 15 |
| - Wylkynson | 16 |
| - Wylkynson ² | 17 |

| | PAGES |
|--|--------------|
| GRAPHS | |
| Total Number of Tones: | |
| Per work | |
| - Browne, Browne ² , Cornysh, Davy, Fayrfax, Hacomplaynt | 18 |
| - Hampton, Horwood, Huchyn, Hygons, Lambe, Sutton | 19 |
| - Wylkynson, Wylkynson ² | 20 |
| Total Number of Tones: | |
| Per vocal line, for each work | |
| - Browne | 21 |
| - Browne ² | 22 |
| - Cornysh | 23 |
| - Davy | 24 |
| - Fayrfax | 25 |
| - Hacomplaynt | 26 |
| - Hampton | 27 |
| - Horwood | 28 |
| - Huchyn | 29 |
| - Hygons | 30 |
| - Lambe | 31 |
| - Sutton | 32 |
| - Wylkynson | 33 |
| - Wylkynson ² | 34 |

PAGES

Percentages of Adjacent Repeated Tones:

Per vocal line for each work

| | |
|--------------------------|----|
| - Browne | 35 |
| - Browne ² | 36 |
| - Cornysh | 37 |
| - Davy | 38 |
| - Fayrfax | 39 |
| - Hacomplaynt | 40 |
| - Hampton | 41 |
| - Horwood | 42 |
| - Huchyn | 43 |
| - Hygons | 44 |
| - Lambe | 45 |
| - Sutton | 46 |
| - Wylkynson | 47 |
| - Wylkynson ² | 48 |

Percentages of Frequently Held Tones:

Per vocal line for each work

| | |
|-----------------------|----|
| - Browne | 49 |
| - Browne ² | 50 |
| - Cornysh | 51 |
| - Davy | 52 |
| - Fayrfax | 53 |

PAGES

| | |
|--------------------------|----|
| - Hacomplaynt | 54 |
| - Hampton | 55 |
| - Horwood | 56 |
| - Huchyn | 57 |
| - Hygons | 58 |
| - Lambe | 59 |
| - Sutton | 60 |
| - Wylkynson | 61 |
| - Wylkynson ² | 62 |

STRUCTURAL ORGANISATION OF WORKS

KEY TO TABLES:

| | |
|---------------------------|--|
| Solo-vocal writing | |
| Full-vocal writing | |

| Brown 1 | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 |
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| Brown 2 | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 |
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| Davy | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 |
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| B | | | | | | | | | | | | |

| Fayth | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 |
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| Harwood | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 |
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| Harwood | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 |
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| B | | | | | | | | | | | | |

CF

| Lamb | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 |
|------|----|----|----|----|----|----|----|-----|----|-----|----|-----|
| TR 1 | | | | | | | | | | | | |
| TR 2 | | | | | | | | | | | | |
| M 1 | | | | | | | | | | | | |
| M 2 | | | | | | | | | | | | |
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| B | | | | | | | | | | | | |

CF

| Subson | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 |
|--------|----|----|----|----|----|----|----|-----|----|-----|----|-----|
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| Wyllinson 1 | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 |
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| CT 3 | | | | | | | | | | | | |
| B 1 | | | | | | | | | | | | |
| B 2 | | | | | | | | | | | | |

| Wyllinson 2 | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T5 | OE9 |
|-------------|----|----|----|----|----|----|----|-----|----|-----|----|-----|
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| T | | | | | | | | | | | | |
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| Hampton | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | AE1 | T5 | OE9 |
|---------|----|----|----|----|----|----|----|-----|----|-----|----|-----|----|-----|
| TR | | | | | | | | | | | | | | |
| M | | | | | | | | | | | | | | |
| CT | | | | | | | | | | | | | | |
| T | | | | | | | | | | | | | | |
| B | | | | | | | | | | | | | | |

SECTIONALISED TABLES:

TOTAL NUMBER OF TONES PER VOCAL LINE FOR EACH WORK

| BROWNE 1-B | | | | | | | | | | | | | |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| SECTIONS | | | | | | | | | | | | | |
| B | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat |
| Signature | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | O6T | T2 | O6S | T3 | O6S | |
| B-flat | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | |
| A | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 1 | 0 | 0 | 1 | |
| G | 0 | 0 | 1 | 0 | 2 | 2 | 3 | 0 | 12 | 0 | 0 | 1 | |
| F | 4 | 0 | 5 | 3 | 6 | 3 | 10 | 2 | 18 | 2 | 0 | 3 | |
| E | 1 | 0 | 4 | 1 | 0 | 1 | 3 | 1 | 8 | 1 | 0 | 2 | |
| E-flat | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 3 | 0 | 0 | 2 | |
| D | 1 | 1 | 8 | 6 | 7 | 3 | 17 | 6 | 16 | 7 | 0 | 11 | |
| C | 3 | 1 | 8 | 6 | 6 | 9 | 25 | 6 | 25 | 6 | 0 | 19 | |
| B-flat | 3 | 1 | 5 | 4 | 5 | 9 | 16 | 5 | 15 | 5 | 0 | 12 | |
| A | 1 | 2 | 8 | 5 | 2 | 6 | 12 | 5 | 11 | 1 | 0 | 13 | |
| G | 1 | 0 | 2 | 1 | 3 | 6 | 12 | 5 | 10 | 3 | 0 | 9 | |
| F | 3 | 1 | 8 | 4 | 3 | 12 | 8 | 1 | 2 | 1 | 0 | 14 | |

| BROWNE 2 - B | | | | | | | | | | | | | |
|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|
| SECTIONS | | | | | | | | | | | | | |
| A | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 2 nos | 2 nos |
| Signature | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OET | T2 | OES | T3 | O4 | O5 |
| D | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C | 0 | 0 | 0 | 4 | 2 | 7 | 1 | 0 | 0 | 2 | 0 | 4 | 2 |
| B-flat | 0 | 0 | 0 | 0 | 0 | 4 | 3 | 1 | 0 | 0 | 0 | 5 | 2 |
| A | 0 | 0 | 1 | 0 | 5 | 7 | 2 | 2 | 0 | 1 | 1 | 4 | 3 |
| A-flat | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| G | 0 | 0 | 3 | 3 | 5 | 14 | 19 | 2 | 0 | 5 | 6 | 14 | 1 |
| F | 0 | 1 | 5 | 4 | 10 | 19 | 25 | 4 | 0 | 5 | 2 | 14 | 1 |
| E | 0 | 0 | 0 | 0 | 2 | 14 | 0 | 2 | 0 | 2 | 0 | 0 | 2 |
| E-flat | 0 | 0 | 0 | 0 | 2 | 1 | 16 | 0 | 0 | 0 | 1 | 13 | 5 |
| D | 0 | 0 | 4 | 4 | 7 | 7 | 24 | 5 | 0 | 8 | 2 | 16 | 1 |
| C | 0 | 1 | 0 | 9 | 2 | 26 | 17 | 3 | 0 | 5 | 1 | 12 | 1 |
| B-flat | 0 | 0 | 2 | 2 | 2 | 3 | 9 | 3 | 0 | 2 | 1 | 8 | 5 |

| CORNISH - TR | | | | | | | | | | | | | |
|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| SECTIONS | | | | | | | | | | | | | |
| Signature | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| B-flat | 4 | 0 | 3 | 0 | 7 | 4 | 0 | 5 | 0 | 4 | 3 | 7 | |
| A | 5 | 0 | 2 | 0 | 15 | 4 | 0 | 8 | 0 | 3 | 9 | 14 | |
| G | 11 | 4 | 7 | 0 | 20 | 8 | 11 | 0 | 9 | 0 | 6 | 14 | 10 |
| F# | 8 | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| F | 4 | 3 | 9 | 0 | 19 | 10 | 6 | 0 | 8 | 0 | 3 | 14 | 10 |
| E | 4 | 2 | 2 | 0 | 7 | 10 | 3 | 0 | 6 | 0 | 0 | 8 | 4 |
| E-flat | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| D | 12 | 7 | 2 | 0 | 7 | 14 | 2 | 0 | 8 | 0 | 1 | 10 | 5 |
| C | 2 | 4 | 1 | 0 | 5 | 8 | 1 | 0 | 2 | 0 | 0 | 3 | 0 |
| B-flat | 4 | 1 | 1 | 0 | 0 | 6 | 0 | 0 | 1 | 0 | 0 | 2 | 0 |
| A | 2 | 1 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| G | 3 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |

| CORNISH - M | | | | | | | | | | | | | |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| SECTIONS | | | | | | | | | | | | | |
| Signature | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| F | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 1 | 0 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E-flat | 4 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| D | 14 | 3 | 0 | 12 | 7 | 2 | 0 | 4 | 0 | 2 | 0 | 7 | |
| C | 11 | 6 | 0 | 15 | 10 | 11 | 0 | 8 | 0 | 4 | 0 | 6 | |
| B | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 2 | 0 | 1 | 0 | 1 | |
| B-flat | 13 | 19 | 0 | 17 | 12 | 10 | 0 | 5 | 0 | 4 | 0 | 11 | |
| A | 11 | 13 | 0 | 19 | 12 | 6 | 0 | 5 | 0 | 5 | 0 | 10 | |
| G | 14 | 13 | 0 | 15 | 21 | 5 | 0 | 3 | 0 | 5 | 0 | 15 | |
| F# | 1 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| F | 1 | 9 | 0 | 13 | 8 | 2 | 0 | 3 | 0 | 3 | 0 | 6 | |
| E | 1 | 3 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 2 | 0 | 2 | |
| D | 1 | 4 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | |
| C | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| B-flat | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

| CORNISH - CT | | | | | | | | | | | | | |
|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| SECTIONS | | | | | | | | | | | | | |
| Signature | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| B-flat | 0 | 0 | 0 | 5 | 0 | 6 | 7 | 1 | 0 | 0 | 3 | 3 | |
| A | 0 | 0 | 2 | 8 | 0 | 12 | 13 | 1 | 7 | 0 | 14 | 8 | |
| G | 5 | 4 | 1 | 15 | 3 | 25 | 19 | 0 | 13 | 7 | 27 | 9 | |
| F# | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | |
| F | 4 | 7 | 5 | 19 | 2 | 21 | 28 | 2 | 22 | 6 | 34 | 11 | |
| E | 0 | 3 | 1 | 7 | 0 | 9 | 10 | 3 | 20 | 3 | 20 | 6 | |
| E-flat | 4 | 3 | 2 | 7 | 0 | 5 | 7 | 0 | 1 | 0 | 2 | 2 | |
| D | 9 | 11 | 5 | 24 | 4 | 16 | 27 | 8 | 39 | 5 | 30 | 10 | |
| C | 2 | 8 | 11 | 16 | 1 | 7 | 15 | 3 | 18 | 2 | 15 | 8 | |
| B-flat | 1 | 10 | 3 | 7 | 2 | 6 | 11 | 2 | 22 | 1 | 14 | 5 | |
| A | 1 | 1 | 4 | 5 | 1 | 3 | 11 | 2 | 20 | 0 | 8 | 1 | |
| G | 1 | 3 | 1 | 1 | 2 | 3 | 4 | 3 | 17 | 0 | 8 | 1 | |
| F | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | |

| CORNISH - T | | | | | | | | | | | | | |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| SECTIONS | | | | | | | | | | | | | |
| Signature | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| A | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 0 | 3 | 0 | |
| G | 0 | 0 | 0 | 0 | 0 | 10 | 1 | 0 | 8 | 0 | 7 | 0 | |
| F | 0 | 0 | 0 | 3 | 2 | 0 | 6 | 8 | 0 | 18 | 0 | 16 | |
| E | 0 | 0 | 0 | 1 | 2 | 0 | 6 | 5 | 0 | 12 | 2 | 15 | |
| E-flat | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 4 | 0 | 2 | 0 | 1 | |
| D | 0 | 0 | 5 | 5 | 11 | 0 | 19 | 32 | 4 | 36 | 4 | 37 | |
| C | 0 | 0 | 8 | 10 | 13 | 0 | 21 | 32 | 4 | 33 | 3 | 24 | |
| B-flat | 0 | 3 | 4 | 8 | 10 | 0 | 17 | 33 | 6 | 43 | 5 | 31 | |
| A | 0 | 0 | 8 | 8 | 7 | 0 | 17 | 20 | 7 | 30 | 1 | 18 | |
| G | 0 | 0 | 5 | 4 | 7 | 0 | 15 | 16 | 6 | 29 | 0 | 26 | |
| F | 0 | 0 | 4 | 3 | 5 | 0 | 4 | 8 | 2 | 5 | 0 | 7 | |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | |

| CORNISH - B | | | | | | | | | | | | | |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| SECTIONS | | | | | | | | | | | | | |
| Signature | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| E-flat | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | |
| D | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 11 | 0 | 6 | |
| C | 0 | 0 | 0 | 1 | 0 | 0 | 9 | 0 | 0 | 10 | 1 | 8 | |
| B | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | |
| B-flat | 0 | 0 | 4 | 3 | 3 | 0 | 8 | 11 | 0 | 20 | 1 | 14 | |
| A | 0 | 0 | 5 | 2 | 1 | 0 | 1 | 7 | 0 | 16 | 0 | 11 | |
| G | 0 | 0 | 1 | 3 | 7 | 0 | 17 | 14 | 3 | 41 | 3 | 17 | |
| F | 0 | 0 | 13 | 6 | 11 | 0 | 13 | 24 | 2 | 26 | 3 | 8 | |
| E | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 4 | 0 | 1 | 0 | |
| E-flat | 0 | 2 | 2 | 4 | 5 | 0 | 13 | 10 | 3 | 13 | 3 | 6 | |
| D | 0 | 0 | 3 | 2 | 10 | 0 | 14 | 12 | 6 | 19 | 1 | 10 | |
| C | 0 | 0 | 2 | 3 | 4 | 0 | 11 | 8 | 1 | 6 | 1 | 5 | |
| B | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | |
| B-flat | 0 | 1 | 2 | 0 | 4 | 0 | 4 | 8 | 0 | 4 | 4 | 3 | |

| DAVY - TR1 | | | | | | | | | | | | | |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| SECTIONS | | | | | | | | | | | | | |
| Signature | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| G | 5 | 0 | 0 | 0 | 2 | 8 | 1 | 3 | 0 | 6 | 8 | 3 | |
| F | 2 | 3 | 0 | 0 | 8 | 3 | 1 | 3 | 0 | 4 | 8 | 14 | |
| E | 4 | 0 | 0 | 0 | 11 | 13 | 5 | 6 | 0 | 6 | 17 | 22 | |
| D | 5 | 5 | 0 | 0 | 12 | 8 | 9 | 8 | 0 | 8 | 27 | 23 | |
| C | 8 | 3 | 0 | 0 | 7 | 3 | 14 | 14 | 0 | 3 | 21 | 12 | |
| B | 3 | 1 | 0 | 0 | 3 | 1 | 12 | 12 | 0 | 2 | 18 | 8 | |
| B-flat | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | |
| A | 3 | 2 | 0 | 0 | 4 | 1 | 19 | 19 | 0 | 2 | 13 | 4 | |
| G | 5 | 1 | 0 | 0 | 2 | 1 | 20 | 20 | 0 | 2 | 12 | 1 | |
| F | 0 | 2 | 0 | 0 | 1 | 0 | 10 | 10 | 0 | 0 | 7 | 0 | |
| E | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 2 | 0 | 0 | 4 | 0 | |
| D | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | |

| DAVY - TR2 | | | | | | | | | | | | | |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| SECTIONS | | | | | | | | | | | | | |
| Signature | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| G | 3 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | |
| F | 1 | 1 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | |
| E | 8 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | |
| D | 7 | 1 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | |
| C | 6 | 4 | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | |
| B | 5 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | |
| B-flat | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| A | 3 | 5 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | |
| G | 3 | 1 | 0 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | |
| F | 0 | 1 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | |

| DAVY - M | | | | | | | | | | | | | |
|-----------|----|----------|----|----|--------|--------|--------|-----|----|-----|----|-----|---|
| M | | SECTIONS | | | | | | | | | | | |
| Signature | - | - | - | - | 1 flat | 1 flat | 1 flat | - | - | - | - | - | - |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| C | 0 | 1 | 0 | 0 | 2 | 2 | 0 | 1 | 0 | 0 | 0 | 7 | |
| B | 0 | 0 | 0 | 0 | 0 | 4 | 3 | 1 | 0 | 0 | 0 | 1 | |
| B-flat | 0 | 3 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 4 | |
| A | 1 | 5 | 0 | 0 | 7 | 7 | 11 | 3 | 0 | 1 | 0 | 8 | |
| G | 8 | 3 | 0 | 0 | 13 | 14 | 23 | 7 | 0 | 6 | 0 | 21 | |
| F# | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | |
| F | 5 | 5 | 0 | 0 | 14 | 11 | 21 | 7 | 0 | 3 | 0 | 20 | |
| E | 9 | 0 | 0 | 0 | 10 | 11 | 8 | 6 | 0 | 6 | 0 | 15 | |
| E-flat | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | |
| D | 8 | 3 | 0 | 0 | 8 | 7 | 9 | 7 | 0 | 5 | 0 | 15 | |
| C | 4 | 0 | 0 | 0 | 3 | 6 | 7 | 3 | 0 | 2 | 0 | 13 | |
| B | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 4 | |
| B-flat | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | |
| A | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | |
| G | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 1 | |

| FAYRFAX - B | | | | | | | | | | | | | |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| SECTIONS | | | | | | | | | | | | | |
| B | 1 flst | 1 flst | 1 flst | 1 flst | 1 flst | 1 flst | 2 flst | 1 flst | 1 flst | 1 flst | 1 flst | 1 flst | 1 flst |
| Signature | O1 | O2 | O3 | O4 | O5 | O6 | T1 | O67 | T2 | O68 | T3 | O69 | T4 |
| C | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| B-flst | 3 | 0 | 0 | 0 | 4 | 2 | 1 | 1 | 0 | 0 | 0 | 4 | 0 |
| A | 4 | 0 | 0 | 0 | 4 | 1 | 1 | 2 | 0 | 0 | 0 | 7 | 0 |
| G | 6 | 0 | 0 | 0 | 6 | 7 | 5 | 3 | 0 | 0 | 0 | 10 | 0 |
| F | 7 | 0 | 2 | 2 | 10 | 6 | 7 | 8 | 0 | 0 | 2 | 13 | 1 |
| E | 3 | 0 | 0 | 0 | 1 | 6 | 0 | 4 | 0 | 0 | 1 | 5 | 1 |
| E-flst | 1 | 0 | 0 | 0 | 6 | 0 | 5 | 1 | 0 | 0 | 0 | 0 | 0 |
| D | 10 | 0 | 2 | 4 | 11 | 17 | 9 | 11 | 0 | 0 | 5 | 9 | 2 |
| G | 5 | 2 | 4 | 8 | 7 | 20 | 10 | 10 | 1 | 0 | 6 | 12 | 8 |
| B-flst | 5 | 0 | 2 | 8 | 2 | 14 | 8 | 7 | 2 | 0 | 6 | 12 | 3 |
| A | 2 | 0 | 4 | 1 | 2 | 8 | 9 | 4 | 3 | 0 | 5 | 12 | 1 |
| G | 3 | 0 | 1 | 7 | 2 | 14 | 4 | 7 | 1 | 0 | 4 | 10 | 6 |
| F | 0 | 1 | 0 | 2 | 0 | 4 | 6 | 3 | 5 | 0 | 2 | 8 | 4 |

| HAMPTON - B | | | | | | | | | | | | | | | | | |
|-------------|--------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| B | | SECTIONS | | | | | | | | | | | | | | | |
| Signature | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OET | T2 | OES | T3 | T3 | AE1 | T5 | OET | | |
| B-flat | 0 | 0 | 0 | 1 | 0 | 0 | 4 | 0 | 0 | 0 | 2 | 1 | 1 | 1 | 2 | 0 | |
| A | 0 | 0 | 0 | 1 | 0 | 1 | 10 | 1 | 0 | 1 | 4 | 4 | 3 | 0 | 4 | 0 | |
| G | 0 | 0 | 2 | 6 | 1 | 4 | 20 | 4 | 0 | 2 | 8 | 5 | 6 | 4 | 8 | 2 | |
| F | 0 | 0 | 1 | 9 | 3 | 5 | 21 | 2 | 0 | 3 | 3 | 6 | 2 | 3 | 12 | 1 | |
| E | 0 | 0 | 1 | 9 | 2 | 0 | 12 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 2 | |
| E-flat | 0 | 0 | 1 | 3 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 7 | 0 | 0 | 0 | 0 | |
| D | 0 | 0 | 3 | 16 | 6 | 1 | 24 | 7 | 0 | 6 | 6 | 9 | 1 | 6 | 17 | 7 | |
| C | 0 | 0 | 3 | 9 | 10 | 8 | 15 | 3 | 0 | 3 | 4 | 8 | 0 | 6 | 14 | 6 | |
| B-flat | 0 | 0 | 4 | 8 | 8 | 4 | 14 | 5 | 0 | 2 | 4 | 7 | 0 | 4 | 19 | 6 | |
| A | 0 | 0 | 4 | 2 | 2 | 1 | 10 | 4 | 0 | 3 | 5 | 3 | 0 | 0 | 14 | 5 | |
| G | 0 | 0 | 3 | 3 | 3 | 2 | 9 | 4 | 0 | 1 | 2 | 1 | 0 | 1 | 16 | 6 | |

| HACOMPLAYNT - TR | | | | | | | | | | | | | |
|------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| SECTIONS | | | | | | | | | | | | | |
| Signature | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| F | 0 | 5 | 3 | 3 | 1 | 6 | 3 | 1 | 0 | 0 | 9 | 3 | |
| E | 0 | 6 | 4 | 4 | 3 | 9 | 6 | 2 | 0 | 0 | 15 | 4 | |
| D | 0 | 13 | 10 | 10 | 13 | 28 | 19 | 2 | 0 | 5 | 27 | 11 | |
| C | 0 | 19 | 13 | 12 | 14 | 13 | 21 | 2 | 0 | 2 | 21 | 7 | |
| B | 0 | 2 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | |
| B-flat | 0 | 14 | 4 | 8 | 15 | 10 | 27 | 0 | 0 | 4 | 14 | 8 | |
| A | 0 | 14 | 7 | 4 | 20 | 9 | 27 | 0 | 0 | 4 | 11 | 8 | |
| G | 0 | 9 | 1 | 1 | 15 | 7 | 15 | 0 | 0 | 3 | 11 | 7 | |
| F | 0 | 2 | 1 | 0 | 9 | 2 | 9 | 0 | 0 | 2 | 8 | 3 | |
| E | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 3 | 1 | |
| D | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | |

| HACOMPLAYNT - M | | | | | | | | | | | | | |
|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| SECTIONS | | | | | | | | | | | | | |
| Signature | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| C | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| B-flat | 5 | 3 | 0 | 3 | 2 | 2 | 0 | 0 | 8 | 1 | 0 | 1 | |
| A | 7 | 5 | 3 | 8 | 2 | 5 | 0 | 1 | 21 | 4 | 0 | 7 | |
| G | 11 | 11 | 5 | 11 | 5 | 18 | 0 | 4 | 27 | 7 | 0 | 10 | |
| F | 12 | 13 | 10 | 16 | 14 | 18 | 0 | 2 | 26 | 6 | 0 | 9 | |
| E | 10 | 8 | 6 | 8 | 8 | 7 | 0 | 4 | 9 | 3 | 0 | 4 | |
| D | 7 | 8 | 3 | 8 | 11 | 10 | 0 | 4 | 11 | 4 | 0 | 7 | |
| C | 2 | 8 | 5 | 6 | 6 | 1 | 0 | 2 | 7 | 0 | 0 | 2 | |
| B | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| B-flat | 2 | 5 | 1 | 2 | 5 | 1 | 0 | 0 | 4 | 0 | 0 | 1 | |
| A | 2 | 5 | 0 | 2 | 7 | 1 | 0 | 0 | 3 | 0 | 0 | 1 | |
| G | 1 | 2 | 0 | 0 | 4 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | |

| HACOMPLAYNT - CT | | | | | | | | | | | | | |
|------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| SECTIONS | | | | | | | | | | | | | |
| Signature | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| F | 0 | 0 | 1 | 1 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 1 | |
| E | 0 | 0 | 1 | 1 | 0 | 7 | 0 | 1 | 0 | 0 | 0 | 1 | |
| D | 0 | 2 | 6 | 9 | 0 | 22 | 0 | 2 | 22 | 4 | 0 | 9 | |
| C | 0 | 3 | 7 | 6 | 0 | 17 | 0 | 2 | 12 | 2 | 0 | 11 | |
| B | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | |
| B-flat | 0 | 2 | 5 | 9 | 1 | 15 | 0 | 2 | 15 | 5 | 0 | 10 | |
| A | 0 | 1 | 10 | 13 | 5 | 19 | 0 | 4 | 10 | 4 | 0 | 11 | |
| G | 0 | 1 | 5 | 11 | 7 | 11 | 0 | 6 | 18 | 6 | 0 | 8 | |
| F | 0 | 0 | 3 | 9 | 6 | 8 | 0 | 2 | 13 | 2 | 0 | 6 | |
| E | 0 | 0 | 0 | 1 | 3 | 1 | 0 | 2 | 10 | 1 | 0 | 0 | |
| E-flat | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | |
| D | 0 | 0 | 0 | 3 | 5 | 2 | 0 | 1 | 14 | 1 | 0 | 1 | |
| C | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | |

| HACOMPLAYNT - T | | | | | | | | | | | | | |
|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| SECTIONS | | | | | | | | | | | | | |
| Signature | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| F | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| E | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| D | 4 | 0 | 0 | 1 | 0 | 3 | 0 | 0 | 9 | 2 | 9 | 0 | |
| C | 7 | 0 | 1 | 1 | 0 | 5 | 0 | 1 | 12 | 0 | 15 | 0 | |
| B-flat | 5 | 0 | 1 | 5 | 0 | 11 | 0 | 2 | 21 | 2 | 28 | 2 | |
| A | 9 | 0 | 3 | 5 | 0 | 18 | 0 | 2 | 19 | 3 | 40 | 3 | |
| G | 9 | 2 | 3 | 5 | 0 | 28 | 0 | 3 | 31 | 5 | 38 | 8 | |
| F | 4 | 1 | 8 | 5 | 0 | 17 | 0 | 1 | 13 | 2 | 19 | 7 | |
| E | 2 | 0 | 1 | 3 | 0 | 10 | 0 | 0 | 3 | 1 | 7 | 2 | |
| E-flat | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | |
| D | 2 | 0 | 3 | 3 | 0 | 9 | 0 | 0 | 9 | 2 | 4 | 5 | |
| C | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | |

| HACOMPLAYNT - B | | | | | | | | | | | | | |
|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| SECTIONS | | | | | | | | | | | | | |
| Signature | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| B-flat | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | |
| A | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | |
| G | 0 | 0 | 0 | 0 | 0 | 5 | 7 | 0 | 0 | 2 | 16 | 0 | |
| F | 3 | 0 | 4 | 7 | 0 | 11 | 10 | 1 | 0 | 1 | 16 | 4 | |
| E | 2 | 0 | 2 | 5 | 0 | 8 | 11 | 2 | 0 | 1 | 10 | 3 | |
| E-flat | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | |
| D | 4 | 0 | 4 | 11 | 0 | 19 | 23 | 2 | 0 | 5 | 21 | 7 | |
| C | 4 | 2 | 5 | 4 | 0 | 10 | 13 | 3 | 0 | 0 | 13 | 5 | |
| B-flat | 2 | 0 | 6 | 7 | 0 | 18 | 11 | 1 | 0 | 2 | 8 | 10 | |
| A | 2 | 0 | 2 | 4 | 0 | 10 | 10 | 0 | 0 | 1 | 5 | 4 | |
| G | 1 | 1 | 2 | 5 | 0 | 5 | 9 | 1 | 0 | 4 | 6 | 9 | |
| F | 0 | 1 | 4 | 2 | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 5 | |

| HORWOOD - TR | | | | | | | | | | | | | |
|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| SECTIONS | | | | | | | | | | | | | |
| Signature | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| B-flat | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| A | 4 | 1 | 3 | 2 | 5 | 2 | 6 | 2 | 0 | 3 | 7 | 4 | |
| G | 8 | 4 | 3 | 6 | 7 | 9 | 12 | 8 | 0 | 7 | 15 | 10 | |
| F | 9 | 3 | 6 | 10 | 9 | 14 | 17 | 10 | 0 | 8 | 22 | 8 | |
| E | 8 | 3 | 3 | 11 | 9 | 12 | 23 | 8 | 0 | 10 | 21 | 5 | |
| D | 6 | 4 | 6 | 13 | 14 | 10 | 27 | 9 | 0 | 7 | 22 | 12 | |
| C | 2 | 1 | 1 | 9 | 12 | 2 | 20 | 3 | 0 | 3 | 12 | 8 | |
| B | 1 | 0 | 1 | 8 | 8 | 1 | 11 | 4 | 0 | 0 | 3 | 5 | |
| A | 1 | 0 | 0 | 6 | 5 | 0 | 6 | 0 | 0 | 0 | 1 | 2 | |
| G | 1 | 0 | 0 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | |
| F | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

| HORWOOD - M | | | | | | | | | | | | | |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| SECTIONS | | | | | | | | | | | | | |
| Signature | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| E | 0 | 1 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 4 | 0 | 0 | |
| D | 5 | 1 | 5 | 3 | 1 | 5 | 3 | 4 | 0 | 4 | 0 | 3 | |
| C | 5 | 2 | 1 | 7 | 2 | 5 | 4 | 5 | 0 | 10 | 0 | 5 | |
| B | 2 | 5 | 5 | 8 | 4 | 12 | 3 | 8 | 0 | 8 | 0 | 5 | |
| B-flat | 9 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | |
| A | 10 | 5 | 3 | 12 | 8 | 11 | 15 | 5 | 0 | 9 | 0 | 9 | |
| G | 13 | 5 | 2 | 19 | 11 | 12 | 15 | 11 | 0 | 4 | 0 | 18 | |
| F# | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| F | 10 | 1 | 3 | 7 | 6 | 4 | 16 | 2 | 0 | 1 | 0 | 9 | |
| E | 4 | 0 | 2 | 3 | 5 | 2 | 15 | 0 | 0 | 0 | 0 | 7 | |
| D | 5 | 0 | 1 | 2 | 6 | 0 | 10 | 0 | 0 | 0 | 0 | 3 | |
| C | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | |

| HORWOOD - CT | | | | | | | | | | | | | |
|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| SECTIONS | | | | | | | | | | | | | |
| Signature | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| A | 1 | 0 | 2 | 0 | 1 | 0 | 2 | 0 | 0 | 4 | 9 | 0 | 1 |
| G | 3 | 1 | 3 | 3 | 2 | 0 | 7 | 0 | 5 | 6 | 16 | 2 | 3 |
| F | 7 | 1 | 3 | 4 | 1 | 0 | 4 | 0 | 4 | 16 | 23 | 4 | 5 |
| E | 6 | 1 | 5 | 5 | 2 | 0 | 3 | 0 | 5 | 13 | 19 | 5 | 6 |
| D | 11 | 2 | 8 | 6 | 7 | 0 | 14 | 0 | 7 | 21 | 16 | 8 | 14 |
| C | 8 | 2 | 2 | 7 | 4 | 0 | 4 | 0 | 5 | 18 | 7 | 8 | 7 |
| B | 0 | 0 | 0 | 1 | 6 | 0 | 4 | 0 | 0 | 1 | 4 | 1 | 0 |
| B-flat | 7 | 2 | 3 | 0 | 0 | 0 | 1 | 0 | 1 | 11 | 0 | 0 | 0 |
| A | 8 | 1 | 3 | 6 | 4 | 0 | 1 | 0 | 2 | 3 | 3 | 0 | 7 |
| G | 4 | 1 | 1 | 4 | 4 | 0 | 2 | 0 | 3 | 6 | 0 | 3 | 7 |
| F | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 |

| HORWOOD - T | | | | |
|-------------|--|--|--|--|
|-------------|--|--|--|--|

| HUCHYN - TR | | | | | | | | | | | | | |
|-------------|----|----|----|----|----|----|----|-----|----|-----|----|-----|----|
| SECTIONS | | | | | | | | | | | | | |
| Signature | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| F | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 |
| E | 1 | 3 | 0 | 0 | 0 | 3 | 1 | 3 | 0 | 1 | 0 | 0 | 2 |
| D | 10 | 5 | 7 | 14 | 5 | 10 | 12 | 8 | 0 | 6 | 0 | 0 | 10 |
| C | 10 | 6 | 3 | 12 | 8 | 12 | 12 | 8 | 0 | 6 | 0 | 0 | 9 |
| B | 10 | 7 | 4 | 17 | 7 | 16 | 16 | 8 | 0 | 9 | 0 | 0 | 19 |
| A | 9 | 4 | 4 | 12 | 11 | 14 | 20 | 10 | 0 | 8 | 0 | 0 | 17 |
| G | 11 | 2 | 4 | 6 | 7 | 12 | 12 | 2 | 0 | 8 | 0 | 0 | 7 |
| F | 9 | 1 | 1 | 3 | 7 | 7 | 6 | 2 | 0 | 3 | 0 | 0 | 2 |
| E | 7 | 1 | 1 | 3 | 7 | 2 | 6 | 0 | 0 | 3 | 0 | 0 | 1 |
| D | 2 | 1 | 0 | 1 | 4 | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |

| HUCHYN - M | | | | | | | | | | | | | |
|------------|----|----|----|----|----|----|----|-----|----|-----|----|-----|----|
| SECTIONS | | | | | | | | | | | | | |
| Signature | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| B | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| B-flat | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| A | 2 | 1 | 1 | 4 | 1 | 5 | 0 | 4 | 10 | 3 | 0 | 0 | 4 |
| G | 5 | 7 | 4 | 16 | 2 | 9 | 0 | 10 | 13 | 11 | 0 | 0 | 14 |
| F# | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| F | 5 | 5 | 7 | 15 | 5 | 15 | 0 | 10 | 18 | 9 | 0 | 0 | 20 |
| E | 8 | 8 | 3 | 13 | 4 | 11 | 0 | 5 | 23 | 12 | 0 | 0 | 12 |
| D | 14 | 4 | 5 | 20 | 10 | 13 | 0 | 8 | 21 | 8 | 0 | 0 | 15 |
| C | 11 | 3 | 1 | 4 | 7 | 8 | 0 | 2 | 13 | 2 | 0 | 0 | 4 |
| B | 12 | 0 | 0 | 6 | 7 | 4 | 0 | 3 | 8 | 0 | 0 | 0 | 4 |
| A | 5 | 1 | 0 | 2 | 6 | 2 | 0 | 1 | 4 | 0 | 0 | 0 | 3 |
| G | 3 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 |

| HUCHYN - CT | | | | | | | | | | | | | |
|-------------|----|----|----|----|----|----|----|-----|----|-----|----|-----|----|
| SECTIONS | | | | | | | | | | | | | |
| Signature | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| E | 0 | 0 | 2 | 2 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| D | 0 | 0 | 7 | 11 | 0 | 28 | 0 | 9 | 11 | 1 | 4 | 7 | 16 |
| C | 0 | 3 | 4 | 9 | 0 | 20 | 0 | 7 | 15 | 3 | 4 | 9 | 12 |
| B | 0 | 5 | 4 | 11 | 0 | 16 | 0 | 1 | 13 | 3 | 1 | 0 | 0 |
| B-flat | 0 | 1 | 0 | 2 | 3 | 3 | 0 | 0 | 0 | 0 | 1 | 10 | 15 |
| A | 0 | 3 | 5 | 9 | 0 | 17 | 0 | 5 | 18 | 3 | 16 | 14 | 18 |
| G | 0 | 8 | 2 | 9 | 0 | 13 | 0 | 6 | 22 | 5 | 16 | 14 | 12 |
| F | 0 | 2 | 0 | 3 | 0 | 8 | 0 | 2 | 16 | 1 | 10 | 10 | 5 |
| E | 0 | 2 | 1 | 3 | 0 | 4 | 0 | 1 | 14 | 0 | 8 | 4 | 2 |
| D | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 1 | 12 | 0 | 2 | 5 | 1 |
| C | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 2 | 0 |

| HUCHYN - T | | | | | | | | | | | | | |
|------------|----|----|----|----|----|----|----|-----|----|-----|----|-----|---|
| SECTIONS | | | | | | | | | | | | | |
| Signature | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| D | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 7 | 17 | 0 | 0 |
| C | 0 | 3 | 0 | 2 | 0 | 4 | 0 | 1 | 0 | 5 | 15 | 0 | 0 |
| B | 0 | 0 | 0 | 3 | 0 | 7 | 0 | 0 | 0 | 5 | 18 | 0 | 0 |
| B-flat | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 |
| A | 0 | 3 | 0 | 7 | 0 | 13 | 0 | 5 | 0 | 6 | 24 | 5 | 0 |
| G | 0 | 7 | 7 | 10 | 0 | 22 | 0 | 8 | 0 | 4 | 22 | 11 | 0 |
| F | 0 | 0 | 6 | 1 | 2 | 14 | 0 | 1 | 0 | 1 | 16 | 6 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 1 | 7 | 3 | 0 |
| D | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 8 | 3 | 0 |
| C | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |

| HUCHYN - B | | | | | | | | | | | | | |
|------------|----|----|----|----|----|----|----|-----|----|-----|----|-----|----|
| SECTIONS | | | | | | | | | | | | | |
| Signature | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| B | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| A | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 2 | 0 |
| G | 0 | 1 | 0 | 5 | 0 | 4 | 8 | 7 | 4 | 0 | 3 | 19 | 1 |
| F | 0 | 1 | 0 | 0 | 0 | 3 | 9 | 9 | 3 | 0 | 1 | 18 | 1 |
| E | 0 | 1 | 0 | 0 | 0 | 4 | 5 | 4 | 2 | 0 | 1 | 10 | 1 |
| D | 0 | 1 | 6 | 8 | 0 | 6 | 14 | 14 | 6 | 0 | 6 | 15 | 9 |
| C | 0 | 6 | 2 | 4 | 0 | 5 | 9 | 15 | 4 | 0 | 5 | 10 | 7 |
| B | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 11 | 0 | 0 | 0 | 0 | 0 |
| B-flat | 0 | 1 | 4 | 2 | 0 | 3 | 0 | 0 | 3 | 0 | 1 | 11 | 5 |
| A | 0 | 1 | 2 | 3 | 0 | 2 | 7 | 11 | 3 | 0 | 2 | 17 | 6 |
| G | 0 | 3 | 4 | 12 | 0 | 3 | 6 | 7 | 3 | 0 | 4 | 14 | 11 |
| F | 0 | 2 | 1 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 3 |

| HYGONS - TR | | | | | | | | | | | | | |
|-------------|----|----|----|----|----|----|----|-----|----|-----|----|-----|---|
| SECTIONS | | | | | | | | | | | | | |
| Signature | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| C | 0 | 0 | 2 | 1 | 3 | 0 | 4 | 1 | 0 | 0 | 1 | 0 | 0 |
| B | 0 | 1 | 1 | 5 | 6 | 1 | 6 | 2 | 0 | 2 | 2 | 1 | 0 |
| A | 0 | 7 | 3 | 17 | 11 | 9 | 10 | 2 | 0 | 4 | 8 | 10 | 0 |
| G | 0 | 11 | 8 | 22 | 9 | 22 | 15 | 3 | 0 | 9 | 13 | 22 | 0 |
| F# | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 1 |
| F | 0 | 10 | 2 | 16 | 3 | 13 | 15 | 2 | 0 | 2 | 18 | 13 | 0 |
| E | 0 | 14 | 1 | 5 | 5 | 13 | 18 | 0 | 0 | 2 | 13 | 10 | 0 |
| D | 0 | 16 | 2 | 7 | 4 | 14 | 18 | 2 | 0 | 5 | 13 | 19 | 0 |
| C | 0 | 14 | 1 | 0 | 6 | 2 | 11 | 0 | 0 | 0 | 11 | 5 | 0 |
| B | 0 | 12 | 1 | 0 | 2 | 2 | 13 | 0 | 0 | 0 | 7 | 4 | 0 |
| A | 0 | 7 | 0 | 0 | 1 | 1 | 9 | 0 | 0 | 0 | 5 | 1 | 0 |
| G | 0 | 5 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| F | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| HYGONS - M | | | | | | | | | | | | | |
|------------|----|----|----|----|----|----|----|-----|----|-----|----|-----|---|
| SECTIONS | | | | | | | | | | | | | |
| Signature | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| F | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| E | 3 | 0 | 0 | 2 | 3 | 3 | 6 | 0 | 0 | 2 | 5 | 1 | 0 |
| D | 8 | 2 | 1 | 10 | 12 | 4 | 15 | 2 | 0 | 4 | 18 | 7 | 0 |
| C | 12 | 0 | 2 | 10 | 8 | 8 | 18 | 2 | 0 | 1 | 16 | 8 | 0 |
| B | 10 | 2 | 5 | 20 | 16 | 16 | 20 | 6 | 0 | 6 | 15 | 22 | 0 |
| A | 9 | 1 | 6 | 21 | 11 | 11 | 18 | 7 | 0 | 6 | 19 | 24 | 0 |
| G | 5 | 4 | 7 | 12 | 6 | 6 | 20 | 6 | 0 | 6 | 16 | 23 | 0 |
| F | 2 | 0 | 0 | 1 | 0 | 0 | 8 | 2 | 0 | 0 | 12 | 5 | 0 |
| E | 3 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 8 | 1 | 0 |
| D | 3 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 0 |

| HYGONS - CT | | | | | | | | | | | | | |
|-------------|----|----|----|----|----|----|----|-----|----|-----|----|-----|---|
| SECTIONS | | | | | | | | | | | | | |
| Signature | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| B | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| A | 1 | 1 | 2 | 4 | 3 | 5 | 0 | 0 | 4 | 0 | 0 | 1 | 0 |
| G | 5 | 2 | 1 | 13 | 7 | 12 | 2 | 2 | 9 | 1 | 0 | 8 | 0 |
| F# | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| F | 6 | 0 | 6 | 18 | 10 | 18 | 4 | 3 | 15 | 1 | 0 | 9 | 0 |
| E | 6 | 1 | 4 | 11 | 16 | 19 | 5 | 2 | 20 | 3 | 0 | 8 | 0 |
| D | 9 | 2 | 5 | 13 | 14 | 29 | 8 | 6 | 25 | 5 | 0 | 27 | 0 |
| C | 5 | 0 | 5 | 4 | 13 | 17 | 9 | 1 | 20 | 3 | 0 | 9 | 0 |
| B | 6 | 0 | 3 | 3 | 7 | 9 | 10 | 3 | 17 | 5 | 0 | 10 | 0 |
| A | 7 | 0 | 0 | 1 | 6 | 6 | 11 | 7 | 7 | 3 | 0 | 11 | 0 |
| G | 6 | 1 | 2 | 2 | 1 | 2 | 17 | 2 | 4 | 1 | 0 | 7 | 0 |
| F | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |

| HYGONS - T | | | | | | | | | | | | | |
|------------|----|----|----|----|----|----|----|-----|----|-----|----|-----|---|
| SECTIONS | | | | | | | | | | | | | |
| Signature | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ptch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| B | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| A | 2 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 8 | 0 | 0 | 0 | 0 |
| G | 6 | 0 | 2 | 1 | 6 | 4 | 0 | 1 | 10 | 3 | 0 | 3 | 0 |
| F | 7 | 0 | 0 | 0 | 8 | 7 | 0 | 0 | 14 | 2 | 0 | 2 | 0 |
| E | 7 | 0 | 2 | 2 | 9 | 13 | 0 | 2 | 15 | 4 | 0 | 5 | 0 |
| D | 8 | 1 | 4 | 7 | 17 | 17 | 0 | 4 | 20 | 5 | 0 | 11 | 0 |
| C | 9 | 0 | 2 | 3 | 11 | 10 | 0 | 2 | 22 | 2 | 0 | 8 | 0 |
| B | 6 | 2 | 4 | 5 | 5 | 10 | 0 | 4 | 15 | 1 | 0 | 9 | 0 |
| A | 6 | 0 | 1 | 2 | 5 | 9 | 0 | 1 | 8 | 1 | 0 | 9 | 0 |
| G | 6 | 0 | 0 | 0 | 2 | 7 | 0 | 0 | 3 | 0 | 0 | 7 | 0 |
| F | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| LAMBE - TR1 | | | | | | | | | | | | | |
|-------------|----|----|----|----|----|----|----|-----|----|-----|----|-----|--|
| SECTIONS | | | | | | | | | | | | | |
| Signature | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| A | 0 | 3 | 0 | 1 | 0 | 3 | 0 | 3 | 9 | 1 | 3 | 3 | |
| G | 2 | 3 | 0 | 6 | 3 | 4 | 0 | 4 | 21 | 3 | 5 | 3 | |
| F# | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 1 | |
| F | 3 | 7 | 1 | 12 | 10 | 7 | 0 | 4 | 25 | 6 | 6 | 12 | |
| E | 5 | 8 | 2 | 12 | 8 | 7 | 0 | 9 | 34 | 9 | 7 | 20 | |
| D | 6 | 7 | 2 | 8 | 10 | 7 | 0 | 5 | 30 | 7 | 2 | 12 | |
| C# | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | |
| C | 5 | 5 | 3 | 8 | 4 | 4 | 0 | 5 | 15 | 7 | 5 | 11 | |
| B | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 9 | 3 | 0 | 3 | |
| A | 0 | 2 | 2 | 1 | 1 | 3 | 0 | 0 | 2 | 1 | 0 | 3 | |
| G# | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| G | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | |
| F | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| E | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

| LAMBE - TR2 | | | | | | | | | | | | | |
|-------------|----|----|----|----|----|----|----|-----|----|-----|----|-----|--|
| SECTIONS | | | | | | | | | | | | | |
| Signature | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | |
| G | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | |
| F# | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | |
| F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | |
| D | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 0 | |
| C# | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| C | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 0 | 0 | |
| B | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | |
| A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | |
| G# | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| G | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | |
| F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

| LAMBE - M1 | | | | | | | | | | | | | |
|------------|----|----|----|----|----|----|----|-----|----|-----|----|-----|--|
| SECTIONS | | | | | | | | | | | | | |
| Signature | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| D | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | |
| C | 5 | 1 | 1 | 3 | 5 | 7 | 4 | 2 | 3 | 5 | 5 | 5 | |
| B | 2 | 0 | 1 | 4 | 3 | 7 | 4 | 4 | 5 | 2 | 3 | 6 | |
| B-flat | 4 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | |
| A | 18 | 4 | 2 | 10 | 15 | 15 | 12 | 11 | 24 | 8 | 13 | 18 | |
| G | 15 | 4 | 3 | 8 | 12 | 15 | 10 | 6 | 13 | 8 | 10 | 13 | |
| F# | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | |
| F | 12 | 11 | 3 | 9 | 11 | 12 | 10 | 9 | 20 | 7 | 9 | 19 | |
| E | 10 | 6 | 1 | 9 | 10 | 12 | 9 | 7 | 26 | 8 | 7 | 12 | |
| D | 8 | 6 | 3 | 3 | 3 | 7 | 10 | 3 | 18 | 5 | 5 | 9 | |
| C# | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| C | 5 | 4 | 0 | 1 | 1 | 4 | 4 | 3 | 11 | 6 | 4 | 3 | |
| B | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 2 | 0 | |
| A | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

| LAMBE - M2 | | | | | | | | | | | | | |
|------------|----|----|----|----|----|----|----|-----|----|-----|----|-----|--|
| SECTIONS | | | | | | | | | | | | | |
| Signature | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| D | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| C | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | |
| B | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | |
| B-flat | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | |
| G | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | |
| F# | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | |
| D | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | |
| C# | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| C | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | |
| B | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | |
| A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

| LAMBE - CT | | | | | | | | | | | | | |
|------------|----|----|----|----|----|----|----|-----|----|-----|----|-----|--|
| SECTIONS | | | | | | | | | | | | | |
| Signature | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| F | 6 | 2 | 3 | 1 | 3 | 0 | 8 | 3 | 0 | 2 | 7 | 2 | |
| E | 14 | 5 | 4 | 7 | 2 | 7 | 11 | 5 | 0 | 8 | 10 | 1 | |
| E-flat | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | |
| D | 16 | 10 | 10 | 6 | 9 | 10 | 26 | 4 | 0 | 8 | 17 | 5 | |
| C# | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| C | 13 | 8 | 7 | 11 | 8 | 13 | 30 | 6 | 0 | 9 | 22 | 12 | |
| B | 8 | 5 | 5 | 9 | 5 | 10 | 13 | 2 | 0 | 6 | 9 | 3 | |
| B-flat | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 2 | 0 | |
| A | 10 | 5 | 7 | 12 | 13 | 10 | 32 | 6 | 0 | 4 | 18 | 11 | |
| G | 6 | 2 | 5 | 3 | 3 | 6 | 19 | 5 | 0 | 1 | 10 | 5 | |
| F# | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | |
| F | 4 | 3 | 5 | 2 | 3 | 3 | 12 | 3 | 0 | 1 | 15 | 12 | |
| E | 5 | 2 | 3 | 2 | 3 | 3 | 8 | 2 | 0 | 3 | 9 | 5 | |
| D | 4 | 3 | 6 | 2 | 0 | 2 | 6 | 1 | 0 | 0 | 3 | 10 | |
| C | 0 | 0 | 3 | 0 | 0 | 0 | 2 | 1 | 0 | 1 | 4 | 5 | |

| LAMBE - T | | | | | | | | | | | | | |
|-----------|----|----|----|----|----|----|----|-----|----|-----|----|-----|----|
| SECTIONS | | | | | | | | | | | | | |
| Signature | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| F | 4 | 0 | 0 | 0 | 3 | 2 | 0 | 9 | 0 | 0 | 0 | 0 | 2 |
| E | 6 | 0 | 0 | 0 | 2 | 3 | 0 | 11 | 1 | 0 | 0 | 2 | 2 |
| D | 11 | 1 | 3 | 5 | 7 | 8 | 0 | 18 | 3 | 0 | 1 | 8 | 8 |
| C | 14 | 0 | 5 | 9 | 11 | 8 | 0 | 30 | 8 | 0 | 2 | 12 | 6 |
| B | 2 | 1 | 6 | 2 | 2 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| B-flat | 4 | 0 | 0 | 0 | 7 | 0 | 0 | 17 | 4 | 0 | 1 | 9 | 1 |
| A | 10 | 8 | 10 | 6 | 7 | 7 | 0 | 28 | 4 | 0 | 6 | 17 | 11 |
| G | 6 | 4 | 7 | 8 | 0 | 2 | 1 | 14 | 2 | 0 | 3 | 18 | 3 |
| F | 9 | 4 | 9 | 3 | 0 | 2 | 1 | 17 | 3 | 0 | 0 | 16 | 4 |
| E | 5 | 3 | 3 | 2 | 0 | 1 | 1 | 13 | 1 | 0 | 0 | 13 | 3 |
| D | 4 | 3 | 4 | 0 | 0 | 1 | 1 | 11 | 2 | 0 | 0 | 6 | 2 |
| C# | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| C | 1 | 1 | 5 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 3 | 0 |

| LAMBE - B | | | | | | | | | | | | | |
|-----------|----|----|----|----|----|----|----|-----|----|-----|----|-----|---|
| SECTIONS | | | | | | | | | | | | | |
| Signature | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| C | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B-flat | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| A | 3 | 2 | 4 | 1 | 1 | 3 | 7 | 0 | 0 | 1 | 5 | 2 | |
| G | 3 | 2 | 7 | 3 | 3 | 7 | 7 | 2 | 0 | 1 | 9 | 1 | |
| F | 4 | 4 | 8 | 8 | 8 | 7 | 16 | 2 | 0 | 3 | 13 | 8 | |
| E | 4 | 2 | 5 | 4 | 2 | 7 | 3 | 2 | 0 | 4 | 13 | 2 | |
| D | 3 | 6 | 7 | 7 | 8 | 13 | 11 | 3 | 0 | 7 | 20 | 13 | |
| C | 3 | 4 | 5 | 7 | 2 | 10 | 4 | 3 | 0 | 4 | 13 | 7 | |
| B-flat | 0 | 1 | 2 | 0 | 0 | 1 | 5 | 0 | 0 | 1 | 5 | 1 | |
| A | 0 | 4 | 6 | 4 | 1 | 5 | 5 | 4 | 0 | 4 | 13 | 7 | |

| SUTTON - QT | | | | | | | | | | | | | |
|-------------|----------|--------|--------|--------|--------|--------|--------|-----|----|-----|----|-----|---|
| QT | SECTIONS | | | | | | | | | | | | |
| Signature | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | - | - | - | - | - | - |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| F | 1 | 3 | 5 | 3 | 0 | 5 | 3 | 2 | 0 | 3 | 1 | 0 | |
| E | 2 | 2 | 8 | 2 | 0 | 6 | 4 | 3 | 0 | 2 | 2 | 1 | |
| D | 1 | 2 | 6 | 6 | 0 | 12 | 11 | 4 | 0 | 5 | 4 | 8 | |
| C | 4 | 7 | 11 | 21 | 0 | 17 | 26 | 8 | 0 | 11 | 8 | 18 | |
| B | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 5 | 1 | 13 | |
| B-flat | 3 | 2 | 2 | 7 | 0 | 5 | 13 | 0 | 0 | 0 | 4 | 0 | |
| A | 8 | 2 | 4 | 15 | 0 | 5 | 17 | 8 | 0 | 7 | 12 | 10 | |
| G | 3 | 3 | 4 | 11 | 0 | 4 | 8 | 5 | 0 | 2 | 9 | 5 | |
| F | 3 | 1 | 2 | 7 | 0 | 2 | 5 | 4 | 0 | 2 | 6 | 3 | |
| E | 1 | 1 | 0 | 3 | 0 | 0 | 2 | 0 | 0 | 1 | 1 | 0 | |
| D | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

| SUTTON - TR | | | | | | | | | | | | | |
|-------------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| TR | SECTIONS | | | | | | | | | | | | |
| Signature | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| C | 0 | 6 | 6 | 6 | 0 | 3 | 1 | 4 | 0 | 4 | 1 | 5 | |
| B-flat | 0 | 2 | 1 | 4 | 0 | 5 | 6 | 4 | 0 | 2 | 2 | 6 | |
| A | 0 | 10 | 9 | 16 | 0 | 10 | 16 | 4 | 0 | 10 | 6 | 11 | |
| G | 0 | 11 | 13 | 19 | 0 | 12 | 15 | 6 | 0 | 9 | 4 | 10 | |
| F | 0 | 9 | 11 | 27 | 0 | 24 | 41 | 12 | 0 | 11 | 14 | 15 | |
| E | 0 | 5 | 6 | 13 | 0 | 11 | 15 | 4 | 0 | 4 | 7 | 8 | |
| E-flat | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | |
| D | 0 | 0 | 4 | 5 | 0 | 6 | 8 | 2 | 0 | 4 | 3 | 5 | |
| C | 0 | 5 | 4 | 5 | 0 | 10 | 5 | 5 | 0 | 4 | 4 | 3 | |
| B-flat | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | |
| A | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | |

| SUTTON - M | | | | | | | | | | | | | |
|------------|----------|--------|--------|--------|--------|--------|----|-----|--------|--------|--------|--------|--------|
| M | SECTIONS | | | | | | | | | | | | |
| Signature | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | - | - | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| F | 0 | 3 | 7 | 5 | 3 | 1 | 1 | 0 | 5 | 2 | 4 | 4 | 4 |
| E | 2 | 6 | 5 | 2 | 5 | 1 | 0 | 0 | 2 | 3 | 2 | 5 | 4 |
| E-flat | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 1 | 0 | 0 |
| D | 3 | 5 | 8 | 8 | 7 | 3 | 3 | 0 | 7 | 9 | 8 | 6 | 1 |
| C | 5 | 16 | 14 | 21 | 13 | 8 | 10 | 0 | 9 | 10 | 12 | 11 | 10 |
| B-flat | 4 | 5 | 6 | 7 | 5 | 5 | 4 | 0 | 4 | 7 | 6 | 6 | 8 |
| A | 4 | 11 | 9 | 11 | 12 | 3 | 4 | 0 | 8 | 12 | 8 | 9 | 9 |
| G | 8 | 7 | 4 | 8 | 7 | 5 | 2 | 0 | 3 | 4 | 5 | 8 | 13 |
| F | 2 | 3 | 5 | 10 | 3 | 3 | 2 | 0 | 3 | 3 | 6 | 6 | 7 |
| E | 2 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0 |

| SUTTON - CT1 | | | | | | | | | | | | | |
|--------------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| CT1 | SECTIONS | | | | | | | | | | | | |
| Signature | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| F | 1 | 4 | 8 | 2 | 4 | 5 | 0 | 3 | 8 | 1 | 3 | 6 | |
| E | 1 | 4 | 4 | 2 | 5 | 6 | 0 | 3 | 7 | 1 | 7 | 3 | |
| E-flat | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| D | 4 | 2 | 5 | 7 | 5 | 5 | 0 | 5 | 19 | 0 | 12 | 6 | |
| C | 5 | 8 | 16 | 19 | 8 | 18 | 0 | 9 | 21 | 7 | 15 | 14 | |
| B-flat | 2 | 1 | 2 | 7 | 7 | 5 | 0 | 3 | 7 | 3 | 10 | 5 | |
| A | 4 | 2 | 4 | 9 | 10 | 7 | 0 | 3 | 14 | 7 | 19 | 8 | |
| G | 1 | 2 | 5 | 7 | 15 | 7 | 0 | 2 | 4 | 5 | 12 | 3 | |
| F | 3 | 0 | 7 | 9 | 11 | 5 | 0 | 2 | 2 | 5 | 12 | 6 | |
| E | 1 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | |

| SUTTON - T | | | | | | | | | | | | | |
|------------|----------|----|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| T | SECTIONS | | | | | | | | | | | | |
| Signature | - | - | - | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| E | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| D | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| C | 4 | 7 | 0 | 0 | 2 | 0 | 5 | 0 | 0 | 0 | 2 | 6 | 2 |
| B | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| B-flat | 0 | 0 | 0 | 2 | 4 | 0 | 6 | 0 | 2 | 0 | 3 | 4 | 4 |
| A | 1 | 4 | 3 | 1 | 10 | 0 | 14 | 0 | 9 | 0 | 5 | 4 | 12 |
| G | 5 | 6 | 5 | 3 | 13 | 0 | 15 | 0 | 3 | 0 | 8 | 4 | 18 |
| F | 2 | 7 | 5 | 2 | 10 | 0 | 18 | 0 | 2 | 0 | 6 | 7 | 13 |
| E | 3 | 4 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| D | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| C | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

| SUTTON - CT2 | | | | | | | | | | | | | |
|--------------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|--------|
| CT2 | SECTIONS | | | | | | | | | | | | |
| Signature | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 2 flats | 1 flat | 1 flat |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| D | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| C | 3 | 2 | 5 | 3 | 0 | 7 | 0 | 2 | 4 | 3 | 1 | 2 | |
| B-flat | 1 | 0 | 7 | 1 | 0 | 2 | 0 | 1 | 6 | 2 | 1 | 1 | |
| A | 3 | 3 | 7 | 5 | 0 | 5 | 0 | 3 | 35 | 3 | 2 | 4 | |
| G | 2 | 2 | 15 | 6 | 0 | 8 | 0 | 5 | 21 | 3 | 1 | 3 | |
| F | 11 | 6 | 6 | 21 | 0 | 25 | 0 | 10 | 33 | 15 | 7 | 11 | |
| E | 1 | 3 | 2 | 5 | 0 | 4 | 0 | 2 | 12 | 3 | 2 | 3 | |
| E-flat | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 0 | 2 | 1 | 2 | |
| D | 3 | 1 | 1 | 8 | 0 | 10 | 0 | 5 | 12 | 6 | 3 | 6 | |
| C | 7 | 6 | 12 | 13 | 0 | 17 | 0 | 2 | 2 | 6 | 5 | 15 | |
| B-flat | 1 | 1 | 0 | 2 | 0 | 8 | 0 | 2 | 0 | 2 | 1 | 2 | |

| SUTTON - B | | | | | | | | | | | | | |
|------------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| B | SECTIONS | | | | | | | | | | | | |
| Signature | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| B-flat | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 2 | 0 | |
| A | 0 | 1 | 0 | 0 | 0 | 0 | 4 | 0 | 1 | 0 | 5 | 0 | |
| G | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 7 | 0 | 1 | 0 | 6 | 0 |
| F | 0 | 2 | 4 | 2 | 8 | 5 | 25 | 2 | 11 | 5 | 14 | 5 | |
| E | 0 | 1 | 0 | 0 | 6 | 1 | 3 | 1 | 5 | 1 | 6 | 0 | |
| E-flat | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 3 | 0 | 0 | 4 | |
| D | 2 | 0 | 1 | 3 | 11 | 1 | 21 | 6 | 20 | 2 | 8 | 2 | |
| C | 7 | 10 | 9 | 13 | 13 | 9 | 16 | 6 | 16 | 5 | 10 | 7 | |
| B-flat | 2 | 1 | 2 | 6 | 9 | 5 | 11 | 2 | 18 | 2 | 8 | 3 | |
| A | 2 | 5 | 1 | 2 | 5 | 4 | 8 | 2 | 22 | 3 | 8 | 6 | |
| G | 2 | 0 | 4 | 2 | 1 | 3 | 4 | 1 | 2 | 0 | 2 | 5 | |
| F | 0 | 5 | 10 | 13 | 3 | 6 | 7 | 6 | 4 | 6 | 5 | 17 | |
| E-flat | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | |

| WYLYNSON 1-QT | | | | | | | | | | | | | |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| SECTIONS | | | | | | | | | | | | | |
| Signature | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| G | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 | 0 | 0 | 1 |
| F | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| D | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C# | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B-flat | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| A | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| G | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| WYLYNSON 1-TR | | | | | | | | | | | | | |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| SECTIONS | | | | | | | | | | | | | |
| Signature | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| F | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 2 |
| E | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| D | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| C# | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B-flat | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| A | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| G | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| F | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| D | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| WYLYNSON 1-M | | | | | | | | | | | | | |
|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| SECTIONS | | | | | | | | | | | | | |
| Signature | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| C | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B-flat | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| A | 3 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| G | 12 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| F | 6 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| D | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C# | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B-flat | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| A | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| G | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| WYLYNSON 1-CT1 | | | | | | | | | | | | | |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| SECTIONS | | | | | | | | | | | | | |
| Signature | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| F | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| D | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C# | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B-flat | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| A | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| G | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| F | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| D | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| WYLYNSON 1-CT2 | | | | | | | | | | | | | |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| SECTIONS | | | | | | | | | | | | | |
| Signature | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| F | 1 | 1 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 1 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E-flat | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| D | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C# | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B-flat | 0 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| A | 3 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| G | 2 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| F | 2 | 3 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| D | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| WYLYNSON 1-T | | | | | | | | | | | | | |
|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| SECTIONS | | | | | | | | | | | | | |
| Signature | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| D | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B-flat | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| A | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| G | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| F | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| D | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| WYLYNSON 1-CT3 | | | | | | | | | | | | | |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| SECTIONS | | | | | | | | | | | | | |
| Signature | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| D | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B-flat | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| A | 1 | 2 | 11 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| G | 4 | 0 | 5 | 5 | 17 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| F | 4 | 0 | 8 | 8 | 9 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E | 2 | 0 | 6 | 6 | 2 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E-flat | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| D | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C# | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C | 1 | 0 | 1 | 1 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B-flat | 0 | 0 | 3 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| WYLYNSON 1 - B1 | | | | | | | | | | | | | |
|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| SECTIONS | | | | | | | | | | | | | |
| B1 | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat |
| Signature | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T3 | OE9 | |
| B-flat | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| A | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 0 | 0 |
| G | 2 | 0 | 0 | 0 | 4 | 1 | 0 | 0 | 4 | 1 | 20 | 1 | 0 |
| F | 1 | 0 | 2 | 9 | 7 | 4 | 0 | 2 | 11 | 3 | 31 | 10 | 0 |
| E | 1 | 0 | 3 | 5 | 2 | 5 | 0 | 0 | 3 | 4 | 6 | 5 | 0 |
| E-flat | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 0 | 0 |
| D | 1 | 1 | 5 | 8 | 7 | 8 | 0 | 5 | 10 | 8 | 22 | 14 | 0 |
| C | 4 | 2 | 5 | 2 | 7 | 5 | 0 | 4 | 14 | 5 | 12 | 16 | 0 |
| B-flat | 0 | 0 | 5 | 4 | 4 | 0 | 0 | 5 | 9 | 4 | 5 | 5 | 0 |
| A | 2 | 0 | 7 | 1 | 1 | 0 | 0 | 0 | 12 | 0 | 3 | 1 | 0 |
| G | 1 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 5 | 0 | 1 | 0 | 0 |
| F | 0 | 0 | 3 | 2 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |

| WYLYNSON 2 - TR | | | | | | | | | | | | |
|-----------------|----------|--------|--------|--------|--------|--------|--------|--------|--------|-----|----|-----|
| TR | SECTIONS | | | | | | | | | | | |
| Signature | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | - | - | - |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T5 | OE9 |
| G | 1 | 3 | 0 | 5 | 1 | 6 | 1 | 3 | 0 | 1 | 8 | 12 |
| F# | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| F | 3 | 2 | 0 | 10 | 4 | 8 | 2 | 2 | 0 | 4 | 12 | 9 |
| E | 1 | 4 | 0 | 16 | 12 | 11 | 5 | 6 | 0 | 9 | 21 | 15 |
| D | 8 | 13 | 0 | 20 | 8 | 15 | 11 | 6 | 0 | 14 | 27 | 26 |
| C | 2 | 2 | 0 | 20 | 9 | 7 | 14 | 6 | 0 | 8 | 28 | 19 |
| B | 0 | 0 | 0 | 3 | 0 | 0 | 5 | 0 | 0 | 3 | 21 | 2 |
| B-flat | 0 | 0 | 0 | 7 | 1 | 3 | 7 | 1 | 0 | 0 | 1 | 6 |
| A | 0 | 1 | 0 | 5 | 4 | 7 | 21 | 2 | 0 | 1 | 12 | 9 |
| G | 0 | 0 | 0 | 2 | 3 | 7 | 24 | 2 | 0 | 0 | 18 | 6 |
| F | 0 | 0 | 0 | 0 | 1 | 1 | 10 | 0 | 0 | 0 | 0 | 1 |
| E | 0 | 0 | 0 | 0 | 0 | 1 | 7 | 0 | 0 | 0 | 2 | 0 |

| WYLYNSON 2 - M | | | | | | | | | | | | |
|----------------|----------|----|----|----|----|----|----|-----|----|-----|--------|-----|
| M | SECTIONS | | | | | | | | | | | |
| Signature | - | - | - | - | - | - | - | - | - | - | 1 flat | - |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T5 | OE9 |
| D | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| C | 0 | 2 | 2 | 0 | 1 | 3 | 0 | 2 | 0 | 4 | 4 | 2 |
| B | 0 | 2 | 0 | 0 | 0 | 5 | 0 | 2 | 0 | 1 | 2 | 4 |
| B-flat | 3 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 8 | 3 |
| A | 3 | 7 | 10 | 0 | 6 | 7 | 0 | 3 | 0 | 9 | 17 | 5 |
| G | 6 | 12 | 16 | 0 | 10 | 29 | 0 | 7 | 0 | 7 | 27 | 4 |
| F | 3 | 9 | 13 | 0 | 10 | 13 | 0 | 4 | 0 | 6 | 14 | 4 |
| E | 2 | 5 | 4 | 0 | 12 | 10 | 0 | 0 | 0 | 3 | 15 | 9 |
| E-flat | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| D | 6 | 6 | 13 | 0 | 3 | 10 | 0 | 1 | 0 | 4 | 6 | 12 |
| C | 0 | 2 | 6 | 0 | 1 | 10 | 0 | 1 | 0 | 1 | 5 | 7 |
| B | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| A | 0 | 0 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| G | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |

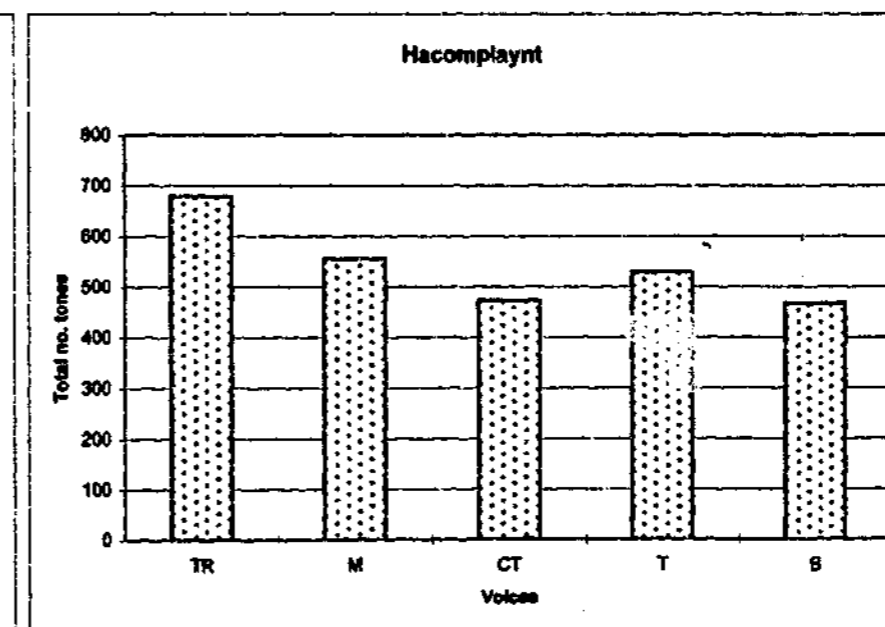
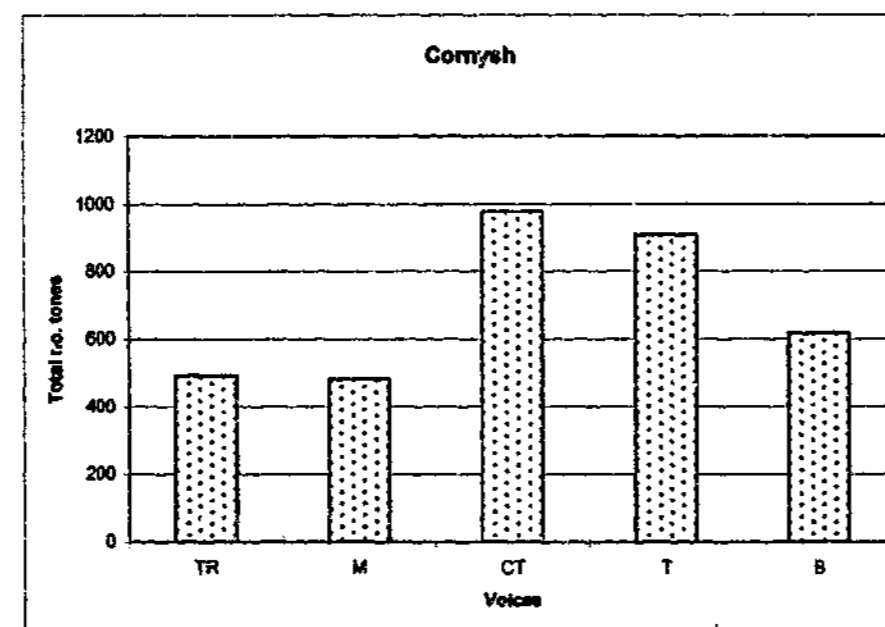
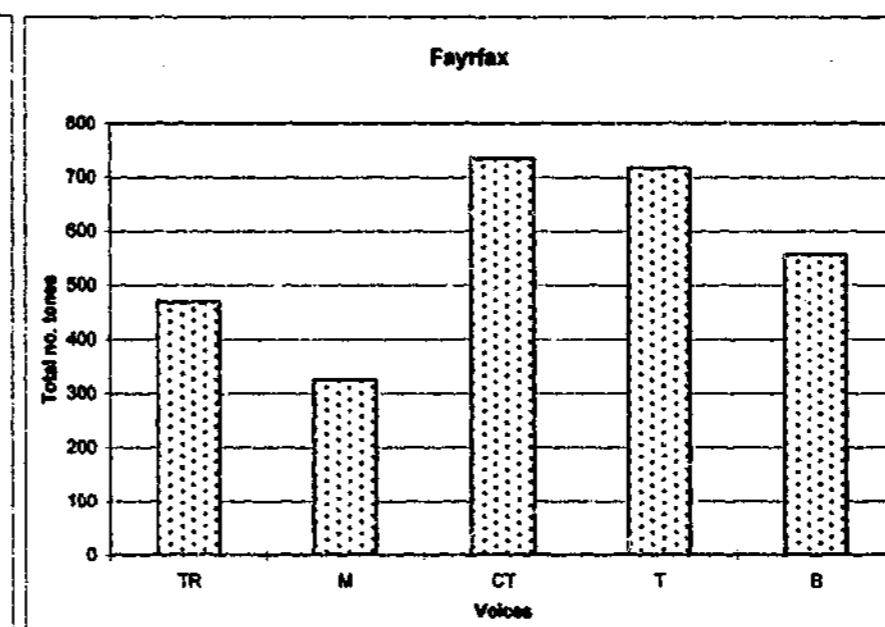
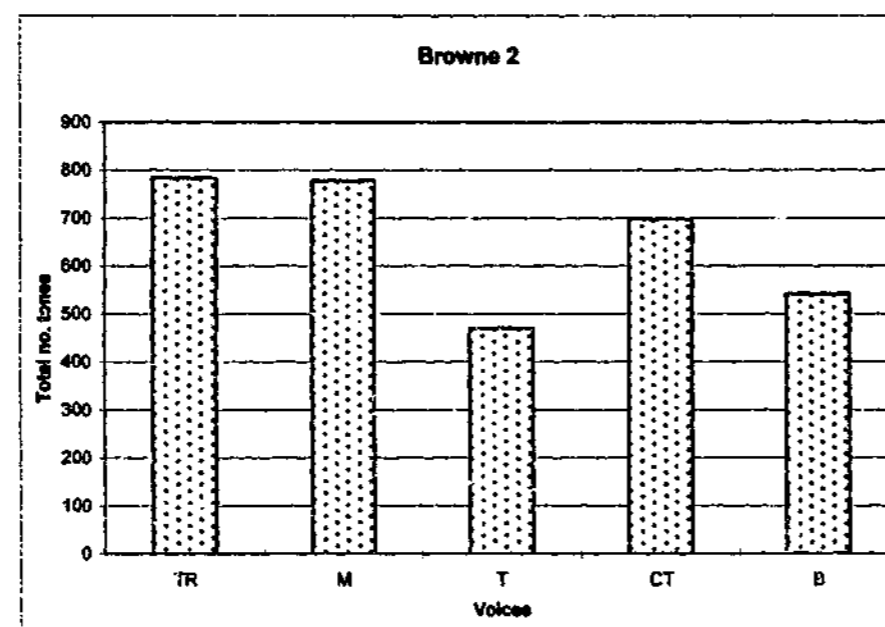
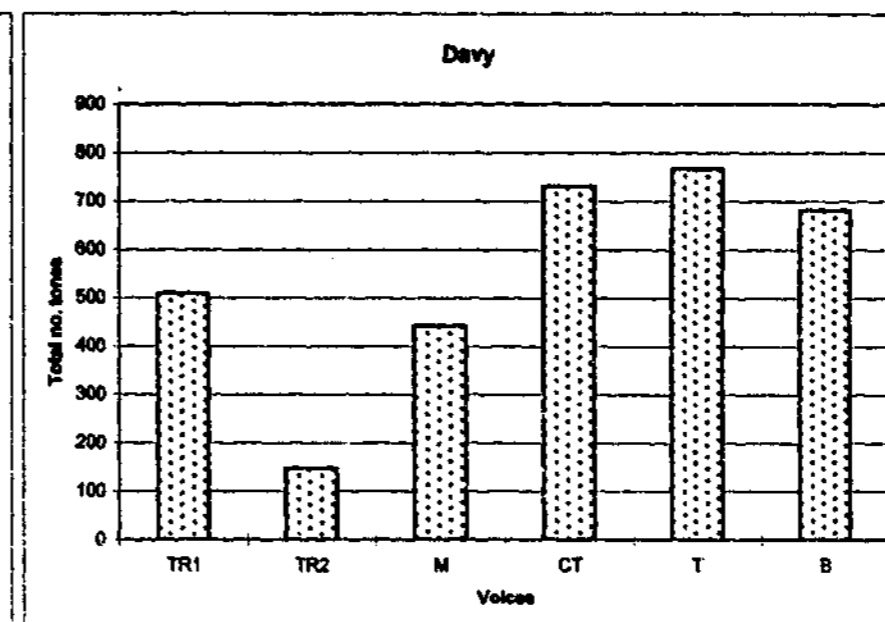
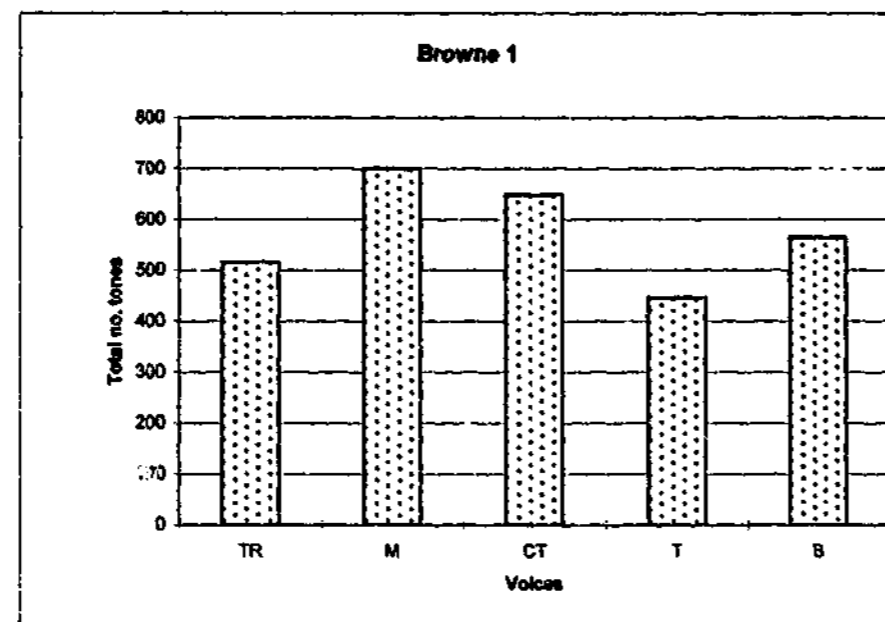
| WYLYKYNSON 2 - CT | | | | | | | | | | | | | | | | |
|-------------------|----------|--------|--------|--------|----|--------|--------|--------|----|----|--------|--------|--------|---|----|-----|
| CT | SECTIONS | | | | | | | | | | | | | | | |
| Signature | 1 flat | 1 flat | 1 flat | 1 flat | - | 1 flat | 1 flat | 1 flat | - | - | 1 flat | 1 flat | 1 flat | - | - | - |
| Pitch | O1 | O2 | O3 | O4 | | O5 | O6 | | | T1 | OE7 | T2 | OE8 | | T5 | OE9 |
| F | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 1 |
| E | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 10 | 2 | 1 | 0 | 3 |
| D | 4 | 5 | 0 | 0 | 3 | 0 | 3 | 4 | 6 | 0 | 6 | 12 | 2 | 3 | 0 | 15 |
| C | 2 | 5 | 0 | 2 | 9 | 0 | 6 | 8 | 15 | 0 | 9 | 11 | 2 | 6 | 0 | 22 |
| B | 0 | 2 | 0 | 4 | 4 | 0 | 2 | 3 | 10 | 0 | 0 | 3 | 2 | 1 | 0 | 10 |
| B-flat | 3 | 3 | 0 | 0 | 8 | 0 | 0 | 0 | 6 | 0 | 4 | 11 | 0 | 3 | 0 | 3 |
| A | 2 | 6 | 0 | 1 | 14 | 1 | 8 | 2 | 10 | 0 | 5 | 14 | 1 | 6 | 0 | 21 |
| G | 5 | 5 | 0 | 3 | 17 | 1 | 8 | 3 | 14 | 0 | 3 | 14 | 2 | 3 | 0 | 24 |
| F# | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| F | 3 | 1 | 0 | 1 | 7 | 2 | 2 | 0 | 6 | 0 | 2 | 10 | 1 | 4 | 0 | 13 |
| E | 0 | 0 | 0 | 1 | 5 | 0 | 2 | 0 | 6 | 0 | 0 | 4 | 0 | 1 | 0 | 8 |
| D | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 4 |
| C | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 2 |

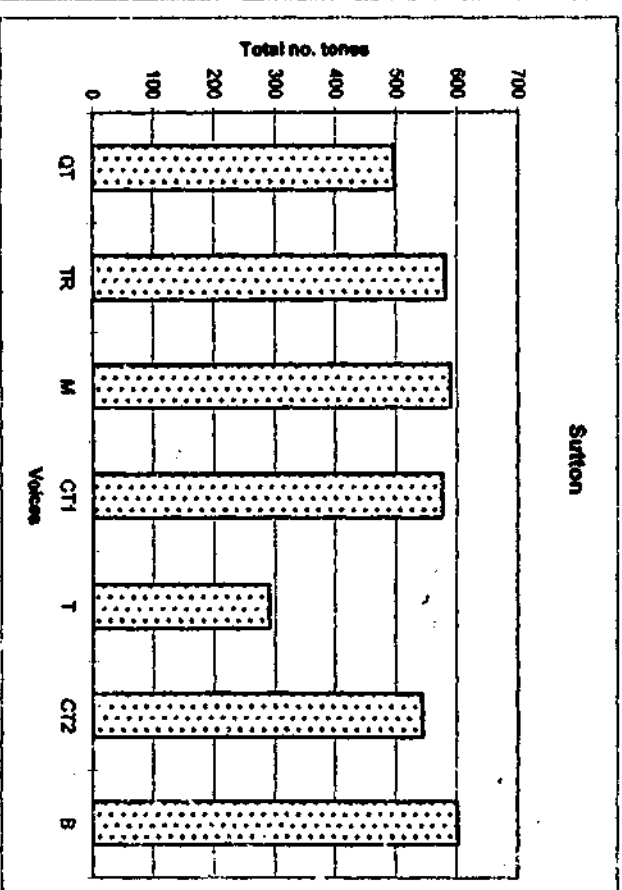
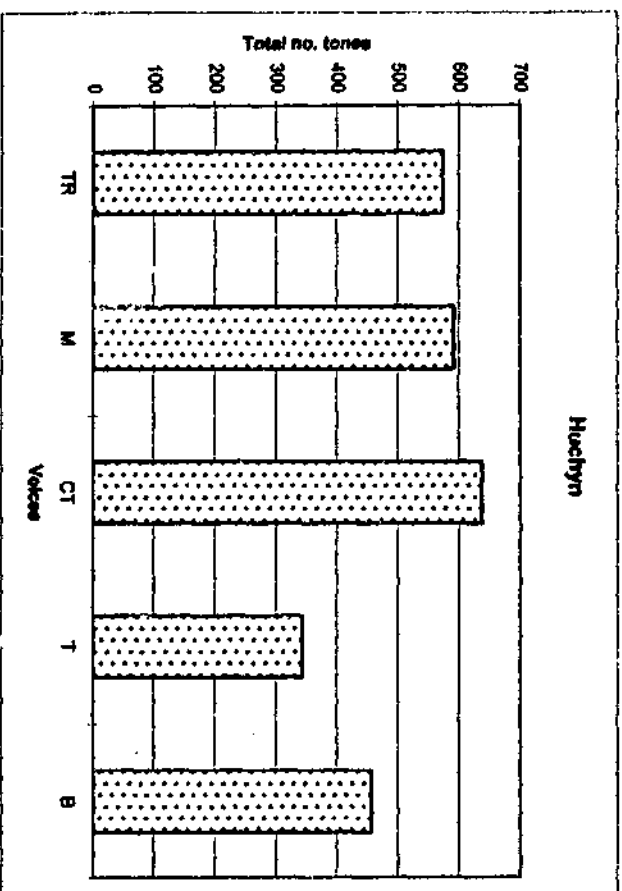
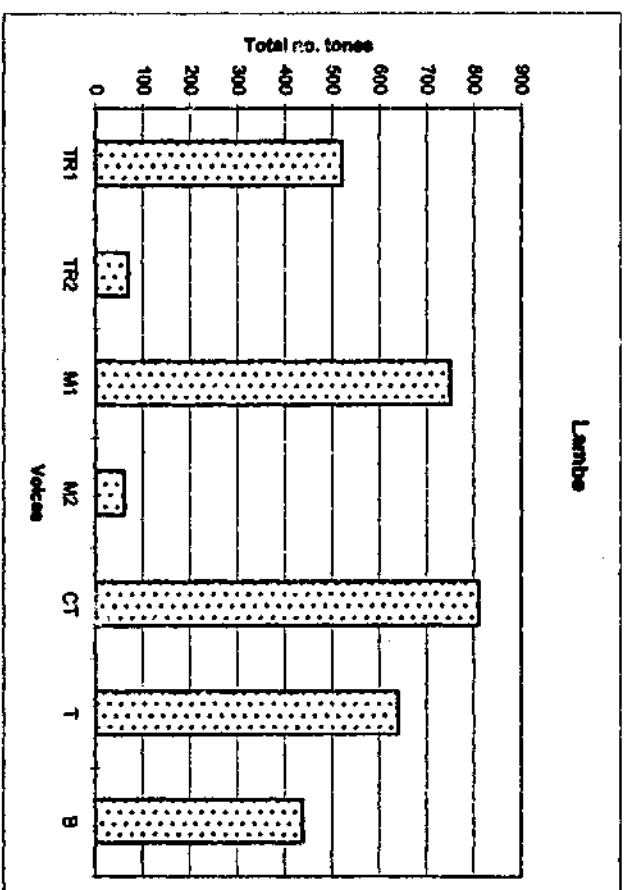
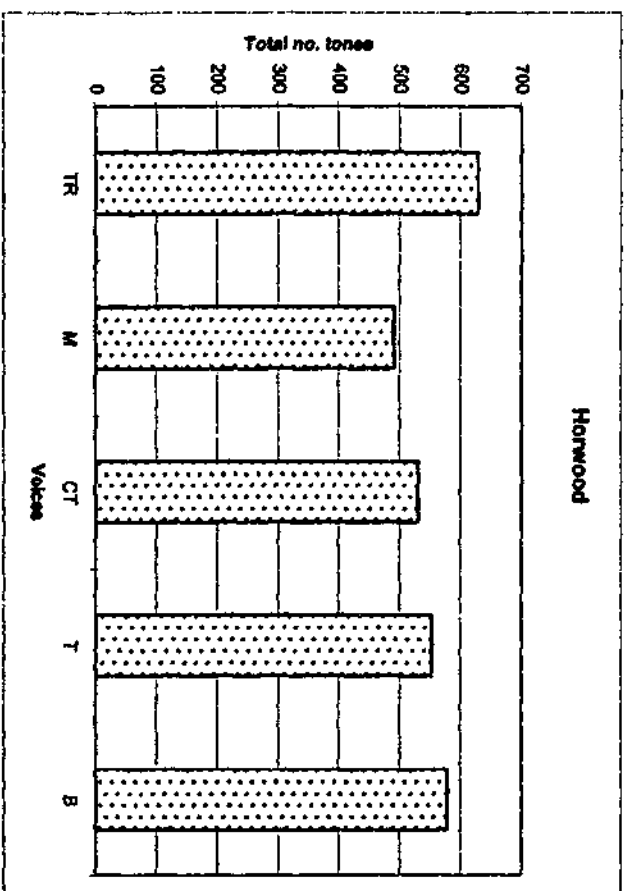
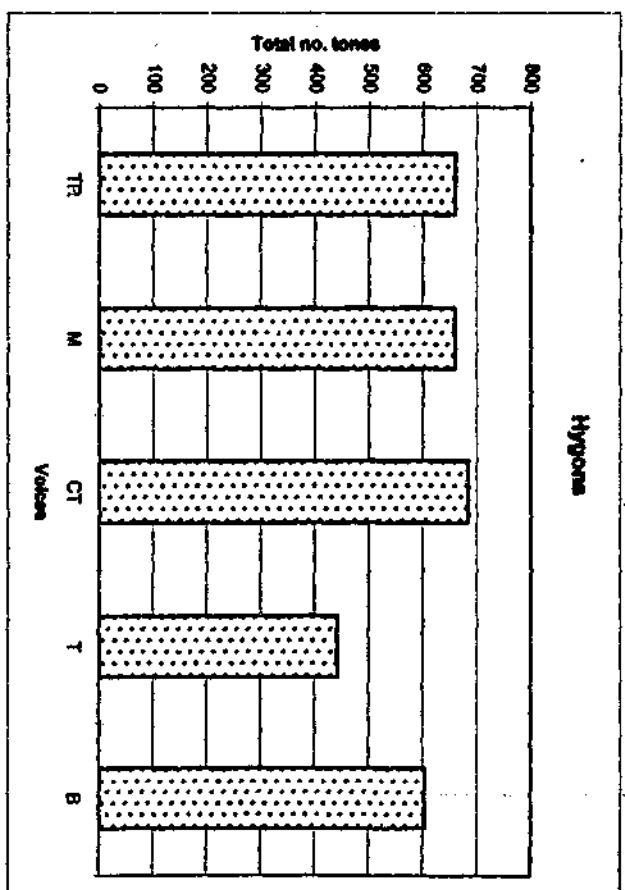
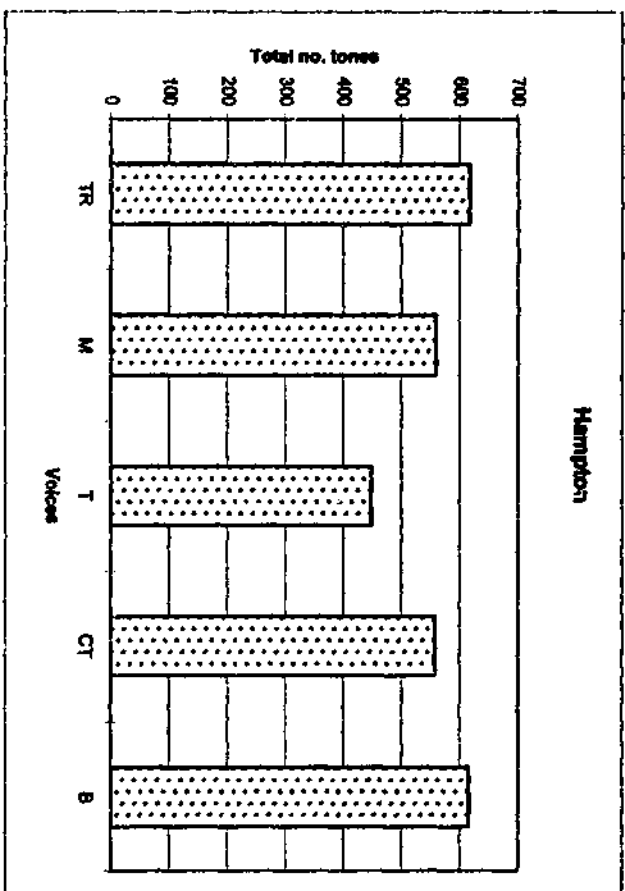
| WYLYN SON 2 - T | | | | | | | | | | | | | | |
|-----------------|----------|--------|--------|--------|--------|----|----|--------|--------|--------|--------|--------|--------|--------|
| T | SECTIONS | | | | | | | | | | | | | |
| Signature | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | - | - | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T5 | OE9 | | |
| F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 1 |
| E-flat | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| D | 1 | 0 | 2 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 10 | 0 | 0 | 6 |
| C | 1 | 0 | 7 | 0 | 2 | 0 | 4 | 4 | 0 | 0 | 11 | 1 | 0 | 13 |
| B | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 1 | 0 | 0 | 3 | 1 | 0 | 7 |
| B-flat | 7 | 2 | 6 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 11 | 0 | 0 | 5 |
| A | 3 | 6 | 11 | 0 | 7 | 2 | 9 | 5 | 0 | 3 | 23 | 4 | 0 | 17 |
| G | 5 | 12 | 13 | 0 | 3 | 3 | 10 | 12 | 0 | 4 | 29 | 5 | 0 | 18 |
| F | 2 | 8 | 11 | 0 | 4 | 3 | 0 | 6 | 0 | 3 | 13 | 4 | 0 | 16 |
| E | 0 | 2 | 4 | 0 | 2 | 5 | 2 | 5 | 0 | 2 | 8 | 2 | 0 | 8 |
| D | 0 | 1 | 4 | 0 | 2 | 1 | 0 | 3 | 0 | 0 | 3 | 1 | 0 | 3 |
| C | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 1 | 1 | 0 | 0 | 4 |

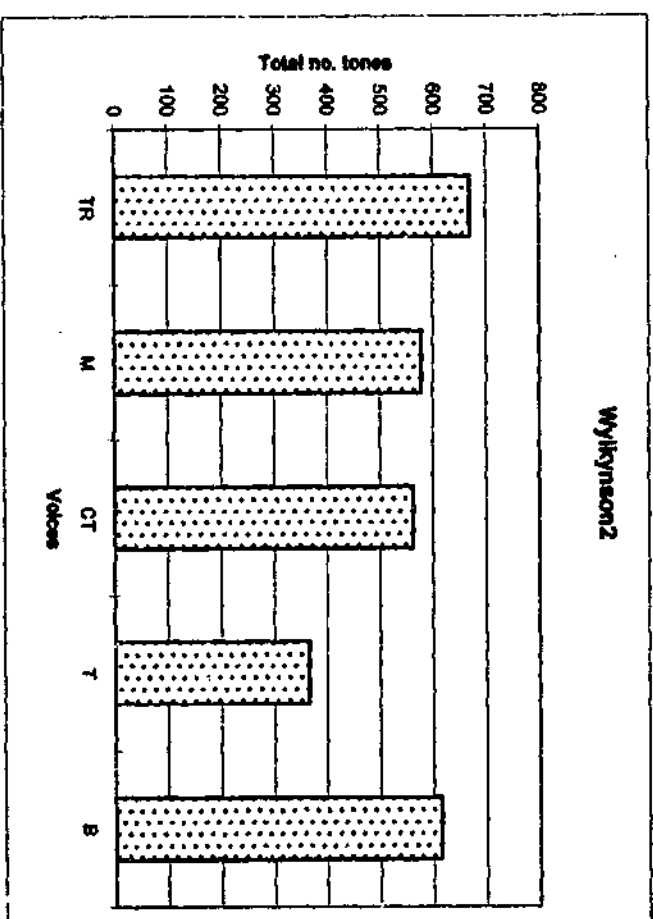
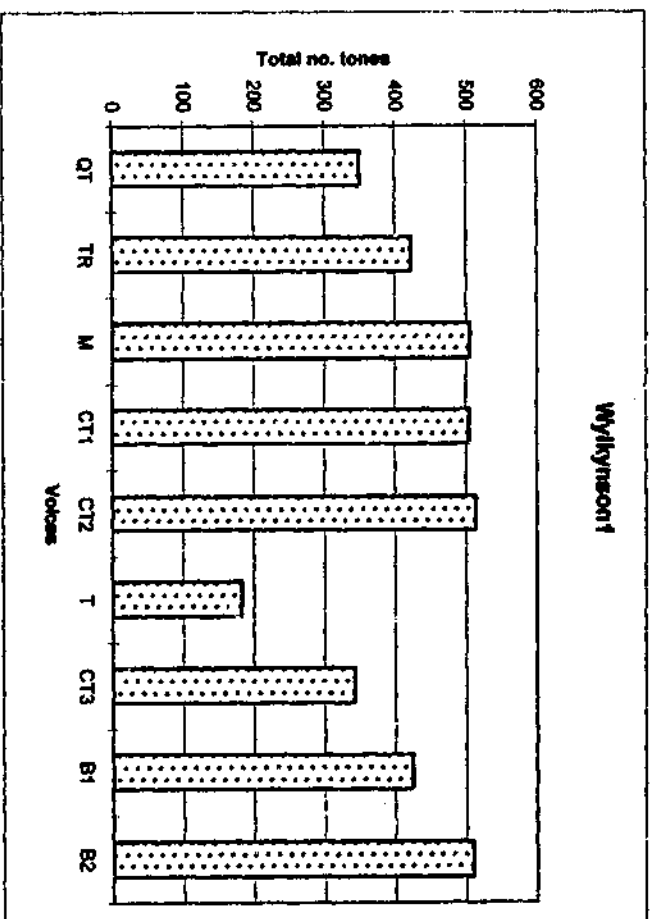
| WYLYN SON 2 - B | | | | | | | | | | | | |
|-----------------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| B | SECTIONS | | | | | | | | | | | |
| Signature | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat | 1 flat |
| Pitch | O1 | O2 | O3 | O4 | O5 | O6 | T1 | OE7 | T2 | OE8 | T5 | OE9 |
| A | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| G | 1 | 0 | 5 | 2 | 1 | 5 | 14 | 0 | 7 | 0 | 8 | 1 |
| F | 0 | 0 | 5 | 9 | 6 | 2 | 9 | 1 | 4 | 2 | 10 | 7 |
| E | 0 | 0 | 3 | 1 | 1 | 1 | 7 | 1 | 0 | 3 | 11 | 6 |
| E-flat | 1 | 0 | 3 | 3 | 0 | 0 | 3 | 0 | 2 | 0 | 0 | 0 |
| D | 6 | 4 | 16 | 9 | 7 | 8 | 16 | 5 | 17 | 4 | 16 | 13 |
| C | 0 | 5 | 15 | 15 | 12 | 12 | 24 | 6 | 14 | 9 | 30 | 15 |
| B-flat | 2 | 4 | 10 | 6 | 2 | 6 | 8 | 1 | 10 | 5 | 5 | 9 |
| A | 3 | 1 | 7 | 6 | 8 | 4 | 7 | 3 | 14 | 4 | 2 | 6 |
| G | 1 | 5 | 5 | 4 | 2 | 8 | 3 | 3 | 7 | 3 | 6 | 9 |

TOTAL NUMBER OF TONES:

PER WORK

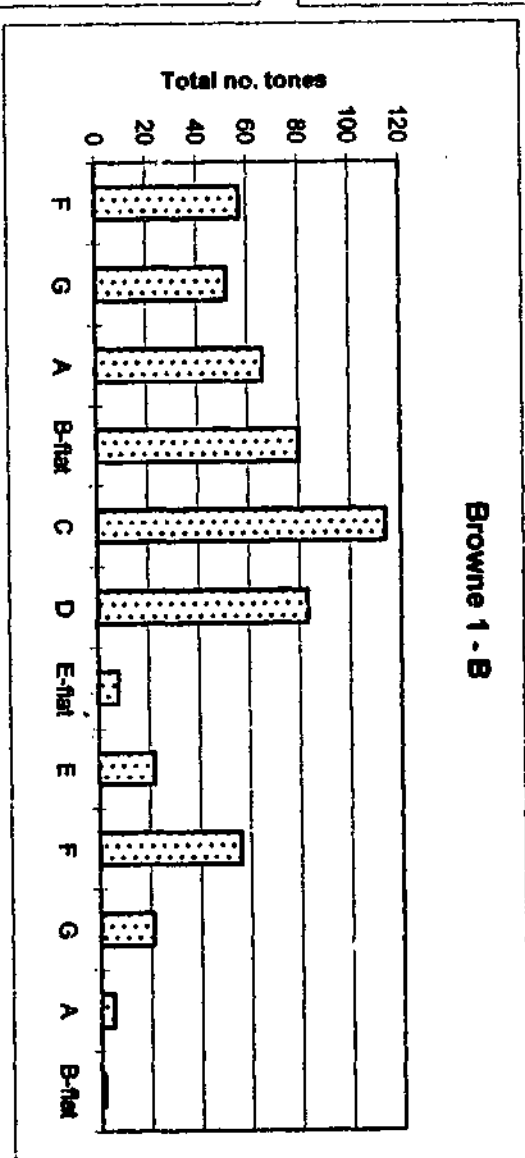
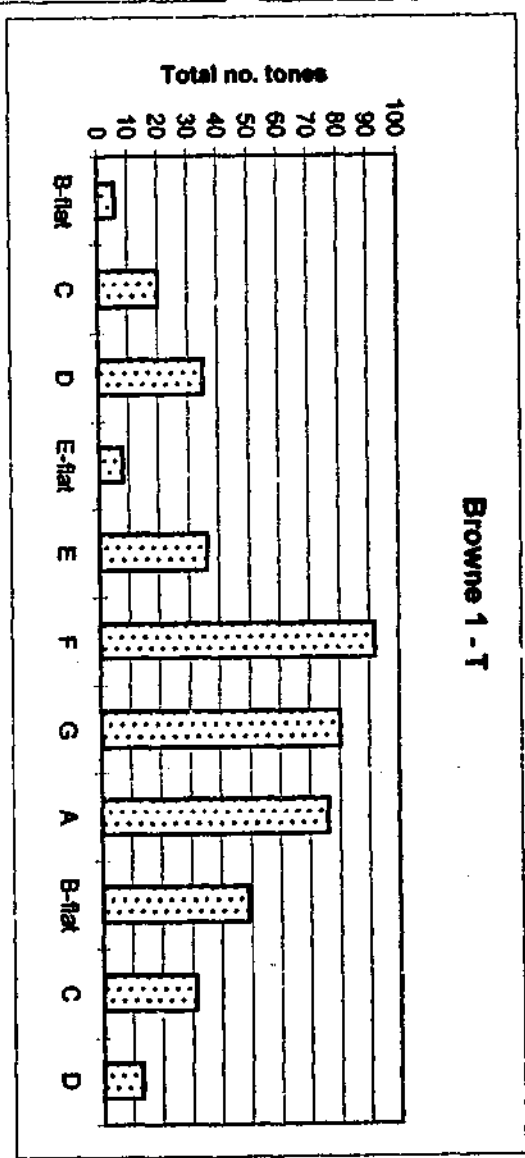
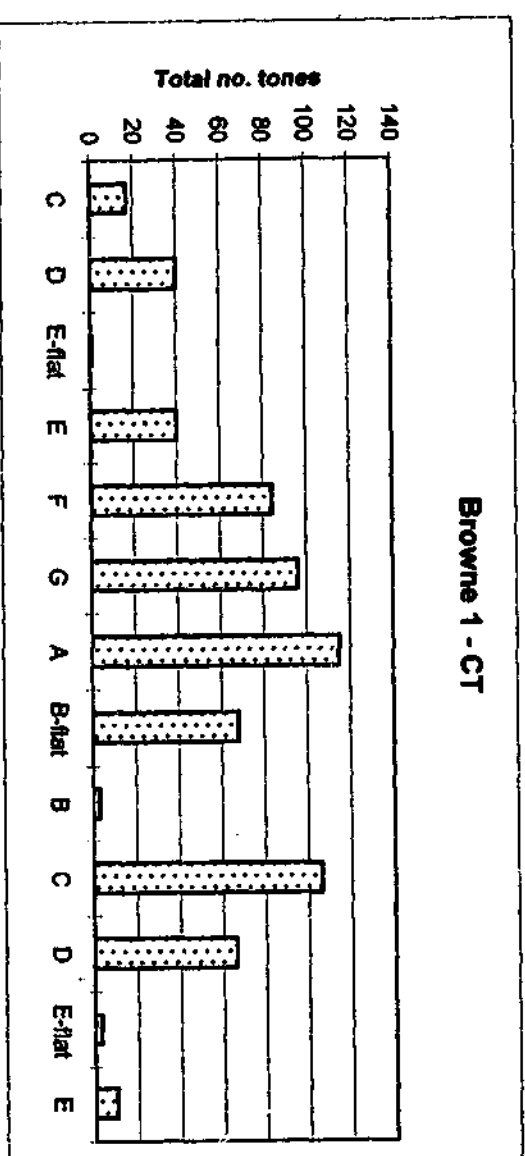
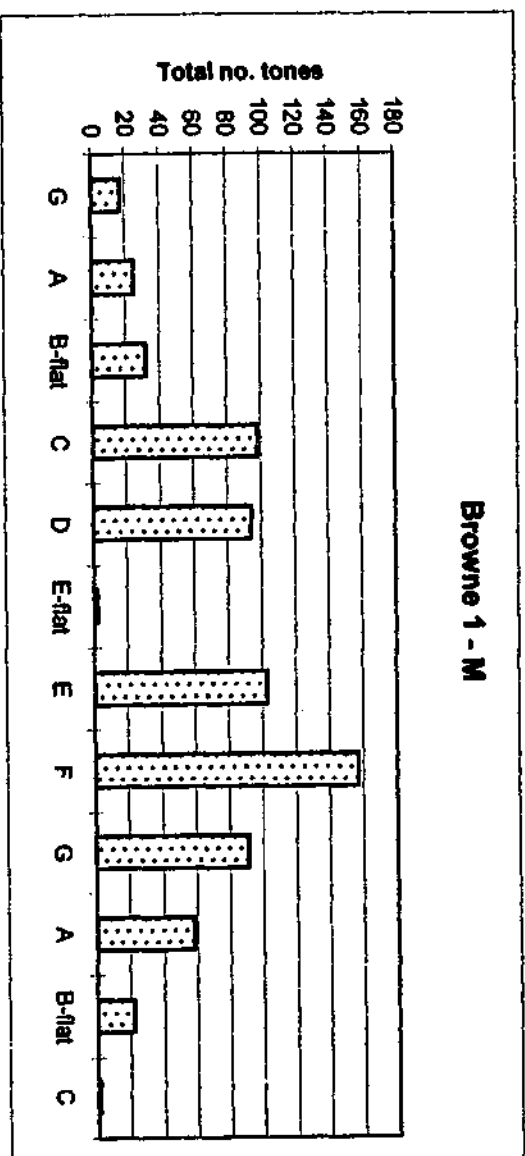
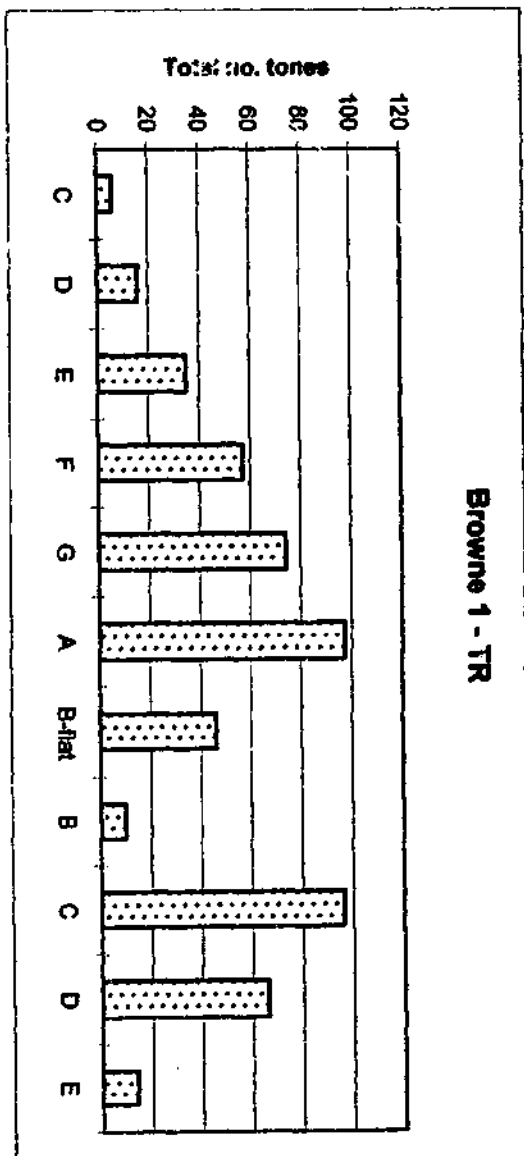


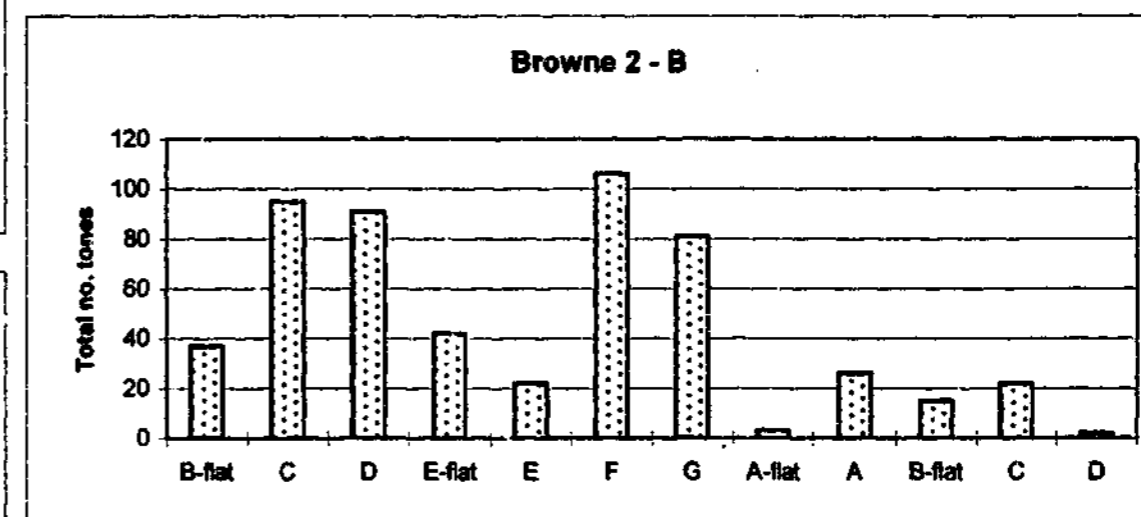
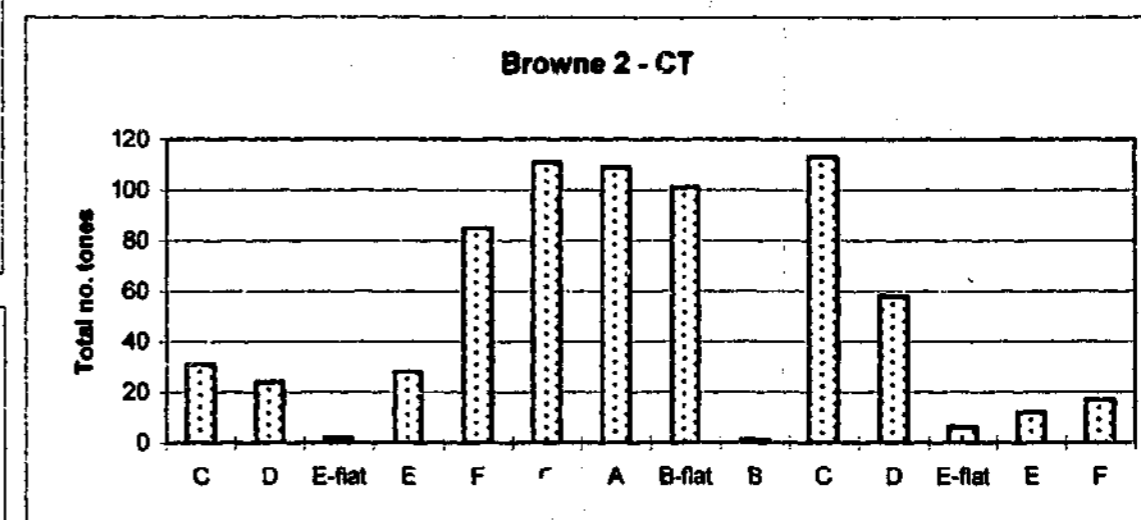
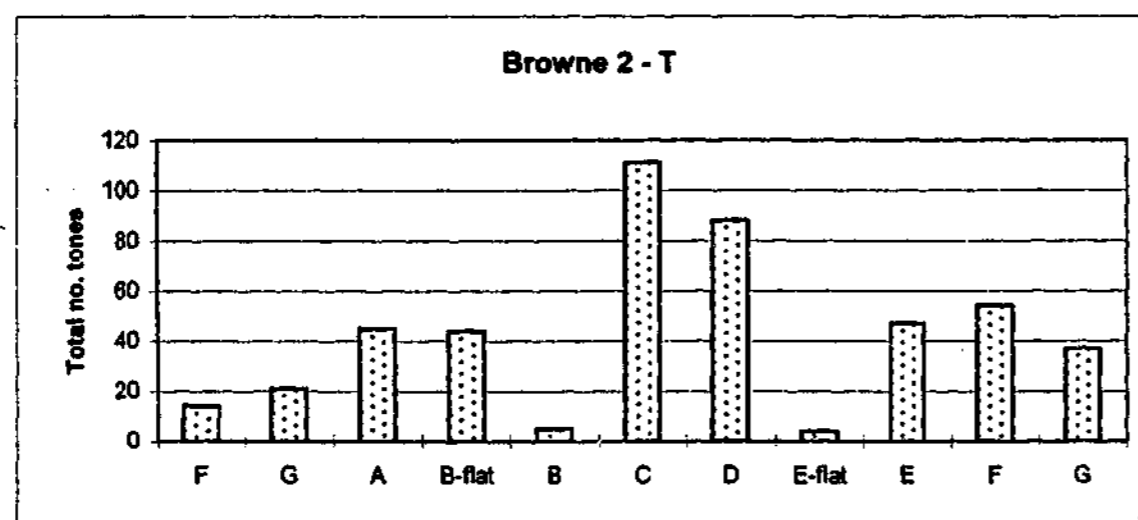
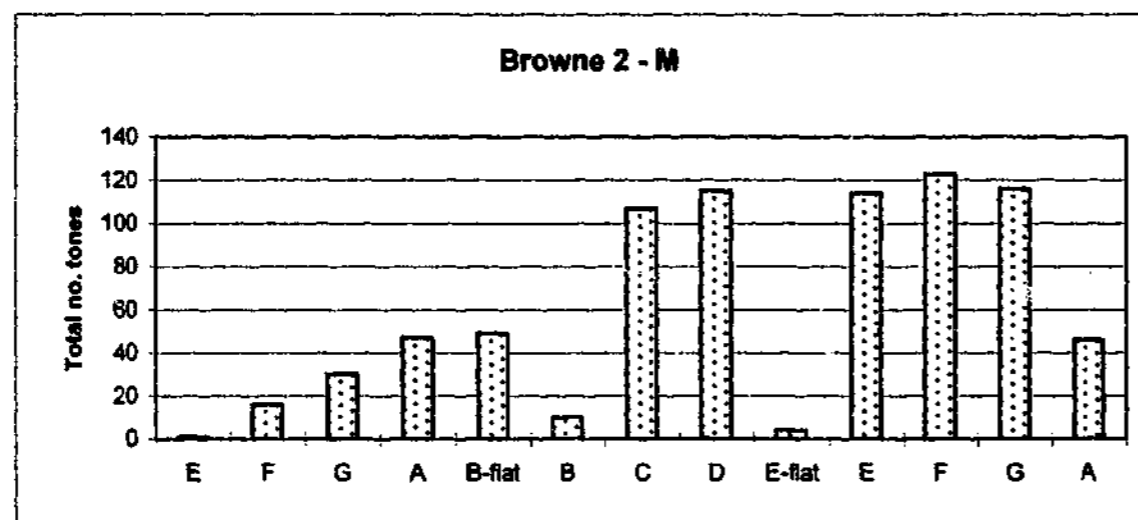
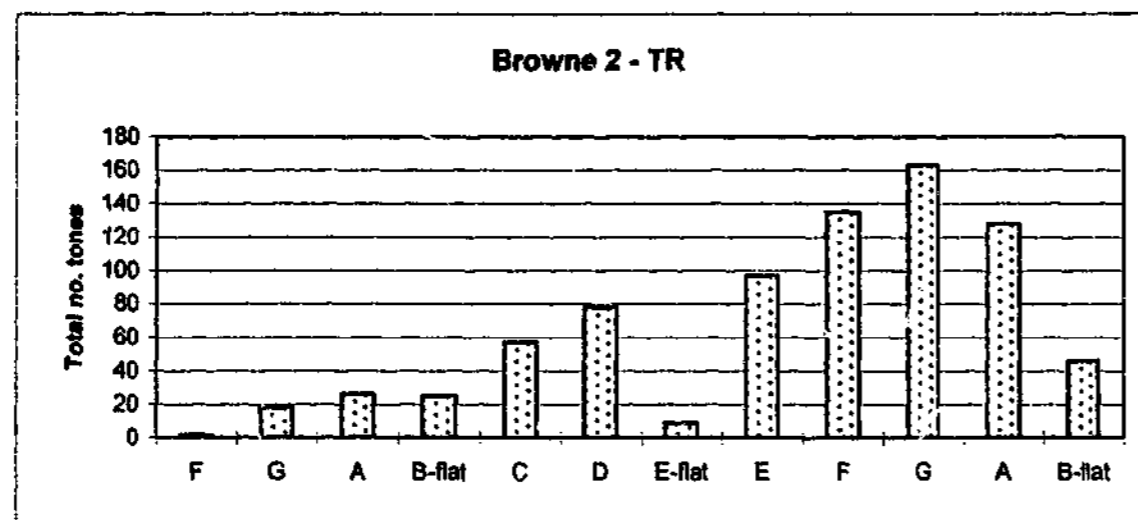


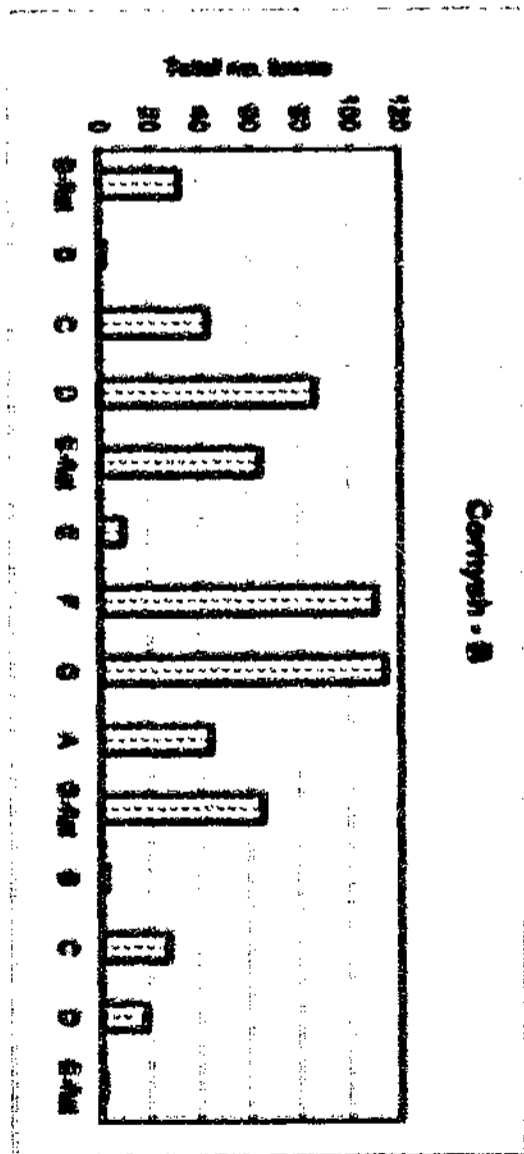
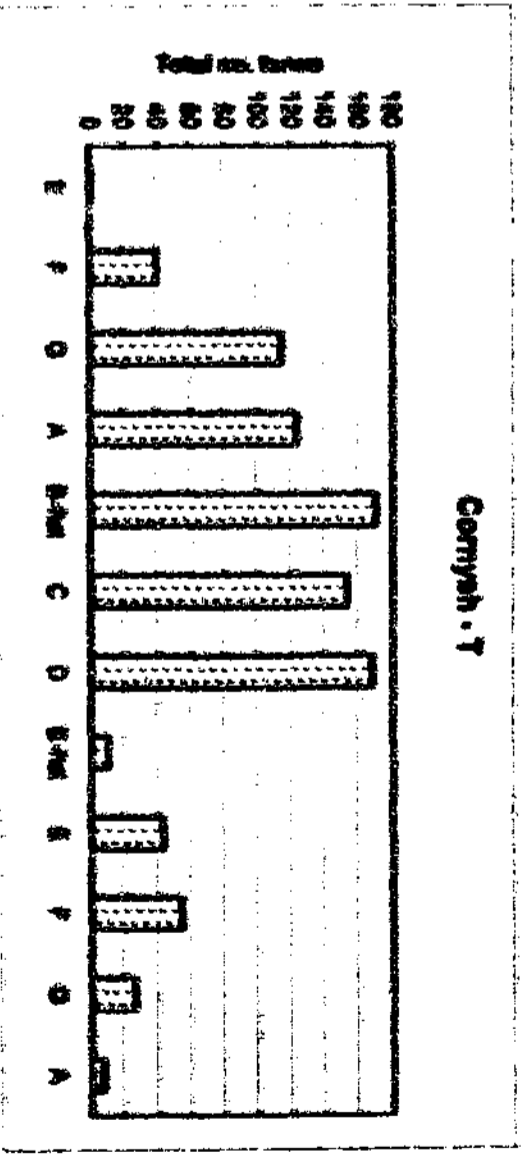
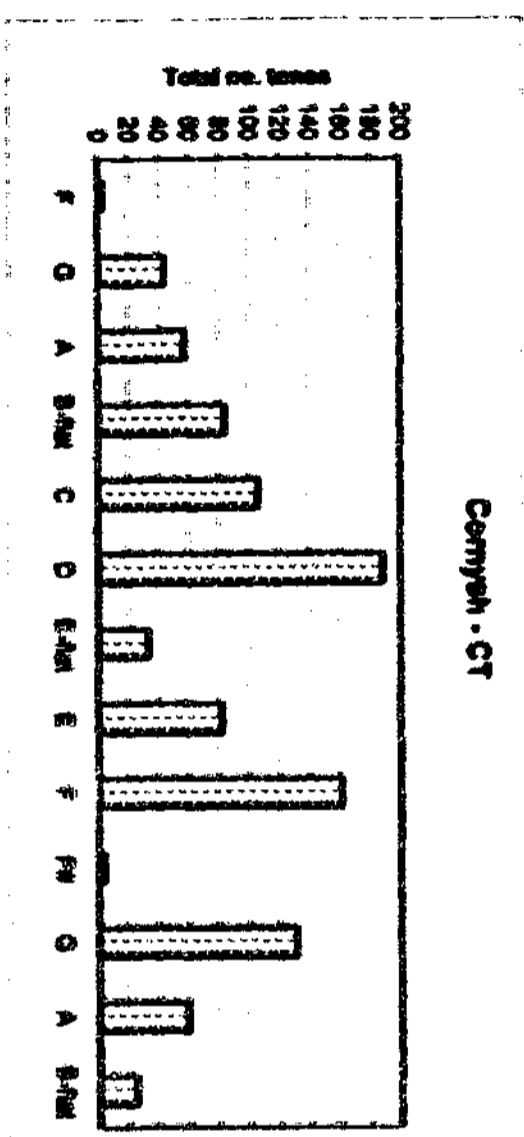
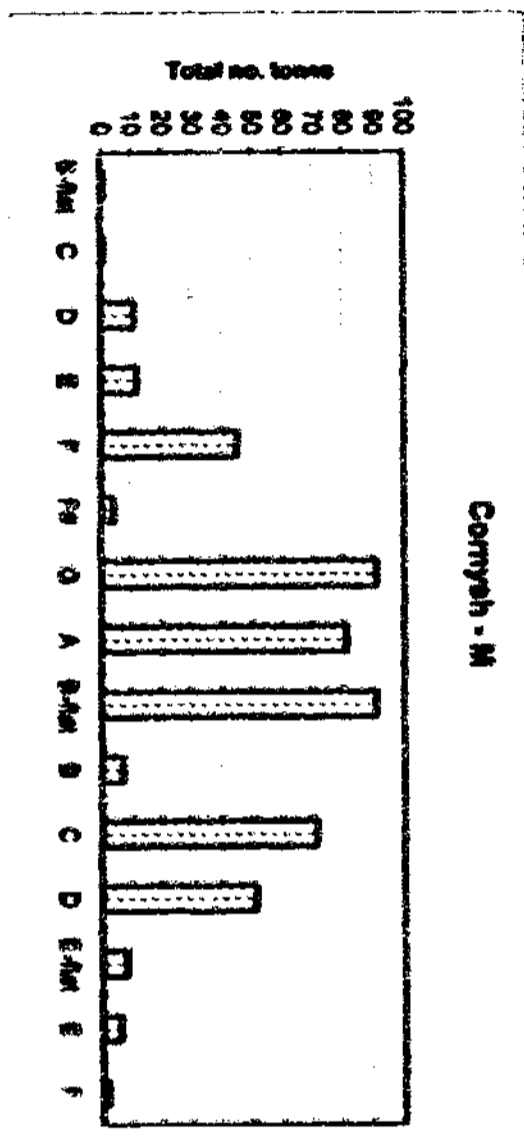
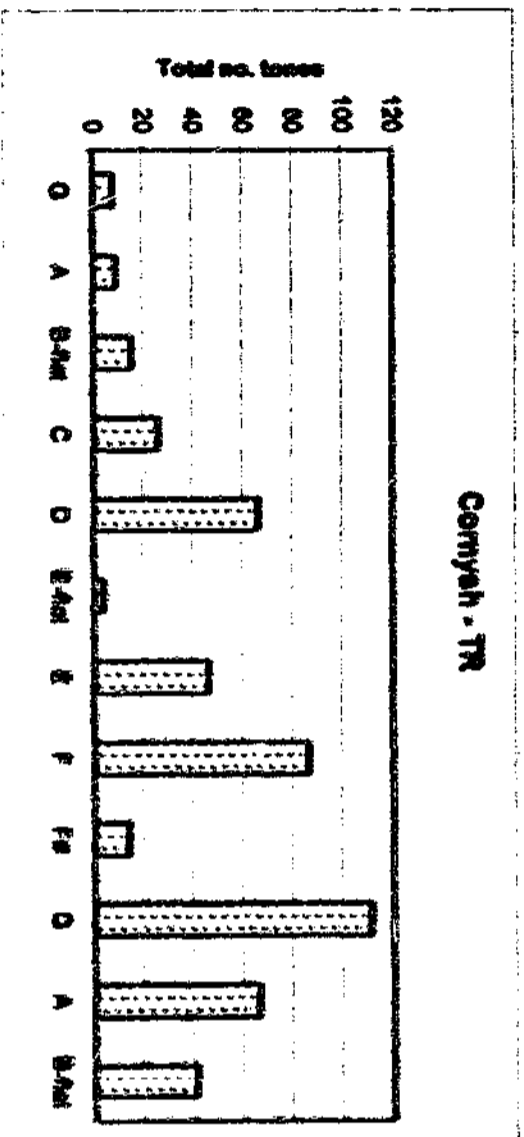


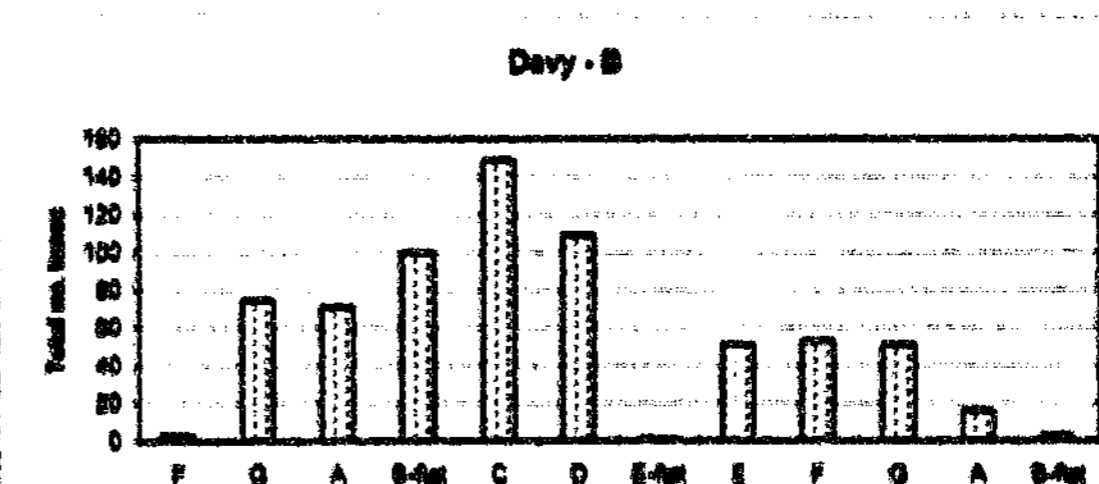
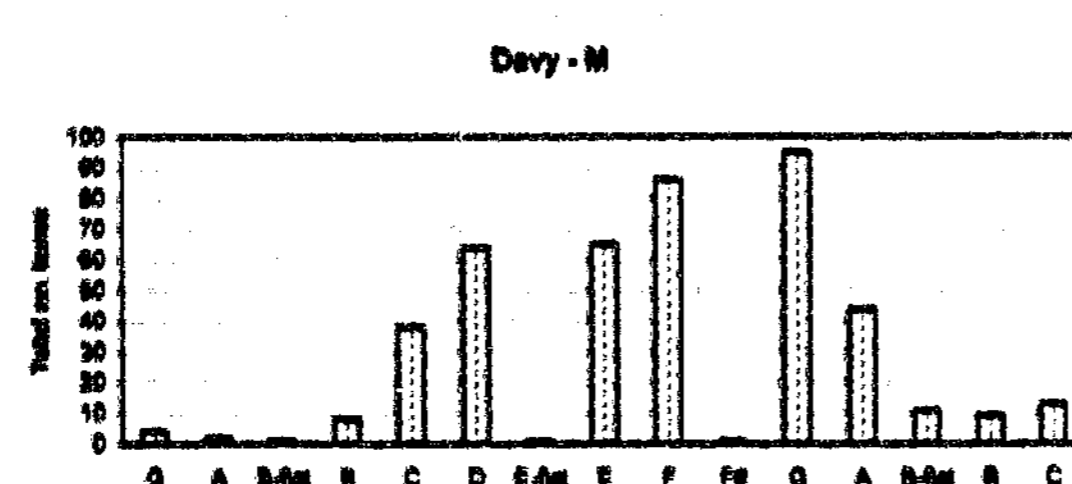
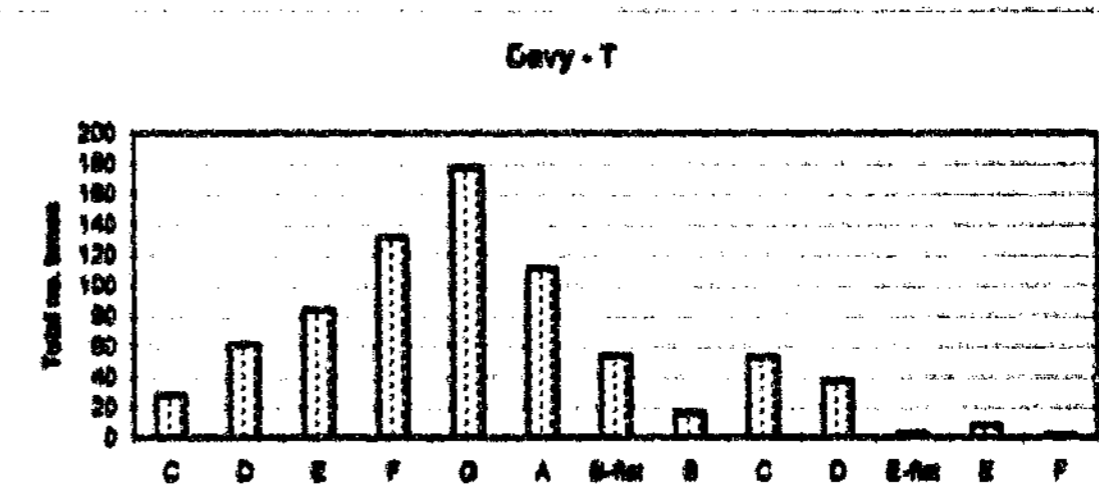
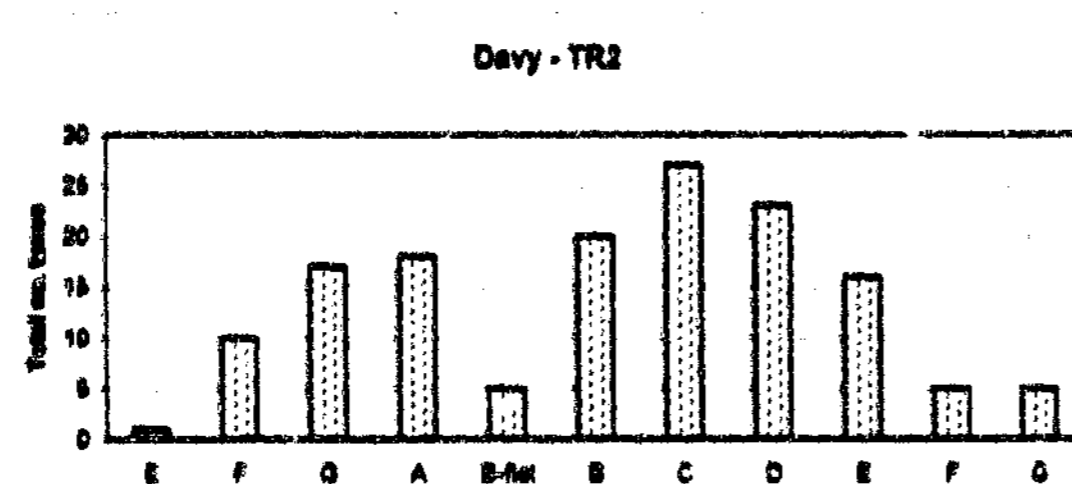
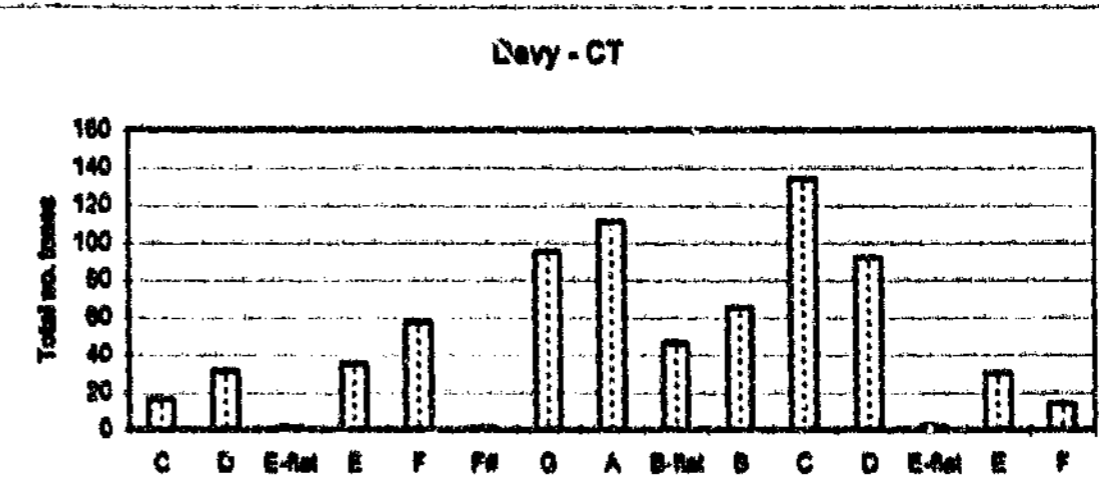
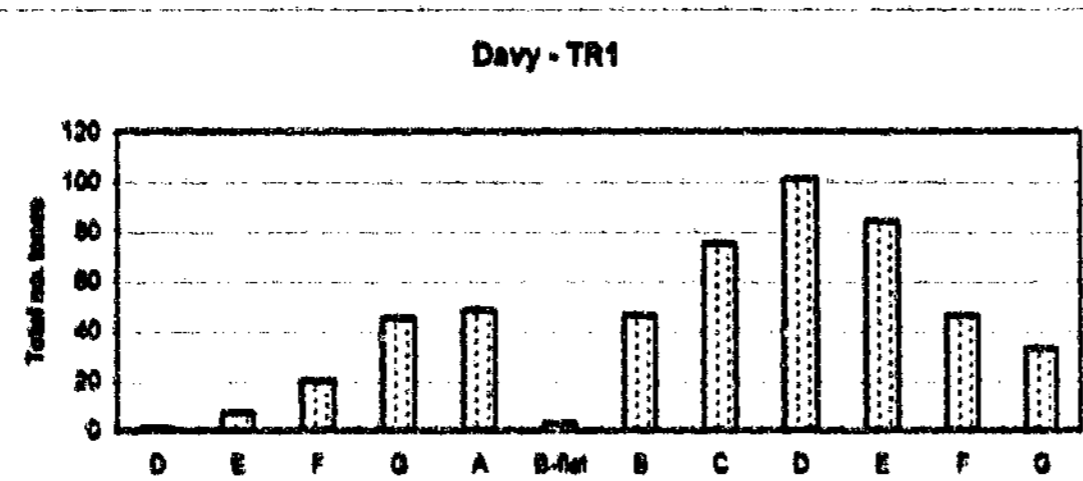
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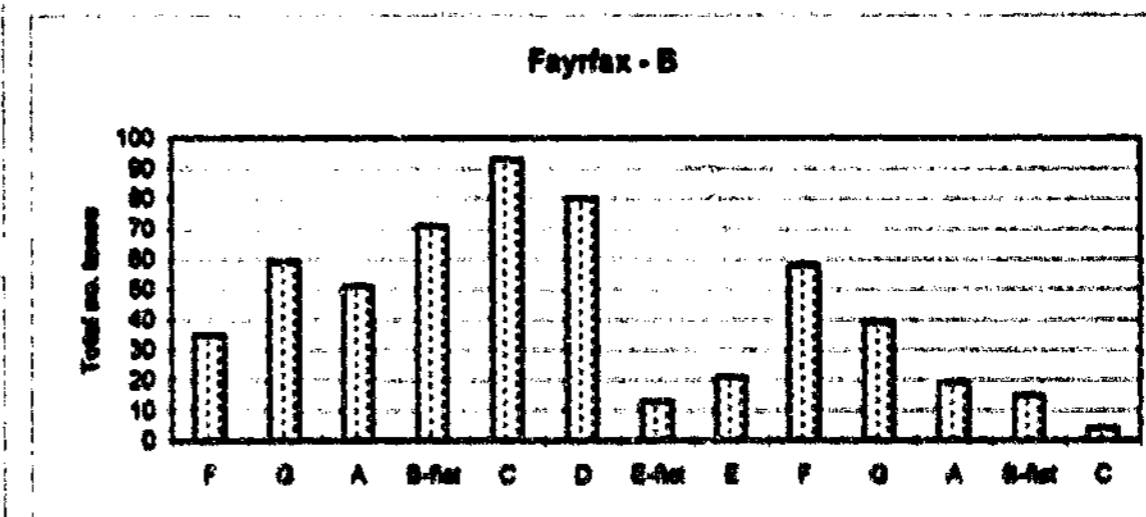
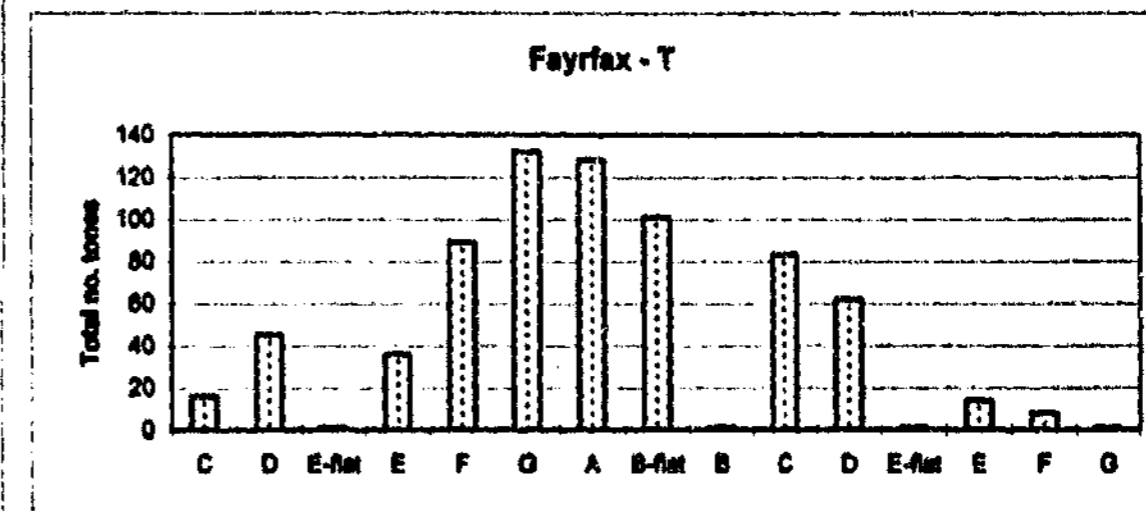
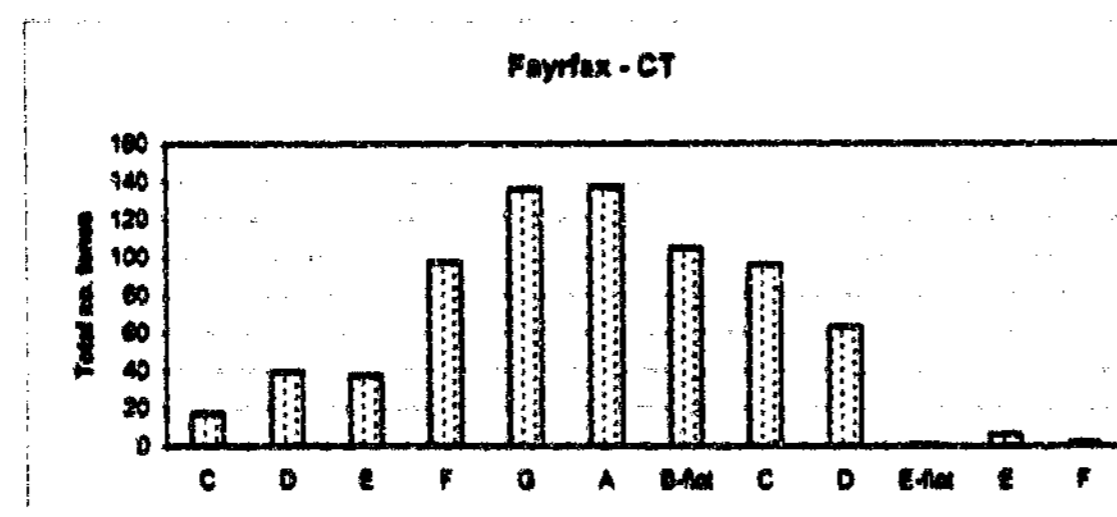
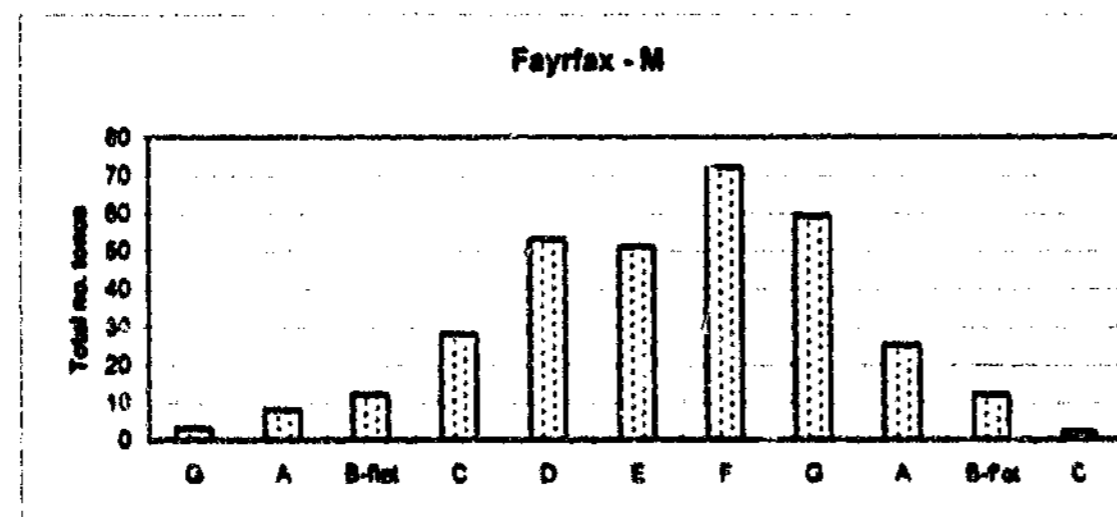
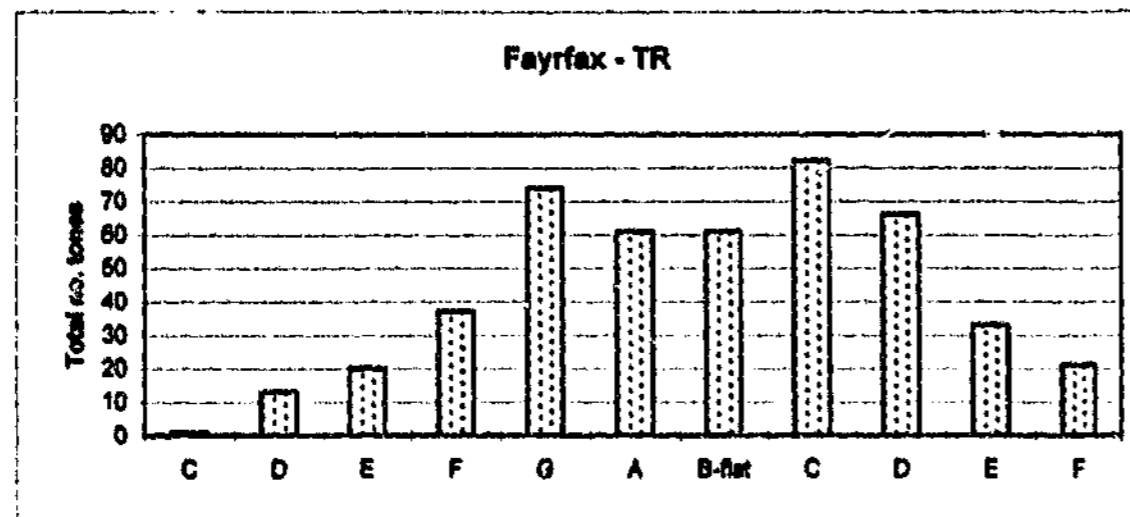
PER VOCAL LINE, FOR EACH WORK

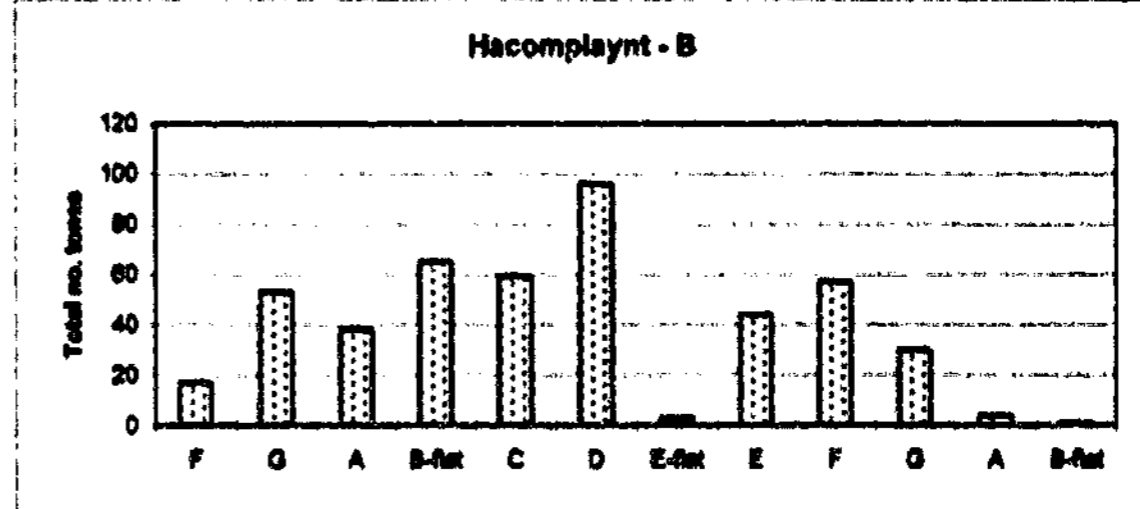
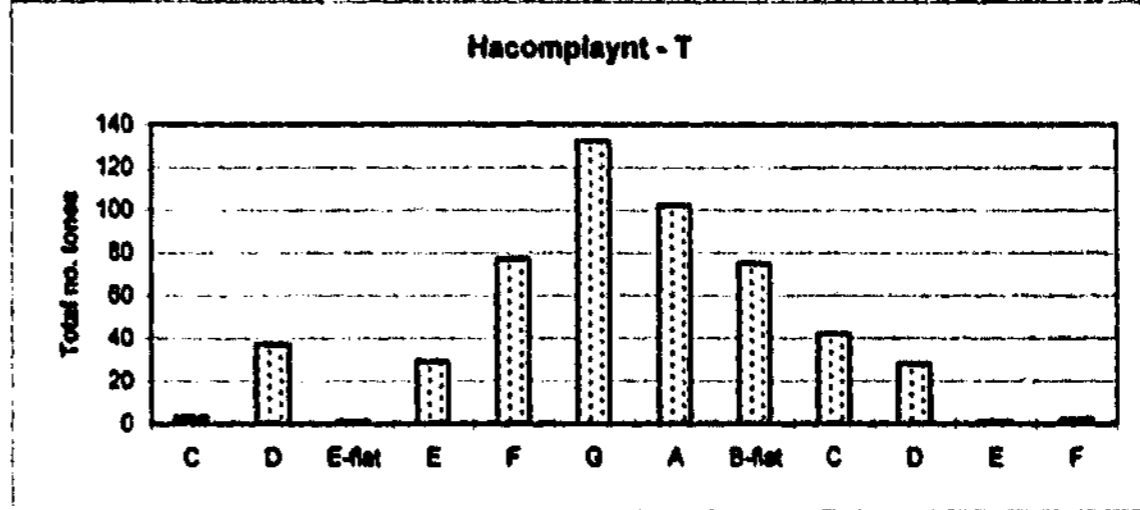
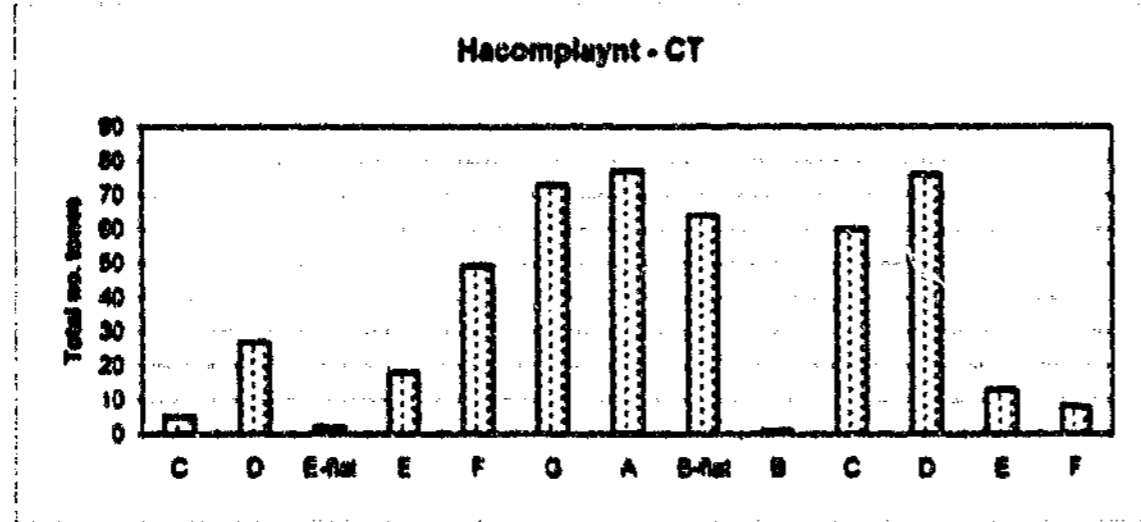
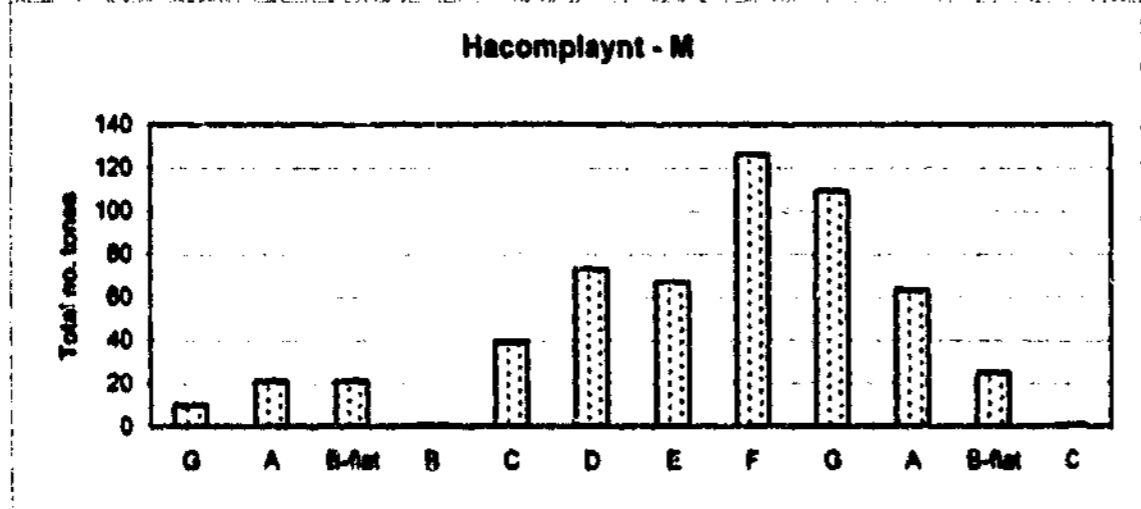
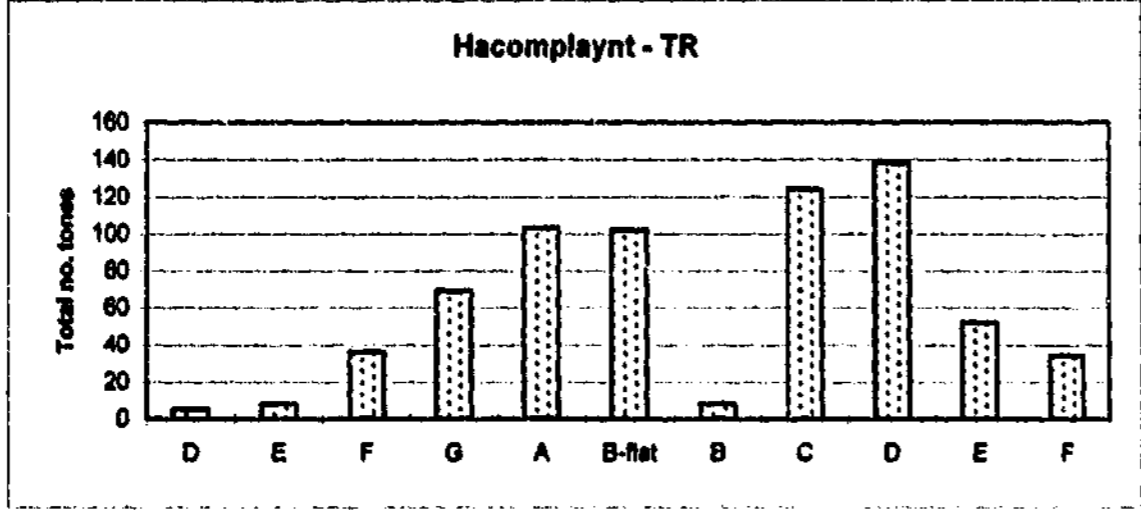


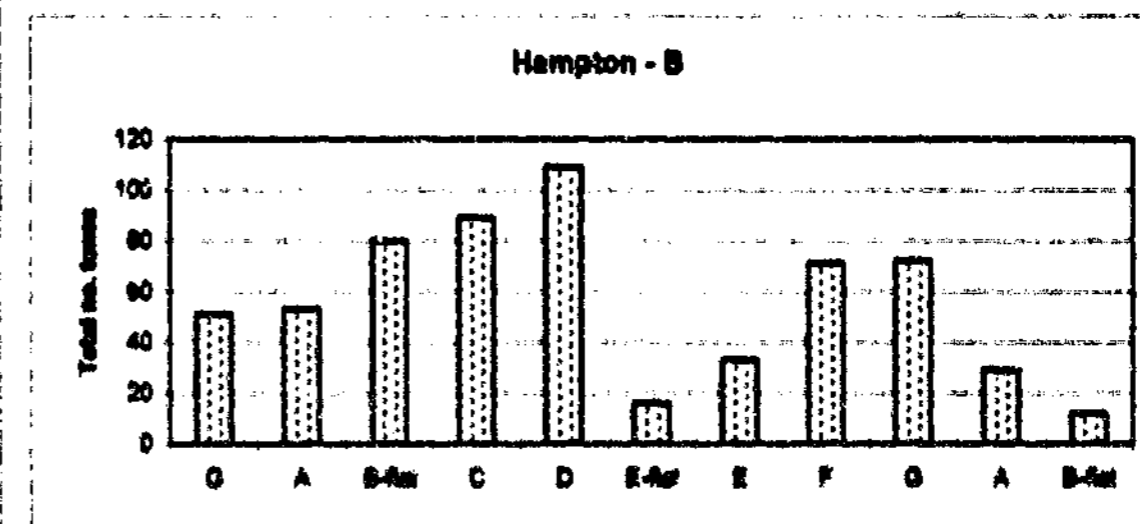
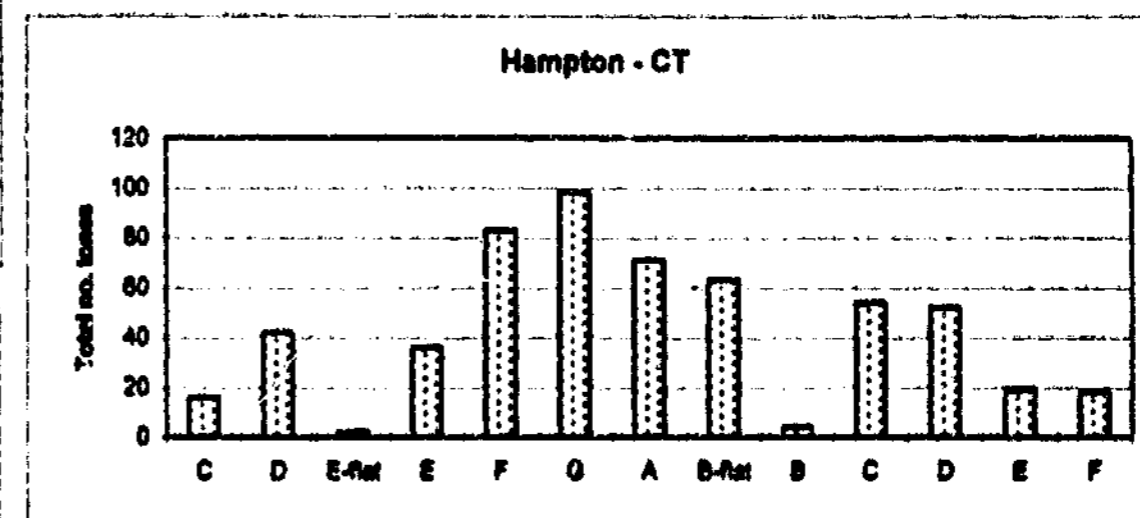
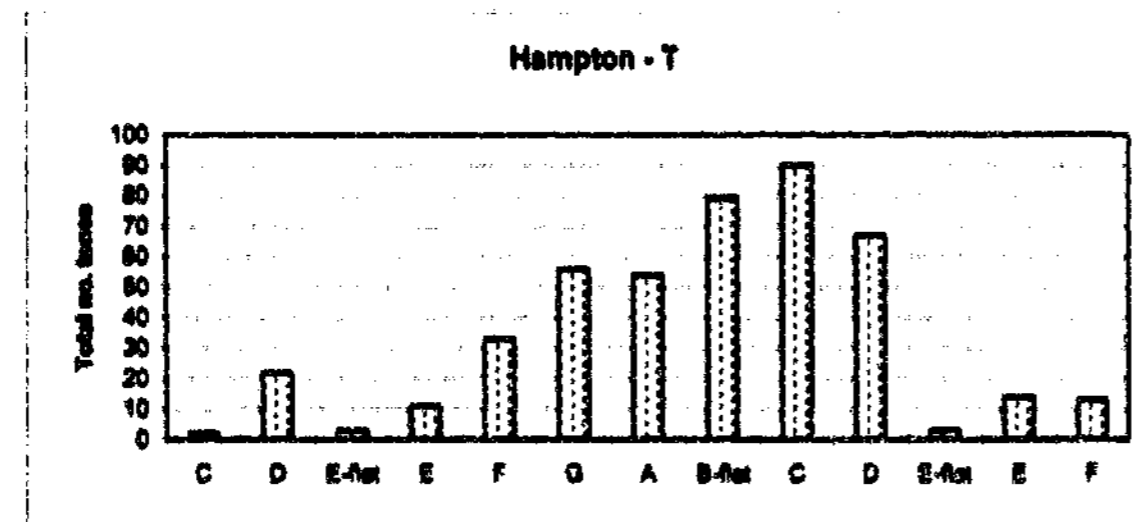
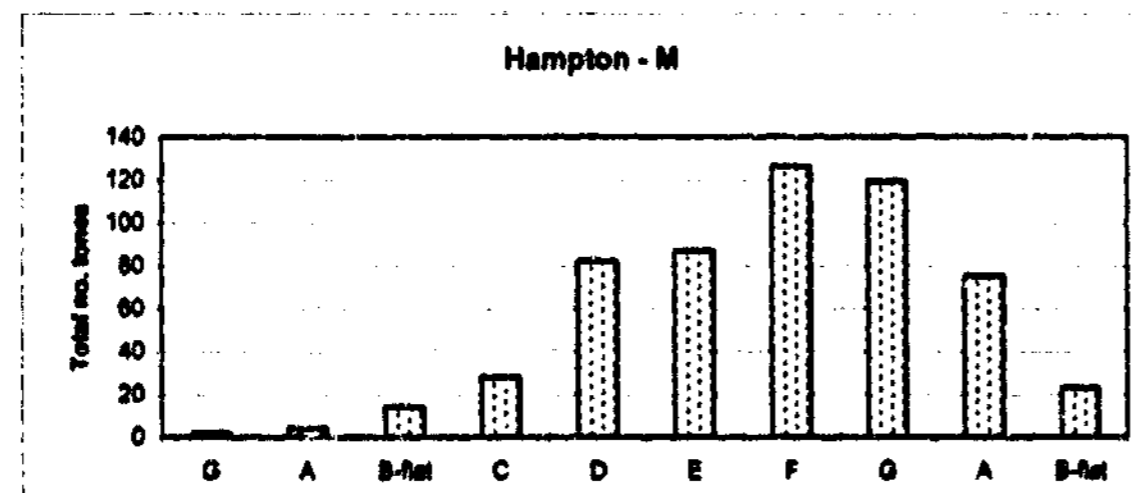
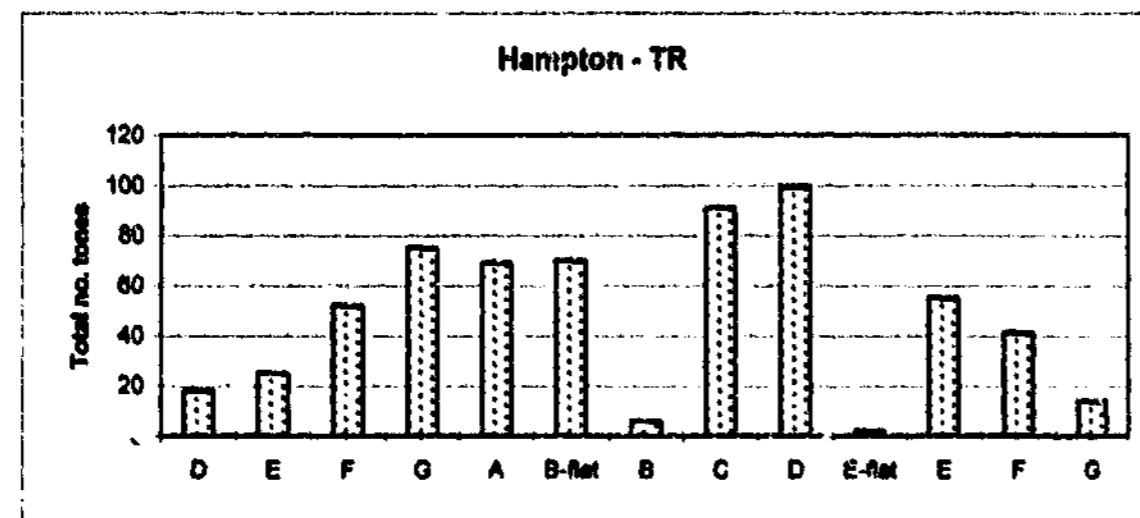




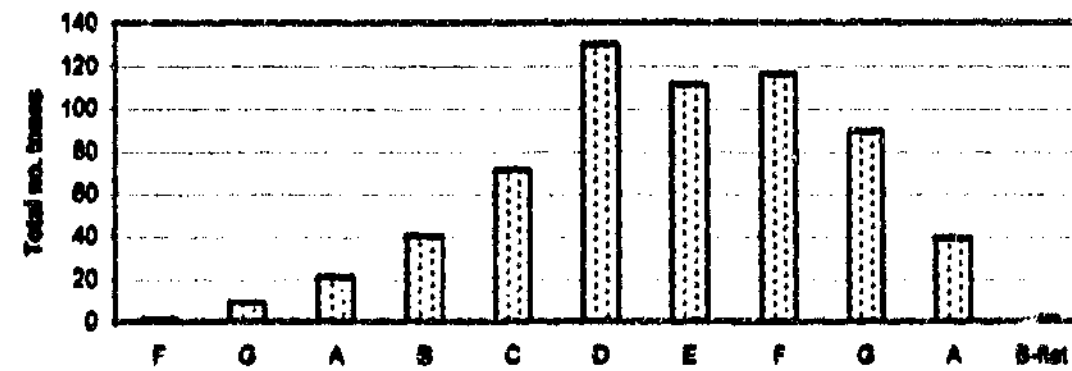




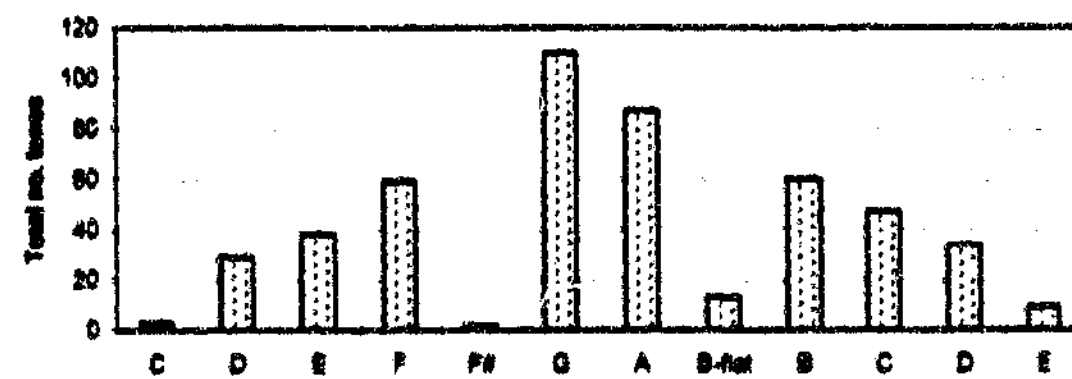




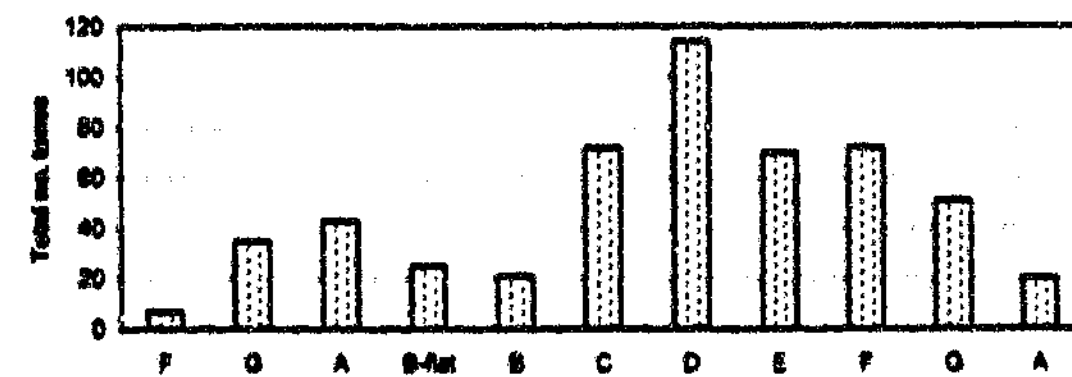
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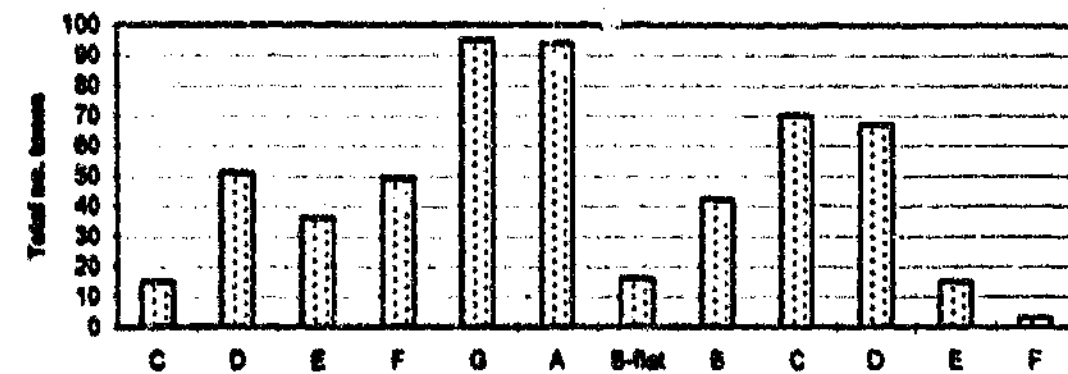
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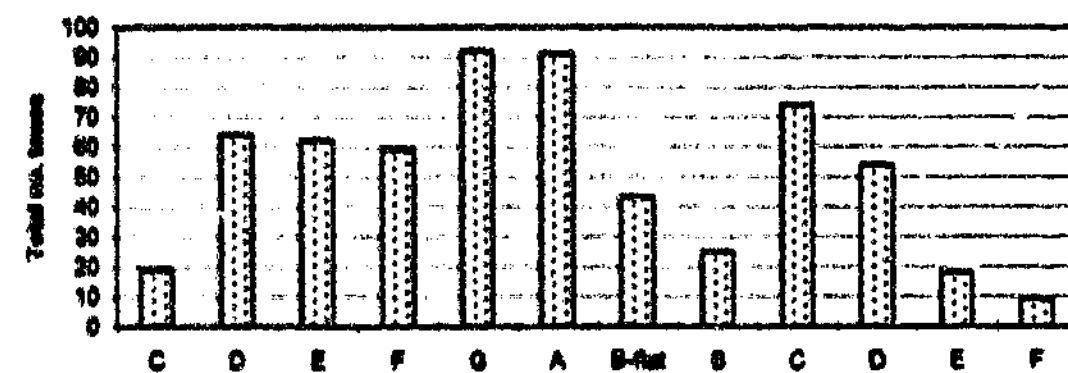
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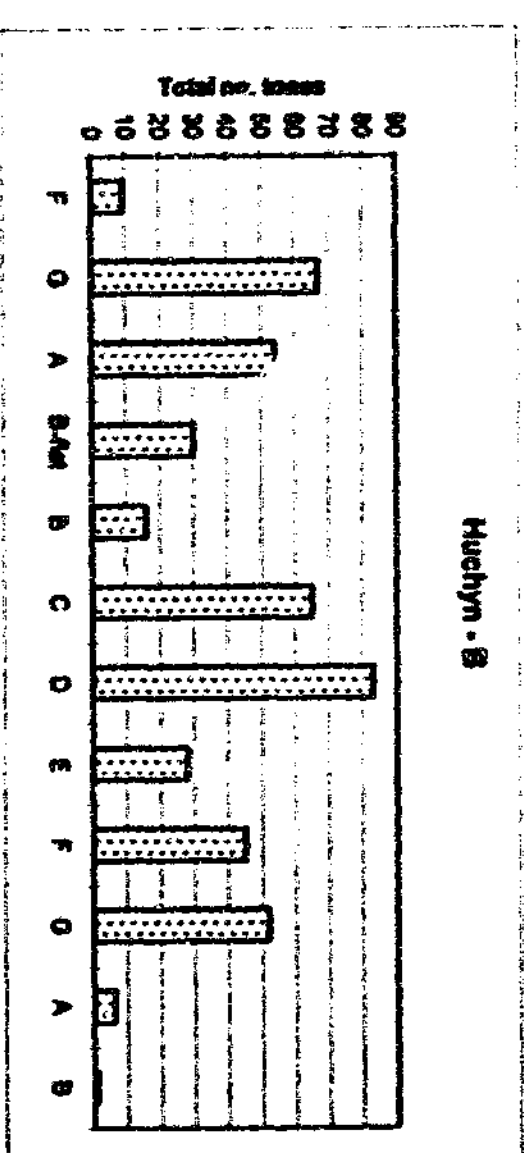
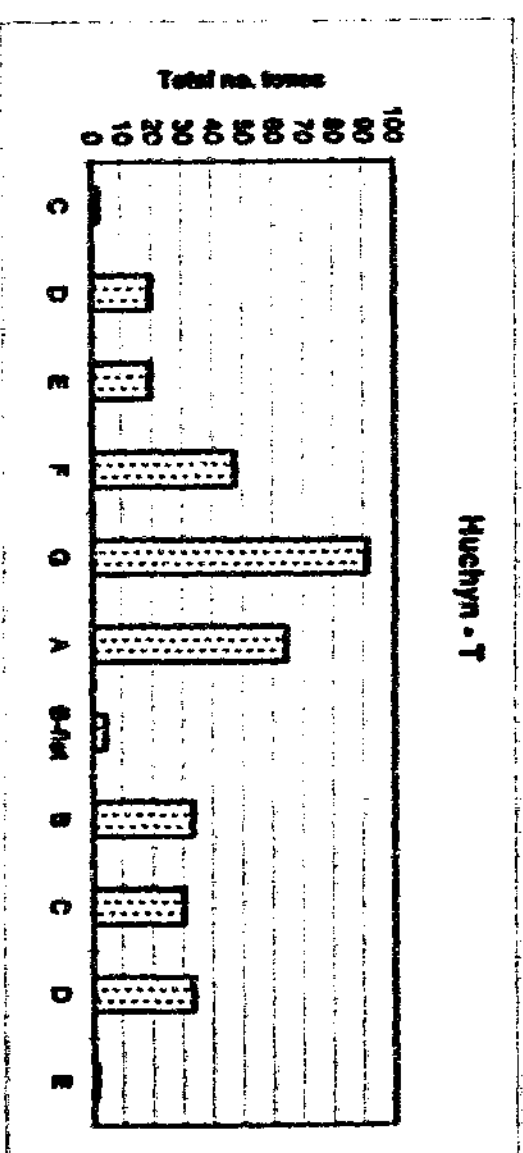
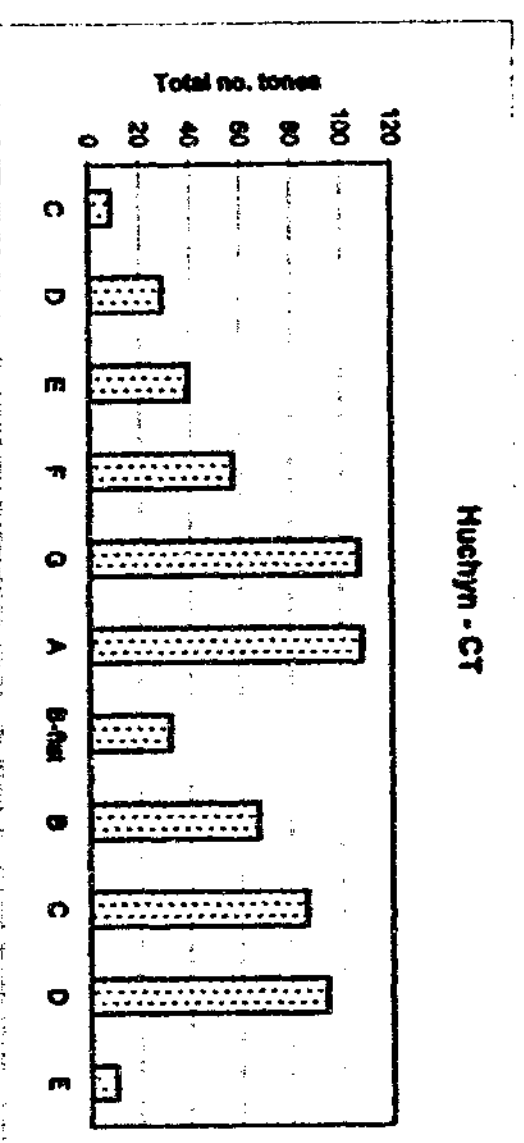
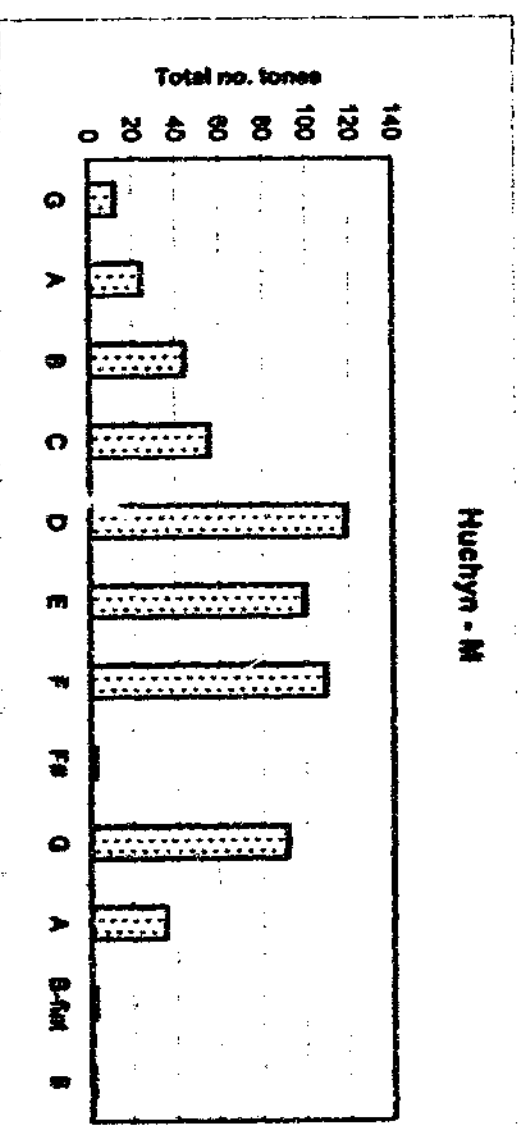
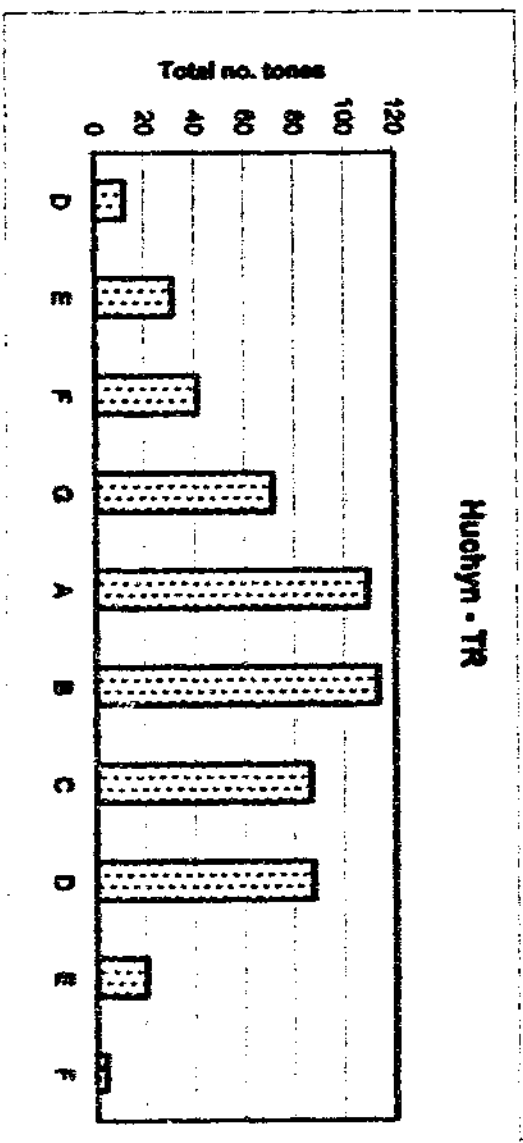


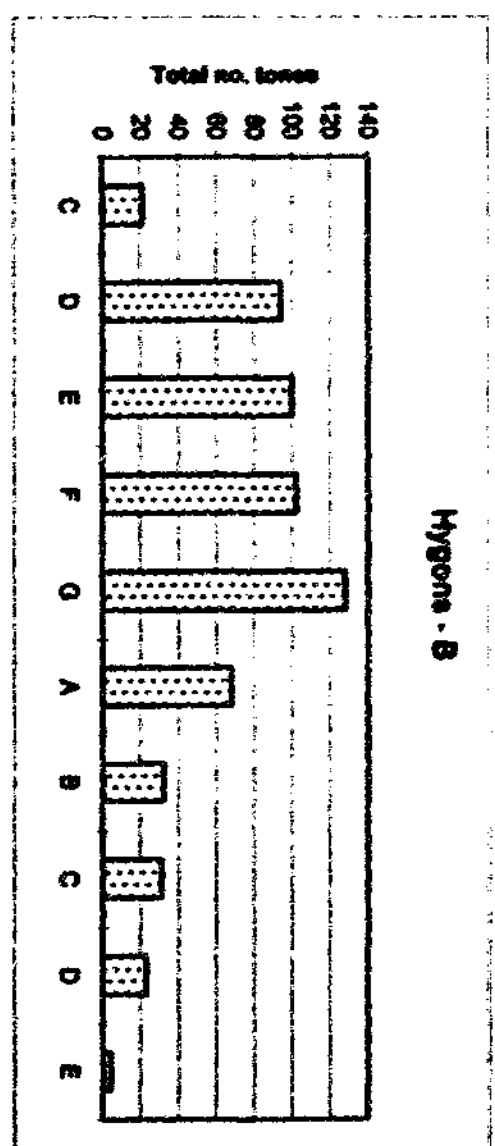
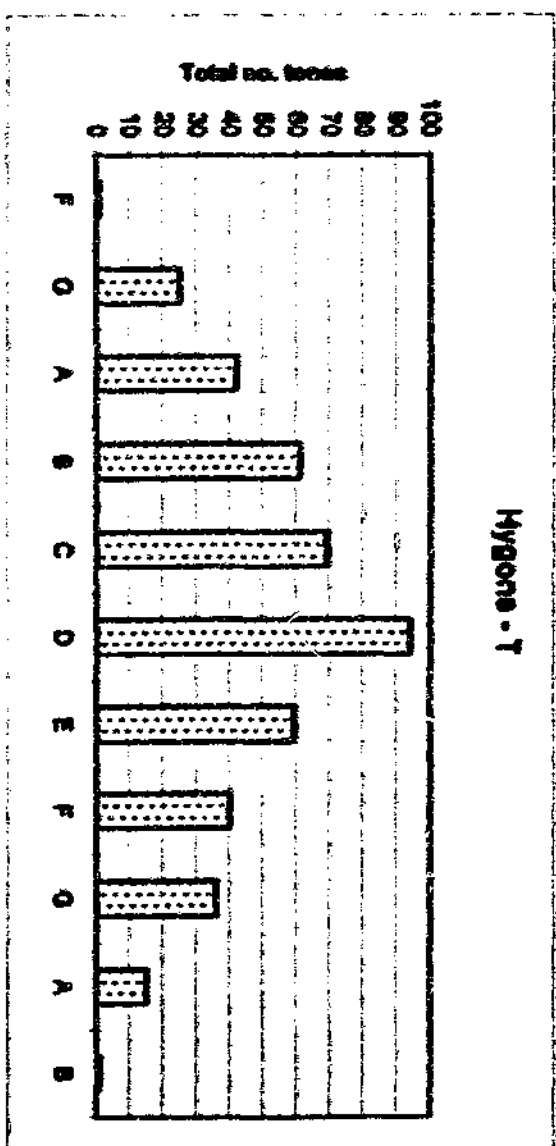
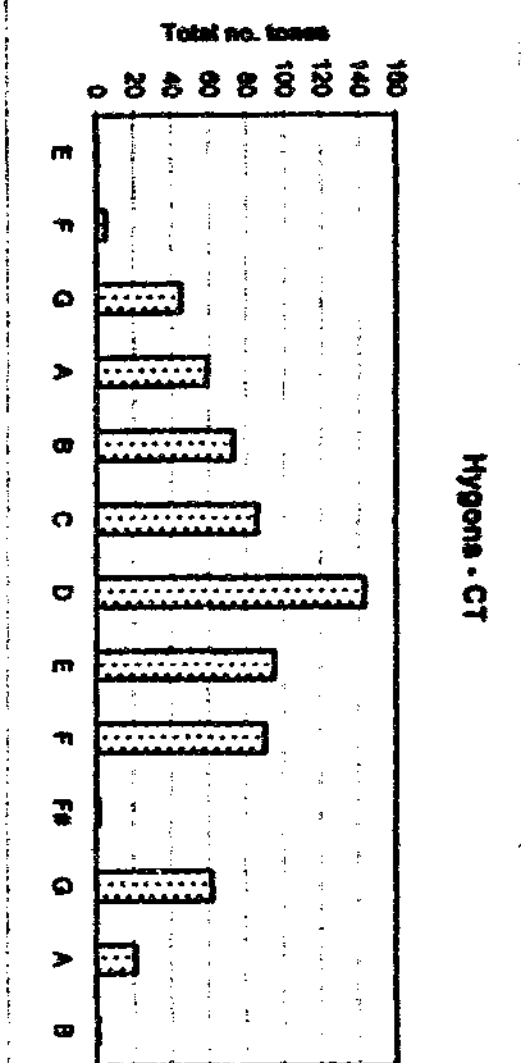
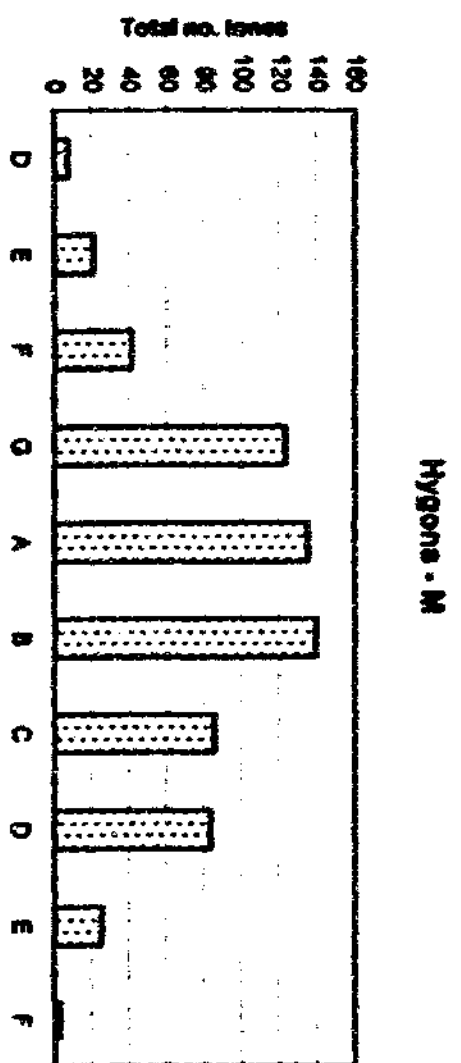
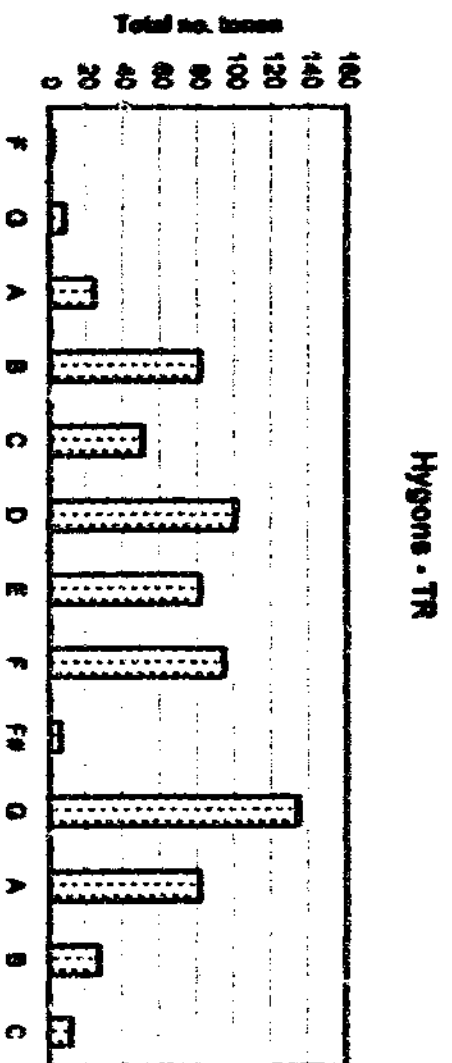
Horwood - T

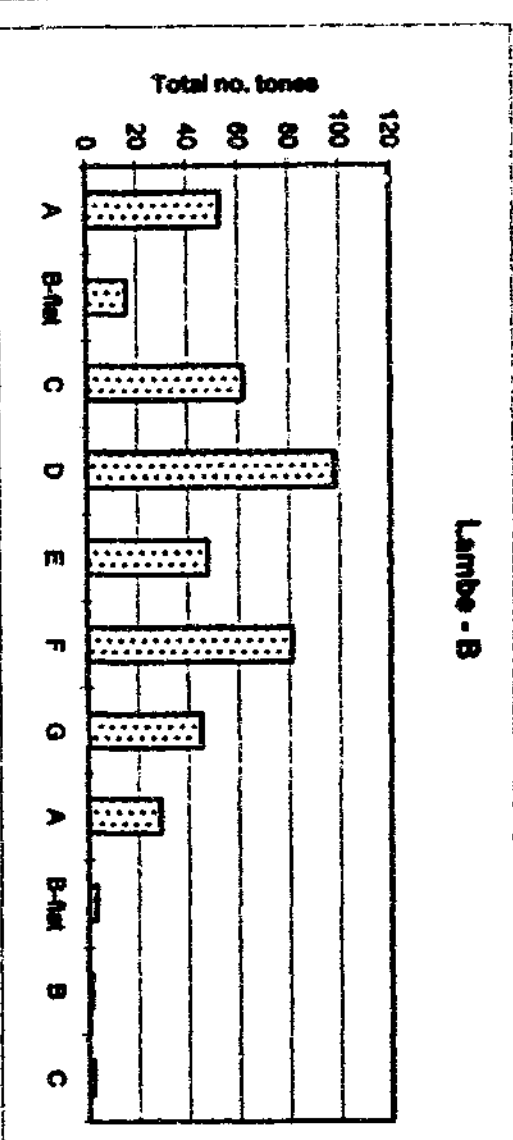
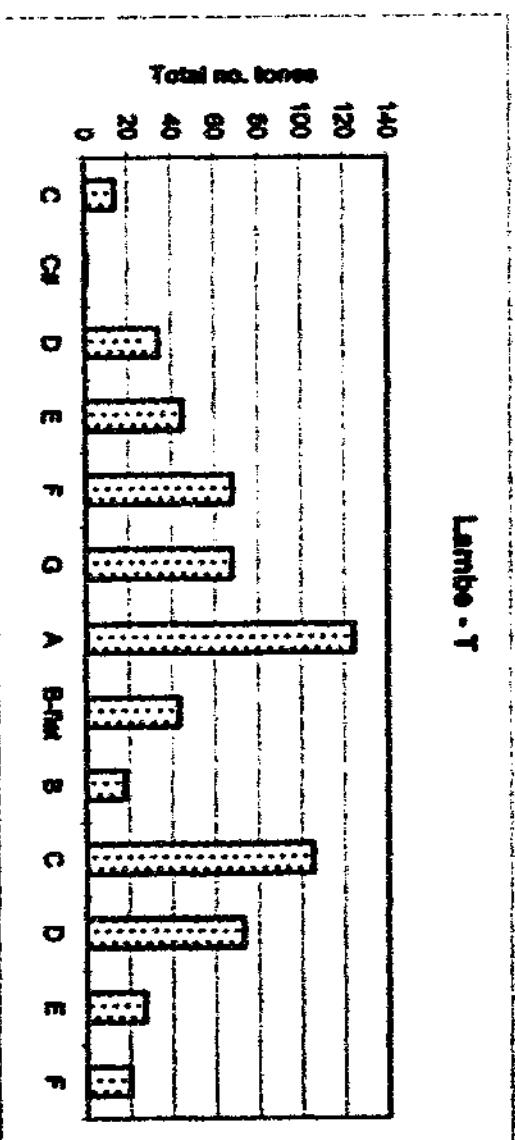
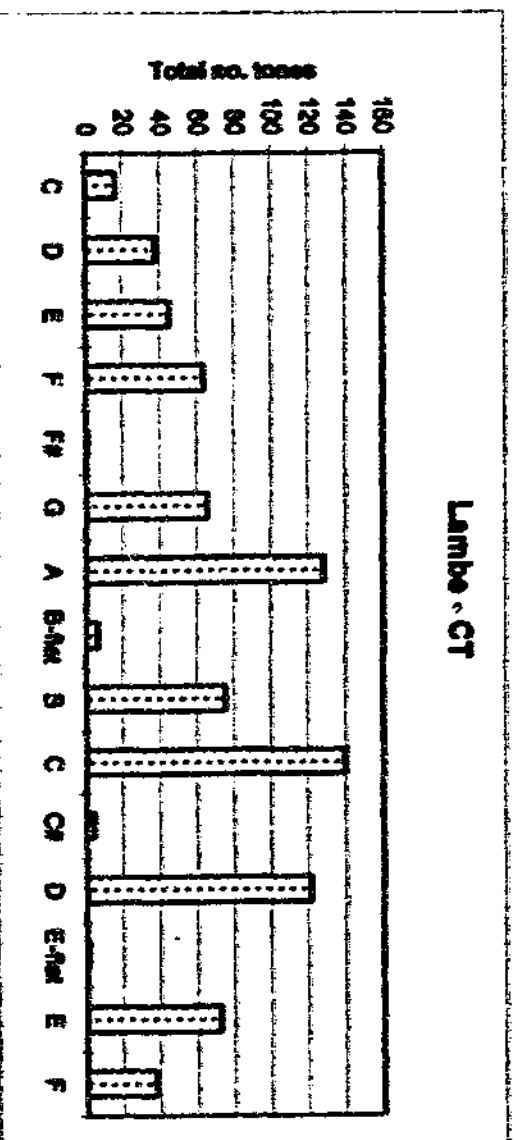
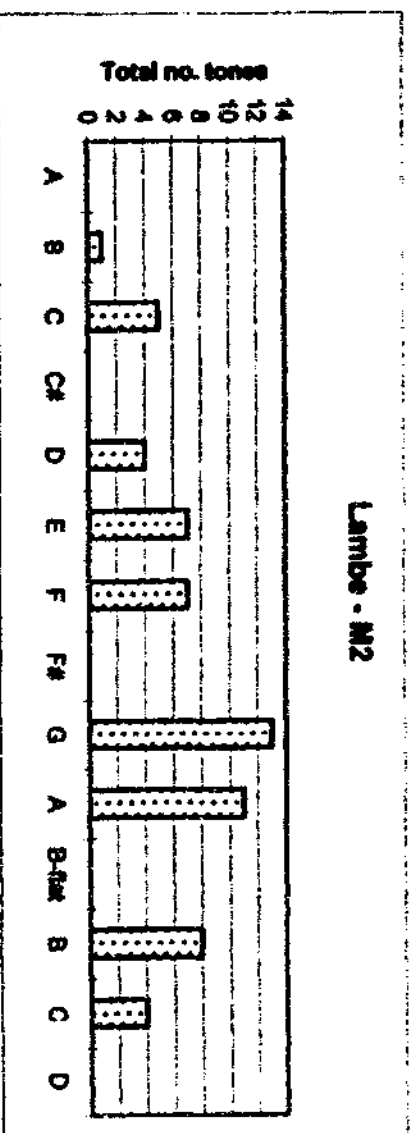
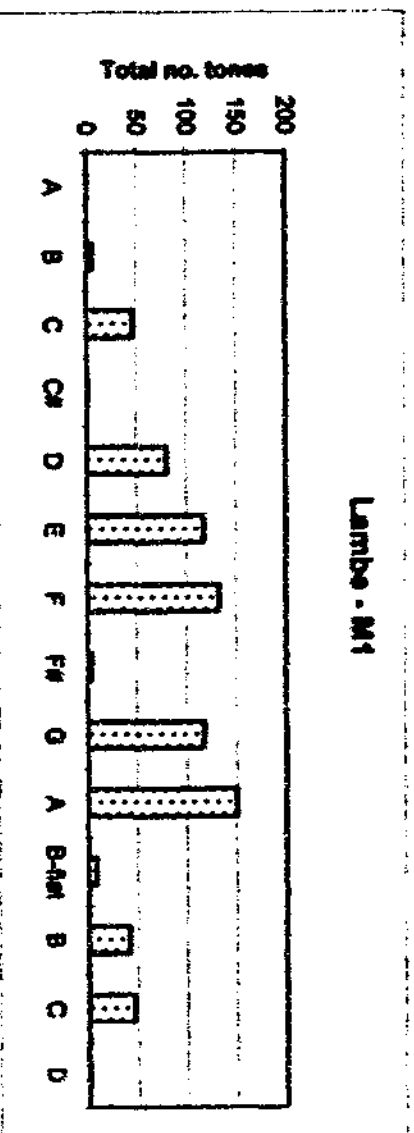
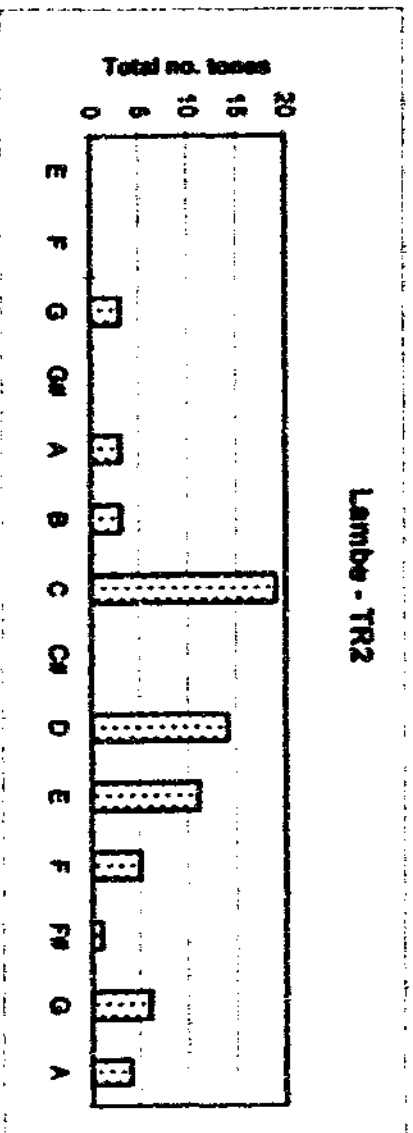
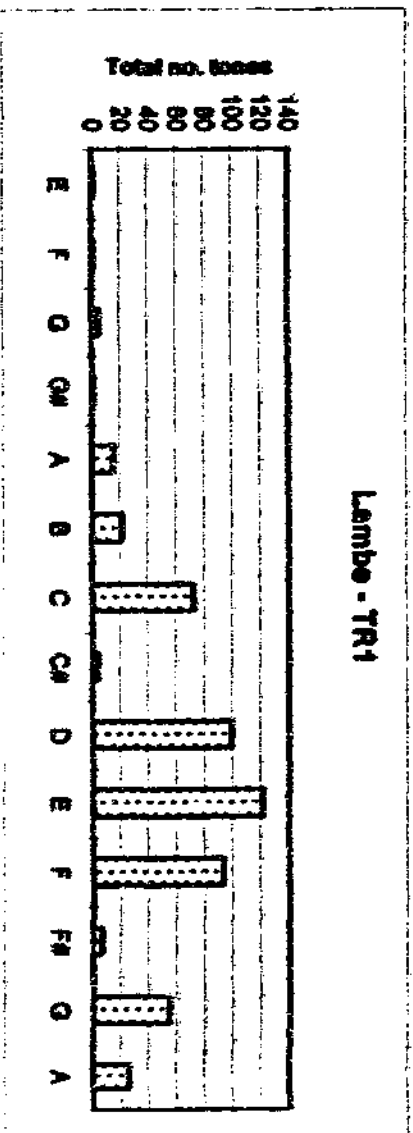


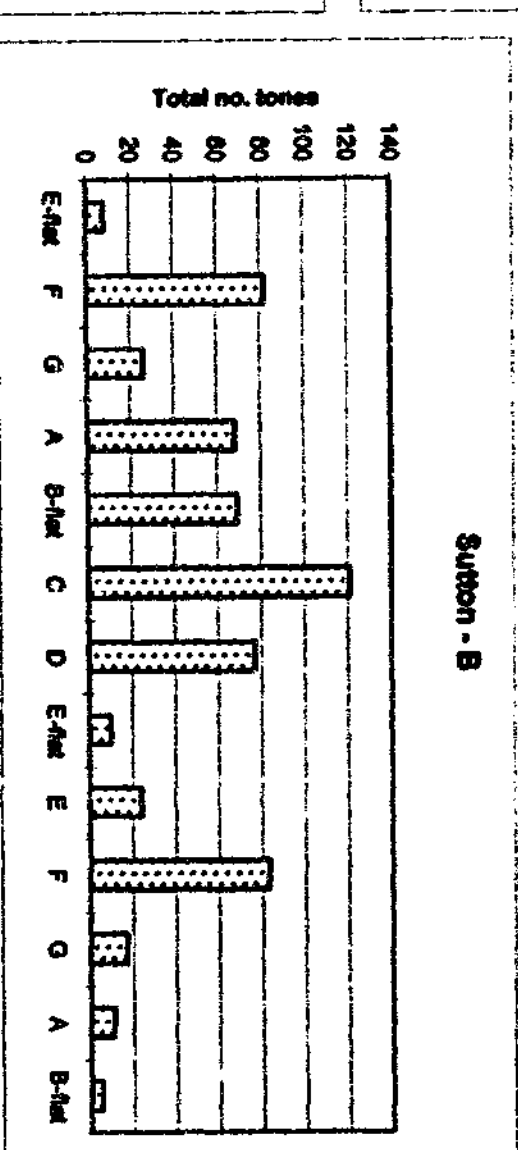
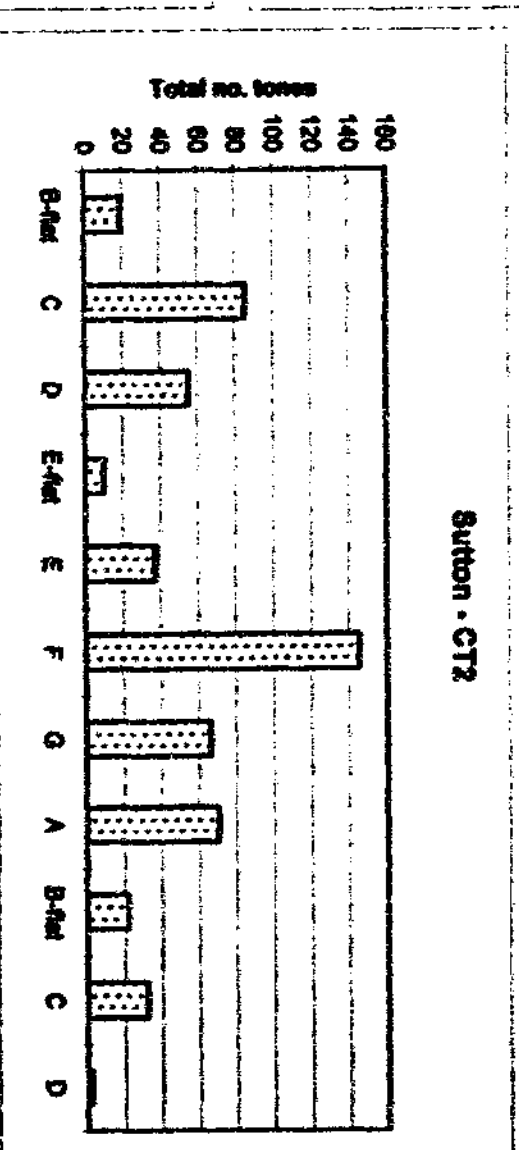
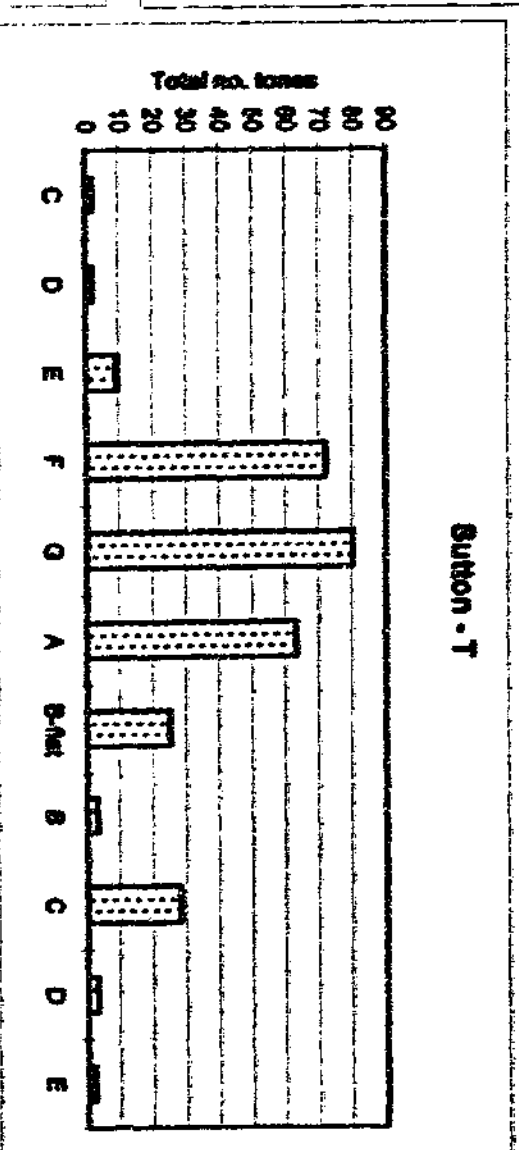
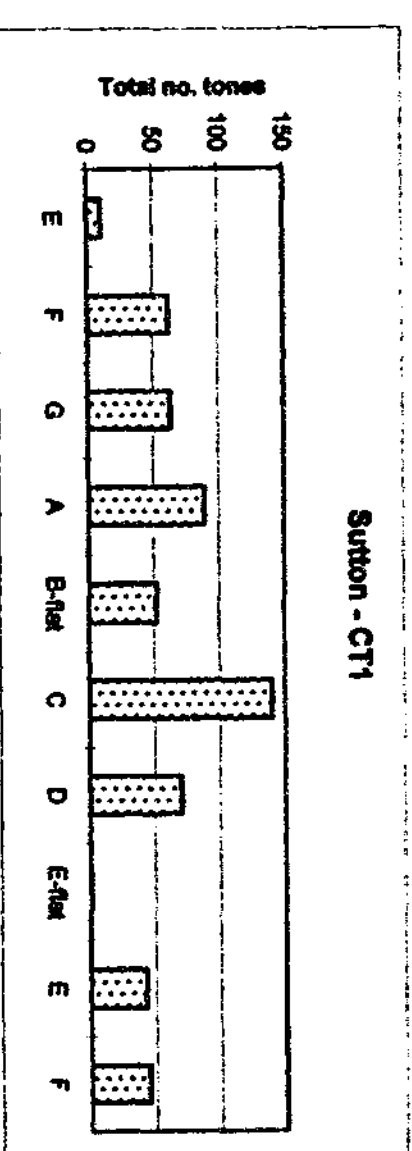
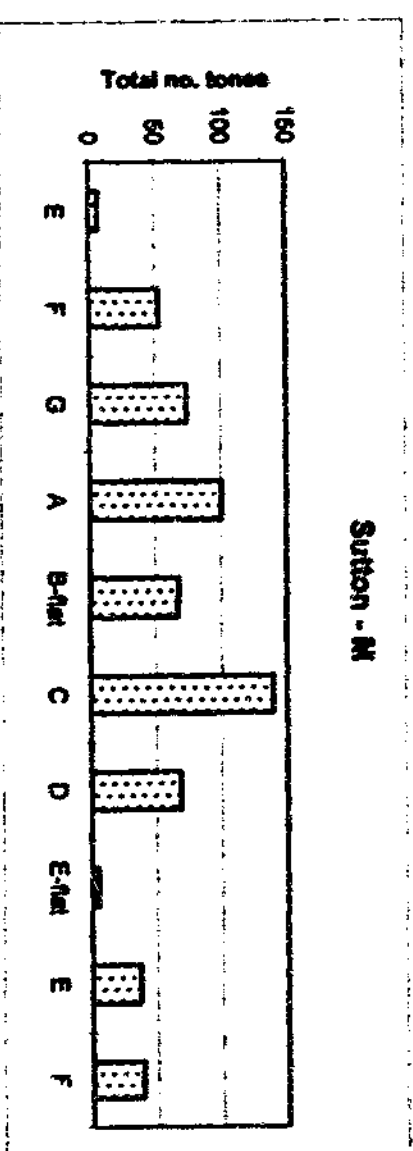
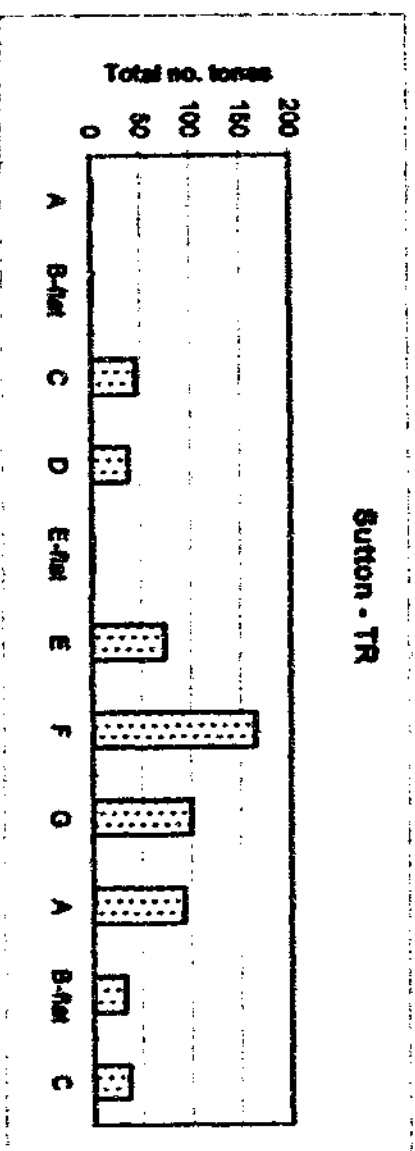
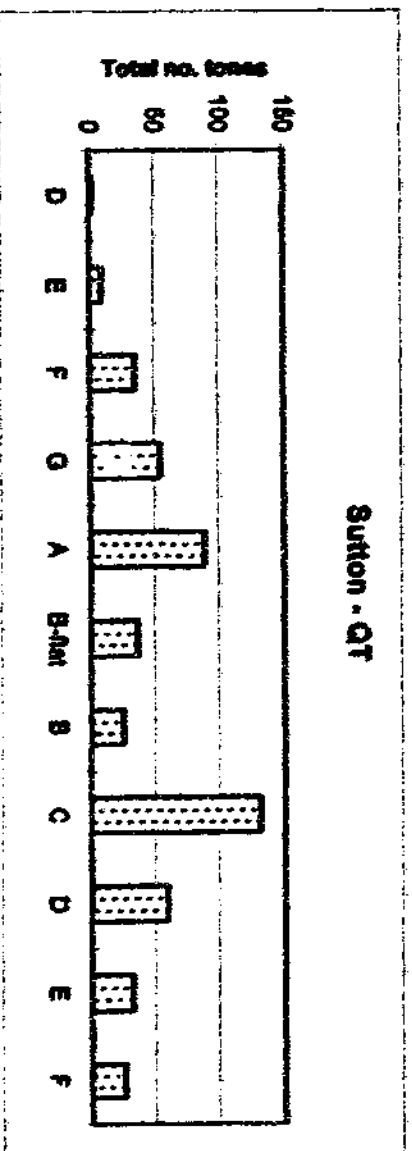
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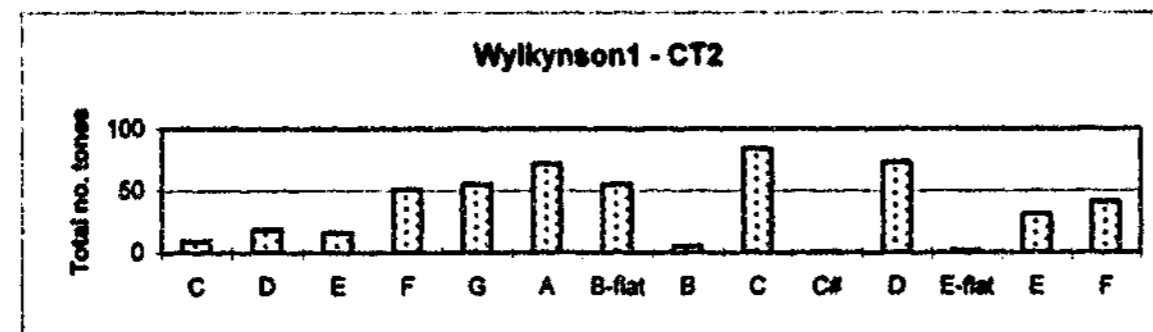
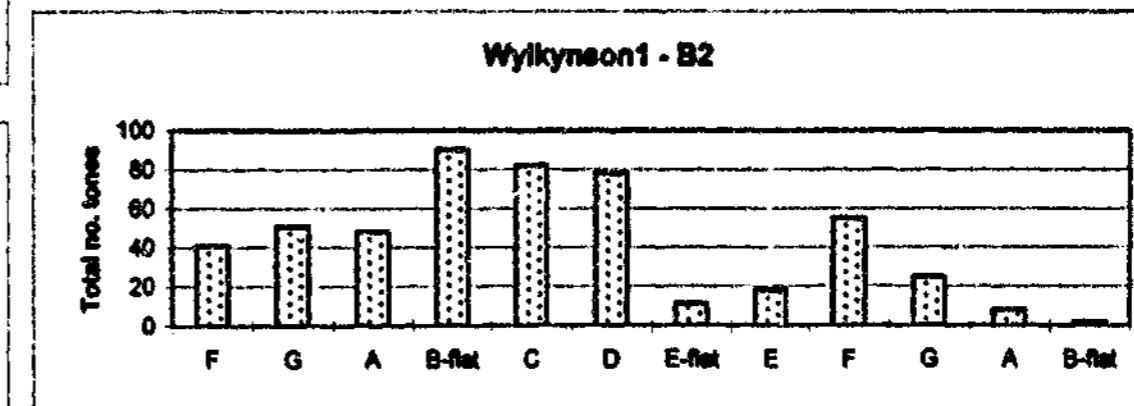
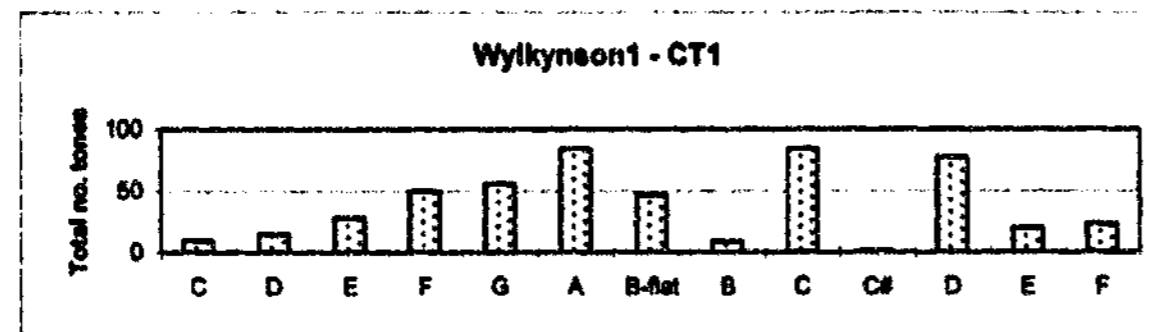
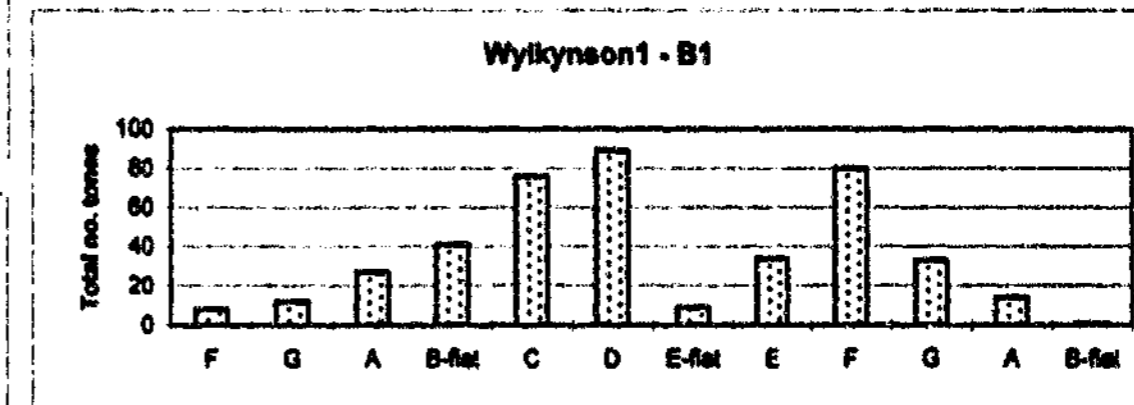
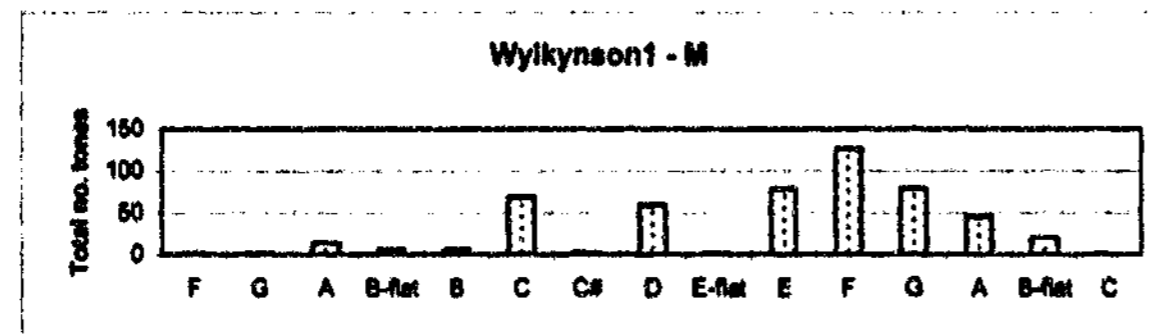
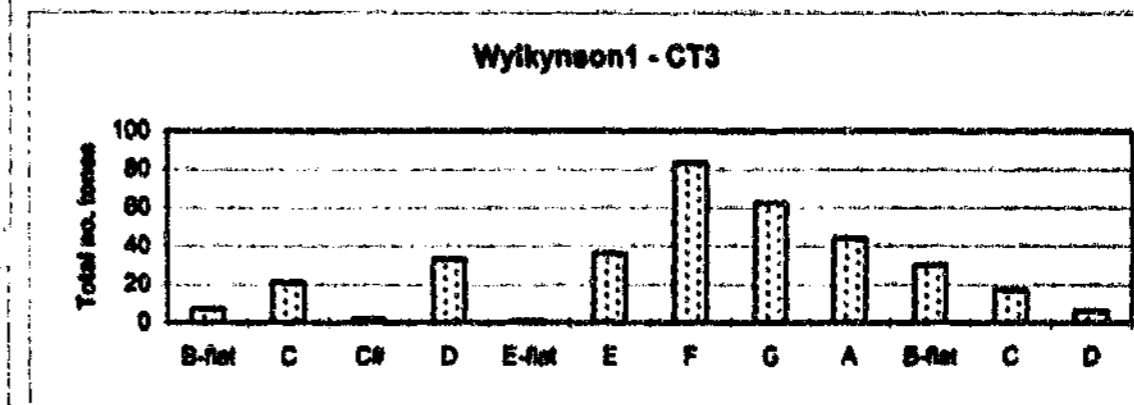
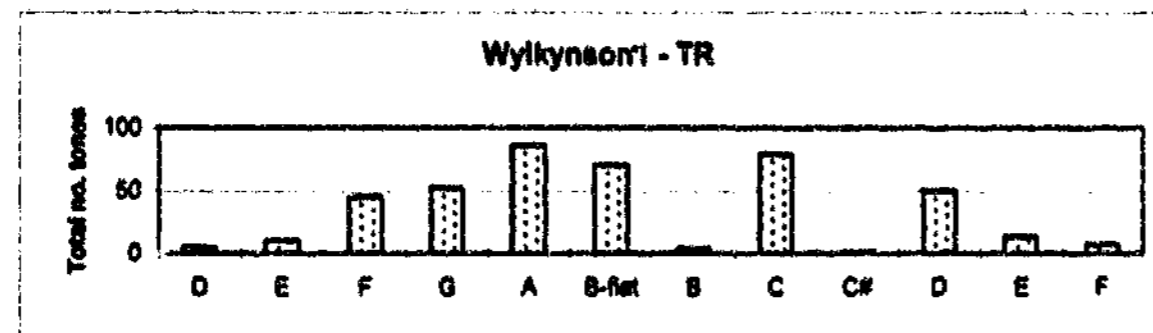
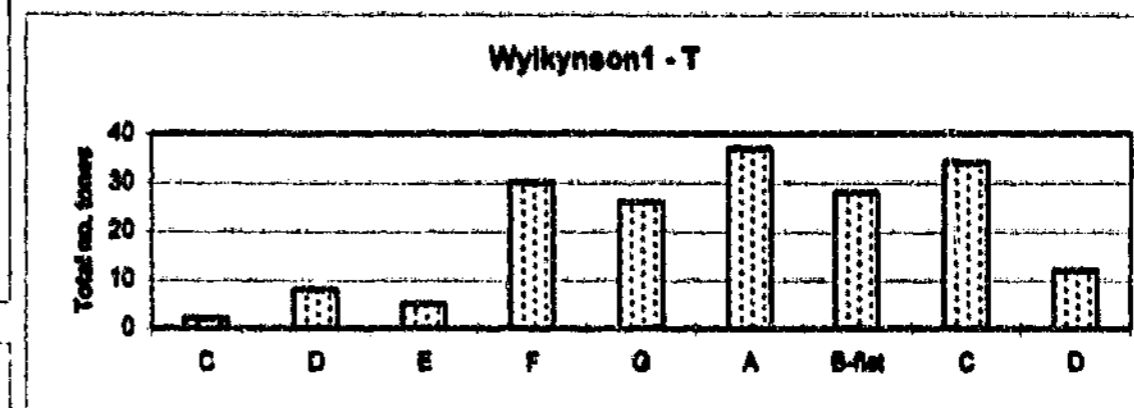
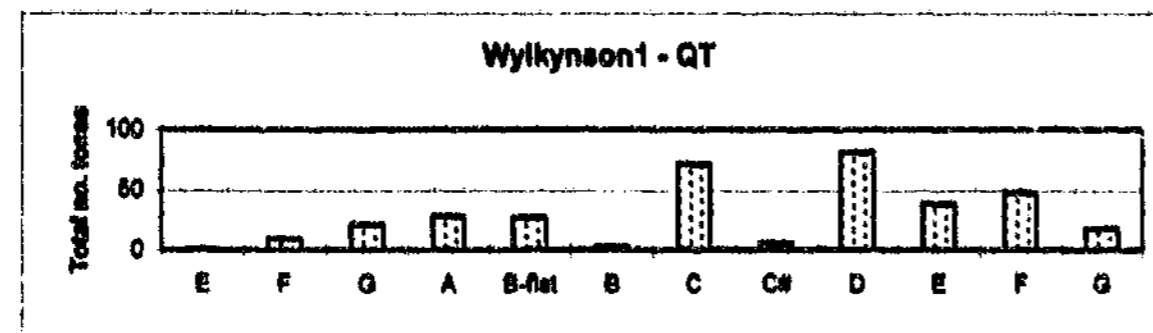


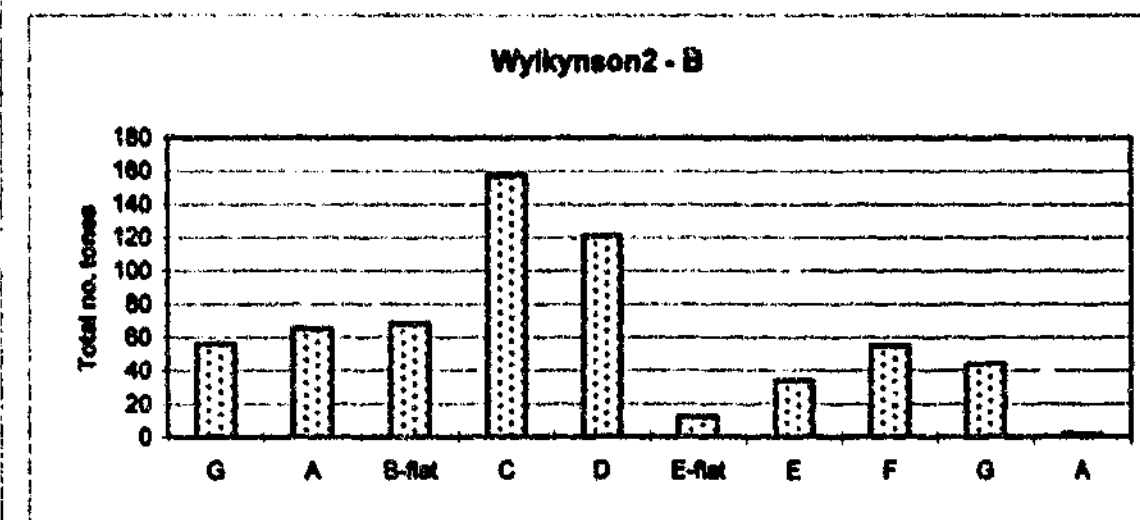
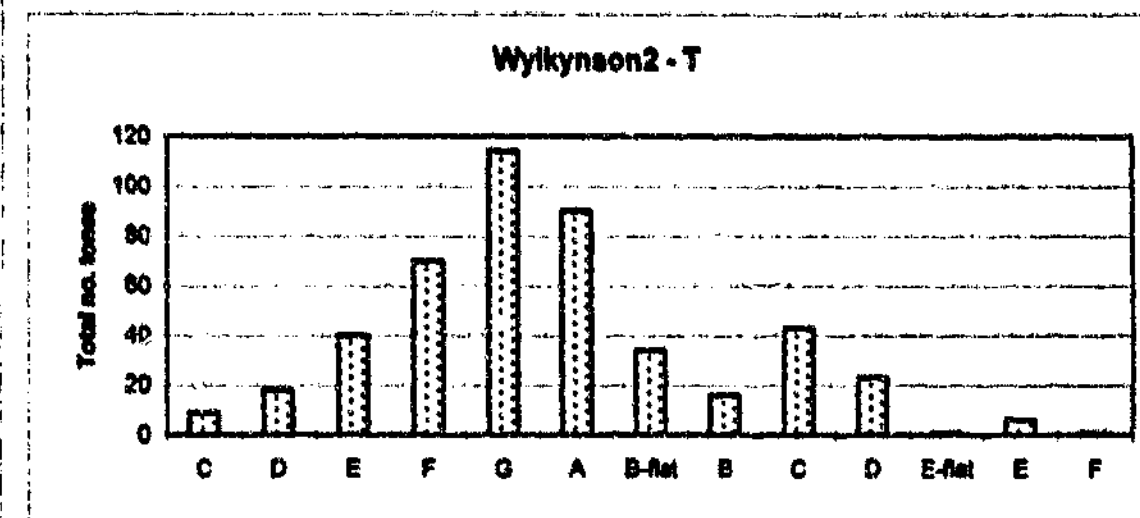
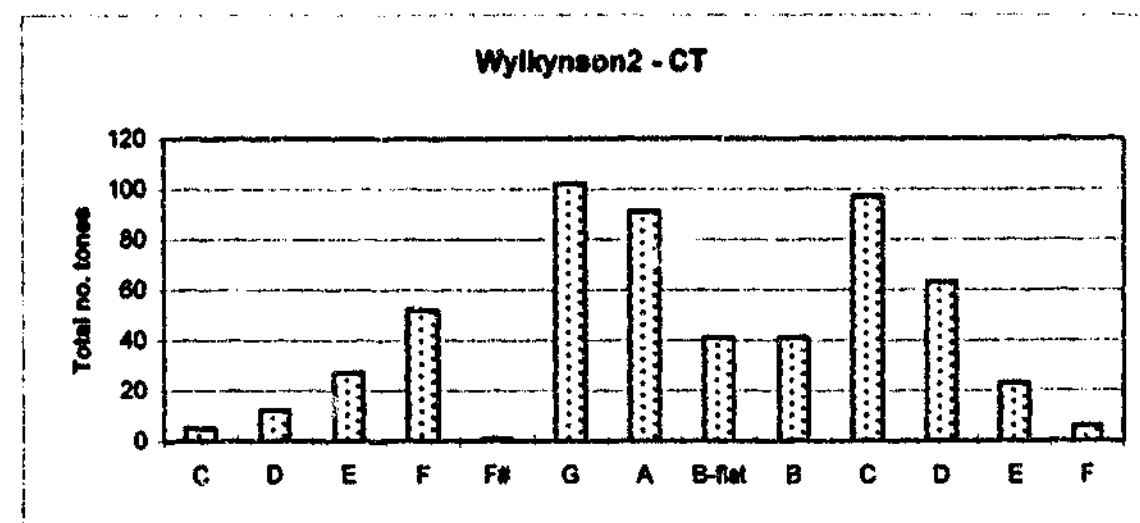
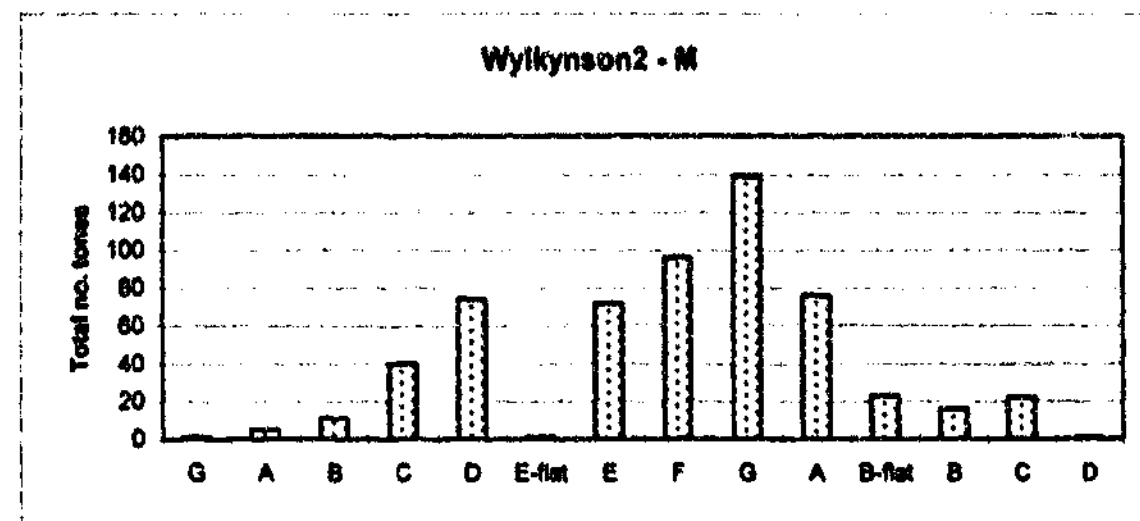
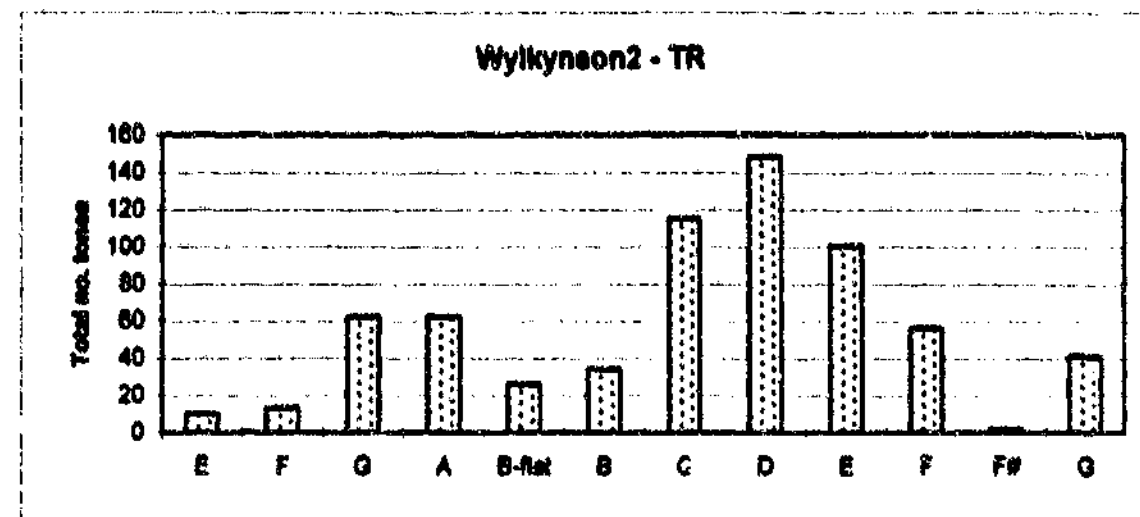






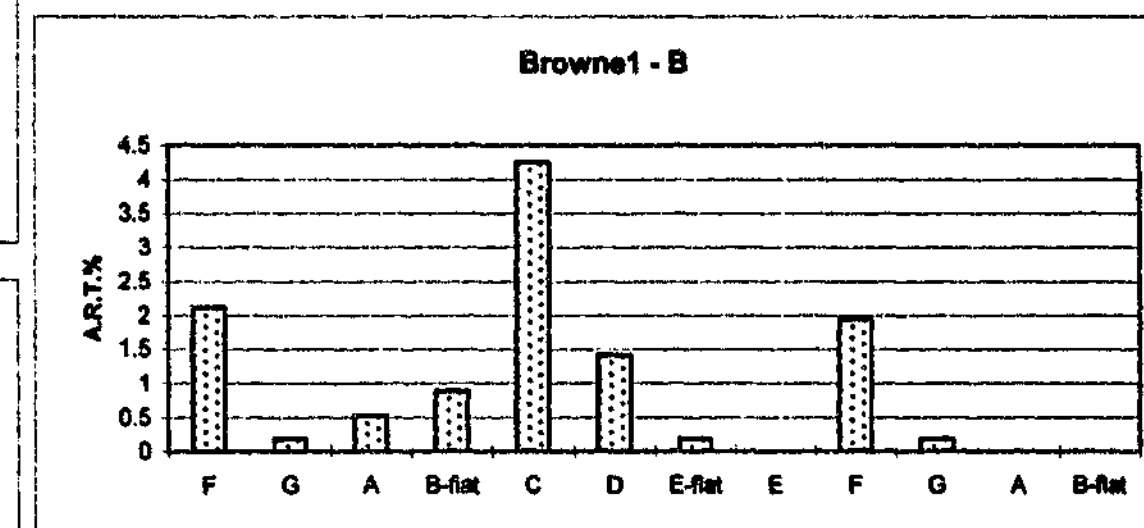
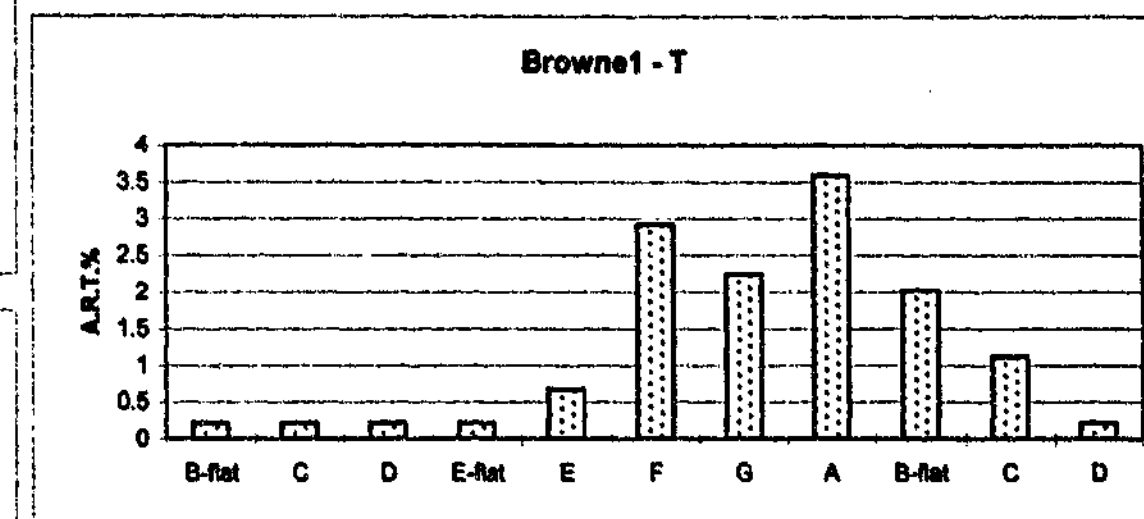
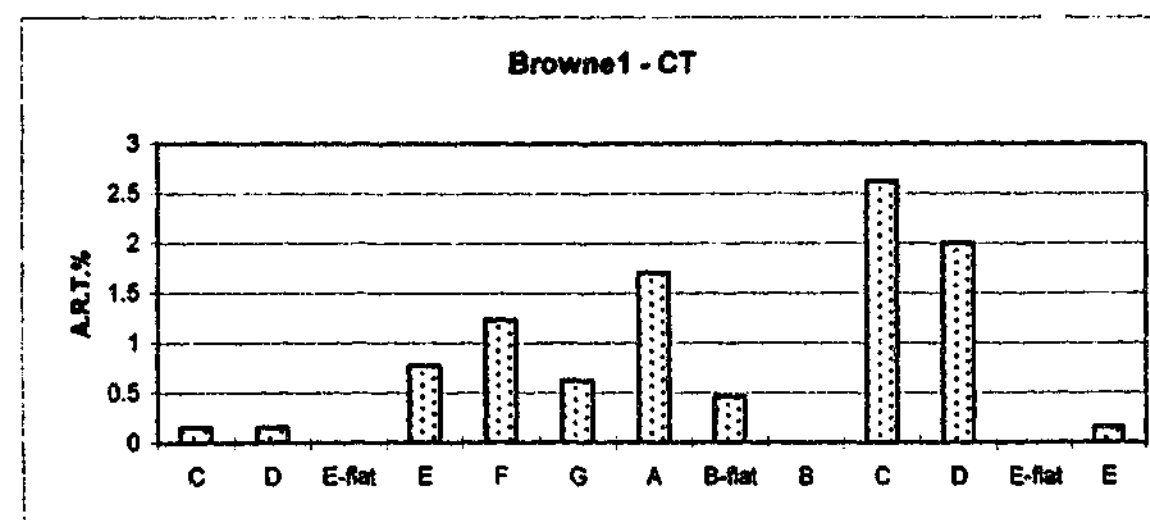
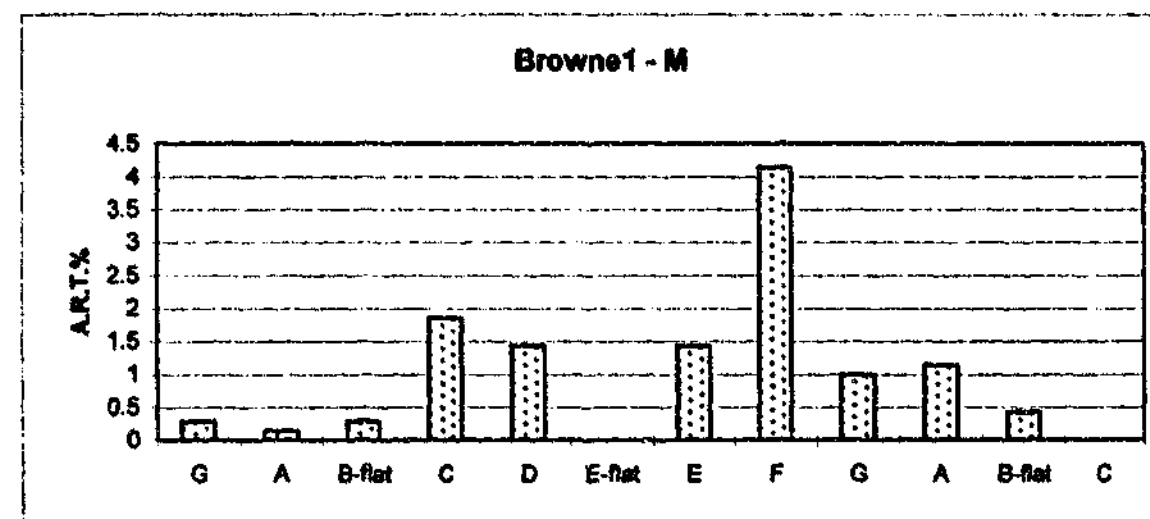
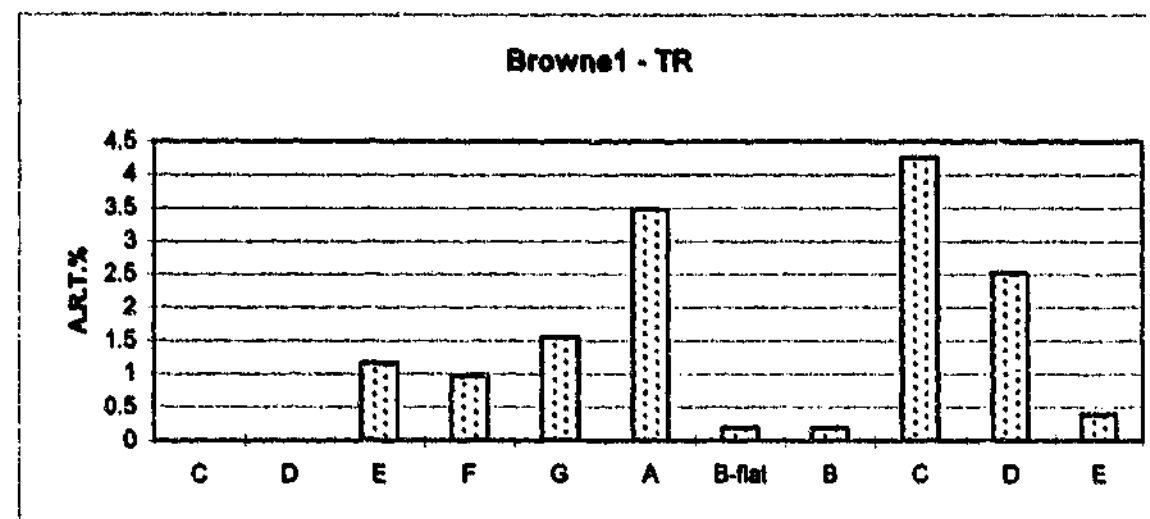


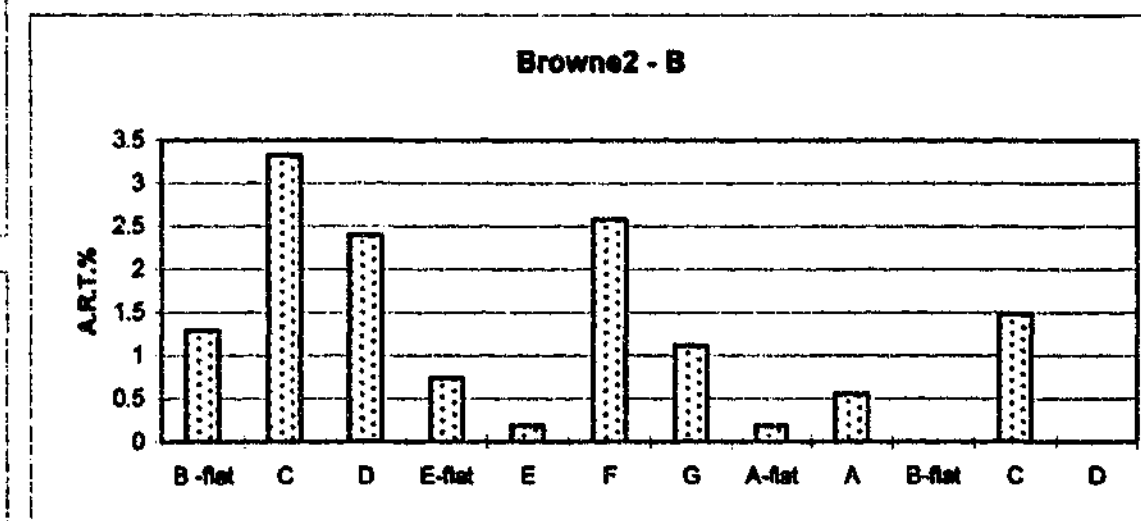
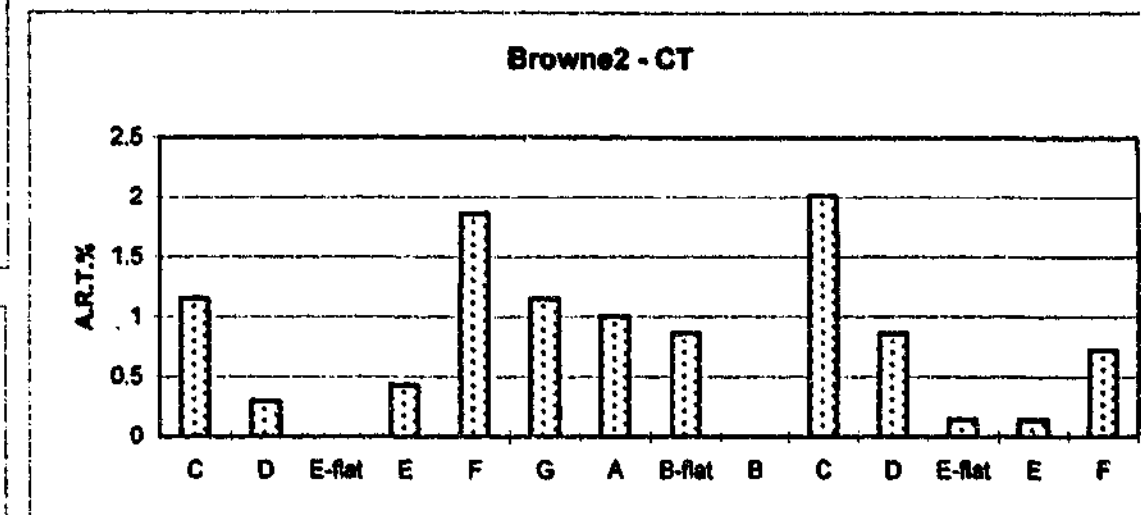
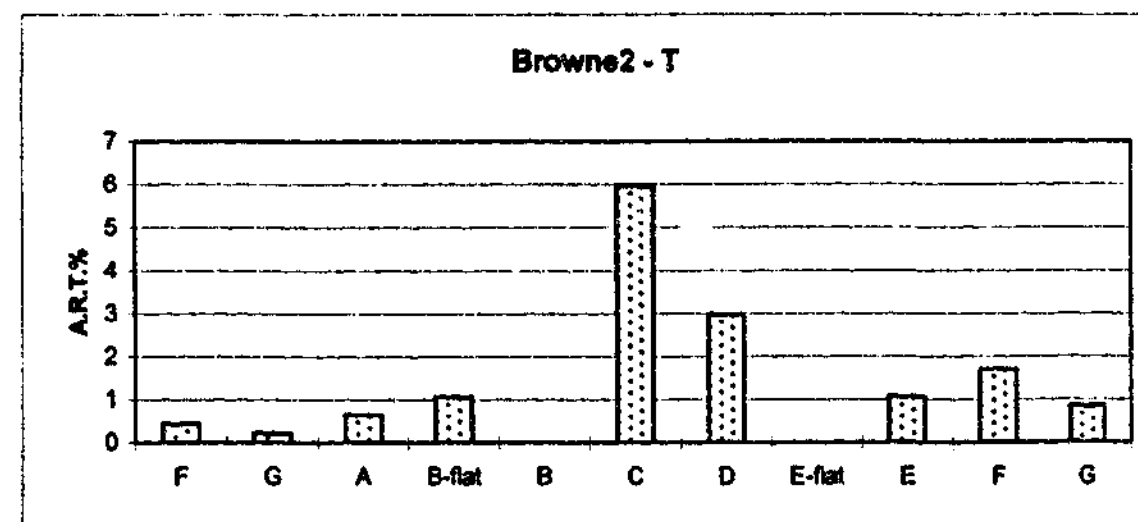
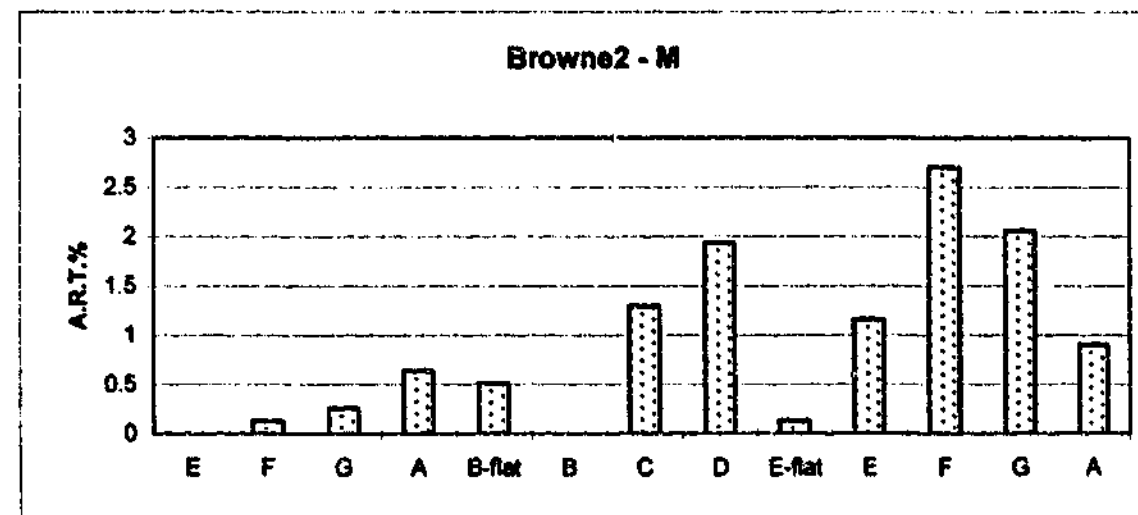
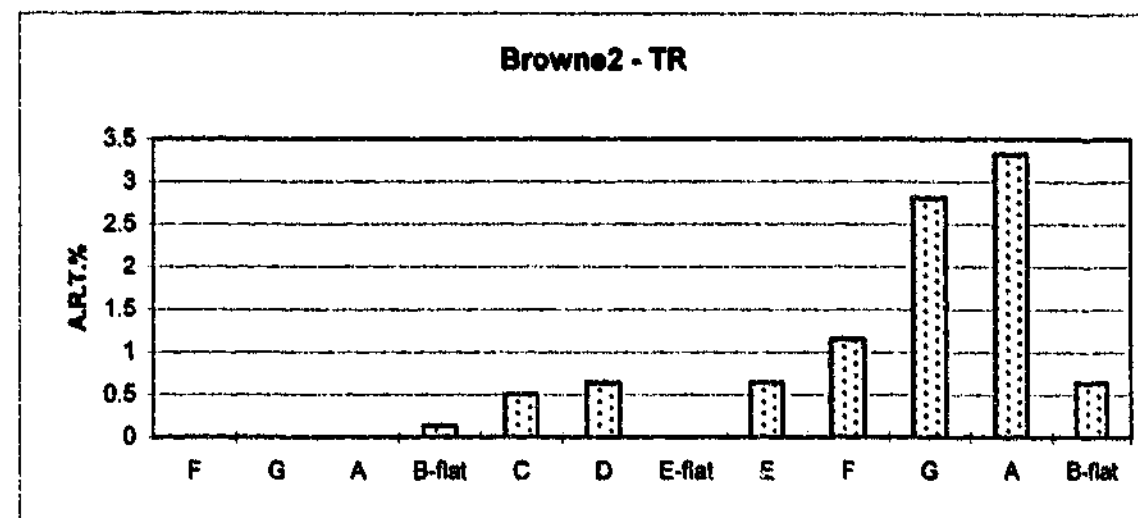


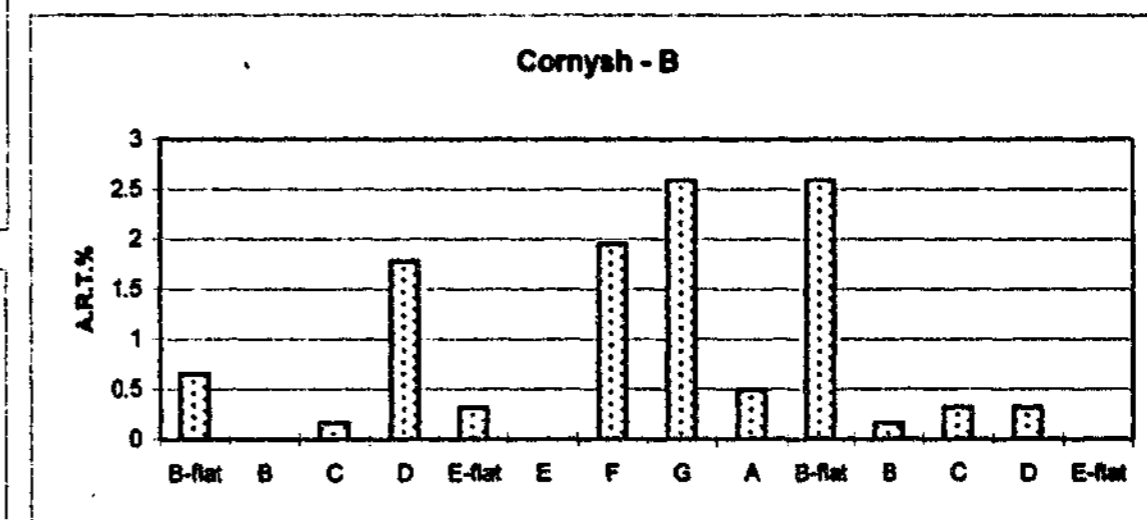
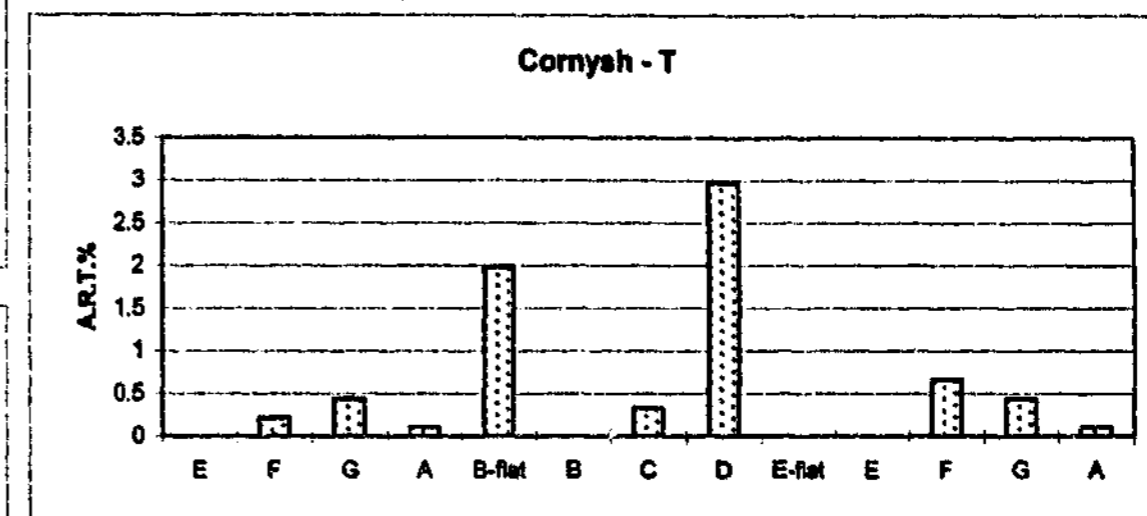
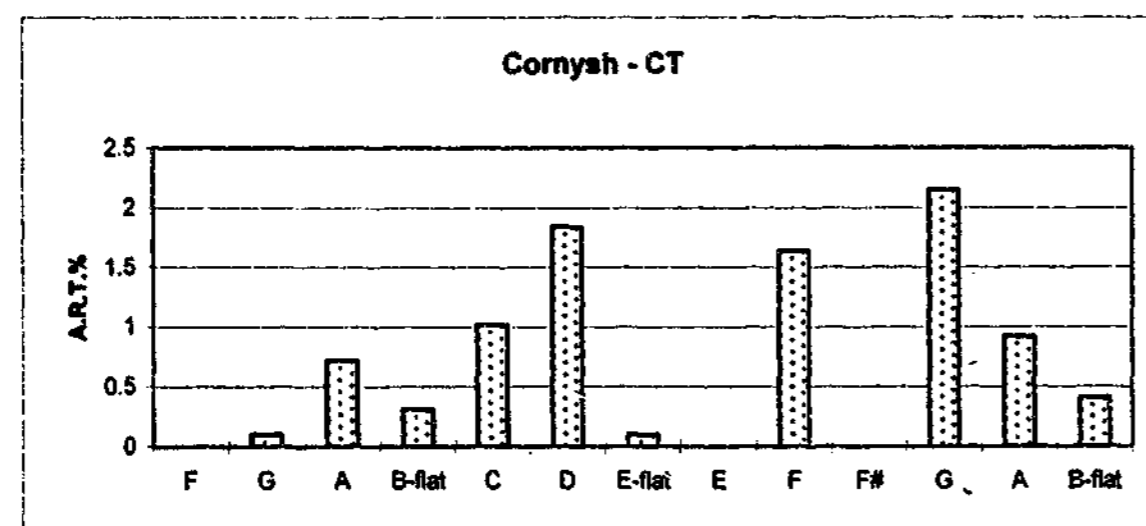
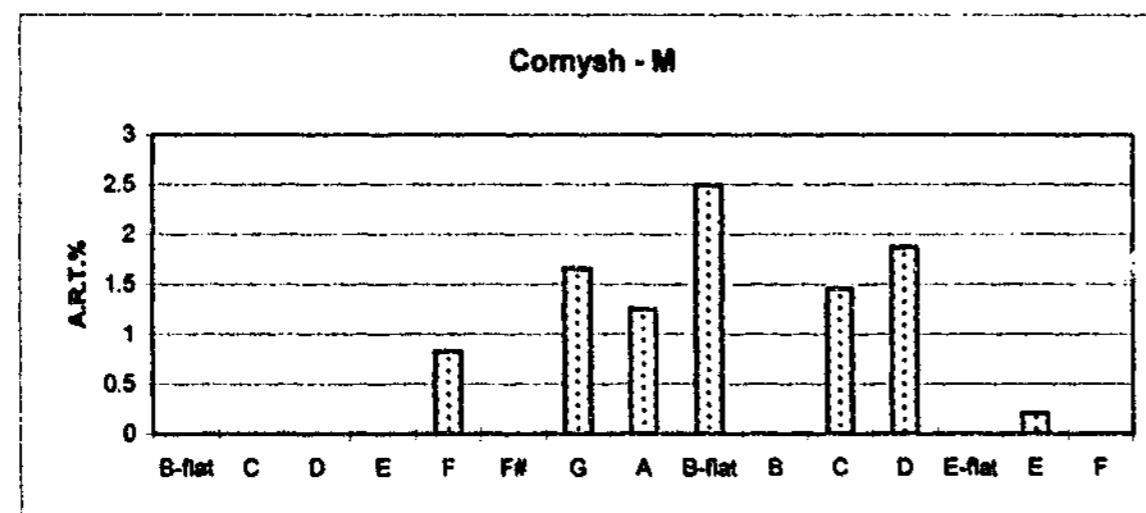
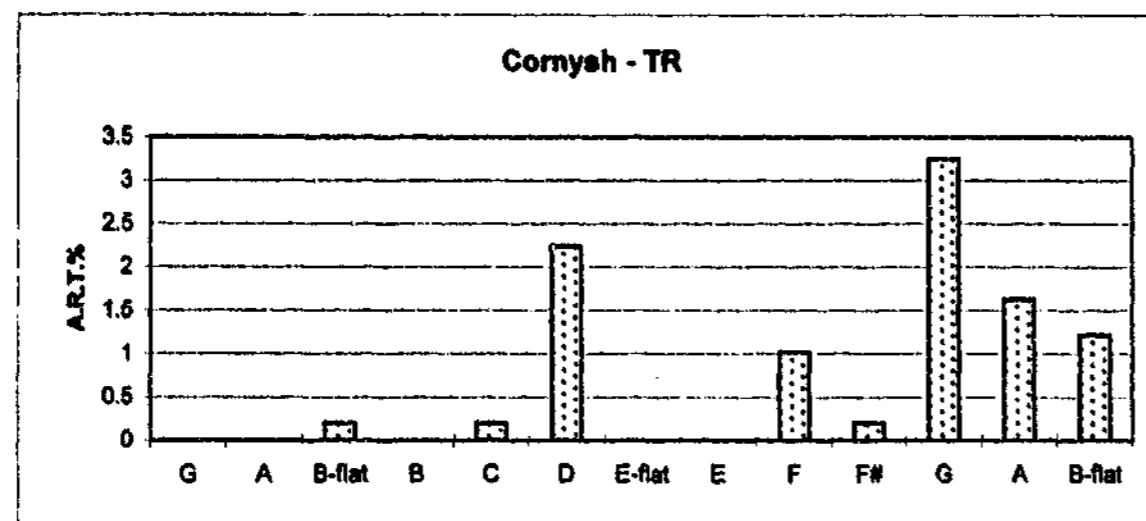


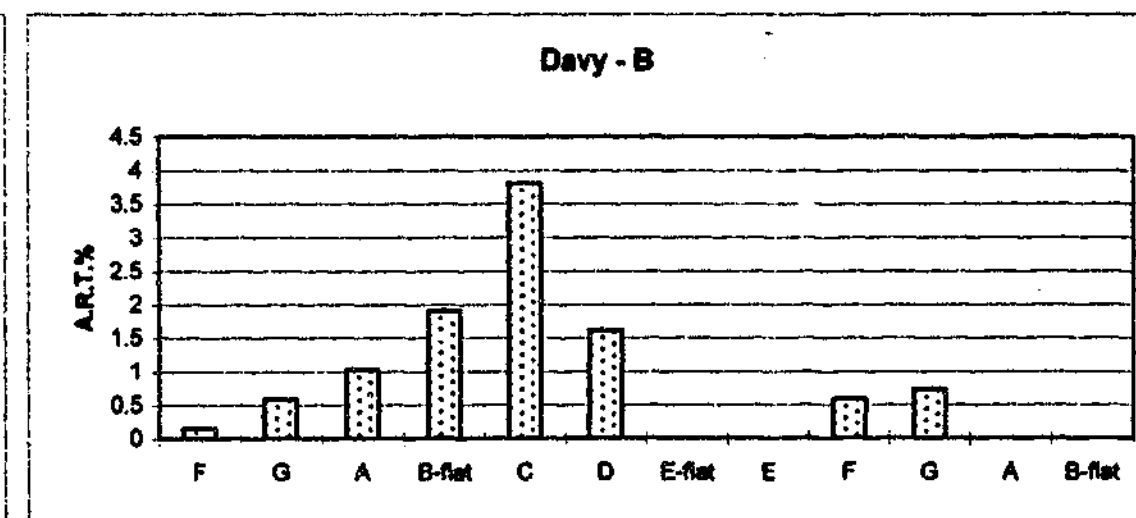
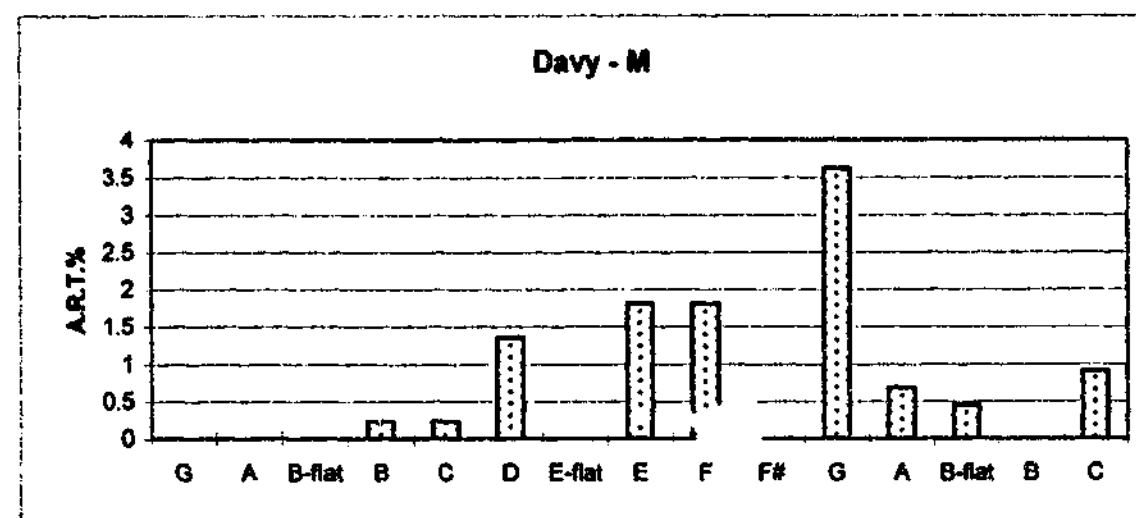
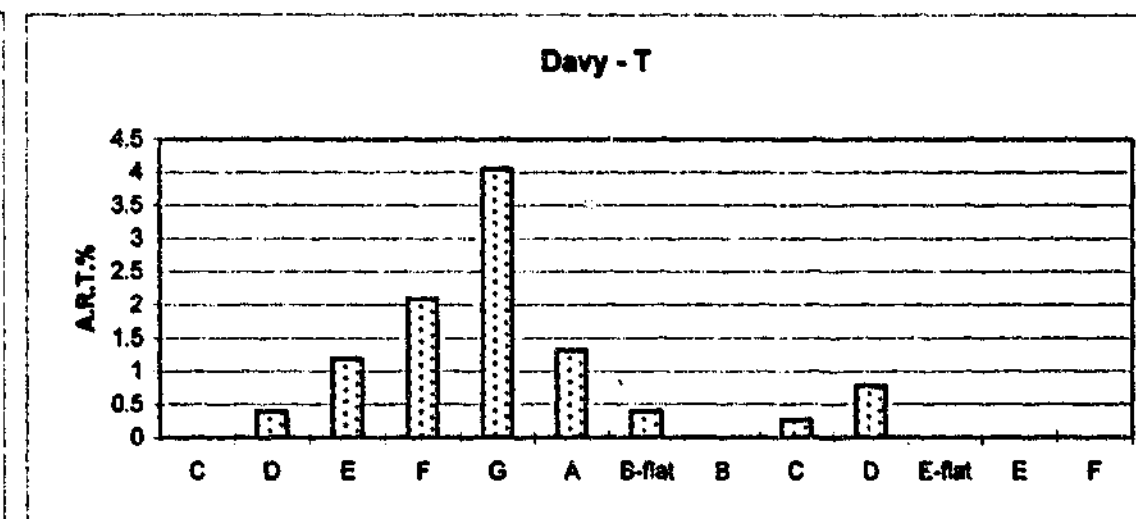
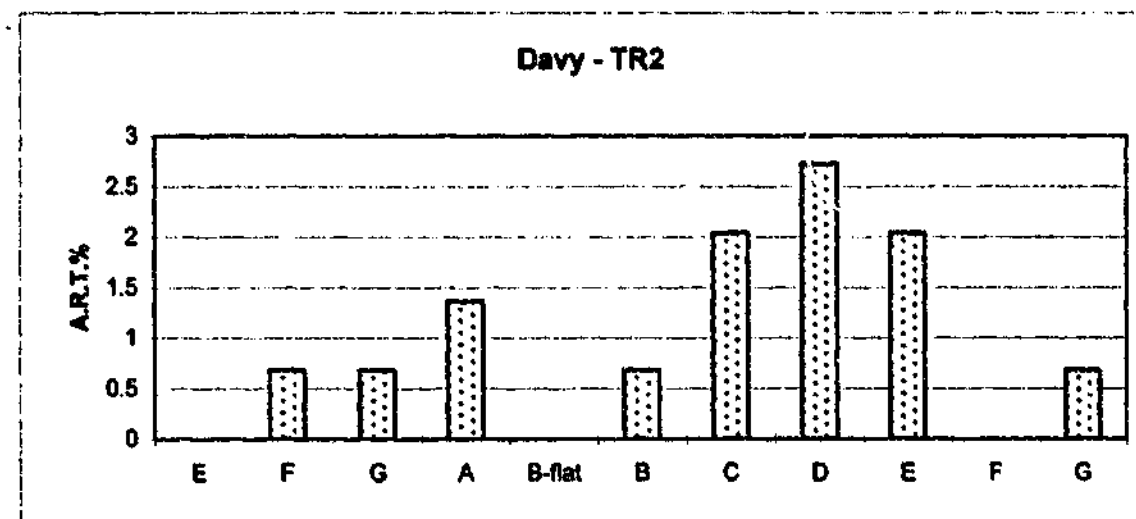
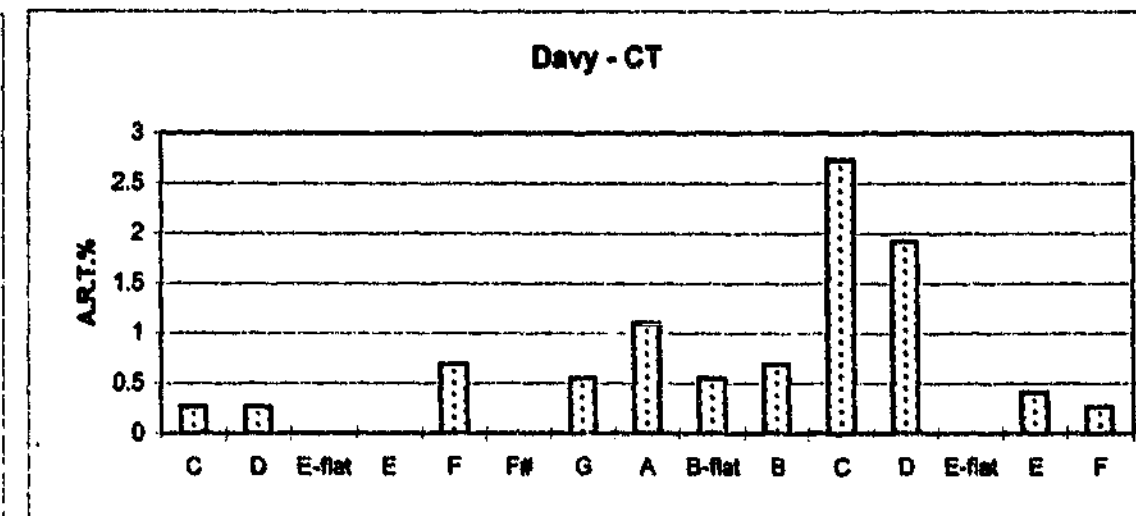
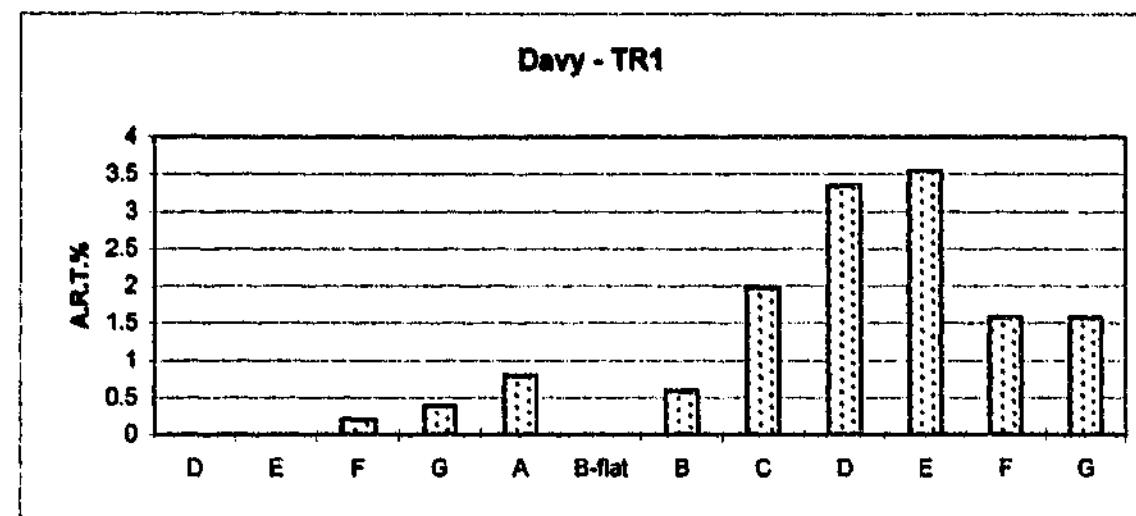
PERCENTAGES OF ADJACENT REPEATED TONES:

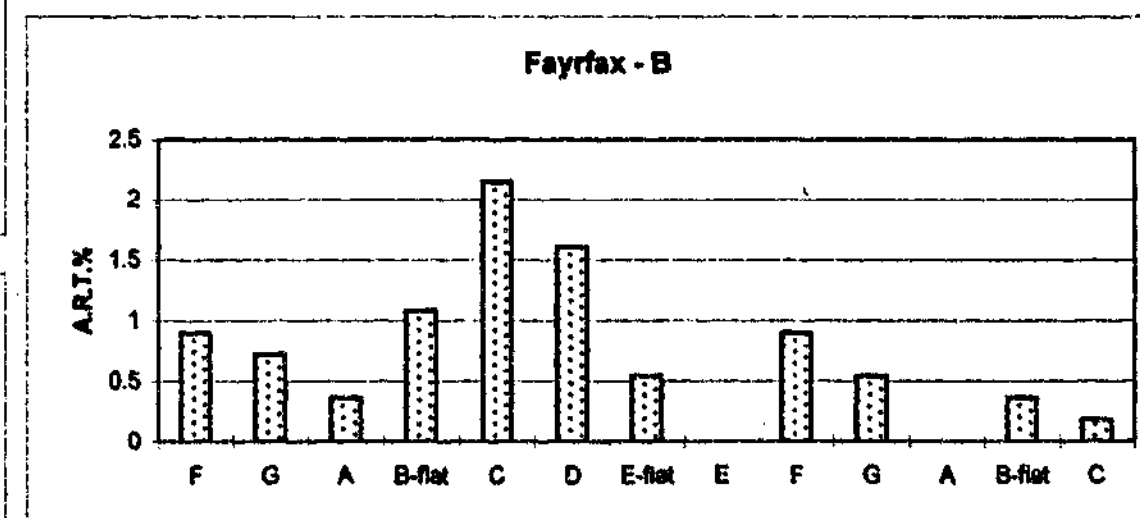
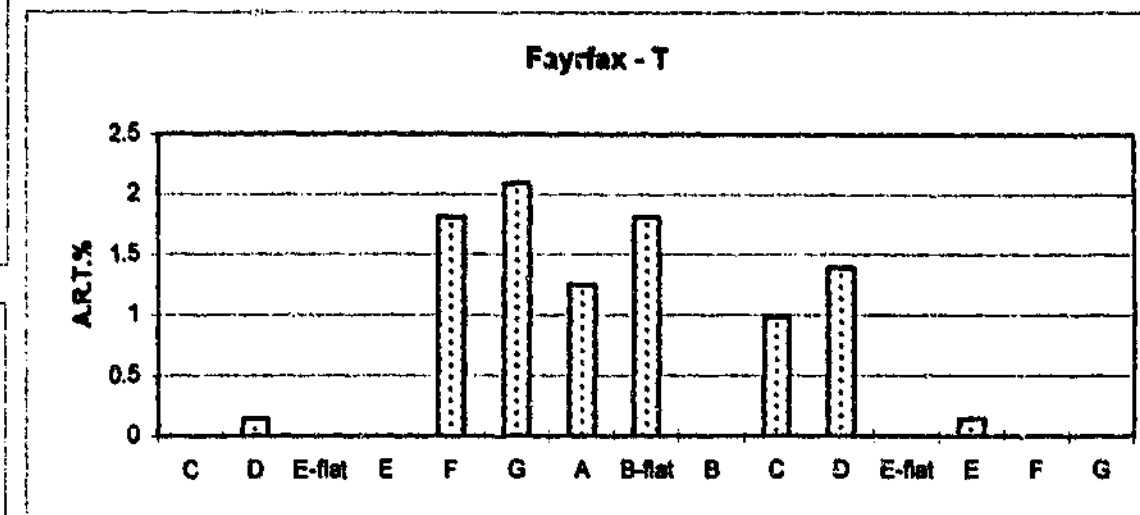
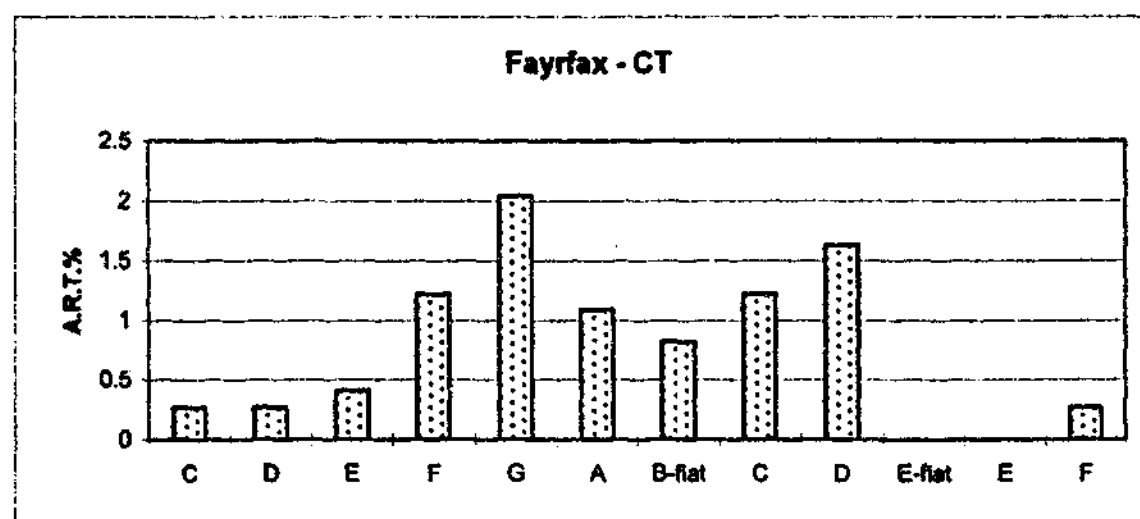
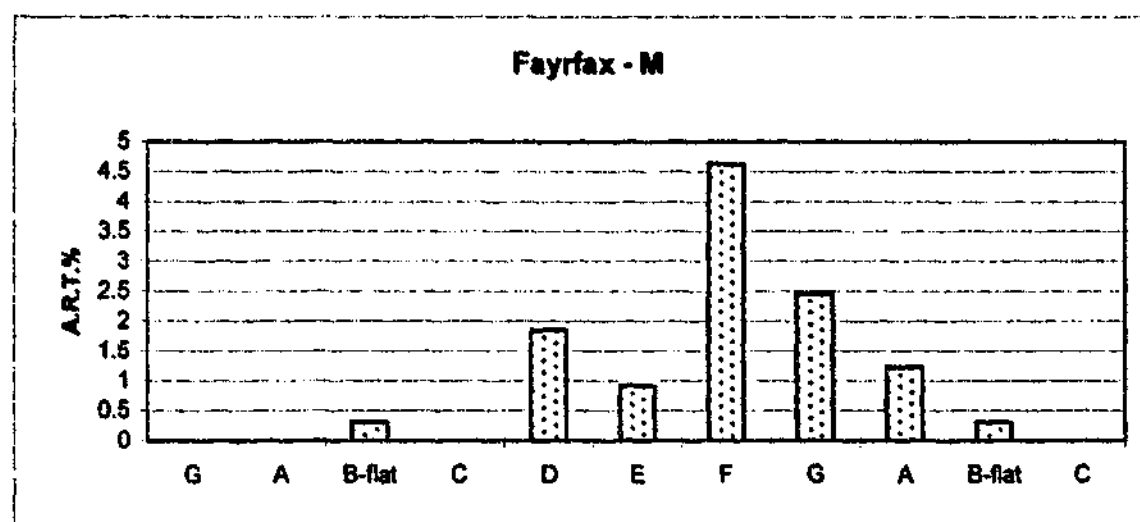
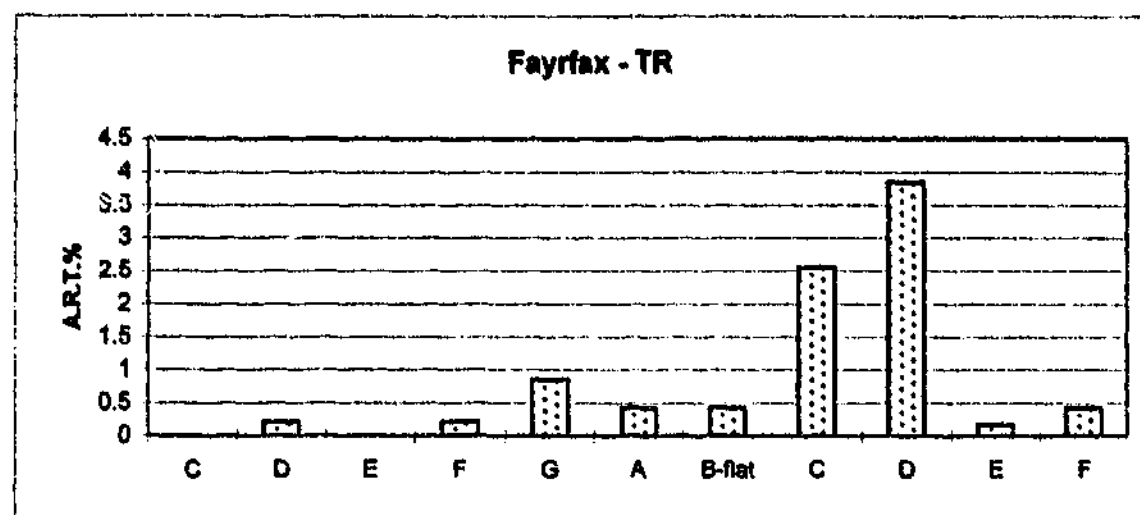
PER VOCAL LINE, FOR EACH WORK

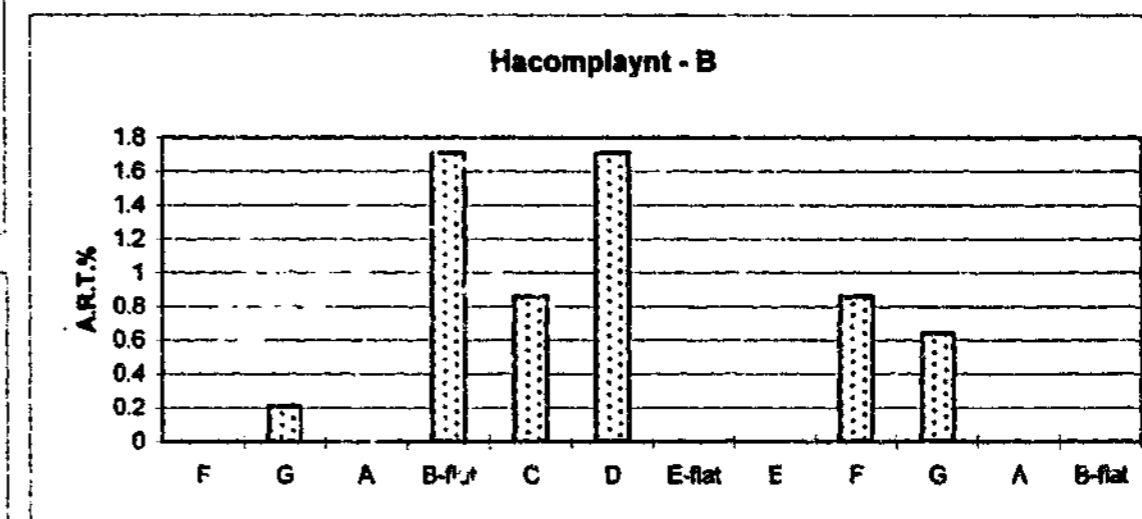
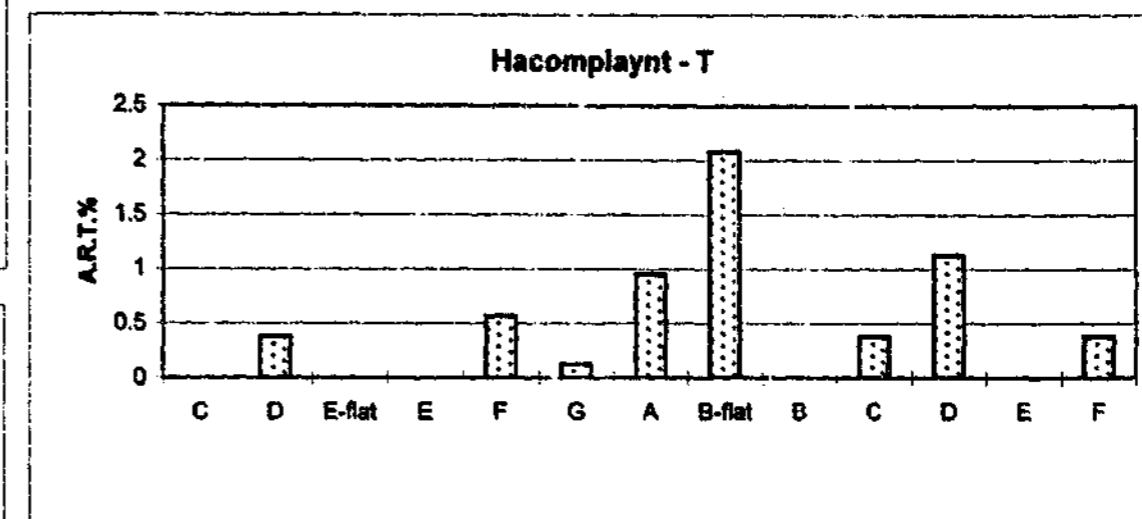
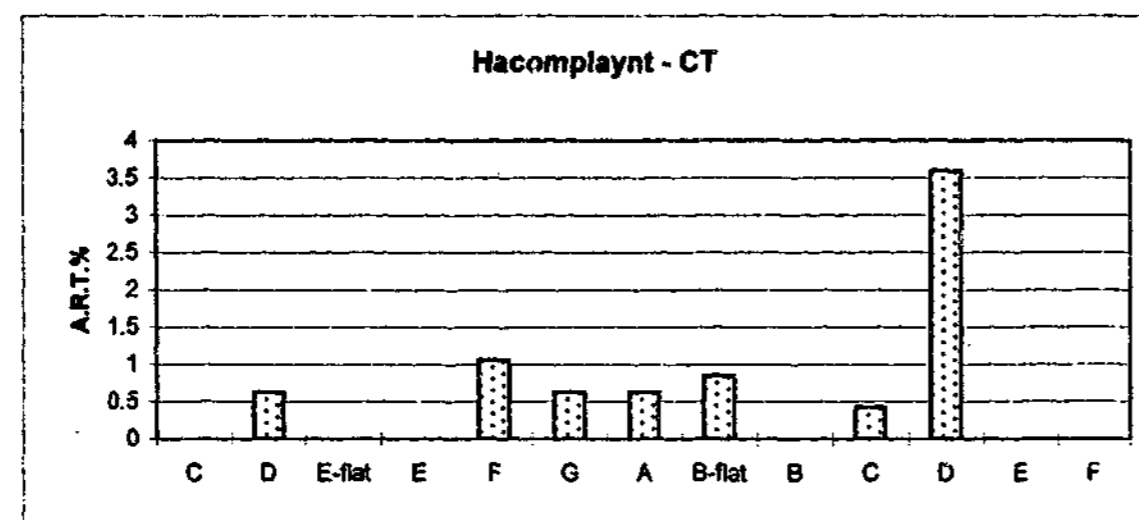
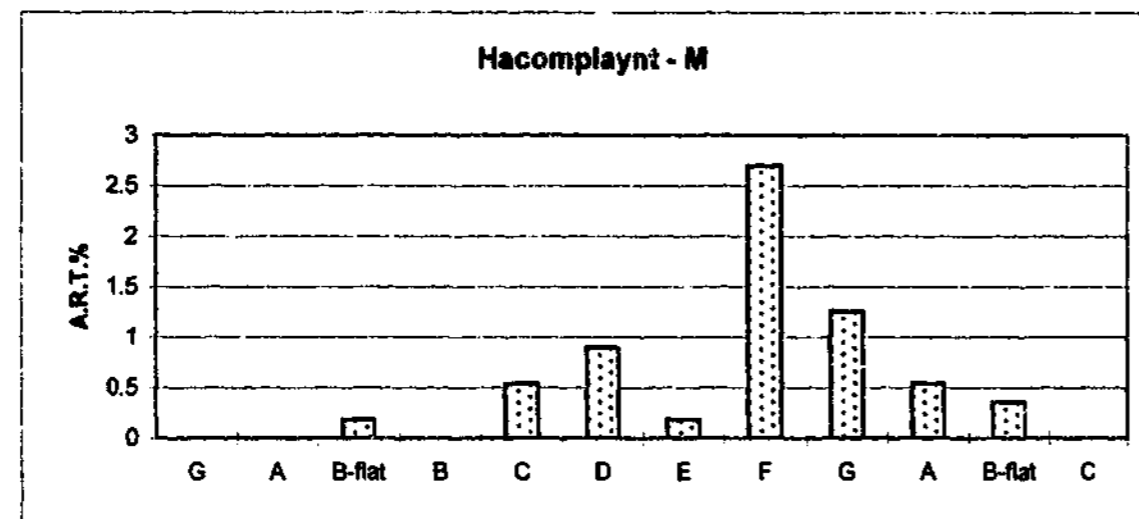
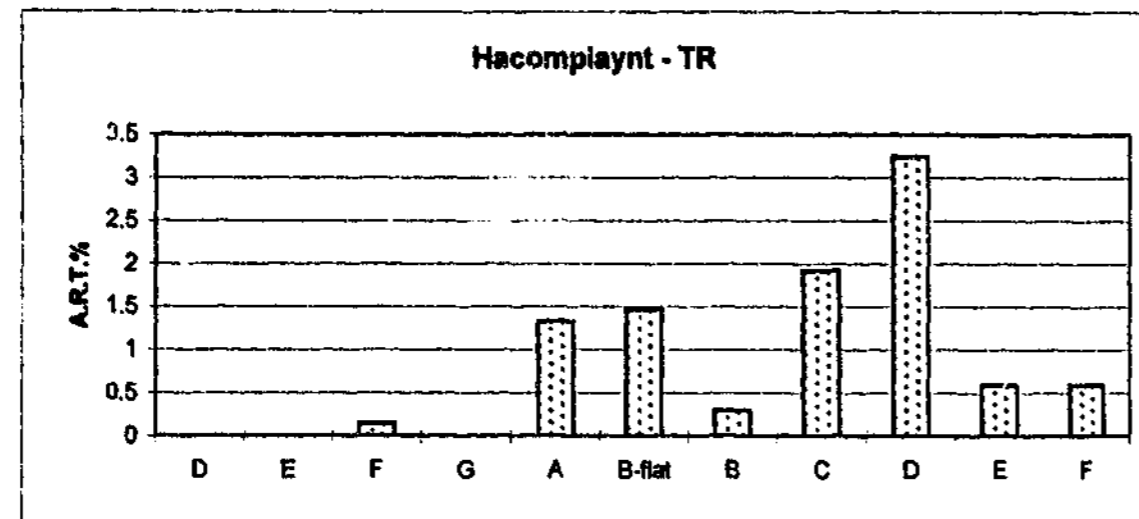


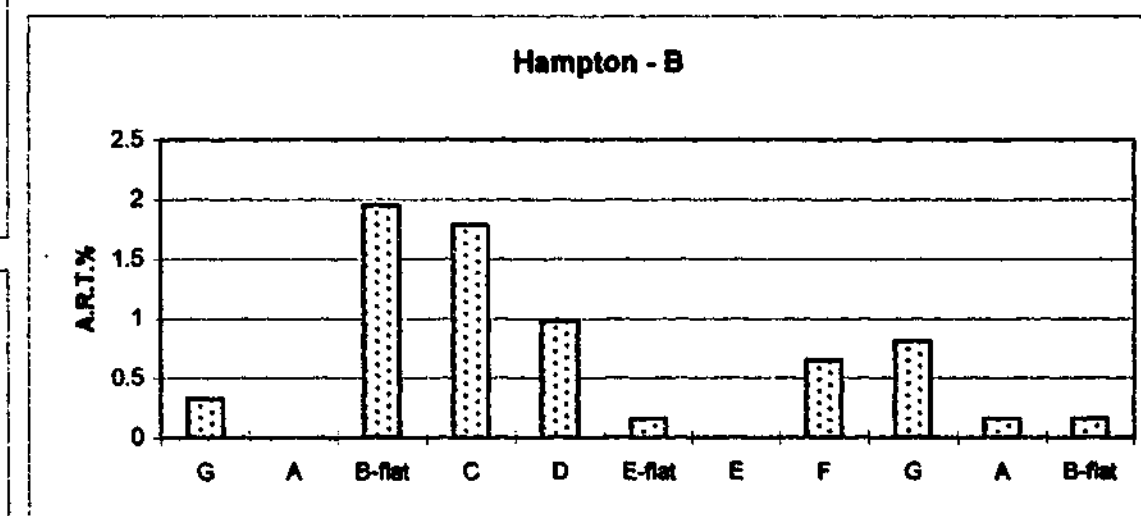
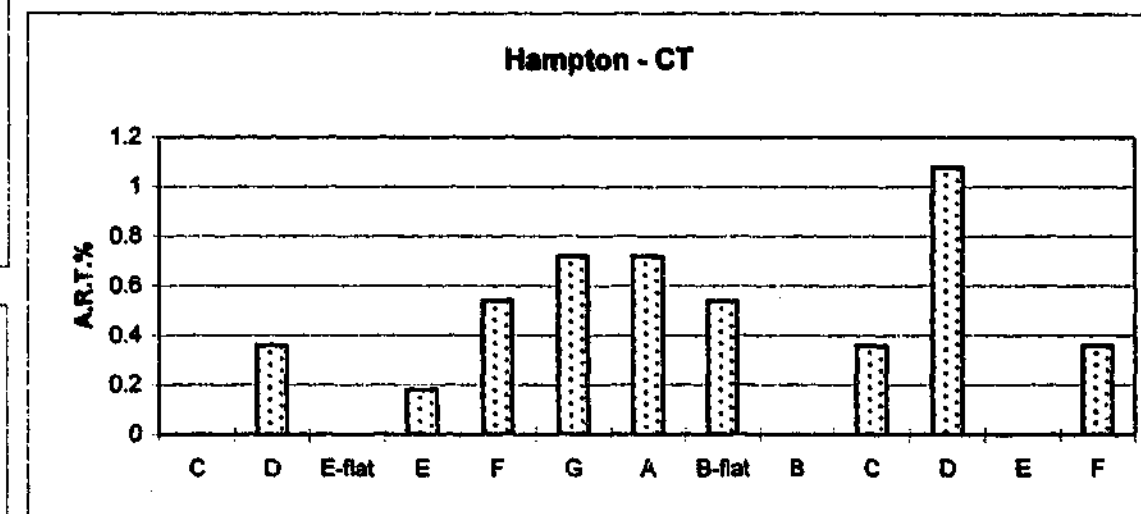
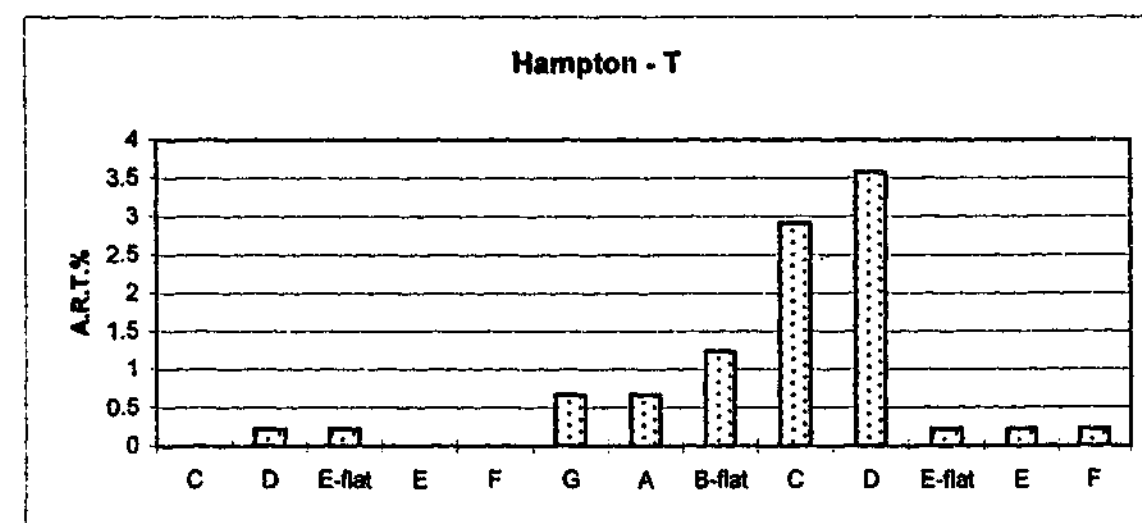
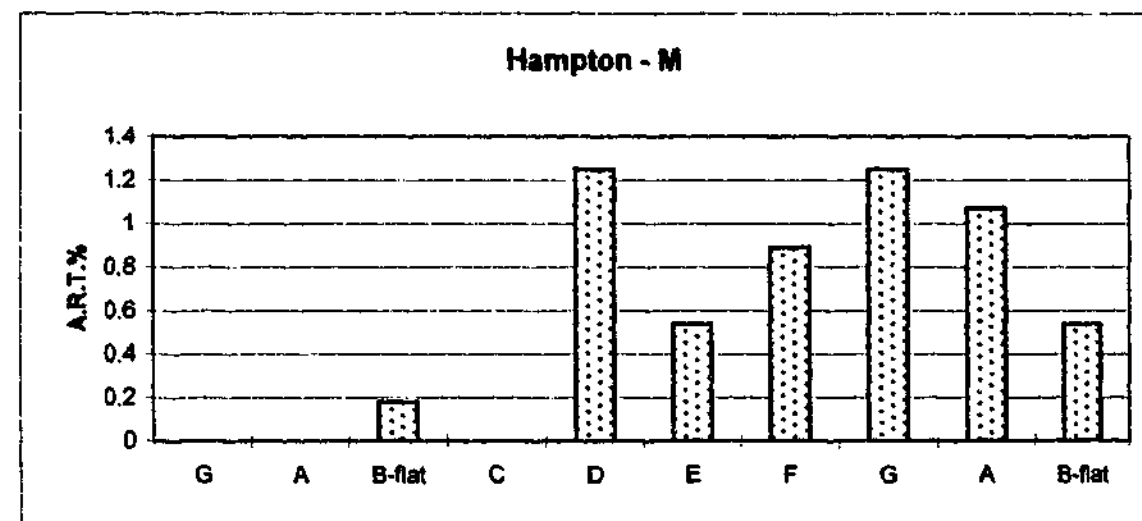
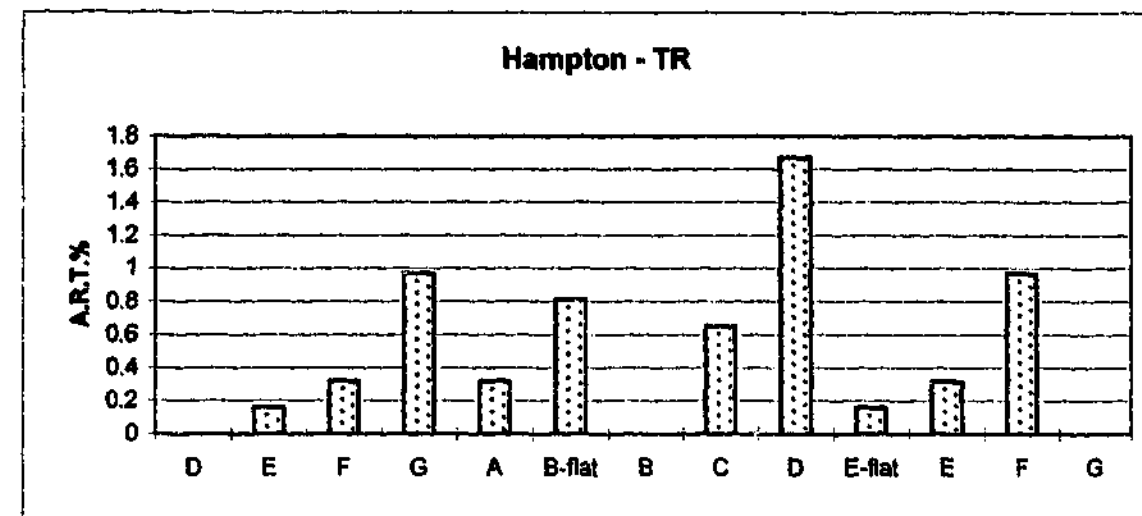


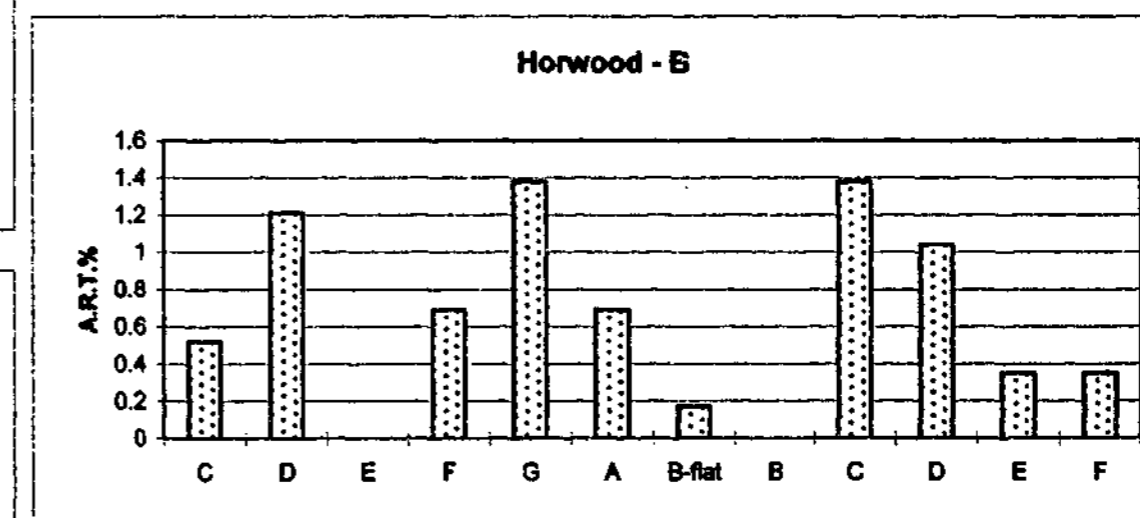
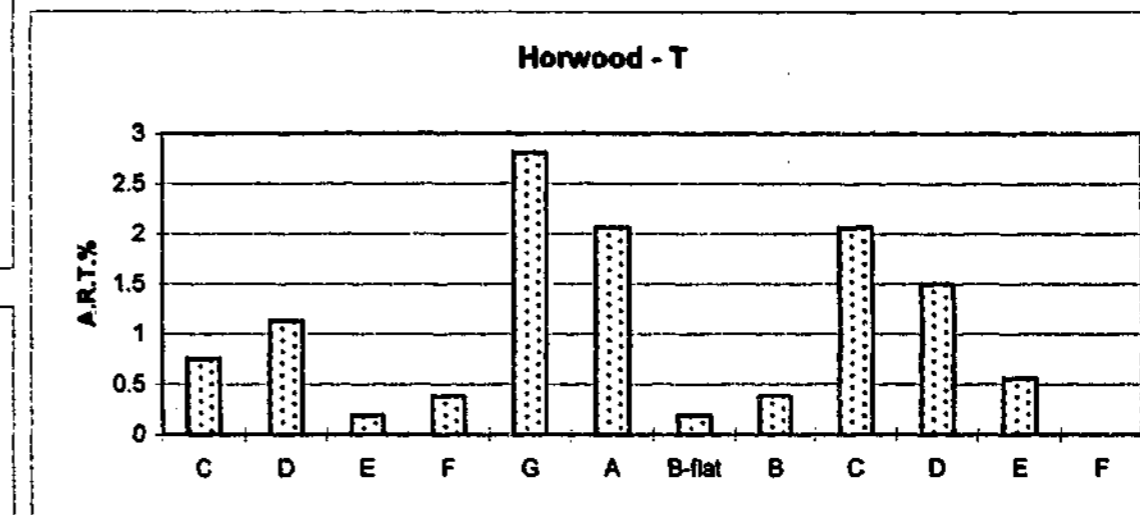
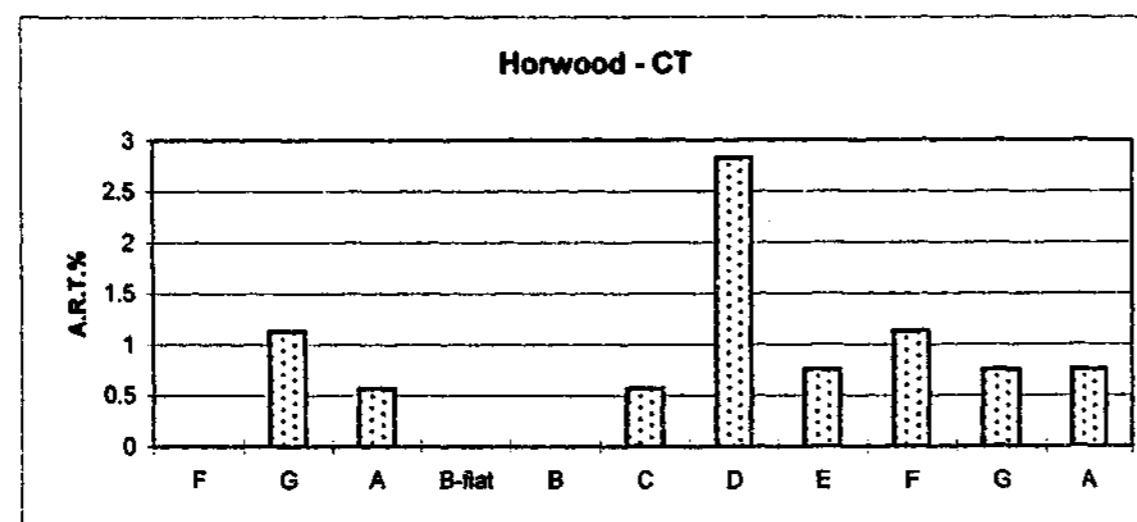
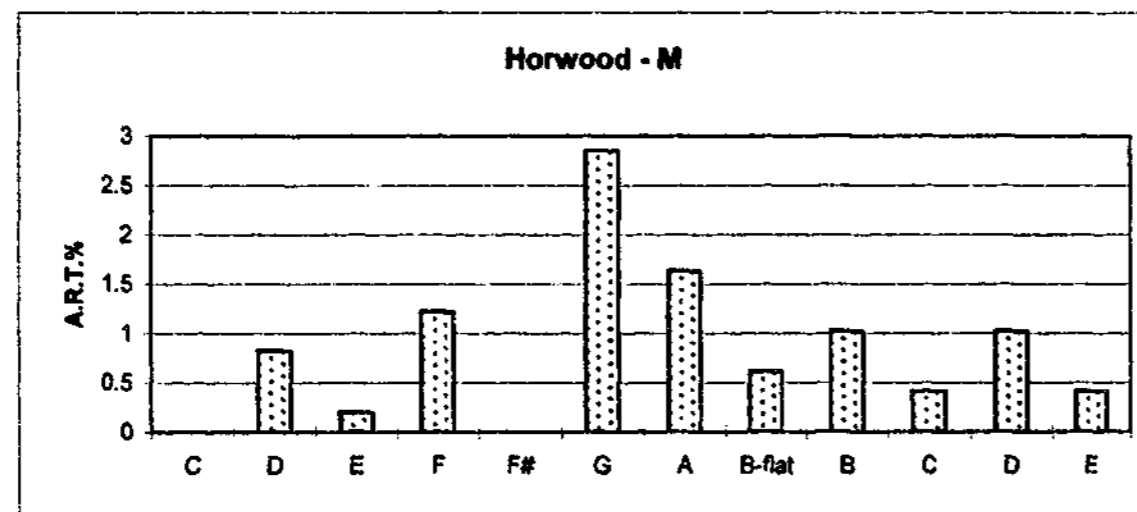
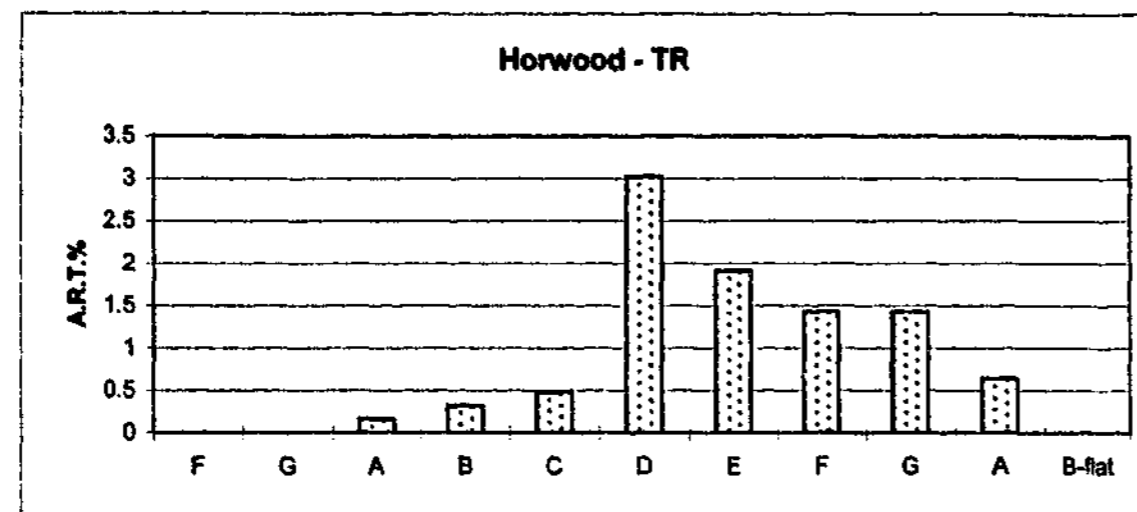


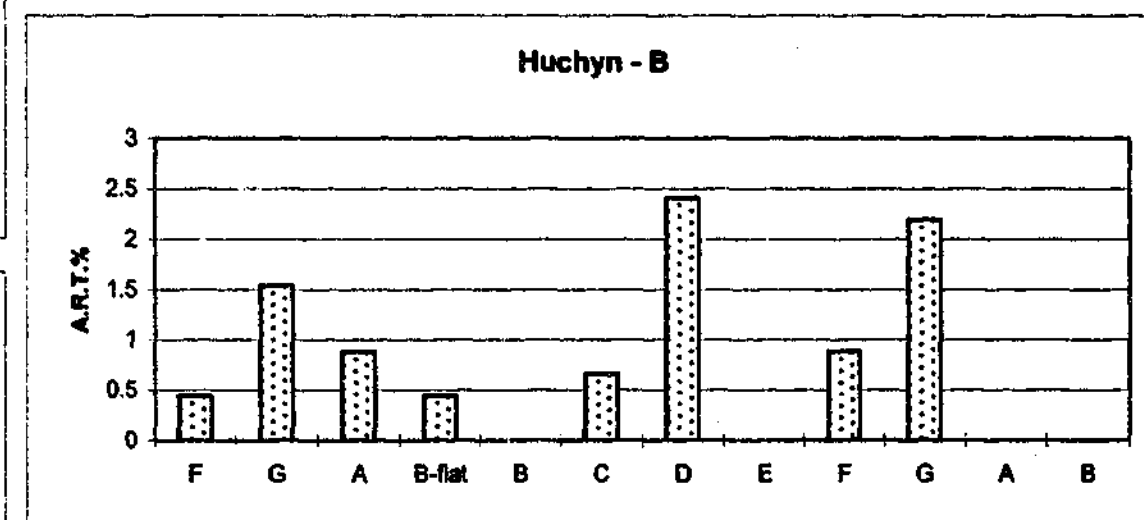
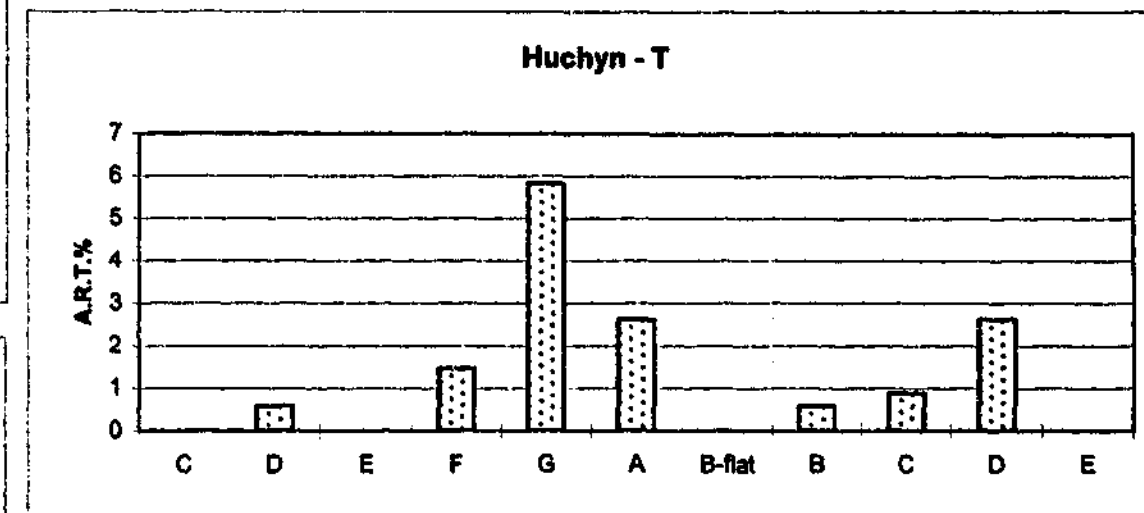
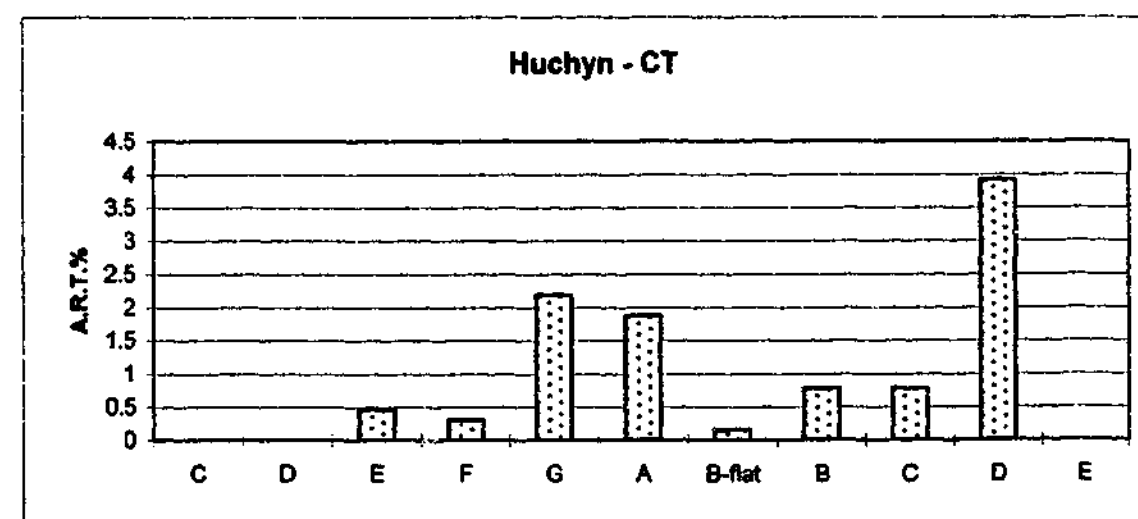
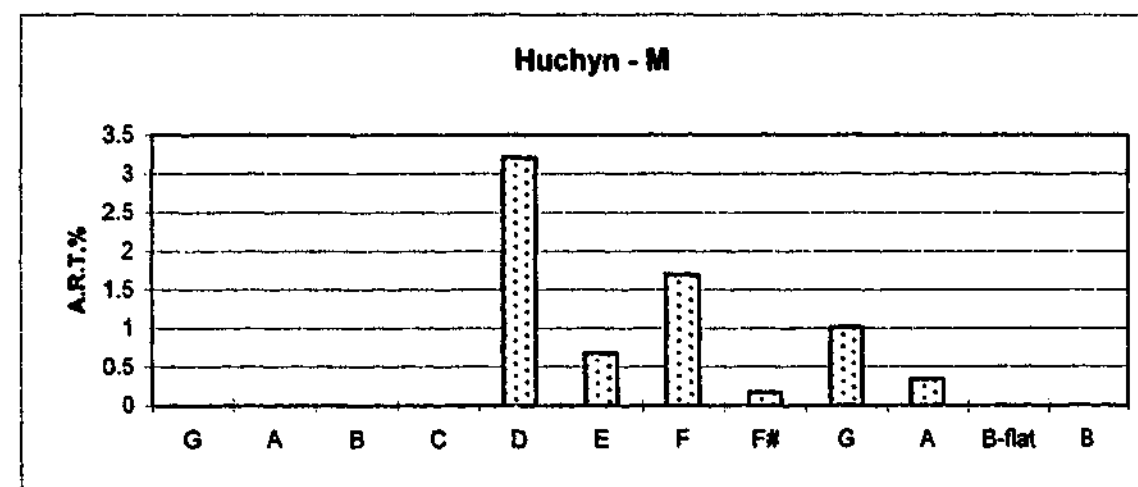
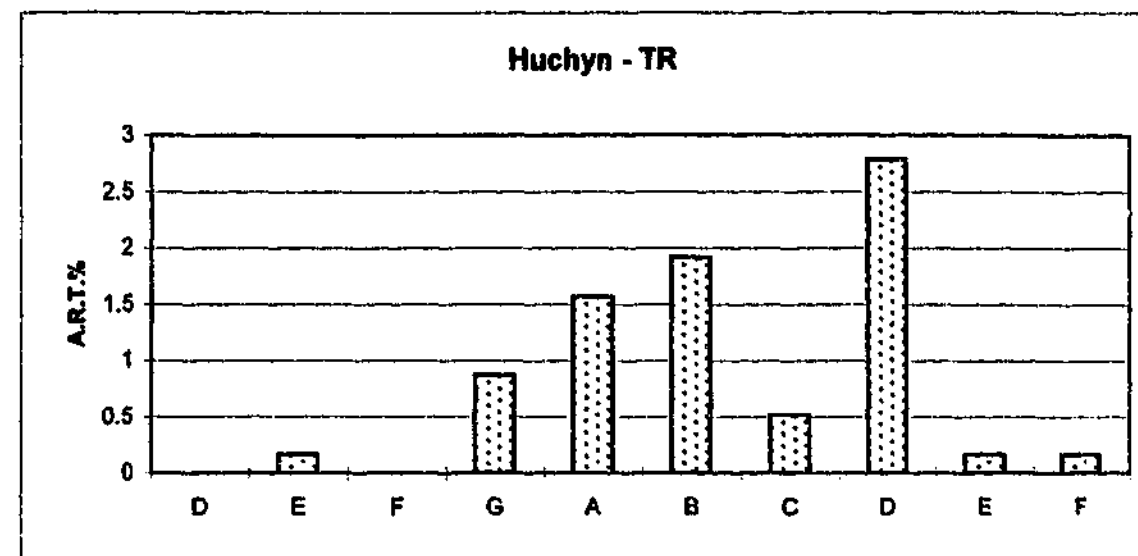


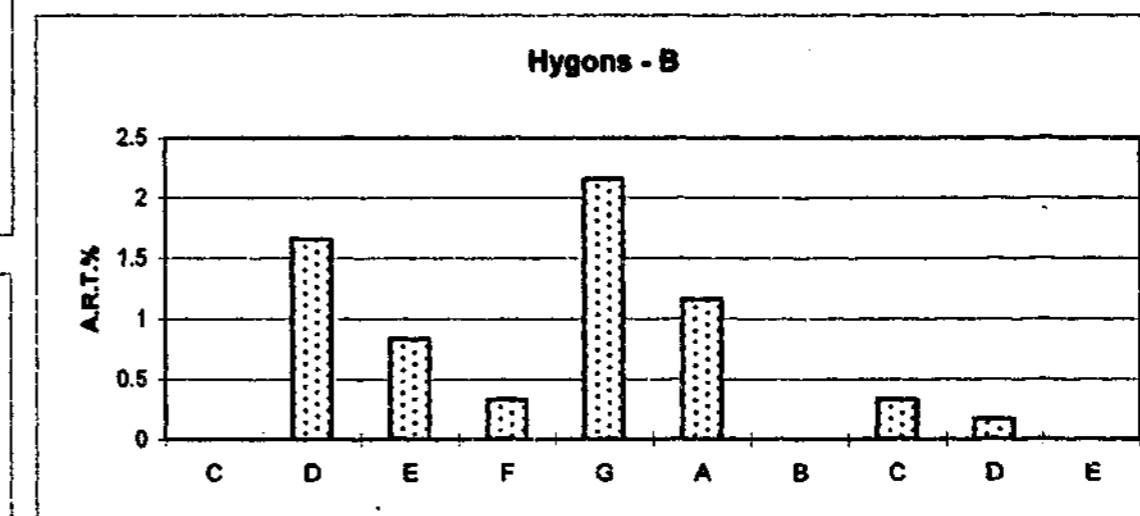
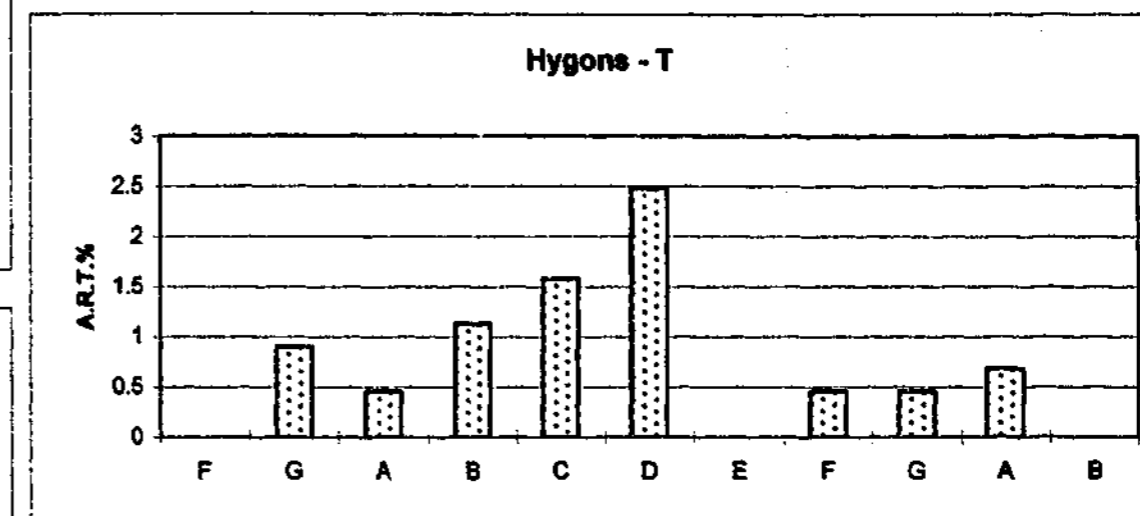
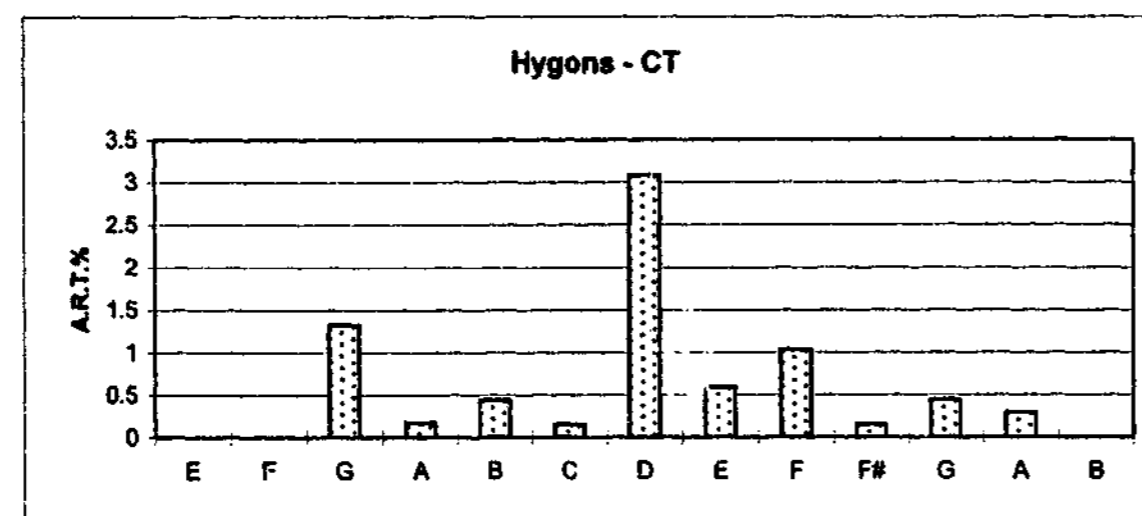
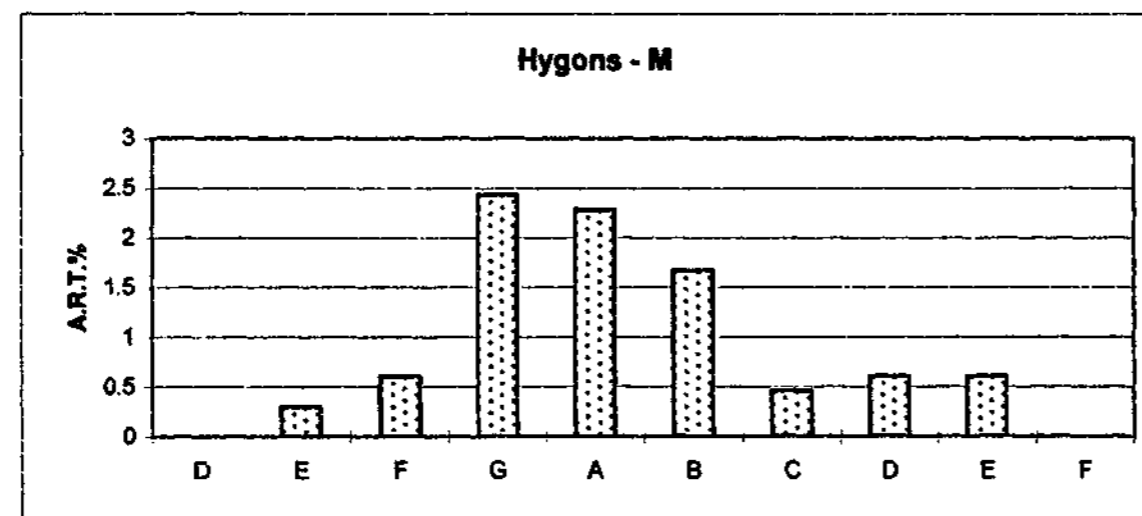
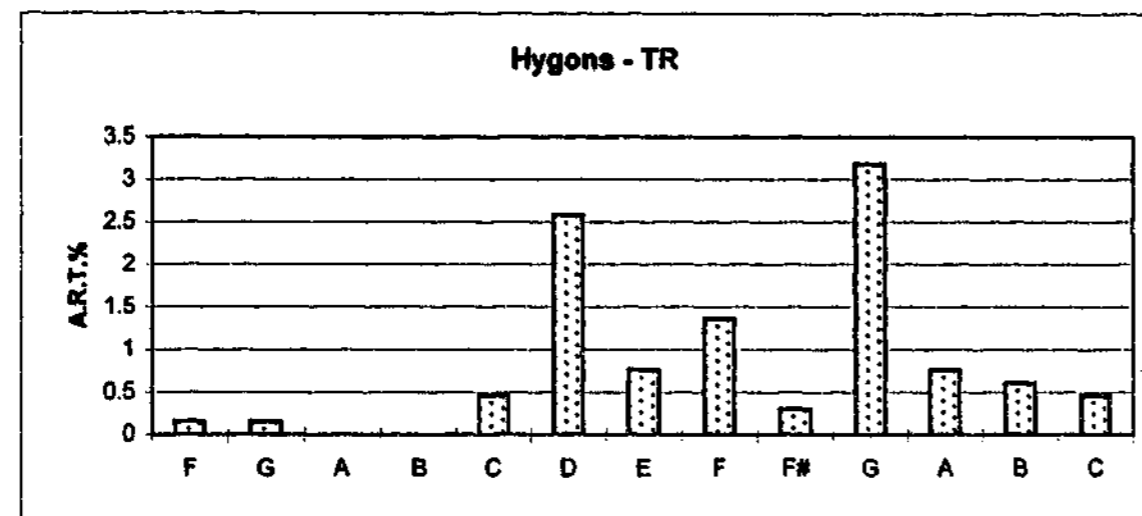


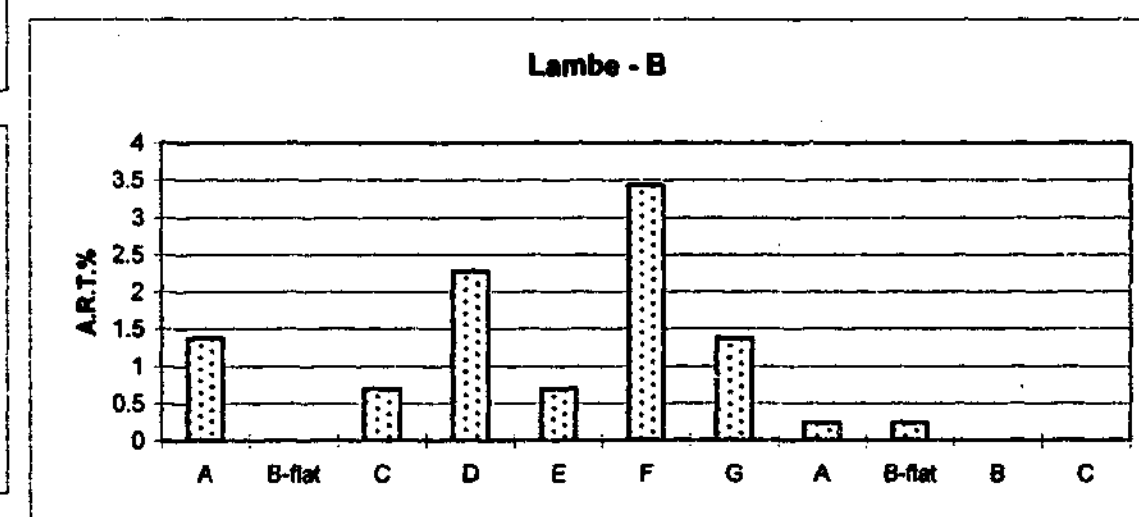
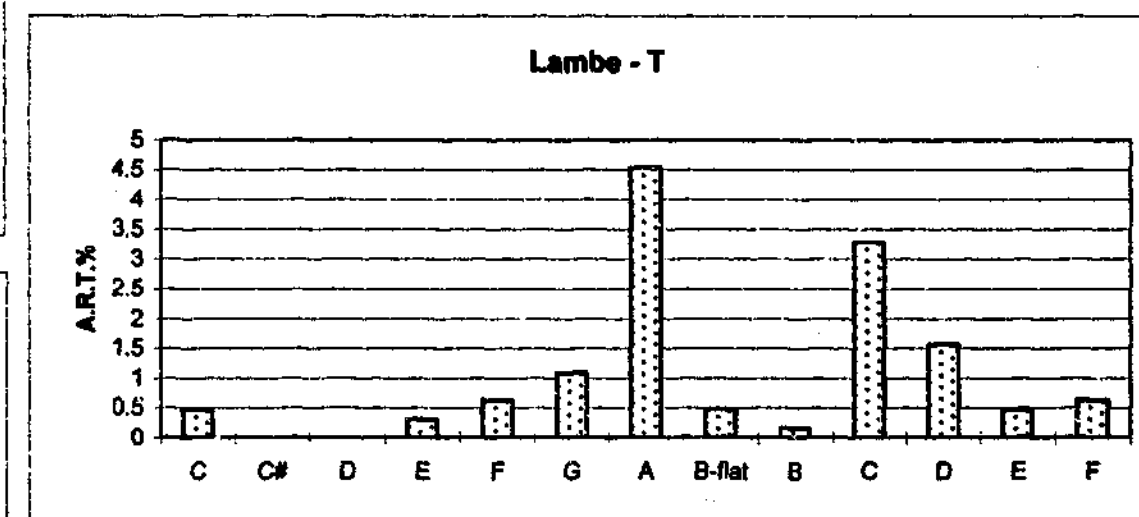
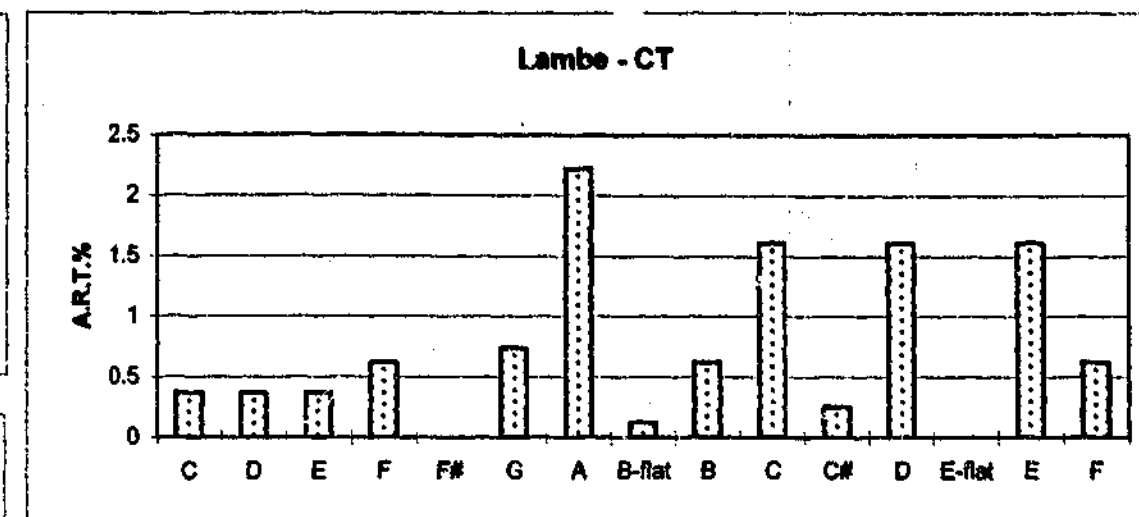
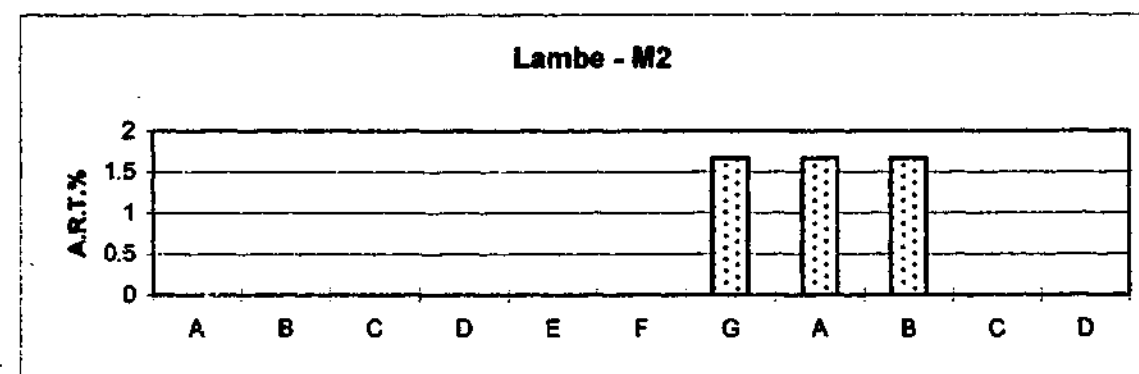
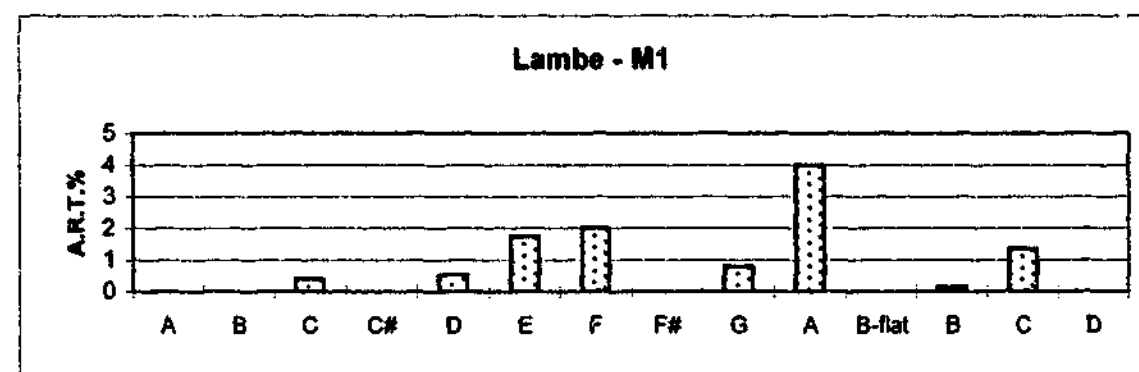
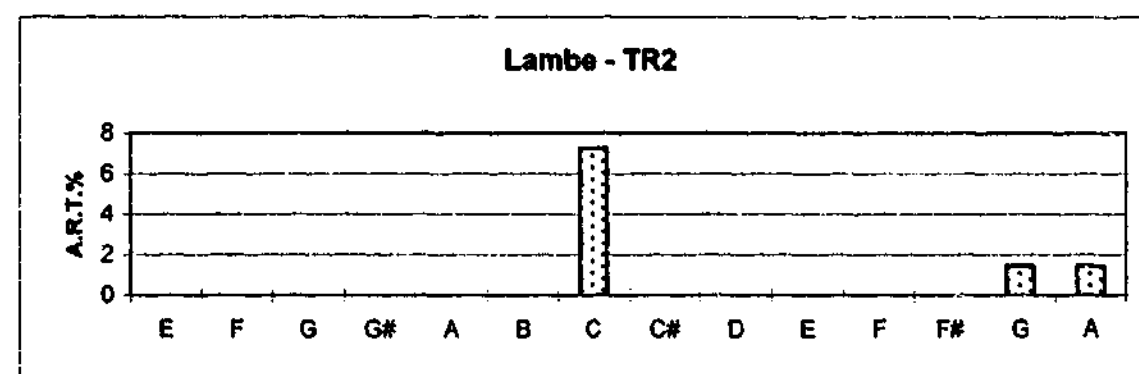
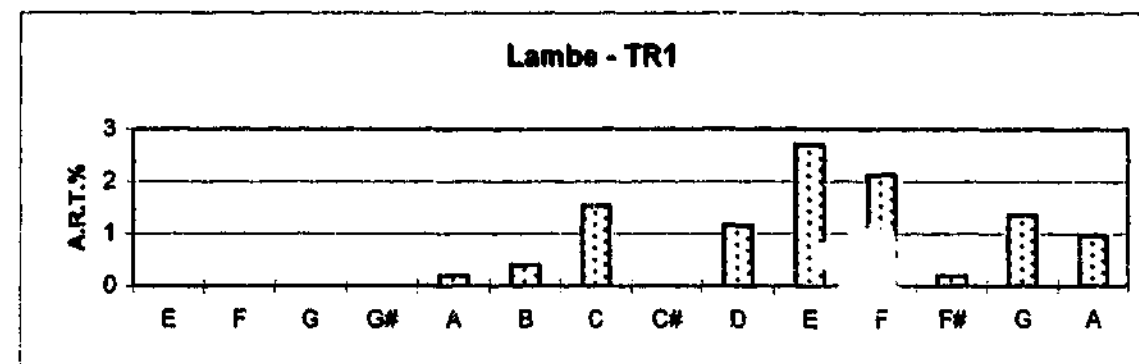


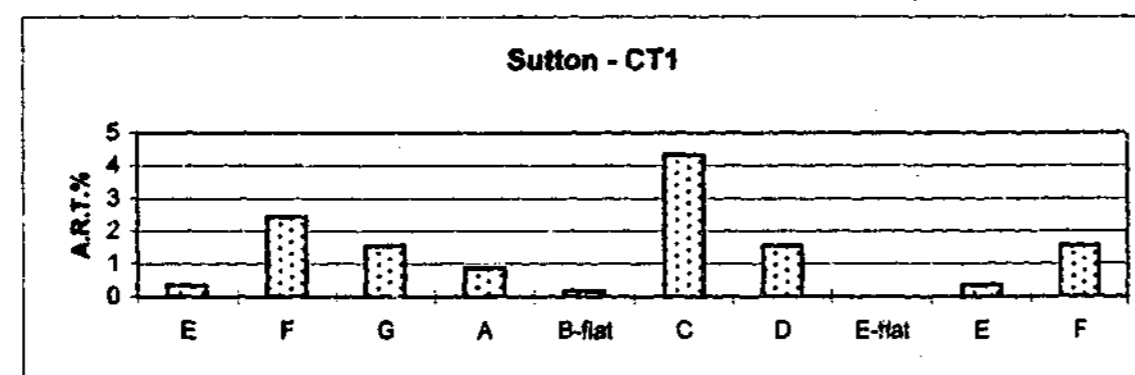
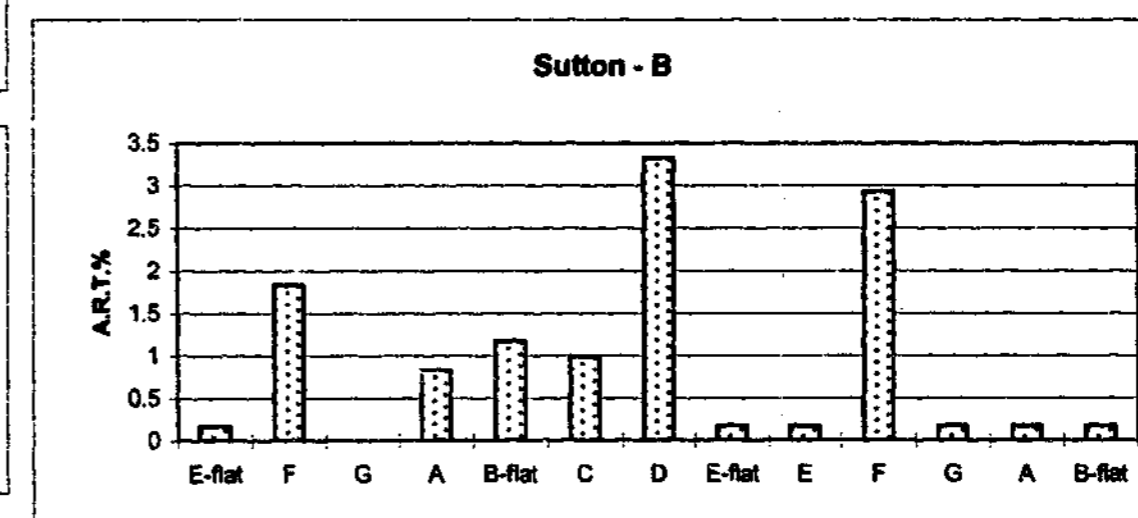
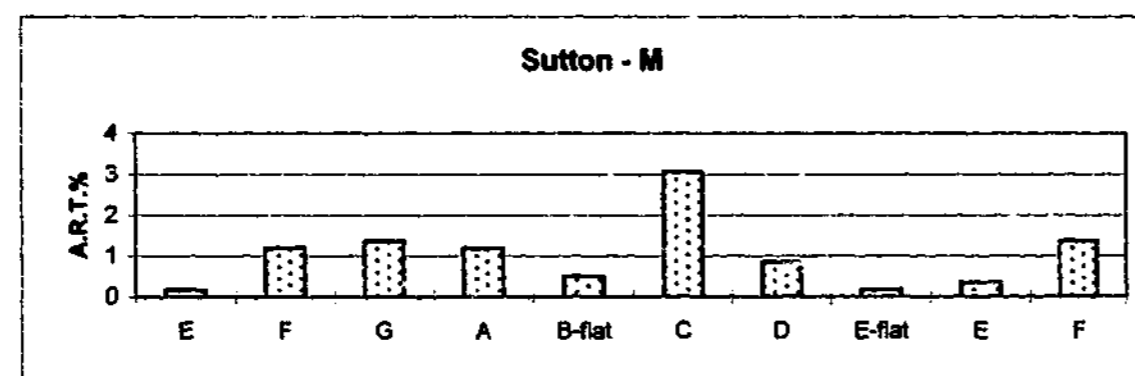
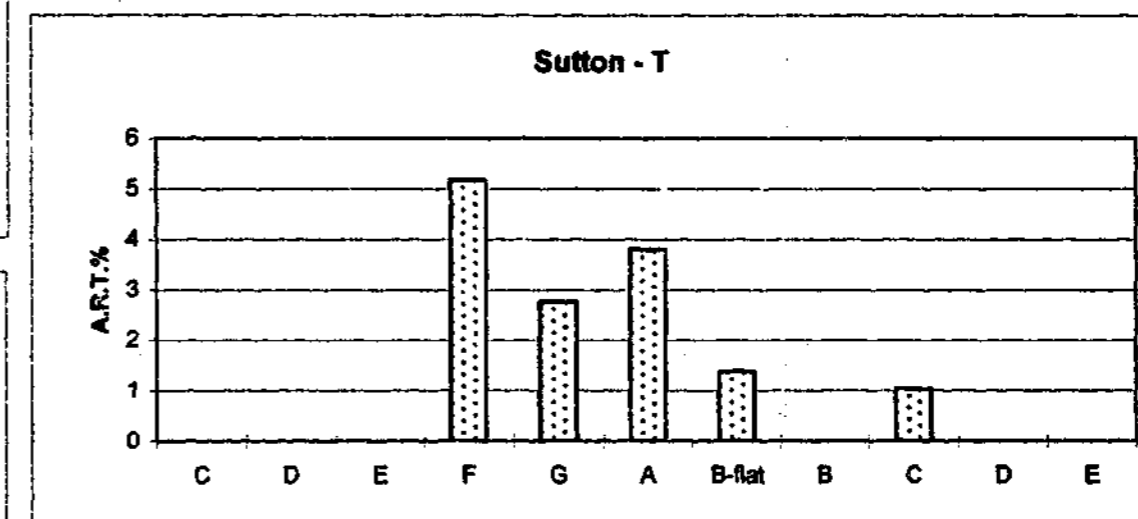
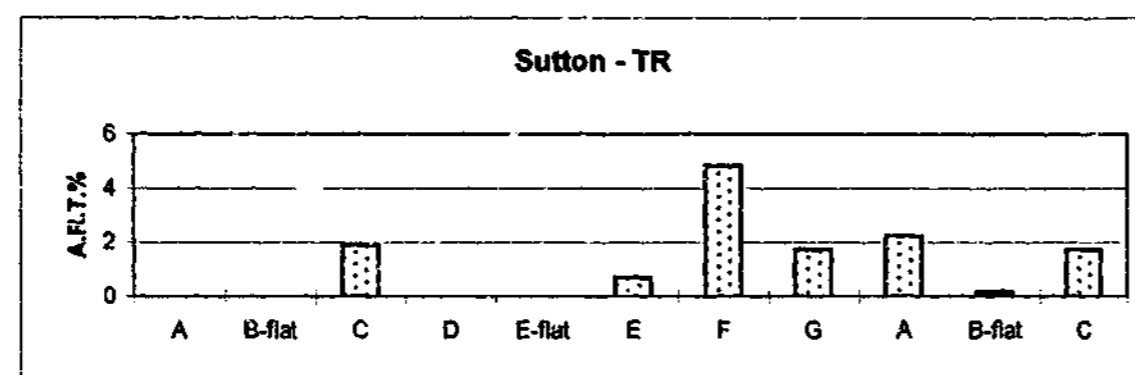
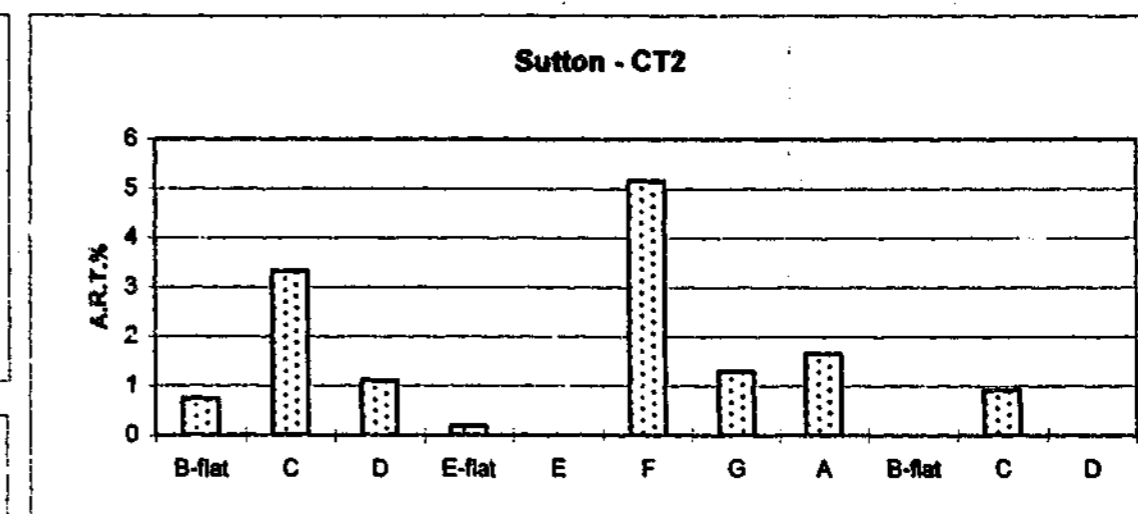
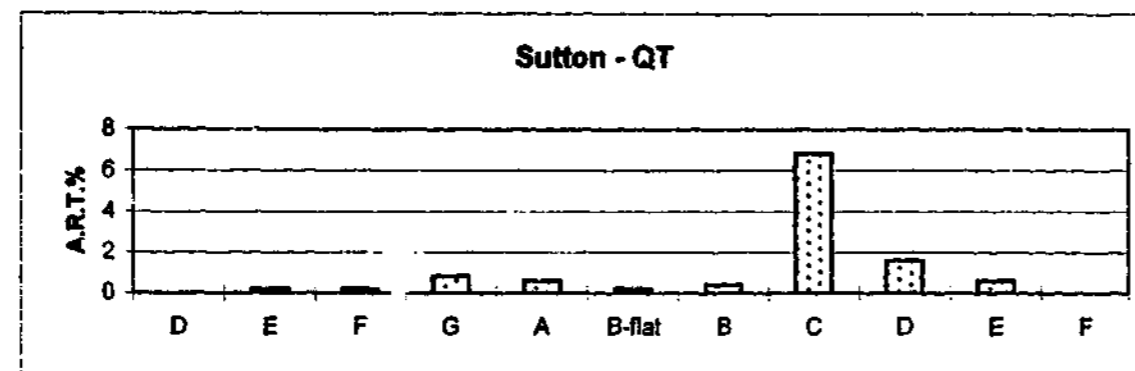


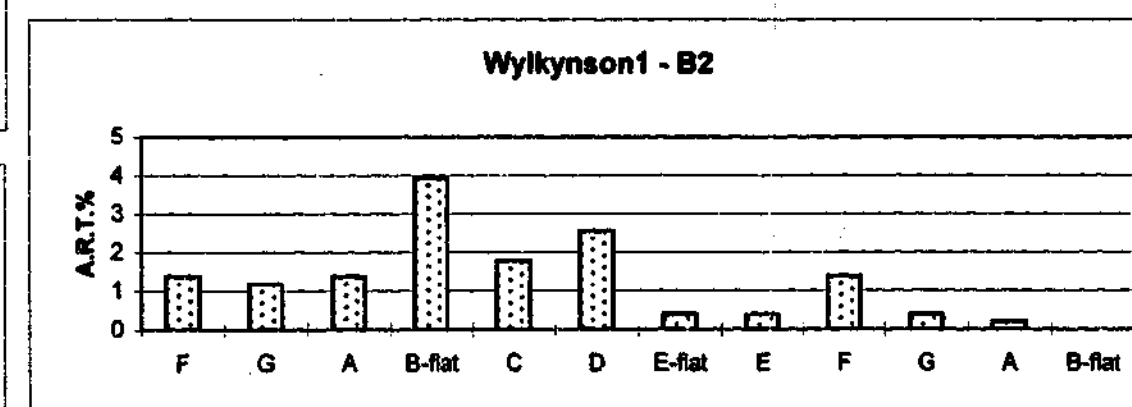
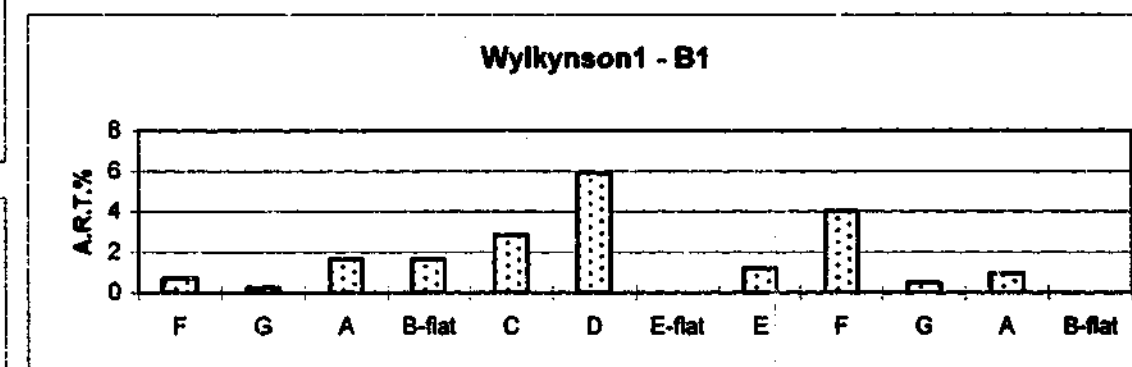
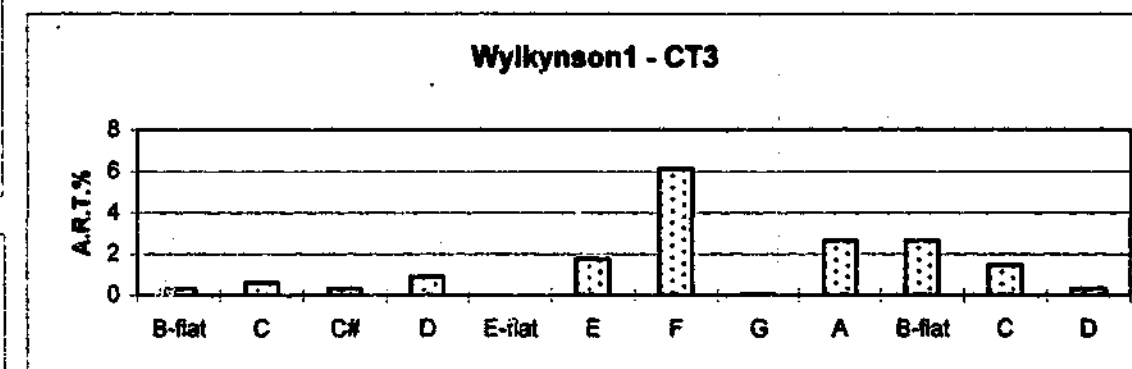
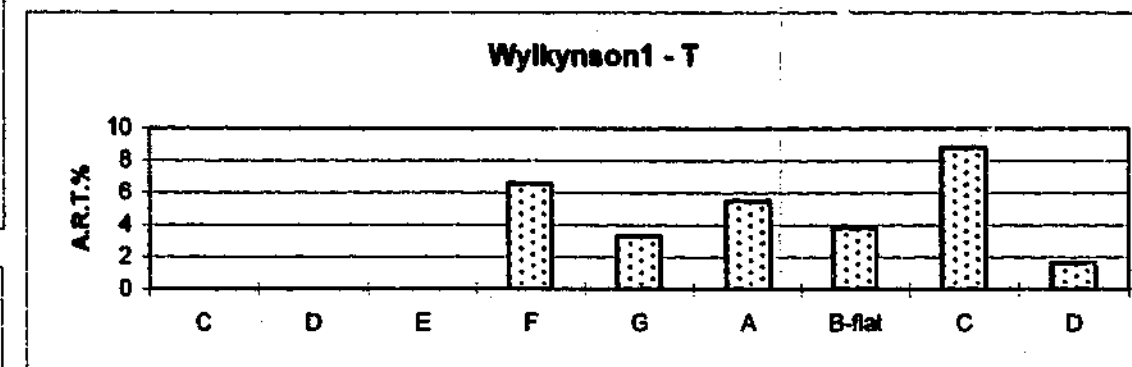
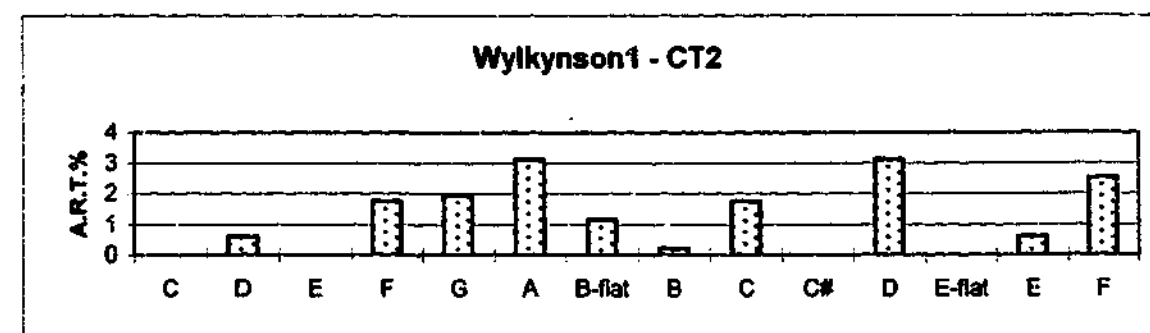
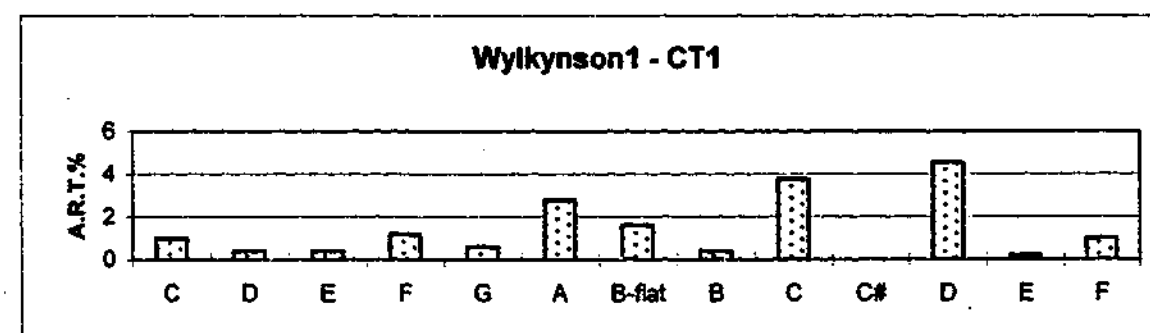
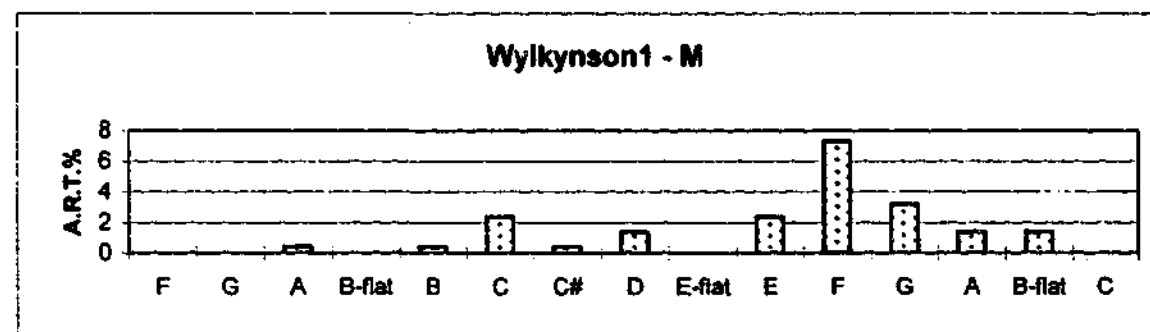
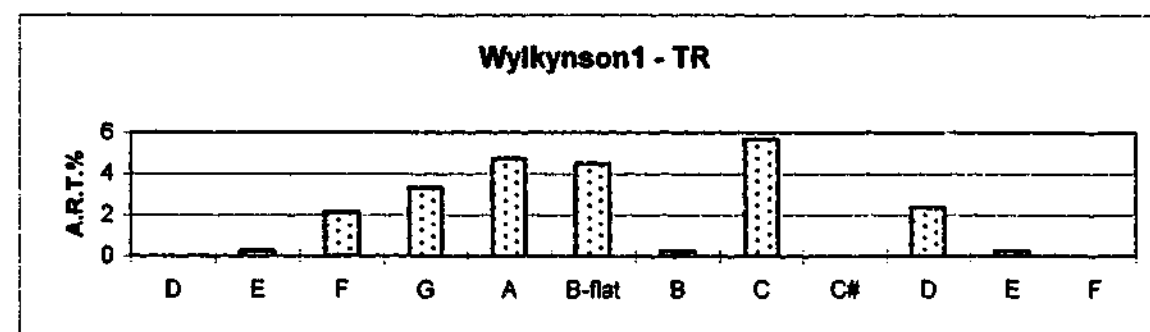
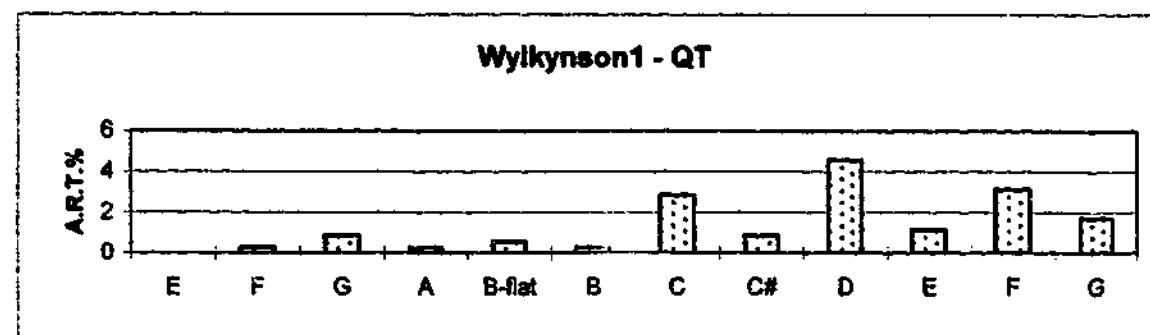












PERCENTAGES OF FREQUENTLY HELD TONES:

PER VOCAL LINE, FOR EACH WORK

