O Viridissima Virga

For mixed chamber choir
divisi into SSAATTB

Text by Hildegard of Bingen (1098-1179)

Music by Bill Alves

O Viridissima Virga

O viridissima virga ave,
que in ventoso flabro sciscitationis sanctorum
prodisti.

Cum venit tempus
quod tu floruisti in ramis tuis;

Ave, ave sit tibi
quia calor solis in te sudavit
sicut odor balsami.

Nam in te floruit pulcher flos
qui odorem dedit omnibus aromatibus
que arida erant.

Et illa apparuerunt omnia
in viriditate plena.

Unde celi dederunt rorem super gramen
et omnis terra leta facta est,
quoniam viscera ipsius
frumentum protulerunt,
et quoniam volucres celi
nidos in ipsa habuerunt.

Hail, o greenest branch,
sprung forth in the airy breezes
of the prayers of the saints.

So the time has come
that your sprays have flourished.

Hail, hail to you,
because the heat of the sun has exuded from you
like the aroma of balm.

For the beautiful flower sprang from you
which gave all parched perfumes their aroma.

And they have radiated anew
in their full freshness.

Whence the skies bestowed dew upon the pasture,
and all the Earth was made joyful
because her womb
brought forth corn,
and because the birds of the firmament
built their nests in her.

Translation by Christopher Page

Computer accompaniment and tuning

This piece is sung with computer-generated tape or disc. This accompaniment begins about 25 seconds before the first voice enters. Every effort should be made to blend seamlessly with the accompaniment.

The pitches the voices sing are in just intonation, which is to say, "in tune." In most cases they do not correspond to the tempered pitches found on a piano keyboard. The singers find their pitches from the tape, which prominently contains drones of all pitches in the score. Some special accidentals, shown below, are used to give the singers a rough idea of where their pitches lie in relation to conventional equally tempered pitches:

↑   somewhat sharp (~33 cents)

+   slightly sharp (~15 cents)

↓   somewhat flat (~33 cents)

These signs may be combined with conventional accidentals:

♯   somewhat sharp of a semitone (~133 cents)

♯   somewhat flat of a semitone sharp (~67 cents)

♭   somewhat sharp of a semitone flat (~67 cents)

♭   somewhat flat of a semitone (~133 cents)

However, singers should not try to overintellectualize this system, which is offered as a convenience. As always, good intonation means good listening and being in tune with the accompaniment. Just intonation means that, despite the unusual intervals, they should mostly seem to "lock in" and be in tune with each other. The tuning system with the exact pitches used is explained in an appendix, but it is not necessary to understand the tuning system in order to be in tune with the tape and with each other.

All accidentals remain in force throughout a measure, as normal, but in sections without bar lines, accidentals remain in force only on repeated pitches.

Other Performance Notes

The conductor is responsible for indicating the beginnings of the sections, but the first three sections are sung without meter at a slow chant-like tempo (around ♩ = 60 to 80) that is left up to the individual singers. Singers should not try to synchronize their part with the others and the conductor does not beat time in these sections. The cues for moving on to the next section are the deep, resonant bells which sound in the computer part. As soon as the conductor hears the bell sound in the disc accompaniment, she should cue the choir to move immediately to the next section.

In section 1, all alto one singers should enter one at a time singing melody A as in a canon. After all of the first alto section is singing, the second altos should likewise begin singing melody B canonically. If there are not enough altos in the choir to render section 1 without obvious spaces for breaths, sopranos may join them. The notes notated as double-whole notes should last an entire breath. Each new singer should enter before the previous singer ends the first note. Upon reaching the end of the melody, each singer should continuously repeat the section indicated. On cue from the conductor, everyone should stop whereever they are and move to section 2 of the score. Those that are singing the pitch D♭ may extend their note over the beginning of section 2.

In sections 2 and 3, the parts are written separately for different sections of the choir, though the singers are still not synchronized to a common beat. At the end of section 3, singers should repeat the phrases shown between the repeat signs (which are different in each part) until the downbeat for section 4. In sections 4, 5, and 6 the singers are synchronized to the conductor's beat as normal. In these sections, portions of the computer part are shown in the score on the staves labeled "cue." These notes are indicated as an aid to the conductor, so that the choir and disc may be synchronized. Everything that the computer disc plays is not shown on the cue staves, however.

Slanted lines connecting pitches indicate pitch slides (glissandos or portamentos). They should be very slow and continue over most of the duration of the first of the two notes. When long lines or long notes necessitate breathing in the middles of phrases or notes, singers should try to take them unobtrusively and at staggered times.

Singing should be with little vibrato, with the dispassionate spirituality and timeless patience of medieval Christian chant.

Program Notes

Hildegard of Bingen (1098-1179) was a medieval abbess whose remarkable works as a poet, composer, naturalist, theologian, and visionary have been rediscovered to some justifiable fame in recent times. *O viridissima virga* is one of a series of sequences (a form of chant) attributed to her. As in many of her other works, the growth of Christian love and the Church is represented symbolically through nature in springtime, nurtured by the Earth, represented by Mary, the Earth mother. Hildegard felt a strong connection to nature, and, indeed, wrote a book on plant life and a compendium of folk remedies. In her mystical visions, green was often symbolic of the Church and of the nurturing spirit of women.

Like most medieval mystics, Hildegard paid special attention to the symbolism of numbers, and to their manifestation as musical pitches. I have used the ratios of the two most holy numbers, 3 and 7, to construct a series of interlocking scales through which this piece "grows." Therefore the choir is frequently singing pitches that are not at all close to those of twelve-tone equal temperament used in our time of practical standardization. The music also grows from chaos to order, much as God's creation of nature from the void is recapitulated every spring.

O Viridissima Virga
Section 1

Each singer in the alto 1 section should enter one at a time singing melody A as a canon. After the whole alto 1 section is singing, alto 2s should likewise begin singing melody B canonically. The notes notated as double-whole notes should last an entire breath. Each new singer should enter before the previous singer ends the first note. However, the entry and rhythm of the part is free and entirely up to the individual singer, though the general tempo should be slow (around ♩ = 60). The singers should not attempt to synchronize their parts or sing to a common beat. Upon reaching the end of the melody, each singer should continuously repeat the section indicated. On cue from the conductor, everyone should stop whereever they are and move to section 2 of the score. Those that are singing the pitch D♮ may extend their note over the beginning of part 2.

Section 2

Singers in each section (soprano 1 and 2 and alto 1 and 2) should sing the part shown canonically, with staggered entrances. The time between each entrance should not be too great — just a few notes — to avoid a sudden thinning of texture between sections one and two. As before, the rhythm shown is a general guide, and the singers should not be synchronized to a beat nor to each other.

Section 3

Though the parts are shown here lined up in score, exact synchronization between the parts and the individual singers is not necessary or even desirable. There should be no beat from the conductor. When the cue to go on to section 4 is heard, the singers should immediately jump to that section from whereever they are. Singers should repeat the part shown until the cue is heard.

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S 1: qui - a ca - lor so - lis in te su-da - vit si - cut o - dor bal - - sa-mi.

S 2: qui - a ca - lor so - lis in te su - da - vit qui - a ca - lor so - lis in te su-da - vit

A 1: in te su-da-vit qui - a ca - lor so - lis in te su-da-vit si - - cut o - dor

A 2: a - ve sit ti - bi qui - a ca - lor so - lis in te su-da-vit qui - a ca - lor so - lis

gradual crescendo...

S 1: si - cut o - dor bal - - sa - mi. si - cut o - dor bal - - sa - mi.

S 2: si - - cut o - dor bal - sa-mi. si - - cut o - dor bal - sa - mi.

A 1: bal - sa-mi. si - - cut o - dor bal - sa - mi. si - - cut o - dor

A 2: in te su-da-vit si - cut o-dor bal - - sa-mi. si - cut o - dor

S 2: bal - sa - mi.

A 1: bal - sa-mi.

A 2: bal - - sa-mi. si - cut o - dor bal - - sa-mi.

S 2: si - - cut o - dor bal - sa - mi. bal - sa - mi.

A 1: bal - sa-mi. si-cut o - dor

A 2: bal - sa - mi.

Section 4

From this point the singers (except for the basses) synchronize with a common beat given by the conductor. The conductor follows the beat from the computer part, shown in the cue staves. The basses continue at their own pace until the conductor gives the cue for the beginning of section 5.

♩ = 60

S 1: Nam — in te flo - ru - it pul - cher flos

S 2: Nam — in te flo - ru - it pul - cher flos

A 1: Nam — in te flo - ru - it

A 2: Nam — in flo - ru - it

T 1: Nam

T 2: Nam

B: Nam in te floruit pulcher flos qui odorem dedit omnibus aromatibus que arida eran

Basses chant the boxed section fast, but not synchronized with the conductor or each other. They continue to repeat it until section 5.
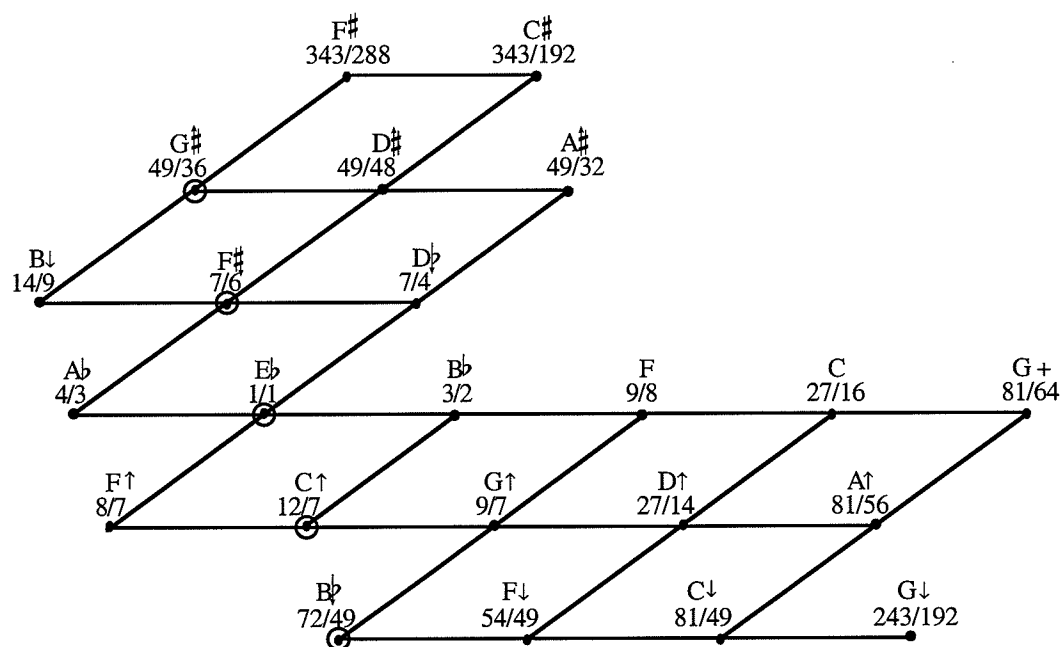
Bells

dim.

Cue

Section 5

Section 6

Appendix: Technical Notes on the Tuning

The following information is for those with a special interest in the details of the tuning for this piece and need not appear with the program notes for performance. While some may find it helpful, is not at all necessary to fully understand the following in order to effectively perform the piece.

O Viridissima Virga is in extended just intonation, that is, the pitches are related to one another by relatively simple numerical ratios. Because, unlike most acoustic instruments, the computer does not have to be locked to a fixed set of pitches, this piece freely modulates to five different tonal centers in six sections (the first and the last are the same). The singers tune to the computer accompaniment. Some pitches are held in common between adjacent keys, therefore the whole scheme may be represented by what tuning theorists call a lattice diagram.

In the tuning used in *O Viridissima Virga*, the pitches may be expressed in terms of ratios only having prime factors 2 (the octave), 3, and 7. In a lattice diagram, relations of 3 are shown by two pitches (represented by dots) being connected by a horizontal line — the pitch to the right is a 3/2 (a pure perfect fifth) higher than the pitch to the left. Relationships of 7 are shown by diagonal lines. The upper pitch is a 7/4 (a somewhat flat minor seventh) higher than the lower.

With that in mind, here is the lattice diagram for *O Viridissima Virga*. Next to each dot is the ratio of that pitch relative to the original tonic (1/1, in this case E♭) as well as the letter name and accidental used in the notation. The circled pitches indicate the tonal centers of the different sections of the piece.

F♯ 343/288   C♯ 343/192

G♯ 49/36   D♯ 49/48   A♯ 49/32

B↓ 14/9   F♯ 7/6   D♭ 7/4

A♭ 4/3   E♭ 1/1   B♭ 3/2   F 9/8   C 27/16   G+ 81/64

F↑ 8/7   C↑ 12/7   G↑ 9/7   D↑ 27/14   A↑ 81/56

B♭ 72/49   F↓ 54/49   C↓ 81/49   G↓ 243/192

Here are the same pitches arranged in ascending order, with ratios and cents relative to 1/1. (Cents are 100ths of semitones.)

Pitch	Ratio	Cents
E♭	1/1	0
D♯	49/48	36
F↓	54/49	169
F	9/8	204
F↑	8/7	232
F♯	7/6	267
F♯	343/288	303
G↓	243/296	373
G+	81/64	408
G↑	9/7	435
A♭	4/3	498
G♯	49/36	534
A↑	81/56	639
B♭	72/49	667
B♭	3/2	702
A♯	49/32	738
B↓	14/9	765
C↓	81/49	871
C	27/16	906
C↑	12/7	934
D♭	7/4	969
C♯	343/192	1005
D↑	27/14	1137
E♭	2/1	1200