



**Ron writes:** July 1, 2011: It is a week past the winter solstice in the Tasmanian forest where I live, and the birds are well aware of it if the quality and intensity of their songs is any guide. If I have any religion, it is based in a sense of wonder at the natural world. Amongst other things, such "worship" involves listening carefully to messages from Mother Earth. For the scientist in me, the interpretation of animal communication involves constant learning and conjecture, and this is greatly assisted by living and working where I do.

As a composer I often use recordings – particularly of birds – as the basis of my compositions, a process that has involved painstaking analysis of many birdsongs. However, this is largely a matter of gaining inspiration rather than experimental science. Once I have started to compose, bird calls tend to become as abstract as the sound of any other musical instrument. In many works, I have derived electronic "instruments" by sampling tiny fragments of birdsong. This has been perhaps the most satisfying part of the process: I have gained many unique and rich instrumental timbres in this way.

My most recent work involving birdsong did not involve any analysis. I was setting a poem ("The Song of the Central Tree" by Keith Harrison) that mentions woodpeckers and happened to have a recording of a sapsucker pecking at a tree in the New Hampshire woods. I incorporated it into the piece for purely referential effect.

My abiding musical interests lie in rhythmic structures and just intonation. These coincide nicely with the complexities of avian vocalisations. It may be wishful thinking on my part, but I like to hear birds as singing in just intervals.

The interpretation of the messages conveyed by animal behaviour requires considerable scientific research, and I do often feel that artists make over-optimistic assumptions about what exactly is going on. But I have no doubt that the greatest challenge to both the science and the art of zoomusicology is the preservation of its source material. The birds of the planet in particular are suffering unprecedented and drastic declines due mainly to the loss of their habitat because of accelerating voracious human activity.

**Selected Compositions Based on Animal Song**

*Dawn in the Wombat Forest* 1983 (environmental recording, violin, didjeridu and clavichord – features Sulphur-crested Cockatoo).



Sulphur-crested Cockatoo.

*Tasmanian Toccata* 1991 (keyboard sampler, didjeridu and pipe organ – various Tasmanian birds).



Dusky Robin.

***Colluricincla harmonica* 1998** (keyboard sampler and fretless electric guitar - sounds of the Grey Shrike-thrush).



Grey Shrike-thrush.

***This Beauteous Wicked Place* 1999** (harpsichord, didjeridu and keyboard sampler. Fantailed Cuckoo, Australian Magpie, Pied Butcherbird, and Masked Lapwing).

***Artamidae Suite* 2002** (clarinet, trombone, flute, fretless electric guitar, mandolin, didjeridu and keyboard sampler - a suite of 5 pieces celebrating a family of Australian songbirds including the Grey Butcherbird, Australian magpie, Pied Butcherbird, Black and Grey Currawongs).

② MAGPIE FUGUE (introducing bar on previous page) ③

Magpie Fugue by Ron Nagorcka.

**Just Bluffing for Quamby 2006 (electro-acoustic – second movement features Bassian Thrush).**



Bassian Thrush.

WHITES THRUSH } MONEERAH (Oyster Bay)  
 } NOYENNAH (Birny Is, Southern Isles)

DISK 860/862 - SB 60B  
 DISK 861/863 - SB 61 - SEQUENCE WT (plays loop of instrument ①: WH TH 1)

TRANSCRIPTION OF WH TH 1 - 2 octaves below actual pitch -

24

Sampler "Instruments"

12

White's Thrush by Ron Nagorcka.

**Song of the Central Tree 2010** (basso profundo, mezzo soprano, cello, trombone & MIDI keyboard – a setting of the poem by Keith Harrison).

**Tuning & Notation - Song of the Central Tree**

MIDI keyboard performance part:

unpitched samples: poem recitation - inst. 1      poem recitation - inst. 2

tuning for MIDI instruments 1&3:

	1/1	81/80	21/20	16/15	10/9	9/8	8/7	7/6	32/27	6/5	5/4	9/7	21/16	4/3
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tuning for MIDI instrument 2:

NOTATION USED FOR INSTRUMENTAL & VOICE PARTS

cents adjustment from equal temperament based on D as 1/1:

	0	+21	-16	+12	-18	+4	+31	-33	-6	+16	-14	+35	-29	-2
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HE notation:

ratio:

	1/1	81/80	21/20	16/15	10/9	9/8	8/7	7/6	32/27	6/5	5/4	9/7	21/16	4/3
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cents above 1/1:

	0	21.5	84.4	111.7	182.4	203.9	231.5	266.9	294.1	315.6	386.3	435	471	498
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bird recordings (all instruments):

poem recitation - inst. 3      mink brook NH      rattlesnake mt. NH      tasmanian raven

	27/20	7/5	10/7	40/27	3/2	32/21	14/9	8/5	5/3	27/16	12/7	7/4	16/9	9/5	15/8	40/21	160/81
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cents adjustment from equal temperament based on D as 1/1:

	+20	-18	+18	-20	+2	+29	-35	+14	-16	+6	+33	-31	-4	+18	-12	+16	-21
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	27/20	7/5	10/7	40/27	3/2	32/21	14/9	8/5	5/3	27/16	12/7	7/4	16/9	9/5	15/8	40/21	160/81
	520	582.5	617.5	680.5	702	729.2	764.9	813.7	884	906	933	969	996.1	1018	1088	1115.5	1178.4

**Performing in just intonation:** While it may at first appear a formidable task to read this music, it is surprising how quickly performers adapt their ears to just intonation, which is after all about being perfectly in tune. As Marc Sabat writes in his introduction to the notation: "Just intervals are readily learned because they are built up from simple, tuneable harmonic relationships. These are generally based on eliminating beating between common partials, finding common fundamentals and audible combination tones, and establishing a resonant, stable sonority which maximises clarity: both of consonance and dissonance."

**Practice CDs:** A computer generated sequenced version of the piece and practice CDs for each part are available from the composer.

**Recordings Based on Animal Song**

**Devils of the Night** – Move Records Melbourne. Features most of the composers work from the 1990s with lots of birds. CD.

**Rhythms of the Tarkine** – booklet by naturalist Sarah Lloyd. Music and recordings by Ron Nagorcka. Available from Ron Nagorcka. CD.

**Just Bluffing** – includes "Artamidae Suite", "Just Bluffing for Quamby" and "Colluricincla harmonica". Available from Ron Nagorcka. CD.