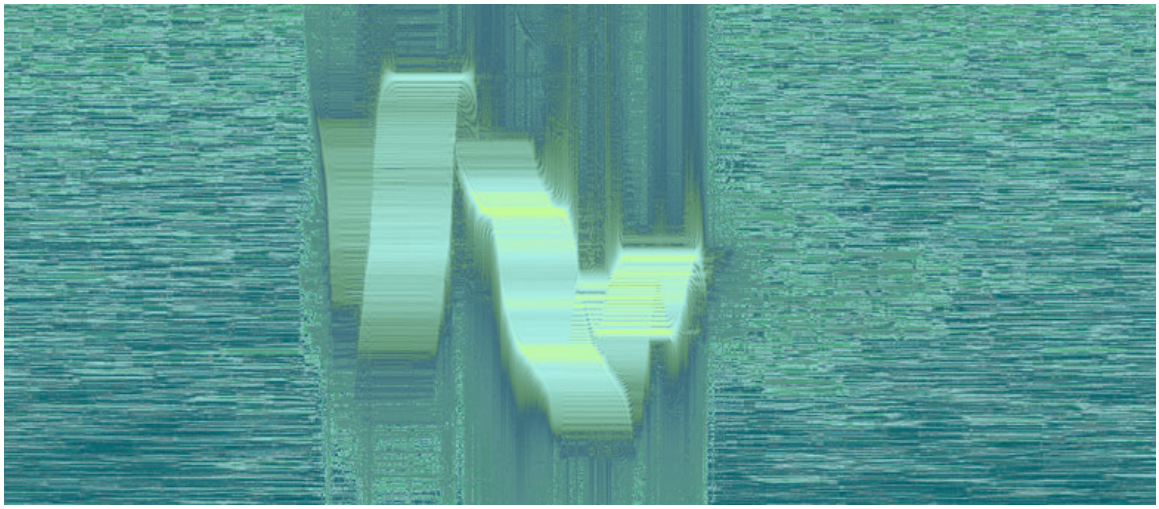
JEFF TALMAN STUDIO – NEW YORK

exquisitely muted… luminously still – The New York Times

PROJECT ANNOUNCEMENT

Music at St. Paul's, Columbia University presents



spectrograph: Vireo philadelphicus, birdsong

WHEN SOARING SINGS

– sound installation –

Birdsong, calls and choruses from over 100 species are sound source to Jeff Talman's new installation in collaboration with the Cornell Lab of Ornithology. Celebrating the cycles of regrowth, the work explores the sounds of bird species that return to nest in New York State in the spring.

Intertwined with humanity as life partners of the planet, birds are a vast source of sacred and secular inspiration and utility. The dove, thunderbird, eagle, raven, swan: birds as symbols of peace, spirituality, love, death, flight, freedom, nations, and beyond, provide continued meaning and wonder today. As environmental concerns and risk to bird populations increase, scientific explorations also offer further diverse study including those in avian-borne diseases, and the extraordinarily rarified, GPS-like organic mechanisms of the homing instinct.

Mozart, Beethoven, Wagner, Rimsky-Korsakov, Stravinsky, Messiaen, and many others relate to birds in their music. Respighi, perhaps inevitably, went forward with the available technology in 1924 to first feature the recorded song of a nightingale in his orchestral work, *The Pines of Rome*. Continuing in this tradition Talman's multi-channel sound composition explores the inherent qualities of melodic shape, rhythm, and unique tonal coloration of these extraordinary avian sounds.

Exhibition – Presented by Music at St. Paul's, Columbia University. Migratory bird species identification and field recordings of bird song, calls and choruses are provided by the Macaulay Library of the Cornell Lab of Ornithology: http://macaulaylibrary.org/

Schedule

Tuesday	March 31	2-10 PM, 6:30 artist presentation
Wednesday	April 1	7-8 PM
Friday	April 3	7-8 PM
Saturday	April 4	6-8 PM
Easter Sunday	April 5	1-8 PM
Monday	April 6	7-8 PM
Tuesday	April 7	6-8 PM, 6:30 artist presentation
Wednesday	April 8	7-8 PM
Friday	April 10	7-8 PM
Saturday	April 11	6-8 PM
Sunday	April 12	2-3 PM
Monday	April 13	7-8 PM

Acknowledgements – Many thanks to the Lab and Lab Director John Fitzpatrick, Macaulay Library Director Michael Webster, Lab Audio Production Engineer Mathew Young, St. Paul's Chapel, The Earl Hall Center at Columbia University, Associate Director Suzanne Jung, Assistant Director Andrew Lynch, and University Chaplain and Director of The Earl Hall Center Jewelnel Davis: http://ouc.columbia.edu/

Jeff Talman – A recognized "pioneer of the use of resonance in artworks" (Intute at Oxford University), Talman has created numerous sound installations including works for Cathedral Square-Cologne, Galleria Mazzini-Genoa, Rothko Chapel, the MIT Media Lab, The Kitchen, Eyebeam, the Bavarian Forest (four installations), and in museums, galleries and alternative spaces internationally. His major achievement is the +15-year exploration of reflexive resonance, in which ambient resonance becomes an installation's only sound source. The installations, which may also include video and objects, often feature the collaborative expertise of scientists from many institutions, including NASA, the Planck Institute for Radio Astronomy, MIT, and the Scripps Institution of Oceanography. Trained as a composer, he also studied visual arts as an undergraduate. Talman attended and then directed orchestras at Columbia University and the City College of New York. Awards include those from the Guggenheim Foundation, the New York Foundation for the Arts, and artists residencies internationally. His third CD, *Moments From The Sun* will be released in 2015.

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video documentation: http://vimeo.com/channels/653325

WHEN SOARING SINGS – THE SOUND

The Cornell University Ornithology Lab's Macaulay Library supplied 248 recordings from their collection for this installation. The recordings represent the sounds of 116 species of birds, all of which are migratory and nest in New York state and elsewhere in the Northeast in the spring.

I downloaded, then surveyed these sounds and categorized them as Chattering, Repetitive, Tweets, Whistles, Honks, Squawks, Screams, Complexes, Textures, Crescendos, Sopranos and others. All sounds were recorded in the wild such that any recording might have a lot of background sound from the environment where it was recorded. So the next step was to "clean" the sounds by using the digital process of noise reduction, in which background sounds are first sampled, then eliminated or greatly reduced across the entire sample.

A number of the sounds had been recorded with a limiter, a device that automatically shuts off recording when the level (volume) of a signal falls below a designated loudness. Unfortunately, a limiter can truncate lower levels and reverberations of the tail end of a sound. Also, noise levels in these limited recordings had not been reduced. So many of the samples you'll hear had to have painstaking reconstruction to reduce noise levels and to correct any truncations. Some sounds, although perfectly good nature recordings, simply had too much background sound to introduce into the installation, so that the work now represents 102 species of the original 116.

For many of the species represented there were perhaps only 2 or 3 songs or calls, which posed the risk of limited variety in the installation if I wanted to use the same sound. To counter this, I cut into some samples and used parts of other samples of the same bird's sound to construct new songs or calls, using the same melodic figurations, timings and rhythms of the original calls.

Two further audio processes were used on some of the sounds. I time-dilated sounds by anywhere from 10-times to 120-times the original length of the sound, so that a simple tweet that lasted 0.25 seconds, might now be 30 seconds long. I also applied filtration to some of these sounds, which does not add any sound, but simply takes away frequency spectra, so that desired elements of the sound are better exposed.

All of the long, sustained tones in the middle of the 20-minute work are nothing more than time-dilated bird sounds with a limited use of filtration on a few of

these sounds. People have commented on these sounds, that they imagine dinosaurs must have sounded something like this. Links to dinosaurs and birds have been well-established, so I find it not so surprising that their sounds could be related as well. A 4-inch tall bird if expanded 120-times becomes a 40-foot tall creature.

I also used time-dilation to time samples to work musically together such that a sample might be stretched only about 4%-13% so that the music of the piece was coordinated. Likewise I felt free to complete some musical gestures. Additional end tones might better complete a phrase in the context of the work, or a natural crescendo might be emphasized. In short, the musical gestures that a musician will normally perform became the shaping forces applied, mostly with restraint, with the intent to have the "true" bird sounds carry the work as much as possible.

With this categorized library of original, noise-reduced and re-engineered bird sounds I then composed the work. It's constructed as music, not as a mere amalgamation of bird sounds – in fact the species selected nest in different regions and would never be heard in the wild singing together.

A close listening, as if listening to chamber music, will demonstrate the types of dialogue that instrumentalists may engage in. There are lead parts, accompanying parts and exchanges. There are harmonies and there is a great use of counterpoint. There are textures and rhythms, and melodies sung by some of the world's great sopranos (Hermit Thrush, Orchard Oriole, White-throated Sparrow). There's musical form, an ongoing process in which like is combined wih like and like with different. There are stated themes and sections marked by cadences. There are transitions, hiatuses and episodes, and thematic materials return exposing transformed ideas of their potential as music.

Having conducted orchestras and studied music composition, analogue electronic music and computer music at Columbia, I was struck by the range of timbres and variety of sounds made available through this limited slice of the worldwide avian population. The sounds are complex, rich, and extraordinarily musical. It's no surprise that bird song has captivated people – and artists – for millennia, to which the cave paintings and early bone flutes attest.

I hope you will enjoy *When Soaring Sings* as much as I enjoyed working on it.

Jeff Talman
NYC, April 2015

When Soaring Sings

Species Listing

102 species are included

Acadian Flycatcher
Alder Flycatcher
American Redstart
American Woodcock
Baltimore Oriole
Barn Swallow
Bicknell's Thrush
Black and White Warbler
Black-crowned Night-Heron
Black-throated Blue Warbler
Black-throated Green Warbler
Blackburnian Warbler
Blue-gray Gnatcatcher
Blue-headed Vireo
Blue-winged Warbler
Boblink
Brown-headed Cowbird
Canada Goose
Canada Warbler
Caspian Tern
Cerulean Warbler
Chestnut-sided Warbler
Chimney Swift
Chipping Sparrow
Cliff Swallow
Common Gallinule
Common Crackle
Common Nighthawk
Common Yellowthroat
Eastern Bluebird
Eastern Kingbird
Eastern Meadowlark
Eastern Phoebe
Eastern Towhee
Eastern Whip-poor-will
Eastern Wood-Pewee
Field Sparrow
Golden-crowned Kinglet
Grasshopper Sparrow
Grey Crested Flycatcher
Hermit Thrush
Hooded Warbler
House Wren
Indigo Bunting
Kentucky Warbler
Kildeer
Least Flycatcher
Lincoln's Sparrow
Magnolia Warbler
Marsh Wren (Eastern)
Marsh Wren (Western)
Nashville Warbler (Western)
Northen Mockingbird
Northern Parula
Northern Waterthrush
Orchard Oriole
Ovenbird
Philadelphia Vireo
Pine Warbler
Prarie Warbler
Prothonotary Warbler
Purple Martin
Red-eyed Vireo
Red-Hooded Woodpecker
Ruby-crowned Kinglet
Sandhill Crane
Savannah Sparrow
Scarlet Tanger
Song Sparrow
Sora
Spotted Sandpiper
Summer Tanager
Swainson's Thrush
Swamp Sparrow
Tree Swallow
Veery
Vesper Sparrow
Virginia Rail
Warbling Vireo (Eastern)
Warbling Vireo (Western)
White-eyed Viero
White-throated Sparrow
Willow Flycatcher (Western)
Wilson's Snipe
Wood Duck
Wood Thrush
Worm-eating Warbler
Yellow Warbler
Yellow-bellied Sapsucker
Yellow-bellied Cuckoo
Yellow-breasted Chat
Yellow-rumped Warbler (Myrtle)
Yellow-throated Warbler

Drumming:

American Three-toed Woodpecker (Eastern)
American Three-toed Woodpecker (Northwest)
Black-backed Woodpecker
Downy Woodpecker (Eastern)
Hairy Woodpecker
Northern Flicker (Red-shafted)
Pileated Woodpecker
Red-bellied Woodpecker
Yellow-bellied Sapsucker