



DAVID MONACCHI

eco-acoustic compositions

*To my parents Gabriella and Walter,
and Ilaria, always the first to listen to my music.*

TRACK LIST

1. STATI D'ACQUA	16.56
Reduction from a large multi-channel site-specific sound installation conceived for <i>Tevereterno</i> – Rome 2006	
2. ECHOES OF A SONIC HABITAT	11.05
Stereophonic reduction from a 26-channel site-specific sound installation conceived for <i>Kryptonale</i> – Berlin 2004	
3. NIGHTINGALE	12.02
With medieval transverse flute performed by David Monacchi	
4. FADING AWAY WHALES	08.30
Stereophonic reduction from a 12-channel installation presented at <i>Ear to the Earth</i> – New York 2006	
5. FRAGMENTS OF EXTINCTION	10.06
Stereophonic reduction from an 8-channel sound installation performed internationally from 2003	
TOTAL	59.12

INTRODUCTION

Jim Cummings

Executive Director, Acoustic Ecology Institute, NM - USA

Eco-Acoustic Compositions is perhaps the most multi-faceted disc I've heard in years of exploring this field. David Monacchi takes us on a very personal journey, into both the diverse sonic world itself (with pieces focusing by turn on water, insects, birds, whales, and rainforests), and the creative possibilities available to composers inspired by these voices around us. Each track offers a clearly distinct approach to working with field recordings and studio/electronic manipulations. We hear extensive and primary use of filters and spectral envelopes in the first track, playback of very focused recordings into resonant spaces (cisterns) on track two, and time-expansion so as to enter into bird song and human musical responses on track three. David then explores a simpler and to my ears most compelling approach, with his reconstructions of largely naturalistic sound material on the final two tracks. Through the course of the disc, Monacchi demonstrates his mastery of an impressive range of compositional techniques, with each successive track peeling away a bit of technological filtering, delivering us in the end into the heart of the Amazonian sound-field, with a subtle echo of his studio presence lingering within an aural space that is enriched by its suggestive (if illusory) "purity" and utterly enlivened by his subtle re-interpretation of this primal rainforest soundscape.

David's approach is manipulated, but never manipulative. While moving surely beyond a naïve or complacent reliance on the natural soundscapes "as they are," and exploring the aural edges and depths of the material with studio extrapolations, the work never becomes obtuse or pointedly experimental for its own sake, and always retains a fundamental sense of wonder about both sound itself, and the natural voices that underlie the work. Throughout, we sense the hours and weeks David has spent in the field, experiencing these primary soundscapes from within; this depth of engagement informs the choices he makes back in the studio, and help keep the work from slipping over a treacherous edge that less grounded experimental soundscape composers can fall prey to.

Even at its most abstracted, on the opening track, Stati d'Acqua, the work also exhibits diligent naturalism, the result of field research and recording that took him the length of the Tiber River in his native Italy.

Track two, Echoes of a Sonic Habitat, tickles my fancy not least for being centered on incredible insect recordings, which I've always found to be exceptionally alien and therefore very rewarding to immerse myself in. It's a carefully executed reconstruction of an imaginary landscape, made all the more resonant (literally) by being recorded inside a space consisting of four concentric cisterns. Here, David's predilection for using drones as a foundation for natural sound compositions finds its strongest expression.

The third track, *Nightingale*, not only examines the improvisational dexterity of these famous avian songsters, but also serves as an opportunity to explore musical interactions, with a medieval flute providing a link between the birds and, once again, a drone beneath it all, which ebbs and flows in an organic fashion. While David's "feet in both worlds" approach to composition is always engaging - his compositional explorations never (or only rarely) lose their rootedness in the voices of the landscape that is his source material.

I responded most strongly to the final two pieces, which are freest of human sound manipulations and additions. *Fading Away Whales*, while exceedingly simple in its approach, merely layering whale recordings at various degrees of time/frequency shift, fully and gracefully transcends the familiar expectations or rote execution of this all-too-cliché source material. By taking our ears gradually closer to the infrasonic low frequencies of actual whale song, David invites us into a sonic space that is both huge and intimate. Here again clearly delighting in the extraordinary tonal qualities of these voices, while constructing a composite soundscape that doesn't fear straying from "natural," the layers and diversity of sounds presented in this short eight-minute track make for compelling listening.

I can only describe the final, ten-minute track *Fragments of Extinction* as a delicious tease! Here Monacchi presents a taste of a major global acoustic research project, in which he is exploring the acoustic ecology of the three major equatorial rainforests (the Amazon, Central Africa, and Southeast Asia), with the aim of producing a series of ambitious soundscape installations, including multi-channel 24-hour sonic reconstructions. The composition is composed primarily of unaltered and minimally processed field recordings, with subtle tonal/drone underpinnings based on pitched sounds found in the soundscapes. Here, as in other aspects of his approach, including his diligent, superlative field recording and compositional respect for the source material, Monacchi's work evokes the same depth that Doug Quin reaches in his soundscape composition masterpieces, *Oropendola* and *Forests*. The timeless and deeply inviting aural spell of *Fragments of Extinction* leaves me wanting much more.

Finally, David's thoughtful and clear track notes elucidate his compositional choices in ways that we can only hope will guide other recordists and composers with open ears and profound engagement with the natural world toward the sorts of substantial results that he has achieved here. It's all too easy for either natural sounds or experimental composition to become trivial in their execution, or for activism and artistic expression to lose their connective threads as they try to dance together. Few have managed to bridge these important gaps with such integrity and subtlety as David Monacchi exhibits here.

TOWARD AN 'ECO-ACOUSTIC COMPOSITION'

David Monacchi

This CD represents the outcome of nearly two decades of research into environmental sound recording. The original inspiration behind these works was to convey natural soundscapes to music, art and museum audiences, from a radically different perspective than offered by 'musique concrète,' 'ambient' or 'new age' music. The eco-acoustic paradigm is the system that I now use to organize all my compositional processes.

A recorded natural sound environment offers the composer many different levels of exploration and manipulation: observation (unaltered sound documentary), representation (multi-track soundscape reconstruction), transfiguration (electroacoustic soundscape transformation), reinvention (soundscape composition), and re-contextualization (sonic-art and sound installation). My approach to composition involves aspects of each, with an emphasis on the *interplay* with nature.

In the field, listening is a creative process, and recording is, by its nature, an act of shaping the environment. In the studio, electroacoustic analysis becomes the fundamental tool for understanding the spectrum of natural sounds. Pivotal to this approach are the evidence of ecological principles in sound environments, and the consideration of and deference to the original sound contexts during audio manipulation. Within this context, the composer's creative process aims to immerse the listener in the original soundscape's complexity and equilibrium. My intention is to offer the listener a new experience of nature. My ultimate vision as a composer is to build a musical system that enhances our listening sensitivity and reveals the density, beauty and phenomena of natural sound.

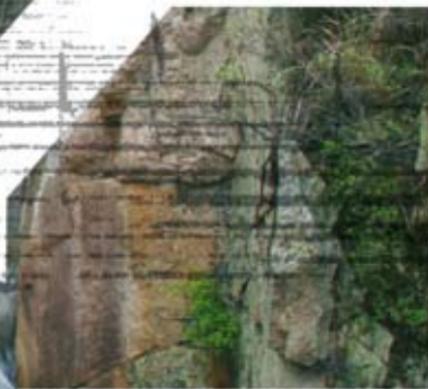
Compositional Notes: *I use very basic tools for sound transformation: time compression-expansion and frequency shifting (always as interrelated processes), equalizers, resonant filters, reverberation, and different presentation formats for soundfield reconstruction and space manipulation. Each of these methods preserves the order and original configuration of the natural sound. I also work with video to focus and increase the perception of sound (e.g., real time spectrogram analysis).*

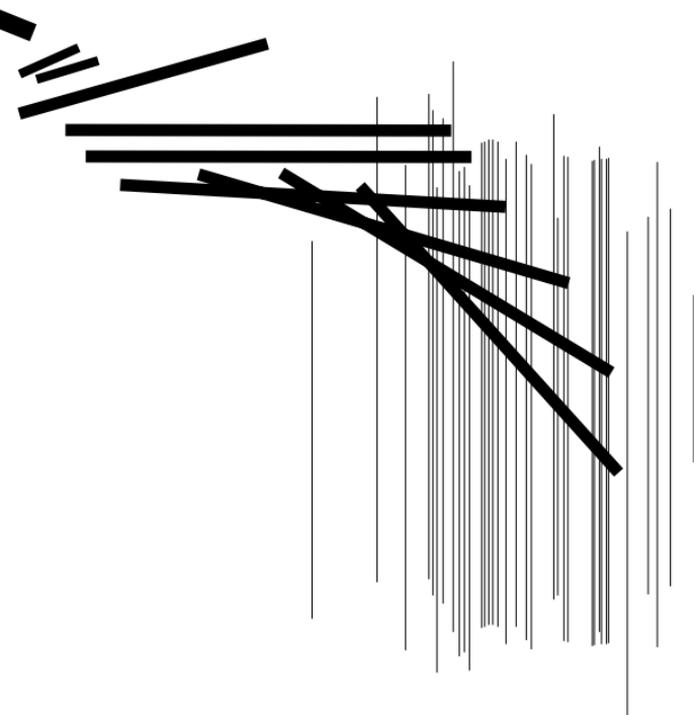
'Horizon harmonics' are created to enhance the perception of the soundscapes. Very complex in their microcosmic structure, the sounds are carefully shaped with an apparent consistency to their overall articulation - thus permitting the listener to focus on the foreground of the natural sound environments. These drone sounds are strictly based on the harmonic series, which is the only tuning system used both for synthesis and sound transformations. Sometimes the fundamental of the harmonic series is set on non-audible frequencies to obtain a fine grid of 'harmonic noise' on the upper bandwidth. If the soundscape has recognizable pitched sounds, I sometimes tune the horizon harmonics to interact with those pitches.





STATI D'ACQUA





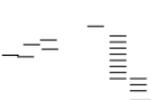
STATI D'ACQUA

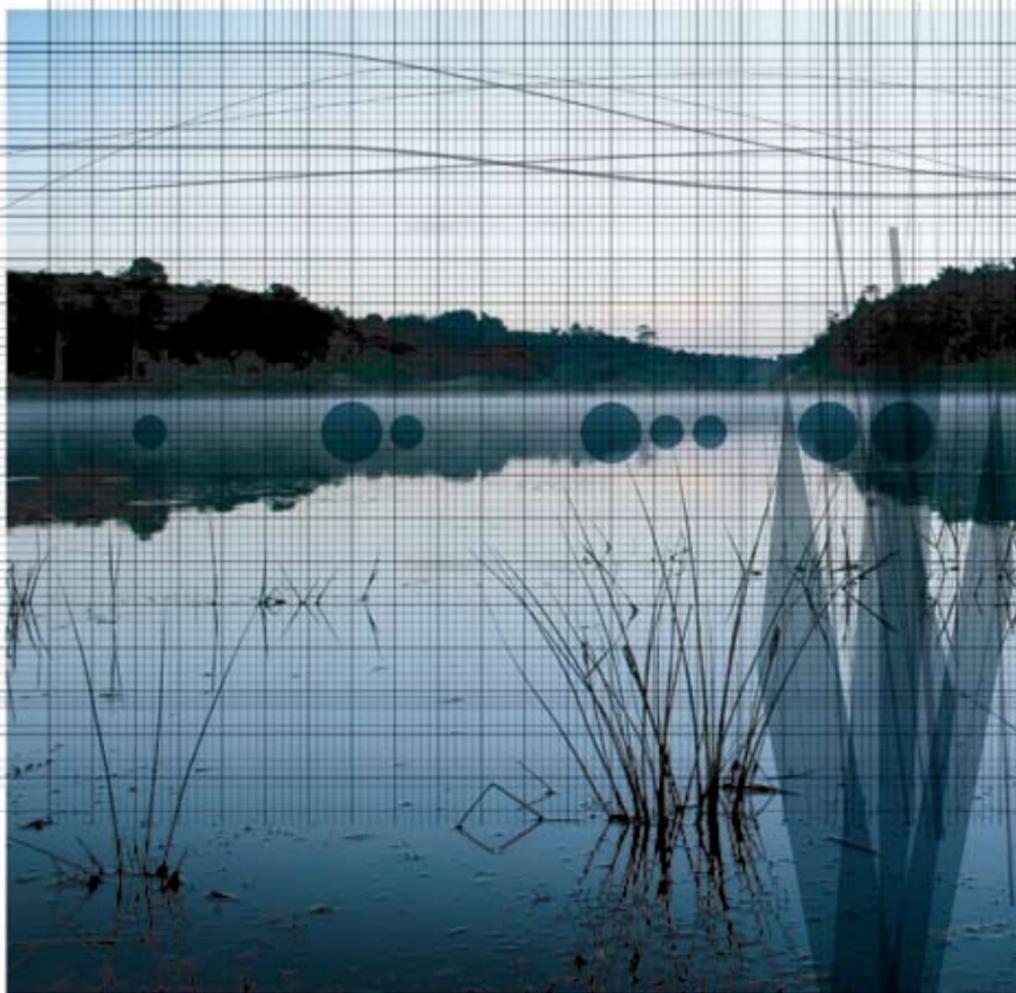
Stati d'Acqua (States of Water) was inspired by water's constant physical transformations. These field recordings explore motion, stagnation, evaporation, condensation and falling. Water produces an infinite variety of sounds throughout the entire range of audible frequencies, sometimes creating the perfect *white noise* (i.e., the equal overlapping of all audio frequencies), and sometimes creating pitched tones.

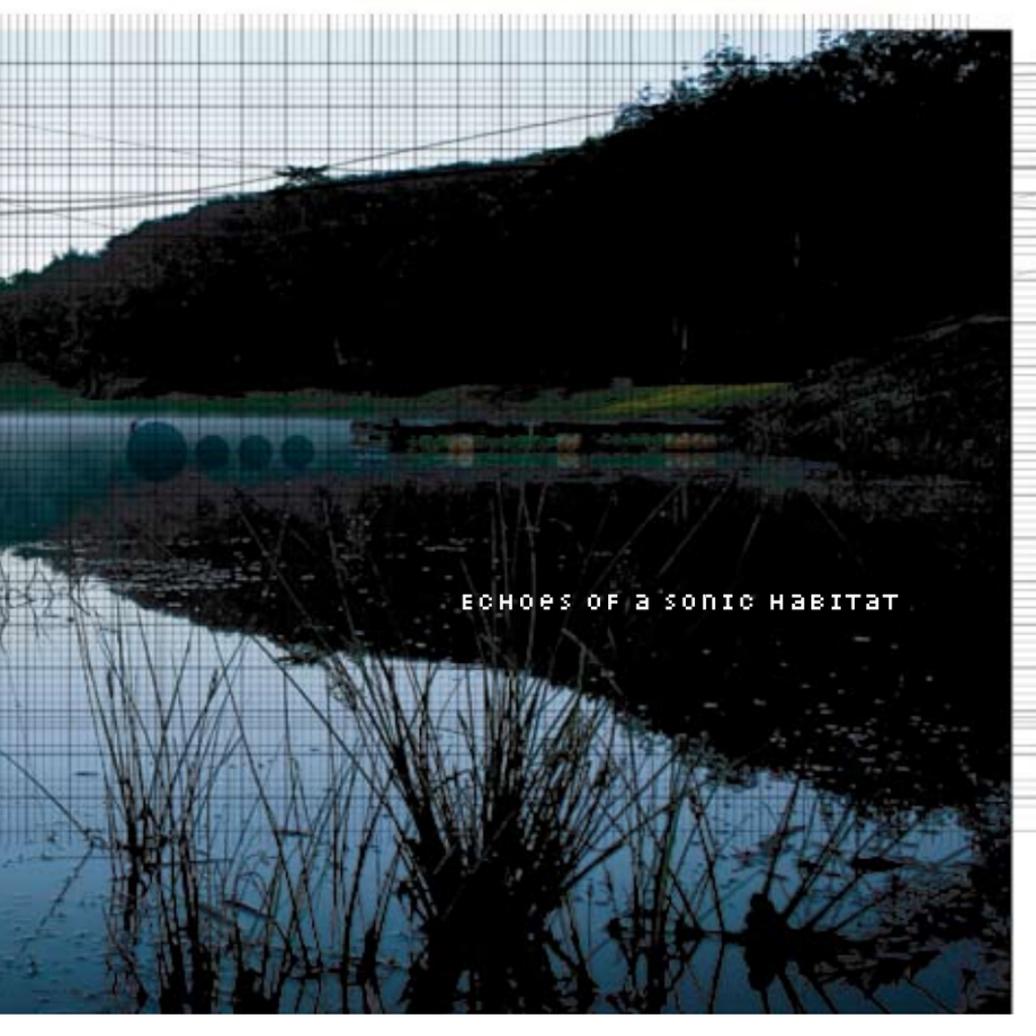
The field recordings for this composition were done along the entire course of the Tiber River, from its source at Mount Fumaiolo to its outlet in the Tyrrhenian Sea. Many techniques were employed, including special microphones and recording while in motion along springs, streams, waterfalls, caves, and waves, as well as the sea. The recordings also include the sound scan of a six-month-old fetus – the fluid resonance within the human body. The work is a tribute to water, as a symbol and metaphor for the various states of mind and emotion.

Technical Notes: Carefully observing and analyzing the microcosm of tones in the recordings of streams inspired me to organize the water's sounds into a tuning system that uses the whole ratios of Zarino's XVI Century system. 120 equalizers were used to create resonant filters on different harmonic series, ordering the chaotic frequencies along natural intervals.

Stati d'Acqua premiered on June 21, 2006 as a 30-minute, multi-channel sound installation with 18 points of sound diffusion on an 80x500 meter site in the heart of Rome. The work was created for Tevereterno, a site-specific, multidisciplinary project conceived by artist Kristin Jones to celebrate the Tiber River. The version presented on this CD is a stereo reduction of the 8-channel concert presented at the 2006 Ear to the Earth Festival in New York City.



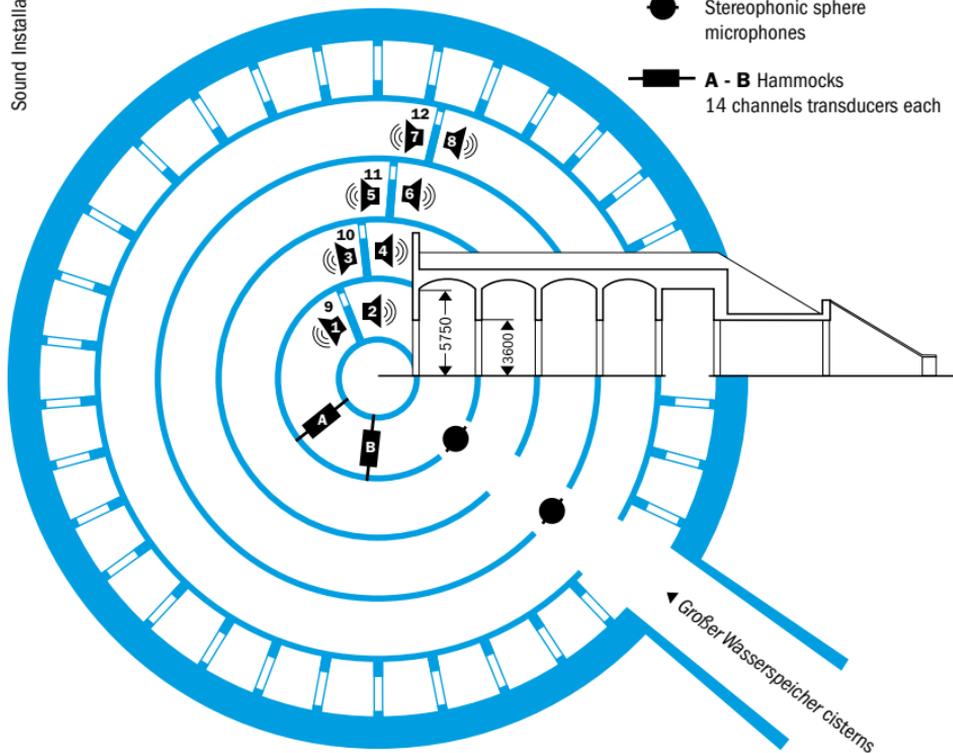




ECHOES OF A SONIC HABITAT

Sound Installation venue

-  **1 > 8** Main speakers
-  **9 > 12** Subwoofers
-  Stereophonic sphere microphones
-  **A - B** Hammocks
14 channels transducers each



ECHOES OF A SONIC HABITAT

Echoes of a Sonic Habitat is comprised of discreet natural sounds extracted from their native environments and then transformed into a composed soundscape. The original sounds were recorded in 2003 in the Montefeltro area of Italy, around the town of Urbino. They were then drawn into a composition and spatialized in a 26-channel sound installation for the extreme, resonant spaces of the *Grosser Wasserspeicher* cisterns in Berlin, Germany, in 2004. The sound event was recorded onto four tracks, using two sphere microphones to record all of the acoustic reflections of the cisterns, including the traffic noise at the end of the piece when the doors of the larger cistern to the city were opened. The recording was then adapted to stereo for this CD.

The composition was shaped by the acoustic responses of the three different contexts in succession, encompassing the listening space where this music will be played. The unique character of the work lies in the stratification of spaces and media superimposed on a natural soundscape.

Technical Notes: *The sound of insects was recorded with special hyper-directional microphones placed in close proximity to the sources, thereby isolating them from other elements of the soundscape. A database of the smallest sound gestures and patterns (corresponding to different species) was created and then used in composing a multi-channel installation.*

Electroacoustic drones were created through a system tuned to the ratios of a single harmonic series, and through simple 'white noise' played on 4 sub-woofers into the cisterns. There was no processing of natural soundscapes except for frequency shifts (which are always interrelated with their reciprocal time shifts) of certain cricket sound gestures from 1:40 min. to 3:40 min. The textures created by the natural soundscapes are the timbral result of the acoustic properties of the cisterns.



NIGHTINGALE





NIGHTINGALE

with medieval transverse flute performed by David Monacchi

Nightingale began as a contemplative reflection on the dynamic relationships between nature and human beings. It was also an explorative analysis of a bird whose melodic virtues have been celebrated since ancient times. Studying the field recordings, I noticed how the nightingale, unlike most birds, does not articulate its singing through simple, repetitive patterns. Rather, it sings by developing improvisations of stunning musical variety and richness.

The songs of three different nightingales were arranged so that the melodic patterns and time structures became evident. Live improvisation on the medieval transverse flute creates an interaction between the sound aesthetics of a human being and the nightingale, forming a link between the static, background drones and the dynamic, foreground sound of the nightingales.

Technical Notes: *The original field recordings of the nightingales were manipulated through a progressive stretching that brings the birdsong onto a plane of time and frequency recognizable by the human ear. Through this process, their melodic patterns and time structures become apparent, while the sound of the flute, recorded and speeded up, suggests a non-human order of time and instrument pitch. All the sound materials (except for the drones, the initial traffic noise, and the flute) have been crafted by these stretched nightingale sounds.*

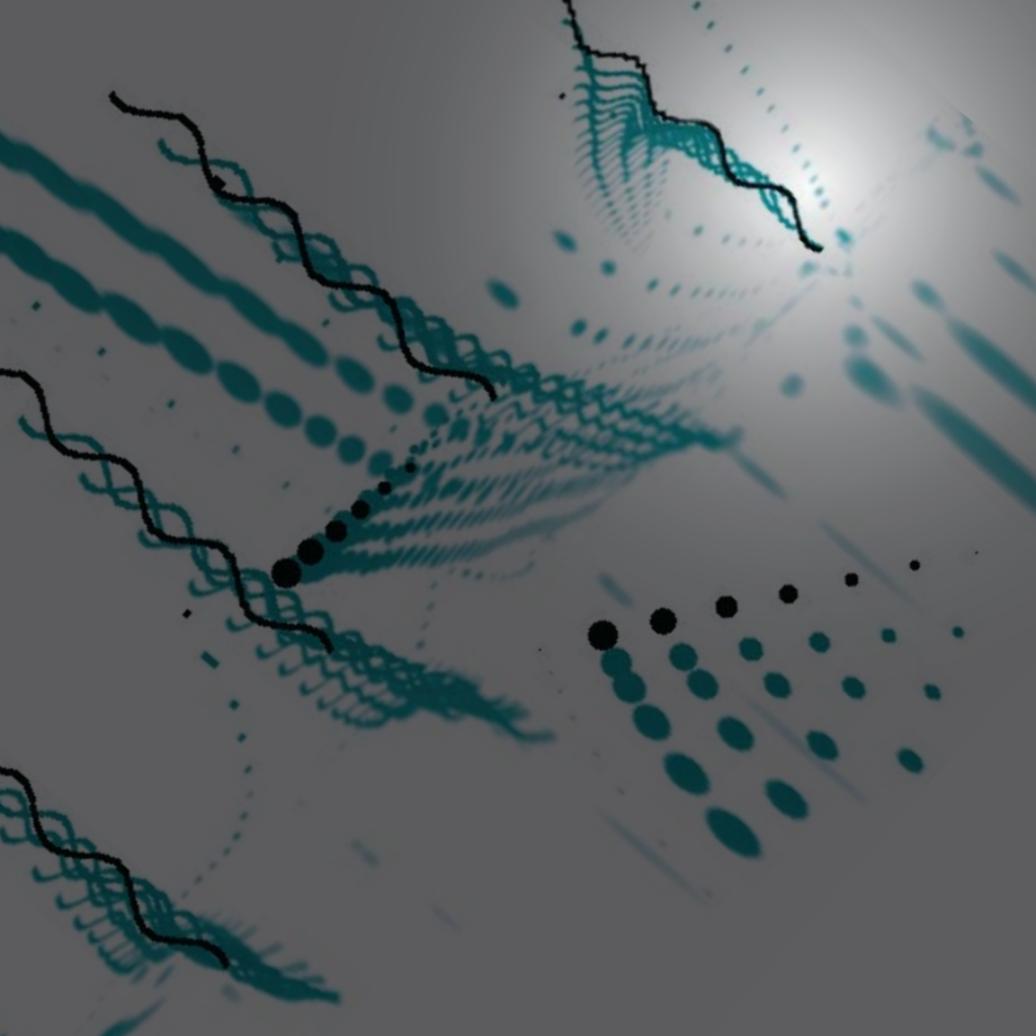
During the recording of the nightingales in the quiet countryside evenings of the Montefeltro region, the microphones picked up a series of nearly imperceptible low frequencies. In the studio, these low sounds became surprisingly clear. Initially, I intended to edit out those sounds, thinking of them as undesirable noise. Instead, they became the emotional core of the composition. Only much later did I discover that these drones were the sound of several military airplane convoys flying at high altitude, likely NATO planes having taken off from the Aviano base and heading towards Kosovo on the night of May 25, 1998.





FADING AWAY WHALES





FADING AWAY WHALES

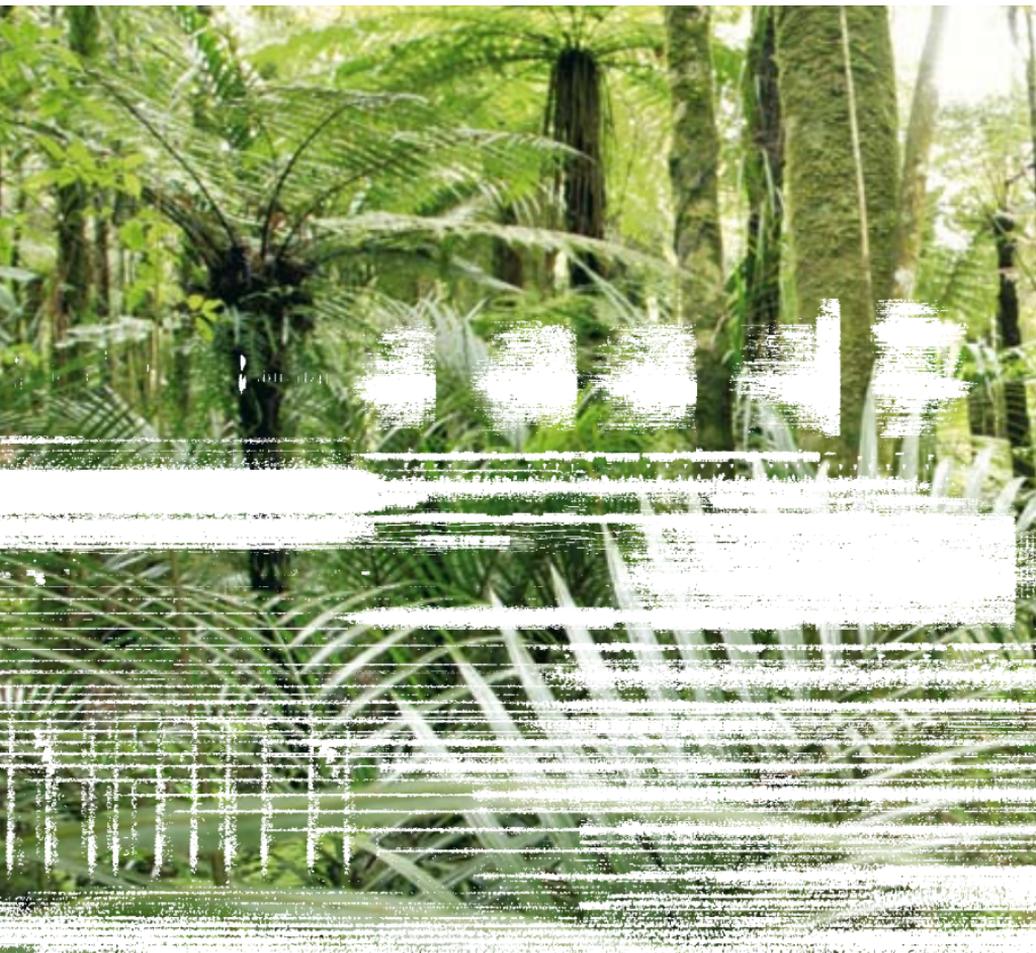
Whales, the largest living creatures, live in the most complex ecosystem on Earth. Due to their longer wavelength and greater energy, the low frequency sounds of some whale species can travel through the ocean for hundreds of kilometers, forming a vast, mostly unknown, network of sonic languages.

These languages are quickly disappearing. Whales are often not able to communicate at all due to the excessive underwater noise pollution of their habitat. And the whales themselves are disappearing. From what currently remains in the oceans of the diminishing populations of whales, many are slaughtered for the use of just a tiny part of their massive bodies and many whale species have been classified on the International Union for the Conservation of Nature Red List as 'threatened' or 'critically threatened' with extinction.

Because many whale species articulate their sounds at the low threshold of human audibility, it is common practice in bio-acoustic research to play back the sounds at higher pitches to make them more audible and to make their timings more perceptible. In this composition, I kept the sounds very close to their original pitches, providing a rare listening experience for the general public.

Technical Notes: *The 'augmentationem' (augmentation) and 'diminutionem' (diminution) linked to frequency transpositions, retrograde motion, and reverberation are the only processes with which all the sounds of this composition are enhanced. Some of the sounds, for example the Finback Whales' songs, which were recorded at their original frequencies around 23 Hz, will be reproducible only on loudspeakers that can play such low frequencies at audible volumes.*

The whale species recorded on this track are: Bowhead Whale and Seals, Blue Whale, Finback Whale, Gray Whale, Humpback Whale, Right Whale, and Sperm Whale. The Cornell Lab of Ornithology provided the original underwater recordings to Electronic Music Foundation, which in turn provided the sounds to me for this composition. The composition was spatialized for an installation presented at Ear to the Earth (2006, New York) using ambisonic techniques with a group of 12 loudspeakers arranged in a spherical array.





FRAGMENTS OF EXTINCTION

FRAGMENTS OF EXTINCTION

Fragments of Extinction is an ongoing research project that documents the sonic environments of the primary equatorial rainforest remaining on the planet. It was conceived as a vehicle for raising public awareness of the bio-acoustic value of our environmental heritage and the serious global issues pertaining to the loss of tropical forests and species extinction. This project aims to communicate the organic equilibrium and intrinsic beauty of the rapidly changing, primary soundscape. A full sequence of multi-channel compositions are being produced from field research in the Amazon, the Congo basin of central Africa, and the islands of Southeast Asia.

These recordings are being brought back to cultural institutions (contemporary art museums, natural history museums and music venues) and played in their pure unaltered form. As three-dimensional sound portraits of a vanishing world and as electro-acoustic compositions for sonic art installations, they explore and reveal the complexity of nature through art.

This version of *Fragments of Extinction* is extracted from a multimedia 45-minute, 8-channel sound installation, which makes use of multichannel field recordings, selections from my travelogue and real time spectrogram projections. I recorded the soundscapes in 2002 in the Brazilian Amazon around the Jaupen River, a tributary of Rio Negro that flows through an as yet undisturbed equatorial rainforest area. It is here, along the equator, that night and day are equal throughout the year and natural rhythms are impressively regular and in balance. Three distinct, major ecosystems (forest, flooded forest, and riverbank forest) were sampled throughout the 24-hour cycle over fifteen days at the onset of the region's rainy season.

Technical Notes: *The original soundscape featured in this work has been slightly enhanced with 'horizon harmonics', additional partials created with granular synthesis, and frequency modulation within a unique harmonic series tuned to the pitched sounds found in the natural sonic environment. The work focuses upon conveying the complexity of the primary ecosystem and remaining true to the essence of the place itself.*

The Jaupen River is six hours by canoe from the nearest source of electricity. These recordings were made possible by a system of solar-panel-powered batteries. The sound was picked up through an experimental binaural-omnidirectional sphere microphone with Schoeps capsules, pre-amplified by a high dynamic portable preamp, and recorded onto a high definition digital recorder. The recordings were made in collaboration with Greenpeace and Vivamazzonía.





CREDITS

All compositions by David Monacchi

Research and field recordings: David Monacchi

Production and track notes: David Monacchi

Liner notes: Jim Cummings, Joel Chadabe

Design: Marcello Serafini

Special Thanks to:

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Echoes of a Sonic Habitat, *Grosser Wasserspeicher*, Berlin, Sept 2004.



Stati d'Acqua, *Tevereterno*, Rome, June 2006.

David Monacchi does more than record sounds of nature. He turns the natural environment into compelling sound art. Through his sounds, he carries us into the Amazon, floats us on the current of the Tiber, guides us into the depths inhabited by whales, connects us to the urgency of a disappearing world. His awareness of wanton destruction of habitat and extinction of species lends power to his music, as if he can preserve nature by documenting its sounds and making them beautiful. In fact, he does document its sounds. And he does make them beautiful. And when we hear the world through Monacchi's music, it does become unforgettable.

Joel Chadabe

President of Electronic Music Foundation, New York - USA

ECO-ACOUSTIC COMPOSITIONS

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ECHOES OF A SONIC HABITAT (2004)	11.05
NIGHTINGALE (1999)	12.02
FADING AWAY WHALES (2006)	08.30
FRAGMENTS OF EXTINCTION (2003)	10.06
TOTAL	59.12



Due to the microphone techniques used, it is recommended that headphones be used when listening to this CD.