
Nature on Record: Part Two

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About This Series

This is the second part of a series of articles about recordings of sounds from natural surroundings that I wrote for the US magazine *Experimental Musical Instruments*. This publication dealt with "the Design, Construction and Enjoyment of Unusual Sound Sources," and did so with an open mind. Its editor, Bart Hopkin, decided to stop publication after having completed volume 14, in June 1999. The contents of the articles ranged from technical via practical to poetic or even surreal. It came with a reviews section. Part of the instruments featured were included in a tape that was compiled annually. Bart Hopkin continues to be active in the field of experimental instrument design. All the back issues will be kept available. With Ellipsis Arts he has produced two books with CDs devoted to this topic.

For information on [Experimental Musical Instruments](#), see below.

NATURE ON RECORD PART 2

This part of the series will focus on soundscapes. These feature sonic impressions of how environments sound, mostly through the animals that live in them. Recordings of environments defined by man made activities do exist. The reader should keep in mind that in these articles I restrict myself to sounds from nature. The meaning of the term "soundscape", when used here, is therefore limited to recordings portraying natural environments. I want to discuss some general aspects of this area, referring to particular albums to illustrate my points. At the end I will give a list of albums that I used for writing this part of the series. But first I want you to join a young researcher trying to catch singing insects in the high grasses of midsummer.[1](#)

Listening to a landscape

In the 1930s at the height of summer Vincent Dethier was busy collecting New England species of grasshoppers and their relatives. He worked as an "entomological factotum" to professor G. W. Pierce who recorded the sounds of these creatures, publishing the results of a twelve years study in *Songs of Insects* (1948). What this scientist had originally been after were sounds in nature with pitches above the human hearing range, a spin-off of his research into the production and detection of high-frequency sound for the US Navy during the First World War. Dethier, a novice to the trade of catching and distinguishing these singing insect species, joined Pierce as an assistant in his investigations for three years.

In the course of time he developed a sensitivity for their sounds. He had to, as he comments on an episode that saw the expedition climb Mount Washington. There they were looking for a species of meadow grasshopper that differs from its common relative by the absence of clicks between sequences of pulses. Dethier did not only acquire a keen ear for Orthoptera. He discovered how shifts in timbre mark the passage of time, how different species of insects provide as much a clue to that as do agricultural tools and machines. He learned to appreciate the sounds of the landscape in its totality, as the wealth of references to them in *Crickets and Katydid's, Concerts and Solos* testifies. Often he uses images from music to

describe the impact all the vocalizations made on him. At times Dethier's descriptions (all based on extensive notes that he made when hunting for professor Pierce)² transcend musical imagery, becoming at once more abstract and more direct.

As the title of the book suggests, it deals primarily with singing insects. That is what Dethier's narrative hinges on. But he himself is there as well, as a spectator, as a listener, as an actor and as an intermediary. Inevitably his presence shapes the landscapes that the reader gleans from the pages. These can be wide and open, but just as often Dethier will zoom in on a tiny detail and make clear how it relates to the whole. By likening his sounding environment to music he apparently wants to stress the grandness of nature as he experienced it. To my opinion he manages to breathe life into his portraits when he steps outside the domain of music into the realm of sound. Or maybe I should say, animated sound; the murmur of the forest on the slopes of Mount Washington makes Dethier realize why "early peoples" viewed their surroundings not simply as geographic areas but also as living and conscious entities. It is the different strands of perceptiveness coming as flashes of insight and running like a deep current throughout the narrative that, with its carefree tone, give this book a rare appeal.

Sound portrayal

Dethier's writing and soundscape recordings show some remarkable parallels. Both document the landscape from the position the author has taken within it. However immediate and true to life these portraits may feel, between the first hand experience and its recreation in the mind of the reader (or the ears of the listener) usually lies a length of time and a lot of work. As I understand it, apart from a variety of possible motives, immediacy and truthfulness are indeed basic aims inherent in sonic representations of natural surroundings, the former more easily achieved than the latter. According to Catherine Girardeau (EMI Vol 10 #2) Bernie Krause's CD *Amazon Days, Amazon Nights* was mixed from 170 tracks. Jean C. Roché told me that he used to compose his "environmental concerts",³ starting with a steady background over which he laid down individual songs (or calls) and choruses, weaving these into patterns that progress from one highlighted species to the next.

An intended free flow, an apparent natural looseness, is often the result of meticulous editing. I will not discuss technical details or motivations; that, I think, is best done by the recordists themselves. I do feel that I have to mention it, though, for several reasons. One is just to draw attention to this paradox,⁴ which (I must admit) was something of an eye opener when I first heard it. Another is that it may have consequences for what is actually on record. The tapestry of sound may be rather dense and eventful, suggesting a population pressure that one would associate with Hong Kong rather than the great outdoors. Sounds with different reverberation characteristics can sometimes occur together, reminiscent of the transparent flat backgrounds used in cartoons to create a sense of depth. In some cases one gets the impression of listening to a sonic slide show, species following one another as if placed on a conveyor belt in front of a colorful backdrop. In some cases each time when within a sequence one specific call or phrase is repeated, another may trail behind, even though there is no apparent connection between the two other than the fact that they must have occurred simultaneously at the moment of recording. Close listening sometimes reveals clicks where a tape is started, or a sudden increase in background hiss.

One of the main problems in constructing an accurate sound image of any environment is the fact that aural perception, which incorporates the three dimensions on all sides, is reduced to one horizontal axis when using headphones or one and a half when playing over loudspeakers. As a consequence sounds are only distributed over a horizontal plane; a lark warbling overhead will not to one's ears be higher off the ground than the chirps of a hopping sparrow. At one point on the first track of *Solitudes* (a sampler album with excerpts from CDs in Dan Gibson's soundscape series of the same name) a curious regular splashing emerges,

shifting from left to right. I was at a loss just what this could be. It sounded as if a current gurgled around my head, or even right through it. Had the sound been projected downward and behind me, I might have recognized it for what it was without consulting the liner notes - canoeing.

The scenery

There is⁵ more to a soundscape than representing an area through the sounds of the animals living in it, although these admittedly constitute its most notable elements. The character of a landscape is also defined by sounds generated through its inanimate components. On two albums that Jonathon Storm made for his label Earthtunes, they are a prominent (though unobtrusive) part of the total image. His *Ancient Forest-Spring Chorus* features in different places in its third track a reverberating and incessant deep murmur of giant trees, bringing to mind how the forest on Mount Washington impressed Vincent Dethier. Near the end of that track one can hear the dry creaks of wood rubbing on wood.

The physical landscape plays a leading part on the first half of *Rivers of Ice*. This album presents scenes from the life cycle of glaciers. There's a lot of wind and water on it, always different in tone and intensity. It trickles and tickles down your ears,⁶ bubbles and sizzles around you, up to the moment that an incredible profound rumble comes on -- it's the crash and boom of immense chunks of ice breaking loose from the main body of the congealed, though not arrested, flow. Positively overwhelming and awesome. But then you'll also come across single drops falling off melting icicles, the subdued tinkle of icicles breaking. The combination of the impressive wide view and these small details on one album makes listening to it an extraordinary experience. Storm must have been awed, too, and felt called upon to shape the liner notes into poems: "Such is this life -- filled with unfathomable beauty, and merciless change." Lines like these do not work for me; they make me think of a tiny figure with arms opened wide declaiming its noble thoughts and feelings in a shrill voice in the roaring face of huge indifferent ice walls.

Both Storm and his erstwhile teacher Gibson have apparently devised the various parts of their albums as narratives. They audibly move from one scenery to another (brook fading out, then murmur of trees fading in) within one track, carrying birds or other sounding elements with them as it were, in order to maintain a sense of unity. At times Gibson's work betrays his experience as a film maker, especially when he uses sounds of human actions to develop the story line. Moreover, the tracks of his sampler album, sketchy though they may be, generate vivid visual images. Storm, on the other hand, seems to be more of a composer in the way he approaches his material. Every now and then his pieces even gave me the sensation of having strayed into a concert of program music. He does have an ear for fascinating sounds, however, and manages to capture them on tape in immaculate detail. Track 5 of *Ancient Forest* has a startling four minute sequence of Hermit Thrushes, with their ethereal melismatic lines among the greatest singers of the North American forests.

Space and time

Another aspect of representing an environment in sound is spacing. This term covers more than one meaning. It may refer to a sense of depth resulting from the way animals are placed within the image and in relation to each other. It may also refer to the rhythm of a place, and the way it is rendered on a soundscape; that is, the number of sound events with the passing of time, or (conversely) the amount of silence allowed in the final product.⁷ One of the best examples is the work of composer David Lumsdaine. He sent me a DAT tape containing a 44 minute piece called *Lake Emu*, plus extensive notes concerning this soundscape and four others, all intended for radio broadcasting.

As the duration implies Lumsdaine approaches the place unhurriedly. What is more, and this is something you will not often hear, by his way of recording he reproduces the act of listening, focusing left and right, on sounds close by or further away. You also get the feeling that he has not been anxious to include all species belonging to the place. Instead you perceive (or so it seems) the distance between individual animals, separated as they are by areas of silence. Neither has he been afraid of sequences being relatively uneventful and falling silent from time to time. Through this he has managed to capture an essential part of nature -- its unpredictability. Not only do these characteristics give *Lake Emu* a rare and very pleasurable sense of openness, in comparison to other soundscape recordings they make the experience come closest to actually exploring a landscape by ear.

Sittelle made a CD of Lumsdaine's recordings called *Australian Soundscapes*, one of the very few such albums devoted to that continent. This fact alone should make it worthwhile. One of its attractions is a recording of Grey Butcherbirds, a species with a well-developed social life, expressed in antiphonal group calls. Each clan has a musical repertoire of its own. The calls have a remarkable nasal quality, as if occupying middle ground between a flute, a clarinet and a trumpet. The melodies are gripping, reminiscent of the Latin American Musician Wren by the ease with which the birds jump large intervals and by their closeness to the human way of composing phrases. Of *Lake Emu* only a fragment is featured on this album, regrettably. It would have been a challenging notion to make a CD of one piece only, taking its time to trace the true nature of an area no larger than the ear can reach.

Quietude

Many recordists profess a deep appreciation for silence. Dan Gibson calls his series of CDs *Solitudes*; Bernie Krause states on the insert of *Amazon Days, Amazon Nights* that his compact discs "are designed to give the listener a sense of the serene presence of each environment;" on the insert of *Ancient Forest* Jonathon Storm writes, "The ancient forest, in contrast to our Age of Noise, has a very quiet voice. One must enter in silence to hear its song." The California Library of Natural Sounds, affiliated to the Oakland Museum, dedicated a CD to it, *Quiet Places*. It is one of those slide show albums, possibly because it was made for educational purposes. What is interesting, is that its producers have tried to give the listener an impression of how the various types of habitat of the state may have sounded before the Europeans arrived. It moves inland from the coastline to the desert, sketching the backgrounds and filling these in with species belonging to them.

In the liner notes the following thoughts, to which I fully subscribe, are expressed: "Since that time (i.e., when the Europeans arrived 200 years ago,) human populations and technology have reduced alarmingly the habitats available for California's numerous, diverse species. Today, as a result, many are in danger of disappearing. Also threatened are the 'quiet places' where the pristine sounds of nature can be heard. For many of us, any natural area seems peaceful. However, when we focus on the sounds of nature, we hear at an ever-maddening level the sounds of automobiles, airplanes, chain saws, generators, and even the din of others like ourselves. Even in places where large areas of untouched natural habitat have been protected, we are increasingly overrun by the sounds of man".⁸
"Those remaining places of natural quietude, what we call 'quiet places', are some of our most endangered habitats, in California as well as in the rest of the world. This quiet crisis -- the disappearance of quiet places at a startling rate around the world -- is the theme we address with this compact disc. We must work now to preserve them or they will soon be gone. As 'in wildness is the preservation of the world', so in the quietude of wilderness, we believe, is the preservation of its very essence."

Recitals

Recordists frequently refer to their soundscapes as symphonies. Jean C. Roché has set up a collection of "great virtuosos" that one may call recitals, as they mostly focus on one protagonist at a time. It allows him to explore the vocalizations of a limited set of animals in some detail and at some length. This is a genre in its own right. In contrast to sound guides, each highlighted species is allowed plenty of time to make its point; in contrast to soundscapes, the effort lies in selecting rather than editing. It's a sensible concept that works well, at least for me. I find it surprising that I have not seen CDs in the same vein from other soundscapists.

On separate albums Roché features Nightingales, European Warblers, Larks and Thrushes. The Warbler CD offers an unexpected diversity in the songs that the members of this family sing. The voices are mostly strong and vibrant, sometimes strident, but generally (as with the Blackcap and the Garden Warbler)⁹ wonderfully mellifluous and varied. *Larks Ascending* opens with what may be the nicest bird singing on the European continent, the Wood Lark. In an uncommonly pure tone this species sings undulating lines that seem to express a deep melancholy. It also contains over nine minutes of continuous song of a first class warbler, the Skylark. One can hear this bird, visible only as a speck high above European fields, giving out its excited whistles and trills throughout spring.

Apart from the fact that at last one can hear the width and depth of these birds, these albums are especially appealing because the songs have not been placed over a background that was created for that purpose -- all tracks do sound natural. As far as I am concerned, pure mono recordings often are to be preferred to heavily edited 'symphonies' in meticulous stereo. On the second track of *A Nocturne of Nightingales* you hear two birds from adjoining territories competing in song.¹⁰ The rivalry and the interaction stand out in the serenity of the night.

Finally Sittelle has brought out two CDs with 'large mammals', *Wailing Wolves* and *Songs from the Deep*. Although Roché does not classify them with the virtuosos, they do belong in the recital category, as only a limited group of species is highlighted. The vocalizations of both wolves and whales consist of elongated glissandi. Choral howls of the former often cross or run almost parallel, making strong difference tones appear. The collection of whale songs may be less unique than the wolves' recordings, this CD¹¹ contains rarities that make it more than worthwhile. There are the rasping chirps, insistent clicks and high whistles of Belugas. You'll hear the voice of the Narwhal, halfway between sputtery mooing and the bellow of an elephant, after short bursts ending in a plaintive whine or swiftly gliding up the scale to unexpected heights. A Humpback around Hawaii that must have been recorded from a considerable distance, as the water seems to be alive with reverberations of its song. Something you should hear at least once in your life is the incomparable interplay of Bowhead Whales and Bearded Seals that concludes this CD. The deep and slow ascending grumbles of the whales are garlanded with multitudes of faster descending tremolos yelped by the seals in the upper end of the tonal range. There is an outlandish, almost electronic quality about these sounds, something quasi deliberate in how they go together. This planet houses communities that we can perhaps touch and spoil, but that we will never be able to master.

Enjoyment

Just like there are different motives for making soundscape recordings, there are different ways of listening to them. I do not always listen as closely as I have for this discussion. Sometimes I will play an album to serve as a background for reading or writing; as there is no musical development or drama, I find that such recordings do not distract me from these activities but rather seem to support them. At times I do listen to soundscape CDs for relaxation, a usage that the makers often promote. For me this does not work with just any album, though. One type of sound that is invariably claimed to put your soul at ease never

fails to make me restless -- running water. On one hand it involves a lot of movement, on the other hand it drowns a large part of the sound spectrum. I notice that this can make me involuntarily strain my ears to be able to catch signals which may be of importance. Most rainforest recordings, because they contain powerful sounds tightly packed together, have a stimulating rather than a calming effect on me.¹² What's more, generally speaking it is the soundscapes from my part of the world (Europe, that is, rather than the temperate zones of the northern hemisphere) that I find effective in that sense; probably because the total image and most of the details are familiar -- they sound close to home.

One example comes to mind of what could be this familiarity at work. After I had listened almost halfway through *Wailing Wolves*, suddenly my hair stood on end and shivers began to run down my spine. Looking at the index I found that the first part with recordings from Canada had finished, and the second part was on now, featuring French animals. This makes me wonder how this CD would affect Canadians, or better still, North American Indians.

Another reason for playing soundscape recordings is to indulge in the sense of fascination that is brought about by the magnificence and the singularity of specific sounds. At times my perception shifts there and back between this wonderment and a strong impression of musicality in the unpredictable variegated patterns, the sonorous and intricate vocalizations. This may be evoked by the sharp percussive gargles of displaying Capercaillies (a large type of grouse) as on Sittelle's *Scandinavian Soundscapes*. These birds produce short phrases of accelerating throaty snaps, alternated with excited rhythmic screeches. On this specific track two males meet and have it out in a thrilling dispute, whilst a Robin (tiny relative of thrushes, not to be confused with its American namesake) interlaces their competition with its imperturbable treble warble. Tropical birds can be eerily melodious.

The throaty gurgling arpeggios of Oropendolas are a case in point. On the Sittelle CD *American Forests and Lakes* the call of one is followed up with an even more unsettling sound. A wily thin whistle, as if somebody is passing by doing his utmost to appear casual. That is the aptly named Musician Wren, the 'mysterious' bird from Olivier Messiaen's *Et exspecto resurrectionem mortuorum*, reputed to sing only shortly before its death, according to the composer. Messiaen held that birds are the most accomplished musicians of creation. A comparison between music and sounds from nature is readily made. But can or should they be equated; and if so, to what extent? It is something that I want to go into in the last part of this series, in which I will take a look at certain human interpretations and adaptations of the voices that our species has discovered in nature.

July, 1995

[René van Peer](#)

Notes

1. In the original text I had used quotes from *Crickets and Katydid's, Concerts and Solos* by Vincent G. Dethier (Harvard University Press, 1992) with permission of the publisher. To my regret they did not give copyright clearance for this WWW version. I want to respect this decision. I would have liked to present Dethier's observations to my readers here. In my opinion they are well worth reading. As it is I will have to direct you to either the book itself, which I highly recommend, or to *Experimental Musical Instruments Vol 11 #1*, in which this article was published and which I also recommend highly. Consequently the current article is a rewritten version of that original. [^](#)

2. As I was informed by his widow, Mrs. Lois Dethier, during a telephone

conversation. [^](#)

3. He began making these 25 years ago; since 1985 he has issued them through his own label Sittelle. [^](#)

4. Questions that come to mind are: don't they by editing their recordings express the wish to improve upon nature; and is that or isn't that a respectful attitude towards it; isn't it inconsistent to try and arouse people's interest in nature through something that is so thoroughly artificial? There are more paradoxes involved: the portrayal of a natural environment through artificial means, i.e., sophisticated technology; an atmosphere of solitude that can only be created because someone was present; another will be discussed in the next paragraph. The bottom line is of course (as every recordist will affirm) that whichever way you look at it, any single recording is the result of human interaction with (and therefore, interpretation and filtering of) the environment as a whole and elements in it. To what extent artificial construction is used, is then a matter of personal taste. [^](#)

5. Or, perhaps, there should be. [^](#)

6. Makes me want to run to the bathroom, too. [^](#)

7. There's another paradox: even though most soundscape recordists are convinced that we make our surroundings suffer from a deficiency of silence, real silence seems to be a scarce commodity on soundscape recordings, too. [^](#)

8. Composer Alvin Lucier went to places as far away from human habitation as possible, to be able to record electromagnetic activity in the ionosphere; on these recordings one can hear continuous tones at the upper end of the human hearing range, guiding beacons for air traffic, that may well cover the entire planet, like a web. [^](#)

9. The bird that inspired Olivier Messiaen's piano composition *La Fauvette des Jardins*. [^](#)

10. A third bird (not noted in the liner notes) is singing in the background. [^](#)

11. Recorded by the Marine Mammal Fund in San Francisco. [^](#)

12. I remember Peter Cusack, a British recordist and musician who has worked in Thailand and Malaysia, telling me that nature in Southeast Asia is quite noisy and lively. [^](#)

Albums

Storm, Jonathon	<i>River of Ice</i>	Earthtunes ET5-1001
Storm, Jonathon	<i>Ancient Forest, Spring Chorus</i>	Earthtunes ET5-1004
Jüssi, Fred	<i>Voices of Matsalu</i>	Melodiya C90-13845-6 (LP; deleted)
Jüssi, Fred	<i>Bird Songs of the Woods 1</i>	Melodiya C90-23557-008 (LP; available through WildSounds)
Matzner, Paul	<i>Quiet Places</i>	Oakland Museum22222

Goodwin, Ray	<i>Gloucester Wildlife Tapestry</i>	Saydisc CSDL 304 (British ambiance sketches)
Bruckert, Rémy	<i>Jungles of Borneo</i>	Sittelle 26304
Hérelle, Jean-Luc	<i>Québec Symphonies</i>	Sittelle 26502 (forest and seashore)
Lumsdaine, David	<i>Australian Soundscapes</i>	Sittelle 23907
Marine Mammal Fund	<i>Songs from the Deep</i>	Sittelle 48207
Matheu, Eloïsa	<i>Brazilian Soundscapes</i>	Sittelle 26106
Mild, Krister	<i>Scandinavian Soundscapes 1</i>	Sittelle 25109
Roché, Jean C.	<i>American Forests and Lakes</i>	Sittelle 22405
Roché, Jean C.	<i>Forests and Mountains of Asia</i>	Sittelle 22702
Roché, Jean C.	<i>Mountain Medley</i>	Sittelle 23501 (different vegetation zones)
Roché, Jean C.	<i>A Nocturne of Nightingales</i>	Sittelle 43608
Roché, Jean C.	<i>"Sylvia" Warblers</i>	Sittelle 42205
Roché, Jean C.	<i>Larks Ascending</i>	Sittelle 42403
Roché, Jean C.	<i>Birds awakening 2</i>	Sittelle 24409
Roché/Bruckert	<i>New Guinea Soundscapes</i>	Sittelle 25505
Roché/Gauthier	<i>Forests of Poland</i>	Sittelle 25703
Roché/Gunn	<i>Wailing Wolves</i>	Sittelle 11102
Kellogg, Allen, Asch	<i>Sounds of a Tropical Rainforest</i>	Folkways 6120 (early attempt at soundscape, from 1951!)
Gibson, Dan	<i>Solitudes, Sampler Album</i>	Solitudes CDS DG 84
Krause, Bernie	<i>Amazon Days, Amazon Nights</i>	Wild Sanctuary 1505 CD

Addresses

Earthtunes, 6190 Beaver Valley Road, Port Ludlow, WA 98365, USA
[Oakland Museum](#)/Nature Sounds Society, 1000 Oak Street, Oakland, CA 94607, USA
 Saydisc, Chipping Manor, The Chipping, Wotton-under-Edge, Glos. GL12 7AD, UK
[Sittelle](#), rue des Jardins, 38710 Mens, France
[Smithsonian/Folkways](#) Mail Order Service, 416 Hungerford Drive, Suite 320, Rockville, MD 20850, USA
[Wild Sanctuary](#), 13012 Henno Road, Glen Ellen, CA 95442, USA

Dan Gibson's Solitudes series is distributed by:

Holborne Distributing Co. Ltd.
P.O. Box 309S
Mount Albert
Ontario, L0G 1M0
Canada

Major distribution services for nature sounds recordings are:

The Crow's Nest, 159 Sapsucker Woods Road, Ithaca, NY 14850, USA

[WildSounds](#), P.O. Box 9, Holt, Norfolk NR25 7AW, UK

Major sound archives:

[Cornell Lab of Ornithology](#), 159 Sapsucker Woods Road, Ithaca, NY 14850, USA

[National Sound Archive](#), 29 Exhibition Road, London SW7 2AS, UK

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René van Peer (1956, the Netherlands) is a freelance journalist who writes about experimental art, contemporary and experimental music, and traditional music. He works for several Dutch newspapers and magazines. He has written articles and reviews for the US magazine *Experimental Musical Instruments*. The Canadian magazine *Musicworks* has printed his articles. Art and music venue Het Apollohuis in Eindhoven, the Netherlands, commissioned him to write 'Interviews with Sound Artists', a book that was published in 1993. His interest in sound developed from his acquaintance with unconventional music. A survey article of his about European record labels for traditional and world music appears in the magazine of the Society for Ethnomusicology (Summer 1999). An interview with sound recordist and composer David Dunn (Santa Fe, NM) appears in *Leonardo Music Journal* (MIT-Press) of 1999. He has contributed several other [articles](#) to this web site.
