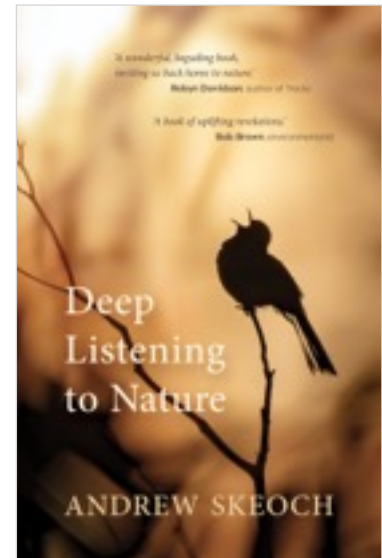


Chapter Summary

Andrew Skeoch

Deep Listening to Nature covers many themes. The book can be considered as comprising three parts, with each chapter developing a major conceptual theme, while the interludes speak of my personal experiences of field work and listening. Significant locations are noted in italics.



Part 1: Beginning to listen to nature

Prologue

Mutawinji, outback NSW.

Recalling the occasion, nearly thirty years ago, that my ears first became opened to the sounds of the natural world. An initial encounter with Indigenous ways of listening and relating to nature.

Chapter 1: An Invitation to Listening

What is deep listening? Why does listening give us such a fundamentally different perception of the world than looking, and what can we benefit from being more acoustically aware? I consider ancestral versus modern listening, the limitations of language, and the 'slow listening' required to tune in to nature's nuances.

Chapter 2: A Practice of Listening

Beginning by extending our listening to the sounds of the natural environment around us, we can then develop our field listening skills; how to identify species by ear, and describe and memorise their calls.

Chapter 3: Nature Tells us Stories

The central Victorian woodlands.

A walk along a bush track, in which I discuss the calls and songs of various birds that are encountered, each representative of the ways they use sound to facilitate their lives: to define their homeranges, announce their presence in the landscape, maintain the integrity of foraging flocks, bond family groups, avoid danger, and express sociality, individual state of being and intelligence.

Interlude – The Tall Forests

The temperate forests of East Gippsland

As a ferocious storm lashes the forest, my partner Sarah and I shelter in a flimsy tent, and make the decision to dedicate our lives to recording and publishing nature sound recordings.

Chapter 4: Hearing Sentience

Birdsong allows us to hear the avian mind. It was a curious Torresian Crow that made me aware – for the first time – that I was not just hearing birdsong, but the sentience of another creature. Our circle of care for other creatures is enlarged by this way of empathic listening. It also reveals the creativity, sophistication and aesthetics of birds, and how their minds function at a speed we cannot comprehend, challenging our conception of time itself.

Interlude – The Valley of the Winds

Kata Tjuta, central Australia

During a frustratingly windy morning attempting to record in the desert, I came to a more integrated awareness of listening; hearing everything together, attentively and without preconceptions. I felt this as a communion, which for me emerged when reflecting on Aboriginal ways of understanding the living world.

Part 2: Hearing evolution and nature's processes

Chapter 5: Voices of the Land

Turkey and Northern Europe

I was puzzled on first encountering European birdsong, and why it sounded so different to the birdsong I was familiar with in Australia. This led me to an understanding that it is the land and climate that constrains or provides opportunities for birds to live in varied ways (co-operative breeding being an example), and hence communicate differently.

Interlude – Islands of Wonder

The Solomon Islands

Recording the sublime predawn singing of Monarchs, and the extraordinarily loud singing of Golden Whistlers.

Chapter 6: Listening to Deep Time

Why are the Solomon's Golden Whistlers so much louder and more exuberant than those in Australia – are they even the same species? I realised I was not just hearing birdsong, but evolution.

Sound plays an important role in speciation, with variations in repertoire pointing to the emergence of new species. Common repertoire characteristics link related species, leading to speculations about how these may have come about. Considering how important acoustic communication is in the lives of many creatures, can sound actually shape the evolution of a species?

Chapter 7: Sonic Strategies

Specific uses of sound often define lineages of birds. These various uses can be thought of as sonic strategies. Song learning and mimicry are examples. But non-song learning birds also show sophisticated strategies, such as closed-mouth vocalisations (found among pigeons and other groups), a possibly ancient capacity linking contemporary birds to the dinosaurs.

Chapter 8: The Mind of Nature

The mountain forests of Papua New Guinea.

Can we hear the integrity of ecosystems? The daily cycles of sound and silence in habitats, generated by acoustic feedback loops, may give us a measure of the health of living systems.

Chapter 9: Avian Co-operation – Birdwaves

The cloudforests of Sulawesi and evergreen forests of India.

Mixed species foraging flocks (birdwaves) are a phenomenon of the avian world, and in tropical forests especially, unite a multitude of species in a co-operative behaviour that is primarily enabled by sound.

Chapter 10: Avian Diplomacy – The Dawn Chorus

Europe, Australia and New Zealand

In the hour before sunrise, birds do something extraordinary - they negotiate their relationships with kin and neighbours, defining their respective living space and creating communities for safety. All this is achieved vocally, in a process we call the dawn chorus, in which species interact in sophisticated ways; counter-singing with neighbours, creating listening silences, utilising specific repertoire not heard at other times of day, sequencing their participation, and even playing 'games' involving song phrase mirroring.

Interlude – Messenger Birds and Spark Birds

We all have a relationship with nature, which can guide us at pivotal moments in our lives. It has for me since childhood.

Chapter 11: The Listening Peoples

Indigenous peoples listen to the natural world around them to derive their understandings of life, so it is to be expected that our distant ancestors did likewise. Could the behavioural limitations of European birdsong have given rise to the conceptual limitations of the Western worldview - misunderstandings that underly our modern disconnection from nature?

Chapter 12: The Communicating Biosphere

Listening tells us about how the living systems of nature functions:

Predation has likely promoted the evolution of organs for acoustic perception, and primitive startle response defences predated eventual sonic communication.

Competition, particularly between members of a species, comes with costs that natural selection has studiously avoided through the evolution of behaviours termed 'agonistic' (the opposite of antagonistic). These are found widely throughout the animal kingdom, with each species having their own ritualistic behaviours for establishing status and access to resources. In many mammals these involve physical interactions, but in birds and other creatures, it is audible - they sing.

Co-operative behaviours are also ubiquitous, underlying the viability of entire marine and terrestrial ecosystems. These cooperative interactions frequently involve communication.

Mutual accommodation is the relationship between these polarities, in which species simply live and let live, sharing common resources. One of these is the acoustic space, with each species capable of sharing the airwaves by having evolved signals unique to their kind, and cognition finely attuned to them.

Aggression is costly, risky, and may only achieve short-term benefits, and what we perceive as aggressive behaviour in animals may often be interpreted otherwise. Evolutionary theory is coming to an understanding that life has been shaped far more by co-operation than competitive processes.

Part 3: What can we learn from listening to nature?

Interlude – The Immolated Forests

The 2019-2020 mega-bushfires across Eastern Australia were traumatic for many. For myself, I realised that many of the habitats I have documented with my microphones over the years will not recover their previous biodiversity. This has led me to re-affirm the importance of listening in a rapidly deteriorating world.

Chapter 13: An Ecological Future

Listening to nature may seem insignificant as humankind faces existential crises, both environmental and social. Yet natural selection has generated principles in living systems, many of them facilitated by communication, which support sustainability and from which we can learn.

The costs of competition in human affairs are profoundly harmful, yet competitiveness is often viewed as natural and unarguable, even affirmed as a virtue. However competition and aggression are not intrinsic to human nature - they have to be learned or incited. Listening allows us to understand how competition is moderated in natural systems. How can we, through a process of biomimicry, apply similar principles to our human systems of governance, economics and social affairs, and promote our own species' agonistic behaviours?

Every organism performs roles within its ecosystem. Identifying and celebrating humankind's role within the biosphere is crucial to finding our purpose and restoring a healthy relationship with nature.

Monitoring environmental sound can provide us with valuable scientific data, while deep listening can inform a culture of stewardship. Listening tells us about life; if we get the sound right, other things will naturally fall into place.

Chapter 14: Hearing our Place

Concluding thoughts on how we can use our senses to reconnect with nature, both personally, and through sharing occasions for collective listening.

Coda

A final walk in the bush, and last reflections.

Links:

[About the book](#)

[Soundtrack to the book](#)

[Author website: andrewskeoch.com](#)

[Sample chapter](#)

[Listening Earth catalogue of nature albums](#)

Contact:

Andrew Skeoch: listeningearth@gmail.com