

**Text Scores  
for Getting to Know  
the Invertebrates**

Lisa Schonberg

# Introduction

*Text Scores for Getting to Know the Invertebrates* is a collection of creative scores that invite re-consideration of individual relations with insects (and more broadly, invertebrates) through prompts that guide interactions with them. These scores are inspired by composer Pauline Oliveros' writing and scores, in which she challenges performers to listen as intently to sound as they possibly can – pursuing “perception at the edge of the new” both globally and focally.<sup>1</sup> My text scores do not require you to make music out loud,<sup>2</sup> but rather prompt you to auralize – a term that Oliveros coined to mean listening or making sound in your mind.<sup>3</sup> Blank ‘notes’ pages are provided for you to document your experiences with the scores.

Human relations with invertebrates, especially in Western capitalist societies, are strained: we are socialized into a narrative of fear, exclusion, and elimination of them. Anthropogenic impacts to our shared environments, such as deforestation, pesticide use, and agricultural intensification are exacerbated by climate change and are causing concerning shifts in invertebrate populations.<sup>4</sup> Many species have disappeared or will soon vanish, while others are experiencing pop-

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1 Pauline Oliveros (2000), ‘Quantum listening: From practice to theory (to practice practice)’, *Music Works*, 76, 73-91.

2 Making sound with your body is encouraged if you feel inclined!

3 Pauline Oliveros (2006), ‘Auralizing in the Sonosphere: Vocabulary for inner sound and sounding’, *Contemporary Music Review*, 25 (5), 481-82.

4 DL Wagner et al. (2021), ‘Insect decline in the Anthropocene: Death by a thousand cuts.’, *Proc Natl Acad Sci U S A*, 118 (2), e2023989118.

ulation booms facilitated by warming climates. The importance of invertebrates to human life on earth is irrefutable: they are critical to ecosystem functions such as seed dispersal, soil aeration, herbivory, and pollination, and as predators and/or prey.<sup>5</sup> Recently there has been increased recognition of their importance, but most of the narrative around protection and conservation of insects is based in utilitarian and anthropocentric rationale: that we should protect them because we need them. These text scores instead offer a means to get to know the invertebrates and develop an appreciation for them through listening, observation, and auralization. Can we move towards better relations through recognition of their intrinsic value?

In the scores, special attention is paid to our commonalities with insects and invertebrates – the homes, soundscapes, multispecies communities, and climatic and weather patterns we live in together. These scores are exercises in moving beyond anxiety and avoidance, and towards intentional exchange, whether that exchange is simply a conscious consideration, or a physical action we take. The scores ask us to give human-made sound (anthrophony) just as much consideration as we give nonhuman biological sound (biophony) and geological sound (wind and rain, etc). Importantly, it considers how invertebrates sense these sounds, rather than focusing on only on the human as listener. These scores consider anthrophony as part of the soundscape, and humans as actively engaged sound-makers, rather than as intruders, controllers, or spectators in soundscapes – *part* of nature, not separate from it.



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5 Edward O. Wilson (1987), 'The Little Things That Run the World (The Importance and Conservation of Invertebrates)', *Conservation Biology*, 1 (4), 344-46.

## Artist Biography

Lisa Schonberg is a composer and percussionist creating sound works based on ecological research. Informed by her background in entomology, Schonberg is interested how these sound works can reveal and challenge assumptions about insects and other overlooked and/or avoided nonhumans. Since 2017 she has been collaborating with Brazilian entomologists on ATTA (Amplifying the Tropical Ants), a project investigating ant bioacoustics in the Amazon. Her other recent work includes investigations of old-growth forests in Oregon, endangered Hawaiian *Hylaeus* bees, mushrooms, and plastics. Schonberg's compositions are performed by percussion ensembles Antenna (with Senem Pirlir and Leah Bowden) and Secret Drum Band. Her past publications include *The DIY Guide to Drums*, *The Hylaeus Project*, and articles for Tom Tom Magazine and She Shreds. Schonberg has performed or exhibited work at FILE Festival (BR), TBA Festival (Portland), the Pompidou, the Brooklyn Museum, Bosque da Ciencia (BR), the American Museum of Natural History, and Museo Reina Sofia (Madrid). She has been an artist in residence with Labverde (BR), the Banff Centre, Pioneerworks, HJ Andrews Experimental Station, and Signal Fire, and has received support from the Oregon Arts Commission, the Regional Arts and Culture Commission (OR), and The Andy Warhol Foundation for the Visual Arts. Schonberg is a PhD student in Electronic Arts at Rensselaer Polytechnic Institute in Troy, NY.



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## Listening Notes & Observations

## Getting to know the invertebrates

*Written for an augmented reality (AR) soundwalk for the Land Lab, at the University of Oregon in Eugene. The World Athletics Championships were being held nearby the soundwalk, directly across the Willamette River.*

Walk along the path and find a spot where you can comfortably sit or stand for a few minutes.

Look at the ground around you, and search for invertebrates.

Invertebrates include insects, arachnids, centipedes, pillbugs, snails, and more.

When you notice an invertebrate, inhale slowly, and watch them.

Exhale just as slowly, and observe whether they might hear or otherwise feel the vibration of your breath.

Look on vegetative surfaces within viewing distance of you, for invertebrates.

Can they feel the vibration of humans walking on the path?

Close your eyes, and listen for invertebrates.

Can they feel the sporting event across the river?

july 2022

## Listening Notes & Observations

## House Centipedes (Are Not Out to Get You)

The next time you see a house centipede in your house, stop and take a deep breath while noticing them. Take another deep breath while watching where they go. What is the centipede possibly sensing? Who might hear them when they stridulate? What surfaces in your home might best carry their stridulations? What are their favorite parts of your shared home? Allow yourself forgiveness for any house centipedes you might have smashed. Acknowledge that they rarely sting, have trouble penetrating skin, successful stings are mild, and allergic reactions are very rare. Let your housemate go on their way.

nov 7, 2021



## Listening Notes & Observations

## Old Wasp (in the Fall)

*Originally published as part of A Year of Deep Listening by the Center for Deep Listening, 2022.*

When you see a slow, tired wasp in your house,  
acknowledge them and take a long breath.  
What did they do in the time it took you to breathe?  
What are they seeking? Are they breathing too?  
Take another deep breath. Consider where their nest might  
be.

Do you think they sensed some of the same things you  
sensed in your shared home?

Keep breathing and watch the wasp.

If it's an inch or more she is probably an old queen, living  
her last hours.

Are her wings tattered?

She will be warmer inside than outdoors, so consider  
letting her stay.

nov 10, 2021



## Listening Notes & Observations

## Thanks but we're not interested

*Dedicated to my parents, the Staten Island wasp watchers.*

Wait until July and keep an eye out for the very large cicada wasp to show up.

Watch out for them emerging from their holes in your lawn.

When you see them take a deep breath in and remind yourself that they will not harm you.

They're simply large – but miniscule compared to us. Where have you learned to fear them?

If you are a cicada, however, I would be concerned.

Notice when solicitors approach the door.

Watch for the wasps. Notice the solicitors notice the wasps.

Notice them leave very quickly.

Missionaries and real estate predators seem to leave especially fast.

The next time you see the wasps thank them, and then enjoy watching them.

2022



## Listening Notes & Observations

## Windowsill

Look on your windowsill.

Find a deceased invertebrate.

Hold them in your hand and breathe deep in and out.

Bring them closer to your eyes.

Check out their form.

Think about where they might have flown.

Bring them outside and lay them on the earth.

2021



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