Between the Species

Review of *Bug Music: How Insects Gave Us Rhythm and Noise*

David Rothenberg
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Bug Music is the third installment in David Rothenberg's animal music trilogy. The first two books explored the more obviously musical songbirds and humpback whales (*Why Birds Sing* and *Thousand Mile Song*). His foray into the comparatively alien world of insects and bugs asks that we open our ears to the "more humble parts of [nature's] grand resonance" (82).

"Noise" in the book's subtitle is not unwanted clamor, but the purposeful buzzing, whirring, chirping, and sawing that make insects musically significant. The mix of pure tone and buzz in crickets inspired the African mbira (thumb piano), which is affixed with bottle caps to give straight tones a buzzing embellishment. The songs of Bayaka pygmies in Central Africa imitate the shrieks and calls of birds, as well as "the rhythmic pulse and thrum of thousands of insects and frogs, the defining ground of the soundscape" (155).

Rothenberg references a theory that music of indigenous peoples tends to be rough, scratchy, and irregular, while Western art music prefers refinement, pure tones, and order. This generalization, supposedly proffered by pioneer ethnomusicologist Bruno Nettl, suggests that human populations connected with natural surroundings readily find musical inspiration in animal sounds. If so, then the modern appeal of low-fi hums, fuzzy guitar distortions, and other sonic imperfections can be viewed as an attempt to return to nature, albeit through technological means.

The book also posits that the human sense of rhythm was derived in part from insect sounds, which offer "scads of regular beats, sometimes exactly in sync, sometimes slightly off—irregular, overlapping, forming complex polyrhythms, sometimes by accident, at other times by evolved design" (173). In

a typical flight of gleeful speculation, Rothenberg goes so far as to call insects "*our original teachers of rhythm*" (173, italics in original). This proposal departs from other evolutionary hypotheses, notably that of neurobiologist Mark Changizi (2011), who connects human rhythmical sense to our own heart beats, sexual gyrations, breathing, walking gait, and vocalizations like sobbing and laughing. While the two theories are not necessarily mutually exclusive—rhythm can have multiple sources, both internal and external—the lack of attention paid to bugs in this regard is symptomatic of a wider preconception that sounds made by non-human animals are rote and preprogrammed, and that only humans can transcend mechanical biology to engage in aesthetics. *Bug Music* joins a growing body of literature that questions this tired old assumption.

However, such points are not rigorously explored in Rothenberg's treatment, which often struggles to rise above informal musings and attempts at popular appeal. The inclusion of a recipe for cicada stir fry is one head-scratching example (19-20). Possible implications for the relationship of insects and humans are touched upon, but never sufficiently developed. Readers looking for deeper insights and theories that go beyond vignettes should look elsewhere.

It should be also noted that Rothenberg is not a scientist. He is a philosopher and jazz musician. His main interest is making "interspecies music" by adding his woodwind improvisations to a canvas of animal sounds. He intuits that doing so creates an intentional collaboration between him and the animals (cicadas in the case of this book). At one point he wonders if insects understand "all swishes around them" as music, and whether people can do the same (88). Later he describes driving through Illinois with a jar of cicadas, noticing how they respond dif-

ferently to different types of music: "They seem to get into the Rolling Stones. They don't really like Keith Jarrett. They have a particular penchant for Ethiopian and Zimbabwean dance beats" (226). Such anecdotal impressions seem clouded by a desire to see insects as musical beings, and probably wouldn't survive the rigors of scientific investigation. However, recent laboratory studies have detected musical preferences in other animals, and naturalist Bernie Krause (2012) has presented similar data.

The question of whether or not insects hear their own sounds as music is almost irrelevant. The book asks us to *consider* insect sounds as music, loosely defined as "the arrangement of tones and rests into patterns that must be repeated endlessly to get the point across" (4). The author is averse to depictions of natural phenomena that relegate beauty to a secondary role, dismiss it as a human projection, or believe it to be an illusion. Insects may be "little machines," but that does not *ipso facto* exclude the possibility of an aesthetic sense. Even if we stop at the biological recognition that an individual insect uses its sound-making abilities to lure a mate, as many presumably do, this is the same motivation that Charles Darwin (1871) claimed as the evolutionary basis of human music.

What is most intriguing for this reviewer is Rothenberg's apparent willingness to embrace the much-maligned label of "anthropomorphizer." He understands the pitfalls of using music to describe non-human phenomena, but enthusiastically does so nevertheless. "Maybe I'm hunting for meaning where I wish there would be some," he writes. "But how else do we move forward to the next pattern, in science or in art?" (34). Elsewhere he acknowledges: "Take any sound and we are able to translate it into meaning something else" (64). If we listen

closely enough and with the right frame of mind, we too can hear bug music. It all depends on our ears.

References

Changizi, Mark. 2011. *Harnessed: How Language and Music Mimicked Nature and Transformed Ape to Man*. Dallas: Ben Bella.

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Krause, Bernie. 2012. *The Great Animal Orchestra: Finding the Origins of Music in the World's Wild Places*. New York: Little, Brown, and Co.