

Environmental Moments: Insect Apocalypse

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What is the Insect Apocalypse?

In 2017, panic set in as a study from a German entomological society revealed that the biomass of flying insects in their immediate area had greatly declined over a relatively short time. (Jarvis) This incited a great deal of conversation amongst entomologists and society at large as to the level of threat posed by this decline as more research came out speaking to the issue at hand. Given the amount of conversation stirred up over the perhaps imminent “insect apocalypse”, it is important to understand the source and legitimacy of these claims as well as the dialogue surrounding the problem and its course to date.

The Issue

In Krefeld, Germany, a group of amateur entomologists set traps to collect insects in the hopes of tracking trends in the local population. The locations matched with a succession of collections over the past decades, and they compared the weight of the insects captured to those previous instances. This showed a decline of around 80% of the insect biomass, and this popular study was the main catalyst to the talk of an impending “insect apocalypse”.

The initial study to begin this pandemic of interest in insects was soon joined by a review of insect studies conducted by Sánchez-Bayo and Wyckhuys. (Yong) Their claim, based on the data they were scrutinizing, was that insect populations were quickly declining, and could become extinct within a century, destroying the remaining ecosystems. (Yong) This, naturally, implies apocalyptic consequences as a result of insect declines in a relatively short amount of time.

As a result of this, articles started cropping up about an impending “insect Armageddon”, inciting widespread dialogue. In fact, the Krefeld study was “the sixth-most-discussed scientific paper of 2017.” (Jarvis) However, while this information does speak to the truth, it is not as clear-cut as these articles led people to believe and they have some problems worth analyzing.

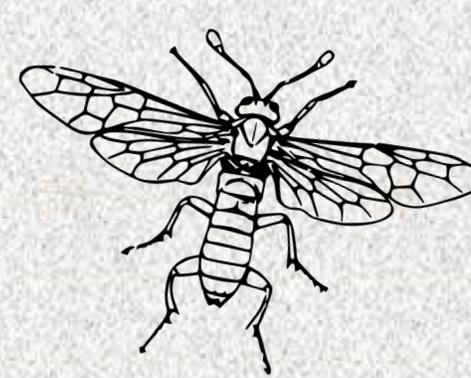
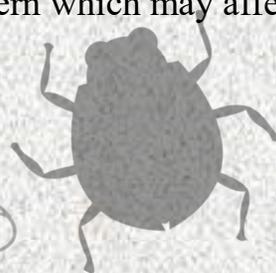
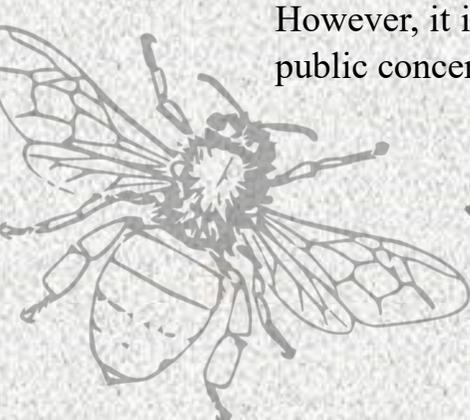


Bias in the Data

To kick off the inherent bias in the studies, much of Sánchez-Bayo and Wyckhuys’ review only contained studies which were vetted through a search of the keywords “insect” and “decline”. (Yong) This means that their snapshot may have failed to capture some of the research which detailed sustained or thriving populations. The Krefeld study also had its complications. The malaise traps are only effective on flying insects, which ignores a great deal of the overall biomass and may have ignored stable or increased growth in flightless species. Most of the reviewed studies were like Krefeld in that they were conducted in a small region in Europe or North America, and this is not representative of most insects, which live in tropical areas.

Going Forward

This is not to say that there is not a general decline of insect biomass. The point of these considerations is that this is not, in all likelihood, to the level of apocalypse within a century as some may claim. While there most likely is a problem, there is still time to make corrections and positive improvements to maintain the ecosystem. However, it is important to take the issue seriously and realize that there is a growing public concern which may affect consumers’ decisions in the future.



References

Jarvis, Brooke. “The Insect Apocalypse Is Here.” The New York Times, The New York Times, 27 Nov. 2018, www.nytimes.com/2018/11/27/magazine/insect-apocalypse.html.

Yong, Ed. “Is the Insect Apocalypse Really Upon Us?” The Atlantic, Atlantic Media Company, 19 Feb. 2019, www.theatlantic.com/science/archive/2019/02/insect-apocalypse-really-upon-us/583018/.

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