

Case study

Open access biodiversity data

SOURCE: Quinn, A. (2021). Transparency and secrecy in citizen science: Lessons from herping. *Studies in History and Philosophy of Science Part A*, 85, 208-217.
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eBird is an online platform for posting observations of birds that was launched in 2002 by the Cornell Lab of Ornithology. Now eBird is among the world's largest biodiversity-related science projects with more than 100 million bird sightings contributed annually by eBirders around the world. In 2008, the success of eBird inspired three students to develop a platform for natural history observations of any organism - iNaturalist. Now iNaturalist is maintained by the California Academy of Sciences and the National Geographical Society. As of 2020, iNaturalist hosted 42 427 731 observations contributed by 1 149 886 observers.

Both platforms bring substantial epistemic benefits by contributing data for natural sciences and life sciences research, as well as for educational purposes. As A. Quinn points out: "Citizens contributing observations in a casual manner can rapidly expand the scale of the dataset far beyond what is possible using traditional research methods. Moreover, it is not even possible to predict what kind of knowledge can be pulled from long-term, huge datasets." Besides that, the platforms encourage many people to experience nature. However, the popularity of the platforms also may create a danger for many species. Smartphone photos uploaded by volunteers contain location coordinates, and, for example, iNaturalist by default makes observation locations visible to all users. While users can choose an option to hide observation locations when uploading data, it is easy to forget to enable this function and there still is a potential for overrides. Many users also are unaware of the risks tied to sharing location information. While iNaturalist automatically hides location data for some species in need of conservation, users are primarily accountable for hiding location data.

The main concern is that the information might be used by poachers. For many species, the more severe threat is the destruction or degradation of habitat. A record of an interesting species on iNaturalist might attract many people who might go to look for the species. But as many people are ignorant of what interventions can destroy habitat, such visits might turn out to be fatal for the animals. This concern is especially raised by the community of herpers as herps (amphibians and reptiles) are very sensitive to any changes in their habitat.

Questions for discussion:

- 1) What are the potential benefits of platforms like eBird and iNaturalist? What are the potential risks? Are these risks unique to citizen science?
- 2) How to responsibly implement the principle 'as open as possible and as closed as necessary' regarding biodiversity data?