Monitoring biodiversity with citizen science data: Assessing, mitigating and communicating the risk of bias.

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Every year, an increasing number of citizen scientists go out in search of animals and plants and document what they see. The result is an enormous quantity of data that can be used for ecological research. For many types of research, however, quantity of data does not imply quality of insight. Of more importance is whether it is representative of the target population about which inference is desired. I will begin my talk by explaining why seemingly "big", but unrepresentative, data can be effectively very small. Approaches exist to assess, mitigate and communicate issues arising from a lack of representativeness, and I will review these too. Throughout, I will use examples of citizen science data being used to monitor biodiversity, but the general principles apply to many types of data and inferential goal.