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April 14, 2021

## Abstract

Long-term, individual-level records are of great importance in biological sciences. By understanding how individuals contribute to their populations during representative temporal scales, we can answer pressing questions in ecology, evolution, and conservation biology. These questions include identifying which, how, and where species' populations will go extinct or become invasive. Calls for the collection, curation, and release of these kinds of ecological data have contributed to the open data revolution in ecology. Birds, particularly, have been the focus of much citizen science and international research for decades, resulting in a number of uniquely longterm studies. However, accessing some of these individual-based, long-term datasets can be challenging. Culina et al. (2021) introduce an online repository of individual level, long-term bird records with ancillary data (e.g. genetics). Similar efforts have also been undertaken for mammals, fish, and even more recently for corals and insects. By releasing these ecological data open-access, the research community is starting to fill "Noah's ecological ark". However, important challenges still lay ahead to address the most pressing research questions. Here, I briefly overview the open access landscape of long-term animal ecological studies, provide suggestions for how to most efficiently expedite our knowledge of long-term animal population dynamics, and highlight four key challenges in the use (and misuse) of these large volumes of animal ecological data.

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