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Sommario/riassunto

Citizen science enlists members of the public to make and record useful observations, such as counting birds in their backyards, watching for the first budding leaf in spring, or measuring local snowfall. The large numbers of volunteers who participate in projects such as Project FeederWatch or Project BudBurst collect valuable research data, which, when pooled together, create an enormous body of scientific data on a vast geographic scale. In return, such projects aim to increase participants' connections to science, place, and nature, while supporting science literacy and environmental stewardship. In Citizen Science, experts from a variety of disciplines—including scientists and education specialists working at the Cornell Lab of Ornithology, where many large citizen science programs use birds as proxies for biodiversity—share their experiences of creating and implementing successful citizen science projects, primarily those that use massive data sets gathered by citizen scientists to better understand the impact of environmental change. This first and foundational book for this developing field of inquiry addresses basic aspects of how to conduct citizen science projects, including goal-setting, program design, and evaluation, as well as the nuances of creating a robust digital infrastructure and recruiting a large participant base through communications and marketing. An overview of the types of research approaches and techniques demonstrates how to make use of large data sets arising from citizen science projects. A final section focuses on citizen science's impacts and its broad connections to understanding the human dimensions and educational aspects of participation. Citizen Science teaches teams of program developers and researchers how to cross the bridge from success at public engagement to using citizen science data to understand patterns and trends or to test hypotheses about how ecological processes respond to change at large geographic scales. Intended as a resource for a broad audience of experts and practitioners in natural sciences, information science, and social sciences, this book can be used to better understand how to

improve existing programs, develop new ones, and make better use of the data resources that have accumulated from citizen science efforts. Its focus on harnessing the impact of "crowdsourcing" for scientific and educational endeavors is applicable to a wide range of fields, especially those that touch on the importance of massive collaboration aimed at understanding and conserving what we can of the natural world.
