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EDITORIAL'S CORNER

Citizen Science

We are pleased to publish our first Citizen Science research article in this journal. We believe this type of collaborative activities must be present here as recognition of citizens' interest in marine sciences and their growing concern for the protection of the environment. Citizen Science is understood to be scientific research which involves active co-working of non-trained citizens together with scientists and professionals. In formal terms, Citizen Science has been defined as 'the systematic collection and analysis of data, the development of technology, the testing of natural phenomena, and the dissemination of these activities by researchers on a primarily vocational basis (Open-Scientist)'. It may encompass basic or applied science research activities, locally or globally, following protocols and practices of the disciplines in which the research is framed. Citizen participation can range from short-term collection of data to intensive use of leisure time to delve deeper into a research topic together with scientists and/or other volunteers, asking questions, or being involved in some or all phases of the research process. Moreover, Citizen Science has turned to be a way to promote scientific and environmental education by using information and communication technologies to generate locally-based projects (Wals et al. 2014). In Citizen Science, the general public take part voluntarily in the scientific process, addressing real-world problems in different ways such as formulating research questions, conducting scientific experiments, collecting and analyzing data, interpreting results, making new discoveries, developing technologies and applications, and solving complex problems (Senabre et al. 2018).

Citizen Science complements the outreach and training activities carried out by different organizations around the world. US agencies, such as NOAA's National Weather Service Cooperative Observer Program (COOP) and the US Geological Service (USGS) have used citizen science and crowdsourcing for over a century. In this way, volunteers collaborate with reports ranging from biodiversity to computer science, health and medicine, and even disaster response. Official government websites, such as citizenscience.gov and challenge.gov, are designed to speed up the use of crowdsourcing and citizen science. According to the Federal Community of Practice for Crowdsourcing and Citizen Science (FedCCS, USA), civic engagement plays an increasingly important role, not only in society but also in research, for example the course of action taken by different actors to actively participate in a science-based society. The National Geographic Society runs a Citizen Science Project where people can participate in wildlife observations identifying plants and animals as part of a BioBlitz, uploading and adding them to a global database of biodiversity to support local to global research projects; joining to an international citizen-science campaign to raise public awareness of the impact of light pollution (Global at Night); monitoring and reporting on coral bleaching and disease and marine invasive species in Hawaii (Coral Bleaching), among others.

In Germany, the Green Paper Citizen Science Strategy 2020 (GEWISS) project is supported by the German Federal Ministry of Education and Research, and was developed with the input of over 700 participants from 350 organizations, scientific institutions, learned societies, non-governmental organizations and civic societies, foundations, and private individuals.

In Argentina, researchers from the Instituto Nacional de Investigación y Desarrollo Pesquero (INIDEP) trained local students and teachers to

identify and record the occurrence of invasive species (Soba y Herrera, 2012) and, recently, they trained local divers to collect seawater samples for the analysis of physicochemical variables, chlorophyll-*a*, and plankton. In the Fishial.ai initiative, technology is being developed for the identification of fish species through Artificial Intelligence, which can be accessed through a portal to add volunteer's contributions. Other Citizen Science projects existing nowadays in Argentina, which are at different levels of development, are: Geovin, an application used for the identification of vinchucas from the sending and curation of photos and other descriptive data; AppEar, an application used to assess the condition of aquatic ecosystems by offering users game tools to learn how to take care of them; and Nodos, platform for collaborative content on the performing arts. Between April 30th and May 3rd, 2021, the City Nature Challenge was held in Buenos Aires, one of the largest global citizen science events organized by the Museo Argentino de Ciencias Naturales 'Bernardino Rivadavia' (MACN-CONICET) together with Fundación Vida Silvestre Argentina. Citizens from all over the country were invited to register nature observations through the iNaturalist platform, a citizen science social network whose Argentine node is ArgentiNat.

Citizen Science is increasingly present and more scientific and civil groups keep joining this trend. This is the case of Barcelona, where the city council created the Citizen Science Office in 2012. A growing scientific and technological activity carried out in the Catalan city makes an ideal environment for the development of citizen science projects, such as InSPIRES and the Network of Meteorological Observers.

We proudly deliver to you an illustrated checklist of Anguilliforms from Mayote lagoon, made by combining data from the literature and underwater photographic and visual censuses. With this first citizen science publication, we invite the scientific community to add their contributions in this category.

Editorial Board

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