**Freshwater Journals Unite to Boost Primary Biodiversity Data Publication**

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**Synthesis of species distributions** and hotspots of endangerment is critical for setting conservation priorities to address the acute worldwide biodiversity crisis (Feeley and Silman 2011). Such a synthesis requires enormous efforts to access and unite widely dispersed biodiversity data and to establish open data archiving as a standard scientific practice. The essential first steps in this endeavor are locating primary biodiversity data—where, when, how, and by whom species have been observed or collected—and making this basic data available to the scientific community. Here, we report on a coordinated initiative of freshwater journals to stimulate a culture of publishing primary biodiversity data.

Although freshwaters are tiny in their extent, they harbor a very large fraction of the global species richness, and they have experienced alarming rates of biodiversity decline (Dudgeon et al. 2006). However, freshwater biodiversity is generally neglected or grossly underrepresented in data-mobilization efforts. The importance of broad biodiversity compilations, however, has been increasingly recognized, especially in light of the establishment of the Intergovernmental Science–Policy Platform on Biodiversity and Ecosystem Services and the Group on Earth Observations’ Biodiversity Observation Network, and standards and tools have already been put in place to manage large sets of primary biodiversity data. In particular, the Global Biodiversity Information Facility (GBIF; www.gbif.org) collates and centralizes biodiversity information through its participant nodes, which include large topical initiatives such as the Ocean Biogeographic Information System (Costello and Vanden Berghe 2006) and the distributed database network for vertebrates, VertNet (Constable et al. 2010). BioFresh (www.freshwaterbiodiversity.eu), a European Union–funded project, serves the same purpose for the freshwater realm.

Recent calls for data archiving in ecology (Whitlock 2011), together with the increasingly common requirement by funding agencies to deposit research data, will be instrumental in making primary biodiversity data available. There is no doubt, however, that scientific journals can and should also play a key role in promoting data-sharing policies (Huang and Qiao 2011). Consequently, we developed the following statement in collaboration with freshwater journal editors to strongly encourage the submission of species-distribution data: “Authors are encouraged to place all species distribution records in a publicly accessible database such as the national Global Biodiversity Information Facility (GBIF) nodes (www.gbif.org) or data centers endorsed by GBIF, including BioFresh (www.freshwaterbiodiversity.eu).” This statement is posted on http://data.freshwaterbiodiversity.eu/submit data.html along with further instructions and will be widely published in the journals’ instructions for authors and on their Web sites. The editors and publishers of the following journals have approved the statement: Aquatic Botany, Aquatic Conservation: Marine and Freshwater Ecosystems, Aquatic Ecology, Aquatic Sciences, Ecology of Freshwater Fish, Freshwater Biology, Freshwater Reviews, Fundamental and Applied Limnology, Hydrobiologia, Inland Waters, the International Review of Hydrobiology, Freshwater Science (formerly, the Journal of the North American Benthological Society), the Journal of Fish Biology, the Journal of Plankton Research, Limnietica, Limnologica, Marine and Freshwater Research, and River Systems. Discussions are in progress with an additional nine major journals in the field.

What is the benefit to authors in following the recommendations for publishing primary biodiversity data? Certainly, promoting large-scale biodiversity syntheses is an important idealistic motivation. However, as was outlined by Costello (2009), embracing data-publishing practices also leads to increased recognition of scientists’ work. Papers connected to publicly available data are cited significantly more often, because the data become available for inclusion in broad-scale analyses (Pivowar et al. 2007), which are increasingly gaining importance. Importantly, the publication of primary biodiversity data is technically straightforward and quick, which minimizes the burden on authors. This is achieved by restricting submissions to a minimal standard set of fields, similar to the requirements for sequence submission to GenBank, a hugely successful database with great potential for supporting biodiversity science as well.

Endorsement of the proposed data-publishing policy by most major freshwater journals will doubtlessly spur submission of primary biodiversity data, because it would raise awareness and could establish a culture of data publication. It should also encourage a wider range of journals in other areas of ecology and related fields to join the initiative. This would be of great benefit to scientific progress and to biodiversity conservation alike.

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