

## Open-access in the wildlife health discipline

Dear Membership of the Wildlife Disease Association,

A movement within science towards open access to scientific data and publication, as demonstrated by the rise and success of the PLoS and BMC families of journals, begs the question, would we serve wildlife, livestock, and human health better by making the *Journal of Wildlife Diseases* an open access journal? Would open access to data provide a similar benefit?

There is a compelling argument for open access to data and literature: this information is necessary to protect the health of wildlife, our livestock, and ourselves. Some of the world's most important disease threats emerged from wildlife: SARS, avian influenza, HIV, Marburg and Ebola viruses, and so many more. These diseases form real and imminent threats, and even esoteric or minor data on their distribution or epidemiology could prove invaluable in managing risk of transmission. Timely access to current methodologies, baseline data, and scientific publications is a necessary cornerstone of effective surveillance. Many of these pathogens have emerged in regions of the planet where the cost of a subscription to the scientific literature is at best prohibitive. Furthermore, even in affluent parts of the globe, shrinking library budgets are leading to reductions in institutional journal subscriptions, something to which our small discipline is particularly vulnerable. Consequently, those that most need access to the current scientific information to detect and respond to emerging wildlife diseases are unable to access it.

This said, it would be a futile exercise to call for open access to wildlife disease data and publications without an understanding of why this has not happened in the past. Impediments to open access in the wildlife health sciences differ between pre- and post-publication. In our opinion, the single largest impediment to sharing of pre-publication data is the loss of control. Many scientists worry that their data will be misused, misrepresented or taken by others who will publish it as their own. This is a real concern as future funding may hinge on the exclusivity of the findings or the numbers of research papers published. To resolve this problem, any system for sharing wildlife disease data has to have built-in mechanisms for giving appropriate credit, allowing the original collector to have some control in how the data may be used by the broader secondary community. Another closely related aspect of scientific publication is the requirement that the data be original to that manuscript. Most journals ask authors to certify that "the research findings" being submitted for publication have not been published "in whole or in part" in other forms. Although the intent of these policies are to avoid duplicate publication of research findings, they have a negative impact on data sharing due to the uncertainty surrounding what exactly constitutes original research findings. For example, does archiving raw data from a long-term research program in a public database constitute a publication, or is it only publication of the scientific paper with results, analysis and interpretation that meets the definition? The solution to this problem is for scientific journals to adopt clear policies that allow prepublication sharing of data.

Open access to published scientific papers involves a separate set of impediments, specifically surrounding the cost of publication and distribution. To date, the wildlife health community has not attracted significant resources relative to other scientific disciplines, and

consequently development of the discipline has come from the efforts of small numbers of dedicated, largely volunteers through small societies such as the WDA. The cost of publication of the *Journal of Wildlife Disease* is supported by individual and institutional memberships, and one could argue that the principal motivation for becoming a member has been to receive the Journal. Removal of the need to become a member to receive the Journal (as would happen in an open access publication model) may also remove its primary funding support. Alternative approaches to sustainably funding publication of the Journal would have to be explored, including increasing page charges, philanthropic funding sources, advertisements, among others.

Following its mission to “disseminate knowledge”, the WDA has undertaken a number of efforts to confront the issue of open access. Most recently, to promote open access to data, the Journal's Editorial Board has agreed to modify the “instructions to authors” to specifically state that pre-publication sharing of data does not preclude publication in the Journal, provided that the intellectual added-value of the manuscript is novel to the submission. While this is not a unique policy in science (e.g., BioMed Central has a similar policy), to our knowledge this is the first time a major veterinary or wildlife health journal has enacted such a policy. To promote open access, and yet still derive revenue, the Association has adopted a tiered strategy. First, open access to the Journal has been granted to everyone for articles older than 18 months, a reasonable time frame given the long citation half-life for the journal of around 10 years. Second, support from the Wildlife Conservation Society and the WDA allows free access to the journal in the countries classified by the World Bank as Lower- and Lower-middle income countries (135 countries in all, representing 75% of the global human population). In 2010, people from 124 of these countries downloaded over 32,000 HTML files and over 90,000 pdf articles, resulting in over 120,000 downloads from the journal. Furthermore, full access until 2014 has been granted to all countries in Latin America to foster the wildlife health discipline.

Ultimately, we believe that open access is in everyone's best interest, provided that proper measures are taken to preserve the benefits and incentives for individual scientists, scientific institutions, and societies. Has the Association done enough? Do the current policies provide sufficient access to data and literature to provide wildlife health practitioners the best scientific foundation to manage wildlife diseases? Is our current subscription-based funding model sustainable in the long term? Should we go down the commercial route, following other small scientific organizations? Should we pursue a full open access model? There aren't simple answers to these questions, but they are questions we implore members of this society to consider, debate, and discuss as we continue in the second half of the organization's first century.

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