

Copyrights and digitizing the systematic literature: *the horror... the horror...*

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The rate of progress in biodiversity research is controlled by two factors: the speed with which we, as scientists, can explore, systematize, and understand the world's biological diversity; and the speed with which we can communicate that information.

Tackling the first problem is the core challenge of any scientific discipline. Tackling the second, though, has some aspects that are unique to biological systematics.

Nearly uniquely in the natural sciences, biological systematics — which underlies all other biodiversity work — relies intimately on historical literature. The initial description, whether published in 2010 or 1810, remains that taxon's defining text. Without access to the original published description, it is not possible to revise taxa or even to decide whether a new specimen is a new species. Most other natural sciences never need literature older than a decade.

When systematics was the purview of learned gentlemen in classical institutions of higher learning, that system was workable. Systematists just had to walk down the hall to a full historical library. But now, systematics is a dying field in the classical institutions, and is being taken up instead by local workers in the centers of biodiversity, primarily the tropics. Full historical libraries don't exist there. Therefore their work is crippled.

The key impediment to making that historical literature available is now technologically overcome. We can digitize it and put it on the Internet for access from anywhere. We no longer have to have a physically local library, and we no longer need to mail off little yellow envelopes containing our latest reprints. (Regrettably though, we have neglected to develop a metadata standard that would substitute for the handwritten personal notes written at the top corners of reprints.)

What is stopping us from making all systematic literature available? We, as a discipline, have taken a naïve view of how copyright laws restrict our ability to share the historical literature. We have chosen to believe that copyright law makes it illegal for us to make systematic literature freely available except in cases where the work is explicitly in the public domain (for the United States, that generally means published prior to 1923) or where permission has been obtained directly from the copyright holder (in most cases this is the publisher).

United States copyright law has, built into it, exceptions that permit copying of copyrighted work without having to obtain permission from the copyright holder. These are the *Fair Use* provisions. The specific conditions that define when the *Fair Use* provisions can be applied turn out to be particularly relevant to systematic literature.

It is time for us to take full advantage of the investment that our societies have made in documenting the biodiversity of the world. It is time for us to fully, and legally, make systematic literature available worldwide.