

Specimens as primary data: museums and 'open science'

Abstract

In 1977, Eugene Odum advocated a synthetic approach if ecology were to rise above the level of explanation afforded by independent, individual studies [1]. Today, Odum's wish is being fulfilled, and important advances are being made by synthesising data derived from great numbers of studies, either by scaling up temporally or geographically [2]. However, to allow effective, creative, and reproducible integration of ecological and environmental results, the methods and data used need to be made freely accessible and combinable. Only then can integrated ecology become a field where the ideals of 'open science' [3] fully come to fruition. Indeed, although great challenges remain 4 and 5, open access to ecological data, methods, and analysis is rapidly improving 6 and 7. Nonetheless, we here call attention to what we perceive as one important obstacle to open data in biodiversity studies.