

The Encyclopedia of Life: Describing Species, Unifying Biology

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The grand endeavor to catalog and describe every species
may be biology's unifying principle.



Odontocheila, a tiger beetle, is described in the second volume of Terry Erwin's eight-volume study of beetles. The EOL's Biodiversity Informatics Group will convert the series into species pages.

Harvard biologist E. O. Wilson affirmed a perennial hope of biologists, taxonomists, and naturalists when in 2003 he wrote, "An all-species encyclopedia of life is logically inevitable if for no other reason that the consolidation of biological knowledge is urgently overdue." Wilson proceeded with his vision of a Web-based encyclopedia in which there is a page devoted to each species on Earth, with links to diverse scientific databases. The species page, as envisaged, would summarize everything known about the species, from its genome and proteome to its distribution, habitat, and ecological relationships, as well as "its practical importance for humanity."

This quest to comprehensively list and describe species has classical and enlightenment-age antecedents, notably Aristotle's cataloging and Linnaeus's classifying. Given the means and assumptions of their day, these were necessarily incomplete efforts. Recent large-scale

projects to catalog species on both local and global scales have also been abandoned or downscaled, testifying to the daunting challenges of comprehensively identifying and describing species.

Wilson's program, however, has proved to be an exception, in part because of his articulate advocacy and in part because of advances in the management of biological information and the collaborative contributions of ongoing initiatives,

such as those focusing on nomenclature or on particular groups of organisms. Momentum from his 2003 article and a 2006 dialogue with funding foundations grew, and Wilson furthered enthusiasm for an encyclopedia of life in March 2007 upon receiving the TED (Technology, Entertainment, Design) Prize. In accepting, Wilson stated his wish "to help create the key tools that we need to inspire the preservation of Earth's biodiversity" and expressed appreciation for support and work already under way. Shortly afterward, in May 2007, the Encyclopedia of Life (EOL) was officially launched, with support from the Sloan and MacArthur foundations.

Up and running

Jim Edwards, an amphibian biologist with many years of administrative experience with the National Science Foundation and the Global Biodiversity Information Facility, has been the exec-