

Species 2000 Report for Year 1 of the Encyclopedia of Life

On Progress with the Catalogue of Life

During the period July 2007 – June 2008

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Species 2000 Secretariat, 10 July 2008*

Introduction

The Species 2000 organisation works in partnership with the ITIS organisation to create a joint product, the *Species 2000 & ITIS Catalogue of Life*. This is a global programme involving organisational work at four centres in Reading (UK), Washington (DC), Amsterdam (Netherlands), and Los Banos (Philippines), involving taxonomic expertise contributed through 52 expert taxonomic databases around the world, and developing regional nodes in N. America, Europe, China, Australia, New Zealand, S. Africa, Brazil and Colombia.

The 52 contributing databases are spread across the UK, USA, other countries of Europe (largely Netherlands, Germany, France, Spain and Belgium), plus Russia, Australia, Japan and the Philippines. Species 2000 has an open community model in which the custodians of these databases are also partners in the governance and ownership of the programme and its product. These custodian partners include major taxonomic institutions, such as Missouri Botanical Garden, American Museum of Natural History, Royal Botanic Gardens Kew, Natural History Museum London, Museum National d'Histoire naturelle Paris, Naturalis Leiden, but also network projects such as FishBase, ILDIS, AlgaeBase, TicksBase, Orthoptera Species File, ICTVdB, and some individual private custodians of databases, such as those providing Conifers and Scarab Beetles.

1. Progress with the product, 2007 – 2008.

- i) The 2008 Annual Checklist, the eighth edition of the Catalogue of Life, was launched publicly at the Chinese Academy of Sciences on April 1st 2008. It is available on CD-ROM, on the web, and as an electronic web-service.
- ii) This 2008 Annual Checklist provides both a Taxonomic Hierarchy, and a Species Checklist covering 1,192,015 species and infraspecific taxa. The Taxonomic Hierarchy is an expert moderated management hierarchy, and it provides a tool that can be used to navigate among the 1,192,015 taxa. The Species Checklist provides an expert derived species/infraspecies page for all 1,192,015 taxa, accessible via the Taxonomic Hierarchy or by name search equipped with fully automated synonymic indexing.
- iii) The Species Checklist is composed of 1,105,589 species, plus 86,426 infraspecific taxa, and lists 720,040 synonyms (2,025,196 scientific names of all ranks) and

461,182 common names (2,486,378 names in all). The increase in the number of species over the previous year, available to EoL and other users, was 96,642 species.

iv) Five new Global Species Databases (GSDs) plus two new ITIS global sectors have been added to the 2008 Annual Checklist. New taxa with global coverage are

- orders Amblypygi, Opilioacarida, Palpigradi, Pseudoscorpiones, Ricinulei, Schizomida, Solifugae, Uropygi and suborder Oribatida (Arachnida) of 11,916 spp (ITIS)
- order Blattodea (Insecta), cockroaches of 4,430 spp
- order Phasmida (Insecta), stick and leaf insects of 2,821 spp
- superfamily Cercopoidea (Insecta, Hemiptera), froghoppers of 2,086 spp
- family Gracillariidae (Insecta, Lepidoptera), gracillariid moths of 1,841 spp
- family Platygastriidae (Insecta, Hymenoptera) of 1,429 spp (ITIS)
- phylum Mycetozoa (Protozoa), slime moulds of 1,074 spp replaced former sector by Species Fungorum on the base of comparing peer review.

vi) The taxonomic treatment of a further 17 of the 52 GSDs has been updated in the 2008 Annual Checklist.

vii) We welcome ongoing feedback and notification of possible errors by EoL and other organisations. 410 species names were corrected after notifications from EoL in January 2008, and included in the new edition published on 1 April.

vii) We launched the new CoL taxon Life Science Identifiers (LSIDs) in the 2008 Annual Checklist, as had been encouraged by TDWG and GBIF. This provides the first step in plans to provide change tracking and taxonomic change alerts in the future. We are grateful to TDWG and CBOL for financial contributions to this work.

viii) A preliminary gap analysis of the Animalia kingdom has been completed at the phylum level, based on the 2008 Annual Checklist. Target groups have been identified, and these contribute to ongoing discussion with Mark Westneat at the EoL Synthesis Centre about future workshops.

ix) The Species 2000 Secretariat prepared a cross-map between the classification of the Angiosperm Phylogeny Group, the APG2+ system (Mabberly, 2008) and the plant classification in our CoL Taxonomic Hierarchy. A roadmap for switching from the present CoL plant classification to APG2+ is under consideration.

x) Work is already going ahead on the assembly of the 2009 Annual Checklist edition. For instance the peer review of the NeurDat (Neuropterida) database has just been completed, and the roadmap for connection has been started for six new databases.

2. Progress with the Catalogue of Life programme:

Completing the Catalogue for 1.8 million species in the period 2009 - 2013

i) Much of the year has been spent preparing plans and funding proposals for the Second Phase of the Catalogue of Life programme to complete the Catalogue for coverage of all known living organisms.

ii) The Second Phase involves two new processes in addition to continuing the established process of the First Phase, and is designed to complete coverage by the end of 2013 in a five year programme starting in 2009.

iii) The Second Phase is a true MegaScience programme, and is built on collaboration with many partners and centres around the world. We are pleased that this can include certain components of the EoL programme.

3. Interactions with the EoL programme

i) Partners in the Catalogue of Life were pleased not only that the 2007 Catalogue of Life was provided to the EoL team prior to the launch in February 2008. In the event the Catalogue was used as a pivotal component, providing the principal taxonomic backbone for the site, and the framework on which the knowledge presented was organised.

ii) We have subsequently provided the 2008 Catalogue that was published just a few days after the EoL Launch. The publication date is April 1st each year.

iii) We have been happy to receive notification of possible errors from the EoL team, and look forward to receiving more. This user feedback is an important component, alongside our own quality assurance procedures, in enhancing the quality and integrity of this very large knowledge set.

iv) In the planning for the Second Phase Catalogue of Life programme we signal the possibility for further interactions especially through the EoL Synthesis Centre in Chicago.

v) Species 2000 and its partner ITIS have taken part in the 'Nomina I' and 'Nomina II' workshops sponsored by EoL and GBIF, and have signalled their interest for the Catalogue of Life partners also to develop a significant role within the Global Names Architecture Initiative (GNA).

4. Acknowledgement and thanks.

i) The Species 2000 organisation has received 50,000 USD in support of the Catalogue of Life programme from EoL during the year July 2007 – June 2008.

ii) Species 2000 is a publicly registered 'Company limited by guarantee' in England (a kind of not-for-profit organisation with limited liability), and its annual accounts are available to the public.

ii) We take this opportunity to thank EoL, and its donors for this provision. These funds have made a real contribution to the continuity and development of the Species 2000 part of the Catalogue of Life, and that in turn has contributed directly to the EoL Launch and subsequent development.

10 July 2008, Reading, UK, Y. Roskov & FA Bisby.