

## NeMys – nematodes taxonomic system in context of marine nematodes ecology

051

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Identifying nematodes species is often a challenging task for ecologists. No taxonomic keys exist for the World fauna and local guides are available only for some regions. The list of all aquatic nematode species published in 1973/74 by Gerlach and Riemann has yet to be updated. New species are often listed only in the personal catalogues of taxonomists, and access to widespread taxonomic literature is difficult sometimes. These difficulties have led some ecologists to identify species incorrectly, thus impeding ecological analyses across regions. Precise taxonomic identification becomes critical to understand the diversity patterns in species composition along depth and longitudes. In the 1990s, the NeMys (“Nematodes and Mysids”) online taxonomic database was created by taxonomists of Ghent University to help students and researchers in identification. The database contains an extensive list of marine and some freshwater species together with original species descriptions. The database now contains over 6500 valid species names and has been integrated within the World Register of Marine Species (WoRMS) according to the classification of De Ley & Blaxter (2002), with further amendments by Schmidt-Rhaesa (2014). The ultimate aim is to have a comprehensive list of all marine nematode species, each with a link to its original description, reference to type specimen, type locality and a history of taxonomic changes. The species distribution data is accumulating also by linking with other databases. NeMys is growing now in two directions – both newly described species and existing species described in less accessible publications. The new species description rate remains high for nematodes, with about 500 new species described in each of the last three decades. These species now come from wider geographical areas outside Europe and from remote habitats such as the deep sea. However, NeMys remains a work in progress, and for most families, the lists of species are not yet complete. The gaps come mainly from rare local editions and regional journals. When complete, NeMys will serve not only for species identification, but also as a tool for studies in nematode ecology.