

# Newsletter #20

April 2010

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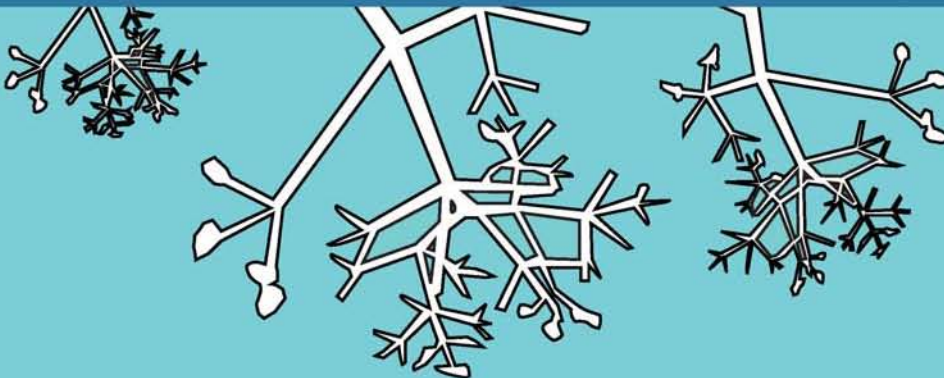
EDIT Summer School 2010  
1st ATUTAX conference  
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The polychaeta collection of the MNCN



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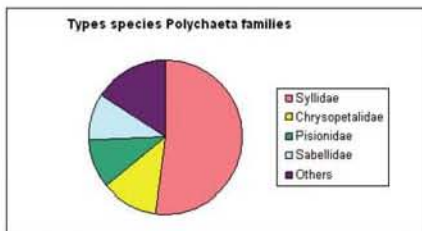
## The polychaeta collection of the Museo Nacional de Ciencias Naturales Madrid: heritage and studies basis.

The Invertebrates Collection of the Museo Nacional de Ciencias Naturales (MNCN) de Madrid (part of the Consejo Superior de Investigaciones Científicas, a member of EDIT) includes over 51,500 lots of invertebrates (excepting Insecta and Mollusca), with more than 800 type species. Every year, many researchers from all over the world deposit their type specimens of new species in the Invertebrate Collection. Just in the current year, there were almost 200 new deposits. In this context are included the collection of Polychaeta, one of the widest and most complete collections in the world. The Polychaeta samples includes over 12,000 lots



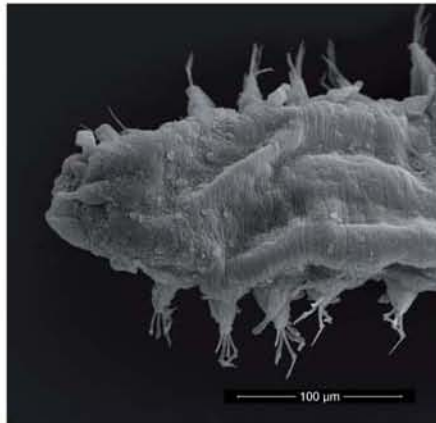
(almost 43 % of the lots of the Non Arthropoda Collections) with more than 1,000 species. Syllidae is the best represented family in our collections (see graph 1). A lot is all the specimens of a given species that have been collected in a same locality and on the same date.

Polychaetes are mainly marine worms included in Annelida phylum (see Fig. 1). They compose one of the most common groups in marine benthonic fauna (Fauchald, 1977), both in terms of number of individuals and species, and they usually represent more than half of the total macrofaunal diversity. They play an important role in the functioning of benthic communities in terms of recycling and reworking of benthic sediments, bioturbating sediments and in the burial of organic matter (Hutchings, 1998). Moreover, the presence or absence of some species could indicate the marine environmental quality (Pocklington & Wells, 1992). Polychaetes have been shown to be good indicators of species richness in benthic habitats and have recently been proposed as surrogates for marine biodiversity (Olsgard et al., 2003) and good indicators of the conditions of the benthic environment (Pocklington & Wells, 1992).



Graph 1: Number of records of type species of Polychaeta families

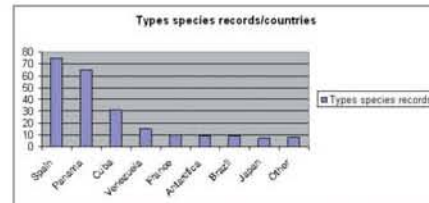
MNCN has 93 type species of Polychaeta



**Fig. 1:** Head and anterior part of body of the Polychaeta *Sphaerosyllis sandrae* (Álvarez & San Martín, 2009) (MNCN 16.01/11384) from Cuba (MNCN Collections).

(78 holotypes and 60 paratypes) from several countries (see graph 2). The main Polychaeta samples come from scientific projects like Campaña Coiba (Panama), Campaña Bentart 94 (Antarctica), CapBreton 88 and FAUNA Project, which have supplied material from the Mediterranean Sea (40 records), Atlantic Ocean (106 records), Pacific Ocean (69) and Indian Ocean (1). The first contribution to the Polychaeta type collection was made by Enrique Rioja in 1916, but the majority of deposits have been done since 90's (182 records).

For these reasons, the collection of Polychaeta of the MNCN offers a basis for numerous studies of distribution, diversity (arctic as well as neotropical), population dynamic, ecological and last but not least taxonomic. It presents a high specific diversity and a great variety inside the sampling localities, providing a solid approach in the determination of new species of Polychaeta. It also constitutes an incomparable patrimony for the future generations, when threats such



**Graph 2:** Number of records of type species of Polychaeta per countries.

as global change could cause the extinction of numerous species in regions like Antarctica. We invite the readers of this newsletter to contact us at [mcnjs619@mncn.csic.es](mailto:mcnjs619@mncn.csic.es)

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