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***Pristionchus* Scratchpads—an online platform for taxonomy, systematics and phylogeny**

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The availability of molecular tools has transformed animal taxonomy and systematics in the last two decades. In particular, small animals that have few morphological diagnostic attributes can be identified and diagnosed accurately by adding molecular markers to those already used. In nematodes, molecular sequence information relevant for taxonomy and systematics is currently transforming the resolution of phylogenetic studies. The extensive use of molecular tools is associated with a large increase in the number of publications. This increase can make problematic accessing current knowledge comprehensively. Similarly, old publications in very specialized journals are often hard to access as well. To overcome some of these issues for the nematode genus *Pristionchus*, we introduce *Pristionchus* Scratchpads as an online platform for taxonomy, systematics and phylogeny. As an online database, *Pristionchus* Scratchpads is community driven, searchable, comprehensive and dynamic. Given the substantial effort in using *Pristionchus pacificus* and other *Pristionchus* species as model systems in evolutionary biology, *Pristionchus* Scratchpads is intended to facilitate the development of new online tools in nematode taxonomy and systematics.

The utility of the nematode *Pristionchus pacificus* as a model system in evolutionary biology and comparative developmental biology has built on the availability of a sophisticated genetic and molecular toolkit with a resolved phylogenetic context (Sommer *et al.* 1996; Hong & Sommer 2006; Sommer 2009; Sommer & McLaughran 2013). This facilitates highly interdisciplinary research approaches in which laboratory tools like forward and reverse genetics, gene cloning and DNA-mediated transformation can be linked with field studies in ecology and population genetics (Sommer & McLaughran 2013). In addition, collection efforts have recovered several new species of *Pristionchus* from East Asia, where the genus seems to be particularly diverse (Kanzaki *et al.* 2012 a,b,c; Kanzaki *et al.* 2013a,b,c; Kanzaki *et al.* 2014; Ragsdale *et al.* 2013). In total, 28 *Pristionchus* species have now been characterized by molecular, morphological and, sometimes, genetic tools, providing a detailed insight into the natural history of the genus (Sommer & McLaughran 2013). (“Genetics” herein refers to forward and reverse genetic techniques resulting in the isolation of mutant animals). All of these species, together with many independent wild isolates, are available as live and frozen stocks in the Tübingen lab collection and can be distributed upon request (see strain list on *P. pacificus* WiKi, www.pristionchus.org). Similarly, a broad phylogenetic framework of 28 genera from the nematode family Diplogastridae has been established and many of these are also available as live or frozen stocks from Tübingen (Susoy *et al.* 2015). This includes among others, species of four genera described very recently (*Leptojacobus*, *Levipalatum*, *Parapristionchus*, *Sudhausia*) (Kanzaki *et al.* 2014; Ragsdale *et al.* 2014; Kanzaki *et al.* 2012; Herrmann *et al.* 2013).

To provide a comprehensive system for the taxonomy, systematics and phylogeny of *Pristionchus* and ultimately the Diplogastridae, we are establishing an online platform using a database system similar to those used elsewhere in bioinformatics and genomics, such as Wormbase for *Caenorhabditis elegans* (www.wormbase.org) and [Pristionchus.org](http://www.pristionchus.org) (www.pristionchus.org) (Dieterich *et al.* 2007). [Pristionchus.org](http://www.pristionchus.org) is a database containing all available genomic and molecular data of *P. pacificus*. Here, we describe *Pristionchus* Scratchpads (www.pristionchus-sp.de), which aims to help researchers throughout the world obtain an overview of published work on *Pristionchus* and serves as a platform for requesting live material. We also describe the functional tools of the platform.

Web Portal. *Pristionchus* Scratchpads is based on the scratchpads.eu platform (Smith *et al.* 2012), modified to our needs. Initiated by The Natural History Museum in London, Scratchpads provide a virtual online research environment for biodiversity, allowing anyone to share their data and create their own research networks. While most sites are hosted at The Natural History Museum, London, we decided to host our site at the servers of the Max Planck Institute for Developmental Biology to guarantee continuation in the long term.

represents a major advantage over classical publications, as has already proven important for the scientific community in various database projects, like NCBI, Wormbase and other model-system-focused database projects. Additional features, requested by nematologist colleagues can easily be added to the page any time. In addition to the dynamic update of *Pristionchus* strains and species, we aim to further develop **pristonchus-sp** as a general database for other Diplogastridae. We hope that **pristonchus-sp** will meet all requirements for modern taxonomic researchers and might even serve as a model for similar platforms for other nematode taxa.

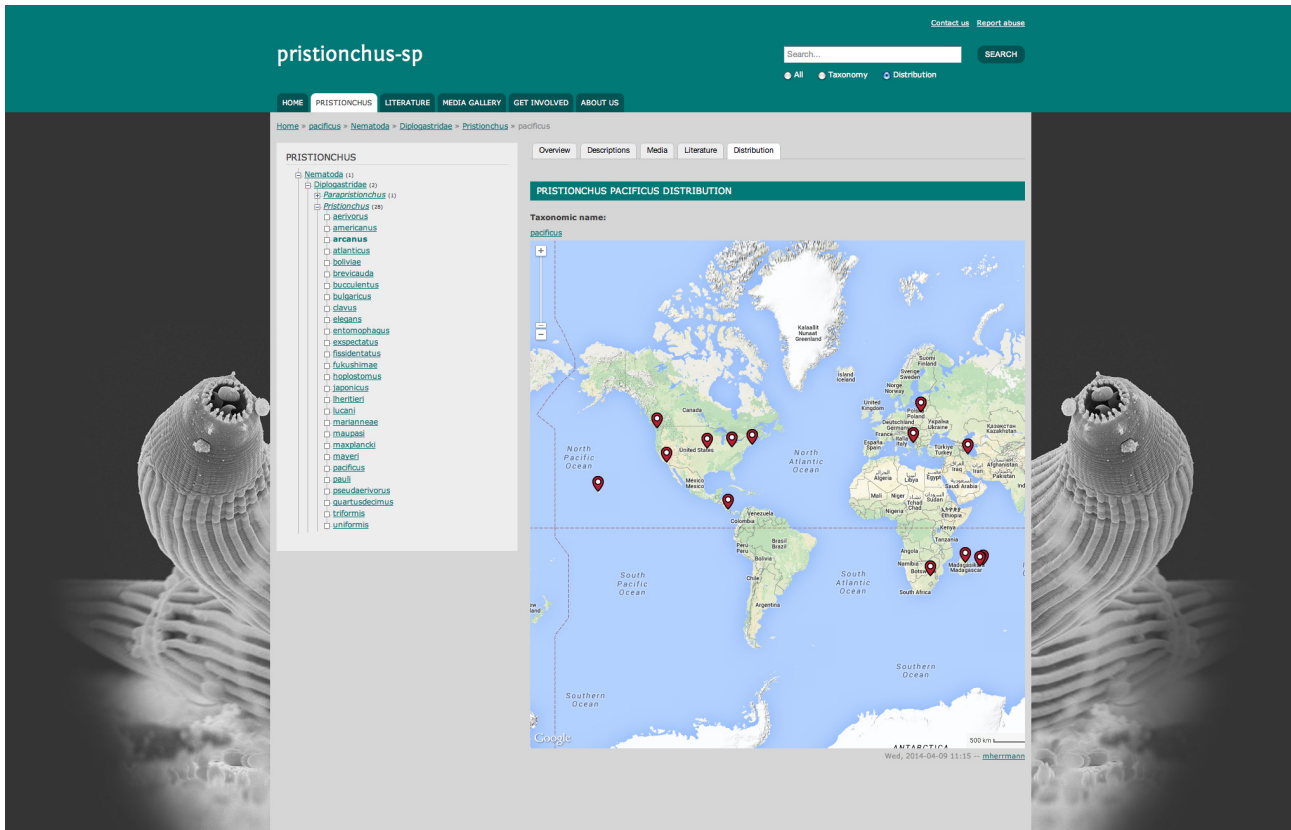


FIGURE 2. Distribution map for *Pristionchus pacificus*.

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