

Species uncovered



Pan-European Species-directories Infrastructure

By Yde de Jong, Mark Costello, Ward Appeltans and Róisín Nash

PESI brings together the three largest species databases in Europe – Fauna Europaea, European Register of Marine Species and Euro+Med PlantBase – together with European-based Global Species Databases (e.g. World Register of Marine Species) and their associated expert(ise) networks. It is a **standards-based, quality-controlled, expert-validated, open-access infrastructure for research, education and data & resource management**. It builds the network of taxonomic experts as well as developing the information systems.

PESI is an EU FP7 Research Infrastructure Project launched in May 2008 to help to tackle one of the fundamental obstacles to the proper development of environmental management systems, **i.e. poor access to reliable biodiversity information!**

So, what's in a name?

Because the correct use of names and names' relationships are essential for biodiversity management, the availability of taxonomically validated standardised nomenclatures (name databases) is fundamental for biological e-infrastructures. PESI is the next logical step in integrating and securing taxonomically authoritative species' name registers that underpin the management of biodiversity in Europe. PESI aims to integrate the three main all-taxon registers in Europe, namely the European Register of Marine Species, Fauna

Europaea and the Euro+Med PlantBase, in coordination with EU-based nomenclators and the network of EU-based Global Species Databases.

Species directories

A series of initiatives has been taken within the European Research Area (ERA) to develop information systems assembling and integrating biological species information for various purposes. For instance:

Species Base (www.speciesbase.org) which attempts to provide accumulated species datasets in one web interface, as the European contribution to the Global Species Information Systems (GSIS).

The **Life Watch** (www.lifewatch.eu) initiative will monitor Europe's biodiversity by bringing

“A crucial part of this project will be the involvement of the expert community to work collaboratively on the PESI tasks following common work formats accepted for the integrated European taxonomic work force in the European Network of Excellence on Taxonomy (EDIT).”

together observational and collection data in a single research system.

Species 2000 (www.species2000.org) prepares comprehensive catalogues of species' names by incorporating the results of an array of autonomous, federated taxonomic databases.

In addition, a wide range of environmental monitor and management systems within Europe exist, dealing with issues related to nature conservation and the sustainable use of

“Collaboration with other EC funded projects: EDIT, MarBEF, Life Watch, SYNTHESYS and CATE.”

biological resources, including pest control, habitat protection, legislation and species conservation.

A prerequisite of these initiatives is the support of scientists and infrastructures that provide standardised and authoritative taxonomic information.

Therefore, each of these initiatives is a potential user community of the PESI species directory infrastructure. However, technology does not work in isolation and requires parallel development in contributor and user practices. PESI will explore the user needs, allowing the user to comment and provide feedback on the system performance and also to communicate on the quality of the taxonomic data.

PESI will coordinate the delivery of this

information through the interoperation of the existing data infrastructures and the networks of experts.

Pan-European

PESI unites experts from 36 organisations from 26 European countries with an aim of improving the European e-infrastructure through the strengthening of the respective scientific, social, political, technological and information capacities in Europe, vital for a proper biodiversity assessment.

Geographic expansion of the European networks to eventually cover the entire Palaearctic biogeographic region is one of the objectives of the PESI project. As an important first step, the cooperation is intensified with

“The development of national and regional focal point networks in PESI will assure an efficient access to local expertise.”

partners from Turkey, Georgia, Ukraine and Russia.

PESI Action Plan

PESI defines and coordinates strategies to enhance the quality and reliability of European biodiversity information by integrating the infrastructural components of four major community networks on taxonomic indexing and their respective knowledge infrastructures, namely those of **marine life, terrestrial and freshwater plants, fungi and animals**, into a joint work programme. This will result in functional knowledge networks of taxonomic experts and regional focal points, which will collaborate in the establishment of standardised and authoritative taxonomic (meta-)data and the development of approaches on their long-term sustainability.

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FEATURES

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The Jewel Anemone *Corynactis viridis*. (Photo: © Fiona Crouch)

By Jon Parr, Guy Baker and Harvey Tyler-Waters

The MarLIN programme of the Marine Biological Association (MBA) is celebrating 10 years of providing marine life information through the internet. Set up in 1998 to provide marine life information for environmental management, protection and education, MarLIN continues to flourish and has become a comprehensive source of marine information on the web.

MarLIN concentrates on three areas: Biodiversity and Conservation Science; Education and Recording; and access to marine life data. The last function has now been taken on by DASSH, a data archive centre for all marine life (www.dassh.ac.uk). The MarLIN