

# Systematics and taxonomy

The fundamental importance of systematics and taxonomy to the study of living things seems obvious to many biologists. Despite their sometimes old-fashioned image, these subjects are more important and exciting today than ever before, contributing positively to the major scientific and social challenges of this century. They provide the tools and evidence to measure and predict the biological and environmental impacts of climate change, understand biodiversity and protect ecosystem services. They underpin many other areas of bioscience, support economically important activities and industries, and enable the UK to comply with its legal and moral obligations to protect the environment and its natural resources.

New tools and resources are making this area of science even more powerful and accessible. Pocket sequencing technologies being developed for military applications may soon become more widely available and cheap enough for both professional and amateur biologists. In theory, this could allow identification of a known species from its DNA, without the need for morphological identification by an expert.

Yet the quality and quantity of taxonomic data in DNA databases is a major limitation to the usefulness and accuracy of such approaches for the foreseeable future. Skills in traditional taxonomy will always be required to assign a DNA sequence to a particular species in the first place. And discovering new species is where the fieldwork gets exciting and becomes taxonomy.

The UK has international centres of excellence for systematics and taxonomy, and collections of international and national importance. It also benefits from active groups of amateurs, who carry out and publish research of the highest quality.

Today, though, systematics and taxonomy are under threat, having been starved of funding for many years, unrewarded by the Research Assessment Exercise, and with few young taxonomists filling the shoes of an increasingly ageing workforce

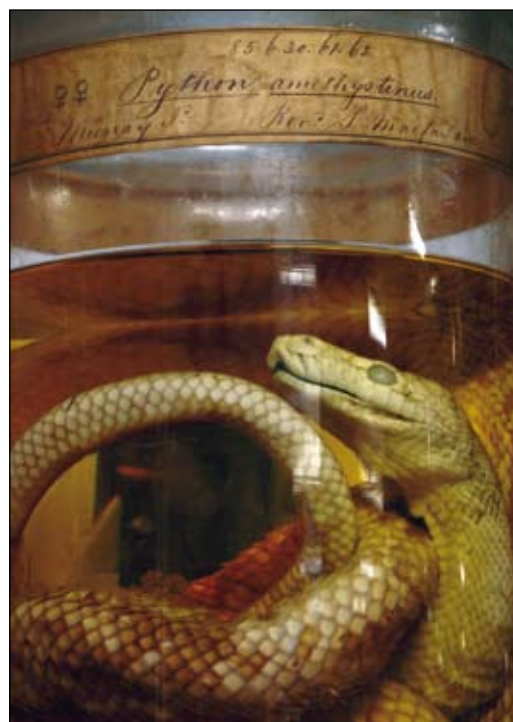
in universities, museums and the ranks of amateurs on whom much UK taxonomy relies. Current funding and policy mechanisms are not coordinated and fail to take account of the particular needs of this area of enquiry.

IOB, with the British Ecological Society and the Biosciences Federation, responded to a House of Lords inquiry on systematics and taxonomy in February. We made a range of recommendations to monitor, fund and improve the state of systematics and taxonomy research, education, infrastructure and skills base in the UK. We await the outcome of the inquiry with interest. We note, however, that their lordships have inquired into this subject twice before in the past 10 years, put forward strong and positive recommendations to improve the state of systematics and taxonomy in the UK, yet failed to elicit many improvements. We hope that their third inquiry will have greater impact.

Our response is at [www.iob.org.uk/policy/consultations2008](http://www.iob.org.uk/policy/consultations2008)

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Preserve taxonomy and taxonomists!