

Comments on the Government's response to the House of Lords report on systematic biology and biodiversity ('What on Earth?')

The Royal Society welcomes the invitation from the House of Lords' Science and Technology Committee (HoL) to comment on the Government's response¹ to the Committee's report on systematic biology and biodiversity (entitled *What on Earth? The threat to the science underpinning conservation*)². The Royal Society submitted evidence to the initial inquiry³. We are generally disappointed with the Government's response to the HoL's report. In particular, recent funding increases neither repairs the damage done to the field by the previous 10 years of under funding nor ensures the long-term stability that would prevent further decline. And, while we welcome the Government's implicit support for the development of an internationally agreed web-based taxonomy as proposed by Professor Godfray FRS and others, we do not share its confidence that the Global Biodiversity Information Facility can deliver the pilot.

Increase in grant-in-aid funding (1.1)

In our submission to this HoL inquiry we noted that core funding for the three major systematics institutions had declined in real terms over the last decade and we recommended a reversal in this decline. We welcome the recent increase in funding for Royal Botanic Gardens Kew, Royal Botanic Gardens Edinburgh and the Natural History Museum, which goes some way towards addressing the decline in funding that has occurred over the last decade. However we are disappointed that it is not sufficient to compensate for the previous failure to maintain core funding in line with inflation. We are also concerned that, despite the recommendations of both this HoL report and the Dainton report⁴, the Government has made no commitment to ensure that future increases in core funding for these institutions will at least be in line with inflation.

Impact of the Research Assessment Exercise on systematic biology in universities (1.4)

We welcome the Funding Council's review of the Research Assessment Exercise (RAE) being chaired by Sir Gareth Roberts FRS and have provided evidence to the initial consultation⁵. It is vital that an analysis of the impact of the RAE on minority subjects such as systematics, is based on quantitative data. We suggest that the next stage of the consultation explicitly requests such data as we note that the issue of minority subjects was not mentioned in the initial consultation for the RAE review⁶.

The well being of the systematics research base and that of the wider biological sciences requires taxonomists in both universities (particularly so that the next generation of taxonomists can be inspired) and other institutions. However, as we have highlighted previously, research into baseline systematic biology (alpha-taxonomy) has been disappearing from universities and is now mainly concentrated in non-university institutions. Changes in the RAE (if indeed they are proved to be a causal factor) are unlikely to prevent the continued disappearance of taxonomy as an academic subject in the short to medium-term. It is therefore vital to maintain and promote links between universities and the relevant non-university institutes. This could include posts shared between universities and major systematics institutions as well as joint PhD studentships and training courses such as the MSc in Systematics and Biodiversity established by Imperial College and the Natural History Museum.

Role of systematic biologists in promoting their discipline (1.6)

We are confident that systematic biologists, including those who are Fellows of the Royal Society, will continue to promote their discipline. The important role of systematics and taxonomy in facilitating the measurement of biodiversity for conservation is being addressed in the current Royal Society policy study on measuring biodiversity⁷. We expect the report of this study to be published in the summer.

Digitisation of taxonomy and its dissemination via the internet (1.7)

We strongly support the ideas put forward by Professor Charles Godfray FRS to turn descriptive taxonomy into a 21st century information science⁸. In particular we recognise the need to provide a single web location where the internationally agreed taxonomy for a given group can be found – a unitary taxonomy. We do not share the confidence expressed by both the HoL report and the Government that the Global Biodiversity Information Facility (GBIF) is an appropriate body to take this forward. While we are aware that GBIF is developing a number of web initiatives including specimen level databases and electronic species name catalogues, it does not have the resources, mandate or aim to construct the unitary taxonomy that is required. We believe that the pilot (the production of a unitary taxonomy for a major group) should be led by a major museum or botanic collection (or consortium of institutions) and that additional resources should be made available to them. If the pilot is successful we would envisage the taxonomy of each of the other groups being produced by the most relevant institution or groups of institutions. We therefore believe that the Government would be wrong to assume that this is a recommendation that can be fulfilled by GBIF.

New body to identify priorities for taxonomy and conservation (1.8)

We look forward to discussing the Government's proposals for a new body to identify areas where taxonomic research is most needed and to assess the taxonomic impediment to conservation action. We are particularly keen to involve members of our working group on Measuring Biodiversity⁷ (which comprises both Fellows and non-Fellows) who have been considering these issues in a national and global context. We have the following initial comments:

- a) In the past, bodies such as the UK Systematics Forum have had a similar remit to that being proposed here. Before considering the establishment of a new body it will be important to examine the strengths and weaknesses of similar groups to ensure that time, money and effort are not wasted.
- b) There is a need for an overall strategic view of priorities for UK policy to be based on quantitative information. We have been concerned, for example, at the lack of quantitative data to support the general view that systematics funding and expertise are declining.
- c) Given the UK's international responsibilities, any new body must focus on those priorities that meet the international (not only national) needs of the conservation community. It is crucial to identify those areas where we can make the most useful contribution most quickly (i.e. on time scales appropriate to the conservation needs).

Increased funding for the Darwin Initiative (1.9)

The Darwin Initiative has led to real benefits in conservation and sustainable use, as well as for the UK systematics institutions and their partners in the richly biodiverse countries. In July 2002, prior to the World Summit on Sustainable Development, the President of the Royal Society wrote to the Prime Minister recommending new funding for this important programme. We therefore welcome the announcement of this increase in funding for the Darwin Initiative.

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¹ <http://www.parliament.uk/documents/upload/GovECEarth.pdf>

² <http://www.publications.parliament.uk/pa/ld200102/ldselect/ldscitech/118/11801.htm>

³ The Royal Society's contribution to this study can be found at: <http://www.royalsoc.ac.uk/policy/>

⁴ House of Lords, Select Committee on Science and Technology. 1st Report, 1991-92. Systematic Biology Research. HL Paper 22-I. ISBN 0 10 480692 3

⁵ The Royal Society's response to this consultation can be found at: <http://www.royalsoc.ac.uk/policy/>

⁶ <http://www.ra-review.ac.uk/>

⁷ Details of this study can be found at: http://www.royalsoc.ac.uk/policy/meas_bio.htm

⁸ Godfray, H.C.J. (2002) Challenges for taxonomy. *Nature* 417, 17–19.