

Forum

Internal drive vs external directive: the delivery of conservation through zoo-based research – a response to Rees

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In the title of his paper Rees (2005) asked a perfectly valid question with regard to one specific element: the effectiveness of European legislation in enhancing the impact of zoo research in conservation. However, the question was not fully addressed, and the answer may be difficult to determine, due in part to the increasing importance placed on research by zoos independently, and in many cases ahead of, legislation. He discusses at some length the way in which the proportion of zoo based research has shifted in recent years to accommodate and address many of the more technically challenging issues of nutrition, reproduction and population dynamics but without losing sight of the valuable behavioural elements of research on captive animals. Rees manages during the course of his argument to answer many of his own questions, with some clear examples of where and how the practical link can be made between many zoo activities, not just research, and the ultimate delivery of conservation benefits to species. It is worth noting, however, that in many cases the truly measurable and sustainable effect of conservation action on populations, species and habitats requires a timescale that spans generations and therefore may not yet be apparent.

It is perhaps a fair criticism of the Directive itself that research may be seen as an option in terms of the obligations of an individual zoo to conservation, but this merely reflects the generally accepted view that conservation is a multi-disciplinary response to biodiversity loss. The Directive is there, in part, to oblige those zoos that are currently pursuing few or none of the qualifying activities to do so.

At the beginning of his paper Rees refers correctly to Article 9 of the Convention on Biological Diversity, which requires parties to adopt *ex situ* conservation measures. This is an important point from which the subsequent argument should be developed. By recognizing the validity of *ex situ* efforts, authors of and signatories to the Convention have, in many ways, pre-empted the direction in which zoo-based research should go. The many examples provided by Rees are a testament to this,

by virtue of the fact that much research has informed husbandry and underpinned the maintenance of the long-term viability of captive populations, held and managed for the purpose of *ex situ* conservation.

An analysis of peer-reviewed or grey literature is not necessarily the most accurate way to assess either the scope or proportional focus of zoo-based research. Some research asks specific questions, the answers to which are relevant to a narrow audience within the zoo community. Additionally, and by Rees' own admission, field research carried out by, or on behalf of, a zoo is more likely to appear in other, non-zoo, conservation oriented journals. The issue of proportionality also needs to be considered when including research carried out in zoological collections that has not been derived from the institutions research programme and/or imparts no resource burden upon it. The high number of student research projects carried out in zoos may not directly accrue conservation benefits but the process is facilitating the training and development of potential conservation biologists.

The EC Zoos Directive is to enable zoos, through legislative guidance, to meet their conservation obligations, including research. The landscape over which the legislation applies is varied and complex and will continue to be so as further accession countries join the European Union. The quality and impact of conservation-oriented research in zoos will continue to advance as the discipline increases momentum. Zoos are increasingly engaging in conservation action and research in the field to complement their *ex situ* work, and there is a need now to promote the integration of the two, whether through the development of wildlife veterinary procedures, sampling techniques or a greater understanding of the behavioural ecology of species.

References

- Rees, P.A. (2005) Will the EC Zoos Directive increase the conservation value of zoo research? *Oryx*, **39**, 128–131.

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