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Dear Sirs,

## **Evaluation of the AUSTRALIAN BIOLOGICAL RESOURCES STUDY (ABRS) and the BIODIVERSITY PROGRAM of Environment Australia**

On behalf of the Society of Australian Systematic Biologists (SASB) I have pleasure in providing you with comments in response to your faxed letter of 19th November. Because of the specific interests of this Society, the comments below focus on ABRS rather than on the Biodiversity Program.

In August this year, I requested comments on ABRS activities from Society members, prior to a Forum held at the Joint Conference of SASB and the Australian Systematic Botany Society in late September at Adelaide University. This Forum, entitled "Future Direction and Resourcing of Australian Systematics" largely discussed the role played by ABRS in funding taxonomic work in this country and the drastic effects of recent Government cuts to the ABRS budget. About 50 members responded to this request, and the comments below have drawn on this information, as well as views expressed at the Forum, and in conversations between Society members and myself and other Council members. As such, the comments below do not represent the unanimous view of the Society, but I believe they represent those held by a wide cross-section of members.

### **SASB Involvement with ABRS**

The Society comprises about 250 members who are mostly professional biologists and have interests in the taxonomy, phylogenetics, biogeography and evolutionary biology of organisms relevant to the Australasian region. A large number of members have received or are receiving funds from ABRS programs, and/or are major users (clients) of information generated through ABRS programs. The Society has been active recently in lobbying Government to restore and improve funding to ABRS following severe cuts that were imposed during the last 18 months. This approach has apparently met with some success, in that the Minister for the Environment has allocated an additional \$1.2 million to ABRS but, unfortunately, within a time frame that may preclude it being used for high priority activities.

### **General Comments**

There is no doubt that over the last 20 years ABRS has made a very significant contribution to the documentation of the Australian biota. This has been achieved through the funding of research initiatives (via the Participatory Program Grants Scheme), and the Publications Program. The latter has been responsible for the series *Flora of Australia*, *Zoological Catalogues*, *Fauna of Australia*, and other individual volumes. Through both the research grants scheme and publications program, ABRS has played a role in fostering the training of systematics at both postgraduate and postdoctoral levels. Further, it has enhanced communication among taxonomists, educators and

client groups by providing support for network meetings and workshops.

## Lack of Funding

ABRS is not the only agency in Australia that funds taxonomic research, but it is the only one that has this as one of its primary functions. However, the size of the ABRS budget is ridiculously small compared to the task of documenting the Australian biota. Both the research grants and publication programs play an important role here. The research program focuses on taxonomic revisions and description of new taxa, which for many groups of organisms, such as invertebrates and fungi, is a huge task because only a small proportion of species are so far described. The publications program is involved in documenting the known biota and making the available information more widely accessible, through the publication of check-lists, catalogues, keys and taxonomic summaries.

Almost universally, the view of SASB is that the proportion of ABRS funds allocated to the research grants scheme is far too small. This has been exacerbated recently by the effects of Government cuts, where for 1998 only \$600K were available for new research projects, when \$3.8 million of total grants applications were received. These cuts have occurred at a time when the responsibilities of ABRS have: (1) been expanded to cover microorganisms (see The National Strategy for the Conservation of Australia's Biological Diversity), and (2) there is an urgent need to accelerate research into the taxonomy and distribution of the least known and most diverse groups (eg. invertebrates and microorganisms).

Clearly funds for the research can only be increased in two ways: by increasing total Government funding to ABRS, or by making other parts of ABRS more efficient (see below). Indeed, an extreme view held by some members of this Society is that ABRS should shed all its other functions and be organised into a research grants agency, like ARC, specifically to fund taxonomic research in this country.

At the Forum in Adelaide, and elsewhere, questions have been raised about the role of ARC in funding taxonomic work on the Australian biota. Data compiled here (see table below) indicate that ARC is a very minor supporter of taxonomy, but it does fund a significant number of phylogenetic projects. Further, ABRS is in many cases the only provider of taxonomic research funding to many government scientists, because they are ineligible to apply to ARC and other government granting agencies.

Summary of ARC Large Grants for the last five years relevant to systematics

Category	1992-94	1995	1996	Total
Phylogeny-molecular	15	8	6	29
Phylogeny-other	9	1	3	13
Taxonomy	8	2	0	10
Biodiversity	1	2	2	5
Evolutionary biology	1	0	2	3
Palaeontology	0	1	0	1
Total	34	14	13	61

(data taken from ARC Research Reports on Research Funding, 1994, 1995 and 1996, Grants and Fellowships Awarded)

## Problems with the Fauna Publications Program

*The Floras* The major activity of this program has been the publication of the series *Flora of Australia*, *Zoological Catalogues*, and *Fauna of Australia*. These book series have been variably received by the scientific community. The *Floras* are generally well regarded for their standard of content, and clearly a focus on their production by the Flora Committee over the last 20 years has been very successful.

*The Fauna Series and Catalogues* However, there have been significant problems with the zoological publications, and they have been criticised by a large number of people over a long period of time. Only three volumes of the *Fauna* series have been completed and published, an output that is clearly unacceptable. Also, the format and the style of the *Zoological Catalogues* have been criticised as being completely inappropriate for highly species-rich groups, particularly the invertebrates. Published book reviews of the catalogues have not been kind, and have continually focused on these problems. Further, for many years numerous workers have questioned the justification of publishing expensive hardcopy catalogues to poorly-known invertebrates groups, which become rapidly dated because of the rate at which new species are described.

*Electronic Publication* Although ABRS is moving towards the production of electronic catalogues and check-lists, they have been resistant to this suggestion for many years, and I understand that invertebrate volumes of the *Catalogues* are still intended to be published as hardcopy. One suggestion from several members of this Society that has significant merit is to abandon the *Zoological Catalogues* in their present form and replace them with a program to develop a species' check-list for all taxonomic groups for Australia, and that this be made freely available on the world wide web. Such a program would certainly meet one of the major objectives of ABRS, which is to make information on the Australian biota widely available to the largest number of clients.

These comments would seem to apply equally well to the *Flora* series. The interactive computer-based keys such as *Euclid* serve as a model for generating scientifically accurate, user-friendly systems that can be made accessible to a large number of people.

*The Role of ABRS Staff* There is no doubt that concerns exist among members about the Fauna Publications Program and what appears to have been, at least in the past, a certain level of inefficiency. At present, a significant amount of ABRS staff time is spent vetting the scientific accuracy of publications. As in all other scientific endeavours, the content of such works is the responsibility of the author. ABRS publications are refereed, so it should be up to authors to correct/modify the work, and if it is not of an appropriate standard then it is not published (and authors do not receive part of their contract payment). Further, it would appear to be far more efficient and financially expedient for some of the editorial functions currently performed by ABRS staff to be taken over by commercial scientific publishers.

*Fauna-Flora Split* A number of members, including several who have sat on ABRS Editorial Committees, have pointed out the inadequacies of the fauna/flora division in staff and funding. There is a belief: that such an arrangement has hindered flexibility of ABRS programs; that some groups such as protists and fungi do not fit these categories; and that important areas of botanical research have remained unsupported because funds are directed exclusively to the *Flora* series. However, these sentiments are not universal, and there is clearly a division of opinion evident between botanists who see the *Floras* as a very successful program that should not be tampered with, and an opposing view that, given the relative numbers of vascular plant species, they receive a disproportionate share of ABRS funds compared with megadiverse groups such as microorganisms and invertebrates. This division has been exacerbated by the recent funding cuts.

## **Management of ABRS**

There are strong perceptions held by members of this Society that ABRS is seen in some ways to be driving its own agenda, rather than one determined from broad consultation and input from systematists and user groups around the country. This extends to what is a widely held belief that ABRS has ignored sensible, realistic comments and criticisms in the past (including from its own Advisory Board and Editorial Boards) (also see comments above re *Zoological Catalogues*). Underlying this situation is that ABRS has a public relations problem, and, because of this, the organisation lacks the support it otherwise needs from the general systematics community.

The best recent example to highlight this situation was the cancellation of two near complete

volumes of the *Fauna of Australia*. This decision was taken because of the recent Government funding cuts, and, although may be justified under the circumstances, ABRS's own Fauna Editorial Committee was not consulted over or later informed of the decision. Further, none of the authors of chapters in these volumes were informed of this decision, and, like the Editorial Committee, they heard about this from hearsay. The outcome of this was a number of very disgruntled authors and Committee members. Indeed, serious questions can be asked in general and specifically regarding this episode -- for instance, what is the role of the Fauna Editorial Committee; how and who manages ABRS, and who makes major decisions regarding policy?

## **Recommendations and the Future for ABRS**

Although the above comments have largely focused on past and recent problems with some ABRS operations, there is no doubt that the organisation has generally performed well and served a critical role in the documentation of Australia's biota. Albeit a rhetorical question, I wonder what the state of knowledge of Australia's biodiversity would be without having ABRS in existence for the last 20 years? In having such an organisation, Australia is the envy of many countries.

Where should ABRS go in the future, how should it be managed, and what should be its priorities? In forming a response to these questions, SASB would offer the following as possible recommendations:-

- As a priority, ABRS funds to research initiatives be increased, particularly for little known megadiverse groups, in line with the National Strategy for the Conservation of Australia's Biological Diversity;
- Training at both postgraduate and postdoctoral levels be given a higher priority;
- That consideration be given to merging the Flora and Fauna programs and committees;
- That the Publications Program move as quickly as possible to electronic delivery of its activities, to optimise information transfer to the largest number of clients as possible;
- That the organisation put in place mechanisms for regular independent evaluation of its activities, and for consultative input from a wide spectrum of professional systematists and user groups of taxonomic information;
- That consideration be given for some publishing functions currently undertaken by ABRS staff be devolved to external publishers.

I hope that the above comments are of some use to you in evaluating ABRS. I look forward to meeting with you on 2nd December, and to discussing further the matters raised above.

Yours sincerely,

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