Scientific Expedition Group Incorporated

SUBMISSION IN RELATION TO THE PROPOSED BIODIVERSITY ACT IN SOUTH AUSTRALIA

This submission is made by Alun Thomas as President of and on behalf of the Scientific Expedition Group Incorporated (SEG)

1 BACKGROUND OF THE SCIENTIFIC EXPEDITION GROUP INCORPORATED

1.1 The Scientific Expedition Group Incorporated (SEG) is a not-for-profit organisation which began in 1984. SEG undertakes several expeditions each year to record scientific information on wildlife and the environment in many parts of South Australia and in particular to teach sound biodiversity survey techniques to expeditioners.

1.2 A major expedition to conduct a biodiversity survey occurs each year over about two weeks. Scientific experts lead volunteers in surveying mammals, reptiles, invertebrates, vegetation, birds and physical geography. The data collected on each survey are archived with the relevant State scientific institutions and biodiversity databases to ensure they are available to anyone interested in the environment of South Australia.

1.3 In addition to the major expedition, SEG manages and runs a long-term study of rainfall and vegetation in the Gammon Ranges and conducts four-day biodiversity surveys at eight different sites each autumn and spring in Heritage Areas of scrub on “Minnawarra” farm near Myponga. Data collected are entered into the Biological Data Base of SA. SEG also conducts malleefowl monitoring in the Murraylands at Bakara and Danggali.

1.4 Over its existence SEG has conducted at least thirty major biodiversity surveys in all parts of the state ranging from the Nullarbour Plain in the west to Boolcoomatta in the east and from Nangwarry in the south to Innamincka and Witjira in the north of the State. SEG has conducted surveys for the Department of Environment and Water and a number of its various predecessors as well as for private landholders such as Nature Foundation of South Australia, Arkaroola Wilderness Sanctuary and holders of Heritage Areas. See Appendix 1 for SEG expedition sites.

2 GOALS OF THE PROPOSED BIODIVERSITY ACT.

2.1 The goals of the proposed Biodiversity Act are enumerated as, to conserve biodiversity and maintain the diversity, quality and function of ecosystems, to enhance capacity to adapt in the context of a changing climate, to protect threatened and culturally important species and ecological communities, and to recover threatened species and ecological communities so their conservation status improves.

2.2 In the opinion of SEG to be effective and to achieve these goals, the new biodiversity legislation must not only recognise the value of biodiversity as a whole, but it must provide a clear intention and means to assess the biodiversity in a particular location. Otherwise, the Act will only be providing lip service to management of biodiversity.

3 IMPORTANCE OF BIODIVERSITY

3.1 There is no doubt that biodiversity in its broadest form keeps us and all living things in existence. The state of South Australia has a range of different habitats each of them critical to biodiversity of the state as a whole. The new Act should ensure that a significant part of each biodiversity habitat is preserved in Parks or private conservation areas.

3.2 The new Act must allow for a range of forms of protection of habitats such as Conservation Parks, National Parks, private reserves and Heritage Areas on private land.

3.3 Provision should be made within the new Act to support biodiversity within each of these forms.

SUBMISSION 1 The New act must ensure that a significant part of each biodiversity habitat is preserved in Parks or private conservation areas and that each of these forms are supported.

4 SEG HAS PARTICULAR CONCERNS IN RELATION TO ASSESSMENT OF BIODIVERSITY

4.1 In Topic 7 of the Discussion Paper released by the Government the matters of better data collection, collation, interpretation and dissemination of biodiversity are discussed.

4.2 SEG is of the opinion that collection of biodiversity data is necessary to quantitate:

4.2.1 How important habitat such as bits of scrub are;

4.2.2 How well they are being managed; and

4.2.3 What impacts are occurring, good or bad.

4.3 SEG has had extensive experience in conducting biodiversity surveys of vertebrates, invertebrates and vegetation.

4.4 It is important that when a survey is carried out it is done in a standardised and repeatable format so that results from different places and at different times can be compared.

4.5 Vertebrate surveys should be carried out using “Guidelines for Vertebrate Surveys in South Australia”. (Owens 2000).

4.6 Vegetation surveys should be carried out using “Guide to a Native Vegetation Survey”. (Heard and Channon 1997)

4.7 Invertebrate surveys are also an important tool for measuring the health and change in the health of a particular habitat. Invertebrate surveys should be carried out using a standardised format such as that discussed in “Use of terrestrial invertebrates for biodiversity monitoring in Australian rangelands, with particular reference to ants”. (Anderson et al. 2004). See also J. A. Forest and D. B. Hirst, S.O. Shattuck, Austin et al. and Agosti et al.

SUBMISSION 2 The New act must ensure that biodiversity surveys are carried out using standardised techniques so that results are comparable.

5 MANAGEMENT OF BIODIVERSITY INFORMATION

5.1 The Department for Environment and Water has traditionally been the repository for data collected in BD surveys and the data has been entered onto the Biological Databases of South Australia (BDBSA) and this has worked well.

5.2 The new Act should continue this practice with the data being accessible to the public and stakeholders.

5.3 SEG supports the establishment of BioData SA, improving the quality of information that can be made available for better evidence-based decision-making.

SUBMISSION 3 The New act must ensure that biodiversity data is entered into a central repository at the Department for Environment and Water and that the Department should enter the data onto an accessible database.

6. THREATS TO BIODIVERSITY

6.1 Many parts of the State are subject to threats to biodiversity. Threats include things such as:

6.1.1 Non-native fish such as carp in our waterways

6.1.3 Invasive weeds such as buffel grass in our pastoral lands

6.1.3 Invasive animal species rabbits throughout pastoral, cropping, and horticultural land.

6.2 Management of these threats is a significant burden upon landholders whether private or public and the new Act should have provision for financial and other support for landowners in combatting threats to biodiversity.

SUBMISSION 4 The new Act should have provision for financial and other support for landowners in combatting threats to biodiversity.

7 BIODIVERSITY AND VOLUNTEERS.

7.1 Volunteers play an important and integral part in managing and assessing biodiversity, whether it be within groups such as Friends of Parks, in organisations such as Nature Foundation SA and Nature Conservation Society of SA and our own group, Scientific Expedition Group Inc.

7.2 In SEG all positions are voluntary. For instance, with our Minnawarra Biodiversity Project over its 23 year history and 46 surveys there have been 30,000 volunteer hours amounting to a monetary value of $1.25 Million. (See Appendix 2)

7.3 Similar volunteer hours occur in the range of our other activities.

7.4 In our opinion specific support should be given to volunteers and volunteer groups carrying out activities relating to managing and assessing biodiversity.

SUBMISSION 5 Specific support should be given to volunteers and volunteer groups carrying out activities relating to managing and assessing biodiversity.

8. ENFORCEMENT OF BIODIVERSITY

8.1 There have been many occurrences where landowners have flouted laws designed to protect biodiversity and been prepared to pay the minimal fines imposed.

8.2 Stronger legislation to “encourage” people to take care of wildlife and habitats is necessary.

8.3 Topic 10 in the Discussion Paper suggests that civil penalties should be favoured over criminal penalties. In our opinion this is misguided as a civil penalty will be passed off as a cost of doing business in South Australia. Criminal penalties which include a period of incarceration should be legislated to stop flagrant violations.

8.4 Legislation needs to be backed up with monetary and expert knowledge assistance for people to be able to protect habitats.

SUBMISSION 6 The new Act should include criminal enforcement provisions against individuals or companies to ensure that their actions do not destroy or damage biodiversity.

9 THIS SUBMISSION MAY BE PUBLICLY SHARED.

APPENDIX 1

SITES OF SEG EXPEDITIONS OVER 40 YEARS

Coffin Bay 1984
Chowilla 1985
Freeling Plateau 1986
Canunda 1987
Coongie 1988
Gammon Ranges 1990
Lake Newland 1991
Venus Bay 1993
Gawler Ranges 1995
Gammon Ranges 1996 and Mount Rose Mine
Balcanoona 1997
Warrraweena 1999
Gluepot 2000
Munyaroo 2002
Witjira 2003
Moonabie 2005
Boolcoomatta 2006
Scrubby Peak 2007
Marqualpie 2008
Arkaroola 2009
Bimbowrie 2010
Arkaroola 2011
Nullarbor 2012
Morella 2013
Hiltaba 2013 Autumn
Hiltaba 2013 Spring
Nangwarry 2014
Witchelina 2015
Witchelina 2016
Morella 2017
Ikara Flinders Ranges 2018
Innamincka 2019
Geegeela 2021
Witchelina 2023

APPENDIX 2

MINNAWARRA BIODIVERSITY SURVEY VOLUNTEER HOURS
The Minnawarra Biodiversity Survey has been going for 23 years so far, 46 surveys done.
Volunteer Hours

		Per survey	Total for 46 surveys	
Actual mammal /reptile survey	4 hours x 9 times x 15 people	540 hours minimum	24,840	
Bird survey	10 hours	10	460	
Set up/Pack up	5 days x 7 hours	35 hours	1610	
Data	4 days x 7 hours	28 hours	1288	
Weeding/Site care	2 days x 7 hours x 3 people	42 hours	1932	
			At least 30,000 hours	
Volunteer hours cost $42.40			At least 1.25 million dollars	

APPENDIX 3

REFERENCES

1 Owens. 2000 Guidelines for Vertebrate Surveys in South Australia. Using the Biological Survey of South Australia. Edited by Helen Owens
https://data.environment.sa.gov.au/Content/Publications/vertebrate_survey_manual.pdf

2 Heard and Channon 1997 Guide to a Native Vegetation Survey. Using the Biological Survey of South Australia. Edited by Leonie Heard and Bronwen Channon
https://data.environment.sa.gov.au/Content/Publications/vegetation_survey_manual.pdf

3. Anderson et al. 2004 Use of terrestrial invertebrates for biodiversity monitoring in Australian rangelands, with particular reference to ants. Alan N. Andersen, Alaric Fisher, Ben D. Hoffmann, John L. Read And Rob Richards *Austral Ecology* (2004) **29**, 87–92.

4. J. A. Forest and D. B. Hirst A Guide to Collecting Insects and Arachnids in South Australia. South Australian Museum, Adelaide, South Australia. 2004

5. S.O. Shattuck Australian Ants, their biology and classification. CSIRO 1999.
This book has a chapter including the "collecting methods" (pg15) and "specimen preparations" (pg17).
This is the “Ant Bible” of Australia.

6. A. D. Austin, D. A. Mackay and S. J. B. Cooper (Editors) Invertebrate Biodiversity and Conservation. Special Issue, South Australian Museum 2003. Records of the South Australian Museum Monograph series number 7.

7. D. Agosti, J. D. Majer, L. E. Alonso and T. R. Schultz editors Ants, Standard Methods for Measuring and Monitoring Biodiversity. 2000 Smithsonian Institute