

Report of Meeting

SCIENTIFIC COMMITTEE ON ANTARCTIC RESEARCH WORKING GROUP ON BIOLOGY BIRD BIOLOGY SUBCOMMITTEE MINUTES OF MEETING, 9–13 JUNE 2002, JENA, GERMANY

1. WELCOME AND APOLOGIES

Members and observers were welcomed to the meeting by the Chair, Dr E.J. Woehler. Apologies had been received from Drs J.P. Croxall, G. Robertson and H. Weimerskirch and Lic N. Coria. The Chair noted the resignation of Dr L.S. Davis from the Subcommittee, and thanked him for his past services.

2. ADOPTION OF AGENDA AND APPOINTMENT OF RAPPORTEURS

The draft agenda was adopted (Doc. 1). Attendees are listed in Annex 1, and the documents tabled in Annex 2. Mr J. Cooper and Ms D.L. Patterson were appointed rapporteurs.

3. MATTERS ARISING FROM THE TOKYO MEETING, 2000

The minutes of the previous meeting, held in Tokyo, Japan, in July 2000 had been circulated and published intersessionally (*Marine Ornithology* 28: 191–202, 2000, www.marineornithology.org) and were adopted (Doc. 2).

3.1 Central Data Bank for Antarctic Bird Banding

Mr J. Cooper reported that the South African Bird Ringing Unit (SAFRING) had received the sum of US\$ 1000 from SCAR to manage the Central Data Bank (CDB) for Antarctic Bird Banding for the period 2001–2002. SAFRING had continued to house the records of the CDB, but apparently had not made the annual requests for information requested by the Subcommittee at its last (and previous) meetings (Doc. 2). Presumably largely as a consequence, primary banding data was reported by SAFRING as being received only from the United Kingdom (British Antarctic Survey) during the last two years. It was agreed that the CDB was not functioning in the way originally envisaged by the Subcommittee.

After discussion, the Subcommittee considered that rather than continuing to sponsor a CDB as such, it should keep a directory of contact persons and national offices for each national and/or Antarctic banding programme from where information could be requested when marked (including colour-marked) birds could not be identified. Such a directory could be a web-based one, possibly housed at the Australian Antarctic Data Centre. The Chair agreed to explore this option intersessionally.

Dr S Loparev gave a summary of Ukrainian banding efforts in Antarctica over the period 1998 to 2002, and will supply the address of the Ringing Centre in Kiev, Ukraine to the Subcommittee after the meeting.

3.2 The conservation status of the Southern Ocean islands

The meeting heard reports from members and observers of improved conservation status for a number of southern islands, both through legislation and by successful attempts to remove alien predators. In terms of legislation, it was noted that South Africa intended to submit the Prince Edward Islands to the World Heritage Convention in 2004 (and that a nomination text had been prepared). A proposal for the Inaccessible Island Nature Reserve (Tristan da Cunha group) to be included within the Gough Island World Heritage Site was being considered by the UK authorities after receiving the approval of the Tristan da Cunha Government. Management plans for South Georgia and Inaccessible Island were adopted and published in 2000 and 2001, respectively. It was noted that existing management plans were under review for Heard and McDonald Islands (Australia), Gough Island (UK) and the Prince Edward Islands (South Africa).

Practical measures to increase island conservation status had been undertaken by Australia (the apparent successful removal of feral Domestic Cats *Felis catus* from Macquarie Island by a number of combined measures, with an ensuing return in 2000 of the Grey Petrel *Procellaria cinerea* as a breeding species for the first time since the 1890s) and by New Zealand (apparent removal of Norwegian or Brown Rats *Rattus norvegicus* from Campbell Island by the aerial dropping of poisoned bait in 2001, a notable achievement on a 11 000-ha island). Norwegian Rats had been removed by the hand-broadcasting of poisoned bait from 30-ha Grass Island, South Georgia in November 2000 by the Government of South Georgia and the South Sandwich Islands, with support from the Department of Conservation, New Zealand. Norwegian Rats had also been removed by hand-broadcasting poisoned bait from four small islands in the Falkland Islands by Falklands Conservation in 2001. Additional islands are planned to be treated in the future.

3.3 Recent publications on Antarctic and sub-Antarctic birds

The compilations produced by Ms C.M. Phillips, British Antarctic Survey (BAS) Librarian, for 1998 and 1999 were tabled (Docs 3 & 4). It was noted that these were soon to be published electronically in *Marine Ornithology* (2001, 29: 97–101, 103–107, www.marineornithology.org) and would thereafter be published in the paper version of the journal. A draft compilation for 2000 by Ms Phillips was tabled (Doc. 5). Members and observers were requested to submit their additions and corrections directly to Ms Phillips (cmp@bas.ac.uk) as soon as possible, so that the 2000 list could be published in *Marine Ornithology* in 2002.

3.4 Guidelines for approaching Antarctic and sub-Antarctic seabirds, including aircraft operations

The Chair tabled a summary of minimum approach distances to wildlife adopted by the Australian Antarctic Division (Doc. 6). The Subcommittee noted that several Antarctic research programmes, as well as the International Association of Antarctic Tour Operators (IAATO), had developed individual guidelines for approaching wildlife within the Antarctic Treaty (AT) area (e.g. by Germany, Doc. 7). The Chair outlined concerns regarding discrepancies between national programmes for minimum approach distances to wildlife, especially when considering that more than 15 000 tourists are likely to visit the AT area on an annual basis. The resulting discussion centred on the need for more long-term demographic data on potential human impacts on wildlife and the possibility that due to regional differences in visitation patterns and wildlife behaviour, a standardized set of guidelines may not be applicable.

The Subcommittee considered that the broader issue of human-wildlife interactions was of great importance within the SCAR area of interest. The Subcommittee thus agreed to continue the consideration of approach distance guidelines for wildlife, with consideration to locality and prior site management. Tourism, especially on the Antarctic Peninsula, represents the majority of human presence during the summer breeding season.

The Subcommittee decided that a workshop examining the broader aspects of human-seabird interactions was appropriate, and that topics to be examined would include researcher-wildlife interactions, building from the workshop held on this topic in the USA in 1993 (Fraser, W.R. & Trivelpiece, W.Z. (Eds). 1994. Report on [the] Workshop on Researcher-Seabird Interactions. Washington, D.C.: Office of Polar Programs, NSF). It was decided to hold this workshop in association with the 3rd International Conference on Albatrosses and Petrels, and the 5th International Penguin Conference, both of which will be held in South America in late 2004.

4. SEABIRD-FISHERIES INTERACTIONS

Mr J. Cooper summarized developments of note in the last two years. BirdLife International continued to run its *Save the Albatross* Campaign to reduce seabird mortality from longline fishing (Doc. 8). Two BirdLife partners had held a South American workshop on the issue in September 2001 in Uruguay (Doc. 9) and a similar workshop had been held in Asia later that year. The Working Group on Incidental Mortality Arising from Fishing (WG-IMAF) of the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) had continued its annual meetings where estimates of birds killed in the Southern Ocean by both legal and IUU (Illegal, Unreported and Unregulated) fishing were made. CCAMLR continued to apply its Catch Documentation Scheme (CDS) to control international trade in long-lined toothfish *Dissostichus* spp. The Marine Stewardship Council was currently assessing the South Georgia longline fishery for toothfish. Certification would *inter alia* take account of the level of seabird bycatch.

The Committee on Fisheries (COFI) of the Food and Agriculture Organization of the United Nations (FAO) at its biennial meeting

in 2001 in Rome, Italy had heard reports from member nations on their progress implementing the International Plan of Action for Reducing Seabird Mortality from Longline Fishing (IPOA-Seabirds). Currently, Japan, New Zealand and the USA had developed their National Plans of Action, with NPOA-Seabirds being developed or planned for Australia, Brazil, Falkland Islands and South Africa.

The Subcommittee noted the intention of Australia to submit the two species of toothfish to Appendix II of CITES (the Convention on International Trade in Endangered Species of Flora and Fauna) at its November 2002 Conference of Parties (Doc. 10). If adopted, such a listing would effectively extend CCAMLR's CDS to a much larger group of countries, further controlling pirate fishing and reducing seabird bycatch. The Subcommittee also noted with approval that Antarctic tourist vessels were collecting donations from passengers to fund research into seabird/longline fisheries problems, and that first call for fund applications had recently been made to an advisory panel that included two current members of the Subcommittee.

5. SPECIES COMPILATIONS

5.1 Giant petrels *Macronectes* spp.

A revised ms was to be submitted for publication to *Marine Ornithology* by the Chair. The figures would be produced at the Australian Antarctic Division.

5.2 Storm petrels

A document summarizing the distribution and abundance of Wilson's and Black-bellied Storm Petrels *Oceanites oceanicus* and *Fregatta tropica* was tabled by Drs P. Quillfeldt and H-U. Peter, who had taken over responsibility for the compilation from Dr M. Sallaberry intersessionally (Doc. 11). This document required updating with new data recently received. Members and observers were requested to submit new (including unpublished) information and methodology used to Drs Quillfeldt and Peter as soon as possible, using the Antarctic Gazetteer for names and coordinates of localities, so that the ms could be completed and submitted for publication. Both quantitative and non-quantitative information was needed. Information would be sent by Drs I. Chupin and E.J. Woehler. An appeal for information would be made on the Seabird Listserver.

Dr W.R. Fraser reported his view that numbers of Wilson's Storm Petrels were decreasing in the vicinity of Palmer Station, Anvers Island, Antarctic Peninsula. He considered this may be due to an increase in snow fall limiting access to their scree-nesting sites, and perhaps also an increase in predation by skuas *Catharacta* spp. Information on population trends, even if only anecdotal, was thus also required. Members and observers were also asked to look at existing at-sea data sets in the Southern Ocean for any trends in numbers of both species of storm petrels. Dr J.A. van Franeker hypothesized that increasing consumption of plastic objects may be affecting Wilson's Storm Petrels. Collected corpses were being analysed by him and Dr Woehler in this regard.

5.3 Cape Petrel *Daption capense*

An updated text produced by Dr P. Hodum was tabled as Doc. 12. The collection of data by the compiler for this species had halted, although members noted the absence of some published information. It was intended the ms would be submitted for publication in the near future once the figures had been produced in the Australian Antarctic Division by the Chair. Updating the ms with missing published information would still be needed.

5.4 Antarctic Fulmar *Fulmarus glacialis*

No ms had as yet been received from its compiler, Dr Hodum. Information for the Antarctic Peninsula would be made available by Ms S. Poncet intersessionally. If Dr Hodum was not able to proceed with completing the compilation timeously, Dr van Franeker agreed to take over the task, when he would include an analysis of at-sea numbers. The Chair agreed to discuss the matter with Dr Hodum as soon as possible.

5.5 Cormorants *Phalacrocorax* spp.

A draft manuscript still required completion by the Chair and Ms S Poncet. Recently published information provided in Naveen *et al.* 2000 (*Polar Record* 36: 323–334) for the Antarctic Peninsula was noted and would be included in the manuscript before it is submitted for publication.

5.6 Antarctic Prion *Pachyptila desolata*

It was agreed that for this burrowing species, inclusion of sub-Antarctic islands in a population synthesis would be premature, and that the review should thus be restricted to the Antarctic Treaty area. Members and observers were asked to submit new information to Ms Poncet and Dr Woehler. An appeal would also be made for new information on the Seabird Listserver.

5.7 Larids and sheathbills

New data had been received intersessionally and continued to be incorporated into a ms by the Chair, which he intended to submit for publication before the next Subcommittee meeting.

5.8 Penguins

The Chair had continued to update the published penguin synthesis (Woehler, E.J. 1993. Distribution and abundance of Antarctic and Subantarctic Cambridge: Scientific Committee on Antarctic Research; see also Woehler, E.J. & Croxall, J.P. *Marine Ornithology* 25: 43–66, 1997, www.marineornithology.org) intersessionally and intended to submit an update for publication in *Marine Ornithology*. New (2001/2002) data for the Prince Edward Islands would be made available by Mr Cooper.

5.9 Other species

The Subcommittee noted that at its previous meeting in 2000 it had suggested that consideration should be given to compilations of population numbers of two *Procellaria* burrowing petrels at sub-Antarctic islands. However, population estimates and/or trends were still only available for a few island groups, including South Georgia (UK) and Marion Island (South Africa), making

full species compilations premature.

Following discussion, it was considered that population trends in these longline-affected species (White-chinned *P. aequinoctialis* and Grey *P. cinerea*) might rather be studied by analyzing at-sea data (see Woehler, E.J. *Polar Biology* 16: 379–382, 1996; Woehler, E.J. & Watts, D. *Marine Ornithology* 29: 152, 2000, www.marineornithology.org for a downward trend of 95% in the former species in the Prydz Bay region over a 18-year period). Two ongoing at-sea studies were identified for such an analysis, one from the Prydz Bay region (Dr E.J. Woehler, Australia) and one from the Peninsula region (Anvers Island to Marguerite Bay, LTER data, Dr W.R. Fraser, USA). It was considered that such an indirect study of population trends could be also applied to other species of sub-Antarctic burrowing petrels.

At its last meeting, the Subcommittee had thought that an update of the last synthesis on albatross population and trends, published in 1998 (in Gales, R. & Robertson, G. Eds. *Albatross biology and conservation*. Chipping Norton: Surrey Beatty) could best be undertaken by the Agreement on the Conservation of Albatrosses and Petrels (ACAP), once it came into force. The Subcommittee confirmed this view, but decided to consider the matter again at its next meeting.

6. SEABIRD POPULATION STATUS AND TRENDS ASSESSMENTS

The published report of the SCAR workshop held in Bozeman, Montana, USA in May 1999 to assess the status and trends of Antarctic and sub-Antarctic seabirds statistically was tabled as Doc. 13. The SCAR-BBS agreed to request that the published report be tabled at the CCAMLR Working Group on Ecosystem Monitoring and Management at its August 2002 meeting at Big Sky, Montana, USA.

It was decided to recommend to the SCAR Working Party on Biology that the Subcommittee holds a two-day non-statistical workshop to undertake the next five-yearly update of population status and trends at the next meeting of the SCAR-BBS, planned to take place in 2004.

7. DATA MANAGEMENT

7.1 On-line bibliographies

The Chair described the ongoing on-line bibliographies housed at the Australian Antarctic Data Centre (AADC). It was noted that a key-worded bibliography on seabird/longline fishery interactions (c.850 titles) and a 120-title bibliography on seabirds at sea were to be added during 2002. The annual bibliographies (item 3.3) were also available on-line (http://cs-db.aad.gov.au/adcc/bib/search_bib.cfm). It is intended to include the references from the various species compilations being undertaken by the SCAR-BBS (item 5).

7.2 Antarctic Biodiversity Database

The Chair gave an update on the Antarctic Biodiversity Database housed at the AADC, which included information on the distri-

bution and numbers of Antarctic and sub-Antarctic birds. It is intended to include the published species reviews in the data base (item 5). The database can be reached at www.aadc.aad.gov.au/biodiversity.

7.3 State of the Environment Reporting

The Chair described the on-line system for collating information on state of the environment reporting housed at the Australian Antarctic Data Centre. Information collated included searchable records on flora and fauna in the SCAR region of interest.

8. DIET STUDIES METHODS WORKSHOP

Dr J.A. van Franeker, Co-convenor of the Diet Studies Methods Workshop with Dr Peter, held before the SCAR-BBS meeting, gave a report of the two-day meeting held in Jena prior to the Subcommittee over 5–6 June, which was attended by 19 researchers. Following an official opening by Dr Stefan Halle, Director of the Institute of Ecology, University of Jena, and an introduction by the convenors, five presentations were given detailing techniques used in dietary studies of fulmarine petrels (J. van Franeker), Subantarctic Skuas *Catharacta antarctica* (C. Büsser), Adélie Penguins *Pygoscelis adeliae* (W.R. Fraser), skuas (H-U. Peter) and Wilson's Storm Petrels *Oceanites oceanicus* (C. Büsser). Nine posters on the subject were viewed during a poster session on the first day. On the second day, discussions were held on sampling methods, considering factors such as in-colony and at-sea sampling; selection of age classes to sample and the different methodologies for each required; methods of handling birds; storage of diet samples; and data analysis and presentation. It was agreed that in addition to minutes of the meeting (distributed by e-mail on 26 June 2002) a report of the workshop should be prepared in the form of a review paper for publication in *Marine Ornithology*.

9. IMPORTANT BIRD AREAS OF ANTARCTICA WORKSHOP

The Chair, Co-convenor of the IBA Workshop with Mr. Cooper, gave a report of the meeting's deliberations and conclusions. The workshop was jointly organized by the Subcommittee and BirdLife International and took place over 7–8 June in Jena. The latter organization was represented by Dr L. Fishpool, Global Coordinator for IBA inventories, and Dr D.C. Nel of the BirdLife International Seabird Conservation Programme. Fifteen people attended from seven countries.

The workshop drew upon quantitative compilations of the breeding distributions of 17 of the 20 species of seabirds that breed within the Antarctic Continent (item 5), concentrating on penguins and fulmarine petrels. In the region of 120 breeding localities were provisionally identified by the workshop as fulfilling IBA criteria (primarily based on percentage of global populations, numbers of species co-occurring and their threatened status). The Workshop planned the production of a 300–400-page book on an Important Bird Area inventory for the Antarctic Continent. It is intended that site descriptions by a suite of authors would be prepared intersessionally, along with short species accounts, which would be illustrated. It was intended that a draft text would be

ready for discussion and revision at a second two-day Antarctic IBA Workshop, to be held at the time of the next meeting of the Subcommittee. It was considered that such a product would be attractive to tourists, as well as representing a major advance for conservation efforts on the Antarctic Continent. A preliminary offer by Dr W. Dinter of the German Federal Agency for Nature Conservation to support the publication of the inventory in one of its regular publication series was accepted with thanks.

The Subcommittee decided to reconsider the production of an IBA inventory for Southern Ocean islands, raised at its last meeting in Tokyo, at its next meeting.

10. SCAR AD-HOC WORKSHOP ON IMPACT OF ACOUSTICS ON ANTARCTIC ENVIRONMENT

The Chair reported on the growing concern on the effects of anthropogenic underwater noise on marine biota, which would be reviewed at a workshop to be held in Berlin immediately after the meeting, under the auspices of the Deutsche Forschungsgemeinschaft. The Chair will present a paper on the effects on Antarctic and sub-Antarctic penguins at this workshop. He had written text (Doc. 15) on its known and likely effects on penguins as part of a larger review for an earlier workshop held in Cambridge in September 2001 by SCAR which covered the hearing abilities, sensitivity to noise levels, and the potential impacts of marine acoustic surveys on penguins.

Two papers in Russian by V.I. Markov (Underwater acoustic signals in Macaroni Penguin. In: Materials of VI All-Union Ornithology Conference, Part I. Moscow: Moscow University Publishers. pp. 156–158, 1974; and Underwater sounds in Macaroni Penguins: In: Adaptations of penguins. Nauka: Moscow. pp. 111–121, 1977) were tabled at the meeting by Ms M. Gavrilov, showing that Macaroni Penguins *Eudyptes chrysolophus* are able to make ultrasound noises underwater. Working translations were prepared during the course of the meeting.

J. Cooper's 1995 literature review on the effects of underwater blasting on marine biota, including seabirds, will be made available to the Chair after the meeting.

11. SCAR BIOLOGY SYMPOSIUM, AMSTERDAM 2001

The Chair reported on progress with the publication of the proceedings of this symposium, the eighth in the series, which was expected to continue in the tradition of high-quality publications of previous meetings. It was intended to include c. 65 presented papers. Publication is expected in 2003.

12. SPECIALLY PROTECTED SPECIES

The Chair reported that under the terms of the Madrid Protocol on Environmental Protection to the Antarctic Treaty, an intersessional contact group set up by the Committee on Environmental Protection (CEP) led by Lic. T. Acero (Argentina) has been defining what constitutes a 'Specially Protected Species' in terms of the Protocol. Initially, it was considered that only species with a World Conservation Union (IUCN) Endangered status would be

included, but input from the SCAR-BBS and others has led to those species with a Vulnerable status being included. These species are Rockhopper Penguin *Eudyptes chrysocome* (V), Macaroni Penguin *E. chrysolophus* (V), Gentoo Penguin *Pygoscelis papua* (Lower Risk/Near Threatened), and Southern Giant Petrel *Macronectes giganteus* (V) as species that breed within the ATS area.

The third term of reference (TOR III) of the contact group allowed for consideration of IUCN-threatened non-breeding migrants that occur seasonally within the ATS area. Such bird species would consist of albatrosses and petrels of the order Procellariiformes, including Wandering Albatross *Diomedea exulans* (V), Grey-headed Albatross *Thalassarche chrysostoma* (V), Black-browed Albatross *T. melanophrys* (being reclassified Vulnerable in 2002), Light-mantled Sooty Albatross *Phoebastria palpebrata* (LR/NT), Northern Giant Petrel *Macronectes halli* (LR/NT) and White-chinned Petrel *Procellaria aequinoctialis* (V).

Discussion took place on whether the Greater Shearwater *Chionis alba* should have a IUCN threatened status (noting its relatively small population, roughly estimated to be no more than a few thousand breeding pairs (item 5.7), and a breeding range restricted to the Antarctic Peninsula and associated island groups). Some evidence existed for a population decrease in the vicinity of the Argentine Islands since 1988. This species did not currently have a IUCN threatened status. However, mechanisms now existed for IUCN status of species to be reassessed on annual basis. It was considered that the Subcommittee was a suitable body to assess the IUCN threatened status of breeding and non-breeding migratory birds occurring within the ATS area (and the whole SCAR area of interest if so desired). This could be achieved by way of a joint CAMP (Conservation Assessment and Management Plan) workshop with the Conservation Breeding Specialist Group. After discussion, it was decided that the Subcommittee should consider the matter intersessionally with advice from the Red Data List Coordinator of BirdLife International, Ms A. Stattersfield, with the view to reconsidering the matter at its next meeting.

Mr J. Cooper reported that a CAMP workshop facilitated by the CBSG, held in Cape Town, South Africa in February 2002 had, *inter alia*, assessed the IUCN threatened status of the South African migratory population of the Antarctic Tern *Sterna vittata*, an ATS area breeding species, and gave it the category of Least Concern.

The Subcommittee finally noted that the TOR III for the Specially Protected Species inquiry mentioned the appropriateness of the CEP establishing cooperative working relationships with other bodies on this issue, and it wished to state that ACAP (the Agreement on the Conservation of Albatrosses and Petrels) would be such a suitable body, once it came into force.

13. PENGUIN BANDING ISSUES

The Chair reviewed the history of concerns expressed on the effects of flipper-banding penguins, noting that the Subcommittee had held a workshop on the issue in 1996 (*Marine Ornithology* 25: 85–87, 1997, www.marineornithology.org). Research

since then has continued on several species to show that flipper bands could affect penguins in several ways, including late arrival at colonies, increased mortality and increased energetic costs of swimming. These effects could be both immediate and long-term. The Subcommittee was told of three mss on the issue, that were currently in press, under journal review or in preparation. It was agreed that as soon as these papers became available (see Jackson, S. & Wilson, R.P. *Functional Ecology* 16: 141–148, 2002) they should be circulated to Subcommittee members intersessionally. In the interim the Subcommittee considered that caution should continue to be taken by researchers wishing to use conventional flipper bands on penguins. The matter should be considered again at the next meeting of the Subcommittee. For that discussion, members and observers were encouraged to submit relevant information they may have to the Chair.

Mr Cooper reported on the development of new plastic bands of a radically different design, currently being tested for the second year on African Penguins *Spheniscus demersus* in South Africa. The Subcommittee agreed to request further information on this study and its findings intersessionally.

Ms Roumiana Metcheva (Bulgarian Antarctic Institute) gave information on a new international programme (running from 2000 to 2005) to undertake comparative population monitoring on Gentoo Penguins within the Antarctic Peninsula. She explained that following advice from the Subcommittee it was intended to test temporary markers (e.g. bar codes attached with epoxy glue to bills) rather than use conventional flipper bands. The Subcommittee considered that the results of these tests should be published.

14. PROPOSAL OF THE ROSS SEA AS A MARINE PROTECTED AREA

Dr D.G. Ainley had asked the Subcommittee to consider his document (Doc. 18) that proposed an increased level of protection for the Ross Sea region of Antarctica. The proposed higher level of protection would essentially lead to a halting of fishing for Antarctic Toothfish *Dissostichus mawsoni* and the taking of Minke Whales *Balaenoptera acutirostris*.

The argument is given by Dr Ainley that the Ross Sea region is one of the world's largest undisturbed ecosystems (except for whaling activities), for which a large body of scientific information was available. This situation meant that the Ross Sea can be regarded as a major 'control site' for studies of human-induced changes elsewhere in the Antarctic Continent, including population trends in seabirds.

It was noted, based on the Subcommittee's ongoing reviews, that the Ross Sea region was a most important area for seabird populations of a number of Antarctic species. The Subcommittee also noted that its recent IBA Workshop (item 9) had selected several terrestrial Important Bird Areas in the Ross Sea region.

The Subcommittee lent its support to the proposal, but noting that it addressed biota other than seabirds, decided to refer it to the SCAR Working Group on Biology for its consideration.

15. REPORTS FROM NON-SCAR MEETINGS

15.1 Cybercartographic Atlas Workshop, Puerto Madryn, Argentina, November–December 2001

A request from Dr D. Vergani (Argentina) had been received to comment on the workshop's report (Doc. 19). The Subcommittee noted that the atlas plan did not address birds specifically. It also noted that there seemed to be potential overlap with other data sets (e.g. item 7), and that rather than risk duplication of efforts, electronic links should be developed with existing data sets, following the advice of their national data managers. The Subcommittee considered that the workshop's report should be reviewed by the SCAR Working Group on Biology.

16. NOTIFICATION OF FORTHCOMING MEETINGS OF INTEREST

16.1 23rd International Ornithological Congress, Beijing, China, August 2002

A round table discussion on seabird/longline fishing interactions (Doc. 20) and a symposium co-convened by Mr Cooper on the subject of seabird conservation, with a review paper on seabird/longline fishing interactions in the Southern Ocean, would be held at the 23rd International Ornithological Congress.

16.2 Third International Conference on Albatrosses and other Petrels, Montevideo, Uruguay, August/September, 2003

No details were currently available about this meeting. Member and observers were encouraged to participate and contribute. Subsequent to the meeting the Conference was postponed to a similar time of year in 2004.

16.3 International Symposium and Workshop on Interactions between the Magellan Region and the Antarctic, Ushuaia, Argentina, October 2003

The web-based announcement for this meeting was tabled as Doc. 21.

16.4 Fifth International Penguin Conference, Ushuaia, Argentina, 6–10 September 2004

A first circular was sent out electronically on the Seabird Listserv in July 2001. No further information was currently available.

16.5 First International Symposium on Bio-logging, Tokyo, Japan, March 2003

A first announcement posted to the Seabird Listserv was tabled (Doc. 22). The meeting was to be held at the National Institute of Polar Research.

16.6 Proposed 'Symposium on seabird biogeography: the past, present, and future of marine bird communities', 13th Annual Meeting of the Pacific Seabird Group, Parksville, Canada, February 2003.

The Subcommittee was informed of the proposal by Dr D. Hyrenbach (Doc. 23) to convene the above-named symposium. Members and observers would be informed intersessionally if confirmation of the meeting was received.

16.7 2nd GLOBEC Open Science Meeting, Qingdao, China, October 2002

Dr Fraser informed the Subcommittee of this meeting, at which he will give a plenary talk on climate change and responses of pygoscelid penguins

17. SCAR REVIEW AND RESTRUCTURE

The Chair reported on the ongoing review of SCAR's structure and strategy (Doc. 24). The SCAR review envisages that the Working Group on Biology would be replaced with an interdisciplinary body, the 'Life Science Standing Scientific Group'. This group would be able to set up Action Groups to address specific research topics. Action Groups would have a core membership of three persons, one acting as Chair, but with no formal limit to total membership. This is apparently what the reviewers envisage as a replacement for the Bird Biology Subcommittee. The Chair and Secretary of the Working Group on Biology and Chair of its Bird Biology Subcommittee had written jointly to the SCAR Executive expressing their general concerns with aspects of the SCAR review, but had not yet received a reply.

The Subcommittee agreed that it was critical that its Chair, Dr E.J. Woehler, attend the 27th meeting of SCAR in Shanghai, China in July 2002, when the new structure is to be inaugurated, so that he could motivate the formation of an Action Group for Bird Biology. To enable his attendance, the Subcommittee noted with acclaim an offer from Dr W.R. Fraser to offer financial support from the Polar Oceans Research Group.

However, if an Action Group for birds was not formed at the Shanghai SCAR meeting, the Subcommittee agreed it should discuss intersessionally how it may be able to continue as an entity.

Of particular concern to the Subcommittee was the suggestion as part of the SCAR review that the successful series of SCAR biological symposia be halted and replaced with shorter, interdisciplinary meetings. Strong support, forwarded to the SCAR Executive, for the continuation of biology symposia was given at a workshop sponsored by the Working Group on Biology at the VIII Antarctic Biology Symposium in Amsterdam, The Netherlands in August 2001 (Doc. 25). The Subcommittee endorsed this view.

Note added in press: The 27th meeting of SCAR in Shanghai agreed to the continuation of a bird group within SCAR, to be called the SCAR Group of Experts on Birds, with Dr Woehler as its first Chair, and reporting to a newly-formed SCAR Life Sciences Standing Scientific Group.

18. FUTURE RESEARCH PROGRAMMES

The Subcommittee revisited the several suggestions for future research programmes made at its previous meeting (Doc. 2) considering these and several new potential projects.

18.1 Long-term implications of climate change on Antarctic and sub-Antarctic bird populations

The Subcommittee discussed at length how climate change effects on Antarctic and sub-Antarctic birds can best be studied. It realized that protecting study colonies from human disturbance was a prerequisite of such long-term studies. This is reasonably easy to do at sub-Antarctic islands under national authority, by way of management plans and a permitting system. Within the ATS area, however, most especially on the Antarctic Peninsula, protection of sites from disturbance might best be done by ensuring that study sites fall within Antarctic Specially Protected Areas (ASPAs). Management plans for these ASPAs should have the protection of long-term study sites as an important objective. Members and observers were thus encouraged to motivate within their countries for their existing study sites to be considered during the process of setting up an ASPA network.

18.2 Population changes of sub-Antarctic and Antarctic birds due to direct human-induced effects

The Subcommittee briefly discussed the potential of human-induced effects on Southern Ocean seabird populations. Since the Subcommittee had decided to host a workshop that dealt with at least some of the issues (e.g. human disturbance, see item 3.4 above), it was decided to hold further discussion on this topic over to the 2004 meeting.

18.3 Reconciliation of population estimates of fulmarine petrels in the sea-ice zone

Dr J.A. van Franeker suggested the inclusion of analyses of at-sea data in population reviews of those species for which land-based surveys of breeding distribution and numbers are incomplete, as he had done for the Antarctic Petrel *Thalassoica antarctica* (van Franeker, J.A. *et al.* 1999, *Waterbirds* 22: 14–28).

18.4 Winter ecology of Antarctic and sub-Antarctic birds

Information was given to the meeting of several data sets on the at-sea distribution and numbers of seabirds collected during winter cruises. The Subcommittee encouraged collaboration between Australian, Russian and USA researchers towards gaining insights into the winter ecology of sub-Antarctic and Antarctic birds.

18.5 Terrestrial atlas of Antarctic birds

Information collected to date under the auspices of the Subcommittee (items 5 & 9), meant that the production of a terrestrial atlas of Antarctic breeding birds was feasible. The intention would be to map the distribution of known breeding colonies within the ATS area. The Chair agreed to develop a project intersessionally, reporting to the Subcommittee at its next meeting.

18.6 Marine Important Bird Areas

The Subcommittee decided that consideration should be given at its next meeting as to whether the IBA approach could be usefully extended to marine areas in the SCAR area of interest.

19. ANY OTHER BUSINESS

19.1 Waste management and effects on Antarctic and sub-Antarctic birds

The Subcommittee noted with concern information presented to it at the meeting of the continuing practice at some Antarctic bases of feeding birds both directly, sometimes as 'pets', and indirectly via the improper disposal of kitchen wastes, especially in the Antarctic Peninsula region. As a consequence, such wastes (as well as plastic items) were being found in samples collected as part of dietary studies of skuas *Catharacta* spp. Noting that these practices are not allowed in terms of ATS decisions, it was agreed that the SCAR Working Group on Biology be asked to bring the matter to the attention of SCAR national delegates, with the request that their national programmes be asked to halt such practices.

20. RECOMMENDATIONS AND FINANCES

20.1 Recommendations

Three recommendations were adopted by the Subcommittee for presentation to the Working Group on Biology (Annex 3).

20.2 Financial requests for 2003 and 2004

See Table 1 for budget requests made to the Working Group on Biology (Annex 3).

21. MEMBERSHIP AND ELECTION OF OFFICERS

Noting the resignation of Dr L.S. Davis, and the fact that several members of the Subcommittee had not been able to attend recent meetings, the Subcommittee agreed to send letters of appreciation for their past services to Drs P. Jouventin, G. Robertson and M. Sallaberry.

Further consideration of membership was held over until after the 27th meeting of SCAR and the expected change of the Subcommittee into an Action Group (item 17).

22. DATE AND PLACE OF THE NEXT MEETING AND PLANNED WORKSHOPS

Dr J.A. van Franeker offered to host the next meeting of the Subcommittee in Texel, The Netherlands, prior to the 28th meeting of SCAR, to be held in Bremerhaven, Germany in July 2004. This offer was accepted with thanks. It was intended to hold two two-day workshops immediately before the meeting, one a second IBA Workshop (item 9), the other in the regular series on population and trends of sub-Antarctic and Antarctic birds (item 6).

The Subcommittee planned a workshop on human effects on birds, following on from the SCAR workshop on a similar theme held in 1993 in Montana, USA (see 3.4 above). This workshop will be held in Ushuaia, Argentina, immediately before the 5th International Penguin Conference (see 16.4 above).

23. CLOSURE AND THANKS

The Chair offered a heartfelt vote of thanks on behalf of all the attendees to Dr Peter and the staff and students of the Institute of Ecology, University of Jena, for the excellent facilities made available for the Subcommittee meeting and associated workshops. Financial support from the Deutsche Forschungsgemeinschaft (German Research Council), SCAR, the Thuringian Ministry for Science, and the University of Jena was gratefully acknowledged, noting that for the first time ever, Subcommittee attendees had been fully funded in terms of travel and accommodation. The

attendance of a large number of students and observers was appreciated. The rapporteurs were thanked for their role in producing minutes in time for their formal adoption before the closure of the meeting. Appreciation was offered to the co-convenors of the two workshops held before the meeting and to their participants for making them a success. Lastly, thanks were offered to Dr I. Chupin and Ms S. Poncet for their presentations outside the meeting, and to all attendees who brought posters for display. The meeting was then closed with a unanimous vote of thanks to Dr Woehler for his able role as Chair.

ANNEX 1

MEMBERS AND OBSERVERS, SCAR BIRD BIOLOGY SUBCOMMITTEE, 9–13 JUNE 2002, JENA, GERMANY

MEMBERS

Eric J. Woehler, Chair
Australian Antarctic Division
Channel Highway
Kingston, Tasmania 7050 AUSTRALIA
eric.woehler@aad.gov.au

John Cooper
Avian Demography Unit
University of Cape Town
Rondebosch 7701 SOUTH AFRICA
jcooper@adu.uct.ac.za

William R. Fraser
Polar Oceans Research Group
PO Box 368
Sheridan, Montana 59749, USA
bfraser@3rivers.net

Hans-Ulrich Peter
Friedrich-Schiller University
Institute of Ecology, Polar & Bird Ecology Group
Dornburger Strasse 159
D-07743 Jena, GERMANY
bpe@uni-jena.de

Jan A. van Franeker
Alterra-Texel
PO Box 167
1790 Den Burg (Texel) THE NETHERLANDS
j.a.vanfraneker@alterra.wag-ur.nl

OBSERVERS

Christina Büsser
Friedrich-Schiller University
Institute of Ecology, Polar & Bird Ecology Group
Dornburger Strasse 159
D-07743 Jena, GERMANY
christina.buesser@gmx.de

Erik W. Chapman
9707 Wharf Street
Edmonds, Washington 98020 USA
ewchapman@yahoo.com

Igor Chupin
Altai State University, Ul. Lenina 61
656099 Barnaul, RUSSIA
chupin@uic.asu.ru

Alexander Chernov
Voronezh State University
Zaschitnikov Rodiny, 10a 5
394040 Voronezh, RUSSIA
a_chernov47@hotmail.com

Jeroen C.S. Creuwels
Alterra-Texel, PO Box 167
1790 Den Burg (Texel), THE NETHERLANDS
j.c.s.creuwels@alterra.wag-ur.nl

Maria Gavrilov
Ul. Marata 24a
Arctic and Antarctic Museum
191040 St Petersburg, RUSSIA
maria@yai.usr.pu.ru

Sergej Loparev
 Taras Shevchenko Kiev National University
 Department of Biology, Volodymyrska 64
 Kiev-33, UKRAINE
 e-mail via yuti@symbiosis.kiev.ua

Roumiana Metcheva
 Institute of Zoology, Bulgarian Antarctic Institute
 Tzar Osvoboditel 15
 Sofia, BULGARIA
 rummech@yahoo.com

Donna L. Patterson
 Polar Oceans Research Group
 PO Box 368
 Sheridan, Montana 59749, USA
 patterdo@3rivers.net

Simone Pfeiffer
 Freidrich-Schiller University, Institute of Ecology
 Bird Ecology Group, Dornburger Strasse 159
 D-07743 Jena, GERMANY
 simone.pfeiffer@oekologie.uni.jena.de

Sally Poncet
 PO Box Stanley
 FALKLANDS ISLANDS
 sallyponcet@horizon.co.fk

Isabel Prieto
 Gaisbergstrasse 71
 69115 Heidelberg
 GERMANY
 isabel.prieto@web.de

Kathrin Schuster
 Philipps-Universität
 Institute of Zoology
 AG v. Hagen/Beck
 Karl-von-Frisch Strasse
 35032 Marburg
 GERMANY
 k2schuster@yahoo.com

ANNEX 2

DOCUMENTS TABLED AT THE 2002 MEETING OF THE SUBCOMMITTEE

1. Agenda. 2 pp.
2. Scientific Committee on Antarctic Research Working Group on Biology Bird Biology Subcommittee. Minutes of meeting, 3–6 July 2000, Tokyo, Japan. (*Marine Ornithology* 28: 191–202, 2000).
3. Phillips, C.M. 2001. Publications and theses on Antarctic and sub-Antarctic birds, 1998. *Marine Ornithology* 29: 97–101.
4. Phillips, C.M. 2001. Publications and theses on Antarctic and sub-Antarctic birds, 1999 *Marine Ornithology* 29: 103–107.
5. Phillips, C.M. ms. Publications and theses on Antarctic and sub-Antarctic birds, 2000. 14 pp.
6. Woehler, E.J. ms. Minimum distances to maintain when approaching wildlife in the AAT. 3 pp.
7. ANON. 2002. Leitfaden für Besucher der Antarktis [Guidelines for visitors to Antarctica]. Umwelt Bundes Amt für Mensch und Umwelt. 18 pp.
8. ANON. [2002]. Save the albatross. Keeping seabirds off the hook. [Cambridge: BirdLife International]. 16 pp.
9. ANON. 2001. South American Workshop on the Conservation of Albatrosses and Petrels, Punta del Este, Uruguay, 24–28 September 2001. *Aves Uruguay & SEO/BirdLife*.
10. KEMP, D. 2002. Media release 5 June 2002. Australia seeks more protection for toothfish. 2 pp.
11. QUILLFELDT, P., SALABERRY, M. & PETER, H-U. ms. Distribution and abundance of Wilson's and Black-bellied Storm Petrels. 8 pp.
12. HODUM, P.J., CROXALL, J.P., PONCET, S. & WOEHLE, E.J. ms. Breeding distribution of the Cape Petrel *Daption capense*. 18 pp.
13. WOEHLE, E.J., COOPER, J., CROXALL, J.P., FRASER, W.R., KOOYMAN, G.L., MILLER, G.D., NEL, D.C., PATTERSON, D.L., PETER, H-U., RIBIC, C.A., SALWICKA, K., TRIVELPIECE, W.Z. & WEIMERSKIRCH, H. 2001. A statistical assessment of the status and trends of Antarctic and Subantarctic seabirds. Report on the SCAR BBS Workshop on Southern Ocean seabird populations. [Cambridge]: Scientific Committee on Antarctic Research. 43 pp.
14. BELBIN, L. [2002]. Boil, or just SIMR? [Kingston]: Australian Antarctic Division. 1 p.
15. [WOEHLE, E.J.]. 2002. Penguins. 6 pp.
16. INTERSESSIONAL CONTACT GROUP. [2002]. Third draft on second round of Specially Protected Species. 4 pp.
17. WOEHLE, E.J. 2002. Comments by SCAR on Draft 3.1 of Specially Protected Species text (May 2002). 2 pp.
18. AINLEY, D.G. 2002. Proposal: the Ross Sea, Antarctica, where all ecosystem processes are still intact. 12 pp. (www.penguinscience.com/ROSSEAMPAht.htm).
19. ANON. Undated. Cybercartographic Atlas Workshop. Centro Nacional Patagónico (CENPAT) Puerto Madryn, Argentina 29 November–1 December 2001. 11 pp.
20. NEL, D.C. & CROXALL, J.P. Undated. Impacts of long-line fishing on seabirds: towards the identification of geographical 'hotspots' of seabird mortality. Accepted Round-

- table Discussion, International Ornithological Congress, Beijing, China, August 2002. 1 p.
21. ANON. 2002. IBMANT/ANDEEP International Symposium & Workshop. 19–24 October 2003, Ushuaia, Argentina. Call for papers. www.tierradelfuego.org.ar/cadic/ibmant.htm. 4 pp.
 22. ROUPERT-COUDERT, Y. 2002. Seabird Listserv posting on the First International Symposium on Bio-logging Science., March 2003, Tokyo, Japan. www.isc.nipr.ac.jp/~penguin/oogataHP/IndexC.html. 1 p.
 23. HYRENBACH, D. 2002. Seabird Listserv posting on a proposed Symposium on 'Seabird biogeography: the past, present and future of marine bird communities' for the 13th Annual Pacific Seabird Group Meeting, 19–22 February 2002, Parksville, British Columbia, Canada. 1 p.
 24. SCAR SECRETARIAT. 2001. Implementation of the SCAR Review. Cambridge: SCAR Secretariat. 12 p.
 25. CHOWN, S.L. 2001. Working Group on Biology Workshop: SCAR structure and strategy, SCAR VIII Biology Symposium, August 2001. 3 pp.

ANNEX 3

RECOMMENDATIONS SUBMITTED TO THE SCAR WORKING GROUP ON BIOLOGY

FUNDING AND WORKSHOPS

1. The sum of US\$ 2500 a year to support the Antarctic and sub-Antarctic bird data base hosted at the Australian Antarctic Data Centre to continue the development of an Antarctic Important Bird Area inventory and to produce an Atlas of Antarctic Breeding Birds.
2. The sum of US\$ 10 000 to support the costs of holding a workshop on the effects of human disturbance on Antarctic and sub-Antarctic birds in Ushuaia, Argentina in 2004.
3. The sum of US\$ 10 000 to support the costs of holding two workshops at the time of the 2004 meeting of the SCAR Bird Biology Subcommittee to:
 - a. complete the text of the Antarctic Important Bird Areas inventory, and
 - b. undertake a review of the population numbers and trends of Antarctic and sub-Antarctic birds.
4. The sum of US\$ 2500 to allow the Chair to attend the next meeting of the Subcommittee in 2004.

INTERNAL RECOMMENDATIONS

1. Recollecting Rec. XXVI-Biol 8, covering threats to Southern Ocean seabirds due to mortality in longline fisheries and noting existing and new international initiatives to address these problems, recommends that SCAR requests National Committees which are range states for Southern Hemisphere albatrosses and petrels, to sign and ratify the Agreement for the Conservation of Albatrosses and Petrels as soon as possible, so that the Agreement may come into force without undue delay.
2. The SCAR Bird Biology Subcommittee requests that the SCAR Working Group on Biology bring the continuing practice at some Antarctic bases of allowing birds to feed on kitchen wastes to the attention of the SCAR National Committees, with the request that their national programmes be asked to halt such practices.
3. The SCAR Bird Biology Subcommittee requests that the SCAR Working Group on Biology endorse its view that caution should be taken when designing research programmes that require the external marking of penguins, in particular with flipper bands, and that this caution be passed to SCAR National Committees.