

SCIENTIFIC COMMITTEE OF ANTARCTIC RESEARCH
EXPERT GROUP – BIRDS AND MARINE MAMMALS (EG-BAMM)
ANNUAL MEETING MINUTES
21 AUGUST 2016, KUALA LUMPUR, MALAYSIA

MINUTES COMPILED BY JAIMIE CLEELAND

Apologies: Ben Raymond, Bruno Danis

Attendees Present: Table 1

1310: Meeting open by Mark Hindell (MH). MH welcomed attendees, gives a short introduction on what EG-BAMM is and its role within SCAR. The main objective of the group is to provide expert scientific advice on birds and mammals in the Southern Ocean, and to help facilitate and coordinate research.

- MH: explains EG-BAMM meeting schedule and why no meeting was held in 2015. Minutes from previous meeting (Auckland, New Zealand 2014) were emailed to registered attendees via EG-BAMM mailing list.

Minutes from previous meeting (Auckland, New Zealand 2014) accepted – Clive McMahon, seconded by Dan Costa.

Updates from working groups

1. *AntaBis, Antarctic Biodiversity Portal– Anton De Putte (ADP)*

- Housed at biodeiversity.aq
- ADP introduces portal and presents its aims and objectives
 - Funded by SCAR MarBIN, AntaBIF
 - Part of EU Lifewatch
 - Electronic biodiversity infrastructure
- Currently funded until 2018/19 with plans for further funding
 - Currently seeking data support officer
- Aims to expand register of Antarctic species and include more terrestrial data
- Explains data portal structure and the process of inputting data into portal
- Currently developing new methods of integrating diverse datasets
 - Previously limited to presence data
 - Newly developed event core enables the inclusion of vectoral data
 - Event core made up of an event hierarchy
 - ADP uses biologging example:
 - Tag deployment, track data and retrieval as separate events
- Virtual Lab
 - Digital Southern Ocean Biogeographic Atlas
 - Many contributors attending EG-BAMM meeting
 - Looking to increase contributors
 - Data contributed will build on SCAR Biogeographic Atlas through virtual lab framework.
 - Inclusion of taxonomic data and distribution maps

- ADP: Highlights this will be an updateable version of SCAR Biogeographic Atlas
 - Still 1-2 years away from completion
 - Conceptual at this point in time

2. Remote Sensing Working Group – Hans Ulrich Peter (HUP)

- HUP reporting on the *Remote Sensing of the Antarctic Environment* meeting in Auckland 2014
- Group supported two students to attend Auckland meeting and SCAR Open Science Conference
- Clive McMahon led discussion about the use of an international on-line database on penguin monitoring (MAPPPD) and status by Heather Lynch. Seen as a significant achievement that will be of great use to the EG-BAMM community
 - Dynamic database of colony data
 - Time series of penguin numbers
 - Tie in with RAATD
 - Seek greater involvement of Heather Lynch in EG-BAMM
- Censusing Animal Populations from Space (CAPS)
 - First meeting of the SOOS working group which aims to conduct a circumpolar pack ice seal census held the day before
- Discussion about wildlife approach distances
 - Increasing use of UAVs and other remote sensing tools by both scientists and tourists
 - Strong need for guidelines
 - SCAR through SCATS has been requested to report on this.
- HUP discusses the future of remote sensing as a rapidly expanding field
 - Need for SCAR to keep pace with guidelines to avoid impact on birds and marine mammals
- Group wanting to engage with early career scientists
 - Provide support to ECS to attend SCAR Biology and EG-BAMM meeting in Belgium
- The focus is now on SCAR to support remote sensing
- MH: exciting and expanding field for scientists working on Antarctic birds and marine mammals
 - Use of drones, AUVS becoming more common
 - Summary of SOOS project – monitoring animals from space
 - Facilitating the use of high resolution imagery
 - And a circumpolar census of pack ice seals (the first since the 1990s)
 - Economical form of censusing populations
 - Working group goal is to complete by 2020
 - Working group would have national representatives
 - Call for contributors to global census
 - Contact MH, HUP or Peter Fretwell (BAS).

3. Wildlife Health Monitoring Group – Andreas Barbosa (AB)

- Group established at Auckland, New Zealand SCAR meetings, 2014.
- Groups aims and objectives highlight current events that reinforce its importance
 - Emergence of new disease spread in Antarctic penguins
 - Adelie – feather loss disease
 - Causes death by hypothermia

- Recorded on Antarctic Peninsula, 2016
 - Not considered highly contagious
- Group aims highlight in SCAR Horizon Scan
 - 56. How does climate change affects spread of emerging diseases in the Antarctic environment?
- Group working towards providing written summary for Antarctic Environments Portal on wildlife disease that summarise all available information
- Workshop on Antarctic Microbial/Parasite impacts
 - Publish information on research gaps and future directions
- Publication outputs
 - 3 papers
 - Poster at SCAR Open Science at Kuala Lumpur
 - Poster at International Albatross and Petrel Conference in Barcelona, 2016
- Working group members have attended several conferences to spread information
 - IV APECS Brazil meeting
 - World Seabird Conference, Cape Town 2015
 - V APECS Brazil meeting
 - Penguin Conference Cape Town, 2016
- Seeing experts on marine mammals to contribute
 - Low participation reflects scientific gap
- Future work and directions
 - Organise open workshop on Antarctic wildlife and disease
 - ??And workshop at SCAR 2018 meetings
- AB discusses opportunities for Citizen Science support
 - Tourism vessels in Antarctica
 - Provide photos of animals to researchers
 - As a group, provide outreach to tourists
- Propose a Adelie Penguin Network about current disease and health
 - Currently contacting collaborators
- Yan Ropert-Coudert (YRC) supports Adelie Network and asks AB- what information would be required.
- AB:
 - Biological samples – blood slides, easy to use, cost effective
 - Plasma more difficult, but potentially more interesting
 - Open communication about colony conditions
- MH: Any ideas about what is driving feather loss disease?
 - AB: No information available.
 - Very few individuals found in distant colonies
 - Ross Sea – more individuals involved
- MH: suggests including sub-Antarctic in Network, starting with Macaroni penguins
 - AB: Open to suggestions, Adelies are a good starting point due to their circumpolar distribution
- Q from meeting attendee:
 - Citizen Science – do you include other species?
 - AB: Yes, Spatial and temporal variation in tourism means greater potential to capture trends and interesting findings.
- ADP: Are their current discussions occurring with IAATO to see what programs/systems are already in place. Suggest as an action item for group.

4. Trophic interactions working group – Jose Xavier (JX)

- Focus on gaps in knowledge when trying to model food webs
- Aim to publish food web research
- Work over the 2015-2016 period
- Information contained in Chapter 12: Life Beyond the Ice
- Looking to engage more researchers to contribute
- Group is working on a review on food web models
- Modellers still trying to understand best variables to use
- Currently working on research gaps in Southern Ocean setting
- YRC and JX – Frontiers paper
 - Currently available online
 - Originated from questions highlighted by SCAR Horizon Scan.
- Developing a crustaceans identification guide for diet studies
 - Species and families
 - To identify important species for top predators
 - Already reviewed a lot of current literature/ecology
 - Reviewers to update guide by adding latest information
 - In collaboration with ADP, there has been discussion about adding geographical maps
 - Next step: photos and diagrams

5. Outreach – Jose Xavier and Mary-Anne Lea (MAL)

- MAL and JX working on engaging with Polar Educators and APECS
- Meeting in Germany 2015
- Address impact on students and what students are learning
- Polar week – through APECS
- Education linked to Antarctic Treaty
 - 37 parties
- Great need to share and spread information to general public
- Call to scientists to contact JX or MAL if need support with outreach
- MAL highlights the need for EG-BAMM scientists to promote and share their work through outreach initiatives
 - Suggest the use of twitter and hashtags to reach broader audience
 - EG-BAMM website might not be the best forum

6. Southern Ocean Trophic Database Update – ADP

- Originated out of discussions with Ben Raymond (AAD)
 - Built from Raymond 2011 paper
- Luis Huckstadt (LH) has developed a tool to allow for data to be entered
 - Looking to develop capacity
 - Currently can add data via website or send .csv files to Luis.
- How we quantify energy and calorific content of diet
 - Varies with age
 - Try to integrate age information and individual samples
 - Integrate google doc in Luis system
- Highlight- Julie McInnes from IMAS
 - Black-browed albatross diet
 - Interactive database on diet papers
 - Looking to include other types of diet information
 - Energy content

- Miel Connor, South Africa
 - Literature reviews and fatty acid data to be included
- MH: How is data currently being sought?
- ADP: In house contacting of researchers that have published in the field, mainly through BR.
- Currently as excel sheets, datasets separate but to be merged
- MH: Can we use social media platform (Twitter) to find remaining participants?
- ADP: Yves Cherel database acted as starting point
- MH: Does database focus on predator diet and prey data?
- LH: Includes everything
- MH: Suggest more structured process required
- ADP: Call on EG-BAMM for support to do so.

7. RAATD Update – MH

- Workshop session held prior to EG-BAMM meeting
- Two other meetings have been held since SCAR Open Science Auckland.
 - Brussels (2015) and Germany (April 2016)
 - Bring together ecologists, statisticians and data managers
- Aggregated data
 - 2 million locations
- Process to obtain data was by contacting known data holders
- Some species are well described by data while other patchy
- Aim is to produce circumpolar habitat maps and identify areas of ecological significance
- Currently too many holes in dataset
- Need to extrapolate to build habitat distribution maps for each species
- MH describes process:
 - Aggregate data
 - Filter
 - Derive appropriate metrics
 - Add environmental datasets
 - Develop best statistical models
 - Use maps to predict
- Quality control
 - Black-browed albatross example
 - Adelie Penguin (ARGOS)
 - Signal to Noise ratio
- State-space models
 - Pseudo track analysis
- How to decide on what model is best to use
 - Boosted regression tree works best
 - However most worked in same way
- Cross validation to test predictions
- RAATD successfully secured CESAB funding for 3.5 years
 - Allows for post-doc appointment
 - Integrate data from 15 species
 - Produce papers for SCAR, CCAMLR, CEP

8. APECS Update – Jaimie Cleeland (JC)

- JC new APECS representative for EG-BAMM, replacing Reny Tyson

- Call for ECS to join APECS
- APECS currently has 2050 active members in 63 countries
- Main platform is APECS web site with international opportunities for ECS, career development workshops, webinar series, mentor database, funding opportunities, list of SCAR acronyms, job opportunities
- APECS recently published first strategic plan
- Education and Outreach Highlights
 - Polar Weeks each September and March
 - Antarctica Day (1 December)
- 2nd APECS International Online Conference 2016 (18 May 2016)
- Workshops e.g.:
 - **APECS World Summit 2015** (5 – 8 June 2015 in Sofia (Bulgaria))
 - APECS Workshops, Panels and Social events at e.g. Arctic Frontiers 2016, ASSW 2016, ICOP2016, AGU 2016
 - APECS Workshop at SCAR 2016 on 21 August
- Projects e.g.
 - “Where are they now?” as part of ICARP III (in cooperation with CliC)
 - SCAR-COMNAP-APECS Webinar (April 2016)
 - Provided travel support for 13 early career researchers to Antarctic conferences through funding through Antarctic Science Ltd.
- Need to explore how APECS can be involved in EG-BAMM
- EG-BAMM ECS have mailing list, however, currently under used – do we want to revive it?
- YRC: Check APECS emailing list is correctly merged with EG-BAMM list.

9. SCATS Update – Aleks Terauds (AT)

- Standing committee to the Antarctic Treaty System
- SCAR in unique position as it sits at the Antarctic Treaty table at the CEP.
- Key instrument of the Antarctic protocol to generate and implement change
- CCAMLR under treaty system
 - Has established structures that can be built on by SCAR/SCATS
- SCATS trying to engage in CCAMLE
 - Mechanisms still being worked out
- Aim is to transition research into CCAMLR policy
- MH: previously EG-BAMM has provided status and trends reports in response to requests from SCAR.
 - Improving relationship with CCAMLR over last decade
- JX: Do we have a clear strategy of what CCAMLR want?
- MH: Highlights the extent of overlap in the SCAR and CCAMLR community because the Antarctic biology community is small
- AT: Suggest first step is EG-BAMM members to engage with national SCAR/CCAMLR delegates
- JX: Situation complex when considering ACAP who also submit papers to the Antarctic Treaty. Need to work out best way to contribute.
 - YRC or MH to provide annual report to SCATS identifying all published papers relevant policy
 - Make an annual EG-BAMM task

10. ICED-SOOS Update – MH on behalf of Andrew Constable

- Circulate future of multi-national initiatives
- Conference in Hobart

- EG-BAMM core business
- Initiative proposed to delegates
 - Benchmark
 - Build on Census of Antarctic Marine Life
 - Coordinated ship-based biological surveys
 - Snapshot of Antarctic ecosystem
 - What can EG-BAMM contribute?
 - Great opportunity for nation level programs
 - Call for feedback

11. EG – ABI Update – YRC

- Antarctic biodiversity facility
- Integrated publishing toolkit
- Publishing metadata
- Working on a dynamic version of the SCAR biogeographic atlas
- Include atlas of microbes
- MH:
 - added flexibility
 - time series data
 - dynamic data

12. EG-BAMM Perspectives - YRC

- Yan Ropert-Coudert – secretary (now Chief Officer) for Life Science Standing Group
- Continuation of EG-BAMM – its 8 year fixed term ending
 - RAATD to continue
 - Working group on Wildlife Health and Monitoring to continue
 - Trophic database work to continue
 - Advice to CCAMLR still needed
 - Several new working groups on the horizon
- Aim to continue for another 8 years, but this is to be determined in the delegates meeting in light of the SCAR restructure
- MH: Suggested improvements to EG-BAMM? Is there room for more working groups?
 - Tag resight requests from the community
 - Online presences where tag data can be reported
- YRC: How will database work? Keep it simple.
 - YRC: How are we address calls for information on status and trends
- George Watters raised the issues of
 - EG-BAMM input to CCAMLR
 - spatial estimation of krill distribution
 - Location database of predator colonies
- MH: Closes meeting

NOTE: List of attendees with YRC