



MINUTES - CHAFC Annual General Meeting 2012

DATE: Melbourne 31st Oct – 1st Nov 2012 VENUE: Museum Victoria

ATTENDEES:

Member agency	Representative
Queensland Museum (QM)	John Hooper (JH) (Chair)
Australian Museum	Penny Berents (Vice Chair)
Tasmanian Museum and Art Gallery	Catherine Young
South Australian Museum	Steve Donnellan (Exec)
ANWC	Leo Joseph
Museum Victoria	Mark Norman
WA Museum	Di Jones
ANIC	David Yeates (Public officer)
ABRS	Michael Preece
CHAEC	John Jennings
ALA	John LaSalle

APOLOGIES:

Queensland Museum	Sarah Verschoore (Secretary/ Treasurer)
ANFC	Alastair Graham & Peter Last
MAGNT	Chris Glasby
QVMAG	David Maynard

ITEM 1 – Introduction and welcome from the Chair - (John Hooper)

ITEM 2 – FCIG report to CHAFC (FCIG)

2.1. FCIG-ALA interaction update (Robert Morris)

- ALA planning scenario
- HISCOM meeting 15-16 Nov in Canberra, including launch of ALA, with MV funding to be used to send FCIG representative. Agreed that local FCIG (Margaret) and CHAFC (David) should participate as representatives at the HISCOM meeting and launch.
- Focused on ALA achievements in the short term
- Priority is mobilisation of data to ALA/OZCAM
- “Mixed bag” of mobilisation progress amongst institutions due to various reasons.
- Bryn has been focusing efforts on fewer institutions to set up automatic uploads and clearly won’t finish all collections before the end of his contract. Manual feeds should be possible after this. Question #1 for John LaSalle (JLS)
- Morphbank still a WIP and members had issues about its suitability and their ability to store, manage and deliver their images to ALA. Question whether there will be someone to receive and manually load images into ALA in the event that Morphbank won’t be ready in 2013? Question #2 for JLS.
- Audit to be undertaken by FCIG about institutions’ capabilities to pick up technical tasks left off by departing ALA staff (no timeframe set). Question #3 for JLS.

2.2 OZCAM (Paul Flemons)

- Delivered a summary of institutions’ contributions to OZCAM/ALA (PF to send copy of tables to JH). Clear that there are different reasons for data downloads by users for different institutions’ data.
- The “collectory” dashboard shows data downloads by users parsed by institution and user group, demonstrating the take-up of CHAFC institutions’ data.
- Recommendations were proposed as to whether statistics could be parsed more comprehensively, such as downloads made by the different industry sectors, numbers of records per download. Questions were also raised about the Feedback loop, and if so, who collates this feedback? Question #4 for JLS.

2.3. CHAFC/FCIG/ALA (John LaSalle via teleconference, including responses to Question #s posed above)

- Q#1: ALA refunding needs better data mobilisation capability, which is seen as a priority.

- Q#2: ALA is currently unable to support Morphbank as a priority, they will, however, respond to requests for assistance by partners/ stakeholder communities, but the levels of assistance will need to be carefully prioritised.
- Q#3: An audit will be conducted, hopefully before 14 December (the date of the ALA MC Meeting).
- Q#4: JLS will check with the remaining ALA staff whether they have the capabilities to make user stats more comprehensive, but still uncertain whether the ALA will be able to do these sorts of things in the short term future, within presently dwindling resources.
- Still uncertainty about future funding for ALA within commonwealth e.g. Innovation and biodiversity funds, including both sides of politics.
- Despite the present uncertainty there is still confidence within the ALA for its survival in the future, given its superlative track record and significant investment thus far.

ITEM 3 - OZCAM funding (Ely Wallace).

- Museum Victoria's residual funds for OZCAM are approximately \$17,000, and these can facilitate CHAFC/ FCIG member representation at the Canberra launch in November. Suggestions were discussed re: some marketing collateral to promote the consortium of museums' data contributions to the ALA, such as branded thumb drives.

ITEM 4 - Questions posed about '*Who are you launching to?*', to determine who should turn up to support this launch.

ACTION: JH to arrange for Kevin Thiele to contact David Yeates and Margaret Cawsey with more information. (Completed)

ITEM 5A - Inspiring Australia Field guide App (Ely Wallace)

- 6 new Apps to be developed on the Fauna of Australia, project managed by MV, with partner museum getting an individual App with its own regional 'flavour', but with content contributed by the consortium of museums (ie where species are common across state boundaries).
- Funding commenced in June 2012.
- Concept based on MV Field guide, available in iOS, and soon to be available also on Android platforms
- 1st of partners meeting at MV (only 3 partners attended – 3 more meetings with the expectation for better participation – but acknowledged that funding for face-to-face participation is now very limited)
- Partner Agreements sent out for signing by respective CEOs (EW asked to resend QM copy to JH to follow-up), as a prerequisite to receiving some funds from the IA grant.

ACTION: JH to walk-through contract for approval by QM CEO (Completed)

- The team consists of Simon (lead programmer), AJ (Android programmer), Nicole (project officer, part-time)
- Species lists being gathered to determine scope and breadth of project.
- There is a collective contribution to the six apps (rather than each institution doing their own App.).
- Each partner will supply approximately 200 species pages, but each regional App will have many more species due to collective contributions.
- New MV App (Marine Park) and AM (Dangerous Animals) seen as models.
- MV is using their existing Apps to leverage industry for funding to produce new Apps.
- The cost of iTunes is \$99/yr to put an App in the store, versus a \$25 flat fee for Android store.
- MV is moving away from hard copy to online only popular publishing, whereas others (eg SAMA, QM) are currently maintaining hard copies as the initial, primary medium to deliver popular information on regional biodiversity etc.
- Evaluation strategy (embedded in the IA contract) is more than just counting downloads. Similarly, the Community Engagement strategy is not just focused on education (eg schools) but includes many others (such as community groups and societies, naturalist clubs, NSWk, NRMs, etc). MV leading the development of these strategies.
- MV Apps being fed by KeMU where data and images are stored, i.e. KeMU is the engine delivering content into the App, as well as these data into the ALA.
- Project runs to June 2014.
- Apps will be released individually with content refreshed periodically (based on an online newspaper model)
- Peer-review to be applied to content
- Species' distributions being drawn from the ALA, despite limitations on e.g. observational data - with local, regional, state-based and whole-of-Australia distributions contributing to each regional App.
- Each regional App will be badged with their respective institutional logos, but with a fairly standard look and feel (ie not constrained by individual institutions' brand strategies/specifications)

ITEM 5B - ALA Biodiversity Heritage Library project (Ely Wallace)

- ALA funding for this project now nearly exhausted
- BHL Australia is synced to parent BHL (US) site, with a similar look and feel to the US site, and the two sites are to be merged into a single site, to be launched in January 2013.

- Ability to search within journals
- Ability to search BHL within ALA based on OCR scanning, however those journals/ papers that were scanned using OCR are prone to some ‘translational’ errors.
- Approx 50,000 pages scanned during the project, and pages uploaded for 27 journal titles.
- McCaw (software used to upload scans) to be deployed to institutions upon request – won’t be rolled out en masse, but needs a specific request to Ely since some instruction and training will need to be provided.

ITEM 6 - Tissue data to ALA (Leo Joseph)

- Discussion of whole tissue databases and stores, versus tissue samples as subsets of vouchers
- Global Genomic Biodiversity Network, establishing standard for tissue data (Penny B, Paul F, Leo J have been participating), and incorporating these data through Darwin Core to search information on samples
- Several hundred thousands of samples currently documented
- Spectre of tissue samples, DNA, RNA extracts etc, versus specimen samples vouchering the tissue samples (QM appears to be only institution currently insisting on taxonomic vouchers accompanying tissue samples).

ITEM 7 - CHAFC website (John Hooper)

7A – Currency of website

- JH noted that parts of the CHAFC website are outdated, such as details about the next meeting, and that the “contact us” facility does not produce any response.
- Secretary/ Treasurer should have direct access to update website.

ACTION: Sarah Verschoore (QM) and Morgan Strong (WAM) to communicate, Sarah to be provided with editorial access to the CHAFC web, and also metadata to splash page. (Access complete)

7B – Policy on data provenance served to ALA

- All members agreed that the policy of CHAFC should be to serve all data to ALA, not just Australian data, since reciprocal international data providers would be expected to do the same for ex situ Australian species records/ specimens. It was suggested that this recommendation be recorded in the minutes of CHAFC.
- Also questions concerning the fate of OZCAM and ALA users who post comments using the “feedback” facility on both sites, as to who these comments go to, and how should questions and responses be handled in the future?

ITEM 8 – Report from ABRS (including Bush Blitz) (Michael Preece)

- Report from ABRS to be circulated with the minutes (**REFER TO APPENDIX A**).
- In addition to the report, MP noted that ABRS are absorbing the Commonwealth Government grant funding cuts as best as possible, to preserve the usefulness of the NTRG funding scheme.

ITEM 9 – CHAFC Accounts & Business (John Hooper on behalf of Sarah Verschoore, with Sarah joining the meeting briefly via teleconference)

9A – Business

- JH noted that he attempted to contact David Maynard, the newly appointed Natural Sciences Curator at QVMAG, prior to the October AGM to extend an open invitation to participate in the community of natural history museums, and to ascertain whether QVMAG wished to continue its membership of CHAFC – but no response was forthcoming. JH noted that this may have been because he used the email address provided on the QVMAG website, which Cathy Young suggested may no longer be current.
- JH also noted that QVMAG was currently unpaid in its CHAFC membership fees, with the consequence that under our ACT model constitution QVMAG would not currently be eligible to vote at meetings (although still welcome to attend), or receive payments for ABRS funded Bush Blitz projects should it take on a lead agency role as per CHAFC's funding agreement with ABRS/ Bush Blitz.

ACTION: Cathy Young to directly contact David Maynard at QVMAG. (Completed)

- It was proposed and agreed that CHAFC General Meetings should be held via teleconference, given the dwindling budgets of most member institutions, whereas it was agreed that the CHAFC Annual General Meetings should continue to be held face to face prior to the end of November each year (as per the requirements of the ACT Incorporations Act model rules).
- The Chair and two Executive positions were declared vacant and nominations were called for by Penny Berents, Vice Chair.

Position of Chair: Mark Norman was nominated as the new Chair for CHAFC Inc. Proposed by: John Hooper. Seconded by: Steven Donnellan. Elected unopposed.

Two positions of Executive Officer:

1) David Yeates (also the CHAFC Public Officer). Proposed by: Penny Berents. Seconded by: John Hooper.

2) Steve Donnellan. Proposed by: Mark Norman. Seconded by: Di Jones. Both David and Steve were re-nominated as CHAFC Executive Officers unopposed.

John Hooper becomes the immediate past Chair (ex-officio Vice Chair). Sarah Verschoore remains ex-officio Secretary/Treasurer.

ACTION. SV to arrange for bank account signatures to remove PB and add MN (with the other two signatories being SV & JH) (Completed)

- It was noted that Penny Berents is retiring on 14 December 2012 from the Australian Museum, and therefore also as the AM's representative on CHAFC. The meeting offered Penny their congratulations and a vote of thanks for her various roles on CHAFC over the years, facilitating CHAFC becoming a more effective and collaborative forum.

ACTION. Chair of CHAFC to write to the Director of the AM inviting a nomination of their representative of AM for CHAFC

- Next Annual General Meeting: Leo Joseph volunteered CSIRO Ecosystem Sciences Black Mountain, Canberra, on or before the end of November 2013.

9A – Audit report

The Audit report was circulated to CHAFC Members. Three issues were raised by the Auditor (his Item 3):

- Why does CHAFC not have the non-taxable status as does CHAH (also Incorporated in the ACT ?)
- GST overpayment of BAS needs checking with accountant
- Bank reconciliation reports not prepared correctly.

MOTION: notwithstanding the auditors comments the meeting agreed to accept the accounts as a true record of the CHAFC affairs.

ACTION: SV to take accounts back to accountant with copy of auditors report for answers to his Item 3 recommendations. SV to ascertain from the Taxation department why CHAFC is paying tax as an Incorporated not-for-profit organisation. (Completed)

ITEM 10 – Outstanding Actions from previous meetings

Item 1 – FCIG communications – Done

Item 2 erroneous data going into ALA (Eremaea bird data) – solution to use automatic predictive 95% algorithm to identify outliers with different symbols. Data owners need to be told.

Item 3: OZCAM MOU – MAGNT outstanding, SV to chase up and send out compiled copy to all member institution Directors. - Completed

ACTION: SV to send a compiled copy to all member institution Directors (Completed)

Item 11 – DAFF: Leo Joseph reported on a BCG meeting with DAFF on imported goods and AQIS issues. Interest from Carol Sheridan, the Director of the Biological Imports Program at DAFF Biosecurity, to meet up with some collection owners.

ACTION: Leo Joseph to invite Carol Sheridan to ANWC in Canberra - completed

- General Item: Remove all other old Actions items from future CHAFC minutes for the new Chair to start with a clean sheet

ITEM 11 – CABC update (Penny Berents)

- Summary of issues from previous (March) CABC meeting, including ALA, ARC Discovery grants, GBIF membership, national membership fee, and GBIF representative

ITEM 12 – Global Genome Biodiversity Network (GGBN) (Penny Berents)

- PB circulated documents re: Tissue data, Standards for tissues, Policies for practices, marketing and outreach. (Penny B, Leo J, Andy Lowe, Paul Flemons are members of the GGBN representing CABC, CSIRO, TERN and AM respectively).
- ALA may provide some of the functions of GGBN but is not providing tissue standards. Early days yet, and await to see outcome. 25% of potential members/signatures are Australian.

ITEM 13 – Australian Genbank (AG) meeting, Adelaide, October (Leo Joseph)

- LJ reported more clarification on the AG proposal and governance, and agreement from stakeholders that it needed to be more cognisant of genomics and not just barcoding. Current name (AG) of the project not adequately representative of the project function.
- Most participants are still interested in the next meeting but some potential drain on collection agencies as they are exposed more so through a coordinated portal (Kevin Thiele). An elevator pitch has to be developed around transformational science.
- ALA was seen as a core partner, potentially bringing the tissue collection information together and delivering it to AG, whereas prior versions of the AG concept were seen as a threat/competitor to the ALA. Nevertheless, despite being version 10, it is still not clear about the purpose, scope, innovation, inclusiveness etc.
- Discussion was held around its usefulness of getting infrastructure and funding to improve access to collections, irrespective of whether particular collections have an existing molecular capability or not.
- A major component of the current iteration is imaging and genetic information that could be scaled up to an industrial process, and at an Australia-wide scope. There is potential to improve the collection agencies' profiles as to the quality and nature of data being gathered (as an enabling science fostering research science).

ITEM 14 – CHAEC report

- Refer to written report

ACTION: CHAEC to submitted written report to accompany minutes

ITEM 15 – Core Member reports

- a) QM (report submitted) – APPENDIX B

- b) ANWC (report submitted) – APPENDIX C
- c) ANIC (report submitted) – APPENDIX D
- d) ANFC (report submitted) – APPENDIX E
- e) SAM (report submitted) – APPENDIX F
- f) WAM (report submitted) – APPENDIX G
- g) MV (no report yet submitted)
- h) AM (no report yet submitted)
- i) MAGNT (no report yet submitted)
- j) QVMAG (no report yet submitted)

ACTION: SV to chase institutions to submit written reports to accompany these minutes

Next Meeting: General Meeting in April/May via teleconference

Next AGM: in October at ANIC Canberra



APPENDIX A – CHAFC MEMBER REPORTS



2012 Third Quarter Report July-September 2012

Director, Australian Biological Resources Study

Purpose: To provide an update on ABRS activities undertaken during the third quarter (July–September) of 2012.

1. **Staffing:**

Consistent with the end of ALA funding on 30 June 2012, a number of non-ongoing ABRS staff finished their AFD related contracts. However, Christy Geromboux, who has been providing critical AFD database resources, will continue until 30 June 2013 as part of the Bush Blitz team supporting the underlying delivery of fauna names and Beth Tully will continue (part-time) until 31 December 2012 as part of the Bush Blitz team.

2. **ABRS Planning:**

The ABRS held a planning day on 20 August 2012. A key output was a draft ABRS 2012-2016 Strategic Plan which will replace the previous 5 year ABRS Strategic Plan that expired at the end of 2011.

The new Strategic Plan will help guide the section's work priorities from 2012-13.

3. **ABRS Advisory Committee:**

The ABRS Advisory Committee met in Canberra over the period 12-13 September 2012 to undertake a strategic planning exercise.

The Advisory Committee reviewed and slightly amended the draft ABRS 2012-2016 Strategic Plan. The Plan is being finalised to incorporate these amendments.

The Committee also discussed its own work priorities for 2012-13.

4. **Grants administration:**

The 2013-14 rounds of the ABRS Research Grants and Capacity-Building Grants opened on 1 August 2012 and will close on 26 October 2012.

5. **Publications:**

- *Flora of Australia*

Production is almost complete for volume 26 (Meliaceae, Rutaceae and Zygophyllaceae), and the volume should go to press about November 2012.

Editing is under way on volume 38B (Asteraceae) and part of volume 23 (Euphorbiaceae).

- *Australian Mosses Online*
Expansion of this resource has seen the addition of hundreds of descriptions, illustrations and distribution map. AMO now includes more than 650 species (70% of the Australian moss flora).
- *Fungi of Australia*
Editing continuing on the first of two volumes documenting truffle fungi
- *Algae of Australia*
Editing is continuing on *Marine Benthic Algae of North-western-Australia*.
- *Other publications*
The ABRS is negotiating with the Australian Government Department of Agriculture, Fisheries and Forestry on a joint project - a book on Lamiine Cerambycid (Longhorn) Beetles to be published by CSIRO Publishing.

Subject to a successful arrangement being finalised, it is expected the book will be ready for printing in mid-2013.

6. **Flora of Australia Online (FoA Online):**

ABRS has been progressing a development framework for the Flora of Australia Online.

The NSL functionality is planned to enable the *Flora of Australia Online* to use APNI/APC as its nomenclatural and taxonomic base: pulling the names information from APNI.

Judy West presented (via a pre-recorded presentation) an overview of the project at the Australasian Systematic Botany Society conference in Perth in September 2012.

7. **National Species Lists Project (NSL):**

In September 2012 the final National Species Lists report was submitted to the Atlas of Living Australia (ALA).

A net increase of 29,864 accepted, described species was recorded for the ABRS datasets, comprising: 26,829 fauna, 1,673 protista, 1,295 algae and 67 lichen species.

8. **Australian Faunal Directory (AFD):**

The AFD now hold 116,309 species, and further new species are being added each week.

These new species derive from the continued processing of sections prepared by external compilers for the National Species List Project, and the addition of newly described species. Even new species of mammals and lizards have been added recently. Also of interest a considerable number of new classifications are being published and the AFD is being rearranged accordingly.

It is very satisfying to note the number of requests, from within Australian and internationally, for lists of names from the AFD. This is sign that the AFD is being used by people in many different countries and organisations.

9. **Bush Blitz:**

- *Previous survey*

The Central Queensland (Carnarvon Holdings) Bush Blitz expedition, postponed in 2010-11 due to flooding and re-scheduled to September 2012, was cancelled in late August following a detailed revised risk assessment. The ABRS was concerned about potential safety risks if the already restricted access was to be further compromised due to the forecast wet weather.

- *In preparation*

Bush Blitz expeditions planned for 2012-13 include:

- South Australia (Gawler Ranges / Eyre York Block Region), scheduled for 11 – 23 November 2012. The expedition will survey areas of Hiltaba Station (Nature Foundation SA) and Gawler Ranges National Park (DEWNR). An expedition reconnaissance was undertaken by the Bush Blitz team in late August 2012.
- Central Australia (near Alice Springs). The expedition will survey areas of the Angus Downs Indigenous Protected Area in March 2013 and Henbury Station in May 2013. The Henbury Station survey will also pilot the Bush Blitz TeachLive pilot involving up to 5 primary and secondary science teachers as volunteer research assistants.

- *Bush Blitz II*

The current Bush Blitz partnership ends on 30 June 2013. The ABRS has had discussions with Earthwatch and BHP Billiton regarding BHP Billiton support for an extended Bush Blitz (Bush Blitz II). Similar discussions, including potential Australian Government funding, have been undertaken within the Department.

All three partners are very supportive of a continuation of the Bush Blitz project. A draft partnership funding proposal for a revised Bush Blitz program is currently being prepared and is expected to be submitted by the ABRS and Earthwatch to BHP Billiton by the end of November. The proposal will be assessed by BHP Billiton in early 2013 as part of its international Sustainable Communities Program.

- *CHAH Bush Blitz report*

The ABRS is awaiting the second progress report (due in May 2012) for the Funding Agreement in relation to Bush Blitz Curation and Data Delivery between ABRS and CHAH. The associated funding instalment of \$150,000 will be paid on receipt of the report.

- *Bush Blitz survey publications/reports*

Survey reports have been published for the following expeditions:

- Charles Darwin, Katji Katji, Karara, and Lochada Reserves, WA, 2009
- Dananbilla, Illunie, and Koorawatha Reserves, NSW, 2010
- Darkwood Reserve, NSW, 2010

- Egg Islands, Flat Rock, Lower Porter Hill and Porter Hill, Murphys Flat, Seventeen Mile Plain and Vale of Belvoir Nature Reserves, TAS, 2010

Supplementary reports for each individual reserve will be available soon.

Survey reports for the following expeditions are in preparation:

- Bon Bon Station, SA
- Witchelina Station, SA
- Wet Tropics, QLD
- Lake Condah, VIC

Michael Preece
Director, ABRS
October 2012



APPENDIX B – CHAFC MEMBER REPORTS

Queensland Museum Report to CHAFC. November 2012

INFRASTRUCTURE & FUNDING

- QM celebrated its 150th birthday in 2012, with a major internal reconstruction and some minor refurbishment of exhibitions undertaken at QMSB (\$12.5 m). The museum was closed for about 3 months, reopening on 20 January. Although more of a makeover than a construction, the end result for the public areas at QMSB is terrific..
- In 2011-12 the Biodiversity & Geosciences Programs (BioGeo, now re-amalgamated into the Natural Environments Program, or NEP, as of 1 July 2012) won \$1.2m (approximately 31% of total budget including base staffing costs) from external research and other grants. This is down significantly from \$2.2m in external grants and other research contracts won in 2010-11 (which was approximately 43% of NEP total funding).
- This 2011-12 funding enabled the commencement of 57 research projects (of which >50 (94%) were funded from external sources by more than 50% of project costs), and completion of 36 of these projects during 2012. In 2012-13 it is anticipated that external funding will drop even further to below \$1m since the research and collection development components of the scientific staff duties have been significantly restructured (see below), such that far fewer external grants applications were submitted for 2013 funding (see below under people).
- Conversely, for 2012-13 the amount of internal funding (government appropriation) for operations has increased and is related specifically to forthcoming exhibition redevelopment and community engagement activities, with research and collection development being required to focus moreso on achieving these aims than on the science outcomes as the driver for research. To this end Curatorial and Collection Management staff were restructured to 40:60 and 50:50, respectively, being proportions of time spent on research and collection development versus exhibitions and community engagement.
- A new business model (Zero Based Budgeting) is being trialed at the QM from July 2012, replacing the previous Accrual Accounting model, with the intention of it being rolled out across the Queensland Government in 2013-14. It is certainly proving challenging.

PEOPLE

- A major restructure of the QM commenced on 1 July 2012, with collections and research coming under the control of a (new) Director of Community Engagement (and a mirror position for the public programming staff under a Director of Brand Delivery). These are both new SES positions and recruitment is commencing toward the end of the year. Similarly, our CEO, Dr Ian Galloway, has announced his impending retirement in mid-2013, and recruitment for a new CEO is also commencing.
- NEP currently has a core staff of 27.9 FTE (down from 29.8 due to a resignation and retirement), located at the Queensland Museum & Sciencecentre at South Bank, the Geosciences collection store and laboratories at Hendra, and the Museum of Tropical Queensland in Townsville.

- Early in 2012 Senior Curator Geosciences (invertebrate palaeontology), Dr Alex Cook, resigned to work in the mining industry and at the present time his position is not being filled.
- Senior Curator Biodiversity, Dr Steve Van Dyck (mammals & birds) has announced his intention to retire sometime in the early part of 2013, once the “Companion Field Guide to Mammals of Australia” (a companion to his “Mammals of Australia” book), is finally published.
- Principle Scientist (corals), Dr Carden Wallace, has also announced her intention to retire but has not yet proposed a timeframe. It is of great concern to us that one or all of these positions may not be filled in the immediate future given the current Public Service directives on recruitment (“critical front line” only), yet the vital need for their input into not only the science and collection development undertaken at QM but also their input into the current and ambitious exhibitions schedule and focus on community engagement at both South Brisbane and Townsville campuses.
- In July 2012 a new digital imaging unit was established and Geoff Thompson, previously one of two Collection Managers in the Entomology group, was transferred across to this new unit to increase the digitization and online public accessibility to QM’s collections. The consequence of this halving of collection management capability in Entomology lead to halving the access to these collections (see Collections below).
- Two (20% funded) cross-appointments were maintained with Griffith University (Senior Curator Entomology, Dr Chris Burwell) and James Cook University (Senior Curator Tropical Marine Invertebrates, Dr Niel Bruce).
- In 2011-12 there was an additional 16.2 FTE temporary employees funded by external grants, all of whom were young post-graduate students mentored by the scientific staff. There were also 4 postdoctoral students in residence, 28 other PhD to Honours level students supervised or co-supervised by staff but based predominantly at universities. (Since 2003 QM staff have supervised and mentored 74 postgraduate students). Sadly in 2012-13 over half these researchers have departed the QM following completion of the grants. This remains a concern about the continued loss of early career researchers being mentored and gaining experience from three year projects only to find very few opportunities for continued support in their areas of newly gained expertise.
- 1,659 person days of volunteer support were provided by approximately 30 active volunteers and honoraries regularly participated in core activities of NEP. Another approximately 60 volunteers periodically assisted the museum to achieve remarkable things in collecting and interpreting and maintaining the collections. Without our students and volunteers the productivity and services of NEP would be far less impressive than it currently is.

PUBLICATIONS & COMMUNITY ENGAGEMENT

- 179 publications were produced by NEP staff in 11-12 (this includes 123 peer reviewed articles, 26 popular publications, 2 technical reports, 21 conference abstracts and posters and 7 Book reviews. (Since 2003, 1116 peer-reviewed journal articles and books have been published by NEP in a variety of national and international journals/ publishing houses). This output was produced by 13 scientific staff and a number of honoraries.
- Just under 100 new species were described by staff during 11-12. (Since 2003 over 1,100 new species were discovered and described by NEP staff, and over the 150 history of the QM over 4,000 new taxa have been described by all QM staff – we know these statistics through research for a new mini-exhibition tentatively entitled

“4,000-species”, currently in preparation to celebrate this milestone – a slightly belated QM150 celebration)

- In 2011-12 there were 783 pages of *Memoirs of the Queensland Museum* published in 3 volumes. The *Memoirs of the Queensland Museum* also turns 100 years old in November 2012, with statistics currently being accumulated on the numbers of papers, authors, new species erected etc to complement the “4000-species” exhibition under development. (Since 2003 there have been 4,663 pages of natural history articles published by the *Memoirs of the Queensland Museum* in 18 separate volumes/ issues (excluding an additional five cultural heritage volumes).
- The “Wildguide to the Great Barrier Reef” (Volume 1) is currently in final stages of typesetting and expected to be published late 2012 or early 2013. It is the first volume of potentially up to 5 books related to popularizing the natural and cultural assets of the GBR, and being produced in collaboration with GBRMPA and others. It will be the 8th addition to QM’s Wildguide/ Wild Places series.
- NEP staff produced about 300 “species pages” for digital delivery (web, ALA and/or smart phone apps) and continue to work towards increasing the number of illustrated and plain language interpretation of datasets for general communities.
- In 2011-12 there were 10,103 natural history specimens registered and added to the Vernon CMS (i.e. the “State Collection”), and an additional 8,336 specimens conserved. Collections were made from 223 localities taking 592 person days to collect, and 22,772 additional items yielded new information (i.e. for the “Research Collection”). (Since 2003 there have been 6,890 new localities investigated from which 275,825 new items were accessioned into the State Collection, as defined by the Vernon Collection Management System database)
- In 2011-12 there were 9,750 digital images added to the Vernon CMS and/or the DAMS databases, many from the new camera systems purchased through the ALA.
- 286 learned lectures were delivered to an audience of 9,815
- 882 registered scientific specimens were loaned for research purposes (down significantly from 2010-11), and 73,073 specimens were loaned for educational purposes. There appears to be a general decrease in demand for physical loans, perhaps balanced by an increase in digitally available collections ?
- 14,083 public enquiries were answered directly by staff, and 838,539 people “deep-visited” the QM website.
- In 2011-12 there were six new “permanent” displays and 44 temporary displays opened across the 4 campuses. Two new major current exhibitions are currently in train (Queensland’s Unique Animals & their Habitats and Ancient Queensland – working concept titles)
- Approximately 1 million visitors attended one of QM campuses, up about 200 thousand on previous years, despite the closure of the QMSB campus to the public for 3 months, thanks largely to the “Mummy” exhibition touring from the British Museum.

COLLECTIONS & EXPEDITIONS

- NEP collections consist of approximately 13.5 million specimens covering all vertebrate and most invertebrate groups, living and fossil faunas, and significant mineralogical types. These include approximately 5.7 million specimens or specimen lots of the living fauna, 7.6 million fossil specimens, 55,000 geological samples, 27,000 mineral samples, and type holdings of around 47,000 specimens (primary and secondary types).
- Approximately 700,000 of these specimens (including all type material) are databased and gradually being delivered to OZCAM and thence to the ALA.

- The consequence of losing one of two Entomology Collection Managers necessitated the closure of about half the entomology collection to general access (such as loans, verification and valuation etc). To achieve this we specifically chose the newly donated University of Queensland Insect Collection, UNIC (excluding the type material which has been moved across to the QM collection) which is now on care-and-maintenance only. By agreement with the UQ we still provide UQ staff and students direct physical access to the UQIC but have had to curtail all other access until resources are found to achieve this.
- In addition to the ~2 million insect specimens donated to the museum by UQ in 2010-11, in 2011-12 NEP received another donation of insects (Franzen collection and Reeves and Bryan collections) together comprising 13,550 specimens.
- Two collections were recently donated to the Museum's Entomology collection. The Franzen collection of moths and butterflies consist of 74 store boxes containing approximately 6,800 specimens of Lepidoptera (Moths and Butterflies) and Coleoptera, family Buprestidae (Jewel Beetles). This donation has been collected over three generations of the Franzen family. The earliest specimens were collected and mounted in 1898 by Ludwig Franzen. His son, Clarence Franzen also contributed to the collection followed in turn by his son, Don Franzen, the current donor. The collection also contains specimens from many notable collectors including F.P. Dodd, D. Waterhouse and others. Ludwig's Neuropteran collection was donated to the Australian Museum and this present donation includes his collection of Lepidoptera. The collection is primarily comprised of species collected from south-eastern Queensland in the 1950's. All of the material is Australian and the majority from Queensland. Many of the areas the specimens were originally collected from would now be developed. There are species included in the collection that are listed species or are rarely collected.
- The second collection is the Reeves and Bryan Odonata (dragonfly and damselfly) collection comprising mainly dragonflies (4,876 from Australia and 1,345 from elsewhere) and some butterflies (436 specimens from Australia and 93 from elsewhere). The collection contains 190 Australian species, representing about 58% of the known Australian fauna. The main geographical focus of the collection is Queensland, particularly south-eastern Queensland although there are specimens from most other Australian states and territories. The Reeves collection represents the largest and most representative privately held collection of Queensland dragonflies and will significantly add to the Museums geographical coverage of the Queensland fauna.
- The issue of naphthalene within the Entomology and some other dry collections is being addressed with testing having been completed by Parsons Brinckerhoff in mid 2012. While there were some technical difficulties with the sampling, the levels do not exceed the workplace exposure standards. Recommendations have been made to further reduce risk to ALARP levels and that these are being considered. These include raising awareness amongst all staff, volunteers and visitors through the use of appropriate signage; reducing the exposure to staff and volunteers (currently only 1 staff member is in the store full-time) and isolating the hazard by ensuring all drawers containing naphthalene are contained within the collection stores (moving them out of Curator's offices). More substantial recommendations include sealing the collection stores off from the laboratory and corridor areas. This would be subject to appropriate funding. Removing the naphthalene was not considered to be a practical solution due to limitations in the current storage space, problems with finding an alternative deterrent against pests and costs involved (there are no adequate physical barriers in the QM&S stores that could replace the present chemical barrier provided by naphthalene). A copy of the report and QM response to it will be circulated to other members who have similar collections for their interest.

- Similarly, arsenic and lead have been confirmed in some taxidermy collections prepared pre-1970s through some random testing of specimens in the Hendra offsite store using X-ray fluorescence analysis. While signage is being installed regarding the risk and need for PPE no further action is yet underway.
- There were no major expeditions conducted by QM in 2011-12 but staff took part in other national and international expeditions such as several of the ABRS national Bush Blitz projects, the WA Museum's Woodside marine survey project in the Kimberley, and Griffith University's Queensland Smart Future Fund project with the Chinese Academy of Sciences studying altitudinal changes in insect distributions.



APPENDIX C – CHAFC MEMBER REPORTS

Institution: Australian National Wildlife Collection

Author: Leo Joseph

Date: 5 November 2012

2011-2012 has seen ANWC in a holding pattern, albeit a productive one. We maintain four staff as follows: Leo Joseph (Director), Robert Palmer (Collection Manager), Alex Drew (Technician, Sound Library Curator) and Margaret Cawsey (Database manager). One dominant feature of the year's progress has been the attempt, which we now confirm as successful, to seek Divisional approval to mount an external search for a new scientist in vertebrate systematics with a genomics emphasis. In CSIRO parlance this will be at the CSOF 5-6 level, which is essentially the equivalent of a base grade, assistant curator. This search will be conducted imminently. It will cast a wide net to ensure that we make the most of this opportunity to grow and expand ANWC research in coming years.

A second dominant feature has been working with Joanne Daly to advance the ANWC's move to Black Mountain. This is being done in the context of the rest of CSIRO staff on our site north of Canberra having already moved to Black Mountain. We are thus extremely isolated. We have done everything possible to convey our concerns that our world class facility should not move backwards in any way when the move happens. We seek an outcome whereby the move of collections to alternative facilities at Black Mountain is done well, and, ideally, done once. There is, however, nothing imminent or foreseeable about to happen by way of moving us to Black Mountain.

Within this holding pattern, ANWC has nonetheless continued most productively. The collection itself has continued growing. A major collecting trip was not mounted this year although two minor ones associated with starting and finishing two PhDs were conducted in south-east Queensland and north-eastern New South Wales. Collection growth has mainly been through donated, salvaged material and by clearing freezer backlogs. This is now essentially complete for birds and will move on to mammals. Research has continued through a productive publishing program and planning for a major field program in Papua New Guinea. Publications, listed below, spanned books, book chapters, primary research papers, reviews (with ANIC) and invited editorials. They continued to emerge from co-supervised PhD theses (Kearns, Lee, McLean, Nyari) and CSIRO postdoctoral work (Dolman), and other collaborative work (Byrne, Yeates, Toon, Wright). All of these papers contribute important advances to the ANWC's program of understanding the evolutionary history of Australian vertebrates.

A total of 52 loans was serviced in the past twelve months. 47 of these were to researchers in Australia and 5 to international researchers. Of the 52 loans, 34 were for specimens (2764 specimens) and 18 were for tissue samples (1069 tissues). We also received 7 loans and returned 31 loans from other institutions.

Three grant proposals were developed that will, when funded, be substantial contributions to moving ANWC's work into genomics. Critically, they will do so jointly with other Collections now included in the new Australian National Biological Collections Facility Them, which united the CSIRO collections.

Prior to formal establishment on July 1, 2012 of the Centre for Biodiversity Analysis, ANWC was active in preliminary work that resulted in a successful funding proposal to Bioplatforms Australia to develop and harness transcriptomes of Australian vertebrates. This work is now in progress.

The ANWC successfully delivered a proof-of-concept project involving the databasing of our sound library. Margaret Cawsey and Alex Drew linked sound files of butcherbird calls to species records in the ALA for listening and download. This new capability was demonstrated to a conference in WA, and it is hoped other collections and institutions will consider adopting this methodology for linking sound files to specimen records in the ALA.

We look forward to another productive year that is likely to be critical in our history.

ANWC publications for the 2011-2012 calendar years to date:

1. Roshier, D., Heinsohn, R., Adcock, G., Beerli, P. and Joseph, L. 2012. Biogeographic models of gene flow in two waterfowl of the Australo-Papuan tropics. *Ecology and Evolution*. Online 10 October 2012 doi: 10.1002/ece3.393
2. Joseph, Leo; Nyari, Arpad. Clarification of the nomenclatural status of a recently introduced genus-group name for some honeyeaters (Meliphagidae). *Emu*. 2012; 112(2):173. IF = 1.121
3. Dolman, Gaynor; Joseph, Leo. A species assemblage approach to comparative phylogeography of birds in southern Australia. *Ecology and Evolution*. 2012; 2(2):354-369.
4. Joseph, Leo; Toon, Alicia; Schirtzinger, Erin; Wright, Timothy; Schodde, Richard. A revised nomenclature and classification for family-group taxa of parrots (Psittaciformes). *Zootaxa*. 2012; 3205(2):26-40. IF = 0.927
5. Lee, June Y.; Joseph, Leo; Edwards, Scott. A Species Tree for the Australo-Papuan Fairy-wrens and Allies (Aves: Maluridae). *Systematic Biology*. 2012; 61(2):253-271. IF = 10.225
6. McLean, Alison; Toon, Alicia; Schmidt, D.J.; Joseph, Leo; Hughes, Jane. Speciation in Chestnut-shouldered Fairy-Wrens (*Malurus* spp.) and rapid phenotypic divergence in Variegated Fairy-wrens (*Malurus lamberti*): a multilocus approach. *Molecular Phylogenetics and Evolution*. 2012; 63(3):668-678. IF = 3.609
7. Nyari, Arpad; Joseph, Leo. Evolution in Australasian mangrove forests: multilocus phylogenetic analysis of the *Gerygone* warblers (Aves: Acanthizidae). *PLoSOne*. 2012; 7(2):e31840. IF = 4.092
8. Schodde, Richard; Joseph, Leo; Bock, Walter. Case 3572 PSITTACULINAE Vigors, 1825 (Aves): proposed conservation of usage. *Bulletin of Zoological Nomenclature*. 2012; 69(1):51-55.
9. Toon, Alicia; Austin, Jeremy; Dolman, Gaynor; Pedler, Lynn; Joseph, Leo. Evolution of arid zone birds in Australia: leapfrog distribution patterns and mesic-arid connections in quail-thrush (*Cinclosoma*, Cinclosomatidae). *Molecular Phylogenetics and Evolution*. 2012; 62(1):286-295. IF = 3.609

10. Byrne, Margaret; Steane, Dorothy; Joseph, Leo; Yeates, David; Jordan, Greg; Crayn, Darren; et al. Decline of a biome: evolution, contraction, fragmentation, extinction and invasion of the Australian mesic zone biota. *Journal of Biogeography*. 2011; 38(9):1635-1656. IF = 4.544
11. Gardner, Janet; Peters, Anne; Kearney, Michael; Joseph, Leo; Heinsohn, Robert. Declining size: a third universal response to warming?. *Trends in Ecology and Evolution*. 2011; 26(6):285-291
12. Joseph, Leo. Museum collections in ornithology: today's record of avian biodiversity for tomorrow's world. *Emu - Austral Ornithology*. 2011; 111(3):i-xii. IF = 1.121
13. Kearns, Anna; Joseph, Leo; Omland, Kevin; Cook, Lyn. Testing the effect of transient Plio-Pleistocene barriers in monsoonal Australo-Papua: did mangrove habitats maintain genetic connectivity in the Black Butcherbird? *Molecular Ecology*. 2011; 20(23):5042-5059. IF = 5.522
14. Loynes, Kate; Joseph, Leo; Keogh, J. Scott. Circumscription, diagnosis and description of a subfamily of Australo-Papuan robins. *Zootaxa*. 2011; 3106:67-68. IF = 0.927
15. Nyari, Arpad; Joseph, Leo. Systematic dismantlement of *Lichenostomus* improves the basis for understanding relationships within the honeyeaters (Meliphagidae) and the historical development of Australo-Papuan bird communities. *Emu - Austral Ornithology*. 2011; 111(3):202-211. IF = 1.121
16. Murphy, Stephen; Joseph, Leo; Burbidge, Allan; Austin, Jeremy. A cryptic and critically endangered species revealed by mitochondrial DNA analyses: the Western Ground Parrot. *Conservation Genetics*. 2011; 12(2):595-600. IF = 1.61
17. Yeates, David; Seago, Ainsley; Nelson, Leigh; Cameron, Stephen; Joseph, Leo; Trueman, John. Integrative taxonomy, or iterative taxonomy? *Systematic Biology*. 2011; 36(2):209-217.

Books/Book chapters

1. Joseph, Leo; Burbidge, Allan; Stephen, Murphy. Night Parrot: *Pezoporus occidentalis* (Gould, 1861). In: Curtis, L.K.; Dennis, A.J.; McDonald, K.R.; Kyne, P.M.; Debus, S.J.S., editor/s. Queensland's Threatened Animals. CSIRO Publishing, Melbourne: CSIRO Publishing,; 2012. 300-301.
2. Olsen, Penny; Joseph, Leo. Stray Feathers : Reflections on the Structure, Behaviour and Evolution of Birds. CSIRO Publishing; 2011.



APPENDIX D – CHAFC MEMBER REPORTS

The Australian National Insect Collection (ANIC)

Introduction

This is an exciting time for the Australian National Insect Collection. After many years of management by separate Divisions, for the first time the CSIRO collections are being managed in one Theme. This is in recognition of their unique and important place in Australia's biodiversity research infrastructure.

- The mission of ANIC is to broaden and deepen our understanding of Australian Insects and other terrestrial invertebrates through research and education, and to manage and develop the collections as authoritative vouchers of Australia's invertebrate biodiversity.
- ANIC is now administered with the other National Biological Collections, including the "big four" – the ANIC, the Australian National Herbarium (ANH) and the Australian National Wildlife Collection (ANWC) in Canberra, and the Australian National Fish Collection (ANFC) in Hobart.
- The Head of ANIC for the last decade, Dr John La Salle, took up the position as Director of the Atlas of Living Australia (ALA) following the departure of Donald Hobern to head the Global Biodiversity Information Facility in Copenhagen. David Yeates was appointed Director of ANIC in April 2012 shortly after John's departure.

Research Directions

Research activity in ANIC is currently being transformed in important ways. Molecular biology is playing a more important role in all CSIRO collections. The growing revolution in genomics provides a much larger armoury of tools with which to understand evolutionary relationships and mechanisms, and adaptation. This creates more demand for the knowledge and material housed in the collections.

- ANIC is currently seeking two new Research Scientists (one indefinite, one a three-year term) in phylogenomics to access and extend these capabilities.
- Research Leaders have been directing research grant applications to access both internal (e.g. Transformational Biology Capability Platform) and external (e.g. National Science Foundation) funds to pursue critical, high impact research that realizes the potential of the collections in the postgenomic era.
- ANIC will benefit from being part of the *Centre for Biodiversity Analysis (CBA)*, headed by Laureate Professor Craig Moritz, based at the Australian National University. The CBA launched on July 1, 2012, and Craig is a joint appointment with ANU and CSIRO.
- A number of collaborative research activities have already been proposed between staff of ANIC, other members of the Division (Yeates, Cunningham, Gordon, Joseph) and ANU (Rowell, Kulheim, Foret, Pryke, Bragg) to access resources under CBA's *Ignition* projects scheme.
- Innovative systematic research on critical groups is being pursued by all RS's. This usually incorporates latest advances in cybertaxonomy, such as the registration of taxonomic names in *Zoobank*, and linking specimen data in collection databases with published descriptions. In 2012 Adam Slipinski was awarded an ABRs grant of \$270,000 over three years to systematically revise the longhorn beetles (Cerambycidae) of Australia.

Research Output: Volume and Impact

- Research output per RS is very high, with 42 journal articles in 2011 and the first 9 months of 2012.
- While much of this research has been published in taxonomically-focused journals that have low ISI impact factors, some research output is appearing in journals with impact factors as high as 10 (*Annual Review of Entomology*).
- The ISI citation curve for each RS as reported in *ResearcherID* shows that 2011 was the most productive citation year for each individual scientist, and that each is on track to make 2012 even more citation-productive again.
- The three Postdoctoral Fellows in ANIC (Nicole Gunter, Ainsley Seago, Sara Pinzon-Navarro) are very productive and give us access to new molecular capabilities, analysis pipelines and perspectives.

Digitisation

Greater virtual access to the knowledge embodied in the collections, through activities such as whole-drawer imaging and collaboration with the ALA, is increasing awareness of the collections, and creating greater demand for further digitisation and databasing.

- More than 1,500 ultra-high resolution images of insect drawers are available for viewing, annotation and download on the Morphbank-ALA portal. A paper describing this project was recently published in a special edition of *ZooKeys* in 2012.
- A new initiative for 2012-13 is the digitization and delivery of images and metadata of all holotypes lodged in the ANIC. Holotypes are being audited, databased, and imaged at a high resolution. These images and associated data will be made available for viewing and download via the ALA. It is hoped this initiative will provide better stewardship and reduce requests for loans of these invaluable and irreplaceable specimens.
- A large proportion of ANIC RP activity was focused on two large tenders to the Australian Biological Resources Study (ABRS) to compile checklists of the moths, beetles, mites, nematodes and ants. Over 15,000 of checklist entries were made in these activities over the past 18 months, and the project was completed on time and under budget.
- The ANIC is currently seeking a new RP as Digitisation and Data Curation Officer to co-ordinate, streamline, innovate, and extend the breadth of our digitization activities.

Outreach

A new series of electronic newsletters called *ANICdotes* was initiated in 2012. *ANICdotes* is emailed to over 300 relevant stakeholders both nationally and internationally every 6 months. *ANICdotes* can be accessed at:

<http://www.csiro.au/Organisation-Structure/National-Facilities/Australian-National-Insect-Collection/ANICdotes.aspx>



APPENDIX E – CHAFC MEMBER REPORTS

Institution: Australian National Fish Collection

Author: Alastair Graham

Date: 26 October 2012

Collections and Informatics

- **Staff** – 2.9 FTE - Peter Last (Curator – 0.1), Alastair Graham (Collection Manager – 1.0), John Pogonoski (Collection Support Officer – 1.0), Louise Conboy (Photographer – 0.2) and Carlie Devine (Digital Image Manager/Photographer – 0.6).
- **Types** – 5 holotype and 34 paratype lots for 10 species added this year. The Collection now holds 205 holotype and 1618 paratype lots for 344 species. Staff members continue to undertake a number of projects which have identified additional taxa requiring description in the near future.
- **Database** - The collection database contains 49,291 lots (149,783 specimens), of which 32,052 lots (or approximately 65% of the records) identified to species level (includes synonyms) can be made available on OZCAM and the ALA. A further 6,561 lots (approximately 13% of the records) are larvae identified only to family level. These records do have latitude/longitude data and could also be made available to OZCAM
- **Loans** – 18 researchers borrowed 238 specimens.
- **Tissue collection** - continues to grow and now contains over 15,500 tissues covering 2,000 species from the Indo-Pacific. About 12,000 tissues have been COI barcoded as part of the Barcode of Life initiative.
- **Tissue grants** – 11 grants to researchers, totaling 810 tissues.
- **Photographic Index of Australian Fishes** - expanded and now contains 49,676 images, covering more than 3,000 species from the Indo-Pacific region.
- **Visiting scientists** - hosted 11 visitors, who spent 65 days working in the Collection.

Research

- **Staff** – 2.9 FTE – Peter Last, William White and Daniel Gledhill
- **ALA fishes** – A project co-invested by the ALA and the CSIRO Wealth from Oceans (WfO) Flagship has created an online spatial mapping and identification tool for all Australian marine fishes (approximately 4500 species). The demonstration project highlights the capability of the infrastructure developed by the ALA, and enables users to create customisable, illustrated species lists for any region in Australia's continental marine jurisdiction. Images and distribution data were delivered to the ALA in October and the tool will soon be available.
- **Indonesian teleosts** – Surveys of Indonesian fish markets completed. This ACIAR-funded project is examining the species composition and conducting rapid market

assessments to characterise the fisheries. Over 870 species will be included in a field guide to the fishes, which will be published in early 2013.

- **Historical spearfishing data** – working with spearfishers in Victoria and New South Wales to investigate climate-related changes in coastal fishes using historic data dating to the 1970s. The project is supported by funding from the FRDC - DCCEE on behalf of the Australian Government.

Selected Publications

Flynn, A.J. and Pogonoski, J.J. (2012). Guide to mesopelagic fishes of the southern Tasman Sea. CSIRO Marine and Atmospheric Research, Hobart, Australia, i-v + 221pp.

Johnson, J.W. and White, W.T. (2012) *Parapercis pariomaculata* (Perciformes: Pinguipedidae), a new species of sandperch from Lombok and Bali, Indonesia and remarks on the validity of *P. quadrispinosa* (Weber 1913). *Zootaxa*, 3319, 57-68.

Naylor, G.J.P., Caira, J.N., Jensen, K., Rosana, K.A.M.; White, W.T. and Last, P.R. (2012), A DNA sequence-based approach to the identification of shark and ray species and its implications for global elasmobranch diversity and parasitology. *Bulletin of the American Museum of Natural History*, vol. 367 - 263pp.

White, W.T. (2012) A redescription of *Carcharhinus dussumieri* and *C. sealei*, with resurrection of *C. coatesi* and *C. tjtjtjot* as nominal species (Chondrichthyes: Carcharhinidae). *Zootaxa*, 3241: 1-34.

White, W.T. and Last, P.R. (2012) A review of taxonomy of chondrichthyan fishes: a modern perspective. *Journal of Fish Biology*, 80: 901-917.



APPENDIX F – CHAFC MEMBER REPORTS

South Australian Museum Annual report to CHAFC for 2011-2012

Collections Revaluation

In 2011 the Museum undertook a full revaluation of the collections as part of its mandatory reporting procedures. By employing methods established during the 1998 valuations exercise as well as a refinements adopted for the 2003 and 2006 reports, the value of the SA Museum's collections as at June 30th 2011 may be summarised as follows.

Collection Valuation	Methodology	Total
Heritage Collections	Net Market Valuation	\$86,125,853.78
Natural History Collections	Cost of Recovery	\$273,468,386.36
Total Valuation		\$359,594,853.14

There has been a significant increase in the overall valuation of the collection since 2006. This is largely due to the inclusion of hitherto zero rated collections such as Archaeology and important components of Archives as well as the increase in the agreed value for Holotypes based on a more realistic assessment of their value against cost of recovery and publication methodologies.

Collections Highlights

- Collections donations and acquisitions through the Board, Foundation, Cultural Gifts Program, Australian Valuation Office etc to the value of \$300,000.
- The addition of over 18,000 objects, specimens and lots through fieldwork, research and donations. Approximately 26,000 records were databased and over 6,000 digital images created.
- 90 commercial and non-commercial loans were arranged in 2011-12, involving 2,000 objects and specimens to 75 different institutions around the world. A further 926 tissue samples/grants were forwarded by our Evolutionary Biology Unit for analysis to research institutions throughout the world.
- Mapping Terrestrial Invertebrates data for migration to EMu underway.
- Mapping ABTC data for migration to Emu to commence soon. Bryn will then assist with its mobilisation to OZCAM/ALA

ALA Volunteer Digitisation Project

Although funding ended some time ago, the project continues apace.

- 4,000 Types specimens have now been high res imaged
- Of these 1400 new database records have been generated
- 1,500 cicadas have been imaged
- We have delivered 355 type specimen images to ALA
- Volunteers currently working on imaging dissected material derived from Type specimens
- Commenced scanning/digitising legacy images such as specimen illustrations, Marine Invertebrates slide collection etc.
- Commenced imaging Herpetology osteological collection
- Commenced conversion of transactions of Royal Soc SA and SA Museum journals for loading onto BHL. Our thanks to Joe Coleman (MV) for providing training and assistance to allow our Librarian to undertake the work.

- Review of DAMS ongoing.

The Entomology Stores Project

With the considerable assistance of Arts SA and ArtLab Australia the South Australian Museum was awarded \$2.67 million by the Government of South Australia towards the improvement of storage facilities for its world class entomology collection. Identified as being at risk from pest attack, most notably from *Anthrenus vevasci* (carpet beetle), the funding will allow for improvements to the storage envelope as well as provide for new pest proof storage cabinets. Over 2 million specimens will be moved into cold storage to allow for refitting the entomology store. The collection will then be returned to the store, the contents of over 5,000 specimen drawers being carefully transferred to the new facility. It is anticipated the collection will not be available for access and research until late 2013.

Board Appointments

- Prof. David Adelson – Term commenced April 2012
- Mr David Rathman AM – Term commenced April 2012

Director, Prof. Suzanne Miller was appointed as the Australian Representative and Vice Chair of Scientific Collections International (an OECD Global Science Forum initiative) and was appointed to the SA Premier's Science and Industry Council.

SCIENCE RESEARCH

Our academic research status has achieved new national and international recognition and an ambitious program of research enhanced access to our collections and knowledge. Over \$5 million in externally won research grants was secured during the year. The majority of this funding was obtained through competitively awarded grants from the Australian Research Council (ARC).

The museum also maintained strong collaborative research partnerships during the financial year. In total 152 partnerships were recorded: 27 with other museums, 85 with university departments, 34 with other research institutions and six with other agencies. Internationally, the museum has continued to cement enriching research collaborations with Canada, Chile, China, France, Germany, Iran, Japan, Korea, Malaysia, New Zealand, Papua New Guinea, South Africa, Spain, Sweden, UK and USA.

Our sites and collections are vital cultural assets and our strong research profile helps bolster the State's and the nation's reputation through our active program of international research and by promoting Australian culture abroad through our collections.

During the reporting period, museum staff contributed 2 379 hours towards tertiary teaching at various academic institutions and universities. During the course of the year museum staff participated in the direct supervision of 47 PhD students, one MSc student and 11 Honours students. Museum staff also delivered eight professional workshops based on museum collections and research.

Published works continued to be a strength of the museum's research with a total of 193 scholarly publications and 26 other publications being finalised during the period. Museum staff were also active in maintaining academic engagement through the delivery of academic and public lectures, workshops, and conference presentations (a total of 139).

PUBLICITY

The South Australian Museum Foundation generously supported the engagement of a Publicist [ex ABC TV journalist] for the Museum over a six month period to lift the Museum's public research profile.



APPENDIX G – CHAFC MEMBER REPORTS

CHAFC Inc. AGM – November 2011
Member Report

Organization: Western Australian Museum
Author: Mark Harvey
Date: 9 November 2011

Collections

The WA Museum's work in describing new genera and species is highly significant in international terms. In 2010–11 Museum scientists described 5 new animal genera, 2 new meteorite and 61 new animal species. 60 new animal species and 2 new fossil holotypes were added to the collection. The Museum added more than 19,300 wet items and over 6,300 dry items to its storage facilities and more than 6,700 artefacts and over 233 cultural items were registered into the collection this year.

Research

Advanced global research efforts through:
115 collaborative scientific research projects, of which 28 involved international partner agencies and institutions.

- The loan of more than 8,400 items to other institutions for scientific research.
- Providing access to its collection by hosting 28 international scholars.
- 47 field trips that took place throughout the State.
- Contributed to the management and sustainability of the State's environment and resources development by providing expert advice and information in response to over 7,280 requests from the government and private sector on biodiversity and culturally significant issues.
- Supported the training of the next generation of scientists, curators and other experts by supervising 29 students of which 14 were post graduate students and 1 undergraduate student: 8 were based in Australia and 6 were based overseas. The Museum also plays a major role in introducing school aged and vocational students to a variety of possible museum and science-based careers.
- Publishing 60 peer reviewed research publications (55 journal articles and 5 book chapters).
- Publishing 236 non-refereed reports, conference papers, popular and other publications (17 non-refereed reports, 26 conference papers, 67 popular publications and 126 unpublished reports to consultants).
- Holding 221 local, 42 regional, 10 national and 32 international public lectures, workshops and presentations.

Achievements

The Western Australian Museum increasingly works in partnership with museums and universities within Australia and around the world as well as the national and international private sector and individual research sponsors. These partnerships deliver a range of benefits to the Museum and the State. They provide access to the WA Museum's collections

and knowledge; enable the Museum to increase its networks, and support research work and projects that might otherwise be out of reach due to funding and staff constraints. The work undertaken through partnerships helps inform today's scientific thinking both within Australia and abroad in vital areas including conservation, climate change, biodiversity and sustainability.

Over the past year, the Museum was involved in 115 research projects in a variety of disciplines, of which 87 involved partner agencies and institutions, including 28 international collaborators. Many of the 31 field trips undertaken by Museum staff during 2010–11 were conducted in partnership with other organizations.

Major field trips this year included:

- Lake Hillman and Weld Spring Reserve audits.
- Kimberley Marine Survey at Cassini Island and Long Reef and Wheatstone fish survey at Ashburton River.
- Assessment of Gwalia-Leonora historic townsite.
- Recovery of meteorites from the Nullarbor Plain (Madura area).
- Heritage surveys of Lucky Bay and Cape le Grande areas in Esperance organized by the Gabba Kylie Foundation.
- Survey of shipwreck sites in Georgraphe Bay and Hamelin Bay.
- Rottnest Island bird survey.
- Study of Yilgarn subterranean fauna.
- Biology of Truffle Beetles in North Eneabba region and study of Earth-borer Beetle, Winderie Station (Gascoyne)
- Survey of frog species in the Great Victoria Desert, Ilkurlka.
- Study of Assassin Spiders of Tasmania.
- Fauna sampling from Bundera bores at Ningaloo Coast.
- Study of arachnids of Southern WA and Oregon USA.
- Bird survey of Christmas Island

In 2010–11 major state, national and international research partnership projects included:

- The Woodside Collection (Kimberley) Project Woodside 4 funded by Woodside Energy Ltd; the Western Australian Marine Science Institution (WAMSI) project studying the deep water communities of Ningaloo Reef; the Ningaloo lagoon filter feeding communities in collaboration with Murdoch University and CReefs and Ningaloo deep water species with CSIRO. These projects have forged collaborations across Australian and international museums, universities, and marine organisations. This has resulted in the creation of new marine collections from both the remote Kimberley, an area with high conservation, social and economic value, and from Ningaloo Reef, an area that is being evaluated for World Heritage Listing.
- The WA Marine Bioresources Library (WAMBL) funded by the WAMSI is enabling registration of frozen sponge specimens from the WA Museum collections into the inaugural WA Bioresources Library, making this material available for biodiscovery research.
- Chevron-funded collaborative work with the Australian arm of the US company URS Corporation to survey fish communities at the mouth of the Ashburton River, near Onslow. This fieldwork added fish specimens to the collections from a previously poorly known area of Western Australia.
- In collaboration with the Tyrell Museum, Canada and the University of Alberta, Canada, palaeontologists are studying the ontogeny and life history of the *Cardabiodon ricki*, the largest known shark from the mid-Cretaceous period. The study of these mid-Cretaceous fossil sharks is paramount to our understanding of the

evolution of the lamniform sharks, a group that includes modern species such as the great white shark and the Megamouth shark.

- In collaboration with the American Museum of Natural History, Museum scientists are researching spiders belonging to the group Oonopidae.
- Studies of the systematics of Pseudoscorpions are being carried out in collaboration with the University of Connecticut.
- A study on the biogeography of calcareous and recent lithistid sponges of Western Australia in two collaborations with the Federal University of Rio de Janeiro, Brazil and the Institute of Palaeobiology, Polish Academy of Sciences, Poland. These fauna have not previously been examined in the Eastern Indian Ocean.

Information

The Museum continued *The Harry Butler lecture series: In the Wild West*, under the patronage of renowned naturalist Harry Butler and the Chief Scientist of Western Australia, Professor Lyn Beazley. Over 2,600 people attended the lecture series across both regional and metropolitan sites, with over 13,000 watching vodcasts.

The Museum also produced and distributed 5 new books and monographs for national distribution to general and specialist readers, libraries and young readers including:

- *Field Guide to Reptiles and Frogs of the Perth Region* by B Bush, et al.
- *Prehistoric mammals (factfocus)* by Ken McNamara
- *Secret Fleets* by Lynne Cairns
- *Field Guide to Reptiles of the Pilbara* by B Maryan, et al.
- *We Cam By Sea* by Nonja Peters