



AUSTRALIAN SOCIETY FOR FISH BIOLOGY:  
PROMOTING SCIENTIFIC EXCHANGE AND  
SUPPORTING EARLY CAREER RESEARCHERS

*J.M. Lyle*

*December 2012*

*FRDC Project No. 2010/316*



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# FINAL REPORT

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**2010/316 Australian Society for Fish Biology: promoting scientific exchange and supporting early career researchers**

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**OBJECTIVES**

- 1 Provide a forum for researchers, managers and stakeholders to meet to discuss issues relevant to fish and fisheries science and management
- 2 Support, encourage and recognise achievements of early career researchers
- 3 Support and encourage student participation at ASFB's annual science conference

**NON-TECHNICAL SUMMARY**

**OUTCOMES ACHIEVED TO DATE:**

The primary outcomes of this project have been the knowledge transfer, building research partnerships and recognition and promotion of research achievements, particularly amongst early career researchers, arising from very successful ASFB annual science conferences held in 2011 and 2012.

Key performance measures that support these outcomes include the large number of registrants (around 220 for each conference event), the quality of keynote presenters attracted to the events (including world leaders in their fields of endeavour), the number, quality and diversity of scientific presentations (over 100 for each event), and representation of students (around 30% of all registrants) and early career researchers at the each of the annual science conferences. Research achievements were actively recognised and promoted through a range of awards targeting students and early career researchers, with several award recipients taking on active roles on the ASFB Executive Council.

The Australian Society for Fish Biology (ASFB) was founded in 1971 and is a professional, independent, non-profit, and non-aligned organisation. The Society's objectives are to promote research, education and management of fish and fisheries and to provide a forum for the exchange of information. Annual conferences have been held each year since the Society's inception and provide a forum for scientists, managers, and industry from around Australia, New Zealand and elsewhere to meet and discuss the most recent developments in fish and fisheries science and management.

The annual science conference makes an important and tangible contribution to skill development of people involved in fish and fisheries research and management, particularly offering students and early career researchers opportunities to present their work, interact with peers, develop collaborative links and obtain new ideas. ASFB has a strong commitment to promoting and communicating science, encouraging sustainable management practices, encouraging excellence in fisheries research, and recognizing outstanding contributions of scientists and professionals through various awards and scholarships.

For the present project FRDC funding was provided as sponsorship support for the 2011 and 2012 annual science conferences, with funding used to offset costs of staging of the conference events (addressing Objective 1); sponsorship of student conference presentation awards (addressing Objective 2); and travel subsidies for students attending the conferences (addressing Objective 3).

The 2011 ASFB science conference was held between 22-24 July in Townsville. The conference represented the Society's 37th annual science conference and the event included a comprehensive program of scientific presentations and social events as well as pre-conference technical workshops and meetings which included the 5<sup>th</sup> Australian Technical Workshop on Fishways, a Social Sciences workshop, Routine Fish Ageing meeting, and OzFishNet Ichthyological meeting.

A total of 220 delegates (64 students and 156 professional registrations) attended the conference. Delegates included international representatives from 11 different countries from the Asia Pacific, Europe and Americas as well as strong representation from New Zealand. The conference program included 93 oral presentations (five keynote presentations from eminent scientists) and 14 posters presented by students, early and established scientists, managers and industry on a range of topics including: animal movement, freshwater invasives, fisheries and management, fish behaviour, age and growth, coral reef ecology and freshwater floods.

The 2012 ASFB conference/symposium was held as a joint event with the Oceania Chondrichthyan Society (OCS) in Adelaide from 15-18 July, 2012. The conference/symposium was developed as a three-day meeting that had two primary components. The conference component entailed a series of concurrent sessions during which delegates had the opportunity to give presentations or posters topics of their choice. The second component of the meeting was a focussed symposium on the major topic of 'Addressing the challenges of understanding the movement patterns of aquatic animals and their significance'.

A total of 223 delegates (64 students and 159 professional registrations) attended the symposium/conference including representatives from five different countries from the Pacific, Americas and Africa as well as New Zealand. The symposium involved three sessions during which nine eminent scientists gave keynote presentations on several different themes. There was a full program of 148 oral presentations that included the keynote presentations on the symposium topic as well as three ASFB and OCS plenary presentations and 25 posters presented by students, early and established scientists, managers and industry on a range of topics.

Support and encouragement for early career researchers and participation in ASFBs science conference was provided in practical terms in the form of research



presentation awards - Gilbert P. Whitley awards for best oral presentations (sponsored by FRDC), John S. Lake best poster presentation awards (sponsored by FRDC), and Victorian Marine Science Consortium Award - and via John Glover travel bursaries (sponsored by FRDC). FRDC sponsorship of these awards amounted to almost \$8,400. A list of all award and bursary recipients (along with other ASFB research and travel awards) is provided in the report. Significantly, about 30% of all participants at the two conferences were students, confirming the value of the events in providing a forum for early career researchers to not only present their research but interact with peers and build networks and collaborations.

**KEYWORDS:** Australian Society for Fish Biology; science conference, student research awards, student travel bursary.

## **ACKNOWLEDGEMENTS**

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The support of the Australian Society for Fish Biology's executive council, its membership and 2011 and 2012 event organising committees and sponsors is gratefully acknowledged. Both events were well organised and attended, and along with associated technical workshops and meetings they were successful in bringing together a large number of high quality presentations across a range of research areas relevant to fish and fisheries.

FRDC sponsorship was used to fund student conference presentation awards, student conference travel costs and offset event costs.

## 1. BACKGROUND

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The Australian Society for Fish Biology (ASFB) was founded in 1971 and is a professional, independent, non-profit, and non-aligned organisation. The Society's objectives are to promote research, education and management of fish and fisheries and to provide a forum for the exchange of information. To achieve its objectives the Society:

- defines the study of fishes in the broadest sense as work in fields of research, management or learning relating to fishes. These include: biology, ecology, physiology, taxonomy and systematics, genetics, habitats and fisheries (including commercially important invertebrates) in marine, freshwater and estuarine environments.
- promotes a friendly, relaxed, egalitarian and welcoming atmosphere for members and those interested in the study of fish.
- encourages participation by all members, particularly students.
- encompasses the professional interests of members.
- promotes the profile of fish research to relevant agencies and the wider community.
- provides independent advice and information on relevant issues.
- promotes the use of fish research in sustainable natural resource management.
- provides access to expertise on fish and fisheries, facilitates professional networks and assists with career development.
- promotes discussion and workshops on topics of relevance and interest to enhance excellence in fish studies.

Annual conferences have been held each year since the Society's inception and provide a forum for scientists, managers, and industry from around Australia, New Zealand and elsewhere to meet and discuss the most recent developments in fish and fisheries science and management. The Society has also hosted a number of very successful international conferences, including the 2<sup>nd</sup> World Fisheries Congress (1996), World Congress on Aquatic Protected Areas (2002) and 8<sup>th</sup> Indo Pacific Fish Conference (2009). The ASFB Annual Conference is widely regarded as Australia's foremost forum for fisheries researchers and managers to meet to discuss emerging fish and fisheries issues.

The ASFB has also taken a lead role in encouraging international scientific links in fish and fisheries research and management in Australia. Through the support of FRDC and State and Territory fishery agencies, ASFB has hosted national workshops that aim to:

1. provide a forum at which a technical area or subject of national significance can be discussed;
2. support keynote addresses by internationally recognised scientists of acknowledged expertise in the workshop subject area;
3. publish the workshop proceedings as a benchmark document of current knowledge in the subject area; and
4. identify and define research needs of national significance.

The proceedings of Society-held workshops are usually produced separately as special publications.

Furthermore the Society publishes a newsletter twice a year, which contains information of interest to the Society membership, including notices and information on Society activities.

The Society is a founding member of the World Council of Fisheries Societies which has the primary goal of promoting international cooperation in fisheries science, conservation and management.

The Society has an active policy of supporting students and early career researchers, principally through awards which provide financial support to assist with travel or research costs. Included are a number of conference awards - John Glover Travel Fund Bursaries, Gilbert P. Whitley Memorial Student Award, John Lake Poster Award, and Victorian Marine Science Consortium Award (inaugurated in 2010) – and research awards - Barry Jonassen Award, Michael Hall Student Innovation Award and Student and Early Career Researcher International Travel Scholarships. Conference awards include travel support for students and student awards for high quality oral and poster presentations. The combined value of the awards has typically been over \$15000 per year.

The Society also recognises outstanding career contributions in fish or fisheries science through the K. Radway Allen Award and an early career research award (inaugurated in 2011) to recognise outstanding contributions to fish and fisheries science by recently graduated scientists. Furthermore the Society has established an Ichthyology Hall of Fame, which provides biographic information and recognises the professional achievements of Australia's most prominent fish and fisheries scientists.

## **2. NEED**

In the face of mounting pressure on Australia's marine and freshwater ecosystems, arising from environmental and human factors, there is a need for robust scientific information to support the sustainable development and management of our aquatic resources. The ASFB is Australia's premier professional association for fish and fisheries researchers in Australia. The annual science conference (and workshops) makes an important and tangible contribution to skill development of people involved in fish and fisheries research and management, particularly offering students and early career researchers opportunities to present their work, interact with peers, develop collaborative links and obtain new ideas. ASFB has a strong commitment to promoting and communicating science, encouraging sustainable management practices, encouraging excellence in fisheries research, and recognizing outstanding contributions of scientists and professionals through various awards and scholarships.

This proposal seeks sponsorship support for the annual science conference in 2011(Townsville) and 2012 (South Australia) and a series of conference associated awards that support student travel and recognise research excellence. The proposal addresses two people development program priorities, namely (i) to encourage knowledge transfer and R&D adoption (ASFB annual science conference) and (ii) to recognise and promote achievements (ASFB research awards). Focus of the latter is on early career researchers, not only in providing encouragement to strive for research excellence but to encourage participation in the exchange of information and to provide opportunity to develop networks and collaborations with outside organisations.

### **3. OBJECTIVES**

- 1 Provide a forum for researchers, managers and stakeholders to meet to discuss issues relevant to fish and fisheries science and management
- 2 Support, encourage and recognise achievements of early career researchers
- 3 Support and encourage student participation at ASFB's annual science conference

### **4. REPORT STRUCTURE**

In addressing the above objectives, the funding provided by FRDC has three main components:

- sponsorship support for the staging of ASFBs annual science conference (Objective 1);
- funding of student research (conference presentation) awards (Objective 2); and
- travel support for students to attend the conference (Objective 3).

Priority is given to the use of the FRDC sponsorship to fund the student research awards and student travel support, the balance being used to offset costs of staging the conferences. In setting registration fees for conferences, the Society has a long-standing policy of offering significant discounts for student members as an incentive to encourage student participation.

The structure of this report addresses Objective 1 by providing a summary of key aspects of the 2011 and 2012 annual conferences (and associated meetings and workshops) (Sections 5 & 6), recognising that they represent an important national forum for researchers, managers and stakeholders to meet and discuss issues relevant to fish and fisheries science and management. Objectives 2 and 3 are addressed by providing details of ASFB research and travel award recipients (Section 7).

## 5. ASFB CONFERENCE 2011

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### 5.1 Background

The 2011 ASFB science conference was held between 22-24 July at Rydges Southbank and Convention Centre, Townsville. The conference represented the Society's 37<sup>th</sup> annual science conference and the event included a comprehensive program of scientific presentations and social events as well as a number of pre-conference technical workshops and meetings which included the 5<sup>th</sup> Australian Technical Workshop on Fishways, a social sciences workshop, Routine Fish Ageing meeting, and OzFishNet Ichthyological Meeting.

### 5.2 Conference Organising Committee

<i>Mike Kingsford (Chair)</i>	James Cook University
<i>Leanne Currey</i>	James Cook University
<i>Mike Cappo</i>	AIMS
<i>Michelle Heupel</i>	AIMS
<i>Colin Simpfendorfer</i>	James Cook University
<i>Lynne van Herwerden</i>	James Cook University
<i>Frederieke Kroon</i>	CSIRO
<i>Damien Burrows</i>	James Cook University
<i>Neil Gribble</i>	DEEDI
<i>Garry Russ</i>	James Cook University

### 5.3 Sponsorship

Several categories of sponsorship were offered:

- Major sponsor: FRDC was recognised as the major sponsor, contributing to offsetting event costs and supporting student prizes and travel bursaries.
- Silver Sponsor: Australian Bureau of Agricultural and Resource Economics and Sciences.
- Bronze Sponsors: South Australian Research and Development Institute and the Department of Fisheries WA.
- The Great Barrier Reef Marine Park Authority provided the venue (ReefHQ) for the welcome reception and a significant contribution to the event costs.
- Additional sponsorships were provided by: Australian Institute of Marine Science, Commonwealth Scientific and Industrial Research Organisation, Institute for Marine and Antarctic Studies, the School of Marine and Tropical Biology James Cook University, School of Earth and Environmental Sciences James Cook University,
- VEMCO provided an acoustic receiver and hydrophone for auction.

Sponsorship enabled the Organising Committee to subsidise the meeting expenses and in particular student registration costs which were significantly discounted. The Organising Committee also budgeted to off-set the carbon footprint of the meeting.

## 5.4 Event program

The Conference program indicating presentation titles is provided as Appendix 3 and the full program (including abstracts) can be downloaded from <http://www.asfb.org.au/pubs/>. The 5<sup>th</sup> Australian Technical Workshop on Fishways (20-22 July), a social sciences workshop (*What difference does SOCIAL science make to fisheries research and management?* – 22 July), Routine Fish Ageing meeting (22 July,) and OzFishNet Ichthyological meeting (22 July) were also held in association with the Conference.

## 5.5 Event report

The event commenced with eighty people attending the pre-conference workshop 5<sup>th</sup> Australian Technical Workshop on Fishways led by Alana O'Brien and Tim Marsden (DEEDI) which brought together both industry and science to discuss fishways. Renae Tobin (JCU) and Nadine Marshall (CSIRO) facilitated the social science workshop '*What difference does SOCIAL science make to fisheries research and management?*', a gathering of 43 delegates. The OzFishNet Ichthyological meeting led by Peter Last (CSIRO) and Routine Fish Ageing Meeting led by Jonathan Staunton-Smith (DEEDI) were also held concurrently on Friday 22 July.

A welcome function was held at Reef HQ Aquarium on Friday 22 July and the conference was formally opened on Saturday 23 July by Mike Kingsford (chair) and ASFB President Jeremy Lyle. The first session involved three keynote presentations. Prof Chris Lowe presented work on using telemetry tools to investigate fish movement, which won him the student's choice award for the best keynote presentation. Dr Brad Pusey discussed freshwater fish connectivity in rivers and the 2009 K Radway Allen Award winner Dr Peter Last provided insights into his career experiences in elasmobranch research, along with identifying research needs and challenges.

Concurrent sessions followed with students, early career and established scientists, representatives from management agencies and industry presenting talks on a range of topics including: animal movement, freshwater invasives, fisheries and management, fish behaviour, age and growth, coral reef ecology and freshwater floods.

Townsville's Museum of Tropical Queensland hosted the annual conference dinner. International travel awards (student and inaugural early career research), student research awards (Barry Jonassen and Michael Hall awards), and career excellence awards (K Radway Allen and inaugural early career excellence awards) were presented by the ASFB president at the dinner (refer below).

Sunday began with keynote presentations from Prof Geoff Jones on larval export from marine reserves and the hot topic of managing Australia's marine biodiversity by Prof Nic Bax. General presentation sessions focussed on freshwater research (eels, Murray cod and impoundments), estuarine systems, snapper management, crustacean fisheries management and climate change and coral reefs. Delegates also viewed the poster presentations throughout the day.

The closing of the conference on Sunday evening provided an opportunity to present the conference oral and poster awards (refer below) and acknowledge and thank sponsors and the organising committee.

## 5.6 Key Indicators

- 220 delegates (64 students and 156 professional registrations) attended the conference. Delegates included international representatives from 11 different countries from the Asia Pacific, Europe and Americas, with a particularly strong representation from New Zealand.
- Five keynote presentations:
  - Prof. Chris Lowe (California State University) *Quantifying physiological and behavioural ecology of marine fishes using telemetry: choosing the right tools for the job.*
  - Dr. Bradley Pusey (Griffith University) *Freshwater fish and connectivity in tropical northern Australian rivers.*
  - Prof. Geoffrey Jones (James Cook University) *Larval export from marine reserves benefits fish and fisheries.*
  - Prof. Nic Bax (University of Tasmania) *Managing Australia's marine biodiversity.*
  - K Radway Allen Award Recipient: Dr. Peter Last (CSIRO) *Shark tales: close encounters from down under!*
- 93 oral presentations and 14 posters presented by students, early and established scientists, managers and industry on a range of topics including: animal movement, freshwater invasives, fisheries and management, fish behaviour, age and growth, coral reef ecology and freshwater floods.
- Gilbert Whitley junior and senior oral presentation awards, John Lake junior and senior poster awards and John Glover travel fund bursaries were sponsored by FRDC, with recognition provided on certificates and at award ceremonies.
- FRDC sponsored fisheries and management sessions ('Fisheries and general management', 11:00-12:00 23 July; 'Fisheries management methods' 10:15-12:00 24 July; 'Fisheries Management – Snapper' and 'Crustacean Fisheries and Management' 1:30-3:00 24 July) and were promoted as the major sponsor of the conference throughout the build-up and during the event with logo displayed on powerpoint slides, notice boards, free-standing sponsorship banners, conference program handbook and conference website.
- Pre-conference workshops and meetings were well attended.
- Hallprint Ltd., Reality Check Ltd. and Vemco provided exhibition tables at the event.
- Conference carbon emissions were offset by "Climate Friendly" scheme, a total of 20 tonnes.



## 5.7 Workshop and meeting summaries

### ***ASFB2011 Social Science Workshop: What difference does SOCIAL science make to fisheries research and management?***

The workshop, led by Dr Renae Tobin (Fishing & Fisheries Research Centre at James Cook University) and Dr Nadine Marshall (CSIRO Ecosystem Sciences), aimed to shed some light on the questions: “what is social science” and “what difference does it make to fisheries research and management”. It aimed to explain social science in relation to biology, ecology and management, and present case studies highlighting the use and importance of social science research to ecological and management projects.

The workshop was attended by 43 people, including social scientists with experience in this field, biologists, ecologists, economists and fishery and marine park managers. Ten presentations by fisheries researchers and managers provided an interesting spread of social science experience and examples within the context of different fisheries, both nationally and internationally.

Presentations covered such topics as how to measure and improve adaptive capacity, reducing vulnerability of fisheries to change; developing social objectives and incorporating social goals in management development; co-management and stewardship within commercial fisheries; exploring social impacts of development on fisheries; communicating science to fishers; and training villagers in pond aquaculture in developing countries.

These presentations, while diverse in their focus and methods, had some consistent themes. For instance many highlighted the need to engage stakeholders at the outset of research projects and management reviews. For meaningful engagement, co-management, and/or improved stewardship the most important element is to build trust within and between stakeholders, managers and researchers. For co-management and stewardship approaches to succeed there must a need or desire by the stakeholders to become engaged, and effective leadership to allow effective communication and ongoing progress. Also, many researchers and research projects can provide help to stakeholders, particularly in tackling change.

The presentations promoted significant discussion. Participants highlighted the current situation that social goals are starting to be considered within management plans or management strategy evaluation, but they usually still rank well behind environment and economic goals – while this is likely to be the case for a while yet, the workshop participants were hopeful social goals would be considered alongside other goals in the future. Further, we appear to be currently using social science to reduce the impacts of change, rather than incorporating social objectives to drive change in the future.

One of the strengths of social science lies with its ability to join with other disciplines to greatly improve overall understanding and outcomes. We hope this workshop increased the likelihood of, and ability for, this to happen in the future.

### ***OzFishNet Workshop Summary***

The OzFishNet Workshop attracted 16 participants from the Australian Ichthyological community, representing the Australian Museum (Sydney), CSIRO (Hobart), Museum Victoria (Melbourne), DPI Victoria, Northern Territory Museum & Art Gallery (Darwin) and the Queensland Museum (Brisbane). The meeting addressed issues relating to the management and research activities of staff from Australian fish collections, including: Discussion of a proposed Fishes of Australia tool for researchers and the general public; Fishes of Australia Online (including an Interactive Key to Australian Freshwater Fishes); the Fishes component of the Atlas of Living Australia; updates to the Australian Faunal Directory and Ozcam Demonstration; potential for future fieldwork and research cruises; Fish Barcode of Life; Taxonomic Interests Lists; Family Numbering Systems and AQIS permits.

The full minutes of the meeting will be made available on the OzFishNet site:  
<http://ozfishnet.org/index.htm>

## 6. ASFB CONFERENCE 2012

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### 6.1 Background

The 2012 ASFB conference/symposium was held as a joint event with the Oceania Chondrichthyan Society (OCS) in Adelaide, South Australia from 15-18 July, 2012. The event venue was the at the Sebel Playford Hotel, Adelaide. The purpose of holding this as a joint event was to facilitate the interaction and exchange of ideas amongst scientists and natural resource managers who may be doing similar research work, but because they work on different taxa that are represented by the two societies, rarely get the chance to meet and exchange ideas.

The conference/symposium was developed as a three-day meeting that had two primary components. The conference component entailed a series of concurrent sessions during which delegates had the opportunity to give presentations or posters on any topic of their choice. The second component of the meeting was a focussed symposium on the major topic of '*Addressing the challenges of understanding the movement patterns of aquatic animals and their significance*'. The symposium involved three sessions during which nine eminent scientists gave keynote presentations on several different themes. These included the invited international plenary speaker Dr Steven Campana, recognised as the world's leader in the use of natural tags for describing animal movement. The other eight keynote speakers reviewed the movement-related research being done in Australia across ecosystems from freshwater to marine and across the taxonomic range of fishes from invertebrates to vertebrates.

### 6.2 Conference/Symposium Organising Committee

<i>Anthony Fowler</i> (Chair)	SARDI
<i>Stephen Mayfield</i>	SARDI
<i>Bronwyn Gillanders</i>	University of Adelaide
<i>Chris Izzo</i>	University of Adelaide
<i>Charlie Huveneers</i>	SARDI / Flinders University
<i>Katherine Cheshire</i>	ABARES
<i>Lara Birchby</i> (meeting manager)	The Meeting People

### 6.3 Sponsorship

- Platinum Sponsor: FRDC was recognised as the major sponsor, contributing to offsetting event costs and supporting student prizes and travel bursaries.
- Gold Sponsor: South Australian Research and Development Institute
- Bronze Sponsors: CSIRO and Primary Industries and Regions, South Australia.
- Conference Dinner Sponsor: Department of Fisheries, Western Australia
- Keynote Speaker Sponsor: Murray Darling Basin Authority.

Sponsorship enabled the Organising Committee to subsidise the meeting expenses and especially student registrations.

## 6.4 Event program

The Conference program indicating presentation titles is provided as Appendix 4, the full program (including abstracts) can be downloaded from <http://www.asfb.org.au/pubs/>. A Routine Fish Ageing workshop (19 July), AATAMS workshop (19 July) and Introduction to backpack electrofishing workshop (19-20 July) were also held in association with the Conference/Symposium.

## 6.5 Event report

There was a full program of 148 oral presentations that included nine keynote presentations on the symposium topic as well as three ASFB and OCS plenary presentations. The latter include presentations from ASFB's 2011 K. Radway Allen Award recipient and the 2011 Inaugural Early Career Excellence Award recipient. Museum Victoria also launched the new Fishes of Australia website.

The conference component of the scientific meeting included five sessions during which concurrent talks were presented. These covered a broad range of themes that included a mini-symposium on fishery genetics entitled 'Fisheries genetics – what managers really want?', aimed at evaluating the role of genetics in the management of wild fisheries. The other themes for conference presentations included: fisheries management; recreational fisheries; ecosystems; aquatic reserves; marine fish biology; freshwater fish biology; larval fish biology; and movement based on natural and artificial tagging techniques. The conference program also included an extended poster session to accommodate the 25 posters.

As a way of value-adding to the event and to take advantage of having numerous delegates from around the country, several focussed workshops were held after the meeting. These focussed on the following topics: routine fish ageing; acoustic telemetry; and electrofishing. The routine fish ageing workshop continued work that was initiated in Townsville (2011) towards developing a national framework for routine fish age estimation from otoliths. The AATAMS workshop was aimed at introducing the new National AATAMS database and the two-day introductory workshop on backpack electrofishing provided theoretical and practical training in the use of electrofishers.

The program also included several organised social functions. An ice breaker was held during the evening of 15 July 2012 at the conference venue, i.e. Sebel Playford Hotel. A student mixer function was held at a local hotel on 17 July, providing an opportunity for the students from different universities from around the country to get to know each other and to discuss their various research topics. Finally, the conference dinner was held on 18 July at the Adelaide Oval Function Centre. International travel awards (student and early career research), student research (Barry Jonassen and Michael Hall awards), early career excellence and conference presentation awards (GP Whitley and JS Lake) were presented by the ASFB president at the dinner (refer below).

## 6.6 Key Indicators

- 223 delegates (64 students and 159 professional registrations) attended the symposium/conference.
- Delegates included international representatives from five different countries from the Pacific, Americas and Africa, with a strong representation from New Zealand.
- Nine keynote symposium presentations:
  - Dr Steve Campana (Bedford Institute of Oceanography) *Natural tags and markers for tracking and identifying aquatic organisms.*
  - Prof Greg Jenkins (Department of Primary Industries, Victoria) *Understanding the dispersal of marine fish larvae: how far have we come and where to next?*
  - Dr Alison King (Charles Darwin University) *Not just "Goin'-with-the-flow": challenges in understanding the movement patterns of the early life stages of Australian freshwater fish.*
  - Dr Jayson Semmens (University of Tasmania) *Where, when, how and why: Using acoustic telemetry to understand marine animal movement, behaviour and physiology.*
  - Dr John Koehn (Arthur Rylar Institute for Environmental Research) *Tagging freshwater fish.*
  - Dr Jenny Ovenden (Department of Employment, Economic Development and Innovation, Queensland) *Crinkles in connectivity: a genetic perspective on the influence of movement on fisheries stock structure.*
  - Dr Craig Mundy (University of Tasmania) *Application of animal movement analytical techniques to fishery data: how do you turn a dataset with 25,000 dives and 10,000,000 records per year into meaningful information.*
  - Dr Colin Simpfendorfer (James Cook University) *Beyond the "shiny new hammer": data analysis tools to make the most of acoustic monitoring systems.*
  - Dr Simon Goldsworthy (South Australian Research and Development Institute) *Impact and mitigation of Australian sea lion bycatch in the shark gillnet fishery off South Australia.*
- Three ASFB & OCS plenary presentations
  - K Radway Allen Award Recipient: Dr. Rod Lenanton (Department of Fisheries, WA) *Some reflections on a lifetime in fishery science.*
  - Inaugural Early Career Excellence Award Recipient: Dr. Rebecca Fisher (University of Western Australia) *Larval swimming performance and impacts on dispersal.*
  - OCS-Passions of Paradise Student Research Grant Recipient: Cassie Rigby (James Cook University) *Habitat associations of deepwater chondrichthyan life history traits.*
- a full program of 148 oral presentations that included nine keynote presentations on the symposium topic as well as three ASFB and OCS plenary presentations and 25 posters presented by students, early and established scientists, managers and industry on a range of topics.
- The Fishes of Australia website was launched.

- Gilbert Whitley junior and senior oral presentation awards, John Lake senior poster award and John Glover travel fund bursaries were sponsored by FRDC, with recognition provided on certificates and at award ceremonies.
- FRDC sponsored “fisheries and management” sessions (“Fishery management 1”, 11:15-12:45; “Fishery management 2” 13:45-15:15; and “Fishery management 3” 15:45-17:30 16 July) and were promoted as the major sponsor of the conference throughout the build-up and during the event with logo displayed on powerpoint slides, notice boards, free-standing sponsorship banners, conference program handbook and conference website.
- Associated post-conference workshops were well attended.
- Welcome function held at Sebel Playford Hotel, annual conference dinner at the Adelaide Oval Function Centre.
- Hallprint Ltd., Myriax, Smith-Root Australasia Pty-Ltd, Scielex, and Wildlife Computers provided exhibition tables at the event.

## **6.7 Workshop and meeting summaries**

### ***AATAMS workshop***

The AATAMS workshop was held at the University of Adelaide on 19 July and was attended by 20 scientists from Queensland, NSW, Victoria, Tasmania, and South Australia as well as by scientists from New Zealand (NIWA), and Brazil (Sao Paulo State University). The manufacturer of the equipment used by the AATAMS facility (Vemco) also sent a representative from Canada to present and highlight the recent development in the acoustic telemetry technology. During the workshop, the AATAMS facility technical officer, Andrew Boomer, went through the recently released AATAMS database which is aimed to provide:

- access to data from AATAMS receivers;
- access data from community receivers;
- storage and archiving of all data and metadata;
- tools developed by AATAMS to facilitate visualisation of the data; and
- a means to overlay the data from the other IMOS 9 facilities through OceanPortal.

During the workshop, all participants were able to trial the database and upload some of their own data.

The workshop was supported by the University of Adelaide providing the venue and the AATAMS facility.

## **Routine Fish Ageing workshop**

Twelve participants, including international expert Steve Campana along with representatives of most fisheries agencies and Fish Ageing Services were represented at the workshop.

### **Workshop Objectives:**

1. To develop a series of best practice protocols for the production of the highest quality fish age data, as produced from reading otoliths, required for routine monitoring and stock assessment of Australian fisheries.
2. To assess and discuss the trade-offs between alternative approaches adopted by the different agencies, and where possible, to achieve consensus on general best practice approaches to ensure consistency across all of the fishery agencies.
3. To promote collaboration among the agencies for this important area of fisheries monitoring and stock assessment.

### **Workshop summary:**

This was the second in a series of planned workshops. The day was divided into six sessions to address four key topics:

1. Introduction (setting the scene)
2. Topic 1: Terminology
3. Topic 2: Reading otoliths (interpreting otolith structure for age estimation)
4. Topic 3: Converting otolith data to fish ages (calculations)
5. Topic 4: Reference collections
6. Wrap-up. Discuss outcomes and where to next.

For each topic, there was a brief 15 minute presentation aimed to introduce the topic to the group and key issues. Then subsequent discussion sessions (which took the majority of the day) addressed these issues for each corresponding topic. Numbers were limited to ensure that discussion sessions were of an informal nature.

### **Outcomes:**

- All discussion sessions completed and minuted. Draft sections are currently being prepared as contributions toward a “National Framework for routine fish age estimation” document. This document is planned to be made publicly available as a best practice guide to developing fish age estimation protocols for fishery monitoring and stock assessment in Australia.
- A major outcome of the workshop was refinement of the original objectives: the National “Framework” is now planned to be a relatively concise document, detailing a set of guidelines on best practice approaches.
- A number of other proposed projects arose from the discussion sessions to be investigated in further detail and produced as separate documents in order to support the overarching Framework document.

**Future planned work:**

- Subsequent workshops are planned to address topics not addressed on the day. Future topics include: defining different categories of financial resources and historical data availability for structuring the framework; post-qualification QC/QA protocols; sample processing and storage; use of proxies other than otolith age estimates; image analysis; data storage and databases; producing an on-line framework as a publicly available resource.
- Producing the “National Framework” as a publicly available online resource to enhance collaboration among agencies and provide opportunities for other agencies (e.g. university students) to access as a reference and training resource.



## 7. RESEARCH & TRAVEL AWARDS

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### 7.1 ASFB2011 Student award recipients (sponsored by FRDC)

**GP Whitley Senior Award** – best student (Masters or PhD) oral presentation  
Ryan Day (University of Queensland) – *Extreme pharyngognathy: Modelling the energetic cost of a hypertrophic pharyngeal mill.*

**GP Whitley Junior Award** - best student (Honours) oral presentation  
Susannah Leahy (James Cook University) – *To fear or to feed: the effects of turbidity on perception of risk by a marine fish.*

**JS Lake Senior Award** – best student (Masters or PhD) poster  
Jimmy White (James Cook University) – *Assessing the susceptibility of *Glaucostegus typus*, *Rhynchobatus australiae* and *Anoxypristis cuspidata* to commercial fishing activity.*

**JS Lake Junior Award** – best student (Honours) poster  
Vinay Udyawer (James Cook University) - *Evacuation of a coastal bay: movement patterns of elasmobranchs in response to Tropical Cyclones Anthony and Yasi.*

**Victorian Marine Science Consortium Award** for temperate fish research (sponsored by VMSC)  
Athol Whitten (University of Melbourne) - *Accounting for variable growth in fisheries stock assessments: A case study from south-eastern Australia.*

#### John Glover travel bursary recipients

Tom Bird	University of Melbourne
Patrick Gilmour	University of Melbourne
Nadine Hackett	Flinders University
Simon Howard	University of Canterbury
Tim Kaminskis	Charles Sturt University
Hannah Murphy	University of Melbourne
Michael Smith	University of Melbourne
Danswell Starrs	Australian National University
Whitten Athol	University of Melbourne

#### Value of student awards (FRDC contribution)

GP Whitley awards	\$1,200.00
JS Lake awards	\$1,200.00
John Glover bursary	\$2,297.05
<b>TOTAL</b>	<b>\$4,497.05</b>

## 7.2 Other ASFB Awards presented at 2011 Conference

### ***Student Research Support***

**2011 Barry Jonassen Award** - David Sternberg (Griffith University) \$2,000 towards costs associated his project examining 'Ecological trait diversity in Australian freshwater fish.'

**2011 Michael Hall Student Innovation Award** - Sandra Binning (Australian National University) \$2,000 towards costs associated with her research project 'Shape up or ship out: Can coral reef fish change their shape to suit their environment?'

### ***International Travel awards***

**Student International Travel Scholarship** - Andrew McKinley (UNSW) for his paper 'Strong links between metal contamination, habitat modification and estuarine larval fish distributions'. \$3,000 provided to support travel to an international conference.

**Inaugural Early Career International Travel Scholarship** - Jan-Olaf Meynecke (Griffith University) - \$3,000 to support the presentation of his mud crab research at the 50<sup>th</sup> Estuarine and Coastal Sciences Association (ECSA) symposium in 2012.

### ***Career Excellence Awards***

**Inaugural Early Career Excellence Award** - Rebecca Fisher (Oceans Institute, UWA) for contributions and breakthroughs in understanding of larval fish dispersal and connectivity.

**K Radway Allen Award** for career excellence and outstanding contribution in fish or fisheries science - Rod Lenanton (Fisheries WA), internationally recognised pioneer in temperate estuarine fish/fisheries research 1960s-1980s, key driver in early environmental impact assessments in south-west estuarine systems, principal instigator of research into recreational fisheries in WA.

## 7.3 ASFB2012 Student award recipients (sponsored by FRDC)

**GP Whitley Senior Award** – best student (Masters or PhD) oral presentation  
Adrian Hordyk (Murdoch University) – *Length-based empirical estimation of SPR for small-scale, data-poor fisheries.*

**GP Whitley Junior Award** - best student (Honours) oral presentation  
George Giatas (Flinders University) – *Diet related distribution of the Yellow-eye mullet (Aldrichetta forsteri) in the Murray River estuary and North Lagoon of the Coorong, South Australia.*

**JS Lake Senior Award** – best student (Masters or PhD) poster  
Gretchen Grammer (University of Adelaide) – *Development of an otolith-based marine chronology in the Southern Hemisphere.*

**JS Lake Junior Award** – best student (Honours) poster  
Not awarded.

**Victorian Marine Science Consortium Award** for temperate fish research  
(sponsored by VMSC)

Elena Sulin (Murdoch University) - *Size and age compositions and growth of King George Whiting (Sillaginodes punctata) in south-western Australia.*

**John Glover travel bursary recipients**

Carlos Bustamante	University of Queensland
John Ford	University of Melbourne
Adrian Hordyk	Murdoch University
Nils Krück	University of Queensland
Michael Smith	University of Melbourne
Danswell Starrs	Australian National University
David Sternberg	Griffith University
Elena Sulin	Murdoch University
Athol Whitten	University of Melbourne

**Value of student awards (FRDC contribution)**

GP Whitley awards	\$1,200.00
JS Lake awards	\$ 600.00
John Glover bursary	\$2,068.90
<b>TOTAL</b>	<b>\$3,868.90</b>

**7.4 Other ASFB Awards presented at 2012 Conference**

***Student Research Support***

**2012 Barry Jonassen Award** - Jonathan Murphy (Murdoch University) \$2,000 towards costs associated his project examining ‘The molecular phylogeography of freshwater fishes in south-western Australia’.

**2012 Michael Hall Student Innovation Award** - Susannah Leahy (James Cook University) \$2,000 towards costs associated with her research project ‘Incorporating ontogenetic habitat shifts into marine reserve designs’.

***International Travel awards***

**Student International Travel Scholarship** – Joel Williams (University of Melbourne) for his paper ‘Influence of freshwater flows on the distribution of eggs and larvae of black bream *Acanthopagrus butcheri* within a drought-affected estuary’. \$3,000 provided to support travel to 9<sup>th</sup> Indo-Pacific Fish Conference in Okinawa, Japan in July 2013.

**Early Career International Travel Scholarship** – Kathryn Hassell (University of Melbourne) support the presentation of her research on the yellowfin goby at the Annual meeting of the Asia-Pacific branch of the Society for Environmental Toxicology and Chemistry.

***Career Excellence Awards***

**Early Career Excellence Award** – Alison King (Charles Darwin University) for contributions and breakthroughs in understanding Australian freshwater fish biology and management.

## **8. BENEFITS**

The main benefits of the FRDC sponsorship in supporting research awards and the annual science conferences are the promotion of research excellence, extension of research findings (many projects funded by FRDC) and training and mentoring of early career researchers. More broadly, stakeholder groups, resource managers, industry and the general community accrue benefit from the transfer of knowledge and technology that supports the health and sustainability of aquatic ecosystems and fishing industries.

## **9. FURTHER DEVELOPMENT**

In relation to this project there is no further development required. Provision of multi-year sponsorship support to the ASFB as part of an integrated sponsorship package has, however, proven effective in providing certainty for the Society in its ability to organise its annual science conference, and allowing for a strong focus of support for early career researchers via research awards, travel bursaries and subsidised registrations. The move away from the more traditional annual sponsorship requests linked to a specific workshop theme (often involving considerable organisational and reporting requirements) has also resulted in a move to a more flexible approach that has seen multiple workshops and technical meetings associated with conferences, adding further value to each event.

## **10. PLANNED OUTCOMES**

Effective provision of opportunities for knowledge transfer, the building research partnerships as well as recognising and promoting achievements, particularly amongst early career researchers represent the main planned outcomes. Key performance measures that support these outcomes include the large number of registrants (around 220 for each event), the quality of keynote presenters attracted to the events (including world leaders in their fields of endeavour), the number, quality and diversity of presentations (over 100 for each event), representation of students (around 30% of all registrants) and early career researchers who presented their research at the each of the annual science conferences.

## **11. CONCLUSION**

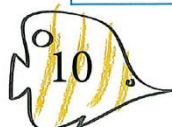
The 2011 and 2012 annual science conferences were highly successful as evidenced by metrics such as the number of registrants (in particular students), number of presentations, and value adding achieved through linked technical workshops and meetings. The broad scope of the programs, the quality of presenters, many of whom are recognised internationally as experts in their fields, coupled with the level of interest in meetings and workshops associated with the events (evidenced by the number of registrants, sponsors and exhibitors) pays testimony to the overall significance as a national forum of research exchange of the ASFB annual conference. FRDC sponsorship contributed to funding awards and off-set event costs that also enabled significant registration discounts to be offered to students.



## APPENDIX 3: 2011 ASFB CONFERENCE PROGRAM

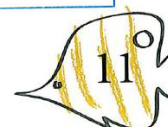
### SATURDAY MORNING SCHEDULE

	ROOM 1. RAFFLES & KINGSTON ROOM	ROOM 2. SAVOY ROOM	ROOM 3. PORTSIDE ROOM
8.30	Welcome: Mike Kingsford ASFB2011 Chair		
8.45	Welcome: ASFB President Jeremy Lyle		
9.00	Keynote Plenary: Prof. Chris Lowe Quantifying physiological and behavioural ecology of marine fishes using telemetry: choosing the right tools for the job		
9.30	Keynote Plenary: Dr. Bradley Pusey Freshwater fish and connectivity in tropical northern Australian rivers		
10.00	K Radway Allen Award Recipient: Dr. Peter Last Shark tales: close encounters from down under!		
<b>10.30-11.00</b>	<b>MORNING TEA</b>		
<b>11.00-12.30</b>	<b>ANIMAL MOVEMENT</b>	<b>FRESHWATER INVASIVES</b>	<b>FISHERIES &amp; MANAGEMENT GENERAL</b>
11.00	Using acoustic telemetry to understand the behaviour and habitat utilisation of key recreational fish in southeast Australia <i>Tracy, Sean</i>	Environmental engineering favours non-native common carp in the Lower Lakes of the River Murray <i>Bice, Chris</i>	Reducing uncertainty in fish shocks <i>Woodhams, James</i>
11.15	Residency and activity patterns of shark-like batoids in Cleveland <i>White, Jimmy</i>	Coexistence between threatened native and exotic fish is benefited by water extraction in a semi- arid New Zealand catchment <i>Shelley, James</i>	Research and management of toothfish and icefish fisheries in the Southern Ocean <i>Ziegler, Philippe</i>
11.30	Migration timing and habitat use by southern bluefin tuna determined with acoustic monitoring <i>Hobday, Alistair</i>	Impact of the introduced Eastern gambusia ( <i>Gambusia Holbrooki</i> ) on the endangered Murray hardyhead ( <i>Craterocephalus fluviatilis</i> ) <i>Rehwinkel, Rohan</i>	Genetic differentiation and demographic history of the orange roughy <i>Hoplostethus atlanticus</i> at a global scale <i>Varela, Andrea</i>
11.45	A hierarchical, spatially explicit recapture model incorporating radio telemetry and passive tagging <i>Bird, Tom</i>	A field based assessment of native fish responses following eastern gambusia removal: putting theory into practice <i>Tonkin, Zeb</i>	Promoting stock recovery through the standardisation of fishing gear: streamlining the haul net sector of South Australia's garfish fishery <i>Steer, Mike</i>
12.00	Spatial ecology of nearshore elasmobranchs <i>Heupel, Michelle</i>	Current status of freshwater fish stocks in the Sepik-Ramu, Papua New Guinea, following introduction of non-native FISHAID fish species <i>Pandihau, Lina</i>	Effects of recreational fishing on sharks in the Great Barrier Reef Marine Park <i>De Faria, Fernanda</i>
12.15	Can strongly site-attached coral reef fish relocate in response to habitat loss? An experimental analysis <i>Gardiner, Naomi</i>	Behavioural adaptations of rainbow fish to <i>Bufo marinus</i> tadpoles <i>Brown, Culum</i>	The target shark longline fishery of Tanjung Luar in East Lombok (Indonesia) <i>White, William</i>
<b>12.30-2.30</b>	<b>LUNCH &amp; AGM</b>		



## SATURDAY AFTERNOON SCHEDULE

	ROOM 1. RAFFLES & KINGSTON ROOM	ROOM 2. SAVOY ROOM	ROOM 3. PORTSIDE ROOM
<b>2.30-3.30</b>	<b>FISH BEHAVIOUR</b>	<b>FRESHWATER INVASIVES</b>	<b>AGE &amp; GROWTH</b>
2.30	Feeding, growth, and maximum daily ration of the moray <i>Gymnothorax polyuranodon</i> in a captive commune Ebner, Brendan	The use of baited vs. unbaited double-wing fyke nets to capture common carp in a shallow New Zealand lake Daniel, Adam	Demographic patterns of tropical baitfish species (family: Clupeidae) at multiple latitudes across the Great Barrier Reef shelf Woodcock, Emma
2.45	Personality-associated learning strategies in mulloway ( <i>Argyrosomus japonicus</i> ) Raoult, Vincent	A novel Wetland Carp Harvesting System to target and harvest migrating carp Thwates, Leigh	Fish as reliable biological loggers of feeding conditions Gerard, Emily
3.00	Predation history restricts the ability of coral reef fish to generalise predator recognition when learning to identify predators Mitchell, Mat	Carp Acoustics: Attractants and Repellents Fredburg, Josh	Recent advances in quality assuring Fisheries Queensland's fish ageing data Foley, Brenda
3.15	To fear or to feed: the effects of turbidity on perception of risk by a marine fish Leahy, Susannah	TBA	Biology, commercial catch rates and post-release survival of pearl perch <i>Glaucosoma scapulare</i> in Queensland Campbell, Matthew
<b>3.30</b>	<b>AFTERNOON TEA</b>		
<b>4.00-5.00</b>	<b>CORAL REEF FISH ECOLOGY</b>	<b>FRESHWATER FLOODS</b>	<b>AGE &amp; GROWTH</b>
4.00	Corallivore feeding preferences reflect fitness benefits Brooker, Rohan	Big sky water country: flood response in a desert river Kerezszy, Adam	Accounting for variable growth in fisheries stock assessments: A case study from south-eastern Australia Whitten, Athol
4.15	Constraints of a coral reef lifestyle: convergence in energetic performance across fish swimming modes Fulton, Chris	Dispersal of golden perch and spangles perch in the Great Darling Anabranch in response to the first major flow events in eight years Linklater, Danielle	Age and size structure of commercial and recreational catches with estimates of fishing mortality of Australian herring from Western Australia Brown, Joshua
4.30	Nemipterid Tales: a holistic view of habitat use for a coral reef fish Boaden, April	Black-water induced suppression of native fish spawning during the 2010-11 Murray River flood event in the Mallee Carr, Lauren	Length frequency analysis and genetic data suggest two independent breeding units of yellowfin tuna ( <i>Thunnus albacares</i> ) exist in the Indian Ocean Dammannagoda, Sudath
4.45	Reproductive characteristics of the orbiculate cardinalfish, <i>Sphaeramia orbicularis</i> Cuvier, 1828 in the Chuuk Lagoon, Micronesia Choi, Young-Ung	From drought to flood: annual variation in larval fish assemblages in the heavily regulated Lower River Murray, SA Cheshire, Katherine	Age and growth, reproduction mortality and population characteristics of Spirilin <i>Alburnoides cf bipunctatus</i> (Actinopterygii: Cyprinidae) in Northern Iran Seifali, Mahvash
<b>5.00</b>	<b>CLOSE</b>		





## SUNDAY MORNING SCHEDULE

	ROOM 1. RAFFLES & KINGSTON ROOM	ROOM 2. SAVOY ROOM	ROOM 3. PORTSIDE ROOM
8.30	Keynote Plenary: Prof. Geoffrey Jones Larval export from marine reserves benefits fish and fisheries		
9.00	Keynote Plenary: Prof. Nic Bax Managing Australia's marine biodiversity		
9.30	5 <sup>th</sup> Australian Technical Workshop of Fishways Summary: Tim Marsden	Social Workshop Summary: Renae Tobin	Age and Growth Workshop Summary: Jonathan Staunton-Smith
9.45-10.15	<b>MORNING TEA</b>		
10.15-12.00	<b>FISHERIES MANAGEMENT METHODS</b>	<b>FRESHWATER GENERAL</b>	<b>FRESHWATER – INDIVIDUAL SPECIES</b>
10.15	Effects of marine reserve protection on adjacent non-protected populations in New Zealand Diaz-Guisado, Daniela	Evolutionary ecology of the Terapontidae Davis, Aaron	Eels on Wheels: evaluating the trap-and-transfer method for Long-Finned Eels ( <i>Anguilla reinhardtii</i> ) to overcome barriers to upstream migration at the Ross River Dam, Townsville Duncanson, Paul
10.30	Reef-fish connectivity estimates for the Great Barrier Reef using a biophysical larval-fish dispersal model Leis, Jeff	Ecosystem metabolism and carbon transfer in a wet-dry tropical river: the role of dry season production for sustaining fish communities Hunt, Richard	Modelling the Impact of Water Resource Development on Golden Perch Persistence in the Fitzroy River Basin, Central Queensland Menke, Norbert
10.45	Derelict fishing line as a tool for assessing the distribution of fishing effort and compliance with no-take marine reserves Williamson, Dave	Efficacy of stable isotope labelling of fish otoliths with stable calcium isotopes Starrs, Danswell	Study of downstream movement behaviour in larval Murray cod, <i>Maccullochella peelii peelii</i> Kaminskas, Timothy
11.00	Maintaining the support and participation of stakeholders for fishery dependent monitoring programs in controversial times Wesche, Stephen	Incorporation of magnesium into fish otoliths: discrimination between water and diet Woodcock, Skye	Movement and habitat use of freshwater catfish in Tahbilk Lagoon, Victoria Koster, Wayne
11.15	Accounting for scientific uncertainty when setting catch limits based on harvest control rules Punt, Andre	Do amphidromous larval koaro ( <i>Galaxias brevipinnis</i> ) disperse widely? Closs, Gerard	Blackfish distribution and genetic structure in the Condamine River catchment, Queensland Balcombe, Stephen
11.30	Low-cost and largely unbiased estimates of mortality rate from data we might already have: single tag-recoveries McGarvey, Richard	Lake morphometry and trophic state control growth of rainbow trout in New Zealand lakes Blair, Jennifer	New findings on the ecology of the threatened Murray hardyhead ( <i>Craterocephalus fluviatilis</i> ) in Mallee wetlands Ellis, Iain
11.45	Introducing ABACuS: an Atlantis model of the Benguela and Agulhas Current Systems Smith, Michael	Satellite imagery as a tool for remote sensing of water quality and spawning habitat in unmonitored lakes Hicks, Brendan	Plasticity in the reproductive and population biology of <i>Cherax cainii</i> (Decapoda: Parastacidae) inhabiting lentic and lotic environments in south-western Australia Beatty, Stephen
12.00-1.30	<b>LUNCH &amp; POSTER SESSION</b>		



## SUNDAY AFTERNOON SCHEDULE

	<b>ROOM 1. RAFFLES &amp; KINGSTON ROOM</b>	<b>ROOM 2. SAVOY ROOM</b>	<b>ROOM 3. PORTSIDE ROOM</b>
<b>1.30-3.00</b>	<b>FISHERIES MANAGEMENT - SNAPPER</b>	<b>FRESHWATER IMPOUNDMENTS</b>	<b>CRUSTACEAN FISHERIES &amp; MANAGEMENT</b>
1.30	Recent challenges in managing South Australia's Snapper ( <i>Pagrus auratus</i> ) fishery <i>Fowler, Anthony</i>	Monitoring the effects of an enlarged dam on native fish species <i>Broadhurst, Ben</i>	The past and future role of long-term monitoring of the Tropical Rock Lobster (TRL) fishery in Torres Strait <i>Dennis, Darren</i>
1.45	Environment-recruitment relationships for snapper in Port Phillip Bay: implications for climate change <i>Jenkins, Greg</i>	Preventing the invasion of alien fish and EHN virus during the enlargement of an upland reservoir in the ACT <i>Lintermans, Mark</i>	Indigenous culture at the decision-making table: a fisheries management example from the Torres Strait Tropical Rock Lobster Fishery <i>Jones, Annabel</i>
2.00	Feeding ecology of snapper, <i>Chrysophrys auratus</i> (Sparidae), larvae in Port Phillip Bay, Australia: a link between diet and interannual recruitment <i>Murphy, Hannah</i>	Food sources of Macquarie perch in an upland reservoir <i>Wright, Danny</i>	Parameterising a bio-economic model of the Torres Strait Tropical Rock Lobster Fishery: towards a more integrated management approach <i>Hutton, Trevor</i>
2.15	Evaluating post-release survival of Snapper ( <i>Pagrus auratus</i> ) using two venting techniques <i>McLennan, Mark</i>	Predation of Macquarie perch by cormorant species in Cotter Reservoir, ACT <i>Clear, Rhian</i>	Environmental influences on daily commercial catch rates of southern rock lobster ( <i>Jasus edwardsii</i> ) in South Australia <i>Feenstra, John</i>
2.30	Review of the biology of deepwater snappers and related species <i>Newman, Stephen</i>	Movement and habitat use of freshwater catfish in Tahbilk Lagoon, Victoria <i>Koster, Wayne</i>	The importance of conserving recruitment pulses in rock lobster ( <i>Jasus edwardsii</i> ) fisheries where puerulus settlement is low or highly sporadic <i>Linnane, Adrian</i>
2.45	TBA	Factors influencing the spawning success of the Australian lungfish <i>Neoceratodus forsteri</i> within an impoundment habitat <i>Roberts, David</i>	Validity of visual determination of ovary development stages of the western king prawn, <i>Penaeus (Melicertus) latissulcatus</i> (Kishinouye 1896), for harvest strategy and stock assessment <i>Hackett, Nadine</i>
<b>3.00</b>	<b>AFTERNOON TEA</b>		
<b>3.30-5.00</b>	<b>CLIMATE CHANGE &amp; CORAL REEFS</b>	<b>ESTUARINE SYSTEMS</b>	<b>GENERAL SESSION</b>
3.30	Fish communities on the world's warmest reefs: what can they tell us about the effects of climate change in the future? <i>Feary, David</i>	Influence of freshwater flow conditions on fish utilisation dynamics of a tropical estuarine floodplain wetland <i>Davis, Benjamin</i>	Long term density dependent mortality of a reef fish is facilitated by high complexity environments <i>Ford, John</i>
3.45	Potential for developmental thermal acclimation in coral reef fish <i>Grenchik, Katie</i>	Linking Spatial Dynamics of Multiple Taxa within a Tropical Tidal Wetland <i>Mattone, Carlo</i>	Extreme pharyngognathy: Modelling the energetic cost of an hypertrophic pharyngeal mill <i>Day, Ryan</i>
4.00	Effects of ocean acidification on the reproductive performance of a coral reef fish <i>Miller, Gabrielle</i>	The functional importance of the complex Structure within a seascape on fish assemblages <i>Carman, Shaye</i>	Phylogeny of Malaysian <i>Puntius</i> spp. and potential efficiency of mitochondrial and nuclear genes as a DNA barcode <i>Moghaddam, Faezeh (Fafa)</i>
4.15	Predator-prey interactions in a CO <sub>2</sub> -rich marine environment <i>Allan, Bridie</i>	Strong links between metal contamination, habitat modification and estuarine larval fish distributions <i>McKinley, Andrew</i>	Communication of fisheries science among fisheries stakeholders <i>Li, Owen</i>
4.30	Pre-adapting Tasmanian coastal reefs to climate change <i>Casper, Ruth</i>	Trophic connectivity across estuarine intertidal habitats <i>Mclean, Nina</i>	I wish we could electrofish in the ocean!! Differences in fish detectability between smithroot and grassl boat electrofishing <i>Lieschke, Jason</i>
4.45	Using the past to predict the future: otolith growth chronologies and climate change <i>Morongiello, John</i>	Changes in catch rates and length and age at maturity, but not growth, of an estuarine plotosid ( <i>Cnidogobius macrocephalus</i> ) after heavy fishing <i>Chuwen, Ben</i>	Electrofishing efficiency in the Murray River <i>Lyon, Jared</i>
<b>5.00</b>	<b>CLOSE – Award Presentation</b>		



## APPENDIX 4: 2012 ASFB & OCS JOINT CONFERENCE PROGRAM

### Sunday 15 July 2012

15:00-19:30	Registration Opens		Foyer	
15:00-17:00	ASFB Executive Meeting	Adelaide Room 1	OCS Executive Meeting	Adelaide Room 2
17:00-19:00	Welcome Reception		Ballroom 1	

### Monday 16 July 2012

08:00	Registration Opens		Foyer	
<b>08:30</b>	<b>Opening Ceremony</b>		Ballroom 2/3	
	<b>Chair: Bronwyn Gillanders</b>			
08:30	Welcome – Bronwyn Gillanders and Susan Theiss			
08:40	Official Opening – by the Honourable Lyn Breuer MP, Speaker of the House of Assembly, representing the Premier of South Australia.			
<b>09:00-10:45</b>	<b>Plenary Session 1</b>		Ballroom 2/3	
	<b>Chair: Tony Fowler</b>			
09:00	<b>Murray Darling Basin Authority Keynote Speaker</b>			
	Natural tags and markers for tracking and identifying aquatic organisms			
	<u>Steven E. Campana</u>			
09:45	Understanding the dispersal of marine fish larvae: how far have we come and where to next? <u>Greg Jenkins</u>			
10:15	Not just "Goin'-with-the-Flow": challenges in understanding the movement patterns of the early life stages of Australian freshwater fish <u>Alison King</u>			
10:45-11:15	Morning tea		Ballroom 1/Foyer	Ballroom 2/3
<b>11:15-12:45</b>	<b>Concurrent Session 1</b>			
	<b>C1:1 Fishery Management 1</b>	<b>C1:2 Otoliths 1</b>	<b>C1:3 Ecosystems/ Conservation 1</b>	
	<b>Chair: Gavin Begg</b>	<b>Chair: Jodie Kemp</b>	<b>Chair: Colin</b>	
	<b>Sponsored by FRDC</b>		<b>Simpfendorfer</b>	
	Ballroom 3	Ballroom 2	Adelaide Rooms 1/2	
11:15	Predicting common Banana Prawn potential catch in Australia's Northern Prawn Fishery <u>Rik Buckworth, Emma Lawrence, Bill Venables, Peter Rothlisberg, Trevor Hutton and Fiona Hill</u>	Otolith shape and elemental composition: Complementary tools for stock discrimination of mulloway ( <i>Argyrosomus japonicus</i> ) in Southern Australia <u>Greg J. Ferguson, Tim M. Ward and Bronwyn M. Gillanders</u>	Environmental Water Allocations in regulated lowland rivers may encourage offstream movements and spawning by common carp, <i>Cyprinus carpio</i> : implications for wetland rehabilitation. <u>Anthony J. Conallin, Ben B. Smith, Leigh A. Thwaites, Keith F. Walker and Bronwyn M. Gillanders</u>	
11:30	Modelling the larval dispersal and recruitment of western king prawns, <i>Penaeus latisculcatus</i> , to nursery grounds in Spencer Gulf, South Australia <u>Mark Doubell, John Luick, John Middleton, Charles James, Cameron Dixon and Shane Roberts</u>	Contribution of water and diet to otolith chemistry in freshwater fish <u>Zoë A. Doubleday, Christopher Izzo and Bronwyn M. Gillanders</u>	Links between fish assemblages and natural, modified and restored riparian zones <u>Travis Howson</u>	
11:45	Improving the approach for adoption of technological development in the fishing industry: by-catch reduction in the Gulf St Vincent demersal prawn trawl fishery <u>Cameron Dixon, Nathan Bicknell, Daniel Gorman, Graham Hooper, Craig Noell and Shane Roberts</u>	River reconstructions: Inferring past, present and future riverine conditions based on golden perch sclerochronologies <u>Christopher Izzo, Zoë A. Doubleday and Bronwyn M. Gillanders</u>	Atlantis ecosystem modelling in the southern Benguela <u>Michael D Smith, Beth Fulton and Rob Day</u>	
12:00	Research and development of novel by-catch reduction technologies in a demersal trawl fishery <u>Daniel Gorman, Nathan Bicknell, Cameron Dixon, Graham Hooper and Shane Roberts</u>	Spatial distribution of adult coral-reef fish populations that are replenished by seagrass nurseries, as revealed by otolith stable isotope signatures <u>CM Huijbers, Ivan Nagelkerken, AO Debrot and E Jongejans</u>	Differences in fish assemblages associated with wrack on sandy beaches between storm and calm events in Southern Australia. <u>Ryan Baring, Peter Fairweather and Rebecca Lester</u>	

**Monday 16 July 2012 continued...**

12:15	Estimating cryptic mortality for NZ sea lions using crash tests and video: Australia-NZ liaisons <i>Edward Abraham, Robert Anderson, <u>Martin Cryer</u>, Rohan Currey, Jeremy Lyle and Giulio Ponte</i>	Validation of age and back-calculation of growth from otoliths of early life history phase Purple-spotted gudgeon, <i>Mogurnda adspersa</i> <i><u>Danswell Starrs</u>, Brendan Ebner and Christopher Fulton</i>	Is small adequate? Assessing the movement of eastern blue groper ( <i>Achoerodus viridis</i> ) to determine the adequacy of protection in a small marine reserve <i><u>Kate Lee</u>, Charlie Huvneers and Rob Harcourt</i>
12:30	Success of an industry Code of Practice in mitigating interactions of a fishery with a protected species: can industry-based, real-time monitoring programs reduce or eliminate discrepancies between observer and logbook data? <i><u>Tim Ward</u></i>	Spatial grouping and temporal trends in otolith chemistry of an estuarine fish <i><u>Ana Judith Giraldo</u>, Travis S. Elsdon and Bronwyn M. Gillanders</i>	Redmap: an online database and mapping resource for observational marine species data – marine monitoring, community engagement and collaborative research effort <i>Gretta T Pecl, Jemina Stuart-Smith, Dianne Bray, Karen Edyvane, Stewart Frusher, <u>Gary Jackson</u>, Natalie Moltchanivskyj, Melissa Nursey-Bray, Keith Rowling, Marcus Sheaves and Peter Walsh</i>
12:45-13:45 <b>13:45-15:15</b>	Lunch <b>Concurrent Session 2</b>	<i>Ballroom 1/Foyer</i>	
	<b>C2:1 Fishery Management 2</b> <b>Chair: Sean Sloan</b> <b>Sponsored by FRDC</b> <i>Ballroom 3</i>	<b>C2:2 Otoliths/Ageing</b> <b>Chair: Chris Izzo</b> <i>Ballroom 2</i>	<b>C2:3 Larval Fish</b> <b>Chair: Jian Qin</b> <i>Adelaide Rooms 1/2</i>
13:45	From theory to policy: implementing spatial management to a blacklip abalone fishery in South Australia <i><u>Stephen Mayfield</u>, Lianos Triantafillos and Andrew Hogg</i>	Interactive effects of environment and genetics on the otolith chemistry of a temperate estuary associated sciaenid, mulloway ( <i>Argyrosomus japonicus</i> ) <i><u>Thomas C. Barnes</u> and Bronwyn M. Gillanders</i>	Food competition and resource partitioning amongst King George Whiting and other fish species at a nursery ground <i><u>Craig A. Meakin</u>, Jian G. Qin and Anthony J. Fowler</i>
14:00	Measuring population change – comparison of blacklip abalone survey density estimates before and after commercial fishing <i><u>Rowan C. Chick</u>, Stephen Mayfield, Paul Burch, Sacha N. Turich and Richard McGarvey</i>	Connecting Fish – Using otolith elemental fingerprints to determine the contributions of estuaries to coastal populations over time <i><u>Patrick Reis-Santos</u>, Susanne E. Tanner, Rita P. Vasconcelos, Travis S. Elsdon, Henrique N. Cabral and Bronwyn M. Gillanders</i>	Swimbladder ontogeny and environmental factors regulating larval fish function <i><u>Lindsey Woolley</u> and Jian G. Qin</i>
14:15	Should South Australia's garfish fishery be managed through exclusive regulation of gear, strategic effort reduction, or a combination of both? <i><u>Mike Steer</u>, Rick McGarvey and Tony Fowler</i>	Long-term otolith biochronologies reveal the effects of environmental variation and stock abundance on tiger flathead growth rates <i><u>John Morrongiello</u></i>	Food and feeding ecology of Snapper larvae <i><u>Jian G. Qin</u></i>
14:30	Requirements for co-management in abalone fisheries <i><u>Rob Day</u>, Patrick Gilmour, Jeremy Prince and P. Dwyer</i>	Can spatial differences in the chronological structure of otoliths provide insight into the origins and large-scale movement of Snapper ( <i>Pagrus auratus</i> )? <i><u>Anthony Fowler</u> and Michael Steer</i>	Gut histological change of Yellowtail Kingfish larvae during weaning <i><u>Ben Nan Chen</u>, Zhenhua Ma, Wayne Hutchinson, Jian G. Qin, Jennifer Cobcroft, Steven Battaglene and Mike S. Thomson</i>
14:45	Using a capture-recapture model to estimate natural mortality of lobsters in a marine reserve <i><u>Paul Burch</u>, Simon Wotherspoon and Stewart Frusher</i>	Age and growth of the Pelagic Thresher ( <i>Alopias pelagicus</i> ) and the Scalloped Hammerhead ( <i>Sphyrna lewini</i> ) in the eastern Indian Ocean <i><u>Michael Drew</u>, Charlie Huvneers, William White and Dharmadi</i>	Exploration of optimum temperature regimes for Yellowtail Kingfish larvae <i><u>Wayne Hutchinson</u>, Zhenhua Ma, Ben Nan Chen, Jian G. Qin and Mike S. Thomson</i>

**Monday 16 July 2012 continued...**

15:00		Age, growth and reproductive biology of Australian blacktip shark, <i>Carcharhinus tilstoni</i> , from the Great Barrier Reef Marine Park <u>Alastair V. Harry</u> , Colin A <u>Simpfendorfer</u> and Andrew J <u>Tobin</u>	Growth, survival and food consumption of Yellowtail Kingfish larvae at different food densities <u>Zhenhua Ma</u> , Jian G. <u>Qin</u> , Wayne <u>Hutchinson</u> and Ben <u>Nan Chen</u>
15:15-15:45	Afternoon Tea		
<b>15:45-17:30</b>	<b>Concurrent Session 3</b>		Ballroom 1/Foyer
	<b>C3:1 Fishery Management 3</b> <b>Chair: Keith Rowling</b> <b>Sponsored by FRDC</b> Ballroom 3	<b>C3:2 Freshwater Fish Biology &amp; Ecology 1</b> <b>Chair: Qifeng Ye</b> Ballroom 2	<b>C3:3 Movement 1</b> <b>Chair: Paul Rogers</b> Adelaide Room 1/2
15:45	Capitalising on seasonal biology of greenlip abalone ( <i>Haliotis laevigata</i> ): advantages of a closed season in an Australian abalone fishery <u>Ben Stobart</u> , Stephen <u>Mayfield</u> and Richard <u>McGarvey</u>	Estimating fish species richness from underwater video and netting in remote Australian waterholes <u>Brendan C. Ebner</u> and David L. <u>Morgan</u>	A method for addressing the issue of auto-correlation in telemetry data: Evaluating environmental influences on the spatial ecology and spawning behaviour of an estuarine-dependent fish, <i>Macquaria colonorum</i> C. T. <u>Walsh</u> , I. V. <u>Reinfelds</u> , <u>Matthew C. Ives</u> , C. A. <u>Gray</u> , R. J. <u>West</u> and D. E. <u>van der Meulen</u>
16:00	Status of Australian herring – a weight-of-evidence assessment <u>Kim Smith</u>	Resilience, Resistance and Fish Movement in Lake Eyre Basin <u>Dale McNeil</u> , David <u>Schmarr</u> and Rupert <u>Mathwin</u>	Eel-tailed catfish ( <i>Tandanus tandanus</i> ) – critical dispersers or curious explorers? <u>Bernie Cockayne</u> , Kate <u>Burdred</u> , Jonathan <u>Marshall</u> , James <u>Fawcett</u> and David <u>Sternberg</u>
16:15	Simultaneous estimation of size-selectivity parameters for multiple fishing gears <u>Athol R. Whitten</u>	Stuck in the Middle with you? Illuminating diadromy in an impacted catchment <u>Rupert Mathwin</u> , David <u>Schmarr</u> and Dale <u>McNeil</u>	The role of spatial ecology in the conservation management of Macquarie perch in the ACT. <u>Ben Broadhurst</u> , Mark <u>Lintermans</u> , Brendan <u>Ebner</u> , Jason <u>Thiem</u> , Katie <u>Ryan</u> , Rhian <u>Clear</u> and Danny <u>Wright</u>
16:30	The underlying dynamics of a simple CPUE based fisheries harvest control rule <u>Malcolm Haddon</u> and Natalie <u>Dowling</u>	2012: A Cooper Odyssey <u>David Schmarr</u> , Rupert <u>Mathwin</u> and Dale <u>McNeil</u>	Tracking broad-scale movements of a top-order predator using coastal sensor arrays and satellite telemetry. <u>Russell Bradford</u> and Barry <u>Bruce</u>
16:45	Length-based empirical estimation of SPR for small-scale, data-poor fisheries <u>Adrian Hordyk</u> , Neil <u>Loneragan</u> and Jeremy <u>Prince</u>	Angry when outnumbered: Behavioural aggression in <i>Gambusia holbrooki</i> is conditional upon temperature and relative abundance Jessica <u>Pink</u> , <u>Andy Moore</u> , Tyrie <u>Starrs</u> , Mark <u>Lintermans</u> and Christopher J. <u>Fulton</u>	On movement of Western Australian sharks <u>Matias Braccini</u> , Rory <u>McAuley</u> and Michael <u>Moran</u>
17:00	Mixing and matching – establishing harvest strategies in a multi-species mud-cockle fishery <u>Jay Dent</u> , Stephen <u>Mayfield</u> , Craig <u>Noell</u> , Paul <u>Burch</u> , Dan <u>Gorman</u> and Tim <u>Ward</u>	Habitat associations of native fish larvae in the main channel of a heavily regulated river system, Australia <u>Katherine J. M. Cheshire</u> , Qifeng <u>Ye</u> , Bronwyn M. <u>Gillanders</u> and Alison J. <u>King</u>	Habitat use, movement patterns and residency of greenback flounder ( <i>Rhombosolea tapirina</i> ) in the Murray River estuary and Coorong, South Australia <u>Jason Earl</u> , Anthony <u>Fowler</u> , Qifeng <u>Ye</u> and Sabine <u>Dittmann</u>

**Monday 16 July 2012 continued...**

17:15	Understanding the animal ethics application process: some hints for expediency. <u>Stephen Balcombe</u>	Complex behavioural patterns of the Australian Lungfish ( <i>Neoceratodus forsteri</i> ) within an impounded river system. <u>David Roberts, Sebastian Knight, Michele Burford and Mark Kennard</u>	Movement and connectivity in populations of adult Golden perch <i>Macquaria ambigua</i> in two lowland rivers, Australia <u>Wayne Koster, David Crook and David Dawson</u>
17:30-19:30	ASFB Committee Meetings		
17:30-19:30	OCS AGM	Adelaide Rooms 1/2	

**Tuesday 17 July 2012**

<b>09:00-10:35</b>	<b>Plenary Session 2</b>		Ballroom 2/3
	<b>Chair: Susan Theiss</b>		
09:00	Where, when, how and why: Using acoustic telemetry to understand marine animal movement, behaviour and physiology <u>Jayson Semmens</u>		
09:30	Tagging freshwater fish <u>John Koehn, Jarod Lyon, Wayne Koster and Matthew Jones</u>		
10:00	Crinkles in connectivity: a genetic perspective on the influence of movement on fisheries stock structure <u>Jennifer R. Ovenden</u>		
10:30	President's poster perspective <u>Bronwyn Gillanders</u>		
10:35-11:00	Morning tea		Ballroom 1/Foyer
<b>11:00-12:30</b>	<b>Concurrent Session 4</b>		
	<b>C4:1 Marine Fish Biology &amp; Ecology 1</b>	<b>C4:2 Freshwater Fish Biology &amp; Ecology 2</b>	<b>C4:3 Genetics</b>
	<b>Chair: Alastair Harry</b>	<b>Chair: Jarod Lyon</b>	<b>Chair: Rik Buckworth</b>
	Ballroom 3	Ballroom 2	Adelaide Rooms 1/2
11:00	Embryonic diapause in the elasmobranchs <u>Daniela Waltrick, Colin Simpfendorfer and Cynthia Awruch</u>	Fish movement at the terminus of the Murray-Darling Basin: past, present and future fish passage at the Murray Barrages <u>Christopher M. Bice, Brenton P. Zampatti and Paul R. Jennings</u>	The management of native freshwater fish in Australia: what has genetics brought to the table? <u>Andy Moore</u>
11:15	House or Home? How snapper ( <i>Chrysophrys auratus</i> ) utilise artificial and natural reefs in Port Phillip Bay. <u>Kade Mills, Paul Hamer, Gerry Quinn and Daniel Ierodiaconou</u>	From drought to flood: fish assemblage response to freshwater flows in the Coorong <u>Qifeng Ye, Luciana Bucater and David Short</u>	How genetics supports decision-making about the harvesting of wild fisheries <u>Jennifer R. Ovenden, Oliver Berry, David J. Welch, Rik C. Buckworth and Cathy M. Dichmont</u>
11:30	Research into the life history characteristics and fishery of teraglin, <i>Atractoscion aequidens</i> , (Family: Sciaenidae) off the coast of New South Wales, Australia. <u>Anne-Marie Hegarty, William Gladstone and John Stewart</u>	"Hi. My name is Murray; Murray Hardyhead." .... A novel approach to increasing community awareness about threatened species management. <u>Michelle Kavanagh</u>	Stakeholder views of the use of genetic tools in fisheries management <u>David J. Welch, Rik C. Buckworth, Jennifer R. Ovenden, Oliver Berry and Cathy M. Dichmont</u>
11:45	Status of knowledge on the Mobulidae and conservation issues <u>Lydie I.E. Couturier, Andrea D. Marshall, Fabrice R.A. Jaine, Tom Kashiwagi, Simon J. Pierce, Kathy Townsend, Scarla J. Weeks, Mike B. Bennett and Anthony J. Richardson</u>	Invasives and rehabilitation of freshwater systems carp acoustics: Attractants and repellents <u>Leigh Thwaites and Josh F. Fredberg</u>	Close kin relationships provide a fishery independent approach for estimating Southern Bluefin Tuna spawning stock biomass <u>Peter Grewe, Mark Bravington, Campbell Davies, Peta Hill, Rasanthi Gunasekera and Danielle Lalonde</u>

**Tuesday 17 July 2012 continued...**

12:00	Size and age compositions and growth of King George Whiting ( <i>Sillaginodes punctata</i> ) in south-western Australia <u>Elena H. Sulin</u> , Alex S. Hesp, Norman G. Hall and Jennifer A. Chaplin	Investigating the effects of intra- and inter-specific competition between native and introduced fish using RNA:DNA ratios as a biochemical indicator of condition <u>Peter Fraser</u> , Christopher Izzo and Bronwyn Gillanders	Contrasting evolutionary histories for sister species of Australian Salmon <u>Glenn I. Moore</u> and Jennie A. Chaplin
12:15	Reproductive biology of the Greeneye spurdog ( <i>Squalus chloroculus</i> ) on the continental slope off south-eastern Australia <u>Bastien Rochowski</u>	Do invasive eastern gambusia ( <i>Gambusia holbrooki</i> ) shape wetland fish assemblage structure in south-eastern Australia? <u>Jed Macdonald</u> , Zeb Tonkin, David Ramsey, Andrew Kaus, Alison King and David Crook Ballroom 1/Foyer Ballroom 3	Genetic effective population size and census size ratios for elasmobranchs <u>Christine Dudgeon</u> , Dean Blower and Jennifer Ovenden
12:30-14:15	Lunch <b>ASFB AGM</b>		
<b>14:15-16:00</b>	<b>Concurrent Session 5</b>		
	<b>C5:1 Marine Fish Biology &amp; Ecology 2</b> <b>Chair: Gary Jackson</b> Ballroom 3	<b>C5:2 Movement 2</b> <b>Chair: Christine Dudgeon</b> Ballroom 2	<b>C5:3 Genetics/ General</b> <b>Chair: Andy Moore</b> Adelaide Rooms 1/2
14:15	Can a threshold value be used to classify Chondrichthyan reproductive modes: review and validation using an oviparous species, <i>Heterodontus portusjacksoni</i> <u>Holly Frazer</u>	Beware the shark in the sun: Investigations into the approach behaviour of white sharks, <i>Carcharodon carcharias</i> , to cage-diving baiting operations <u>Dirk Holman</u> , Alex H. Taylor, Rachel Robbins, Andrew Fox and Charlie Huvneers	Linking demography and genomics of eastern Australian sea mullet ( <i>Mugil cephalus</i> ) for management and conservation <u>Nils Krück</u> , Eric Trembl, David Innes, Ian Tibbetts and Jenny Ovenden
14:30	Might diet contribute to spatial variation in growth for Snapper ( <i>Pagrus auratus</i> ) in South Australian gulf waters? <u>Matthew Lloyd</u> , Anthony Fowler and Bronwyn Gillanders	Use of acoustic monitoring to assess post-release survival and movement of gummy shark ( <i>Mustelus antarcticus</i> ) and southern fiddler ray ( <i>Trygonorrhina dumerilii</i> ) after capture stress <u>Camila Martins</u> , Richard Reina and Terence Walker	Blacktip Hybrid Sharks: An update <u>Jess A.T. Morgan</u> , Malcolm Keag, John Kirkwood and Jennifer R. Ovenden
14:45	Indicator fatty acids in multiple shark tissues and blood serum resulting from different artificial pellet diets <u>Crystal Beckmann</u> , Jim G. Mitchell, Laurent Seuront, David Stone and Charlie Huvneers	Home range and movement of <i>Centrophorus zeehaani</i> on the continental slope off South Australia determined by acoustic telemetry <u>Ross Daley</u>	Do stocking practices influence Rainbow Trout growth in a New Zealand lake? A bioenergetic assessment <u>Jennifer M. Blair</u> , Brendan J. Hicks, Rob Pitkethley, Nick Ling, Iliia Ostrovsky and David Rowe
15:00	Empty slums and crowded mansions: scaling up cryptic density dependence in temperate reef fish <u>John R Ford</u> , Jeffery S Shima and Stephen E Swearer	Acoustic freshwater fish tracking programs: How managers use this technology to inform their decision making <u>John Conallin</u> , Lee Baumgartner, Ian Wooden and Wayne Robinson	Stocking of sturgeons: Preparing <i>Huso huso</i> juveniles for release into estuarine waters <u>Nastaransadat Mazloumi</u>
15:15	Unusual fatty acid profiles of manta rays and whale sharks suggest they might not predominantly feed on crustacean zooplankton <u>Lydie I.E. Couturier</u> , Christoph A. Rohner, Anthony J. Richardson, Simon J. Pierce, Andrea D. Marshall, Fabrice R.A. Jaine, Kathy Townsend, Mike B. Bennett, Scarla J. Weeks and Peter D. Nichols	Combining visual census and ultrasonic telemetry for mark-resight experiments <u>Cesar Penaherrera-Palma</u> , Stewart Frusher, Alex Hearn, Alistair Hobday, Jayson Semmens and Eduardo Espinoza	Effects of salinity on the growth and osmoregulation of Yellowtail kingfish ( <i>Seriola lalandi</i> ) <u>David Stone</u> , Shane D. Roberts, Marty Deveney and Craig Hayward

**Tuesday 17 July 2012 continued...**

15:30	Predicting the occurrence of whale sharks over entire ocean basins <i>Ana Sequeira, Camille Mellin, Steven Delean, Mark G. Meekan and Corey J. A. Bradshaw</i>	Spatial dynamics, diving behaviour and habitat use of satellite-tracked manta rays ( <i>Manta alfredi</i> ) in eastern Australia <i>Fabrice R.A. Jaime, Scarla J. Weeks, Lydie I.E. Couturier, Michael B. Bennett, Kathy A. Townsend and Anthony J. Richardson</i>	Livelihoods from Predators: Shark Fisheries in Eastern Indonesia <i>Vanessa Jaiteh, Carol Warrena and Neil Loneragan</i>
15:45	Diversity in Shark Nursery habitat along the central Great Barrier Reef coast <i>Peter Yates, Michelle Heupel, Andrew Tobin and Colin Simpfendorfer</i>	Determining fine-scale patterns of movement in black bream <i>Acanthopagrus butcheri</i> and estuary perch <i>Macquaria colonorum</i> within drought-affected estuaries <i>Joel Williams, Jeremy S. Hindell, Sean R. Tracey, Klaas Hartmann, Greg P. Jenkins and Steve E. Swearer</i>	
16:00-17:30	<b>Poster Session &amp; afternoon tea – Sponsored by Wildlife Computers</b>		Ballroom 1
18:30-20:00	<b>Student Mixer – Mansions, Pulteney Street</b>		

**Wednesday 18 July 2012**

<b>09:00-10:30</b>	<b>Plenary Session 3</b>	Ballroom 2/3	
	<b>Chair: Charlie Huveneers</b>		
09:00	Application of animal movement analytical techniques to fishery data: how do you turn a dataset with 25,000 dives and 10,000,000 records per year into meaningful information? <i>Craig Mundy</i>		
09:30	Beyond the “shiny new hammer”: data analysis tools to make the most of acoustic monitoring studies <i>Colin A. Simpfendorfer and Michelle R. Heupel</i>		
10:00	Impact and mitigation of Australian sea lion bycatch in the shark gillnet fishery off South Australia <i>Simon Goldsworthy</i>		
10:30-11:00	Morning tea	Ballroom 1/Foyer	
<b>11:00-12:30</b>	<b>ASFB/OCS Joint Plenary</b>	Ballroom 2/3	
	<b>Chair: Bronwyn Gillanders</b>		
11:00	<b>2011 K. Radway Allen Award</b> Some reflections of a lifetime in fishery science <i>Rod C. Lenanton</i>		
11:30	<b>2011 Inaugural Early Career Excellence Award</b> Larval swimming performance and impacts on dispersal <i>Rebecca Fisher</i>		
12:00	<b>OCS-Passions of Paradise Student Research Grant</b> Habitat associations of deepwater Chondrichthyan life history traits <i>Cassie Rigby and Colin Simpfendorfer</i>		
12:15	<b>Website Launch</b> Fishes of Australia <i>Martin Gomon</i>		
12:30-13:30	Lunch	Ballroom 1/Foyer	
<b>13:30-15:15</b>	<b>Concurrent Session 6</b>		
	<b>C6:1 Marine Fish Biology &amp; Ecology 3</b> <b>Chair: Malcolm Francis</b> Ballroom 3	<b>C6:2 Freshwater Fish Biology &amp; Ecology 3</b> <b>Chair: Katherine Cheshire</b> Ballroom 2	<b>C6:3 Movement 3</b> <b>Chair: Jayson Semmens</b> Adelaide Rooms 1/2
13:30	Rain-induced reversal of activity rhythms in Yellowfin Bream <i>Nicholas L. Payne, Ruan Gannon, Dylan E. van der Meulen, Jayson M. Semmens, Iain M. Suthers, Charles A. Gray and Matthew D. Taylor</i>	Monitoring the fish community of the Great Darling Anabranch in the 2010-11 flood <i>Deborah Bogenhuber and Danielle Linklater</i>	Radio transmitters can affect the feeding behavior and the movement of freshwater stingrays (Myliobatiformes, Potamotrygonidae)? <i>Domingos Garrone Neto, Carolina Bonfim Tiveron, Rafael dos Santos, Lisiane Hahn and Otto Bismarck Fazzano Gadig</i>



**Wednesday 18 July 2012 continued...**

13:45	Distribution, relative abundance, and length of the vulnerable black cod <i>Epinephelus daemeli</i> in northern NSW <u>Hamish Malcolm</u> and <u>David Harasti</u>	Use of off channel lower ephemeral lakes in the Great Darling Anabranch system <u>Danielle Linklater</u> , <u>Lauren Carr</u> , <u>Deborah Bogenhuber</u> and <u>Iain Ellis</u>	Tagging fish in the Murray River – Lessons learnt <u>Jarod Lyon</u> , <u>Justin O'Mahony</u> and <u>Charles Todd</u>
14:00	Where are the little ones? Distribution and relative abundance of juvenile and sub-adult black cod <i>Epinephelus daemeli</i> in NSW <u>David Harasti</u> , <u>Christopher Gallen</u> , <u>Hamish Malcolm</u> and <u>Patrick Teggart</u>	Persistence of Spangled perch in the southern Murray-Darling Basin post 2011 flooding. <u>Iain Ellis</u>	Movement dynamics of translocated southern rock lobsters ( <i>Jasus edwardsii</i> ) in South Australia <u>Adrian Linnane</u> , <u>Shane Penny</u> , <u>Matthew Hoare</u> and <u>Peter Hawthorne</u>
14:15	Behavioural plasticity in coral reef fishes subject to a dynamic wave environment <u>Siobhan J. Heatwole</u> and <u>Christopher J. Fulton</u>	Fish community response to flooding at Lindsay Mulcra Wallpolla Islands, North-West Victoria <u>David Wood</u>	Post-release survival, pop-up satellite tag predation and vertical habitat use of school shark ( <i>Galeorhinus galeus</i> ) in the Great Australian Bight <u>Paul J. Rogers</u> , <u>I. Knuckey</u> , <u>R. Hudson</u> and <u>L. Guida</u>
14:30	Account of a mass aggregation of Port Jackson sharks ( <i>Heterodontus portusjacksoni</i> ) at Point Cooke Marine Sanctuary, Victoria, Australia <u>Andrew Christie</u>	Flow diversion effects on Murray cod in upland environments <u>Mark Lintermans</u> , <u>Fiona Dyer</u> , <u>Anu Datta</u> and <u>Daniel Wright</u>	The devil is in the detail: Tracking movements in the Southern Blue Devil ( <i>Paraplesiops meleagris</i> ) using photo-ID <u>Simon Bryars</u>
14:45	Morphological differences within sympatric populations of the sparid <i>Pagrus auratus</i> in New Zealand <u>Darren Parsons</u> , <u>Mark Morrison</u> and <u>Kendall Clements</u>	Freshwater catfish ( <i>Tandanus tandanus</i> ) response to reconnection events of Washpen Creek, a large, mid-murray paleochannel <u>Lauren Carr</u> , <u>Rick Stoffels</u> , <u>Danielle Linklater</u> and <u>Rohan Rehwinkel</u>	When do they move: Macquarie perch ( <i>Macquaria australasica</i> ) and the short finned eel ( <i>Anguilla australis</i> ) in the Yarra River, Victoria <u>Charles Todd</u> , <u>Dave Crook</u> and <u>Nick Bond</u>
15:00	Use of photo-identification to monitor white sharks aggregating at Stewart and Ruapuke Islands, New Zealand <u>Clinton Duffy</u> , <u>Malcolm Francis</u> , <u>Kina Scollay</u> and <u>John Montgomery</u>	Response of small-bodied fish to habitat reconnection in the Murray River Estuary, South Australia <u>Luke Silvester</u> , <u>Sabine Dittmann</u> and <u>Kathleen Beyer</u>	
15:15-15:45	Afternoon tea	<i>Ballroom 1/Foyer</i>	
<b>15:45-17:15</b>	<b>Concurrent Session 7</b>		
	<b>C7:1 Marine Fish Biology &amp; Ecology 4</b> <b>Chair: Matias Braccini</b> <i>Ballroom 3</i>	<b>C7:2 Ecosystems/ Conservation 2</b> <b>Chair: Simon Goldsworthy</b> <i>Ballroom 2</i>	<b>C7:3 Recreational Fishing</b> <b>Chair: Kim Smith</b> <i>Adelaide Rooms 1/2</i>
15:45	Are seasonal manta ray <i>Manta alfredi</i> aggregations related to zooplankton nutritional quality? <u>Nathalie Verlinden</u> , <u>Luiz Felipe Mendes Gusmao</u> , <u>Lydie E. Couturier</u> , <u>Fabrice Jaine</u> , <u>Anthony Richardson</u> , <u>Michael Bennett</u> , <u>Scarla Weeks</u> and <u>Kathy Townsend</u>	Recovering populations of the endangered fish red-finned blue-eye, <i>Scaturiginichthys vermeilipinnis</i> , at Edgbaston Reserve in central western Queensland <u>Adam Kerezsy</u>	Recreational gillnetting in Tasmania – improving fishing practices through management intervention <u>Jeremy M. Lyle</u> and <u>Sean R. Tracey</u>
16:00	Behavioural thermoregulation by the world's largest fish <u>Michele Thums</u> , <u>Mark Meekan</u> , <u>John Stevens</u> , <u>Steven Wilson</u> and <u>Jeff Polovina</u>	Oriental weatherloach, <i>Misgurnus anguillicaudatus</i> , in South Australia: a risk assessment <u>Josh F. Fredberg</u> and <u>Leigh Thwaites</u>	Overview of research on the recreational fishery for southern bluefin tuna in Tasmania. <u>Sean R. Tracey</u> and <u>Jeremy M. Lyle</u>

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**Wednesday 18 July 2012 continued...**

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16:15	The effects of shark cage diving on the localised and broad-scale movements of white sharks in Australian waters <u>Barry Bruce and Russell Bradford</u>	Decadal shifts in demersal fish assemblage structure in Port Phillip Bay correspond with drought and the introduction of an exotic starfish <u>Alastair Hirst</u>	Managing Murray cod: a large, iconic, threatened angling species <u>John Koehn</u>
16:30	Acoustic tracking of New Zealand white sharks reveals spatial preferences and small-scale movements in an island chain <u>Malcolm Francis, Clinton Duffy, Warrick Lyon and Kina Scollay</u>	Detecting snapper ( <i>Pagrus auratus</i> ) larval dispersal from a New Zealand marine reserve: preliminary results <u>A. Croucher, Agnès Le Port, M. O'Sullivan and J.C. Montgomery</u>	Integrated state-wide survey of boat-based recreational fishing catch and effort <u>Brent Wise, Ken Pollock, Karina Ryan, Adrian Thompson, Norm Hall and Rod Lenanton, Gary Jackson</u>
16:45	Assessing the effects of an electric deterrent on the behaviour of white sharks <u>Charlie Huveneers, Paul J. Rogers, Jayson Semmens, Crystal Beckmann, Alison A. Kock, Brad Page and Simon Goldsworthy</u>	The impact of marine closed areas on fishing yield under a variety of management strategies and stock depletion levels <u>Belinda Barnes and Harvinder Sidhu</u>	Do estuarine artificial reefs enhance fish biodiversity and recreational angling opportunities? <u>Charles A. Gray, F. Ochwada-Doyle, M. Lowry and H. Folpp</u>
17:00	Evaluation of shark detection rates by aerial observers <u>William D. Robbins, Victor M. Peddemors and Steven J. Kennelly</u>	Protecting the Harlequin Fish ( <i>Othos dentex</i> ) within South Australia's new system of marine protected areas: Acoustic tracking to determine site fidelity and movement patterns <u>Simon Bryars, Paul Rogers and David Miller</u>	Monitoring the recreational take of shark species of relevance to Commonwealth fisheries <u>Katherine Cheshire and Peter Ward</u>
<b>17:15</b>	<b>Sessions conclude</b>		
<b>18:30 for</b>	<b>Conference Dinner – sponsored by WA Fisheries</b>		
<b>19:00-23:30</b>	<b>Adelaide Oval Members Dining Room</b>		

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## Posters

- P1** Tracking shallow water elasmobranchs using mesh-networking digital radio devices  
*Peter de Joux and Warrick Lyon #005*
- P2** Indigenous subsistence strategies and fish population changes revealed through the analysis of archaeological otoliths from an estuarine mound site, Greenfields, South Australia.  
*Morgan Disspain, Sean Ulm and Bronwyn M Gillanders #010*
- P3** The reproductive biology of *Brachaelurus waddi*: preliminary results  
*Ylva Martina Norén and Dr David Powter #012*
- P4** Determining and testing the optimal pure-tone frequency for use in acoustic conditioning of common carp  
*B.A. Mahoney, B.J. Hicks, Dai K.J. Morgan and A.J. Daniel #030*
- P5** Development of a toxic bait to target carp made from sustainable ingredients  
*Dai K.J. Morgan, J. Verbeek, K.A. Rosentrater and B.J. Hicks #031*
- P6** The ability of a community-based sight-resight program, 'Grey Nurse Shark Watch', to obtain robust estimates of the east coast population of *Carcharias taurus*  
*Deborah Bowden, Carley Bansemer and Mike Bennett #034*
- P7** Creation and preliminary findings of a photographic identification database to determine seasonal abundance and site fidelity patterns of white sharks, *Carcharodon carcharias*, at the Neptune Islands, South Australia  
*Rachel Robbins and Andrew Fox #035*
- P8** Development of an otolith-based marine chronology in the Southern Hemisphere  
*Gretchen L. Grammer, Christopher Izzo and Bronwyn M. Gillanders #039*
- P9** Identification and power assessment of genome-wide markers for population structure analysis of sea mullet (*Mugil cephalus*) using limited 454 next-generation sequencing  
*Nils Krück, David Innes and Jenny Ovenden #041*
- P10** The integration of local knowledge and fishery-dependent monitoring to assess data-poor fisheries: Corner Inlet, Victoria case study  
*Jodie Kemp, Simon Conron and Taylor Hunt #043*
- P11** Historic Marine Species data for the Kimberley, North Western Australia (1880s – 2009): shallow water fishes  
*Sue Morrison, Glenn Moore and Alison Sampey #049*
- P12** Decadal change in fish community structure within a Caribbean Marine Protected Area.  
*Mae Noble, Gregoor van Laake, Michael Berumen and Christopher Fulton #051*
- P13** Spencer Gulf research initiative: Development of an ecosystem model for aquaculture and fisheries  
*Bronwyn M. Gillanders, Tim Ward, Corey Bradshaw, Nathan Clisby, Mark Doubell, Simon Goldsworthy, John Middleton, Tom Prowse, Paul Rogers and Jason Tanner #058*
- P14** Diet related distribution of the Yellow-eye mullet (*Aldrichetta forsteri*) in the Murray River estuary and North Lagoon of the Coorong, South Australia  
*George Giatas, Sabine Dittmann, Qifeng Ye and Kathleen Beyer #061*
- P15** Reproductive and fishery insights of two commercially exploited sharks, *Isurus oxyrinchus* (Rafinesque, 1810) and *Prionace glauca* (Linnaeus, 1758), in the south-east Pacific Ocean  
*Carlos Bustamante and Michael B. Bennett #069*
- P16** State of origin: Identifying spawning sources and movement patterns of King George whiting in Victoria and South Australia  
*Julia Kent, Greg Jenkins and Craig Sherman #087*

- P17** Replacing gill nets with electrofishing sampling in a long term monitoring program of fish populations in urban lakes  
*Matt Beitzel, Koral Hunt and Mark Jekabsons #091*
- P18** A comparison of the stock structures of two exploited demersal teleosts, employing complementary methods of otolith element analysis  
*David Fairclough, John Edmonds, Gary Jackson, Rod Lenanton, Jodie Kemp, Brett Molony, Ian Keay, Brett Crisafulli and Corey Wakefield #105*
- P19** Linking manta ray habitat use to effective conservation strategy in Southern Mozambique  
*Daan I. van Duinkerken and A.D. Marshall #116*
- P20** Trait-environment relationships, life history strategies and phylogenetic constraints of Australian freshwater fish  
*David Sternberg and Mark Kennard #118*
- P21** Seasonality and frequency of visitations of mature female white sharks (*Carcharodon carcharias*) to the Neptune Islands, a seasonal aggregation site  
*Rachel Robbins and Andrew Fox #129*
- P22** 2-way learning: science and indigenous ecological knowledge of euryhaline elasmobranchs in the Roper River, Northern Territory  
*Sharon Every, P Kyne and K.S. Edyvane #130*
- P23** Arresting shark declines: who's being killed (and where)?  
*Paolo Momiigliano, Adam Stow and Robert Harcourt #132*
- P24** Inter- and intra-species resource partitioning in three Dasyatidae elasmobranchs determined from stomach content and bulk stable isotope analyses  
*Katherine J Burgess, Sebastian A Pardo and Michael B Bennett #163*
- P25** An investigation into the feeding biology of juvenile *Heterodontus portusjacksoni* (Meyer, 1793) at various daily ration size  
*Alexander Wray-Barnes and David Powter*
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