



Australian Society for Fish Biology: Scientific Networking, Early Career Development, and International Engagement



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In submitting this report, the researcher has agreed to FRDC publishing this material in its edited form.

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Acknowledgments

The support of the Australian Society for Fish Biology's executive council, its membership and 2016, 2017, 2018 and 2019 event organising committees and sponsors is gratefully acknowledged. All 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.

Abbreviations

ASFB Australian Society for Fish Biology

WFC World Fisheries Congress

Executive Summary

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/workshops 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. The ASFB has a strong commitment to promoting and communicating science, encouraging sustainable management practices, encouraging excellence in fisheries research, and recognising outstanding contributions of scientists and professionals through various awards and scholarships.

For the present project, FRDC funding was provided as sponsorship support for the 2016, 2017, 2018 and 2019 annual conferences, with funding used to offset costs of staging the conference event in each year (addressing Objectives 1 & 4), sponsor student conference presentation awards (addressing Objective 2); and travel subsidies for students to attend national and international conferences (addressing Objectives 3 & 4).

The 2016 ASFB conference was held as a joint event with the Oceania Chondrichthyan Society (OCS) between 4 and 7 September 2016 at Wrest Point, Hobart, Tasmania. This was the second time that the ASFB had held its annual conference in conjunction with the OCS. The conference explored the theme of "Intersections in fish and fisheries" as well as exploring issues in gender equity and diversity through special events that highlighted the achievements of women in fish and fisheries via an opening night poster exhibition and full conference forum on gender equity in fish and fisheries on the first full conference day. A broad and comprehensive program of scientific presentations met the diverse range of interests of members of the two science societies, as did a variety of social events. Affiliated technical workshops included a pre-conference meeting of the ASFB Threatened species committee, and a post-conference workshop hosted by ARGOS-CLS on satellite tracking of animals on 8 September. We were delighted to host the President of the American Fisheries Society (AFS) Joe Margraf, and as part of our reciprocal hosting arrangement, the AFS hosted ASFB Vice-President Harry Balcombe at their 2016 AFS conference in Kansas City, Kansas.

A total of 266 delegates (64 students = 24%) from 7 countries attended the conference. In addition, to the opening forum on the issue of gender equity in fish and fisheries, which was attended by over 190 delegates, the conference program included 222 presentations that included 22 posters presented by students, early career and established scientists, managers and industry. A range of special conference sessions were convened by members from the three societies that for the ASFB included: Connectivity, Threatened fishes, Early life history, Trophic ecology, Habitat, Biology & behaviour, Physiology, Recreational and commercial fisheries, Socio-ecology, Monitoring, Invasive species, and Evolution.

The 2017 ASFB conference was held at the Albany Convention Centre from 30 June to 3 July 2017 in the regional fisheries centre of Albany, Western Australia. The conference program was a 4-day event, with the theme of "Turning points in fish and fisheries" asking delegates to share all those influential moments or developments, small or large, that changed the way they go about their fisheries research and management. The event also actively engaged the local Albany community via a free public forum and a special session partnership with the local high school students. Another key aspect of the event was the "Nurturing fish scientists" session that brought together key speakers into a discussion forum to share experiences and tips for making the most of the formative years of becoming a professional scientist or manager in our field. We were also delighted to host the President-elect of the AFS Steve McMullin, who

was a keynote speaker in our special forum on early career development. Through our reciprocal relationship with the AFS, they hosted ASFB President Chris Fulton at their 2017 annual conference in Tampa, Florida.

A total of 170 delegates (40 students = 24%) attended the conference, which included international delegates from North America, Europe and south-east Asia. Five keynote plenary presentations covered a range of topics such as dynamic ocean management of fish and fisheries, as well as industry perspectives on science-based management. The conference program comprised 137 presentations including 16 posters presented by high school and university students, early career and established scientists, managers and industry on a range of topics, including: Advances in stock assessment, Socio-economics, Environmental stress on fishes, Artificial reefs, Fish biology, Habitat ecology, and Threatened species.

The 2018 ASFB conference was held in Melbourne from 11 to 14 October, 2018 at the Rydges on Swanston, Melbourne, Victoria. The conference theme of "Science into Practice, Practice into Science" challenged and engaged delegates to explore the relationships between scientific research, natural resource management and policy formulation. A series of mid-conference workshops explored early career development in fish and fisheries, fisheries management, fish ethics, and threatened species. We also held a day of discussions on the National Carp Control Program, and facilitated a special FRDC-sponsored workshop on "Fisheries Management" attended by scientists and managers from across Australasia. This culminated in a new Fisheries Management Committee being formed with the full support of the ASFB. We were also delighted to host the President-elect of the AFS Jesse Trushenski.

A total of 242 delegates (69 students = 29%) attended the conference, including international delegates from nine countries in the Asia Pacific region, Africa, Europe and the Americas. The program included four days of internationally renowned plenaries on topics such as socio-economic dimensions of ecosystem-based fisheries and environmental management, the role of partnerships in sustainable recreational fisheries, and ecosystem modelling to support freshwater fisheries management. These headline talks were supported by 188 oral presentations and 35 posters across 13 special sessions of talks and posters that spanned advances in fisheries management, aquatic pollution, alien fishes, fish ethics & welfare, threatened species, elasmobranch ecology, fish habitat ecology, movement & connectivity, recreational fisheries, behavioural ecology, climate change, adaptive management of our freshwaters, and a range of other topics in fish biology, ecology and evolution. We also held a public event at Melbourne Museum that explored impacts and adaptations to climate change in our marine and freshwater environments.

The 2019 ASFB conference was held in Canberra from 14 to 17 October, 2019 at the National Library of Australia, ACT. The conference theme of "Communicate to illuminate & inspire" encouraged delegates to find new ways to share our passion for fishes, and raise their profile among the many people who depend on them for their everyday health and wellbeing. The program included four days of internationally renowned plenaries, oral and poster presentations and workshops, as well as a special networking event 'Big Messages for Decision Makers' wherein speakers made short pitches of their idea of the future of fish and fisheries to key people responsible for policy and investment in aquatic resource. A series of workshops explored 'animal ethics', 'fish art and imagery', 'writing with quality & productivity', 'new media for science communications' and 'using graphical abstracts'. Social events included a reception at the National Library, a student-mentor fish quiz, the 'Big Messages' public forum and a conference dinner at Gandel Hall on closing night.

A total of 251 delegates (62 students = 25%) attended the conference, including international delegates from Australia, New Zealand, Europe, South Africa, the USA and Fiji. The program included four days of internationally renowned plenaries on topics such as scientific illustration for communication and conservation, communicating science to the masses, what good science looks like, sustainable development goals on a blue planet, and deep sea research. These headline talks were supported by 178 oral and poster presentations across 15 conference species sessions. In two of the largest special sessions – Aquageography & Fish Kills – the presentations were followed by question-answer forums.

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 the John Glover travel bursaries (sponsored by FRDC). FRDC sponsorship of these awards over the four conferences amounted to over \$28,000. A list of all award and bursary recipients (along with other ASFB research and travel awards) is provided in the report. Significantly, 24-29% of all participants at the three 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; congress; student research awards; student travel bursary, international engagement, World Council of Fisheries Societies

Introduction

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 several very successful international conferences, including the 2nd World Fisheries Congress (1996), World Congress on Aquatic Protected Areas (2002) and 8th Indo Pacific Fish Conference (2009). In 2005, the Society created the executive position of a National Conference/Workshop co-ordinator, to assist future local organising committees and to maintain corporate knowledge in this area. 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. The Society now publishes a main newsletter once a year (in December) and a mid-year email news update (in July) that contain information of interest to the Society membership, including notices and information on upcoming events and activities. The Society is also now very active in social media (Facebook, Twitter) and recently created the executive position of a Communications Manager to manage this growing area of its communications.

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 and that is responsible for coordination of the World Fisheries Congress that is held every 4 years - the next to be held in Adelaide, South Australia in 2021.

The Society has an active policy of supporting people working in fish and fisheries. Students and early career researchers are supported through subsidised attendance at events, and awards that provide financial support to assist with travel or research costs. This includes several conference and research awards:

Conference Awards:

- John Glover Travel Fund Bursaries
- Gilbert P. Whitley Memorial Student Award
- John Lake Poster Award
- Victorian Marine Science Consortium Award

Research awards:

- Barry Jonassen Award
- Michael Hall Student Innovation Award
- Student and Early Career International Travel Scholarships

Note: 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 around \$8,000 per year.

The Society also recognises outstanding career contributions in fish or fisheries science through the K. Radway Allen Award and an Early Career Excellence 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 (<http://www.asfb.org.au/hall-of-fame/>), which provides biographic information and recognises the professional achievements of Australasia's most prominent fish and fisheries scientists and managers.

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. 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. 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 sought sponsorship support for the annual science conference in 2016 (Hobart), 2017 (Albany), 2018 (Melbourne) and 2019 (Canberra) and a series of conference-associated awards that supported student travel and recognised research excellence. The proposal addressed 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. Moreover, the ASFB sought to increase the international recognition of excellence in fish and fisheries in Australasia through increased partnerships with key members of the World Fisheries Council, and via a strong presence on the planning committees for the 2020 (now 2021) World Fisheries Congress (WFC). The ASFB is scientific host for the WFC to be held in Adelaide, South Australia in 2021.

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 and key international conferences
- 4 Increase international profile of ASFB via greater participation in activities of World Fisheries Council and planning for World Fisheries Congress

Method

To address the objectives, ASFB used FRDC sponsorship to:

1. support the staging of ASFBs annual science conferences in 2016, 2017, 2018 and 2019 (Objective 1);
2. fund student research awards (conference presentation) in 2016, 2017, 2018 and 2019 (Objective 2); and
3. fund travel support for students to attend national and international conferences in 2016, 2017, 2018 and 2019 (Objective 3).

Priority was given to funding the student research awards and student travel support. The balance being used to offset costs of staging the annual ASFB conferences that brought together an international delegation of fish and fisheries scientists and managers from 11 countries of the Australasian region and elsewhere.

The structure of this report addresses objectives 1-4 by providing a summary of key aspects of each annual conference (and associated meetings and workshops) in turn. Following this, objectives 2 and 3 are further addressed by providing details of ASFB research and travel award recipients each year for 2016, 2017, 2018 and 2019.

Results & Discussion

ASFB CONFERENCE 2016

The 2016 ASFB conference was held as a joint event with the Oceania Chondrichthyan Society (OCS) between 4 and 7 September at Wrest Point, Hobart, Tasmania. This was the second time that the ASFB had held its annual conference in conjunction with the OCS. The conference explored the theme of “Intersections in fish and fisheries” as well as exploring issues in gender equity and diversity through special events that highlighted the achievements of women in fish and fisheries via an opening night poster exhibition and full conference forum on gender equity in fish and fisheries on the first full conference day. A broad and comprehensive program of scientific presentations met the diverse range of interests of members of the two science societies, as did a variety of social events. Affiliated technical workshops included a pre-conference meeting of the ASFB Threatened species committee, and a post-conference workshop hosted by ARGOS-CLS on satellite tracking of animals on 8 September. We were delighted to host the President of the American Fisheries Society (AFS) Joe Margraf, and as part of our reciprocal hosting arrangement, the AFS hosted ASFB Vice-President Harry Balcombe at their 2016 AFS conference in Kansas City, Kansas.

Conference Organising Committee

Sean Tracey (co-Chair)	IMAS, University of Tasmania
Heidi Pethybridge (co-Chair)	CSIRO Hobart
Will White (co-Chair)	CSIRO Hobart
Chris Fulton	The Australian National University
Andrew Chin	James Cook University
Brendan Ebner	CSIRO Atherton
Alistair Hobday	CSIRO Hobart
Tim Farrell	IFS Tasmania
Madi Green	IMAS, University of Tasmania
Nick Ling	University of Waikato
Peter Yates	Australian Antarctic Division
Peter Coulson	Murdoch University
Emily Fisher	WA Fisheries

Sponsorship

A range of categories of sponsorship was offered including:

- Gold sponsors: FRDC (who were recognised as a principal sponsor, contributing to offsetting event costs and supporting student prizes and travel bursaries); the Institute of Marine & Antarctic Studies (IMAS); and the CSIRO.
- Session sponsors: IMOS, MDBA
- Workshop sponsors: CLS-ARGOS
- Satchel sponsor: MDBA
- Conference dinner sponsor: SUBCON

Sponsorship enabled the Organising Committee to subsidise the cost of the event, particularly to reduce the cost of student registrations.

Event Program

The conference program is provided at Appendix 3.

Event Report

The conference was formally opened on the Monday by Dr Sean Tracey (IMAS and Chair of 2016 ASFB-OCS Conference), followed by a welcome to country by Aunty Brenda Hodge (UTas), and opening addresses from the ASFB President Dr. Chris Fulton and OCS President Dr. Andrew Chin, who commended the delegates to think outside their usual fields of interest to learn more about the diversity of work being done in fish and fisheries across our region.

The conference theme was 'Intersections in Ichthyology'. A highlight of the 2016 conference was the successful execution of two exciting new initiatives. The first was a celebration of the contributions of women to fish and fisheries research in Australasia led by the presidents and some committee members from both societies. This initiative included a poster display in the main foyer area showcasing the career achievements of some of the many women who have been recognised by the society for their contribution to our field, six keynote addresses directly after the opening of the conference by established and early-career women in fish and fisheries research from both societies. A panel discussion with the full delegation then explored the issue of gender equity in fish and fisheries research, including an introduction to the meaning of gender equity vs. equality, as well as systematic and unconscious biases. The panel (comprising the keynote speakers, the ASFB and OCS presidents) answered questions and took comments from the full delegation, in which we explored some of the ways to support gender equity in the many workplaces of ASFB members. The panel discussion was attended by >190 delegates.

Another major highlight of the conference, which also celebrated diversity, was the Student Competition in Science Communication. In the lead-up to the conference, the ASFB held a competition for students to present their research in a short (< 3 min) video. Entries were voted on by the public (>20,000 views), and prizes awarded to the most popular in each of a junior (Honours) and senior (Masters/PhD) category. These short videos were run in the foyer of the conference venue throughout the conference, to showcase the outstanding research and creativity of 15 student members of the ASFB. Participants in the video competition were then invited to present a 3 minute 'unplugged' presentation of their work in front the entire conference delegation, without the use of any visual aids, and the winner judged by audience vote.

Social events included the Welcome Reception, on the Sunday night at the Wrest Point Convention Centre was opened by the co-Chairs Dr. Sean Tracey (IMAS), Dr. Heidi Pethybridge (CSIRO) and Dr. Will White (CSIRO), and provided the first opportunity for the 200+ delegates to discuss the week ahead and view the Incredible Women in Ichthyology posters and trade booths. A formal Government House Reception on Monday night was attended by 120 delegates, who had the opportunity to marvel at the architecture of Government House Tasmania and meet the Governor of Tasmania. Her Excellency, what's her face, welcomed the delegates, and applauded us on working towards gender equity in fish and fisheries. A Student-Mentor Mixer held at The Metz Hobart on the Tuesday evening (immediately after the student speed talk competition) was attended by 179 delegates, who were encouraged to mix with other students and supervisors outside of their own fields/institutions by an innovative "Find your species" game developed by the ASFB Student Representatives Stacey Bierwagen and Jordan Matley. The final social event of the conference was the outstanding Conference Dinner at the Museum of New and Old Art (MONA) on the Wednesday night (sponsored by Subcon), which was attended by 210 people. Prizes for both societies were awarded in an hour ceremony, including the announcement of the FRDC-funded student presentation awards (details below) and the 2016 K Radway Allen Award recipient, Prof Bronwyn Gillanders (U Adelaide).

Key Indicators

- 266 delegates (64 students = 24%) from 7 countries attended the conference.
- Whole-conference forum on gender equity in fish and fisheries, chaired by ASFB President Chris Fulton and comprising the eight keynote speakers discussing their experiences and understandings of the topic, with active participation by all conference delegates through a Q&A session
- Nine keynote plenary presentations: Prof Bronwyn Gillanders (U Adelaide); Dr Kara Yopak (U Western Australia); A/Prof Gretta Pecl (UTas - IMAS); Dr Jodie Rummer (JCU); Dr Michelle Heupel (JCU); Dr Gretchen Grammer (U Adelaide); Dr Patrick Lehodey (Collecte Localisation Satellites, Paris); Dr William White (CSIRO); Prof David Bellwood (JCU)

- 222 presentations that included 22 posters presented by students, early career and established scientists, managers and industry. A range of special conference sessions were convened by members from the three societies that for the ASFB included: Connectivity, Threatened fishes, Early life history, Trophic ecology, Habitat, Biology & behaviour, Physiology, Recreational and commercial fisheries, Socio-ecology, Monitoring, Invasive species, and Evolution.
- Gilbert Whitely junior and senior oral presentation awards, John Lake junior and senior poster awards, and John Glover travel fund bursaries were sponsored by the FRDC, with recognition provided on certificates and at the award ceremony
- Post-conference ARGOS workshop was attended by 37 people, with 13 presentations delivered on the satellite systems that underpin tracking of animals using satellite telemetry and applied presentations on the tracking of a range of marine and terrestrial biota.

Gender equity in fish & fisheries forum summary

A summary of the main discussion points and outcomes (“Good Habits for Gender Equity”) of the forum on gender equity in fish and fisheries are compiled in an open-access blog that can be accessed via this link: <https://www.facebook.com/notes/australian-society-for-fish-biology/celebrating-and-supporting-women-in-ichthyology/942024349239671/>

ASFB CONFERENCE 2017

The 2017 ASFB conference was held at the Albany Convention Centre from 30 June to 3 July in Albany, Western Australia. The conference program was a 4-day event, with the theme of ‘Turning points in fish and fisheries’ asking delegates to share all those influential moments or developments, small or large, that changed the way they go about their fisheries research and management. The event also actively engaged the local Albany community via a free public forum and a special session partnership with the local high school students. Another key aspect of the event was the “Nurturing fish scientists” session that brought together key speakers into a discussion forum to share experiences and tips for making the most of the formative years of becoming a professional scientist or manager in our field. We were also delighted to host the President-elect of the American Fisheries Society (AFS) Steve McMullin, who was a keynote speaker in our special forum on early career development. Through our reciprocal relationship with the AFS, they hosted ASFB President Chris Fulton at their 2017 annual conference in Tampa, Florida.

Conference Organising Committee

Emily Fisher (co-Chair)	WA Fisheries
Gary Jackson (co-Chair)	WA Fisheries
Brendan Ebner	CSIRO Atherton
Stephen Beatty	Murdoch University
Shaun Wilson	WA Parks & Wildlife
Thomas Holmes	WA Parks & Wildlife
Paul Close	University of WA
Peter Coulson	Murdoch University
Glenn Moore	WA Museum
Adrian Gleiss	Murdoch University
Di McLean	University of WA
Chris Hallett	Murdoch University
Katherine Cure	AIMS
Stacy Bierwagen	James Cook University
Lachlan Fetterplace	University of Wollongong
Garry Ogston	Murdoch University
Ben Saunders	Curtin University
Ruby Hatfield	ASN Events

Sponsorship

A range of categories of sponsorship was offered including:

- Platinum sponsor: FRDC was recognised as the principal sponsor, contributing to offsetting event costs and supporting student prizes and travel bursaries.
- Poster session sponsor: CSIRO

Sponsorship enabled the Organising Committee to subsidise the cost of the event and in particular student registrations.

Event Program

The conference program is provided at Appendix 4.

Event Report

The 2017 ASFB conference opened with a Welcome to Sea Country by Traditional Owner Aunty Avril, followed by opening addresses by Conference Chair Gary Jackson and ASFB President Chris Fulton. The opening day progressed with five outstanding keynote presentations provided by speakers spanning industry, government and academia. These discussed dynamic ocean management of fish and fisheries (Stephanie Brodie, UC Santa Cruz), industry perspectives on science-based management (David Carter, CEO Austral Fisheries), the utility of sclerochronologies in fish and fisheries (Bronwyn Gillanders, U Adelaide), positive psychology and work-life balance (Hugh Kearns, Flinders U), and the movement physiology and ecology of inland fishes (Jason Thiem, NSW DPI).

We were also proud to have a special FRDC-sponsored session on “Recent Advances in Stock Assessment and Management”, which was attended by scientists and managers from across Australasia.

The focus on the next day turned to the many student and early career members of the society as Education Committee Chair Stephen Beatty presented one of the highlights of the conference; the ‘Nurturing Fish Scientists’ session. It took delegates

on a journey from the post-graduate (larval) phase to fully-recruited fish scientists, with several guest speakers at various stages of their careers sharing their personal stories and experiences that helped them land a PhD or employment in this competitive field. The session included panel discussions focused on how to navigate the ‘PhD rollercoaster’ and what range of employment opportunities are available to newly recruited scientists in academia, Government, industry and consulting. This was followed by the popular rapid-fire student talk competition, which gave students the opportunity to take to the stage for three minutes to spruik their research.

Students from Albany Senior High School also wowed the audience with five fantastic presentations on their marine research projects spanning biodegradability of soft plastic lures to jig colour preferences of squid!

On the Sunday evening the Auditorium was opened up to the public, with 90+ attendees enjoying five short talks on key topics from the conference, followed by a Q&A session. The Albany locals then had the opportunity to mingle with conference delegates and speakers while enjoying some drinks and food. Other social networking events included the opening welcome sundowner, the student mentor-mixer night, and the conference dinner on the final evening at the Albany Boatshed.

Key Indicators

- 170 delegates (40 students = 24%) attended the congress. Included international delegates from North America, Europe, SE Asia
- Five keynote plenary presentations: dynamic ocean management of fish and fisheries (Stephanie Brodie, UC Santa Cruz), industry perspectives on science-based management (David Carter, CEO

Austral Fisheries), the utility of sclerochronologies in fish and fisheries (Bronwyn Gillanders, U Adelaide), positive psychology and work-life balance (Hugh Kearns, Flinders U), and the movement physiology and ecology of inland fishes (Jason Thiem, NSW DPI).

- 137 presentations that included 16 posters presented by high school and university students, early career and established scientists, managers and industry on a range of topics, including: Advances in stock assessment, Socio-economics, Environmental stress on fishes, Artificial reefs, Fish biology, Habitat ecology, and Threatened species.
- Gilbert Whitely junior and senior oral presentation awards, John Lake junior and senior awards and John Glover travel fund bursaries were sponsored by FRDC, with recognition provided on certificates and at the award ceremony

Nurturing fish scientists & Albany public forum summaries

A summary of the main discussion points and outcomes of the forum on nurturing fish scientists are compiled in an open-access blog that can be accessed via this link:

<https://www.facebook.com/notes/australian-society-for-fish-biology/nurturing-a-new-generation-of-fish-scientists/1235935916515178/>

A summary of Albany public forum is compiled in an open-access blog that can be accessed via this link:

<https://www.facebook.com/notes/australian-society-for-fish-biology/a-public-fish-forum/1236891356419634/>

ASFB CONFERENCE 2018

The 2018 ASFB conference was held in Melbourne from 11 to 14 October, 2018 at the Rydges on Swanston, Melbourne, Victoria. The conference theme of “Science into Practice, Practice into Science” challenged and engaged delegates to explore the relationships between scientific research, natural resource management and policy formulation. In so doing, the conference celebrated our successes at the science-practice nexus.

The program included four days of internationally renowned plenaries, oral and poster presentations and workshops, as well as a public event at Melbourne Museum that explored impacts and adaptations to climate change in our marine and freshwater environments. The workshops explored ‘challenges in fisheries management and assessment’, ‘threatened fishes’, ‘how to get a job in the fish and fisheries industry (for students and early career)’, and ‘animal ethics’.

Social events included a welcome mixer at Rydges, a student mentor-mixer at the Panama Dining Room, a public event at Melbourne Museum, a poster night, and a conference dinner at the MCG. We were also delighted to host the President-elect of the American Fisheries Society (AFS) Jesse Trushenski.

Conference Organising Committee

John Morrongiello (Chair)	University of Melbourne
Steve Swearer	University of Melbourne
Rob Hale	University of Melbourne
Josh Barrow	University of Melbourne
Henry Wootton	University of Melbourne
Jarod Lyon	Arthur Rylah Institute
Charles Todd	Arthur Rylah Institute
John Koehn	Arthur Rylah Institute
Di Bray	Melbourne Museum
Martin Gomon	Melbourne Museum
Kylie Hall	Victorian Fisheries Authority
Aldo Turco	Golder Associates
Lance Lloyd	Lloyd Environmental

Claire Hollier	ASFB
Ruby Hatfield	ASN Events
Chad Murphy	ASN Events

Sponsorship

A large range of categories of sponsorship was offered including:

- Principal sponsor: the FRDC was recognised as the principal sponsor, contributing to offsetting event costs and supporting student prizes and travel bursaries.
- Major sponsors: Vic Dept of Environment, Land, Water & Planning, Victorian Environmental Water Holder, Victorian Fisheries Authority, University of Melbourne, National Centre for Coasts and Climate
- Public forum: Melbourne Museum
- Session sponsors: CSIRO

Sponsorship enabled the Organising Committee to subsidise the cost of the event and in particular student registrations.

Event Program

The conference program is provided at Appendix 5.

Event Report

The conference was formally opened by Dr John Morrongiello (Conference Chair), followed by a welcoming address from ASFB President Dr Harry Balcombe, who welcomed our distinguished guests, including the American Fisheries Society President-elect Jesse Truchinski.

The conference program included meetings of the ASFB Alien Fishes and Threatened Fishes committees, followed by an international complement of eight outstanding key speakers, a special series of workshops on postgraduate career development in fish and fisheries, fisheries management, fish ethics, and threatened species, and 13 special sessions spanning a range of topics in fish and fisheries science and management. These themes were explored through 188 oral presentations (including 8 keynote presentations) and 35 posters.

Another major highlight of the conference, which also celebrated our next generation of fish and fisheries scientists and managers, was the Student Competition in Science Communication. In the lead-up to the conference, the ASFB held a competition for students to present their research in a short (< 3 min) video. Entries were voted on by the public (>100,000 views), and prizes were awarded to the most popular video for the Senior (Rob Perryman of Macquarie University with Social behaviour and network structure in a reef manta ray population) and Junior (Shona Rankin of University of Wollongong with Damsels in distress: temperate damselfishes take on tropical vagrants) categories. These short videos were run in the foyer of the conference venue throughout the conference, which showcased the outstanding research and creativity of eight student members of the ASFB. Delegates to the conference also voted a popular choice winner (Sammy Andrzejczek of University of WA with The secret lives of tiger sharks).

There were eight outstanding keynote presentations provided by speakers spanning industry, government and academia, who discussed the topics of: socio-economic dimensions of ecosystem-based fisheries and environmental management (Dr Eva Plaganyi, CSIRO); applying evolutionary concepts to management and conservation (Prof Stephanie Carlson, UCB); the role of partnerships in sustainable recreational fisheries (Prof Steve Cooke, Carleton U), mesophotic reef ecosystems (Dr Joel Williams, NSW DPI); ecosystem modelling to support freshwater fisheries management (Prof Nick Bond, LaTrobe U); the current status of the national carp control program (Dr. Matt Barwick, FRDC); tales of a life as a fish detective (Prof Mike Kingsford, JCU); and the plasticity of marine fishes to ocean warming (Dr Jennifer Donelson, JCU). These headline talks were supported by 13 special sessions of talks and posters that spanned advances in fisheries

management, aquatic pollution, alien fishes, fish ethics & welfare, threatened species, elasmobranch ecology, fish habitat ecology, movement & connectivity, recreational fisheries, behavioural ecology, climate change, adaptive management of our freshwaters, and a range of other topics in fish biology, ecology and evolution (please see attached booklet for full list).

As noted above, we facilitated a special FRDC-sponsored workshop on “Fisheries Management” attended by scientists and managers from across Australasia. This culminated in a new Fisheries Management Committee being formed with the full support of the ASFB.

Social events included a welcome mixer at Rydges on Swanston, a student mentor-mixer at the Panorama Bar, a public lecture series for the Melbourne community attended by over 180 people, and a conference dinner at The Melbourne Cricket Ground. Major sponsors were the FRDC and CSIRO, which enabled the organising committee to subsidize the costs of the conference for all registrants, particularly students. FRDC sponsorship also underpinned the Fisheries Management Workshop, the John Glover student travel bursaries (19 awardees), and the four student presentation awards at the conference.

Key Indicators

- 242 delegates (69 students = 29%) attended the conference. Delegates included international representatives from nine countries from the Asia Pacific region, Africa, Europe and the Americas.
- Eight keynote conference presentations: Prof Steve Cooke (Carleton University, Canada; recreational fisheries), A/Prof Stephanie Carlson (University of California Berkley; evolutionarily enlightened fisheries management), Professor Nick Bond (LaTrobe University; river flow and habitat management), A/Prof Gretta Pecl (University of Tasmania; impacts of climate change on fisheries), and Dr Eva Plaganyi (CSIRO, new approaches to fisheries assessment), Prof Mike Kingsford (James Cook University, K Radway Allen Award), Dr Jennifer Donelson (James Cook University, ASFB Early Career Excellence Award), and Dr Joel Williams (ASFB ECR travel Award winner).
- 231 presentations that included the eight keynotes and 35 posters presented by students, early career and established scientists, managers and industry on a range of topics including: Adaptive management in freshwater systems, Carp control program, Recreational fisheries, Climate change impacts and adaptation, Challenges in fisheries management and assessment, Animal ethics, Habitat importance and restoration, Evolutionary ecology, Behavioural responses to environmental change, Threatened species, and Aquatic pollution.
- Gilbert Whitely junior and senior oral presentation awards, John Lake junior and senior awards and John Glover travel fund bursaries were sponsored by FRDC, with recognition provided on certificates and at the award ceremony

ASFB CONFERENCE 2019

The 2019 ASFB conference was held in Canberra from 14 to 17 October, 2019 at the National Library of Australia, ACT. The conference theme of “Communicate to illuminate & inspire” encouraged the 251 delegates (including 62 students) from across Australia, New Zealand, Europe, South Africa, the USA and Fiji to find new ways to share our passion for fishes, and raise their profile among the many people who depend on them for their everyday health and wellbeing.

The program included four days of internationally renowned plenaries, oral and poster presentations and workshops, as well as a special networking event ‘Big Messages for Decision Makers’ wherein speakers made short pitches of their idea of the future of fish and fisheries to key people responsible for policy and investment in aquatic resource. The workshops explored ‘animal ethics’, ‘fish art and imagery’, ‘writing with quality & productivity’, ‘new media for science comms’ and ‘using graphical abstract’.

Social events included a reception at the National Library, a student-mentor fish quiz, the public ‘Big Messages’ forum and a conference dinner at Gandel Hall on closing night.

Conference Organising Committee

Chris Fulton (Chair)	The Australian National University
Harry Balcombe	Griffith University
Steve Beatty	Murdoch University
Matt Beitzel	ACT Government
Sherrie Chambers	University of Western Australia
Brendan Ebner	CSIRO Atherton and James Cook University
David Ellis	The Australian National University
Elise Furlan	University of Canberra
Rhiannon Jones	Western Australian Government
Paula Kalinowski	Victorian Fisheries Authority
Andrew Katsis	Deakin University
Emily Lester	University of Western Australia
Nathan Miles	NSW Government
Mae Noble	The Australian National University
Rachael Remington	University of Canberra
Katie Ryan	Murray Darling Basin Authority
Robert Streit	James Cook University

Sponsorship

A large range of categories of sponsorship was offered including:

- Major sponsors: FRDC, CSIRO, NSW Recreational Fishing Trust, Icon Water and the ACT Government.
- Other sponsors: Murray-Darling Basin Authority, NSW Department of Primary Industries, Charles Sturt University Institute for Land, Water and Society, ANU Fenner School of Environment & Society and Animate Your Science

The organising committee used this support to expand the conference events, support attendance by key stakeholders and the public, and boost the quality of our social events within a balanced budget.

Event Program

The conference program is provided at Appendix 6.

Event Report

During the first morning of talks delegates were treated to a masterclass of six plenary speakers in the *Communication in Fish & Fisheries Forum*, which explored the use of video and graphical abstracts to unleash the impact of their work (Dr. Tullio Rossi), the fine art of scientific illustration for taxonomy (Dr Lindsay Marshall) and conservation communication (Dr. Erin Walsh), the ingredients for effective communication of your science to your target audience (Stella McQueen & Dr. Tom Rayner), and reimagining our approach to science writing (Dr. Zoe Doubleday). A lively question-answer session with the full panel of speakers generated plenty of discussion during the forum, the tea breaks and special-session question times.

Energised to speak up and show their wares, delegates engaged with the main conference program that included three more outstanding plenaries by ASFB Award Winners – Dr. Alistair Hobday (2018 KRA Award), Dr. Kirsty Nash (2018 Early Career Excellence Award) and Dr. Tiffany Sih (2018 Student International Travel Award) – and 178 talks and poster presentations within the 15 conference special sessions. In two of the largest special sessions – Aquageography & Fish Kills – the presentations were followed by question-answer forums that allowed the audience to talk with presenters and dig deeper into these hot topics.

Another headline event during the conference was our free public forum with the moniker *Big Messages for Decision Makers* attended by 228 delegates, VIPs and members of the public. Our public forum presenters shared insights into the problems and solutions to mass fish kills and the loss of cultural connections in the Murray-Darling, seafood mislabelling, tracking fish movements at oceanic scales, making the most of big data in fisheries, and communicating with people who deny the need for science and conservation.

Extended tea and lunch breaks gave plenty of time for catch-ups with old and new friends, as well as two extremely well attended events. The first was the fish pub quiz that pitted the brains of 164 fish-heads in 10 teams to answer a spread of gritty and quirky questions (Can fish fart? You should have been there to find out the answer!). The final event was the conference dinner at the National Gallery of Australia, where 201 delegates enjoyed local food and drinks while enveloped within the wonderful soundscape provided by *Scroggin*, which got people doing backflips on the dancefloor after dinner.

Delegates who could take advantage of a pre-conference workshop were delighted with the new skills they'd gained in communicating their work through the arts, visual abstracts, developing a comms strategy, and/or exploring new dimensions in their approach to writing. Attendees had the chance to show off their design skills by submitting entries to the ASFB2019 graphical abstract (GA) competition. A competitive pool of 21 submissions made it hard to choose the most outstanding GAs in the student (Tristan Guillemin), early career (Dr. Kylie Scales) and general (Dr. Cindy Bessey) categories, with a \$500 cash award for each winner.

Key Indicators

- 251 Delegates (62 students = 25%) attended the conference
- Nine plenary speakers: Dr Zoe Doubleday (University of South Australia; Reimagining the way we write for bolder and brighter research), Alistair Hobday (University of Tasmania, CSIRO; In a fast-changing world – what does good science look like?), Dr Lindsay Marshall (Specialist; Illustrating the World's Shark and Ray Species: my unexpected career as a natural history artist), Stella McQueen (Specialist; Taking science nerdery to the masses), Kirsty Nash (University of Tasmania; Planetary Boundaries and the Sustainable Development Goals on a Blue Planet), Dr Tom Rayner (Griffith University; Pathways to impact: saving fish by saving yourself.) Dr Tullio Rossi (Animate Your Science; How to Stand Out and Unleash Your Impact), Tiffany Sih (James Cook University; Now entering the Twilight Zone) Erin Walsh (James Cook University; Scientific illustration for communication and conservation)
- 178 talks and poster presentations across 15 conference special sessions

RESEARCH & TRAVEL AWARDS

ASFB 2016 Student award recipients (sponsored by FRDC)

GP Whitley Senior Award – best student (Masters or PhD) oral presentation

João Teixeira (University of Melbourne): First excursions into the 'black box' period of the blackspot seabream *Pagellus bogaraveo*: a missing piece of a deep-sea life cycle puzzle.

GP Whitley Junior Award – best student (Honours) oral presentation

Lucy Wenger (Australian National University) Microhabitat specialisation underpins coral-seaweed niche segregation in tropical reef fishes.

JS Lake Senior Award - best student (Masters or PhD) poster

Karissa Lear (Murdoch University): Correlations of metabolic rate and body acceleration in three coastal shark species under contrasting temperature regimes.

JS Lake Junior Award – best student (Honours) poster

Hannah Ashe (Murdoch University): Ecology of marine cleaning stations used by *Manta alfredi* in Ningaloo Reef, Western Australia.

Victorian Marine Science Consortium Award for temperate marine fish research (sponsored by VMSC) Kay Weltz (University of Tasmania) for the talk entitled Genetics: a vital tool for understanding connectivity and the ability of a threatened marine species (Maugean skate (*Zearaja maugeana*) to withstand future challenges.

John Glover Travel Award recipients:

Alan Couch, Jonas Bylemans, Patrick Ross-Magee, Sally Hatton, Mae Noble, Lucy Wenger, Joshua Van Lier (ACT), Sharon Every (NT), Sasha Whitmarsh, Kayla Gilmore (SA), Mischa Turschwell, Jordan Matley, Stacy Bierwagen, Ana Barbosa Martins, Diana Pazmino Jaramillo, Tiffany Nay, Emmanuelle Zoccola (QLD), Connor Gervais, Catarina Castro Pauperio Vila Pouca, Sherrie Chambers, Christopher Lawson, Hayden Schilling, Natasha Hardy (NSW), Adam Canning (NZ), Anthony Ashe, Edy Setyawan, Curtis Champion, Kay Weltz (TAS), João Teixeira (VIC), Hannah Ashe, Nathan Beerken, Karissa Lear (WA).

Value of student awards (FRDC contribution)

GP Whitley awards	\$1,200
JS Lake awards	\$1,200
<u>John Glover awards</u>	<u>\$7,513</u>
Total	\$9,913

Research and International awards presented at 2016 Conference

2016 Barry Jonassen Award – William Coates (University of Melbourne) \$2,000 towards costs associated with his research project examining ‘To leave or not to leave: The influence of social context and behavioural syndromes on the dispersal of freshwater fish’.

2016 Michael Hall Student Innovation Award – Curtis Champion (University of Tasmania) \$2,000 towards costs associated with his research project examining ‘Climate-driven range shifts in fishes and the impacts on temperate marine ecosystems’.

International Travel awards

2016 Student International Travel Scholarship – Jordan Matley (James Cook University) for his paper ‘Diet-tissue discrimination factors and turnover of C and N isotopes in tissues of an adult predatory coral reef fish *Plectropomus leopardus*’. \$3,000 support to travel to the Indo-Pacific Fish Congress held in Tahiti, French Polynesia in October 2017.

2016 Early Career International Travel Scholarship - Stephanie Brodie (UNSW) to \$3000 support for her attendance at the American Society for Limnology and Oceanography Aquatic Sciences Meeting in the USA.

Career Excellence awards

2016 Early Career Excellence Award – Dr Jason Thiem (NSW DPI) for exceptional contributions to the field of freshwater fish movement ecology and physiology.

2016 K Radway Allen Award for career excellence and outstanding contribution in fish or fisheries science – Bronwyn Gillanders (University of Adelaide), internationally recognised pioneer in using otoliths to address a range of questions related to environmental history of organisms, population structure, connectivity of organisms between estuaries and open coastal regions.

ASFB 2017 Student award recipients (sponsored by FRDC)

GP Whitley Senior Award – best student (Masters or PhD) oral presentation

Marianne Nyegaard (Murdoch University). There be Giants! How a new species of ocean sunfish managed to hoodwink the world

GP Whitley Junior Award – best student (Honours) oral presentation

Cameron Desfosses (Murdoch University). The significance of macroalgae to the diets of juvenile fish and ecosystem function in a tropical coral reef lagoon

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

Mark Chambers (University of New South Wales) – Evidence of separate subgroups of juvenile southern bluefin tuna

John Glover Travel Award recipients:

Danielle Davenport (University of Queensland), Mischa Turschwell (Griffith University), Md. Rakeb-UI Islam (Griffith University), Tyson Martin (Griffith University), Bryan Baker (Charles Darwin University), Joni Pini-Fitzimmons (Macquarie University), Hayden Schilling (University of New South Wales), Joshua Barrow (Melbourne University), Henry Wootton (Melbourne University), Daniel Yeoh (Murdoch University), Samantha Andrzejczek (University of Western Australia), Alissa Tate (Edith Cowan University), Karissa Lear (Murdoch University), Anna Cresswell (University of Western Australia), Marianne Nyegaard (Murdoch University).

Value of student awards (FRDC contribution)

GP Whitley awards	\$1,200
John Glover awards	\$3,433
Total	\$4,633

Research and International awards presented at 2017 Conference

Student Research Support

2017 Barry Jonassen Award (winner) - Maud Kent (University of Sydney) \$2,000 towards costs associated with her research project examining 'Schooling for success: sociality in an invasive species'.

2017 Barry Jonassen Award (runner-up) - Gabriel Cornell (University of Melbourne) \$2,000 towards costs associated with the research project examining 'Understanding how food and habitat use in a degraded stream can structure fish'.

2017 Michael Hall Student Innovation Award (winner) - Katie Sambrook (James Cook University). \$2,000 towards costs associated with her research project 'Beyond the reef: the influence of seascape structure on fish communities on coral reefs and their use of seagrass beds and mangroves'

2017 Michael Hall Student Innovation Award (runner-up) - Leteisha Prescott (James Cook University). \$1,000 towards costs associated with her research project 'What happens when fish settle onto a degraded coral reef? Impacts to the 'health' of the gill.'

International Travel awards

2017 Student International Travel Scholarship – Paloma Matis (University of Technology Sydney) for her paper 'Latitudinal variation in behavioural patterns and social group structure of range-expanding coral reef fishes'. \$3,000 support to travel to the Indo-Pacific Fish Congress held in Tahiti, French Polynesia in October 2017

2017 Early Career International Travel Scholarship – Joel Williams (NSW Fisheries) \$3000 support for him to travel to the Indo-Pacific Fish Congress held in Tahiti, French Polynesia in October 2017.

2017 Early Career International Travel Scholarship – Krystle Keller (NSW Fisheries) \$3000 support for travel to the Women in Marine Science forum, Indo-Pacific Fish Congress held in Tahiti, French Polynesia in October 2017.

Career Excellence awards

2017 Early Career Excellence Award – Jennifer Donelson (James Cook University) for outstanding contributions to our understanding of the ecology and early life history of tropical fishes, and their capacity to acclimate to predicted environmental changes arising from marine climate change.

2017 K Radway Allen Award for career excellence and outstanding contribution in fish or fisheries science – Michael Kingsford (James Cook University) for his critically acclaimed work on population and community ecology of reef-associated and pelagic fishes; the importance of oceanographic features for larval fish dispersal; how otolith microstructure and elemental chemical tags in fishes can be used to elucidate patterns of connectivity and recruitment; the importance of sensory cues for larval fish settlement; and the consequences of climate change for marine ecosystems.

ASFB 2018 Student award recipients (sponsored by FRDC)

GP Whitley Senior Award – best student (Masters or PhD) oral presentation
Robert Streit (James Cook University). Exploring spatial heterogeneity of algal removal by herbivorous fishes on coral reefs.

GP Whitley Junior Award – best student (Honours) oral presentation
Sinead O’Dwyer (University of Melbourne). Exploring the direct and indirect effects of warming on fish growth.

JS Lake Senior Award - best student (Masters or PhD) poster
Louise Tosetto (Macquarie University). A fish can change its stripes: behavioural drivers of rapid colour change in bluelined goatfish.

JS Lake Junior Award – best student (Honours) poster
Jenna Hounslow (Murdoch University). Establishing best practice classification of shark behaviour from bio-logging data.

John Glover Travel Award recipients:

Alex Chen (Australian National University), Brendan Lanham (University of NSW), Cindy Palermo (Murdoch University), Curtis Champion (University of Tasmania), David Ellis (Australian National University), Eva McClure (James Cook University), Hayden Schilling (University of New South Wales), Hugh Allen (University of Canberra), Jenna Hounslow (Murdoch University), Joni Pini-Fitzimmons (Macquarie University), Joshua van Lier (Australian National University), Karissa Lear (Murdoch University), Kim Hunnam (Charles Darwin University), Mariah Millington (Griffith University), Molly Scott (James Cook University), Nicholas Hill (University of Tasmania), Oliver Jewell (Murdoch University), Rachel Spinks (James Cook University), Taryn Laubenstein (James Cook University).

Value of student awards (FRDC contribution)

GP Whitley awards	\$1,200
JS Lake awards	\$1,200
<u>John Glover awards</u>	<u>\$4,998</u>
Total	\$7,398

Research and International awards presented at 2018 Conference

Student Research Support

2018 Barry Jonassen Award (winner) - Isabella Loughland (University of Sydney) \$2,000 towards costs associated with her research project examining 'Acclimation of fishes to thermal changes'.

2018 Barry Jonassen Award (runner-up) - Pavel Mikheev (University of Otago) \$1,000 towards costs associated with his research project examining 'Spatial and temporal dynamics of juvenile brown trout life-history strategies'.

2018 Michael Hall Student Innovation Award (winner) - Barrett Wolfe (University of Tasmania) \$2,000 towards costs associated with his research project examining 'Range extension and ecophysiology of snapper'.

2018 Michael Hall Student Innovation Award (runner-up) – Pauline Navaez (James Cook University) \$1,000 towards costs associated with her research project examining 'cleaner organisms, fish parasites and pathogen transmission'

International Travel awards

2018 Student International Travel Scholarship – Tiffany Sih (James Cook University) for her paper 'The biology and ecology of deep sea fishes on the Great Barrier Reef'. \$3000 support for her to travel to the 'Deep Sea Biology Symposium' in Monterey, California, USA.

2018 Early Career International Travel Scholarship – Justin Rizzari (Deakin University) \$3,000 support for his to travel to the 'International Congress for Conservation Biology' in Kuala Lumpur, Malaysia, to present his paper 'Parks for sharks: human exclusion areas outperform no-take marine reserves'.

Career Excellence awards

2018 Early Career Excellence Award – Kirsty Nash (University of Tasmania) for outstanding contributions to our understanding of resilience in coral reef fish communities.

2018 K Radway Allen Award for career excellence and outstanding contribution in fish or fisheries science – Alistair Hobday (CSIRO Hobart) for stellar achievements in modelling the rate and consequences of climate change for marine ecosystems.

ASFB 2019 Student award recipients (sponsored by FRDC)

GP Whitley Senior Award – best student (Masters or PhD) oral presentation

Christopher Hemingson, James Cook University. \$600 'Evolutionary and ecological relationships of eyespots in coral reef fishes'

GP Whitley Junior Award – best student (Honours) oral presentation

Aaron Puckeridge (University of NSW) \$600 'Fine scale behaviour of bluespotted flathead around a designed artificial reef'.

JS Lake Senior Award - best student (Masters or PhD) poster

Yi-Yang (Alex) Chen (Australian National University). \$600 'Sargassum epifaunal communities vary with reef fish biomass and seascape setting within a fringing coral reef ecosystem'.

John Glover Travel Award recipients:

Alan Couch, Jonas Bylemans, Patrick Ross-Magee, Sally Hatton, Mae Noble, Lucy Wenger, Joshua Van Lier (ACT), Sharon Every (NT), Sasha Whitmarsh, Kayla Gilmore (SA), Mischa Turschwell, Jordan Matley, Stacy Bierwagen, Ana Barbosa Martins, Diana Pazmino Jaramillo, Tiffany Nay, Emmanuelle Zoccola (QLD), Connor

Gervais, Catarina Castro Pauperio Vila Pouca, Sherrie Chambers, Christopher Lawson, Hayden Schilling, Natasha Hardy (NSW), Adam Canning (NZ), Anthony Ashe, Edy Setyawan, Curtis Champion, Kay Weltz (TAS), João Teixeira (VIC), Hannah Ashe, Nathan Beerken, Karissa Lear (WA).

Value of student awards (FRDC contribution)

GP Whitley awards	\$1,200
JS Lake awards	\$600
<u>John Glover awards</u>	<u>\$4,367</u>
Total	\$6,167

Research and International awards presented at 2019 Conference

Student Research Support

2019 Barry Jonassen Award (winner) - Harriet Goodrich (University of Queensland) \$2,000 towards costs associated with her research project examining 'Optimising diets for sustainable aquaculture by reducing the energetic costs of digestion'.

2019 Barry Jonassen Award (runner-up) - Geoffrey Pierre Francois Mazue (Sydney University) \$1,000 towards costs associated with his research project examining 'The flexibility of individual and collective foraging strategies in an invasive species, the eastern mosquitofish (*Gambusia holbrooki*)'.

2019 Michael Hall Student Innovation Award (winner) – David Ellis (Australian National University) \$2,000 towards costs associated with his research project examining 'How does a popular fishery target species respond to seasonal changes in their preferred tropical seaweed habitat?'.

2019 Michael Hall Student Innovation Award (runner-up) – Adam Downie (James Cook University) \$1,000 towards costs associated with his research project examining 'The changes in physiological performance associated with coral reef fish metamorphosis'.

International Travel awards

2019 Student International Travel Scholarship – Oliver Jewell (Murdoch University) for his paper 'cryptic habitat use of white sharks in kelp forest revealed by animal-borne video. \$3000 support for travel TBA original conference (Experimental Biology 2020, San Diego) postponed by COVID-19 restrictions.

2019 Early Career International Travel Scholarship – Rohan Brooker (NSW DPI) for his talk on 'Working together: the ecology and evolution of reef fish mutualism' \$3,000 support for travel TBA original conference (ICRS 2020, Germany) postponed by COVID-19 restrictions.

Career Excellence awards

2019 Early Career Excellence Award – David Harasti (NSW DPI) for outstanding contributions to Fish and fisheries, particularly surrounding the management of threatened species.

2019 K Radway Allen Award for career excellence and outstanding contribution in fish or fisheries science – Beth Fulton (CSIRO Hobart) for her development and extension of the Atlantis family of models. Beth's strongest research contribution has been as a leading developer of amongst the first whole-of-system models which give equal attention to biophysical and human components of marine ecosystems. Beth is an advocate for in situ data collection in marine systems and has been instrumental in raising the importance of fisheries research, management, and conservation in Australia and internationally.

Implications

The main implications of the FRDC sponsorship in supporting research awards and the annual ASFB science conferences are the promotion of research excellence, extension of research findings (many projects funded by FRDC), training and mentoring of early career researchers, and increasing the international profile of our world-class Australasian fisheries science and management. 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.

The 2016, 2017, 2018 and 2019 annual science conferences were highly successful as evidenced by metrics such as the number of registrants (in particular students), number of presentations, and value added 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 the ASFB annual conference is as a national forum of research exchange. FRDC sponsorship contributed to funding awards and off-set event costs that enabled significant registration discounts to be offered to students.

Recommendations

Provision of multi-year sponsorship support to the ASFB as part of an integrated sponsorship package has proven effective in providing certainty for the Society in its ability to organise its annual science conference. In addition, this allows for a strong focus of support for early career researchers via research awards, travel bursaries and subsidised registrations. We recommend ASFB continues to seek multi-year sponsorship arrangements.

The move away from the more traditional annual sponsorship requests linked to a specific workshop theme (often involving considerable organisational and reporting requirements) has resulted in the society developing multiple workshops and technical meetings associated with each conference, adding further value to each event. We recommend ASFB peruse this method in any future sponsorship arrangements.

Extension and Adoption

Effective provision of opportunities for knowledge transfer, the building of research partnerships as well as recognising and promoting achievements, particularly among early career researchers represent the main extension of this project. Key performance measures that support these outcomes include the large number of registrants (average of 208 per 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), student and early career engagement (around a quarter of registrants each year), who presented their research at each of the annual science conferences, as well as international conferences around the world via ASFB international travel awards.

Project materials developed

Program pocket books were developed for most conferences, there are included in the appendices.

Appendix 1: Staff

Australian Society for Fish Biology

Christopher Fulton	The Australian National University
Stephen Balcombe	Australian Rivers Institute
Heather Patterson	ABARES
Lenore Litherland	QLD DPI
Brendan Ebner	CSIRO Atherton & James Cook University

2016 Conference Organising Committee

Sean Tracey (co-Chair)	IMAS, University of Tasmania
Heidi Pethybridge (co-Chair)	CSIRO Hobart
Will White (co-Chair)	CSIRO Hobart
Chris Fulton	The Australian National University
Andrew Chin	James Cook University
Brendan Ebner	CSIRO Atherton & James Cook University
Alistair Hobday	CSIRO Hobart
Tim Farrell	IFS Tasmania
Madi Green	IMAS, University of Tasmania
Nick Ling	University of Waikato
Peter Yates	Australian Antarctic Division
Peter Coulson	Murdoch University
Emily Fisher	WA Fisheries
Ruby Hatfield	ASN Events

2017 Conference Organising Committee

Emily Fisher (co-Chair)	WA Fisheries
Gary Jackson (co-Chair)	WA Fisheries
Brendan Ebner	CSIRO Atherton & James Cook University
Stephen Beatty	Murdoch University
Shaun Wilson	WA Parks & Wildlife
Thomas Holmes	WA Parks & Wildlife
Paul Close	University of WA
Peter Coulson	Murdoch University
Glenn Moore	WA Museum
Adrian Gleiss	Murdoch University
Di McLean	University of WA
Chris Hallett	Murdoch University
Katherine Cure	AIMS
Stacy Bierwagen	James Cook University
Lachlan Fetterplace	University of Wollongong
Garry Ogston	Murdoch University
Ben Saunders	Curtin University
Ruby Hatfield	ASN Events

2018 Conference Organising Committee

John Morrongiello (Chair)	University of Melbourne
Steve Swearer	University of Melbourne
Rob Hale	University of Melbourne
Josh Barrow	University of Melbourne
Henry Wootton	University of Melbourne
Jarod Lyon	Arthur Rylah Institute
Charles Todd	Arthur Rylah Institute
John Koehn	Arthur Rylah Institute
Di Bray	Melbourne Museum
Martin Gomon	Melbourne Museum
Kylie Hall	Victorian Fisheries Authority
Aldo Turco	Golder Associates
Lance Lloyd	Lloyd Environmental
Claire Hollier	ASFB
Ruby Hatfield	ASN Events
Chad Murphy	ASN Events

2019 Conference Organising Committee

Chris Fulton (Chair)	The Australian National University
Harry Balcombe	Griffith University
Steve Beatty	Murdoch University
Matt Beitzel	ACT Government
Sherrie Chambers	University of Western Australia
Brendan Ebner	CSIRO Atherton and James Cook University
David Ellis	The Australian National University
Elise Furlan	University of Canberra
Rhiannon Jones	Wester Australian Government
Paula Kalinowski	Victorian Fisheries Authority
Andrew Katsis	Deakin University
Emily Lester	University of western Australia
Nathan Miles	NSW Government
Mae Noble	The Australian National University
Rachael Remington	University of Canberra
Katie Ryan	Murray Darling Basin Authority
Robert Streit	James Cook University

APPENDIX 2: [2016 ASFB & OCS CONFERENCE PROGRAM](#)

APPENDIX 3: [2017 ASFB CONFERENCE PROGRAM](#)

APPENDIX 4: [2018 ASFB CONFERENCE PROGRAM](#)

APPENDIX 5: [2019 ASFB CONFERENCE PROGRAM](#)