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On behalf of the local organising committee for the 2017 ASFB conference, I'd like to welcome you all to the beautiful coastal town of Albany on the south coast of Western Australia. Situated on the edge of Princess Royal Harbour and walking distance from the historic town centre, the Albany Entertainment Centre is a spectacular venue to host the first stand-alone ASFB conference since 2011. This has provided the organising committee with an opportunity to develop an exciting conference program that is a little bit 'out of the ordinary'.

With the overarching theme of '*Turning Points in Fish and Fisheries*', we hope to get everyone thinking about all those influential moments or developments, small and big, that have changed the way we go about our research. After a few years of working hard to get both marine and freshwater contributions in as many sessions as possible, we are mixing (or rather un-mixing) it up for the Sunday, when two concurrent sessions will focus specifically on marine habitat-based topics and freshwater-related issues for the full day.

I wish to thank everyone for making the effort to travel all the way to Albany for this conference. Thank you also to the local organising committee and to ASN for helping with the planning of the event and to our sponsors for their contributions.

I wish everyone an enjoyable and rewarding conference and hope you enjoy your stay in Albany!

Gary Jackson

Conference Chair

We acknowledge the Noongar people, the traditional owners of this country and their continuing connection to land, sea and community.

We offer our respect to them and their culture, to the elders past and present, and to those who were removed as children.

With great pleasure I welcome you to the 2017 ASFB Conference in Albany, Western Australia. A huge thanks to the Local Organising Committee and Conference Chair Gary Jackson for assembling an outstanding program around the theme of *Turning Points in Fish and Fisheries*.

We have three days of high quality presentations to showcase our endeavours in fish and fisheries, which is sure to generate lively discussions and networking opportunities for scientists and managers at all stages of their careers. We have also strived to engage with the local community during this conference, through a partnership with the local high school, and a public forum on topics relevant to the coastal communities of southwest Australia.

After the success of the *Women in Ichthyology* forum at ASFB 2016 Hobart, this year we kick off with a focus on early career development in fish and fisheries. The *Nurturing Fish Scientists* session will take us on a journey from the post-graduate (larval) phase to fully-recruited ichthyologists, with several speakers and a discussion forum allowing us to share our experiences and tips for making the most of the formative years in becoming a professional scientist or manager in this rewarding, but highly competitive field. We will also feature the popular Rapid Talks, where students will take to the stage to spruik their research in a short and sweet format. Thank you to our Conference & Workshop Convener Brendan Ebner and Education Committee Chair Stephen Beatty for guiding these fantastic sessions.

I hope that you enjoy the conference and take the opportunity to explore Albany and its surrounding areas during your visit. When you do, please take the time to engage with the locals and share your passion and knowledge for all things fish and fisheries!

Dr Chris Fulton

President, Australian Society for Fish Biology





Australian Government

Australian Fisheries Management Authority

The **Australian Fisheries Management Authority (AFMA)** is responsible for the efficient management and sustainable use of Commonwealth fish resources.

Did you know...

Commonwealth fisheries are sustainable and well-managed with decisions based on the best available science

Harvest strategies maintain commercial fish stocks at environmentally sustainable levels

Scientific ecological risk assessment processes identify and quantify impacts of fishing



Sustainable fisheries

No stocks subject to overfishing in AFMA solely managed fisheries for **3** consecutive years



afma.gov.au



DELEGATE INFORMATION

VENUE

Albany Entertainment Centre

2 Toll Place, Albany

WA, 6330

Phone: (08) 9844 5000

Website: www.albanyentertainment.com.au

Email: aec@ptt.wa.gov.au



ORGANISER'S OFFICE – ASN EVENTS

The conference registration desk, located in Harbour Side Foyer, will operate as per the times listed below:

Saturday, Sunday & Monday: 7:30 am – 5:30 pm

All conference related enquires should be directed to ASN Events staff at this desk. Accommodation queries should be directed to the relevant hotel reception desk.

INTERNET ACCESS

Free Wi-Fi is available to conference delegates at the venue. There are different networks for various locations and rooms within the building:

The Harbour Side Foyer

Network: VIEW Restaurant

Password: July#2017

Kalyneup 1:

Network Name: AECStudio 1

Password: Stud16za

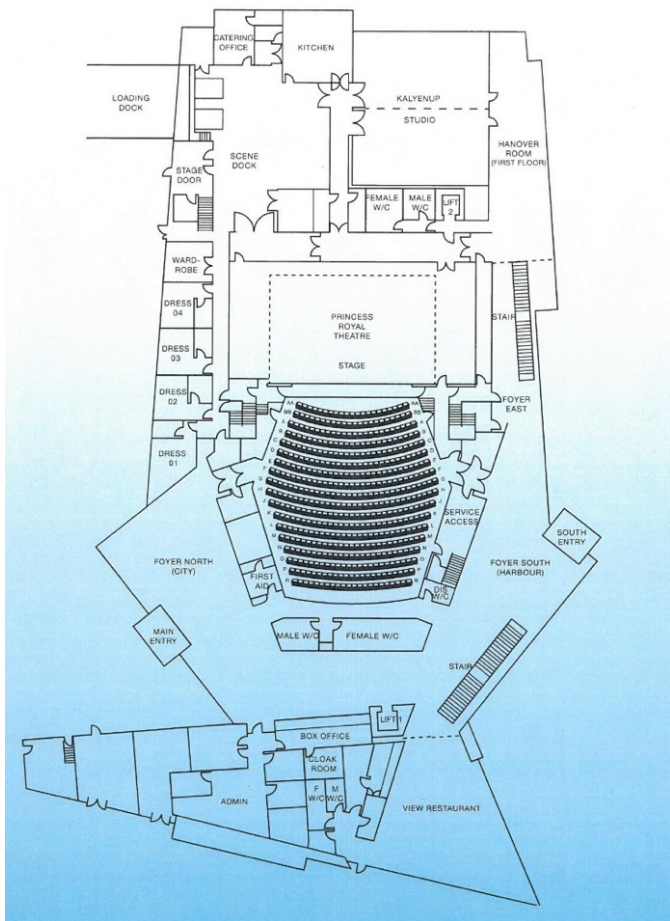
Kalyneup 2:

Network Name: AECStudio 2

Password: Stud16hd

Unfortunately, there is no Wi-Fi in the Auditorium or the PRT Stage. Please contact ASN staff if you have any difficulties connecting.

MAP OF ALBANY ENTERTAINMENT CENTRE



CONFERENCE WEB APP

The official **ASFB 2017** web-based app will keep you organised during the meeting.

You can use the app to update your profile information and view:

- An up-to-date daily program
- Speaker abstracts
- Speaker bios
- Venue maps
- Sponsors & Exhibitors



Downloading the ASFB 2017 Conference Mobile App is easy!

INSTRUCTIONS FOR APPLE DEVICES

Step 1: Open asfb-2017.m.asnevents.com.au in your browser or use the above QR code.

Step 2: Tap the 'share icon' at the bottom centre of your screen then 'Add to Home Screen' – the conference icon will appear on your home screen for quick access.

INSTRUCTIONS FOR ANDRIOD DEVICES

Step 1: Open asfb-2017.m.asnevents.com.au in your browser or use the above QR code.

Step 2: Select the menu button, and add the page to your **bookmarks**. Then open your bookmarks using the menu button, and find the new bookmark you've just added. Press down and hold on the bookmark until you see an action menu. Select 'Add to homescreen' - the conference icon will appear on your home screen for quick access.

For further assistance please see ASN staff at the registration desk.

SOCIAL PROGRAM

WELCOME SUNDOWNER

Time: 6:00 - 8:00 pm

Date: Friday 21st July

Venue: Due South, 6 Toll Place, Albany

STUDENT-MENTOR MIXER

Time: 6:00 - 8:30 pm

Date: Saturday 22nd July

Venue: White Star, 72 Stirling Terrace, Albany

PUBLIC FORUM

Time: 6:00 - 8:00 pm

Date: Sunday 23rd July

Venue: Albany Entertainment Centre, 2 Toll Place, Albany

CONFERENCE BASH

Time: 7:00 – 11:00 pm

Date: Monday 24th July

Venue: The Boatshed, Princess Royal Drive, Albany

ANNUAL GENERAL MEETING

All society members are encouraged to attend the ASFB AGM. The ASFB AGM will be held after the lunch break from 2:00 - 3:30 pm on Monday 24th July in the Auditorium.

SPEAKER PREPARATION INSTRUCTIONS

It is the conference preference that ALL presentations must be pre-loaded onto the laptop in the relevant presentation room at least one full session in advance of your presentation session to allow for testing. Audio-visual equipment will be supplied, please bring your presentation to the meeting on a USB drive compatible with PC.

There will be a technician in the Auditorium and volunteers to assist with any enquiries.

DISPLAYING YOUR POSTER

You will be able to hang your poster from 9:00 am on Saturday 22nd July in the Harbour Side Foyer. Please affix your poster to the allocated board before 11:00 am on Sunday 23rd July ready for the poster viewing during the Sunday lunch break. Posters should be attached to the boards using the Velcro provided. Please visit the conference registration desk if you require additional supplies.

Posters should be taken down no later than 4:00 pm on Monday 24th July. Posters remaining after this time will be removed by conference staff. View more information about the presenter and their research by scanning the QR code displayed on posters – a new feature for this year!

NOTICEBOARD

Notices may be placed by delegates and trade participants on the board outside the main trade display.

RECYCLING YOUR NAME BADGES AND LANYARDS

If you do not wish to keep your name badge at the conclusion of the conference, please return it to the conference registration desk for recycling.

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INVITED SPEAKERS

DAVID CARTER

Austral Fisheries

E: dcarter@australfisheries.com.au

David Carter graduated from Melbourne University in 1978 with a science degree in marine zoology and then went to sea as a deckhand on a prawn trawler out of Darwin immediately after that. David has worked in the same business for his whole career and has been exposed to most of what the fishing industry has to offer from science and policy through operations and management and marketing and sales. He has been CEO since 2006.

Austral Fisheries Pty Ltd has a strong commitment to science based fisheries management, believes strongly in recognition of sustainable fisheries performance through third party certification schemes such as the Marine Stewardship Council and is recognised locally and internationally as responsible and progressive. Austral has accumulated a number of awards and recognition over the years and in 2012 David was admitted to the Australian seafood industry 'Hall of Fame'.

BRONWYN GILLANDERS

University of Adelaide

E: bronwyn.gillanders@adelaide.edu.au

Professor Bronwyn Gillanders is based in the School of Biological Sciences at the University of Adelaide. She completed her BSc at the University of Canterbury (New Zealand), MSc at the University of Otago (NZ) and PhD at the University of Sydney (Australia). She has previously held ARC Fellowships and is now a Faculty member at the University of Adelaide. Her research focuses on freshwater, estuarine and marine systems including fisheries, ecological and environmental questions. Bronwyn uses calcified structures of aquatic organisms as innovative tools to understand past environments and biological processes, such as age, growth and movement patterns. Her broader interests include integrated marine management and understanding cumulative environmental impacts. She is past president of the Australian Society for Fish Biology and current President of the World Council of Fisheries Societies.

HUGH KEARNS

Flinders University

E: hugh@ithinkwell.com.au

Hugh Kearns is recognised internationally as a public speaker, educator and researcher. He regularly lectures at universities across the world and has recently returned from lecture tours of the UK and the US which included lectures at Oxford, Cambridge, Harvard, Berkeley and Stanford.

His areas of expertise include self-management, positive psychology, work-life balance, learning and creativity. He draws on over twenty five years of experience as a leading training and development professional within the corporate, financial, education and health sectors in Ireland, Scotland, North America, New Zealand and Australia. He has coached individuals, teams and executives in a wide range of organisations in the public and private sectors.

Hugh lectures and researches at Flinders University in Adelaide. He is widely recognised for his ability to take the latest research in psychology and education and apply it to high-performing people and groups. As a co-author with Maria Gardiner, he has published ten books which are in high demand both in Australia and internationally.

JASON THIEM

NSW Fisheries

E: jason.thiem@dpi.nsw.gov.au

Jason Thiem is a Fisheries Scientist with Fisheries NSW. His PhD research was undertaken in Canada and focussed on the effects of dams on lake sturgeon migration and reproductive behaviour, as well as the biomechanics and energetics of sturgeon passage through fishways. Over the past 10 years he has undertaken fisheries research in Australia, Canada, USA and the Bahamas. Jason has been based at the Narrandera Fisheries Centre since 2013. His current research program is focussed on the abiotic drivers of fish movement, spawning and recruitment within the Murray-Darling Basin, with a strong focus on riverine connectivity.

STEPHANIE BRODIE

National Oceanic and Atmospheric Administration

E: stephbrodie1@gmail.com

Stephanie Brodie is based at the University of California Santa Cruz and the National Oceanic and Atmospheric Administration (NOAA) in the United States. She completed her PhD and early post-doctoral research at the University of New South Wales researching the distribution, ecology, and eco-physiology of pelagic fish off the east coast of Australia. Stephanie has recently moved to the US to conduct post-doctoral research on dynamic ocean management, specifically focusing on marine fish and fisheries.

Enjoy...

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diverse history to life!*

Present this coupon page to receive 2 entries for the price of 1.
Complementary entry must be of equal or lesser value than paid entry.
Valid from 21st to 31st July 2017. Limit 1 coupon per transaction.

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PROGRAM

FRIDAY 21ST JULY 2017

Welcome Sundowner & Registrations

6:00PM - 8:00PM Due South, 6 Toll Pl, Albany

SATURDAY 22ND JULY 2017

Registration Opens

7:30AM - 5:00PM Harbour Side Foyer

Welcome

8:30AM - 9:00AM Auditorium

Plenaries

Chair: Gary Jackson

9:00AM - 10:00AM Auditorium

9:00 AM David Carter

Much to be done. *abs# 1*

9:30 AM Bronwyn Gillanders

Ear bones of fish: turning points in fish and fisheries science *abs# 2*

Morning Tea

10:00AM - 10:30AM Harbour Side Foyer

Nurturing Fish Scientists – from Nursery to Broodstock

10:30AM - 12:45PM Auditorium

Chairs: Stephen Beatty & Brendan Ebner

10:30 AM Hugh Kearns

The Life Cycle of the PhD *abs# 3*

11:00 AM Steve McMullin

Preparing the Next Generation of Fisheries Professionals for Career Success *abs# 4*

11:30 AM John Koehn

Nurturing fisheries researchers: larvae and juveniles *abs# 5*

Lunch

12:45PM - 1:30PM Harbour Side Foyer

ASFB Award Plenaries and Student Talks

1:30PM - 3:00PM Auditorium

Chairs: Gary Jackson and Stephen Beatty

1:30 PM Jason Thiem

Move it or lose it: restoring movement pathways for fish in freshwater rivers *abs# 6*

1:45 PM Steph Brodie

Dynamic Ocean Management: a strategy to reduce conflict between ocean users *abs# 7*

2:00 PM ASFB Student Rapid Talks

2:30 PM Albany High School Marine Project Student Talks

An introduction to the Albany Senior High School Marine Science Program a short 4 minute video produced by *Taylor Smith*.

- *Colour preference of Squid. By Hayden Chandler, Peter Ebert and Taylor Smith*
- The abundance and distribution of Elongate Surf Clams (*Paphius elongate*) And Wedge Surf Clams (*Donacidae columbella*) in the Albany area. By Reuben Cloughton and Jeremy Staude.
- The settlement of native flat oysters (*Ostrea angasi*) and other invertebrates in Princess Royal and Oyster Harbours. By Eleanor Barnett, Katie Valley, Indigo Bew and Indi Weeden.
- The biodegradability of soft plastic lures. By Eliza Driffill
- The abundance and distribution of juvenile Australian Salmon (*Arripis truttaceus*) in Oyster Harbour. By Hayley Hartwig, Bonnie Staude, Alyssa Ward and Sophie Lambert.

Afternoon Tea

3:00PM - 3:30PM Harbour Side Foyer

Hearing me, Hearing you, a-ha – Using acoustics to monitor fish & their habitats

3:30PM - 5:00PM PRT Stage

Chairs: Miles Parsons & Ben Scouling

3:30 PM Ben Scouling

A review of the use of echosounders for fish-stock assessment in marine and freshwater environments *abs# 8*

3:45 PM Ben Scouling

Evaluating active-acoustic methods for assessing snapper (*Chrysophrys auratus*) spawning aggregations in Western Australia *abs# 9*

4:00 PM Iain Parnum

Imaging sonar mapping of river habitats and fish usage *abs# 10*

4:15 PM Miles Parsons

Passive acoustic monitoring of fish movement around the Swan River *abs# 11*

4:30 PM Miles Parsons

An introduction to Marine Soundscape Ecology: The highs and the lows (frequency) *abs# 12*

Turning Points & Agents of Change in Fish Biology Conservation and Fisheries

3:30PM - 5:00PM Kalyenup 1

Chair: Brendan Ebner

3:30 PM Timothy Emery

Electronic monitoring within longline fisheries in the western and central Pacific Ocean: implications for data collection and exchange. *abs# 13*

3:45 PM Rocio Noriega

The role of electronic monitoring in improving the quality of fishery dependent logbook data. *abs# 14*

4:00 PM Christopher Henderson

Integrating ecological processes into marine reserve design *abs# 15*

4:15 PM Ana Lara-Lopez

Measuring and understanding change: IMOS initiatives and tools relevant to fish and fisheries *abs# 16*

4:30 PM Stuart Little

Turning points, meandering or trending upwards - initiatives in the Murray Darling Basin for native fish *abs# 17*

4:45 PM Katie Ryan

Looking back and looking forward: water reform as an agent of change for native fish in the Murray-Darling Basin *abs# 18*

Beyond Biology: Social & Economic Dimensions of Fisheries

3:30PM - 5:00PM Kalyenup 2

Chairs: Emily Fisher & Emily Ogier

3:30 PM Emily Fisher

The role of fishery certification schemes in providing social licence for both industry and Government *abs# 19*

3:45 PM Emily Ogier

The 'social and economic' turning points in fisheries research and management *abs# 20*

4:00 PM Eva Plaganyi

A social revolution in fisheries science *abs# 21*

4:15 PM Kim Walshe

Turning the tide - demonstrating the sustainability of Western Australia's fisheries *abs# 22*

4:30 PM Timothy Emery

How do we prevent the economic benefit of fisheries being exported? *abs# 23*

Student Mixer

6:00PM - 8:30PM

White Star, 72 Stirling Terrace, Albany

SUNDAY 23RD JULY 2017**Registration Opens**

8:00AM - 5:00PM Harbour Side Foyer

Monitoring & Assessments

8:30AM - 10:30AM PRT Stage

Chair: Alex Hesp

8:30 AM Alastair Harry

Evidence for systemic age underestimation in shark and ray ageing studies *abs# 24*

8:45 AM Gary Jackson

Quantifying shark depredation encounters while commercial, charter and recreational fishing in Western Australia *abs# 25*

9:00 AM Andrew Prosser

Optimizing sample sizes for biological monitoring of sea mullet (*Mugil cephalus*) in Queensland *abs# 26*

9:15 AM Alissa Tate

Assessing variability in standardised harvest rates from shore-based recreational fishing surveys. *abs# 27*

9:30 AM Lenore Litherland

Tailor tales: 18 years of monitoring wild harvest fisheries in Queensland *abs# 28*

9:45 AM Kim Smith

Cruising along or collapsing: what is the status of WA's last cobbler fishery? *abs# 29*

10:00 AM Craig Noell

Reconstructing the footprint of an Australian penaeid-trawl fishery to support ecosystem-based management *abs# 30*

Marine Habitats 1

8:30AM - 10:30AM Kalyenup 1

Chair: Dianne McLean

The value of subsea infrastructure and artificial reefs to fish and fisheries

8:30 AM Krystle Keller

Multispecies presence and connectivity around a designed artificial reef off coastal Sydney, Australia *abs# 31*

8:45 AM Matthew Hammond

Ecological changes to the marine community after instalment of an artificial reef on the south-west coast of Western Australia. *abs# 33*

9:00 AM Michael Tropiano

Reef Vision: Recreational fishers monitoring artificial reefs using baited remote underwater video systems. *abs# 34*

9:15 AM Paul Lewis

Insights into fish associations with various artificial structures in southwest WA *abs# 35*

9:30 AM Todd Bond

A comparison of fish assemblages associated with two gas flowlines and the adjacent seafloor. *abs# 36*

9:45 AM Dianne McLean

Fish-habitat associations on subsea pipelines on the north-west shelf, Western Australia *abs# 37*

10:00 AM Benjamin Saunders

Sampling deep-water fish assemblages using ROV's *abs# 38*

10:15 AM Matt Rees

Seascape patterns and habitat differences explain spatial variability in nearshore temperate fish assemblages *abs# 39*

Freshwater: The Good, Bad and Ugly 1

8:30AM - 10:30AM Kalyenup 2

Chair: David Morgan

8:30 AM Mark Lintermans

The extent and adequacy of monitoring of Australian threatened freshwater fish *abs# 40*

8:45 AM Benjamin Ford

Using species distribution modelling to identify priority areas for conservation of freshwater fishes in southwestern Australia *abs# 41*

9:00 AM Mischa Turschwell

Multi-scale environmental processes influence juvenile recruitment success in a non-migratory fish *abs# 42*

9:15 AM John Koehn

Modelling population dynamics of fish in the MDB- from local to Basin-scale *abs# 43*

9:30 AM Krystle Keller

Habitat use of fishes in a perennial tropical Australian River *abs# 44*

9:45 AM Zeb Tonkin

Quantifying links between instream woody habitat and riverine fish populations *abs# 45*

10:00 AM Paul Close

River flows support key life-history events of spotted galaxias (*Galaxias truttaceus*) in south-western Australia *abs# 46*

10:15 AM Stephen Balcombe

Comparing fish body condition measures as indicators of fitness for two lowland fish species *abs# 47*

Morning Tea

10:30AM - 11:00AM Harbour Side Foyer

Life history & Connectivity

11:00AM - 1:15PM PRT Stage

Chair: Karissa Lear

11:00 AM Marianne Nyegaard

There be Giants! How a new species of ocean sunfish managed to hoodwink the world *abs# 48*

11:15 AM Tony Miskiewicz

Comparative assessment of morphological and pigmentation characters

during larval development of species of 10 genera of F. Gobiidae and two genera of F. Eleotridae *abs# 49*

11:30 AM Inigo Koefoed

Regional variation in life-history strategies of penaeids and their resilience to changing temperatures. *abs# 50*

11:45 AM Henry Wootton

Novel methods to assess long-term trends in size and age at maturity in fished stocks *abs# 51*

12:00 PM Richard Evans

Genomics reveals patterns of dispersal for two reef fish with differing reproductive characteristics along the ecologically significant coast of northwestern Australia *abs# 52*

12:15 PM Tom Barnes

Coast to coast: population structure and connectivity of southern Australia's only sciaenid, mulloway (*Argyrosomus japonicus*) *abs# 53*

12:30 PM Stuart Sexton

Spawning patterns of sardine (*Sardinops sagax*) off eastern Australia; further evidence for multiple spawning stocks? *abs# 54*

12:45 PM Sarah Hearne

Connectivity of fishes from the Kimberley region, Western Australia, using otolith geochemistry *abs# 55*

1:00 PM Daniel Gaughan

Revisiting the analysis and interpretation of otolith chemistry studies for determining stock structure *abs# 56*

Marine Habitats 2

11:00AM - 1:00PM Kalyenup 1

Chairs: Shaun Wilson & Chris Fulton

(Changes to macroalgal habitats – causes and consequences & The Great Southern Reef: ecology, value and threats)

11:00 AM Shaun Wilson

Climatic conditions and seaweed habitat quality provide indicators of reef fish recruitment strength *abs# 57*

11:15 AM Michael Taylor

Ontogenetic shift of a commercially important endemic species, *Lethrinus punctulatus*, from nearshore macroalgal beds to offshore sessile invertebrate habitats *abs# 58*

11:30 AM Federico Vitelli

Angelfishes hybridisation in Christmas Island: ecological and biological aspects *abs# 59*

11:45 AM John Keane

Can commercial harvest of the long-spined sea urchin, *Centrostephanus rodgersii*, reduce the impact of destructive urchin grazing on macroalgae communities and associated fisheries? *abs# 60*

12:00 PM Ben French

Biology and dietary composition of the harlequin fish *othos dentex* in south-western australia *abs# 61*

12:15 PM Gretchen Grammer

Fish ear bones record the bomb radiocarbon decline in an upwelling area off southern Australia *abs# 62*

12:30 PM Jack Parker

Geographic distributions and assemblages of labrids along the south west coast of Western Australian over the past decade *abs# 63*

12:45 PM Lachlan Mcleay

What is driving changes in size at maturity (L50) in Australia's largest Southern Rock Lobster fishery? *abs# 64*

Freshwater: The Good, Bad and Ugly 2

11:00AM - 1:00PM Kalyenup 2

Chair: David Morgan

11:00 AM Alison King

Wet and dry season flows influence juvenile fish abundance in a tropical river *abs# 65*

11:15 AM Brendan Ebner

Visual census, photographic records and the trial of a video network provide first evidence of the elusive *Sicyopterus cynocephalus* in Australia. *abs# 66*

11:30 AM Nicholas Ling

Estuarine specialist: the Stokell's smelt *abs# 67*

11:45 AM Charles Todd

Large scale population dynamics of a flow dependent enigmatic freshwater fish. *abs# 68*

12:00 PM Ben Broadhurst

Facilitating passage to spawning habitat for an endangered percichthyid *abs# 69*

12:15 PM Michael Hammer

Testing genetic models of dispersal and speciation in a tropical freshwater stream headwater-specialist, the Exquisite Rainbowfish

(Melanotaeniidae: *Melanotaenia exquisita*) *abs# 70*

12:30 PM Peter Unmack

Hemi-clonal unisexual carp gudgeons (Eleotridae: *Hypseleotris*):

systematic clarification of species boundaries and various hybrid lineages in southeastern Australia. *abs# 71*

12:45 PM Md Rakeb-UI Islam

Extreme genetic structure has conservation implications for Australian smelt (*Retropinna semoni*) in Queensland, Eastern Australia *abs# 72*

Lunch & Poster Session

1:00PM - 2:00PM Harbour Side Foyer

The conference acknowledges the support of



What Drives Migration? 1

2:00PM - 3:30PM PRT Stage

Chairs: Adrian Gleiss & David Crook

2:00 PM Stephen Beatty

One-way traffic: Black Bream passage through a storm surge barrier.

abs# 73

2:15 PM Daniel Gwinn

Freshwater catfish, *Tandanus bostocki*, move further and maintain larger home ranges during elevated flow in a regulated river, Western

Australia *abs# 74*

2:30 PM Culum Brown

Environmental triggers of migration in an urban population of Australian Bass *abs# 75*

2:45 PM David Crook

Skipped spawning by diadromous fishes drives the direction and extent of material subsidies across marine-freshwater ecotones *abs# 76*

3:00 PM Daniel Yeoh

Acoustic telemetry reveals the contrasting ways in which four key fishery species use a south-western Australian Estuary *abs# 77*

3:15 PM Adrian Gleiss

Vertical Migrations in fishes: how novel sensors elucidate the drivers of daily migrations in freshwater and marine environments *abs# 78*

Marine Habitats 3

2:00PM - 3:30PM Kalyenup 1

Chair: Mat Vanderklift

Ningaloo Reef: biology and ecology of fish inhabiting an Australian icon

2:00 PM Anna Cresswell

Links between coral morphological assemblage and fish communities at Ningaloo Reef *abs# 79*

2:15 PM Renae Hoskins

Understanding how coral reef fish abundance and richness in Ningaloo Reef is influenced by habitat and other environmental predictors. *abs# 80*

2:30 PM Thomas Holmes

Considering multiple factors in assessing the effectiveness of a large-scale marine protected area for conserving targeted fish communities *abs# 81*

2:45 PM Julia Haberstroh

Baited video, but not diver video, detects a greater abundance of legal size target species within no-take areas at Ningaloo *abs# 82*

3:00 PM Cameron Desfosses

The significance of macroalgae to the diets of juvenile fish and ecosystem function in a tropical coral reef lagoon *abs# 83*

3:15 PM Cindy Bessey

Different factors predict the distribution of two sympatric urchin species along a fringing coral reef: Ningaloo, Western Australia *abs# 84*

Freshwater: The Good, Bad and Ugly 3

2:00PM - 3:30PM Kalyenup 2

Chairs: Ben Broadhurst & Alan Lymbery

2:00 PM David Morgan

The Wild West *abs# 85*

2:15 PM Dean Thorburn

Good golly it's a Molly! Did the mining downturn lead to the introduction of *Poecilia latipinna* to the Pilbara region of Western Australia? *abs# 86*

2:30 PM Brendan Hicks

Responses of the fish community and biomass in Lake Ohinewai to fish removal and a carp exclusion barrier *abs# 87*

2:45 PM Scott Raymond

Demonstrating the benefits of carp removal in the Ovens river *abs# 88*

3:00 PM Alan Lymbery

Edwardsiella ictaluri is present in wild catfish in Australia abs# 89

3:15 PM Cindy Palermo

Molecular characterisation of a new species of *Cryptosporidium* in goldfish (*Carassius auratus*) abs# 90

Afternoon Tea

3:30PM - 4:00PM Harbour Side Foyer

What Drives Migration? 2

4:00PM - 5:15PM PRT Stage

Chairs: Adrian Gleiss & David Crook

4:00 PM Julianna Kadar

Accelerometry reveals diel activity patterns in Port Jackson sharks, *Heterodontus portusjacksoni* abs# 91

4:15 PM Barry Bruce

Broad-scale movements of white sharks in eastern Australia from acoustic and satellite telemetry abs# 92

4:30 PM Samantha Andrzejczek

Temperature-structured vertical movement behaviours in oceanic whitetip sharks abs# 93

4:45 PM Mark Chambers

Albany a turning point for juvenile southern bluefin tuna? abs# 94

5:00 PM Mark Meekan

Vertical migration in the open ocean and its implications for the evolution of size in whale sharks abs# 95

Marine Habitats 4

4:00PM - 5:15PM Kalyenup 1

Chair: Mat Vanderklift

Ningaloo Reef: biology and ecology of fish inhabiting an Australian icon

4:00 PM Tim Langlois

Impact of recreational fishing on fish and shark assemblages within the Ningaloo Marine Park abs# 96

4:15 PM Jonathan Mitchell

Understanding and quantifying shark depredation in a recreational fishery abs# 97

4:30 PM Mat Vanderklift

Using stable isotopes to understand ecology of sharks and fish at Ningaloo Reef *abs# 98*

4:45 PM Peter Cowman

The biogeography of tropical reef fishes: endemism and provinciality through time *abs# 99*

5:00 PM Richard Pillans

Movement and diving behaviour of Whale Sharks (*Rhincodon typus*) tagged at Ningaloo Reef *abs# 100*

Freshwater: The Good, Bad and Ugly 4

4:00PM - 5:00PM Kalyenup 2

Chair: Katie Ryan

4:00 PM Justin A Benson

Freshwater mussels as ecological engineers in permanent water refuges in southwestern Australia *abs# 101*

4:15 PM Maggie Watson

A complicated symbiosis: understanding the parasitic-mutualistic continuum between Temnocephala and spiny crayfish *abs# 102*

4:30 PM Karl Moy

The invasion of Running River and the story of its refugees. *abs# 103*

4:45 PM Rita Yam

Variation of trophic dependence of different fish consumers in two mountain lake ecosystems from subtropical Taiwan *abs# 104*

Public Lecture

6:00PM - 8:00PM Auditorium, Albany Entertainment Centre

Assessing Fish Stocks (**Dr Malcolm Haddon**, CSIRO)

Tropical reef fish & climate change (**Prof. Morgan Pratchett**, James Cook University)

The Great Southern Reef (**Dr Thomas Wernberg**, University of Western Australia)

Freshwater fishes of WA (**Dr David Morgan**, Murdoch University)

Social and economic dimensions of fishing (**Dr Emily Ogier**, University of Tasmania)

Registration Opens

8:00AM - 5:00PM Harbour Side Foyer

Environmental Stress and its Effect on Fish 1

8:30AM - 10:30AM PRT Stage

Chairs: Chris Hallett & Kathryn Hassell

8:30 AM Sara Long

Environmental metabolomics provides insights into physiological responses of southern sand flathead in Port Phillip Bay *abs# 105*

8:45 AM Jarrad Baker

Health status of sand flathead (*Platycephalus bassensis*), inhabiting an industrialised and urbanised embayment, Port Phillip Bay, Victoria as measured by biomarkers of exposure and effects *abs# 106*

9:00 AM Marthe Monique Gagnon

The Montara oil spill, Timor Sea – two years of fish health monitoring *abs# 107*

9:15 AM Kathryn Hassell

Fish dissection 101 – fish sampling considerations and how to produce hundreds of response endpoints *abs# 108*

9:30 AM Kye Adams

Sharks, rays and abortion: the prevalence of capture-induced parturition in elasmobranchs *abs# 109*

9:45 AM Joshua Barrow

Environmental drivers of growth and predicted effects of climate change on a commercially important fish *abs# 110*

10:00 AM Jake Watsham

The influence of environmental factors on the habitat use of Black Bream *Acanthopagrus butcheri* and the implications of artificial oxygenation in the Swan-Canning Estuary *abs# 111*

10:15 AM Karissa Lear

Accelerometers reveal thermal performance regimes in free-ranging elasmobranchs *abs# 112*

Diets and Trophic Interactions

8:30AM - 10:30AM Kalyenup 1

Chair: Ben French

8:30 AM Chris Fulton

The great escape: are marine blennies using land to avoid predation? *abs# 113*

8:45 AM Joni Pini-Fitzsimmons

Top shelf bottom feeders - Food provisioning in stingrays *abs# 114*

9:00 AM Tyson Martin

Habitat connectivity exerts opposing effects on piscivory and browsing *abs# 115*

9:15 AM Hayden Schilling

Latitudinal and ontogenetic variation in the diet of a pelagic mesopredator (*Pomatomus saltatrix*), assessed with a classification tree analysis *abs# 116*

9:30 AM Sherrie Chambers

Navigation and homing ability in a benthic shark *abs# 117*

Recent Advances in Stock Assessment and Management 1

8:30AM - 10:30AM Kalyenup 2

Chair: Malcolm Haddon

8:30 AM Andre Punt

Exploring model structure uncertainty using a general stock assessment framework: The case of Pacific cod in the Eastern Bering Sea *abs# 118*

8:45 AM Malcolm Haddon

Data-Poor Stock Assessment Options for Australia *abs# 119*

9:00 AM Brent Wise

The state of fisheries science in the early 21st century - A perspective from the future? *abs# 120*

9:15 AM Eva Plaganyi

Empirical harvest strategy and tier system for the Torres Strait tropical lobster fishery *abs# 121*

9:30 AM Richard McGarvey

Decision rules for quota setting to support spatial management in a lobster (*Jasus edwardsii*) fishery *abs# 122*

9:45 AM Alex Hesp

Addressing limitations with catch curve assessments applied to data-limited fisheries *abs# 123*

Morning Tea

10:30AM - 11:00AM Harbour Side Foyer

Environmental Stress and its Effect on Fish 2

11:00AM - 1:00PM PRT Stage

Chairs: Chris Hallett & Kathryn Hassell

11:00 AM Katherine Cure

Genomic signatures of local adaptation reveal source-sink dynamics in a high gene flow fish species *abs# 124*

11:15 AM Tanika Shalders

Climate-mediated changes to the distribution and density of reef fishes family pomacentridae in south-western australia *abs# 125*

11:30 AM Cassandra Thompson

The decline in abundance and diversity of Chaetodon butterflyfish and effects on sociality due to coral loss. *abs# 126*

11:45 AM Morgan Pratchett

Direct versus indirect effects of climate change on coral reef fishes *abs# 127*

12:00 PM Greg Ferguson

Monitoring the response of large-bodied fishes to flood and drought using fishery catch compositions to provide baseline data *abs# 128*

12:15 PM Nicholas Yabsley

Multiple and opposing effects of urbanisation on estuarine fishes *abs# 129*

12:30 PM Chris Hallett

Drivers and symptoms of environmental stress among estuarine fish communities of southern Australia *abs# 130*

Fish Ecology

11:00AM - 1:00PM Kalyenup 1

Chair: Samantha Andrzejczek

11:00 AM Jordan Goetze

Collecting broad scale ecological data with stereo video technology *abs# 131*

11:15 AM Bryan Baker

Assessing the impact of macrophyte density on underwater video camera monitoring of fishes in tropical wetlands *abs# 132*

11:30 AM Brooke Gibbons

An assessment of fish assemblages in Moorea's marine reserve network using stereo-video techniques *abs# 133*

11:45 AM Hayden Borland

Habitat type and beach exposure shape fish assemblages in the surf zones of ocean beaches *abs# 134*

12:00 PM Hamish Malcolm

Suitable surrogacy for decadal-scale conservation planning in a warming subtropical region with persistent patterns and shifting species *abs# 135*

12:15 PM Osmar Luiz

Advancing trait-based ecology of fishes by bridging the gap between marine and freshwater studies *abs# 136*

12:30 PM Tim Langlois

Case study of using national on-line services to annotate and analyse underwater imagery: SQUIDLE+ and GlobalArchive *abs# 137*

Recent Advances in Stock Assessment and Management 2

11:00AM - 1:00PM Kalyenup 2

Chair: Malcolm Haddon

11:00 AM Andre Punt

Spatial structure in stock assessments: results of simulation-estimation experiments *abs# 138*

11:15 AM Patrick Cavalli

Review of minimum legal size limits for finfish in Western Australia *abs# 139*

11:30 AM Fay Helidoniotis

Accounting for depletion levels in juvenile biomass when determining stock status *abs# 140*

11:45 AM Norman Hall

Accounting for sample size when estimating natural mortality from maximum age *abs# 141*

12:00 PM Jonathan Carroll

No tanking: estimating the age of pelagic fish eggs directly from field samples *abs# 142*

12:15 PM Marcelo Reis

Fisheries Interaction Index: A Method Based on Catch And Spatial Data *abs# 143*

12:30 PM Malcolm Haddon

Catch-per-unit-Effort: A Pig's Ear or a Silk Purse? *abs# 144*

Lunch

1:00PM - 2:00PM Harbour Side Foyer

AGM

2:00PM - 3:30PM Auditorium

Afternoon Tea

3:30PM - 4:00PM Harbour Side Foyer

Debate

4:00PM - 5:00PM Auditorium

Conference Bash

7:00PM - 11:00PM

Venue: The Boatshed, Princess Royal Dr, Albany

TUESDAY 25TH JULY 2017

Bus Depart Albany Entertainment Centre

Bus departs sharp at 8:45am arrives at Perth Airport at 2:30pm followed by Fremantle at 3:30pm.

Bryan Baker

Towards confident fish identifications – how many image pixels does it take? abs# 151

Benjamin M Ford

Stochastic processes dominate the assembly of marine fish communities, with variation in importance of dispersal limitation and deterministic processes along a latitudinal gradient. abs# 152

Kathryn Hassell

*Taking estuarine eastern blue spot goby (*Pseudogobius* sp.) fish embryo testing (FET) out of infancy.* abs# 153

Ross J Marriott

Comparing indices of abundance from standardised catch rates calculated using alternative imputation methods abs# 154

Lauren S Munks

Storm-induced changes in environmental conditions are correlated with shifts in temperate reef fish abundance and diversity abs# 155

Setareh Samadi

*Phylogenetic relationships of *Panulirus homarus*, *P. versicolor* and *Thenus orientalis* from Persian Gulf and Oman Sea* abs# 156

Setareh Samadi

*Oocyte developmental stages of the *Pontogammarus maeoticus* Sowinsky, 1894 (Ponto-Caspian area amphipod)* abs# 157

Peter Unmack

Are specific pops of key threatened MDB fishes native or introduced? abs# 158

Tzu-Dan Wang

Effects of seasonality, salinity and nutrients on trophic basis of omnivorous fishes in an urbanised estuary from subtropical Taiwan abs# 159

Danielle Davenport

*Contemporary and retrospective genomic analysis of white sharks, *Carcharodon carcharias** abs# 160

CSIRO



Understanding our oceans is critical to Australia's future. Our ocean-based industries contribute over \$42 billion a year to the Australian economy. Australia's marine and coastal resources often come under pressure from the competing demands of different sectors. Sharing our oceans for the benefit of all Australians requires a careful

balancing act of planning, management and cooperation. CSIRO Oceans & Atmosphere provides the knowledge to manage Australia's marine estate and atmospheric environment, plan for and respond to weather and climate related natural hazards and ensure sustainable coastal development and growth of marine industries.

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FRDC



FRDC

The Fisheries Research and Development Corporation (FRDC) is a co-funded partnership between its two stakeholders, the

Australian Government and the fishing industry.

The FRDC's role is to plan and invest in fisheries research, development and extension (RD&E) activities in Australia. This includes providing leadership and coordination of the monitoring, evaluating and reporting on RD&E activities, facilitating dissemination, extension and

commercialisation. The FRDC achieves this through coordinating government and industry investment, including stakeholders to establish and address RD&E priorities. In addition the FRDC monitors and evaluates the adoption of RD&E to inform future decisions.

Website: frdc.com.au

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2017 ASFB CONFERENCE – ALBANY, WA

DRAFT PROGRAM OUTLINE

DAY 1 - SATURDAY 22 nd JULY			DAY 2 - SUNDAY 23 rd JULY			DAY 3 - MONDAY 24 th JULY			
	Auditorium		PRT Stage	Kalvenup 1	Kalvenup 2		PRT Stage	Kalvenup 1	Kalvenup 2
8:30 - 10:00	Welcome & Plenaries		Monitoring & Assessments	Marine Habitats 1	Freshwater: The Good, Bad & Ugly 1	8:30 - 10:30	Special Session: Fish Stress 1	Diets and Trophic Interactions	Special Session: Stock Assessment & Management
10:00 - 10:30	MORNING TEA <i>Harbour Side Foyer</i>		MORNING TEA <i>Harbour Side Foyer</i>			10:30 - 11:00	MORNING TEA <i>Harbour Side Foyer</i>		
	Auditorium		PRT Stage	Kalvenup 1	Kalvenup 2		PRT Stage	Kalvenup 1	Kalvenup 2
10:30 – 12:45	Nurturing Fish Scientists		Life history & Connectivity	Marine Habitats 2	Freshwater: The Good, Bad & Ugly 2	11:00 - 13:00	Special Session: Fish Stress 2	Fish Ecology	Special Session: Stock Assessment & Management
12:45 – 13:30	LUNCH <i>Harbour Side Foyer</i>		LUNCH & Poster Session <i>Harbour Side Foyer</i>			13:00 - 14:00	LUNCH <i>Harbour Side Foyer</i>		
	Auditorium		PRT Stage	Kalvenup 1	Kalvenup 2		Auditorium		
13:30 - 15:00	Plenaries & Student Talks		Special Session: Migration 1	Marine Habitats 3	Freshwater: The Good, Bad & Ugly 3	14:00 - 15:30	AGM		
15:00 - 15:30	AFTERNOON TEA <i>Harbour Side Foyer</i>		AFTERNOON TEA <i>Harbour Side Foyer</i>			15:30 - 16:00	AFTERNOON TEA <i>Harbour Side Foyer</i>		
	PRT Stage	Kalvenup 1	PRT Stage	Kalvenup 1	Kalvenup 2		Auditorium		
15:30 - 17:00	Special Session: Hearing me, Hearing you	Special Session: Turning Points	Special Session: Migration 2	Marine Habitats 4	Freshwater: The Good, Bad & Ugly 4	16:00 - 17:00	Debate		
18:00 - 20:30	STUDENT MIXER – White Star		PUBLIC LECTURE – Albany Entertainment Centre			19:00 - 23:00	CONFERENCE BASH – Albany Boatshed		