

Fees

General public

\$30 per person per day (Early bird registration \$20 per person per day. Must register by close of business Friday 24th February 2012)

Children (minimum age 10) and students: **FREE**

Government agency employees

\$60 per person per day (Early bird registration \$50 per person per day. Must register by close of business Friday 24th February 2012)

**N.B. All fees include morning tea.
Book for lunch on the Registration Form**

How to register

Either: Fill in the enclosed Registration Form and return with your payment to:

**Sapphire Coast Marine Discovery Centre,
P.O. Box 239, EDEN NSW 2551.**

Payment details appear at the bottom of the form

Or: Download the registration form from our website:

www.sapphirecoastdiscovery.com.au
and return as above with your payment.

Please note that all attendees (including students) must register for catering purposes.



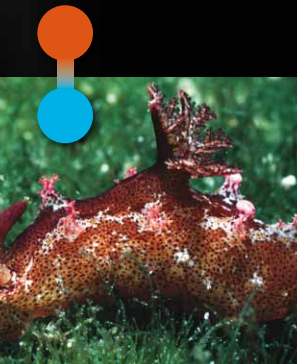
Photograph: Copyright Carole Durussel



sea connections



Photograph: Copyright Carole Durussel



All other Photographs: Lisa Kirkendale

Forum Venue:
**Eden Marine
High School Hall,
Barclay Street, EDEN**

Sapphire Coast Marine Discovery Centre

The Wharf Building, 253 Imlay Street
P.O. Box 239 EDEN NSW 2551
P: 02 6496 1699 F: 02 6496 2404
Email: admin@sapphirecoastdiscovery.com.au
www.sapphirecoastdiscovery.com.au

We are a not-for-profit community organisation, a Registered Charity and have Deductible Gift Recipient (DGR) status. All donations to our organisation are tax deductible.



a sponsor of the
Sapphire Coast Marine
Discovery Centre



MARINE SCIENCE FORUM
24-25 MARCH 2012



Photograph: Brendan Kelaher



Saturday 24 March



8.45 – 9.00am Registration

9.00 am Welcome and Official Opening

9.30 am

Dr Moninya Roughan, Regional Oceanography Group, University of New South Wales

Presentation Title: **“Finding Nemo: Understanding the oceanic circulation and connectivity along the coast of Eastern Australia”**

Presentation Outline: The East Australian Current and its Eddy Field drive oceanic circulation along the coast of Eastern Australia. Understanding the circulation and ocean dynamics are central to understanding biological productivity, connectivity, and the impacts of climate change. The use of modern technology such as oceanic moorings, autonomous ocean gliders and high frequency radar are providing new results and key insights into the EAC and its impacts on the coastal ocean. In addition, circulation models are used to provide insight into transport and connectivity along the NSW coast. Dr Roughan will present an overview of the comprehensive ocean-observing system that has been developed along the coast of NSW and the numerical modelling work being conducted in order to measure, monitor and understand this challenging oceanic environment and its connectivity.

10.15 – 10.45am Morning tea

10.45 am

Dr Lisa Kirkendale, Research Fellow, University of Wollongong Shoalhaven Marine and Freshwater Centre

Presentation Title: **“What have population genetic data done for marine conservation?”**

Presentation Outline: Genetic data have greatly improved our understanding of sea connections among widely distributed populations of Indo-west Pacific marine organisms. These data have been found to track life history data, such as larval dispersal patterns. Taxa with poor dispersal capabilities often exhibit greater genetic differentiation and therefore less connectivity than species with high dispersal capabilities that are typically more genetically homogeneous and better connected. A review of case studies across a diversity of marine species from a wide range of biogeographic settings allow a critical look at how genetic data inform marine conservation initiatives.

11.30 am

Dipl. Carole Durussel, PhD Candidate, Australian National Centre for Ocean Resources and Security (ANCORS)

Presentation Title: **“Connecting High Seas Biodiversity Conservation”**

Presentation Outline: Covering 64% of all marine areas, the high seas are beyond the boundaries of national jurisdiction but are still connected to coastal ecosystems and display a rich array of biodiversity, play a significant role in the regulation of the Earth’s climate and provide humans with amenities such as food, transportation and mineral resources. However, human-induced stressors are putting high seas biodiversity under pressure. Despite increased international recognition of the importance of biodiversity for humankind and the need to conserve it, to this day only 1% of the high seas benefit from protection measures. The challenge to achieving effective protection in the high seas is in connecting the sometimes conflicting interests with responsible management in a no-man’s land of liability.

12.15pm

Lunch and afternoon activities

Saturday afternoon activities:

Your choice of the following activities for Saturday afternoon:

- Guided tour of the Sapphire Coast Marine Discovery Centre
- 1 hour guided snorkel tour - starting at 2pm (\$25 per person, bookings essential)
- 1 hour guided beach geology walk - starting at 2.30pm (free)

6.30 pm Saturday Evening Dinner is at Mystique Restaurant, Halfway Motel, Eden. \$45/head set menu – bookings essential.

Sunday 25 March

8.45 am

Chair will deliver a short summary of Saturday’s outcomes.

9.00 am

Dr Brendan Kelaher, Batemans Marine Park Manager and Principal Research Scientist.

Presentation Title: **“Why detritus matters?”**

Presentation Outline: Detritus, non-living organic material, is the major carbon pathway in estuaries. Detritus connects marine habitats, promotes biodiversity, fuels fisheries and drives vital ecosystem processes. Detrital resources have been changing in Australia

because of catchment development, nutrient pollution, seagrass loss, algal invasions and climate change. The repercussions of changing detrital resources for marine ecosystems will be discussed along with potential management solutions.

9.45 am

Dr Melinda Coleman, Research Scientist, Batemans Marine Park

Presentation Title: **“Connectivity of seaweeds on Australia’s temperate reefs”**

Presentation Outline: Seaweeds form underwater forests along much of Australia’s temperate coastline providing shelter and food for an astounding diversity of marine organisms. This important habitat is in decline from climate change and human stressors. To properly manage and conserve our ocean forests, we need to understand how these forests are connected both on local and continental scales. Dr Coleman will present results from research that investigates connectivity for 3 species of seaweeds and how this is linked to our ocean currents and climate change.

10.30 – 11am

Morning tea

11.00 am

Dr. Chris Fulton, ARC Centre of Excellence for Coral Reef Studies, The Australian National University

Presentation Title: **“Marine Protected Areas: do they work for fish and for people?”**

Presentation Outline: Over the past 50 years we have seen an increasing number of Marine Protected Areas (MPAs) established around the world, amidst much controversy about the environmental and social impacts. Dr Fulton will draw on studies spanning several decades to explore what benefits MPAs have provided for marine ecosystems and the people that depend upon them.

12.00 noon Closing Address. **12.15 pm Lunch**



Photograph: David Harasti



Photograph: DLWC 2000



SEA CONNECTIONS

Fees

General public

\$30 per person per day (Early bird registration \$20 per person per day. Must register by close of business Friday 24th February 2012)

Children (minimum age 10) and students: **FREE**

Government agency employees

\$60 per person per day (Early bird registration \$50 per person per day. Must register by close of business Friday 24th February 2012)

**N.B. All fees include morning tea.
Book for lunch on the Registration Form**

How to register

Either: Fill in the enclosed Registration Form and return with your payment to:

**Sapphire Coast Marine Discovery Centre,
P.O. Box 239, EDEN NSW 2551.**

Payment details appear at the bottom of the form

Or: Download the registration form from our website:

www.sapphirecoastdiscovery.com.au
and return as above with your payment.

Please note that all attendees (including students) must register for catering purposes.



Photograph: Copyright Carole Durussel

sea connections



Photograph: Copyright Carole Durussel



All other Photographs: Lisa Kirkendale

Forum Venue:
**Eden Marine
High School Hall,
Barclay Street, EDEN**

Sapphire Coast Marine Discovery Centre

The Wharf Building, 253 Imlay Street
P.O. Box 239 EDEN NSW 2551
P: 02 6496 1699 F: 02 6496 2404
Email: admin@sapphirecoastdiscovery.com.au
www.sapphirecoastdiscovery.com.au

We are a not-for-profit community organisation, a Registered Charity and have Deductible Gift Recipient (DGR) status. All donations to our organisation are tax deductible.



a sponsor of the
Sapphire Coast Marine
Discovery Centre



sea connections

MARINE SCIENCE FORUM
24-25 MARCH 2012



Photograph: Brendan Kelaher



Saturday 24 March



8.45 – 9.00am **Registration**

9.00 am Welcome and Official Opening

9.30 am

Dr Moninya Roughan, Regional Oceanography Group, University of New South Wales

Presentation Title: **“Finding Nemo: Understanding the oceanic circulation and connectivity along the coast of Eastern Australia”**

Presentation Outline: The East Australian Current and its Eddy Field drive oceanic circulation along the coast of Eastern Australia. Understanding the circulation and ocean dynamics are central to understanding biological productivity, connectivity, and the impacts of climate change. The use of modern technology such as oceanic moorings, autonomous ocean gliders and high frequency radar are providing new results and key insights into the EAC and its impacts on the coastal ocean. In addition, circulation models are used to provide insight into transport and connectivity along the NSW coast. Dr Roughan will present an overview of the comprehensive ocean-observing system that has been developed along the coast of NSW and the numerical modelling work being conducted in order to measure, monitor and understand this challenging oceanic environment and its connectivity.

10.15 – 10.45am **Morning tea**

10.45 am

Dr Lisa Kirkendale, Research Fellow, University of Wollongong Shoalhaven Marine and Freshwater Centre

Presentation Title: **“What have population genetic data done for marine conservation?”**

Presentation Outline: Genetic data have greatly improved our understanding of sea connections among widely distributed populations of Indo-west Pacific marine organisms. These data have been found to track life history data, such as larval dispersal patterns. Taxa with poor dispersal capabilities often exhibit greater genetic differentiation and therefore less connectivity than species with high dispersal capabilities that are typically more genetically homogeneous and better connected. A review of case studies across a diversity of marine species from a wide range of biogeographic settings allow a critical look at how genetic data inform marine conservation initiatives.

11.30 am

Dipl. Carole Durussel, PhD Candidate, Australian National Centre for Ocean Resources and Security (ANCORS)

Presentation Title: **“Connecting High Seas Biodiversity Conservation”**

Presentation Outline: Covering 64% of all marine areas, the high seas are beyond the boundaries of national jurisdiction but are still connected to coastal ecosystems and display a rich array of biodiversity, play a significant role in the regulation of the Earth’s climate and provide humans with amenities such as food, transportation and mineral resources. However, human-induced stressors are putting high seas biodiversity under pressure. Despite increased international recognition of the importance of biodiversity for humankind and the need to conserve it, to this day only 1% of the high seas benefit from protection measures. The challenge to achieving effective protection in the high seas is in connecting the sometimes conflicting interests with responsible management in a no-man’s land of liability.

12.15pm

Lunch and afternoon activities

Saturday afternoon activities:

Your choice of the following activities for Saturday afternoon:

- Guided tour of the Sapphire Coast Marine Discovery Centre
- 1 hour guided snorkel tour - starting at 2pm (\$25 per person, bookings essential)
- 1 hour guided beach geology walk - starting at 2.30pm (free)

6.30 pm Saturday Evening Dinner is at Mystique Restaurant, Halfway Motel, Eden. \$45/head set menu – bookings essential.

Sunday 25 March

8.45 am

Chair will deliver a short summary of Saturday’s outcomes.

9.00 am

Dr Brendan Kelaher, Batemans Marine Park Manager and Principal Research Scientist.

Presentation Title: **“Why detritus matters?”**

Presentation Outline: Detritus, non-living organic material, is the major carbon pathway in estuaries. Detritus connects marine habitats, promotes biodiversity, fuels fisheries and drives vital ecosystem processes. Detrital resources have been changing in Australia

because of catchment development, nutrient pollution, seagrass loss, algal invasions and climate change. The repercussions of changing detrital resources for marine ecosystems will be discussed along with potential management solutions.

9.45 am

Dr Melinda Coleman, Research Scientist, Batemans Marine Park

Presentation Title: **“Connectivity of seaweeds on Australia’s temperate reefs”**

Presentation Outline: Seaweeds form underwater forests along much of Australia’s temperate coastline providing shelter and food for an astounding diversity of marine organisms. This important habitat is in decline from climate change and human stressors. To properly manage and conserve our ocean forests, we need to understand how these forests are connected both on local and continental scales. Dr Coleman will present results from research that investigates connectivity for 3 species of seaweeds and how this is linked to our ocean currents and climate change.

10.30 – 11am

Morning tea



11.00 am

Dr. Chris Fulton, ARC Centre of Excellence for Coral Reef Studies, The Australian National University

Presentation Title: **“Marine Protected Areas: do they work for fish and for people?”**

Presentation Outline: Over the past 50 years we have seen an increasing number of Marine Protected Areas (MPAs) established around the world, amidst much controversy about the environmental and social impacts. Dr Fulton will draw on studies spanning several decades to explore what benefits MPAs have provided for marine ecosystems and the people that depend upon them.

12.00 noon Closing Address. **12.15 pm Lunch**



Photograph: David Harasti

Photograph: DLWC 2000



SEA CONNECTIONS