

Bryce D. Beukers-Stewart*

Address: Environment Department
(Work) University of York,
Heslington,
York YO10 5DD
United Kingdom
Ph. no. 01904 434789
Mobile. 07784260855
Email: bryce.beukers-stewart@york.ac.uk
Web: <http://www.york.ac.uk/environment/our-staff/bryce-beukers-stewart/>

Address: 54 Frances St
(Home) York
North Yorkshire YO10 4DP
United Kingdom
Ph. 07784260855
Email: bdbs@hotmail.co.uk

*Formerly Stewart

SUMMARY

- Ph.D. qualified in marine ecology
- Over 20 years research experience
- Strong publication and presentation record
- Proven ability to attract research funding
- Over 10 years experience of University teaching
- Committed to promoting sustainable use of our environment

EDUCATION AND QUALIFICATIONS

Tertiary

1994-99: PhD (Marine Biology), James Cook University, Queensland, Australia.

1988-91: BSc Honours (Zoology), 1st Class Honours, University of Melbourne, Victoria, Australia.

RESEARCH AND WORK EXPERIENCE

Lecturer

Oct 2007 - Present

Department of Environment, University of York, York, UK

Research: Various topics including; Untangling the effect of fishing and climate change on marine benthic communities, Improving the management of scallop fisheries through the use of protected areas and stock enhancement, The influence of food web structure on the resilience of coral reef ecosystems

Teaching: Major contributor to an MSc degree in Marine Environmental Management. Modules convened include; Ocean and Coastal Processes, Biodiversity and Conservation Biology, Coral Reef Ecology and Management. Contributor to various undergraduate modules. Supervisor for numerous student projects at BSc (Hons) and MSc level and currently supervising 3 PhD students.

Admin: Chair of Department Teaching Committee, Course organiser- MRes in Ecology and Environmental Management, Departmental Representative – Open Days & Library

Consultancy: Seafood sustainability assessments for various major seafood retailers, producers and chefs / writers (e.g. Hugh Fearnley-Whittingstall). Provision of advice to UK nature conservation agencies on sustainable management of fisheries.

Fisheries Policy Officer:

Oct 2005 – Sept 2007

Marine Conservation Society, Herefordshire, UK

Ecologically sustainable fisheries: Co-ordinated the Society's fisheries programme to promote ecologically sustainable fisheries and mariculture, including the consumption of sustainable seafood. Involved responding to consultations on fisheries management policy, regular liaison with key stakeholders such as retailers, processors, fishing industry, and government authorities, and raising public awareness through considerable media work. Included annual updating of significant portions of the consumer awareness website www.fishonline.org and provision of species assessments / advice for seafood suppliers, processors and retailers. Responsible for the overall strategy of the fisheries team including the activities of the two other staff members, and for assisting with

fundraising.

Research Associate:

Aug 1999-Nov 2007*

Port Erin Marine Laboratory, University of Liverpool, Isle of Man

Scallop fisheries biology and impacts: Co-ordinated stock assessment programmes and associated projects to provide fisheries management advice to the Isle of Man government. Developed additional research into the effects of scallop dredging on benthic communities and the potential of closed areas and stock enhancement for improving fisheries management. Helped sustain and increase funding for research. Produced regular peer-reviewed publications, conference presentations and in addition reports for the Manx government and other funding agencies. Daily supervision of Research Assistants and regular supervision of up to five boat crew. Also regularly lectured to, supervised and assessed final year Marine Biology undergraduate students. Co-ordinated the weekly departmental seminar series 2002/3 and 2004/5.

* *Part time / UK based Oct 2005 – Nov 2007*

PhD and Research:

Jun 1994 - Jun 1999

Department of Marine Biology, James Cook University, Qld, Australia.

PhD Thesis: *Interactions between piscivorous coral reef fishes and their prey*. Designed and obtained funding for the project. Investigated aggregative, functional and developmental responses of predatory fish to variation in prey abundance and the consequences for prey fish populations and communities. The research involved intensive underwater studies and experiments on a remote coral reef, along with laboratory experiments and analysis of samples. Provided new evidence for mechanisms of density-dependent mortality in coral reef fishes. Produced several peer-reviewed publications, conference presentations and reports to funding bodies.

Research Assistant: *Age determination of damselfishes and butterflyfishes / Eungella Rainforest Frog Project*. Worked on various projects including laboratory analysis of fish otoliths and field studies of frog communities in remote tropical rainforest streams.

Fisheries Scientist:

Jan 1992 - May 1994

Marine and Freshwater Resources Institute, Victoria, Australia.

Development of methods to age commercially important deepwater fishes: dories (Zeidae) and oreos (Oreosomatidae). Demonstrated extreme longevity of these species through the development of unique ageing methodologies. Provided management advice to the commonwealth government that resulted in the setting of precautionary quotas for these fisheries. Produced a peer-reviewed publication, conference presentations, regular internal reports, and a final report for the funding agency. Two months as acting manager of the National Fish Ageing Laboratory.

Research Assistant:

Nov - Dec 1991

Victorian Institute of Marine Sciences, Victoria, Australia.

Spatial variation in food limited growth of juvenile flounder, Rhombosolea taparina. Ran a laboratory experiment to support field studies of flounder growth. Resulted in a peer-reviewed publication.

BSc Honours and Teaching:

Mar - Nov 1991

Zoology Department, University of Melbourne, Victoria, Australia.

Fourth Year Honours Thesis: *Reliability of growth back-calculations from otoliths: the effect of variation in somatic growth rate*. Ran a comprehensive laboratory experiment to provide validation for a new method of calculating fish growth rates from otoliths. Produced a peer-reviewed publication and conference presentation.

Teaching. Provided supervision and assistance to practical classes of approximately 15 first year Biology and Medical students on a weekly basis. Included assessment of practical reports.

RESEARCH GRANTS

2013-2014: "Conservation of the Firth of Clyde, Scotland" Flora and Fauna International (£16,770, CM Roberts, JP Hawkins and **BD Beukers-Stewart**)

2013: "International Connections Award" Santander (£1000, **BD Stewart**)

2012: "Isle of Arran No-take Zone crustacean and scallop survey" Community of Arran Seabed Trust (£6000, **BD Beukers-Stewart** & LM Howarth)

2011-2013: "Conservation of the Firth of Clyde, Scotland" Flora and Fauna International (£182,000, CM Roberts, JP Hawkins and **BD Beukers-Stewart**)

- 2008-2009: “Principles for the Management of inshore scallop fisheries around the United Kingdom” NE, CCW & SNH (£4100, **BD Beukers-Stewart**)
- 2008-2011: “Untangling the effect of fishing and environmental change on marine benthic communities” NERC (£64,543, **BD Beukers-Stewart** & RL Brown)
- 2007-2008: “Untangling the effect of fishing and environmental change on marine benthic communities” Pump Priming Grant, University of York (£900, **BD Beukers-Stewart**)
- 2006-2007: “Scallop Fisheries Research” Department of Fisheries, Forestry and Agriculture, Isle of Man Government, UK (£36,000, AR Brand & **BD Beukers-Stewart**)
- 2005-2006: “Scallop Fisheries Research” Department of Fisheries, Forestry and Agriculture, Isle of Man Government, UK (£120,000, AR Brand & **BD Beukers-Stewart**)
- 2003-2006: “Towards a network of Marine Protected Areas in the British Isles” Esmée Fairbairn Foundation, UK (£149 950 in total with £18,000 awarded to my research group)
- 1996-1997: “The influence of prey availability and habitat structure on piscivorous coral reef fish” Lizard Island Doctoral Fellowship, Australian Museum (AUS\$9666, **BD Stewart**)
- 1996: “Piscivory by coral reef fishes” Merit Research Grant, James Cook University, Queensland, Australia (AUS\$7000, **BD Stewart**)
- 1995: “Piscivory in coral reef fishes” Merit Research Grant, James Cook University, Queensland, Australia (AUS\$4700, **BD Stewart**)
- 1994: Australian Postgraduate Research Award, Commonwealth Government, ACT, Australia (AUS\$52 500, **BD Stewart**)

PUBLICATIONS

- Howarth LM, Roberts CM, Thurstan RH & **Stewart BD** (2013). The unintended consequences of simplifying the sea: making the case for complexity. *Fish and Fisheries*. DOI: 10.1111/faf.12041
- Craven HR, Brand AR, **Stewart BD** (2013) Patterns and impacts of fish bycatch in a scallop dredge fishery. *Aquatic Conservation: Marine and Freshwater Ecosystems*. 23:152-170.
- Beukers-Stewart BD**, Beukers-Stewart JS, Jones GP (2011) Behavioural and developmental responses of predatory coral reef fish to variation in the abundance of prey. *Coral Reefs* 30: 855-864.
- Diamond B & **Beukers-Stewart BD** (2011) Fisheries discards in the North Sea: Waste of resources or a necessary evil? *Reviews in Fisheries Science*. 19(3): 231-245.
- Howarth LM, Wood HL, Turner AP, **Beukers-Stewart BD** (2011) Complex habitat boosts scallop recruitment in a fully protected marine reserve. *Marine Biology* 158: 1767-1780
- Shephard S, **Beukers-Stewart BD**, Hiddink JG, Brand AR, Kaiser MJ (2010) Strengthening recruitment of exploited scallops with ocean warming. *Marine Biology* 157: 91-97.
- Vause BJ, **Beukers-Stewart BD**, Brand AR (2007) Fluctuations and forecasts in the fishery for queen scallops (*Aequipecten opercularis*) around the Isle of Man. *ICES Journal of Marine Science*. 64: 1124-1135.
- Bogan YM, Kennedy DJ, Harkin AL, Gillespie J, Vause BJ, **Beukers-Stewart BD**, Hess P, Slater JW (2007). Variation in domoic acid concentration in king scallop (*Pecten maximus*) from fishing grounds around the Isle of Man. *Harmful Algae*. 6: 81-92.
- Beukers-Stewart BD**, Vause BJ, Mosley MWJ, Brand AR (2006). Closed areas and stock enhancement of scallops: what’s the catch? *Journal of Shellfish Research* 25: 267-268.
- Vause BJ, **Beukers-Stewart BD**, Brand AR (2006). Age composition and growth rates of queen scallops *Aequipecten opercularis* (L.) around the Isle of Man. *Journal of Shellfish Research* 25: 310-312.
- Watts, PC, Mallanaphy PJ, McCarthy C, **Beukers-Stewart BD**, Mosley MWJ, Brand AR and Saccheri IJ. (2005) Polymorphic microsatellite loci isolated from the great scallop, *Pecten maximus* (Bivalvia: Pectinidae). *Molecular Ecology Notes*. 5: 902-904.
- Beukers-Stewart BD**, Vause BJ, Mosley MWJ, Rossetti HL and Brand AR. (2005) Benefits of closed area protection for a population of scallops. *Marine Ecology Progress Series*. 298: 189-204.
- Beukers-Stewart BD** and Jones GP. (2004). The influence of prey abundance on the feeding ecology of two piscivorous species of coral reef fish. *Journal of Experimental Marine Biology and Ecology* 299: 155-184.
- Beukers-Stewart BD**, Mosley MWJ and Brand AR (2003). Population dynamics and predictions in the Isle of Man fishery for the great scallop, *Pecten maximus* (L.). *ICES Journal of Marine Science* 60: 224-242.
- Beukers-Stewart BD**, Jenkins SR and Brand AR (2001). The efficiency and selectivity of spring-toothed scallop dredges: a comparison of direct and indirect methods of assessment. *Journal of Shellfish Research* 20:121-126
- Jenkins SR, **Beukers-Stewart BD** and Brand AR (2001). The effect of scallop dredging on benthic megafauna: a

comparison of damage levels in captured and non-captured organisms. Marine Ecology Progress Series 215: 297-301

Stewart BD and Jones GP (2001). Associations between the abundance of piscivorous fishes and their prey on coral reefs: implications for prey fish mortality. Marine Biology 138:383-397

Stewart BD and Beukers JS (2000). Baited technique improves censuses of cryptic fish in complex habitats. Marine Ecology Progress Series 197: 259-272.

Stewart BD, Fenton GE, Smith DC and Short SA (1995). Validation of otolith increment age estimates for a deepwater fish species, warty oreo, *Allocyttus verrucosus* by radiometric analysis. Marine Biology 123: 29-38.

Jenkins GP, Shaw M and **Stewart BD**. (1993). Spatial variation in food limited growth of juvenile flounder, *Rhombosolea taparina* Gunther: evidence from otolith daily increments and otolith scaling. Canadian Journal of Fisheries and Aquatic Sciences 50: 2558-2567.

May HMA, **Stewart BD**. (1992). Feeding ecology and condition of larvae – Discussion. In: Hancock DA (ed). Larval Biology. Bureau of Rural Resources Proceedings No. 15, AGPS, Canberra, p 62-65

Stewart BD and Jenkins GP. (1991). Daily growth increments in the otoliths of juvenile greenback flounder, *Rhombosolea taparina* Gunther, 1862. Journal of Fish Biology 39: 605-608.

In progress

Beukers-Stewart BD, Lart W, Sinfield C, Brand AR and Jenkins SR. Patterns and mechanisms of damage to benthic fauna in a dredge fishery. ICES Journal of Marine Science.

Milward-Hopkins H McClean C, **Beukers-Stewart BD** Hotspots of recreational fishing world record catches: priority areas for management and conservation? Fish and Fisheries.

SELECTED CONFERENCE PRESENTATIONS AND INVITED SEMINARS

Stewart BD, Howarth LM, Sciberras M, Yates KL & Hoskin MG (2013) Opening up about using closed areas to manage scallop fisheries. Keynote speaker. 19th International Pectinid Workshop, April 2013, Florianopolis, Brazil

Stewart BD (2012) Fisheries discards: waste of resources or a necessary evil? Invited panelist. Debate on the Reform of the Common Fisheries Policy. European Parliament, November 2012, Brussels, Belgium

Beukers-Stewart BD, Lart W, Sinfield C, Brand AR and Jenkins SR. (2012) Patterns and mechanisms of damage to benthic fauna in a dredge fishery. World Fisheries Congress, May 2012 Edinburgh

Beukers-Stewart BD (2012) Can we have our fish and eat it? Invited seminar, University of Newcastle, March 2012, Newcastle upon Tyne, UK.

Beukers-Stewart BD (2011) Can we have our fish and eat it? Keynote speaker. Conservation Forum: Annual Conference of the Lincolnshire Wildlife Trust. November 2011, Horncastle, UK

Beukers-Stewart BD, Beukers-Stewart JS, Vause BJ and Brand AR (2009) Can MPAs sustain scallop fisheries? Invited seminar. Seachange: an International Conference on Marine Protected Areas. December 2009, London, UK.

Beukers-Stewart BD and Beukers-Stewart JS (2009) Management of UK scallop fisheries: current status and future opportunities. Invited seminar. Fisheries Research Services, September 2009, Aberdeen, UK.

Brown RL, **Beukers-Stewart BD** and Brand AR (2009) Long-term effects of anthropogenic and environmental change on the benthic communities of commercially exploited scallop grounds. 44th European Marine Biology Symposium, September 2009, Liverpool, UK.

Beukers-Stewart BD and Beukers-Stewart JS (2007) Monkfish: a cautionary tale. Invited seminar. “Catching for the Market”. Workshop hosted by Seafood Scotland and the Seafood Choices Alliance, October 2007, Edinburgh, UK.

Beukers-Stewart BD and Brand AR (2007). Seeking sustainable scallops: do MPAs really work? Invited seminar. Coastal Futures Conference, January 2007, London, UK.

Beukers-Stewart BD (2006). Can we have our fish and eat it? Invited seminar, Defra, Marine and Fisheries Division, June 2006, London, UK.

Beukers-Stewart BD, Vause BJ, Mosley MWJ and Brand AR. (2005) Closed areas and stock enhancement of scallops: what’s the catch? 15th International Pectinid Workshop, April 2005, Mooloolaba, Queensland, Australia.

Beukers-Stewart BD (2005) Closed areas and stock enhancement of scallops: what’s the catch? Invited seminar. Seafish Industry Authority, February 2005, Edinburgh, UK.

Beukers-Stewart BD, Vause BJ, Mosley MWJ and Brand AR (2004). Evidence for larval export of scallops

from a small closed area off the Isle of Man. ICES Annual Conference, September 2004, Vigo, Spain.

Beukers-Stewart BD, Vause BJ, Mosley MWJ and Brand AR (2003). Benefits of a closed area for a population of scallops, *Pecten maximus*, around the Isle of Man. 14th International Pectinid Workshop, April 2003, St Petersburg, USA.

Beukers-Stewart BD (2001) Predator-prey relationships in coral reef fish communities: is there potential for top-down control? Invited seminar, University of Newcastle, November 2001, Newcastle upon Tyne, UK.

Beukers-Stewart BD, Mosley MWJ and Brand AR (2001). Predicting fluctuations in scallop catches: how far can you go? 13th International Pectinid Workshop, April 2001, Coquimbo, Chile.

Stewart BD and Jones GP (1998). Mechanisms controlling variation in the abundance and distribution of piscivorous coral reef fish and their prey. Australian Society for Fish Biology, Annual Conference, September 1998, Hobart, Tasmania, Australia.

SELECTED REPORTS

Diamond B and **Beukers-Stewart BD** (2009) Fisheries discards: waste of a resource or a necessary evil? Report to the European Commission on the Reform of the Common Fisheries Policy. University of York.

Beukers-Stewart BD and Beukers-Stewart JS (2009) Principles for the Management of Inshore Scallop Fisheries around the United Kingdom. Report to Natural England, Scottish Natural Heritage and Countryside Council for Wales. University of York.

Brand AR and **Beukers-Stewart BD**. (2000 to 2005) Shellfish Research Report to the Isle of Man Government, Department of Agriculture, Forestry and Fisheries. Port Erin Marine Laboratory, University of Liverpool. (*Separate report submitted each year*).

Smith DC and **Stewart BD**. (1994). Development of methods to age commercially important dories and oreos. Final Report to Fisheries Research and Development Corporation, Project 91/36. Department of Conservation and Natural Resources, Victorian Fisheries Research Institute, Victoria, Australia.

Stewart BD. (1992). Synopsis of the biology of commercially important species of dories and oreos (Order: Zeiformes) in southern Australasian waters: A review of the literature. Department of Conservation and Environment, Fisheries Division, Victoria, Australia. Internal Report no. 196.

SELECTED POPULAR ARTICLES

Beukers-Stewart BD and Bache D (2006). Kings and queens of the Isle of Man: Seeking sustainable scallops. Marine Conservation. Winter 2006: 7-10. Marine Conservation Society.

Beukers-Stewart BD (2006) Marine protection works. Sea Angler. October 2006: 119.

Beukers-Stewart BD (2006) Skating on thin ice. Sea Angler. June 2006: 141

Beukers-Stewart BD (2006) Size matters. Sea Angler. May 2006: 66

Beukers-Stewart BD and Bache D (2006). Can we have our fish and eat it? Marine Conservation. Spring 2006: 5-10. Marine Conservation Society.

Beukers-Stewart BD (2004). Port Erin Marine Laboratory: can it weather the storm? The Marine Scientist, No. 7 2Q, pp 16-17, IMAREST, London.

ESTEEM INDICATORS

- Invited member of the Defra Fisheries Science Advisory Group. Includes acting as a referee for grant proposals.
- Invited member of the UK Scallop Dialogue Group.
- PhD Examiner: External (James Cook University, Bangor University and Warwick University), Internal (University of York – 5 students to date)
- Manuscript Reviewer: PLOS One, Journal of Applied Ecology, Fish and Fisheries, Coral Reefs, Marine Ecology Progress Series, Marine Biology, ICES Journal of Marine Science, Fisheries Research, Journal of Fish Biology and the Journal of the Marine Biological Association UK.
- Report Reviewer - Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO)
- Seafood Sustainability Adviser - Blue Ocean Institute, USA

MEDIA & OUTREACH ACTIVITIES

I have disseminated my research and knowledge to wider audiences through a range of activities

- **Television:** Interviewed / featured research on BBC 1 “Seawatch” (August 2006); BBC 1 “Countryfile” (September 2006); UKTV Food “Market Kitchen” (April 2007); BBC “Springwatch” (June 2008)
- **Radio:** Interviews include BBC Radio 4 “The Food Programme” (twice) & “Nature”, BBC Radio 5 Live, BBC Radio Scotland Live and various regional stations.
- **Newsprint:** Research featured in national newspapers in the UK including the “Daily Telegraph”, “Guardian”, “Times” and “Independent” and national UK fishing industry press including “Fishing News” and “Fishupdate”
- **Newsletters:** “Scallop and Queen Research News” (produced biannually by myself for the Manx fishing industry) and contributor to “Fish Skeet” (Isle of Man Government)

PERSONAL DETAILS

Date of Birth: 27th October 1968

Nationality: Australian (Indefinite Leave to Remain in the UK)

INTERESTS

Travelling: My upbringing in Papua New Guinea inspired a sense for adventure. I have subsequently travelled to over 25 countries in Australasia, Asia, Europe, Africa and North & South America. During the period from April 1990 to December 1990 I jointly organised and undertook an expedition around the coastline of Australia by 4WD vehicle.

Sports: Enjoy cycling, fishing, snorkeling, golf, cricket, squash, tennis, surfing and walking.

REFEREES

Prof David Raffaelli

Department of Environment,
University of York,
Heslington,
York YO10 5DD
United Kingdom
Ph no. (01904) 434060
Email. dr3@york.ac.uk

Dr Andrew Brand

University of Liverpool,
C/o - Asahi House,
10 Church Rd,
Port Erin,
Isle of Man, IM9 6AQ
British Isles
Ph no. (07624) 464619
Email. arbrand@liv.ac.uk

Prof Geoffrey Jones

Department of Marine Biology,
James Cook University,
Townsville, Queensland 4811
Australia
Ph. no. (61 7) 47814559
Fax no. (61 7) 47251570
Email. geoffrey.jones@jcu.edu.au