

CURRICULUM VITAE: Shaun Kevin Wilson

CONTACT DETAILS:

Dept. Marine Sciences and Technology
University of Newcastle upon Tyne
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Centre of Excellence for Coral reef Studies
James Cook University, Townsville, Qld
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PERSONAL DETAILS:

Date of Birth: 17/7/1968
Nationality: Australian

EDUCATION:

- 1998-2001 PhD, Dept. Marine Biology James Cook University (JCU). Project title: Trophic limitations in small reef fish: an evaluation of herbivory in the Blenniidae.
- 1997 Bachelor of Science. Honours. Dept. Marine Biology, JCU. Project title: Cryptic dietary components in territorial damselfish.
- 1996 Bachelor of Science. JCU. Majors in Marine Biology & Zoology
- 1990 Bachelor of Pharmacy. University of Sydney

EMPLOYMENT HISTORY:

- 2007- Post-doc, ARC Centre of Excellence for Coral Reef Studies, James Cook University
- 2005-2007 Research Associate, Indirect effects of coral bleaching. Newcastle University, Newcastle upon Tyne, UK
- 2003-2004 Marine Ecology Faculty, School for Field Studies. Sth Caicos, Turks and Caicos Islands, Caribbean.

RESEARCH INTERESTS

My research interests lie in linking large scale ecological studies of coral reef communities with rigorous studies of individual species functional ecology to gain a mechanistic understanding of the effect of disturbance on coral reefs. I am currently involved in a large collaborative effort examining the ecological impacts of disturbance on a global scale. My involvement in this work examines the impact of climate change on coral reef communities, with an emphasis on reef associated fish assemblages. The effects of coral bleaching on species richness, ecological versatility, functional and taxonomic diversity of coral reef fishes are being examined in relation to functional ecology, reef resilience and socio-economics. I am particularly interested in how coral reefs are changing in terms of their dominant habitat types, the consequences of this change to reef associated communities and the long term prognosis for reef ecosystems.

REFEREED PUBLICATIONS:

- Pratchett MS, Munday PL, **Wilson SK**, Graham NAJ, Cinner JE, Bellwood DR, Jones GP, Polunin NVC, McClanahan TR (In press) Effects of climate-induced coral bleaching on coral-reef fishes: ecological and economic consequences. *Oceanography and Marine Biology: Annual review*.
- Turner RA, Cakacaka A, Graham NAJ, Polunin NVC, Pratchett MS, Stead S, **Wilson SK** (In Press) Occupational shifts reduce reliance on marine resources in remote South Pacific societies. *Coral Reefs*.
- Wilson DT, Vaughan D, **Wilson SK**, Simon CN, Lockhart K (In press) Efficacy of a starch-iodide swab technique to detect the illegal use of bleach in a Spiny Lobster (*Panulirus argus*) fishery. *Fisheries Research*
- Wilson SK**, Burgess S, Cheal A, Emslie M, Fisher R, Miller I, Polunin NVC, Sweatman HPA (In press) Habitat utilisation by coral reef fish: implications for specialists vs. generalists in a changing environment. *Journal of Animal Ecology*.
- Graham NAJ, **Wilson SK**, Jennings S, Polunin NVC, Robinson J, Daw T. (2007) Lag effects in the impacts of mass coral bleaching on coral reef fish, fisheries and ecosystems. *Conservation Biology* 21:1291-1300.
- Ledlie MH, Graham NAJ, Bythell JC, **Wilson SK**, Jennings S, Polunin NVC, Hardcastle J (2007) Phase shifts and the role of herbivory in the resilience of coral reefs. *Coral Reefs* 26: 641-653.
- McClanahan TR, Anteweberhan M, Ruiz Sebastian C, Graham NAJ, **Wilson SK**, Bruggeman H, Guillaume MMM (2007) Predictability of coral bleaching from synoptic satellite and in situ temperature observations. *Coral Reefs* 26: 695-701.
- McClanahan TR, Anteweberhan M, Graham NAJ, **Wilson SK**, Ruiz Sebastian C, Guillaume MMM, Bruggemann JH (2007) Western Indian ocean coral communities, bleaching responses, and susceptibility to extinction. *Marine Ecology Progress Series* 337:1-13.
- Wilson SK**, Graham NAJ, Polunin NVC (2007) Appraisal of visual assessments of habitat complexity and benthic composition on coral reefs. *Marine Biology* 151:1069-1076.
- Graham NAJ, **Wilson SK**, Jennings S, Polunin NVC, Bijoux JP, Robinson J (2006) Dynamic fragility of oceanic coral reef ecosystems. *Proceedings of the National Academy of Science of the USA* 103:8425-8429
- Pratchett MS, **Wilson SK**, Baird AR (2006) Declines in the abundance of *Chaetodon* butterflyfishes (Chaetodontidae) following extensive coral depletion. *Journal of Fish Biology* (69:1269-1280).
- Wilson SK**, Graham NAJ, Pratchett MS, Jones GP, Polunin NVC. (2006) Multiple disturbances and the global degradation of coral reefs: are reef fishes at risk or resilient? *Global Change Biology* 12:2220-2234.
- Wilson SK**, Wilson DT, Lamont C, Evans M (2006) Identifying individual great barracuda *Sphyraena barracuda* using natural body marks. *Journal of Fish Biology* (69:928-932)
- Fisher R, Leis JM, Clark DL, **Wilson SK** (2005) Critical swimming speeds of late-stage coral reef fish larvae: variation within species, among species and between locations. *Marine Biology* 147:1201-1212

- Wilson SK**, Street S, Sato T (2005) Use of discarded conch shells by coral reef fishes. *Marine Biology* 147:179-188
- Fisher R, **Wilson SK** (2004) Maximum sustainable swimming speeds of nine species of late stage larval reef fishes. *Journal of Experimental Marine Biology and Ecology* 312:171-186
- Pratchett MS, **Wilson SK**, Berumen ML, McCormick MI (2004) Sublethal effects of coral bleaching on an obligate coral feeding butterflyfish. *Coral Reefs* 23:352-256
- Wilson SK** (2004) Growth, mortality and turnover rates of a detritivorous blenny. *Marine Ecology Progress Series* 284:253-259
- Wilson SK**, Bellwood DR, Choat JH, Furnas M (2003) Detritus in the epilithic algal matrix and its use by coral reef fishes. *Oceanography and Marine Biology: Annual review*. 41: 279-309
- Wilson SK** (2002) Nutritional value of detritus and algae in blenny territories on the Great Barrier Reef. *Journal of Experimental Marine Biology and Ecology* 271: 155-169
- Wilson SK**, Burns K, Codi S (2001) Sources of dietary lipids in the coral reef blenny *Salarias patzneri*. *Marine Ecology Progress Series* 222: 291-296
- Wilson SK** (2001) Multiscale habitat associations of detritivorous blennies (Blenniidae: Salarini). *Coral Reefs* 20: 245-251
- Wilson SK**, Burns K, Codi S (2001) Identifying sources of organic matter in sediments from a detritivorous coral reef fish territory. *Organic Geochemistry* 32: 1257-1269
- Wilson SK** (2000) Trophic status and feeding selectivity of blennies (Blenniidae: Salarinii). *Marine Biology* 136: 431-437
- Munday PL, **Wilson SK** (1997) Comparative efficacy of clove oil and other chemicals in anaesthetization of *Pomacentrus amboinensis*, a coral reef fish. *Journal of Fish Biology* 51: 931-938
- Wilson SK**, Bellwood DR (1997) Cryptic dietary components of territorial Damselfishes (Pomacentridae, Labroidei). *Marine Ecology Progress Series* 153: 299-310

BOOK CHAPTERS:

- Wilson SK** (in press) Diversity in the diet and feeding habits of blennioid fish. In: Patzner RA, Gonçalves EJ, Hastings PA, Kapoor BG (Eds) *The Biology of Blennies*. Science Publishers.
- Pratchett MS, **Wilson SK**, Graham NAJ, Munday PL, Jones GP, Polunin NVC (in press) Coral bleaching and consequences for motile reef organisms: past, present and uncertain future effects. Chapter 11. In: Jough J, Van Oppen M (Eds) *Coral bleaching: patterns, processes, causes and consequences*. Springer

REPORTS:

- Polunin NVC, **Wilson SK**, Graham NAJ, Pratchett MS, Zann L (2007) Combined impact of coral bleaching and variable fishing pressure on fish communities. Report for National Geographic Grant # 7941-05
- Polunin NVC, **Wilson SK**, Sweating CJ (2006) An Environmental Impact Assessment of the Holland Klipper grounding on Jeddah Reef, Jeddah, Saudi Arabia.
- Wilson DT, Vaughan D, **Wilson SK**, Simon CN, Lockhart K (2005) Bleach detection in the Spiny Lobster (*Panulirus argus*) fishery of the Turks and Caicos Islands, British West Indies

Wilson SK, Street S, Beltz E, Berry M, Lawson J, Marks C, Schmidt L, Sato T (2004)
The use of discarded queen conch (*Strombus gigas*) shells as shelter sites by fish

RESEARCH PRESENTATIONS:

- 2006 Impact of coral loss and fishing on fish communities in the Lau Islands, FIJI. Meso-scale workshop on the effects of bleaching. Zanzibar, Tanzania.
- 2005 Secondary production by a small bodied detritivorous fish. Oral presentation. Impact of coral bleaching on an assemblage of chaetodontids Indo-Pacific Fish Conference. Taipei, Taiwan.
- 2004 Small bodied detritivorous fish: implications for coral reef trophodynamics. Guest lecture at Moss Landing Marine Laboratories, CA
- 2003 Underwater censusing of herbivorous fish: effects of observer bias. Poster presentation at the Gulf and Caribbean Fisheries Institute conference, Tortola, BVI
- 2003 Maximum sustainable swimming speeds of nine species of late stage larval reef fishes. Poster presentation at International Larval Fish Conference, Santa Cruz CA.
- 2001 Sources of detritus in the epilithic algal matrix of blenny territories. Presentation at the Australian Coral Reef Society Conference. Magnetic Island, Australia.
- 2001 Distribution and habitat associations of salarini blennies on a coral reef. Presentation at the joint Australian Marine Science Association and New Zealand Marine Sciences Society Conference. Townsville, Australia
- 2000 Identifying components of a detritivorous fishes diet using lipid biomarkers. Presentation at the Australian Organic Geochemistry Society conference, Townsville, Australia.
- 2000 Diet selection by small herbivorous reef fishes, a re-evaluation of trophic status. Presentation at the 9th International Coral Reef Symposium, Bali, Indonesia.
- 1999 Detritus vs Algae: A comparison of resource value and use by small reef fish. Presentation at the Australian Coral Reef Society Conference, South Molle Island, Australia.

SCHOLARSHIPS:

- 2005-2007 Leverhulme trust
- 1997-2000 Australian Postgraduate Award
- 1987-1989 Soul Pattinson Cadetship

RESEARCH GRANTS:

- 2006 National Geographic (\$29 000 USD)
- 2005 Fisheries Society of the British Isles (£1000)
- 2004 PADI AWARE (\$1055 USD)
- 2001 Doctoral Merit Research Scheme, James Cook University (\$2500 AUD)
- 2000 Doctoral Merit Research Scheme, James Cook University (\$2000 AUD)
- 2000 Australian Coral Reef Society (\$1200 AUD)

LICENCES & CERTIFICATES:

- NAUI Dive Master (approx. 500 dive hours)
- Queensland speed boat drivers license
- Radiotelephone operators restricted certificate
- Queensland Ambulance first aid certificate

DAN Emergency oxygen course

MEMBERSHIPS IN PROFESSIONAL ORGANISATIONS:

International Society for Reef Studies

The Fisheries Society of the British Isles