

Dr. Ryan M. Kempster

CONTACT DETAILS

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[Instagram.com/supportoursharks](https://instagram.com/supportoursharks); youtube.com/ryankempster.

SUMMARY OF ACHIEVEMENTS



16 Scientific
Publications



\$1 Million+
Research Funding



Experienced
Team Leader



Experienced
Public Presenter



350+ Media
Interviews/Articles



First Aid
Certification



Remote Fieldwork
Experience



14 years of Marine
Science Experience



PADI DiveMaster
200+ Dives



Powerboat License
150+ Hours

ACADEMIC QUALIFICATIONS

- **PhD, Neuroecology** Australia
University of Western Australia (www.uwa.edu.au) 2010-2014
For my PhD, I investigated the behaviour and biology of elasmobranchs to develop improved enrichment programs, and to better understand the effectiveness of shark deterrent devices.
- **MSc, Marine Biology** United Kingdom
Bangor University (www.bangor.ac.uk) 2006-2007
For my MSc, I completed a range of multi-disciplinary course modules, in addition to an independent research project focused on the feeding behaviour of sharks.
- **BSc (Hons), Marine Biology** United Kingdom
Bangor University (www.bangor.ac.uk) 2002-2005
For my BSc, I completed an extensive range of topics, including, but not limited to, animal behaviour, anatomy, ecology, oceanography, and conservation.

PROFESSIONAL EXPERIENCE

- **Founder and Director** - Support Our Sharks (SOS) Ocean Conservation Society International
www.supportoursharks.com 2010-Present
I founded SOS to educate the public about elasmobranch conservation, through outreach and research, in the hope of inspiring interest in protecting these important animals.
- **Research Associate** - The UWA Oceans Institute Australia
www.oceans.uwa.edu.au 2013-2017
I lead a team of scientists, students, and technical staff to test and develop a range of shark-mitigation technologies utilising both aquarium- and field-based behavioural experiments.
- **Aquarium Manager** - University of Western Australia Australia
www.uwa.edu.au 2010-2016
The UWA aquarium housed a diverse range of species, from crocodiles to sharks. My duties included general husbandry, maintenance, disease recognition, animal collection, and more.
- **Lecturer/Lab Demonstrator** - University of Western Australia Australia
www.uwa.edu.au 2010-2016
I taught in a range of undergraduate and postgraduate courses including Neuroecology, Marine Biology, Marine Ecology, Science Communication, and Shark Conservation.
- **Travelling Scientist** - SPICE Travelling Scientist Program Australia
www.spice.wa.edu.au 2010-2016
In 2011, I was selected to be a Travelling Scientist, which provided funding for me to travel around Australia to give inspiring marine conservation talks to high school students.
- **Aquarist/Marine Educator/Diver** - Blackpool Sea Life Centre United Kingdom
www.visitsealife.com 2009-2010
My duties included general maintenance of aquarium exhibits, educational dive shows inside the shark tanks, daily feeding, monitoring, and water quality assessments.
- **Field Officer** - Pretoma Sea Turtle Conservation Program Costa Rica
www.pretoma.org 2009
I lead a team of volunteers to monitor and tag turtle populations, which involved daily maintenance of a turtle egg hatchery, nightly patrols, and educational visits to local schools.
- **Chief Scientific Officer** - Greenforce Marine Conservation Program Fiji & The Bahamas
www.greenforce.org 2007-2009
I trained teams of volunteers, based in remote locations, to conduct scientific diving surveys on coral reefs to assess local fish, coral and invertebrate abundance.

AWARDS and PRIZES

Total Value of Awards and Prizes to date: \$16,350

- **The Animal Biology Davies Prize (\$250)** 2014
University of Western Australia (www.animals.uwa.edu.au)
- **Editor's Choice Award – Free Open Access (worth \$3,500)** 2013
Brain, Behaviour and Evolution (www.karger.com)

- **Awarded Free Open Access** (worth \$1,350) 2013
PLOS One (www.plosone.org)
- **Awarded Free Open Access** (worth \$2,700) 2013
Marine Biodiversity Records (www.journals.cambridge.org/MBD)
- **Student Travel Award** (\$800) 2013
American Elasmobranch Society (www.elasmo.org)
- **International Three Minute Thesis Competition** (\$3,500) 2011
University of Western Australia (www.uwa.edu.au)
- **Student Travel Award** (\$400) 2011
Oceania Chondrichthyan Society (www.oceaniasharks.org.au)
- **WA Three Minute Thesis Competition** (\$1,500) 2010
University of Western Australia (www.uwa.edu.au)
- **Student Travel Awards** (Totalling \$2,400) 2010-2013
University of Western Australia (www.uwa.edu.au)

GRANTS and SCHOLARSHIPS

Total value of Grants and Scholarships to date: \$1,164,000

- **Kempster RM, Kerr CC and Collin SP (2016)** Assessment of shark attack repellent technology. Shark Attack Mitigation Systems. **(\$238,000)**
- Hart NS, Collin SP and **Kempster RM (2014-2016)** A case of mistaken identity? Discovering the sensory cues that trigger shark attacks. WA Office of Science Applied Research program (ARP) Shark Hazard Mitigation. Western Australian State Government. **(\$284,000)**
- Hart NS, Collin SP and **Kempster RM (2013-2015)** Development and testing of novel shark deterrents. WA Office of Science Applied Research program (ARP) Shark Hazard Mitigation. Western Australian State Government. **(\$222,000)**
- Collin SP, Hart NS and **Kempster RM (2013-2015)** Testing and enhancement of existing shark deterrents. WA Office of Science Applied Research program (ARP) Shark Hazard Mitigation. Western Australian State Government. **(\$220,000)**
- **Kempster RM (2013)** The role of electroreception in elasmobranchs, PhD. UWA Completion Scholarship. University of Western Australia. **(\$20,000)**
- **Kempster RM (2011-2013)** The role of electroreception in elasmobranchs, PhD. International Postgraduate Research Scholarship. University of Western Australia. **(\$112,000)**
- **Kempster RM (2010)** The role of electroreception in elasmobranchs, PhD. Endeavour Europe Award. **(\$60,000)**
- **Kempster RM (2006-2007)** Marine Biology, MSc. European Social Funding. Bangor University, U.K. **(\$8,000)**

PEER-REVIEWED PUBLICATIONS

Publication Metrics

- Total Publications: **16**
- Publication Rate: **3.2/year**
- First Author Publication Rate: **1.8/year**
- Total Citations: **95**
- Citation Rate: **19/year**
- *h*-index: **7**; *i10*-index: **5**; *M*-quotient: **1.4**.
- First Publication: **2011**; Awarded PhD: **2014**.

Citations per year

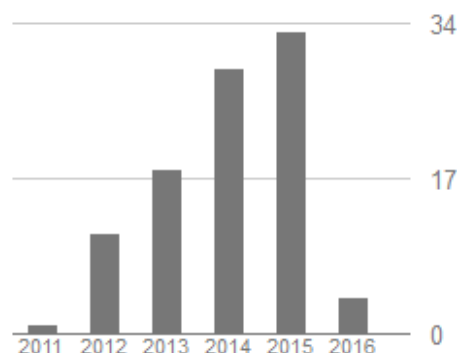


Table 1. Summary of journal articles and their impact metrics.

Journal	No. Articles (1st author)	Citations	Impact Factor (5 Year)	ISI Ranking	ISI Ranking Top % (Quartile)
Multidisciplinary Sciences					
PLoS One	2 (2)	14 + 0	3.534 (4.015)	8/55	14% (Q1)
PeerJ PrePrints	1 (0)	0	- -	-	- -
Zoology					
Brain, Behavior and Evolution	2 (1)	7 + 0	4.288 (3.109)	2/153	1% (Q1)
Zoology	1 (0)	5	1.596 (1.777)	40/153	26% (Q2)
Fisheries					
Marine and Freshwater Research	2 (1)	1 + 0	2.25 (2.191)	10/50	19% (Q1)
Journal of Fish Biology	3 (1)	19 + 17 + 8	1.734 (1.870)	16/50	31% (Q2)
Marine and Freshwater Biology					
Aquatic Biology	2 (2)	13 + 11	1.258 (1.504)	61/103	59% (Q3)
Marine Biodiversity Records	1 (1)	0	- -	-	- -
Total	14 (8)	95			

Book Chapters

- Collin SP, Yopak K and **Kempster RM** (2015) Sensing the environment. In *Physiology of elasmobranch fishes Volume 34*. (Eds. Shadwick RE, Farrell AP and Brauner CJ). Elsevier, Inc.
- **Kempster RM** and Collin SP (2014) Iconic Species: Great White Sharks, Basking Sharks and Whale Sharks. In *Sharks: Conservation, Governance and Management*. (Eds. N Klein and E Techera). Earthscan (Routledge, Taylor & Francis).

Peer-Reviewed Journal Articles

- **Kempster RM**, Egeberg CA, Hart NS, Ryan L, Chapuis L, Kerr CC, Schmidt C, Huveneers C, Gennari E, Yopak KE and Collin SP (2016) How close is too close? The effect of a non-lethal electric shark deterrent on white shark behaviour. *PLoS One*.

- Garza-Gisholt E, **Kempster RM**, Hart NS and Collin SP (2015) Visual specializations in five sympatric species of stingrays from the family Dasyatidae. *Brain, Behavior and Evolution* 85 (4): 217-232.
- **Kempster RM**, Egeberg CA, Hart NS, and Collin SP (2015) Electrosensory-driven feeding behaviour of the Port Jackson shark (*Heterodontus portusjacksoni*) and Western shovelnose ray (*Aptychotrema vincentiana*). *Marine and Freshwater Research* 67(2): 187-194.
- Schifiliti M, McLean DL, Langlois T, Birt M, Barnes P, **Kempster RM** (2014) Are depredation rates by reef sharks influenced by fisher behaviour? *PeerJ PrePrints* 2:e708v1
- Egeberg CA, **Kempster RM**, Theiss SM, Hart NS and Collin SP (2014) The distribution and abundance of electrosensory pores in benthic sharks: a comparison of wobbegong (*Orectolobus maculatus*) and angel (*Squatina australis*) sharks. *Marine and Freshwater Research* 65 (11): 1003-1008.
- Camilieri-Asch V, **Kempster RM**, Collin SP, Johnstone R, Theiss SM (2013) A comparison of the electrosensory morphology of a euryhaline and a marine stingray. *Zoology* 116 (5): 270-276.
- **Kempster RM**, Garza-Gisholt E, Egeberg CA, Hart NS, O'Shea OR, Collin SP (2013) Sexual dimorphism of the electrosensory system: a quantitative analysis of nerve axons in the dorsal anterior lateral line nerve of the blue spotted fantail stingray (*Taeniura lymma*). *Brain, Behavior and Evolution* 81 (4): 226-235.
- O'Shea OR, Thums M, van Keulen M, **Kempster RM**, Meekan MG (2013) Dietary partitioning by five sympatric species of stingray (Dasyatidae) on coral reefs. *Journal of Fish Biology* 82 (6): 1805-1820.
- **Kempster RM**, Hart NS, Collin SP (2013) Survival of the Stillest: Predator Avoidance in Shark Embryos. *PLoS ONE* 8: e52551.
- **Kempster RM**, Hunt DM, Human BA, Egeberg CA, Collin SP (2013) First record of the mandarin dogfish *Cirrhigaleus barbifer* (Chondrichthyes: Squalidae) from Western Australia. *Marine Biodiversity Records* 6: e25.
- **Kempster RM**, McCarthy ID, Collin SP (2012) Phylogenetic and ecological factors influencing the number and distribution of electroreceptors in elasmobranchs. *Journal of Fish Biology Special Issue: The Current Status of Elasmobranchs: Biology, Fisheries and Conservation* 80: 2055-2088.
- Fitzpatrick JL, **Kempster RM**, Daly-Engel TS, Collin SP, Evans JP (2012) Assessing the potential for post-copulatory sexual selection in elasmobranchs. *Journal of Fish Biology Special Issue: The Current Status of Elasmobranchs: Biology, Fisheries and Conservation* 80 (5): 1141-1158.
- **Kempster RM**, Collin SP (2011) Electrosensory pore distribution and feeding in the basking shark *Cetorhinus maximus* (Lamniformes: Cetorhinidae). *Aquatic Biology* 12: 33-36.
- **Kempster RM**, Collin SP (2011) Electrosensory pore distribution and feeding in the megamouth shark *Megachasma pelagios* (Lamniformes: Megachasmidae). *Aquatic Biology* 11: 225-228.

OUTREACH

Outreach Metrics

- Social Media Reach: **200,000+ Users**
- Professional Articles Written: **35**
- Short Films Produced: **15**
- Media Interviews Conducted: **350+**
- TV/Film Appearances: **11**
- Public/Professional Seminars: **300+**
- High School Presentations: **200+**

Selected Media Interviews

- [Shark files: new site wants your shark sightings](#). *Discovery News* (27th May 2015). “Started by shark biologists Ryan M. Kempster and Channing A. Egeberg, SharkBase gives citizen conservationists a place to report shark sightings, ‘whether you’ve seen a shark or not’...”
- [Tiger shark shot and dumped at sea as cull begins in Western Australia](#). *Scientific American* (29th January 2014). “Ryan Kempster, a shark biologist at the University of Western Australia and founder of Support Our Sharks, counters that ‘there is no evidence that the current approach taken by the WA government will reduce shark bite incidents’...”
- [Shark embryos ‘freeze’ to evade predators](#). *BBC Nature* (10th January 2013). “Australian researchers found that [shark] embryos could identify electric fields simulating a nearby predator, despite being confined to a tiny egg case...”
- [Rare sharks turn up in Australia](#). *NBC News* (1st March 2013). “After two years of thorough investigation which included DNA sequencing, the sharks were identified as mandarin dogfish (*Cirrhigaleus barbifer*), a species never before seen in Australia, said study co-author Ryan Kempster...”
- [The Megamouth – The shark that sucks](#). *New Scientist* (9th March 2011). “[Ryan Kempster] thinks the megamouth’s maw holds so much water that, if it simply swam into a cloud of plankton with its mouth open, they would be pushed aside rather than drawn in...”

Selected TV/Film Appearances

- [Operation Maneater: Great White Shark](#). *UK Channel 4/PBS* (2014). “Mark Evans travels to Western Australia, where authorities have implemented radical measures to catch and kill any shark they deem a threat. Evans meets with scientists to explore non-lethal solutions to keep people...”
- [Why Sharks Attack](#). *Nova-PBS* (2014). “In recent years, an unusual spate of deadly shark attacks has gripped Australia. To separate fact from fear, NOVA teamed up with leading shark experts in Australia and the United States to discover the science behind the great white's hunting instincts...”

- [Australia's Deadliest: Shark Coast](#). *National Geographic* (2013). "Western Australia's pristine coastline has been ravaged by a deadly predator, but one shark investigation team's extraordinary technological advancements may someday allow sharks and humans to co-exist safely..."
- [Shark Repellents](#). *ABC Catalyst* (2012). "Graham Phillips discovers how understanding a sharks' sensory system could help people swim safely amongst the carnivorous fish..."

Selected Films Produced

- [Shark Science 101 Animated Series](#) (2015). Shark Science 101 is an animated series I created to showcase the importance of sharks to an audience of all ages.
- [Go Mercury Free Animation](#) (2014). The Go Mercury Free animation encourages people to say no to consuming sharks and other large predatory fish.
- [Do Sharks Need to Be Controlled](#) (2014). During the 2014 Sharks International conference in Durban, I interviewed shark experts from around the world for their views on shark bite mitigation strategies.
- [Operation White Shark](#) (2013). This film documents my early research into the development of a non-lethal shark deterrent.
- [Predator Avoidance](#) (2012). In this film, I share the results of my research investigating the avoidance response of embryonic bamboo sharks when exposed to predator mimicking electric fields.

PROFESSIONAL PRESENTATIONS

- **Kempster RM**, Garza EG, Egeberg CA, Hart NS, O'Shea O and Collin SP (2014) Can bio-electric signals help stingrays to find suitable mates? *Sharks International Conference*. 2nd – 6th June, Durban, South Africa.
- **Kempster RM**, Hart NS and Collin SP (2013) Survival of the stillest: Predator avoidance in shark embryos. *American Elasmobranch Society Conference*. 11th – 14th July, New Mexico, U.S.A.
- **Kempster RM**, Hart NS and Collin SP (2011) Electrosensory prey detection in benthic elasmobranchs. *Oceania Chondrichthyan Society Conference*. 13th – 15th September, Gold Coast, Australia.
- **Kempster RM** and Collin SP (2010) The role of electroreception in the feeding behaviour of elasmobranchs. *International Society for Behavioural Ecology Conference*. 26th September – 1st October, Perth, Australia.
- **Kempster RM**, McCarthy ID, Summerville R and Collin SP (2010) The role of electroreception in the feeding behaviour of sharks. *Sharks International Conference*. 6th – 11th June, Cairns, Australia.
- **Kempster RM** and Collin SP (2010) The importance of electroreception to elasmobranchs. *Western Australian Marine Science Institution Conference*. 1st February, Perth, Australia.

PROFESSIONAL CERTIFICATIONS

- **Senior First Aid (St. John's Ambulance)** 2013
- **Animal Ethics Welfare and Science (UWA)** 2010
- **Divemaster and Master Scuba Diver (200 hrs + experience)** 2007
- **International Powerboat License (150 hrs + experience)** 2006
- **Full UK and CA Driving License (inc. 4x4 Training)** 2003