ELODIE J.I. LÉDÉE

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APA funded
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Improving understanding of spatial ecology through network analysis ofacoustic monitoring data

Elodie moved to Australia in 2002 to complete her BSc in Marine Biology. She went on to attain a Master of Applied Science in Protected Area Management, after which, she worked for 8 months as a GIS officer for the Australian Centre forTropical Freshwater Research (ACTFR); for 2 years, as a Research Assistant for the Fishing and Fisheries Research Centre (FFRC); and a further two and half years as a GIS officer for the Great Barrier Reef Marine Park Authority (GBRMPA).

Elodie's research will use Network Analysis (NA) to look at movement patterns, habitat use and functional connectivity of predator populations within inshore and offshore habitats. NA will be applied in conjunction with more traditional home range analysis methods to compare the outcomes between the different approaches and consequently produce a more complete picture of movement patterns, habitat use and connectivity. In addition, NA will provide an alternative approach to allow acoustic monitoring data to be analysed without the need to transform it into more traditional data formats.

Elodie's project will examine the use of a Network Analysis approach, using predator population movement data within an inshore and an offshore area using acoustic monitoring. This will further our understanding of animal movement patterns, connectivity and habitat use.

Through the project, Elodie has gained valuable experience and mastered NA methods, progressing their application by adapting them to fit new situations. Excitingly, Elodie's preliminary results suggest that NA can be adapted to look at movement patterns and habitat use of predator populations within inshore habitats.

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Presentations

Lédée EJI, Simpfendorfer CA, Heupel MR and Tobin AJ (2013) The utility of Network Analysis in studying aquatic animal movements: an example from two nearshore shark species. Poster presentation at Behaviour 2013 joint meeting ofthe 33rd International Ethological Conference (IEC) and the Association for the Study of Animal Behaviour (ASAB), Newcastle Gateshead, England. http://aims.jcu.edu.au/ckfinder/userfiles/files/Seminar-Days/Behaviour2013_Poster.pdf

Oral presentation at *OCS 2013 conference* in Brisbane.

Oral Presentation at *AIMS@JCU seminar day* 2013 in Reef HQ, Townsville.

Oral Presentation at *SEES 2013 conference*, School of Earth and Environmental Sciences, Townsville.