

Barramundi seek safe refuge after rains

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Research has found that barramundi exhibit very accurate homing behaviour.
Credit: Northern Australia Environmental Resources Hub

Research to understand the movements of fish in Top End waterways
has found that barramundi exhibit very accurate homing behavior,

traveling up to 80 km to their "home" billabongs after wet season rains.

Funded through the Australian Government's National Environmental Research Program (Northern Australia Hub) the research was recently published in the *Journal of Animal Ecology*.

Charles Darwin University Associate Professor and project lead David Crook said the research aimed to improve understanding of the seasonal movements of large-bodied fish in tropical rivers.

"It is widely understood that as the wet season rains flow into floodplains, fish begin to leave the refuge of their dry-season waterholes to capitalize on the abundance of new aquatic habitat and [food resources](#)," Dr. Crook said.

"What we wanted to understand was the movements and behavior of individual fish and their dispersal over floodplains."

To find out, Dr. Crook worked with researchers from the Department of Primary Industry and Resources, Fisheries Division and with support from Parks Australia, to implant [radio transmitters](#) into 25 barramundi and 29 fork-tail catfish to track their movements over an eight-month flood cycle in Kakadu's South Alligator River, 300 kms south-east of Darwin.

"We found that the majority of fish that survived the wet season sought out and recolonized their 'home' billabong, even if there was suitable habitat closer to their wet season feeding grounds," he said.

Dr. Crook said both species altered their behavior in response to changes in the availability and distribution of aquatic habitat.

"Although there was a lot of individual variation in [movement](#) patterns,

some barramundi and catfish traveled up to 80 km from their dry-season waterhole during the wet," Dr. Crook said.

He said this type of homing behavior allowed fish to travel widely to seek food during the wet [season](#), while reducing the risk of fish becoming stuck on drying floodplains as the flood waters receded.

"This [research](#) has helped address a gap in understanding the behavior and fates of individual [fish](#)," he said. "It gives us a better understanding of food webs and energy flows in these dynamic river systems as environmental conditions change."

More information: David A. Crook et al. Tracking the resource pulse: Movement responses of fish to dynamic floodplain habitat in a tropical river, *Journal of Animal Ecology* (2019). [DOI: 10.1111/1365-2656.13146](#)

Provided by Charles Darwin University

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