

# Unlocking the Secrets of Nomadic Desert Waterbirds: Satellite Tracking of Banded Stilt



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Early results from the first tracking of Banded Stilts (*Cladorhynchus leucocephalus*) have provided some important insights into the lives of these enigmatic birds. Banded Stilts are an endemic Australian shorebird of conservation concern. Their 'boom and bust' life history strategy sees them breeding only on the rare occasions when vast desert salt lakes are inundated by intense rainfall or flooding; transforming the lakes from inhospitable wastes to shallow salty soups teeming with rich Brine Shrimp (*Parartemia* spp.). Banded Stilt are anecdotally well known for their ability to rapidly move to these inland sites following inundation, flying hundreds of kilometres from coastal wetlands and breeding almost immediately in densely packed nesting colonies of tens of thousands of pairs while the highly ephemeral resources last. The tendency for Banded Stilts to breed *en masse* in such remote desert lakes kept their breeding strategy a mystery for many decades. But, since its discovery around 80 years ago, just 30 breeding colonies have been recorded and many important aspects of their life ecology are poorly understood.

The movement behaviour of stilts is important for understanding their conservation needs. Although we know that stilts arrive at inland sites within just hours or days following rainfall, it is not known where the breeding birds originate and for some time the populations in eastern and western Australia have been assumed separate. The movements made by the stilts to detect and rapidly exploit these inland breeding opportunities are unknown, as are their dispersal movements following breeding. Perhaps even more important are the wetland sites that the stilts use between breeding events, particularly during unpredictable prolonged droughts, for which the Australian climate is famous.

To answer these questions this Deakin University project, funded by BHP Billiton, has begun tracking Banded Stilt using 5g Solar PTTs. Following captive trials, a Teflon ribbon leg loop harness was selected and tags were fitted to 10 adult breeding Banded Stilts during a rare filling event of Lake Eyre; a vast salt lake in arid central Australia. As Lake Eyre dried, the birds captured from nests in just a few square metres of the densely packed nesting colony dispersed to all corners Australia with most moving 800 to 3000 km from their tagging location. Almost all birds made major overnight flights of 500-700 km to reach coastal saline wetlands. Some extensive rapid dispersals to south-western Australia also confirm that there is interchange between the eastern and western populations, with implications for the previous population estimates in

these areas. The use of many diverse artificial and natural saline wetlands during an extended dry period following the breeding event was also critical in highlighting the essential non-breeding habitats used by this species and the number and diversity of sites that are important in sustaining their population between unpredictable and infrequent breeding events.

It is hoped that further deployments of 5g PTTs in early 2014 will add to the data already gained and continue to gather important behavioural information to unlock conservation-relevant secrets of Banded Stilt behaviour.

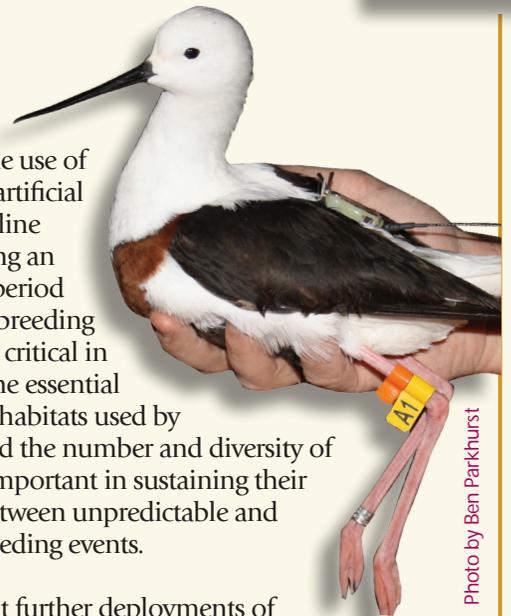


Photo by Ben Parkhurst



Photo by Lynn Pedler

Above Photos: Banded Stilts wearing 5g Solar PTTs at capture.



Photo by Ben Parkhurst

Above and Below: Breeding Banded Stilts pack a tiny nesting island during a rare filling of Lake Eyre in the South Australian desert.



Photo by Ben Parkhurst