

## Working for Waders

David Edwards, Chairman, Queensland Wader Study Group

The Queensland Wader Study Group, founded in 1992, thought that better outcomes could be achieved for shorebirds by forming a special interest group of dedicated wader watchers. Rather than go it alone, the Queensland Wader Study Group decided to link with the Queensland Ornithological Society. Queensland Wader Study Group are now a division within Queensland Ornithological Society, better known as Birds Queensland.

From the very start, Queensland Wader Study Group has been an activitiesbased group, surveying and studying waders (also called shorebirds). The group's core business is monthly surveys of high-tide roosts within Queensland, usually over ninety sites, from Cairns to the Tweed River. Shorebirds are counted on the hightide, which concentrates the shorebirds close to the shore and enables a more accurate measurement of abundance and diversity. During these surveys, not only are numbers of various shorebird species recorded, but other water birds and raptors, weather conditions, and disturbances are also recorded.

In addition, to the Cairns through to the Tweed River regions, the Queensland Wader Study Group complete surveys in the broader Queensland regions to obtain a more comprehensive dataset. The group have regularly surveyed the Great Sandy Strait and the greater Mackay region, showing how vital these areas are to shorebirds. The group have also surveyed the lower end of the Gulf of Carpentaria, around Kurumba, using light aircraft and, more recently, chartered vessels, in conjunction with Griffith University and Carpentaria Land Council Aboriginal Corporation.

The Flinders, Gilbert, and Mitchell Rivers flow into the Gulf of Carpentaria, supporting healthy ecosystems and nationally significant wetlands, hence the importance of surveying shorebirds in the region. Queensland Wader Study Group work with marine ecologists and indigenous rangers to learn about the relationship between shorebird diversity and abundance and the food sources of shorebirds in these rivers' estuarine mouths. Furthermore, the group have also just completed a new major shorebird survey of the Townsville region, adding to the wealth of information the Queensland Wader Study Group has in its database.

Queensland Wader Study Group's monthly surveys have been implemented for the past thirty years. The duration and intensity of their surveys are unique in Australia, and the information has been made available to university staff, students,

Above: A far eastern curlew (*Numenius madagascariensis*). Image: Robert Bush

and governments, resulting in many published papers and informed decisions about shorebirds and their environment. Unfortunately, the data has accurately shown a sad decline in shorebird numbers throughout the East Asian-Australasian flyway.

The group is very proactive in banding and tracking shorebirds under an appropriate license. The shorebirds are weighed and measured and have previously had an Australian Bird and Bat Banding Scheme band applied to one of their legs - which contains an individual number unique to that bird. However, unless you have 'Superman' vision or are very lucky, the number is hardly ever read. As a result, this led to the placement of a coloured flag to the leg of shorebirds as an alternate tracking method, and different colours for different regions are used. The change in tracking strategy helped to show the shorebirds' flight paths as birders recorded the flags. The subsequent development was the etching of alpha-numerics onto the flags so that an individual could be tracked. Even with these advances, the information gained was reliant on observers on the ground, usually in populated shorebird areas. However, more detailed information was required, which meant adapting to modern technology - electronic and satellite tags.

In the 1990s, the group started using satellite transmitters or Platform Transmitter Terminals. However, the



A grey-tailed tattler (Tringa brevipes) with Geolocator. Image: Jon Coleman

initial transmitters were relatively heavy and could only be allocated to the largest shorebirds, such as the Endangered far eastern curlew (Numenius madagascariensis), which weighed over one kilogram. Over time, the group have seen the size and weight of the transmitters reduce, so they have been able to use them in a broader selection of shorebirds. For example, the group have been able to use these new smaller transmitters on the Eurasian whimbrel (Numenius phaeopus), bar-tailed godwit (Limosa lapponica), Pacific golden plover (Pluvialis fulva), and grey-tailed tattler (Tringa brevipes). Now, the group can follow

a wider variety of shorebirds up and down the East Asian-Australasian flyway and obtain results such as flight paths, speed in the air, and the duration of a stop-over at a 'refuelling' site.

The tracking results have shown that shorebirds use habitats in the East Asian-Australasian flyway entirely different from those used here in Australia. The group have also seen shorebirds driven way off-course due to bad weather conditions. However, after the bad weather conditions have passed, the shorebirds have managed to recalibrate their flight path and head to



A bar-tailed godwit (Limosa lapponica) flock. Image: Jon Coleman





Canon-net firing. Cannon-netting is a technique that has been used for over thirty-five years to catch shorebirds (and other birds) as part of research programs conducted across Australia and internationally. Images: Mavis Choi

their destination or point of origin. As equally important, the data has provided invaluable information on a local scale, where shorebirds will spend up to six months in the nonbreeding season in Moreton Bay.

Tracking shorebirds is an enriching activity and is vital to local, national, and international efforts to understand shorebird behaviour. Understanding seasonal and tidal habitat usage are essential to guide wildlife conservation efforts. Furthermore, the data collected can help to inform and reduce the current decline in shorebird numbers.

The Queensland Wader Study Group is aware of the importance of education. Shorebirds are not easy to identify, not brightly coloured, and often live in inhospitable and remote environments. To overcome these barriers to shorebird identification, the group run 'identification days' for individuals, community groups, and government officials to learn how to identify shorebirds. Identifying shorebirds is not always the most straightforward task, but most attendees leave the day feeling more confident in their observation skills. The group also run a 'one-dav wader course' for those who wish to learn more about the magic and plight of shorebirds. The course covers shorebird taxonomy and diversity, their epic global migrations, their unique feeding requirements, breeding behaviour, and conservation requirements. It is an intense course but is a great way to obtain a deeper understanding of shorebirds. These courses are attended by birders enthusiasts and beginners – national park rangers, indigenous rangers, plus local council representatives.

The Queensland Wader Study Group is also committed to educating primary school children. In collaboration with the Moreton Bay Environmental Education Centre, the group take students to the Port of Brisbane, which has shorebird viewing hides that facilitate studying shorebirds at close quarters. Talks and education materials are provided by both Moreton Bay Environmental Education Centre and Queensland Wader Study Group. Furthermore, the group has developed a children's education mobile application - 'My Shorebird Watcher' -specifically created for learning about

Queensland's shorebirds. The mobile application is available in Android and Apple formats.

Queensland Wader Study Group's biggest job is to work with all government levels to achieve effective outcomes that benefit shorebirds. Although the group's data on population estimates, habitat usage, sources of disturbance, and mortality can guide local, national, and international wildlife conservation efforts, when decisions are made across different jurisdictions, not every decision leads to a beneficial outcome for all shorebirds. It must be understood that Australia has international migrant shorebirds on our shores, and decisions made overseas have a significant impact on Australia's shorebirds. To facilitate a beneficial outcome for all shorebirds across different jurisdictions, the Queensland Wader Study Group collaborate with Australasian Wader Study Group, BirdLife Australia, and Healthy Land and Water to influence decisions across the East Asian-Australasian Flyway and beyond.

The future of shorebirds is precarious, with so many factors impacting their survival. However, the Queensland Wader Study Group will continue to survey and monitor shorebird populations to provide valuable information to local, national, and international groups and regulators and advocate for shorebird conservation to ensure their survival.

For further information and to become a member of the Queensland Wader Study Group, please visit www.waders.org.au or follow the group on Facebook (@QueenslandWaderStudyGroup).



A bar-tailed godwit (Limosa lapponica) with a satellite aerial. Image: Jon Colemen.



The Endangered far eastern curlew (*Numenius madagascariensis*) with satellite pack, aerial, and flag. Image: Jon Coleman



Queensland Wader Study Group's shorebird identification day held at Manly Wader Roost, Queensland. Image: Sheryl Keates



A far eastern curlew (Numenius madagascariensis). Image: Jon Coleman