



Fig 1. Sharp-tailed sandpiper (*Calidris acuminata*). Credit - UNE

Migratory birds in the Warrego: a home away from home

Australia provides critical habitat for millions of migratory birds each year. The Warrego River and its associated wetlands in [Toorale State Conservation Area \(SCA\)](#), including the Western Floodplain, support a range of these migratory waterbird species that are listed and protected under various [international migratory bird agreements](#). These agreements between governments exist to protect and conserve migratory birds and their important habitats; Australia holds three of them with other nations: Japan-Australia ([JAMBA](#)), China-Australia ([CAMBA](#)) and the Republic of Korea-Australia ([ROKAMBA](#)) – you can read more about each of the agreements by clicking the blue links.

Almost every year, a handful of waterbird species listed under one or more of the agreements drop into the Warrego's wetlands, at least for a little while, following their mammoth international migration. As such, the Warrego and its wetlands are likely to be an important location for migratory waterbirds.

Visitors on the Western Floodplain

During our six years of waterbird monitoring in the Warrego's wetlands and Western Floodplain for the Flow-MER and LTIM projects, we have encountered dozens of wetland bird species. At least four of such species are recognised as migratory birds of international significance and they include:

- Sharp-tailed sandpiper (*Calidris acuminata*; Fig 1)
- Wood sandpiper (*Tringa glareola*; Fig 2)
- Marsh sandpiper (*Tringa stagnatilis*; Fig 4)
- Common sandpiper (*Actitis hypoleucos*; Fig 5)



Fig 2. Wood sandpiper (*Tringa glareola*). Credit - [eBird](#)

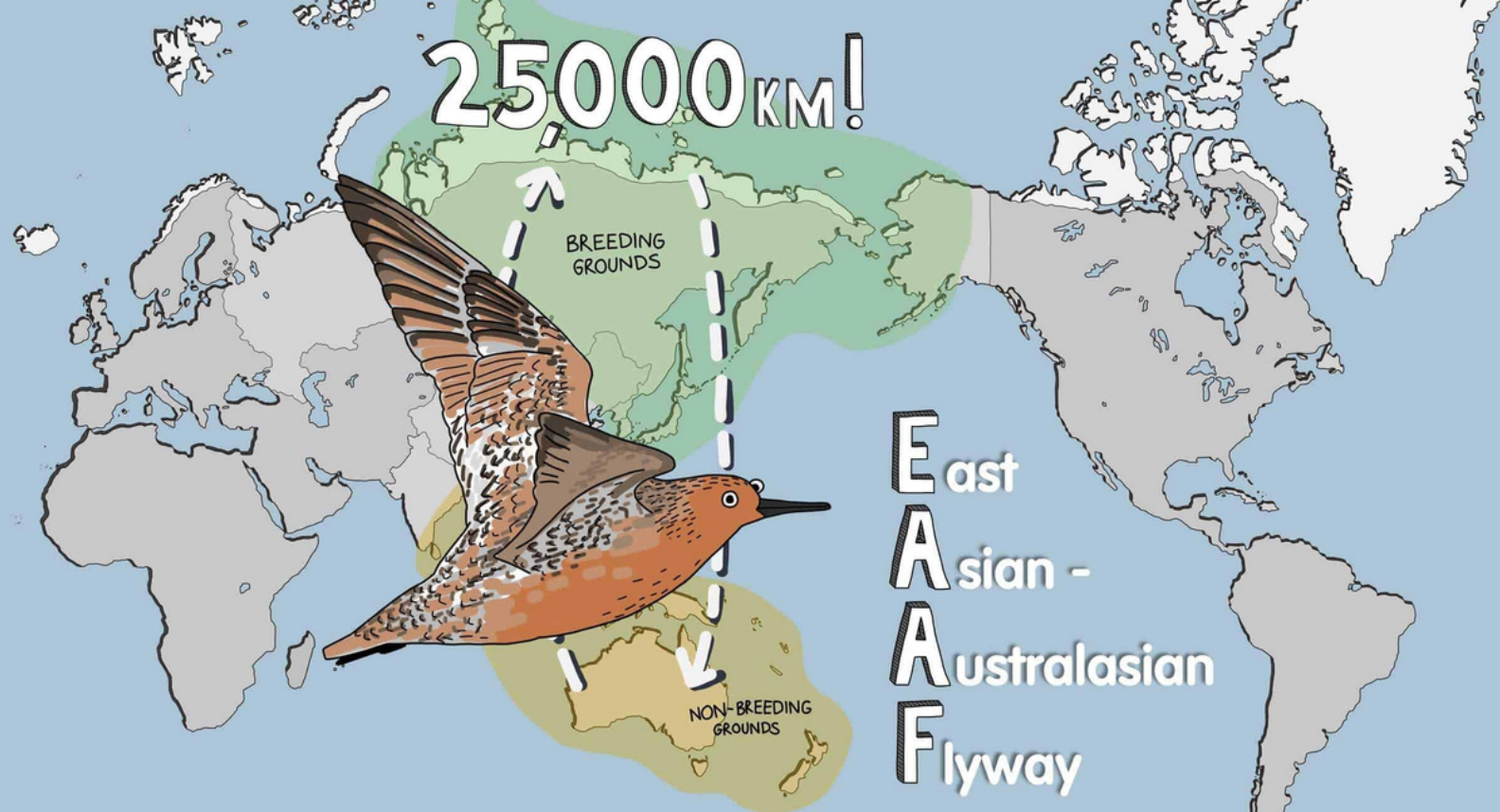


Fig 3. The East Asian-Australasian Flyway (EAAF); the migratory bird highway connecting Australia to Arctic Siberia.
Credit - [Wing Threads](#)

The four types of sandpipers listed above are migrants to Australia during the northern hemisphere winter. The sharp-tailed sandpiper breeds in Arctic Siberia and is a summer migrant to Australia that can be found in wetlands throughout the continent, including those connected to the Warrego River. The wood and marsh sandpipers are typically found on inland wetlands which is why we've had the chance to observe these special visitors in Toorale SCA, too.

Why migrate?

The trigger to migrate is the imminent onset of autumn and winter in the harsh Arctic which they have to flee, after breeding in the short but very productive Arctic summer. So, they avoid the northern winter and come to Australia for the southern summer. In our autumn they then return to breed in the northern spring. They're effectively following global summer conditions by alternating between hemispheres twice yearly. Some young birds stay for a year in Australia (overwinter here in our winter – see below)



Fig 4. Marsh sandpiper (*Tringa stagnatilis*).
Credit - UNE

Preparing to migrate

In the bird world common, wood and sharp-tailed sandpipers are classified as “waders” and what is crucial for waders during their migration preparation is the accumulation of body fat; which is later turned into the energy required to sustain their marathon journey. The amount of fat an individual bird can carry is unlikely to be enough to fuel it for non-stop flight from deep in the northern hemisphere to locations like the Warrego's Western Floodplain in the southern hemisphere.



Overwintering refers to northern hemisphere migratory shorebirds, usually immature birds that haven't bred yet, staying on for a year to spend our winter in Australia instead of heading north to breed in the Arctic. By comparison with the arctic tundra, winter in Australia is mild so if there's food available some non-breeders stay here instead of going to the Arctic where they wouldn't yet breed anyway. The breeders vacate the Arctic in their autumn to spend their winter (our summer) here, then go back to breed in their spring (our autumn).

- Dr Stephen Debus (UNE), our resident bird expert



Fig 5. Common sandpiper (*Actitis hypoleucos*). Credit - [Wikimedia Commons](#)

Migration navigation, what's the situation?

Migrating birds can cross thousands of kilometres in their annual travels, often taking pretty much the same route year after year such as the East Asian-Australasian Flyway (Fig 3). Young birds make their first migration in a large flock that may contain a number of experienced birds although when they depart the breeding ground in the Arctic they do so at a slightly different time to the adult flock.

The phenomenon of their navigational skills isn't fully understood, partly because birds engage numerous different types of senses when they navigate. When birds migrate, they get compass information from the sun, the stars, and by sensing the earth's magnetic field. They also get information from the position of the setting sun and from landmarks seen during the day.

Threats to migratory birds

The degradation and loss of wetland habitat is a highly significant threat to migratory waterbirds. This means that for these birds to survive into the future, wetland sites along migratory bird flyways such as the Warrego's Western Floodplain need to remain intact and healthy to support birds during their migration marathons.

Why the Warrego?

In the modern world, the degradation and loss of wetland habitat is a real issue so striving to protect what we have left is crucial. The recurring presence of international migratory waterbirds is a sign that current water management is hitting environmental targets that not only wildlife, but us people get to enjoy.

Click [here](#) for more on Flow-MER

Managing water for the environment is a collective and collaborative effort, working in partnership with communities, private landholders, scientists and government agencies - these contributions are gratefully acknowledged.

We acknowledge the Traditional Owners of the land on which we live, work and play. We also pay our respects to Elders past, present and emerging.