

# Shorebird numbers crash: survey alarm

9 April 2008

One of the world's great wildlife spectacles is under way across Australia: as many as two million migratory shorebirds of 36 species are gathering around Broome before an amazing 10,000-kilometre annual flight to their northern hemisphere breeding grounds.

But an alarming new study has revealed that both these migrants and Australia's one million resident shorebirds have suffered a massive collapse in numbers over the past 25 years.

A large scale aerial survey study covering the eastern third of the continent by researchers at the University of New South Wales has identified that migratory shorebirds populations there plunged by 73% between 1983 and 2006, while Australia's 15 species of resident shorebirds - such as avocets and stilts - have declined by 81%. The study is published in the scientific journal *Biological Conservation*.

It is the first long-term analysis of shorebird populations and health at an almost a continental scale and reveals a disturbing trend of serious long-term decline.

"This is a truly alarming result: in effect, three-quarters of eastern Australia's millions of resident and migratory shorebirds have disappeared in just one generation," says an author of the report, Professor Richard Kingsford.

"The wetlands and resting places that they rely on for food and recuperation are shrinking virtually all the way along their migration path, from Australia through Indonesia, the Philippines, Malaysia and up through Asia into China and Russia."

The study also revealed for the first time that Australia's inland wetlands are particularly important for migratory shorebirds, along with the better-known coastal sites - such as Roebuck Bay, Port Phillip Bay, the Hunter River estuary and Hervey Bay.

Of the 10 wetlands supporting the highest number of shorebirds within survey bands across eastern Australia, eight were inland and only two coastal.

This makes shorebirds vulnerable to the effects of damming rivers and extraction of water. Four of the ten wetlands had been substantially reduced in size during the survey period.

"Loss of wetlands due to river regulation is one of the more significant contributors to this drastic decline, but it appears such a threat is largely unrecognised in Australia's conservation plans and international agreements," says Professor Kingsford, who co-authored the report with Silke Nebel and John Porter, of the UNSW School of Biological, Earth and Environmental Sciences.

The fact that resident shorebirds in eastern Australia have also suffered dramatic declines points to serious conservation problems within the continent, they say, and reflects the pressures on river systems such as the Murray-Darling Basin. Other shorebird populations in Australia's north and west, however, may not have declined so much.

The migratory shorebirds make an annual flight from Australia during March and April to their breeding grounds in northern China, Mongolia, Siberia and Alaska. These birds make the extraordinary journey of to 10,000 kilometres over a period of only a few weeks, some of them flying non-stop.

"Australia has international responsibilities for the conservation of these species and it has migratory bird agreements with Korea, Japan and China in place, but these do not appear to be stopping this long term decline," Professor Kingsford says.

As the migratory shorebirds wing their way up the east coast of Asia (known as the East Asian–Australasian Flyway), they are increasingly vulnerable to many pressures.

Many are hunted but the most serious issue is the

loss of their staging habitat, places they stop to recuperate during their arduous journey. Here they need build up body reserves for the next part of their journey. Sometimes, many migratory shorebirds may use a single site.

the other half breeding in Russia and China.

Source: University of New South Wales

The key staging site for the migratory shorebirds leaving Australia is the Yellow Sea, where all 36 species concentrate, but the river catchments draining into the Yellow Sea host a growing population of about 600 million people in China and South Korea (about 10% of the world's population).

"Agriculture and industry are progressively reclaiming the tidal feeding grounds of migratory shorebirds in the Yellow Sea" said Professor Kingsford. "Our international agreements relating to shorebird conservation (Ramsar Convention) the Japan-Australia Migratory Bird Agreement (JAMBA), the China-Australia Migratory Bird Agreement (CAMBA) and the Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention) do not seem to be working."

Saemangeum, the most important shorebird site in the Yellow Sea, is being reclaimed with no apparent effort on behalf of the South Korean or Australian Government to stop it.

"Australia could do better" says Kingsford.

"We need to properly recognise our international obligations for shorebirds within our shores when we decide to develop rivers and wetlands. We must try to meet our side of the bargain for their conservation if we are to influence other countries to protect their breeding and staging grounds."

Identifying and adequately protecting wetlands of high conservation value for migratory shorebirds and protect their water supply is paramount, he believes.

Worldwide, shorebird numbers are in decline. Of the 237 species with trend data, more than half are in decline, while only 8% are increasing.

Shorebirds are spectacular migratory birds, travelling almost the whole planet, from north to south. They spend half their lives in Australia and

APA citation: Shorebird numbers crash: survey alarm (2008, April 9) retrieved 17 January 2022 from <https://phys.org/news/2008-04-shorebird-survey-alarm.html>

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