

WILD SOUTH AFRICA

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Tigers

Up in China

The Bird That Flies Forever

Last September, researchers tracked a female bar-tailed godwit as she flew nonstop from Alaska to New Zealand, 7,250 miles across the Pacific. The trip took 8.2 days and is the longest known continuous flight of any bird. Scientists followed the godwit, known as E7, via a satellite transmitter implanted in her abdomen.

A small shorebird, the bar-tailed godwit (right) breeds in the Arctic and spends the austral summer in New Zealand and eastern Australia. How these birds get to their southern sites used to be something of a puzzle. Since few of the birds are seen on land once they leave the north, scientists suspected that they made the journey in a single haul. But the thought of a godwit, which weighs a tad more than a pound, traveling over the largest ocean without stopping seemed incredible.

Not anymore.

Flying such a baffling distance requires sufficient fuel and some physiological streamlining. A few weeks prior to their departure, godwits gorge on marine invertebrates. They bulk up to the point where their fat stores make up more than half their weight. Then, just before they leave, their gizzards and intestines wither to almost nothing. At takeoff, the birds are little more than brain, fat, and flight muscle.

Once in the air, godwits take advantage of strong tailwinds that help blow them south. E7, for instance, flew at an average speed of 35 miles per hour, according to Bob Gill, a scientist with the U.S. Geological Survey in Alaska and one of the leaders of the study. E7 probably used polarized light to navigate during the day, which would allow her to key off the sun even under cloudy skies. At night, she likely relied on the stars. When she needed to rest, she may have shut down one side of her brain at a time, as mallard ducks are known to do, flying on a sort of autopilot.

Sadly, this natural feat may be in jeopardy. This year, close



to 70,000 godwits made the trip with E7, but those numbers are less than half of what they were in the 1990s.

“Part of the concern comes from the loss of habitat at the staging grounds when they fly north,” says Phil Battley of Massey University in New Zealand. Staging grounds are the crucial stops where tired birds can rest and refuel, sometimes for weeks at a time. The godwit follows the east Asian coast on its way to Alaska. Its resting sites are near the Yellow Sea between mainland China and the Korean peninsula, a region that is home to some of the largest land reclamation projects in the world. Drained wetlands mean no food.

“Almost every godwit from New Zealand will go through those areas,” says Battley. So, what governments do about the wetlands—whether they can work out ways to preserve them—will go a long way to determine the future of this far-flung traveler.

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