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The bird that refuses to land: New study records seabirds staying aloft for two consecutive months

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Cursed with being a seabird that cannot float, a new study has identified the unusual coping tactic used by tropical frigate birds during cross-ocean journeys: They simply refuse to stop flying.

"The juveniles in particular, who leave their birthplace for the first time, can remain airborne for over two months without touching ground," said a [statement by the French National Centre for Scientific Research](#), which funded the study.

The two- to four-pound birds live exclusively off flying fish, have an uncanny ability to dodge tropical cyclones and can even sleep in mid-air.

The French research agency called the birds “astute strategists” capable of crossing the Indian Ocean simply by riding the trade winds.

It’s called a “roller-coaster” flight path; the birds catch updrafts and wind to soar to as high as 4,000 metres before gliding back down. By this method, the bird can travel hundreds of kilometres while barely moving its wings.

Prepared by a team of French, Canadian, German and British scientists, the study began by catching 50 of the elusive seabirds at Europa Island, a remote tropical atoll halfway between Mozambique and Madagascar.

The birds were strapped to transmitters that recorded their geographic position, altitude and how often they beat their wings. Researchers then watched as the frigates carried out their epic migration from southeast Africa to Indonesia.

While scientists generally knew that the frigate could stay aloft for long periods, the data showed the sheer intensity of the birds' commitment to continual flight. Given that the frigates need to travel in circles to stick with the winds, their meandering path across the Indian Ocean can be as long as 34,000 km — roughly four times the width of Canada at its widest point.

Normally, a bird on a trans-oceanic migration will break up the journey by touching down on the ocean's surface to bob around for a while. But despite living almost all of its life over the sea the frigate is alone among seabirds in not having waterproof feathers — and would sink if it tried to tread water.

But what the frigate lacks in waterproofing, it makes up for with gliding ability. With wingspans as wide as 2.3 metres, roughly equivalent to the length of a car, the birds have the largest wing-to-weight ratio of any bird on earth.

"The frigate is a bird built for gliding," said a [video accompanying the new research](#), which is published in [this month's edition of the journal Science](#).

The awkwardness of their giant wings appears to give the frigate a steep learning curve in how to fly.

The average crow or pigeon can be flying about mere weeks after hatching. A newborn frigate, meanwhile, will be grounded for an incredible six months or more before it can fly comfortably.

With this new research, science now knows the frigate is roughly on par with the human record for continuous flight. In 1959, Robert Timm and John Cook kept a Cessna aloft for 64 consecutive days by refuelling from a speeding truck on the ground.

The record for longest solo flight by a human, meanwhile, is only five days. That record was set last year by Swiss businessman André Borschberg flying a solar-powered aircraft.

Incredibly, though, the frigate bird is not even close to the world record for continuous flight. Alpine swifts, which migrate annually from Africa to Switzerland, can stay aloft for as long as 200 days.

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