Did crab turn hunter from scavenger?

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It is a scene straight out of a horror movie: a giant, land-dwelling coconut crab climbs a tree in the dead of night, seizes a sleeping bird and breaks its wing. Then, the coconut crab climbs back down to the bird, which has fallen to the ground, snags its other wing like a tug, and eats it alive.

The video of the kill, which has gone viral, has some speculating that the crab species had morphed from scavenger to hunter. It was the first time such predatory behavior had been observed in the species, fueling speculation that the transformation could have significant impact on the ecosystems where they live.

But other crab experts say that this behavior is rare for a coconut crab, that the individual in the video was likely an opportunistic anthropophagous crab which got lucky, and which will probably learn from the experience.

Coconut crabs, also known as robber crabs and by their scientific name Bungarus crabs, need forests and clump trees in search of nuts and fruits like its favorite coconuts. But being scavengers, they also feed on anything edible they come across, such as carrion. They have been seen of the size of an adult human, and detect odors kilometers away.

Professor Peter Ng, programme director of Singapore’s Marine Sciences Research and Development Programme and a renowned crab expert, said it is possible that this particular crab killed something on the tree and climbed up to probe, expecting to find a dead bird or something that was moving.

“Instead, he climbed onto a bird... the claws of his caws are so powerful it breaks the bird’s wing. And from then on he responds like any scavenger does.”

Prof Ng, who is also head of the Lee Kong Chian Natural History Museum, said he doubts this is something the crab does on a regular basis, going by his observations of coconut crabs since the 1990s, including trips to Christmas Island to study coconut crabs.

None of the crab researchers that he has spoken to has ever described the coconut crab as a predator either.

“Here you have a crab that got lucky,” he said.

The odd behavior was recorded by Assistant Professor Mark Laidre of Dartmouth College in the United States, while he was studying the giant crabs in the remote Chagos Islands in the Indian Ocean. He wrote in scientific journal Frontiers in Ecology and the Environment that he had observed the coconut crab attack and kill an adult red-footed booby — a common seabird — in the middle of the night in March last year.

The booby had been sleeping on a low-lying branch, less than a meter up the tree, when the crab grabbed its wing with its claws, broke the bone and carried the booby back to the ground.

The crab then clambered down and grabbed the bird’s other wing. Within 30 minutes, five more coconut crabs had arrived for the feast.

“As the booby lay paralyzed, the crab fought, eventually tearing the bird apart over several hours, carrying away and consuming its fat,” Prof Laidre wrote.

The coconut crab is the largest land-based invertebrate, weighing up to 25 kg and with a leg span of over 1.5 m. And these animals have been turning heads since the time of Charles Darwin, the father of evolutionary biology, who described their size as “monstrous” and who observed them tearing off the flesh of turtles and crocodiles.

According to a study published by researchers from the Okinawa Churashima Foundation’s zooarchaeological laboratory last year, the force of the crab’s pinch is almost equal to the bite force of an adult lion. This makes it five to six times stronger than human braw.

In fact, the lab’s chief, Dr Shinichiro Ota got pinched twice, and described the pain he felt as “enormous.”

Dr Yoshida Fujita, a crab researcher, holding a coconut crab on a Christmas Island expedition with Professor Peter Ng in 2010. PHOTO: COURTESY OF PETER NG

FACTS ON THE COCONUT CRAB:

- They are the largest land-based invertebrate and the largest hermit crab on the planet, although they haven’t been seen for a decade until recently.
- They can weigh up to 30 kg and have a leg span of more than 1.8 m.
- They can live for more than 60 years.
- They are found in forests across the Indian and Central Pacific Oceans.
- They live in tropical and subtropical forests, and are known to eat crab shells...
- They are tasty to humans and are...