**Scientists Discover Long-Beaked Echidna May Not be a Thing of the Past in Australia**

*Adapted from Smithsonianscience.org*

The western long-beaked echidna, one of the world’s five egg-laying species of mammal, became extinct in Australia thousands of years ago…or did it? Smithsonian scientists and colleagues have found evidence suggesting that not only did these animals survive in Australia far longer than previously thought, but that they may very well still exist in parts of the country today. The team’s findings were published in the journal *ZooKeys*.

With a small and declining population confined to the Indonesian portion of the island of New Guinea, the western long-beaked echidna (*Zaglossus bruijnii*) is listed as “Critically Endangered” on the International Union for Conservation of Nature’s Red List of Threatened Species. It is also considered extinct in Australia, where fossil remains from the Pleistocene epoch demonstrate that it did occur there tens of thousands of years ago. Ancient Aboriginal rock art also supports the species’ former presence in Australia. However, no modern record from Australia was known to exist until scientists took a closer look at one particular specimen stored in cabinets in the collections of the Natural History Museum in London. Previously overlooked, the specimen’s information showed that it was collected from the wild in northwestern Australia in 1901—thousands of years after they were thought to have gone extinct there.

“Sometimes while working in museums, I find specimens that turn out to be previously undocumented species,” said Kristofer Helgen of the Smithsonian Institution, the lead author and the scientist to first report the significance of the echidna specimen. “But in many ways, finding a specimen like this, of such an iconic animal, with such clear documentation from such an unexpected place, is even more exciting.”

The re-examined specimen in London reveals that the species was reproducing in Australia at least until the early 20th century. It was collected in the West Kimberley region of Western Australia by naturalist John T. Tunney in 1901, on a collecting expedition for the private museum of Lord L. Walter Rothschild in England. Despite collecting many species of butterflies, birds and mammals (some new to science at the time), no full report on his specimens has ever been published. The collection, including the long-beaked echidna specimen, was then transferred to the Natural History Museum in London in 1939 after Rothschild’s death. It was another 70 years before Helgen visited the museum in London and came across the specimen with the original Tunney labels, which both challenged previous thinking about the species’ recent distribution and offered insight into where it may still occur.

Learning whether the western long-beaked echidna still exists in Australia today will take time. “The next step will be an expedition to search for this animal,” Helgen said. “We’ll need to look carefully in the right habitats to determine where it held on, and for how long, and if any are still out there.” To find it, Helgen hopes to draw on his experience with the species in New Guinea and to interview those who know the northern Australian bush best. “We believe there may be memories of this animal among Aboriginal communities, and we’d like to learn as much about that as we can,” he said.

With the species in danger of extinction, finding Australian survivors or understanding why and when they vanished is an important scientific goal. “We hold out hope that somewhere in Australia, long-beaked echidnas still lay their eggs,” said Helgen.

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**Relocating Elephants Fails to Decrease Human-Wildlife Conflict**

*Adapted from Smithsonianscience.org*

Human–elephant conflict in Sri Lanka kills more than 70 humans and 200 Asian elephants every year. One of the most common tools in combating these conflicts is moving the elephants into ranges away from humans, often into national parks. This is done in hopes of avoiding problems that include elephants raiding crops, breaking into homes and injuring or killing people.
But according to a new study published in *PLOS ONE* by scientists at the Smithsonian Conservation Biology Institute, the Centre for Conservation and Research in Sri Lanka and the Department of Wildlife Conservation Sri Lanka, moving problem elephants can actually lead to more conflict and more deaths of both humans and elephants.

“What happened with some of the translocated elephants was quite unexpected,” said the paper’s lead author Prithiviraj Fernando, a Smithsonian research associate and chairman of CCR. “Most of these elephants didn’t stay put; they left the relocation area and ventured back into agricultural lands, causing problems.”

Using remote-download GPS collars, the researchers monitored 12 translocated, adult male elephants and compared their movement and propensity for conflict with 12 males left in their normal home ranges. Before the study, all of the translocated elephants and 10 of the elephants left in their home ranges were considered problem elephants.

Two of the translocated elephants were killed within the national parks where they were released, and the rest of the elephants left the parks within one to 260 days. Some of the elephants moved back toward their capture site, others wandered over large distances and a few settled close to the park where they were released. But nearly all of the translocated elephants were involved in human-elephant conflict after their release, killing five people over the time of the study. Five of the elephants also died within eight months of release. The elephants left in their original home range did not kill any humans and one elephant was shot and killed. “There are many ongoing translocation projects based on the assumption that this technique is effective, and our joint study is the first comprehensive assessment of whether that’s true,” said Peter Leimgruber, SCBI research scientist and co-author of the paper. “We were stunned that translocation neither solves the conflict nor saves elephants.”

Human-elephant conflict is a major conservation, socioeconomic and political issue across Asian elephant range in Asia and Africa. It is also one of the major threats to the survival of Asian elephants, which are listed as endangered by the International Union for Conservation of Nature. Between 35,000 and 50,000 Asian elephants are left in the wild. Across elephant range hundreds of problem elephants are translocated each year. “As you track the elephants, you identify with these animals, you see their struggles and understand why they’re doing the things that ultimately get them killed,” Leimgruber said. “But you also understand that elephants represent a serious threat to humans and their livelihood.”

The paper’s authors suggest that rather than focus on translocation, land managers and conservationists need to implement land-use plans that minimize crop raiding and create mixed-use zones that both humans and elephants can use, in addition to zones where only one or the other is allowed.

### Current Literature


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