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Fossil find leads to new bird species discovery by Royal BC Museum

VICTORIA, BC – Not every hike ends in the discovery of a rare 25-million-year-old bird, but for a family in Sooke that's exactly what they stumbled upon.

Now, thanks to Research Associate and bird expert Gary Kaiser, the Royal BC Museum is able to tell the pair exactly what they discovered and just how extraordinary it is.

Bird bones are thin and light and therefore do not preserve well. Finding a fossil bird bone is a rare event; the last fossil bird discovered along the shorelines northwest of Sooke was more than 100 years ago.

A Sooke family out for a walk **didn't realize this when** they found a bone in a rock slab that had fallen from the nearby cliffs. The daughter spotted the fossil, her brother carried the fossil slab off the beach, and their father immediately brought it to the Royal BC Museum to be identified.

Although the fossils are reminiscent of cormorant bones, Kaiser discovered they actually represent a previously unknown kind of plotopterid, a long-extinct family of flightless birds. They were diving birds whose wings became flippers, like those of a penguin. Plotopterid fossils have been found in Japan and the U.S.A. Most were giants, more than two metres long, but this fossil is from a very much smaller bird.

"The fossil is a coracoid or collarbone from a bird about the same size as the modern Pelagic Cormorant that lives in the area today," said Kaiser. "The family also found two bird leg bones in the same area. The leg bones are difficult to identify but the coracoid has a very distinctive and unusual shape which is not at all like that of a cormorant."

With the assistance of colleague Junya Watanabe from Kyoto University, Japan, Kaiser named the bird *Stemec suntokum*. The name means 'long-necked waterbird' in the language of the T'Sou-Ke First Nations people.

The fossil is now in the Royal BC Museum's fossil collections and a new paper by Kaiser, Watanabe and Royal BC Museum Palaeontology Collections Manager Marji Johns has been published in *Palaeontologia Electronica* announcing the species.

"It's extraordinary to think this bird bone survived predation, burial, earthquakes, plate tectonics, heating, alteration, potential dissolution, uplift and weathering," said Johns, "and that after 25 million years it was found by these amateur collectors."

Plotopterids died out shortly after the time of this fossil. The waters and temperatures of the North Pacific had changed and food may have become scarce for diving birds. At about the same time, modern sea lions and fur seals moved into the North Pacific. They may have preyed on plotopterids or competed with them for food and haul-out sites.



Fossils are considered to be British Columbia heritage items. Collection of fossils should be done conservatively (if at all), keeping in mind the risk of loss or damage at the site and land ownership. The safest method is typically to photograph the fossil and report it to a museum or science institution. For more information about fossil collecting in British Columbia visit: <http://www2.gov.bc.ca/gov/content/industry/natural-resource-use/land-use/fossil-management>.

About the Royal BC Museum

The Royal BC Museum explores the province's human history and natural history, advances new knowledge and understanding of BC, and provides a dynamic forum for discussion and a place for reflection. The museum and archives celebrate culture and history, telling the stories of BC in ways that enlighten, stimulate and inspire. Looking to the future, the Royal BC Museum will be a refreshed, modern museum, extending its reach far beyond Victoria as a world-class cultural venue and repository of digital treasures.

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Media contact:

Royal BC Museum Media Inquiries

250-387-3207

news@royalbcmuseum.bc.ca

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