

Rediscovering the world's largest cormorant

March 20 2024, by James Ashworth



Only six skin specimens of the spectacled cormorant are known to exist. Credit: The Trustees of the Natural History Museum, London

The world's largest cormorant went extinct almost 200 years ago—but almost nothing is known about its life. A recent dive into the collections of museums around the world is helping to piece together the history of the spectacled cormorant.

The life of this forgotten seabird is being slowly put back together.



Standing around a meter tall, and weighing as much as 6.5 kilograms, the spectacled cormorant was the largest cormorant that ever lived. Despite its record-breaking size, however, its extinction in the 1850s was largely overlooked, consigning the cormorant to a footnote in history.

Researchers from University of Akureyri and the Natural History Museum are now looking to change that. They recently went through every known specimen of the spectacled cormorant to help set the bird's record straight.

Doctoral researcher Theo Squires, the lead author of the resulting study, says, "there are myriad examples of species that have become extinct in recent times that people just don't pay attention to."

"It's especially true of species from <u>remote locations</u>, and news of the spectacled cormorant was probably obscured by the more prominent extinction of the great auk in the same decade. While the passing of the auk was widely discussed at the time, the cormorant instead faded away. I hope that after all this time, we can highlight this long-lost species."

The findings of the study were published in the <u>Bulletin of the British</u> <u>Ornithologists' Club</u>.

What happened to the spectacled cormorant?

During the early sixteenth century the explorer Vitus Bering spent several years exploring the North Pacific as part of the Russian Empire's Great Northern Expedition, reaching as far east as Alaska.

On their return to Russia in 1741, however, Bering's boat was shipwrecked on the island which now bears his name. While the man himself passed away, the remaining crew were stranded on Bering Island for almost a year, with the naturalist Georg Steller among their number.



Steller was the first scientist to see the spectacled cormorant, with his journals referring to a bird "the size of a great goose" which could feed three famished sailors at a time. He noted that large numbers lived on the island, but all this would change within just a few decades.

When Steller and the surviving crew made it back to Russia the following year, their story immediately drew attention—but not for the cormorants. Instead, the focus was on the large sea otter population which could be exploited for the fur trade.

Over the next 30 years, more and more trappers arrived in the Commander Islands to hunt the sea otters. Their arrival impacted not just the otters, but many other animals as well. One of the most notable examples was the Steller's sea cow, a giant relative of the manatee that was driven to extinction by 1768 after being hunted for food by the trappers.

At the time, the spectacled cormorant hung on. But as sea otter populations fell, some trappers decided to expand the fur trade by introducing Arctic foxes to islands across the North Pacific.

Dr. Alex Bond is the Principal Curator and Curator in Charge of Birds at the Natural History Museum, and co-author of the paper.

"While we can't be exactly sure why the spectacled cormorant went extinct, but all the known specimens originate from the time that foxes were introduced to some of the islands for fur farming," Alex explains. "Even if they weren't the only cause, it's likely that the foxes would have played a role in driving these birds towards extinction."

By the time the spectacled cormorant was formally described in 1811, it was likely to have already been quite rare. The last confirmed reports of the seabird come from the 1840s, although it may have hung on in a few



places for another decade or two.

Having vanished into obscurity, it wouldn't be until 2020 that Theo found out about the spectacled cormorant and its story.

"I have a background in cormorant research, but when I first came across the spectacled cormorant, I'd never heard of it before," Theo says. "In fact, it seems that almost nobody had."

"As I kept reading the bird's history, I was shocked it hadn't become a movie. It's got all these stories of adventure, including shipwrecked naturalists and remote islands, and it seemed to be a microcosm of everything interesting in biology. I was really excited to get involved in it."

Diving into the collections

With such a rapid extinction, relatively little is known about the spectacled cormorant. Details of its behavior and lifestyle are scarce, while scientists still debate whether it could even fly or not.

To try and improve this situation, Theo and Alex contacted every museum mentioned as having at least one spectacled cormorant specimen. As it turned out, not all of them did.

"Think of the dodo," Theo says. "Lots of institutions thought they had a dodo in the past, because they hadn't seen one before. I think it's similar for the spectacled cormorant. They were given a cormorant from the North Pacific, and just assumed that this was it."

"We also dug up records which were based on typos, or a series of citations that eventually lead to a misquote. As the era of digitizing collections has only just begun, it's likely many similar issues will come



to light over the coming decades."

In total, Alex and Theo found just six skins and more than 90 bones of the spectacled cormorant. Identifying these remains has helped to put the species' life on a timeline, stretching from 120,000-year-old bones found in Japan to nineteenth-century skins.

"It's not clear whether the spectacled cormorant once lived more widely across the north Pacific, but it's likely the species was never very abundant," Alex says. "All known skin specimens of these birds came from the Commander Islands, and passed through Sitka, which was then the capital of Russian America."

It's possible that there could still be more unidentified spectacled cormorants in museum collections just waiting to be found. Alex and Theo hope that investigating historic records might reveal whether or not this is the case, as well as shedding more light on the bird's social history.

"There's a report from the US Signal Corps that the Indigenous People of the Near Islands said that they had been hunting a very large cormorant in the 1860s, a decade after the spectacled cormorant is presumed to have become extinct," Theo says.

"I think a lot of information which came from Indigenous communities was probably dismissed at the time, and going back to it might reveal what was happening to this species."

"There are some tight ethical issues to navigate, but the opportunity to fit an entire organism back into the history of a people and allow them to reclaim it is a moral imperative. I would love to go through this material and reveal even more about the spectacled cormorant."



More information: Theodore E. Squires et al, Specimens of the extinct Spectacled Cormorant Urile perspicillatus, *Bulletin of the British Ornithologists' Club* (2024). DOI: 10.25226/bboc.v144i1.2024.a2

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