New record set for wingspan with discovery of bird fossil in Chile

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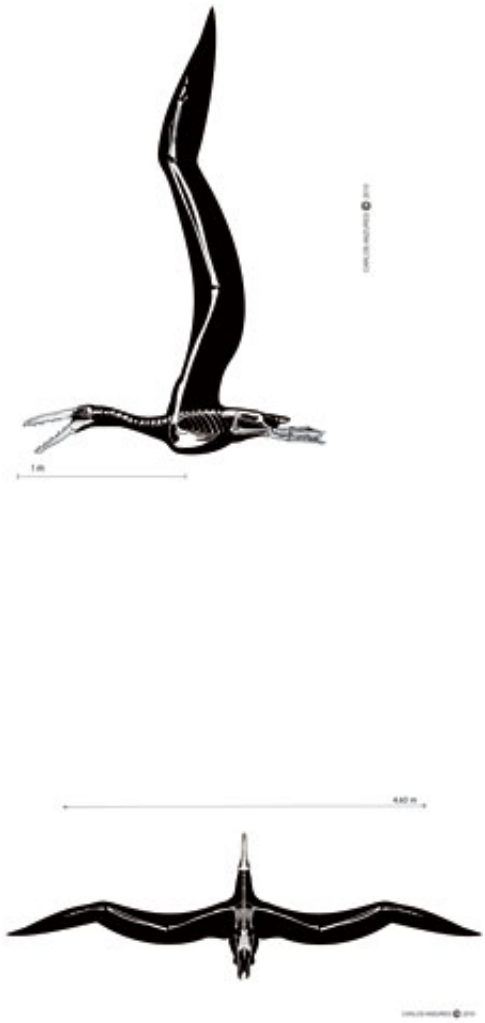
A newly discovered skeleton of an ancient seabird from northern Chile provides evidence that giant birds were soaring the skies there 5-10 million years ago. The wing bones of the animal exceed those of all other birds in length; its wingspan would have been at least 5.2 m (17 ft.). This is the largest safely established wingspan for a bird. Other, larger estimates for fossil birds have been based on much less secure evidence.

The new bird belongs to a group known as pelagornithids, informally referred to as bony-toothed birds. They are characterized by their long, slender beaks that bear many spiny, tooth-like projections. Such 'teeth' likely would have been used to capture slippery prey in the open ocean, such as fish and squid.

“Bird watching in Chile would be thrilling if birds with more than five meter wingspans and huge pseudoteeth were still alive,” said Dr. Gerald Mayr of the Forschungsinstitut Senckenberg in Germany, lead author on the study.

Fossils of bony-toothed birds are found on all continents, but such remains are usually fragmentary. This is because most birds have fragile bones that often do not survive the fossilization process. Only a single partial skeleton of a bony-toothed bird was known prior to discovery of the new Chilean specimen, and it is badly crushed. The new specimen, which is 70% complete and uncrushed, provides important new information about the size and anatomy of these strange birds. It is the largest bony-toothed bird discovered so far. It also represents a new species named after its country of origin: *Pelagornis chilensis*.

“Although these animals would have looked like creatures from Jurassic Park, they are true birds, and their last representatives may have coexisted with the earliest humans in North Africa,” said Mayr.



A life-size reconstruction of the skeleton will be on exhibition in the Senckenberg Museum in Frankfurt am Main, Germany.

Knowledge of the maximum size that can be reached by a flying bird is important for understanding the physics behind how birds fly. This new fossil may therefore help scientists better appreciate physical and anatomical constraints in very large birds.

"This specimen greatly improves our knowledge of the appearance of one of the most spectacular and fascinating animals that crossed the skies," said the study's co-author, Dr. David Rubilar of the Museo Nacional de Historia Natural, Chile.

More information: Mayr, Gerald and David Rubilar. 2010. Osteology of a new giant bony-toothed bird from the Miocene of Chile, with a revision of the taxonomy of Neogene Pelagornithidae. Journal of Vertebrate Paleontology, Volume 30, No. 5.

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