

PALEONTOLOGY

Giant Birds Restored

Ancient extinct species of birds that couldn't fly but pursued their prey on foot, such as the monster called the Terror Bird, have been restored.

By DR. FRANK THONE

See Front Cover

► BIG BIRDS are having their day in American museums just now. Birds ten feet tall. Birds with leg-bones that rival those of an elephant. Birds that could have chopped off your head with one snap of an enormous, trap-like beak. The biggest and most awesome birds that ever lived.

Fortunately for human peace of mind, they are all extinct. Especially that last number, the nightmare carnivorous monster shown on the cover of this week's SCIENCE NEWS LETTER that once lived in South America, and has been aptly nicknamed the Terror Bird. He is the deadest of the lot, having been extinct something like 11,000,000 years.

More formally, the Terror Bird is known to zoologists as *Mesembriornis*. Its massive bones, first found in Argentina nearly 60 years ago, show that it stood nearly as tall as a modern ostrich but was more heavily built. Its great beak, with a tearing hook

at the end, indicates plainly that it lived mainly on a diet of flesh.

Like all giant birds, both living and extinct, it could not fly, but pursued its prey on foot. Its habits probably resembled those of that modern American terror-to-snakes, the California road-runner, except that everything was scaled up to size: it could easily have done in a small alligator as its modern smaller counterpart devours a lizard.

The Chicago Natural History Museum has placed on display a lifelike restoration of this ancient monster-bird, assembled around wooden replicas of its bones and beak. Leon L. Pray, staff taxidermist, found that carefully saved pencil-sharpener shavings, mixed with casein paint, ground asbestos and chopped tow, made an excellent modelling mixture. Feathers were whittled out of balsa wood, and feet and claws from tulip-tree wood. Mr. Pray followed the coloration of the Terror-Bird's small-sized collateral descendant, the carima of Argentina and Brazil, in painting his restoration. As you look at it, you are glad that it isn't as alive as it looks—it might decide to snap at you.

Ten-foot-tall moa skeletons, approximately twice the height of the South American bird though nowhere nearly as formidable, were brought back by an expedition from New Zealand just in time to feature the formal opening of the new Sanford Hall of Biology of Birds at the American Museum of Natural History in New York. Moas have not been extinct very long: indeed, there is fair reason to believe that the last specimens were seen by the early Polynesian inhabitants of New Zealand, and perhaps even hunted by them.

The moa was not a bird to be particularly dreaded—unless he happened to kick or step on you. He was fairly closely related to the modern ostrich, and like the ostrich was not a flesh-eater, being content with a vegetarian diet varied with chunks of rock and assorted junk.

Five moa eggs have been found. Their original weight is estimated at nearly nine pounds. An egg like that would have fitted into Chesterton's description of Noah: "He ate his eggs with a ladle, from an egg-cup big as a pail."

At that, however, the moa's egg was only about half the weight of the egg of the great Elephant Bird of Madagascar, which was the biggest bird that ever lived. It has been extinct longer than the moa, but recently enough so that some of its eggshells and a few of its huge bones were

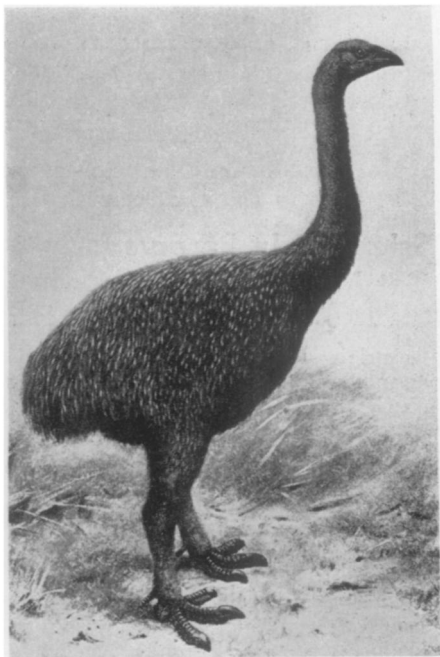
known even to the Arab voyagers of the Middle Ages. It was the original of the fabled Roc of the Arabian Nights tales, the bird that could fly off with an elephant clutched in each claw and a third in its beak.

Of course, the Elephant Bird couldn't fly; it was another giant ostrich, a third taller than present-day ostriches. Its thigh-bone was half a yard long, and its drumstick bone measured nearly 28 inches. Both were massive in accordance with the body-load they had to carry, so that it is no wonder that this gigantic fowl has been dubbed the Elephant Bird.

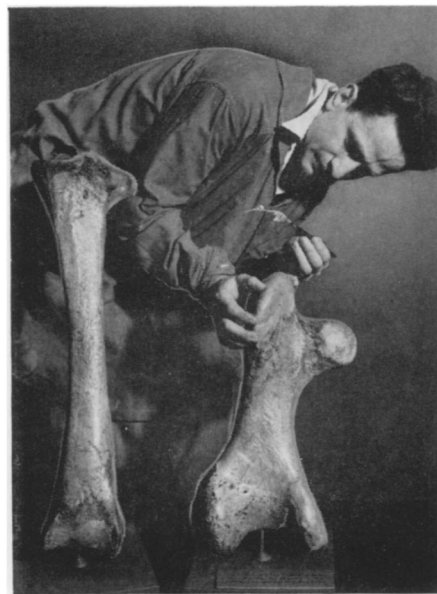
Since it will never be possible to invite any of these extinct bipeds to step on a platform scale, any figures for their once-living weight must be estimates. However, one American Museum ornithologist, Dean Amadon, has done a most ingenious job of estimating the weights of the two huge relatives of the ostrich.

Carefully measuring all important bones of the extinct birds, he has compared them with the corresponding bones of the modern ostrich, as well as with those of the ostrich-like birds of South America and the Australasian region. Comparing measurements of living birds with their known weight and filling in the "unknown" frame in the ratio, he arrives at a weight of nearly half a ton (965 pounds) for the Elephant Bird, and slightly over a quarter of a ton (520 pounds) for the ten-foot moa.

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NEW ZEALAND MOA—This ten-foot bird, closely related to the modern ostrich, was believed to have been last seen by early Polynesian inhabitants of New Zealand.



ELEPHANT BIRD—These are the bones of the biggest bird that ever lived. It was a giant ostrich, a third taller than present-day ostriches.