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Courtesy of Monsieur V. Forbin

The only creature now alive that looked upon Napoleon

HISTORIC TORTOISES AND OTHER AGED ANIMALS

BY

FREDERIC A. LUCAS*

OUR good friend M. Forbin, to whom we are indebted for many interesting items and illustrations, recently sent us a photograph of the only creature now alive that saw the great Napoleon. This is a tortoise from Aldabra that is still living a peaceful existence at St. Helena though Napoleon passed away a century ago (May 5, 1821). How old this tortoise was when brought to St. Helena, we know not, but venerable as it seems to us with our allotted span of threescore years and ten, its age is exceeded by that of another tortoise that is—or was recently—living in the Island of Mauritius whither it was brought from the Seychelles many years before, being even then of unusual size. In Mauritius it became a national possession and in 1810 was specifically mentioned in the treaty by which the French ceded Mauritius to England. "It is said" to have lived in Mauritius for at least seventy years previously, so that

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it is pretty safe to conclude that it is at least 150 years old.

Unfortunately this tortoise has been confounded with another brought to England from Mauritius in 1897, through the efforts of Sir Walter Rothschild. The latter specimen originally came from South Aldabra, was taken to Egmont Island, and thence to Mauritius, before being transferred to England. In *All About Animals*, p. 171, incidents in the history of this tortoise are assigned, in error, to the tortoise that figured in the treaty—or as the writer in *All About Animals* will have it, in two treaties—with the result that Aldabra is mentioned as the place of origin of the historic tortoise of Mauritius, instead of the Seychelles, its true birthplace. Through the same error, the historic tortoise is, in the account given in the volume mentioned, transshipped to England in 1897, although the very fact that it was regarded by Sir Hubert Jerningham as Government property, and therefore not subject to sale, made such a transfer impossible. This tortoise remained at Port Louis, Mauritius, whereas the tortoise from South Aldabra is preserved today in the Rothschild Museum at Tring; the latter was certainly more than 150 years old at the time of its death, probably nearer 200, and enjoys the distinction of being, aside from fossil specimens, the largest known tortoise, having, it is reported, attained a weight of 560 pounds.

Still another Ancient of Days was a tortoise from the Galápagos, taken to Honolulu probably by some whaler during the golden days of the whale fishery, before 1850, and given to Paki, father of Mrs. Bernice Pauahi Bishop, by whom it was christened Maeleka. Some time before his death in 1855 he gave the tortoise to Queen Liliuokalani, who later placed it in Kapiolani Park. From there, at the instance of Sir Walter Rothschild, it was sent to England in 1915, where it died two years later.

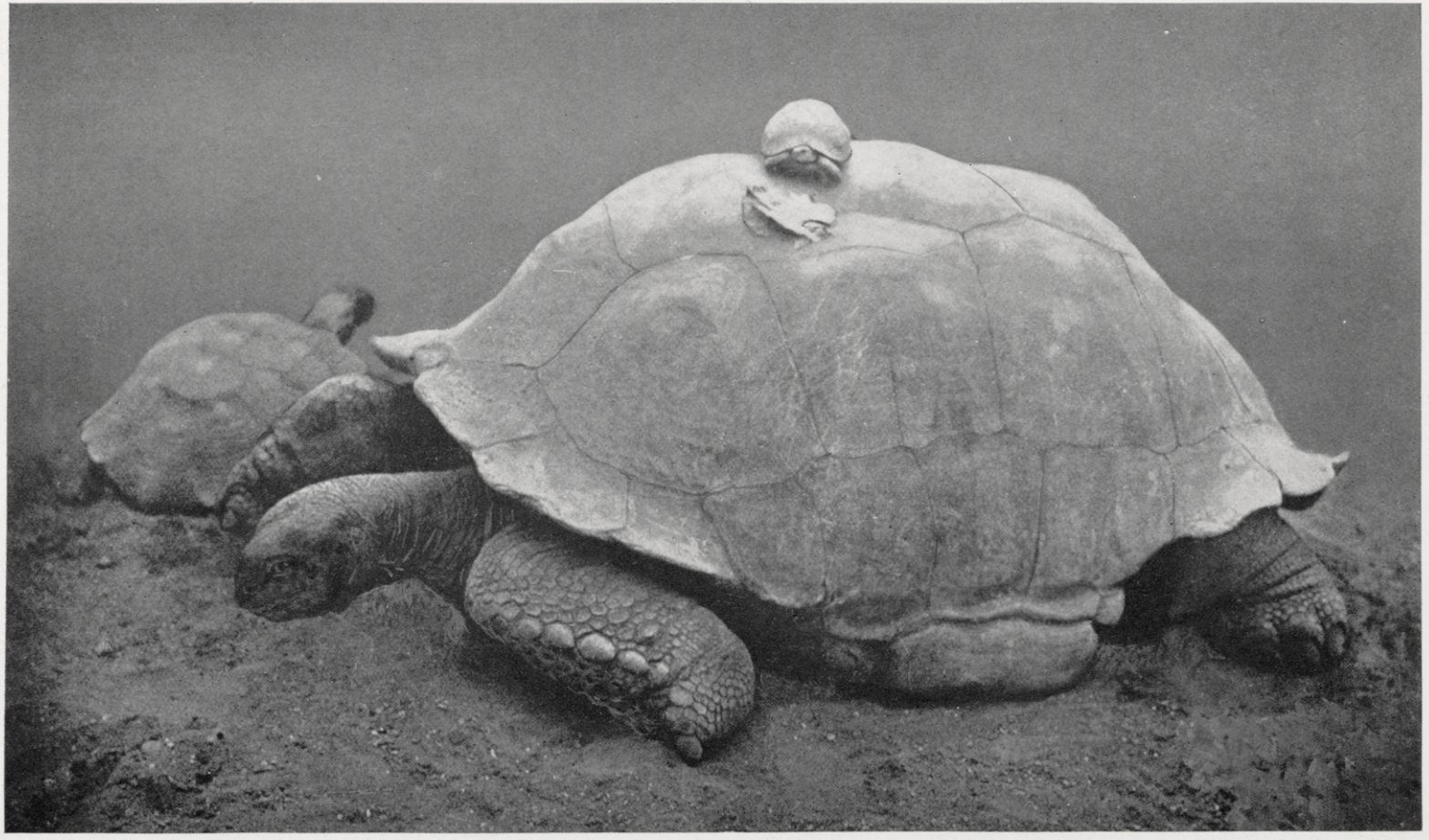
These three "historic tortoises," so far as we can determine, attained the greatest ages recorded for any animals, being the oldest known members of an ancient and long-lived race, for even such little species as our box turtle reach a good old age. True, the most accurate record, that of an individual that was caught and marked from time to time, is only 41 years, but there is a rather reliable account of a tortoise 110 years old and a less reliable note of a specimen marked by Daniel Webster, though here I confess that I have lost the published account.

This naturally leads to the questions: what is the limit of life, what animals live the longest, and what is the age they attain?

There are plenty of statements that fish are known to attain, and birds have reached, many scores of years, but when an attempt is made to verify these statements, they resolve themselves into matters of hearsay or of belief rather than records of facts. We naturally associate size with age, for the bigger an animal, the longer should it take to reach that size, but while we are apt to credit such creatures as whales with a century or more of existence, there is reason to believe that they are by no means as venerable as they appear, and the same seems to be true of elephants, which reach their full stature in comparatively few years.

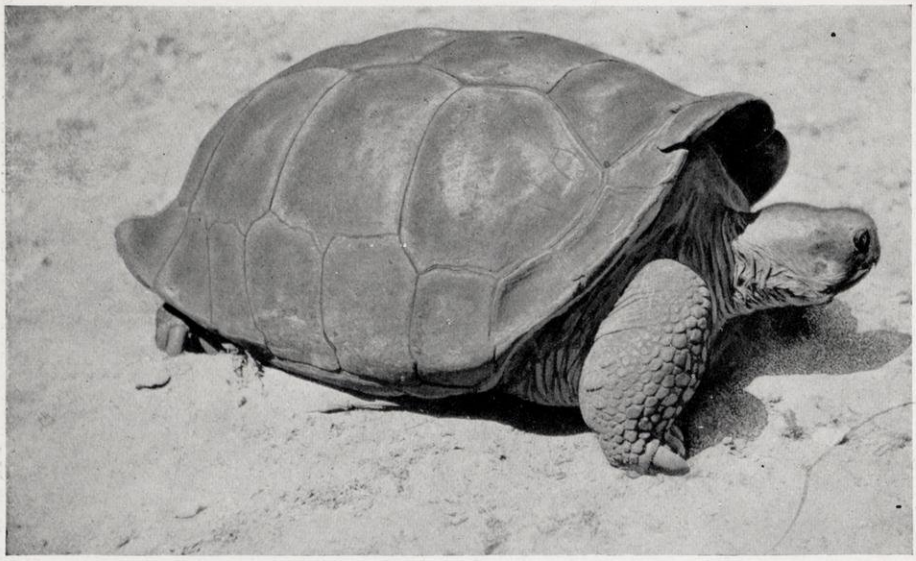
Thus, the once-famous Jumbo, whose name has been embodied in the dictionary as a synonym for all things big, reached his full height and weight in twenty-one years, growing in this time from an infant three feet high, weighing a few hundred pounds, to a towering adult eleven feet in height and weighing six and a half tons.

As for the Indian elephant, Mr. Pocock, from a study of the teeth, estimates the average duration of life at about seventy years and, so far, I have not been able to lay hands on an authenticated record of an elephant older than this, although these animals "are said" to attain an age of 120 years.



THE LARGEST RECENT TORTOISE

Exclusive of fossil specimens, this tortoise from South Aldabra, now preserved in the Rothschild Museum at Tring, is the largest known tortoise. At the time of its death it was between 150 and 200 years old and weighed, as recorded by Dr. Hans Gadow, 560 pounds. The history of this tortoise, as well as that of other noteworthy specimens, is given by Doctor Gadow in the volume *Amphibia and Reptiles* in The Cambridge Natural History



This tortoise lived for more than half a century after having been given to Queen Liliuokalani of Hawaii by Paki, the father of Mrs. Bernice Pauahi Bishop, being even then of so conspicuous a size that it was deemed a present worthy of royalty. It came originally from the Galápagos Islands, sojourned for many years in the Hawaiian Islands, was finally transshipped to England, and died there two years after its arrival

Personally, I confess that I believed whales required many years, possibly one hundred, to reach their full growth, until I became somewhat intimately acquainted with them at Balaena, when my ideas underwent a radical revision. Briefly, if whales continued to grow indefinitely, there would be an infinite variety of sizes; as a matter of fact they fall into rather few categories and there are a not inconsiderable number of whales of moderate bulk that are, as shown by the condition of their bones, indubitably old, or at least adult. How long it takes to reach a length of 80 feet, with a known weight of 60 tons, or the maximum of 103 feet, and an estimated 80 to 90 tons, we know not, but the chances are that it takes far less time than is generally supposed.[1]

There are some animals, or groups of animals, such as fishes and reptiles, that seem to have no fixed limits of life and growth and thus appear to present great possibilities in the matter of age. Unfortunately, there are few records on which to base any trustworthy conclusions and the most reliable of these show that under favorable conditions some reptiles grow much more rapidly than is generally supposed: the big alligator in the New York Zoölogical Park grew from seven feet to twelve feet in length in twelve years, though theoretically it should have taken him at least half a century to attain such an unusual size, almost the maximum for an alligator.

The great size of the tortoises referred to, which reached a weight of *at least* 450 pounds, probably even more, was supposed to indicate a proportionately great age; in fact, a specimen that died at the London Zoo was stated by the papers to be 400 years old; but another, brought from the Galápagos by Mr. Edmund Heller, in seven years increased from 29 pounds to 295 pounds and in less than ten years reached a weight of 350 pounds. Had not the career of this tortoise unluckily been

[1]Whales seem to reach their maximum size in the South Atlantic: examples of the "blue" or "sulphur-bottom whale," 105 and 108 feet in length respectively, have been reported from the whaling station at South Georgia, and the British Museum party measured specimens up to 103 feet long.

cut short by kidney trouble, induced by living for part of the year in a moist climate on damp ground, it might by this time have attained the record size for tortoises.

If reptiles grow so rapidly nowadays, they probably did so in the past, and Brontosaurus and his kindred may not have taken a century or two to reach their seventy or eighty feet of length, as has so often been supposed.

Mere size, then, is not a safe criterion of the age of either mammals or reptiles, and needs to be checked by a knowledge of the conditions under which the animals have lived.

Fish stories and fishy have become "familiar in (our) mouths as household words," so we are not surprised to find among the "it is said's" and "it is reported's" that fishes are credited with the greatest span of life ascribed to animals, pike and carp holding the places of honor with *reputed* ages of from 200 to 375 years. Oddly enough, most of these alleged records are reported from French ponds at Chantilly, St. Germain, and Fontainebleau, during the German occupation of 1870.

Records of birds are rather disappointing, for just as the greatest creature is apt to shrink before the application of a two-foot rule, and fish when weighed in the balance are often found woefully wanting in avoirdupois, so the ages of birds become wonderfully less when their claims to longevity are investigated.[1] Parrots stand well toward the head of the list, with numerous records on good authority of various species attaining an age of from fifty to eighty years. Geese and swans, too, are long-lived, and include some possible centenarians, though just as the census returns show a part of womankind to be much younger than it looks, so there are few reliable records of swans more than seventy years old.

There have been many attempts to estimate the ages to which various animals might attain under favorable circumstances, but none of these estimates based on size, time required to reach maturity, period of incubation (in birds), is borne out by the known facts. The best of them is possibly that applied to mammals, that their normal life is five times that required to reach maturity, this being determined by the union of the epiphyses with their adjacent bones.

After all, man, when compared with other animals, does not suffer much in the matter of longevity, and frequently exceeds the threescore years and ten popularly ascribed to him, though he does not often reach the 120 years allotted in Genesis. In the *Times* for November 6, 1921, Mr. Buck, discussing the span of life, cites from recent death notices seven instances ranging from 102 to 115 years.[2]

In preparing this article I have become more than ever impressed with the truth of the adage that "there is no truth in history." To begin with, I cannot find that there is any such adage, the nearest approach to it being the remark, attributed to Plutarch, "So very difficult a matter is it to trace and find out the truth of anything by history," a remark to which I most heartily subscribe.

[1]The statements in regard to the ages of birds are taken from an article by J. H. Gurney, on the "Comparative Ages to which Birds Live," which may be found in the *Ibis* for January, 1899. It was reprinted, with additions, in the *Osprey* for June, 1899, and the subject of longevity discussed by Doctor Gill on p. 157 of the same number.

[2]The reader is referred also to "The Biology of Death: I—The Problem," by Professor Raymond Pearl, *Scientific Monthly*, March, 1921. Professor Pearl points out (p. 198) that "the most extreme case of longevity which Young was able to authenticate was about a month and a half short of 111 years."