

THE MANATEE OR COW FISH.

The manatee, says Mr. Frank Buckland, is one of the rarest and most interesting beasts that has been brought to England for many years past. His external appearance is very puzzling. At one moment he looks like a pig, the next moment he reminds us of a porpoise or herring hog. The home of the manatee is the shallow bays and quiet rivers of Central and South America. He is purely herbivorous, and lives upon the water plants which abound in those tropical regions. Mr. Bartlett, of the Zoological Gardens, London, has discovered that he is exceedingly fond of lettuces and vegetable marrows, cut into slices. His hind legs are flattened out into a fan, somewhat resembling a porpoise's tail. When he wishes to move forward he gets way on by moving his tail up and down; and—as those who unpacked him from his traveling box know—he is able to use this beaver-like tail with very great force. The manatee is purely mammalian, and suckles its young at the breast.

"The manatee is allied to the dugong found in Australia. The dugong has a face ornamented with a big, hooked nose, and when I see the figure of Punch performing in the street, it puts me in mind of the dugong. The dugong and the manatee are without doubt the origin of the fable of the mermaid; either of them, especially the dugong, when coming to the surface of the water to breathe or look round, is very human. The manatee now in the gardens is 7 feet 2 inches long; a full grown beast is from 14 feet to 16 feet long. Unfortunately for this animal, the flesh is very good eating. It has the flavor of pork with the taste of veal, reminding one of that curious relish 'beef cut with a hammy knife.' The skin of the manatee is like the rind of a prickly pear; he has stiff bristles inside his mouth; this is really a form of whalebone, as found in the whale's mouth. The animal seems to be a compromise between a pig and a porpoise.

LAND TORTOISES.

The two large tortoises, living at present in the Zoological Gardens, belong to a species indigenous and peculiar to Aldabra, a small island, or rather group of small islands, situated in the Indian Ocean, about 180 miles northwest of Madagascar.

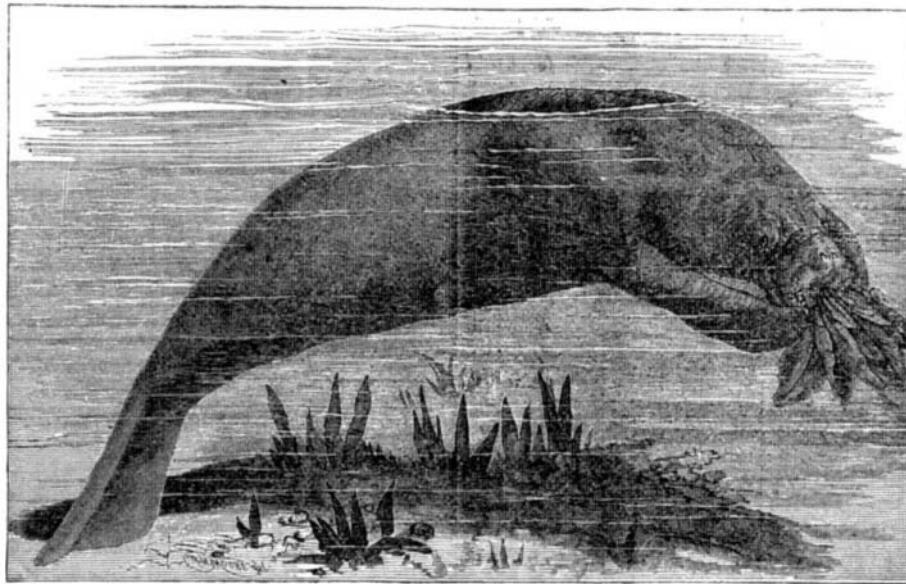
The animals, of which a faithful representation has been given by our artist, have left their island home a long time ago. They were kept in a semi-domesticated state in a paddock, partly for the sake of their young, partly as a kind of curiosity, the male being the largest individual of its kind existing at present, of which the proprietor was very proud, and in which the islanders generally took an interest.

The female lays twice a year, between July and September, some forty eggs, which are hatched in about ten weeks. The young of such domesticated tortoises are allowed to grow till they are four years old, and from 12 inches to 15 inches long, when they are considered fit for the table. Some of the young individuals which are now on the continent of Europe are the offspring of the animals now in the Zoological Gardens. The tortoises were transported in separate cages, and that for the male had to be made as strong as wood and iron could do it, his strength being so great that, if he gets a good purchase with his feet and brings his shell against a square bar two inches thick, he is able to break it like a reed. In spite of every precaution, he nearly succeeded in getting out of the cage on board of the steamer conveying him to Aden. The sailors had placed the cage of the female opposite to his, and as soon as he obtained a sight of her he commenced to raise himself on his hind legs, and to break through the roof of the cage. There is no doubt that he soon would have succeeded in his efforts if Dr. Brooks had not resorted to the expedient of greasing from time to time the inside of the cage, so that he could no longer support himself against the slippery sides.

The two individuals differ from each other considerably, not only in size, but also in the form of the shell; and in the Seychelles they were thought to belong to different races,

possibly they come from different islands of the Aldabra group.

The shell of the male is 5 feet 5 inches long, and 5 feet 9 inches wide, measured over the curvature; the length of the head and neck is 1 foot 9 inches, and the circumference 1 foot 6 inches. The circumference of the foreleg is 1 foot 11 inches, of the hind leg 1 foot 5 inches. The weight of the animal when it left the Seychelles was 870 lbs; it is still



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growing! The center of each of the scutes along the middle of the back is raised into a hummock, and also the other scutes are divided by deep grooves or sutures. The color is a dirty brown, gradually changing into black towards the center of each scute. The shell of the female is 3 feet 4 inches long, and 3 feet 10 inches broad (measured over the curvature); the circumference of its foreleg is 13 inches. The shell is perfectly smooth, nearly polished, without any unevenness.

They feed on vegetables of all kinds, of which they consume daily a large quantity; in the Zoological Gardens they seem to prefer cabbage and vegetable marrow, but eat grass freely. A constant supply of water to drink is essential; without it they would perish in a short time. They are fond of basking in the sun, but dislike a long exposure to the di-

as much as a tun, but we should not care to recommend this experiment, as the shells of these large tortoises are comparatively much thinner than those of the smaller kinds.

These tortoises never bite, and the male is so tame as to take the food out of the hand. He was thus sketched while being fed with a vegetable marrow. He is fond of being stroked and rubbed about the head and neck, which he stretches out of the shell to their full length. He shows great affection for the female, and this was especially apparent when he was released from the two months' confinement in his cage; he seemed stiff, without any inclination to move, until the female was placed before him, when he at once stretched out his head, and followed her about in their inclosure. Some time before sunset they go to rest, one with the fore part of the shell resting against that of the other. The male has a loud voice, compared by the keeper to the roaring of a bull.

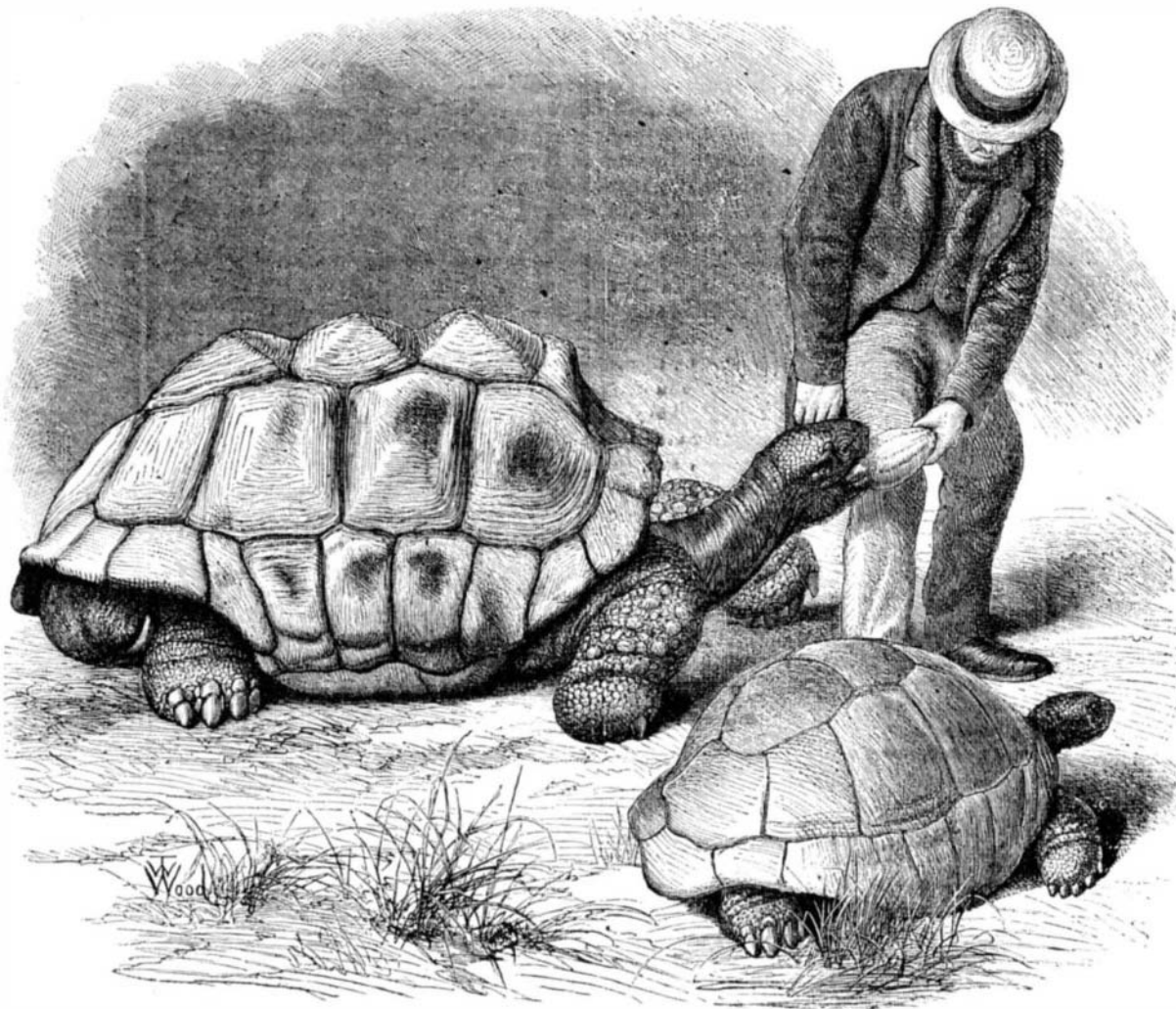
Remarkable Electrical Phenomena

The night of July 7-8, 1875, will be long remembered in Switzerland for thunderstorms, several of them of almost unexampled severity. Of these, one that broke over Geneva was unprecedentedly severe and disastrous. It appears to have originated to westward, in the department of Ain, and took an easterly course up the valley of the Rhone to Geneva, on reaching which it spread over a wider area, and thence directed its course over Savoy. As midnight came on, though the heat was suffocating and not a breath of wind stirred below on

the streets, light objects on the roofs of the houses began to be whirled about and carried off as by a tempest of wind. At the same time a dull rumbling sound, resembling neither that of wind nor that of thunder, announced the approach of the thunderstorm, and at 12 midnight exactly it burst over Geneva in all its fury. An avalanche of enormous hailstones, with no trace of rain, was precipitated from the sky, and shot against opposing objects by a tempest of wind from the southwest. In a moment the street lamps were extinguished, and in a brief interval incredible damage was inflicted, the glass and tiles of houses smashed to powder, trees stripped of their bark on the side facing the west, and crops of every sort were, in many places, all but totally destroyed. The smallest of the hailstones were the size of hazel nuts, many were as large as walnuts and chestnuts, and

some even as large as a hen's egg. Some of the hailstones measured four inches in diameter, and six hours after they fell weighed upwards of 10 ozs. For the most part the hailstones were of a flattish or lenticular form, with a central nucleus of 0.16 to 0.40 inch diameter, developed in several concentric layers of ice, generally from 6 to 8 alternately transparent and opaque. A map has been printed in the *Journal de Genève*, showing the districts where the storm was felt as well as the degree of its intensity in each locality. The electrical phenomena were very remarkable; the flashes of lightning succeeded each other with such rapidity, from midnight till a few minutes after 1 o'clock in the morning, that a mean of from 2 to 3 were counted each second, or from 8,000 to 10,000 per hour. Electrical phosphorescence was remarkably intense before and during the hail. The ground, animals, prominent objects, as well as the hailstones, were strongly phosphorescent. Immediately after the hail, ozone was greatly developed, the smell being so pronounced as to be compared, by nearly all observers, to garlic. The incessant electrical discharges passed from cloud

to cloud over a central point from which the hail fell, but thunder was very rarely heard.—*Nature*.



LAND TORTOISES IN THE ZOOLOGICAL GARDENS, LONDON

rect rays of a powerful midday sun, which they avoid by seeking the shade. As the temperature in the Seychelles does not sink at any time of the year below 70°, the utmost care is to be taken to shield them from the cold of the nights of early autumn; and we believe that neglect in this respect has been the cause why the specimens imported into England some thirty years ago never survived their transmission to Europe for more than a few months. Twenty-four hours' exposure to a temperature below 50° is fatal to them.

Their walk is slow and clumsy, but is not impeded by the weight of as many people as can possibly find room on the back of their shell. The male is believed to be able to carry

A good cheap paint for barns and outhouses is made as follows: Put ½ bushel of good lime in a clean barrel, and add sufficient water to make a thin whitewash; stir it well with a flattened stick until every lump of lime is dissolved. Then add 50 lbs. mineral paint, 50 lbs. whiting, 50 lbs. road dust, finely sifted. Mix to a thick paste with linseed oil and thin gradually to the proper consistence with sweet buttermilk, fresh from the churn. The covering quality is improved by the addition of 1 gallon soft soap.