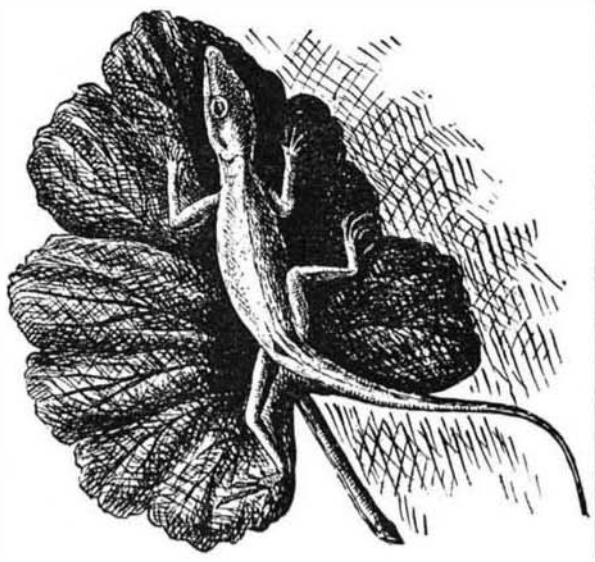
THE CAROLINA LIZARD.

This little lacertilian reptile, of the family *anolidæ*, is known to herpetologists by the name of *anolis principalis* (Linnæus). It is the *anolius Carolinensis* (Cuvier) of Holbrook. It has been called a chameleon. It does not, however, possess the prehensile tail and elongated and extensile tongue of the true chameleon, but resembles it only in the changing hues of its skin.

The specimen in our possession, upon which the few following observations were made, was captured in Florida. Its prevailing color is grayish brown, with a slight greenish tint. In the night, when in a state of repose, the color has always been whenever observed, of a clear bright green above; the labials and inferior parts white, or grayish white. A few times only during the day has it assumed the green hue, yet this is the common color of the Carolina lizard when in a wild



state. The reason of this may be want of light-colored and green insect food. I have seen it of a uniform grayish-brown color above, with a few spots of clear green dispersed over the body. At one time it changed from lead-brown to clear, bright green, after it had crawled and remained upon some geranium leaves for a few minutes. It retained this color for over ten minutes, when, without quitting the leaves, it gradually faded into a uniform grayish-brown.

The inferior surface of the epidermis of this lizard seems to contain numerous minute glands or chromatophores, by means of which the animal can, by secreting pigments into them, or withdrawing the same, change from one color to another. Thus, when all pigment is entirely withdrawn from the chromatophores, the whole upper part of the animal is bright green colored; when partly filled, grayish-brown with a greenish tinge; and when entirely filled, dark grayish-brown approaching to lead color. When one portion of the pores is empty and the other filled, the animal is bi-colored, or spotted with green and grayish-brown.

The assertion that every scale of the animal is furnished with sets of muscles, and that the change of color is produced by the action of light alone, is at best doubtful. On the inner parts of the scales of the epidermis I observed numerous minute glands or ducts, but no separate muscle attachments.

Before the old skin is about to be cast from the head, it becomes whitish in color on the occipital and frontal regions, and around the orbits. From the anterior part of each eye, also around the eye, and extending to beneath each nostril, the skin is broken by forcing outward the eyes, and the muscles around them. The edge of the skin is then observed to spring loose from the occiput, after which it is pushed off from the entire head by the fore feet of the lizard.

After the skin of the head had been removed, the skin of the new tail became lighter in color, and then parted along the dorsal line, when the whole of it slipped from the tail, a longitudinally hollow piece. When purchased our specimen was minus part of its tail, but a new one soon began to sprout, and now, an inch of new tail has been developed.

Our lizard is an expert fly-catcher, and it feeds almost entirely upon common house flies. It has eaten several Croton bugs (*ectobia germanica*), also small beetles, day flies, moths, and butterflies. It does not swallow its prey whole, in the manner of a frog, but tears and mashes it with its teeth and jaws, before swallowing. It drinks often, licking drops of water from the leaves, and from the sides of its cage.

It became quite excited on seeing its reflected image in a small looking glass, and made a bold advance towards it, at the same time erecting and depressing its head rapidly. This nodding motion I have also observed in the horned toad (*phrynosoma cornutum*, Harlan). As it is practised only at the meeting of individuals, it is reasonable to suppose it to be an action of greeting, or, in other words, a how-do-you-do nod.

From that remote period in the great chain of human development, when our forefathers were yet lizards, even to the present enlightened period, a nodding of the head was and is an action of salutation or friendly greeting; and although forgotten in many intervening links, it still survives!

A Move in the Right Direction.

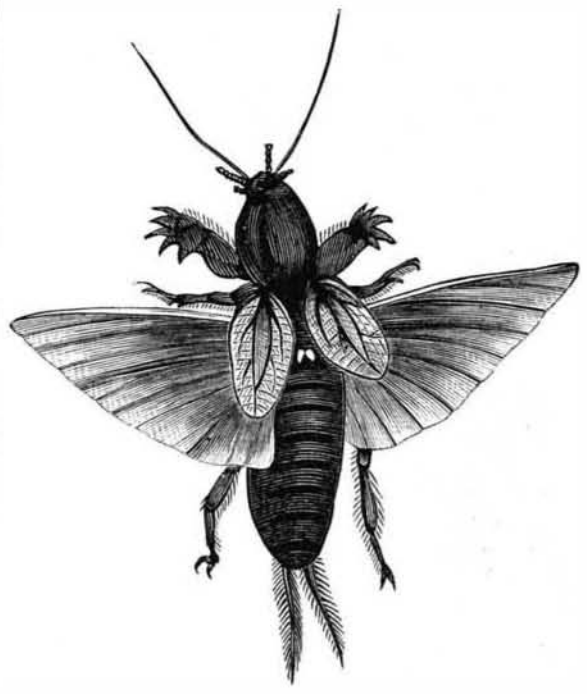
The Massachusetts Society for Promoting Agriculture has offered a series of prizes for the encouragement of tree planting in this State—the awards to be made 10 years from the 1st of March next for the best results produced in the interval. The white ash, the European larch, and the white and Scotch pine are the varieties especially favored. Something has been done already toward promoting a new centennial growth of trees, and the inducements here offered will give another impulse to the work. Mr. Sargent, of the new Arboretum of Harvard College, estimates that over 1,000,000 trees will be planted in Massachusetts this year. In Connecticut the General Assembly of this year gave public sanction and encouragement to the same enterprise by exempting from taxation all plantations of timber trees to be thereafter planted, for a period of 10 years after such trees have grown to an average of 6 feet in height.

THE SEA MONSTER.

We are indebted to Lieut. W. P. Haynes, of H.M.S. *Osborne*, for the sketch of the sea monster seen by the officers and crew of that vessel off the north coast of Sicily on the 2d inst., notice of which we gave in the SCIENTIFIC AMERICAN for July 14. In a letter accompanying the sketch he says: "My attention was first called by seeing a long row of fins appearing above the surface of the water at a distance of about 200 yards from the ship, and 'away on our beam.' They were of irregular heights, and extending about 30 or 40 feet in line (the former number is the length I gave, the latter the other officers); in a few seconds they disappeared, giving place to the fore part of the monster. By this time it had passed astern, swimming in an opposite direction to that we were steering; and as we were passing through the water at 10½ knots, I could only get a view of it, 'end on,' which I have shown in the sketch. The head was bull-shaped, and quite 6 feet thick, the neck narrow, and its head was occasionally thrown back out of the water, remaining there for a few seconds at a time. It was very broad across the back or shoulders, about 15 or 20 feet, and the flappers appeared to have a semi-revolving motion, which seemed to paddle the monster along. They were about 15 feet in length. From the top of the head to the part of the back where it became immersed, I should consider 50 feet, and that seemed about a third of the whole length. All this part was smooth, resembling a seal. I cannot account for the fins unless they were on the back below where it was immersed."—*London Graphic.*

THE MOLE CRICKET.

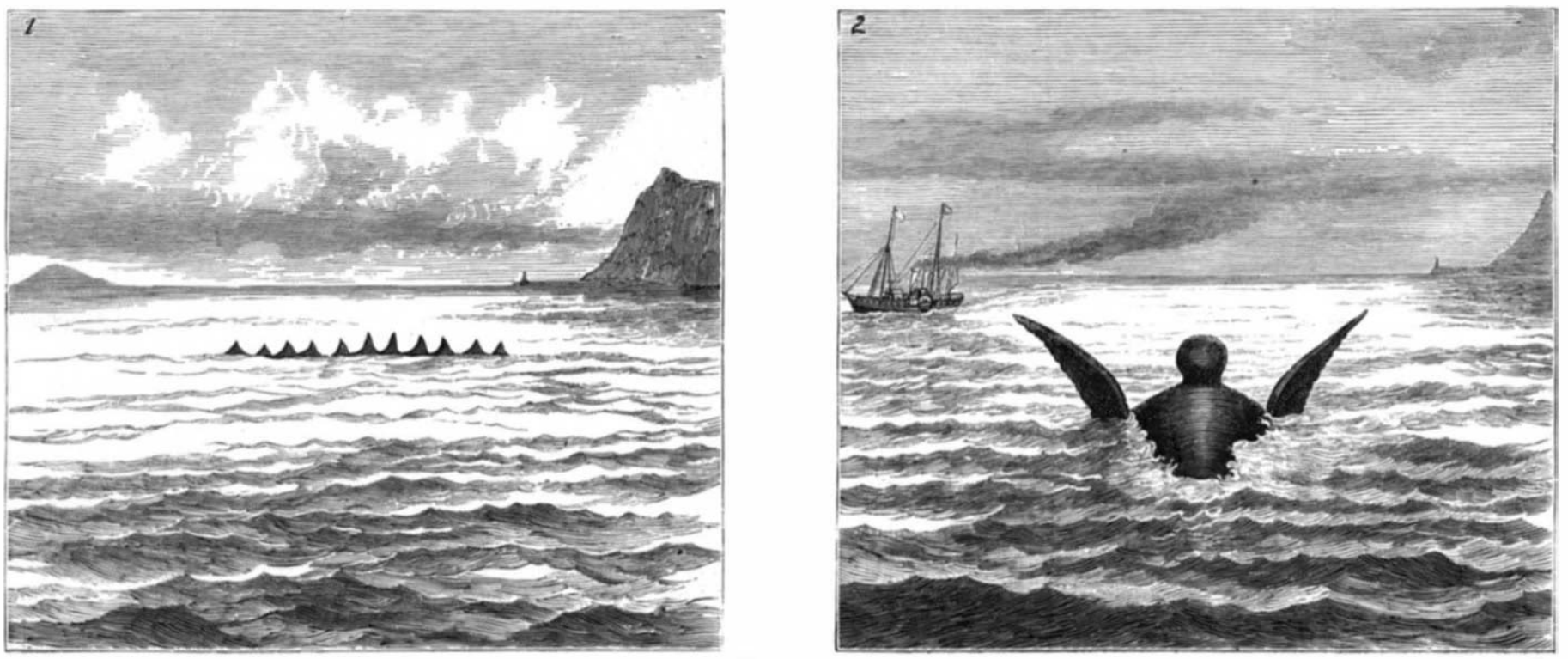
This insect is one of the most curious of all the *orthoptera*, to which order earwigs, crickets, grasshoppers, cockroaches, locusts, and the strange looking leaf and stick insects also belong; it is widely distributed over the world, from the torrid zone to the arctic circle; allied species inhabiting Java, China, Australia, Van Diemen's Land, North



and South America, and even Melville Island. It has been variously called eve-churr, churr worm, jarr worm, and crocker, names derived from its peculiarly jarring song; also fen cricket, earth crab, and mole cricket, the last being by far the most appropriate, and that by which it is generally known. With its powerful fore limbs it burrows underground, raising ridges in its progress. Its shape is long and cylindrical (a full-grown specimen measures 2½ inches in length by barely half an inch across the thorax), just that best fitted for locomotion through long narrow galleries; its color is a rich, dark, velvety brown of various shades, its thorax is very hard, and so formed that the head can be withdrawn into it, much after the manner of some tortoises; its whole body is covered with fine down. It has a long sensitive pair of antennæ or horns projecting in front of its head, and another pair on its tail, projecting backwards, also very sensitive; and as it moves with equal facility either forwards or backwards, should danger threaten from front or rear, it is ready to escape without turning round, an operation which would be difficult or almost impossible in its narrow tunnels. Like all the crickets and grasshoppers, its nearest allies, its hind legs are formed for jumping; though perhaps not often employed for this purpose, they form the ordinary locomotive organs of the animal, both below and on the surface of the ground; the middle pair being comparatively weak, while the fore pair are carried raised up.

The fore limbs are rarely used in walking, but are the tools with which the insect burrows. They bear a very close outward resemblance to the fore pairs of a mole.

The mole cricket is furnished with two pairs of wings, the



A SEA MONSTER.