

ART. XIV.—*Contributions to Zoölogy from the Museum of Yale College. No. I.—Descriptions of a remarkable new Jelly-fish and two Actinians from the coast of Maine; by A. E. VERRILL.*

DURING an excursion to the coast of Maine and Bay of Fundy last season, many interesting and rare marine animals were observed and collected by myself and companions.\* Among the most remarkable new species is a very large and beautiful Discophorous jelly-fish, which is the type of a new genus and represents a family previously unknown upon our Atlantic coast.

In size and general appearance it has some resemblance to *Cyanea arctica*, for which it may, possibly, have been hitherto mistaken by casual observers, for it seems scarcely probable that such a large and conspicuous species, which occurred twice among the wharves at Eastport, could otherwise have so long escaped observation. Its color, however, is much lighter than that of *Cyanea*, and yellowish rather than brown or reddish, while the much less numerous tentacles are larger, flattened, with one edge crenulated and bordered with white, while its entire structure is quite different.

It is far more nearly allied to *Heccædecomma ambiguum* Brandt, of the North Pacific, but the latter is represented with round tentacles, different marginal-lobes and ovaries, and broader and much more complicated mouth-folds.

CALLINEMA Verrill, gen. nov.†

Disk broad, moderately thick, with numerous broad channels running to the marginal one, arranged in sixteen systems, two or three parallel and undivided tubes alternating with a group of five or six branching ones, which unite together into one, toward the central portion of the disk, each of which cor-

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† κάλλος, beauty, νῆμα, thread.

responds in position with one of the sixteen, eye-bearing marginal lobes. Toward the marginal channel the branching tubes anastomose freely, the undivided ones but slightly or not at all, though two often unite into one near the margin. Margin deeply and regularly divided into scalloped lobes, sixteen of which bear eyes and are bilobed for more than half their length, bearing the eye at the division, just below which the channel in the lobe divides into two divergent branches, one of which goes to each division. Alternating with the eye-lobes are somewhat longer lobes, which are divided at the edge into two, three, or four rounded scollops, each of which receives a simple channel. Tentacles in a nearly regular circle, but arranged in groups of five or six at the bases of the inter-ocular lobes, very long, highly contractile, flat; one edge double, finely scalloped, the scollops again finely crenulate. Ovaries large, much convoluted, pendant pouches. Lobes of the actinostome, four, large, elongated, pointed, complexly lobed and frilled.

*Callinema ornata* Verrill, sp. nov.

Disk large, up to 18 inches in diameter, with conspicuous radiating tubes, .1 to .3 inch broad. Actinal appendages, when extended, about as long as the diameter of the disk, broad, much convoluted and deeply frilled at base, the edges with fine papilliform divisions. Ovaries large, hanging loosely from the under side of the disk, and nearly equal in length to the radius of the disk. Tentacles .2 inch broad, extending to the length of at least 15 feet in large specimens, capable of contracting to a length of less than six inches, about 80 or 90 in number, arranged in a nearly regular circle, one to each of the marginal scollops, except those of the eye-bearing lobes; double edge neatly scalloped, frilled and minutely crenulated.

Disk transparent, the radiating tubes light brownish yellow, the central area marked interiorly with lines of light orange, enclosing large, irregularly polygonal areas, below which the lobes of the actinostome show through, giving a yellow center about three inches in diameter; outside of this the ovarian lobes, which are light brownish yellow, show through the disk and extend at times nearly to its margin. They are grouped somewhat into four divisions, and float about variously as the animal moves. Eyes pearl-white. Tentacles transparent, the complex edge flake-white. Actinal folds lemon-yellow or light buff. Lobes of the reproductive organs either yellowish white or brownish yellow, with darker borders of yellowish brown or orange-brown. Phosphorescent with white light. Diameter of largest specimen 18 inches; length of tentacles 15 feet or more, in extension. Another specimen was 10 inches in diam-

eter ; disk at center 1.5 inches thick ; largest marginal lobes 1.25 long ; smallest .75 ; actinal appendages 8 to 10 inches long ; ovaries hang down 4 inches from disk ; tentacles 12 feet long.

Eastport Harbor, swimming near the surface at noon ; three specimens observed, one preserved in the museum of Yale College.

*Edwardsia elegans* Verrill, sp. nov.

Body elongated, slender ; epidermis thick, light yellowish brown, with entangled mud, the upper edge slightly free and prominent. Tentacles 16, slender, variously curved and entwined, pale flesh-color, with a central longitudinal line of light orange-red ; naked part below the disk pale pink with longitudinal white lines corresponding with the internal lamellæ ; mouth light yellowish ; disk pale flesh-color.

Eastport, Me., at low water under stones, rare ; also on Indian Island, N. B.

*Edwardsia farinacea* Verrill, sp. nov.

Body small, changeable in form, not very slender, often swollen in the middle or near the base, tapering upward ; epidermis firm, dark yellowish, covered with small, firmly adherent grains of sand, the internal lamellæ showing through faintly, but becoming more distinct on the naked, transparent, protruded basal portion, which is marked by 12 corresponding whitish sulcations, meeting at the end and alternating with some finer lines. Upper part of column transparent and naked for about .12 inch. Tentacles 12, short, conical, in a single circle at the margin of the disk, not crowded, pale yellowish white, sprinkled with fine flake-white specks which become more crowded on the inner median line and at the tips. Disk small, protruded ; mouth largely dilatable, at times elevated on a cone ; lips with 6 to 12 irregular lobes. Disk and naked space below the tentacles pale yellowish white, finely speckled with flake-white, the disk with faint whitish radiating lines. Length, .5 inch ; greatest diameter, .15 ; diameter of disk, .12.

South Bay, Lubec, on a muddy bottom in 8 fathoms, rare.

No. II.—*Descriptions of a new genus and two new species of Scyllaridæ and a new species of Æthra from North America ; by*  
SIDNEY I. SMITH.

*Evibacus*, gen. nov.

Carapax very broad ; lateral border expanded, incision at the cervical suture closed, and the margin behind it not incised. Rostrum broader than long, very slightly bilobed. Eyes situ-

ated midway between the rostrum and the outer angle; the orbits entire, slightly removed from the anterior margin and connected with it only by a suture. Antennæ with the inner margins approximate.

This genus is most nearly allied to *Ibacus* and *Parribacus* but is very distinct from both of them in the entire lateral margin of the carapax, the closing of the orbits in front, and the form of the rostrum.

*Evibacus princeps*, sp. nov.

Whole upper surface verrucose and nearly naked; five low, tuberclose elevations on the median line of the carapax, of which one is at the base of the rostrum, two on the gastric region, one on the anterior part of the cardiac, and one on the posterior margin; similar elevations on the middle of the second and third segments of the abdomen, and a very slight one on the fourth. Carapax strongly convex transversely; the anterior margin nearly straight, except at the lateral angle where it is slightly curved forward; lateral margin strongly curved, with a broad notch at the cervical suture behind which the margin is very slightly, obtusely and irregularly toothed. Antennæ together as broad as the anterior part of the carapax; the outer margins coarsely and irregularly serrate and their outline forming the segment of a circle. Everywhere beneath naked and nearly smooth. External maxillipeds with the outer margin of the merus divided into a number of slender processes. Legs so short that when bent forward in their natural position they are concealed beneath the expansions of the carapax; those of the first and second pairs with the superior angle of the merus raised into an obtuse crest; dactyli of all the legs short and stout, in the female those of the posterior pair closing against a process from the propodus. Abdomen with the lateral projections of the second, third and fourth segments long and rather acutely pointed, those of the fourth shorter and triangular at tip; lamella of the terminal segment half as long as broad. Whole length of body, 14 in.; length of carapax, including rostrum, 5.8; breadth of carapax, 7.9.

A single female specimen of this remarkable species, the first of the Scyllaridæ discovered upon the west coast of America, was sent from La Paz, Lower California, by Capt. Jas. Pedersen.

*Arctus Americanus*, sp. nov.

Carapax as broad as long, median crest high, covered with low squamiform tubercles, tridentate, the anterior tooth small and situated half way between the front and the second tooth; lateral crests very high, anterior portion with two teeth above the eye and separated by a deep notch from the posterior por-

tion which is covered to the lateral margin with low squamiform tubercles; depression between the median and lateral crests broad and deep, smooth or slightly punctate, with a median line of four depressed tubercles; lateral margin broken by a deep fissure at the cervical suture, and by a slight one a little more posteriorly. Antipenultimate segment of the antennæ as broad as long; anterior angle not prominent; outer margin arcuate, bidentate; anterior margin armed with several denticles; median carina prominent but smooth and even; terminal segment short, the extremity almost truncate and rather deeply five-lobed, the lobes rounded; the inner margin bidentate. Exposed portions of the abdominal segments sculptured as if covered with rows of scales; fourth segment with a prominent median elevation above. Feet nearly naked; the merus segments slightly carinated above. Length, 1.45 in.; length of carapax, along the median line, .45, lateral margin, .50; breadth, anteriorly, .49. Male and female do not differ.

Several specimens from Egmont Key, west coast of Florida, collected by Col. E. Jewett and William T. Coons. It is especially interesting as the representative of a genus hitherto known only from the old world.

*Æthra scutata*, sp. nov.

Carapax transversely and regularly elliptical; margins thin, slightly dentate, the denticles separated by broad and very shallow sinuses; posterior margin nearly straight in the middle; anterior margin straight and parallel to the posterior margin for a short space outside the eyes; front projecting horizontally, its margin forming a semicircle; gastric region elevated, with a broad median depression extending to the front; anterior lobe of branchial region large and prominent; the broad space between the branchial region and the anterolateral margin concave; summits of the elevations and a space along the posterior border tuberculose, rest of the upper surface smooth; inferior lateral regions slightly convex and smooth. Chelipeds fitting closely to the carapax; the angles projecting into dentate crests; outer and inferior surface of the hand coarsely granulous. Ambulatory legs short; the angles projecting into thin, dentate crests. Sternum and abdomen deeply vermiculated. Length of carapax, 1.39 in.; breadth, 2.23.

A single male of this species, the first of the genus discovered in America, was sent with the *Evivacus* from La Paz by Capt. Pedersen. It is at once distinguished from *Æ. scruposa* Edw., by the much broader and more regularly elliptical carapax.

The genus *Æthra* should evidently be placed near *Crypto-*

*podia* as has been done by Stimpson. The gastric region is narrow and projects far forward as in the Maioids. The expansions on the sides of the carapax, which give it a Cancroid form, are thin, and contain none of the internal organs, and their removal would give the carapax very much the form of *Cryptopodia*.