

compressed and almost three lobed, large, furnished with broad curved and reticulated membranaceous margins, when mature greatly enlarged beyond the calyx, external integument closely adonate, interior obsolete, charged with the peculiar colouring matter of the root. (“*Style* 0. *stigmata* 3.” JUSSIEU.) deciduous, or obsolete in the membranaceous lobes of the fruit; *perisperm* farinaceous, almost three lobed; *corculum* immersed, inverted, erect and flat; *radicle* exerted through the perisperm; seed lobes ovate.

The seeds of *R. undulatum* and *R. compactum* are so very similar to those of the *R. Rhaponticum* that the same description answers to the three, excepting that the seed lobes of the two former appear a little more acute.

From what we can discover then it appears that the Eriogonum ought to be placed in the class *Enneandria* and the order *Trigynia* of Linnæus instead of *Monogynia* where it was placed by Michaux, by Persoon, and where it still remains in Mr. Pursh’s Flora of North America, and is generically distinguished from *Rheum* as follows:

RHEUM.

Enneandria trigynia.

Calyx sexfidus, glabris, persistens *Semen* unicum triquetrum, alatum, nudum.

Characters of a new Genus, and descriptions of three new Species upon which it is formed; discovered in the Atlantic ocean, in the months of March and April, 1816; Lat. 22° 9'. By C. A. Le Sueur.—Read April 15th, 1817.

I now proceed to the description of a series of animals heretofore unknown; they belong to the extensive family of Pteropode mollusca; and may be arranged near to the

genus *Firola*, to which they approach by the form of their body, their habit, their manners, and by being inhabitants of the same temperate climates.

The anatomical characters are very similar to those of that genus, but the simple examination of their figures will exhibit obvious distinctive traits. These differences consist, in the position of the nucleus, the heart, and the branchia. In the *Firolæ*, these organs are placed in a cavity at the base of the tail, by which they are protected from all danger; but in the beings under consideration, they are situated at the posterior extremity of the body; very slightly attached; exposed to every danger; and constantly liable to be separated, in consequence of their unguarded position.

These differences are, I believe, sufficiently great, to authorize the establishing of a new genus, for the reception of the three new species, which are here described; possessing, as they do, a common form of body, and similarity of habits, but at the same time presenting distinct specific characters, by which, on examination, we shall be able readily to recognize them.

For this genus, I propose the name of *FIROLOIDA* under the following characters :

Genus FIROLOIDA.

Generic Characters.

Tentacula none; jaws horny; eyes two; one fin, placed on the back; branchia grouped with the heart, around an oblong nucleus, situated at the posterior and terminal part of the body; tail none.

Body gelatinous, cylindrical, glabrous, very similar to that of the *Firolæ*; like them they have a proboscis, two

eyes, jaws armed with small, horny, curved, reddish points, arranged in a pectinate manner—two nervous ganglions, one above the eyes and the other at the base of the dorsal fin, united by nervous threads, and furnishing numerous smaller ones, extended to various parts of the body.

The intestinal tube in the first species, is reddish, and extended from the jaws to the nucleus, without any sensible enlargement. In the second species it is abruptly enlarged near the nucleus, and in the third, the intestine is filiform before that part.

The branchia, are proportionally much smaller than in the *Firolæ*, and the nucleus shorter and more spherical, and of a pale colour.

I have not observed the vermiform organ in the animals under consideration, but in the first and second species a long filiform appendage appears to me to be the oviduct, including small globules resembling eggs; this part is very probably elongated by receiving the eggs; and when these are exhausted it is perhaps detached entirely, and the body then resembles the species fig. 3.

SPECIES.

1. *F. Demarestia*. Body long, glabrous, hyaline, acuminate at each extremity; no gelatinous points.

Plate 2, fig. 1. *b.* position of the eyes and nervous ganglion between them; *a.* oviduct, magnified.

Inhabits the ocean near Martinique, taken in March 1816.

Dorsal fin rounded, nearer to the eyes than to the nucleus. Length of the body two inches.

2. *F. Blainvilliana*. Body short, glabrous, posterior

extremity thicker, and truncated; dorsal fin equidistant between the eyes and the nucleus.

Plate 2, fig. 2. *a.* small specimen; *b.* nucleus and oviduct magnified.

Inhabits near Martinique, taken in March 1816.

Oviduct shorter, perhaps broken, thicker; posterior part of the nucleus furnished with small oviform globules. Length of the body seven lines to one inch and a half.

3. *F. aculeata.* Body subequal, glabrous, hyaline, wrinkled above the eyes. Dorsal fin equidistant from the extremities, longer behind.

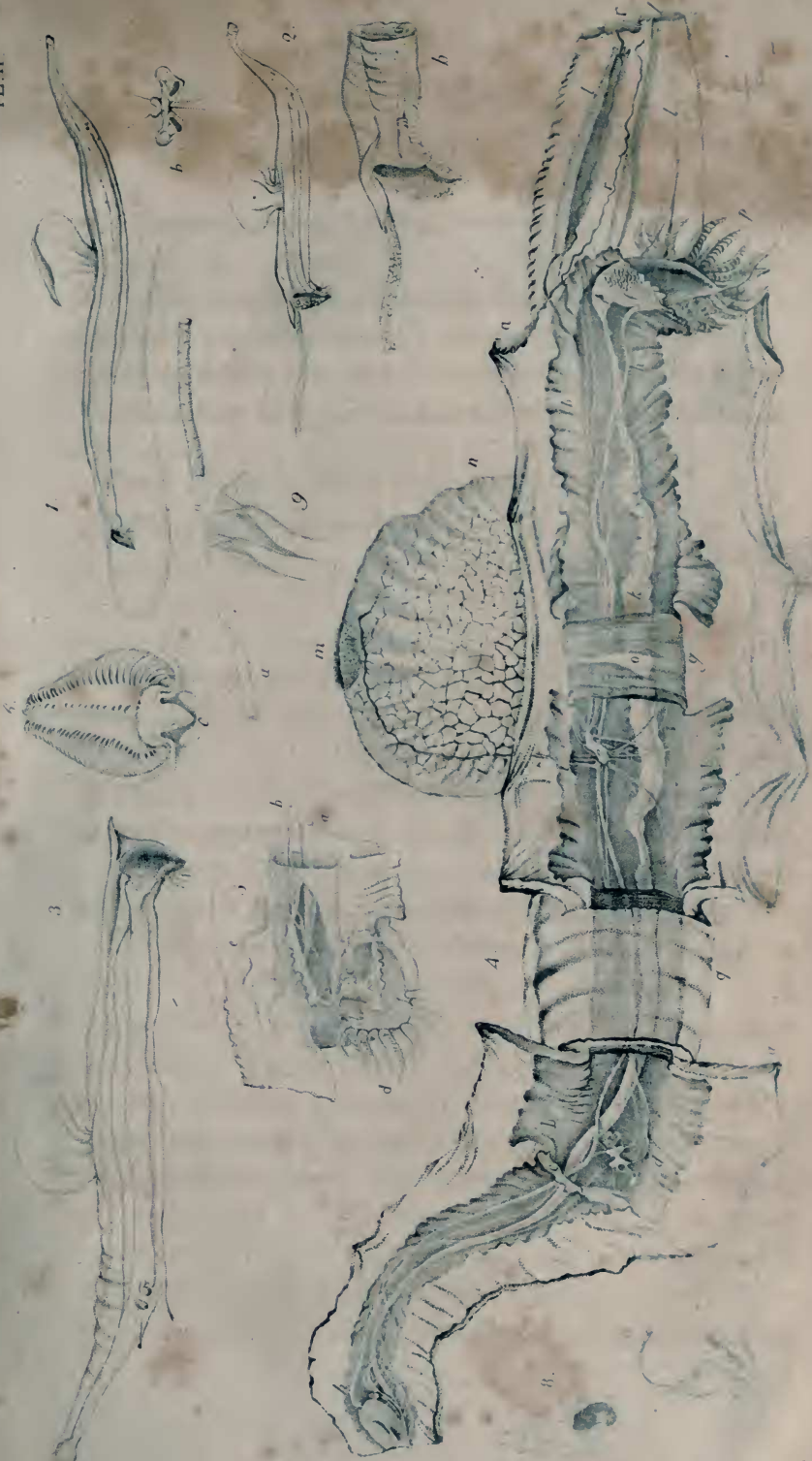
Plate 2, fig. 3, magnified.

Taken April 26, 1816.

Nucleus suboval—eyes conspicuous; one elongated, gelatinous point beneath the eyes, and another, much shorter, before them—oviduct none.

I here add some anatomical explanations, accompanied with figures of a species of the genus *Firola*, described in the preceding number.

Plate 2, fig. 4. represents a *firola* magnified and opened on the side. *a. a. a.* gelatinous, exterior substance of the body, which at *g* remains entire. *b. b. b.* peritoneum opened, and entire at *g*. *c.* diaphragm. *d.* anterior ganglion. *e.* posterior ganglion. *f.* nucleus; it is laid bare of the peritoneum, to exhibit a granulated appearance, on its superior part; very like grains of Indian corn (*Zea*). *p.* branchia. *h. h.* artery. *i. i.* branch of the artery. *k.* intestine. *l. l. l.* caudal muscles. *n.* muscles of the dorsal fin. *m.* cup of the dorsal fin. *o. o.* radicles of the dorsal fin. *r. r.* two small filiform tubes, opening into the posterior part of the peritoneum, and connected with



the ramose vessels of the extremity of the tail; these, perhaps, serve to eject a portion of the air which may be admitted by the branchia in this larger cavity, so as to enable the animal to preserve a proper equilibrium with the water.

Observation. The connection of these tubes with the cavity of the peritoneum was ascertained by injecting blue coloured water.

Fig. 5. Position of the heart and branchia on the opposite side of the nucleus. *c.* heart. *d.* branchia. *b.* artery. *a.* intestine. *e.* vermiform organ and branch of the artery.

Fig. 7. Retracted jaw. *a.* artery. *b.* intestinal tube. *c. c.* nerves. *e.* capitate threads. *d.* interior palpi.

Fig. 8. Eye.

Fig. 6. Jaw exerted, front view with lateral and central teeth. *c.* lip.

Fig. 10. Two pairs of muscles of the dorsal fin.



Description of three New Species of the Genus Raja. By C. A. Le Sueur. Read July 1st, 1817.

Generic Characters.

Body flat; pectoral fins large, extending from the head to the anus; branchial apertures 5, placed beneath the body; nose at tip,* distinct from the face.

SPECIES.

1. *R. Maclura.* Head very broad, snout short, entire, very obtuse; confounded with the pectoral fin; tail

* I have called this part, *tip of the nose*, from its analagous situation with that part of the human face; for the same reason the part called snout may be called the middle of the nose, it is more or less elongated, compressed, or depressed, and joined to the lip by the septa.