

DESCRIPTIONS OF TWO NEW NAIADS.

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Among the Unionidæ received by the United States National Museum in the past two years are two undescribed species, which are here diagnosed.

NEPHRONAIAS FLUCKI, new species.

Plates XXVII-XXIX.

Description.—Shell elliptical, moderately inflated, attenuated postero-ventrally; sloping gently and evenly dorsally from a line extending from the umbones to the posterior ventral angle. Dorsal line evenly arcuate, curving a little more abruptly anteriorly than at the posterior end; ventral margin almost straight or slightly concave. In some, presumably the females, the shell is somewhat drawn out ventrally at the posterior margin, and in such the ventral outline necessarily appears more concave. Surface marked by numerous very strong concentric lines of growth and crinkly radiating rays which are most pronounced on the anterior end and gradually fade out from the middle of the shell posteriorly. Periostracum shining, dark brown at the umbones, fading gradually to greenish yellow at the edge. Umbonal cavity moderately deep. Pseudocardinal of the right valve strong, triangular, deeply notched (almost bifid by the deep vertical \wedge -shaped notch in old specimens), with numerous fine secondary notchings. Pseudocardinals of the right valve rather slender, finely notched, inclosing a \wedge -shaped cusp between them, which corresponds to the \wedge -shaped notch in the other valve. Laterals narrow, slightly arcuate and obliquely ridged. Dorsal muscle scars feeble. Nacre bluish white at the margin, shading to livid olive dorsally.

There are four specimens of this species before me, all with more or less eroded umbones. They measure:

Length.	Height.	Diameter.
<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
53.7	32.7	22.5
51.2	32	21.7
^a 64	26.7	17.6
40	23.7	13.6

^a Type.

N. flucki can be readily separated from the other *Nephronaias* of the region by its rugose sculpture, in which respect it resembles *N. dysoni* Lea, from Costa Rica, and by its wavy radiating lines and the dark nacre.

Type.—Cat. No. 106121 U.S.N.M. The specimens were collected by the Rev. W. H. Fluck at Wounta River, northwest of Kukallaya, Nicaragua.

DIPLODON HUAPENSIS, new species.

Plates XXVII-XXIX.

Description.—Shell thin, elongate, elliptical, drawn out posterior-ventrally into a blunt beak, compressed dorsally, from a line extending from the umbones to the postero-dorsal margin of the beak and somewhat pinched in its subcentral ventral half. Dorsal margin slightly curved, its posterior third sloping regularly obliquely downward. Anterior margin abruptly curved, falling off a little more gradually toward the ventral than the dorsal edge. Posterior extremity evenly rounded. Ventral margin somewhat concave in the middle. Periostracum brown on the posterior dorsal portions of the shell, grading to wax yellow streaked with brown on the anterior ventral parts. Surface marked by numerous lines of growth, the stronger ones of which are usually darker colored than the general surface, and numerous fine, crinkly, radiating lines, which are best developed on the anterior half, and gradually diminished in prominence posteriorly. Beak cavities shallow. Pseudocardinals in the right valve two, narrow, weak, sublamellar, and very oblique, the dorsal one decidedly notched and stronger than the ventral, which is rugose. Left pseudocardinal narrow, slender, slight, notched, and cut into many fine tubercles. Right lateral only moderately curved, very slender, slightly roughened, more so on the inner than the outer edge. Left laterals thin, and lamellar, inner one larger and better developed than the dorsal, both with roughened edges. Nacre bluish, with many spots of livid olive, which are more numerous and extensive in the dorsal part of the shell than ventrally. Posterior part iridescent.

There are two specimens of this species in the U. S. National Museum, No. 186117. The shells measure: Type, length, 55 mm.; height, 25.9 mm.; diameter, 14.5 mm.; the other—length, 57 mm.; height, 27.3 mm.; diameter, 16 mm.

Description of soft parts.—Animal pale flesh colored. Mantle thickened near the edge all the way around from the anterior to the posterior end; this thickening is cord-like and becomes decidedly strengthened in the syphonal regions. The mantle slopes from the cord to a thin edge, which is more or less marked by longitudinal, parallel ridges. The space between the cord and the edge is dark colored on the inside. Syphons completely separated, the space between them being about 2 mm. wide. Ventral syphon 7 mm. long, thick

walled, and beset with several rows of long, thick, conical papillæ. Dorsal syphon 6 mm. long, moderately thick walled, and not papillose. Outer gills much smaller than inner, terminating somewhat posterior to the basal attachment of the inner gills; roughly they represent an isosceles triangle, the base of which constitutes the line of attachment; the anterior edge is a little less regular, not quite as straight as the posterior side, and falls off just a trifle more abruptly. The inner gills correspond at the posterior end with the outer gills in size, shape, and slope, but they extend forward in a slightly curved line, almost undiminished in width to the labial palpi, where they are suddenly deflected dorsally, their anterior margin being very short. Labial palpi small, with the free edge somewhat sinuous, agreeing with each other in shape and size, but the outer one is attached to the mantle in such a way that it probably presents only half the free surface on its outside that the inner presents on its inside. The space between them is equal. Foot and body of the animal small, the entire length of the body at the base of the gills being only 29 mm., while the entire length of the animal from the anterior mantle edge to the posterior mantle edge is 52.5 mm. The posterior half of the mantle is ash colored, deepest at the posterior edge, fading gradually anteriorly.

The shell in a general way recalls *Diplodon casæblancæ* Philippi and *Diplodon frenzelli* Ihering, but can readily be distinguished from them by its narrower outline.

This species is reported to be very abundant in a small lake on Victoria Island, in Lake Nahuel Huapé, Argentina, where the natives are said to roast and eat them.

One of the specimens has four lateral teeth, two in the right valve, instead of one; the ventral one of these, the extra one, is almost as strong as the dorsal member.



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