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ZOOLOGY.—*Notes on Mexican urocoptid mollusks*.¹ PAUL BARTSCH, U. S. National Museum.

The preparation of a monograph on the Cuban land mollusks of the family Urocoptidae by Dr. Carlos de la Torre and myself has made it necessary to subject the entire family to a critical overhauling. This has brought to light considerable misunderstanding on the part of the older authors,

due largely to the fact that at the time when they were working little was known of the anatomy and structure of the columella, the lamellation of the interior shell, and even less of the circumscribed ecologic conditions under which these animals exist. Today some of the deficiencies have been met, more or less, and the mass of material available for study furnishes a clearer viewpoint, and the results of the revisional work show a

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consistent zoogeographic pattern. For the new species here described I am indebted largely to the energetic efforts of Miss Marie E. Bourgeois.

Genus **Bostrichocentrum** Strebel

Bostrichocentrum Strebel, Beitr. Kentn. Fauna Mexico, pt. 4: 80. 1880.

Type: *Bostrichocentrum tryoni* Pfeiffer.

This group appears confined to central Mexico. The known species are listed with their type localities:

tamaulipense Bartsch: Camargo, Tamaulipas
hidalgoensis Bartsch: Bonanza, Zimapan, Hidalgo

veracruziana Dall: Misantla, Veracruz

veracruzicolum, n. sp.: Veracruz

ronzoni, n. sp.: Pajaro Verde, Puebla

pilsbryi Dall: City of Puebla, Puebla

tryoni Pfeiffer: Matamoros de Izucar, Puebla

eurybia Bartsch: Near Rio Balsas, Guerrero

galathea Bartsch: Near Rio Balsas, Guerrero

goldmani Bartsch: Tamazulapan, Oaxaca

gealei H. Adams: Putla, Oaxaca

B. hogeana von Martens, Maltrata, Veracruz, is doubtfully referred here.

Bostrichocentrum veracruzicolum, n. sp.

Fig. 4

Shell cylindroconic, flesh colored with the nucleus and the early postnuclear whorls pale horn colored. The nucleus consists of 2.7 turns, which are well rounded, microscopically granulose, and form an obtuse apex. The five postnuclear whorls following increase regularly in size, after which the shell becomes cylindric. They are marked by retractively curved axial riblets, which gradually become less strongly developed and on the cylindric portion are merely indicated as incremental lines. The postnuclear whorls on the conic portion are well rounded, while the later turns are almost flattened. The suture is well constricted. The last whorl is short, narrowly umbilicate, with well-rounded base crossed by axial riblets, which are irregular in their development, size, and spacing. The last whorl is usually solute, though at times adnate to the parietal wall. The solute portion rarely extends over one-tenth of a turn. The aperture is very broadly pear shaped, the narrow portion being at the posterior angle. The peristome is moderately expanded and reflected. The columella is hollow and bears a strong fold a little posterior to the basal wall on

the penultimate whorl, which fades out on the turn preceding it.

The type, U.S.N.M. 536877, was received from Miss Bourgeois, who states that it was collected in the neighborhood of Orizaba or Cordoba, or a little farther south, in the state of Veracruz. It has 12.8 whorls and measures: height, 12 mm; diameter, 2.9 mm. U.S.N.M. 536878 contains two topotypes, and another topotype is in the collection of Miss Bourgeois.

In type of sculpture this species resembles *B. pilsbryi* but is easily differentiated by its much smaller size and less elongate form.

Bostrichocentrum ronzoni, n. sp.

Fig. 3

Shell small, pupiform, white, with the nuclear whorls horn colored. The nuclear turns and the first four postnuclear whorls increase regularly in size to form a conic apex. The rest of the shell is cylindric, the last whorl being slightly contracted. The nucleus consists of 2 turns, which are strongly rounded and minutely granulose. The postnuclear whorls are marked by numerous closely spaced, well-developed, axial riblets, which are separated by intercostal spaces that vary from mere impressed lines to equal the width of the ribs. Beginning with the middle of the cylindric portion, the axial ribs become stronger and more distantly spaced, reaching their greatest width on the last turn. All the postnuclear whorls are well rounded. Suture well impressed. Periphery of the last whorl well rounded. Base short, well rounded, narrowly openly umbilicated, and marked by the continuation of the axial ribs. Aperture subovate; peristome slightly expanded and reflected, usually adnate on the parietal wall to the preceding turn though at times slightly solute. The columella is hollow and bears a fold a little above the basal wall which is very strong in the penultimate whorl and extends feebly throughout the rest of the spire. The columella shows retractively curved incremental lines.

The type, U.S.N.M. 536874, was received from Miss Bourgeois and was collected by Dr. M. del Campo at Pajaro Verde, Puebla. It has 12.2 whorls and measures: height, 10.1 mm; diameter, 3.9 mm. U.S.N.M. 536875 contains two topotypes and an additional topotype is in Miss Bourgeois's collection. U.S.N.M. 536876 contains five additional specimens, which are

said to have come from either Cordoba or Orizaba, the exact locality being not definitely known. An additional specimen from this lot also is in Miss Bourgeois's collection.

This species in sculpture resembles *B. tryoni* but can readily be distinguished by its much smaller size. It has much finer sculpture than *B. eurybia* and stronger sculpture than *B. galathea*.

Genus *Haplocion* Pilsbry

Haplocion Pilsbry, Man. Conch. 15: 89. 1902.

Type: *Holospira pasonis* Dall.

The known species, with their type localities, are:

- bryantwalkeri* Pilsbry: Rio Conchos near Rio Grande, Chihuahua
semisculpta Stearns: San Carlos Cañon, Chihuahua
townsendi Bartsch: Cerro Chilicote, Chihuahua
coahuilensis Binney: Cienega Grande, Coahuila
minima von Martens: Hermosillo, Sonora
remondi Gabb: Valle de Sahuaripa, Sonora
guaymasensis, n. sp.: Guaymas, Sonora
percostata Pilsbry: Sonora
mazatlanica, n. sp.: Mazatlan, Sinaloa
matthewsoni Bartsch: D. F. Mexico,
mariae Bartsch: Ixtapan de la Sal, Mexico.
campoi, n. sp.: Las Grutas, Guerrero
bartschi Pilsbry & Cockerell: Balsas, Guerrero
fusca von Martens: Omilteme, Guerrero
pasonis Dall: El Paso, Texas
mesolia Pilsbry: Sanderson, Texas
tantalus Bartsch: Arizona or New Mexico

Haplocion guaymasensis, n. sp.

Fig. 1

Shell elongate-pupiform, flesh colored. The nucleus consists of 2.5 well-rounded, microscopically granulate turns. These, combined with the first four postnuclear whorls, form a conic apex. The remaining turns are cylindrical. The postnuclear whorls are well rounded and crossed by decidedly retractorily slanting axial ribs, which are separated by spaces double the width of the ribs or even wider. Suture strongly constricted. The last two turns are inflated and strongly rounded. Base short, strongly rounded, openly umbilicated and marked by the weak continuation of the axial ribs. The last whorl is solute for about one-tenth of a turn. Aperture subcircular; peristome broadly expanded and reflected. The columella is rather broad and hollow and smooth.

The type, U.S.N.M. 536883, was collected by Miss M. E. Bourgeois near the beach at

Guaymas, Sonora. It has 13 whorls and measures: height, 12 mm; diameter, 4 mm. U.S.N.M. 522967 contains two topotypes.

This species resembles most nearly *Haplocion mazatlanica* but differs in being stouter and in having the whorls much less rounded and the axial ribs more distantly spaced.

Haplocion mazatlanica, n. sp.

Fig. 6

Shell small, cylindroconic, pale horn colored. The nucleus consists of 2.5 well-rounded granulate turns. The postnuclear whorls are decidedly inflated, strongly rounded, and marked by somewhat sinuous, retractorily curved axial ribs, which are almost as wide as the spaces that separate them. Suture very strongly constricted. The last whorl is short. Base short, strongly rounded, narrowly openly umbilicated, and marked by the continuation of the axial ribs. Aperture subcircular; peristome broadly expanded, widest on the inner lip and parietal wall. Columella moderately stout, hollow with a slight twist in the later whorls.

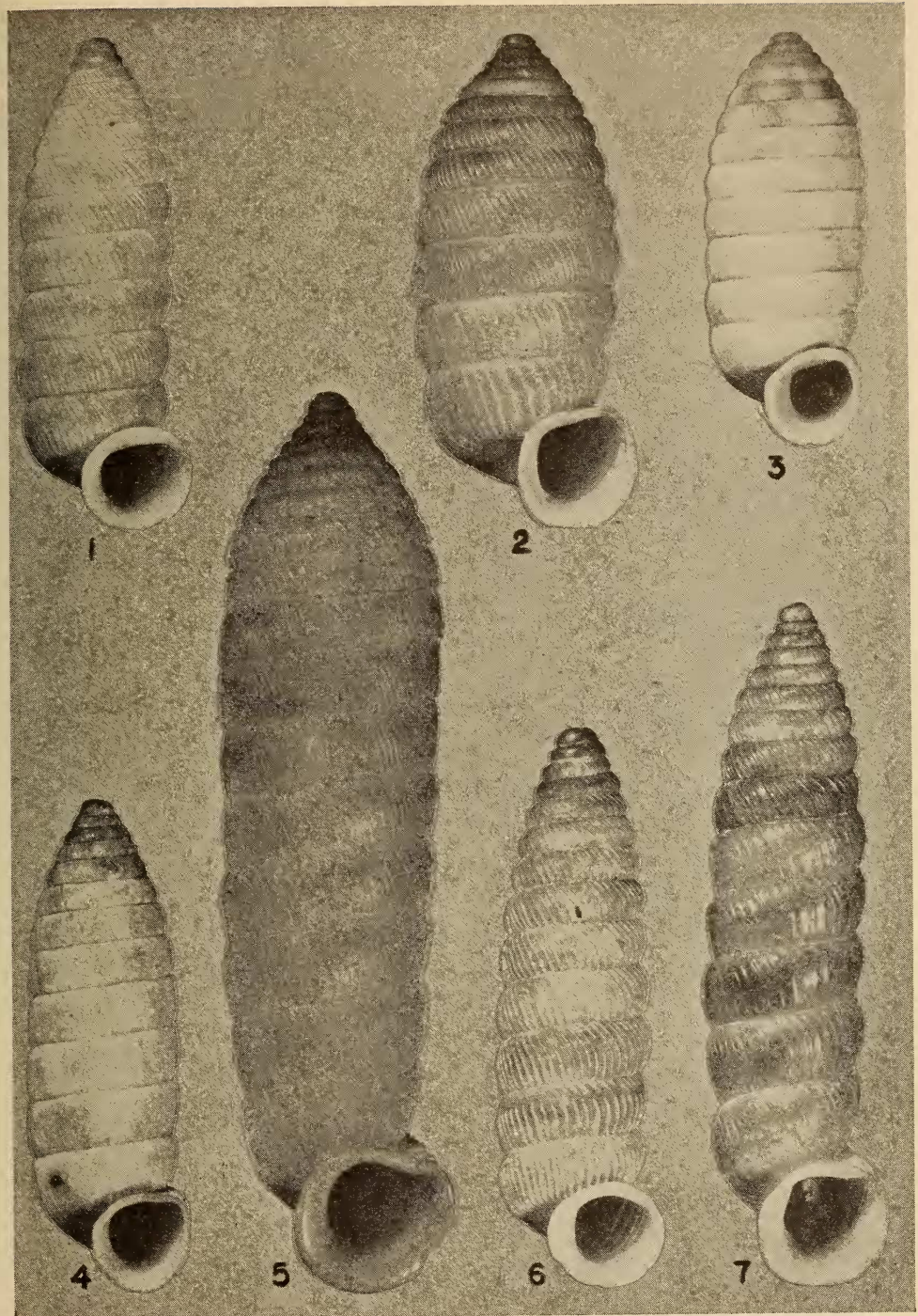
The type, U.S.N.M. 536884, was collected by C. R. Orcutt at Mazatlan. It has 14 whorls and measures: height, 13.5 mm; diameter, 4.1 mm. U.S.N.M. 381625 contains four topotypes.

This species resembles most nearly *Haplocion guaymasensis* but differs from it in being slenderer and having the whorls much more inflated and the axial ribs more closely spaced.

Haplocion campoi, n. sp.

Fig. 7

Shell cylindroconic, pale horn colored with the interior of the aperture pale brown. The nucleus consists of 2.5 well-rounded whorls, of which the last half of the first is wider than the rest of the turns. They are minutely granulate. Beginning with the sixth postnuclear whorl the shell assumes a cylindrical form. All the whorls are almost flattened, well rounded, and marked by retractorily curved, well-rounded, strongly developed axial ribs, which are about as wide as the spaces that separate them on the early turns, but a little less wide on the later whorls. Suture strongly constricted. The last whorl is somewhat attenuated and rather long. The base is short and rimate at the umbilicus and crossed by the continuation of the axial ribs. The last whorl is solute for about one-eighth of a turn. Aperture subequal; peristome moder-



Figs. 1-7.—New species of Mexican urocoptid mollusks: 1, *Haplocion guaymasensis*; 2, *Coelostemma presidioensis*; 3, *Bostrichocentrum ronzonei*; 4, *Bostrichocentrum veracruzicolum*; 5, *Coelostemma antricola*; 6, *Haplocion mazatlanica*; 7, *Haplocion campoi*.
 (All figures $\times 6$)

ately expanded and reflected. Columella slender and almost solid in the later whorls, but more hollow in the earlier turns, almost straight.

The type, U.S.N.M. 536880, has 15 whorls and measures: height, 17 mm; diameter, 4.6 mm. It was collected by Dr. Martin del Campo at Las Grutas, Cacahuamilpa, Guerrero. U.S.N.M. 536881 contains nine topotypes. U.S.N.M. 536882 contains four additional topotypes collected by Miss M. E. Bourgeois.

This species in the inflation of the whorls resembles *Haplocion mariae* Bartsch but differs from it in being much larger and in having the ribs more closely spaced.

Genus *Coelostemma* Dall

Coelostemma Dall, *Nautilus* 9: 50. 1895.

Type: *Holospira elizabethae* Pilsbry.

Following are the known species, with their type localities:

- dalli* Pilsbry: Sierra Guadalupe, Coahuila
strebliana Pilsbry: Sierra Guadalupe, Coahuila
lichenophora Dall: Encarnacion, Hidalgo
bourgeoisiana Bartsch: Ixtapan de la Sal, Mexico
antricola, n. sp.: Las Grutas, Guerrero
igualaensis Bartsch: Iguala, Guerrero
balsasensis Bartsch: Rio Balsas, Guerrero
adria Bartsch: Rio Balsas, Guerrero
adana Bartsch: Rio Balsas, Guerrero
elizabethae Pilsbry: Amula, Guerrero
herrerae Bartsch: Silacayoapan, Oaxaca
presidioensis, n. sp.: Presidio, Veracruz

The following species whose columellar structure is unknown are doubtfully placed here:

- cretacea* Pfeiffer: Mexico, without specific locality
microstoma Pfeiffer: Mexico, without specific locality
imbricata von Martens: Mexico, without specific locality
teres Menke: Puebla
teres var. β Crosse & Fischer: Puebla

Coelostemma antricola, n. sp.

Fig. 5

Shell elongate-cylindroconic, with the nucleus and the early post-nuclear whorls horn colored, the rest flesh colored. The nucleus consists of 2.5 well-rounded, minutely granulose whorls. The succeeding seven turns increase rapidly in size to form a conic apex. The rest of the shell is cylindrical, but the whorls become slightly contracted from the broadest expansion at the junction of the cylindrical portion and the

conic part anteriorly. The conic part and the last whorl are marked by strong, rather distantly spaced axial ribs. Here these are only about half as wide as the spaces that separate them and they develop slight nodules at the slightly overhanging portion of the turns at the suture. On the cylindrical portion the axial ribs become much finer and more closely spaced. Suture moderately strongly constricted. The last whorl is somewhat prolonged, slightly angulated at the periphery. Base short, slightly rounded, rimate at the umbilicus, and marked by the continuation of the axial ribs. The last whorl is solute for about one-fifth of a turn. Aperture subtriangular; peristome moderately expanded and reflected. The columella is very broad, widest in the later part of the conical portion of the shell, hollow, and marked by slender, retractively curved, axial riblets.

The type, U.S.N.M. 536885, was collected at the base of a limestone boulder in a ravine near Las Grutas, Cacahuamilpa, Guerrero. It has 18.3 whorls and measures: height, 21.1 mm; diameter, 5.6 mm. A topotype is in Miss Bourgeois's collection.

This species recalls *Coelostemma bourgeoisiana* but is much larger and much more cylindrical.

Coelostemma presidioensis, n. sp.

Fig. 2

Shell small, pupoid, pale horn colored, the later whorls flesh colored, which is also the color of the interior of the aperture. The nucleus consists of 2 well-rounded, microscopically granulose whorls. The nucleus, plus the succeeding five turns, complete the conic spire, the remaining turns being more or less cylindrical, contracting slightly toward the base. All the whorls are moderately well rounded. On the conic portion they are covered by rather strong, distantly spaced ribs, which are only about one-half to one-third as wide as the spaces that separate them. On the central part of the cylindrical portion the ribs become much finer and more closely spaced. On the penultimate whorl they are almost obsolete, while on the last whorl they are again very strong and very distantly spaced, the intercostal spaces being at least four times the width of the ribs. Suture very strongly constricted. Base very short, narrowly umbilicated, and marked by the strong continuation of the ribs which extend over the umbilicus. Aperture subtriangular;

peristome moderately expanded, reflected, and thickened. The columella is stout, almost one-fourth the width of the interior of the whorls, and crossed by slender, slightly retractively curved axial ribs.

The type, U.S.N.M. 536886, was collected by Miss M. E. Bourgeois at Presidio, Veracruz. It

has 13 whorls and measures: height, 12 mm; diameter, 5 mm.

The small form and pupoid shape will differentiate this from all other species except possibly *Coelostemma imbricata* von Martens, in which the middle whorls are not cylindrical.

ICHTHYOLOGY.—*Two marine fishes new to the fauna of Alaska, with notes on another species.*¹ LEONARD P. SCHULTZ, U. S. National Museum.

Recently in identifying a collection of fishes taken in Alaskan waters by Dr. Waldo L. Schmitt, two of the species proved to be new to the known fauna of Alaska and of North America. Additional information is given on another species.

Sebastes polyspinis Taranetz and
Moiseev
Fig. 1

Sebastes polyspinis Taranetz and Moiseev, in Taranetz, Vestnik dv. Eiliala Akad. Nauk SSSR no. 1-3: 69. 1933; Taranetz, Bull. Pacific Sci. Inst. Fish. Oceanog., 2: 94. 1937.

The discovery of six specimens of *Sebastes* in Schmitt's collection with XIV dorsal spines all belonging to the same species was a surprise, because among the hundreds of specimens of this group examined from the American side of the North Pacific, all have had XIII dorsal spines. From time to time species of *Sebastes* have been reported from the Asiatic side of the North Pacific Ocean with XIV spines, but these specimens are thought to be the first recorded from Alaska. My studies indicate that the Alaskan specimens belong to the species *Sebastes polyspinis*. Although there are some minor differences, such as in color, it is thought best not to describe them as a new form without first making direct comparisons with the types of *S. polyspinis*, which is not now possible because of the war.

The following key was prepared from the available specimens and literature, and by means of it one should be able to identify the North Pacific species of *Sebastes* with XIV

dorsal spines that have a flattish to convex interorbital space.

1a. Tubes in the lateral line 44 or fewer.

2a. Lateral line tubes 35; vertical scale rows from upper edge of gill opening to base of caudal fin about 65; scales above lateral line at base of first soft ray of dorsal 6 and below lateral line at origin of anal 16; mandible scaly; pectoral rays 16, lower 8 unbranched and swollen; anal rays III, 8; dorsal XIV, 13; interorbital a little convex; nasal and preocular spines present; parietal, postocular, and nuchal with weak spine; color reddish, marked with about 5 indefinite dark saddles along the back; peritoneum black; mouth cavity and gill cavities dusky; Japan... *Sebastes owstoni* Jordan and Thompson²

2b. Tubes in lateral line 40; mandible probably naked; pectoral rays 17; anal III, 10; dorsal XIV, 15; interorbital space flat; nasal and parietal spines strong; preocular, supraocular and postocular very weak; tympanic, coronal and nuchal absent; color red, no spots. Southeast coast of Siberia... *Sebastes pavlenkoi* Wales³

1b. Tubes in lateral line 45 or more.

3a. Tubes in lateral line about 63; vertical rows of scales above lateral line about 115; scales above lateral line 11 or 12 and 17 below; pectoral rays 19, 9 lower ones unbranched; anal III, 7; dorsal XIV, 13; gill rakers 12+27; mandible scaly; interorbital convex; nasal spine small but sharp; other cranial spines absent; peritoneum black; color brownish, top of head and upper sides clouded with dusky; lateral line run-

² *Sebastes owstoni* Jordan and Thompson, Mem. Carnegie Mus. 6 (4): 270, pl. 31, fig. 3. 1914; Jordan and Hubbs, Mem. Carnegie Mus. 10(2): 260, 1925; SCHMIDT, P. J., Trans. Pacific Committee Acad. Sci. USSR 2: 94. 1931.

³ *Sebastes ruber* Pavlenko, Fishes Peter the Great Bay, Trd. Obsc. Test. Kanzani, p. 42. 1910 (name preoccupied); *Sebastes pavlenkoi* Wales, Copeia, No. 1, p. 10. 1930 (new name).

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