

HAWAIIAN CYPRÆIDÆ.

BY D. D. BALDWIN, HAIKU, MAUI, H. I.

In the following list of species reported from these Islands, those not known to me personally as Hawaiian are marked with an asterisk :

<i>Cypræa annæ</i> Roberts.*	<i>Cypræa nucleus</i> Linn.
<i>Cypræa annulus</i> Linn.	<i>Cypræa polita</i> Roberts.
<i>Cypræa arabica</i> Linn.	<i>Cypræa poraria</i> Linn.
<i>Cypræa argus</i> Linn.	<i>Cypræa reticulata</i> Mart.
<i>Cypræa carneola</i> Linn.	<i>Cypræa spadix</i> Migh.*
<i>Cypræa caput-auguis</i> Phil.	<i>Cypræa scurra</i> Chem.
<i>Cypræa caput-serpentis</i> Linn.	<i>Cypræa semiplota</i> Migh.*
<i>Cypræa childreni</i> Gray.	<i>Cypræa staphylea</i> Linn.*
<i>Cypræa cicercula</i> Linn.	<i>Cypræa sulcidentata</i> Gray.
<i>Cypræa erosa</i> Linn.	<i>Cypræa talpa</i> Linn.
<i>Cypræa erronea</i> Linn.	<i>Cypræa tessellata</i> Sow.
<i>Cypræa fimbriata</i> Gmel.	<i>Cypræa tigris</i> Linn.
<i>Cypræa helvola</i> Linn.	<i>Cypræa unifasciata</i> Migh.*
<i>Cypræa isabella</i> Linn.	<i>Cypræa ventriculus</i> Lam.
<i>Cypræa intermedia</i> Gray.	<i>Cypræa vitellus</i> Linn.
<i>Cypræa limacina</i> Lam.*	<i>Trivia exigua</i> Gray.*
<i>Cypræa lynx</i> Linn.	<i>Trivia grandis</i> Gask.
<i>Cypræa madagascariensis</i> Gmel.	<i>Trivia globulus</i> Linn.*
<i>Cypræa mauritiana</i> Linn.	<i>Trivia insecta</i> Migh.
<i>Cypræa moneta</i> Linn.	<i>Trivia oryza</i> Lam.*
<i>Cypræa microdon</i> Gray.	<i>Trivia sphærulea</i> Migh.*

NEW VARIETIES OF UNIONIDÆ.

BY BERLIN H. WRIGHT.

U. gibbosus Barnes, var. *armathwaitensis* nov.

The chief distinguishing characters of this variety are: Broader behind, lateral teeth shorter, darker epidermis, beak cavity more pronounced and angular, longer, posterior cavity greater, nacre usually a brighter purple and it is never as large or as massive as the typical form.

Habitat.—A branch of the South Fork of the Cumberland River at Armathwaite, Fentress Co., Tenn. Type in National Museum.

Remarks.—Mr. E. F. Hassler collected a quantity of these shells

along with *Margaritana ravenelliana* Lea and they seemed to differ from *U. gibbosus* Bar. sufficiently to warrant making a variety of them, in which opinion Mr. Simpson of the National Museum concurred. Its place is between *U. subgibbosus* Lea and *U. gibbosus* Barnes and while it occasionally has the white nacre of the former species it is always larger but less massive, wider and has a darker epidermis.

It is also related to *U. stonensis* Lea and closely resembles that species except in epidermis and nacre. Only three specimens out of fifty had a pure white nacre, and those would be taken for *stonensis* but for the darker epidermis.

Margaritana marginata Say, var. *truncata* nov.

Shell abruptly truncated behind, and more produced in front, causing it to be nearly equilateral. More inflated and usually larger than the typical form.

Remarks.—This well marked variety was noted by Mr. Say and specimens were by him labelled in this name, but no description was ever published, so far as known. It occurs in eastern as well as western waters and into Virginia and Tennessee.

DESCRIPTIONS OF NEW PISIDIA.

BY DR. V. STERKI.

Pis. splendidulum Sterki.

Additional localities are: Upper Red Hook, N. Y., and New Philadelphia, Ohio.

Pis. abyssorum Stimpson, n. sp.

Mussel small, moderately inflated, somewhat elongate and oblique (most specimens somewhat rhombic), superior and inferior margins moderately curved; scutellum slightly, scutum rather well marked; posterior end rounded or slightly truncated above obliquely in postero-anterior direction, merging into the inferior margin with one continuous curve; anterior end a rounded angle situated rather inferiorly; beaks slightly posterior, rather low, comparatively broad; color whitish to pale horn; surface polished, with fine, irregular striæ; shell very thin, translucent; hinge very fine, plate very narrow; cardinal teeth short, lamellar, thin, longitudinal, scarcely curved, the superior of the left valve little anterior, quite small or abortive; lateral teeth very thin, not high, the outer ones of the right valve scarcely perceptible or absent; ligament small.

Long. 2.4, alt. 2.0, diam. 1.4 mill., (long. 2-3 mill.); young, as contained in parent, 0.8 mill. long.

Habitat: Region of the Great Lakes, in deep water.—Lake Michigan: Racine, Wis., dredged (Mr. Geo. T. Marston); different places on the Michigan side, partly from a depth of 24 meters; Pine Lake, Mich., dredged; Green Lake, Wis., dredged; from stomachs of White Fish, Lake Michigan, all sent by Mr. Bryant Walker, in 1894, and partly since. They were believed be a new form, but publication was deferred.

In March, 1895, Mr. Geo. T. Marston sent me two lots from dredgings, writing: "No. A. 208, *Pis. abyssorum* Stimpson, were from Dr. P. R. Hoy, Racine, Wis. He wrote me that they were first found in the stomachs of White Fish taken in Lake Michigan, near Racine, Wis., in 1870, by a party of gentlemen including Wm. Stimpson and himself. The party were investigating the food of White Fish, then unknown. I quote from Hoy's letter: 'In 1870 we dragged in Lake Michigan—Wm. Stimpson assisted—we got several of the *Pisidium* and three species of Crustaceans, all of which were new. Stimpson described the several new species—the names were published—I do not recollect where published—but the description was written out with the greatest care and were to be published in the Proc. of the Chicago Acad. Sc., of which Stimpson was secretary at the time. All were burnt at the time of the great fire.'" Mr. Marston subsequently had correspondence with several conchologists, but the matter remained unsettled. The two lots contained different forms of small *Pisidia* mixed up; but the most numerous and most conspicuous specimens represented the form now described under Stimpson's name. There is no absolute certainty that this is the same *Pisidium* the author had described, but it is the nearest in probability, and so to-day by the efforts of Mr. Marston, we can do justice to the deceased scientist. For the above description the writer is wholly responsible. The name (only) *Pis. abyssorum* has been published by Smith in his "Sketch of the Invertebrate Fauna of Lake Superior," according to a kind communication of Mr. Bryant Walker.

The form comes nearest *Pis. splendidulum*, in size and shape; but it is less inflated, the beaks are less prominent, the color is much paler (whitish), the shell thinner, and the hinge much finer and, as mentioned, partly defective.

Pis. pauperculum var. *Nylanderi* n.

Different from the type in the following points; it is comparatively

higher (as high as long, or nearly so), quite oblique; the beaks are very large; upper margin and hinge very strongly curved; color pale greenish horn; surface highly polished, with distinct, irregular lines of growth.

Known from Maine and New Jersey. It has been collected in Partridge Lake, in the thoroughfare between Partridge and Long Lakes, in Long Lake, Square Lake, all in Maine, with the dredge, in various depths down to 25 feet, by Mr. Olof O. Nylander. Also dredged in White Pond, N. J., by Messrs. Pilsbry and Rhoads, together with rather typical specimens of *pauperculum* and intermediate forms. The upper margin and hinge are as strongly curved as in *Pis aquilaterale* Pr. and some forms of *P. compressum* Pr. The beaks are so large as to make out almost the whole upper part of the mussel.

This *Pisidium* has been named after Mr. Ol. O. Nylander, who has so assiduously collected both recent and fossil mollusca of northern Maine.

New Philadelphia, Ohio., Jan., 1898.

PUBLICATIONS RECEIVED.

CATALOGUE OF THE HATFIELD COLLECTION OF SHELLS FROM THE LOYALTY ISLANDS, by James Cosmo Melvill and Robert Standen. Originally published in the *Journal of Conchology*, this paper has been reprinted as one of the Manchester Museum Handbooks. The Loyalty Islands belong to the New Caledonian group, and like that island are remarkably prolific in mollusk life. About 600 species, of which a score are new, are catalogued by Messrs. Melvill and Standen. Some idea of the wealth of the fauna may be obtained from the fact that there are 42 species of *Conus*, 53 mitras, 46 *Cypræa* and *Trivia* (among them *C. exanthema* L.¹ *Rashleighana* Melv., *sulcidentata* Gray, *aurora* (aurantium), *clandestina* v. *Artuffeli* Jouss., *poraria* var. *albinella* (new), *Trivia childreni*, etc.). Other interesting species are *Turbo moluccensis* and the *Pleurotomidæ*, of which a large number of small species, including numerous new ones, occurred. Two excellent plates illustrate new forms. The work is very creditable to Mr. and Mrs. Hatfield, who collected the shells, as well as to the authors.

Mr. G. B. Sowerby announces the issue of a supplement to his "Marine Shells of South Africa."

¹ Probably not indigenous.

Subgenus **Melaniella** Pfr., 1859.

232. **OPEAS GRACILLIMA** (Pfr.). Key West, and near Miami River, Florida. Cuba, etc.

Genus **RUMINA** Risso, 1826.

233. **RUMINA DECOLLATA** (Linn.). Charleston, S. C. Introduced from southern Europe.

Genus **CÆCILIOIDES** (Fér.) Hermannsen, 1846.

234. **CÆCILIOIDES ACICULA** (Müll.). Florida (Bartlett, many years ago); Princeton, N. J. (A. D. Brown). Introduced from Europe.

Genus **COCHLICOPA** (Fér.) Risso, 1826.

235. **COCHLICOPA LUBRICA** (Müll.). Canada to D. C. and Alabama, west to Oregon. Also Palæarctic. Commonly known in America as "*Férussacia subcylindrica* L."

235a. **COCHLICOPA LUBRICA MORSEANA** (Doherty). Hamilton Co., Ohio; Kenton Co., Ky.; Roan Mt., N. C.

(Superfamily **AGNATHA** Mörch.)

Family **GLANDINIDÆ**.

Genus **GLANDINA** Schum.

233. **GLANDINA TRUNCATA** (Brug.). Georgia Sea Islands to Florida, west to Louisiana and Mississippi. Forms *macer* Dall; *parallela* W. G. Binn., Florida. Form *bullata* Gld., Louisiana and Mississippi. Var. *ovata* Dall, Florida, is the same.

234. **GLANDINA TEXASIANA** (Pfr.). Brownsville, Texas. Probably a mere form of *truncata*.

235. **GLANDINA SINGLEYANA** W. G. B. South central and southern Texas. (*G. decussata* Desh. is a Guatemalan species).

236. **GLANDINA VANUXEMENSIS** Lea. Texas?; Mexico. *A doubtful member of our fauna.*

Family **TESTACELLIDÆ**.

237. **TESTACELLA HALIOTIDEA** Drap. Roxborough, Philadelphia, Pa. Introduced from Europe.

Family **CIRCINARIIDÆ** Pilsbry.

Genus **CIRCINARIA** (Beck, 1837) Pilsbry.

(*Macrocyclus* auct. not Beck; *Selenites* Fischer not Hope; *Haplotrema* Anc.).

238. *CIRCINARIA HEMPHILLI* (W. G. Binn.). Olympia, Walla-walla and Freeport, Wash.; also Oregon.

239. *CIRCINARIA CONCAVA* (Say). Ontario and Quebec, Canada, west to Minnesota, south to Kansas, Mississippi and Georgia.

240. *CIRCINARIA VANCOUVERENSIS* (Lea). Bolinas Bay, Cal., to Sitka, Alaska.

240a. *CIRCINARIA VANCOUVERENSIS OCCIDENTALIS* (Hemph.). Sonoma to Santa Cruz Co., Cal.; Kalama, Wash.

S. concavus var. *tenuis* Hemph., from Napa Co., is practically the same. Mr. Hemphill has described a var. *keepi* from near Oakland, Cal. I have not seen specimens.

241. *CIRCINARIA SPORTELLA* (Gld.). Klamath and Humboldt Co., Cal., to Vancouver I.

241a. *CIRCINARIA SPORTELLA HYBRIDA* (Ancey). Portland, Astoria. The Dalles and Douglas Co., Ore.; Olympia, Freeport, and Seattle, Wash.; Vernon, B. C.

(This is *M. vancouverensis* var. *hybrida* Anc., 1888, and *S. vancouverensis* var. *hybridus* Hemph., 1890).

242. *CIRCINARIA VOYANA* (Newc.). Shasta Co., Cal. to Puget Sound.

242a. *CIRCINARIA VOYANA SIMPLICILABRIS* Ancey. California.

243. *CIRCINARIA DURANTI* (Newc.). Santa Barbara Is. and coast range of southern California.

243a. *CIRCINARIA DURANTI CÆLATA* (Mazyck). San Diego, Cal. to San Tomas River, Lower California. (*Cælatura* W. G. B., Terr. Moll. V, 3d Suppl.).

243b. *CIRCINARIA DURANTI CATALINENSIS* (Hemph.). Santa Catalina Island.

244. *CIRCINARIA TRANSFUGA* (Hemph.). San Diego, Cal. to Todos Santos Bay, Lower California.

(Superfamily *AULACOPODA* Pilsbry.)

Family ZONITIDÆ.

Subfamily Zonitinæ Pilsbry.

Genus *OMPHALINA* Rafinesque.

245. *OMPHALINA KOPNODES* (W. G. Binn.). West Virginia to Ga. and Alabama.

246. *OMPHALINA FULIGINOSA* (Griff.). Ontario, west to southern Michigan, Indiana and Arkansas, south to Volusia Co., Fla.

246a. *OMPHALINA FULIGINOSA POLITA* Pilsbry. Mountain region of Eastern Tennessee and western North Carolina. Great Smokies; Monroe Co., Tenn.

247. *OMPHALINA FRIABILIS* (W. G. B.). Southern Illinois to Washington Co., Texas; northern Kentucky; Franklin Co., Tenn.

248. *OMPHALINA LÆVIGATA* (Pfr.). North Carolina to St. John's Valley, Fla., west to Arkansas and western Louisiana.

249. *OMPHALINA RUGELI* (W. G. B.). North Carolina, Roan Mt. to Cranberry.

250. *OMPHALINA SUBPLANA* (Binn.). Mts. between Tennessee and North Carolina.

251. *OMPHALINA INORNATA* (Say). Ottawa and Hull, Canada, to Georgia and Ohio.

252. *OMPHALINA ANDREWSÆ* Pilsbry. Great Smoky Mts., between Tennessee and North Carolina; Macon Co., Ga.

252a. *OMPHALINA ANDREWSÆ MONTIVAGA* Pilsbry. Thunderhead Mt.

Genus **VITRINIZONITES** W. G. Binney.

253. *VITRINIZONITES LATISSIMUS* (Lewis). Mountains between Tennessee and North Carolina.

Genus **VITRINA** Drap., 1801.

254. *VITRINA LIMPIDA* Gld. Canada and New England, west to Manitoba, south to Pittsburgh, Pa.

255. *VITRINA PFEIFFERI* Newc. California to B. C.; New Mexico, Utah, Colorado.

256. *VITRINA ANGELICÆ* Beck. Godhavn, Greenland.

257. *VITRINA EXILIS* Morel. Unalaska; Bering Id. A Kamchatkan species.

Genus **VITREA** Fitzinger.

258. *VITREA CELLARIA* (Müll). Seaports of Atlantic and Pacific coasts, Quebec, Portland, Me., Phila., Charleston, S. C., occasional in greenhouses inland, Allegheny City, Pa., Detroit, Mich., etc.

259. *VITREA DRAPARNALDI* (Beck.). Greenhouses, etc., Seattle, Wash., Oakland, Cal.

260. *VITREA HAMMONIS* (Ström). North Carolina to Colorado, northward throughout the northern states and British America; also Palæarctic. (*Hyalina pellucida* Lehnert, *H. viridula* Mke., *H. radiatula* Ald., *H. electrina* Gld. are synonyms).

261. *VITREA WHEATLEYI* (Bland). Knoxville, Tenn., northern Alabama. (Indiana and Michigan, *Sterki*).

261a. *VITREA WHEATLEYI CLINGMANI* Dall. Clingman's Dome, Great Smoky Mts., N. C.

262. *VITREA RADERI* Dall. Cumberland, Md.

263. *VITREA PETROPHILA* (Bld.). Knoxville, Tenn.; Habersham Co., Ga.; Clarkesville, N. C.; Great Smoky Mts.

264. *VITREA BINNEYANA* (Morse). Quebec and Maine to northern Mich.; also reported from Vancouver Id.

265. *VITREA JOHNSONI* Dall. Seattle, Washington.

266. *VITREA WHITNEYI* (Newc.). Near Lake Tahoe, Cal.

267. *VITREA DIEGOENSIS* (Hemph.). Near Julian City, Cuyamaca Mts., San Diego Co., California.

Section *Striatura* Morse, 1864.

268. *VITREA FERREA* (Morse). Quebec, Ontario and Maine to Northern Mich., south to Ohio and North Carolina.

Section *Glyphyalina* Martens, 1892.

270. *VITREA INDENTATA* (Say). Dakota to New Mexico, Lower California and states of Jalisco and Morelos, Mexico, east to the Atlantic, Ontario to Florida.

271. *VITREA SCULPTILIS* (Bld.). Mountain region near the Tennessee and North Carolina boundary.

272. *VITREA CAROLINENSIS* (Ckll.). Mountain region along the North Carolina and Tennessee boundary; Monroe Co., Tenn.

273. *VITREA SUBRUPICOLA* (Dall). Clinton's Cave, Utah.

273a. *VITREA SUBRUPICOLA SPELÆA* (Dall). Cave City, Calaveras Co., Cal.

Section *Paravitrea* Pilsbry, 1898.

274. *VITREA CAPSELLA* (Gld.). Virginia and Kentucky to Alabama.

275. *VITREA SIMPSONI* (Pils.). Limestone Gap, Indian Terr.; Mablevale, Ark.

276. *VITREA PLACENTULA* (Shuttl.). Great Smoky Mts., etc., Eastern Tennessee; Lexington, Va.; Hot Springs, Ark.

277. *VITREA LAWÆ* (W. G. B.). Eastern Tennessee.

Genus **CONULUS** Fitzinger, 1833.

(Not *Conulus* Klein, pre Linnæan, nor of Raf., 1815, a nude name).

278. *CONULUS FULVUS* (Müll.). All the States; British America, Palæarctic.

278a. *CONULUS FULVUS DENTATUS* Sterki. Jackson Co., Ala.; Cincinnati, Ohio.

279. *CONULUS STERKII* Dall. New Philadelphia and Summit Co., Ohio; Mt. Lebanon, La.; Jackson Co., Ala.

280. *CONULUS CHERSINELLUS* (Dall). Calaveras Co., Cal.; Fresno Co.

Genus *GUPPYA* Möreh, 1867.

281. *GUPPYA GUNDLACHI* (Pfr.). Florida; Hidalgo, Texas; also West Indies and Central America.

Subfamily Ariophantinae Pilsbry.

Genus *ZONITOIDES* Lehmann, 1862.

282. *ZONITOIDES NITIDUS* (Müll.). British America and Northern States from New England to Washington; Pa.; Ohio; Ala. Also Europe.

283. *ZONITOIDES ARBOREUS* (Say). All the States; British America north to Great Slave Lake.

284. *ZONITOIDES DALLIANUS* (Simp.). Manatee Co. and Little Sarasota Bay, W. Florida.

Section *Pseudohyalina* Morse, 1864.

285. *ZONITOIDES LIMATULUS* (Ward). New York, Ohio, Michigan, Indiana, local and rather rare. (San Mateo, Cal., *Binney*).

286. *ZONITOIDES LATEUMBILICATUS* (Pils.). Near Woodville, Jackson Co., Ala.

287. *ZONITOIDES PATULOIDES* (Pilsbry). Thunderhead, Great Smoky Mts.

288. *ZONITOIDES SHIMEKII* (Pils.). Loess of Iowa (Extinct).

289. *ZONITOIDES SELENITOIDES* (Pils.). Mariposa Big Trees, Cal.

290. *ZONITOIDES MINUSCULUS* (Binn.). Ontario to Florida, west to Mont., Arizona and New Mexico.

290a. *ZONITOIDES MINUSCULUS ALACHUANUS* (Dall). Alachua Co., Fla.

291. *ZONITOIDES LAEVIUSCULUS* (Sterki). Comal Co. and Hidalgo, Texas; Henry Co., Ind.; N.-W. Ohio; New Mexico.

292. *ZONITOIDES SINGLEYANUS* (Pils.). Comal Co., Central Texas; Woodville, Ala.

293. *ZONITOIDES EXIGUUS* (Stimps.). Quebec and Ontario, New England, N. Y., Mich.

294. *ZONITOIDES MILIUM* (Morse). Ontario to Florida, west to Indiana.

294a. *ZONITOIDES MILIUM PUGETENSIS* (Dall). Seattle, Wash.; Ballena, San Diego Co., Cal.

Genus **GASTRODONTA** Albers, 1850.

295. *GASTRODONTA INTERTEXTA* (Binn.). Ontario to Florida, west to southwestern Louisiana and Indiana. A carinated form occurs.

296. *GASTRODONTA ACERRA* (Lewis). Roan Mt., North Carolina, to Montgomery, Ala.; Indian Terr.

297. *GASTRODONTA DEMISSA* (Binn.). Western Pa. to Georgia west to Arkansas and eastern Texas.

297a. *GASTRODONTA DEMISSA BRITTSII* (Pils.). Hot Springs, Ark.

298. *GASTRODONTA CERINOIDEA* (Anth.). Virginia to northern Florida.

299. *GASTRODONTA LIGERA* (Say). Ontario to Michigan, Indian Terr. and Louisiana, south to Virginia and Tennessee.

300. *GASTRODONTA COLLISELLA* Pils. Lookout Mt., Roane, Knox, Monroe and Washington counties, Tennessee; Lexington, Va.

300a. *GASTRODONTA COLLISELLA PERCALLOSA* Pils. Near Chattanooga and Nashville, Tenn.

301. *GASTRODONTA GULARIS* (Say). Mountain region of eastern Tennessee, western North Carolina, northern Alabama and Georgia.

301a. *GASTRODONTA GULARIS CUSPIDATA* (Lewis). Monroe Co., etc., eastern Tennessee; Roan Mt.

302. *GASTRODONTA SUPPRESSA* (Say). Ontario and Michigan to Maryland.

303. *GASTRODONTA MACILENTA* (Shuttl.). Mountains near the Tennessee and North Carolina boundary.

304. *GASTRODONTA LASMODON* (Phillips). Eastern Tennessee, western North Carolina and northern Alabama.

305. *GASTRODONTA ELLIOTTI* (Redf.). Same distribution.

306. *GASTRODONTA INTERNA* (Say). Ohio to northern Florida, chiefly in Tennessee; West Virginia; northern Alabama.

Subgenus **Taxeodonta** Pilsbry, 1898.

307. *GASTRODONTA SIGNIFICANS* (Bld.). Fort Gibson, Indian Terr.; Union Co., Tenn.

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DESCRIPTIONS OF NEW AMERICAN LAND SHELLS.

BY HENRY A. PILSBRY.

Punctum clappi n. sp.

Shell minute, openly umbilicated, yellowish-brown, with depressed, nearly level spire, and cylindroid whorls. Whorls $3\frac{1}{2}$, the earlier $1\frac{1}{2}$ smoothish, finely pitted, the last 1 or $1\frac{1}{4}$ whorls sculptured with elevated laminae running with the increment-lines, 30 to over 40 on the last whorl, the intervals closely striated and showing fine spiral striation; suture impressed, descending in front; umbilicus deep and open, its width contained between $3\frac{1}{3}$ and $3\frac{1}{2}$ times in greatest diameter of shell. Aperture short oval, higher than wide, somewhat oblique, but little excised by the previous whorl.

Alt. 1.1-1.2, greatest diam. 2 mm.

Seattle (Randolph) and Tacoma (Hemphill), Washington; Salem, Oregon (Hemphill).

My attention was called to this form some years ago, but its determination at this time is due to Mr. George H. Clapp, who insisting that the shells were neither *Punctum conspectum* nor *Pyramidula asteriscus*, induced me to review the group.

P. (Planogyra) asteriscus is even flatter above; the umbilicus is wider, one-third the diameter, and more open; the cuticular lamellae are more widely spaced and fewer, 19-25 on the last whorl, and the aperture is relatively smaller.

Punctum conspectum, which also occurs at Seattle, has a much more elevated spire, decidedly narrower umbilicus, less than one-fourth the diameter of the shell, and the aperture is different in shape, wider than high.

On some specimens of *P. clappi* the elevated lamellæ are in part subobsolete.

Dentition not yet examined, so that the species may turn out to be a *Planogyra* rather than a *Punctum*.

Punctum californicum n. sp.

Similar to *P. conspectum* in the small, deep umbilicus and color. Spire somewhat more elevated; whorls fully 4, closely revolving, the last decidedly narrower than in *conspectum* (viewed from above). Surface lusterless, with fine, even, hair-like striation, and in places showing faint traces of spiral striæ. Umbilicus narrow and deep, its width contained $4\frac{1}{3}$ times in greatest diameter of the shell. Aperture wider than high, shaped much as in *P. conspectum*.

Alt. 1.14, greatest diam. 1.85 mm.

Fish Camp, Fresno Co., California.

Gastrodonta (Taxeodonta) lamellidens n. sp.

Shell similar to *G. multidentata*, but larger, with an additional whorl, and instead of radial rows of teeth having partition-like radial barriers, generally three in the young, one, not far within, in the adult shell. Alt. 1.6, diam. 3.7 mm.

Thunderhead, Great Smoky Mts.

This is one of Mr. J. H. Ferriss' finds. It was only obtained in small numbers, but probably is abundant, overlooked on account of the small size. I have not heard of *G. multidentata* being found so far south as this.

Gastrodonta collisella percallosa n. var.

Shell similar to *G. collisella* or a small *ligera* with globose base; having an extremely heavy callus within the outer and basal walls of the aperture, extending about one-third whorl inward; no lamella. Whorls $7\frac{1}{3}$. Size of *G. collisella*.

Mr. Geo. H. Clapp, of Pittsburgh, Pa., when in Philadelphia lately, called my attention to this form. Upon examining the collection of the Academy, two trays of it were found, one set collected by A. G. Wetherby (who also supplied Mr. Clapp's specimens), on the Tennessee river, 3 miles above Chattanooga, Hamilton Co., the other by G. A. Lathrop, at Nashville, Tenn. In correspondence with Mr. Wetherby some years ago, we mutually agreed that the shells were a small, heavily calloused variety of *G. ligera*; but upon reconsideration I am disposed to rank them rather with *G. collisella*.



Wright, Berlin H. 1898. "New varieties of Unionidae." *The Nautilus* 11, 123–134.

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