

Trimorphodon and (?) Phimothyra. Elaps, extending westward to the Gulf of California, has not yet been discovered at the Cape.

No species has yet been found which is common to Cape St. Lucas and the country of Vera Cruz and Jalapa. The genera common to both are *Caudisoma*, *Drymobius*, *Thamnophis*, *Tropidonotus*, *Lampropeltis* and *Phimothyra*; all found also in Texas and the Southern United States.* They form but one-half of the whole number included in the Lucasian fauna.

Genera characteristic of Jalapa, and not known to exist in Lower California, Arizona, or Texas, are *Catostoma*, *Ninia*, *Chersodromus*, *Pliocercus*,† *Stenorrhina*, *Himantodes*, *Bothrops* and *Bothriechis*; all of which, except *Chersodromus*, are represented in South America and intermediate localities. The latter statement is true as regards *Sibon*, *Coniophanes*, and *Spilotes*, which Jalapa shares with Texas, and of Arizona and *Dryophis*, which are found in Sonora. Omitting *Thamnophis* and *Lampropeltis* as common to the two faunas, we find here but one nearctic type (*Tropidonotus*) among the many neotropical.

We know but little of the herpetology of Guatemala west of the Cordilleras. *Caudisoma durissia* is the only serpent yet obtained there, which we suppose to be found in Vera Cruz. The ten known genera are identical, excepting *Loxocemus*, and *Conopsis*. Other genera which have not been found north of Central America, are *Colobognathus*, *Hydrodipsas*, *Hydromorphus*, *Thamnococheilus*, *Dipsas*, *Tomodon*, *Xenodon*, *Scolecophis*, *Oxyrhopus*; the first four are not known to extend into South America. *Trimorphodon*, *Hypsiglena* and *Tantilla*, are the only genera known to be common to the fauna of Central America and that of Lower California, Sonora and Arizona, which may be called the Sonorian.

Comparing this last subfauna with that of Southern Texas, at least five degrees further south, we find that while neotropical genera are to nearctic in the former in an equal proportion, in the latter they are as one to four. Of five genera peculiar to the former region, four have neotropical representatives, none nearctic. No genus is peculiar to the Texan region. *Rhinocheilus*, common and peculiar to the two regions, is nearctic in relationship.

The probabilities are then, that the artificial line separating the neotropical and nearctic groups of faunae must be placed several degrees further north on the west of the Cordilleras than on the eastern coast region. It is also probable that the tropic of cancer, the line proposed by Dr. Günther, will be found to be nearly the true position of its eastern extremity.

List of the Mollusca inhabiting the neighborhood of Philadelphia.

BY W. M. GABB.

Believing that the best way of obtaining an accurate knowledge of the geographical distribution of species, is by the publication of numerous local lists, I have prepared the following catalogue of Mollusca of our neighborhood. Most of the species have been collected by myself this season. I have received valuable information and assistance from several of my friends, all of which is acknowledged at the proper place. I have been careful to point out the principal localities, more especially to assist young collectors.

GASTEROPODA.

MELANIIDÆ.

Melania Virginica Say.—Found everywhere. The specimens from the Schuylkill appear to be somewhat larger than those from the Delaware.

* *Phimothyra grahamiae* has been obtained at Port Mojave, California, by Dr. Cooper, vid. Proc. Cal. Acad. Nat. Sci., 1861, p. 123.

† Is not this *Elapochrus* Peters? A species inhabits New Grenada, and a third (*P. aequalis* Salv.) eastern Guatemala.

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"Finest in the Wissahickon and Schuylkill, above the dam." (Tryon.) *M. multilineata* Say, and the other names, quoted as occurring in this neighborhood, are synonyms of the above.

RISSOIDÆ.

Leptoxis altilis Lea.—Very abundant at Gloucester; also found in the Schuylkill, and in the ditches along Broad street, near League Island.

Ambicola grana.—Fairmount, Wissahickon, near Chestnut Hill, rare in ditches, south Broad street, with preceding.

A. lapidaria (Say sp.)—Under logs in a moist meadow above Red Bank, N. J. This locality was first pointed out to me by my friend, Dr. G. H. Horn, who discovered this species with several others in abundance. On visiting the spot with him, we obtained in about an hour nearly 300 specimens of this, besides other rare shells. I have never seen this shell from any other locality, though Dr. Leidy informed me that he has occasionally seen single individuals.

The habitat of the animal is curious. Belonging to a genus, all the other species of which, as far as I know, are strictly inhabitants of the water, we found this species in a spot where it could not possibly reach water nearer than a hundred yards, and associated with *Helix*, *Succinea*, *Carychium*, *Vertigo*, &c.

A. limosa Say.—Wissahickon, near Chestnut Hill, and Delaware River, below Gloucester. "Schuylkill, above the dam." (Tryon.)

A. fustrica Say.—"Wissahickon, above Chestnut Hill, under stones." (Tryon.)

A. porata Say.—League Island, in ditches; Schuylkill River, at Fairmount; Wissahickon, near Chestnut Hill.

VIVIPARIDÆ.

Vivipara (Paludina) decisa Say.—Most numerous in the Schuylkill, and at the extremity of League Island. Prefers muddy bottoms. Extremely common at all the mill-dams on the Wissahickon. (Tryon.)

V. subcarinata (Say sp.)—Preponderates in the Delaware, especially on the gravelly bottoms of the New Jersey side. Found also in the Schuylkill, but not so common. Very good specimens occur in the Wissahickon. "Kaighn's Point, N. J., very fine specimens." (Tryon.)

VALVATIDÆ.

Valvata tricarinata (Say sp.)—Rare. Found occasionally in the Wissahickon, especially near Chestnut Hill, where it grows quite large. Delaware River, (teste Say.) As far as I am aware, the variety *sincera* has not been seen in this neighborhood. Mr. Tryon, one of the best collectors in the city, says he has never seen it here.

HELICIDÆ.

Succinea ovalis Gld. non Say.—Abundant in the meadow near Red Bank, mentioned above.

S. avara Say.—Near the Falls of Schuylkill; near Manayunk, on the west side of the Schuylkill; near Red Bank, N. J.; "near Germantown, estate of E. K. Tryon." (T.)

Achatina lubrica Mull.—Rare. "Isolated individuals west of the Schuylkill." (Leidy.)

1861.]

Vertigo modesta Gould.—Meadow near Red Bank, rare.

Helix albolabris Say.—“Damp, shady woods and old quarries. I have found them at twelve or fifteen feet elevation on the perpendicular walls of an old quarry, near Germantown.” (Tryon.)

H. alternata Say.—“New Jersey, above Cooper's Point,” (Leidy) and found by Dr. Horn and myself, at various points around the city, especially at “Robison's Knoll,” near the mouth of the Wissahickon, and on the west side of the Schuylkill, in damp places, usually under stones.

H. appressa Say.—“One specimen found near Germantown, on the estate of E. K. Tryon.” (T.)

H. arborea Say.—Common in logs and stumps, under bark.

H. cellaria Müll.—This species is said by Say (under the name of *H. glaphyra*) to have been found in Philadelphia, but I am not aware that it has since been reported by any one else. See Binney, vol. 4, p. 114.

H. chersina Say.—Banks of Delaware, ten miles above Philadelphia, (Phillips teste Say.) “Near Germantown, rare.” (T.)

H. concava Say.—I have found two specimens of this species, both west of the Schuylkill, one below the Columbia Bridge, the other opposite Manayunk. Mr. Conrad tells me that it was once very common west of the city.

H. electrina Gould.—Meadow near Red Bank, abundant. “One of the most numerous species around Germantown.” (T.)

H. fallax Say.—Robison's Knoll, near the mouth of the Wissahickon, abundant; also found common in the woods along the Schuylkill. “Around Germantown, abundant.” (T.)

H. hirsuta Say.—Robison's Knoll and west of the Schuylkill. “One of our commonest species. I obtained 25 from a stump last season, and 50 more from the same stump this summer.” (T.)

H. labyrinthica Say.—East side of Schuylkill, near Falls of Schuylkill village. Common near Germantown. Mr. Tryon says that this species lives more exposed to the sun, and seems to need shade and moisture less than perhaps any others of our native species, resembling, in this respect, the European *Helices*.

H. ligera Say.—Abundant in the meadow near Red Bank, and found occasionally in the woods west of the Schuylkill.

H. lineata Say.—“Near Germantown.” (Tryon.)

H. monodon Racket.—Probably should be considered as identical with *hirsuta* “Germantown, one or two.” (Tryon.)

H. pulchella Müll.—Germantown (Tryon); gardens in Philadelphia (Leidy); found by myself under bark in the woods near the Falls of Schuylkill, and by Dr. Horn and myself near Red Bank.

H. suppressa Say.—Robison's Knoll, mouth of Wissahickon. “Most common of the small species, Germantown,” &c. (Tryon.)

H. thyroideus Say.—“Germantown, plentiful on the estate of E. K. Tryon.” (T.)

LIMACIDÆ.

Tebennophorus Carolinensis Binn.—One specimen found by Dr. Horn and two by myself, north of the city. Exact locality forgotten.

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Limax agrestis Müll.—Common under stones and bark, sometimes in very exposed situations; also in dark woods.

L. campestris Binn.—Generally found with the above. I have found both these species everywhere.

ELLOBIDÆ.

Carychium exiguum.—Meadow near Red Bank.

LIMNÆIDÆ.

Limnæa catascopium Say.—Abundant in the Delaware; also found in the Schuylkill; not uncommon in the Wissahickon.

L. columella Say.—Abundant in standing water, especially in the ditches on and near League Island; in a brick pond west of the Baltimore Railroad Depot, I found it swarming; some specimens from this locality were more than an inch long. I have observed it also in the ditches, and even gutters along the roads in New Jersey, near Camden. Also "abundant in ponds near Germantown." (T.)

L. decidosia Say.—Everywhere. Germantown (Tryon), Wissahickon, Schuylkill, League Island, but most rarely found in the rougher waters of the Delaware. This, with the *L. columella*, appear to prefer still and even semi-stagnant water, while the other two species are rarely found but in the larger streams, and generally on a sandy or gravelly bottom. Mr. Tryon thinks this is the most common species of the genus in this neighborhood.

L. fragilis Say.—This shell, if it is at all distinct from *L. catascopium*, is always found in the same localities. I have collected it principally in the Delaware, below Gloucester. I cannot see where the line is to be drawn to separate this from the more elongated varieties of the other.

Physa heterostropha Say.—Occurs in almost every body of water about Philadelphia. It is the most abundant shell of our vicinity. I cannot find any data on which to recognize the species *P. ancillaria*. I have taken hundreds of the *Physas* of our waters, and tried to draw some line to separate the two species; the height of the spire, the width of the mouth, the shoulder of the body whorl, all take such an infinity of forms, that, although I acknowledge to not having examined the animals of the two typical forms, yet, from the data before me, I am satisfied that these two so-called species cannot be separated on any characters based on the shells.

Planorbis armigerus Say.—"Wissahickon, rare." (T.)

P. bicarinatus Say.—Found almost everywhere, especially in the Delaware. Very abundant in the Schuylkill and its tributaries.

P. deflectus Say.—Beach at Gloucester; ditches, South Broad St. near League Island.

P. exacutus.—Wissahickon, near Chestnut Hill and brick ponds west of the Baltimore depot.

P. lentus Say.—"Delaware, and Haines' Pond, 1½ miles from Germantown. Very rare." (T.)

P. parvus Say.—I have only found this species at Gloucester. "Ditches, South Broad St." (Tryon.)

P. trivolvis Say.—Common in the Delaware, more rare in the Schuylkill. "All the ponds around Germantown, but always rarer than *bicarinatus*." (T.)

Ancylus rivularis? Say.—On stones in the Schuylkill, above the dam. Rare in the Wissahickon. I am not quite positive about the identification of 1861.]

this species, after a comparison with the original of the figure in Haldeman's monograph. It corresponds more nearly with this species than any other however, and I have yielded to the opinion of Mr. Tryon, who thinks this to be the species.

CONCHIFERA.

CYRENIDÆ.

Sphaerium sulcatum Lam. (*Cyclus similis* Say.)—Wissahickon; Delaware, opposite the city, and in the ditches of League Island, where the finest specimens are found. Also, more rarely, in the Schuylkill. "A very small species of *sphaerium* is found in Tryon's pond." (Tryon.) See Hartman's Cat. Shells of Chester Co.

Pisidium abditum Say.—Generally found with *S. sulcatum*, but more rare.

UNIONIDÆ.

Unio cariosus Say.—Most abundant about Gloucester. "Very common at Bristol and Tacony, and in the canal through Smith's Island." (T.)

U. complanatus Lea.—Everywhere. The best specimens are found at the extremity of League Island, and in the still waters of the Schuylkill. On gravelly bottoms the beaks are often very much worn. I found one specimen at the lower end of Peter's Island, in the Schuylkill, with two lateral teeth in each valve. "Very fine specimens at Kaighn's Point." (Tryon.)

U. Fisherianus Lea.—I discovered one specimen of this shell in the Schuylkill above Girard Avenue bridge. This is the only occasion, I believe, on which it has been seen so far north.

U. heterodon Lea.—Rare. Schuylkill below the Fairmount dam, (Lea.) Mr. A. J. Schaffhirt found it on one occasion above the dam. "Darby Creek" Lea.

U. nasutus Say.—Everywhere. The principal localities are Gloucester, the Schuylkill river above the dam at Fairmount, and the extremity of League Island. At the latter place the largest individuals are found, and those from Gloucester sometimes exhibit the colored rays. "Little Perkiomen Creek, with a dark brown epidermis and more ponderous than usual." (Tryon.)

U. ochraceus Say.—More abundant at Gloucester than elsewhere, but occasionally found in the Schuylkill and Wissahickon. "There is no place where this shell attains such perfect magnificence as at League Island." Tryon.

U. radiatus Lam.—Same as the preceding species. "Very good specimens at League Island." (Tryon.)

U. Tappanianus Lea.—Is an inhabitant of the Schuylkill River, and may possibly be found near the city.

Margaritana undulata Lea.—Comparatively common in the Schuylkill and Wissahickon. Occasionally met with in the Delaware. "Magnificent, though rare, in the head waters of Frankford Creek, on the North Pennsylvania Railroad." (T.)

M. rugosa Say.—"Same locality." (T.)

Anodonta fluviatilis Lea.—Fine specimens occur in a dam on Mill Creek, at a place called Mill Town, two miles above Frankford. Not common in the Wissahickon or Schuylkill, but abundant at the extremity of League Island in the ditch and in the river. Also abundant at Gloucester. "Robert's Pond, 22d Ward; Wingohocking Creek and Silver Lake, near Germantown, at the latter place specimens have been taken $4\frac{1}{2}$ inches wide." (T.)

A. implicata Say.—Gloucester, Newtown Creek and League Island.

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