

which is a lasidium. In *Spatha* there are no, or hardly any, hinge teeth, and they are surely *not* taxodont. The embryo is unknown to me. Yet the above characters of the soft parts fully justify the separation of this genus from the North American *Unionidae*, and I do not hesitate to affirm, that *Spatha* should stand in a different family, which may be called *Mutelidae*, if the genus *Mutela* should prove to be allied in the structure of the soft parts. Whether the other genera placed by Simpson in this association actually belong here, remains to be investigated.

DESCRIPTION OF A NEW SPECIES OF TRUNCILLA.

BY BRYANT WALKER.

TRUNCILLA LEWISII n. sp. Pl. III, figs. 3, 4, 5.

Male shell quadrate, subcompressed; thick, solid; dark reddish-yellow, with faint, radiating lines of green; beaks laterally compressed, eroded, but apparently only slightly elevated above the hinge-line, sculpture not seen; anterior end regularly rounded, forming an obtuse angle at its junction with the basal emargination, which is nearly straight; dorsal line curved; posterior end slightly emarginate and terminating in a broad biangulation, which projects slightly beyond the posterior and basal lines; a broad, flat groove extends from the beaks to the basal emargination, widening and deepening as it approaches the base; posterior ridge prominent, rounded towards the beak, but becoming flattened and obsoletely biangulated as it approaches the posterior end; immediately in front of the median groove, there is a strong anterior ridge, which becomes more pronounced as it approaches the base, where it terminates in the angle at the anterior end of the basal emargination, it is more or less roughened by the accentuation of the lines of growth, which elsewhere on the disk are not very strongly developed; dorsal slope concave behind the posterior ridge; interdentum rather long, narrow, rounded and parallel with the hinge; pseudo-cardinals in the left valve, two, the anterior very narrow, straight, directed obliquely forwards and slightly widening towards the anterior end, the posterior triangular, the space between them triangular and extending to the hinge; in the right valve, two, the anterior smaller, but well developed, the posterior long, triangular, the space between them

narrow, direct and extending separated from the interdentum obliquely downward from the one in the right, large and impressions large and deep, the rather long and narrow, below anterior retractor impressions cardinal; posterior adductor in the posterior retractors small, adductor and immediately below of the beaks shallow; narrow

The female shell is thinner, anteriorly wider, the posterior ridge is not so strongly developed; the posterior line is strongly emarginate noted in the margin produced beyond the basal line in the anterior expansion, is of a similar shape to the shell, being thin and dark green in the anterior expansion and the posterior ridge

Length (male) 43; height 31.

Length (female) 51; height 31.

Types (No. 15612 Coll. Walker) (ex Lewis Coll.). Also from Cumberland River, Port Burns River, Knox Co., Tenn. (Anders)

This species, while closely related to *foliata*, was referred by the original collector to a much larger and heavier species from the Ohio and Wabash rivers, while the species from the Cumberland River and Tennessee drainage given above is remarkably conspecific with *foliata*, sides being uniformly smaller, the anterior expansion, which is triangular in *foliata*, is triangular in the extremity and of a different texture as the remainder of the shell.

It is named in memory of the collector, R. J. Lewis, N. Y. (whose collection has been deposited in the

there are no, or hardly any, hinge dent. The embryo is unknown to of the soft parts fully justify the North American *Unionidæ*, and I *Spatha* should stand in a different *mutelidæ*, if the genus *Mutela* should are of the soft parts. Whether the n in this association actually belong

NEW SPECIES OF TRUNCILLA.

WALKER.

l. III, figs. 3, 4, 5.

pressed; thick, solid; dark reddish-lines of green; beaks laterally com-ly only slightly elevated above the anterior end regularly rounded, form-on with the basal emargination, which curved; posterior end slightly emar-broad biangulation, which projects and basal lines; a broad, flat groove the basal emargination, widening and the base; posterior ridge prominent, at becoming flattened and obsoletely the posterior end; immediately in front is a strong anterior ridge, which be-approaches the base, where it terminates d of the basal emargination, it is more situation of the lines of growth, which very strongly developed; dorsal slope dge; interdentum rather long, narrow, the hinge; pseudo-cardinals in the left narrow, straight, directed obliquely g towards the anterior end, the poste-reen them triangular and extending to e, two, the anterior smaller, but well , triangular, the space between them

narrow, direct and extending to the hinge-line, the posterior tooth is separated from the interdentum by a deep groove; lateral teeth bent obliquely downward from the hinge-line, two in the left valve and one in the right, large and nearly straight; anterior adductor im-pressions large and deep, those of the protractor-pedis well marked, rather long and narrow, below and slightly behind the adductor; anterior retractor impressions small and on the base of the pseudo-cardinal; posterior adductor impressions large, semicircular; those of the posterior retractors small, but well impressed, above that of the adductor and immediately below the end of the lateral tooth; cavity of the beaks shallow; nacre white.

The female shell is thinner than that of the male and proportion-ately wider, the posterior ridge being more oblique and more ex-extended; the posterior line is straight or slightly curved, without the emargination noted in the male; the anterior ridge is greatly pro-duced beyond the basal line in a triangular prolongation and this, the marsupial expansion, is of a different texture from the rest of the shell, being thin and dark green as in *T. capsæformis*; between this expansion and the posterior ridge, the base is deeply emarginate.

Length (male) 43; height 37; diam. $22\frac{1}{2}$ mm.

Length (female) 51; height $49\frac{1}{2}$; diam. 25 mm.

Types (No. 15612 Coll. Walker), from the Holston River, Tenn. (ex Lewis Coll.). Also from the Clinch River, Tenn. (Lewis); Cumberland River, Port Burnside, Ky. (Wetherby) and the Holston River, Knox Co., Tenn. (Andrews).

This species, while closely related to *T. foliata* Hild., to which it was referred by the original collectors, is clearly distinct. *Foliata* is a much larger and heavier species and is apparently confined to the Ohio and Wabash rivers, while *lewisii* is restricted to the Cumber-land and Tennessee drainage systems, and from all the localities given above is remarkably consistent in its peculiar features. Be-sides being uniformly smaller, more delicate and smoother than *foliata*, it is specially characterized by the difference in the mar-supial expansion, which is triangular and comparatively narrow at the extremity and of a different texture from the body of the shell. In *foliata*, this expansion is broadly rounded and is of the same texture as the remainder of the valve.

It is named in memory of the late Dr. James Lewis, of Mohawk, N. Y. (whose collection has furnished the types), who was a con-

chologist far in advance of his contemporaries and through whose endeavors, a very large part of the fauna of Eastern Tennessee was first made known.

SHELL COLLECTING IN PUGET SOUND AND ALASKA.

BY DR. FRED BAKER, SAN DIEGO, CAL.

(Concluded from p. 31.)

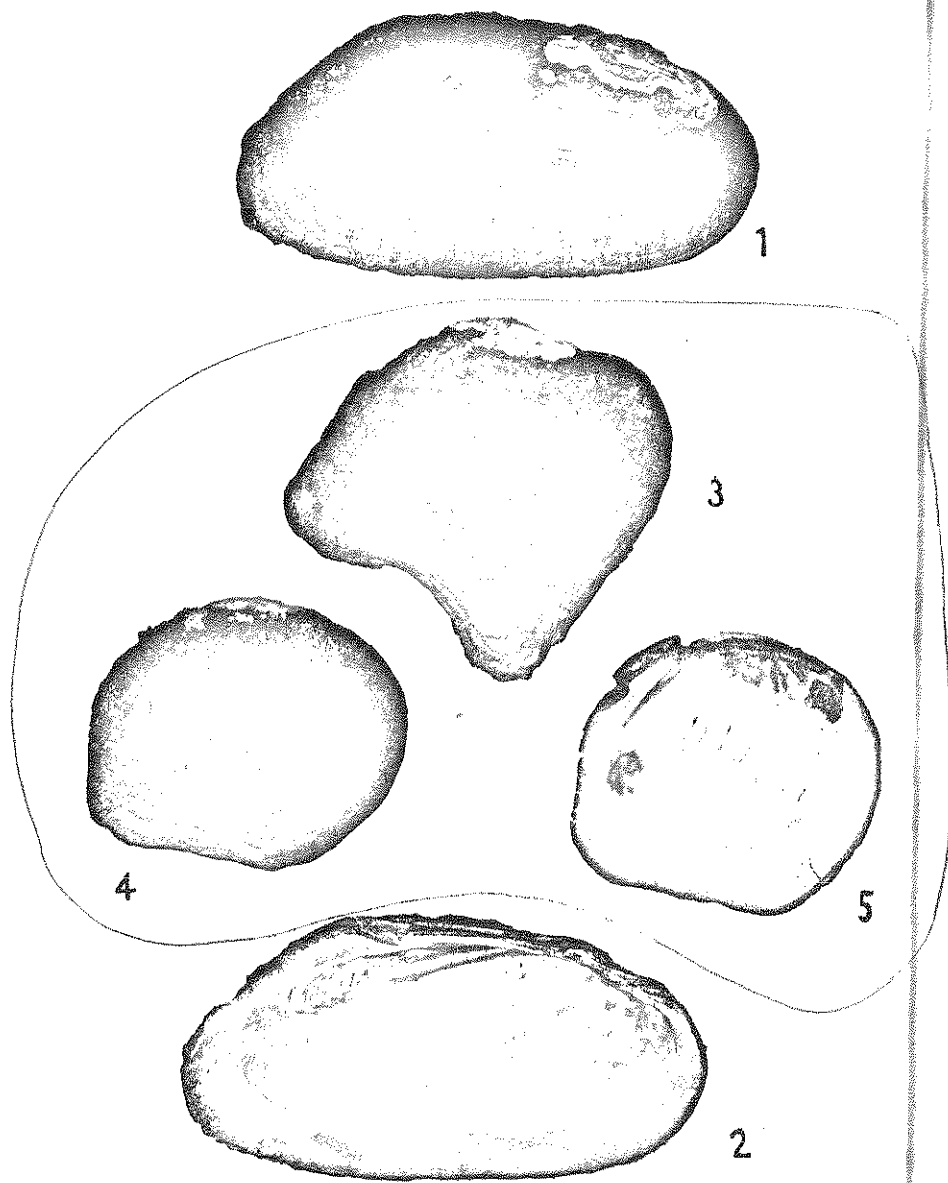
- Turbonilla (*Strioturbonilla*) *vancouverensis* Baird. Orcas Island.
 Odostomia (*Evalea*) *cookeana* Bartsch. sp. nov. Ellamar.
 Odostomia (*Evalea*) *amchitkana* D. & B. Ellamar.
 Odostomia (*Amaura*) *avellana* Cpr. Shore, Orcas Island.
 Odostomia (*Evalea*) *deliciosa* D. & B. Ballard Beach.
 Odostomia (*Evalea*) *inflata* Cpr. Orcas Island.
 Odostomia (*Evalea*) *valdezi* D. & B. Orcas Island.
 Littorina *groenlandica* Mörch. Seward.
 Littorina *scutulata* Gld. All points visited except Port Graham.
 Littorina *sitchana* Phil. All points visited.
 Lacuna *porrecta* Cpr. Orcas Island, Sucia Island.
 Lacuna *solidula* Lovén. Ellamar.
 Lacuna *vineta* Mtg. Ballard Beach, shore Orcas Island, Ellamar.
 Bittium (*Stylidium*) *eschrichtii* Midd. Dredged and on shore, Orcas Island.
 Alvania *bakeri* Bartsch. sp. nov. Port Graham.
 Onoba *asser* Bartsch. sp. nov. Port Graham.
 Mölleria *quadrae* Dall. Port Graham.
 Calliostoma *annulatum* Mart. Orcas Island, rather common.
 Calliostoma *costatum* Mart. Dredged and on shore Sucia and Orcas Island.
 Calliostoma *variegatum* Cpr. Orcas Island, 4 fine live specimens.
 Margarites *albulus* Gld. Port Graham.
 Margarites *livulatus* Cpr. Shore, Orcas Island.
 Margarites *pupilla* Gld. Ballard Beach, dredged and on shore, Orcas Island.
 Leptogyra *alaskana* Bartsch. sp. nov. Port Graham.
 Haliotis *kamtschatkana* Jonas. Near Ketchikan, Alaska. (Purchased.)
 Puncturella *cooperi* Cpr. Orcas Island.

Puncturella
 Acmaea mit
 Acmaea pel
 Graham.
 Acmaea pa
 Seward.
 Acmaea pa
 Ellamar, Sew
 Cryptobran
 Seward, Port
 Lepidopleur
 Tonicella li
 Seward.
 Tonicella su
 Ischnochitor
 Ischnochitor
 Ischnochitor
 Trachyderm
 Trachyderm
 Trachyderm
 Mopalia acu
 Mopalia cili
 Mopalia mu
 Mopalia mu
 Mopalia mu
 Cryptochitor
 Tornatina e
 Cylichna all
 Haminea ve
 Dentalium r
 haul.
 Saxicava are
 Mya arenari
 Mya arenari
 men; Port Gr
 Mya truncat
 Cryptomya c
 Pandora (Ke
 Pandora (K
 specimens.

THE

Vol. XXIV.

PURPURA



WALKER: NEW SPATHA AND TRUNCILLA.

In the following not generic term *Thais* in pl

THAIS Plicata Mart.

The species usually of America was first named in figures in Martyn's *Unfoliated form*, one being all brown. *Buccinum lpositum* (Chem.) Desh.

Polypi copies of them. *Polypi* form with white should

Murex ferrugineus Esch

Esch. 1829 (not Bolt.), i T. p. VAR. SEPTENTRI pl. 10, f. 50, is a name for longitudinal foliation.

THAIS LIMA Mart. 1789.

Buccinum lima Mart

costæ. It has the following 1839, *Purpura attenuata*

1849, *Purpura analoga* 1851; the latter name is f

THAIS EMARGINATA Desl

Purpura emarginata D