

Simpson

THE NAUTILUS.

...ile it contains such rarities as *Cypræa* ...
...mens of *C. guttata*, large suites of *C.*
...*ata* and very large and handsome series

Both collections are still in cabinets
exhibited.

exhibition in the Liverpool, or Derby
...ugh not large, is exceptionally fine, and
...are in its selection. A few species or
...allied to living mollusks are incorpora-
...resting features of the museum are its
...ter and marine mollusks may be seen
...s of Mr. Joseph A. Clubb, Assistant
...pleasant hours in going over these col-

CHAS. W. JOHNSON.

SEA DEPARTMENT.

[Lea Conchological Chapter of the Agassiz Associa-
...urton Williamson.]

...ling a number of our members engaged
...es. We anticipate some fine reports

...ira N. Trowbridge has been changed
...National City, San Diego County, Cal.

THE SOUTHERN CALIFORNIA COAST.

[D. G. Campbell. From the Transactions of the
...1895.]

...one in San Pedro Bay and vicinity.
...I had not strength to go.

...rary at Dead Man's Island have found
...*ulium* (*Pomaulax*) *undosus* Wood and

...ecting Dead Man's Island with Termi-
...t., *A. spectrum* Nutt., *Littorina planaxis*
...were very plentiful. At extreme low
...beach along the northern part of the

breakwater, I found numerous bright, perfect (dead) specimens of
Calliostoma gemmatum Cpr., *Modiola recta* Conr., *Scala hindsi*
Cpr., *Siliqua patula* Dixon (small specimens), *Solen rosaceus* Cpr.
and *Fissurella volcano* Rve., while the occasional finding of a pretty
Calliostoma gloriosum Dall, *Erato vitellina* Hds., *Mitromorpha filosa*
Cpr. or *Actæon* (*Rictaxis*) *punctocælatus* has marked the day.

During the low tides of the last month (November), alive upon
the rocks at White's Point we found a few fine specimens of *Mitra*
maura Swains., and *Gadinia reticulata* Sby. The under side of
some of the large stones there were covered with *Astyris gausapata*
Gld. var. *carinata*, which little animals would move off at such rapid
pace that it required lively movements to capture them. With the
Astyris were a few *Scala Hindsi*.

In the vicinity of Laguna near Three Arches, among *Mytilus cali-*
formicus Conr., *Purpura lima* Mart. var. *emarginata* Desh. were
very plentiful, some of them larger than I had seen before. There
was also one nice living *Cypræa spadicea* Gray. Upon the beach
sand were several bright, large specimens of *Trivia solandri* Gray.
These were dead, as were all but one of *Muricidea incisa* Brod.,
which were quite plentiful. *Macron lividus* A. Ad. was there, too,
living upon the under side of large stones.

At Catalina on the Main, upon the beach, were several specimens
of *Chrysodomus* (*Kellettia*) *Kelletti* Fbs., which had been brought in
by fishermen. But the "find" which I appreciated most was that
of a "baker's dozen" of living *Semele rupium* Sby., upon the rocks
above extreme low tide, at a place about one mile and a half west of
Laguna.

NOTES ON THE PARVUS GROUP OF UNIONIDÆ AND ITS ALLIES.

BY CHAS. T. SIMPSON.

Mr. R. Ellsworth Call, so well known as an able student of the
American *Unionidæ*, has recently published a revision and synon-
omy of the *Parvus* group of *Unionidæ*,¹ and I wish to call attention
to certain points in the paper.

The *Parvus* group is, in general, well characterized, consisting of
small *Unios*, with brownish to blackish epidermis, rayless or feebly-

¹ Proc. Indiana Acad. Science for 1895, pp. 109-119, plates I-VI.

rayed posteriorly, usually somewhat pointed behind, the females distinguished from the males by a well-developed basal swelling, and the beak sculpture consisting of parallel, curved ridges, which are drawn in towards the hinge-line posteriorly, and are more open anteriorly. The cardinals are usually compressed, often torn and reflected upwards, and the nacre is generally brilliant bluish-silvery, becoming richly iridescent behind, but it is sometimes purple. The peculiar beak sculpture, much like that of the *Tetralasmus* group, is one of the best characters when not eroded away.

Mr. Call is right in his criticism on my paper on the *Unionidae* of Florida, in which I placed *Unio trossulus* Lea and *U. lepidus* Gould in the *Parvus* group. At the time of writing that paper I had carefully examined all of Lea's material, all the general collection of the National Museum, much of B. H. Wright's, Mrs. George Andrews', Wm. A. Marsh's, Rev. A. Dean's and my own collection of Florida and Georgia Unios of this general type, but had not found a specimen old or young that showed the beak sculpture. Recently, in examining some specimens of *U. amygdalum* in Mr. A. G. Wetherby's collection, from Clear Lake, Florida, I noticed that the beak sculpture was perfect, and consisted of a *double loop*, hence they cannot be placed in the *Parvus* group. I may remark, in passing, that having seen Gould's type of *U. lepidus*, I should unhesitatingly pronounce it the same as Lea's *amygdalum*.

Unfortunately, Mr. Barnes' description of *Unio parvus*² is very brief and imperfect, and the only figure he gave of it is an outline. Much confusion exists concerning this species, and it is often confounded with *Unio texasensis*; in fact, Mr. Lea himself has placed a lot of specimens of the latter species from northern localities among the *parvus* in his own collection. *Unio texasensis* certainly extends into southern Indiana and Illinois, and well north into Missouri and Kansas. In general, *U. parvus* is smaller than *U. texasensis*, is more inflated and cylindrical, rather more elongated, and has a much more evenly rounded posterior region. The latter is almost always distinctly pointed behind.

I cannot agree with all of Mr. Call's synonymy. I have all of Lea's types of this and related groups before me. *U. marginus* Lea, and *U. cromwelli* Lea, are probably the same, and are, no doubt, members of the *Parvus* group, but are widely different from *U. parvus*, in which he places the former, as they are shorter, less inflated,

² Am. Jl. Science and Arts, VI, 1823, p. 174, pl. XIII, fig. 18.

and have a copper-tinted nacre. *U. paulus* Lea are very likely the same species, but I show the synonymy of *U. parvus* as Mr. Call does.

U. visicularis Lea, of which I have before specimens on which the species was founded *parvus*. Both these specimens are dead shells and in poor condition, but they are nearer to any of the *Parvus* group, and probably are heavy, light-brown variety of that species. smooth, shining, yellowish or waxy-brown shell and rayed with green, and very different from *minor* seems to me to be more nearly related to *U. parvus*, under which Mr. Call places it.

Unio haleianus Lea is not noticed in this *parvus* group, although it should undoubtedly be included in the assemblage. It is the largest of the species, of which I have before me being 2¼ inches long by 1½ high, and *ensis*, but is a less heavy species.

NOTES AND NEWS.

MEXICAN LAND SHELLS.—Professor T. D. Cresson has sent me a few land shells collected at San Ra-
Cruz, by Professor C. H. T. Townsend. The

Helicina flavida Mke. Wonderfully variable in color, some uniform yellow with red apex; others uniform whitish with the spire red, or whitish below, and some specimens are girt with a reddish band above and whitish ground. The size also varies considerably.

Glandina? A species of the *decussatus* group. *Volutaxis similaris* Strebel. Somewhat larger than *7* mm.

Praticolella griseola Pfr.

Praticolella ampla Pfr. This *Helix* looks like *laris* Fér.

Bulimulus sulphureus Pfr. Besides the ordinary form there is one example with five reddish bands, the latter continuous, those above interrupted into square intervals. This color-form has not before been

what pointed behind, the females displaying a well-developed basal swelling, and a series of parallel, curved ridges, which are more open line posteriorly, and are more open and usually compressed, often torn and irregular. The color is generally brilliant bluish-silvery, but it is sometimes purple. The form is like that of the *Tetralasmus* group, but is not eroded away.

Reference is made in my paper on the *Unionidae* of the *Unio trossulus* Lea and *U. lepidus*. At the time of writing that paper I had not seen Lea's material, all the general collection of B. H. Wright's, Mrs. George Dean's and my own collection of this general type, but had not seen a specimen that showed the beak sculpture. I had specimens of *U. amygdalum* in Mr. A. Clear Lake, Florida, I noticed that it consisted of a double loop, hence it is not in the *Parvus* group. I may remark, in connection with the type of *U. lepidus*, I should name it as Lea's *amygdalum*.

The description of *Unio parvus*² is very good, the figure he gave of it is an outline. In describing this species, and it is often confusing in fact, Mr. Lea himself has placed a number of species from northern localities among the *Unio texasensis* certainly extends to the north, and well north into Missouri and Illinois. *Unio texasensis*, is more elongated, and has a much larger beak. The latter is almost always

as in Mr. Call's synonymy. I have all of the groups before me. *U. marginus* Lea, is probably the same, and are, no doubt, but are widely different from *U. parvus*, as they are shorter, less inflated,

23, p. 174, pl. XIII, fig. 18.

and have a copper-tinted nacre. *U. paulus* Lea and *N. corvinus* Lea are very likely the same species, but I should not place them in the synonymy of *U. parvus* as Mr. Call does.

U. vesicularis Lea, of which I have before me the two original specimens on which the species was founded, is certainly not *U. parvus*. Both these specimens are dead shells, very badly eroded and in poor condition, but they are nearer to *U. amygdalum* than any of the *Parvus* group, and probably are merely a somewhat heavy, light-brown variety of that species. *Unio singleyanus* is a smooth, shining, yellowish or waxy-brown shell, sometimes tinted and rayed with green, and very different from *U. parvus*. And *U. minor* seems to me to be more nearly related to *U. vesicularis* than to *U. parvus*, under which Mr. Call places it.

Unio haleianus Lea is not noticed in this revision of the *Parvus* group, although it should undoubtedly be placed with that assemblage. It is the largest of the species, one of Lea's specimens before me being 2½ inches long by 1½ high, and is nearest to *U. texasensis*, but is a less heavy species.

NOTES AND NEWS.

MEXICAN LAND SHELLS.—Professor T. D. A. Cockerell has sent to me a few land shells collected at San Rafael, Jicaltepec, Vera Cruz, by Professor C. H. T. Townsend. The species are:

Helicina flavida Mke. Wonderfully variable in color. Some are uniform yellow with red apex; others uniform reddish; others whitish with the spire red, or whitish below, red above, while some specimens are girt with a reddish band above the periphery, on a whitish ground. The size also varies considerably.

Glandina? A species of the *decussatus* group, not adult.

Volutaxis similis Strebel. Somewhat larger than the type, alt. 7 mm.

Praticolella griseola Pfr.

Praticolella ampla Pfr. This *Helix* looks a good deal like *similis* Fér.

Bulimulus sulphureus Pfr. Besides the ordinary unicolored form, there is one example with five reddish bands, the umbilical and basal continuous, those above interrupted into squarish spots at irregular intervals. This color form has not before been noticed.—H. A. P.