

resulted in finding 19 good specimens and a number of dead and broken ones, the latter looking as if some small rodent had broken them to get the animal for dinner. This shell has been named and described by Dr. Pilsbry in the NAUTILUS, Vol. 22, page 138, as *Cælocentrum hinkleyi*. At the base of the bluffs the walking was good to what it had been below, and here are found *Macroceramus mexicanus*, *Holospira hinkleyi*, *Schasicheila hydalgoana*, *Streptostyla gracilis*, *Streptostyla supracostata*, *Helicina panattæ* and a few dead *Englandina corneola* and *Englandina oblonga potosiana*; also a few specimens of a number of other species.

On the 8th of February the same bluffs were again visited. This time an early start in the morning put the writer on the ground before the sun made the climb uncomfortably warm. The entire day was put in around the bluffs and resulted in near fifty good specimens of the fine *Cælocentrum*, but no additional species were added to the first half-day's work.

During the day a nest of small bees was encountered. This nest was made of the same material as our hornets' nests; it was trumpet-shaped, big end up, and stood at an angle from the rock to which it was attached. Being open, the bees could be seen within; they resented the presence of a stranger by buzzing about my face, but made no attempt to sting.

Standing on an elevated point of rock, which was reached after a little climb, a good view of the valley was before me. Through this valley the Mexican Central Railroad passes in nearly a straight line. The valley is cut up into small farms, occupied mostly by people from the United States who are clearing the land and planting sugar-cane, orange trees, bananas, and growing some vegetables, making homes for themselves in this mild southern country.

A COMPARISON OF THE UNIONIDE OF THE PEARL AND SABINE RIVERS.

BY L. S. FRIERSON.

A collection of Unios from the Pearl River, at Jackson, Miss., made by Mr. A. A. Hinkley, proves of remarkable interest, when compared with the Unios of the Sabine River, Texas; these two rivers being so far apart, and separated by the immense "bottom" of the Mississippi, which area has, in large part, a different set of inhabitants.

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Pearl River.

1. Anodontoides,
2. Gracilis,
3. Cornutus,
4. Aspera,
5. Perplicata,
6. Trapezoides,
7. Heros,
8. Purpurata,
9. Confragosa,
10. Donaciformis,
11. Elegans,
12. Tuberculata,
13. Castaneus,
14. Riddelii,
15. Cerinus,
16. Concestatator,
17. Inflata,
18. Excavata,
19. Claibornensis,
20. Beadleana,
21. Refulgens, }
22. Sphaerica, }
23. Ebenus,
24. Crassidens,
25. Compladata.

Sabine River.

- Anodontoides,
- Gracilis,
- Cornutus,
- Aspera,
- Perplicata.
- Trapezoides,
- Heros,
- Purpurata,
- Confragosa,
- Donaciformis,
- Elegans,
- Tuberculata,
- Castaneus,
- Riddelii,
- Cerinus,
- Nigerrimus,
- Amphichæna,
- Satur,
- Hydiana,
- Askewii,
- { Nodifera,
- { Mortonii,

Notwithstanding the absolute identity of the first fifteen species,
 yet there is a well-marked *tribal* difference between the two sets,
 the Pearl river *U. heros* being nearly full-blooded *boykiniana*, and
 with a *yellow nacre*.

The *U. riddelii* of Pearl river inclines towards *rubidus*, some being
 of a warm, rich rose color. These Pearl river shells vary also in
 having the successive lines of growth so heavily impressed that the
 shell sometimes has *humps* as well defined as in the well-known *U.*
dromas Lea.

Perhaps the most interesting feature, however, lies in the list
 where the species differ:

U. concestatator vs. *nigerrimus*. Large suites of both show their
 identity, with only slight differences. *U. nigerrimus* is only a variety
 of *concestatator*.

U. excavata vs. *satur*. These two are the same species!

U. satur is not, strictly speaking, a variety of *ventricosa*, but because of priority it is a good species, and *excavata* becomes a synonym!

U. claibornensis vs. *hydiana*. The greatest difference existing here is the lack of rays in *claibornensis*.

U. beadleana,
U. chickasawensis } vs. *Askewii*. These three species are identical,

the varietal differences being no more than the different habitats should demand.

Proptera inflata vs. *amphichæna*. A suspicious piece of evidence is to be noted in the fact that where one of these species is found, there is a lack of *P. lævissima*!

However, *amphichæna* has no wing, even when young and perfect.

U. refulgens and *sphaericus*. These two species are identical and form a well-marked subspecies characterized by purple naere.

U. ebenus and *crassidens* do not grow in the Sabine.

Margaritana complanata is by this find considerably extended down South. They were gravid when taken in November.

PLANORBIS BICARINATUS AND PLEURODONTE ANGULATA.

BY E. G. VANATTA.

Some recent studies have shown that the nomenclature of these species is somewhat intricate, and an examination into their history proves that the names in current use cannot be held.

The records bearing on the question follow.

PLANORBIS BICARINATUS Lamarck.

In the *Ann. du Mus. Hist. Nat. Paris* V, p. 36, 1804, Lamarck describes a fossil under the name *Planorbis bicarinata*, which was figured on plate 62, fig. 3 of the *Annales du Muséum* viii, 1806. It was also described in *Animaux sans Vertèbres Supp.*, vii, p. 542, 1822. Deshayes in the *Anim. s. Vert. Bassin, Paris*, ii, p. 438, 1864, placed this species in *Adeorbis*.

PLANORBIS BICARINATUS Say (not Lam.)

In the Third American Edition of Nicholson's *British Encyclopedia*, Philadelphia, 1819, *Conchology*, pl. 1, f. 4, Say, described

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