

the latter it differs in its shorter dorsal line, more pointed posterior, red ligament and greater length. It has the outline of *U. Genthii* Lea but it is darker, rayless and the teeth are heavier, the single lateral being uniformly tapered off to its posterior end instead of ending abruptly. Twelve specimens were taken along with *U. succisus (cacao)* Lea, *U. incrassatus* Lea, var. *boykinianus* Lea and *neissleri* Lea, var.

We name it in honor of our esteemed friend, Dr. W. S. Strode, of Lewiston, Ill.

U. cylindricus Say, var. *strigillatus* nov.

The chief distinguishing characters of this variety are: Much more compressed, sculptured throughout, and lateral teeth widely diverging and curved downwards. The umbonal ridge is very low and broad, and fluted with elongated, divergent, flattened elevations. Nacre usually pink.

Habitat: Clinch River, Lee Co., Va. Type in National Museum.

Remarks: A large number of these shells was received several years ago from Mr. J. F. Sword, of Jonesville, Va., and sent out under Mr. Say's name. Recently several young ones were found which convinced me of their varietal value, indicating a connecting link with *U. tuberculatus* Barnes.

ISAAC LEA DEPARTMENT.

[Conducted in the interest of the Isaac Lea Conchological Chapter of the Agassiz Association by its General Secretary, Dr. W. S. Strode].

INTERGLACIAL SHELLS AT TORONTO, CANADA.

[Extract from the report of James H. Lemon. From the Transactions of the Isaac Lea Conchological Chapter for 1897.]

The most interesting deposit from a conchological standpoint is found at Taylor's Quarry on the banks of the Don River, a mile northeast of the city of Toronto. At this point a good section of the Drift has been exposed. The underlying rocks are Hudson River shales belonging to the Silurian period, rising about 30 feet above the bed of the river. They are immediately covered by a layer of till three feet thick, and which fills in all irregularities of the underlying shale. The fossils are found in a few inches of clay

Lemon

just above this till. Dr. Cole collected and sent a number Simpson, who identified them as *pustulosus*, *U. pustulosus* var. *U. undulatus*, *U. rectus*, *U. t*

Besides these a number *Pleurocera subulare*, *P. elevata*, *carinata*, *Campeloma decisum*, *Sphaerium*, etc.

A peculiar fact is the corals and *Physa*, shells which of the Don. Of the 10 species Mr. Simpson only *U. luteolus*, *Unio phaseolus* and *U. undulatus* in Lake Erie, but not in L.

Three of the species, *Unio* not found to-day in the St. Lawrence confined to the Mississippi

The presence of the Mississippi climate existing during the more southern than it is to-day out by the nature of the plain

Along the shores of Lake Erie line of cliffs known as Scarboro deposits. Only a very few of the beds are very rich in fossils

The deposits along the shore of Lake Erie interesting results in the study

QUATERNARY FOSSILS

[Excerpts from

One day in April, 1896 Signal Hill, which lies on the east side of the hill runs a road called.

While climbing up in the morning on either side literally fill the lower species, viz.: *Nas*

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just above this till. Dr. Coleman, of the School of Practical Science, collected and sent a number of the species to Dr. Dall and C. T. Simpson, who identified them as follows: *U. phaseolus*, *U. clavus* *U. pustulosus*, *U. pustulosus* var. *schoolcrafti*, *U. occidentis* (?), *U. luteolus*, *U. undulatus*, *U. rectus*, *U. trigonus* and *U. solidus*.

Besides these a number of other shells have been found, viz.: *Pleurocera subulare*, *P. elevatum*, *Goniobasis*, *Valvata sincera*, *V. bicarinata*, *Campeloma decisum*, *Ammicola*, *Physa*, *Planorbis*, *Pisidium*, *Sphaerium*, etc.

A peculiar fact is the comparative rarity of *Campeloma*, *Planorbis* and *Physa*, shells which are very abundant to-day in the waters of the Don. Of the 10 species of *Unios* identified by Dr. Dall and Mr. Simpson only *U. luteolus* and *U. rectus* are found here to-day. *Unio phaseolus* and *U. undulatus* have been found in small numbers in Lake Erie, but not in Lake Ontario.

Three of the species, *Unio pustulosus*, *U. solidus* and *U. clavus* are not found to-day in the St. Lawrence drainage system at all, but are confined to the Mississippi area where they are extremely common.

The presence of the Mississippi forms seems to indicate that the climate existing during the first interglacial period was somewhat more southern than it is to-day, and this conclusion is also borne out by the nature of the plant remains.

Along the shores of Lake Ontario to the east of Toronto is a long line of cliffs known as Scarboro' Heights, composed entirely of Drift deposits. Only a very few shells have as yet been found here, but the beds are very rich in insect and plant remains.

The deposits along the Don River have yielded by far the most interesting results in the shell line.

QUATERNARY FOSSIL SHELLS, LONG BEACH, CALIFORNIA.

[Excerpts from report of Julia E. Campbell, 1896].

One day in April, 1896, while out for wild flowers, we drove to Signal Hill, which lies back from the ocean about 2½ miles. Down one side of the hill runs a narrow ravine or little cañon as it is often called.

While climbing up in the center of this ravine we found the banks on either side literally filled with fossil shells. We secured the following species, viz.: *Nassa mendica* Gld., *N. perpinguis* Hds., *Den-*