

dle position between them." He has based his determination of the species upon the sterile fronds only; but in the figure of Lesquereux we have the fertile frond, or a portion of it, of the same species. This fragment was found at Erie, Col. Should not the *Caulinites fecundus* be considered *Onoclea sensibilis*?

On plate lxiii. of the same volume we have a fossil called *Zamiostrobus mirabilis*, and on p. 70 is the description. Mr. Lesquereux has referred the fossil to the *Gymnospermae*, and considers it probably to be the cone of one of the *Zamia*e. Compare, now, the copy of his figure (fig. 2) with that of the longitudinal section of the fruit of *Nelumbium luteum* (fig. 3), and the resemblance is striking, — so striking is it,

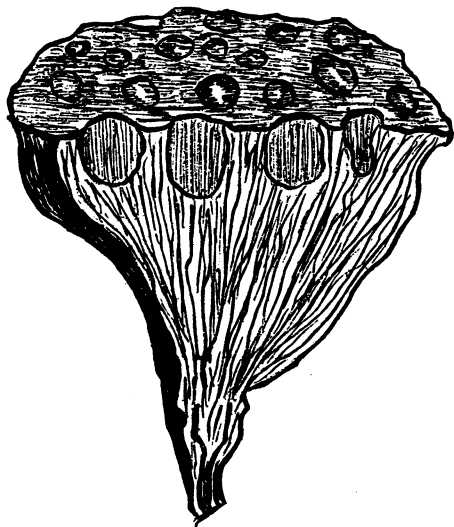


FIG. 3. — Longitudinal section of *Nelumbium luteum*.

in fact, that I do not hesitate to say that both belong to the same genus. Mr. Lesquereux's specimen was found on the surface at Golden, Col.

Turning to p. 252 of the same volume, we find two species of *Nelumbium* described from the leaves. One was found at Golden, and the other at Sand Creek, Col. The fact of finding leaves of a *Nelumbium* in the same locality as the fossil here figured, strongly confirms the idea that the *Zamiostrobus* is only the capsular fruit of a *Nelumbium*, probably that described as *N. Lakesii*. It differs only slightly from the other species, *N. tenuifolium*; and the two should probably be united.

JOS. F. JAMES.

Spool-shaped ornaments from mounds.

As the spool-shaped copper ornaments occasionally found in mounds — one of which is figured by Dr. Rau (*Arch. coll. U. S. nat. mus.*, p. 61, fig. 235), and others by Professor Putnam (*Rep. Peabody mus.*, xv. 110, figs. 18 and 19) — have attracted the attention of archeologists, it may not be amiss to notice some additional specimens of the same kind, recently obtained by the assistants of the bureau of ethnology.

Three of these were obtained by Dr. Palmer, of Mr. J. D. Miller, Marshall county, Ala., who discovered them in an ancient grave in that county. As yet no description of the grave, nor any further statement as to the conditions under which they were found, has been obtained.

These copper spools, as also the others to be men-

tioned, are of the form represented in the figures alluded to, consisting of two concavo-convex disks joined together by a hollow cylindrical axis. One of the specimens is quite perfect. The disks are one and a half inches in diameter, formed of copper plate that is very smooth and even throughout. The hollow cylindrical axis is about seven-tenths of an inch long, and a little less than two-tenths of an inch in diameter, and has the ends slightly expanded outside of the disks, so as to hold the latter in position. The other specimens found by Mr. Miller are of larger size; being about two inches in diameter, and closely resembling that figured by Professor Putnam. The plate is not more than half the thickness of that of which the preceding specimen was made, being almost as thin as writing-paper; but the cylindrical axis is of the same form and dimensions.

The method of connecting and fixing the disks in these, as will be seen from the description, is slightly different from that described by Professor Putnam. The cylindrical axis is simply passed tightly through the holes made in the centre of the disks, and the ends expanded, as though done with a punch, so as to clasp the outer faces.

Four other specimens, very similar to that figured by Professor Putnam, were discovered by Mr. Middleton in a mound in Jackson county, Ill. The mound in which these were found is one of a group situated in the Mississippi bottom, a short distance from Grand Tower: it is about ninety feet in diameter, and six feet high. In excavating it, human bones were found at all depths, from six inches to six feet below the surface. Below this no human bones were observed; but at the depth of nine feet, that is, three feet below the original surface of the ground, some animal bones were discovered.

The copper specimens were found at the depth of three feet, lying by the side of a skeleton. The four are of the same form and size, being about one inch and a half in diameter: the axis is short, bringing the disks rather closer together than usual, the attachments being as described by Professor Putnam. All the specimens mentioned, except the first, are much corroded and very brittle. The first is also somewhat corroded, but not to the same extent as the others, and is probably the best formed and most perfect specimen of the kind so far discovered.

CYRUS THOMAS.

[These so-called 'spool-shaped ornaments' have been shown by Mr. Putnam to be enormous ear-studs, his examinations of the altar-mounds in Anderson township, O., having brought to light over thirty made of copper, together with figurines in which similar objects were inserted in the ears. See *Science*, i. 348, 349.]

Unio forms a byssus.

If your correspondent at Holston River, Va., will consult my 'Observations on the genus *Unio*,' he will find most of his queries answered. The subject is treated in vols. i., iii., vi., x., xi. The byssus is not attached to the shell, but to the foot of the included soft parts.

ISAAC LEA.

Philadelphia, March 24, 1884.

Illusive memory.

James Sully, in his 'Illusions,' suggests that a good way of testing for recollections of ancestral experience would be to find out whether children of seafaring men, who have been brought up far from the coast, have the feeling, when they first see the sea, of having seen it before.

Paul Radestock seems to consider that the question is settled by the fact, that while he was writing his