

Symplocos fœtidus, he would be surprised at the great amount of variation it presented, even in a small area, when the variations were looked for by comparison. He had himself seen a plant bearing spathes four inches long, with its next neighbor having one a little over an inch—no larger than a walnut. Some would be globular, some ovate, some linear, some terminating in an abrupt point, others lengthened into a long straight or curved beak. The variations in color were too well known to need more than this bare reference. It was not uncommon to hear variation attributed to environment, by which we are to understand external, and in a measure accidental circumstances. Environment might be led to include some external influence operating on the primary cell, giving birth to the subsequent individual exemplifying the variation.

But in this sense, change by environment would be the merest guess, as no evidence had been offered in support of any special influence then not exerted. At other times no great variation followed, and possibly no one would want to embrace this point in a definition of environment.

Sugar in Cladastris tinctoria.—In Mr. Meehan's garden at Germantown, there were few trees but which exuded sap from wounds made in winter or early spring, but among them all, few bled, as it was termed by horticulturists, more profusely than *Cladastris tinctoria* (*Virgilia lutea* Mx.). The icicles formed from this exuding sap afforded a good opportunity to test the saccharine character of the liquid. During congelation by frost all foreign substances are rejected, and in the formation of the icicle the sugar is pushed forward to the extreme point. The end of an icicle of a sugar maple is its only sweet part, and this was very sweet from the accumulation of the saccharine matter. The end of the icicle from the *Cladastris* was also sweet, though less so than in any other sugar-bearing trees he had observed.

APRIL 22.

The President, Dr. JOS. LEIDY, in the chair.

Twenty-eight persons present.

Vertebrate Fossils from Florida.—Prof. LEIDY directed attention to some fossils, part of a collection recently referred to him for examination by the Smithsonian Institution. They consist of remains mostly of large terrestrial mammals, especially related with forms which now live in the intertropical portions of the old world. Obtained in Florida, they are of additional interest as evidences of the existence in this region of a formation of tertiary age not previously known. An accompanying letter from Dr. J. C. Neal, of Archer, Florida, informs us that the fossils

were discovered in a bed of clay, occupying a ridge in the pine forest. They occurred over an irregular area of one hundred feet long by thirty feet wide, and were dug from variable depths of seven feet to the bed-rock, the character of which is not stated. The fossils, consisting of bones and a few teeth, are mostly in fragments, but exhibit no appearance of being water-worn, or abraded by friction among gravel. In the collection, for the present hastily examined, there may be observed the following more conspicuous remains:—

1. Those of a young mastodon, consisting of bone fragments and detached epiphyses. The epiphysial head of a femur measures $6\frac{1}{4}$ inches in diameter. In the clay adherent to the rough under surface, the vertebra of a teleost fish is imbedded. An astragalus measures $4\frac{1}{2}$ inches fore and aft, and $5\frac{1}{2}$ inches transversely.

2. Remains, apparently of several individuals of a rhinoceros, rather smaller than the Indian rhinoceros. Among them are small fragments of a mandible, and portions of lower molar teeth. The nearly complete crown of one of the latter measures $2\frac{1}{4}$ inches fore and aft, with $1\frac{1}{4}$ inches width in front. The limb bones indicate an animal of shorter stature, but equally robust proportions to those of the Indian rhinoceros. There are two nearly entire radii, 9 inches long, by $3\frac{1}{2}$ inches width at the proximal, and $3\frac{1}{4}$ inches width at the distal end. The distal extremity of a femur measures 6 inches at the epicondyles. The head of a tibia is $5\frac{1}{4}$ inches wide and $3\frac{1}{2}$ inches fore and aft. A calcaneum is 5 inches long. Three middle metacarpels exhibit the following measurements:—

Length,	$4\frac{1}{2}$ inches,	4 inches,	$3\frac{3}{4}$ inches.
Width, proximal end,	$2\frac{3}{4}$ “	$2\frac{1}{2}$ “	$2\frac{1}{4}$ “
Width, distal end, .	$2\frac{1}{2}$ “	$2\frac{1}{4}$ “	$2\frac{1}{8}$ “

3. Small fragments of the maxillæ of a tapir; one with an entire molar tooth, which differs neither in form nor size from the corresponding tooth of the living *Tapirus americanus*. The tooth measures 11 lines fore and aft by 13 lines transversely.

4. Remains, apparently of a llama, as large as the camel. The distal end of a metacarpel is about 4 inches in breadth. A first phalanx is $4\frac{1}{8}$ inches long by $2\frac{1}{4}$ inches wide at the proximal end and $1\frac{5}{8}$ inches at the distal end.

5. A calcaneum of a ruminant, not quite so long as that of the Irish elk, but of more robust proportions. Its reference is uncertain, and it is doubtful whether it pertains to the extinct *Cervus americanus*.

6. The vertebral centrum of a small crocodile.

7. Remains of several other animals undetermined.