ity. The writer would be glad to receive small samples of such collections, together with the accompanying data on collecting and storage conditions, for the purpose of testing the viability. He would like also to receive any information bearing on the viability of such algae, if any one has made such tests.

CHAS. H. OTIS

UNIVERSITY OF WISCONSIN

WHAT IS THE FIRST FOSSIL COLLECTED BY MAN?

THE question has been frequently asked, "What is the first fossil collected or handed down by man?" Mr. Barnum Brown, in *Natural History* (Sept.–Oct., 1926) again raises the query. He presents curious evidence for the "claims" of discovery or collection of a tooth of *Elephas antiquus* by the ancients of two thousand years ago. The tooth was associated with sculptures and figures covered by débris in the ruins of the Asklepieion, the ancient medical school of Hippocrates, the father of medicine. There is no doubt of this collection and preservation by the Greeks, and it is obvious that the fossil tooth was brought in as an object of some kind of singular interest. Was it recognized as an elephant's tooth? Perhaps so; for the Greeks were of keen intellect, and may not have made the pious blunder of those north Europeans of but a few centuries ago, who flattered themselves by reinterring the bones of a mammoth as one of their giant ancestors. Even yet, in some of the mountainous districts of China considerable quantities of fossil bone are ground up for medicinal use!

Nevertheless, a far older instance of "collection" is that of the petrified plant type of the Capellini Museum of the University of Bologna, known as *Cycadeoidea Etrusca*. This fossil was certainly handled by the Etrusci as an unusual object over four thousand years ago. It was refound just fifty years ago on one of those striking stone tombs of the ancient Etruscan burial ground or necropolis at Marzabotto on the estate of the Count Aria, in the valley of the Reno amid the foothills of the Apennines, about eighteen miles west of Bologna. Evidently it was regarded by the Etrusci as some great curiosity or rarely marked block of black flint, to thus be given a place of honor and remembrance on one of their tombs. Further up the hillside there is seen the base of a small temple of a stately simplicity, and of the same period as the necropolis, though discovered somewhat earlier. And as a further confirmation of such an antiquity there is noted on one side of the fossil an elliptical polished out depression about the size of a woman's hand, very possibly of even a neolithic date. Here is a memento of a civilization as old as that which "chiseled out its code on the black diorite of Hammurabi."

The specimen itself is a segment of a medium-sized cycadeoid stem of the columnar type, just nearing the close of its flowering season. There is a faithful *papier maché* reproduction at Yale University, as well as thin sections cut from the original. This historic fossil is structurally important and was one of the first of its group to yield evidence for a flower-bearing, instead of the cone-bearing habit so long supposed to characterize ancient and modern cycads alike. Indeed, it was one of the flowers cut from this very stem that yielded to Capellini and Solms the first pollen grains ever seen in the cycadeoids.

LOUISE SUDBURY

NEW HAVEN, CONN.

QUERY ON "A REVISION OF THE FUNDAMENTAL LAW OF HABIT FORMATION"

WHILE reading a paper with the above title by Dr. Dunlap[1] the writer of this note wondered if psychological research had ever availed itself of the abundant data which might be obtained from music-teachers. The most successful of modern piano-playing methods —Leschitizky's—is based on the principle that the pupil should *never be allowed to make a mistake.* Pieces taken the first time are played very slowly and with the utmost concentration upon absolute accuracy. "Make no mistakes," said the writer's teacher, at the *Thomasschule,* "but if you do, get up, walk three times around the room, say the *Vater Unser,* and kick yourself! Then go back to the piano and play the passage correctly twenty-five times!" Rapid practice is absolutely forbidden until the piece is thoroughly mastered. Experience seems to show that if the student never makes a mistake in any given piece, he will never be able to do so, even when performing under unusual pressure. There are at present hundreds of pianists in the world who can reproduce hundreds of difficult, complicated pieces with a note-accuracy of at least 99.99 per cent.—repertoires which involve anywhere from a quarter of a million to a million individual notes. On the other hand, experience seems to show that if a piece is practiced carelessly at first no amount of subsequent diligence will ever bring it into a state of reliable performance. Long after all errors have been eradicated in private practice they will come out again if the piece is played in public or under unusual pressure.

The idea, based upon Dr. Dunlap's paper, that one could correct errors and learn to play a piece right by practicing it wrong is so revolutionary and would, if applicable, save piano-students such a vast amount of weary practice that the writer devised a test ex-

[1] By Dr. K. Dunlap, SCIENCE, Vol. LXVII, No. 1736.