

one place in Garden Island Bay the land appears to have advanced 2,000 feet in the spring of 1912. The mud lumps are commonly 20 to 30 rods broad and stand 20 or 30 feet above the adjacent bottom. Their growth occupies from a few hours to several years and is usually irregular. Generally a mud lump rises in a few weeks or months to a height of 4 or 5 feet above the surface of the water. Then it remains quiet and is beaten down by the waves in the course of a few years. Many of them subside, however, and some disappear over night. Those that rise slowly are considerably worn before they stop growing, while those that rise more rapidly and in protected places are capped by laminated silt having a maximum thickness of 10 feet. Among the most conspicuous and impressive features of the mud lumps are the mud springs that are active on many if not all of them. The discharge from these springs consists of salt, watery mud and gas—in fact, gas escapes at many places on the surface of the Delta of the Mississippi, the vents appearing to be most numerous and largest on and near the mud lumps, though the rate of flow rarely, if ever, exceeds a few cubic feet an hour. Gas rises in bubbles in all the mud springs, though its rate of issue varies. The United States Geological Survey has issued a report entitled "The Mud Lumps at the Mouths of the Mississippi," by Eugene Wesley Shaw—a copy of which may be obtained free on application to the director of the survey, Washington, D. C.

UNIVERSITY AND EDUCATIONAL NEWS

THE observance of Washington's birthday at Lehigh University was marked by the dedication of Coppee Hall, the new home of the arts and science department. The building is named after Dr. Henry Coppee, who was the first president of Lehigh University.

TEACHERS COLLEGE, Columbia University, celebrated its twenty-fifth anniversary on February 20 and 21, with an educational conference which brought together nearly one thousand alumni and former students of the institution. During Friday and Saturday a series of educational conferences was held at

the college devoted to different divisions of the educational fields as follows: Administration and College Teachers of Education, Secondary Education, English, History, Geography, German, Mathematics, Science, Elementary Education, Kindergarten Education, Fine and Industrial Arts, Household Arts, Nursing and Health, Household Administration. The speakers included superintendents of schools, deans of university schools of education, directors of normal schools and specialists from various educational fields, college, secondary and elementary. Saturday night nearly 800 alumni gathered for a dinner at the Aldine Club. The program of the science round table was as follows:

"Use of Literature in Science Teaching," by Clarke E. Davis.

"Trend of the Times," by J. Newton Gray.

"A Method for Teaching Nutrition in the High School."

"Chemistry for Second-year High School Girls," by Henry T. Weed.

"General Science—A Method and Its Difficulties," by Roland Hugh Williams.

"An Experiment in Teaching Heat," by Carl J. Hunkins.

PROFESSOR A. L. DEAN, of the Sheffield Scientific School, Yale, has accepted the call to the presidency of the college of Hawaii, at Honolulu, and will take up his duties there next autumn.

At the Massachusetts Institute of Technology Mr. J. M. Barker has been appointed instructor in civil engineering and Miss Edith A. Beckler, lecturer on public health laboratory methods.

DR. H. F. BAKER, F.R.S., fellow of St. John's College and Cayley lecturer in mathematics, has been elected Lowndean professor of astronomy and geometry in the University of Cambridge in succession to the late Sir Robert Ball.

THE Manchester University Council has appointed Dr. Charles Alfred Edwards to the chair of metallurgy and metallography.

DR. E. E. FOURNIER D'ALBE, assistant lecturer in physics in the University of Birmingham, has been appointed special lecturer in physics in the University of Punjab, Lahore.

DR. LUDWIG DIELS, of Marburg, has been appointed associate professor of botany in the University of Berlin, and assistant director of the Botanical Garden and Museum.

DISCUSSION AND CORRESPONDENCE

FOSSIL PLANTS IN THE PANAMA CANAL ZONE

EXCEPT for the incidental mention by Pilsbry and Brown of lignified nuts in their paper on the Mollusca I know of no record of any remains of fossil plants having been found in the Canal Zone, notwithstanding the fact that the numerous Tertiary tuffs would seem to furnish an admirable matrix for the preservation of leaf impressions.

During 1912 Dr. M. I. Goldman, of the Johns Hopkins University, visited the Isthmus and in connection with his work on rock weathering devoted considerable time to a search for fossil plants along the Canal with the results indicated by the following note.

Since fossil plants of Tertiary age from the tropics have not been collected or studied to any large extent and since the Tertiary floras of Central America have a most important bearing on both the phytologic and geologic history of southeastern North America during the Tertiary, a preliminary announcement seems justifiable.

Fossil plants seem to be somewhat sparsely but widely distributed along the canal and identifiable forms were collected from the following localities:

1. East wall of the Culebra Cut just north of station 1760 and opposite Culebra.
2. West wall of cut below Miraflores locks, where the plant-bearing tuff outcrops for about one fourth of a mile.
3. Culebra Cut under the steep hill just north of Paraiso, associated with specimens of the pelecypodian genus *Phacoides*.
4. Gatun Dam borrow pits.

The best material comes from the first of these localities and the least satisfactory from the last. The collections have not been critically studied, since it is hoped that more extensive collections will be sent in by the resident geologist of the Canal Commission.

The following forms have been recognized

in a preliminary study of the collection: A fine large species of *Guatteria* which is present at several localities; a well-marked species of *Myrtaceæ*, probably representing the genus *Calypttranthes*; a species of *Nectandra*; a species of *Rhamnaceæ*; a characteristic small-leaved species of *Ficus*; another of *Ocotea*; a species of *Rubiaceæ* and one of *Melastomaceæ*. Petrified wood was also collected and although but three slides have been cut these show apparent identity with a species described from the Oligocene of the Island of Antigua.

None of the material lends any support to the view, at one time prevalent, that some of the Isthmian beds represent deposits of Eocene age, and while the various plant-bearing beds are probably not exactly synchronous, their floras in so far as they are known from the present small collection all appear to be referable to the Oligocene.

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WHAT GRADES REPRESENT

THE following considerations have been of service to the writer in the diagnosis of the difficulties encountered by students in meeting the scholastic requirements represented by grades, and the identifying of the obstacles has often assisted in their removal.

It is not necessary in this discussion to assume any more definite or uniform system of grading than that 100 per cent. represents a perfect grade and that there is a minimum grade required to entitle the student to credit for the course. Half way between these is what may be called an average grade. This does not mean the grade that a class would average under the usual conditions, but what a class might be expected to average if all members gave all the officially allotted time (or a reasonable time) and their best effort to the subject—quite a different matter! The instructor should make his demands such that the student of average qualifications using his best effort all the allotted time would receive the average grade—half way between the passing grade and 100 per cent.