

The executive committee consists of the officers and the following gentlemen, who were also elected: E. T. Allen, A. Seidell, E. A. Hill and S. S. Voorhees.

W. W. Skinner was appointed chairman of the committee on communications.

J. A. LeCLERC,
Secretary

DISCUSSION AND CORRESPONDENCE

IS ALABAMORNIS A BIRD?

A LITTLE more than a year ago Dr. Abel published a brief paper, taking the ground that the bones described by me in 1900 as the pelvic girdle of *Zeuglodon* were really the coracoids of a gigantic bird, possibly allied to *Gastornis* and, distantly, to *Anthropornis*. In reviewing this paper I said that it "seemed so clear and convincing that this conclusion was at once accepted, . . . but it became evident that if they (the bones) were the coracoids of a bird, that bird was extraordinary, if not exceptional in many particulars"; it was therefore decided to say nothing more until the bones could be reexamined. It has been impossible for me to do this, but Mr. C. W. Gilmore has kindly examined them for me and corroborated my remembrance of certain details. It is rather difficult to discuss the question without figures, but a description of the bones taken by me for *ossa innominata* must suffice for the present. One is perfect, save for the loss of a few millimeters on one process; the other has lost the posterior, or proximal, end if it is a coracoid, but the anterior end is perfect, which in this case is an all-important fact. Close by the anterior end is a good-sized cavity, precisely like an acetabulum, and this is *the only articular surface* present; what Dr. Abel considers the glenoid fossa is simply a notch, *not* an articulation. The length of the complete bone is 245 mm., 9½ in., and the bones are flattened, but not crushed or distorted.

If we adopt Dr. Abel's view that the bone is a coracoid we are confronted with the following extraordinary conditions: the precoracoid process is longer than the acrocoracoid, Dr. Abel's processus furcularis, and the acrocoracoid aborted, being reduced to a low,

rounded mass of bone, without articular faces of any kind. The articulation of the scapula with the coracoid would be by means of a ball-and-socket joint and, were a humerus present, it would rest against the anterior end of the coracoid, with nothing in advance of the shoulder joint. For, it must be repeated, the anterior end of the bone, be it pelvis or coracoid, is absolutely complete, save a chip off the point of the "precoracoid"; it was never any longer. Then, too, the proximal end of the alleged coracoid is thin and narrow, whereas the coracoid in all other birds, and particularly in flightless birds, is expanded where it articulates with the sternum. Finally the texture of the bone is dense and not bird-like.

If the bones are the coracoids of a bird they represent a type of shoulder girdle entirely different from any with which we are at present acquainted, and the bird from which they come not only belongs to a new species and genus, but to a new order or superorder.

There is not the slightest resemblance between the bone named by Dr. Abel *Alabamornis* and the coracoid of *Anthropornis* which is a perfectly normal avian coracoid; nor is there any resemblance between it and the coracoid of *Gastornis*, which is long and slender, the only peculiarity being that it belongs to a degenerate shoulder girdle and its characters are not sharply defined.

Dr. Abel's surmise that *Diatryma* and *Alabamornis* may be one and the same is best answered by noting that not only are the bones separated by many hundred miles of space, but that one comes from the Lower Eocene, Wasatch, the other from the Upper Eocene, Jacksonian. Now, I will not insist that the bones under discussion represent the pelvis of *zeuglodon* nor deny that they are the coracoids of a bird; I will simply say that it seems to me doubtful that this last ascription is correct and wait for further discoveries to throw more light on the problem. F. A. LUCAS

CLADODUS COMPRESSUS, A CORRECTION

IN the Thirtieth Annual Report of the Indiana Department of Geology and Natural Resources, page 1378, I named a new species

of Cladodontidæ *Cladodus striatus*. As the name *striatus* was preoccupied, having been applied by Agassiz to a species of *Cladodus* from the Devonian, I suggest that the new species be named *Cladodus compressus*. The following is the original description.

Cladodus compressus

Teeth of medium size, base of type specimen 14 mm. wide by about 5 mm. long, tooth broader than high. Outline of base subelliptical, extremities subangular, posterior border with stronger convexity than anterior; under surface smooth, upper surface with a narrow furrow just behind the cones running parallel with the posterior margin of the base, a strong ridge between this furrow and the posterior margin. Middle cone low, broad and thin near base, twice as broad as thick, with sharp cutting edges; outer lateral denticles broad, thin, and very low, one third to one fourth height of median cone; between lateral denticles and median cone a high narrow ridge that bears two minute denticles on one side of the median cone but none on the other side in the type specimen; median cone and lateral denticles all marked with almost vertical, narrow, sharp-crested ridges; spaces between ridges about twice as broad as ridges.

C. compressus differs from *C. euglyphæus*, the nearest allied species, in its much larger size, much greater breadth of median cone, greater breadth and less height of outer lateral denticles, smaller number of lateral denticles, high ridge between outer denticles and main cone, and in the greater approximation of the ridges on the teeth.

Formation and Locality—Salem limestone, Paynter's Hill, Ind.

Type specimen No. 7709—1 American Museum of Natural History.

E. B. BRANSON

GEOLOGICAL DEPARTMENT,
OBERLIN COLLEGE

THE TERM "THERM"

TO THE EDITOR OF SCIENCE: I have noted in the recent issues of SCIENCE discussions in regard to the use of the term "Therm" as a simple way of expressing 1 million gram calories.

While this old term used in a new sense may simplify an expression, it, however, to my mind makes it more complicated as far as its actual meaning is concerned.

The trend to-day in all scientific matters, and primarily it is the object of research, is to bring all phenomena and facts down to a common basis of understanding so that as far as possible one can tell at a glance what the subject is about.

The arbitrary use of a term without the sanction or adoption by the majority of persons or countries engaged in research of the kind to which the term is to be applied, tends more to confuse than to simplify matters.

I am heartily in accord with the suggestion for the term kilo-calorie, mega-calorie, etc., made by A. T. Jones in SCIENCE of January 3, 1908.

LEWIS W. FETZER

MARYLAND AGRICULTURAL
EXPERIMENT STATION,
COLLEGE PARK, MD.

SPECIAL ARTICLES

NOTES ON THE OCCURRENCE OF THE RECENTLY
DESCRIBED GEM MINERAL, BENITOITE

DURING the course of the writer's investigations in the Coalinga oil field, Fresno County, California, the past summer, he was accorded the opportunity of examining the mine from which the new gem mineral, benitoite, is obtained. At the time Dr. Louderback¹ described the mineral, he had examined only a limited amount of material and had had no opportunity of visiting the type locality. The following notes on the field relations of the gem are therefore offered as an addendum to his paper. The writer wishes to extend his thanks to the owners of the mine, Messrs. R. H. Dallas and L. B. Hawkins, the latter one of the discoverers of the mineral, for permission to visit the mine, for the gift of a representative series of specimens, and for other courtesies.

Benitoite, according to Louderback and

¹ "Benitoite, a New California Gem Mineral," by George Davis Louderback, with chemical analyses by Walter C. Blasdale: *Bull. Dept. Geol., Univ. Calif.*, Vol. V., No. 9, pp. 149-153, July, 1907.