

tubercles were never before made use of in systematic work, and he felt sure these would be found to be of great taxonomic significance.

— Mr. Banks presented the following paper :

AN AMERICAN SPECIES OF THE GENUS CÆCULUS.

By NATHAN BANKS.

In every group of animals there are a few genera having characters which ally them to various larger groups, or serve to conceal their true relationship. In the Acari there are several such genera, and not least interesting of them is *Cæculus*. Its general appearance at once reminds one of certain Oribatid mites, viz., *Nothrus*. And on a closer examination one finds several structures which would confirm this appearance. But there are certain characters, deemed by acarologists of much importance, which place the mite near a quite different family, the Trombididæ. These important characters are the palpi, the structure of the coxæ, and the peculiar eyes. The eyes are almost exactly as in *Trombidium*, an arrangement not found elsewhere in the Acari. But the dorsal shields, the rough spinose legs, and the large ventral openings are characters wholly foreign to the Trombididæ.

The early writers placed the genus after Oribata, and Gervais suggests that it has some affinity with Phalangium. In 1877 Canestrini and Fanzago wrote a paper on the genus and erected for it a new family, which they placed near the Trombididæ. This position it has since occupied in all classifications. Canestrini and Fanzago gave the genus a new name, *Hoplopus*; because they thought *Cæculus* inappropriate, and called the family Hoplopidæ. But since *Hoplopus* is a synonym, the family should be called *Cæculidæ*.

The genus is represented in southern Europe and northern Africa by one species, *C. echinipes*. Last spring Mr. H. G. Hubbard sent me a mite taken at Palm Springs, California. It proves to belong to *Cæculus*, and differs from the typical European species in several minor particulars.

Cæculus americanus, n. sp.

Length 1.3 mm. Black, soft portions rather reddish-brown. Cephalic shield more than twice as long as broad in front, twice as broad behind as in front, sides sinuate, angles rounded; from the front margin there projects four spatulate hairs or scales; there are two subparallel middle lines not reaching to the hind margin; under the hind angles arise a double tubercle, each bearing an eye. Anterior shield of the abdomen one-

third broader behind than in front, rather concave above, traversed

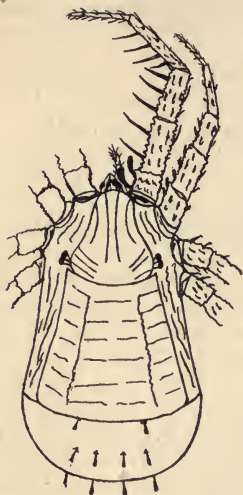


FIG. 16.—*Cæculus americanus* ; enlarged. (Original.)

by irregular low ridges, and two longitudinal lines rather nearer to the lateral margin than to the middle. Posterior abdominal shield much broader than anterior, its front border concave, broadly rounded behind, bearing above two scale-like hairs on the front border, four in a transverse line beyond the middle, and four more on hind border. Venter with large anal and genital openings close together. Legs very large and stout, first pair longest but plainly shorter than body, all roughened and clothed with clavate hairs, two on the front margin of the anterior trochanters are larger, spatulate and curved. The first leg is armed with stout erect, slightly curved spines, longer than the widths of the joints, two on the inner border of femur, three on the inner border of tibia, five on inner border of metatarsus; rather smaller and more curved ones on the lower outside margin of these joints. Palpi not very long, bristly.

Two specimens collected by Mr. H. G. Hubbard, at Palm Springs, California.

BIBLIOGRAPHY.

- Dufour, L. Descript. and figure of *Cæculus echinipes*. Ann. des Sci. Nat., XXV, 1832, p. 289, pl. 9, figs. 1-3.
 Gervais, P. Aptères, III, p. 260, pl. 38, fig. 5.
 Lucas, H. Explor. Algerie., p. 307, pl. 22, fig. 1.
 Canestrini & Fanzago. Sul. gen. *Cæculus*, p. 477; Acarof. ital., p. 75, pl. 2, fig. 1.
 Berlese, A. Acari ital.—Prostigmata, pl. 50, fasc. 50.

— Mr. O. F. Cook presented the following paper :

NEW DICELLURA.

By O. F. COOK.

The genus *Japyx* Halliday has been recognized* as a distinct order under the above name. To the *Japygidaë* is to be added a new family, *Projapygidaë*, founded on *Projapyx styliifer*, † a new

* Brandtia, p. 49, July, 1896. In October of the same year Mr. Ashmead published the name *Uratochelia* for the same group in Volume III of these Proceedings, page 327.

† See plate II, figs. 5a-5d.