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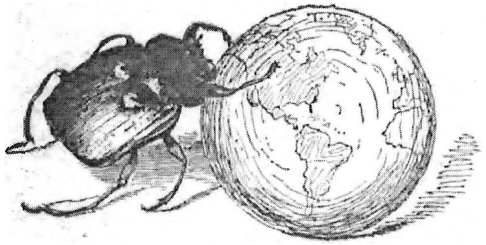

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THE NEW ERA PRINT

EXPLANATION OF PLATE IV.

GENITALIA OF CONOTRACHELUS BREVISETIS CHAMPION.

Fig. 1. The female parts: *a*, space where the area is somewhat contracted, corresponding with the space *b* in fig. 5; *an*, anal orifice; *ovd*, the common oviduct; *spt*, spermatheca with its gland; *ut*, bursa.

Figs. 2, 3, 4, 5 and 6. The male parts.

Fig. 2. Profile of the ædægus with the sac indrawn, but with tegmen extended.

Fig. 3. Tegmen dissected off the median lobe.

Fig. 4. Apical portion of the median lobe, showing median orifice for the protrusion of the sac and transfer apparatus.

Fig. 5. Apical portion of median lobe, profile with sac extended.

Fig. 6. Face of transfer apparatus.

In figures 2 to 6 the lettering is uniform, as follows: *b*, contracted part of the sac; *c*, hinge or volet; *cm*, connecting membrane; *d*, membranous bulge accommodating the transfer apparatus when the sac is retracted; *e*, outer shield of transfer apparatus; *ej*, ejaculatory duct; *fo*, functional orifice; *is*, the sac; *ml*, median lobe; *mo*, median orifice; *ms*, strut of median lobe; *ta*, transfer apparatus; *tg*, tegmen; *tgl*, tegminal lobe.

THE TRUE KATYDID NEARLY EXTINCT IN NEW YORK CITY.

BY WM. T. DAVIS,

NEW BRIGHTON, STATEN ISLAND, N. Y.

The true katydid, *Pterophylla camellifolia* Fabr., is either extinct or nearly so on Staten Island, a borough of New York City. It used to be very common there, and as late as August 14, 1908, the writer noted it "quite numerous and very noisy in the tall trees in the Egbertville ravine" near the central part of the Island. There are still considerable forested areas on Staten Island that would seem to be as suitable for the insect as similar places on Long Island and in New Jersey, and indeed it used to frequent these very same trees. Why it has died out is not known, except possibly the air is no longer as pure as formerly, for there are now numerous factories along Arthur Kill, the smoke from which may have affected the foliage on which it feeds. However, it is no longer present even on the ocean side of the Island. In our investigation that carried us

over about fifty miles of the most rural parts, Mr. Edward J. Burns and I were unable to hear any true katydids on the warm nights of September, 1919, though the tree-frequenting *Microcentrum rhombifolium* was present, as were also the several native species of *Scudderia, Amblycorypha* and *Neoconocephalus.*

It has been shown by Dr. Joseph L. Hancock in Entomological News for February, 1916, that the eggs of *Amblycorypha oblongifolia* may not hatch until the second or third year after they have been laid. If those of *Pterophylla* can remain dormant for a like period, it is possible that some small colonies may still exist on Staten Island, but we think their presence unlikely. While we have not the same conclusive evidence for other areas of forested country lying in New York City as we have for those on Staten Island, from our observations it would appear that the true katydid is either extinct or is rapidly becoming less common in most localities within the limits mentioned. From Mr. S. Harmsted Chubb of the American Museum of Natural History we learn that about four katydids were heard singing on the evening of October 6, 1919, in some tall trees a short distance west of Broadway at about 255th Street. This locality is near the northern limit of Van Cortlandt Park. In the collection of the American Museum of Natural History there are six specimens collected many years ago at West Farms, New York City, by John Angus. Owing to the fact that the true katydid is still so common on parts of Long Island, it may possibly be found in the eastern part of one of the boroughs of the greater city situated on that island.

It is to be regretted that but six specimens of *camellifolia* are preserved from Staten Island, where at one time the species was so abundant. Most of these were found on the trunks of trees after storms, for when the wind blows hard the katydid often descends to the main trunk. They are easily collected where the forest growth is low, as at Lakehurst, N. J., for instance, by following up the song of the male and locating the insect with the aid of an acetylene lantern. Then if the katydid is gently touched with a long stick, it will let go its hold and fall to the shrubbery below. Mr. George P. Engelhardt and I have thus collected many. The insect, however, will not let go its hold if the trees are simply shaken: it has to be touched.

While the true katydid does not often frequent the tops of pitch pines, it does lay its eggs in the bark of that tree, and we have photo-

graphed a female while so engaged, and seen a number of others, especially in the mixed woods of pines and oaks on Long Island, N. Y. Many lay their eggs during the latter part of September on Long Island, and it is then also that the males sing often in the daytime when the sunshine is warmest.

LEGS IN THE CARABIDÆ.

BY HOWARD NOTMAN,

BROOKLYN, N. Y.

The coxæ of the anterior and intermediate legs are globular in form and exhibit the same structure throughout the Carabidæ. The apex or upper end of the joint, viewing the beetle as it lies on its back, contains a circular cavity which holds the condyle of the trochanter. Adjoining this cavity on the outer side is another cavity or depression in the outer face of the coxa. This second cavity reaches the outer edge of the joint and is bounded by a more or less carinate edge except at the outer end where the carina is obliterated. Where the two adjoin, the wall of the central cavity is deeply emarginate. This structure gives the leg a greater radius of transverse motion and allows it to be drawn closer to the body in repose.

The anterior and posterior edges of the outer depression are not similar in form. The former, viewed from the front, is straight and continuous with the edge of the central cavity. The latter, viewed from the opposite direction, is strongly concave and elevated in a prominent blunt-pointed tooth where it joins the edge of the central cavity. This tooth is bent slightly over the condyle and strengthens the hold on the latter at the point where the emargination between the cavities tends to weaken it. Considering this to be a description of the anterior coxæ, the arrangement in the intermediate is exactly the reverse; that is, the tooth is on the anterior edge and the posterior edge is straight. When it is considered that the anterior legs are used chiefly to pull the beetle forward and the intermediate to push it in the same direction, the reason for the opposite arrangement is explained and it seems probable that the tooth not only