various editorials and business proceedings. In view of this it is necessary for entomologists to support their journals in a more substantial manner, and one way of doing this is to subscribe for as many as one can afford. This is a duty which entomologists owe to their science. Moreover, the charges for such subscriptions are extremely low considering present-day prices, and each journal is well worth its price and more.

In one of the publications mentioned in the tables, which is also the official organ of an association of entomologists, the statement is made that "there were a considerable number of both active and associate members who did not subscribe for the publication." It is inconceivable that an active member of an association would refuse to support its journal. In some cases there might be extenuating circumstances, but it is believed that most entomologists can afford the small sums asked for their publications. The fact that a journal is not devoted exclusively to the entomological subject in which one is interested is not a valid excuse for failing to support it. The systematist, the economic worker, the insect ecologist, the insect biologist and the collector all need each other, and each should contribute to the other's support in order to advance the science of entomology.

A NEW SPECIES OF PSEUDACHORUTES (COLLEMBOLA).

BY CHARLES MACNAMARA,
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The crystalline limestone that crops out in many places along the shores of Lac des Chats on the Ottawa River is often curiously eroded between the seasonal high and low water-marks into little circular cups with fairly vertical sides and rounded bottoms, ranging in size from about three to about eight inches in diameter by three or four inches deep. The cups occur only on horizontal surfaces, and are usually scattered in small groups rather widely separated; but occasionally a flat rock is so closely pitted with the depressions that it looks something like an enormous dilapidated honeycomb. The cups nearly always contain water, either from rain or from the splashing of the waves; and no doubt they are caused by the solvent action of water on the limestone, but why they should be so symmetrical in shape is not clear.

What concerns us here, however, is that these water-filled rock cups are great traps for some kinds of Collembola. Of course, the brisk, semi-aquatic *Isotoma palustris* Mull, which is at home on fresh-water shores all over the northern hemisphere, can leap nimbly in and out of the cups and play safely over the surface of the water. But any of the plodding Collembolan earth-walkers that blunder into the little hollows find them snares for their feet, and once caught on the water film, few of them ever seem to reach the rocky side and safety again.

So far I have collected nine different species and one variety of Collembola in the rock cups. Four are species common elsewhere in the district, but six of them—and this is what makes the cups such an interesting hunting ground—I have never found anywhere else, and of these at least two are new to science. One of the latter—a *Pseudachorutes*—is described in the present paper.

August, 1920.

The genus *Pseudachorutes*, Tullberg, belongs to one of the most generalized of the Collembolan families, the Poduridæ. Including the subject of this paper, it comprises as yet only nine species, five of which are reported from Europe and four from North America. Two or three additional species have been described by different authors, only to melt away into the synonymy that is so rife in Collembolan classification. At present the genus is recorded only from the north temperate zone, but they are rare insects, and future collecting will probably discover them in other parts of the world.

The name "*saxatilis*" given the species here described, is suggested by the insect's habit of frequenting the rocks where it becomes trapped in the water-worn cups. What attraction a moisture-loving Collembolan can find on the sun-baked wind-swept limestone is hard to understand. Like many other members of its order, this *Pseudachorutes* seems possessed of a *wanderlust* that gets it into trouble. It does not seem possible that it can live on these bare rocks, and a careful search under stones and in crannies near the rock cups failed to discover a single individual. The fifteen or twenty specimens I have collected were all found caught on the water in the cups. The "mother lode" of this supply has not yet been traced, but it is probably among the bushes and trees a few yards back from the shore. In this respect the name is inaccurate, for the next time the insect is taken it will probably be in dead leaves or under rotten bark. But scientific names are no more to be regarded as strictly descriptive than those of persons, and no one expects to find every John Smith hammering iron on an anvil.

***Pseudachorutes saxatilis*, n. sp.**

Plate V. Figs. 1 to 8.

Colour light to dark lavender blue, finely mottled. Body sutures, legs and under parts lighter. Dividing the width of the back into about thirds, are two rows of small light spots which diverge a little caudally on each segment (Fig. 1). *Eye-spots* conspicuously black, particularly so in the lighter-coloured specimens. *Eyes* 8+8, equal (Fig. 2). *Postantennal organ* of about 28 oval leaves arranged in a long ellipse (Fig. 3). The number of elements varies from about 25 to 29. *Antennæ* sub-equal in length with head or slightly shorter. Third and fourth segments confluent dorsally, but suture shows ventrally. Relative lengths of segments vary a good deal in different individuals, but approximate 7:8:7:9. First segment about $1\frac{1}{2}$ times wide as long, second segment about $1\frac{1}{4}$ times wide as long, third and fourth segments taken together about $2\frac{1}{2}$ times long as wide. Fourth segment furnished with "olfactory" setæ (Fig. 4). Sense-organ of two clavate curving rods situated distal dorsally on third segment (Fig. 5). *Antennæ* bear many single setæ, sparse on first and second segments, numerous on third and fourth segments. *Buccal cone* relatively short. *Unguis* (Fig. 6) with one large tooth about one-third from base. No tenent hairs, but distal tibio-tarsal hairs are apically bent and minutely knobbed. *Furcula* short and stout. *Dentes* with many coarse dorsal tubercles distally. *Mucrones* (Fig. 7) about one-third as long as dentes, convex in outline, with rounded lamella extending about two-thirds of the length, apical third finger-like, ventral margin curved. Rami of *tenaculum* tridentate, corpus

CAN. ENT., VOL. LII.

PLATE V.

PSEUDACHORUTES SAXATILIS, n. sp.

without ventral setæ. *Clothing* merely a row of short, blunt simple setæ across middle of each segment with a few minute setæ in addition (Fig. 8). Maximum length 1.5 mm. Found August to October trapped on water in little cups eroded in limestone on shores of Ottawa River at Marshall's Bay, near Arnprior, Ontario.

The most distinctive feature of this species is the long, elliptical, postantennal organ of numerous elements. While these elements are usually referred to as tubercles, in this instance when viewed in plan they look like flat, overlapping plates; in perspective they are seen to be somewhat inflated, outstanding, oval leaves.

The two rows of light spots down the back may also serve for a preliminary identification, and possibly these may prove to be a constant characteristic; but coloration is so unstable with many Collembolans that little weight should be given to their presence or absence.

It is a pleasure to acknowledge the generous help that Dr. J. W. Folsom, of the University of Illinois, has given me in separating this species. His criticisms and suggestions have been of the greatest assistance, and I am indebted to him for pointing out some of the morphological niceties that the average microscopist cannot see until he is told where to look for them.

EXPLANATION OF PLATE V.

- Fig. 1. *Pseudachorutes saxatilis* x45.
 2. Eyes and postantennal organ of left side. x350.
 3. Postantennal organ. x730.
 4. Olfactory setæ of right antennæ, dorsal aspect. (Undifferentiated setæ are omitted). x450.
 5. Sense organ of third antennal segment. x1500.
 6. Right hind foot. x730.
 7. Right mucro and part of dens. x660.
 8. First abdominal segment. x500.

A NEW *MYZOCALLIS* (APHIDIDÆ: HOMOPTERA).

BY W. M. DAVIDSON,
 U. S. Bureau of Entomology, Alhambra, Calif.*

Myzocallis alhambra, sp. nov.

Body non-tuberculate; wings clouded; cornicles and tibial bases pale. Alate viviparous female.

General colour pale lemon yellow, suffused with pink and light orange. Shape of body rather narrow. Antennæ slender (third joint slightly enlarged on basal half), about as long as the body, pale yellow, articulations narrowly dusky brown; joint III bears from 2 to 4 circular sensoria on basal half; filament of distal joint longer than base; relative lengths of joints: III 317, IV 233, V 250, VI 133+186; joint IV is sometimes longer than joint V, and vice versa. Head and thorax somewhat dusky on sides; forehead produced obtusely in centre, its longest hairs about one-fourth as long as the head is wide between the antennæ, obscurely capitate; beak pale yellow, tip black, reaching barely to August, 1920.