spots on the upper surface. The spots become more conspicuous as the insects mature, and the leaves fall prematurely. The species is related to Aspidiotus uvæ, but is easily distinguished from that insect by its yellowish gray or whitish scale and concolorous exuviæ. The half mature females hybernate under the leaf buds. I have not found this insect on any other tree than maple, and as it attacks the leaves, principally, I have proposed the above popular name. Its specific name is proposed in honor of Prof. J. H. Comstock, of Cornell University, who first instructed me in this most interesting group of insects.

The Elm Aspidiotus (Aspidiotus ulmi).—This species has been found on the trunk of white elm (Ulmus americana) on the University campus, in rather limited numbers. So far as my observations go it does not attack the branches, twigs or leaves. This scale is not so important, economically, as the preceding species.

The Buckeye Aspidiotus (Aspidiotus æsculi).—I found this species very abundant on buckeye (Aesculus californica) in Santa Clara County, California, two years ago. It attacks the trunk, branches and smaller twigs, but so far as I have observed the scale, I have never seen it on the leaves. It is a very prolific creature, and often colonates to such an extent as to completely cover the branches. The color of the scale conforms to that of the bark, and where not abundant is difficult to detect.

# TWO DOLICHOPODID GENERA NEW TO AMERICA.

By WILLIAM MORTON WHEELER, Ph.D.

(University of Chicago.)

While looking through a lot of Dolichopodidæ collected during the Summer of 1895, I happened on two species which represent genera that have long been known to occur in Europe, but whose presence in America has not been noted.

Of the first genus, Xiphandrium, Loew (Monog. ii, p. 142) believed that he had seen a single female specimen from North America, but it had lost its antennæ, so that he could not be certain of its systematic position. My specimens agree in most respects with the generic characters given by Loew, although the sudden constriction of the long third antennal joint near its base and the long beard of cilia on the inferior orbit might lead one

to make it the type of a new genus. I have refrained from this, however, because the limits of the genera Porphyrops, Rhaphium and Xiphandrium are by no means perfectly definite (Conf. Schiner Fauna Austriaca Diptera i, p. 194) and the founding of a new genus could only add to the confusion. A careful study of the structure of the hypopygium in these genera may give more satisfactory characters, but the small size of the species and the difficulty of obtaining sufficient material will, I fear, delay such a study for some time. Adopting Schiner's definition of the genera Rhaphium and Porphyrops—he abandons Loew's genus Xiphandrium—I am in doubt where to place the American species; I prefer, therefore, to accept Loew's view and to recognize his genus as distinct from the other two.

The second species may be placed without difficulty in Wahlberg's genus *Thinophilus* as defined by Loew (Monog. ii, p. 148–149) and Schiner. According to Loew the male *Thinophilus* has six, the female five abdominal segments, whereas Schiner says that the abdomen is "in beiden Geschlechtern fimfringlig." The latter author also claims that the first and second abdominal segments are of equal length. Neither of Schiner's characters will apply to the American species, and here, too, I suspect that Loew is the more accurate.

The American Thinophilus is remarkable in two respects. First, its occurrence in the Western States and its absence in the Atlantic States—for I can hardly believe that so large and conspicuous a Dolichopodid could have been overlooked in the latter region—is another example of the similarity of the fauna of the Western States to that of Europe. Baron Osten Sacken long ago called attention to this interesting resemblance in the distribution of several insects (see his Western Diptera, p. 351 et seq.). A second peculiarity of the American Thinophilus is. its occurrence in Wyoming, far from the sea-shore or any body of salt water. The European species (T. flavipes Zettst., ruficornis Haliday and versutus Walk.) are described as occurring along the sea-shore. Concerning this interesting difference in the American form, two suggestions may be made: either the species has become adapted to living along the shores of alkali streams and ponds, or it may be actually a salt water species which has its center of distribution in the vicinity of the Great Salt Lake. These are matters for further investigation.

I append descriptions of the two new species:

### Xiphandrium americanum n. sp.

Male.-Length 2.5 mm.; length wings 2.25 mm. Slender species; proboscis small, black; palpi rather large, yellow, with several stout black hairs. Face metallic green, with golden reflection, covered with an almost imperceptible layer of white dust. Antennæ black, nearly as long as the head and thorax; first joint slender, without hairs; second joint rounded, transverse, with a few stout black hairs; third joint about two-thirds the breadth of the head, broad at the base, but suddenly narrowing to a long, thin and very gradually tapering apical portion; the whole joint covered with long and distinct gray hairs; the thick and distinctly pubescent arista bent at an angle with the third joint and about one-third its length. Front rather bright metallic green; inferior orbit with a long and conspicuous beard of white cilia. Thorax and scutellum bright metallic green with golden reflection; in some specimens considerably dimmed by a layer of whitish dust; pleuræ metallic green with a layer of light-colored dust; scutellum naked, with only the usual bristles. Abdomen bright metallic green with golden reflection, somewhat darker towards the posterior end; covered with short black hairs; base of the small embedded hypopygium black, the tips of the appendages yellowish or piceous; posterior pair of appendages short and conical, directed at right angles to the long axis of the abdomen, with long and conspicuous hairs; anterior pair of appendages considerably larger, spatulate, less hairy and directed forwards; coxæ black, with whitish dust; fore coxæ with vellow tips and glistening white hairs on their anterior surfaces. Legs plain, covered with short, but distinct black hairs; fore and middle pairs yellow; fore femora with a conspicuous black streak along their outer faces; hind femora black with a metallic greenish tinge, covered with whitish dust and with yellow tips; all the tarsi infuscated from the tips of the first joint. Wings hyaline, distinctly narrower towards their bases; posterior cross-vein distant about one and one-half times its own length from the posterior margin, forming a right angle with the third longitudinal vein; apical segment of the fourth vein perfectly parallel with the third and terminating in the tip of the wing; tegulæ white, with pale cilia; halteres lemon-yellow.

Female.—Length 2 mm.; length of wings 2 mm. Face considerably broader and less brilliantly metallic than in the male, with a thicker layer of pale dust; first and second antennal joints like those of the male; third joint hardly longer than broad, with the same kind of glistening gray hairs as in the male; the apically inserted arists strongly pubescent, much longer than that of the male, being nearly two-thirds the breadth of the head in length and exhibiting the same S-shaped curvature as the elongated third joint of the male antenna. The white beard of cilia on the inferior orbit nearly as conspicuous as in the male; the black stripe on the fore femora less distinct; all the tarsi black from the tip of the first joint. Wing not narrowed at the base; anal angle prominent; posterior crossvein somewhat further removed from the margin than in the male.

Described from seven males and one female taken in sweepings in the following localities: Milwaukee, Wis., June 26; Chicago, Ill., June 6; Whiting, Ind., July 13.

### Thinophilus pectinifer n. sp.

Male.-Length 5.5 mm.; length of wing 5 mm. Proboscis greatly swollen, dark colored, covered with a thick layer of gray dust; palpi very large, flat, of a clear yellow color, with a very delicate layer of silvery dust, and with several prominent black hairs scattered over their surfaces. Face short and broad, its lower border far above the lower edge of the eyes; widening somewhat below; with two transverse wrinkle-like swellings, one near its middle, the other near its lower border; ground color greenish coppery, covered thickly with tawny dust; antennæ small, yellow, the broadly rounded end of the third joint somewhat brownish; arista black; eyes with the white pubescence particularly distinct on their lower portions; cilia of the inferior orbit long and rather dense, yellowish white; front and thorax greenish coppery, covered with a thick layer of rich tawny dust; the thorax with two opaque gray lines down its middle; pleuræ covered with a dense layer of tawny dust; scutellum coppery, somewhat brighter than the thorax. Abdomen with six apparent segments; the first distinctly shorter than the second; the second to sixth subequal; all the segments metallic green with coppery reflection and gray dust, thickest on the sides; whole upper surfaces of abdomen beset rather uniformly with short black hairs; hypopygium black, its embedded base covered with whitish dust; lamellæ directed forward, of uniform thickness, shining black, without dust and with a few weak hairs at their anterior ends; fore coxæ yellow, scarcely infuscated at their extreme bases, with some prominent black hairs on their anterior faces; middle and hind coxæ dark, with white dust and yellow tips. Legs yellow, with black hairs; the short tarsal joints individually blackened at their distal ends; fore tibiæ with an uninterrupted series of black spines along the whole inner face, three prominent black spines at their distal ends and three smaller and equidistant bristles on the middle of their outer faces; first joint of the fore tarsi with a plantar concavity near its proximal end, where there is also a dense cluster of short black spines; extending from the concavity to the distal end of the joint is an uninterrupted series of short stout spines, which gradually increase in length; these spines are inserted at right angles to the long axis of the joint like the teeth of a comb; middle and hind tarsi plain, the latter with the basal joint only one and onethird times as long as the succeeding joint. Wings of uniform breadth and with prominent anal angle; distinctly yellow along the costal region, more grayish towards the apex and posterior margin; veins near the costa yellow, elsewhere brown. The posterior cross-vein, which is twice its length from the posterior margin, is covered with a dark gray or blackish cloud, and there is a distinct spot of the same color on the middle of the apical segment of the fourth vein; this vein shows a very faint curvature,

its tip running parallel with the termination of the third vein; tegulæ white, with glistening white cilia; halteres honey-yellow.

Female.—Length 4-5.5 mm.; length of wings 4.5-5.5 mm. The face is somewhat broader than that of the male; the abdomen, which has only five apparent segments, is broader and flatter. The fore tarsi are plain, the concavity of the first joint, the cluster and series of spines on the plantar surface are much less conspicuous than in the male. The same is true of the three black spines or spurs, at the distal end of the fore tibia.

For the two male and three female specimens from which this description is drawn, I am indebted to Mr. W. A. Snow, who collected them on Old Woman Creek, Wyoming (twelve miles north of Lusk) in July. The five specimens show a considerable variation in the color of the wings and body, some of them being much more yellow than others. There can be no doubt, however, that they all belong to the same species.

## NOTES ON OXYBELUS.-II.

By CARL F. BAKER, Fort Collins, Colo.

The species mentioned in this paper possess squamæ having lateral curved points. In all previously known species belonging to this group the spine is emarginate at tip. Three of the new species described herein (robertsonii, varicoloratus and hirsutus) form a new group of this section, having the spine entire at the tip. The new species are all Rocky Mountain forms, taken very near or within the hills. Several of them, like Prof. Cockerell's cladothricis, have a much greater extent of rufous on the abdomen than has so far occurred among eastern species.

Oxybelus robertsonii n. sp. J.—Vertex and thorax finely, somewhat sparsely punctate, the occiput finely transversely striato-punctate. Prothorax transversely carinate, not sharp angled at sides; mesonotum in front, and scutellum and postscutellum medially carinate; squamæ nearly joining behind, with very large, strong, lateral points but little bent, their tips somewhat exceeding tips of squamæ; spine rather long, narrow at base, towards the truncate tip flat and broadened to twice its width at base, sides of apical third parallel; metathorax with median space long triangular, passing into a short median carina, within transversely striate; above and lateral faces finely transversely rugose; pleuræ transversely striate. Abdomen oval, finely, somewhat sparsely punctate, scarcely constricted between the segments; last two segments coarsely punctate, the apical trapezoidal, truncate at tip; without lateral spines. Color black; pubescence silky, very thick on face, finer and thinner on rest of body;



Wheeler, William Morton. 1896. "Two dolichopodid genera new to America." *Entomological news, and proceedings of the Entomological Section of the Academy of Natural Sciences of Philadelphia* 7, 152–156.

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