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NEW SPECIES OF COLORADO APHIDIDÆ, WITH NOTES UPON THEIR LIFE-HABITS.

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In our study of Colorado Aphididæ during the past two or three years, we have endeavoured to trace each species throughout the entire year. In doing this work it has been necessary to make careful descriptions of the lice in all their stages of development. On account of inadequate descriptions of some of the described species, it is impossible in some cases to decide whether a louse under examination is a described species or not, and in other cases there seems to be very little doubt but that the species being studied is new to science. Some of the apparently new species I am describing below. If in any case an old species should be redescribed, I hope I shall give the description and the life-habits full enough in each case so that other workers may be able to tell upon what species I was working. Even this in some cases may not be an easy matter.

Unless otherwise stated, the descriptions are made in each case from fresh living specimens, and the colours given as they appear under a hand lens.

Aphis torticauda, n. sp.

A large red louse on native thistles, *Carduus* sp. Light to dark red in general colour, with antennæ and cornicles black.

Apterous Viviparous Female (Plate 11, figs. 1 and 4).

Described from specimens taken at Fort Collins, Colo., July 22, 1907.

Length, 3.5 to 3.75 mm; width, 2 to 2.20 mm.; antenna, 3 mm. Joints: III .9, IV .6, V .5, VI .14, VII .6 mm. Joint 3 with about 30 and joint 4 with 12 or more small circular sensoria. Joints 1 to 6 with a few short stout hairs on each. The antennæ are upon slight tubercles, and there is a small blunt tubercle on either lateral margin of the prothorax and each abdominal segment. The entire dorsum, including head, unicolorous-red; eyes, distal ends of femora, tibiæ, and all of tarsi, cornicles and antennæ black or blackish. Cornicles about .75 mm. long,