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Adult emergence counts from soil samples and laboratory mating crosses of *Aphthona lacertosa* and *Aphthona czwalinae*

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Soil samples were collected in the fall of 1993 along transects which traversed several habitat situations over which these two species of *Aphthona* have established at a site in eastern North Dakota. Sampling was also done on two additional sites which were recently established. Numbers of adults emerging from these samples ranged from 36 to 410 per square foot. At the older site, the proportion of *A. czwalinae* emerging, based on coloration of hind femur and elytra shape, was determined for each transect point. These proportions ranged from 0 to 0.07. Sex ratios for both species appear to approach 1:1.

Adults emerging from these soil samples were paired in cages and observed for oviposition. Egg deposition patterns, total numbers laid and egg hatch were recorded. After the adults died they were sent to the USDA-ARS Systematic Entomology Laboratory at Beltsville for final determination of species. Confirmed pairings of female *A. lacertosa* with male *A. czwalinae* produce 50 eggs/female (9 to 86 / 6 prs.); only 8% of which hatched. Confirmed pairings of female *A. czwalinae* with males *A. lacertosa* produced 70 eggs/female (0 to 247 / 8 prs.); only 10% of which hatched. It was not possible to trace the development of emerged larvae. In contrast, successful interspecies crosses for *A. czwalinae* produced 294 eggs/female with 94% hatch (3 prs.) and for *A. lacertosa*, 168 eggs/female with 81% hatch (11 prs.).