

NOTES ON THE CANADIAN REPRESENTATIVES OF BRITISH SPECIES OF BEES.

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Of the twenty-eight genera of bees given in Saunders' "Hymenoptera Aculeata of the British Isles," no less than twenty-two occur in Canada. The six absent are small genera belonging to an ill-defined unimportant complex in the *Andrena* group, several of which may yet be found to exist in Canada when this large genus, full of raw material, has been analyzed. In most of the genera common to both countries, there are many Canadian species which are more or less closely related to British species. The following are a few outstanding examples:

Colletes cunicularia Linn.

Colletes inaequalis Say, by far the largest species of *Colletes* in Eastern Canada and the only one occurring in spring, is apparently the representative of *C. cunicularia* Linn., also much the largest species and the only spring one found in England. Both are among the earliest bees to appear in spring. Ottawa specimens differ from British in having a much shorter coat, which is generally paler and greyer (less brown), and they have well-developed bands of white felt* on the margin of each segment of the abdomen. These bands in British specimens are scarcely discernible, being composed of fewer, looser hairs, which are dingy. Ottawa specimens are smaller; several females measured averaged in length 13.33 mm.; British females 14.00 mm.; Ottawa males 11.00 mm.; British males 13.25 mm.

Andrena clarkella Kirby.

Comparison of a male and two females of *Andrena bicolor* Prov. taken by the writer at Ottawa, and a female from Abitibi, with two males and two females of *A. clarkella* Kirby, taken at Maidstone, Kent, England, and with Saunders' description of this species shows no differences either in structure or colour. Even the tint and extent of the different hair colours in both sexes are identical. The characteristic red and red-haired hind tibiae and tarsi, and black-haired notum in the female, and the comparative lengths of the antennal joints 3, 4 and 5 in both sexes are the same. The Canadian examples however, are a little smaller:—females, average length 12.00 mm.; Maidstone females 12.75 mm.; Ottawa males 8.75 mm.; Maidstone males 9.75 mm.; and the coat on the thorax and abdomen is much shorter and less shaggy in the Canadian specimens. In both countries these are early spring bees. The Ottawa females were taken during early willow-bloom on April 25, 1915, about ten days after the snow had gone, and the male on April 27. In England it is taken in early March and has been recorded as early as February 19. It is also widely distributed northwards and uncommon, both in Canada and England.

Andrena wilkella Kirby.

Andrena winkleyi Vier. is the same as *A. wilkella* Kirby. I can find no differences in structure or size. Both are abundant in late spring at Ottawa and Dover respectively, and are fond of the same plants; *Myosotis*, etc. In both, the third antennal joint is shorter than the fourth, a character by which *wilkella*

*The word "felt" is used to describe very short, close hair, the individual hairs of which are thicker than ordinary hairs. Felt grades into ordinary hairs.