

# THE GENUS VESPA IN CANADA. KEY TO THE SPECIES.

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The wasps of Canada, the word "wasp" being used in its strictest sense to include only the genus "Vespa," fall into four groups:—the Norvegica Group, the Carolina Group, the Vulgaris Group, and the Rufa Group.

Four new forms are described in this paper, but how far they run into existing forms only extensive collecting and especially the taking of nests will show. In several cases, there is a dark northern form closely related to a yellow southern form.

1. Eyes not nearly reaching to mandibles, sagittae not fused together at the tip (Norvegica group) 2  
Eyes touching or nearly touching mandibles...6

## NORVEGICA GROUP.

2. Large species (female length about 21 mm.), maculations white, not yellow, flagellum testaceous beneath, segments 1 and 2 entirely black.  
male 2061, female 2060, *maculata* L.

N. S. to B. C. Makes aerial nest, constructing entrance tube when first workers are maturing. This is the well-known "Black hornet."

Regular size (female length about 17 mm.), segments 1 and 2 nearly always striped more or less .....3

3. Markings yellow .....4  
Markings white .....5

4. Yellow band on segment 1 wider, interrupted or almost so in middle, small black spot or spots on clypeus, antennae testaceous beneath, inner angle of stipes rectangular or acute, its hair shorter and denser.

male 2064, female 2063, *diabolica* Sauss.

Very common, N.S. to B.C., to 5000 ft. in southern B.C.

Yellow band on segment 1 narrow, uninterrupted, clypeus divided by a black line, widened in middle, male antennae black beneath, inner angle of stipes obtuse, its hair longer and less dense.

male 2186, female 2187, *norvegicoides* n. sp.

N.S. to B.C. Near to *diabolica* and the European species *norvegica* L.

5. No red spots on segment 2, stipes black, inner side strongly angled and margined with moderate amount of pale hair.

male 2065, female 2062, *arctica* Rohw.

(=*borcalis* Lewis)

N.S. to B.C., not common. Only males and females known. Parasitic in nests of *V. diabolica*.

Segment 2 with lateral red spot, stipes pale, slender, inner side not angled, clothed with dense yellow hair.

male 2077, neuter, *albida* n.sp.

Alaska.

## CAROLINA GROUP.

6. Dorsum with two (or four) longitudinal yellow stipes; female abdomen ochreous and black, neuter yellow and black.

female 4015, *carolina* Sauss.

Point Pelee, Ont. (Taverner).

Dorsum entirely black, or (in *occidentalis* only) with two small spots, markings yellow or white .....7

Hairs on segment 1 pale, sagittae fused together at tip, forming a spoon with slender stem.

(*Vulgaris* group) ...8

Hairs on segment 1 black, sagittae fused together, forming a subtruncate club.

(*Rufa* group) ...9

## VULGARIS GROUP.

8. Scape yellow in front in female and neuter; male has the surface of segment 7 concave, sagittal piece not armed with thorns, slightly emarginate at tip, inner tooth of stipes truncate.

male 4016, female 2069, *occidentalis* Cr.

Lethbridge, Alta., to Victoria, B.C.

Scape entirely black in female and neuter; male has a transverse declivity on segment 7, a long thorn on either side of base of terminal swelling of sagittal piece, inner tooth of stipes pointed.

male 2188, neuter 2071, *communis* Sauss. 8a.

Common in eastern Canada. Makes underground nest.

- 8a. More extensively black. Clypeus with black line. Pronotal yellow stripe narrower, black spots on abdominal segments fused into the wider basal bands.

female 2070, var. *communis* Sauss.

More northern range. Probably only a melanic variety.

More extensively yellow. Clypeus with small black spots, pronotal stripe wider. Black spots on abdominal segments free from the narrower basal bands.

female 2170 var. *flavida* n.n.

(=*pennsylvanica* of authors)

More southern range.