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NOTES ON SOME MOSQUITOES NEW TO CANADA.

BY ERIC HEARLE,
Guelph, Ont.

Psorophora sayi Dyar and Knab.

This beautiful insect has not previously been recorded from Canada, although it is reported from the Atlantic and Gulf states, the Mississippi Valley, Cuba and the Bahamas.

The single specimen obtained by the writer was taken near Jordan, Ontario, on August 3rd, 1916. It was in woods, attempting to bite at 8.30 in the morning. With it were a number of *Aedes canadensis*.

This is a very distinctive mosquito; in the sunlight most of the scales give off vivid purple reflections. The hind tibiae and some of the hind tarsal segments have many erect, dark purple scales which give a brush-like appearance to these parts. The apices of the hind legs are white: the two distal tarsal segments and part of the preceding one being entirely white-scaled. The abdomen is dark-scaled, the scales having violet reflections. At the apex of each segment, on each side, there is a lateral yellow triangular patch. The venter is yellow-scaled.

Aedes triseriatus Say.

There is no previous Canadian record of this very interesting little mosquito. Howard, Dyar and Knab give its distribution as the United States east of the Rocky Mountains.

The writer found the species to be a fairly common one in woods in Southern Ontario. Females only were taken and these were found to bite fiercely during the day, but collections made after nightfall gave no specimens. Quickness of movement and a highly-strung sense of danger characterizes the species which is a very illusive one.

The writer's specimens were taken at Jordan, Ontario, on August 3rd, 1916. Dr. E. M. Walker kindly loaned for examination specimens of males and larvæ of *triseriatus* taken by him at De Grassi Point, Ontario. The larvæ were obtained from a tree-hole on July 4th, 1917, and the males bear the date June 23, 1917. These were reared from larvæ taken from the same tree-hole.

Aedes triseriatus is a small black and white mosquito in which the markings are very characteristic. The mesonotum has a broad band of dark brown scales running from base to apex and covering the central half. The sides are pure-white scaled. The abdomen is black-scaled dorsally, except for white spots laterally at the base of each segment. The venter is white-scaled, except for apical black bands on the posterior segments. The legs are black and the wings are clothed with black scales.

***Aedes aldrichi* Dyar and Knab.**

While investigating the mosquito problem of the Fraser Valley, B.C. during 1919, the writer found *Aedes aldrichi* to be the dominant mosquito of that district. Previous to this it had been known only from Montana and Idaho.

The extensive development of this species in the Fraser Valley is apparently dependant upon the fluctuation of the river. In years of high freshet, the cotton-wood bottom lands around the river become flooded and *aldrichi* is extremely abundant. The adults bite very viciously and are so small that they can penetrate ordinary screening with comparative ease.

Swarming of males was observed at six p.m. on July 12th, 1919, at Dewdney, B.C. Four or five dozen individuals were hovering in a swarm three or four feet from the ground. The swarm was composed almost entirely of males and was in a place well protected by willow growth.

This small grayish *Aedes* has the thorax clothed with yellowish-gray to pale straw-coloured scales. There is a broad median divided stripe of dark brown scales, and two short lateral markings of the same colour. The abdomen is black, with crisp white basal bands narrowed in the centre and broadening laterally in the posterior segments to form broad triangular patches. The legs are black, and the wings are entirely black-scaled.

Specimens were taken at Mission, B.C., between June 13th and August 3rd. They were found throughout the valley from Hope to Ruskin.

***Anopheles quadrimaculatus* Say.**

It is surprising that there are no previous Canadian records of this mosquito, as the writer found it to be fairly common in some parts of Southern Ontario. Specimens were taken at St. Catharines, Ontario, on August 24, 1916, and at Jordan, Ontario, on August 4, 1916. At the latter place *quadrimaculatus* was very abundant. It was not found at Guelph, where *occidentalis* is the common Anopheline.

A. quadrimaculatus is a gray-brown species in which the brown mesonotum is clothed with yellowish hair scales: the abdomen is grayish-brown and has many silky, pale hairs. The legs, proboscis and palpi are uniformly dark-scaled, save for yellow scales at the knees and the apices of the tibiæ. The wings are marked with four dark spots, these being at the forks of the second and fourth veins, at the base of the second vein and at the cross-veins. The wing fringe is uniformly dark-scaled.

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Anopheles occidentalis and *A. walkeri* somewhat resemble this species, but the former has a yellow coppery patch on the wing fringe, at the apex; and the latter has less distinct black spots on the wings and has white rings on the palpi.

REMOVING POLLEN FROM BEES.

It is well known to all persons who have made a collection of bees that a large proportion of specimens in some genera—notably *Andrenidæ* and *Megachilidæ*—are so heavily loaded with pollen that their beauty as cabinet specimens is much impaired, and also that some of the characters which need to be examined in order to identify them properly are covered and concealed.

Last season I experimented to find some practical and easy way to remove the pollen without injury to the specimens, and I succeeded so well that I thought that some of your readers would like to know about it.

I take a wide-mouthed bottle holding some five or six ounces and fill it about two-thirds full of gasoline, drop the bees in and cork tightly and shake vigorously for two or three minutes, then pour off the liquid into another bottle and empty the bees out on to a sheet of blotting paper. In a few minutes the gasoline will all evaporate and leave the bees perfectly clean. When wholly dried out they should be examined with a lens, and if not clean give them another bath of fresh gasoline. This second bath will rarely be necessary if thoroughly done the first time. In case some very shaggy species should not look fluffy enough, a little brushing with a small, soft paint brush will completely restore the natural appearance. Some pollens are more difficult than others to remove. That of *viburnum* is the worst I have seen yet, but it will come off. I am sure that any one who will give this plan a thorough trial will be more than satisfied. Old dried specimens cannot be cleaned.

N.B.—Do not fear to shake vigorously. You cannot injure them, and it is necessary to shake well in order to rinse them completely.

E. J. SMITH, SHERBORN, MASS.

CONCERNING THE DISTRIBUTION OF NORTH AMERICAN. CICADELLIDÆ (HEMIP.).

BY GEO. W. BARBER,
U. S. Bureau of Entomology, (*) Washington, D.C.

Some time ago a study was pursued to determine what relation the distribution of N. A. Cicadellidæ had to the life zones of N. A. fauna. It was soon found, however, that under our present knowledge of the distribution of the insects of this family, such a study would lead to considerable confusion, and it was, therefore, discontinued for the present.

Certain information did develop, however, concerning the distribution of the Cicadellidæ, and it is here presented as perhaps adding something to our conception of this family:

Undoubtedly some localities in the distribution of the species have been overlooked, but an endeavor has been made to know the distribution of each species so far as it has been recorded in literature.

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