

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.).

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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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The Cicadellidæ is represented in America north of Mexico, by 70 genera through which are distributed some 773 species now held to be distinct. On the whole, very little has been done to determine the fauna of any given locality. Several lists, however, have been published and for at least six states the family has been collected extensively and recorded. There may be mentioned the New York and Maine lists by Prof. Osborn, the Tennessee list by De Long, the Wisconsin list by Saunders and De Long, the Missouri list by Gibson and Cogan, and the South Carolina list of Lathrop. In addition to these more extensive lists there have been several minor lists, which need not be mentioned here.

Of the 773 recognized species, some 294 have been recorded from but one locality, the locality of the type and apparently never recovered. The localities of these follow:

"Am. Sept.".....	1	Tenn.....	19
Boreal Am.....	1	Wisc.....	12
Carolina.....	1	Iowa.....	4
Maine.....	5	Arkansas.....	1
N. H.....	1	Texas.....	9
N. Y.....	3	Kansas.....	3
N. J.....	3	Nevada.....	3
Md.....	2	Utah.....	6
D. C.....	3	Colorado.....	62
Va.....	2	N. Mexico.....	6
N. C.....	1	Arizona.....	15
S. C.....	6	Calif.....	70
Ga.....	3	Washington.....	4
Fla.....	20	Oregon.....	4
Penn.....	4	Canada.....	3
Ohio.....	2	Manitoba.....	1
Ill.....	5	Vanc. Isd.....	1
Mich.....	1	Alaska.....	5
Kentucky.....	1	Greenland.....	1

Total—294.

The number of species in addition to the above list that have been recorded from certain of the General Geographical regions may be summed up in the following list:

Generally distributed throughout the U. S. and Canada.....	32
Generally distributed throughout the U. S.....	24
Generally through Atlantic States.....	33
Generally through Northern States.....	72
Occurring generally East of the Rocky Mountains.....	134
" " through the Southern States.....	52
" " " " Middle Western States or great plain region.	25
" " West of the Miss. River.....	5
" " through Rocky Mountain Region.....	60
" " in the South West.....	27
" " in the North West.....	3
" " in the Pacific slope.....	10

The number of species that have been recorded from the several states, territories and provinces is here enumerated:

Maine.....	151	La.....	8
N. H.....	74	Minn.....	8
Vermont.....	6	N. D.....	8
Mass.....	62	S. D.....	12
R. I.....	5	Nebr.....	39
Conn.....	14	Kans.....	107
N. Y.....	209	Okla.....	3
Penn.....	143	Texas.....	73
N. J.....	123	N. Mex.....	41
Del.....	1	Ariz.....	70
Md.....	46	Colo.....	268
D. C.....	65	Wyo.....	7
Va.....	17	Mont.....	7
N. C.....	112	Utah.....	61
S. C.....	121	Idaho.....	3
Ga.....	40	Nevada.....	8
Fla.....	128	Oregon.....	11
Ohio.....	89	Wash.....	21
W. Va.....	2	Calif.....	178
Kentucky.....	15	Mexico.....	15
Tenn.....	242	Quebec.....	94
Ala.....	12	Ontario.....	121
Miss.....	40	Alaska.....	11
Ind.....	11	Manitoba.....	6
Ill.....	63	Vanc. Isd.....	19
Wisc.....	208	Brit. Col.....	43
Mich.....	43	Greenland.....	1
Iowa.....	161	Nova Scotia.....	4
Mo.....	155	Newfoundland.....	1
Ark.....	9		

From the figures presented above, the most striking fact that will be apparent is not the number of species found in any one region, but the meagre information that we have concerning the Cicadellid fauna of the majority of the states and provinces. The value of state and even local lists is here quite apparent, through the service that they render in extending the known distribution of species.

It is quite evident that certain sections accommodate a considerably larger number of species of Cicadellidæ than others whose climatic conditions are less varied, but it may be estimated that nearly all of the states should give from 150 to over 250 species. Considering the meagre collecting that appears to have been done in certain parts of our territory the total number of living species of this group will undoubtedly be found to be greatly in excess of one thousand.