

# U. S. Department of Agriculture.

DIVISION OF ENTOMOLOGY,

Washington, D. C., May 5th, 1891.

Prof. Sereno Watson,

Botanical Garden,

Cambridge, Mass.

My dear Sir:

I was much pleased to receive, this morning, your favor of the 30th ultimo, with enclosures, the more pleased because I had read at the last meeting of the Washington Entomological Society an article on the determination of the food-plant of Carpocapsa saltitans, of which I send you a copy enclosed. Your specimens enable me now to speak with certainty of the species bred from the bi-coccous form, which, by the way, is marked bilocularis in the herbarium here. I presume it is the same as what you call bi-capsularis. You will notice that I had already arrived at the conclusion that C. saltitans affects several species of the genus, if not different genera. In this connection I would like to ask you whether you are familiar with the meaning of Colliguaja. You will see, upon reading over my article, why I ask the question. I cannot find anyone here who can give me an explanation, as it seems to be a Mexican or native term and probably has reference to some common attribute of the Euphorbiaceae,



or those plants which the Indians use to poison their arrows. The moths you enclose from the capsules of bi-capsularis are somewhat smaller than Carpocapsa saltitans, and belong, in fact, to a different genus. So far as I can now make out, they are an undescribed species of Grapholitha, the larvae of which commonly infest various seeds. I shall be very much indebted to you if you will in any way revise or add to the synopsis which I quote from Mr. Rose, as you are more familiar with the species and generic characters than he probably is. So far as I know each carpel in almost all Euphorbiaceous plants contains one seed, and the single seed which I have seen from S. palmeri was dark and very small compared with the size of the carpel, while in bicapsularis the seed is lighter in color and occupies the entire cavity of the carpel. Now I have been very much puzzled over Dr. Barnes' language, as to each pod containing from 3 to 5 seeds, and particularly puzzled by the fact that the larva of Carpocapsa saltitans is much too large to have nourished on a single seed of the size which characterise S. palmeri. Can you throw any light on this phase of the subject?

What you write me of your experience with the figs in Mexico interests me intensely. I have for some time been giving attention to the question of caprification in this country, and have a number of interesting data accumulated. I have also a



Riley, Charles V. 1891. "Riley, Charles V. May 5, 1891 [to S. Watson]." *Asa Gray correspondence*

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