

still of the opinion that in normal years the parasite would, in all probability, maintain a general distribution (page 26). During the spring and summer of 1909 a notable exception to this opinion existed in southwestern Oklahoma. Here the green bug was abundant over about one hundred square miles. This area was examined, first by a representative from the federal bureau about the middle of April and then by a member of the entomological department of the university of Kansas a month later, and neither of these entomologists found any evidence of the presence of the parasite. Reliable reports subsequently made to the author showed the green bugs present and the absence of the parasite during the entire growing season and this in a locality where parasites were superabundant two years previous and in a climate favorable to the existence and natural distribution of the parasite.

These are the evidences upon which the opinion was based that this parasite does not maintain a general distribution.

5. What the reviewer says regarding the Australian lady bird in California is important. The only reference to this insect in the bulletin is in connection with a historical summary of entomological endeavor in the control of one insect by the use of another. Since this lady bird is not referred to in the discussion of the green-bug problems, there does not appear to be anything to show that the behavior of this lady bird was used as corroborative evidence to strengthen any conclusions regarding the green bug and its parasite.

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GAMETOGENESIS OF THE SAWFLY NEMATUS
RIBESII. A CORRECTION

In the *Quarterly Journal of Microscopical Science*, Vol. 51, 1907, p. 101, I described observations on the gametogenesis of *Nematus ribesii*, some of which subsequent work has shown to be erroneous. Since my statements have been quoted in several recent papers, I think it necessary to correct the mistakes as

far as possible, although I have not yet reached a satisfactory solution of the phenomena. The errors arose partly through misinterpretation of the phenomena observed, and partly through imperfect fixation, for I find that, unless the material is very accurately fixed, the chromosomes tend to adhere together and give the appearance of a smaller number than the true one. The same cause has led other observers to make similar mistakes.

Reinvestigation of *Nematus* shows, in the first place, that there is only one division of the spermatocytes; the first division described in my paper is not a true mitosis, but is probably comparable with the abortive division observed in the spermatogenesis of the bee. I have not yet been able to determine the chromosome number with certainty. In the spermatogonia the number appears to be about sixteen, and that in spermatocyte mitoses about eight, but if eight is the true reduced number, the occurrence of sixteen in the spermatogonial mitoses of larvæ derived from parthenogenetic eggs is unexplained. In the bee, and as I find, also in a cynipid (to be published shortly), the spermatogonial number is the same as that of the spermatocytes.

I have not yet obtained fresh material for reinvestigation of the maturation of the egg, but the results of my recent work on the spermatogenesis make it clear that my observations on the chromosomes in the polar divisions also require revision.

But the behavior of the chromosomes in *Nematus ribesii* is so difficult to follow that it is possible that the true interpretation will be obtained only by the discovery of some nearly related species in which they are more clearly distinguishable.

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MOUNTAIN AND VALLEY WINDS IN THE CANADIAN
SELKIRKS

TO THE EDITOR OF SCIENCE: Report has been brought from British Columbia by Mr. C. T. Brodrick, of Harvard University, of an interesting case of the daytime descent of air