

effect of this mixture on leaves, but the president stated that trees had received three applications in summer in Canada without any apparent injury, while 90 per cent. of the scale was killed.

Mr. C. P. Gillette gave an account of some observations on insects in Colorado. The speaker illustrated his remarks by means of insect specimens. A short-winged form of *Melanoplus bivittatus* was exhibited, and also of *M. femur-rubrum*, the latter showing great variation in colour. The speaker stated that *Chorizagrotis agrestis* occurs in Colorado in three forms, and is extremely injurious to a great variety of crops. The males are uniformly darker than the females, and this fact has, in a few cases, led to errors in determination. He also described a species of Chermes on pine and spruce, and gave an account of its life-history. In spring the insect is found on the under side of small twigs of *Abies pungens*. The eggs are deposited on the old wood near the new growth in masses of 150 or more. The swelling of the needles and consequent gall formations are due to the attacks of young lice, and not to the punctures of the adult females in laying the eggs. In Colorado there is apparently a new species of Chermes in addition to *C. abietis*. The young of this new species also locate on the new growth, but do not form galls. The insect passes the winter in a larval stage and is strictly oviparous. There is some evidence of another species of Chermes on *Pinus ponderosa*. The speaker also referred to the injury to apples from the use of strong arsenical sprays and Bordeaux mixtures.

Mr. R. A. Cooley, of Montana, also spoke on the same subject.

The question was raised whether breeding experiments in insects might reasonably be expected to lead to valuable results, and was discussed by several members. During this discussion mention was made of experiments which had been made in attempting to lengthen the tongues of bees, and of experiments to determine the effect of foodstuffs and other conditions of environment upon the life history of silkworms and the quality and quantity of silk produced.

Dr. E. P. Felt spoke on the subject of the exhibit of economic insects to be sent to the St. Louis World's Fair, and the arrangements which had been made for displaying it.

For the next meeting of the Club, which will be held in connection with the meeting of the Association for the Advancement of Science in Philadelphia, the Club elected Henry Skinner as president, and E. V. Wilcox as secretary.

E. V. WILCOX.