

by the characters of the eyes, the anterior row in *pacifica* being distinctly procurved instead of straight or slightly recurved, with the eyes obviously more widely separated and the medians clearly smaller relatively to the laterals, the clypeus higher, etc. In *pacifica* tibia I bears in front two spines instead of one, the ventral spines do not typically overlap, and tibia II is armed with a spine at the distal end.

A NOTE ON THE WINGLESS TIPULID *CHIONEA VALGA* HARRIS.

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During March, 1920, Mr. H. J. Blurton, trapper, of Mara, B. C., brought into my office some specimens of insects taken from above snow line at the north end of the Okanagan Valley. One of these insects has turned out to be the wingless tipulid *Chionea valga* Harris, and it constitutes a new record from the West. The determination was made by Dr. Nathan Banks through Dr. J. McDunnough, of Ottawa, and my attention was drawn to the article on this genus that appears in *Psyche*, Vol. XXIV, p. 142, October, 1917, by Dr. Werner Marchand of the Department of Animal Pathology, the Rockefeller Institute for Medical Research, Princeton, New Jersey. Owing to the interest of this capture I requested Mr. Blurton to give me the leading notes of his observations for record and publication. These notes follow, arranged in manuscript form.

"I have noticed them for many years in the Hunter's Range of Mountains, east of Mara, B. C., and they have always attracted my attention by their peculiarities in regard to the altitude they live at in the mountains, their mode of travel, and the weather conditions they seem to prefer. These insects seem to live principally between 5,000 and 6,500 feet above sea level, and in a country where spruce and balsam trees grow, living principally in the large, open spaces near timber line, but very seldom where timber is plentiful. When travelling over the snow they always appear to be in a great hurry, and they move in nearly straight lines from one point to another, not travelling in an erratic manner at all, but as if they had some special destination in mind. I noticed when I approached one that it would crouch down when I am near, as if it could feel the vibrations in the snow made by the weight of my snowshoes falling on the snow, and would remain motionless until I had passed. This habit is not invariable, but it happens often enough to be noticeable, showing that this species is either sensitive to vibrations in the snow or to the sounds made by my movements.

It is very noticeable that this insect only selects cold, snowy weather to travel in, and it is very active on the surface of the snow during the months of January, February, March and April, even when the temperature is below zero. If the atmospheric temperature is warm enough to make the snow surface moist they apparently do not travel. I have noticed in April that if the sun in the morning shone brightly, causing a slight thaw, there would be a few *Chionea* visible, but if the weather changed in the afternoon and became colder with a flurry of snow that large numbers of *Chionea* both males and females, came hurrying from all directions. The adults seem very sensitive to warmth and will die in a few minutes if carried in a warm hand, although if placed on the