

For interesting accounts of the life-history and habits of this insect the reader is referred to McNeill's "List of the Orthoptera of Illinois," in Psyche, VI., 1891, p. 5, and to Blatchley's "Orthoptera of Indiana," p. 436.

Long-winged females of *abbreviatus* are common in Ontario, though far less so than the short-winged individuals. On Aug. 26, 1901, I found considerable numbers of them floating on Lake Huron, off the shore of the Bruce Peninsula. I have never seen a long-winged male.

Localities: Pt. Pelee, Aug. 7, 1901; Arner, Aug. 9, 1901; Rondeau, Sept. 14, 1899; Sarnia, Aug. 15, 1901; Goderich, Aug. 19, 1901; Southampton, Aug. 20, 1901; Bruce Peninsula, Aug. 25-26, 1901; Owen Sound, Aug. 31, 1901; Peterborough Co., Sept., 1903; Toronto, Aug.-Nov.; Lake Simcoe, Aug.-Oct.; Dwight, Muskoka, Aug. 23, 1903; Algonquin Park, Aug., 1902-3; North Bay, Sept. 12, 1900.

10. *GRYLLUS PENNSYLVANICUS*, Burmeister. The Pennsylvania Field Cricket.

*Gryllus pennsylvanicus*, Burm., Handb. der Ent., II., 1838, 734.

*Gryllus luctuosus*, McNeill, Psyche, VI., 1891, 4.

*Acheta niger*, Harr., Ins. inj. to Veg., 1862, 152.

*Gryllus neglectus*, Scudd., Journ. Bost. Soc. Nat. Hist., VII., 1862, 428.

Measurements: Length of pronotum, ♂ 3 mm., ♀ 3.3 mm.; of hind femur, ♂ 10 mm., ♀ 10.5 mm.; of body, ♂ ♀ 17.5 mm.; of ovipositor, 13.5 mm.

I have often found nymphs of this species in early spring under logs and rubbish, where they have passed the winter. The chirp of the adult is first heard about the third week in May, the last toward the end of July. They are most numerous about midsummer, when the fields and pastures resound with their song. They are very difficult to obtain, however, for they are not gregarious like *G. abbreviatus*, but usually occur in pairs hidden in the rubbish under some thick tuft of grass or weeds, or under the edge of a stone. It requires the utmost care and patience to trace the song to its source, but if this is done successfully, one is often rewarded by finding the female as well as the male.

They are found everywhere in open woods and pastures, and are most abundant on sandy soil.

Blatchley says of this species in Indiana, that "the young hatch in July and August, and after the second or third moult form their winter abiding places, while the adults perish with the coming of the hoarfrost."