

FOOD PLANT.—Goldenrod (*Solidago canadensis* and perhaps other species of the genus). The adults hibernate and come forth in early spring to feed on the tender goldenrod plants. The eggs are doubtless inserted in the goldenrod stems where the nymphs appear and feed during July. In New York, most of the adults mature by the middle of August, and continue to feed until the cool September nights make them seek hibernation quarters.

KNOWN DISTRIBUTION.—Illinois, Iowa, Minnesota, Ontario, Wyoming and eastward, perhaps everywhere its host plant grows freely.

Illinois Records.—NORTHERN ILLINOIS: 1 ♂. APPLE RIVER CANYON STATE PARK: July 11, 1934, DeLong & Ross, 1 ♂, 2 ♀. GALESBURG: Sept. 13, 1888, 1 ♀. ROCK ISLAND: May 19, 1934, Ross & Mohr, 1 ♂. SAVANNA: June 13, 1917, 1 ♀. WHITE PINES FOREST STATE PARK: July 12, 1934, DeLong & Ross, 1 ♂.

#### *Lygus frisoni* new species

This is to be distinguished from *oblineatus* (Say) by its larger size and longer second antennal segment; it is smaller than *vanduzeei* Knight, but the second antennal segment is relatively longer than in that species.

MALE.—Length 6.10, width 3.00. Head width, 1.18, vertex 0.48; yellowish without dark marks, collum black. Rostrum, length 2.60, extending to tips of hind coxae, yellowish, apex black. Antennae, first segment, length 0.73, yellowish brown, becoming blackish beneath; second, 2.20, brownish, apical one-fourth black; third, 1.04, black; fourth, 0.91, black. Pronotum, length 1.38, width at base 2.38; disk rather coarsely punctate; yellowish brown; two small spots present behind each callus, large spot at either basal angle, and ray behind top of coxal cleft, black. Scutellum pale to yellowish, darker on median line at base; coarsely punctate; transversely rugulose. Hemelytra punctate, with rather fine pubescence, this pubescence more distinct than in *vanduzeei*; pale translucent yellow; apical area of corium and area on middle of clavus fuscous to black. Cuneus pale, translucent; extreme tip black. Membrane dark fuscous, veins yellowish; marginal spot beyond tip of cuneus and basal half of cells clear. Venter very dark brown with a broad lateral, longitudinal, yellowish stripe. Legs yellowish brown; apical half of each hind femur very

dark brown, with three rather irregular, pale fasciae on anterior aspect; tibiae pale; spot at base and elongate mark just beneath black. Genital claspers rather similar to those of *vanduzeei*.

**Holotype, male.**—Urbana, Ill.: Sept. 1932, T. H. Frison.

**Paratype.**—Same data as for holotype, 1 ♂.

#### *Lygus hesperus* Knight

##### Legume Bug

*Lygus elisus hesperus* Knight (1917b, p. 575).

MALE.—Length 6.50. Head width 1.22, vertex 0.45. Rostrum, length 2.68, slightly exceeding posterior margin of hind coxae. Antennae, first segment, length 0.65, pale reddish brown, fuscous on ventral side; second, 2.11, reddish, apex and ventral side at base very dark brown; third, 1.00, dark reddish brown to fuscous; fourth, 0.63, fuscous. Pronotum, length 1.34, width at base 2.30; yellowish; outer half of calli and a small round spot behind each inner margin, a spot within basal and anterior angles of disk, and a small spot behind coxal cleft, black. Hemelytra more pallid than yellowish; apex of clavus and suture, apical half of corium, and tip of embolium, reddish or marked with red; cuneus with inner margin and apex reddish. Membrane pale, faintly shaded with brownish in areas bordering veins, a darker mark at inner apical angles of larger areoles. Legs yellowish, more or less shaded with reddish; two annuli present near apex of each femur; tibiae yellowish, apices reddish, spines black. Venter fuscous beneath, sides yellowish. Genital claspers as in fig. 161.

FEMALE.—Length 6.40. More uniformly yellowish than male, pronotum entirely yellow except for a small black dot behind inner margin of each callus; hemelytra uniformly pallid, without reddish; markings on femora more reduced than in male; venter yellow. Rostrum attaining or slightly exceeding posterior margins of hind coxae.

FOOD PLANTS.—This species is an important pest of beans and alfalfa in Idaho and Utah and on cotton in Arizona. Shull (1933) has published a work on the biology and economic status of this species and has given it the common name "legume bug."

KNOWN DISTRIBUTION.—This is a west-