## Perdita citrinella Graenicher.

Minot and Granville. At Petalostemon oligophyllum; July 8 and Aug. 22, five females, eleven males.

Female.-Dark sutures of head and thorax quite prominent; two specimens have tibiæ dark except knees, middle tarsi dark, ventral surface of abdomen dark medially, and scape and upper side of flagellum dark.

Male .- Closely resembles the female. Hind tibiæ usually dark behind; abdomen usually with dark triangular patches at sides of segments 2 to 5.

The males does not seem to have been previously described, although Crawford recorded\* a specimen from Medicine Hat, Alberta, Canada. The markings of both sexes vary quite a little, but there is no suggestion of intergrading with the following species. In a series of eight males taken at the same time, considerable variation is known. The dark lines next the eyes are shorter than in the female, but the spots between these and the antennæ are prominent, sometimes each occupying one-fourth the width of the front; well developed spots are sometimes present at sides of lateral ocelli and small ones behind apex of eyes. Two have lateral brown lines on the mesoscutum, while one has suffused brown lines both medially and laterally, and nearly complete bands on abdomen. One has hind tarsi yellow.

## Perdita perpallida Cockerell.

Sand hills near Sheldon, Aug. 12, 1916, and Aug. 21, 1918, at Petalostemon villosum; ten females, seven males. This species would seem to have been expected where the preceding was taken, and vice versa. This plant occurs only in this part of the State and near Pleasant Lake and Towner (not far from where Perdila citrinella was taken); P. oligophyllum and purpureum are common plants throughout the State.

## Perdita martini Cockerell.

1895.-Perdita martini Cockerell, Proc. Acad. Nat. Sci. Phila., 1895, p. 14. male.

Male.--Agrees closely with the original description. The yellow on the face extends about to the middle of the anterior ocellus, its upper line irregular, being depressed under the lateral ocelli and slightly produced next the eye, a narrow line following the direction of its upper border reaching the lateral ocellus. Brown of the antennæ above mostly limited to the junctions of the first four or five joints of the flagellum; yellow on cheeks extending fully twothirds the length of the eyes.

Meso-pleuræ with a broad yellow mark extending from front coxæ to midway between middle coxæ and tubercles; middle tibiæ with a dark spot above, posterior tibiæ dark, and femora on apical half both above and below; posterior tarsi brownish; stigma yellow, nervures brownish.

Female.--Length 5 mm. Yellow on clypeus, labrum, a low supra-clypeal spot, spot behind base of mandibles, lateral face marks extending from middle of clypeus to slightly above base of antennæ with an irregular margin, scape of antennæ and lower side of flagellum, tegulæ, tubercles and a line on prothorax connecting them. Legs with coxæ dark, trochanters yellow; anterior yellow except a spot in inner side of femora; middle with a larger spot on femora, and a small one on outer side of tibiæ; posterior dark except knees. Dark bands of

\*Can. Ent. vol. 44, p. 359, 1912.