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Two New Species of *Perdita* from North Carolina (Hymenoptera: Apoidea)¹

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Both of the following species of *Perdita* were discovered at Holly Shelter, North Carolina, by Professor T. B. Mitchell on October 5, 1951. Attempts to obtain additional specimens of *P. discreta* in 1952 failed, but *P. polygonellae* was collected again at the middle of September.

Perdita polygonellae n. sp.

A member of the *octomaculata* group, with a ferruginous abdomen. This is the only species of the group so far described that has this character, and it is also the only known eastern species of *Perdita* with an entirely red abdomen.

Female: Head and thorax dark olive green. Basal half of mandibles, sides of labrum, clypeus, lateral and supraclypeal marks, pale yellow. Mandibles shading into testaceous at middle and into rufous at apex. Middle of labrum more or less piceous. The usual pair of clypeal dots minute. Lateral marks large, higher than wide, narrowed above and ending obtusely at level of antennae. Supraclypeal mark generally a little notched above, and sometimes divided into two spots (rarely absent). Anterior border and large cuneate marks on each side of hind margin of pronotum, and the tubercles, yellow. Abdomen uniformly ferruginous, with only the lateral foveae of tergite 2 black, but occasionally (paratypes) with a faint brownish subapical band on the first segment, mostly in the form of sublateral oval spots, and a more distinct blackish spot on disk of tergite 5. Legs black, the under margin of posterior side and the apex of front femora, apex of middle femora, anterior side of front and middle tibiae and basitarsi, apex of hind femora, and apex of middle and hind coxae and their trochanters, yellow. Antennae blackish, the under side of scape

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pale yellow, the under side of flagellum dull yellowish. Tegulae testaceous, with a yellow basal mark. Wings somewhat dusky, the nervures and margins of stigma brown.

Head somewhat broader than long, with face below antennae gently convex. Clypeus only slightly produced and with the lateral extensions broad and nearly fully visible in frontal aspect. Middle of labrum produced, forming a small obtusely pointed lobe that is medially ridged beneath. Facial foveae twice as wide as interval between them and eye margin, and three-fourths as long as space between sockets and anterior ocellus. Pygidial plate with arcuate sides and a rather narrow, rounded apex. Tarsal claws with a minute inner tooth. Head and thorax nearly uniformly tessellate and dullish, with minute setigerous punctures more apparent on mesonotum than on frons. Pubescence of head and thorax pale ochreous, fairly long, erect, and moderately abundant. Length, 4.5–6 mm.; anterior wing, 3–3.5 mm.

Male: Similar to female, but mandibles, except rufous tips, labrum, and face almost or quite entirely below level of antennae, white. Subantennal plates sometimes green at lower end, varying from more than half green to entirely white. Posterior orbits yellowish white, sometimes nearly to middle of eyes, or the white reduced to a small spot near base of mandibles. Thorax and abdomen as in female, except that the abdomen is marked with fuscous on basal half of tergite 1 and usually with an apical dusky band on tergites 1 to 4 (or 5), this band frequently reduced to a transverse oval spot on each side, where the duskiess is accentuated, and rarely with an extension basad in median line as a spot or short stripe. Legs with the dark area on femora more reduced than in female. Scape of antennae yellow, except at apex above, the pedicel and flagellum blackish above and brownish yellow beneath. Tegulae as in female. Wings a little more dusky than in female, the nervures and margins of stigma blackish.

Head slightly broader than long, the cheeks no wider than the eyes. Lateral extension of clypeus broad and gradually reflexed. Facial foveae about twice as long as broad. Mandibles rather short, curved, and simple. Tarsal claws strongly

bifid, the teeth nearly equal. Labrum nearly normal. Apical tergite with a rather narrow, apically rounded pygidial process. Sculpture and pubescence very nearly as in the female. Length, 4.5 mm.; anterior wing, 3.2 mm.

Holotype female and *allotype*, Holly Shelter, NORTH CAROLINA, on *Polygonella polygama*, Oct. 5, 1951 (T. B. Mitchell). *Paratypes* from the same locality and flower: 33 females, 3 males, Oct. 5, 1951; 21 females, 17 males, Sept. 16, 1952.

Types to be deposited in the U. S. National Museum; paratypes in the collection of the author and of T. B. Mitchell.

***Perdita discreta* n. sp.**

Similar to *P. octomaculata* (Say), but smaller with the markings white, those of abdomen reduced to small, transverse spots.

Female: Head and thorax dark green, the labrum and clypeus black. A narrow median stripe on clypeus, and small lateral marks, yellowish white. The latter slender and acute above at level of antennae and globosely widened opposite the clypeus (in paratype reduced to a narrow curved mark, not quite reaching level of antennae). Mandibles testaceous, becoming reddish at apex and with a white spot at base. Thorax entirely dark, the propodeum a little more bluish green than the mesonotum. Abdomen black, the customary bands represented by transversely linear white marks, one on each side of tergites 1 to 4; those on tergite 1 at base of disk and narrowly separated; those on following segments basal and widely separated, becoming a little oblique on tergites 2 and 3; and those on 4 sometimes evanescent (paratypes). Pygidial plate ferruginous. Antennae black, the flagellum slightly brownish beneath toward apex. Legs black, the tip of front and middle femora, extreme apex of hind femora above, anterior side of front tibiae and basitarsi, and a line on middle tibiae, pale yellow. Tegulae pale testaceous. Wings dusky (grayish), the margins of stigma and nervures fuscous.

Head about as wide as long, the facial foveae narrow and elongate. Stigma of anterior wings rather narrow; marginal cell with the parts beneath and beyond stigma equal. Pygidial

plate broad, slightly ridged medially and rounded or obscurely emarginato-truncate at apex. Tarsal claws with a small inner tooth near apex. Head and thorax dullish, densely tessellately shagreened, and impunctate except on anterior part of face. Abdomen microscopically lineolate. Pubescence moderately developed, erect, whitish, becoming pale ochreous on mesonotum. Length about 5 mm.; anterior wing, 3.1 mm.

Two females (*holotype* and *paratype*), Holly Shelter, NORTH CAROLINA, Oct. 5, 1951 (T. B. Mitchell). There is no flower record for these specimens but they carry a fine-grained yellow pollen, presumably from some Composite.

Holotype returned to T. B. Mitchell for ultimate deposit in the U. S. National Museum.

P. discreta and the four similar eastern forms of the *octomaculata* group may be distinguished as follows:

1. Markings yellow, including marks on pronotum and tubercles.....2
Face with three small yellowish-white marks, the thorax entirely dark and the abdomen with transversely linear white marks on each side of tergites 1 to 3 or 4; length, 5 mm.....*discreta* n. sp.
2. Lateral face marks much higher than wide, generally terminated bluntly at anterior end of facial foveae; superclypeal mark sometimes developed.....3
Lateral face marks triangular, usually hardly higher than wide and acute above; supraclypeal mark absent; abdominal marks usually widely separated, those on tergites 2 to 4 oblique; length, 7 mm.....*octomaculata* (Say)
3. Supraclypeal mark large.....4
Supraclypeal mark absent or represented by two dots or a line; yellow band on tergites 1 and 4 (usually also on 5 and rarely on 3) narrowly interrupted, that on tergite 2, and usually on 3, widely interrupted, with the remnants oblique; length, about 8 mm...*consobrina consobrina* Timb.
4. Scape narrowly yellowish beneath; abdominal bands broad, those on tergites 2 and 3 moderately well, and the others narrowly interrupted; wings a little dusky.....
.....*consobrina lepida* Timb.
Scape yellow except above on apical half; abdomen with bands on first five segments moderately wide and narrowly interrupted medially; wings clear, the nervures yellowish; length, about 6-7 mm.....*swenki* Cwfd.