NOTES ON THE NORTH AMERICAN SPECIES OF ISODONTIA,
PATTON, WITH DESCRIPTIONS OF A NEW
SPECIES AND VARIETY.

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The North American species of *Isodontia* may be distinguished by means of the following table :

1. Mandible with two teeth (anterior tooth sometimes partly divided) . . 2.
Mandible with three teeth 7.
2. Petiole black 3.
Petiole yellow *exornata*, n. sp.
3. Third segment of antenna longer than seventh or eighth 4.
Third segment of antenna shorter than seventh or eighth 5.
4. Median segment above with long white
hairs *macrocephala*, var. *cinerea*, n. var.
Median segment above without long white hairs . . . *macrocephala*, Fox.
5. Body hairs gray 6.
Body hairs black *azteca*, Sauss., var.
6. Front part of wings fuscous *azteca*, Sauss.
Wings entirely fuscous *azteca*, Sauss., var.
7. Legs more or less yellowish 8.
Legs black *apicalis*, Sm.
8. Abdomen black *tibialis*, Lep.
Abdomen more or less yellowish *elegans*, Sm.

I am hardly prepared at present to accept *Isodontia elegans*, Smith, as a variety of *I. apicalis*, Smith. The differences between the two seem to be very constant, and their distribution appears to be somewhat different, *elegans* being more a southern and western form, while *apicalis* occurs chiefly in the central, eastern and northern States.

Patton (Proc. Ent. Soc., Wash., III., p. 46) regards *macrocephala*, Fox, as a synonym of *azteca*, Sauss. With this I am unable to agree, all the specimens of a large series of both of these species before me being distinguishable almost at a glance. The type specimen of *macrocephala* has the anterior tooth of the mandible with a groove dividing it into two portions, which leads me to believe that in this insect the mandible was originally three-toothed, but that the anterior two have partially fused. All my specimens of *azteca*, on the other hand, indicate an originally two-toothed mandible, and though the anterior tooth is blunt in many cases, it

shows no trace of any longitudinal groove, such as is present in the type of *macrocephala*. However, the length of the third segment of the antenna as compared with that of the seventh or eighth in the two species should be sufficient to show that the two are not identical in any case.

Isodontia apicalis, Smith, has sometimes been considered as a synonym of *Sphex philadelphica*, Lep., but I regard this as based on insufficient evidence. Lepeletier's description gives no characters which would place it in the more recent genus *Isodontia*, and in two points differs from what has been commonly considered that species. Lepeletier says (*Histoire Naturelle des Insectes, Hymenopteres, III.*, p. 340): "Thorax niger, nigro villosus," and "tarsorum quatuor anticorum articulo extremo ferrugineo." None of the many specimens of what has been considered this insect which I have examined agree in these points with this description. An attempt to locate the type in order to settle the matter has proved a failure. The insect was in the Serville collection, and this is not at the Museum d'Histoire Naturelle at Paris, and Monsieur R. du Buysson writes me: "Ils ont dû être vendus et séparés dans beaucoup d'autres collections. Actuellement l'on ignore où ils se trouvent." I may add that Dr. F. Fr. Kohl, of Vienna, who has given much study to this group, writes me: "Wahrscheinlich ist *Sph. philadelphicus* Lepeletiers gar keine *Isodontia*."

Under these conditions it seems best to apply Smith's name—*apicalis*—to this insect, at least until Lepeletier's type shall be found.

Isodontia exornata, n sp.

Head: clypeus somewhat arched laterally, with a faint median carina most pronounced posteriorly, sometimes not perceptible; anterior edge slightly prolonged laterally, with a slight notch at the middle; surface covered sparsely with yellow hairs. Clypeus and frons to level of insertion of antennæ golden pubescent. Mandibles two-toothed, black at base and tip; elsewhere ferruginous. Eyes somewhat nearer at the clypeus than at the vertex. Antennæ, first six to eight segments ferruginous, terminal segments black; scape bearing a few yellowish hairs; third segment longest. Head with scattered punctures and sparsely covered with long yellowish hairs. A narrow, yellow pubescent band just behind the eye.

Thorax: collar faintly punctured, clothed with scattered yellow hairs; its dorsal edge and the posterior edge of the prothoracic lobe golden pubescent. Mesonotum black with yellow hairs, rather coarsely

punctured and with a short median, unpunctured groove extending about one-third its length from its anterior edge. A small, somewhat triangular spot of golden pubescence is situated on the pleuron just posterior to the prothoracic lobe, and sometimes a smaller one occurs between this and the wing attachment. Tegulae smooth, pale yellow. Mesopleura and sternum covered sparingly with long yellow hairs. Scutellum black, punctured, the punctures rather more scattered than on the mesonotum; on each side just mesad to the attachment of the hind wings is a golden pubescent spot. Postscutellum covered by golden pubescence. Median segment coarsely punctured, on each side a golden pubescent band passes from the front edge just lateral to the edge of the pubescence on the postscutellum backward below the stigma to the posterior coxa. Just above the base of the petiole is a golden pubescent spot.

Abdomen: petiole slightly curved, ferruginous yellow, somewhat darker at the base beneath, covered with yellowish hairs; its posterior portion yellowish pubescent. Base of abdomen above, yellowish, remainder black, the hinder edges of the segments, however, dull yellowish; surface finely pale pubescent. A few hairs scattered over the more posterior segments. Beneath, minutely punctured, with scattered hairs in the female, in the male with a cross row of black hairs on each of the last three or four segments. Legs: coxae, trochanters and proximal part of femora black, hairy, remainder ferruginous. Sometimes a yellowish pubescence is present on the coxae and trochanters. Tips of claws nearly black. Spines dark ferruginous. Posterior tibiae yellow pubescent behind. Wings smoky, with a slight violet reflection.

Length, 16-20 mm. Wing expanse, about 30 mm.

Described from five male and two female specimens from Indian River and Biscayne Bay, Fla., and from N. C. and Ga. Types have been deposited in the collections of the National Museum at Washington, American Entomological Society at Philadelphia, Massachusetts Agricultural College, Amherst, Mass., and of Mr. W. H. Ashmead, Washington, D. C.

Isodontia macrocephala, var. *cinerea*, n. var.

This variety differs from the typical form only in the fact that the thoracic hairs are longer and whiter, giving the insect a noticeably gray appearance very different from that of the typical form, which is glossy black, the few gray hairs not modifying this, and, in fact, being generally overlooked unless the body is closely examined.