

TWO NEW SPECIES OF SPHEX.

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SPHEX NUDUS, sp. nov.

Head. Black, covered with long yellowish white hairs. Clypeus and frons covered with pale straw-colored pubescence to, or slightly above the insertion of the antennae, except at middle of anterior edge of clypeus where it hardly reaches the edge. A noticeable furrow passes forward (downward) a short distance, from the median ocellus. Surface of frons with rather coarse, scattered punctures. Mandibles black at base and from the bases of the two teeth to their tips; elsewhere ferruginous. Antennae black, third segment longest; scape with short, pale straw-colored hairs.

Thorax. Collar with faint scattered punctures and a few pale hairs; with a trace of yellowish white pubescence on its dorsal edge. Prothoracic lobe black, posterior portion somewhat pubescent, fringed behind with pale hairs. Just behind the lobe is a vertical band of pale yellowish pubescence more or less pronounced. Mesonotum somewhat punctured, with short grayish white hairs, and a faint median longitudinal groove on its anterior third. Scutellum rather more sparsely and finely punctured, with a slight median depression, and covered with short, grayish white hairs. Postscutellum pale yellowish white pubescent as far laterally as where the groove of the median segment leading to the stigma originates. This pubescence is frequently in part or entirely absent. Median segment finely, transversely aciculate, covered with yellowish white hairs longer than those of the mesonotum and scutellum. Above the petiole are two yellowish white pubescent areas partly confluent on the median line. Petiole short, straight, black, with yellowish white hairs.

Abdomen. Above, smooth, gray sericeous, very faintly punctured, the last two segments bearing grayish and brownish hairs directed backwards. Terminal segment rounded, somewhat compressed on its posterior half at the sides, forming a slight median ridge (Fig. 6). Beneath, glistening, somewhat sericeous, with a few scattered grayish hairs, which on the fifth, sixth, and seventh ventral plates become tufts, one on each side, on each of the segments named. Eighth segment somewhat emarginate on its hinder border. Ninth (terminal) segment rounded at the sides, with a spine on the posterior edge (Fig. 4) giving this plate the same form as that found in *Sphex flavipes*.

Wings. Nearly hyaline, the front pair very slightly fuscous. Tegulae black, margins dull ferruginous; traces of a yellowish pubescence present.

Legs. Tibiae and tarsi yellow ferruginous except last tarsal segment and claws which are much darker or almost black. Spines of legs yellow ferruginous. Coxae, trochanters, and the greater portion of femora black, the tips of the latter yellow ferruginous. Coxae sparsely punctured, sericeous, with a few scattered hairs.

Length, 18–22 mm.

Described from six male specimens: one taken in Tenn., now in the collection of the U. S. national museum; the others captured Aug. 23, 1902, at Indian Head, Md., by Mr. J. C. Bridwell on flowers of *Monarda punctata* L., and now in the collections of the American entomological society at Philadelphia, Massachusetts

agricultural college, and in Mr. Bridwell's collection. Besides these I have examined eight other specimens from Mr. Bridwell's collection and have labeled them paratypes.

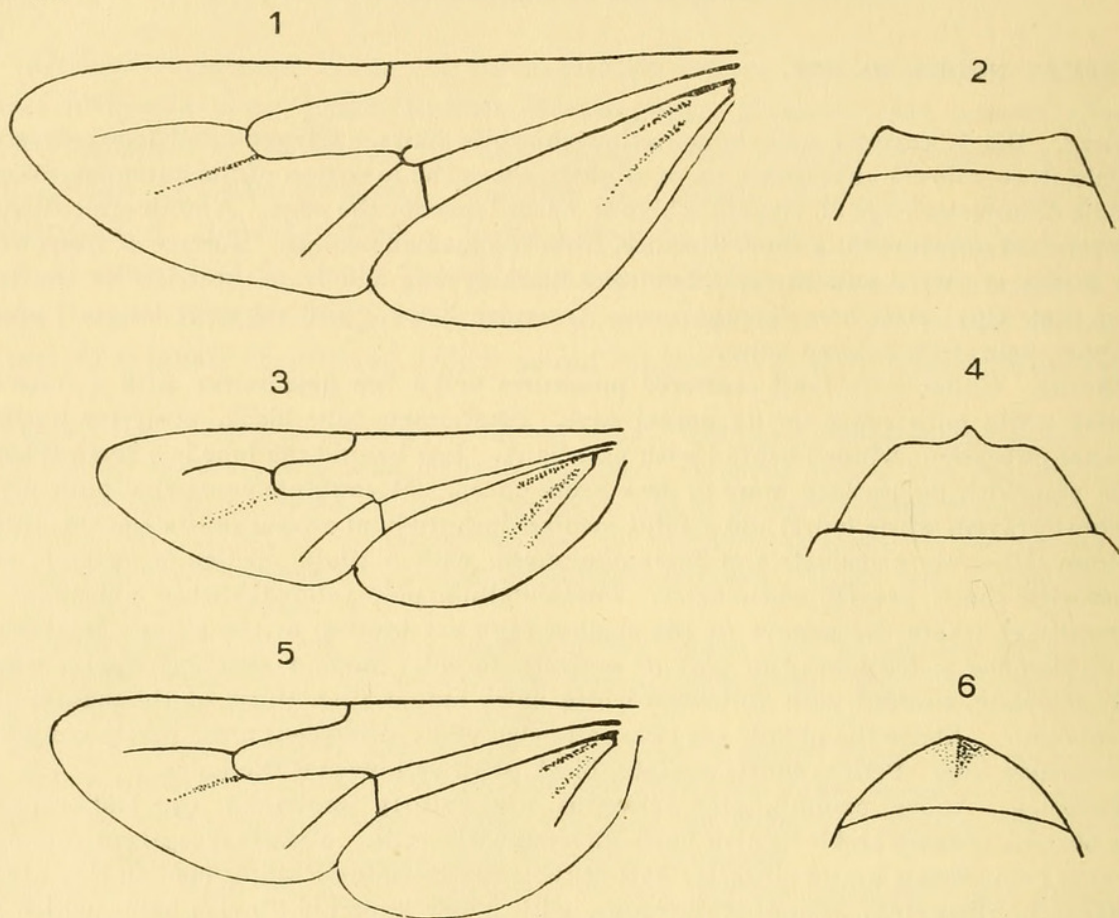


Fig. 1. Hind wing of *Sphex flavipes* Sm. Fig. 2. Last dorsal abdominal plate of male *S. flavipes*. Fig. 3. Hind wing of *S. bridwelli*. Fig. 4. Last ventral abdominal plate of male *S. nudus*. Fig. 5. Hind wing of *S. nudus*. Fig. 6. Last dorsal abdominal plate of male *S. nudus*.

This species much resembles *Sphex flavipes* Sm. but the outline of the last dorsal abdominal plate (see Figures 2 & 6) provides a ready means of separation. Though well clothed with hair the general effect to the eye is that of absence of such clothing. I am of the opinion that the next species may prove to be the other sex of this, being represented by females only, and a number having been taken at the same time and place. Until this relation can be proved however, they must remain separate.

SPHEX BRIDWELLI, sp. nov.

Head. Black, with scattered dark and yellowish white hairs. Clypeus coarsely punctured, with scattered long black hairs; emarginate anteriorly, with a broad, shallow notch

at the center bounded by a slight blunt projection on each side. At the sides of the clypeus are traces of a golden pubescence sometimes extending to the bases of the antennae. Frons slightly punctured, less coarsely so than the clypeus, with scattered dark and yellowish white hairs. Eyes about equidistant at vertex and clypeus. Mandibles long, two toothed, base and teeth black, elsewhere dull ferruginous. Antennae black, third segment longest. Cheeks narrow behind the eyes, with long pale hairs, particularly below.

Thorax. Collar black, minutely punctured, with long dark and yellowish white hairs. Scutellum more sparsely and faintly punctured, with a slight median depression; its hairs very short and not noticeable. Postscutellum very faintly punctured, rather more hairy than the scutellum. Median segment finely, transversely aciculate, quite closely covered at the sides and behind with long yellowish white hairs but with no trace of pubescence except a small pale yellow spot on each side just above the petiole, not always present. Petiole black, short, straight.

Abdomen. Above, somewhat sericeous, particularly on the anterior segments, smooth except the last two segments which are coarsely punctured, the punctures being more abundant on the last. These two segments also bear short brownish hairs. Beneath, glistening, with extremely minute punctures and here and there a larger one anteriorly. These become more abundant posteriorly and are quite numerous on the last two segments. This distribution of the punctures coincides with that of the short brown hairs also present.

Wings. Uniformly fuscous with blue or violet reflection. Tegulae dull ferruginous, more or less mingled with black.

Legs. Coxae, trochanters, and greater portion of femora black. Outer ends of femora, the tibiae, and the tarsi except the last segment, pale ferruginous. Last tarsal segment and claws much darker or nearly black. Spines yellow ferruginous.

Length, 22–25 mm.

Described from six female specimens: one from the U. S. national museum, without locality; one from the American entomological society, collected in Ga.; three collected at Indian Head, Md., Aug. 23, 1902, on *Monarda punctata* L., by Mr. J. C. Bridwell for whom I take pleasure in naming the species; and one from Md. now in the collection of the Massachusetts agricultural college. I have also seen ten other specimens from the same localities, with one exception which was collected June 20, 1883 at New Orleans, La.

The two species above described in many ways resemble *Sphex flavipes* Sm. and have in some cases been mistaken for it. Of *S. nudus* only males are known and these may be distinguished from males of *S. flavipes* by the differences of form of the last dorsal abdominal segment (Figures 2 and 6) and by the wings of the former being hyaline, while in the latter they are usually fuscous. *Sphex bridwelli* of which only females are known, may be distinguished from females of *S. flavipes* by the almost total absence of pubescence, giving the body a pronounced black appearance, and by the presence in the hind wing of *S. flavipes* of a short vein which leaves the cubital vein and enters the median cell just beyond the point where the discoidal vein leaves the cubital vein. No such hook-like vein is present

in the specimens of *S. bridwelli* but is seen in all the specimens of *S. flavipes* (nine) accessible to me. Whether this hook-like vein is a universal character of *S. flavipes* I cannot say, but I do not find it mentioned in any of the descriptions of this insect. (See Figs. 1 and 3.)

It is probable that the name *Sphex flavipes* Sm. will need to be replaced by another, as this name was used by Fabricius much earlier for a different insect, which brings the present *S. flavipes* under the last portion of Canon XXXIII of the A. O. U. Code.



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