(Continued from page 274.)

des plantes at Paris, a Q, and the Philadelphia type of the same at the Oxford museum, and from my notes and sketches taken at the time (1865-66) I can have no doubt that the two species are identical, an opinion first advanced by Burmeister (Germ. Zeitschr. ent., 2,54) and now generally Burmeister's description apheld. peared at least a month before Serville's. That the Brazilian specimen mentioned by Serville belonged to a different species is probable both from its geographical separation and because Serville mentions that the inside of the hind femora is of a deep blue, which might have been taken from the Brazilian specimen but is not true of the North American species.

This is a characteristic species of the southern United States, where it extends everywhere from Florida to Texas, and ranges as far north as Maryland, Pennsylvania (Serville), and New Jersey in the east, Illinois as far north as Union County (Thomas) or Rock Island County (McNeill) where it is rare, and in the west to Nebraska. I have specimens before me from parts of Florida, Dallas. Tex., Georgia, North Carolina, Vir-Maryland, New Jersey, and ginia, Nebraska.

HIPPISCUS (H.) PANTHERINUS Sp. nov.

Pale ochraceous, the head strongly tinged with pale yellow, full and well rounded, only moderately broad above; vertex transversely scabrous behind the scutellum which

is broader than long, with distinct and somewhat elevated, though smoothly rounded bounding walls which rapidly converge on the sides anteriorly, its front terminated by a transverse and deep foveolate sulcus separating its body from the frontal costa; posteriorly the bounding wall is slight and a feeble longitudinal carina passes through its posterior half, the floor nearly smooth; lateral foveolae small, subrhomboid, distinct; frontal costa rather deeply sulcate except at Antennae fuscous, paler at extremities. base. Pronotum not very stout, the posterior lobe less expanded than usual, the median carina impressed rather than cut by the anterior sulcus, and the effect heightened by its partial suppression immediately behind said sulcus and the formation of a slight discal scutellum; surface rugose but not prominently nor densely, the lateral canthi moderately sharp and traversing the principal sulcus; color ochraceous with a pale yellow oblique stripe on either side of the metazona, broad anteriorly and narrow posteriorly, giving the metazona the appearance of a greater expansion than it has. Tegmina dark fuscous with strongly pantherine, transverse, pallid or yellowish stripes which become narrower and fainter in the semipellucid apex; in all cases they are continuous, subequal, and traverse the whole or nearly the whole of the tegmina outside the axillary area which is fuscous except for one or two partial bands adjoining those of the area above but separated from them by the clear pale yellow sutural stripe; an oblique pallid discal stripe follows the descending portion of the ulnar vein connecting the transverse stripes at either end; darker spots of the marginal field blackish fuscous and conspicuous especially in middle of tegmina. Wings pale lemon-yellow at base with a rather broad dark fuscous stripe hardly narrowing in the upper part of the anal field, but narrowing with great regularity to the anal angle which it reaches, leaving four lobes of the margin intact; separated by a

very narrow yellow line from the humeral stripe which runs two-thirds of the way to the base traversed interiorly by conspicuous yellow cross veins; costal margin more or less tinged with orange, the apical portion of axillary area with a few cellular fuliginous spots clustered along the veins. Hind femora uniform coral red within from base to apex, testaceous externally with clouded fuscous oblique stripes, above mostly fuscous; hind tibiae coral red externally, pallid toward base, the spines black tipped.

Length of body, 39 mm.; of tegmina, 37 mm. Pecos River, Texas, June 18. Capt. Pope, one 3.

This species not only shows a departure toward the Xanthippus type of structure of the pronotal carina, but it strikingly resembles H. (X.) conspicuus Scudd. It differs from the latter, however, in the structure of the head and pronotum, as well as in the width of the arcuate dark band of the wing; and from the Xanthippus type generally in the great depth of the inferior carina of the hind femora. So far as can be seen the antennae are of the Hippiscus type, but the tip is lost in the only specimen known.

HIPPISCUS (H.) HALDEMANII.

Oedipoda haldemanii Scudd!, Rep. U. S. geol. surv. Nebr., 251; Glov., Ill. N. A. ent., Orth., pl. 13, fig. 3?

Hippiscus haldemanni Scudd!, Bull. U.S. geol. surv. terr., 2, 264.

Oedipoda paradoxa Glov. (not Thomas), Ill. N. A. ent., Orth., pl. 18, fig. 14.

Hippiscus nanus Sauss., Prodr. Oedip., 86-87.

Hippiscus tuberculatus McNeill!, Psyche, 6, 63.

Oedipoda neglecta Thom!, Key Ill., Orth., 3; Bull. Ill. mus., 1, 64; (not Oe. neglecta

Thom., Proc. acad. nat. sc. Phila., 1870, 81-82, etc.

I have re-examined some of the types of this species and base thereupon my conclusions about the synonymy of this and the allied species. That it is the *H. nanus* of Saussure there can, I think, be no question. It is not the *Oe. paradoxa* of Thomas, which an examination of the type shows to be a Xanthippus, though Glover figures quite a different insect. Illinois specimens labelled by Thomas show, strange as it may seem, that it was this insect which he mistook for his *Oe. neglecta*.

This species appears to be confined to the centre of the continent. Passing from east westward, the localities known to me are the following: Moline, Ill. (McNeill), southern Illinois (Thomas), the Red River of the North (Kennicott), middle Kansas (Bruner in litt.), all eastern and middle Nebraska and the Sand Hills of the same state (Bruner in litt.), eastern Nebraska (Dodge), Nebraska City and the banks of the Platte River (Hayden), Garden of the Gods, Colorado (Packard), Colorado (Saussure).

HIPPISCUS (H.) TEXANUS Sp. nov.

Brownish fuscous, darker above than on the sides, inconspicuously dotted with black, the head, excepting above, ochraceous more or less mottled with brown, the vertex behind scutellum lightly corrugate, often in the δ transversely disposed; scutellum large with slight and not sharp bounding walls, of nearly equal length and breadth ($\mathfrak P$) or much longer than broad (δ), its front margin deeply V-shaped and connected more or less faintly at the point of the V with the longi-

tudinal carinae of the vertex; lateral foveolae rather small, subtriangular and shallow; frontal costa somewhat constricted above, gently expanded at the ocellus at and below which it is moderately sulcate. Antennae ochraceous, becoming blackish fuscous in apical half or third, hardly tapering except on apical joints. Pronotum compressed, gently expanding on the metazona, the dorsum very faintly tectiform, and the prozona posteriorly tumid centrally, the surface with distant prominent glistening granulations or very brief vermiculations; median carina simple, moderately pronounced with a distinct but very slight uniform arcuation; lateral canthi not very pronounced, confined to the metazona but for slight indications; posterior margin rectangular; lateral lobes with sparse, feeble, and very brief vermiculations, the centre marked with a fuscous blotch enclosing a yellowish quadrate mark below. Tegmina cinereous and fuscous, the former prevailing in the 2, the latter in the 3 where it also becomes blackish and the cinereous of a brighter tone: the marginal field has a large quadrate fuscous spot just beyond the angle of the humeral lobe, and in the Q this is almost the only dark marking therein, while in the 3 it is preceded by one and followed by two similar but a little smaller, equally dark spots, and the apical portion of the field is much infuscated; in both sexes the axillary area is dark cinereous with dark veins and faint fuscous spots; sutural stripe of the lighter color and tolerably conspicuous; the inner discoidal field has rather small and roundish fuscous spots, the largest and roundest just at or within the broadest part, the outermost below the sharply triangular fuscous spot at the extreme base of the outer discoidal field and separated from it by only a narrow cinereous line at the upper edge of the ulnar interspace; beyond this the outer discoidal field has three or four very similar broad transverse fuscous bands, relatively much broader and much darker in the 3 than in the 2,

becoming blurred and indistinct apically. Wings coral red at base, the fusco-fuliginous arcuate band marginal below the fourth lobe, of moderate breadth, narrowing but little as it passes to the anal angle, but somewhat as it passes upward to the faint and slender yellowish red line separating it from the humeral stripe which reaches toward but not to the base, and is separated from the margin except apically by the red of the base; apex hyaline, slightly infuscated at the edge in the 3, the veins and cross veins blackish fuscous. Hind femora yellow apically and blue basally within, thrice traversed by broad black bars; outside fusco-cinereous, indistinctly barred with fuscous in the \mathcal{S} ; hind tibiae yellow with an orange tinge, the spines black tipped.

Length of body, 3, 32 mm., 9, 47 mm.; of elytra, 3, 34 mm., 9, 45 mm.

Dallas, Texas, Boll, May 1, June 6. Described from 3 &, 1 \, \text{2}. I have since received a specimen from San Antonio, Texas, collected by Newell (Bruner).

Hippiscus (H.) Rugosus.

Oedipoda rugosa Scudd!, Bost. journ. nat. hist., 7, 469; Walk., Cat. Derm. salt. Brit. mus., 731; Thom., Rep. U. S. geol. surv. terr., 6, 720-721; Syn. Acrid. N. A., 132-133; Key Ill. Orth., 3; Glov., Ill. N. A. ent., Orth., pl. 12, fig. 8.

Hippiscus rugosus Scudd!, Rep. geol. N. H., 1, 377; Sauss., Prodr. Oedip., 85.

Hippiscus corallipes var. rugosus Thom., Rep. ent. Ill., 9, 95, 115-116.

This species, originally described from specimens found in Massachusetts and Maine where it is very rare, has since proved to be wide spread. I have myself seen specimens from Norway, Me. (Smith), eastern Massachusetts (Scudder), Delaware (Ent.

Philad.), Maryland (Uhler), soc. Georgia (Morrison in Henshaw's collection), Illinois (Strumberg in Henshaw's coll.), southern Illinois (Kennicott), Republican Fork, Kansas (Lt. Bryant), Lakin, Kans. (Scudder), West Point, Nebraska, and Glendive, Montana! (Bruner), and from Dallas (Boll), San Antonio (Lincecum), and Bosque Co., Texas (Belfrage). Saussure in addition reports it from Missouri, Thomas from the District of Columbia, Nebraska, and Dakota; and Walker (in whose correct determination of the species I have no confidence) from Nova Scotia, New Jersey, and Vancouver Island. It seems to be a southern species, rarely occurring in the north. Belfrage says that in Texas it is a rare species found on prairies in October.

HIPPISCUS (H.) COMPACTUS Sp. nov.

A compact and stout though not very large form. Very dark brownish fuscous, flecked with blackish, the head stout and full, very broad above, olivaceo-fuscous excepting above, where it is brownish fuscous with broad median and lateral longitudinal dull olivaceous stripes; summit of head sparsely punctate, nearly smooth with very slight signs of transverse rugae; vertical scutellum indistinct, with slight and low bounding walls, broader than long in both sexes, faintly quadripartite; lateral foveolae slight, elongate, triangular; frontal costa broad, flat, punctate, slightly depressed at the ocellus, subequal, at upper extremity faintly bifoveolate. Antennae pale cinereous at base, dark fuscous apically. Pronotum stout, but not expanding greatly on the metazona, the dorsal area nearly flat and tolerably uniform

except for the more or less longitudinal glistening rugae which are rather sparse and not very elevated; median carina very uniform and not prominent or arcuate; lateral canthi tolerably well pronounced on the metazona, distinctly and considerably surpassing the median sulcus; angle of posterior margin slightly exceeding a right angle; lateral lobes densely punctate on the meta-Tegmina cinereous, becoming semipellucid apically, heavily banded with blackish fuscous in tolerably regular transverse subequidistant stripes, with very little obliquity, broader in the proximal than in the distal half of the tegmina; they are subcontinuous in the marginal and discoidal areas, and the axillary area is fuscous with three or four small blackish spots seated on the anal vein; sutural stripe distinct and yellowish cinereous; the spot at extreme base of the outer discoidal area is completely amalgamated with that below and slightly within in the inner discoidal area; the outer stripes are slender, more or less maculate, and do not reach the lower margin of the tegmina. Wings pale lemon-yellow at base with a pretty broad, blackish fuscous, arcuate band scarcely reaching the anal angle and touching the margin only at the 5th (3) or 6th (2) lobe; it is not narrowed above, is separated from the humeral stripe by a testaceous line, the stripe reaching nearly to the base; apex hyaline, or in the & slightly infuscated next the margin above, all the veins blackish. Hind femora clay yellow within banded with black, dull cinereo-fuscous without, obliquely banded with blackish fuscous; hind tibiae brownish yellow, more or less infuscated except in a broad band just beyond the base, spines black tipped.

Length of body, \mathcal{J} , 26 mm., \mathcal{P} , 33 mm., of tegmina, \mathcal{J} , 22 mm., \mathcal{P} , 29 mm.

Carolina, from the Schaum collection; Maryland, from the south shore of the North Potomac. Described from 13, 19.

















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