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THE EASTERN SPECIES OF *NEMOMYDAS* CURRAN
(DIPTERA: MYDAIDAE)

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ONLY two species of *Nemomydas* have been reported from east of the Mississippi River: *N. desideratus* (Johnson) and *N. jonesi* (Johnson), both of which were described under the generic name *Leptomydas*. Hardy¹ has recently redefined the genus *Nemomydas* and revised the western species. He did not, however, see examples of eastern forms.

The University of Michigan collections include seven specimens of *Nemomydas*, all from Florida. One of these is a male which agrees rather well with the description of *N. jonesi*, but the others appear to be undescribed.

Nemomydas jonesi (Johnson)
(Pl. I, Figs. 1a, 1b)

Leptomydas jonesii Johnson, *Proc. Boston Soc. Nat. Hist.*, 38 (1926): 143, Pl. 3, Figs. 14, 17, 18.

Nemomydas jonesii (Johnson) Hardy, *Wasmann Journ. Biol.*, 8 (1950): 26.

Hardy's description of the abdomen and legs as "predominantly black" is not borne out (at least in regard to the male) by Johnson's description, which reads: "Second and third segments yellow, with a large dorsal spot of black rounded behind; . . . the remaining segments brown, with a narrow posterior margin of yellow; the fourth and fifth with a dorsal spot of black; all of the segments laterally margined with black; venter yellow brown toward the end. Legs brown; upper sides of the front femora, tip of the tibiae, and all of the tarsi black."

The specimen at hand, labeled "Leon Co., Fla., June 10, 1922, J. S. Alexander," is a male. Abdomen largely brownish yellow, venter wholly so. First tergite black with a yellow margin and with long

¹ D. Elmo Hardy. "The Nearctic *Nomoneura* and *Nemomydas* (Diptera: Mydidae)." *Wasmann Journ. Biol.*, 8 (1) (1950): 9-37.

yellow pile laterally, as described by Johnson. Also some long yellow hair among black hairs at the sides of second tergite, but the shorter hairs in the middle of first tergite and all of the remaining vestiture of the abdomen black. Color of the integument of the abdominal dorsum yellowish brown with the exception of the first segment, a triangular medial spot on the second, and a wedge in the middle of the third, which are black. Legs also are yellowish brown, the upper surface of the anterior femora quite dark, and the tips of all femora and tibiae, as well as the tarsi, quite dark or piceous. Postmarginal calli of the second tergite black; each is situated approximately its own length from the lateral margin of the tergite. All vestiture of the head pale yellow. Venation of the apical part of the right wing is as figured; the left one is mutilated. The hypopygium is as shown in Figure 1b.

Nemomydas melanopogon, new species

(Pl. I, Figs. 2a-2e)

MALE.—Head, including antennae and mouth parts, black; gray pruinose on occiput, parafacies, and along frontal orbits. Pile of occiput, vertex, and frontal orbits long and gray. Pile of first two antennal segments, callosities at base of antennae, and medifacies long and black. A few pale hairs at oral margin. Mouth parts very small, not projecting.

Thorax black and shining; dorsum with four broad longitudinal stripes and a narrow central stripe gray pruinose. Scutellum, propleura, humeri, metanotum, and part of the pteropleura also gray pruinose. A narrow band of similar pruinosity also present near the upper edge of the sternopleura. The two lateral and the two submedian stripes, as well as humeri, lateral metanotal calli, and pteropleura, furnished with long pale gray hair.

Wings hyaline to light brown, venation as figured.

Legs brownish yellow, tarsi a little darker. Anterior coxae piceous, others black. All hairs of legs black, except a few on the anterior and middle femora and tibiae.

Abdomen largely black, each tergite with a rather broad, continuous yellowish white posterior margin. Venter black, but becoming piceous to dark brown apically. The last few tergites also a little brownish laterally. Postmarginal calli of second tergite black and rather short, situated almost twice their length from lateral margin of tergite. Hypopygium is as figured, yellowish with coarse black hairs. First tergite covered with long pale gray hair. Second tergite furnished with similar

hair laterally, and third tergite also has a few such hairs basilaterally. All other hairs of the abdomen black. Length of body, 12 mm.

HOLOTYPE.—Male, Florida: Lake County, 4.5 miles east of Eustis, sec. 4, T. 19 S., R. 27 E., August 25, 1938 (T. H. Hubbell and J. J. Friauf, Cat. No. 184); *paratype*, male, Florida: Putnam County, Welaka, June 5, 1940 (J. J. Friauf, Cat. No. T-44); both in UMMZ. The holotype was collected by sweeping and beating the margins of a dense growth of scrub oaks (*Quercus myrtifolia* and *Q. geminata*) and sand pines (*Pinus clausa*) at night, along a trail through a patch of sand scrub on Lakewood fine sand soil.

The only other *Nemomydas* with black facial hair is *N. desideratus* (Johnson). That species, according to its description, differs from *N. melanopogon* in having black hairs on the vertex, black pile at the sides of the first abdominal tergite, and differently colored legs and abdomen.

Nemomydas lara, new species

(Pl. I, Figs. 3a-3d)

FEMALE.—Head dark brown to blackish, especially on front and vertex; occiput brownish, face and rudimentary mouth parts yellowish. First two antennal segments yellow, remainder of antennae black. Heavy pale yellowish pruinosity present on occiput, parafacies, and frontal orbits. Some short black hair present at base of antennae and on dorsal side of first two antennal segments, but hair on remainder of head yellowish. Medifacies covered with thick, short yellow hair.

Body largely yellowish brown, legs entirely so. Thorax yellowish except for three broad dorsal longitudinal black stripes, one median and two sublateral, the latter narrowly interrupted above wing bases. Yellow parts of thoracic dorsum heavily yellowish pruinose, and median stripe with narrow grayish pruinose stripe down its center. All hairs of thorax short, yellowish, and sparse, including those of lateral metanotal calli. Black thoracic stripes terminating short of yellow scutellum. Wings light brown, venation as figured.

Abdomen also largely yellowish brown with narrow lateral sutural black line, interrupted at posterior segmental margins. In some specimens a broad, ill-defined, piceous or blackish zone extending along middle of dorsum. Venter wholly yellowish. First tergite bearing sparse and very short yellowish hairs, remainder of abdomen with black hairs.

Length of body, 14 mm.

HOLOTYPE.—Female, Florida: Orange County, [on Ocoee road, 5.5 miles west of] Orlando, July 4, 1924 (F. W. Walker, Cat. No. 21); *paratypes*, 3 ♀♀, Florida, as follows: one from Lake County, 1.5 miles east of Altoona, June 13, 1938 (T. H. Hubbell, Cat. No. 5); 2 from Marion County, Ocala National Forest, sec. 4, T. 17 S., R. 25 E., July 27, 1938 (T. H. Hubbell and J. J. Friauf, Cat. No. 34).

It is possible that this is the female of *N. desideratus* (Johnson), or even of *N. melanopogon*, new species. Conjectures as to relationships seem futile when the fauna is so poorly known.

The holotype was taken in a patch of typical sand scrub vegetation, which is also the type locality for the grasshopper *Schistocerca ceratiola* Hub. & Walk.² The Altoona specimen was collected in a sand hills environment verging on scrub, with an open stand of slash pines and sand pines (*Pinus elliotti* and *P. clausa*) and of turkey oak and bluejack oak (*Quercus laevis* and *Q. cinerea*), low undergrowth of wire grass and oak shoots, and much exposed whitish sandy soil. The two remaining paratypes were caught along the margins of the scrub bordering Swan Pond in the Ocala National Forest. The species seems thus to be associated with two of the most distinctive xeric environments of the Florida peninsula—sand scrub, and high pine-turkey oak (or sand hills).

Nemomydas desideratus (Johnson)

Leptomysdas desideratus Johnson, *Psyche*, 19 (1912): 151; *Proc. Boston Soc. Nat. Hist.*, 38 (1926): 142.

Nemomydas desideratus (Johnson) Hardy, *Wasmann Journ. Biol.*, 8 (1950): 25.

A single male from Atlanta, Georgia, seems to be the whole basis for our knowledge of this form.

Considerable reliance has been placed in the past on the mode of anastomosis of the wing veins. The apical anastomoses seem to be relatively constant; in our four specimens of *N. lara*, for example, there is at that point practically no variation. In the region of the meeting of the radial and medial fields, however, there is considerable variation. I have shown (Figs. 3a-d) the condition in this area in all four specimens of *N. lara*. The right and left wings of each specimen are very similar.

² This locality and environment were fully described by Hubbell and Walker, *Occ. Papers Mus. Zool. Univ. Mich.*, No. 197 (1928).

The characters of the eastern North American *Nemomydas* are summarized in Table I.

TABLE I

Summary of Characters of Eastern North American *Nemomydas* Curran

	<u>desideratus</u> ♂	<u>melanopogon</u> ♂	<u>ionesi</u> ♂	<u>ionesi</u> ♀	<u>lara</u> ♀
First posterior cell of wing	Closed	Open	Open	Open	Open
Color of pile of face	Black	Black	Yellow	Yellow	Yellow
Color of pile of front	Black	Yellow	Yellow	?	Yellow
Color of pile of first tergite	Black	Yellow	Yellow	?	Yellow
Color of face	Black	Black	Black	Black	Yellow
Color of antennal segments 1 and 2	Black	Black	Black	Black	Yellow
Color of femora					
1	Black	Yellow	Brown and Black	Black	Yellow
2	Black	Yellow	Brown	Black	Yellow
3	Red and Black	Yellow	Brown	Black	Yellow
Length of body (in mm.)	14	12	16	17	14

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PLATE I

FIG. 1. *Nemomydas jonesi* (Johnson): *a*, tip of wing; *b*, ventral view of male hypopygium.

FIG. 2. *Nemomydas melanopogon*, new species: *a*, tip of left wing of holotype; *b*, part of left wing of paratype (indicated by broken line in figure *a*); *c*, same as *b* for right wing; *d*, *e*, ventral and dorsal views, respectively, of male hypopygium.

FIG. 3. *Nemomydas lara*, new species: *a*, tip of wing of holotype; *b*, area of wing (indicated by broken line in figure *a*), first Ocala paratype; *c*, same, second Ocala paratype; *d*, same, Altoona paratype.

PLATE I



