A New Species of *Leptohyphes* from Mexico[1]

(Ephemeroptera: Tricorythidae)

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An undescribed species of *Leptohyphes* Eaton, 1882, was recently found in a collection of mayfly nymphs from Mexico. I take pleasure in naming this species in honor of Richard K. Allen, in recognition of his contributions to the knowledge of this genus. I thank Jerry Battagliotti for preparing the illustrations.

Leptohyphes alleni Brusca, new species

NYMPH.—Length: body 4.0–5.0 mm; caudal filaments 4.5–5.5 mm. General color tan to reddish-brown with gray to black markings. Head tan with scattered black markings and numerous pale spots (Fig. 1); maxillary palpi 3-segmented; labrum pale with black lateral margins and marginal setae; labrum deeply emarginate; lateral ocelli moderate in size, median ocellus small. Thoracic nota brown with variable gray markings and numerous pale spots; legs reddish-brown with numerous pale spots on femora (Fig. 3a, b); femora with large, diffuse, black maculae; tibiae reddish-brown with faint black streak along ventral margin; tarsi pale, without markings; femora with short spines (Fig. 3c); fore femoral band of spines (Fig. 3a); hind femora with marginal spines in raised sockets; hind femora without spines on anterior surface; hind femora produced apically, and 50 per cent longer than fore femora (Fig. 3b); tibiae with large marginal spines; tarsal claws with 3–4 marginal denticles (Fig. 3d); tarsal claws red apically. Abdominal terga reddish-brown with numerous pale spots and diffuse, black, transverse band; terga 1–9 with long posterolateral spines; sterna reddish-brown with diffuse black markings; operculate gills pale at apex and along margin, dark at base; operculate gill with short lateral spine near base (Fig. 2). Caudal filaments brown with pale annulations.

Holotype mature nymph, STREAM 10 MILES NORTH HUAJUAPAN DE LEON, OAXACA, MEXICO, 7 September 1968. R. K. Allen, in collection California Academy of Sciences, San Francisco. Paratopotypes: 3 mature nymphs, same data as holotype, in collection California State College at Los Angeles.

REMARKS.—Mature nymphs were collected in a small stream (elevation 5,400 ft.) with a temperature of 70° F. *Leptohyphes alleni* and *Leptohyphes murdocki* Allen are the only described species of *Leptohyphes* in which the head, body, and femora are covered with small, white spots. The femoral spines of both species are short and broad,

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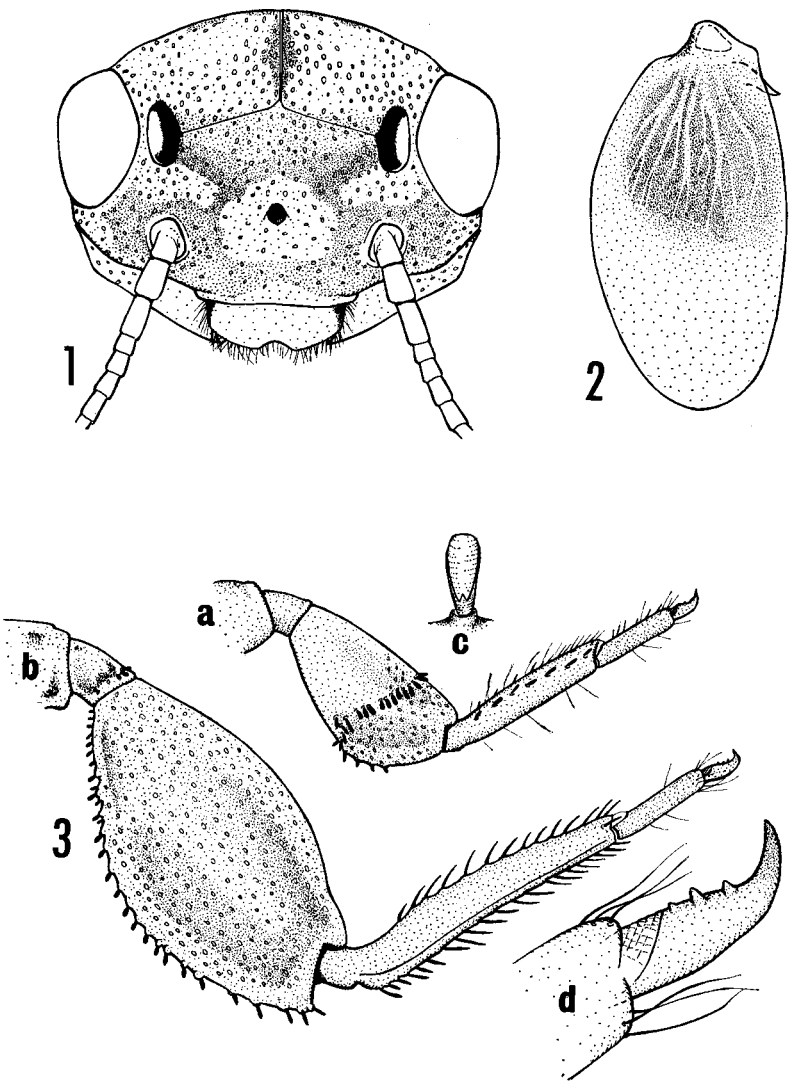

FIGS. 1–3. *Leptohyphes alleni* Brusca, n. sp., nymph: FIG. 1. head, front view; FIG. 2. operculate gill; FIG. 3a. right fore leg; FIG. 3b. right hind leg; FIG. 3c. fore femoral spine; FIG. 3d. tarsal claw.

and the number of denticles on the tarsal claws is indentical. *Leptohyphes alleni* appears to be geographically and seasonally isolated from *L. murdocki* as the former has been collected in November from southern Mexico, and the latter in May from Panama. *Leptohyphes alleni*

is distinguished from all described *Leptohyphes*, by the following combination of characters: (1) the maxillary palpi are 3-segmented; (2) the femora are reddish-brown with black maculae; (3) the hind femora are expanded, with an apical projection; (4) the ratio of length of fore femora to hind femora is 50 per cent; (5) the middle and hind tibiae have long spines on the dorsal and ventral margins; and (6) the hind femora are without spines on the anterior surface. *Leptohyphes alleni* is the first species of the genus to be described from southern Mexico.