with fibrous leaf bases. Culms triquetrous, scabrous on the angles only, especially above, 1.3–2.5 mm thick. Leaves flat to subtly pli cate, about as long as the culm, 5–15 mm wide, the margins and keels scabrellate. Inflorescence bracts 6–8, 3–30 cm long, 2–10 mm wide, vertical to ascendent at (60) 75°. Rays 10–11, up to 15 cm long; secondary rays 3–8 per primary ray, 10–40 mm long; tertiary rays 3–15 mm long. Spikelets digitate in groups of 1–3, linear lanceolate, 7–15 mm long, 2.3–3.5 mm wide (including the apices of the scales), greenish brown, deciduous at maturity; rachilla slightly flexuous, wingless, persistent. Scales 8–16, oblong-elliptic, 2.2–2.4 mm long (the excurved cusp 0.4–0.8 mm long), 1.4–1.6 mm wide, laterally 3–4 nerved, reddish to brownish green, medially 3–7 nerved, the midvein green, smooth or scabrellate distally. Stamens 3; anthers 0.9–1.2 mm long, the setose apices of the connectives an additional 0.1–0.2 mm long. Styles 0.6–0.8 mm long; stigmas 3, (1.2) 1.6–2.6 mm long. Achenes trigonous, ellipsoid, 1.8–2.0 mm long, about 1.2 mm wide, sessile, apiculate, papillose, brown.

Endemic to southern Chiapas, Mexico, Cyperus matudae is known from only two collections made near the Guatemalan border. Plants with mature achenes have been collected in July and August. Cyperus matudae is placed in subgenus Protocyperus K. A. Lye, because of its trigonous achenes and digitately arranged spikelets. Both known collections of this new species had been identified previously as "C. diffusus Vahl" [= C. laxus Lam.], a widespread neotropical species (Tucker, 1983). Cyperus matudae differs strikingly from C. laxus in features of the achenes and scales, and in its more highly branched inflorescences. Cyperus laxus has only primary and secondary rays, while all available specimens of C. matudae have tertiary rays as well. This species is named for Professor Eizi Matuda (1894–1978), specialist on the flora of Mexico, who made both known collections of this species.


Cyperus breedlovei G. C. Tucker sp. nov. Type: Mexico. Chiapas, on Hwy. 211 about 25 km N of Huixtla, in crevices on rocky roadcut in forest with Bursera, 700 m, 28 July 1984, Tucker & Schwartz 2686 (Holotype: DUKE; Isotypes: BH, CAS, ENCB, F, GH, K, MEXU, MICH, MO, NY, US, WIS). (Figure 2).
Plantae perennes, 25-50 cm alta. Bracteae 3–5, ad 12 cm longae; bractea longissima erecta vel valde adscendens. Spiculae digitatae, 1–5 (7), lineari-oblongae, 4–15 mm longae, 1.8–2.4 mm latae.
Squamae oblongo-lanceolatae, mucrone apicali 0.2-0.4 mm longo. Stamina tria. Stigmata tria. Achenia trigona, ellipsoidea, 1.2-1.4 mm longa, usualiter 0.6 mm lata. *Cypero chalarantho* Presl affinis.

Perennials, 25-50 cm tall. Rhizomes indurate, about 2 mm thick. Culms solitary or 2-3 together, trigonous and smooth below, triquetrous and scabrellate (or smooth) above, 0.8-1.2 mm thick. Leaves 1-5, conduplicate, 10-40 cm long, 2-3.5 mm wide, the margins and keels scabrellate. Inflorescence bracts 3-5, up to 12 cm long, 1-2.5 mm wide, the margins and keels scabrellate, the longest erect or strongly ascendent (appearing as a continuation of the culm). Rays 2-8, up to 4 cm long, scabrellate; secondary rays absent or 1-4, up to 1 cm long. Spikelets digitate, 1-5 (7), linear-oblong, compressed, reddish brown, 4-15 mm long, 1.8-2.4 mm wide; rachilla straight, wingless, persistent. Scales 7-16, oblong-lanceolate, 1.8-2.3 mm long (including the mucronate apex of 0.2-0.4 mm), 1-1.2 mm wide, laterally reddish brown, 2-3 nerved, the margins sometimes sparsely ciliate-scabrellate, medially green, 3-5 nerved, the midvein scabrellate, deciduous. Stamens 3; anthers about 1 mm long, the setose connective apices about 0.2 mm long. Styles 0.2-0.4 (0.6) mm long; stigmas 3, 2.3-2.5 mm long. Achenes trigonous, ellipsoid, 1.2-1.4 mm long, about 0.6 mm wide, apiculate, cuneate to substipitate, puncticulate, brown.

Endemic to southern Chiapas, *Cyperus breedlovei* is known from only three collections from the type locality: crevices in steep moist ledges in tropical forest at about 700 m elevation. Flowering and fruiting collections have been made in July and October. *Cyperus breedlovei* is distinguished from all other Mexican and Central American species of subgenus *Protocyperus* by the combination of linear-oblong spikelets, reddish brown mucronate scales, and ellipsoid apiculate achenes. The oblong-lanceolate scales nerved nearly to the margins, the straight mucronate apices of the scales, and the ellipsoid achenes indicate that the new species is most closely related to *C. chalaranthus* Presl of northwestern South America (Tucker, 1983). *Cyperus breedlovei* differs from *C. chalaranthus* in having the longest inflorescence bract erect to ascendent (at 60°), and the scales reddish brown and scabrellate along the midvein; in *C. chalaranthus* the bracts are horizontal to ascendent (at 30°) and the scales light green and smooth. This species is named for Dennis E. Breedlove, diligent investigator and collector of the flora of Chiapas, who gathered the first collection.

Cyperus wilburii G. C. Tucker sp. nov. Type: Mexico. Oaxaca, 8.5 km W of Niltepec on Hwy. 200 at the turnoff to Cerro Iguana, 31 July 1984, Tucker 2756 (Holotype: DUKE; Isotypes: BH, C, CAS, ENCB, F, GH, K, MICH, MO, NY, US). (Figure 3).

Plantae annuae caespitosae, (5) 10–25 (30) cm alta. Radii simplices; spicae subdigitatae. Spiculae compressae, (3.5) 5–6.5 (7) mm latae, stramineae vel fulvae. Squamae (3.8) 4–4.6 mm longae, (2.4) 2.6–3.2 (3.6) mm latae, cuspidate apicali (1.1) 1.3–1.5 (1.6) mm longa. Achenia obovoidea, stipitata, trigona, apiculata, 1.7–2.2 mm longa, 1–1.4 mm lata. Cypero compresso L. affinis.

Caeptisone annueae caespitosae, (5) 10–25 (30) cm tall. Roots fibrous, rhizome none. Culms trigonous, smooth, 0.5–1.5 mm thick. Leaves (1) 3–4, (1) 12–20 (30) cm long, 0.5–3 mm wide, conduplicate, the margins and keels scabrellate distally. Inflorescence bracts (2) 3–5 (6), (2) 8–15 (25) cm long, 0.5–4 mm wide, the margins and keels scabrellate, ascendent at 45–60° (the longest bract in some plants erect, looking like a continuation of the culm). Rays 1–3 (5), unbranched, smooth, 1.5–5 cm long, occasionally lacking, the inflorescence in such plants a loose cluster of 3–6 spikelets; rachis smooth, 1.5–3.5 (6) mm long. Spikelets (1) 3–7 (10), oblong to oblong-lanceolate, strongly compressed, (10) 14–20 (32) mm long, (3.5) 5–6.5 (7) mm wide, stramineous to tawny brown; rachilla slightly geniculate, brown to reddish brown, persistent, 0.5–0.8 mm wide, 0.2–0.3 mm thick, the hyaline wings 0.1 (–0.2) mm wide, successive scale scars 2–2.4 (2.6) mm apart on the same side. Scales 10–16 (30), ovate-oblong, (3.8) 4–4.6 mm long, (2.4) 2.6–3.2 (3.6) mm wide, the cusp straight to slightly excurved (1.1) 1.3–1.5 (1.6) mm long, the medial part of the scale greenish, smooth, weakly 3–5 nerved, laterally stramineous to reddish brown, conspicuously 2-nerved midway between the center and margins, deciduous. Stamens 3; filaments 4.5 mm long; anthers oblong, 0.8–0.9 mm long, the connective apices minute. Styles 2–2.5 mm long; stigmas 3, about 0.6 mm long. Achenes trigonous, obovoid, stipitata, 1.7–2.2 mm long, 1.0–1.4 mm wide, apiculate, the base 0.3–0.4 mm long and about as wide, the angles acute, the faces concave, punctulate, brownish.

Endemic to Mexico, *Cyperus wilburii* occurs in the Pacific Coastal lowlands of the Isthmus of Tehuantepec in the State of Oaxaca.