

## NEW SPECIES OF CAREX FROM GUATEMALA

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GUATEMALA is the only Central American country possessing a considerable number of *Carex* species, and the number of them undescribed or new for the Central American flora is truly amazing. Most of these new species were collected by the junior author in the Sierra de los Cuchumatanes of the Department of Huehuetenango, where the *Carex* flora is much more extensive than has been reported for any similar area of Mexico where an even greater number of species might be expected. All specimens, unless otherwise noted, are in the Herbarium of the Chicago Natural History Museum.

***Carex cuchumatensis*** Standley & Steyermark,  
*sp. nov.*

Rhizoma crassum caespites densos formans et stolones validos emittens, culmis acutangulis basi vaginis aphyllis parte tertia inferiore foliatis; foliis 4-5 plerumque culmo longioribus; spicis 4-7 cylindricis approximatis, spica terminali mascula plerumque foeminea breviter pedunculata, squamis oblongo-obovatis obtusis atropurpureis, costa pallide viridi; spicis foemineis lateralibus 3-6 sessilibus vel inferioribus pedunculatis, 100-150-densifloris; squamis foemineis ovato-oblongis perigyniis angustioribus; perigyniis late elliptico-ovatis plano-convexis, utrinque 6-10-nervatis, basi cuneatis, apice parce serrulatis in rostrum breve rectum subintegrum contractis; achaeniis lenticularibus.

Loosely caespitose, stoloniferous and forming colonies, the stolons stout, scaly, and ascending, the culms 1.5-4.2 dm. high, 3-4 mm. thick at base, erect, strict, triangular with concave sides, smoothish or only slightly roughened above, pale brown at base, the lower and basal sheaths not at all filamentose; sterile shoots elongate, conspicuous; leaves with well-developed blades 4-5 to a fertile culm, on the lower third, the blades gray-green or light green, 3-4

cm. long, 3-4.5 mm. wide, long-tapering, closely serrulate on margins; staminate spike solitary, mostly pistillate, short-peduncled, linear-spatulate, 3.2-3.5 cm. long, 3-5 mm. wide, the scales oblong-obovate, obtuse, purplish-black with light-colored center not extending to tip and very narrow white-hyaline apex margins; pistillate spikes 3-6, approximate, sessile or the lower as much as 1 cm. long-pedunculate, linear, 1.8-3.2 cm. long, 3-5.5 mm. wide, densely flowered throughout, 100-150-flowered, appressed; bracts with prolonged sheaths, leafy, equaling or mostly surpassing the inflorescence, greenish, pale or drab brown at base; pistillate scales ovate-oblong, the middle and upper ones obtuse, the lower mucronate to aristate, narrower and shorter than the perigynia, purplish-black with pale 1-3-nerved center 1.4-0.6 mm. wide not extending to tip and very narrow hyaline apex; perigynia yellowish-green or stramineous, broadly elliptic-ovate, plano-convex, 2.7-2.9 mm. long, 2-2.2 mm. wide, minutely serrulate at apex, membranous, papillate, round-tapering at base, short-stipitate, glabrous, 6-10-nerved on both faces, abruptly apiculate, the beak only 0.1-0.2 mm. long, the orifice subentire or only slightly bidenticulate; achenes lenticular, obovate, body of achene 1.8-1.9 mm. long, 1.5 mm. wide, the slender style 0.5 mm. long; stigmas 2, slender.

HUEHUETENANGO: in vicinity of Tunimá, Sierra de los Cuchumatanes, 3,400-3,500 meters, July 7, 1952, *Steyermark 48347* TYPE in Herbarium of Chicago Natural History Museum.

Apparently a member of the section *Acutae*, where it falls between *C. Endlichii* Kükenthal of subsection *Strictae* and subsection *Forsiculae*. In its conspicuously developed lower bracts it is more closely allied to *Forsiculae*, but in other respects resembles *C. Endlichii* of subsection *Strictae*. From *C. Endlichii* it differs in the non-filamentose base of the leaf-sheaths, the prolonged leafy bracts of the inflorescence sheathing at their base and greenish or pale or drab brown instead of purplish-black at their base, the more numerous lateral pistillate spikes, the mostly pistillate terminal spike, the shorter subentire beak of the non-resinous, conspicuously nerved, longer and broader perigynia, which are scabrous-serrulate above, and the broader

Cespitose, the culms 0.9-2.5 dm. high, 1-1.5 mm. thick below the middle, erect, triangular, glabrous, exceeding the leaves; leaves numerous, mostly clustered at the base of the culm, the blades stiff, the lower spreading, 5-10 cm. long, 2.5-5.5 mm. wide, the margins rough-serrulate, sheaths brown and conspicuously striate at base, spreading in age; inflorescence up to 3.5 dm. long, spikes 4-7, the terminal and uppermost ones androgynous with few pistillate flowers, the others pistillate, single or in twos, at first erect, in maturity ascending, eventually remotely separated on elongated, slender, straight or flexuous, glabrous peduncles which are solitary or in pairs and in maturity mostly exceed the spikes, the lower peduncles at maturity eventually loosely spreading or cernuous, the spikes oblanceolate-clavate to clavate-cylindric, densely flowered, 1.5-3 cm. long, 4-8 mm. wide; the terminal and uppermost spikes erect, on peduncles 1-1.5 cm. long, the staminate scales membranaceous, lustrous, obovate, acute 5-5.5 mm. long, 1.5-2 mm. wide, appressed-ascending, ferruginous with a pale green carinate center, the margins white-scarious; pistillate spikes on long-exserted, slender, capillary peduncles up to 8 cm. long, exceeding the spikes, the perigynia ascending; bracts long-sheathing, with a prolonged closed and tubular sheath 15-26 mm. long and prolonged at the brown orifice with a conspicuous ligule, the lowest ones 6-9 cm. long, leaf-like, the upper ones greatly reduced; perigynia fusiform, 5-5.5 mm. long, 1.25-1.5 mm. wide, trigonous and 3-ribbed, slightly 1-nerved on at least two sides, coriaceous, pale green, glabrous, tapering into a conspicuous beak 2.5 long, conspicuously bidentate at the apex, the hyaline teeth 0.6-0.7 mm. long; achene trigonous, oblong-elliptic, 2 mm. long, 1 mm. wide, stramineous, not filling the perigynium, jointed with the style; stigmas 3.

HUEHUETENANGO: alpine areas in vicinity of Tunimá, Sierra de los Cuchumatanes, 3,400-3,500 meters, July 7, 1952, *Steyermark 48334* TYPE; near Tunimá, July 6, 1942, *Steyermark 48283*; along rivulet, alpine meadows just northwest of Chancol, July 6, 1952, *Steyermark 48251*.

The affinities of this distinctive species are not immediately apparent. They appear to be with section *Longiros-*



*tres* Kükenthal in some respects, and with section *Elatae* Kükenthal in other respects. The special characteristics of this new species are the long-sheathing bracts of the inflorescence, the long-peduncled, densely flowered, clavate-oblancoolate, solitary or paired spikes, the terminal ones androgynous, but mostly staminate throughout, the others pistillate, the glabrous capillary peduncles, the fusiform, long-beaked glabrous perigynia bidentate at the apex, the ferruginous scales of the spikes, and the short, crowded, basal leaves which are much shorter than the flowering culm.

**Carex venosivaginata** Standley & Steyermark, *sp. nov.*

Laxe caespitosa, culmis laevibus basi valde atropurpureis culmis longioribus; foliis plerumque basalibus septatodulosus glabris, laminis marginibus serrulatis; spicis 4-6 plerumque androgynis, plerumque conspicue remotis solitariis vel duobus linearibus supra densifloris basin versus laxifloris; bractea infima longe vaginante culmo breviori, bracteis superioribus minoribus; squamis glabris, foemineis late ovatis vel suborbiculari-ovatis mucronatis vel abrupte acuminatis; perigyniis anguste oblongo-ellipticis, obtuse trigonis glabris valde nervatis in rostrum breve minute bidentatum contractis; achaeniis elliptico-oblongis trigonis.

Loosely cespitose with short rootstocks, the culms 2.5-6 dm. high, 1-1.5 mm. thick below middle, slender at base, erect, triangular, the angles and sides smooth, strongly purple-tinged at base, the lower sheaths breaking and very slightly filamentose; leaves with well-developed blades 5-10 to a fertile culm, septate-nodulose, the lower clustered at the base, the blades erect, firmly membranaceous to subcoriaceous, septate-nodulose, flat with subrevolute scabrous margins, 1-1.5 dm. long, 2.5-4.5 mm. wide, the sheaths glabrous; spikes 4-6, mostly appearing androgynous, widely separate, in pairs or single, elongate-linear, 1.5-4 cm. long, 3.5-4 mm. wide, closely flowered above, loosely at base, the upper fourth to fifth staminate; lower bract leaf-like, long-sheathing, exceeded by the culm, the upper much reduced; staminate scales membranaceous, obovate, mucronate to abruptly acuminate, 4-4.25 mm. long, 1.5 mm. wide; pistil-

late scales membranaceous, broadly ovate to suborbicular-ovate, abruptly acuminate, 2.6-3 mm. long, about 2 mm. wide, subcucullate, carinate; perigynia narrowly oblong-elliptic, 3 mm. long, about 1 mm. wide, obtusely trigonous, tapering to a somewhat rounded base, glabrous, tapering into a smooth short beak 0.8-1 mm. long, obliquely cut, at length minutely bidentate, punctulate, 2-ribbed, strongly 3-4-nerved on each face with elevated nerves; achenes elliptic-oblong, 2 mm. long, 1 mm. wide, trigonous, rufous brown, filling about four-fifths of the perigynium body, apiculate, jointed with the slender style; stigmas 3.

HUEHUETENANGO: in cloud forest. Cerro Huitz, between Mimanhuitz and Yulhuitz. Sierra de los Cuchumatanes, 2,600 meters, July, 14, 1942, *Steyermark*, 48554 TYPE; on high bluffs in upper reaches of barranco, above San Juan Ixcoy, Sierra de los Cuchumatanes, 2,400 meters, August 4, 1942, *Steyermark* 50062.

This species may be related to *C. perlonga* Fernald, from which it differs in the glabrous septate-nodulose sheaths, culms, and leaves (except for their serrulate margins), shorter perigynia with shorter beaks, and more remote spikes.

*Carex polystachya* var. **Bartlettii** (O'Neill) Standl. & Steyermark., *comb. nov.*

*C. Bartlettii* O'Neill, Carnegie Inst. Wash. Publ. 522: 255 f.l. 1940.

Type from El Cayo, British Honduras, at edge of mountain pine ridge, *Barlett 11718A*; collected also near Vaca, El Cayo District, *Gentle 2321* in part. In Guatemala known only from rocky forested banks, at 350 meters, Alta Verapaz (vicinity of Secanqum, *Maxon & Hay 3214*, U. S. Nat. Herb.)

Differing from *C. polystachya* only in having scaberulous perigynia. The position of this plant still is obscure because of the lack of adequate material, but even so, it can scarcely be regarded as more than a variety of *C. polystachya*, and it is possible that it should be reduced to synonymy under *C. scabrella*. However, the general appearance of the plant and its gross characters seem to ally it rather with *C. polystachya*. It is significant that *Gentle 2321* consists of plants with glabrous perigynia and other with scaberulous ones indicating, probably, that the two forms were growing together.