44. FIMBRISTYLIS argillicola Kral, sp. nov.

Perennis caespitosa usque 1 m. alta, culmis basi bulbosis cum foliis exterioribus squamiformibus. Folia propria plantam 1/3-2/3 aequantia, laminis angustie lineariibus (ad 1 mm. latis) laevibus (marginibus ciliato-scabridis exceptis). Spiculae lanceol-ovoideae vel ellipsoideae castaleae vel brunneae (vivo atratae). Achaenia lenticulari-obovoidea vel obpyriformia ca. 1.5 mm. longa.

Caespitose perennial, erect or ascending at most to 1 meter tall. The bases of the culms bulbous, the outer leaves of a clump scale-like. Leaves 1/3-2/3 the length of the plant, the blades narrowly linear (rarely exceeding 1 mm.), involute, smoothish, pale green, the nerves of the lower surface numerous and raised, the margin pale, thickened, upwardly ciliate-scabrid, at least toward the base and apex; sheathing portion of the leaf broad, smooth, stramineous to dark brown, thickened, but with a pale brown scarios margin, this entire, its apex passing into the blade at an acute angle. Ligule of hairs absent. Scapes slender, little wider than leaves, multicositate, smooth, subterete below, somewhat flattened toward the apex. Longest bract of the involucrare shorter than the inflorescence, the blade similar in character to that of leaves. Spikelets lance-ovoid, or ellipsoidal, 0.7-1.2 cm. long, (1-) 3-5 (-7), all but the central one in an open umbellate system of ascending peduncles, castaneous to dull brown. Fertile bracts broadly ovate, entire smooth, or with a few short hairs apically around the midrib. the midrib itself paler, either pale green or stramineous, this usually exserted as a short cusp. Stamens usually 2, rarely 3, the anthers 1.5-2.0 mm. long, apiculate, the filaments broad and flattened, but narrowing apically at point of attachment with anthers. Style 2-branched, flattened, fimbriate from at least its midpoint to the point of branching. Akene lenticular-obovoid, or obpyriform about 1.5 mm. long, a pale to deep brown, rather finely scalariform-foveate or reticulate, the individual cells horizontally rectangular, arranged in numerous, vertical lines; surface of akene usually verrucose. Joint of akene short, usually persistent on fruit.

Type: MEXICO. MICHOACAN. Just west of Puente Rio de Turundco, w. of Tuxpan on heavy wet soil of boggy swale in relict prairie by highway 15, R. Kral 25509. Holotype at MICH.

Moist to rather dry, often somewhat brackish, heavy soils of original grasslands, Mexico, in the states of Guerrero, Mexico, D. F., Jalisco, Michoacan, Durango, Zacatecas, Aguascalientes, Puebla, Guanajuato. Particularly abundant in the lake country of Jalisco.

This species has often been identified as F. pentastachya Boeck. the type locality of which is in the state of Vera Cruz, a state in which this plant does not seem to occur. It differs from F. pentastachya by its smoother foliage, its darker coloured spikelets, and in the character of its old leaf bases which is not fibrous-shreddy. F. pentastachya has much paler, reddish brown spikelets, and is well marked by the fibrous character of its old leaf bases. While F. pentastachya is a plant of savanna development in oak or
oak-pine forest, *F. agrillicola* is definitely a plant of native grassland. The former is a plant of rather loose textured soils, while the latter grows on heavy black gumbo-type clay.

The best growth of *F. agrillicola* is on alkaline soils. In the lake country around Guadalajara it is frequent in association with brackish soil plants. In the greenhouse it responds best to fine-texture, alkaline or circumneutral, potting medium. Flowering plants may be grown from seed in a few months. As is the case with *Abildgaardia*, the seedlings quickly develop numbers of close-set and bulbous-based lateral offshoots. Flowering scapes usually do not form until rosettes of such offshoots are well developed.


Perennial to 1 meter tall, the culms bulbous-based, solitary or in small tufts, usually also with bases invested in a fibrous ramentum of old leaf bases. Leaves 1/2-3/4 the length of the mature scapes, spreading-recurred, lax, the blades linear, flat to somewhat involute, with several prominent ribs on the backs and two marginal ribs, the margins ciliate, particularly toward the apex and base of the blade, with pale, stout and rather long, ascending or upwardly appressed, trichomes, the upper and lower surfaces similarly pubescent toward the base of the blade; sheaths broad at the base, the old sheaths becoming fibrous, a deep reddish-brown, the margins subscarious, pubescent on the backs, and tapering gradually or abruptly to the blade, here copiously pubescent with pale, crisped trichomes. Ligule not evident. Scapes about the width of the leaf blades, rather lax, subterete and multicarinate below, many-ribbed and somewhat flattened distally, smooth. Longest bract of the inflorescence similar in texture and indument to leaves, somewhat shorter than to longer than the inflorescence. Mature spikes ovoid to ellipsoidal, acute, ca. 1 cm. long, 3-7 (usually 5), all but the central ones pedunculate in open simple umbell-like cymes, the individual peduncles ascending, to 4 cm. long. Fertile scales ovate, smooth, reddish-brown save for a paler, scarious edge and a paler or sometimes greenish midrib, rounded or obtusely angled, the margin entire or ciliate apically. Midrib of 5, often conspicuous, close-set nerves, this exserted as a short macro on the lower scales, otherwise included. Stamens 3, anthers about 3 mm. long. Styles 2-branched, the edges fimbriate above the mid-point and to the bases of the style branches. Akene lenticular-obovoid, 1.5-2.0 mm. long, brown, rather flat to somewhat tumid, the surface reticulate, the cells broadly or narrowly rectangular, horizontal, in several longitudinal lines, the surface irregularly dotted with pale, dome-like or irregularly shaped warts.

Red, sandy-clay soils of pine or oak-pine savannas, lower elevations in both the Sierra Madre Oriental and Occidental of Mexico in the states of Guerrero, Jalisco, Michoacan, Oaxaca, Veracruz.

Type locality: Veracruz, Mexico ("ex hb. Schultzii Bip."). The identification of *F. pentastachya* has to be based upon the type description rendered by O. Boeckeler (1860) in that the actual specimen (or specimens) was de-