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WESTERN UNITED STATES

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TWO NEW SEDGES FROM THE SOUTHWESTERN UNITED STATES

By KENNETH K. MACKENZIE

In going over the collections of the Agricultural College of New Mexico, two species of *Carex*, which are apparently undescribed, have been noted. At the request of Mr. Paul C. Standley, who wishes to use the names in the Flora of New Mexico, soon to be published, descriptions are given herewith.

CAREX WOOTONI Mackenzie, sp. nov.

Clumps medium-sized, without long running rootstocks, the culms 3-6 dm. high, usually exceeding the leaves, slightly roughened on the angles above, phyllopodic; leaves with well developed blades, 3-8 to a culm, on the lower third, the sheaths overlapping, white-hyaline opposite the blades, the blades flat, 1.5-3.5 mm. wide, 1-2 dm. long, roughened toward the apex; blades of sterile culm leaves longer and more attenuate; inflorescence consisting of 3-8 spikes aggregated into a head 1.5-4 cm. long and 1-2 cm. wide, the spikes ovoid-oblong, 8-16 mm. long, 6-8 mm. wide, containing a few inconspicuous staminate flowers at base and numerous appressed-ascending perigynia above; lowest bract 3 cm. long or less, 2-4 mm. wide at base, usually long-cuspidate, with hyaline margins at base and often brownish tinged; upper bracts much shorter or wanting; scales ovate, brownish, with green midrib and hyaline margins, usually acute but varying from short-cuspidate to acutish, narrower and noticeably shorter than the mature perigynia; perigynia lanceolate or narrowly ovate-lanceolate, 7 mm. long, 2.5-3 mm. wide, narrowly winged to the base, the margins often incurved, nerveless or nearly so on both faces, noticeably dilated by the thick achene, round-tapering at base, tapering at apex into the serrulate, shallowly bidentulate beak, this about one-fourth the length of the whole perigynium and winged to near the tip; achenes lenticular, with oblong faces, 2.5 mm. long, 1.5 mm. wide, rounded to a nearly sessile base, rounded at apex, tipped by the straight style; stigmas two.

This plant of the mountains of New Mexico and Arizona has heretofore been referred to the northern *Carex petasata* Dewey (*Carex Liddonii* Boott). In the size and shape of its perigynia the resemblance is very strong, but that species has perigynia strongly and finely nerved on both faces, and in addition its scales are equal in length to the perigynia, while in the species here proposed the perigynia are nerveless or nearly so and the scales are noticeably shorter than the perigynia. The long narrow perigynia with margins serrulate to the tip serve to distinguish it from *Carex festiva* and its allied species.

Specimens examined—NEW MEXICO: San Francisco Mountains, *Wooton*, July 15, 1892 (type, in herb. New Mexico Agricultural College); Winter Folly, Sacramento Mountains, Otero County, *Wooton*, August 13, 1899; North Eagle Creek, White Mountains, Lincoln County, *Turner 204*, September 14, 1899. ARIZONA: Southern slope of San Francisco Mountains, *Cannon and Lloyd*, August, 1904.

CAREX RUSBYI Mackenzie, sp. nov.

Culms strictly erect, densely cespitose, 2.5-3.5 dm. high, much exceeding the leaves, roughened on the angles above, brown and slightly fibrillose at the base; leaves with well developed blades, usually three or four to a culm, clustered near the base, the blades erect-ascending, flat, with somewhat revolute margins, 1.5-3 mm. wide, 1-2 dm. long, roughened on margins, the sheaths tight, not readily breaking, not septate-nodulose, the opaque part neither transversely rugulose nor red-dotted; spikes about five, all aggregated into a rather stiff head, this 1.5-2.5 cm. long and about 7.5 mm. wide, the upper spikes scarcely distinguishable, the lower readily distinguishable but little separated, each spike bearing the rather inconspicuous staminate flowers above and the one to five ascending perigynia below; bracts (except lowest) inconspicuous and resembling the scales, the lowest bract exceeding its spike, 1 cm. long, enlarged at base and terminating in a long cusp; scales ovate, white-hyaline, with green midrib, faintly tinged with reddish brown, acuminate or cuspidate, about the width of and rather shorter than the perigynia, these not completely concealed; perigynia narrowly ovate, strongly plano-convex, with slightly raised borders, somewhat spongy at base, nerveless or nearly so, 4 mm. long, about 1.75 mm. wide, tapering to the substipitate base, tapering to the minutely serrulate or nearly smooth beak, this about one-third the length of

the body, minutely hyaline-tipped, obliquely cut or in age very shallowly bidentate; achenes lenticular, with short oblong face, 2.75 mm. long, 1.5 mm. wide; style slender, straight, not enlarged at base; stigmas two.

Among the specimens cited by me in describing *Carex neomexicana*¹ are two specimens collected in Arizona by Dr. H. H. Rusby. Further study of these specimens has convinced me that while they have a strong resemblance to that species they represent an entirely distinct plant. In *Carex neomexicana* the perigynium beak is deeply bidentate and strongly serrulate, and the rootstock is short-creeping. In Dr. Rusby's specimens the perigynium beak is obliquely cut, or in age very shallowly bidentate, and minutely serrulate or nearly smooth on the margins, while the culms are densely cespitose. The northern species described by me as *Carex brevisquama*² is closely related but is distinguished by its smaller perigynia, less cespitose culms, and more strongly reddish brown tinged scales.

In addition to Dr. Rusby's specimens collected in 1883 in Yavapai County, Arizona, nos. 859 (type, herb. N. Y. Bot. Gard.) and 855, Mr. E. O. Wooton has collected the same species at Van Patten's Camp, in the Organ Mountains, Dona Ana County, New Mexico (May 14, 1899).

¹ Bull. Torrey Club 34: 154. 1907.

² An earlier name for this northern plant is *Carex vallicola* Dewey. The type, which I have seen recently, is a young plant with little developed perigynia. In mature plants the bracts and scales are much less prominent than they appear in the type.