A New Species of Carex from Tennessee

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Professor H. L. Blomquist of Duke University recently sent the writer specimens of a sedge from Roan Mountain, Tennessee, which had puzzled him and which proves to be a hitherto undescribed species. It may be characterized as follows.

Carex roanensis sp. nov. (§ Gracillimae). Caespitosa e rhizomatibus crassis; culmi 6-8.5 dm alti, laevigati, basi aliquidum obtuse superne acute triangulares, folia plus minusve superantes, aphyllopodi; folia frondoza 3-5, laminis 12-45 cm longis, 2.5-4.5 mm latis, planis marginibus nonnihil revolutis, utrinque pilosis, ad apicem attenuatum minute serrulatis, vaginis pilosis inferioribus aphyllis rubris reticulatim fissis; spicae 3-4 lineari-cylindricae, 2-5.5 cm longae, 2-3 mm latae, spica terminalis gynaecandra laterales feminae tenuiter pedunculatae erectae vel infima cernua basi densi-superne laxiflorae, bracteis 5-20 cm longis usque ad 3.5 mm latis marginibus plus minusve scabridis vel ciliatis infima frondosa superioribus pleurumque setaceis, vagina infima ad 15 mm superiorius 2-3 mm longis; squamae feminae oblongo-ovatae 2.5 x 1.25 mm hyalinae obtusae multicornatae vel aristatae costa lata virideae; squamae masculae anguste oblongae ca. 4.5 mm longae mucronatae vel breviter aristatae; perigynia 10 ad 40, adpressae ascendentia, 3-4 mm longa, 1.25-1.5 mm lata, elliptico-ovoidae, complanato-trigona, subinflata, membranacea, olivacea, dense albo-hirsuta, dorso conspicue paucinervosa ventre enervia, ad bastem substipitatam et apicem obtusum erostratum abrupte contracta; achaenia triangulare-ellipsoidea longe stipitata, 2.5 mm longa, 1 mm lata.

Caespitose from short, brown rootstocks; culms 6-8.5 dm high, equaling or somewhat exceeding the leaves, smooth, somewhat obtusely triangular below, acutely so above, strongly red-tinged below, some of the basal sheaths becoming fibrillose; leaves with well-developed blades 3 to 5 to a fertile culm, chiefly on the lower third of the culm, the blades flat to somewhat revolute, erect, 12-45 cm long, 2.5-4.5 mm wide, pilose beneath, short-pilose to pilosulous or glabrate above, scabridulous toward the attenuate apex, the sheaths pilose dorsally, membranaceous, yellowish brown and densely short-pilose ventrally, conceave at the mouth, the ligule much longer than wide; spikes 3-4, linear-cylindric, 2-5.5 (averaging 4.5) cm long, 2-3 mm wide, the lower half to three-quarters of the terminal spike staminate, the lateral spikes pistillate, erect to ascending or the lowermost cernuous on slender peduncles varying from 3 to 40 mm in length, rather densely flowered above, sparsely so toward the base, the perigynia 10 to 40, appressed-ascending; bracts 5-20 cm long, up to 3.5 mm wide, the margins more or less scabrous or even ciliate, the lower leaf-like, somewhat exceeding the inflorescence, the uppermost much reduced, generally setaceous; lowermost bract-sheath
up to 15 mm long, the upper 2-3 mm long; pistillate scales oblong-obovate, 2.5 x 1.25 mm, hyaline, obtuse, the broad green midrib extended as a stout awn 0.25-2.5 mm long or the uppermost occasionally merely mucronate; staminate scales narrowly oblong, averaging 4.5 mm long, mucronate to short-awned; perigynia 3-4 (averaging 3.5) mm long, 1.25-1.5 mm wide, elliptic-ovoid, compressed triangular, membranaceous, olive-green, densely white-hirsute, coarsely several-nerved dorsally, abruptly tapering to the substipitate base and to the blunt, beakless apex; achenes triangular-ellipsoid, 2.5 mm long, 1 mm wide, not filling the perigynium, tawny brown, densely spotted with dark red, conspicuously stipitate, short-apiculate, jointed with the short, straight style; stigmas 3, dark reddish brown.


In its hirsute perigynia Carex roanensis bears a superficial resemblance to C. virescens Muhl. (§ Viroscentes). Both perigynia and achenes, however, are much too large for C. virescens, the achenes do not fill the perigynia as they do in § Viroscentes nor are the bracts uniformly short-sheathing as they are in that Section. The shape of the perigynia, the loosely-flowered lateral spikes, the combination of strongly sheathing lowermost bract with almost sheathless upper bracts, and the general habit of the plant are those of Carex aestivaliformis Mack. of § Gracillimae, to which C. roanensis is evidently very closely related. It may be worthy of remark, in this connection, that the character which is generally relied upon to set apart § Gracillimae from § Viroscentes in current keys, namely the possession of long-sheathing lower bracts in contrast to sheathless or short-sheathing bracts, is not a thoroughly satisfactory one. In § Viroscentes the bracts are fairly uniformly sheathless to very short-sheathing, but in most species of § Gracillimae great variation in sheath length is usually evident even within individual plants. In C. prasina Wahl., which is traditionally included in § Gracillimae, the lowermost bract is short-sheathing to almost sheathless.

From Carex aestivaliformis, a species ranging from New Hampshire southward to Delaware and Kentucky, the Roan Mountain Carex may be distinguished at a glance by its copiously hirsute perigynia, and it differs further in the perigynia being longer and narrower and in its larger, conspicuously stipitate achenes. It is readily separable from the only other known member of § Gracillimae having pubescent perigynia, the recently described Carex oxylepis var. pubescens Underwood (Amer. Midl. Nat. 33:635. 1945), by its oblong-obtuse, rather than ovate-acuminate, pistillate scales and by having only the lowermost bract strongly sheathing.

Whether Carex roanensis is actually specifically or merely varietally distinct from C. aestivaliformis is a question that can be definitely settled only after additional collections of it are known so that it can be ascertained whether the characteristics differentiating it are constant or whether transitional forms occur. Under the circumstances it seems logical to propose it as a species since at present no intermediates are known. Specific rank properly indicates our present knowledge of the plant; should transitional forms be later found, reduction to varietal status will then be in order to correspond with the additional information. The contrary procedure of proposing novelties as varieties when the circumstances are identical with the present instance is misleading in that it implies the occurrence of intermediates which are not in fact known to exist. The argument propounded in a recent parallel case, that "pubescence has received too much attention as a species character; this is why this plant has not been raised to rank of [sic; for "described as a"] species," breaks down on two counts. First, it ignores the present generally recognized concept of the variety as pri-
marily a category of geographical significance, as distinct from that of the form, and the discriminating practice of basing the specific concept upon the lack of transitional forms (the "discontinuity in the series of biotypes," as Du Rietz phrases it) rather than upon mere degree of difference. And, secondly, even if the outmoded custom of assigning paramount significance to the degree of differentiation be followed, the evaluation assigned to pubescence in the above quotation can hardly be considered seriously if taken literally and without proper limitation. Whole sections, let alone species, are distinguished by its author on the sole character of pubescent perigynia. In certain species of Carex, and sections of the genus as well, the presence or absence of vesture is diagnostically valueless because of its extreme instability; in others, pubescence or its absence seems to be absolutely constant, and in such a case it can hardly receive "too much attention."

PLANT INDUSTRY STATION
BELTSVILLE, MARYLAND

Hilbiscus syriacus — Totus Albus in Virginia
H. A. ALLARD

I first began gardening in Virginia (Arlington County) in 1922. Since that time I have grown many hundreds of seedlings of the common shrubby Althaea of gardens (Hibiscus syriacus L.). These plants were all descendants of one or two plants of an original planting with rose-colored flowers. As seedlings of this shrub readily flower in two or three years, a great variety of color forms appeared, varying from dull white with a crimson eye-spot to various shades of rose-color and bluish rose. Hundreds of these plants were discarded after flowering owing to the rapid increase in numbers. In 1944 a striking pure white form appeared for the first time in all the period of 24 years. This plant produced snow-white flowers without the usual red eye-spot of this species.

A search of earlier literature revealed a discussion of this pleasing and striking form in a brief note by T. Moore, under the title "Hibiscus syriacus Totus Albus", published in Gard. Chron., London, New Ser., Vol. 10, Oct. 26, 1878, p. 525. Moore considered this form one of singular beauty, fit for any garden. It appears to have originated on the Continent, and was introduced into English gardens probably just prior to 1878. Moore first saw it at Mr. Waterer's Knap Hill Nursery, then one of the most important tree nurseries in the United Kingdom, and was greatly impressed by its pure whiteness and its free-flowering habit. This white form of Althaea was much prized on the Continent, and was being grown in the parks of Paris. The above discussion was accompanied by an excellent full-page black-and-white drawing. Mention was made of another new or little-known variety then growing in England known as Hibiscus syriacus coelestis (Celeste of the French), described as a charming coerulean blue with a crimson eye. This has come down to the present day.

A brief note by the editors of the Gard. Chron. New Ser., Nov. 16, 1878, p. 631, again mentions the white-flowered Totus Albus which they had not seen, but they gave high praise to the species H. syriacus itself.

While most of these shrubs are not particularly striking for the color of their flowers, the rare Totus Albus form which appeared spontaneously in my garden cannot but merit admiration. A study is now being made of the genetics and inheritance of this form, as well as propagation by grafts and rooted cuttings. Material has been deposited in the U. S. National Herbarium under the writer's field number 12195.