

NOTES ON BRITISH CARICES — VIII*

By E. NELMES.

CAREX FILIFORMIS L.

The name *Carex filiformis* L. (1753, *Sp. Pl.*, 976) was published as follows:—

17. CAREX spica mascula oblonga, femineis sessilibus oblongis, inferiore foliolo proprio brevior. *Fl. suec.* 760.

Cyperoides sylvaticum tenuifolium, spicis parvis tenuibus spadico-viridibus. *Scheuch. gram.* 425. t. 10. f. 11.

Habitat in Europae nemoribus.

No type specimen appears to have been preserved (as explained later in this paper), and it is therefore necessary to consider at some length the correct application of the name.

DIAGNOSTIC PHRASE.

The short Linnaean diagnosis quoted above is taken unchanged from the *Flora Suecica*. It applies more or less to several other European *Carices*, besides *Carex filiformis*, described in the *Species Plantarum* as having a solitary male spike and sessile female spikes. These species are: *C. flava*, *C. montana*, and *C. pilulifera*. Apart, however, from the improbability of Linnaeus's describing any one of these distinct sedges twice in the same work, *C. flava* has at least its lowest spike peduncled (Linnaeus says "spicis confertis subsessilibus"), and is obviously too robust in habit to be named 'filiformis'. This epithet, agreeing with the words "tenuifolium" and "tenuibus", used by Scheuchzer to describe the leaves and spikes of his plant, surely suggests a markedly slender sedge. *C. montana* and *C. pilulifera* are distinct and well-marked species, well known to Linnaeus, and their female spikes cannot be accurately described as 'oblongis'.

As Linnaeus places *C. filiformis* between *C. globularis* and *C. pilulifera*, which have pubescent utricles, it is permissible to assume that it also has a pubescent utricle. Taken in conjunction with its other characters, this greatly restricts the possible claimants to the name *C. filiformis* among *Carices* described since the publication of the *Species Plantarum*. Indeed, there appear to be only three species occurring in Sweden that remain to be considered: *C. ericetorum* Poll., *C. caryophyllea* Latourr. (a common plant, apparently and surprisingly absent from the *Species Plantarum*), and the species known as "*C. tomentosa* L.", which may or may not be the plant described as *C. tomentosa* by Linnaeus in his *Mantissa*, 1123 (1767). *C. caryophyllea* is a plant of dry open hillsides rather than of woods, and both it and *C. ericetorum* normally have a somewhat clavate male spike and a setaceous lowest bract.

*Continued from 1948: *Rep. Bot. Soc. & E.C.*, 13, 337.

Linnaeus's description of *C. globularis*, "16. *Carex spica mascula oblonga, feminea sessili ovata, foliolo florali breviori approximata. Fl. suec. 759*", if compared with that of *C. filiformis*, strongly suggests that the two species are closely related. The type specimen of *C. globularis* in the Linnean herbarium, marked by Linnaeus "16 *globulifera*" [sic], agrees perfectly with the description of this species in the *Species Plantarum*, where it is no. 16. There is, in fact, no question about the identity of this well-marked northern species. Its nearest European relative, apart from *C. Grioletii* Roem., which has peduncled female spikes and is a southern species, is the plant known as "*C. tomentosa* L.", and this species is distinguished from *C. globularis* in exactly the same way in which Linnaeus distinguishes *C. filiformis*. It seems evident, therefore, that *C. filiformis* L. is the plant usually known as "*C. tomentosa* L."

HABITAT.

Linnaeus gives the habitat of his *C. filiformis* as "in Europae nemoribus". In England the species known as "*C. tomentosa*" occurs in water-meadows, drier fields, dry roadsides, dry to damp grassy rides in woods, and dry wood-borders, from about sea-level up to at least 600 ft. On the Continent "*C. tomentosa*" is a still more pronounced woodland plant than in this country.

CITATIONS.

Linnaeus's first reference under *C. filiformis* in the *Species Plantarum* is to the *Flora Suecica* (1745), whence he takes his diagnosis unchanged. In fact, the treatment of species no. 760 in the earlier work is the same as that in the *Species Plantarum* except that there is a citation from "*Haller helv.*" and an *observatio* below the description of the habitat. As the Haller reference and the *observatio* are omitted from both the *Species Plantarum* (1753) and edition 2 of the *Flora Suecica* (1755), they are not taken into account in this investigation.

There is one important point, as will be seen later in this paper, arising from the *Flora Suecica* reference. Linnaeus describes in the *Flora* six species in his section "Spicis sexu distinctis: foemineis sessilibus", corresponding to those in the same section in *Species Plantarum*, where are added *C. montana* and *C. pilulifera*. Under five of these species there is a reference to his *Flora Lapponica*, but not under the sixth, no. 760, which in the *Species Plantarum* becomes *C. filiformis*. This clearly indicates that *C. filiformis* was not known to Linnaeus from Lapland.

The only citation under *C. filiformis*, apart from the *Flora Suecica* definitive reference, is of a description and figure published in Scheuchzer's *Agrostographia* ('*Scheuch. gram.*'). My colleague, Mr. H. K. Airy Shaw, has kindly translated Scheuchzer's detailed Latin description for me, and this puts beyond all doubt, what his figure had already made clear, that his plant is the '*Carex tomentosa* L.' of botanical authors. Phrases such as "culms a foot high or slightly more, slender".

"lower sheaths . . . spadiceous or fuscous-purplish", "one or two seed-bearing spikes" [from axils] " $\frac{1}{2}$ -1 inch . . . long", "these seed-bearing spikes . . . have either no peduncle or a very short one entirely hidden in the sheath", "they are 3-4 lines long [and] 1-1 $\frac{1}{2}$ lines in thickness", "utricle, which is greenish, about $\frac{1}{2}$ line long [and] if examined through a lens, is villous with very short dense hairs", refer unmistakably to this plant.

"TYPE" SPECIMENS.

There are no specimens of '*C. tomentosa*' in the Linnean herbarium, and if this is indeed *C. filiformis* L., as is argued in this article, then Linnaeus did not preserve the specimen or specimens from which he drew up his descriptions in the *Flora Suecica* (1745) and *Species Plantarum* (1753). (See quotation from Th. Holm below.) The fact that Linnaeus takes the *Flora Suecica* diagnosis and uses it without alteration in the *Species Plantarum*, cuts out the Haller reference and the "Obs.", and retains the Scheuchzer reference, suggests that the discarded specimen of 1745 had not been replaced by 1753, and that his conception of *C. filiformis* in the *Species Plantarum* was based on his knowledge of the plant in the field, or on his memory of the *Flora Suecica* specimen, and on the figure and very full description of Scheuchzer.

It should be mentioned that Kükenthal, the great authority on the *Cyperaceae*, has the following synonym and note under '*C. tomentosa* L.' in his monograph (in Engler, *Das Pflanzenreich*, 1909). '*C. filiformis* Thuill. Fl. Paris. 440 (1790); verisimiliter etiam L. Sp. Pl. 976 (1753) (excl. herbar.)'. Further, at the end of his description of *C. lasiocarpa* Ehrh. he has this note: "In herbario Linnaei sub nomine *C. filiformis* species nostra asservatur, sed descriptio et locus natalis non ad hanc sed ad *C. tomentosam* quadrant."

In the Linnean herbarium *C. lasiocarpa* Ehrh. is represented by two specimens (on two sheets). At the foot of the first sheet Linnaeus first wrote "*angustifolia*", but later crossed it through and substituted "*elongata*", which was in turn also struck out, the final epithet being "*filiformis*". At the left of this appears, in pencil, "*Lasiocarpos* of Ehrh. G [oodenough].", and below it the name "*tomentosa* Light [foot] herb.", both apparently in Goodenough's hand. Other notes (by Smith) on the sheet are: "rara", "*angustifolia* conf. Faun. Suec. 558 mss." Just beneath the stem Linnaeus has written: "Lapp. s. [i.e., Lapland, Solander]." Another specimen of the same species follows, with merely "30" written at the foot of the sheet.

In Smith, 1828, *English Flora*, 4: 128, under *C. filiformis*, is this synonym, among others: "*C. angustifolia*, Linn. Ms. in Sp. Pl. ed. 1, 975." This refers to Linnaeus's own interleaved copy of the *Species Plantarum*, on the blank page of which, exactly opposite *C. hirta* (p. 975), are written a diagnosis and full description of "*angustifolia*". This diagnosis and description agree well with the specimens of *C. lasiocarpa* mentioned above, a species which is most closely related to *C. hirta* L. Following the diagnosis is the habitat, given as "Lapponia, Anglia",

no doubt referring to the Solander specimen and the one placed next to it in Linnaeus's herbarium.

Most of the species described by Linnaeus in manuscript in his interleaved copy of the *Species Plantarum* were incorporated into his second edition, but that of *C. angustifolia* was struck out and discarded. This corresponds with the change of epithet on the 'type' sheet, and it seems certain that Linnaeus changed his mind about this being a distinct species, hesitantly referring it to his *C. filiformis*.

At this point it may be of interest to quote from Th. Holm, "Studies in the Cyperaceae, XVIII." (1903, *Amer. Journ. Sci.*, Ser. 4, 15: 147): "It is a well known fact that a large number of the specimens collected by Linnaeus do not correspond with the diagnosis, written by himself, and the reason for this is thus explained: Linnaeus did not preserve such material as he had already described, and which he described in the field, but he preserved such specimens which were either very rare and not readily accessible or such as he thought differed somewhat from those already described. These he laid into his herbarium with the intention of comparing and studying them later."

The above evidence appears sufficient to dispose of the view of Goodenough and certain later authors that the Solander specimen from Lapland represents the true *C. filiformis* L. There is, however, further proof. Solander's specimen cannot have been the *Flora Suecica* plant, on which, with Scheuchzer's, *C. filiformis* was founded, because Solander was only nine years old when the *Flora Suecica* was published, and his specimen was collected in Lapland (for which country *C. filiformis* L. was not recorded), probably in 1755, two years after this species was published in the *Species Plantarum*.

It is, therefore, reasonably certain that the plant described in the *Flora Suecica*, no. 760, to which Linnaeus gave the name *C. filiformis* in the *Species Plantarum*, p. 976, but of which no specimen was preserved, is that known hitherto to British and other European botanists as '*C. tomentosa* L.' I therefore formally typify *C. filiformis* L. in this sense, choosing as lectotype Scheuchzer's description and figure.