

A NEW HYBRID SEDGE

By P. M. BENOIT

On the 24th June 1954, when I was collecting specimens of *Carex punctata* Gaud. near Barmouth, Merioneth (v.c. 48), I noticed a curious plant which differed conspicuously from that species in having purplish-brown female glumes, similar to those of *C. binervis* Sm. As it seemed interesting, I made a note of its location and collected only the two stems which it bore, leaving the basal part in the hope that more stems would be produced in subsequent years.

Examination of these specimens showed that they possessed a combination of *binervis* and *punctata* characters and were sterile ; also the plant is the only one of its kind, and although I did not see *C. binervis* near it in the first place, I found later that *C. binervis* and *C. punctata* actually grow together there in some quantity. It is therefore reasonable to assume that the plant is a hybrid of these two species. Mr. E. Nelmes, of the Royal Botanic Gardens, Kew, to whom I sent the specimens, agrees with this view. Such a hybrid has apparently not been recorded before.

Ecological isolation no doubt usually prevents the parent species from hybridising. *C. binervis* is characteristic of moors, the drier parts of bogs, acid pastures, and similar habitats on acid soil ; *C. punctata*, of wet maritime habitats, especially rock crevices and the upper parts of sandy salt-marshes. It is interesting to note that my plant grows on a heathy rock near the shore, a place where the habitats of the parents meet. Associated species are : *Carex demissa*, *Erica cinerea*, *Hedera helix*, *Hypericum pulchrum*, *Molinia caerulea*, *Rosa canina*, *Solidago virgaurea*, *Succisa pratensis*, *Veronica officinalis*, *Bryum alpinum*, *Campylopus atrovirens* and *Saccogyna viticulosa*.

The plant produced four stems in 1955 ; one of them was eaten through when young, but the remainder reached maturity and were gathered. Although apparently healthy it did not produce any in 1956—probably on account of the dry spring, following the very dry summer of 1955. The original specimens were shown at the Society's Exhibition Meeting of the 27th November 1954.

A description follows.

Carex binervis × **punctata**

Rootstock, base of stem and basal leaves not collected. *Stems* 65-70 cm. in height, c. 1.5 mm. thick below. *Leaves* 3-4 mm. wide, flat, the basal (observed in the field) about half as long as the stems. *Terminal (male) spike* 1, occasionally with a much smaller one at its base, erect, 'pedunculate', 25-35 × 2.5-3 mm., ellipsoid-cylindric, light brown, not hoary with the persistent remains of filaments. *Male glumes* c. 4.5 mm., obovate-oblong, erose-ciliate and very obtuse to emarginate at the apex, tapered to the base, colourless, to pale yellowish-brown above, with a pale purplish zone on each side of the stout pale or greenish midrib, which is very slightly excurrent in only the uppermost glumes of the spike. *Stamens* remaining enclosed within the glumes ; the *anthers* c. 2.5 mm., slender, indehiscent. *Lateral (female) spikes* 3, usually very distantly spaced especially below, erect or rarely the lowest nodding, 12-25 × 5-7 mm., shortly cylindric, ± tapering upwards and abruptly contracted into the peduncle (a spike having its most spreading utricles at or near its base and no odd florets on the peduncle), often with a few male florets at the

top ; *peduncles*, uppermost \pm included, the others exerted 10-45 mm. ; *bracts* usually falling far short of the top of the stem, grading from the lowest which are long and leaf-like, with a long sheath, to the uppermost which are with or without a very short blade and with a very short sheath. *Female glumes* 2.5-3 mm., ovate, obtuse, pale purplish-brown, to yellowish-brown above and at the margin, with a stout green midrib which is rough on the back and excurrent in a short mucro (in the lowest glumes up to a quarter of their length). *Utricles* spreading at 40-70°, 3.5-4 \times c. 2 mm., ovate with rounded sides and base, \pm compressed-trigonous with very sharp lateral angles when fresh, flat on account of the undeveloped nut and faintly nerved or wrinkled when pressed, shining, punctate, pale green above to whitish below, occasionally becoming slightly flushed with purplish-brown, rather gradually narrowed into the *beak*, which is c. 1 mm., slender, slightly compressed, smooth, with at the apex very small erect 'horns' and an inconspicuous notch. *Nut* not developed.

Wales. Merioneth (v.c. 48). A single plant on a wet rock just above the shore near Barmouth, National Grid reference 23/61, P. M. Benoit, 24.6.1954 in Herb. Kew. (2 stems) ; 1.7.1955 in Welsh Nat. Herb. (2 stems) and Herb. Sandwith (1 stem).

The hybrid, which is very similar to *C. binervis*, is compared in the following table with the parent species from the Barmouth district. The best distinguishing characters are in italics.

	<i>C. binervis</i>	Hybrid	<i>C. punctata</i>
Stem	Typically tall.	As in <i>C. binervis</i> .	Often shorter.
Male spike	1, often with a smaller one at base, distinctly pedunculate, <i>stout</i> (3.5-4 mm. <i>thick</i>), <i>clavate, dark brown to greyish-hoary; remains of filaments present.</i>	1, occasionally with a smaller one at base, distinctly pedunculate, <i>rather stout</i> (2.5-3 mm. <i>thick</i>), ellipsoid-cylindric, <i>light brown; remains of filaments absent.</i>	1, very shortly pedunculate, <i>very slender</i> (1.5-2 mm. <i>thick</i>), <i>cylindric, pale yellowish-brown; remains of filaments present.</i>
Male glumes	Dark purplish, at least near the pale midrib.	\pm pale purplish near the pale or greenish midrib.	Pale yellowish; midrib green.
Stamens	<i>Exserted; anthers dehiscent.</i>	<i>Included; anthers indehiscent.</i>	<i>Exserted; anthers dehiscent.</i>
Female spikes	Usually 3, very distant, especially below, \pm tapering downwards into the peduncle (a spike having its least spreading utricles at its base and often a few odd florets on the peduncle).	3, very distant, especially below, \pm tapering upwards and abruptly contracted into the peduncle (a spike having its most spreading utricles at or near its base and no odd florets on the peduncle).	3-4, the upper often not very distant, scarcely tapering, abruptly contracted into the peduncle, which has no odd florets.
Bracts	All falling far short of top of stem.	As in <i>C. binervis</i> .	At least the middle ones usually over-topping the stem.

	C. binervis	Hybrid	C. punctata
Female glumes	Very obtuse, dark purplish-brown.	Obtuse, <i>pale purplish-brown</i> .	Rather acute, <i>pale yellowish to colourless</i> .
Utricles	Spreading 40-70° when mature. 3.5-4 mm. long. Ovate, trigonous with sharp lateral angles, gradually narrowed into the beak. Soon becoming flushed with or entirely coloured purplish-black, rather shiny.	Spreading 50-70° when mature. 3.5-4 mm. long. Ovate, compressed-trigonous with very sharp lateral angles when fresh, flat when pressed, gradually narrowed into the beak. Occasionally becoming slightly flushed with purplish-brown, rather shiny.	Spreading <i>c.</i> 90° when mature. 3-3.5 mm. long. Roundish, obscurely trigonous to compressed-terete, rather abruptly narrowed into the beak. Becoming a uniform pale brown when mature, never flushed with purplish-brown, very shiny.
Beak	<i>Stout, much compressed, with conspicuous divergent 'horns' and notch.</i>	<i>As in C. punctata.</i>	Slender, slightly compressed, with small erect 'horns' and an inconspicuous notch.
Nut	<i>Normally developed.</i>	<i>Not developed.</i>	<i>Normally developed.</i>

I wish to thank Mr. E. Nelmes for his kind help in connection with the writing of this paper.