

TRANSACTIONS
OF THE
ROYAL SOCIETY OF NEW ZEALAND

BOTANY

VOL. 2

No. 10

AUGUST 30, 1963

Notes on *Uncinia* (Cyperaceae-Caricoideae) from New Zealand,
New Caledonia, Kerguelen and Amsterdam Islands

By B. G. HAMLIN

[Received by the Editor, March 22, 1963.]

Abstract

Two new species of *Uncinia* are described, one from New Zealand and one from New Caledonia. A new series is proposed to accommodate the New Caledonian species. The taxonomic status of two species from Kerguelen and Amsterdam Islands is assessed. *U. moseleyana* Boeck. is accepted and *U. compacta* var. *elongata* C. B. Clarke is accepted as a variety of *U. hookeri* Boott.

The following species was sent to me by Mr A. P. Druce shortly after publication of the revision of New Zealand *Unciniae* (Hamlin, *Dom. Mus. Bull.* 19, 1959).

***Uncinia nelmesii* sp. nov.** (Sect. *Uncinia*, Ser. *Leptostachyae* Hamlin)

Herbae dense caespitosae. Folia quaterna ad sena in singulis caulibus, culmis aequalia vel longiora, 1.5–2(–3)mm lata, scaberrima in marginibus, in centrali nervo et in foliorum superficie; vaginae brunneae. Culmi 28–38(–50)cm alti, 0.5mm lati, scabri supra, vaginati circa tertiam partem longitudinis. Spicae (4–)5–6cm longae, floribus laxis; flores feminei (8–)10–13; internodia 3–4mm longa infra, 2mm longa supra; pars mascula 1.6–2cm longa. Glumae utriculis breviores, 4mm longae, carinatae, acutae, brunneae, margine hyalino, deciduae, 2–3 infimae in bracteis foliosas productae 8–18cm longas et valde spicas superantes. Utriculi 5.5–6mm longi, 0.8mm lati; stipes 1.5–1.8mm longus, rostrum 1.5mm longum, marginibus scabris.

Densely caespitose. Leaves 4–6 per stem, equalling or longer than the culms, 1.5–2(–3)mm wide, strongly scabrid on the margins, on the midrib and upper surfaces, sheaths brown. Culms 28–38(–50)cm tall, 0.5mm wide, scabrid above, sheathed for about $\frac{1}{3}$ of the length. Spikes (4–)5–6cm long, lax-flowered, female flowers (8–)10–13, internodes 3–4mm long below, 2mm long above, male portion 1.6–2cm long. Glumes shorter than the utricles, 4mm long, keeled, acute, brown with a hyaline margin, deciduous, the 2–3 lowermost produced into leafy bracts 8–18cm long and greatly exceeding the spikes. Utricles 5.5–6mm long, 0.8mm wide, stipe 1.5–1.8mm long, beak 1.5mm long, margins scabrid. Text-fig. 1 G–J.

TYPE: Saddle south of Mt Matthews, Rimutaka Range, c.600m alt. (cultivated at Taita, Hutt Valley, March, 1959) *Druce* (WELT 5369). Mr Druce tells me that he has also collected this species on Mt Wainui, near Paekakariki, but I have seen no specimens.

The species brings to four the number of species in the endemic Series *Leptostachyae*. From *U. distans* Boott, which also has deciduous glumes, *U. nelmesii* may be distinguished by its having narrower leaves with brown, not red, basal sheaths, shorter spikes with shorter internodes and smaller utricles. From *U. scabra* Boott which it resembles very closely, it can be recognised by the deciduous glumes and narrower utricles.

Series **Oceanicae** ser. nov. (Sect. *Uncinia*).

Spicae dense-floribundae; flores feminei numerosi. Glumae membranaceae, deciduae. Utriculi membranacei, inflati, rostro stipiteque conspicuo. Nux in medio constricta. *Typus U. dawsonii* sp. nov.

***Uncinia dawsonii* sp. nov.**

Herbae sparse caespitosae; caules pauci. Folia sena ad septena in singulis caulibus, culmis longiora, 2–3mm lata, plana, scabra in marginibus, et in centrali nervo apicem versus, ut sunt in foliorum superficie duo nervi laterales; vaginae fuscae ad 25cm longae, nullis septis nodulosi. Culmi 45cm longi, trigoni, laeves. Spicae 6 et 8.5cm longae, 4mm latae in summa femina parte, subclavatae, bracteatae; flores feminei c.60 +; internodia 0.5–2mm longa; spicae masculae 1cm longae. Glumae utriculis aequales vel paulo longiores, angustolanceolatae, acuminatae, membranaceae, infra pallidae, apicibus ferrugineae; carina viridis, parum distincta, 3-nervis. Utriculi 5mm longi, 1.3mm lati, pallidi, nervis apparentibus, membranacei, inflati; stipes distinctus, 1–2mm longus, curvatus; rostrum distinctum, gracile, 1.5mm longum. Nux 2.5mm longa, 1mm lata, ovata, obtuse trigona, in medio anguste constricta.

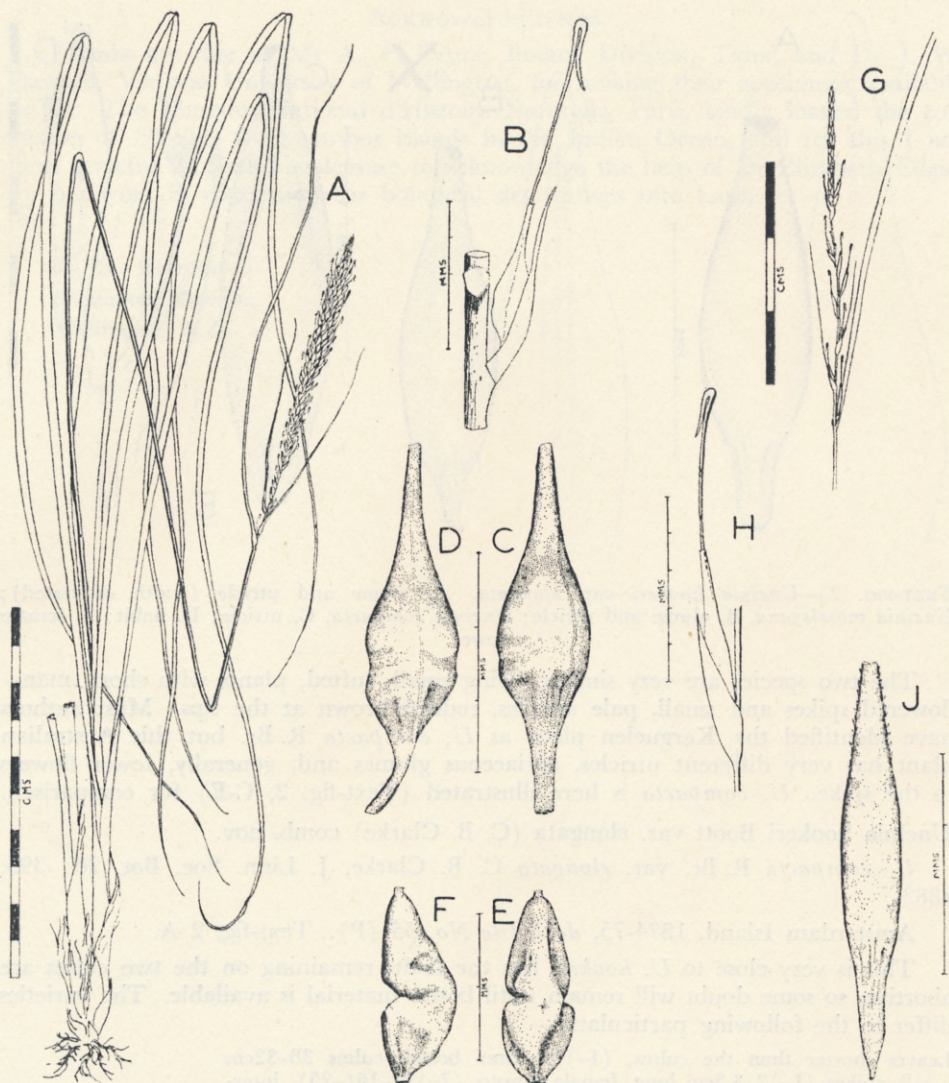
Sparsely caespitose, stems few. Leaves 6–7 per stem, longer than the culms, 2–3mm wide, flat, scabrid on the margins, midrib scabrid towards the apex as are the two lateral nerves on the upper surface, sheaths brown, up to 25cm long, not septate-nodulose. Culms 45cm long, trigonous, smooth. Spikes 6 and 8.5cm long, 4mm wide at the top of the female portion, subclavate, bracteate, female flowers c.60 +, internodes 0.5–2mm long, male spikes 1cm long. Glumes equalling or slightly longer than the utricles, narrow-lanceolate, acuminate, pale below, reddish-brown at the tips, midrib pale-green, rather indistinct, 3-nerved. Utricles 5mm long, 1.3mm broad, pale, nerved, membranous, inflated, stipe distinct, 1.2mm long, curved, beak distinct, slender, 1.5mm long. Nut 2.5mm long, 1mm broad, ovate, bluntly trigonous, sharply constricted across the middle. Text-fig. 1, A-F.

TYPE: Mt Ignambi, Chaîne du Nord, New Caledonia, about 1200m to summit at 1311m, under forest canopy, which tends to be broken in places. Scattered plants, 16 Dec. 1963, J. W. Dawson (WELT 30846).

The type, the only specimen seen, consists of three stems, one of which is of a previous season and shows the truly deciduous nature of the glumes. The other two stems are in full fruit. Dr Dawson tells me that the plant grows in scattered clumps of a few stems, the present collection being a whole plant.

Guillaumin (*Flore analytique et synoptique de la Nouvelle Calédonie, Phanerogames* p. 43, 1948) records *U. australis* Pers. from New Caledonia and presumably the present species is intended. It bears some resemblance to *U. uncinata* (Linn. f.) Kukenthal (*U. australis* Pers.) in the rather long spikes with densely spaced flowers, but the spikes are much shorter than is usual for *U. uncinata*, the glumes are membranous and the form of the utricles is different. There is a closer resemblance to *U. ferruginea* Boott, but that species has coriaceous dark utricles and an unconstricted nut.

The discovery of *U. dawsonii* poses some problems of classification. It falls between Series *Compactae* and *Australes* as previously defined (Hamlin, Rec. Dom. Mus. 3(2): 85–88. 1958) having the membranous glumes and utricles of the former but lacking the obviously trigonous utricles. To Series *Australes* it shows affinities in the numerous flowers to the spikes and in the shape of the utricles. It seems best to place it in a series of its own.



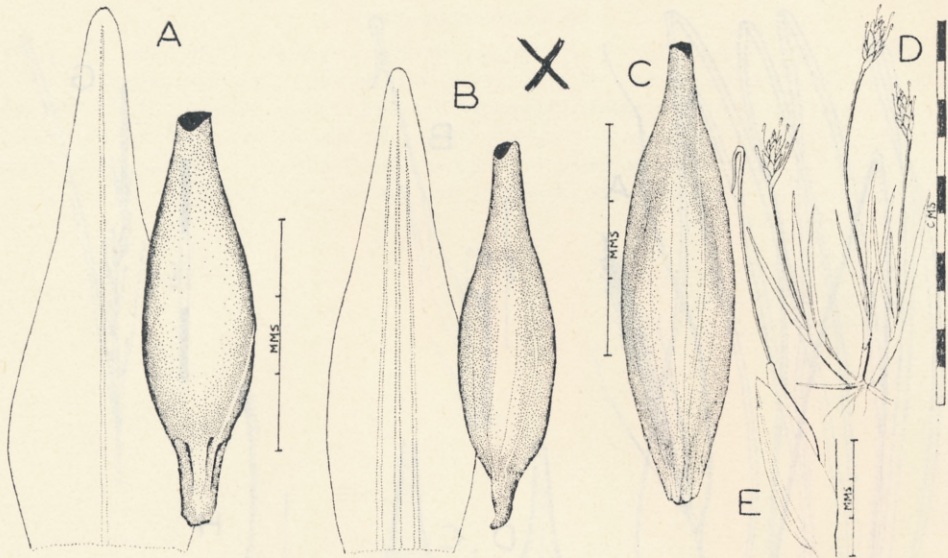
TEXT-FIG. 1.—*Uncinia dawsonii*. A, Habit; B, female flower; C, dorsal view and D, lateral view of utricle; E, dorsal view and F, lateral view of nut. *Uncinia nelmesii*. G, inflorescence; H, female flower; J, utricle.

Uncinia moseleyana Boeck. Flora 61: 170. 1878.

Kerguelen Island, leg. Moseley 1/74 (P). Text-fig. 2, B.

I have seen part of Moseley's collection held by the Museum National d'Histoire Naturelle, Paris. This specimen was received from Kew in February, 1879, so could not have been at Paris at the time of Boeckeler's publication, but as Boeckeler's type at Berlin was destroyed, other collections must be relied upon.

The specimen differs from *U. divaricata* Boott of New Zealand in having leaves much more coriaceous, larger glumes, utricles shorter than the glumes, 5mm long, less turgid and with a narrow stipe. The nut is smooth not minutely sculptured as it is in *U. divaricata*.



TEXT-FIG. 2.—*Uncinia hookeri* var. *elongata*. A, glume and utricle (width estimated); *Uncinia moseleyana*, B, glume and utricle; *Uncinia compacta*, C, utricle; D, habit; E, female flower.

The two species are very similar, being small, tufted, plants with short, many-flowered spikes and small, pale utricles, reddish-brown at the tips. Most authors have identified the Kerguelen plant as *U. compacta* R. Br. but this Australian plant has very different utricles, coriaceous glumes and, generally, fewer flowers to the spike. *U. compacta* is here illustrated (Text-fig. 2, C-E) for comparison.

Uncinia hookeri Boott var. *elongata* (C. B. Clarke) comb. nov.

U. compacta R. Br. var. *elongata* C. B. Clarke, J. Linn. Soc. Bot. 20: 395. 1883.

Amsterdam Island, 1874-75, de L'Isle No. 55 (P). Text-fig. 2 A.

This is very close to *U. hookeri* but the fruits remaining on the two culms are abortive, so some doubt will remain until better material is available. The varieties differ in the following particulars:—

Leaves shorter than the culms, (1-)1.5-2mm broad, culms 30-32cm tall, spikes (1-)2-3.5cm long, female flowers (7-)12-16(-25), internodes 2-3(-5)mm long, glumes equalling the utricles	var. <i>hookeri</i>
Leaves longer than the culms, 1.5-2.5mm broad, culms up to 26cm tall, spikes 3.5-4cm long, female flowers 17, 19, internodes 1.5-2.5mm long, glumes longer than the utricles	var. <i>elongata</i>

I have not examined the type of Clarke's species, presuming that de L'Isle's number represents one plant. Clarke's description, although scanty, is applicable to the Paris specimen except for the slightly longer culms ("3½ dm.") of the type.

U. compacta R. Br. seems to have been stretched inordinately to include some very different plants. It is difficult to see why Clarke should have placed the present plant under *U. compacta* while disposing the very similar *U. hookeri* Boott under *U. rupestris* Raoul. The affinity of the Amsterdam Island plant with *U. hookeri* from Auckland and Campbell Islands is much more in keeping with the known characteristics of distribution within the genus. *U. compacta* would appear to be confined to south-east Australia. It is thus an endemic and further testifies to the high degree of endemism characteristic of the genus.

ACKNOWLEDGMENTS

Thanks are due to Mr A. P. Druce, Botany Division, Taita, and Dr J. W. Dawson, Victoria University of Wellington, for making their specimens available to me. The Museum National d'Histoire Naturelle, Paris, kindly loaned the collection of *Uncinia* from various islands in the Indian Ocean, and for this I am most grateful. It is also a pleasure to acknowledge the help of Dr Elizabeth Edgar for her work in translating the botanical descriptions into Latin.

B. G. HAMLIN,
Dominion Museum,
Wellington, N.Z.