

FLORA OF VICTORIA: NEW SPECIES AND OTHER ADDITIONS—7

By N. A. WAKEFIELD, Melbourne

Genus *Hibbertia*: Delimitation of *H. acicularis* and *H. stricta* and of some Species Allied to them

These species are members of a natural group in the genus, having the ovary consisting of two carpels with the stamens in a single bundle lateral to it, and the leaves are narrow, with the margins recurved to the midrib so as to obscure the under-surface lamina.

All specimens cited in this paper are in the National Herbarium of Victoria, Melbourne.

There is apparently no significant variation in features of petals within the group, so they are not commented on in the descriptions.

HIBBERTIA ACICULARIS (Labill.) F. Muell. *Pl. Indig. Col. Vict.* 1: 17 (1860).

This was originally described from Tasmania, as *Pleurandra acicularis* Labill. in *Nov. Holl. Pl. Spec.* 2: 6 T. 144 (1806). The typical Island form is a sprawling plant with wiry stems and glabrous needle-pointed leaves; the flowers are borne on long peduncles; the calyx has a sparse investment of small, hooked hairs; and the ovary is pubescent. [See figure 1.] It is widespread in Tasmania; and it occurs in Victoria in the near-coastal country east of Port Phillip Bay, such as at Cheltenham, Mentone, Grantville, Wilson's Promontory, Port Albert, Snowy River, etc. Thence it extends north through eastern New South Wales and into Queensland.

Of the three following species, the first is apparently a recent derivative of *H. acicularis*, but the other two are only superficially similar to it. All three have been included by botanists under this one specific name.

HIBBERTIA EXUTIACIES sp. nov.

Ex affinitate *H. acicularis* (Labill.) F. Muell. sed acie ad apicem folii decidua, floribus sessilibus, calyce glabro recedit.

Holotype: Specimen bearing the data "Trailer common about Stawell. St. Eloy D'Alton No. 13".

General Diagnosis: Stems prostrate, short, stout, much branched, when young bearing a little simple vestiture; leaves tiny, usually about 5 mm. long and 1 mm. wide (sometimes up to 10 mm. long), linear, acute, margins recurved to the midrib, often a little tuberculate, glabrous or with a few tiny forward-pointing bristles; apex of young leaves bearing a simple bristle which is shed later; flowers terminal, sessile within a few small broad pointed shortly fringed reddish bracts; sepals about 5 mm. long, glabrous; stamens 4-6, in a single cluster, the filaments usually free (rarely united), anthers 1.5-2 mm. long; ovary invested with short simple whitish tomentum; carpels 2. [See figure 2.]

Distribution: From central Victoria westward to South Australia—upper Goulburn River, Seymour, Bendigo, Castlemaine, Maldon, Coliban, lower Loddon River, Maryborough, upper Ayoca River, St. Arnaud, Stawell, etc.; Mount Lofty, Mount Remarkable, Port Elliott, Adelaide, etc.

H. exutiacies differs from typical *H. acicularis* in having sessile flowers, glabrous calyx and the leaves not so sharply pointed. On each young leaf there is a fine needle-point of colourless material, distinctly jointed to the apex, and this becomes detached as the leaf hardens. From this unique character is derived the name of the new species. In sub-tropical localities there are divergent states of *H. acicularis*, some with the calyx glabrous and some with sub-sessile flowers, but none of these has the leaf of *H. exutiacies*.

HIBBERTIA RUF A sp. nov.

H. acicularis (Labill.) E. Muell. similis, sed foliis apice obtusis et ad basin cordatis, sepalis (præter ad apices) atque ovario glabris, staminibus 4, filamentis conjunctis differt.

Holotype: Reedy Creek, 3 miles east of Cam River, Victoria; J. H. Willis and N. A. Wakefield; 22/10/1948.

General Diagnosis: Stems long, slender, glabrous, reddish; leaves scattered, very shortly petiolate, lanceolate, cordate at the base, the apex bluntly pointed and bearing a tiny tuft of hairs, margins recurved to the broad midrib, the surfaces glabrous or with a few short white bristles; flowers small, about 12 mm. across, pedicellate, axillary; pedicels slender, reddish, about 10 mm. long or more, subtended by several small broad thin bracts; calyx reddish, glabrous; stamens 4, anthers about 1.5 mm. long, the filaments completely united; ovary glabrous, carpels 2, the styles terminal. [See figure 3.]

Distribution: Eastern New South Wales, eastern Victoria and north-eastern Tasmania; apparently favouring a sedgy and heathy habitat near swamps.

Specimens of *H. rufa* are as follows. *New South Wales*—Paddy's River (near Wingello), leg. Louisa Calvert, "trailing low growth, margin of swamps"; Braidwood district, 3,200 feet, leg. William Bauerlen, No. 121, November 1886; Jenolan Caves (ex National Herbarium of N.S.W., without further data). *Victoria*—The type material from Reedy Creek. *Tasmania*—St. Helens (north-east), leg. W. Fitzgerald, 1892.

The Tasmanian specimen has almost sessile flowers but is otherwise quite typical. It was labelled "*H. acicularis* var. *triandra*" by Mueller (but the anther's actually number 4), resulting in the publishing of this varietal name by Ewart in *Flora of Victoria* 770 (1930).

There are also two New South Wales specimens—Walcha Road, leg. E. Bêche, Oct. 1886; and "near Scone", leg. Miss Carter, 1884—of a divergent form of *H. rufa*, with the leaves longer and without cordate bases, and the leaves and sepals shortly bristly.

HIBBERTIA CISTIFLORA (Sieb. ex Spreng.) comb. nov.

Syn. *Pleurandra cistiflora* Sieb. ex Spreng. *Syst. Voy.* (ed. 16) 42: 191 (1827).

Part of Sieber's No. 148, labelled "*Pleurandra cistiflora*" has been examined and it agrees well with Sprengel's original diagnosis.

The typical plant is a sparse shrub, glabrous or almost so; with the leaves about 9 mm. long and 1 mm. wide, bluntly pointed and somewhat tuberculate; flowers sessile within terminal clusters of leaves, subtended by tiny triangular bracts; calyx glabrous; stamens about 6, filaments normally free; ovary glabrous, carpels 2, styles lateral.

It occurs about the Blue Mountains and Port Jackson, and in New England there is a form which has only 4 stamens with the filaments united.

For Victoria, there are several collections from the Grampians, but Mount Rosea (leg. Miss K. Cowie) and Mount William (leg. D. Sullivan, Nov. 1871 and 22/11/1873) are the only specific localities noted. This is a robust, erect form of the species, with the leaves up to 13 mm. long, rather sharply pointed and minutely pimpled. It apparently grows in very rocky places. [See figure 4.]

Previously, the New South Wales material of *H. cistiflora* was identified as a form of *H. stricta* (partly the var. *glabriuscula* Benth. l.c.: 27); while that from Victoria was noted on herbarium sheets, together with *H. eritracis*, as a variety of *H. acicularis*. Reference to the accompanying illustrations will indicate the relationship of these species.

HIBBERTIA STRICTA (R. Br. ex DC.) F. Muell. l.c.

Syn. *Pleurandra stricta* R.Br. ex DC. *Reg. Veg. Syst. Nat.* 1: 422 (1818).

A duplicate of the type collection shows the typical form to be an erectly branched shrub with narrow, blunt leaves and small sub-sessile flowers with few (5-8) stamens; the vestiture on upper stems, leaves and sepals is of small, fine, stellate hairs. [See figure 5.] It extends from the Port Jackson area southward, growing in near-coastal heathlands; and it is found in eastern Victoria, near Orbost, Longford, Grantville, etc. The species extends too into Tasmania in a form not much different from typical.

A smaller-leaved form was described as *Pleurandra microphylla* Sieh. ex Spreng. (l.c.). This is the mountain and inland form, being found about the highlands and western slopes of New South Wales. In Victoria it is recorded from the upper Cann Valley in the east, as well as about the Goulburn, Loddon and upper Murray Rivers and in the Wimmera. It occurs too in several places in South Australia.

In inland Victoria (Broken River, Mt. Hope, Mt. Korong, Grampians, etc.), there is a long-leaved form with longer, greyish vestiture and with the flowers often quite stalked, which was described as *Pleurandra incana* Lindl. ex Mitch. (*Thres. Exped. Int. East. Austr.* 2: 156), from material collected on Mount Hope by Mitchell. This is the basis of *H. stricta* var. *canescens* Benth. (l.c.: 27); and he included also in this variety the *Pleurandra microphylla* and the Tasmanian form.

In south-western Victoria (Brisbane Ranges, Otway Ranges, Port Fairy, etc.) and in South Australia, there is a divergent form with much of the vestiture becoming simple and in some cases with hooked bristles also on the calyx. [See figure 6.] In north-western Victoria (Dimboola, Lake Hindmarsh, etc.) and in South Australia, there are tiny desert forms which are smaller in all parts and with very little vestiture.

All the above material constitutes a satisfactorily circumscribed species, but in the past there have also been included under the name *H. stricta* a number of entities which are apparently quite distinct specifically. Of the Victorian representatives of these, besides the *H. cistiflora* already dealt with, there are the two following species.

HIBBERTIA AUSTRALIS sp. nov.

H. stricta (R.Br. ex DC.) F. Muell. proxima, sed foliis latis tuberculatis, pilis stellatis robustis, pedunculis longis, sepalis intus nitidis differt.

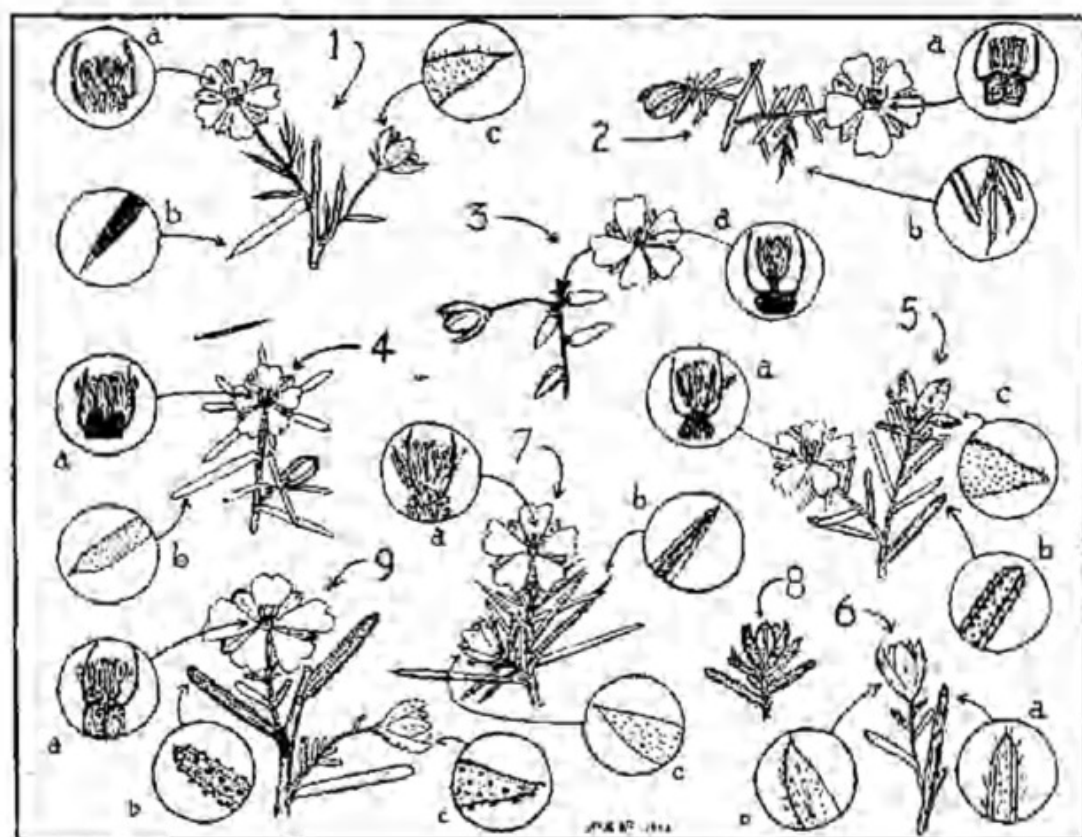
Holotype: Marcus Hill (4 miles north-west of Queenscliff), Victoria: leg. H. B. Wilson (No. 22), 1884.

General Diagnosis: Stems numerous, erect, little branched, stellate-pubescent; leaves thick, oblong-linear, up to 16 mm. long and 1.5 mm. wide, very obtuse, the margins recurved to the broad midrib, scabrous, the upper surface glabrous and dotted or bearing fine stellate hairs, the under surface tuberculate and bearing coarse stellate hairs; flowers appearing axillary but actually terminal on very short small-leaved branches; peduncles about 5 mm. long, with a narrow bract about midway along; sepals about 6 mm. long, stellate-pubescent on the outside, most of the inner surfaces glabrous and quite shiny; stamens 4-9 (usually 6), in a single bundle, anthers 1.2-2 mm. long, filaments free; ovary invested in very short felty vestiture, carpels 2. [See figure 9.]

Distribution: Victoria, mainly in southern and western parts (Shoal Inlet, Woodside, Wilson's Promontory, Heywood, Pakenham, Emerald, Doncaster, Broken River, Queenscliff, Ballarat, Geelong, Steiglitz, upper Barwon, Ararat, Curdies Inlet, Victoria Range, Lower Glenelg, etc.), and in South Australia as far west as Eyre Peninsula.

Though *H. australis* was previously regarded as being a form of *H. stricta*, the two are not really closely related, the former having a different vestiture (coarse, flat, stellate hairs subtended by tubercles), different inflorescence (comparatively long peduncles subtended by tiny leaflets), different sepals (straw-like and shiny on the inner surfaces), etc.

A small South Australian form of the species, from Kangaroo Island, was described by J. M. Black in *Trans. Roy. Soc. S. Aust.* 49: 274 (1925) as var. *oblonga* of *H. stricta*. It was not considered desirable to adopt this varietal epithet as a specific name, first because Black's type material is abnormally small, and secondly to avoid confusion with the epithet *oblongata* which is in use in the genus.



1. *H. acicularis*, piece of typical plant, with enlargements of (a) ovary, styles and anthers, (b) needle-point of leaf, (c) apex of sepal, showing hooked hairs.
2. *H. exiliacris*, piece of type specimen, with enlargements of (a) ovary, etc., (b) young leaves with needle-points, and old leaf.
3. *H. rufa*, piece of typical plant, with enlargements of (a) ovary, etc., showing united filaments.
4. *H. cristiflora*, piece of specimen from Grampians, with enlargements of (a) ovary, etc., (b) apex of leaf.
5. *H. stricta*, piece of typical plant, with enlargements of (a) ovary, etc., (b) apex of leaf (under side), (c) apex of sepal.
6. *H. stricta*, piece of divergent form from Otways, with enlargements of (a) apex of leaf (under side), (b) apex of sepal.
7. *H. calycina*, piece of typical form, with enlargements of (a) ovary, etc., (b) apex of leaf (under side), (c) apex of sepal.
8. *H. calycina*, piece of villose inland form.
9. *H. australis*, piece of type specimen, with enlargements of (a) ovary, etc., (b) apex of leaf (under side), (c) apex of sepal.

(All illustrations which are not in circles are reproduced about natural size.)

HIBBERTIA CALYCINA (DC.) comb. nov.Syn. *Pleurandra calycina* DC. l.c.: 422 (1818).

For the identification of this species, reference has not been made to the type specimen, but it is considered that the part of De Candolle's description of *Pleurandra calycina*—"foliis acutis; calycibus sericeovelutinis ovario hirsutis", (as against "foliis subobtusis; calycibus subscabris ovario velutinis" for *Pleurandra stricta*), leaves no doubt as to the identity of the former. Moreover, Bentham applied the name *H. stricta* var. *calycina* (l.c.: 27) only to material dealt with here as belonging to *H. calycina*.

The species differs from *H. stricta* in having pilose stems; leaves very narrow, acute, tuberculate, glabrous or with simple bristles or hairs, the midribs depressed beneath; flowers subtended by several short, broad, pointed bracts; calyx invested with more or less forward-appressed hairs, from almost glabrous to quite villose; stamens numerous (6-18); ovary shortly villose. [See figure 7.]

H. calycina in its typical form occurs in near-coastal heathlands of eastern New South Wales and eastern Victoria (Orbost, etc.). A short-leaved mountain form is found in eastern New South Wales; and a development with the calyx (and sometimes the leaves too) quite villose, is in inland New South Wales and Victoria, especially in the Murray River valley (Albury, Wodonga, Beechworth, Ovens River, Broken River, Avon River, etc.) [See figure 8.] Somewhat modified forms occur about the Grampians and in South Australia; while from near Lake Hindmarsh there is material which evidently represents a desert reduction—an almost glabrous plant with tiny leaves and flowers.

It is the intention of the writer to deal with other Victorian groups of *Hibbertia* in a future part of this series of papers.

Grateful acknowledgement is made here to Mr. J. H. Willis for his interest in this research, and particularly for the formulation of the Latin diagnosis of the new species.

BOTANICAL TRAVERSES BY MOTOR CAR IN CENTRAL AUSTRALIA

By J. B. CLELAND, C.B.E., M.C.

On the various Anthropological Expeditions under the auspices of the Board for Anthropological Research of the University of Adelaide and of the South Australian Museum, and on other occasions, the writer has kept notes of the kinds of vegetation passed and of the species of plants recognized as he sat in the front seat of a motor vehicle during these journeyings into the drier parts of South Australia and in Central Australia. The last occasion on which this was done was on the expedition to Yuendumu in Central Australia in August 1951, to which the Wenner-Gren Corporation for Anthropological Research Incorporated (previously the Viking Fund) of New York so generously contributed.

As the journeys were usually several hundred miles long, and these notes often were made every mile or so, each traverse forms a rather bulky document—too detailed and long to be published. Typescripts have been made of the notes; one copy is filed in the Waite Institute of the University of Adelaide and another has been presented to the National Herbarium, Melbourne. These copies will thus be available for consultation by anyone seeking such information as they may afford. The persons likely to wish to consult them are anthropologists (seeking information as to the kind of country in Central Australia occupied at one time by our natives), geographers (who may want to get a general idea of the country passed over), ecologists, botanists and those interested in general in our natural history. But these people must first know of their existence and they need be given



Wakefield, N.

A.

↑

. 1955. "Flora of Victoria: New species and other additions—7 Genus Hibbertia: Delimitation of *H. acicularis*, *H. stricta* and of some Species Allied to them." *The Victorian Naturalist* 72(8), 118–122.

View This Item Online: <https://www.biodiversitylibrary.org/item/127025>

Permalink: <https://www.biodiversitylibrary.org/partpdf/240308>

Holding Institution

Field Naturalists Club of Victoria

Sponsored by

Atlas of Living Australia

Copyright & Reuse

Copyright Status: In copyright. Digitized with the permission of the rights holder.

License: <http://creativecommons.org/licenses/by-nc-sa/3.0/>

Rights: <https://biodiversitylibrary.org/permissions>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.