



ASGAP
HIBBERTIA
STUDY GROUP

NEWSLETTER
NO. 23

HIBBERTIA DENTATA

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Dear Members.

This is the last newsletter for the 1993/94 year. Subscriptions for 1994/95 are due 30 th June 1994. The cost is \$5 and \$10 for overseas members. It will be assumed that those members who do not subscribe by the time the August newsletter goes to print wish to cease membership.

I would like to thank Anne Kerr, Barbara Buchanan, Helen Morrow and Ron Pearson for their contributions to this newsletter. Members' contributions make the newsletter and I am looking forward to hearing from other members - their experiences with hibbertias - out there amongst us exists gems of knowledge. We are eager to share your knowledge.

Faye Candy tells me that *H. cuneiformis* seeds sown 13/12/93 germinated 4/5/94. Sown in commercial seedling mix with coarse sand on top of seeds - put out in sunshine and only watered by rain. The seeds were soaked prior to sowing.

I spoke to Shauna Roche (Kings Park Science and Education Unit) about the work being done on seed germination using smoke. An article is being produced for publication. Shauna has tried four hibbertia species - approximately 5% success rate with three species, nil with other; seeds untreated. She plans to try different treatments (eg nicking seed coats etc) next time. When more information is available I will put it in a future newsletter.

The next meeting is at Helen Morrow's on 21 May 1994.

A field trip to the Bairnsdale area to view local hibbertias is being arranged for the first weekend in October. Full details will appear in the August Newsletter. If you want information in advance please phone me (03 763 7914).

regards Kerry Davis

Incoming Correspondence

From Peter Bernhardt - Prof. of Botany, Saint Louis University. - 22nd March 1994

The Department of Biology at Saint Louis University has received a grant from the National Science Foundation in Washington to build a research glasshouse. The glasshouse will propagate plants of temperate zones for experimental purposes. Under these circumstances, I hope to introduce some of my Australian research to the United States upon returning from sabbatical in May 1994.

In particular, I would like to start a living collection of hibbertia for breeding experiments. My fieldwork, up until this point, has concentrated on pollination ecology interpreting the roles of native bees as carriers of hibbertia pollen and adaptations anthers and stigmas. A small but successful collection of *Hibbertia scandens* is now grown in the glasshouse of the U. of Illinois at Normal from seed I collected in 1992 but it is out of my reach for experiments.

Therefore, I would like to establish working ties with yourself and / or members of the ASGAP Hibbertia Study Group to obtain viable seed once the St. Louis glasshouse is constructed. Until then, propagation could be started within the glasshouse complex of the Missouri Botanical Garden to import live plants so it may be possible to import viable cuttings direct from Victoria or NSW.

From SGAP - Victoria Inc. Re ASGAP 1995 Biennial Conference 5th April 1994

There are two activities at which you are especially invited.

1. A full day Study Group leaders Conference / Workshop. on the Saturday, September 23rd 1995, 8.30 am start.
2. A Display / Trading Night to be held on the Tuesday evening, the 26 September 1995 from approximately 8 - 10.30 pm. we invite Study Groups to put on a display of plants / materials / books for the registered participants and the general public.Books / plants / seeds and other merchandise can be sold with total profits being returned to the Study Group or its members.

Extracts of Letter From Barbara Buchanan

19 February 1994

The recent Garden Design Newsletter had a query about the space under eucalypts and how to get things to flower there. It is a problem I have been interested in - I started out here (Myrhee, Victoria) hoping to grow an open woodland of mallees which would just give a nice light shade but mostly they have not done at all well, even died on me. The natural vegetation of the area is forest, but whether the present regrowth with lots of thin trees is very like the original which old timers say was more open with bigger trees - either way it is not very floriferous undergrowth. any more than Sherbrooke, Victoria. I have three hibbertia species which certainly flower better in a wet year and in the open, but do grow right under trees.

A lot of the hibbertias are forest species and it seems a golden opportunity to write up a piece on shade and dry tolerant hibbertias. Can the Group come up with reliable hibbertias to grow under Eucalypts? Trees provide good drainage of course and I think summer watering would be required to get good green growth and flowering.

I went around the garden, the near part anyway, with my record book today, there are six hibbertias with flowers, although most of them only a few. *H. longifolia* is probably the best, and near it *H. amplexicaulis* is not bad. I think these have benefited from watering. Both are quite close in under trees (but not eucalypts) where I have had some trouble keeping other plants.

In course of checking the plants I brought in some of one which I think came from John Knight, whether cuttings I sent him or someone else did. Anyway I can't key it out. It has three carpels, hairy I think, staminodes and sessile. I thought it might be *H. ovata* but the bracts may be there but are quite green, or absent, and the leaf shape is not as shown in 'Flora of the Perth Region'. Many stamens all round the carpels. Petals long, thin, and notched, yellow. (I tried to key out the sample you sent - the flower has characteristics of *H. ovata*, however leaves, etc do not match known descriptions of *H. ovata* - refer to Ron Pearson's article this newsletter, K.D.)

In the watered area *H. aspera* has gone mad and is swallowing its neighbours, but flowering was a bit disappointing. I dug up several self rooted pieces, only one survived and I thought in view of the behaviour of the parent it would be great in the paddock, but found today it is only just alive and not much increased in size.

I cannot keep *H. dentata* here, it seems fairly frost tender to me.

Trialling The Key

Ron Pearson

The tentative 'Key to the Hibbertias' prepared by Kerry has been based on many sources and as such is a condensation and interpretation of the published material. As the revision of the hibbertias being undertaken by Hellmut Toelkin of the Adelaide Botanic Gardens will not be completed for about five years, it is interesting to test known hibbertias to see how they conform to the new 'Key'.

In my own case I have a problem with a local hibbertia which is indigenous to the Braeside area, about 25 km south east of Melbourne. From records for the area and after referring to the 'Key' this plant has the characteristics of *H. riparia* (previously *H. stricta*).

I took a number of cuttings of the plant last year and at present have several growing well in tubes and flowering. In the case of several of the plants I have noticed that of the two flowers on the one plant at the same time one has two carpels and the other has three carpels. As the 'Key' and other references I possess indicate that *H. riparia* has two carpels how do we explain the three carpels? Is this a mistake that has been with us for a long time or do we have a really special plant? The plant has Four to six stamens and greyish green leaves.

Further Information Re - Collecting Specimen

Anne Kerr

Refer to Newsletter No 20 page 7 for first article.

When collecting one should obtain a relevant permit from the appropriate authority. Permits must be obtained for each state. In Victoria the Department of Conservation and Natural Resources issues permits. A separate permit is required for National Parks issued by the National Parks Service CNR. When collecting from private property, permission of the owner should be sought.

Though tedious it is necessary to keep field notes. When you start collecting, number each specimen starting with No 1 your initials and date 30 - 4 - 1994 enter number in field book and on tag, attached to specimen. Jewellers' tags are ideal, can be purchased from most stationary shops.

Though not necessary, a photo of the plant and habitat shot can be helpful.

Another helpful thing is to mark on a good map where collections were made, especially if you find it difficult to determine latitude and longitude.

Mounting Specimens

Points to remember before actually mounting plant specimen.

First stick label down with paste in right hand corner of sheet, place specimen on sheet before mounting to determine correct position - Fig 1 (when pressing have one specimen showing back of leaves and flowers).

Leave approximately 2 to 3 cm around sheet.

Place any loose fragments such as fruit, flowers or seeds in a cellophane bag (not plastic) and put in a paper envelope, stick with a small dab of glue, place on mounting sheet.

Dried specimens are mounted on card (Herbarium size is 442 x 285 mm). This is not a standard size and may not be easy to obtain, use size near as possible.

The quickest and most commonly used method of mounting specimen is to glue with 'Aquahere' that is applied with nozzle to the base of the stem, along stems (lightly) in small dabs. Do not put glue on flowers.

See Fig 2 for mounting 2 mm wide gum strips.

Practise a few times before starting on collection.

Place a clear sheet of plastic over specimen, it may be necessary to put a metal weight on parts to keep it flat.

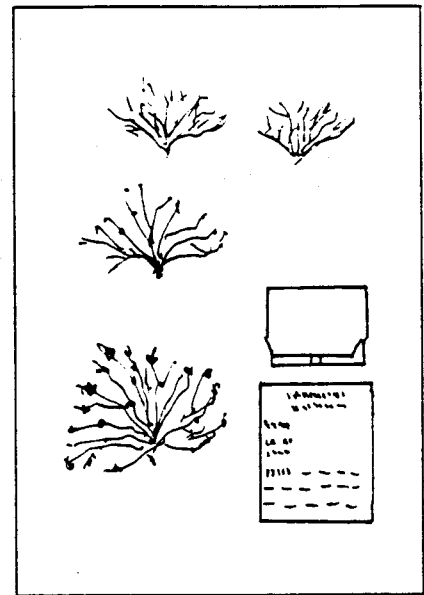


Fig 1 Placement of specimen on sheet

Let dry for 12 hours and then gently remove plastic.

Never use sticky tape, etc.

Place mounted specimen card in an outer cover: about the quality of good typing paper. On the bottom of the cover write in pencil family, genus, species and state collected.

Arrange collection in alphabetical order and place in a buff manilla folder.

On bottom of folder write, for example, DILLENIACEAE *Hibbertia obtusifolia* N.S.W.

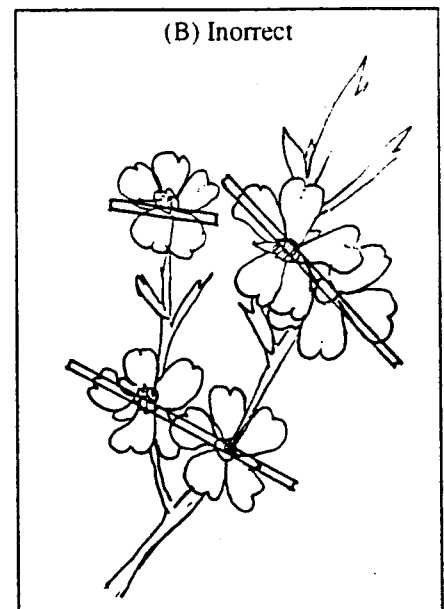
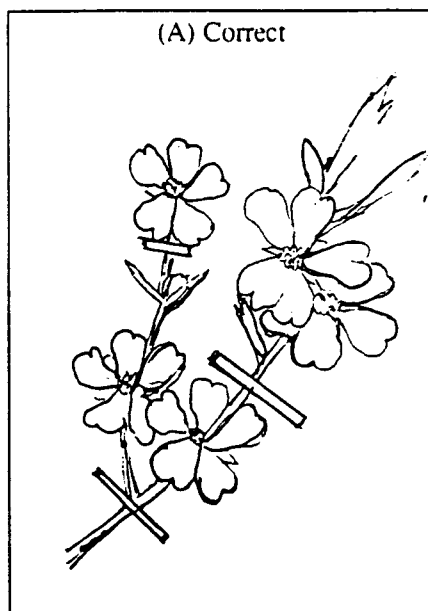


Fig 2 Placement of Paper Strips

Equipment

Tweezers, pencil, rubber, sharp scissors, 'Aquahere', Clag or VHC, tissues, large sharp needle, plastic - rolls can be bought from stationary shops, corrugated card board collected from boxes to put between mounted sheets while drying.

Acknowledgements

Thanks to David Albrecht for liberal use of various sections of "Collecting and Pressing Herbarium Specimens".

Thanks to staff at Melbourne Herbarium.

Next Meeting

Saturday 21 May 1994

Venue: Helen Morrow's home
6 Janet Street, Lower Templestowe.

Agenda: Correspondence
Field Trip
Propagation form

Plant Descriptions

Helen Morrow has prepared plant descriptions for four hibbertias which appear below.

We need information from members from all around Australia on what hibbertias grow well in their gardens, under what conditions they are growing, etc.. This information will be valuable to pass on to the Garden Design Study Group. So please write to me so that I can pass this information on to all members.

Hibbertia serpyllifolia

- Height:** Decumbent to prostrate shrub with spreading habit. Branches to 0.3m long.
Young growth hairy.
- Leaves:** Linear to narrow- oblanceolate, scabrous, 2-10 mm x c. 1 mm, margins revolute, apex and base obtuse.
- Flowers:** Terminal, sessile or almost so, 15-30 mm across.
- Petals:** 6-15 mm long.
- Sepals:** 4-7 mm glabrous except for ciliate margins.
- Stamens:** 12-20 surrounding carpels. **Staminodes** absent.
- Carpels:** 3, hairy.

Habitat: Distributed from northern NSW to central Tas. Widespread in heath on shallow sand and among rocks. Requires plenty of moisture in a position with some sun. Regular tip pruning will stop plant from becoming straggly. Tolerates light to moderate frost.
Flowers spring - summer.

Hibbertia vestita

- Height:** Shrub to 0.3 m erect, sprawling or prostrate.
- Leaves:** 4-7 mm long, 1-2 mm wide, linear to oblong, midrib ridged beneath, margins recurved glabrous to minutely hairy.
- Flowers:** 15-25 mm across, terminal, sessile, surrounded by floral bracts.
- Petals:** 8-10 mm long.
- Sepals:** 6-8 mm long, villous, hairs simple.
- Stamens:** About 30 surrounding carpels.
- Carpels:** 3, hairy.
- Staminodes:** Present (Flora of NSW)
Absent (Encyclopaedia Elliot & Jones)

Habitat: Distributed from south-eastern Qld and northern to central NSW, grows in coastal heaths and in dry sclerophyll forest Requires good drainage in sunny position but will tolerate some shade, must not dry out. Withstands heavy pruning. Excellent for containers or rockeries, tolerates exposed coastal conditions. Flowers July - September also sporadic.

Hibbertia pedunculata

- Height:** Prostrate to erect dwarf shrub, stems glabrous, young growth pubescent.
Leaves: 3-6 mm long, 1 mm wide linear, sessile, hirsute sometimes roughened, apex acute base obtuse, margins recurved.
Flowers: 12-15 mm across solitary, terminal on peduncle 5-15 mm long.
Petals: 5-7 mm long.
Sepals: 3-6 mm hirsute.
Stamens: 15-20 surrounding carpels. **Staminodes** present.
Carpels: 2, hairy.

Habitat: Distributed from south-eastern Qld, NSW eastern Vic. Widespread in open forest on sandy or heavier soils. Requires some protection and prefers not to dry out. Tolerates light to medium frost, responds well to pruning. Good container plant. Flowers August - March.

Hibbertia riparia

- Height:** Shrub to 0.6 m erect, stems generally scabrous, young growth stellate hairy.
Leaves: 3-20 mm long, 1-2 mm wide, linear scabrous with simple and stellate hairs, midrib strongly raised beneath, margins revolute.
Flowers: 10-20 mm across, terminal or axillary, sessile or on short shoots.
Petals: 6-12 mm long.
Sepals: 6-12 mm long, silky to minutely hairy.
Stamens: 6-16 grouped on one side of carpel.
Carpels: 2, hairy.

Habitat: Distributed NSW, Vic, Tas and SA, grows in a range of habitats. Plants require free drainage and a warm sunny position. Regular tip pruning is recommended to encourage a bushy habit. Tolerates light to moderate frost. Flowers July - Nov. also sporadic.

- References:** Beadle, N. C. W. (1982) Student Flora of North Eastern NSW (U of New England)
Elliot, W. R. & Jones, D. L. (1990) Encyclopaedia of Aust. Plants. (Lothian)
Harden, G. Ed. (1990) Flora of NSW. (NSWU Press)
Ross, E. M. & Stanley, T. D. (1983) Flora of south-eastern Qld. (DPI Qld)