

DODONAEA STUDY GROUP

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Jeanette Closs

176 Summerleas Road
KINGSTON, 7050
Tasmania Australia

Phone (002) 291710



DODONAEA
VISCOSA ssp. ANGUSTISSIMA

Dear Members,

As I seemed to dominate the news in the last newsletter, I plan to be brief and make room for more news from members. I have sent off seed of 23 species of Dodonaea to the Australian National Botanic Gardens following their request. I have more seed in stock but have no record of where it was collected. Please collect seed for our seed bank (preferably from wild sources) and label with the name of the species, the date and location of collection. Please also make an effort to send cuttings from wild sources to the Australian National Botanic Gardens, Canberra and to Mt. Annam Botanic Gardens, N.S.W. and let me know what you have sent. I would like to see our Study Group assisting in this way.

We have been invited to put on a display at the Wild Flower Show in Rouse Hill, N.S.W. on July 23rd and 24th. Would any member like to do this for us?

You will all have received the December Issue of 'Australian Plants', which featured our Dodonaeas. I would like to thank those who very kindly wrote and said nice things about this issue. This was much appreciated. I would also welcome some criticism.

Jo Walker sent me three lovely photos of D. falcata from the Pillaga Scrub and two taken west of Temora, N.S.W. but I can't identify them from the photos, however they'll go into our album. Jo has D. camfieldii cuttings in so we hope that she is successful as I haven't managed to get a plant of this species as yet.

Jo also notes that my letter to the ANBG regarding the Dods. may have had some effect. Last time she was at the Gardens one of the gardeners was busy in the Dods, section - the first time she'd ever seen anyone there.

Rosemary Pedlar, who has published one identikit book on the flora of the Flinders Ranges and is preparing another, sent me three photos of Dodonaeas, that she has drawn for her next book. They are so lovely that I've put them in a frame and have them on my desk. If you are travelling in South Australia, I would recommend these handy guides to identify plants.

Ida Jackson has sent us a most interesting report on a trip she and her husband, Garth did last year. Many thanks Ida. Garth unfortunately had to have a bypass operation soon after returning from this trip but Ida reported in November that he was doing well and we wish Garth all the best and hope that he continues to improve.

I have just heard that Helen Morrow of Victoria has accepted the position of Study Group Co-ordinator. Helen is a lovely Person and a very capable lady, so we wish her the best in this role.

EXPEDITION DESERT DREAMING

Ida Jackson

The expedition was organised by the University of WA Extension and CALM (Dept. of Conservation and Land Management) to monitor a population of boodies (*Bettongia lesueur*) and golden bandicoots (*Isoodon auratus*) which were taken to the Gibson Desert from Barrow Island in 1992. These animals were native to the Gibson but had become extinct there by the end of the 1970's. The boodies and bandicoots were fitted with radio collars and released into a fenced area that had been cleared of feral cats and foxes. They were monitored regularly by Pet Christensen who was in charge of the operation. At first, all went well. The animals put on weight and the females became pregnant. Then two things happened - they moved out of the fenced enclosure and cats and foxes from other parts of the Gibson moved in and ate them.

Instead of cancelling the expedition, it was decided to use it to monitor existing desert populations of small mammals and reptiles and to search for evidence of the existence of the rabbit-eared bandicoot in the area.

We went by chartered bus from the University of WA 12 people plus the driver (who was an excellent camp cook) and Pet Christiansen. We went via Sandstone, Wangarri Outdoor Education Centre, Wiluna and Carnegie Downs to Eagle Camp. It took 3 days and 2 nights to reach the camp. Our first lunch stop was at a picnic area surrounded by bush - *Hakea francisiana* in full bloom and yes, we could collect seeds, *Halgania* sp., *Nicotiana* sp., *Grevilleas*. Honestly, eating there seemed a horrible waste of time! We reached the Sandstone pub at sunset and were told we could buy cups of tea. The tea drinkers were carefully isolated at the far end of the bar where they would not contaminate the rest of the pub's clientele! It was dark when we left and bitterly cold by the time we reached Wangarri. A good fire and a meal made us more cheerful. We slept in a very old shearing shed with cement floors and an abundance of fresh air.

Wiluna is an old abandoned mining town that is now an aboriginal town. We bought ice cream and cool drinks at their supermarket which looked just the same as any country supermarket. The next night was spent at Carnegie Downs, a cattle station that has entered the tourist trade and provides comfortable accommodation and hot showers.

Once we reached Eagle Camp we set up tents. Camp stretchers were available. The nights were cold and we were glad of the camp fire and woollen pullovers. The daytime temperatures were in the 30's.

Each morning we went out by bus or 4-wheel drive to the trap lines. Animals were trapped either in pit traps or box traps. I went with the trappers and spent part of my time going round the traps and part botanising. I was, unfortunately the only botanist on the trip. I had a copy of the 'Flora of Central Australia' but I should have liked to have someone along who was more familiar with the plants than I am. The commonest animal found in the traps was the European house mouse (*Mus musculus*) - they were all killed. I learned how to tell a feral mouse by its teeth. The mice are ferocious little beasts. We found one in the same trap as a skink which the mouse had partially devoured. At some stage the unfortunate skink must have died. We found skinks, geckos, legless lizards, a small snake and an assortment of marsupial mice. The pit traps were all closed before we left and the

SEED LIST

D. baueri	D. pinifolia
D. bursariifolia	D. platyptera
D. ceratocarpa	D. procumbens
D. concinna	D. ptarmicaefolia
D. filifolia	D. rupicola
D. filiformis	D. sinuolata ssp. acrodentata
D. hackettiana	D. sinuolata ssp. sinuolata
D. heteromorpha	D. stenozyga
D. hexandra	D. subglandulifera
D. inaequifolia	D. triangularis
D. lanceolata var. lanceolata	D. triquetra
D. lanceolata var. subsessilifolia	D. truncatiales
D. lobulata	D. viscosa ssp. burmanniana
D. macrossani	D. viscosa ssp. cuneata
D. multijuga	D. viscosa ssp. spatulata
D. peduncularis	D. viscosa ssp. angustissima
D. petiolaris	
D. physocarpa	

Please send a stamped and addressed envelope with request for seed. Many of these are in very small quantities, so I will fulfill your requests where possible. Don't forget that we need fresh seed to restore our seed bank, but only from the wild, as there appears to be hybridization in the home garden.

Judy West some time ago sent seed capsules of *D. lobulata* and *D. pinifolia*, it took me some time to get around to separating the seed from the capsules. Even when I had done that I felt that I had probably left some seed in the 'chaff'. So just for fun, I placed the 'chaff' on top of seed raising mix in terra cotta pots and lit a fire over it. The chaff was reluctant to burn, which surprised me, but only a week or so later there are many seedlings coming up in the *D. lobulata* pot but none so far in the other. This is obviously another way to help seed to germinate.

Another 'experiment' I did was to try to preserve with glycerine some of the Dods. I used *D. megazyga* and *D. ptarmicifolia* in full fruit. The latter was disappointing but *D. megazyga* looks well months later with the leaves turning the pinkish red of the fruits. I have them in an arrangement with dried rushes and *Restio tetraphyllus*. It looks good.

I now have mounted and in three folders, the best of our herbarium specimens. I would like to have one of each Dodonaea species in this special collection, so in the next newsletter I will list what is missing and perhaps members could help with this project.

Autumn is here now and it is a good time for planting, I put in 96 plants this week and have lots more to find room for. Good luck to you all for the weeks to come in your garden and do think of what you can do for our Study Group.

Copied from a book entitled 'Australian Medicinal Plants'
Perhaps medical science will one day realise that our
Dods are more than a great garden plant!!

Authors: E.V. Lassak & T. McCarthy

Dodonaea viscosa

FAMILY: Sapindaceae

SYNONYMS: *Dodonaea dioica*, *Dodonaea angustifolia*.

VERNACULAR NAMES: 'Sticky hopbush', 'giant hopbush', 'hopbush', 'watchupga', 'kirni', 'tecan'.

DESCRIPTION: A tall shrub, 3 m high or more with a thin reddish brown bark. Its alternate, narrow-elliptic or narrow-oblong leaves are 4-10 cm long and less than 1 cm broad; their margins may be toothed. Young leaves are sticky. The fruit, a 3-winged capsule is about 1 cm long and 1.4 cm wide; may be purplish in colour. The dried capsule is bitter and resembles hops. Flowers in early summer.

HABITAT AND DISTRIBUTION: Often in gullies and valleys; common in all eastern Australian states. Also in South Australia and Western Australia.

X MEDICINAL USES: Used by the Aborigines as a pain killer: leaves were chewed, without swallowing the juice for toothache;¹⁹ chewed leaves and juice were also used in the treatment of stonefish and stingray wounds (usually bound to the wound and left for several days).¹⁹ A root decoction of the variety *laurina* was used externally for the healing of cuts and open wounds; the boiled roots or root juice gave relief from toothache.²⁰

In India, a form of this bush was used as a febrifuge; in South Africa it was used to make a medicine for stomach disorders; in Peru, the leaves were reputedly chewed as stimulant.¹⁹

ACTIVE CONSTITUENTS: Not known; leaves contain a diterpenoid acid, various flavonoids, some 18 per cent tannin, and they are slightly cyanogenic.^{19,21}

Dodonaea attenuata

FAMILY: Sapindaceae

SYNONYMS: *Dodonaea preussiana*

VERNACULAR NAMES: 'Narrowleaf hopbush', 'slender hopbush', or just 'hopbush'.

DESCRIPTION: A slender shrub up to 3 m tall. Its alternate leaves are very narrow, usually 3-7 cm long and about 2 mm wide (rarely up to 4 mm wide), more or less toothed (main distinguishing feature from *Dodonaea viscosa*) and sometimes with wavy edges. The whole shrub may be sticky. The fruit is a winged capsule up to 1 cm long and 1.4 cm wide, sometimes tinged with reddish purple. Flowers in spring and fruits in summer.

HABITAT AND DISTRIBUTION: Widespread throughout Australia; in valleys as well as in mountainous areas; often inland.

X MEDICINAL USES: The Aborigines used the cooled infusion of the foliage for sponging of the forehead and body to relieve fever.¹⁵

ACTIVE CONSTITUENTS: The narrow-leaved form, *D. attenuata* var. *linearis*, yielded the lactone of hautriwaic acid; the leaves are also cyanogenic.¹⁴ However, the active substances are not really known.

Dodonaea lanceolata

FAMILY: Sapindaceae

VERNACULAR NAMES: 'Hopbush', 'pirrungu' (in Western Australia).

DESCRIPTION: An up to 2 m high shrub with alternate, narrow spear-shaped and almost veinless leaves. Leaf margins are straight. The petal-less flowers and young fruit are yellowish green. The fruit is a capsule with a winged appearance. Flowers from late autumn to spring.

HABITAT AND DISTRIBUTION: From northern Western Australia through Northern Territory to Queensland; widespread.

X MEDICINAL USES: Western Australian Aborigines used to apply the bruised, cut up and boiled leaves, after slightly cooling them, to various parts of the body for the relief of pain, including snakebite.^{19,20} A very much more diluted decoction of the leaves may be drunk for the same complaints;¹⁸ at the same time leaves were tied under the belt to enhance the curative effect.²⁰

ACTIVE CONSTITUENTS: Not known.

box traps were collected.

I spent my afternoons sitting under a tree keying out specimens. 70 specimens were pressed and sent to the WA State Herbarium. I didn't find any *Dodonaea* in the area. Goodeniaceae were very well represented and included a marvellous blue goodenia, *Goodenia azurea*. There were several *scaevolas*, but none as attractive as our *Scaevola aemula*. WA is famous for its *Lechenaultia* - however the only one I saw at Eagle Camp L. *divaricata* can best be described as "interesting". There were many *Eremophilas* including *E. fraseri*, *E. clarkii*, *E. latrobitii*. There were *Ptilotus* by the score, the *Cassia's* were also very attractive and very colourful. We found a *Petalostylus* not mentioned in the Flora. There were several *Solanum's*, some very prickly, some almost without spines, some with dry capsules, others with juicy fruits. Mulgas were the commonest trees; we saw some *Eucalypts*, but none in flower. I was very attracted by *Halgania solanacea* which closely resembles a *Solanum* until one looks more closely at the flower. We saw big patches of *parakeelya* (*Caladenia balonensis*), *Brunonia australis* was also common, like a blue scabious. *Dicrastylis exsuccosa* is a most attractive plant covered in dense white or pinkish tomentum. Everywhere we saw spinifex *Triodia* sp.

We returned to Perth via Kalgoorlie following at first seismic tracks and later the Gunbarrel Highway. We looked for evidence of rabbit-eared bandicoots and found shallow holes where animals had dug for insects and an old tunnel - a bit like a rabbit burrow but going straight down. This showed the experts that the animals had probably passed through the area at some time.

For 2 nights we slept under the stars. At one of these camps I found my only DODONAEA - *D. peduncularis* - a bush growing up to 2m with lovely inflated fruits but, alas, no ripe seed.

Our last night was spent in a Kalgoorlie hotel. We arrived covered in red dust, for we had not been able to shower after leaving Eagle Camp. Hot showers and a change of clothes transformed us. The next day we returned to Perth after a truly memorable desert experience.

MEMBERSHIP AND FINANCE

A warm welcome is extended to Robyn Hartley, 'Linksvieiw', Dalby, Qld, 4405. This brings our membership up to 17 individual financial members and 15 financial Regions and district groups. Many thanks to the Regions who send on their newsletters - much interesting information is gleaned from them and passed on to members.

RECEIPTS		EXPENDITURE	
brought forward	41.31	stationery	14.05
subscriptions	140.00	postage	51.40
donations	72.00	copying	61.00
interest	1.88	FID S STD tax	86
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	255.19		127.31

Balance \$127.88

\$5 sub due in June

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RESEARCH

In the last newsletter I noted that I would write to Eileen Croxford of Albany, W.A. to see if she could track down the wild source of the prostrate form of what we are calling D. aptera. In her reply Eileen writes:
"I was interested to receive your letter re Dodonaea. Your specimen is very similar to D. ceratocarpa specimens we have in the Herbarium, and we have found this plant as high as 1½ m. and also quite prostrate, but usually against the coast where one can also find Banksia grandis under a metre high. It usually grows in association with granite. I am forwarding a specimen to Judy West which is growing at the base of Mt. Melville, which is about 1 km from the harbour, yet in Yonderrup National Park against the ocean on granites. It can be less than 0.5 m so I will leave it to Judy to make the decision. We have never thought of the prostrate form being other than D. ceratocarpa, perhaps that's because we are not professional botanists. However I was not able to go out to look for the prostrate form, one of the members brought me the specimen, which is always a shrub on Mt. Melville, but we will keep a lookout for anything prostrate and forward it. We will do our best for you, as a matter of interest I am enclosing a list of the specimens (Doc) we have in the Herbarium and where they occur"

I'm beginning to think that this mystery species is the prostrate form of D. ceratocarpa and that the plant I am growing as D. ceratocarpa is something else - I got the seed from Nindethana and I have found them wrong in other cases. When mine produces flowers or fruit I will check it out. I would appreciate to receive specimens of either of these species from the wild to compare. (Ed.)

Barry Hadlow from the Australian National Botanic Gardens wrote a long letter answering some of my queries about propagation in glasshouses etc and I am grateful for his advice. He also writes:
"We have in our herbarium just completed the data entry entry for Dodonaea, which I am told totals 1076 entries. These entries represent vouchered collections &/or propagation material for this genus, and usually from 'wild' locations rather than collections from cultivated origins.

It occurs to me that some assessment of these data, perhaps noting the breadth (or narrowness) of geographic distributions for a species in the herbarium collections, may be of interest for the newsletter? Perhaps you have suggestions that I could investigate using this data base, which could be published in your newsletter"

I think this is a great offer and I have asked Barrie to follow up his idea of looking at the geographic distributions but as I am no computer literate, perhaps other members could suggest ways in which some other helpful information might be gleaned from this data source. Ideas please.

Geoff Butler also from the ANBG sent copies of these data sheets (I presume that they are the same as Barrie has mentioned) and the information I got from these was that there are very

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few plants in evidence at the gardens, despite the number of items listed - what has happened to them and if we knew the answer to that we might know of some research we could assist with to overcome the problems.

In the SGAP SA Region newsletter for February, 1994 an article by Werner Kutsche - Coorong Planting 1994 mentions that last year about 40 members from SGAP, Four Wheel Drive Association and Friends of the Coorong camped over with about 110 volunteers present on the Sunday to plant about 5,000 plants. This year it is anticipated that they will be planting about 7,000 plants and their list included Dodonaea viscosa ssp. angustissima - what a magnificent effort and great that they are using an attractive and hardy Dod.

IN THE GARDEN

Ida Jackson writes that her D. viscosa the female bush put on a nice collection of "hops" this year and should be even better next year if all the flowers set seed. The male D. humilis is flowering well and really quite attractive. The female is putting growth and fortunately did not die in our absence. The D. subglandulifera still don't flower, but are growing larger. - Has anyone had this species set fruit yet? I would like to get cuttings of a good female specimen. (Ed.)

Diana Snape, leader of the Garden Design Study Group writes:
"The Garden Design Study Group wants to establish a list of "proven" Australian native plants for garden design - attractive plants regarded as being reliable under the conditions described for them in recent literature (e.g. the 'Encyclopaedia of Australian Plants'). These plants should have garden design value and also be reasonably readily available, from nurseries or through SGAP. Would it be possible for you or your Study Group, from your current knowledge, to write such a list of Dodonaeas? It would be helpful if you could add a very brief comment about the special merits of each plant, but you can assume people will check the literature to find out the conditions under which the plants should grow best. "

I am sad to say that in my experience there are rarely Dodonaeas to be found in nurseries - what are our members doing about this? Do you ask what Dods are available when you visit nurseries - please do this!! I feel that many Dods have garden value but are they proven. Please write to me and let me know what you could list for this request.

A letter from Kaye Bartlett asks for our co-operation with the Pangarinda Arboretum, but I really feel that the only way we could help is with the offer of seeds. It will be a collection of plants of lower rainfall areas so many Dods would fit this category.