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ASSOCIATION OF SOCIETIES FOR GROWING AUSTRALIAN PLANTS

DODONAEA STUDY GROUP

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Dear Members,

I'm beginning to wonder if I really have any active members left. A study group is not a study group, if it only has one active member. Please write to me and let me know what is happening with your Dods. In the August newsletter I asked a number of questions, the answers would greatly help our records. I would like some descriptions of Dodonaeas, we've 'done' most of the South Australian ones and it would be nice to know more of other species.

You may remember that I was the organizer of the 1986 'Wildflowers of Australia' exhibition in Hobart in October. It was a great success and you'll not be surprised to hear that I used our Dodonaea Display Kit supplemented with a number of display plants, which I have in tubs and some cut material. I was pleased with the presentation. If your Region or Branch are having a Flower Show, please suggest that they put on a Dodonaea display or better still, offer to present it yourself.

Earlier this year I read of the 'Australian Arid Lands Botanical Gardens' which is being developed at Port Augusta, South Australia. I wrote to John Zwar, who is the Superintendent for Parks and Gardens of the City of Port Augusta, offering seeds of Dodonaea species for the project. John replied that they would be grateful for such assistance. I then sent seed of a number of Dodonaeas, which grow in arid areas. I also included a description of each, and what little I know of their requirements. This project should be worth visiting in a few years time.

A.S.G.A.P. Council held a meeting last month. It was a Telecom Link -up, which was a new experience to most of us. I was the Tasmanian delegate. There were a number of Study Group matters discussed and Barbara Daly, the Federal Study Group Co-ordinator presented some items from the Grevillea Study Group. I hope to be able to report on these matters when I receive a copy of the minutes of the meeting.

A friend of mine has offered to help me to produce a more attractive newsletter, she has access to a copying machine and other clever technology so the new year should see an improvement.

A book by Vincent Serventy entitled 'Australian Native Plants' makes mention of the family Sapindaceae; the family to which the genus Dodonaea belongs. He calls it the soapberry family, a name I hadn't heard before. This is how he describes the family:-

'The name soapberry comes from the saponin in the plant tissues and several rainforest species are known as foam-bark trees. The bark was used by Aborigines to stupefy fish in freshwater pools. Widespread in the tropical world this family consists of shrubs, creepers and tall trees, such as tulipwood and smaller inland trees such as whitewood and bullock bush.

It is best known from the 50 or so species of hopbush, half of which occur in Western Australia. The flowers are small but the fruits are striking, often covering much of the plant and adding a splash of red to the scene. These reddish capsules have three or four winged adornments and so resemble the introduced hop plant.'

In the September, 1986 Canberra Region newsletter, Jon Real reports on the June meeting - DODONAEA: -

'SGAP member and CSIRO botanist, Judy West, gave a most enjoyable and informative talk on the genus Dodonaea at the June general meeting. The following is a summary of Judy's talk.

General

In the family Sapindaceae there are 143 genera, 20 of which occur in Australia. Dodonaea with 61 species, is the largest genus of this family to occur in Australia, ranging from the tropics, through arid Australia, into the temperate zone. Habitat varies from coastal woodland to spinifex grassland. The genus tends to occupy open positions; it is never found in dense forest, nor in alpine regions. Dodonaea are woody plants which vary in form from prostrate to small trees.

Morphology

In an evolutionary sense, the leaves and fruit are not the most important feature of the genus. The number of flower parts and arrangements of the flowers themselves are much more significant.

Leaves

The leaves of this genus vary greatly. Both pinnate and simple leaves are found and range from broad to needle-like. The cotyledons are almost always linear.

Flowers

Dodonaea flowers are quite insignificant; they lack petals. There are both male and female flowers. Most species are dioecious, i.e. male and female flowers on separate plants, though some species do have both sexes on the one plant. There can be a large number of flowers on a single plant.

Pollination

Flowers of the genus Dodonaea are wind pollinated. The flowers certainly are not showy attractants. Wind pollination is a chancy affair, dependant on random air circulation. The plant's strategy to aid wind pollination is its wide open structure with sepals well out of the way. Female flowers do not have nectar. Some species have long styles projected well above the foliage. Male flowers produce large amounts of pollen, which can travel long distances and has in fact, been collected more than 2 km from a population. The pollen is small as is usual in wind-pollinated species. Pollen is released under dry, sunny conditions. Plants of this genus are gregarious, as is often found among wind-pollinated species, because otherwise the flow of pollen is interrupted. Dodonaea are not found in dense vegetation for the same reason.

Fruit

As with the leaves, the fruit of Dodonaea vary greatly. Wings on the fruit can be rounded, long, horned or lobed and there can also be sticky glandular hairs. All fruit though has a dry capsule. Most fruit has some appendage and most are brightly coloured at some stage during development.

Seeds

Some species of Dodonaea have a swollen stalk attaching the seed to the capsule (an aril) yet others e.g. D. viscosa, dont. Similarly the seeds of some species have a see-through membrane (hyaline) covering them.

Ecology

The genus tends to respond well to disturbance such as fire and road works. It has the potential to become the dominant shrub after fire. As well as seedling growth, some species e.g. D. pinifolia can shoot from the base after fire as some species of Eucalyptus do. Some species e.g. D. viscosa also recover from drought very well. Overgrazing by domestic stock can lead to an increase in numbers to such an extent that it can become a problem in terms of carrying capacity.

Propagation

Many species of Dodonaea will grow fairly readily from seed. Those with an aril respond well to the boiling water treatment or to nicking. Most species also do very well from cuttings. This method is preferable in order to be sure of obtaining the desired sex. It also avoids the possibility of sowing infertile seed; a high probability in dioecious species. One may also have to wait 6-7 years for a plant grown from seed to flower.

Conclusion

Judy West concluded her talk with slides illustrating the wide variability and horticultural desirability of the genus. Some species covered were D. ericoides, the only Dodonaea with opposite leaves; D. petiolaris, one of only two species with inflated fruit; and D. stenozygia, a very attractive plant with fine leaflets. Judy also noted a couple of species are known to be toxic to stock. For those interested in knowing more about the genus it is covered in detail in Vol. 25 of the 'Flora of Australia'.

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I would like to thank Canberra and Victoria Regions for their donations and all Regions for their newsletters received regularly.

My garden is looking great at present with many plants in flower, one gem Hymenosporum flavum - the Native Frangipani perfuming the air. The following Dodonaeas are putting on a good display of various coloured capsules: D. sinuolata, D. heteromorpha, D. multijuga, D. new sp. (Chinchilla), D. multijuga, D. megazygia, D. boroniifolia and D. viscosa ssp. spatulata. Our endemic D. filiformis is producing fruit in the bush now, but my plants aren't obliging yet. The male flowers on this species are quite spectacular, they are a bright, shiny deep red and very numerous. Don and I have been hunting out the small and isolated areas where this species grows. It is listed as rare and endangered.

The festive season is nearly upon us, so may I extend to you all, the warmest wishes for a very Happy Christmas and suggest that a good new years resolution could be - to grow more Dods. and to report on our successes and failures (if any).

Greetings,

Jeanette Closs.