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Association of Societies for Growing Australian Plants

EREMOPHILA STUDY GROUP NEWSLETTER No. 79

May 2003

The news this month is somewhat better than that reported in the last Newsletter; at least there has been some very good rain in a number of areas, but unfortunately that has been expressed in floods in some parts of the Eastern States. Reports from a number of people I have spoken with indicate that their eremophilas have stood the long 'dry' and many have quickly responded to that long awaited rain water direct from the sky. Prior to the rains came those devastating fires in NSW and the ACT. I trust that none of our members suffered directly from them.

A couple of comments made in brief letters about other matters include:

"Hope we all get rain soon. Are there ever *Eremophila* species lost due to these big droughts? (and then are extinct)?

"I've had to do a lot of hose shifting round the garden which has been very dry, but the ermophilas still put on a brave show."

The workshop is certainly a 'goer'. I have received replies from about twenty people, most of whom indicated that they would have partners or be with other members of the Study Group. This gives us a lot of confidence in going ahead with the event. Details are printed further on in this Newsletter, and there is a reply sheet for you to fill in with the necessary details which we require to get things moving. Thankyou to all who have responded. Due to the arrangements which we have made in Tooleybuc (NSW) for accommodation and the Saturday evening dinner and presentation, it will be necessary to have all replies back to me by July 30. Replies received after this may mean that accommodation cannot be found - you might be able to get in to the Caravan Park if you have your own van/tent etc., or travel further afield.

Those who have been awaiting cuttings are advised that the amount of good cutting material has been very small due to the dry, with many plants simply storing energy. losing leaves and not putting on new shoots which they would otherwise do with the summer rains; even good watering has been unproductive. I suggest that we start again with all outstanding requests being 'wiped' and if you have a standing request that you ask again and I will start a new listing - I think that the old one is rather inaccurate now with so many stops and starts. Sorry for the lack of response from me on this matter.

I am grateful to Dr Peter Hornsby, a member of APS, Adelaide Region, for the article which he has written for the Study Group on his research into *Eremophila freelingii*, which he encounters regularly in his work researching behaviour of the Yellow-footed Rock Wallaby in the Northern Flinders region of South Australia.

A special thankyou to Hans Griesser for his offer to make available some of his colour pictures of eremophilas. I have not been able to include them this issue, however, promise to have some in the next one. Hope to have a page of colour & appropriate captions.

SUBSCRIPTION RENEWAL

Members are reminded that Subscriptions are now due for the coming twelve months, commencing July 1st. If there is a red sticker at the top right-hand corner of this Newsletter, you will become unfinancial after June 30th.

PLEASE NOTE SUBSCRIPTIONS ARE NOW $5 PER YEAR

WORKSHOP AT RUSSELL WAIT'S PROPERTY

The Study Group Workshop will be held at Russell & Beryl Wait's Property at Natya, North East Victoria on the weekend of **18-19 October 2003**. I hope that this weekend is suitable to the majority of members who indicated their initial interest, unfortunately there will be a few who cannot make it.

Russell has booked out one of the Tooleybuc motels, (sixteen rooms) at a rate of approximately $70 per night per room. They have 8 twin, 4 double, 4 family rooms. Other accommodation is available but I understand that there is a wedding in town on the same weekend, so if you do not get in early you might have to stay at Swan Hill, which is approximately 70km further along the Murray Valley Highway. There are camping & caravan facilities in Tooleybuc also. Tooleybuc is approximately 20 minutes away from Russell's place.

Enclosed with this Newsletter is a registration form, on which you are asked to fill in all details requested if you are attending the workshop - we will need this so that plans can be made and all catering etc. can be organised. Returns are to be back to Colin Jennings by the end of July.

Requests for accommodation are to be made on the form and I will pass on the requests to Russell, who will make the bookings, this way I can keep a full check on proceedings. A deposit of $20 will be required by the motel when the booking is made.

A Registration fee for the weekend will be charged. This will be $50 per person. It covers four morning & afternoon teas, two lunches, & dinner on Saturday night. Also included in this costing is an amount for printing etc. together with the facility after dinner for the evening presentation - probably an informative slide programme showing a number of the less commonly grown species.

You can send your money with the completed registration form or leave it until you arrive at the workshop. Cheques/ Money orders to made payable to the ASGAP Eremophila Study Group.

We plan to start at Russell's about 10am on Saturday, (this will allow for those travelling on Saturday morning). A morning workshop session, lunch and two afternoon workshop sessions, with afternoon tea between. Dinner will be in Tooleybuc, followed by a presentation. On Sunday we will start at 9am with similar arrangements for workshops etc. We will probably finish about mid-afternoon on Sunday to allow members to get home on Sunday night if they need to.

At this stage details of the weekend's events are a bit sketchy, however, it is intended to have some hands-on grafting, cutting preparation, species ID, (perhaps using a key) as well as the opportunity to view the extensive collection of eremophilas which Russell has growing on his property, some well established, others recently introduced. Russell has collected extensively in the wild and has also been responsible for the introduction of many new species and better forms of older introductions.

At previous workshops we have used this opportunity for those attending to exchange cutting material. It is planned to do this once again.

I will post, to all who register, an outline of the programme and a mud-map showing how to get to Russell's place. This will be sent about the middle of September.

I look forward to catching up once again with as many of you who can make the trip to Natya.

FROM YOUR LETTERS

Maree Goods - *Horsham, Victoria*

You probably heard about our find of *E.* 'sulcata' Plumridge Lakes Nature Reserve (WA) last year. I now have one *E.* 'sulcata' growing in the garden, growing nicely and another four in pots ready top go. I am hoping to start some second generation grafts soon.

Alan Anderson - Monbulk, Victoria

The 'Saga' of "Thundercloud" continues. After reading Ken Warnes' notes, the plant I acquired appears to be incorrectly labelled. As he fears my plant seems to be the Halls' *E. maculata* going by the flower colour & foliage. It is covered in large purple-plum flowers and bright healthy foliage as described in Newsletter #78.

I also have growing profusely and laden with flowers an *E. maculata* labelled "Wendy" (Norwood Industries Label.) The flowers are cerise-pink with pink spots and cream centres. The history of this plant would be interesting.

I believe Merele Webb (a Study Group Member) purchased this plant in South Australia some time ago. I do have a similar *E. maculata* with cerise-pink flowers, but it does not grow as profusely nor is the foliage as soft to touch.

Another eremophila which does not get much publicity, but would have to be one of the best for beginners and suited to cool, wet areas like mine is what I think is called *E.* 'splendens'. The cuttings strike readily and the plant has non-stop, red-orange flowers and if eaten by the wallabies, , quickly re-generates and has lovely soft, hairy, light green oval leaves. In Newsletter #77, Hans Greisser regarded it as his favourite when he was living nearby.

On the Gardening Australia TV programme a couple of months ago they did a feature on eremophilas , I believe set in Pinery Nursery in South Australia. I felt it was wonderful publicity for the genus and what a pity more promotional work can't be done.

I would particularly like to procure *E. lachnocalyx* as it was stunning, but am not sure of its vulnerability in our climate, nor of its limitations. Other species featured were also most attractive and for me the first sighting. Maybe the workshop should be a must to view plants or photos to acquaint myself further.

Ken Warnes - Owen, SA

In Newsletter #70, Colin reported the large number of seedlings following heavy rains at Owen. Only a handful remain. I find *Eremophila* seedlings very difficult to keep alive whether transplanted into tubes or left *in situ* and watered. Over the years I've seen many hundreds of them, but apart from *E. maculata* there's not a lot left. I wonder if others have the same problem. Generally the germination has been in autumn and perhaps a glass house would help them through the first winter. Any ideas?

In trying to find the origins of "Thundercloud" I read the booklet containing the first 31 Newsletters. It's fascinating reading for those who've travelled the full thirty years of the Study Group. Yes, we've been going that long. Did I read somewhere in there that Bob Chinnock began his revision in 1977 and hoped to publish by 1985? And still we bring him new species!!!

In the early Newsletters there was discussion on *E. crassifolia* being a short-lived species. In general I suppose that's true, but my original plant is still in good health at twenty five years of age. It is growing in natural; conditions on the south-east side of a small malleee and so is protected from the hottest sun. I have lost others over the years, but this one is very healthy. Several species occur mainly as understory in mallee, e.g. *E. densifolia, E. weldii, E. veronica, E. ternifolia, E. barbata, E. gibbifolia* and *E. behriana* among others and are quite happy in light shade provided drainage and ventilation are adequate.

Charles Farrugia - Seven Hills, NSW

Charles wrote to me recently to ask if it is possible to conduct Eremophila Study Group meetings in the Sydney region. I have contacted Jan Sked and she has advised that she sees no reason for this not to be possible. I have written to Charles and advised him accordingly. No doubt those who live in the Sydney area will hear from Charles in the near future when he decides what format he wishes the meetings to take. If you are interested you might wish to contact him.

Sylvia Cleland - Campbell, ACT

I have been very pleased with the eremophilas I have in the garden. *Eremophila* 'campanulata' flowered well through spring; *E. racemosa* had many flowers in October/November and the hybrid *E. nivea* x *E. drummondii* flowered profusely in October, even though I only planted it in the previous March.

Eremophila spectabilis which I purchased at the ASGAP Conference in Canberra seems to flower whenever I water it, but hasn't grown very much. *Eremophila maculata* and *E. denticulata* are growing well, but as yet haven't produced many flowers.

(I am not sure that the plant referred to is *E.* 'campanulata' since this is quite rare and as far as I know grown

by a few members. I remember having some communication with Lyndal Thorburn some time back over plants with this name, but cannot recall what we decided it should be named - it was I think available through the Canberra SGAP group - raised from cuttings. Was it *E.* 'complanata'? Colin)

Ian Mitchell - Ringwood, Victoria

We grow most of our eremophilas at Stawell on a bush block where the major limiting factors for most eremophilas is browsing - I am not complaining, just pointing out the fact. This is also very evident in grazing country where sheep, goats & cattle reduce plants to a few short, green shoots on bare sticks.

Plants which grow very well, but are almost hopeless for us because they are eaten are *E. viscida*, *E. decipiens*, the Murchison River form of *E. glabra*, and *E. longifolia*, until it gets quite tall. These are for gardeners. *Eremophila latrobei for* us is much less browsed than I have seen it in sheep (and goat) country. Plants seldom browsed for us are *E. miniata*, *E. forrestii*, *E. platycalyx*, *E. neglecta*, and *E. oppositifolia*. *Eremophila denticulata* is interesting in that although sometimes eaten and always untidy, it persists in desperate sites and is flowering at the moment - probably in response to 30mm of very welcome rain a few weeks ago. (Mulgas are also flowering.) Its rarity in nature must be due to lack of opportunity rather than lack of ability.

The hybrid *E. maculata* x *E. duttonii* which I complained about previously is now more moth-eaten than ever due to *Botrytis* on the leaves in the winter and is due for 'the chop". I planted another *E. abietina* in a high , sunny and windy site but it is still bare sticks due to sooty mould in the winter, with short, green shoots of summer growth - so not a proposition.

It is still my ambition to grow *E. duttonii* well, but two plants - one on its own roots and one on *Myoporum montanum* rootstock - are both extremely slow growing; *E. macgillivrayi* is even slower growing. Perhaps they just need more summer water. At this time that is something which a lot of people do not have.

Clinton Garrett - Whyalla, SA

Clinton wrote to me late in December expressing his concern about the invasion of a weed species from South Africa. The plant in question is commonly known as the "Carrion Flower", or *Orbea variegata*.

This species was first planted at the Whyalla Institute in 1916. This was done because the Carrion Flower is very hardy and requires little water. Since that time, *Orbea* has spread widely around the City of Whyalla.

In 1994 a mapping programme was organised through the Federal Government's LEAP scheme. This showed that most of the spread was downwind from Whyalla, i.e. north of the City. An area near Flinder's Red Cliffs on the Arid Lands Botanic Garden in Port Augusta also had this species growing. This needs to be monitored for revegetation.

The flowers are purple coloured with yellow blotches, some are almost entirely purple., while some are mainly yellow. The flower smells of rotting meat - hence the name Carrion Flower. *Orbea* has no obvious predators in Australia - a small amount of damage is done by caterpillars of the Monarch Butterfly, but this is insignificant for control.

Seeds have feathery attachments that allow them to be spread by the wind. The seeds need shade to germinate and will often spring to life beneath saltbush or bluebush. Each square metre of plant takes up seventeen litres of water, so Carrion Flowers are able to out-compete the local plants for water and causes them to die through lack of water.

Hans Griesser - Lobethal, SA

..... By the way, it might be nice to include a colour page in the Eremophila Study Group Newsletter. e.g. with some nice pics of eremophilas. Depending on how many copies you need, I might be able to help. as I have a colour printer. I also have some nice shots of eremophila flowers, many taken with a macro lens and Kodachrome, thus good resolution and colour fidelity. Some are already scanned in as JPEGs for digital reproduction. The line drawings are nice, but a photo might help, especially as the descriptions rarely ever mention the flower colour.

(Members will remember that the possible inclusion of colour, among other things was being considered

when the increase in rates was presented; this was not just to cover postage and printing expense rises. Colin).

Gordon Brooks - Castle Hill, NSW

We live opposite a steep-sided valley that is a heavily wooded reserve. It has been tinder dry. There is always the danger of bushfires although we have escaped those of recent years. Today we have had some light rain but need much, much more before we will feel safe. If the outlook improved as some have said, we will feel much better.

We have kept our garden alive, losing relatively little, by watering sparingly at night through summer. However, as I may have stated on an earlier occasion, our garden is on Hawkesbury Sandstone, our depth of soil is limited and our block slopes sharply away to the north. Eremophilas and other plants cannot get their roots down as they may in normal habitats and there is less moisture, anyway, due to the sloping land.

We have been particularly interested in the condition of several grafted eremophilas which we obtained from Ray Isaacson some two years ago and about eighteen months ago. They, with two exceptions, withstood our heavy rain of last February when we had 310mm and have coped with the subsequent drought conditions. mind you, they have grown as vigorously as we have hoped but this may be due in part to our poor soil as well as the dry conditions.

The basic soil is poor quality sandstone that has broken down over time. We have imported a premium grade garden mix which includes Botany humus to provide some moisture holding. We have built up the garden over the past sixteen years and during the past ten have added mulch to improve the soil as it breaks down to retain the moisture.

Species from Ray include *E. abietina* (we have lost one but the other is doing well), *E.* 'citrina', *E. cuneifolia*, *E.* 'enata', *E. exotrachys* (this is now *E. platythamnos* subsp. *exotrachys* - Ed.), *E.* 'fasciata' (which we have lost twice now), *E. foliosissima*, *E. georgei* (mauve), *E. georgei* (pink), *E.* 'glandulifera', *E.* 'occidens', *E.* 'prolata', *E. spectabilis*, (both the northern and southern forms), *E.* 'splendens' and *E.* "Rainbow Gem".

For many years we have called to see Peter & Marion Lang in Mildura en route to Adelaide and have obtained some lovely plants, many of which were collected originally by Russell Wait. We have visited Peter & Ronda Hall at Pinery on two occasions and must arrange another. Noel Gane, here in Sydney is another source of plants and local information.

Of plants from these other sources, I must recommend *E. eriocalyx*, *E. latrobei* (several forms from Lang's) *E. glabra* (all forms with the exception of that from CSR), *E. maculata* (all forms), *E, nivea* (much to my surprise), *E. santalina*, *E.* "Summertime Blues", *E.* "Yanna Road" and a *E. glabra* hybrid from Lang's which I understand Russell Wait collected in the vicinity of Cana, WA. Another which I have labelled as *E. pentaptera* (from Hall's) has survived and grown strongly after appearing to be on its last legs and being pruned back to almost nothing. It has pink flowers whereas my only reference for this species states it is normally 'violet to blue-purple".

Plants that prove difficult here, sometimes to my surprise, include *E. calorhabdos*, *E. drummondii*, and *E. interstans*. Obviously many others do too with our humid summers but it is to be expected.

Beverley Rice - Dutton, SA

Dutton is near Truro, with an average annual rainfall of 540mm. The soil is red clay-loam with a pH of 7. All established eremophilas have to survive on the naturally occurring rainfall - some newly established species may need a drink to get through their first summer.

Following six months of drought and dry dams February's downpour of 83mm was most welcome. Although only one eremophila was lost through the drought many looked very thirsty and sparse in foliage. Due to heavy frosts in July/August, very few eremophilas flowers as the flowers were burnt off.

Unfortunately I had planted out some 'new' grafted species in May and lost them due to the severe frosts - hopefully this year will bring more rain and lighter frosts!

As there has been little in the way of flowers I did not prune plants after the flowering period, however, since the February rain the pruning shears and hedge clippers have worked overtime! With the hedge clippers I take

approximately 10 to 15 cm off the tops and generally tidy up the plant. Some of the *E. maculata* receive a more substantial pruning on 1.5 to 2cm diameter stems.

Eremophila maculata var. *brevifolia* (1.5m x 1m) was looking very sparse but after a good clip all over it is now thick and dense with new shoots.

Eremophila sargentii (1.5m x 1m) has become leggy. I pruned it back hard to bare sticks, green shoots are now bursting from the old wood.

Eremophila granitica (0.5m x 0/5m) was left for dead but it miraculously responded to the rain and is now green and flowering profusely.

The following are all flowering following the February rain.

Eremophila 'lucida' (1.5m x 1.5m) is a well shaped bush - the flowers are hidden somewhat, but very attractive - I think that this could get very leggy if not heavily tip pruned.

Eremophila georgei (0.5m x 0.5m) has not been pruned since it is only a very young plant. It is flowering magnificently with lovely pink flowers and a maroon calyx. I will tip prune it after flowering.

Eremophila 'glandulifera' (0.5m x 0.5m) is also a young plant but has very attractive pink flowers which contrast well with the grey foliage.

Eremophila 'jucunda' (30cm high) was badly affected by the frost - the bark split on the main stem but it re-shot in the spring and is now flowering and making new growth.

Eremophila maitlandii (30cm high) is about three years old - for the first two years it did not move, so win or lose I moved it to a better position. It is now starting to grow and has flowered for the first time. It has beautiful large, soft lavender flowers; masses of them on the tiny bush - it should be very attractive when larger.

Eremophila glabra var. 'carnosa' (0.5m x 0.5m) is kept to size by pruning and is very floriferous.

Eremophila cuneifolia (40cm tall) is only twelve months old and growing in a large pot, It is absolutely beautiful with large purple flowers with a paler pink/purple calyx and deep glossy green foliage - very striking. I'm rather tentative about putting this one out in the garden until I find out more about the conditions it requires to thrive - **help anyone**?

Eremophila drummondii (0.5m x 1m and is the dwarf form). I use these as border plants - they respond well to pruning with hedge shears after spring flowering.

Eremophila 'Kalbarri Carpet' (1m spread) gets trimmed back with the spade and re-shoots from the centre was well as along the laterals. It is a good border plant and ground cover.

Eremophila strongylophylla (40cm x 40cm in one year) has attractive deep blue flowers which contrast well with the grey foliage. I am not sure how big this will eventually grow.

Eremophila gilesii (30cm high) is crowded by a dense *E. viscida* and it is flowering.

I am now wondering if the above mentioned plants will flower again in the spring.

Tree Guards

The garden has regular unwanted visitors in the form of rabbits, hares and kangaroos, consequently guards are essential until the plants are larger. I use black gutter guard tied with two pieces of green tie wire in the desired size. The guard is then secured with two or three plastic 'stakes' which are discards from a local winery, these are approximately 60cm long and 3cm wide. (I believe some wine bottle tops are supplied on these plastic strips.) The guards last for years but the plastic 'stakes' do become brittle after about three years. I a wind-prone area I cut the ties longer so as to tie the gurad and also tie around one stake top and bottom so the guard is held firmly in place as sometimes the wind will whip the guard off if it is not tied to at least one plastic stake. I think that these guards are effective as the plastic stakes are flexible and make a slight noise if

disturbed by an animal or maybe it is the smell of the plastic - I am not sure but it works and it is cheap.

Lyndal Thorburn - Queanbeyan, NSW

(Lyndal has forwarded a copy (09.04.03) of the results of the cuttings done by the Canberra Group - not sure of *E.* 'macrantha' - this is a manuscript name for an *Eremophila* species, and the likelihood of it being in cultivation is remote. I have printed the report as received, since it indicates that the time required between taking the cuttings and getting results is not very long and the report could prove useful to those wishing to try their hand at propagating from cuttings. The recording of the strength of the hormone used is also valuable - so often this is omitted from data received. Ed.)

Results of summer Eremophila cuttings, Canberra

Genus	Species	Plant Variety	Number	Hormone	Date Potted	No. potted	Success rate
Eremophila	divaricata	x nivea	16	IBA 1000	3-Mar	15	93.8%
Eremophila	glabra	var. 'carnosa'	8	IBA 1000	17-Mar	4	50.0%
Eremophila	glabra	Mingenew	16	IBA 1000	17-Mar	9	56.3%
Eremophila	glabra	yellow	17	IBA 1000	3-Mar	13	76.5%
Eremophila	glabra	Kalbarri Carpet	16	IBA 1000	17-Mar	12	75.0%
Eremophila	'labrosa'		20	IBA 1000	17-Mar	8	40.0%
Eremophila	'macrantha'	red	18	IBA 1000	3-Mar	5	27.8%
Eremophila	maculata	purple	16	IBA 4000	17-Mar	13	81.3%
Eremophila	maculata	yellow	17	IBA 2000	17-Mar	8	47.1%
Eremophila	maculata	Pink Mini	8	IBA 1000	17-Mar	6	75.0%
Eremophila	maculata	var. brevifolia	16	IBA 1000	17-Mar	8	50.0%
Eremophila	maculata	x racemosa	16	IBA 1000	17-Mar	16	100.0%
Eremophila	microtheca		25	IBA 1000	3-Mar	22	88.0%
Eremophila	'pinnatifida'		16	IBA 1000	17-Mar	4	25.0%
Eremophila	subfloccosa	var. subfloccosa	16	IBA 1000	3-Mar	1	6.3%
Eremophila	youngii		16	IBA 1000	3-Mar	4	25.0%

Behaviour of *Eremophila freelingii* F. Muell [Myoporaceae] in the North Flinders Ranges of South Australia

Peter Hornsby

Nent Oura Research Unit
University of Adelaide, SA 5005

The rock fuchsia bush *Eremophila freelingii*, known as aratja to the local Aboriginal Community, is one of the commonest shrubs in the North Flinders Ranges, growing in what must be some of the harshest conditions in South Australia. The region is characterised by high summer temperatures that can exceed 50°C in the shade; and cold winters where temperatures can drop below freezing point.

It is an area where theoretically it does not rain; being too far south for the monsoonal rains from the north, and too far north for the prevailing south-westerlies which bring winter rains to the areas to the south. Precipitation is sparse, averaging around 150 mm per annum, and erratic, while the evaporation rate is around 4,000 mm per annum.

In response to these conditions, *E. freelingii* has evolved a number of buffering mechanisms, which together add up to ensuring the survival of the species.

It grows on the hill slopes [with a pitch around 30° or less] as opposed to the adjacent lower-lying flat areas. In such locations it is able to avoid frosts to such an extent that it now is classed as a frost-intolerant species [R. Isaacson, pers. comm]. It favours the warmer slopes, being mainly found on those which face north and west. The largest specimens [up to 3 m high, and the same across] are those growing along the gutter lines. The smallest ones are little over ½ m high, growing on north-facing slopes.

In common with many xerophytic plants, the root system is a substantial proportion of the plant biomass. Furthermore, it has a dual root system, with a layer of superficial roots exploring surface soil, and a deep taproot allowing access to deeper water sources. It suckers readily. Contrasted to this, in 25 years of concerted searching, I have never found a seedling.

E. freelingii typically grows in 'leopard-bush' patterns of spaced individual plants with bare ground in between. The extensive lateral root systems probably enable them to harvest water from the surrounding bare patches. Puigdefábregas and Sánchez [1996] have concluded that such mosaics of vegetated and bare patches are not independent but hydrologically linked.

The leaf and canopy structure also are important adaptations to arid environments [Puigdefábregas and Pugnaire, 1999]. The plants typically are umbrella shaped with a dense canopy over a network of bare ribs. The canopy helps redirect the rainfall into stemflow which in turn directs the water to the root crown and main roots, as well as reducing direct evaporative loss.

The leaves normally are pubescent, increasing light reflectivity and helping to reduce leaf temperature. In their usual state the leaves are horizontally spreading; but in hot dry weather they hang vertically down and develop a glazed coating of resin, enabling *E. freelingii* to avoid excessive irradiation. After rain, recovery from this state is slow, and the plant can take up to three days for the leaves to revert to their 'normal' aspect. In many respects, *E. freelingii* enters a period of dormancy in hot weather and restricts its activity to periods of water availability. In particularly severe drought, *E. freelingii* can become totally defoliated, and appear dead. After reasonable rainfall, new shoots sprout along the lengths of the pseudo-senescent branches.

In some parts of the region occupied by *E. freelingii*, yellow-footed rock-wallabies *Petrogale xanthopus* share the habitat. The wallabies eat the inflorescences and the softer developing fruit but avoid the foliage, presumably because of the poisonous systemic sesquiterpenes. However the wallabies will eat foliage from extremely unhealthy-looking plants. This could indicate that under severe stress, sesquiterpene production is inhibited. In contrast, the wallabies show no reluctance in eating foliage from the harlequin fuchsia bush *Eremophila duttoni* even though deaths of yearling brahman cattle were attributed to poisoning from *E duttoni* [Pinch, 1996].

In summary, the mechanisms of survival of *E. freelingii* make it a potentially fascinating topic for research.

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