

FAQs on the Eremophila Study Group's Geoff Simmons Bequest Project

What is the Eremophila Study Group?

The Eremophila Study Group (ESG) is one of 17 study groups operating under the auspices of the Australian Native Plants Society (Australia) Inc. Native Plants Queensland is a member society of ANPSA. The ESG was founded in 1972 and currently has 160 members from around Australia.

The Study Group aims to further knowledge about the cultivation, propagation and conservation of members of the genus Eremophila, which are commonly known as Emu Bushes or Poverty Bushes. For more info go to http://anpsa.org.au/study_group/eremophila-study-group/

What are Eremophila?

Eremophila is a genus of ~240 described species which are found across the regions of Australia which usually receive less than 250mm rain annually. Of these about 10% are found in Queensland.

Eremophilas are the fifth most diverse native plant genus in Australia and are key components of the arid environment and of traditional Aboriginal medicinal practices. It is only recently that a limited number have come to home horticulture, but they are now offered by both specialist nurseries and retail outlets and are attractive to the general public because of their showy flowers, extended flowering times, and drought hardiness.

To see photos of Eremophila go to <http://anpsa.org.au/eremophila-image-database/>

Why are we Interested in Fruit and Seed?

Eremophila produce fruit capsules which can hold up to four seeds when fully developed. These fruits start off green, but become hard and woody so they can withstand many years dormant in a dry environment, allowing germination only when the conditions are right.

In the wild, fruits may be held on the plant or may fall and remain dormant in the soil. There are anecdotal examples of fruit remaining viable in local environments for 50 or 60 years, emerging after a combination of fire and following rains, or heavy rain alone.

In its initial work with the University of Queensland, the ESG asked its members to send fruit from their garden plants for examination. Members sent almost 5,000 fruit from 69 species to the university. Examination of these by X-ray revealed that most fruit had no or few seeds. We wondered if this was because of conditions in members' gardens (e.g. lack of required soil nutrients or specific pollinators) or whether it was due to a wider effect including climate change.

What is the project?

The project funded by the Geoff Simmons Bequest aims to collect seed (in fruit) from wild populations of Eremophila species in order to determine fruit production and seed fill/quality for species growing in the wild and compare it with fruit from the same species growing in members' gardens (already collected); correlate seed fill and weather during flowering and seed formation; and assess pollen viability and pollen formation and cross reference this with weather and climate data.

What Outcome are Expected?

We expect the following outcomes:

1. Collections of seed of several species not in cultivation, which can be shared with NPQ if desired
2. Data on seed fill and quality of selected species by location, cross correlated against climate and weather data, from wild and domestic populations (the latter using fruit already sent by members – this is being stored at 15°C in the University cool rooms). This will allow us to draw conclusions about the seed fill and quality of wild populations of the selected species and reasons for any observed geographic variations
3. Data on pollen viability to cross correlate against seed fill data. This will provide further insights into reasons for poor seed fill in domestic specimens and will enable conclusions to be drawn about viability of seed in the wild
4. Findings which can be published in academic literature and presented to NPQ or ESG events

When will we see the results?

The project report will be finalised by June 2023 and findings will be publicly announced through the ESG newsletter and other avenues including academic publications.

What do I have to do if I volunteer?

Fruit collection volunteers will need to agree to follow the collection rules set by the **Code of Practice for the Take and Use of Protected Plants Under an Exemption Nature Conservation Act 1992**. Under this Code, collectors must agree to:

- record the GPS coordinates of all collections;
- limit fruit collection to no more than 20% of the fruit on any one plant;
- Collect any *Eremophila* species occurring naturally in Queensland EXCEPT *Eremophila stenophylla* or *E. tetraptera*

Do I need to also collect Pollen and Soil?

No, the university will use the GPS coordinates submitted by volunteers to travel to the site and collect pollen and soil

What Do I do With my samples?

Volunteers need to be able to

- Store collected fruit in accordance with directions from the university
- Post samples to the university by specified dates
- Provide whatever other information the university requires in order to ensure the samples can be used in the research, including GPS coordinates
- Photograph the bush and flowers for reference

How Will Volunteers be Acknowledged?

Volunteers will be put on a mail list to receive news of the project as it progresses. Individuals will be acknowledged through the ESG newsletter and via the ESG webpage on the project.

Will I Be Paid?

No, volunteers will not be paid for their time or the costs of collecting. We have funds to contribute towards petrol costs for any travel over 200km round trip – for which petrol receipts must be provided. The maximum refund is \$50 and preference will be given to ESG and NPQ members until our budget runs out.

What about Insurance?

Members of the member societies of ANPSA (including ESG members) will be covered by ANPSA's public liability insurance for any damage they accidentally cause to third parties on official business under the project. This insurance does not provide any coverage for their own injuries or damage to their own property.

Any other members of the public are not covered by ANSPA insurance and participate at their own risk.

We advise all participants to consider taking out a private travel insurance policy if they want insurance coverage for damage to their own equipment or belongings, injury or illness to themselves, or to cover potential expenses due to changes in travel plans, missed flights, bogged vehicles etc etc.