

To The Australian Flora Foundation,

I would like to express my many thanks for your contribution of funds towards my PhD research. What follows is a progress report of my work to date, anticipated outcomes, research communication, and a request for the next instalment of the grant of \$7875.

Project background: My PhD research focuses on the nutrition and ecology of a wide range of carnivorous plants, which use specially modified leaves to attract, capture, and digest prey. I am utilising natural abundance stable isotope techniques to understand how much these plants rely on prey to gain essential nutrients, such as nitrogen. Western Australia is home to around a third of the world's carnivorous plant species, with most of the diversity concentrated in southwest Australia and in the northern Kimberley region. Despite this, there has been very little prior research on the carnivorous plants of Western Australia, particularly in terms of their carnivorous syndrome and ecology.

Research output: Over the course of the last year I have conducted fieldwork in both the Kimberley and southwest regions, and sampled several species of carnivorous plants (see Table 1), along with autotrophic reference plants and insect prey. I have transported these samples to the BayCEER Laboratory, at the University of Bayreuth, to undergo natural abundance stable isotope analysis (revealing total concentration and isotopic composition of nitrogen and carbon). This data will allow us to calculate how much of the carnivorous plants' nutrition has originated from the digestion of captured prey, as opposed to the usual method of root uptake of soil nutrients. Final results from this research will be available by mid-late 2018, and will be included in my PhD thesis and form a major component of anticipated publications. I am passionate about science communication, and would be more than happy to present these results in another form for the Australian Flora Foundation (e.g.: a post for your website, a written article, or public presentation).

Table 1: *Byblis*, *Drosera*, *Utricularia*, and *Cephalotus* sampled throughout Western Australia in 2017.

Kimberley	Southwest
<i>Byblis filifolia</i> , <i>B. liniflora</i> , <i>Drosera banksii</i> , <i>D. burmanni</i> , <i>D. cucullata</i> , <i>D. dilatoto-petiolaris</i> , <i>D. fragrans</i> , <i>D. glabriscapa</i> , <i>D. kenneallyi</i> , <i>D. nana</i> , <i>D. ordensis</i> , <i>D. paradoxa</i> , <i>D. serpens</i> , <i>D. subtilis</i> , <i>Utricularia antennifera</i> , <i>U. chrysantha</i> , <i>U. fistulosa</i> , <i>U. lasiocaulos</i> .	<i>Byblis gigantea</i> , <i>Cephalotus follicularis</i> , <i>Drosera erythrorhiza</i> , <i>D. glanduligera</i> , <i>D. hamiltonii</i> , <i>D. macrantha</i> , <i>D. menziesii</i> , <i>D. neesii</i> , <i>D. pulchella</i> , <i>D. purpurascens</i> , <i>D. stolonifera</i> , <i>D. zonaria</i> , <i>Utricularia menziesii</i> , <i>U. multifida</i>

Research funding: The initial payment of \$4500 has been spent according to the proposed budget (see Table 2). We are now seeking the second payment of \$7875, which was to be available from 1/1/2018, to be used primarily to cover costs of stable isotope analysis at the BayCEER Laboratory, Germany.

Table 2: Allocation of funds provided by the Australian Flora Foundation.

	Item	Amount (EUR)	Amount (AUD)
Equipment 1500	Travel to southwest WA field sites (75c per km)	n/a	1385.55
	Collection equipment	n/a	114.00
Travel 3000	Flights from Perth to Germany, return	n/a	1716.35
	Train from Frankfurt to Bayreuth, return	60	91.80
	Student's accommodation for 3 months	780	1192.30

Many thanks again for your kind support of this research!

Kind regards,



Laura Skates