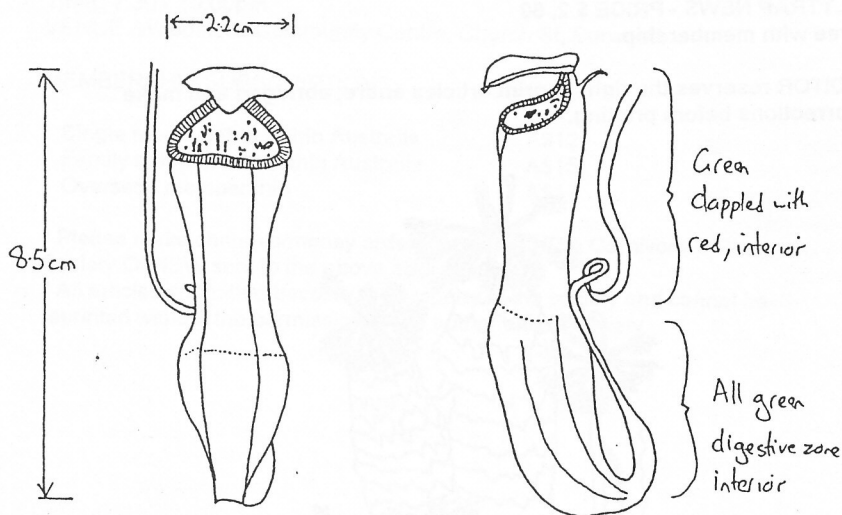


# FLYTRAP NEWS

VOLUME 6 NUMBER 1  
JULY/AUG/SEPT 1992



NEWSLETTER OF THE CARNIVOROUS  
PLANT SOCIETY OF NSW

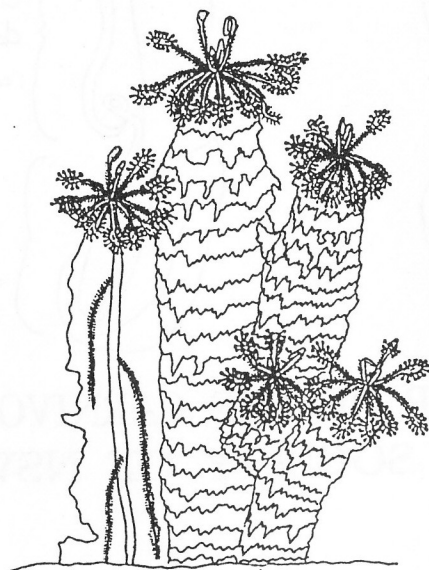
## CONTENTS:

### Office Bearers

Editors Report	Peter Carlin
News and Reviews	Correspondence
Nematodes	Article
Carnivorous Orchid	Article
Buy, Sell, Swap	
Return to New Caledonia	Robert Gibson
Drosera peltata	Michael Gosden
Drosera schizandra.	Denis Daly

FLYTRAP NEWS - PRICE \$ 2. 50  
Free with membership

EDITOR reserves the right to print articles entire, abridged and make corrections before printing.



Stem-forming clump of *D. neo-caledonia*.  
The internal structure of one stem is shown.

## 1992/1993 OFFICE BEARERS.

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TREASURER	Richard Riles	(02) 639 8230
SEED BANK MANAGER	Denis Daly	(02) 526 1212
EDITOR	Peter Carlin	(02) 604 3090

### ALL CORRESPONDENCE (including articles) TO:

The C.P.S. of N.S.W.  
P.O. Box 87  
Burwood NSW 2134

### Remaining 1992 Meetings:

August 14  
October 9  
November 13

TIME: 7.30 - 10.00pm

VENUE: Woodstock Community Centre, Church St, Burwood

### MEMBERSHIP SUBSCRIPTIONS:

Single membership within Australia	A\$12
Family membership within Australia	A\$15
Overseas membership	A\$17

\* Please make cheques/money orders payable to The Carnivorous Plant Society Of NSW sent to the above address.

\* All articles submitted become the property of the society and cannot be reprinted without the permission of the author and/or society

## EDITORS REPORT.

This issue of Flytrap News is my first attempt of producing a newsletter and this job has been made very difficult due to the lack of articles that I have received. I would like to thank several people for their advice and articles and I take great pleasure in printing their names. The Carnivorous Plant Society Of New South Wales would not exist without :

Robert Gibson  
Ken Harper  
Denis Daly and  
Richard Riles.

It is important to point out that anybody who attends meetings or subscribes to Flytrap News is capable of writing articles and several changes will be made to Flytrap News to make this task easier. A News And Reviews column will now appear in Flytrap News and I ask that people send in curiosities that they note in their plants, soil, water, growing methods etc. A letters to the editor column will also appear and I hope that Buy, Sell and Swap will expand to become a way for society members to communicate amongst each other and trade plants that are otherwise unavailable to some members.

This winter has been quite harsh compared to the past few years. I hope that everybody's plants are healthy and are surviving the cold mornings that we are experiencing. Dormancy is the natural process through which plants cease to produce seeds, spores, and buds. This ensures that they survive the harsh environmental conditions that they are receiving and assists in bud formation in the spring. I hope that all your plants re emerge in spring in a healthy state. While this is the case for *Sarranenia* and some *Drosera* species, other tuberous *Droseras* will now be in full growth. I encourage you to photograph these if you grow them to show members whose collections do not contain such remarkable plants.

## NEWS AND REVIEWS.

A new feature of Flytrap News is the News and Reviews column. This is an opportunity for any person who does not want to write a formal article to share some views with the society. Maybe you have some criticisms, questions or unknown facts? Here is your chance to say them.

\* Ryde College of T.A.F.E has a large *Nepenthes x mixta* growing in one of its glasshouses. This plant has no special heating or lighting provided to it but receives mist. The plant is very large and fleshy, all shoots being green. Pitchers on this plant are rare and I am now attempting to grow a leaf cutting of this plant, although Ryde T.A.F.E does not permit plant material to be removed from their premises. I will approach Ryde T.A.F.E in spring and donate some carnivorous plants to them to use as a teaching aid . - Peter Carlin 3/7/92

\* Flytrap News invites any person/nursery to advertise in this Newsletter. Request can be made to the societies address at Burwood.

\* Flytrap News has two copies of Allen Lowries Carnivorous Plants Of Australia - Volume 1 for sale. These have been read once and can be purchased for \$20 each. A paperback edition of Adrian Slacks Carnivorous Plants is also available for \$15. Back copies of newsletters can be purchased for \$2 each and there are no plans to reprint these. All proceeds will go towards the printing costs of Flytrap News in an attempt to keep membership costs as low as possible. A newsletter with photographs is costly to produce and the Society invites you to assist in the funding for future editions.

\* On the 17th May several members of The Carnivorous Plant Society Of NSW put on a display at the 1992 National Showing of the Koi Carp Society Of Australia. It proved to be a great success and the interest in Carnivorous Plants was astounding. We would now like to hear peoples views on how to construct a stand that could be easily assembled at any show with a backdrop to make the volunteers work easier.

\* I was fortunate enough to receive a special addition to my plant collection after the Koi Carp show. I noticed that the plants that I took home were infested with the Two spotted mite, a pest which used to be known as the Red Spider Mite. It is found on the under surface of leaves and causes a mottled appearance the the leaves where it feeds. I am about to purchase some predaceous mites that feed on the Two Spotted Mite to see if this form of biological control works.

## NEMATODES.

Many people who repot their Carnivorous Plants annually may never notice this plant pathogen but may notice the damage that they cause.

This may include damage such as:

- \* Root tips which appear to be underdeveloped, eaten or disintegrate when touched.
- \* Lesions in the root where the nematodes have been feeding.
- \* Ring barking of the roots.
- \* Large numbers of lateral roots which have developed when root tips have been eaten and
- \* Root Galls which appear as balls on the roots ranging in size from 1mm to 2cm

This damage is caused by a Nematode (eelworm) which are not related to true worms and are known to carry a large range of diseases. They vary in size from 300 microns to 4mm in length. They are transparent and are impossible to see with the naked eye.

Nematodes are unable to spread by themselves and rely on our mistakes for their spread in the nursery situation. They stick to pots, unsterilised soils, water runoff and tools.

### **CONTROL:**

Heat Treatment - Raising the soil temperature to 60°C for 30 minutes with steam will kill nematodes and their eggs.

Development of resistant varieties - using genetic engineering it is possible to develop attractive disease resistant plants for nursery production.

Crop Rotation - Change locations of plants away from known infected plants, soils etc.

Sanitary Practices - Nursery Hygiene.

### **Bibliography:**

\* NSW Department of Technical and Further Education,  
Division of Horticulture.  
Plant Protection B 1992.  
Nematodes pp 114-117.

\* Judy McMaugh  
What Garden Pest or Disease is That?  
Weldon Publishing 1989.

## CARNIVOROUS ORCHID.

A Carnivorous Orchid has been discovered in the Central American Jungles. The plant, *Schomburgkia tibicinus* has formed a symbiotic relationship with ants which make their homes inside the orchid.

The ants feed on nectar from the flowers of the orchid and in return fight off any insects which attack the plant (*American Journal Of Botany*, vol 76, p 603). The botanists noted that the ants fill the orchid with debris from the dead bodies of insects and other ants by placing these in hollow spaces in the orchid. Rico - Gray noted that the orchid sent roots into the hollow spaces inside itself and appeared to be feeding on this debris.

To test the theory of Carnivory in this plant, botanists fed the orchid with radioactive honey and later noted that the radioactivity had spread throughout the whole plant and high concentrations were found at the tips of young shoots.

Rico - Gray noted that the walls acted like a large stomach and are yet to determine whether the plant absorbs these nutrients through enzymes or microbes. The orchid grows high in trees where nutrients are scarce and suffers a reduction in size when starved of ants.

\* Paul Simons - Carnivorous Orchid Feeds Off Its Own Rubbish Tip.  
New Scientist - 5th August 1989.

### BUY, SELL, SWAP.

\* Denis Daly will address the Ramsgate - Sans Souci Garden Club Inc on the 14th October 1992. It has been requested by Denis that any members with have plants to sell are invited to have these sold at the show. In order to do so please label plants as follows:

Plant name  
Growers name  
Date  
Price

Monies will be returned to individual growers the following meeting.

\* Peter Carlin wishes to purchase *Pinguicula* or *Nepenthes* species to add to his collection.

This is your chance to sell anything. You can advertise plants that you have for sale, sell the hothouse, or sell the pet Budgie. Its open to everyone.



## Return to New Caledonia.

In late December 1990 I had the pleasure to go on a 12 day family holiday to Vanuatu and New Caledonia. The first six days were spent on Vanuatu. The remainder of the holiday was spent in New Caledonia during which I spent two days looking for and observing carnivorous plants. This article is based on information collected on the trip.

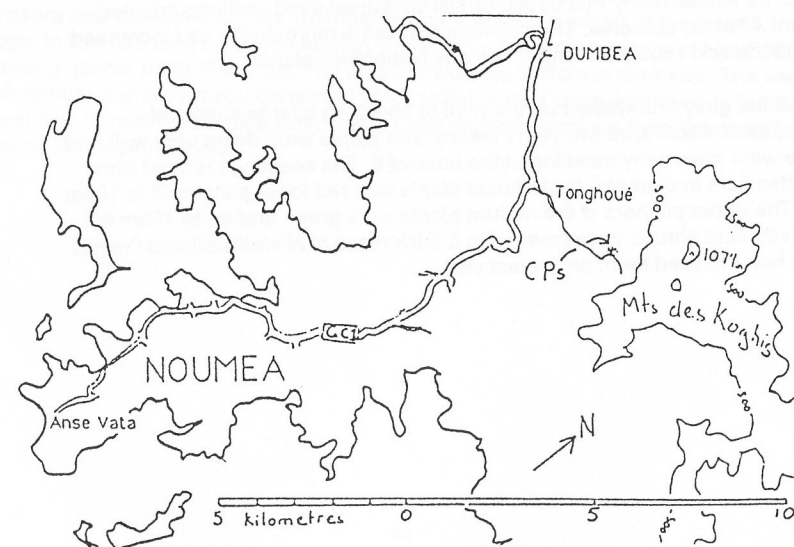
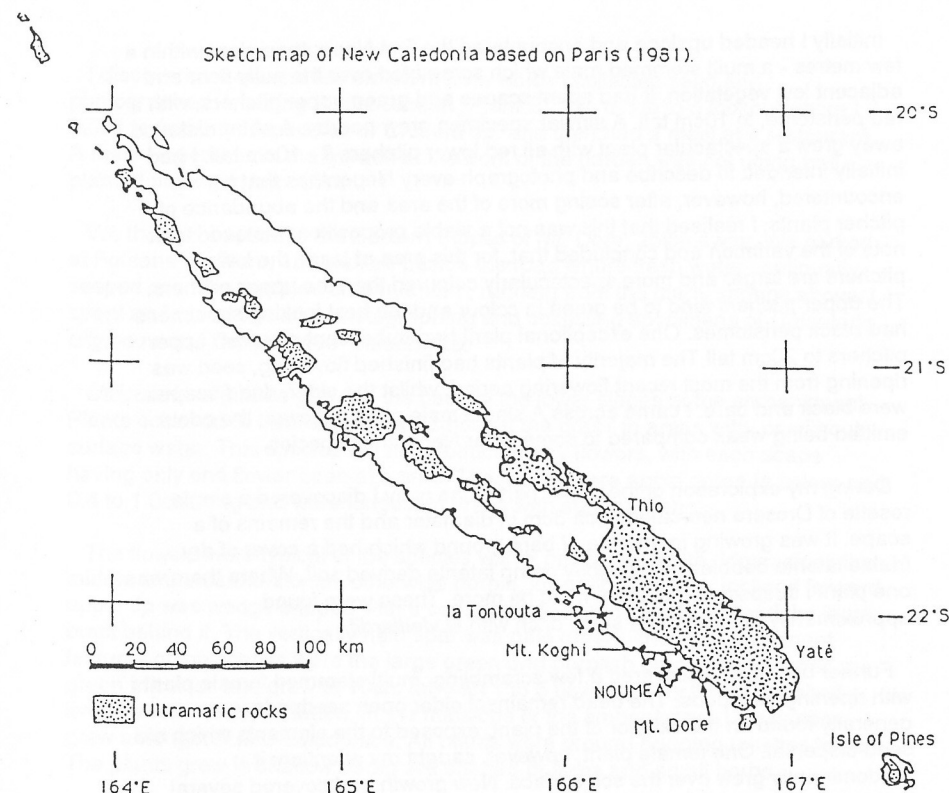
Before the holiday I contacted Tanguy Jaffre, a botanist at ORSTOM in Noumea. He kindly offered me the use of drying facilities at the herbarium and also advised me to contact Monsieur Boulet, who is in charge of parks and reserves in Southern New Caledonia. I also contacted Peter Abell of the Royal Botanical Gardens in Sydney who told me of an outstanding *Nepenthes vieillardii* location.

From my previous trip to New Caledonia two years before (Flytrap News Vol 4, No 2 & 3), I knew of three carnivorous plant locations. This time I also had my own camera, with a macro lens and a considerable amount of film, purchased at Mascot Airport.

For the first day of carnivorous plant hunting (Tuesday 1/1/90) we had use of a hire car. However, this had to be returned by 5 pm that day so dad and I set off early that morning for Mount Koghi. The turnoff for the 5km long road to Station d'altitude, Auberge is now well signposted and every kilometre is indicated. It is at the 4km sign that the landscape of the lower part of the road changes from lush rainforest and gardens to open marquis vegetation which covers most of the ultramafic massif. Carnivorous plants are a component of the marquis.

We stopped 500m up the road, passing beside many *Nepenthes vieillardii* plants growing on the roadside embankment - richer fields were ahead. We parked beside a broad gully in which, two years earlier we had found a lot of *Nepenthes*. This situation had not changed and I could see many mature plants on the floor of the gully as I approached it.

The gully extended upslope at least 30m from the point of entry and at least 50m downslope. The walls were 1 to 2m high and were composed of either laterite or a scree slope of loose red soil granules. Bracken fern, numerous shrubs and a few plants of *Megastylis gigas* (a terrestrial orchid) were the main plants growing in the gully. *Nepenthes vieillardii* was locally abundant.



Sketch map showing Mt. Koghi in relation to Noumea.

Initially I headed upslope and encountered the first *Nepenthes* plant within a few metres - a multi stemmed male which scrambled over the gully floor and adjacent low vegetation. It had spent scapes and green upper pitchers, with a red peristome, to 10cm tall. A similar specimen grew nearby. A short distance away grew a spectacular plant with all red lower pitchers 8 - 10cm tall. I had initially intended to describe and photograph every *Nepenthes* that I encountered, however, after seeing more of the area and the abundance of pitcher plants, I realised that this was not a viable proposition. Instead I took note of the variation and concluded that, for this area at least, the lower pitchers are larger and more spectacularly coloured than the upper pitchers. The upper pitchers tend to be green in colour and the best looking specimens had black peristomes. One exceptional plant had pubescent all green upper pitchers to 20cm tall. The majority of plants had finished flowering, seed was ripening from the most recent flowering period, whilst the older, dead scapes were black and bare. I came across A single male plant in flower; the odour emitted being weak compared to some other *Nepenthes* species.

During my exploration of the upper part of the gully I discovered a single rosette of *Drosera neo-caledonica* 3cm in diameter and the remains of a scape. It was growing in an area of bare ground which had a cover of dry friable laterite bebbles over slightly damp laterite derived soil. Where there was one plant I suspected that there must be more. These were found approximately 5m away in a small ditch with *N.vieillardii*.

Further upslope I discovered a few scrambling, multi stemmed female plants with ripening seedpods. The dead remains of older open seedpods were generally found on the exterior of the plant, exposed to the elements which aid seed dispersal. One female plant, however, caught my attention: it predominantly grew over the soil surface. New growth had covered several inflorescences. On the ground below the seed pods were many straw coloured objects 7mm long by 1mm wide. On closer inspection these turned out to be seeds. Many fruit capsules still contained seed and was labelled "Plant A" when collected. The vegetation became more dense as I increased in altitude and I could no longer see any *Nepenthes* plants.

I left the gully and walked up the road to check on a large cluster of *N.vieillardii* discovered two years before. The plants were doing very well and there were now many seedling at the base of it. The seedlings ranged from rosettes 5cm in diameter to stemmed plants with red lower pitchers 3 to 10cm tall. The upper pitchers of the mature plants were green and up to 10cm tall. The adjacent shrubs were covered in a thick mass of *N.vieillardii* and I'm not sure how I missed them on my last visit.

I discovered a second female plant from which I collected seed and photographed, labelling this specimen "Plant B". We drove to a lookout where I failed to find any *Nepenthes* or *Drosera* sp. and then had a meal at a restaurant. A male *Nepenthes* in the garden at the front of the garden was not doing well planted amongst *Impatiens*.

We then proceeded to the Eastern Slopes of Mt. Dore, 25km away. We parked at Fontane du Plum, and walked beside the road where fresh water continually seeped over the roadside embankment, running from the many springs above. I spent an hour at this site, photographing and collecting specimens of *Utricularia uliginosa* and *Drosera neo-caledonica*.

*Utricularia uliginosa* grew on the base of the lower slopes at the embankment. Plants occurred in discrete clusters amongst the grass in areas with, or without, surface water. This species did not produce many flowers, with each scape having only one flower open at a time. The leaves were apple green in colour and 0.4 to 1.0cm long and were longest in areas with surface water.

The flowers were typical of the species with a prominent white ridge across the middle of the subhorizontal, otherwise purple, lower lip. The thin, inclined forward upper lip was wedge shaped with a central notch, and scarcely exceed the large bract behind it. The vertically held spur was pale green. The most prominent features of the scapes were the large green and purplish bracts. The scapes are green in colour and grew to 10cm tall with 1 to 5 flowers. Very few of the short lived flowers were pollinated. In the midslope of the embankment *U. uliginosa* grew amongst *D.neo-caledonica*. All plants were ground hugging rosettes to 3cm. The plants grew in shallow damp soil shaded by ferns and small herbs.

Our next stop was a swamp at the head of the creek Pernod. In the fine moist soil, carnivorous plants grew above and below the water. Small clusters of *Drosera neo-caledonica* grew amongst pungent pointed sedges at the waters edge. In this situation all plants formed stems, one very impressive plant had 10 growing points up to 15cm tall. The rosettes were up to 4cm in diameter. The very substantial stems diameter consisted of a central core of vascular tissue to 3cm in diameter. *D. neo-caledonica* extended a short distance upslope from the swamp amongst ironstone rocks.

Two forms of *U. uliginosa* grew in this area. The difference occurred in the flower. The most common form had a pale purple flower similar to those seen at Mt. Dore. I did find one scape with a dark purple flower.

On Thursday 3/1/90 I met Mr Boulet for an expedition. Our first stop was Chute de la Madeleine, a lovely waterfall with a drop of 3m. Monsieur Boulet pointed out that a yellow flowered *Utricularia* grew in these water (probably *U. gibba*) but none were to be seen.

In an area beside the falls we found plants of *D. neo-caledonica*. The rosettes were 1 to 2.5cm diameter and grew in areas of full sun to light shade. Some rosettes formed short stems to 1cm tall. A few plants had new scapes emerging from amongst the leaves. The rosettes grew in groups of different densities from one to about 20 plants per square metre. A species which grew with the *Drosera* was the large terrestrial orchid *Eraxis rigida* which was in full flower. The white and purple flowers occurred in abundance in the area.

The furthest point that we travelled that day was an artificial canal which linked Grand Lac with Lake Yate. We took photos, notes and collected botanical specimens.

*Drosera neo-caledonica* grew in a range of habitats including compacted, dry surfaced ultramafic rock derived soil with pieces of wood embedded into it. *Utricularia uliginosa* grew with a pale green flower and poorly formed upper and lower lips. Near this green flowered form of *U. uliginosa* grew two clumps of *D. neo-caledonica* on the creek bed. These plants were healthy and large and reminded me of short stemmed *D. intermedia* plants. On the downstream end a few plants grew underwater. On closer inspection most of these plants had formed plantlets on exposed roots further upstream, an example of asexual propagation.

Monsieur Boulet described how some forms of *N. vieillardii*, in some mountain locations, have pitchers capable of holding 1.5 litres of fluid.

Upon my arrival back to Sydney, customs approved my pickled material and seed but confiscated pressed material for being too green. There is still so much left to see in New Caledonia. Although it may take several years, I would like to go back to see *U. novae-zelandiae* and the other species of Carnivorous Plant, and to record their variation. *Nepenthes mirabilis* has reportedly been found on the island (Phillipps and Lamb, 1988), and I would like to investigate this. The holiday was fantastic with active volcanoes, ultramafic rocks, tropical sunsets and Carnivorous Plants.

#### References

- Gibson, R. 1990 "Carnivorous Plants of New Caledonia (Part One)" *Flytrap News*, Vol.4, No 2 pp 7-14.  
Gibson, R. 1991 "Carnivorous Plants of New Caledonia (Part two)" *Flytrap News*, Vol 4, No 3 pp 9 - 17.  
Phillipps, A and Lamb, A. 1988 "Pitcher Plants of East Malaysia and Brunei" *Nature Malaysiana*, Vol 13, No4, pp 8 - 27.

#### Acknowledgements:

This holiday would not have been possible without my father who takes an active interest in so many things, I extend my thanks to Peter Abell, formally of the Royal Botanical Gardens, Sydney; Tanguy Jaffre of ORSTOM and, especially Monsieur Boulet and his son Frederick. I'd also like to thank Ken Harper and Richard Tilbrooke for their suggestions about the text.

*Drosera peltata* Michael Gosden

In September last year, I went on a holiday with my parents to their farm at Gulgong, NSW. While I was riding my motorbike I noticed that the ground was damp and mossy, and contained quite a large number of small plants. When I took a closer look I noticed that these plants were *Drosera peltata*. My father and I photographed these plants and noted the details of the flowers. They were five petalled and were pink in colour. The plant was approximately 15cm tall, found mainly in the damp soil which had a high composition of sand.

I went back up in the Christmas holidays and they were all dormant. I have now noted that *Drosera peltata* and other *Drosera* in Australia all go dormant at some time during the year. I dug one up and when I moved the soil away I noticed the other end of the root system. I didn't break it off but placed the plant back carefully in the soil. As I walked further up the track I noticed some young plants beginning to emerge from dormancy. When they first arrive they grow in a rosette similar to *Drosera spatulata*.

*Editors note* - It is pleasing to see that some of our younger members the society are doing some form of field research. All of these observations can be useful in determining individual differences between species around the Sydney region. Thankyou Michael.



### Propagating *Drosera schizandra*.

Having recently stumbled upon a technique to propagate *D. schizandra* I wish to publish preliminary details at this time for the benefit of others who may wish to use my technique as a starting point. I would welcome comments and feedback as to the success or not of this technique.

One of the newer leaves is cut from the plant, with a razor blade or sharp knife, and placed upon a surface rich in peat (50% peat - 50% perlite). The razor blade or knife is sterilised in bleach before cutting the leaf from the plant.

In "striking" the leaf humidity is kept high by placing the cut off top of a PTFE soft drink bottle, minus the cap, over the leaf as it rests upon the peat/perlite mix. Preliminary indications are that for the leaf to "strike" the light level should be kept low. The level of light could best be described as "Forrest gloom" although morning sunlight shining under tree covering is not harmful.

In some 5 to 8 weeks little plantlets arise from the perimeter of the leaf. However not all leaf cuttings are successful, often the leaf dies completely or partly dies and only produces 3 or 4 plantlets.

I have leaves "striking" over the winter with no heating. Hopefully the strike rate will increase in the spring and summer so that I can distribute plants, (trading), to as many other CP enthusiasts as possible. I have already distributed some small plants.

Besides the fact that the leaves seem to prefer to have a significant amount of peat beneath them to strike the plants grow well for me in the same 50% peat 50% perlite mixture that the leaves are "struck" upon.

I am presently experimenting with higher intensity light levels, multiple wounding across the leaf veins and striking the leaves on quartz sand, to see if I can produce plantlets faster with a greater yield per leaf.

Denis Daly  
17/7/92

P.S. This discovery was a result of the plants tenacity to survive despite me. It should be taken of just another example of the need for enthusiasts to publish success and failure reports to add to the general knowledge of the cultivation of carnivorous plants.



# CARNIVOROUS PLANT SOCIETY of N.S.W.

## SEED BANK REPORT

for period 10<sup>th</sup> April 1992 to 11<sup>th</sup> June 1992

### CASH RECEIPTS

		TOTAL
Cash on hand at 10-4-92	27.55	27.55
Receipts by cheque	Nil	27.55
Receipts by cash	Nil	27.55
Payments to treasures account	Nil	27.55
Postage	Nil	27.55
Miscellaneous Expenses	Nil	27.55
Cash on hand 11-6-92	27.55	

### CREDIT DEBITS

Credit points due on 10-4-92	20.81
Credit points due to unsatisfied sales	0.00
Total credit points owing on 11-6-92	20.81

Due to a resolution passed at the meeting of 12-3-92 credit will only be given in lieu of change on orders unable to be fully satisfied. It is expected that donations of seed will be made in the true spirit of a donation and as a result of a desire to promulgate carnivorous plants.

### Use of seed bank

The seed bank is provided for member's use. Its value to us all (including you) is being a means of obtaining plants that you have not got yet.

Remember even though it took you considerable effort to obtain and grow your plant another has already grown a plant that you will still have to expend another considerable effort to get also. Forget the "my plant is rarer than his" concept. As "he" thinks that "my plant is rarer than his" also it should be quite apparent that there is no long term gain if members adopt that approach.

Sharing seeds pools this effort so that all members can get the plants AND that includes you.

***Consider if you lost your plant!*** You would have to go to all the trouble to get one again. BUT if the plant was now commonly grown because you had donated seed it would be relatively easy for YOU to get another plant. The seed bank is an insurance policy. It is obvious that the "dog in the manger approach" does not even benefit the dog in the long term.

As you can see from above nobody has ordered seeds over the period 10<sup>th</sup> April 1992 to 11<sup>th</sup> June 1992. Please use this service. It is there for your benefit. It won't be of benefit if it is not used.

If CP's become popular then commercial enterprises will respond to the market thus making the supply secure and prices competitive. It may even result in the introduction of new carnivores into the market. It will benefit us all to spread CP's around. The place to start is to spread species around to other Carni's.

Denis Daly  
Seed bank Manager  
15/6/92

# SEED BANK LIST / ORDER FORM

TO MEASURE

\$ c

\$ c

1	S.alata	1991	C	_____	31	(S.o x S.m) x S.r" g"	1991	C	_____
2				_____	32	(S.p x S.a) X S.p	1991	C	_____
3	S.leucophylla	1991	C	_____	33	S.p "v" X S.f	1991	C	_____
4	D.acturi (Mt. Ruapehu N.Z.)	1991	R	_____	34	S.x readii	1991	C	_____
5	U.gibba	1992	R	_____	35	S.r "g" X S.l	1991	C	_____
6	S.oreophila	1991	A	_____	36				_____
7	D.capensis (narrow leaf)	1992	A	_____	37	D. aliciae	1991	A	_____
8	S.purpurea venosa	1991	A	_____	38	D. arcturi (Mt. Wllngtn)	1991	R	_____
9	S.rubra ssp gulfensis	1991	C	_____	39	D. acturi (W.TAS)	1991	R	_____
10	D.capensis	1992	C	_____	40	D. auriculata (Bikhth) (pink)	1991	A	_____
11	S. r "j" H	1991	A	_____	41	D. auriculata (Mulgoa)	1991	A	_____
12	S.rubra ssp rubra	1991	A	_____	42	D. auriculata (W.TAS) (pink)	1991	A	_____
13	S.rubra ssp wherryi	1991	A	_____	43	D. burmanni (Richmond, Sydney)	1991	A	_____
14	S.rubra ssp ??	1991		_____	44	D. filliformis (?) var. (?)	1991	C	_____
15	S.alata X S.psittacina	1991	C	_____	45	D.auriculata (S. Aust.)	1991	R	_____
16	(S.a X S.ps) X S.alata	1991	C	_____	46	S.purpurea purpurea (W.Canada)	1991	R	_____
17	S.x aerolata	1991	C	_____	47	U. subulata	1992	C	_____
18	S.x aerolata X S.alata	1991	C	_____	48	D. capillaris	1992	A	_____
19	S.x excellens	1991	C	_____	49	U. monanthos (W.TAS) (white)	1991	R	_____
20	S. flava X S.alata	1991	C	_____	50	U. monanthos (W.TAS)	1991	R	_____
21	S. flava X S.leucophylla	1991	C	_____	51	(S.a x S.l) X S.l	1991	C	_____
22	S.l "wide" x (S.a x S.ps)	1991	C	_____	52	S.l X S.p "v"	1991	C	_____
23	S.l X S.a "red form"	1991	C	_____	53	D. rotundifolia (W. Canada)	1991	A	_____
24	S.l x S.ps	1991	C	_____	54	D. pelata (S. Aust.)	1991	R	_____
25	S.l X (S.ps X S.a)	1991	C	_____	55	D. filliformis ssp filliformis	1991	C	_____
26	S.l X S.x willisii	1991	C	_____	56	D. indica	1992	A	_____
27	S.m X S.l "wide"	1991	C	_____	57	S. purpurea purpurea	1992	A	_____
28	S.m X S.m "giant"	1991	C	_____	58	S.f x S.x willisii	1991	A	_____
29	(S.m X S.o) X S.l	1991	C	_____	59	D. intermedia	1991	R	_____
30	S.o X S.m	1991	C	_____	60	D. cocciculis	1991	R	_____

SUB TOTAL

PACKETED

	TOTAL "TO MEASURE"
	TOTAL "PACKETED"
	TOTAL PURCHASE"
LESS	TOTAL "PAID"
	USE CREDIT Y/N

BALANCE

If +, must have credit to use.

PACKETED

## CONTACT DETAILS

D. peltata (ssp gracilis?)	2	1991	50	_____	Name	_____
D. ariculata W. Auckland NZ	1	1991	1.00	_____	Address	_____
D. villosa	2	1991	1.00	_____	Phone	_____
Darlingtonia californica	2	1991	1.00	_____		
S. flava small red veins	3	1991	1.00	_____		

TOTAL "PACKETED"

KEY (1) Rarity of Seeds

R = Rare.  
A = Average or Medium  
C = Common.  
(?) = Variety not given or uncertain.

KEY (2) Species Codes

a = alata  
f = flava  
l = leucophylla  
m = minor  
o = oreophila  
p = purpurea

p "v" purpurea ssp venosa  
ps = psittacina  
r = rubra  
r "j" H = rubra ssp jonesii f heterophylla  
r "g" rubra ssp gulfensis

29 June, 1992