FLYTRAP NEWS

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April / May / June 1993

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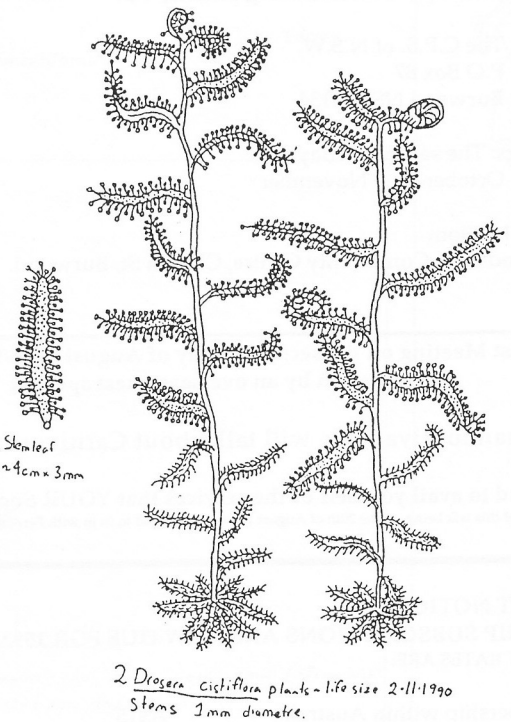

NEWSLETTER OF THE CARNIVOROUS PLANT SOCIETY OF NSW

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ALL CORRESPONDENCE (including articles) TO:

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

1993 Meetings: The second Friday of:-
August October November

TIME: 7.30 - 10.00pm
VENUE: Woodstock Community Centre, Church St, Burwood.

At the August Meeting on the second Friday of August (13/8/93) there will be a presentation by an overseas guest speaker

Mr Fernando Rivadavia will talk about Carnivorous Plants In Brazil

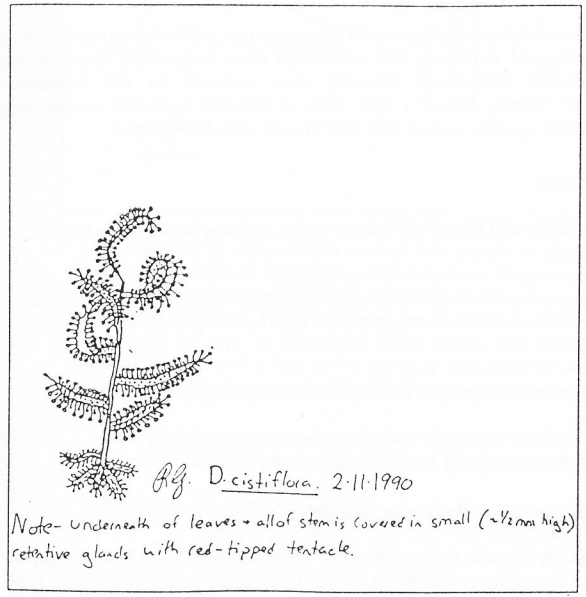
Please attend to avail yourself of the services that YOUR Society can provide.
(previous advice of this talk being on the 20th of August has been changed to fit in with Fernando's travel arrangements)

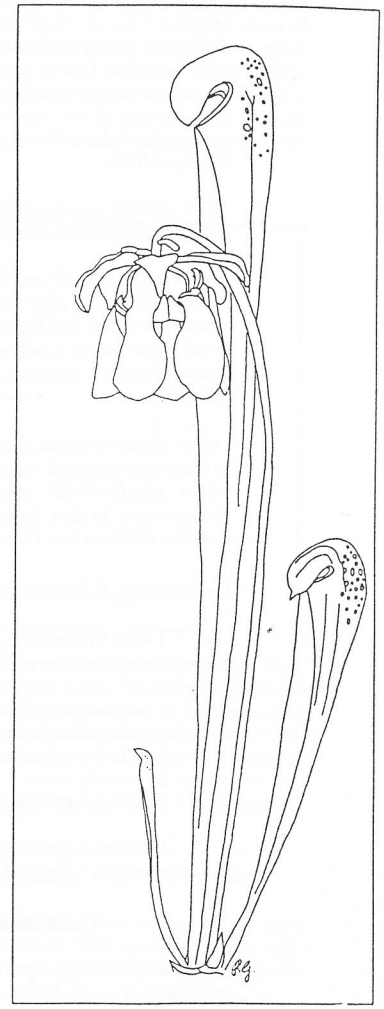
IMPORTANT NOTICE:
MEMBERSHIP SUBSCRIPTIONS ARE NOW DUE FOR 1993/1994
THE CURRENT RATES ARE:

Single membership within Australia	A$15
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.

CONTENTS





Sarracenia minor "Giant type" in Flower
16 11 1990 62 cm tall pitcher

FLYTRAP NEWS - PRICE $2. 50
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Editor reserves the right to print articles entire, abridged and make corrections before printing.

Retiring Editors Report.

This is going to be my final edition of "Flytrap News" due to other work and tech commitments. I have enjoyed producing "Flytrap News" for the past year and am looking forward to seeing what becomes of the newsletter and the society.

To empower the committee to discuss and resolve the future direction of the Carnivorous Plant Society of NSW.

This motion was discussed at some length and it was decided that Denis Daly should write to the Australian Carnivorous Plant Society to set some objectives and get the ball rolling.

Now is the time for membership renewal with this society and it is up to you to support your society. Where are your articles? Where are your questions? Your money is spent in producing a newsletter which has the majority of its contributions continuously coming from a selected few. Would you prefer to see a newsletter with more articles, photos and useful information from other growers? It becomes a bit monotonous when the author spends most of their time begging for articles.

Once again winter is upon us and it gives growers the chance to rest while dormancy sets in. I am fascinated by the mechanism of dormancy and Australian Flora in general. Many of our native plants show remarkable adaptations allowing their survival in the Australian environment. In this issue of "Flytrap News" I will look at Drosera spatulata at Berowra Heights, examine two Utricularia species and we will visit France with Ken Harper.

Incoming Editors report

I wish to extend my thanks and that of the Society to our retiring Editor Peter for his efforts during his term of Editor.

As you can gather from the attached flier proposed amalgamation negotiations have met a huge snag. For those members unable to attend please return your proxy votes as you have a right to have your say.

This is your Society please take the time to tell us what services you require.

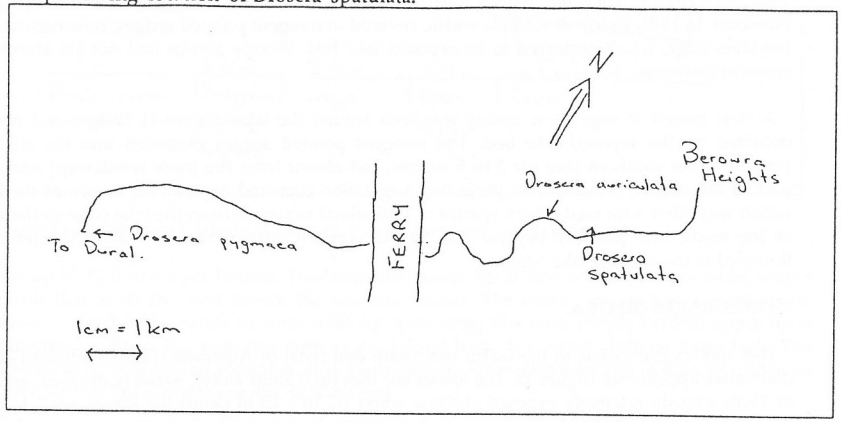
I welcome receiving letters to the editor and of course articles for flytrap news. Preferred format is on IBM disk either text or in any popular word processor format.

Drosera Spatulata at Berowra Heights, NSW. by Peter Carlin

Several years ago I stumbled upon a large colony of Drosera Spatulata growing on an embankment on the Northern side of Berowra Waters Road. The mature plants were quite large being approximately 40mm in diameter with individual leaves being 10mm in length narrowing to a petiole 1 - 2 mm long.

The plants were growing in a semi - shaded location which had a south western aspect. The soil was damp to dry with the majority of the plants growing on pockets of soil found on the sandstone rock faces, created by the construction of Berowra Waters Road. I collected some of these and found that the majority of these reverted to the typical D. spatulata size when grown at home in my collection. Yet a few remained large and are in my collection today. Other carnivorous plants can be found growing near the site. A large quantity of Drosera auriculata grows on a mossy covered embankment with a southerly aspect, yet its growing area did not extend into that of the D. spatulata. D. pygmaea can be found on the western slope of Berowra Creek in a dry sandy soil in full sun from the west.

Map showing location of Drosera spatulata.



Up until 1992 it was possible to view this pocket of plants at will, but these have now been destroyed by the ever expanding city of Sydney. Stormwater from a new housing estate flows across these plants resulting in phosphate poisoning from generous quantities of fertilisers and domestic detergents. Robert Gibson and I noted in 1990 that a colony of D. burmanni had regrown in an area at Richmond NSW which had previously been bulldozed to construct drainage ditches and a fire trail. I am now interested to see if these plants will regrow in this location or be lost forever. As these plants were growing on a disturbed site I will follow this up.

Utricularia biloba and Utricularia uliginosa. by Robert Gibson

Utricularia biloba and U. uliginosa grow in a small coastal freshwater lake on the central coast of N.S.W. The locality was visited in November 1990 and February 1992, however it was only the second visit that U. biloba was discovered. The following is an account of the habits of both species, followed by a short note on cultivation.

HABITAT.

Both species grow in the shallow edges on the south - western part of a small freshwater lake. This habitat is within 200 metres of the coast and is surrounded by dense, low coastal woodland which has stabilised the underlying sand dunes. Due to the porous nature of the sand, substrate surface water is rare. The lake appeared to be the exposed portion of the fresh water table, a narrow area of visible seepage occurred on the southern lake margin. On the initial visit access to the lake was easy as the surrounding vegetation had been burnt, however, on the last visit, access was more difficult due to the prolific and intermeshing regrowth.

Between visits the lake level dropped by approximately 1 metre, probably in response to the 1990 drought. Initially the woody coastal vegetation terminated against the lakes edge. However, in 1992, a strip of variable width, covered in pungent pointed sedges, now occurred at the lakes edge, which appeared to be exposed lake bed. Woody shrubs had not yet started to colonise this area.

A clear patten of vegetation zoning was seen around the lake (Figure 1). Sedges and rushes occurred on the exposed lake bed. The pungent pointed sedges extended into the shallow portion of the southern lake for 2 to 5 metres, but absent from the more windswept northern part of the lake. A band free of projecting vegetation occurred around the centre of the lake which was filled with reeds. Both species of Utricularia occurred from the lake edge to the start of the reeds, and possibly beyond this, in the western part of the lake. Both species only flowered in the shallow lake edges.

UTRICULARIA BILOBA.

This species is endemic to the warm temperate east coast of Australia (*Taylor,1990*) and has a distinctive appearance (figure 2). The leaves are thin (to 0.3mm wide), variably divided, and up to 15cm long. In relatively exposed shallow water (c. 10 - 15cm deep) the leaves are 1 to 3cm long, and either undivided or with up to 3 divisions. In progressively deeper water the leaves become both longer and more divided. The longer basal divisions may be further divided. The leaves are often partly covered in a reddish - brown algae and can make them difficult to see. Many of these leaves have become detached from the lake bed and were floating on the surface of the southern end of the lake. Initially I thought they were fragments of an aquatic Utricularia however they lacked both traps and a growing point.

The plants grew in either almost pure sand, or in deeper water, in a peat - like substance composed of partially decomposed sedge and reed leaves. The white stolons were very thin (to 0.8mm thick) and bore bladders to 1.5mm long.

Several scapes were found near the edge of the lake in water 5 to 15 cm deep and were surprisingly robust. They were up to 40cm tall, and to 3mm diameter, and were often branched. The scapes grew erect amongst the sedges and rose to 20cm above the water surface. The dark purple flowers are borne alternately,

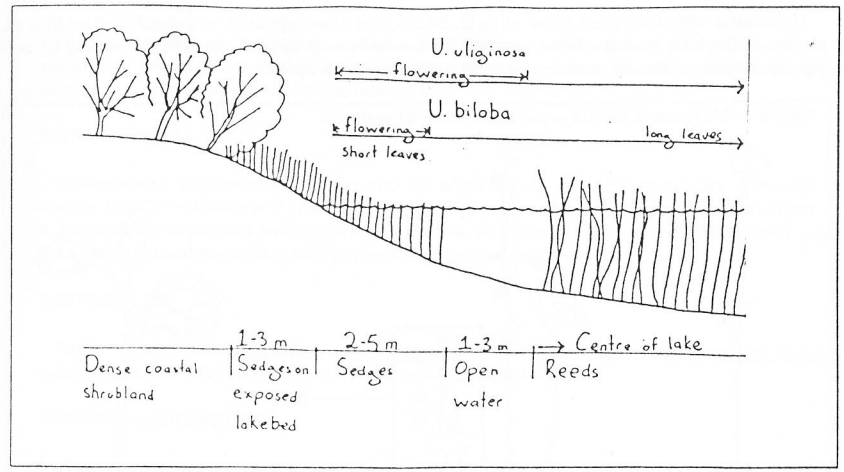


Figure 1 - Habitat of U. Uliginosa and U. biloba amongst reeds and sedges.

with up to 15 flowers per branch. The horizontal lower lip is 1cm across by 8mm wide, with a central cleft at its free end (hence the scientific name). The domed palate has two triangular yellow - edged white bands to 1mm wide by 3mm long. The dark purple vertical upper lip is triangular in shape, but both free corners are folded back. It is 4mm wide by 8mm high. The subvertical spur is curved forwards. It is 8mm long by 2mm diameter and is dark purple in its upper portion but is white around its blunt end.

Not all scapes produced branches but the effect of those that do is to extend the flowering period of this species. It was noted that many flowers set seed however no pollinating insect was noted at the time of the visit.

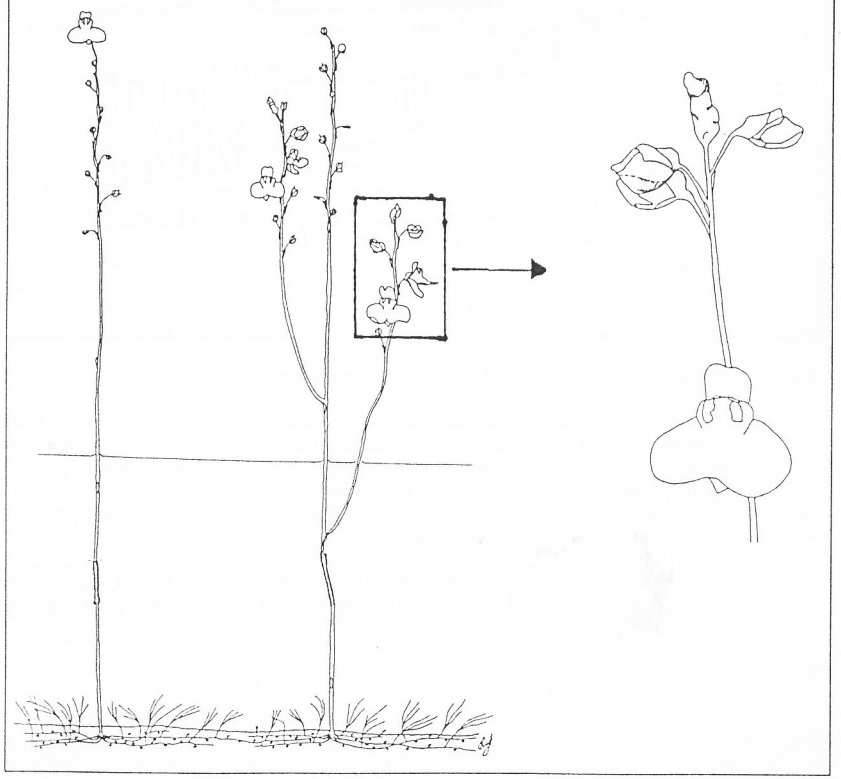
UTRICULARIA ULIGINOSA

This species has a very large natural range which extends from coastal NSW through South East Asia to Korea and India (Taylor,1989). It grows as either a terrestrial or affixed aquatic species with linear leaves 3 to 80mm long by 1 to 3mm wide, the largest leaves occur in the wettest situations and have limited internal strength (figure 3). The golden green leaves have a prominent mid vein on their upper side and the larger ones bear numerous bladders on their paler green underside.

This species grows at the southern edge of the lake. In 1990 it also occurred in soaks at the lakes edge where the large leaves lay on the ground, covered in a film of clear moving water. Leaves of similar size occurred on the numerous scapes, but no open flowers were seen, most rising clear of the water surface. On my second visit I found more patches of the species although the leaves were only up to 4cm long and none of the scapes rose above the water surface. No open flowers were seen so I am not sure if these plants were submerged by a heavy rainfall event or that this was a purely phenomena for this species. The species has flowered for me in cultivation and it is of typical form for this species.

Utricularia uliginosa often grew with U. biloba, but also appeared to extend further into the centre of the lake than the latter species. In the shallowest part of the lake the leaves of both species appeared similar, and care was needed to tell them apart.

Figure 2 - Utricularia biloba growing in 15cm of water.



CULTIVATION.

Both species are amenable to cultivation. Although U. biloba can grow in wet substrate above the water table it does not produce the characteristically divided leaves, instead it bears thin filiform leaves, often with short divisions. To grow it well it is best to mimic its natural environment. This can easily be done by growing it in a small aquarium.

A sand - based growing medium is best used, to which a small amount of peat may be added. In order to obtain clean but acidic water a basal layer of peat moss may be put in. The weight of the overlying sand keeps the peat down. The plant is carefully placed in the growing medium and the aquarium filled with clean fresh water. This is then placed in a moderately well lit position to encourage large leaves and discourage algae to which this species appears prone. Given the coastal habits of this species, exposure to freezing temperatures is best avoided.

Utricularia uliginosa may be grown in a similar set up or in a pot of peat and sand mix and watered by placing on a shallow saucer. In the latter setup the leaves will be smaller but algae is not a problem, and it will take more intense light.

CONCLUSION.

Observations of Utricularia biloba and U. uliginosa in the wild reveal the niches of these species in their environment and also provide important clues about how to cultivate them. This is particularly important with regard to U. biloba which is a beautiful endemic species, with an interesting growth form, but which is currently rare in cultivation.

REFERENCES.

Taylor, Peter. 1989. Kew Bulletin Additional Series XIV: The genus Utricularia - A Taxonomic monograph. Her Majesty's Stationary Office, London, pp. 724.

ACKNOWLEDGMENTS:

I wish to thank Allen Lowrie for telling me of this location and for comments on this article.

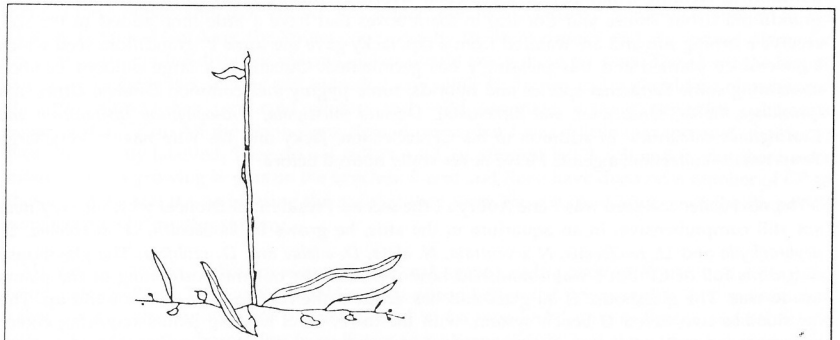


Figure 3 - U. uliginosa

Carnivorous Plants In France by Ken Harper.

During my time as editor of Flytrap News, I established contact with a number of other CP societies and people all over the world. In particular, I had frequent correspondence with Pierre Sibille of Dionee (French CPS) and in mid 1992, I was fortunate enough to stay with him and his wife Martine for 5 days while on a holiday in Europe. This article details part of my trip, the collections visited and observations concerning Northern Hemisphere CP cultivation.

I arrived in Paris on July 17th, 1992. After meeting Pierre at the airport, we went by public transport back to his home in Rouen, 120km north - west of Paris in the province of Normandy. Pierre's written English is superb and his spoken is also very good which I was grateful for as my knowledge of French is non existent despite my mother fluently speaking it.

Pierre's garden is delightful; he calls it "wild" but it contains many plant species, especially *Cyclamen*. Inside the house Pierre has a number of aquariums, each housing the uncommon or unusual. Two contain CP, including *Heliamphora heterodoxa, Heliamphora minor, Nepenthes ventricosa, N.bongso, N.x trichocarpa, N. vieillardii, N.lowii* seedlings, *Drosera villosa, D. adelae* and *D prolifera*. In my years of growing CP's I have never seen *Heliamphora* as healthy as these and *D. villosa* is also worthy of mention. In addition to these plants, Pierre has an aquarium containing newts which I found most interesting.

Pierre has two glasshouses in his yard. The first is on one side of the house and here grow huge Cobra Lilies (*Darlingtonia californica*) and the lovely *Pinguicula* as well as some of the more common *Drosera*. Pierre has another aquarium here, this time containing black and yellow salamanders which are very sensitive to strong sunlight and hence are sheltered from it.

Pierre's second glasshouse contains mainly *Sarracenia* species and tuberous *Drosera*. It was great to see that a lot of the seed that I had sent over the years had germinated and the plants were indeed healthy.

On July 18th I visited a number of Pierres friends living near Rouen. Jacky Allain has a sensational Pinguicula collection, all grown in a fibreglass shade - house; he has many species in addition to creating a number of spectacular hybrids. Outside Jacky grows two forms of P. grandiflora (from France and Corsica) in foam boxes that have a little lime added to the soil, receive morning sun and are watered from a tap. Jacky gave me some P. grandiflora seed which I have since planted and this pleasingly has germinated. Outside is a large outdoor peatbog containing some *Sarracenia* species and hybrids, some pygmy and common *Drosera, Utricularia (praelonga, livida, sandersonii, and dichotoma), Dionaea muscipula, Drosophyllum lusitanicum and Darlingtonia californica*. In addition to his CP collection, Jacky and his wife have a very large *Sempervivum* collection, a genus I have never really noticed before.

The next collection seen was Rene Aubry's (the second President of Dionee) which is very neat yet still comprehensive. In an aquarium in the attic, he grows *U. humboldtii, U. dichotoma, U. nephrophylla* and *U. reniformis, N x ventrata, N. alata, D. adalae* and *D. prolifera*. The glasshouse outside is full of CP but I was astonished how well thought out the positioning of the plants inside was. The glasshouse is all glass and has vents in the roof to release heat build up. The interior has two tiered U bench system, with the lower level holding plants requiring cooler temperatures and indirect sunlight (ie *Pinguicula*) and some pygmy Drosera, while the upper level has a variety of CP (*Cephalotus follicularis, Darlingtonia californica, Byblis liniflora, Utricularia, Drosera, Dionaea muscipula* and *Sarracenia*) and some cacti. Renes glasshouse is approximately 3m wide by 3m long x 3m high with a typical A frame roof. The setup was so neatly arranged that any visitor would be impressed and this encouraged me to tidy up my own collection when I returned home.

The next day (July 19) I watched Australia beat New Zealand in the Rugby Union and went with Rene and Pierre to Sotteville Railway station. Rene works as a train driver for the French railway and arranged for me to see one of the world - famous TGVs. This train travels normally at 270km/h, rather a lot faster than any Australian train.

We are somewhat fortunate to have in Australia so many native CP growing close by but in France centuries of civilisation have reduced this opportunity. In the afternoon I visited a site in Foret de Bray (Bray Forest), Mesangueville with Sebastien Duvere and Pierre where D. *rotundifolia* grows. This place is wonderful and it is necessary to wear gum boots to reach the area as it is a natural area for accumulating water runoff from the surrounding hills. Sphagnum moss grows in excess of 50cm deep and as I walked through it, it felt as though you were floating over a very large amount of water. The sphagnum bog is huge, probably 50m long by 30m wide and D. *rotundifolia* grows prolifically. There are thousand of plants her, growing in birch, *Erica tetralix* (heath), *Oxycoccus palustris* (a pretty ground creeper with red berries) and *Eriophorum* species. The adult *D. rotundifolia* has petioles almost 7cm long with 6 or 7 white flowers per scape. Here in Australia I have seen large stands of *Drosera* (*D peltata, D. spatulata* and *D. burmanni*) but this site, for sheer abundance of plants, is at least equal to any I have yet found.

In the late afternoon Pierre and I visited Nelly and Pierre Tourmente at Gueutville. Pierre Tourmente was the inaugural President of Dionee and he and Nelly sell Bonsai from their shop in Rouen. They have a wonderful bonsai collection and grow most of them in a large plastic igloo about 40m long. While their interest in CP has diminished over the years, they still have many *S. flava* and huge plants of *Darlingtonia californica* (almost 50cm tall).

On July 20th I met serge Lavayssiere (the current President of the French CPS) and he, Jacky, Rene, Pierre Sibille and moi visited The Rouen Botanical Gardens. Somewhat similar to the Sydney Botanical Gardens, the Rouen one is run by the local council and also grows plants for its own use in garden displays and any visitor would enjoy these gardens. They have the largest collection of *Nepenthes* species and hybrids I saw while in France and it should be remembered that this country has very cold winters and mild summers, making *Nepenthes* cultivation somewhat difficult. All the plants were flowering size but I was a little disappointed that some were incorrectly labelled. They do not collect seed, or attempt hand pollination, but there were many cuttings growing in pots on the benches. Pierre and Rene have donated a number of CP to these gardens and it was pleasing tho see that they were being looked after, with the *Pinguicula moranensis* and *P x sethos* thriving.

My final two days in France were CP free and spent touring around Rouen and seeing the tourist sites in Paris. The weather could not have been better and it was with a little sadness that I flew back to the Netherlands on July 22nd. I had a wonderful time in France and could not have asked for better hospitality from Pierre and Martine Sibille and their friends I visited. To them all go my best wishes and I hope that one day they come to Australia so I can reciprocate the hospitality.

Well, what have I learnt about CP from this trip?? There are quite a few things that I intend doing or have already done since returning home:-

1) I realise now why so many of my *Pinguicula* die. They are badly neglected and are growing in the wrong places. From now on I intend growing them under my benches to protect the from the strong sunlight and pot them in a perlite/peat mix instead of the perlite/sphagnum one that I had been using for a number of them. Interestingly I grow only *P. primulifolia* well but the French growers have difficulty with it and I have recently sent its seeds over to spread around and hopefully germinate.

Photo Showing Heliamphora heterodoxa . Pierre Sibille 21/4/92

2) For the fourth time I am trying to grow *Darlingtonia californica*. Seeing such huge plants in France has inspired me to try even harder to get it to grow, not exist!! I have a number of these seedlings growing in pure sphagnum moss in a protected area which I hope will allow them to survive summer and

3) My collection has been purged of sick and weak Sarracenia hybrids. Over the years this part has built up with little rational thought about whether the hybrid was in fact of collectable benefit. Rene Aubry only keeps his strongest and healthiest plants and I am trying to adopt the same philosophy. In any batch of hybrids there will be good and bad ones and I urge all growers to look at each and decide its value, while ensuring that all hybrids are correctly labelled to prevent confusion at a further date.

The climates of Sydney and Rouen are remarkably different but I have learnt a lot about growing *Pinguicula* and *Darlingtonia californica* from my French friends. It is always nice to have contacts in other parts of the world and visit them after years of correspondence. In the next few years I would like to visit Mount Kinabalu in Borneo, Malaysia, and on another trip Okefenokee Swamp in North America but until then, *vive la France!!*

Historical Reprint

(foreword by Ken Harper)

The following article was originally published in an 1853 edition of *Smithsonian Contributions to Knowledge*. Hawkeye Rondeau sent me a photocopy of the article by Torrey, detailing the original scientific description and naming of *Darlingtonia californica*. The article is published here in its entirety and without comment. Thanks are extended to Hawk for providing me with this material of unique historical interest.

On the *Darlingtonia californica*, a new pitcher-plant, from Northern California.

By John Torrey

This new pitcher-plant was first detected by Mr J.D. Brackenridge, Assistant Botanist to the United States' Exploring Expedition, under Captain Wilkes, while passing overland from Oregon to San Francisco, in the year 1842. He found it in a marsh, bordering a small tributary of the Upper Sacramento, a few miles south of Shasta Peak. Owing to the lateness of the season (it was October) the flowers had passed; and not even a seed vessel was found, but only the leaves and tall scapes, with the remains of a single capsule. The leaves, however, were so peculiar, that no doubt was entertained of the plant being either a *Sarracenia*, or a near ally of that genus. Without the flowers, nothing further could be determined respecting it; but from the bracteate scape and deeply parted lamina or appendage of the leaves, it seemed more probable that it was distinct from *Sarracenia*. Long had I been hoping to receive the plant in a more complete state, when it was last brought to me by my friend, Dr G.W. Hulse, of New Orleans, who found it in flower in May 1851, in the same region, and perhaps in the very spot where it was discovered many years before by Mr Brackenridge. The plant proves to be generically distinct from *Sarracenia*, as well as from the genus *Heliamphora* of Bentham; and I take great pleasure in dedicating it to my highly esteemed friend Dr. William Darlington, of West Chester, in Pennsylvania, whose valuable botanical works have contributed so largely to the scientific reputation of our country. The genus dedicated to this veteran botanist by De Candolle has been reduced to a section of *Desmanthus* by Bentham; and a Californian plant, on imperfect specimens of which, I had recently indicated a genus under this name, proves to be only a species of *Styrax*. The following are the characters of the new genus :-

DARLINGTONIA, Nov. Gen.

Calyx, ebracteolatos, 5-sepalus; sepalis distinctis subpetaloideis. Corolla 5-sepala; petalis latissime unguiculatis; lamina ovata ungue multo minore. Stamina 12-15, uniserialia; filamentis brevibus subulatis; antheris oblongo-linearibus; loculis inæqualibus. Ovarium turbinatum, 5-loculare, 5-lobatum; apice dilatatum concavum. Stylus brevis, columnaris, 5-fidus; laciniis linearibus, divergentibus, apice intus stigmatosis. Ovula plurima anatropa, placentas dilatatas obtegens. Capsula.- Herba perennis, Californica, uliginosa, foliis Sarraceniæ; lamina profunde biloba: lobis divergentibus: scapis unifloris, bracteatis: bracteis infimis distantibus, supremis approximatis imbricatis: flore nutane purpureo.

Having recently obtained good flowering specimens of this plant, the following description of it is appended :-

STYRAX CALIFORNICUM (*n. sp.*): foliis ovatis utrinque obtusis subcoriaceis interregimis ramulisque glabriusculis vel subtus minute stellato-tomentosis, raceims terminalibus 2-4 floris, pedicellis flore multo brevioribus incrassatis cum calyce brevissime 6-dentato sub-tomentosis; corollis sexpartitus: filamentis ad medium usque monadelphis.

HABITAT -- Upper Sacramento: Col. Frémont. Near the upper crossing of the Sacramento about lat. 40°30′: Dr G.W. Hulse. Foot-hills of the Yuba River: Dr. Stillman. Flowers in March and April.

An upright branching shrub, seldom attaining a height of more than six feet. The leaves vary from an inch to two and a half inches in length, and are more or less broadly ovate in outline. The upper surface is paler, and either nearly glabrous or clothed with a close stellate pubescence; on the upper side they are usually quite smooth. The racemes are produced at the extremity of short leafy branches, and are mostly about three-flowered; occasionally the flowers are solitary. The pedicels are from three to six lines long, and are thickened upward. The campanulate calyx is furnished with six very short subulate teeth. Corolla about three fourths of an inch long, nearly white, or slightly cream colour: constantly 6-parted, with oblong-lanceolate rather obtuse segments. Stamens 10-14; the filaments monadelphous to near the middle. Ovary 3-celled, with several ovules in each cell; but the dissepiments soon separate from the walls. Style slender, longer than the stamens; stigma minutely 3-cleft. Immature fruit one-celled, with a single seed.

Of the numerous American species of *Styrax* only two have been found on the west side of the Continent, as far north as Mexico. This is the most northern species of the genus found in any part of the world. It has a strong resemblance to *S.officinale* of Southern Europe, from which it is chiefly distinguished by its fewer-flowered racemes, thickened pedicels, and longer stamineal tube. There is a well-marked, unpublished species (*S.PLATINIFOLIUM, Engelm. ined.*, gathered on the Guadaloupe, north of New Braunfels, Texas, by Mr. Lindheimer), the corolla of which is more commonly 6-parted. Its dilated and subcordate leaves are glabrous and shining on both sides.

Darlingtonia californica

HABITAT - Head waters of the Sacramento; Northern California, near Shasta Peak; growing in marshes, and flowering in May (Mr. J.D. Brackenridge and Dr. G.W. Hulse).

A perennial herb. Root-stock short and thick, producing numerous, stout, dark brown, fibrous roots. Leaves all radical; the adult ones from eighteen inches to two feet or more in length; the petiole or pitcher tubular, gradually tapering downward, and singularly twisted on its axis about a half turn, marked with strong parallel and longitudinal veins which are connected by very slender veinlets. The summit is vaulted, and formed into a sac about the size of a hen's egg, on the under side of which is an oval orifice, about half an inch in diameter, opening into the cavity of the pitcher. The aerolæ of the sac, and also of the back of the tube, on the upper part, are discoloured (of a dull orange colour in the dried specimens), as in *Sarracenia variolaris* and *S.Drummondii*. Along the inside of the petiole is a narrow wing, which is single, except at the base, where it separates into two plates that clasp the scape and the base of the superior leaves. The lamina is narrow at the base, and deeply divided into two somewhat unequal widely-spreading lobes, which are oblong-lanceolate, rather acute, bent downwards and often also backwards; the inner (or properly upper) surface very minutely pubescent. The pitcher inside the hood is retrorsely hirsute with short conical hairs; from thence downward it is glabrous; but towards the base it is lined with long slender hairs, also pointing downwards: at the bottom remains of insects were found. Neither these hairs, nor those of the lamina, appeared to be of a secreting character. The scape is from one to four feet long, flexuous, angular, glabrous, and furnished with sessile clasping straw-coloured scales. These scales are foliaceous and alternate; the lower ones distant and lanceolate, the upper more and more approximated and broader, while those near the flower are oblong-ovate and imbricate. They are marked with longitudinal veins, which are forked above. The upper surface is paler than the lower, and under a lens shows a minute conical papillæ. The flower, when fully expanded, is nearly two inches in diameter. The calyx consists of five oblong, rather acute sepals, which are of pale straw-colour, and are quincuncially imbricated. There are no calyculate bractlets at their base. The corolla is five-petalled, about the length of the calyx, and its æstivation is likewise quincuncial. The petals are oblong, pale purple, marked with deeper reticulated veins, and are apparently not connivent over the pistil. They are furnished with a small ovate, concave lamina, and a very broad, obovate claw, which is two or three times larger than the lamina. Stamens from twelve to fifteen, hypogynous, inserted in a single series, and partly concealed by the dilated summit of the ovary: filaments short and rather stout: anthers oblong, with the cells very unequal and opening longitudinally, turned by the twisting of the filament so that the cells are anterior and posterior, the smaller cell lying against the ovary. Pollen simple and spherical. The ovary is turbinate, five-celled and somewhat five-lobed, concave and dilated at the summit, so as to exhibit a sort of margin which projects over the stamens: the columnar style is short, and five-cleft at the summit; the narrow segments diverging, and stigmatose at the extremity, on the inside. Ovules very numerous, anatropous, covering the large placentæ, which project into the cells of the ovary. No fruit was found; but, on one of the specimens collected by Mr. Brackenridge, there was a small portion of a capsule, which was evidently five-celled.

From *Sarracenia*, this genus differs in the calyx not being calyculate; in the form of petals; in the somewhat definite and uniserial stamens; in the dilated turbinate ovary; and especially in the absence of the large umbrella-shaped summit in the style, which is so conspicuous in the former genus. The forked lamina of the leaf, and the bracteate scapes, are also characters not found in any *Sarracenia*.

From *Heliamphora*, it is still more distinct. In that genus, the scapes are several-flowered, and the flowers are destitute both of calyculate bracts and petals; the style is entire and not dilated at the summit, and the ovary is three-celled. The leaves, also, differ in their greatly dilated orifice, in the very small lamina, and in the doubly-winged pitchers.

The geological distribution of *Sarraceniaceæ* is worthy of notice. This small order consists of but three genera, which are all exclusively natives of America. The oldest or typical genus is confined to North America; and, of the six species, one only (*Sarracenia purpurea*) has an extensive range, being found from lat 48°, north, to Southern Florida, but westwards only as far as Ohio; the remaining species being confined to the Southern States. *Heliamphora*, a genus of a single species, is a native of British Guiana, and has not been found elsewhere. *Darlingtonia* is the only representative of the order west of the Rocky Mountains, and even there it seems to be extremely rare.

The affinities of *Sarraceniaceæ*, not withstanding the discovery of *Heliamphora*, and now of another genus belonging to the same family, are nearly as obscure as ever. Its resemblance to *Nymphæaceæ* and *Papaveraceæ* has been pointed out by several botanists; and Dr. Lindley, without hesitation, places it between the latter order and *Ranunculaceæ*. A more remote affinity to *Droseraceæ* has also been indicated; but this, however, is chiefly seen in the structure of the leaf of *Dionæe*.

The most recent opinion respecting the affinity of *Sarraceniaceæ* is that of M. Planchon, who thinks these plants are very closely related to *Pyrolaceæ*. This acute botanist points out some striking characteristics in which *Sarracenia* resembles the genus *Monese*(*Pyrola uniflora, Linn.*); in addition to which, it may be remarked that the seeds of *Heliamphora* are furnished with a loose winged testa and minute embryo, as in *Pyrolaceæ*. Between *Moneses* and *Darlingtonia* the comparison may be drawn more closely: in the floral envelopes and the almost definite stamens, in the structure of the ovary and in the radiating stigmas, as well as in habit, the likeness of our new genus to *Moneses* is quite remarkable. In many points, too, we may trace in *Darlingtonia* an approach to *Monotropa*, of the nearly related family *Monotropaceæ*. *Heliamphora*, in its several-flowered scapes, is more like *Pyrola*. The singular pitchers of *Sarraceniaceæ* might seem to show a wide difference between the families thus compared, but characters drawn from the abnormal conditions of a single organ are not of high importance in determining affinities. In conclusion, I would remark that, while offering a few additional considerations that seem to strengthen the views of M. Planchon, I do not wish to be considered as yet adopting those views. When we obtain the fruit of *Darlingtonia*, perhaps it may give us some better knowledge of the place that its family should occupy in the Natural system.

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DON'T FORGET

At the August Meeting on the second Friday of August (13/8/93) there will be a presentation by an overseas guest speaker

Mr Fernando Rivadavia will talk about Carnivorous Plants In Brazil

Please attend to avail yourself of the services that YOUR Society can provide.

(previous advice of this talk being on the 20th of August has been changed to fit in with Fernando's travel arrangements)

VISITORS WELCOME

FTN 1st July 1993

Notice of motion

Proposed Amendment to the Constitution of the CPS of NSW to be put to the General Meeting to be held on 10th September 1993.

Replace Existing clause 39 below:-

39. In the event of a general meeting or Extraordinary meeting of the members deciding that the Society be wound up or for any reason whatsoever, the Society be wound-up or cease to function, all assets shall become the property of a society with similar objects, such society to be decided upon by the Committee.

With 39a, 39b and 39c below

39a. The Society shall not be dissolved except by a resolution passed by a two-thirds majority of those present and voting at a Special General Meeting convened for that purpose, of which 30 days notice shall be given to the members. Such resolution shall give the instructions for the disposal of any assets held by or in the name of the Society provided that if any property remains after the satisfaction of all debts and liabilities such property SHALL NOT be paid to or distributed among the members of the Society but shall be given or transferred to such other institutions having objects similar to some or all of the objects of the Society, as the meeting shall determine.

39b. To guide the members present at a dissolution meeting in their deliberations it would be appropriate to bestow the remaining property of the Society upon one or more institution that belongs to one or more of the following classifications Carnivorous Plant Society, Horticultural or Agricultural Societies, Botanic Gardens, University faculty engaged in Horticultural, Agricultural or Botanical Research, Non commercial body engaged in cultivation or preservation of Carnivorous Plants or any CITES listed species of flora.

39c. Notwithstanding section 39a above the members of the Dissolution Meeting may alternatively resolve, that after all debts and liabilities of the Society are discharged, to sell all assets and place the funds in perpetual trust with the intention that they be may be reclaimed by a reformed Carnivorous Plant Society based and operating within NSW. The members of the dissolution meeting shall formulate terms of the trust deed, in particular the criteria for a successful claim to the funds from the trust, and nominate two members to have such a trust deed prepared and carried into effect. The legal and administrative costs associated with such action shall be paid from the funds with the residue placed in perpetual trust.

Amalgamation of Carnivorous Plant Societies

Preliminary correspondence between this Society's President has occurred with the ACPS through their secretary Mr. Brian Denton on the matter of amalgamation. When the ACPS's initial reply of 3rd June was received it appeared that the matter would proceed into meaningful negotiations.

However on 6th June 1993 the ACPS sent another letter which lead the members at the June 11th AGM concluding that there was a significant probability that the motives of the ACPS in proposing amalgamation included the tactic of waiting for the CPS of NSW to fold in order to afford the ACPS considerable financial advantage (to help pay for the computer just purchased and a proposed new photocopier and laser printer) without necessarily taking positive steps toward improving the position of Carnivorous Plant Cultivation in all parts of Australia.

Statements such as **"at best, we hope to gain 33 new members"** and **"we cannot see any portion of our current subscription being available for distribution to a State Branch of the society"** could hardly be interpreted in any other way.

The members at the June 11th AGM meeting resolved that should these suspicions be confirmed at some later date a mechanism should be in place so that such a course of events would not be a foregone conclusion hence the proposed amendment to the Constitution to be put the General Meeting to be held on 10th September 1993.

The Committee of the ACPS has apparently not thought in depth on the matter of amalgamation before they proposed it as indicated by other sections of their letter of 6th June 1993 viz:-

Winging about "increasing the workload on our already burdened administrative volunteers" when logic would indicate that the Adelaide group would be a Branch of the main body after amalgamation was considered odd given that the main body may not, at any one time be based in Adelaide nor, for that matter, wholly grouped in any one City and thus the "workload" will not always be a perpetual cross that the "Adelaidians" will have to bear.

The ACPS states that "we cannot see any portion of our current subscription being available for distribution of a State Branch of the society". They do not even address the question of how the South Australian Branch of an amalgamated society will be financed on a long term basis.

Remote members subsidise the meeting costs of any society's head office but what the CPS of NSW's amalgamation proposals offer them that the ACPS's letter of the 6th June would deny them is support to form local branches.

However amalgamation without at least retention of the existing local groups let alone without a mechanism to support and encourage new local groups (branches) is a backward step. The Committee of the CPS of NSW recommends that such a course should not be taken even if this means cancellation of the amalgmation proposals.

The president of the CPS of NSW has corresponded with the Secretary of the ACPS expressing our disappointment in the approach now taken by the ACPS and requesting that they engage in constructive and meaningful negotiations. Only time will tell if the Committee of the ACPS are prepared to engage in meaningful negotiations or not.

Freedom of Information

The entire set of correspondence has been tabled and is available to members upon request. Members who cannot attend meetings should send a stamped (approx 160mm x 225mm size for 125 grams) addressed envelope to the Societies PO Box 87 Burwood to obtain a copy if they so desire. Similarly copies of the constitution are likewise available upon request.

Where to from here?

The CPS of NSW wishes to promote the culture and propagation of carnivorous plants, their preservation in their natural habitat, scientific and cultural knowledge of carnivorous plants for all persons in Australia growing them.

While the CPS of NSW believes that amalgamation of the three remaining Australian CP Societies together with local state, provincial or suburban branch formation seems to be the appropriate course to take to achieve that goal **the local branches are seen as an absolutely vital part of that concept.**

It is envisaged that these local groups would start as state groups progressing toward the formation of suburban and provincial centre groups as, hopefully, Carnivorous Plants become popular. (It is felt that only 10 to 15 people would be needed to form a viable local group.) This concept is not unusual as there is usually a proliferation of local groups of any popular plant species or garden groups.

To achieve viability of local groups, whether as a branch of the ACPS after amalgamation or as an independent Group, it would appear that a change of direction may be called for. What are your opinions on the following:-

Free the committee of the ACPS from the duty of conducting formal meetings in order to enable the meetings to concentrate on making the meetings interesting. Change the Constitution if necessary to dispense with reading various reports by tabling them instead. Announce broad definition of correspondence received, table it, and only discuss it if the members present want to. The only exception would be the AGM.

Does the journal, Fly Trap News, have to always contain formal articles? What do you want in the journal? Are you prepared to contribute to growing tips etc.? Do you want to buy or sell a plant or two? Publish your wish list as well as your surplus list. Do you want help with growing a particular plant? Write a letter to the editor. Do you have success in growing a particular plant? Write a letter to the editor.

Are you prepared to use the seed bank? Quite frankly the use of the seed bank has been dismal with seeds often being thrown out because they are too old. What if seeds in the seed bank were free and members only sent in money to cover postage? What if those who donate seeds get, say, two days grace per species to request seeds ahead of others?

What other suggestions do you have on the services that you want? What do you feel that you can contribute?

Please take the time to tell us so that you will get the services that you want!

PROXY FORM

I, ...

of .....

being a member of the CARNIVOROUS PLANT SOCIETY OF NEW SOUTH WALES

HEREBY APPOINT

(i) ..... of .....

OR FAILING HIM

(ii) ..... of .....

OR THE PRESIDENT AS MY PROXY TO VOTE AND OTHERWISE ACT ON MY BEHALF

AT THE $\frac{\text{EXTRAORDINARY}}{\text{GENERAL}}$ MEETING OF MEMBERS TO BE HELD ON .....

AND AT ANY ADJOURNMENT THEREOF.

Signed this ..... day of .....

.....

Member's Signature