



Chelsea Flower Show

Photos by J. Sirkett



The Chelsea Flower Show

by John Sirkett, British CP Society

This year, for the fourth time, the Carnivorous Plant Society staged an exhibit at Chelsea Flower Show. I have just read an article that described it as "one of the most daring we have ever attempted," which is an interesting comment, and one that I would not question. During the judging, we were described as a young and vigorous society (some of us didn't feel all that vigorous by the end of the week), and it was suggested, very politely, that we were showing plants that were not really any of our business, but in many ways, that's what we were trying to find out.

What do *you* mean when you say Carnivorous?

Perhaps I had better start at the beginning and explain. Chelsea is one of the world's great flower shows. The Royal Horticultural Society put up a big white tent in the middle of London, and for a week in May, it is filled with the most spectacular things that the world of horticulture has to offer. The exhibitors get about two weeks in which to put up their stands, though most use rather less time. Everything must be ready for 4:00 p.m. on Monday, when the Royal party arrives to view the show. On Tuesday, it is open from 8:00 a.m. until 8:00 p.m. for members of the Royal Horticultural Society to view, and then for the next three days it is open to members of the public. Last year, a quarter of a million people came to see it. For the Society, it is our main event of the year, where we go out and meet the public, and try to correct some of the mistaken ideas about carnivorous plants that people seem to have. We are, after all, an educational charity. I will admit, however, that there is another reason for exhibiting. We sell an introductory booklet about carnivorous plants, and try to make a lot of money! This is essential to keep the Society going. Our costs for such things as the meetings, journals and newsletters are currently much higher than our income from subscriptions.

For the last three years, we have tried to put on a spectacular display of c.p., and we have been awarded two silver gilt and silver medal for our efforts. The first two years' displays were based on replica bogs; however, last year a commercial firm exhibited for the first time, and they also chose the 'Bog-Look.' We felt that there was no point in duplicating the stands, and so we concentrated on showing as many as possible of the c.p. in cultivation. These ranged from *Heliamphora* to *Aldrovanda*, displayed on a very striking black and white stand.

This year presented us with a new challenge. All through the year we had been hearing from speakers at the meetings, and from the members during general discussions, about plants that hover on the edge of conventional carnivory, and which bring us back to the question "What do you mean when you say a plant is carnivorous?" There have been a number of definitions put forward, some of them lengthy and complex, yet I haven't seen one that does more than fit some of the facts. We decided to ask the general public what they thought by presenting them with the problem at Chelsea Flower Show. We had moved beyond the visual display and were trying to make the stand into an active part of the debate. Our aim was to provide a visually appealing stand that also inspired comment on the subject. We were awarded the Flora Medal for our display, aptly described by one member as the booby prize, and this reflected the visual effect of the stand, which was interesting but not spectacular.

We were slightly hampered right from the outset by size of the stand that we were allocated, seventeen feet by seven. This was longer and thinner than we had wanted, but this turned out to be an advantage. A strip two feet wide all round the stand was raised to a height of two feet, and the central block was raised two feet above this. This central peak was used

to display the tallest species and hybrids that we could get hold of, from the genus *Sarracenia*. These were to attract the eye to the stand, and to give us the maximum height possible. At the lower level, the stand held the bare bones of our argument. Along one of the sides, we displayed 'Sticky Traps,' a combination of carnivorous and non-carnivorous plants that had all developed sticky parts, for one reason or another. The other long side repeated the idea, using plants that had developed pitcher structures. The short ends were rapidly filled with displays of the British carnivores, and with a large patch of venus fly traps, respectively. I'm sure that there are lots of small children who would have been genuinely delighted if this plant had actually bitten the ends off of their probing fingers!

The 'sticky' display started with the sticky buds of Horse Chestnut, which had been in my refrigerator for three months to keep them in their sticky state. (They opened in record time when brought out into the warm.) These, and some species of *Rhododendron*, use sticky buds to protect their soft tasty innards from insect attack during the winter, and although they undoubtedly catch plenty of insects, they are not carnivorous. The same is true for *Plumbago* which protects its flowers with a mass of sticky hairs on the calyx. The London Pride, *Saxifraga urbium*, and indeed nearly all of the Saxifrages, is a bit more open to question, with sticky hairs all the way up the flower scape. The next plant in the sequence was the Petunia. The whole plant is covered with sticky hairs, and some Italian research from early in this century says that this plant is definitely carnivorous! The same paper comes to the same conclusions about *Silene viscaria* (Catch-fly), which we had to force into flower specially for the show. I'm not so sure about that one myself. The shepherd's-purse, *Capsella bursa-pastoris* is a strange novelty, with sticky carnivorous seeds, (see C.P.N., vol. 7, p. 39). The last major question mark hung over the head of *Martynia lutea* (synonym *Ibicella lutea*, related to the Unicorn Plant), which is

covered in all its parts with sticky glandular hairs. While I'm on the subject, I should mention the sticky-haired species of potato and tomato, which we tried to get onto the exhibit, but were thwarted by the plants' natural dormancy—without its sticky leaves, one potato looks much the same as another. Carnivorous vegetables seems rather a back to front concept anyway. From *Martynia* we progressed to *Drosophyllum*, probably the simplest of the conventional sticky carnivores, and then on to *Drosera* and *Pinguicula*.

The pitcher traps started at an equally simple level with the common lupine, which does no more than catch a drop-let of water in the centre of its leaf. The teasel (*Dipsacus*) carries this a bit further. The bases of the leaves join to form great buckets in which water and debris collect, and which raise it to the rank of possibly carnivorous. Following this, we had a display of *Tillandsia* (Bromeliads), selected from those species that have hollow bulb-shaped bases in which ant colonies live. This is one of the most sophisticated carnivorous (?) symbioses that I know. Another bromeliad, *Neoregelia*, returned us to the 'watery grave' principle, the green rosette of leaves forming a water-catching pitcher, and the bright red inner leaves acting as an attraction. From this, we moved to *Sarracenia purpurea*, using a very similar principle, but in the slightly duller green and purple. The 'true' carnivores then continued with *Darlingtonia*, and *Nepenthes* (which looked distinctly ill by the end of the week) and then on to the most complex trap of all, represented by *Utricularia sandersonii*.

Throughout the week the stand was kept manned by at least four people, who were kept busy answering questions and holding lively debates both among themselves and with the public.

I'm sure a number of people wondered what we were doing, but couldn't be bothered to ask; however, these were outnumbered by the people who were prepared to tell us what they thought.

(Continued on page 106.)

regrowth yet to bring light and space limitations into play. The observations were in effect a model of the effects of these three factors on pitcher plant populations. (Reprints: D.E. Schnell, Rt. 1, Box 145C, Pulaski, VA 24301).

Simons, P., The touchy life of nervous plants. *New Scientist*, March, 1982.

This popular article discusses the need for plant scientists to resume research into the "real" electrical signals that a large variety of plants evoke including CP for regulating many different processes. The author describes why electrophysiology was neglected for decades, which left a gap of knowledge that was filled by sensationalists who grossly exaggerated the plants' response to stimuli. This is an article that will stimulate new ideas for research and should be read by everyone interested in this area.

Watson, A. P., et. al. 1982. Arthropod associates and macronutrient status of the red-ink sundew (*Drosera erythrorhiza* Lindl.). *Australian J. Ecol.*

Various arthropods associated with this sundew in native habitat were studied. Several were prey for the sundew, some were pre-robbers. Physical model studies in the field indicated that insect components were sufficient to supply 100% of nitrogen and phosphorous, but a negligible portion of potassium which came from soil sources.

Wolfe, L.M. 1981. Feeding behavior of a plant: Differential prey capture in old and new leaves of the pitcher plant (*Sarracenia purpurea*). *Am. Midl. Nat.* 106:352-359.

An environmental chamber of *S. purpurea* plants was set up in the lab and the plants captured measured numbers of fruit flies introduced into the chambers. New pitchers captured more insects than old, as did pitchers with wider openings. Also, older pitchers on plants with a new pitcher captured more flies than older pitchers on plants without new pitchers. These results were within limits of numbers of introduced flies which were varied.

DES

WANT ADS

Jim Comia (18701 San Rufino Dr., Irvine, CA 92715). WB: *Sarracenia oreophylla*, *S. rubra wherryi*, *S. rubra gulfensis*, *S. rubra alabamensis*, *S. rubra jonesii*, *S. rubra rubra*, *Pinguicula vulgaris*, *S. purpurea venosa* "Louis Burk" flower, *S. flava* "red-throat," *Pinguicula macroceras*.

Harris Emmons III (824 McGilvra Blvd. E., Seattle, WA 98112). WB: (plants) *Drosera adelae*, *D. filiformis*, *D. schizandra*, *D. regia*, *D. binata* (T form), *Pinguicula caudata*, *Cephalotus*.

Steve Friedrich (172 Hutchens Close, Baringa Gardens, Melba A.C.T. 2615, Australia). Wanted: Plants, seeds or cuttings of *Nepenthes* and *Heliamphora*. I have for trade *Drosera proliferata*, *D. schizandra*, *D. indica*, *Byblis gigantea*, *Chrysamphora californica*, *Nepenthes mixta*, *N. balfouriana*, *N. mirabilia* and many others.

Donald Kalb, Jr., (Box 25, Peosta, Iowa 52068). WB: *Byblis gigantea* seeds or plants; *Drosera regia* seeds or plants.

Lee's Botanical Gardens (P.O. Box 7026, Ocala FL 32672). TS: giant *psittacina*, red *flava*, *flava mixima*, *psittacina* × *alata*, *psittacina* × *purpurea*, *flava* × *rubra*, *rubra* × *purpurea*, *psittacina* × *leucophylla*, *leucophylla alba*, many more. WT: *Nepenthes* plants or cuttings.

CHELSEA (from page 100.)

If I may be allowed to quote from our rules, the Constitution of the Society, our primary aim is 'to further the knowledge of the public in the field of carnivorous plants.' I think that this stand furthered everybody's knowledge.

Naturally, no education process ever stops, and we would be pleased to hear other people's comments on plant carnivory so that we can work towards a definition of plant carnivory that is acceptable to everybody. The Carnivorous Plant Society can be contacted at 'Carn View,' Lanner Hill, Redruth, Cornwall TR16 6DA, ENGLAND. (John Sirkett's address.)