

# International Carnivorous Plant Society

## Seed Bank

August 19, 1989

*Byblis liniflora* (6); *Capsella bursa-pastoris* (non CP); *Dionaea muscipula*; *Drosera aliciae* (10); *D. arcturi* (5); *D. binata* (14); *D. burkeana* (10); *D. burmanni*; *D. capensis* (10); *D. capensis* (narrow leaf); *D. capillaris* (11); *D. dielsiana* (9); *D. erythrorhiza*; *D. erythrorhiza*; *D. erythrorhiza squamosa*; *D. filiformis filiformis* (NJ); *D. glanduligera*; *D. intermedia*; *D. intermedia* (S. Carolina) (7); *D. lovellae* (2); *D. lowriei* (2); *D. natalensis* (10); *D. rotundifolia* (British Columbia); *D. rotundifolia* (Czechoslovakia); *D. rotundifolia* (Lowland-Czechoslovakia); *D. spathulata* (kansai) (1); *D. spathulata* (kanto) (1); *D. stolonifera humilis* (10); *Drosophyllum lusitanicum* (5); *Nepenthes ventricosa* (6); *Pinguicula ionantha* (1); *P. lusitanica* (1); *P. vulgaris* (Norway) (1); *Sarracenia alata*; *S. flava* (10); *S. flava* (typica); *S. leucophylla*; *S. leucophylla* "chipoca"; *S. oreophila* (6); *S. purpurea purpurea* (Maine); *S. purpurea venosa* "Louis Burke" (1); *S. rubra gulfensis* (5); *S. rubra rubra* (9); *S. rubra wherryi*; *S. alata x minor* (5); *S. flava x purp. x flava x purp.* (3); *Utricularia pentadactyla* (10); *U. uliginosa* (2).

For updated information on the Seed Bank inventory, please contact Gordon C. Snelling 329 1/2 W. Palm Ave., Monrovia, CA 91016, USA. Please include S.A.S.E. or return postage. Overseas include 2 international reply coupons (IRC's)

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## Literature Review

ANDRIKOVICS, S., L. FORRO and E. ZSUNICS. The zoogenic food composition of *Utricularia vulgaris* in the Lake Fertő (Hungary). Opusc. Zool. (Budap) 23(0): 65-70. 1988.

The author examined 1000 traps of the above *Utricularia* and found 19 different species from 9 major taxonomic groups with most of the prey belonging to the Copepoda and Ostracoda. The traps never contained any protozoa or rotatorians. About 2/3 of the traps contained some prey.

DOW, PATSY. 1989. Sowing seeds ... and a lot more. Mobile Bay Monthly 4:17.

This is a short popular article about eleven-year-old John Douglas who has explored Mobile and Baldwin Counties, Alabama in depth with his father and local naturalist J.C. Moore. Mr. Moore was John's early mentor concerning ecologic and conservation problems in the area. John has since developed an intense and knowledgeable interest in the local CP. There is mention that John has promised CPN an article. This story is accompanied by two black and white photos in the field. DES

FOLKERTS, GEORGE W. 1982. The gulf coast pitcher plant bogs. American Scientist 70:260-267.

Somehow we missed this article when it first appeared. I ran across it in the bibliography of Juniper, et. al., *Carnivorous Plants*. It is more than the usual popular article, written for a magazine that aims for the intelligent layman with an interest in science.

The article begins with a description and broad location map of the gulf coast pitcher plant bogs (there being some discussion on what to call the locations), and then comments on the general ecology of the areas. The article quickly swings into CP, and then specifically sarracenias with good discussions on competition, carnivory, hybridization and hybrid swarms and any meaning these may or may not have in the ultimate scheme of things, pitcher plant insects (my

grass cutting wasp is still not mentioned here, either!), and how the habitat is maintained and what, if anything, pitcher plants contribute to it as a whole. The article concludes with some comments on the future of the bogs. The dismal picture painted is certainly coming true as evidenced by changes over the seven years since the paper was printed.

The article is very well written, and in addition to the small orientation map, is accompanied by eight excellent color photos and a bibliography. DES

FOLKERTS, GEORGE W. and DEBBIE RYMAL FOLKERTS, 1989. Unique capsule dehiscence in *Sarracenia leucophylla* Raf. and a hypothesis concerning post-anthesis tilting in *Sarracenia* flowers. *Castanea* 54:111-114.

Seed capsules in most *sarraceniads* split or dehisce at the apex ("umbrella" end) of the seed capsule. However, the authors note that in *S. leucophylla*, splitting occurs at the base of the seed capsule. This is felt to be a derived condition since all other species have apical capsule splitting. The authors postulate that this may help in getting shed seed clear of the umbraculate cup of the retained style. They also hypothesize that tilting of the flower back towards a more erect position after anthesis allows seed to generally clear the "umbrella" in all *sarraceniads*. DES

HUGO, NANCY ROSS. 1989. A fly in their soup. *Harrowsmith* 4:58-67.

This is a well done popular article in a newer magazine that covers various subjects, mostly related to home, garden and nature. The article primarily tells about ICPS member Phil Sheridan and his efforts in locating CP (mostly pitcher plant) habitats in Virginia. The state has relatively few recorded collections of *sarraceniads* and most of these sites have not been seen for years. Phil has been searching them out as well as locating new bogs containing CP. While his job is in Fairfax, he commutes two hours every day to his home in east central Virginia on a quarter acre of wetland on which he has naturalized many CP. The author discusses American CP in general, including some history and function. There are 12 excellent color photos, including one of Phil, and a sidebar with photo on how to naturalize or grow CP in pots outdoors.

JANSSEN, A., The flora of the savannas of Humaita, Amazonas. *Mitt. Bot. Staatssamml. Muench* 27(0):87-96. 1988.

Five new species of *Utricularia* were found in the Amazonas region: They are *Utricularia viscosa*, *U. ocesta*, *U. hirtella*, *U. simulans* and *Genlisea filiformis*.

JOEL, DANIEL M. 1988. Mimicry and mutualism in carnivorous pitcher plants (*Sarraceniaceae*, *Nepentheaceae*, *Cephalotaceae*, *Bromeliaceae*). *Biological Journal of the Linnean Society* 35:185-197.

The material in this paper is pretty well covered in the chapter on mimicry in Juniper, Robins and Joel, *Carnivorous Plants*, and summarized in the recent CPN article (CPN 18:12-14), where the author comes to essentially the same conclusion. DES

MACROBERTS, MH and BR. 1988. A note on *Sarracenia purpurea* L. in Louisiana. *Phytologia* 65:191-194. 1989.

The authors researched older reports of *S. purpurea* in Louisiana where it apparently does not occur today. They confirmed two older herbarium specimens (1842, 1970). The plants were originally found in St. Helena and St. Tammany Parishes. They are no longer found here, but intensive botanizing may turn them up again. DES

NELSON, E.C. *Dionaea* D. Solander ex J. Ellis (*Droseraceae*): Notes on the nomenclature and typification of Venus's flytrap. *Bot. J. Linn. Soc.* 99(3):249-254. 1989.

The binomial, *Dionaea muscipula*, from the Carolinas in the USA was first published in a London newspaper in September 1768 by John Ellis who credited the generic name, Venus's flytrap, to Daniel Solander.

RENNER, SUSANNE S. 1989. Floral biological observations on *Heliamphora tatei* (*Sarraceniaceae*) and other plants from Cerro de la Neblina in Venezuela. *Plant Systematics and Evolution* 163:21-29.

The author spent a month on this large tepui located on the Brazilian-Venezuelan border studying pollination of various plant species, among them *Heliamphora tatei* var. *neblinae*. The paper should be read for detail which includes ecological notes of locations including elevation, temperatures, soil, water, etc. In summary, the *Heliamphora* has a porocidal anther that requires "buzz" pollination; that is, rapid wing vibration of visiting pollinators to cause release of the pollen through the slit-like terminal pores. Contrary to a supposition by Gibson that moths may be involved in pollination (see CPN 17:47, 1988, as pointed out to me in a note from Renner), and Maguire who thought that birds were major tepui pollinators, this author has shown that various species of bees, particularly bumblebees of the area, are the chief pollinators. They were seen to visit the pitcher plant flowers, "buzz" them, and induce pollen shedding. The author confirms this reviewer's observation that pollen does not spontaneously shed from *Heliamphora* anthers, and certainly moths and birds cannot produce the "buzzing" effect. The author detected no flower fragrance in the field, and no floral nectar production. DES

RUFFIN, LISA;. 1989. Classics with American style. *American Horticulturist* 68:32-34.

This article is about a floral arranger based in Houston. The main reason for reviewing it is because of a photo of an extensive arrangement containing cut pitchers of *Sarracenia alata*. We have heard from various sources about the increased use of pitcher leaves by florists all over the world. As a consequence, a cottage industry of collecting "stems" of pitchers has grown up all over the Gulf coast and apparently thousands of pitcher leaves are collected annually.

There has been little study on how this may be impacting on pitcher plant populations. Theoretically, if only one pitcher is cut from a plant bearing two or more pitchers only (no collections from one-pitcher plants), and trampling of the location is limited, there should be little problem. However, human nature dictates efficiency and speed even in a cottage industry, and collectors may be tempted to clip off all pitchers from a rhizome and to show little regard for other plants in the area. There is some indication that limited harvesting of pitcher leaves from anyone rhizome may stimulate additional leaf growth, but one wonders at what cost to rhizome storage.

The opinion of this reviewer is that use of field collected pitchers for this purpose should be strongly discouraged, particularly since worker activity is probably not closely controlled. I do not feel that a national magazine of the stature of *American Horticulturist* should appear to endorse use of increasingly rare CP collected haphazardly and massively for floral arrangements. DES

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## Special Announcement

- Dues for 1990 will remain unchanged.
- Please forgive the delays in handling your orders and requests. As your business manager/managing editor, who puts CPN in final form and mails it has had to move twice this year (May-June & November)
- December issue will include a directory of current ICPS members. Please send all corrections by 30 November 1989. If you do **not** want your address published, please notify ICPS. We will edit out names of people who so indicate their desire for privacy on their application forms.