LITERATURE REVIEWS

Cheek, M., Schnell, D., Reveal, J.L., and Schlauer, J. (1997) Proposal to conserve the name *Sarracenia purpurea* (Sarraceniaceae) with a new type, Taxon, 46, pp. 781-783.

As has been previously described in this journal (see Carniv. Pl. Newslett. 22:78 (1993), 23:69 (1994)) there has been some recent nomenclatural discussion about *Sarracenia purpurea*. Despite the fact that nearly everyone knows the northern form of the species as *S. purpurea* subsp. *purpurea* and the southern form as *S. purpurea* subsp. *venosa*, it was discovered that, according to rules of botanical precedence, the southern species should be called *S. purpurea* subsp. *purpurea* while the northern one should be called *S. purpurea* subsp. *gibbosa* (or, if you preferred, *S. purpurea* var. *terrae-novae*). The authors note this would be a terribly foolish and confusing thing to do, so they proposed a new type specimen. So if this proposal is accepted by the appropriate committee at the next Botanical Congress we may all relax, the northern plant will stay *S. purpurea* subsp. *purpurea*, and the southern plant will remain S. *purpurea* subsp. *venosa*. (BAMR)

Heard, S.B. (1998) Capture Rates of Invertebrate Prey by the Pitcher Plant, *Sarracenia purpurea* L., Am. Midl. Nat., 139, pp. 79-89.

The author monitored *Sarracenia purpurea* subsp. *purpurea* plants growing in the wild in Newfoundland, Canada, for three years. The author visited the plants every three days during the summer months and extracted all the prey from the pitchers. Of 4780 captures, the four largest categories of prey (by dry mass) were ants (26%), beetles (23%), slugs and snails (20%), and dipterans (12%). An average pitcher caught but 11.02 mg dry mass over its entire lifetime! This study verified the previously known fact that pitchers catch prey most rapidly when they are 12-33 days old, although why this is the case is still unknown. It was also shown that pitcher leaves capture approximately the same amount of prey during their second year as during their first. The leaves of other pitcher plant species are mostly inoperative after one year. Perhaps this is one reason *S. purpurea* is such a successful (widespread) species? It would be interesting to test if *S. purpurea* leaves are still actively carnivorous in their second year. (BAMR).

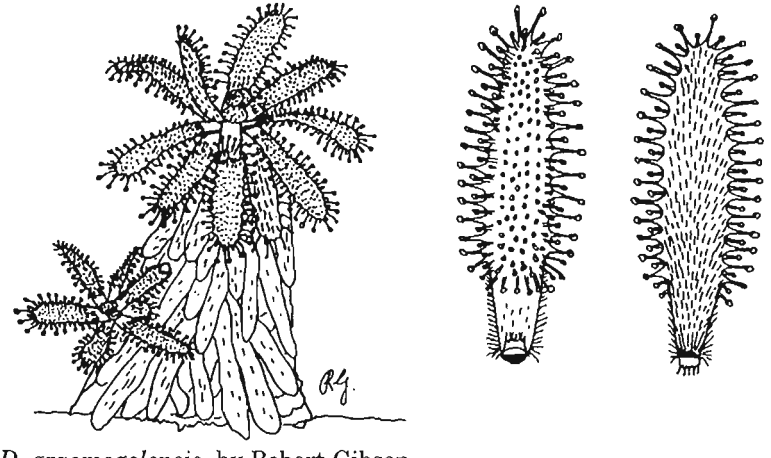
Radhamanim, T.R., Sudarshana, L., Krishnan-Rani 1995, Defense and Carnivory: Dual Role of Bracts in *Passiflora foetida*, Journal of Biosciences (Bangalore), vol. 20, pp. 657-664.

This interesting article about the possibly carnivorous nature of *Passiflora foetida* has hitherto escaped the attention of the CPN editors (and perhaps some readers' attention as well). So we hasten to communicate the information to those of you who might have missed it. It has been known for some time that some members (subgenera Dysosmia and Dysosmioides, together some 18 species all from Central and Southern America) of the large genus *Passiflora* (ca. 470 species) possess the ability to capture and kill insects. In the present work *P. foetida*, a pantropical weed and the most variable species in the genus, has been tested for the carnivorous syndrome in remarkable detail. The flowers of *P. foetida* are subtended by persistent, repeatedly pinnately divided bracts with stalked, vascularized glands at their margins, which ooze with a sticky secretion. Removal of the bracts from developing buds and fruits resulted in higher predatory damage compared to controls with intact bracts. Small insects were found trapped by the secretion of the bracts. The secretions of these glands showed protease and acid phosphatase activity, two common digestive enzymes found in traps of carnivorous plants. Amino acids were released from freshly freeze-killed ants when incubated in aqueous buffered extracts of the bracts. ^{14}C-phenylalanine smeared on the glandular surface of the bracts was recov-

ered from ovules, suggesting a potential for absorption and redistribution of amino acids. These results indicate a novel role for bracts besides their primary function to minimize predatory damage to developing flowers and fruits. The bracts serve as insect traps and obviously also possess the ability to digest the trapped insects in order to obtain free amino acids.
Besides *Triphyophyllum* (Dioncophyllaceae) this might constitute another case of carnivory within a family of mostly non-carnivorous plants. It would be the first instance of carnivorous members in an otherwise non-carnivorous genus. The other subgenera of *Passiflora* (besides Dysosmia and Dysosmioides) and the other genera of Passifloraceae do not have sticky glands, but they frequently have extrafloral nectaries on the leaf stalks or leaf blades. Like in the order Nepenthales (cf. Carniv. Pl. Newslett. 26: 34-38), Passifloraceae with different levels of carnivorous specialisation may allow further insight into the mechanisms and processes of carnivorous plant evolution. Further study is required and in progress. (JS)

Silva, T.R.d.S. and Giulietti, A.M. (1997) Levantamento das Droseraceae do Brasil (Survey of Droseraceae of Brazil, in Portuguese), Bol. Bot. Univ. Sao Paulo, vol. 16, pp. 75-105.

In the present attempt at a survey of Brazilian sundews, 15 taxa are recognized. The reader-friendly aspect of the work is its high compatibility (except for the addition of the recently described *Drosera graomogolensis* and minor taxonomic adjustments) with the classical treatment by Diels. Considering more recent insights from the results of extensive field work, e.g. by F. Rivadavia from the same institution as the first author of the present paper, however, this traditionalism is also the greatest drawback of the text, which is interspersed with several oversights. While *D. roraimae* is accepted as a Brazilian taxon, *D. meristocaulis* is not, although the latter species occurs at the Venezuelan-Brazilian border. The recently described *D. pumila* is nowhere mentioned in the text. Although numerous specimens are cited for *D. montana*, the distribution map (fig. 3) does not show a single locality for this species. Localities of *D. intermedia* on the same map are indicated by a symbol different from that used in the legend. Taxonomic discussions are rather brief, and almost no synonymy is given. This essentially precludes any evaluation of the results. The positive aspects are distribution (dot-)maps for most of the discussed species and rather adequate line drawings of all taxa accepted in the paper. The paper is recommended to those interested in the Brazilian species of *Drosera* but it is hopefully not the last word from the first author, who is obviously preparing a monograph for Flora Neotropica. (JS)



D. graomogolensis, by Robert Gibson.