

Literature Review

Balatoва-Tulackova E. and E. Garcia. Phylantho selbyi-Aristidetum brittonorum mitracarpetosum depauperati, a new savanna community in Isla de la Juventud (Cuba). Folia Geobot. Phytotax. 22:217-222. 1987./English, Prague./

Description of savanna communities on Isla de la Juventud (former Isla de Pinos), including statements of *Pinguicula filifolia* and *Utricularia pusilla* stands. The substratum consists of oligotrophic sandy soil formed on siliceous deposits, rich in organic matter in the uppermost part of the soil profile (observed in the layer 0-7cm) and inundated during the humid period of the year.

Related plant communities (including the mentioned CP-species) have been described also in previous paper: Balatoва-Tulackova E. and R. Capote: Contribution to the knowledge of some savanna and forb-rich communities on the Isla de la Juventud (Cuba). Folia Geobot. Phytotax. 20:17-39. 1985.

Centre for Life Studies (no author), 1985. Carnivorous plants. Centre for Life Studies (Zoological Gardens, Regent's Park, London NW1 4RY), 57p. (/1.00 UK, \$2.50 US ppd surface elsewhere).

For some reason we had not run across this little booklet before, and we are glad we did. Considering the limitation of size and its intent as a school educational tool, it has a lot of well-written and accurate information in it, if one is ready to excuse a very few oversimplifications. The booklet is very well illustrated by excellent line drawings and covers CP worldwide in terms of all genera, trap functions, etc. A good part of the book is given over to excellent methods of propagation and a thorough discussion of horticulture and cultivation with an eye to economy. The book concludes with a long list of sources, not only legally for plants in the UK, but also supplies and other educational materials including slides, books and VCR tapes.

Corker, B. Germination and viability of seeds of the pitcher plant, *Nepenthes mirabilis*. Malay Nt. J. 39(4): 259-264. 1986.

Seeds of the above CP species were collected and stored for varying lengths of time before sowing, to determine the duration of viability of the seed. Maximum viability (84%) was obtained when seeds were stored for two months and required light for germination. The longer stored seed required longer times for germination with 4 months storage needing 4 months to germinate.

Fromm-Trinta, E. Lentibulariaceae of Brazil: Aquatic *Utricularia*: I Bradea 4(29): 188-210. 1985.

Brazil has around 50 species of *Utricularia* generally separated into two groups by the presence or not of floating organs represented by swollen stolons situated around the scape. In this report, the author describes the floating species without those organs.

Janssens, J. In vitro propagation of sundews, *Drosera regia* Stephens. Meded Fac. Landbouwwet Rijksuniv Gent 51(1): 61-66 1986.

The author cultured 1cm leaf fragments by tissue culture on mineral salts, vitamins and supplemented with sucrose, agar and the hormones BA and IAA. After six weeks, the cultures are transferred to a medium with less mineral salts and vitamins, myo-inositol, sucrose, agar and activated charcoal to induce shoot elongation. The shoots of sufficient size are then transplanted to peat. One piece of leaf 1x2cm can produce about 50 plantlets in 5 months.

Meng, L.K. and C.K. Lok. The biology of *Dasyhelea ampullariae* in monkey cups at Kent Ridge. J. Singapore Natl. Acad. Sci. 14(0): 6-14 1985.

This fly has a very long life cycle of about 28 days under tropical temperatures and humidity in which the larvae develop inside in the liquid of *Nepenthes* pitchers.

The proteinaceous diet required by the females for producing eggs is obtained during the prolonged feeding larval stage. The plant serves as the only known source of its diet.

Thum, M. Segregation or habitat and prey in two sympatric carnivorous species, *Drosera Rotundifolia* and *Drosera intermedia*. *Oecologia* (Berl) 70(4): 601-605 1986.

Slavick, A.D. and R.A. Janke. 1987. The vascular flora of Isle Royale National Park. *The Michigan Botanist* 26:91-134.

This floristic study occupies the entire May, 1987 issue. For those not familiar with the subject, Isle Royale is located some miles offshore from Michigan in Lake Superior. The island is reached only by ferry and there are no vehicles. Several good trails traverse the expanse of the island which is well wooded, has some ridges, and large numbers of shallow lakes and bogs. There are accommodations and supply outlets at the ferry landing for those who may wish to visit the island and observe; the entire island is a National Park. Among the 700 species listed, the following CP are present: *Sarracenia purpurea*, *Drosera anglica*, *D. intermedia*, *D. linearis*, *D. rotundifolia*, *Pinguicula vulgaris*, *Utricularia cornuta*, *U. gibba*, *U. intermedia*, *U. minor* and *U. vulgaris*. The relative common or uncommon numbers, and habitats are mentioned with each species.

Tans, William. 1987. Lentibulariaceae: The bladderwort family in Wisconsin. *The Michigan Botanist* 26:52-62.

This is an excellent review article of the presence of family members in Wisconsin. The article includes a brief review of *Utricularia* description and function, range maps (county dot) of species locations in the State, and finally two excellent keys: One for flowering and one for sterile material, followed by detailed plant descriptions and habitat information. Species include *Utricularia resupinata*, *U. purpurea*, *U. intermedia*, *U. minor*, *U. gibba*, *U. Cornuta*, *U. Vulgaris* and *U. geminiscapa*. To make the family coverage complete, *Pinguicula vulgaris* is also covered. *P. vulgaris* and many of the *Utricularias* are rather infrequent.

In a bog in southern Germany, both species have nearly the same biomass but differ in individual size and abundance. *D. rotundifolia* grows in the higher parts of the bog and traps mostly wingless springtails. Winged insects were found mostly on *D. intermedia* which the author attributes to different microhabitats and different shape of the plants.

Truswell, E.M. and N.G. Marchant. Early Tertiary pollen of probable Droseracean affinity from central Australia. *Spec. Pap. Palaeontol* 0(35): 161-176. 1986.

A new species found in the Hale River Basin, northeast of Alice Springs, central Australia is called *Fischeripollis halensis*. The pollen was found to be probably from the Middle to Late Eocene age, a time when there was abundant rainforest and high uniformly distributed rainfall. There is a strong resemblance of this pollen to the morphology of pollen of extant *Dionaea*, the Venus Fly Trap. *F. halensis* differs in detail from the pollen of *D. muscipula*. This record is the oldest occurrence of this pollen morphotype.

Wagner, G.M. and K.E. Mshigeni. The *Utricularia-Cyanophyta* association and its nitrogen-fixing capacity. *Hydrobiologia* 14(3): 255-262 1986.

Nitrogen-fixing blue-green algae were found inside the bladders of *U. inflexa* growing in a shallow lake in Tanzania. The most abundant genus was *Anabaena* which occurred on the outer surfaces and inside mature traps fixing nitrogen. The blue-green algae was not found in the lake water. It was proposed that this association involved a degree of physiological interdependence and may have potential as a biofertilizer for rice.