

When everything was set up, I turned on the instrument and the audio oscillator (part of the instrument) emitted a constant sound, always at the same pitch. When the plant's electrical current changed, so would the pitch.

I touched a trichome once. The pitch went up, down, and leveled off. Now it sounded the same as it always did. I touched it again and it repeated the same oscillations as before; this time, however, the trap closed.

I tried this using a live insect in the trap, and I could hear two distinct touches of the trichomes and then the closing of the trap. For quite some time then the insect stood still. Then suddenly violent thrashing around was heard through the instrument. Repeatedly, the insect touched the trichomes. Little did the animal know he was only signalling the plant to close tighter.

SPECIAL NOTICES

CP PHOTOS FOR SALE--JOE ISLEY (Box 2774, Duke Hospital, Durham, NC 27710), in the interest of conserving CP, has become a photographer of them rather than a collector. His photos are quite good and some have been published. These are in color, on 3 1/2 x 5 inch bordered glossy paper, and the original slides were made with a Pentax camera. The prints are 35¢ apiece and are made up to order, so allow 3-6 weeks for delivery. Presently available are: Sarracenia flava, S. purpurea (venosa), S. leucophylla, Dionaea, Drosera intermedia, D. filiformis, and Pinguicula caerulea. All photos were made in the field or in the habitat gardens at the North Carolina Botanical Garden in Chapel Hill.

TREVOR KUCHEL is looking for seeds in large or small quantities of Sarracenias, especially the different forms of species (either home grown or preferably collected in the wild). Also, hybrid seed and homemade crossings are sought. Contact him at P.O. Box 110, Murray Bridge, S.A. 5253 Australia, and please state what seeds you have and approximate price.

JOE MAZRIMAS has received relatively few requests for Nepenthes cuttings for the spring of 1976. He thanks everyone for sending in a letter requesting the cuttings and their description on how they intend to root and grow them. This is one last chance for the year to acquire various species of this pitcher plant. There will be many cuttings to send. See the notice on page 51 of #3 CPN. He also has several copies of Randall Schwartz's book left for sale at \$5.50 domestic and \$5.75 for foreign orders postpaid. This is the last chance for acquiring this book at this low price.

RECENT LITERATURE

Affolter, J.M., Olivo, R.F.: Action Potentials in Venus' flytraps: Long-term observations following the capture of prey. *Am. Midl. Nat.* 93(2): 443-445. 1975.

A flexible length of silver wire was attached to a leaf with a mixture of electrode paste and glue. Action potentials were produced in closed flytraps after prey had been trapped and only if prey were still active. Continuous recordings could be made for fifteen hours or longer.

Carlquist, S.: Island Biology, Columbia University Press, 1974.

In this book Dr. Carlquist discusses in one of its chapters the adaptive radiation of plants in Western Australia. Among the plants mentioned are the tuberous Droseras and their adaptation to fire and dryness. Also, the vining types of Droseras such as Drosera heterophylla, one of the ten species, show adaptation with twining stems.

DeBuhr, L.E.: Phylogenetic relationships of the Sarraceniaceae. *Taxon* 24:297-306, 1975.

The author believes there is little evidence to support a taxonomic relationship of this family with Droseraceae and Nepentheaceae, and suggests that placement as a suborder of the Theales would be best.

Forsyth, A., Robertson, R.J.: "K" reproductive strategy and larval behavior of the pitcher plant sarcophagid fly, Blaesoxipha fletcheri. *Can. J. Zool.* 53(2): 174-179, 1975.

The number of S. purpurea leaves limits the density of the insect larvae so that only one larva per pitcher leaf utilizes the food present. As a result, few larvae are produced but they are very large so that it is suggested that this larva is a "K" strategist relative to other sarcophagid flies.

Hashmi S., Siddiqui, S.: Trichomes on the floral parts of Utricularia. *Bangladesh J. Bot.* 3(2): 67-72, 1974.

Ontogeny, structure and distribution of four new types of trichomes of taxonomic importance in U. bifida, minor, stellaris, dichotoma, and cornuta are described.

Ishizu, Hiroshi: Insectivorous Plants. *Jour. of Medical Reports of Ohtsuka.* No. 274, pp. 30-41, 1975. IN JAPANESE

This little review contains some three dozen color photos of various CP and a brief description of types and function of each one.

arence, T.E., Seabury, F.: A scanning electron microscopic study of the utricle trichomes in Utricularia biflora Lam. Bot Gaz. 136(1): 87-93, 1975.

The mature utricle (bladder) can be characterized as having four different types of trichomes ornamenting the following regions: the external surface, entrance, threshold and pavement epithelium, and the internal utricle surface. All were seen using the scanning electron microscope.

mond, C.B., Ziegler, H., Stichler, W., Trimborn, P.: Carbon isotope discrimination in alpine succulent plants supposed to be capable of crassulacean acid metabolism. Oecologia (Berl.) 18(3): 209-218, 1975.

The authors found that Pinguicula alpina has a carbon dioxide metabolism more like the succulent plant, such as Sempervivum. This means that dark carbon dioxide fixation makes larger contribution than the light reaction.

eyermark, J.A., Smith, L.B.: A new Drosera from Venezuela. Rhodora 76:491-493, 1974.

Designated Drosera felix, this new species was found in the Geand Savanna. The plant small ("can be covered by a quarter") and the peduncle is quite short.

itehead, T.: Predatory plants of Texas. Texas Parks and Wildlife Magazine 33:16-20, May, 1975. (Copies of magazine available from Texas Parks and Wildlife Department, John H. Reagan Bldg. Austin, Texas 78701.)

Good full color article mentioning the fifteen species of CP in Texas with excellent photos of four. County range map.

les, D. H. et al: Tumor inhibitors: Preliminary investigation of antitumor activity of Sarracenia flava. J. Pharm. Sci. 63:613-615. 1974.

Chloroform and aqueous extracts of S. flava roots (sic) showed antitumor activity against human epidermoid carcinoma of the nasopharynx in cell culture. Betulin was identified as one constituent responsible for this activity. There is also a brief review of folklore medicinal uses.

INDEX TO VOLUME IV

AUTHOR INDEX

dams, R.	62,63	Kuchel, T.	41,69
lbrecht, R.	28	Kutt, D.	12,55,56
shley, G.	47,48,56	Lane, D.	27,49
alko, E.	25	Lindquist, J.	40,65
allentine, R.	26	Lione, A.	24
arber, L.	27	Lucas, G.	49,66
rokenbro, T.	57	Macey, L.	43
ase, F.	26	Mazrimas, J.	3,4,7,19,24,30, 40,45,51,58,69
hester, J.	50	McCullah, L.	57
lemesha, S.	25,46	Netherton, H.	29
zerwony, R.	68	Oravetz, J.	4
ebbert, P.	25	Potter, S.	27,47
deBuhr, L.	24,60,61	Prager, P.	26,42
ennis, S.	24	Ramsden, R.	58
ubosky, D.	68	Reibenstein, L. ...	54
ife, J.	46	Sahin, Z.	24
olkerts, R.	1,33,39	Schnell, D.	42,66
orrest, J.	44,57	Slack, A.	28
orst, C.	4,35	Song, L.	56,58
aldi, J.	25,42	Steiger, J.	8
anabusa, K.	57	Stronach, N.	53
anna, W.	24,25,31,33,40,41	Swenson, A.	51
anrahan, R.	24,43,55,57	Tallman, Owen	54
aynes, R.	28,40	Taylor, C.	55
enderson, K.	22	Taylor, P.	28
eston, D.	41	Thomas, D.	24
odge, W.	27	Turnbull, J.	25,41
ogard, B.	5,42	West, D.	4
ooft, J.	32	Wherry, E.	25
isley, J.	69	Whiting, Colin	54
illson, R.	27	Williams, S.	64
ohnson, P.	35,56	Woodrich, A.	31
ordan, B.	42	Yapkovitz, K.	28
apa, S.	2,4,25	Ziemer, R.	4,28
irby, A.	7,21,26,35,41		
ondo, K.	56		