

Continuous Growth of Tuberos *Drosera*?

By R.D. Tilbrooke

c/o Poste Restante GPO, Adelaide, S.A. 5000, Australia

A seed germinates, producing a seedling that grows, develops and matures into a plant capable of producing its own progeny that may, if conditions are favourable, continue the cycle. Inherent in our thoughts is the fact that all four processes usually occur in the same location. Consequently plants have adapted to avoid environmental stresses such as flood and drought. Seeds are the common method, used by plants to outstay harsh conditions. However the time required for a seedling to reach maturity is very often prohibitive, especially if conditions occur regularly ie. annually. Under such conditions bulbs, corms and tubers play an integral role in the maintenance of the species. The last entity, the tuber, is associated with many Australian *Drosera* and is used solely to classify inclusion into the subgenus *ergalium* (Marchant et. al. 1981).

A tuber is really a compressed vegetative axis, deposited prior to and during partial senescence; a process whereby the plant translocates above-ground reserves to the roots and/or other storage organs. The plant while present in the soil as a tuber, is regarded as being in a state of dormancy. The breaking of this dormancy is induced by a return to favourable conditions. It should, therefore, in theory be possible to break dormancy when required, to cessate future tuber production by maintenance of favourable growing conditions and to initiate tuber production only when it is most convenient or required.



D. peltata in continuous growth. Note shoots of various ages.



Close up view of base of plant. Eight shoots have been produced so far. Photos by author.

Everyone has heard at some stage of their life the saying "Nature is the mother of invention." This proverb is very apt for the general lack of tuberous *Drosera* at the last two A.C.P.S.'s annual shows prompted me to investigate any method that might delay or retain growth until the show held in mid-December, two to three months after most of the species have gone dormant! I have since then experimented and have made a number of observations that I feel will, not only help members in Australia, but also enlighten overseas members who are having great difficulty retarding the departure of newly acquired "bulbs." The experiments were all made on the common South Australian *Drosera*, *Drosera peltata* Smith.

By keeping the soil permanently moist, dormancy was shortened; which led to the formation of shoots in January some two months earlier than usual!

Upon emergence of the apical meristem (shoot) above the soil it was observed that retention of high moisture and low light levels, combined to prolong the duration of the characteristic basal rosette and reduce the internodal distance between subsequent aerially produced leaves; such that flowering occurred at approximately six centimeters from the soil surface. It was also noted that the leaf shape changed from petiolate to reniform to peltate in a very gradual manner — more so than in the wild type.

Fully grown plants held under moderately low light conditions (lower than normal, but not low enough to conflict with normal ascension of the axis), and maintained with a moist soil, began and are still producing new shoots which are characteristically *devoid* of a basal rosette! Slides included with this article show evidence of eight shoots having come from one plant.

It is hoped, this year, the technique will be refined and extended to other Rainbow Sundews and that an attempt on a rosette species will be made.

REFERENCES: DROSERACEAE, N.G. Marchant, H.J. Aston & A.S. George, FLORA OF AUSTRALIA Vol. 8, Pg 9-68 (set Vols. 1-49).

Want Ads

Matthew Hochberg (5500 Fieldstron Road, Riverdale, New York 10471; USA). (W,T,B) Plants, seeds or cuttings of the following: Any *Genlisea* species other than *hispidula* and *violacea*; *Heliamphora tatei* or new species; *Drosera affinis*; *D. arenicola*; *D. bequaertii*; *D. capillaris* var. *braziliensis*; *D. cayennensis*; *D. dendeensis*; *D. chiapasensis*; *D. colombiana*; *D. communis*; *D. compacta*; *D. elongata*; *D. esmeraldae*; *D. felix*; *D. humbertii*; *D. insolita*; *D. kaieteurensis*; *D. katangensis*; *D. meristocaulis*; *D. neocaledonica*; *D. oblanceolata*; *D. panamensis*; *D. petiolaris* (and related species); *D. pilosa*; *D. pusilla*; *D. ramentacea*; *D. roraimae*; *D. sessilifolia*; *D. uniflora*; New *Drosera* species; Cuban *Pinguicula* species; South American *Pinguicula* species; cultural information on the above plants various other CP. (T) *Drosera intermedia* (Mount Roraima); South American species of *Drosera* and *Utricularia* for the above; *Drosera spathulata* and others for anything I do not have.

Randy Lamb (5030 E. Hastings St. #106: Burnaby BC: CANADA V5B 1P6). (W) *Drosera linearis*, *D. x obovata*; *Cephalotus*; *P. primuliflora*; *S. flava*; *S. minor*. (TS) *D. anglica*; *D. capensis*; *D. rotundifolia*; *D. spathulata*; *U. vulgaris*; *P. macroceras*; live *Sphagnum*. I especially would like to hear from Canadian growers.

Chas. Powell (2138 Harrison St., Santa Clara, CA 95050) (Trade or sell) Rooted cuttings: *Nepenthes alata*, *N. ventrata*, and various other species and hybrids in limited supply; *Pinguicula x weser*, *P. esseriana*, and various other species and hybrids in limited supply. (Want, trade or buy) *Drosera petiolaris*, *D. graminifolia*, *D. pilosa*, *D. schizandra*, any *Genlisea*; *Pinguicula crenatiloba*, *P. cyclosecta*, *P. imitatrix*, *P. kondoi*, *P. ramosa*.