Patterns and Phylogenies in *Drosera*; a Critical Review of Current Knowledge

Alastair Culham; Centre for Plant Diversity and Systematics, Department of Botany,
The University of Reading, Whiteknights, Reading, RG6 6AS UK

The Family Droseraceae has variously included *Drosera*, *Aldrovanda*, *Dionaea* and *Drosophyllum* amongst others. Only the genus *Drosera* is sufficiently speciose to form an opinion of its origin and dispersal through time.

This talk will review the historical classification of the family Droseraceae, the classification of *Drosera* per se and the impact of modern knowledge on our understandings of the relationships of the family and the genus. The various classifications curently offered will be compared with data from vegetative and floral morphology, micromorphology of the pollen and seeds, phytochemistry, cytology and molecular evidence.

Drosera in South Africa

Günter Eitz; 3 Cockle Close, Richwood, South Africa

South Africa has four climatic regions:

1. Summer rain areas as in the Transvaal with 600 to 750 mm rain mainly in summer.
2. Winter rain areas as in the Cape province with 500 to 750 mm rain mainly in winter.
3. Sub-tropical areas as in Natal with up to 1000 mm rain per year.
4. Semi-desert areas as in the Karoo with less than 250 mm rain per year with 90 % of the rain falling from July to September.

In all climatic regions *Drosera*, *Utricularia* and *Genlisea* grow during different seasons.

Due to these climatic differences we have also four groups of growing times:

First Group

Summer growing, winter dormant *Drosera* species in Transvaal as *D. dielsiana*, *D. natalensis*, *D. burkeana*. In cultivation these plants are evergreen, only lack of water makes them go dormant in winter.

Second Group

Winter growing, summer dormant *Drosera* species in the Cape as *D. cistiflora*, *D. pauciflora*, *D. alba*, *D. acaulis*, where *D. acaulis* is growing on mountains 2000 m and more high with winter temperatures below 0 °C and with snow, so this *Drosera* starts growing only at the end of September, flowers in December and then goes dormant. This group needs a dormant period in cultivation.

Third Group

Winter dormant due to temperatures between +5 °C and -1 °C and summer growing: *D. regia*. This *Drosera* hibernates in wither with one or two small leaves and grows from spring to summer with heights up to 70 cm and flowers in February. *Drosera regia* nearly disappeared in nature . Only tissue culture saved this plant from near extinction.

Fourth Group

Evergreen *Drosera* species as *D. collinsiae*, *D. aliciae*, *D. admirabilis*, *D. capensis*, *D. hilaris*, *D. cuneifolia*, *D. slackii*, *D. ramentacea*, *D. curviscapa*, *D. venusta*. This group can go dormant due to lack of water but this occurs quite rarely.

150 slides of *Drosera*, *Genlisea*, and *Utricularia* growing in their natural habitats will be shown.