# A SOUTH AFRICAN INSECTIVOROUS PLANT TRIP

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The choice of a place for traveling is always difficult, especially when the purpose is the study of the flora, since there are so many beautiful places in the world.

I have chosen South Africa because it is the land where you can find the greatest diversity of plants. Out of some 200 orders in the vegetal kingdom, 180 of them exist here with 18,000 species. This great variety is mainly due to the great diversity of climates. On the northwest coast, the Atlantic Ocean, with its cold stream of Benguela from the Antartic, inhibits precipitation on a strip of land between the sea and mountains and intercepts nearly all the humidity that the wind brings from the open sea. Beyond the mountain barrier, we discover the aridity of Namaqualand and Karoo with the famous Kalahari desert in the north. (Fig. 1)

The southwest portion has a Mediterranean climate with remarkable landscape. In the inland, the ground rises up to form a high plateau (Highveld) attaining a height of 2,000 meters. Although the sun shines during the day in the winter, the ground is frosty at night. Further east, the land becomes flat and tends to be warmer (Lowveld); it is the land of the African animals. Meanwhile, the east coast enjoys a semitropical climate because it is heated by the warm air flows off the Mozambique current.

The flora is very characteristic of the varying climates. In the arid portion, it's mainly the succulents but near the cape there are many examples of the *Proteacae, Ericaceae, Amaryllidaceae, Compositae, Geraniaceae, Liliaceae, Orchidaceae* . . . and *Droseraceae, Roridulaceae,* and *Lentibulariaceae*!

In South Africa, there are 18 species of *Drosera* and many are easy to find. My trip took place between August and October, 1980, which is the best time to view these plants. In October, most of the *Droseras* can be observed to bloom in the spring.

The first species that I discovered was on Table Mountain, near Cape Town. It was *Drosera trinervia* which grows on wet places on the south side along the trail that takes you to the top (Level Traverse). This plant grows in a rosette 3 to 4 cm in diameter and its name comes from the ribs which are evident on the inferior epidermis of the leaf when not unfolded. The flowers are either white or pink. This mountain is a plateua and *D. trinervia* is even more abundant on the summit. Near the catchment area there was plenty of *Drosera cuneifolia*, with some giant specimens having diameters of 6 cm. On the east side, a natural park belonging to the Kirstenbosch Botanical Garden has some *Drosera hilaris* growing in a shady spot which looked like and were as large as *D. capensis* with pubescent leaves. Normally, *D. capensis* is seen on the west side since it is easy to confuse these two species, though I have never seen it personally. Also, I saw *Utricularia capensis* with white flowers.

*Drosera* are frequently seen on the mountains in the southwest, but it is at the Fernkleef Nature Reserve (at Hermanus at about 100 km from Cape Town) that I saw the greatest number of species. At the reserve the spring and winter seasons are humid and cool but without frost. The summers are warm and dry except on the mountains, where clouds maintain a high humidity. However, autumn is the best season since it is not as warm as summer. For the most part, the ground rises

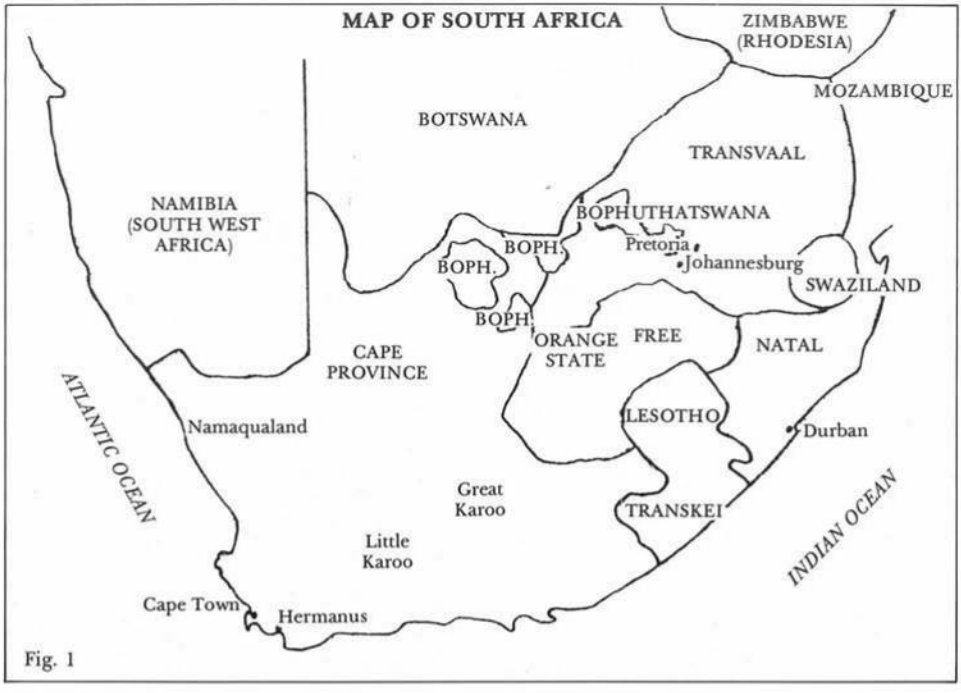


Fig. 1

steeply along the south facing escarpment in a manner typical of the geography developed on Table Mountain sandstone in the Western Cape. (Fig. 2)

By far the major part of the reserve lies above 300 m. and there are several peaks of approximately 600 m., the highest being 825 m. The area is extensively dissected by steep, mainly south-facing ravines and kloofs and offers a wide range of habitats; from moist wooded kloofs through which small streams trickle even in summer, to steep rock faces in hot dry valleys; to extensive areas of marshy black ground to boulder-strewn sandy plateaus. It is this variety and range of habitats which contributes to wealth of the funbos even in such a relatively small area.

**SOIL.** Because of the generally steep topography and the slow rate of weathering of the quartzitic sandstone, there is little possibility for soil development. Most of the soil is clay-free and consists of coarse sandy residue which is rarely deeper than 30 cm and is comprised of gravel and small boulders. Organic residues slowly decompose because of the acidic conditions and it is dispersed in the sandy soil and seems to play an important role in improving water holding capacity. This soil mixture serves to minimize moisture loss by drainage and evaporation and accounts for the green appearance of fynbos vegetation even in the hot mid-summer period. On permanently wet sites, peat moss accumulates and characteristic flora may develop.

**FLORA.** The same type here exists on Table Mountain. We can see beautiful *Erica, Berzelia, Protea* and numerous *Drosera* species such as *D. cistiflora* with white to pale pink flowers. This plant grows 20 to 30 cm high. It is well distributed in the reserve, although it is rare to find more than 4 to 6 specimens together. During the summer, the plant disappears and renews growth in the winter. Another species which is frequently seen is *D. glabripes* which exists all year but I have not seen flowers since I think they appear in summer. This plant has a stem,

Please see **TRIP** p. 100.



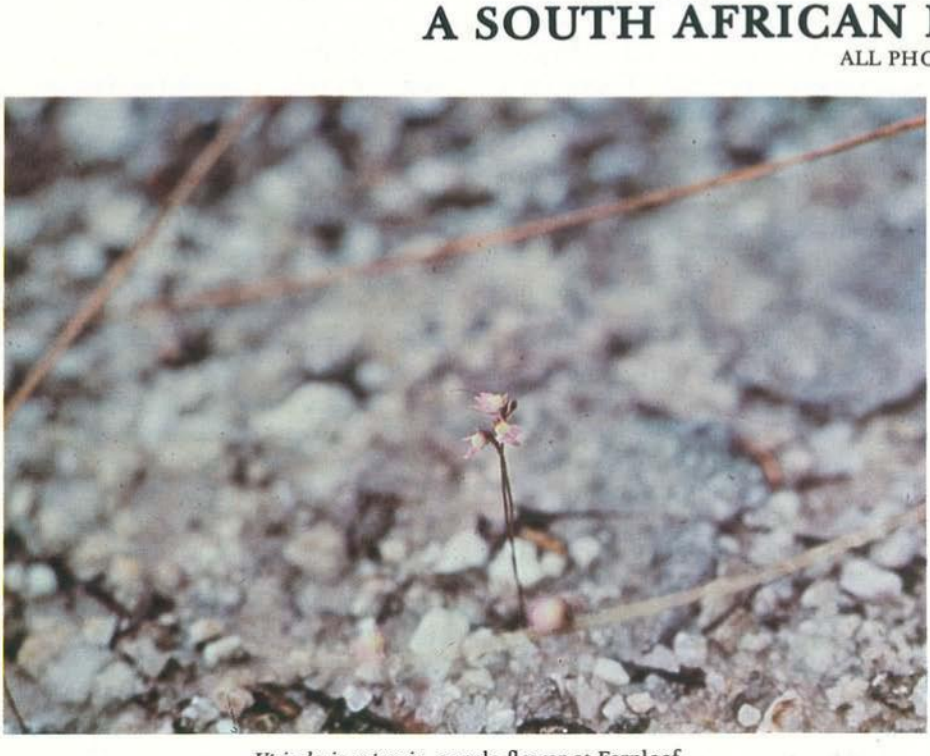
*Drosera trinervia* at Table Mountain, R.S.A.



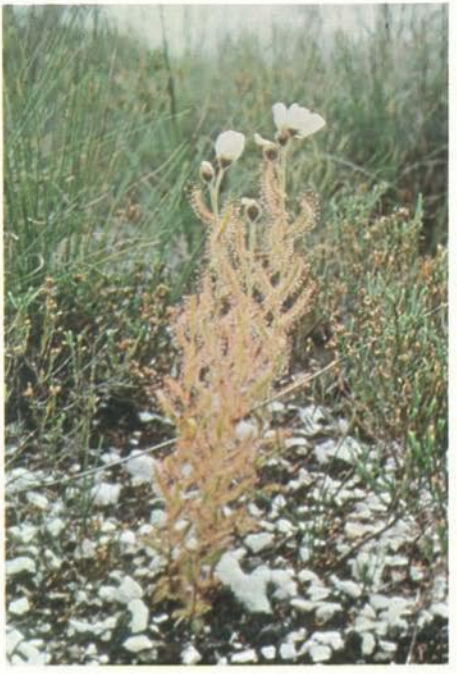
*Drosera glabripes* at Fernkloof, R.S.A.
*Utricularia capensis*, purple flower at Fernkloof.

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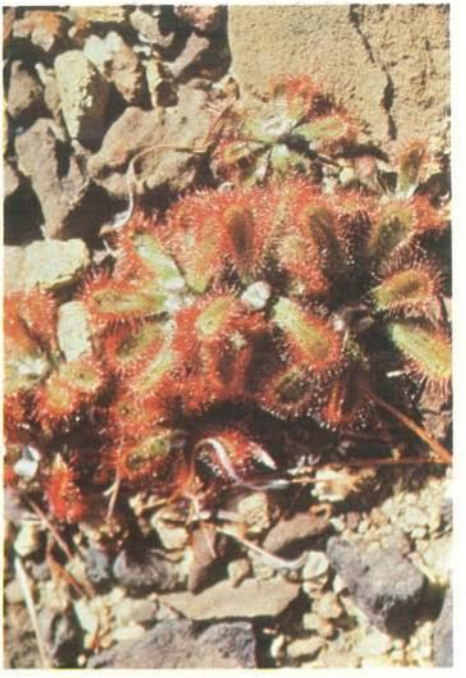
ALL PHOTOS



*Utricularia capensis*, purple flower at Fernloof.



*Drosera cistiflora* at Table Mountain.



*Drosera aliciae* at Fernkloof growing mainly on the paths.

# TIVOROUS PLANT TRIP

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*Roridula gorgonias* at Fernkloof.

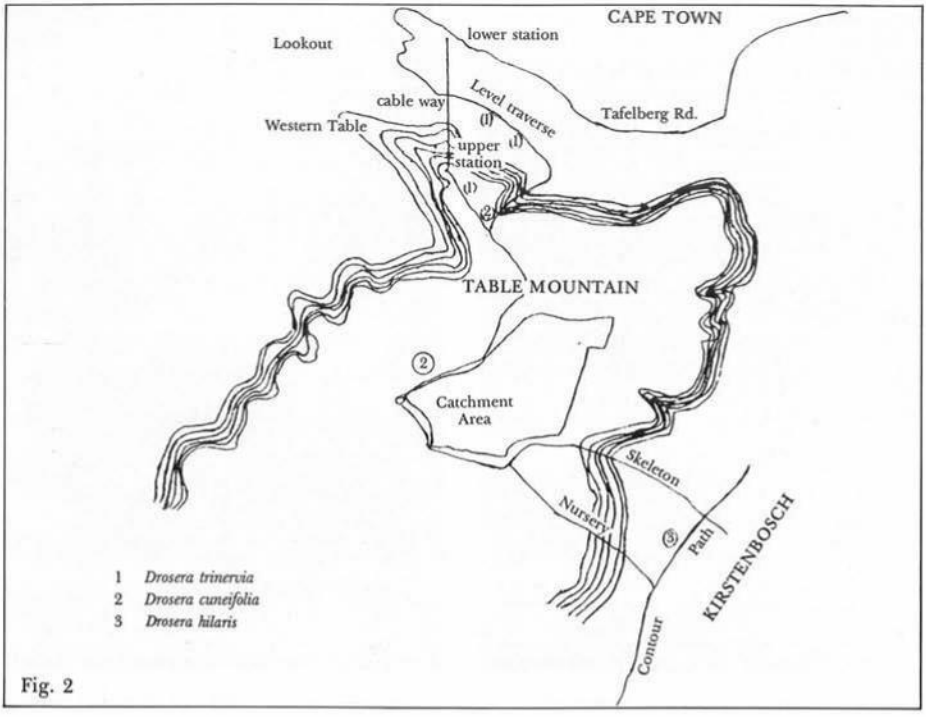



Fig. 2

**TRIP** continued from p. 97.
with old leaves of about 25 cm in length, but most of the time it is prostrate next to the ground.

The most prevalent *Drosera* is certainly *D. trinervia* which, as on Table Mountain, is everywhere but the plants are smaller and flowers are only white. *Drosera aliciae* is seen sometimes in the reserve, but it resembles mostly the description in the Bulletin of the Botanical Society of S.A. when the former name was *D. curviscapa var. esterhuysenae* rather than *D. curviscapa,* which is nearly identical to *D. cuneifolia.* It may be that the variety was joined to *D. aliciae* and *D. curviscapa* has become *D. cuneifolia* but I'm not sure.

*D. hilaris* is less abundant but it is a more beautiful species. Here, the plant is redder because it receives more sun than at Kirstenbosch. The flowers are magenta and they began to open in mid-September. I have seen here another species that appears only in the reserve and it's probably a hybrid between *D. cistiflora* (tuberous) with a rosette of leaves. The stem was shorter (5 to 7 cm) with only one cauline leaf (*D. cistiflora* is 20 cm). Unfortunately, the flowers were already over, but it may be a new *D. cistiflora* form.

On passing a small stream where the soil was very sandy, I noticed some *Utricularia capensis* with pink flowers. These plants have the same height as the white ones have on Table Mountain.

the white ones have on Table Mountain
(3 to 4 cm). The leaves are almost impossible to see without the flowers. Leaves are 1 mm long.

Another plant that can be found in the reserve is *Roridula gorgonias* (giant fly catcher), which was once considered to be an insectivorous shrub. If it catches insects, it doesn't digest them. It is interesting that a small beetle lives on this plant and feeds itself on the trapped insects that are caught by the extremely sticky resin. This plant and its smaller cousin *R. dentata* belong to the *Roridulaceae* which comprises two species endemic in S.A. This shrub can reach 100 cm tall and leaves are found at the ex-

tremity of the branches. The flowers are pinkin color and the plant is rare and localized to the Hermanus location in small clumps and in a few other parts in west South Africa.

I have seen all of the above species in the Cape Province. It is also possible to find *D. alba, ramentacea, capensis, regia, pauciflora, Roridula* and other *Lentibulariacea.* All other *Drosera* sp. *(burkeana, collinsiae, dielsiana, natalensis, madagascariensis* and *indica)* are situated in the east (Natal, Transvaal).

My interest here was also for succulents and *Proteacea* and so I did not have time to find other CP species. I hope next year I'll be able to return and do it.

NOTES:

Botanical Society of South Africa

Botanical Society of South Africa
Kirstenbosch, Claremont 7735,Cape
Republic of South Africa
Journal=Veld & Flora

Namaqualand: a semi-desert area where succulents grow and where in spring, after the winter rains, thousands of wild flowers appear.

Karoo: a semi-desert area.

Fynbos: a low-growing, woody shrub that is characteristic of the Cape. The word is derived from Africans which means "short-lived" and these drought resistant plants live rarely more than 25 years. Fires allow the regeneration of these plants which are a significant element in the Cape flora.

A nursery who sells seeds of indigenous and Australian shrubs and trees maybe will be able to sell some *Drosera* seeds *(hilaris, cistiflora, . . .)*. Write for seed list to:

WOODSEED (PVT) LTD
P.O. Box 28
Veelklip
7203
Republic of South Africa

*I would like to extend my gratitude to Mr. Woodvine for the help in elaborating this article. Mr. Woodvine is the owner of this listed nursery.*

## NEWS AND VIEWS

continued from p. 88.

JOE MAZRIMAS reports that the recent San Francisco Flower Show was a rousing success again this year. It took place Aug. 21-23 and we had 9 exhibitors showing off their CP which numbered about 38 plants. The Best of Show award was given this year to Eileen Masterson for a beautiful and large *Nepenthes alata* plant. Others in the show were: Paul and Mike Morris, Leo Carrillo, Joe Mazrimas, Ilse and Allan Ber, Irene Dowmen and Jeff Gold. Entering the show is very simple and we urge the 50 or so CPN members living within 75 miles of S. F. to enter their favorite plants next August. You will be sent a Premium Schedule book and application next summer. All you have to do is to fill out the list of plants you intend to bring and send this along with $1.00 to the manager for Carnivorous plants listed in the book. Bring the plants on Wednesday or Thursday up to 12 noon to the Hall of Flowers in Golden Gate Park so your plants may be judged. That is all there is to it. Pick your plants up Sunday evening or Monday after the show is over. We like to see a large number of you there next show so good luck with your growing!

LAURIE WATSON (33 Ashgrove Ave., Ashgrove, Queensland 4060, Australia) visited the United States this summer and revealed some good news regarding the start of a CP newsletter called "CP News" of which he is publisher. This 24-page CP News whose format and size is similar to our CPN is full of interesting articles about CP and people that grow them. Send A$10.00 to CP News, P.O. Box 214 in Ashgrove if you wish to subscribe to this quarterly. Send $5.00 extra for airmail service. U.S. Subscribers should send international bank or postal money order.

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*Drosera cuneifolia* at Table Mountain, Republic of South Africa.
Photo by Alain Christophe