BULL. BOT. SURV. INDIA
Vol. 44, Nos. 1-4 : pp.17-24, 2002

NATIONAL ORCHIDARIUM AND EXPERIMENTAL GARDEN, YERCAUD - TERRESTRIAL ORCHIDS IN CULTIVATION

A. A. ANSARI AND P. DWARAKAN

Botanical Survey of India, Howrah

ABSTRACT

The present paper deals with 42 species of terrestrial orchids being cultivated and maintained as germplasm in the National Orchidarium and Experimental Garden, Yercaud.

INTRODUCTION

The National Orchidarium and Experimental Garden under the Southern Circle of Botanical Survey of India was established at Yercaud in May, 1963. Yercaud in Shevoroy Hills is situated towards north-east Salem in Tamil Nadu. It has a salubrious climate with very equitable temperature and receives both south-west and north-east monsoon. The total area is about 18.6 hectares with altitudinal ranges of 1380 to 1511 m. The annual rainfall ranges from 830 mm to 1350 mm and the temperature varies from 11°C to 30°C. Geologically the area is rich in archean charnockites with few belts of granite gneiss. Along the slopes the soil is red sandy-loam.

MATERIALS AND METHODS

A large collection of orchids from all over India especially Peninsular India numbering over 50,000 sets belonging to about 225 different species, most of which are indigenous to India is being maintained. Out of these, there are 59 species of terrestrial orchids. The identification was done mainly with the help of experienced staff members and flora (Abraham & Vatsala 1981, Henry & al. 1989, Joseph 1987, Kataki 1986, Matthew 1983) and carefully matching with the authentic specimens housed in BSI, Yercaud and MH, if needed.

Received on 30th July, 2001; accepted on 1st January, 2002.

Compost and container efficiency studies for various species of orchids were carried out and for terrestrial orchids pot mixture of two parts of loam, one part of leaf mould and one part of a mixture of equal quantity of brick and charcoal powder has been found to be good. The pots are generally with more drainage holes. Pieces of bricks and charcoal are top-dressed for better growth and also good show. The same combination put in trenches has also been found to be very efficient. Manure is very rarely supplied to the wild orchids. However, liquid cow dung manure has been found to be useful for the purpose. Pests are very rarely found. Precautionarily if such incidence is there, BHC powder or extract of Neem leaves have been used, otherwise all the orchids grow successfully in near natural condition without much artificial maintenance.

The present paper deals with the 42 species of terrestrial orchids being cultivated and maintained as germplasm. The species have been arranged alphabetically and for each species correct binomial, basionym if any, followed by habit, flower colour, flowering and fruiting period and their present status in cultivation in beds/pots with approximate individual numbers/sets have been provided in enumeration.

ENUMERATION

1. Acanthephippium bicolor Lindl.

Robust herb with pinkish-white flowers; Apr.-June; 5 beds (125 sets), 10 pots (about 30 sets).

2. Anoectochilus elatus Lindl.

Delicate herb with white flowers in dense racemes; June-Sept.; 6 pots (20 individuals).

3. Anthogonium gracile Lindl.

Erect slender herb with pink flowers; Aug.-Oct.; 2 pots.

4. Arundina graminifolia (D. Don) Hochr. *Bletia graminifolia* D. Don

Slender herb with pinkish-white flowers; May-June; 2 pots (2 sets).

5. Calanthe masuca (D. Don) Lindl. *Bletia masuca* D. Don

Erect herb with bluish-white flowers; July-Sept.; 6 beds (500 sets).

6. Calanthe triplicata (Willemet) Ames, *Orchis triplicata* Willemet

Erect herb with whitish-blue flowers; July-Sept.; 2 pots (2 sets).

7. C. vestita Lindl.

Erect herb with whitish or rosy-white flowers having dark pink patch at the base of lip; July-Sept.; 1 pot (2 sets).

8. Cheirostylis flabellata Wight

Small herb with whitish flowers; Feb.-Mar.; 3 pots (10 individuals).

9. C. parviflora Lindl.

Herb with creeping rhizome. Flowers white; July-Sept.; 2 pots (4 individuals).

10. Disperis neilgherrensis Wight

Small slender herb with pink flowers; Aug.-Sept.; grows wild in the garden.

11. Eulophia andamanensis Reichb. f.

Stout pseudobulbous herb with green flowers; Aug.-Sept.; 3 pots.

12. E. epidendrea (Koenig) Schltr. *Serapias epidendrea* Koenig

Pseudobulbous herb with greenish-white flowers; Sept.-Oct.; 1 bed (75 sets), 2 pots (2 sets).

13. E. graminea Lindl.

Pseudobulbous herb with grass like leaves and greenish-white flowers; Oct.-Dec.; 1 bed.

14. E. nuda Lindl. var. **andersonii** Hook.f.

Herb with underground tubers and dark-red flowers; May-July; 1 pot (2 individuals).

15. Geodorum densiflorum (Lam.) Schltr. *Limodorum densiflorum* Lam.

Stout herb with pink flowers; Aug.-Sept.; 3 beds (25 sets), 6 pots (12 individuals).

16. Habenaria crinifera Lindl.

Slender herb with white flowers; Aug.-Sept.; 10 pots (30 individuals).

17. H. longicorniculata Graham

Tall herb with white flowers; Aug.-Sept.; 1 bed (25 individuals), 5 pots (25 individuals).

18. H. longicornu Lindl.

Herb with white flowers; Aug.-Sept.; 1 bed (15 individuals), 5 pots (10 individuals).

19. Liparis atropurpurea Lindl.

Herb with pink flowers; July-Aug.; 2 beds (50 individuals), 5 pots (20 individuals).

20. L. biloba Wight

Herb with dark purple flowers; Aug.-Sept.; 1 bed (20 individuals).

21. L. viridiflora (Bl.) Lindl. *Malaxis viridiflora* Bl.

Lithophyte and also terrestrial. Fl. light yellow; 2 beds (50 individuals).

22. Malaxis densiflora (A. Rich.) O. Kuntze, *Liparis densiflora* A. Rich.

Herb with light yellow or greenish flowers; July-Aug.; 2 beds (80 individuals).

23. M. rheedii Sw.

Herb with brownish flowers; Sept.; 6 pots (30 individuals).

24. Nervilia aragona Gaud.

Herb with white flowers; Aug.-Sept.; 3 pots (10 individuals).



Fig. (1-3) :
[1] *Spathoglottis plicata* Bl.
[2] *Eulophia nuda* Lindl.
[3] *Calanthe masuca* (D. Don) Lindl.

25. Paphiopedilum druryi (Bedd.) Stein *Cypripedium druryi* Bedd.

Herb with golden yellow flowers; Aug; 2 pots (7 individuals).

26. P. fairieanum (Bl.) Stein, *Cypripedium fairieanum* Bl.

Herb with brownish flowers having dark purple lines; Jan.-Mar.; 3 pots (6 individuals).

27. P. hirsutissimum (Lindl. ex Hook.) Stein, *Cypripedium hirsutissimum* Lindl. ex Hook.

Herb with greenish flowers having black dots and crisped margins; Mar.-Apr.; 150 pots (about 400 individuals), 1 bed (4 individuals).

28. P. insignes (Wall. ex Lindl.) Pfltz. *Cypripedium insigne* Wall.

Herb with greenish flowers having brown-purple dots with white apical part of dorsal sepal; Oct.-Nov.; 100 pots (about 250 individuals).

29. P. spicerianum (Reichb.f.) Pfitz. *Cypripedium spicerianum* Reichb.f.

Herb with yellowish-green flowers having red streaks and white dorsal sepals; Oct.-Nov.; 20 pots (50 individuals).

30. P. venustum (Wall. ex Sims.) Pfitz. *Cypripedium venustum* Wall. ex Sims.

Herb. Not yet flowered and also the plants are not growing properly; 3 pots (3 individuals).

31. P. villosum (Lindl.) Stein, *Cypripedium villosum* Lindl.

Herb with brownish-yellow flowers; Feb.-Mar.; 170 pots (about 500 individuals).

32. Pecteilis gigantea (J.E. Sm.) Rafin. *Orchis gigantea* J.E. Sm.

Tall herb with large white flowers; Sept.; 5 pots (10 individuals).

33. Peristylus goodyeroides (D. Don) Lindl. *Habenaria goodyeroides* D. Don

Erect herb with pale white flowers; July-Aug.; 1 bed (10 individuals), 3 pots (12 individuals).

34. Phaius luridus Thw.

Robust herb with cream-white flowers; May-July; one bed and a few pots.

35. P. tancarvilleae (Banks ex L. Herit.) Bl. *Limodorum tancarvilleae* Banks ex L. Herit.

Robust herb. Fl. white without and brownish within; Mar.-Apr.; 3 pots (9 sets).

36. Satyrium nepalense D. Don

Stout herb with red flowers; Oct.-Nov.; 1 pot (2 individuals).

37. Spathoglottis plicata Bl.

Herb. Not yet flowered; 2 beds (20 individuals), 10 pots (2 individuals).

38. Spiranthes sinensis (Pers.) Ames, *Neottia sinensis* Pers.

Small herb with white flowers; Aug.-Sept.; 1 pot (1 set).

39. Tainia bicornis (Lindl.) Reichb.f., *Ainia bicornis* Lindl.

Stout herb with pale greenish-yellow flowers; Feb.-Mar.; 3 pots (10 individuals).

40. Vanilla planifolia Andrews

Climber. Not yet flowered; 1 pot (2 individuals).

41. V. walkeriae Wight

Climber. Flowers whitish; 1 pot (5 individuals).

42. Zeuxine longilabris (Lindl.) Trimen, *Monochilus longilabris* Lindl.

Slender herb with white flowers; Aug.-Sept.; 4 pots (8 individuals).

REFERENCES

ABRAHAM, A. AND P. VATSALA. Introduction to Orchids. TBGRI, Trivandrum. 1981.

HENRY, A.N., V. CHITHRA AND N. P. BALAKRISHNAN. Flora of Tamil Nadu, Series 2 : Vol.3, BSI, Coimbatore. 1989.

JOSEPH, J. Orchids of Nilgiris, BSI, Kolkata. 1987.

KATKI, S.K. Orchids of Meghalaya, Govt. of Meghalaya, Shillong. 1986.

MATTHEW, K.M. The Flora of Tamil Nadu Carnatic Vol.3(2), The Rapinat Herbarium, Tiruchirapalli. 1983.