

DOMESTICATION OF WILD ORNAMENTALS

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In India, search for new species and elite clones notably by Botanical Survey of India, forest departments, herbarium and taxonomy divisions of many universities and research institutions was made to bring new and unexplored plant wealth under cultivation. So far, only economic and medical plants were kept under priority and very little attention was given to the ornamental plants. Most of the flowering plants, grown at present, in our gardens are of exotic origin, introduced mainly during the British rule. In recent years the importance of native flora and its use in gardening has been realised.

Recent developments in floriculture have brought in close competition to gain market. Therefore, floriculturists are always in search of new and rare genotypes. Domestication of wild ornamentals may be useful to attain the following objectives :

1. New wild species of potential ornamental/economic importance may be introduced into cultivation after survey and exploitation of wild germplasm.
2. Superior/improved varieties may be developed through hybridization using wild, domesticated germplasm.
3. Domestication will help to provide habitat for endangered and threatened plant species.
4. Useful genotypes may be conserved for future breeding programme.

Certain species viz., *Aeschynanthus tricolor*, *Antennaria dioica*, *Argyrea hirsuta*, *Bidens pilosa*, *Butomus umbellatus*, *Calceolaria mexicana*, *Castilleja coccinea*, *Combretum decandrum*, *Commelina elavata*, *Convolvulus sapium*, *Coronilla varia*,

Cuphea pinetorium, *Cyanotis pilosa*, *Cynoglossum fureatum*, *Desmodium glustinosum*, *D. scalpe*, *Epilobium coloratum*, *Exacum bicolor*, *Gaura bienis*, *Hepatica acutiloba*, *Hypericum mysorensis*, *Linaria vulgaris*, *Linum sulcatum*, *Lochnera rosea*, *Oenothera tetraptera*, *Saponaria officinalis*, *Solanum sisymbriifolium*, *Strobilanthus kunthianus*, *Tephrosia virginiana*, *Tradescantia ohiensis* and *Tulipa tarda* (all herbaceous plants) and *Acacia cultriformis*, *A. podalyriifolia*, *Butea superba*, *Careya herbacea*, *Casearia graveolens*, *Cassia artemisioides*, *Cassia suberosa*, *Colebrookia oppositifolia*, *Cordia sebeslena*, *Erythrina arborescens*, *E. glabrescens*, *Entada scandens*, *Helicteres isora*, *Hovea longiflora*, *Menecylon malabaricum*, *Osbeckia*, *Phyllanthus pulcher*, *Reinwardtia indica*, *Stereospermum chelonoides*, *Woodfordia floribunda*, (perennial plants), growing in the forests have potential as ornamentals. These may be screened for use as new ornamental species.

Domestications made at National Botanical Research Institute

1. *Erythrina resupinata* Roxb. (Leguminosae)

A wild plant of rare beauty and prostrate habit was collected from *Tarai* forest of U.P. and Bihar and domesticated as a rockery plant. The flowers emerge earlier than the leaves.

2. *Sopubia delphinifolia* G. Don (Scrophulariaceae)

An annual herb growing widely in the central and southern parts of India bears attractive pink flowers during rainy season.

3. *Lantana camara* L. (variegated form) (Verbenaceae)

Lantana camara is an evergreen flowering shrub with red, yellow or white flowers. A variegated form of *L. camara*, having ornamental foliage was collected from Chitrakoot forests of district Banda (U. P.). The plants is propagated by cutting of young shoots.

4. *Nyctanthus arbor tristis* (Oleaceae)

Nyctanthus arbor tristis is an indigenous species and is widely distributed in the forests of Chitrakoot and Madhya Pradesh region. A survey, indicated that much floral polymorphism exists within this species. Five distinct clones of *N. arbortristis* were collected (Srivastava, 1978). The domesticated clones were seed propagated, but to raise homogenous population, they were propagated by patch budding.

5. *Rumex hastatus* D. Don (Polygonaceae)

Rumex hastatus is well distributed in Kumaon hills. It is a perennial herb or a small shrub and bears a long flowering stalk, with pink flowers and fruits. In view of its potential as a rockery plant in the plains, it was domesticated and has been maintained. The plants flower and fruit well under Lucknow conditions (Srivastava and Dhar, 1978a).

6. *Cassia auriculata* L. (Leguminosae)

Occurs extensively in the central and western peninsular India and some parts of Uttar Pradesh had been introduced at Lucknow (Srivastava and Dhar, 1978b). By proper training, the plant made a very good 'free flowering standard'. It flowers almost throughout the year.

7. *Combretum nanum* Buck-Ham. (Combretaceae)

This species collected from *Tarai* region of Lakhimpur Kheri District, is a small, decumbent, undershrub having very colourful winged fruits. It is suitable as a rockery plant. Fruits of *C. nanum*, when mature, become very colourful and are suitable for interior decoration.

REFERENCES

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