

Ornamental plants: A tribute to human society for aesthetics, economics and environmental enrichment

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Ornamentals: A gateway to human soul and aesthetics

Ornamental plants are mostly grown for their exquisite blooms and are a source of major attraction for many gardens. Several such ornamental gardens usually prefer a wide variety of flowering plants so that the garden is continuously in flower through the year during spring, summer, monsoon and winter (Fig 1). Several types of plants representing predominantly angiospermic plant families, some selected gymnosperms and pteridophytes (such as ferns) are most commonly grown that have colorful flowers, foliages, shapes, fragrance or aroma, spectacular morphological characters that are visibly attractive are usually selected. Ornamental plants could be either herbs, shrubs or trees, lianas and creepers, terrestrial and aquatic in habit and that could have originated in a wide variety of habitats representing different ecosystems and environments. Several ornamental plants are commonly known for their exquisite beauties such as gardenia, pansy, bougainvillea, muhlenbergia, roses, narcissus, daisies, petunias, dahlia, chrysanthemum, gerbera, aster, cosmos, gladiolus, sunflowers, pansy, different lilies, amaryllids, orchids colorful ornamental grasses and aroids (Figs 2-4). In general, floriculture and nursery industries are often referred together as *ornamentals* or *ornamental industry* or *non-food agriculture*. Recently the sod and Christmas tree industries have been referred to as *ornamental horticulture* in the Europe and North America; while use of plants in reshaping and changing landscape profile, quality and property value is now called *ornamental landscaping*.



In addition to herbs, shrubs and trees, miniature plants or bonsai, cacti and succulents also constitute ornamental plants. It is important to understand that ornamental plants are not just restricted to only spectacular flowering plants. The concept of ornamental plant is also a dynamic. Hence, a weed in one part of a continent could be ornamental in another part of the same or a distant continent. A commercial food or industrial crop with spectacular foliage or bloom in a specific country or continent may be considered as an ornamental species in another distant locality. Many producers prefer ornamental plants with a special emphasis for food production. However, it is possible to integrate floral and fruit productions together in the growing regions by targeted selection of specific plant species. For example plants like Runner Beans, Ruby Chard or Globe Artichokes can easily find their place inside the walls of a floral garden for ornamental plants. People can decide about the merits of including such plants in their ornamental gardens as they can add a new dimension to their floral gardens, lawns and parks.





Roadside ornamentals along the busy city streets and lanes and along the highways passing through both urban municipalities or corporations and rural areas are an important source of beauty and aesthetics for travelers and visitors. Well maintained city and town parks are also added attraction for tourist to these places and also have a positive impact on the local environment. It is also important to note that several such parks, gardens and ornamental meadows serve as island refuge for many small mammals and numerous bird species that adds to the color of life and helps in protecting the local biodiversity particularly in busy urban commercial or business centers as well as residential areas. Ornamental plants provide homeowners the means to improve their local environment. It is therefore important to have the necessary knowledge and technology of selecting, multiplying and growing appropriate species of plants that would be most suitable to fit into the target landscape. Overall, ornamental plants serve multiple roles to the human society. In one hand they enrich the aesthetic quality of our life and improve the local environment providing refuge for our busy life and relaxation; while on the other, they protect the nature, local biodiversity, generates revenues and employment and helps in the process of natural beautification. In addition to wide variety of colorful plants and plants showing distinct foliages for pattern, color, shape, size and morphology; artificial miniaturized plants or “bonsai” also constitute an important aspect of ornamental

plants are exquisite parts of indoor beautification with plants (Fig 4). Although several ornamental species are known, only a few distinct handfuls are described as examples below.



Bougainvilleas: A perfect ornamental plant for city environment

Bougainvilleas represent woody climbing plants belonging to the dicotyledonous family Nyctaginaceae and are adored for their wide spectrum and shades of colors across the globe. It is however important to note that the different shades of color for which different cultivars and germplasms of Bougainvilleas are so revered and cherished all over the world are not actually true petals. But truly speaking these are colorful bracts that translates in simple terms to mean modified leaves. The true flowers of the plants are small, tubular, white and subtended by the colorful bracts (Fig 5). The flowers occur in clusters of three with 3-6 colorful bracts surrounding them. The spines of on the stem plant are solid, green when immature but transforms to become woody at maturity. Leaves are simple, ovate and alternately arranged on the stem with a thick leathery texture. Now horticulturists have been successful in introducing many varieties of the plants with variegated leaves that has further enhanced the ornamental value of the plants in addition to the colorful bracts. Different species have different colored bracts varying between purple, pink, red, orange to white and yellow and several other shades. The plant is exploited commercially as an important ornamental and horticultural plant and several hybrids and mutant varieties are also well known.

The center of origin of this spectacular garden plant is tropical South America. The strange name of the plant comes from the last name of the celebrated explorer and polymath genius Captain Louis Bougainvillea. The plant was actually named by the famous French botanist Philbert Commerson. It is worth mentioning that bougainvillea is the national plant of Grenada, a small island nation from the Caribbeans. The plant is easy to cultivate and do not need much maintenance once a steady growth stage is

reached. The bright colored bracts against the green leaves usually demonstrate an amazing color contrast that adds to the natural beauty of the bougainvillea hedge or ornamental arrangements of the growing and well pruned plant around garden gates and against boundary walls or against any supporting structures around which the plant can creep around and grow successfully. The plant has been found to be quite resistant against city based pollutants and have seen to thrive under bright sunny conditions with low water requirements. Hence this is an excellent city ornamental that could cope with pollutants and continue to add to the city aesthetics with the spectacular color of their bracts.



Cacti and Succulents: The World of Indoor Botany

There are several plant species that adorn our homes and add to the indoor beauty in the environment that we settle in; our homes and offices. Even in absence of hot houses or greenhouses or so called glass houses such plants could be reared and easily grown and cultivated in the ambient temperatures of our houses and offices. Such plants include several xeric and succulents plants from angiospermic or true flowering groups of plants such as cactus (plural cacti), several members of bromeliads, euphorbias, lilies, amaryllids, asperagales, aroids, certain hardy artificial hybrid orchid species, short indoor palms and bamboos, bonsai plants (specially prepared live plant miniatures) etc; and non-flowering plants such as ferns adorn the inner world of modern human habitation across the planets mostly in towns and cities. However, cacti and succulents (Figs 6 & 7) constitute a big bulk of them and are represented by a bunch of diverse plant families.



Over 15-16,000 species of cacti are known world wide and include big desert giants to minute potted ones showing wide diversity in their habits and habitats; while the succulents plants have highly specialized and adopted thick and fleshy leaves and stems that are capable of retaining moisture inside the plant cells in xeric (arid/desert) habitats. Both cacti and other succulents can store and preserve moisture efficiently for long periods of time and unfavorable conditions of temperature and humidity. Hence such plants are prized

as indoor-ornamental plants. Such plants have evolved several specialized modified plant parts such as flattened, thick fleshy leaves and stems, specialized cuticle and waxy coatings, spines and thorns, sunken stomata and several other morphological and anatomical macro and micro structures to enable them to survive them under hostile environment. As such due to low water requirements and their ability to survive under minimal conditions such plants have become so popular worldwide as fancy indoor plants beautifying our surroundings and also helping in absorbing several indoor pollutants and purifying the enclosed environments of houses and offices. Such diverse plants not only add aesthetic beauty but also have a close ecological relationship to our anthropocentric life and society. The wide adaptability of such plant groups to their hostile environment and ecosystem has been through long years of evolution and are spectacular in the very true sense of the term.



Orchids: A widely diverse group with a huge spectrum of ornamentals

Orchids are monocotyledonous plants belonging to the family Orchidaceae. The largest member of the plant family is found in the tropics and sub-tropics of Asia, Oceania, Africa and the Americas and also in the temperate regions of Europe and Asia. The family is represented by diverse plants with a wide spectrum of shape, forms and color

and as such highly valued as horticultural plants. The orchids therefore constitute an important member of plants categorized as highly prized ornamentals. Orchids (like tulips), have enormous potential as ornamental plants in the local, regional and international markets and serve as important source of foreign exchanges for many developing and under developed countries.



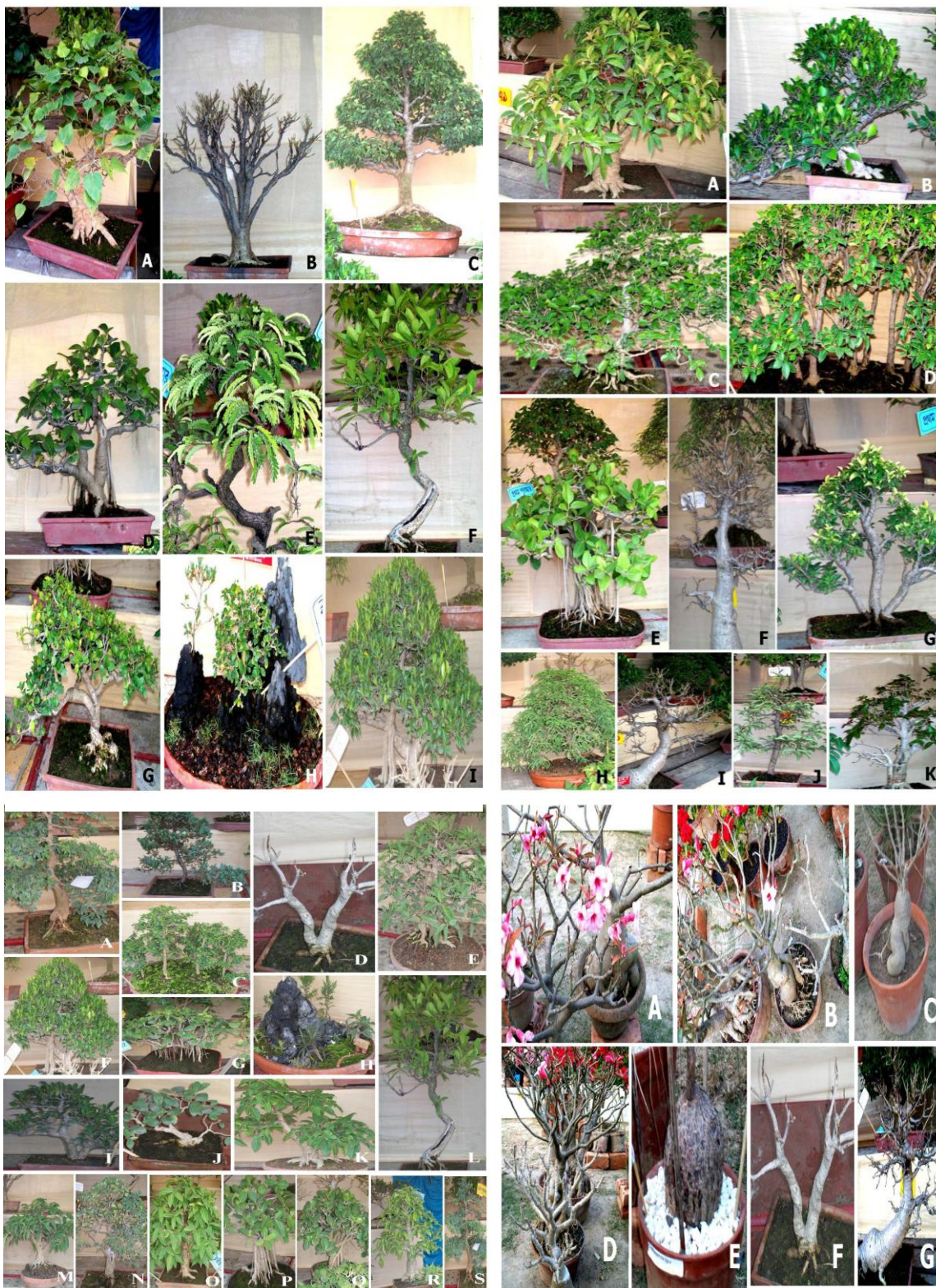


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