

Medinilla: an exotic and attractive indoor plant with great value

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Abstract Diversifying the assortment of indoor plants by introducing exotic species is an actual concern of growers worldwide. In Romania we are lately witnessing to the importation of ornamental plants less known, but which are a great interest in terms of ornamentation. This requires knowledge of environmental conditions and culture technology so that the plants could be grown with good results. In this paper was presented the *Medinilla* genus, including species and varieties approximately 418, but only *Medinilla magnifica* species is being taken in culture. It is a species of great beauty with spectacular inflorescences, and its leaves complement the decorative value. Promoting the culture of new assortment to ornamentals will improve interior design with positive effects on the human benefits, but may also be a major source of income by taking it in culture and selling it. Growing and caring for indoor plants gives many a sense of pleasure, tranquility and peace.

Key words

houseplant, pot plant, characteristics, techniques, assortment, diversification

The introduction of new plants in floriculture and ornamental horticulture is an important objective of our researches in order to diversify the Romania assortment for indoor design. It is almost impossible to enter an apartment and do not notice in a corner or on a shelf, on a table or on a window sill, the green presence. The species variety taking part in the decoration has grown enormously in recent decades due to the importation of exotic specimens and the work of horticultures that created ornamental varieties adapted to our climate. To be presented in all their beauty, each plant needs best place inside the apartment. Some of them require very bright places, sometimes spoiled by the sun and others require shady places (2).

Plants used for interior decoration, of spaces with heating possibilities during the winter, do not form a homogeneous group. They belong to a large number of botanical families and are mostly originating in warmer areas of the globe.

There are today many archaeological writings and documents attesting since ancient time the presence of decorative plants in the room. They were highly esteemed, and often elevated to a symbol of divinity (1).

Houseplants can have beneficial effects on life. They purify and renew the indoor air by filtering out toxins, pollutants and carbon dioxide we exhale, replacing them with oxygen, so much needed to life.

For this reason this paper presents a new tropical plant with real possibilities of spreading in our interiors.

Origin and History of Genus *Medinilla*

The *Medinilla* genus belong some of the most beautiful tropical plants. There is not widespread because it does not know many of its characteristics. The plants are grown in warm and sunny places or in greenhouses, but are very difficult to maintain because they are very delicate and needs precise conditions to flourish. The effort is rewarded with splendid plants and flowers of an extraordinary beauty. Flowering occurs late spring and summer.

Medinilla is part of the phylum *Magnoliophyta*, class *Magnoliopsida*, order *Melastomataceae*. There are about four hundred species of *Medinilla*, of which only *Medinilla magnificent* Lindl. is grown indoors. Originally from the Philippines, the species is an epiphytic plant, grows naturally in tropical forests. It has pink flowers that grow as bunches of grapes and therefore is also known as "pink grape" (4).

King Boudewijn of Belgium had a great passion and devotion to the species. He grew *Medinilla* in the royal greenhouses and even appeared on the bill of 10.000 Belgian francs. The name of the plant comes from the Spanish Governor of Marianas Islands, from the Pacific Islands, *Medinilla* Y Jose Pineda from 1820.

One of the most famous writers in the Netherlands, Rob Herwing, called *Medinilla* "the Rolls Royce of the houseplants."

With a spectacular presence, *medinilla* is the pride of any collection of ornamental plants. It is an exclusive plant that fully deserves its name of "magnificent".

In our country, is almost unknown, only in recent years some plants are beginning to appear to some flower shops in big cities.

Plant Description

With a spectacular presence, medinilla is pride of any collection of ornamental plants. In places of origin appears as an evergreen, tall shrub 1 - 2.5 (6).

The leaves are very large, up to 40 cm long, 20-25 cm wide, oval, located opposite, dark green color, bright, has prominent rib on the upper side and the corrugated appearance underside (Fig. 1).

Flowers have five fleshy pink petals with purple anthers. They are grouped in panicles terminal pendent of 40-50 cm long and also are accompanied by large bracts pink with darker rib (Fig. 2). Inflorescence hangs over the edge of the pot.

Medinilla are a real feast, and definitely deserved his name of magnificent.



Fig. 1. Medinilla magnifica



Fig. 2. Flower of Medinilla magnifica

Species and varieties:

Of the approximately 418 species and varieties of the genus *Medinilla* include (more important are (5):

Medinilla alata, *Medinilla beamanii*, *Medinilla crassata*, *Medinilla cummingii*, *Medinilla crassata*, *Medinilla magnifica*, *Medinilla miniata*, *Medinilla sedifolia*, *Medinilla speciosa*, *Medinilla waterhousei* etc.

Biology and ecological requirements

As an exotic plant, magnificent *Medinilla* is quite difficult to care. The soil should be a mixture of garden soil, sand and manure to provide both food and much needed drainage. The plants love the light, but not directly on the leaves and flowers, so it is better to be placed in semi-shade. The favorable temperature is

between 13-27 °C. To ensure proper growth *Medinilla*, it must be kept in a ventilated room. In winter months, the plant should be kept in a room where the temperature exceeds 18 degrees Celsius. In the winter the plant is passed through an easy resting period (November-February) when temperatures of 16-18 °C should be provided and in any case will not fall below 15°C. Variations in temperature, as the air currents can damage the plant (3).

Medinilla magnifica needs plenty of water and the soil must be kept constantly moist. Spray the whole plant all summer with clean, non-calcareous, water, thus ensuring humidity (approx. 70%) necessary for the efficient development. During flowering, every two weeks, the plant needs to be fertilized with liquid fertilizer for exotic plants in water. The plant should be sprayed two to three days with a fine jet sprinklers to

moisten the atmosphere. To increase humidity, it is also indicated the use of large plates pots to be filled with clay and gravel.

Light must be intense, but should avoid direct sunlight which can cause leaf burn. The soil should be rich in humus, slightly acidic with pH 5.5, with coarse particles by adding fibrous peat.

If the plant gets too much in size, it can be cut. Once the flowers disappeared watered is less often, for the period from November to February to take necessary rest to stimulate the emergence of new flowers. Regular watering will reduce when the first floral buds have appeared. It is recommended that after last flowers fall, strains that bore bunches to be halved by cutting to stimulate development of new flowers next season and keep the right dimensions. The plant doesn't support any form of airflow, which is why it must be used the indirect ventilation (by opening the neighboring room windows).

Propagation and cultivation

In general, plant production flat difficult conditions. Propagation methods most used are by cutting and layering.

When flowering is passing away cuttings from shoots stem, which are not too cruel, can be made and they must be putted to root in fibrous peat with perlite or sand, at a temperature of 24 - 25°C. Treatments with hormones substances are beneficial. Rooting occurs in about 4 weeks.

In early spring from the top of the shoots will be take cuttings of 8 cm long, with at least one pair of leaves. The cuttings will be treated with hormonal substances. They will be planted in different pots containing a mixture of sand and peat in equal proportions. Boxes should be placed in semi-shade at a temperature of 30 °C, covered with a glass lid, half opened, to maintain high indoor air humidity and the soil mixture must be maintained also constantly wet. After rooting, plantlets can be transferred in separate pots, with fertile soil.

Once transferred from the casket, rooted cuttings need a good sunny place and enough water. The mixed soil must be kept wet and it is left to dry only a layer 1.5 cm thick.

The main of maintaining works, applied to *medinilla* include: maintaining heat and atmospheric humidity. To this goal, the pot can be placed on a layer of pebbles, which favors the necessary moisture (70%).

With a relatively slow growth is not necessary to transplant more often than at intervals of 2-3 years, in February. Species transplantation is recommended for a mixture of forest soil, garden soil, sand and peat. In years transplantation is not done, the replacement of the top layer of the mixture (2-2.5 cm) with fresh one is enough.

Medinilla takes approximately 40 weeks for the plants go through the complete growing process. During this process the quality of the plants is

constantly monitored, so we are able to anticipate every visible change to and need of the plants.

Plants should be cut when they become too large, taking care not to be too radical. The pinch of the young branches to stimulate branching plant is recommended. In optimum conditions the plant can reach 1.5 m high and 1 m wide.

During spring and summer, it is necessary to administer a liquid fertilizer every two weeks with irrigation water. At other times, should be suspended. Use a fertilizer containing macroelements such as nitrogen (N), phosphorus (P) and potassium (K), and microelements, magnesium, iron, manganese, copper, zinc, boron, which are all important for a proper growth and balanced plant.

In the summer fertilize once a month with complex fertilizer in a concentration of 0.1%.

At the end of flowering it needs to reduce watering to help plants to get to the resting period easier.

The leaves will be sprayed regularly with water, but avoiding wetting the flowers. When the last flowers have faded, flower stems will be cut in half.

The resting period can be introduced by lowering the temperature to 16-18 ° C, by reducing water and choosing a Nordic exhibition.

Important to remember!

Too cold or too dry air, insufficient light or excessive watering can lead to wither of leaves and can block the flowering. The most dangerous pest of this plant is the red spider, which can be controlled by regular water sprinkling of leaves and using appropriate pesticide.

Diseases and pests

Too cold or too dry air, insufficient light or excessive watering can lead to withered leaves and can block the blooming.

The greatest damage of this plant is red spider (*Tetranychus urticae*) that may be controlled by regular water sprinkling of leaves and using appropriate acaricides (Padan 50DP - 0.1%, Karate 2.5 EC - 0.04%; Sintox 40 EC - 0.1%; Nissorun 10WP - 0.03%; Danirun 11 EC - 0.06%).

On the red spider attack, leaves turn yellow and the bottom of it is seen jotting veils. If the attack is high, the humidity must be increased, because the deficiency of humidity causes proliferation of mites.

Uses

The indoor plants are not used only for their decorative role. They also have many healing benefits, an additional reason to host them somewhere near the window where natural light for ideal the growth.

Plants are also designed to refresh the air inside, because he is ten times more polluted than outside, according to American researchers (7). Because most of our spare time is spent at home, toxicity is high. Moreover, air conditioning also

contributes to this, so it takes a natural filter to improve the environment.

The humidity of a room where there is not indoor plant is high, and this contributes to migraines. Flowers in the home controls humidity in the room, setting the optimum level of comfort.

Plants in the house mean a better oxygenation of the room and reduce toxicity. They act as a natural filter, reducing anxiety and tension throughout the day. Houseplants can be considered even a simple and inexpensive, method of relaxing. Just to be properly managed and they will provide a fresh environment.

Medinilla is an elegant shrub, grown for the beauty of its flowers and leaves, so it is not decorating only by the beauty of flowers but also by all the plant. Its graceful and distinguished flowers decorate several months during the year, if the plant is properly cared for. These plants love the light and heat, so you can use them in apartments, offices, conference rooms and even on balconies, terraces, patios while the temperature doesn't falls below 18 degrees Celsius.

Conclusions

This exotic plants and new plant varieties are increasingly found in the collections of fans because of their special appearance.

Medinilla magnifica is one of the most spectacular indoor plants. Its flowers and leaves of a brilliant green provide to the space an elegant style. It pays to invest financially and emotionally in new plant varieties, even if it requires sometimes patience and skill. *Medinilla magnifica* was popular since the 1800s, royally growth and attended. In our interiors it's enjoying the same "treatment" and fully deserves its title of magnificent.

References

1. Cantor Maria, 2008, Plante ornamentale de interior, Ed Todesco, Cluj Napoca
2. Draghia Lucia and Liliana Chelariu, 2011, Floricultură specială, Ed. Ion Ionescu ed la Brad Iași
3. Șelaru Elena, 2004, Plante de apartament, Editia a II-a, Ed Ceres, Bucuresti
4. <http://www.gardenguides.com/taxonomy/medinilla>
5. <http://www.ars-grin.gov/cgi-bin/npgs/html/splist.pl?7367->
6. http://www.plante-interieur.com/medinilla_magnifica.php
7. www.houseofplants.co.uk