

MEDICINAL PLANTS FROM GREENHOUSES COLLECTION "AL. BUIA" BOTANICAL GARDEN OF THE UNIVERSITY OF CRAIOVA (NOTE I)

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ABSTRACT

In this paper are presented the medicinal plants from the greenhouses Botanical Garden "Al. Buia" of the University of Craiova. In the greenhouses collection there are exotic plants, well identified, obtained over time from seed or cuttings in the exchange of plant material between the Botanical Garden and other similar institutions in the country or abroad. Knowledge of all aspects of these exotic plants and disseminating information to both specialists and the general public is one of the objectives of University Botanical Gardens.

The species with therapeutic potential existing in collection Botanical Garden greenhouses are known in particular as ornamentals and less from the point of view of their use as medicinal plants.

INTRODUCTION

Mission botanical gardens in biodiversity conservation is a necessity in the current degradation of the natural environment. To achieve this mission Botanical Garden "Al. Buia" has a number of means, such as collection of plant material containing collection of plants grown in greenhouses or outdoors, plants preserved in herbarium, collection of fruits and seeds, and an extensive literature on plants.

Greenhouses contain collections of taxa with origin in different regions of the globe. There are exotic plants, which in addition to ornamental role can have other uses: medicinal plants, aromatic, dyeing, textile plants etc. Herbs play an increasingly important place, being known that they can be successfully used in therapy, such that in recent years an increasing number of studies are made on the chemical composition of the plant, for the identification of new taxa with curative properties.

Based on these considerations, this paper presents plants with therapeutic properties identified in the collection of the "Al. Buia" Botanical Garden greenhouses.

MATERIAL AND METHOD

A modern speciality literature was consulted to identify medicinal plants in greenhouses Botanical Garden "Al. Buia". These are plants from different geographical regions and can deliver active ingredients useful in treating certain diseases. Medicinal plants in the collection are presented in a table in alphabetical order, as follows: scientific name and family specified for each taxon, vernacular names, geoelement, plant part(s) used for therapeutic purposes, medical uses and observations (phenological data, and where appropriate if any precautions in the use of plants for medical purposes).

Nomenclature is presented according to international databases (The Plant List, GRIN).

RESULTS AND DISCUSSIONS

In the table are presented frequent usages of medicinal plants in greenhouses collection:

Table 1

The medicinal plants identified in the collection greenhouses

Taxon name (Family name)	Vernacular names	Geoelement	Medical uses / Pharmacological aspects	Plant part(s) used	Observations
Agave americana L. (Agavaceae)	American aloe, Century plant	Mexico and other parts of tropical America	- Diuretic properties (Oudhia, 2007); - The anticancer activity (Khade et al., 2011); the anti anxiety effects of the ethanolic extract of leaves (Khalid et al., 2013); laxative and as an emmenagogue; to treat cardiac problems, high blood pressure and gastrointestinal problems; antibacterial activity against <i>Staphylococcus</i> spp., <i>Pseudomonas aeruginosa</i> and <i>Escherichia coli</i> (Oudhia, 2007)	The leaves, Roots - decoction; The leaves	Has not flourished <i>Precautions:</i> The leaves contain calcium oxalate crystals (raphides), which can cause contact dermatitis and conjunctivitis
Agave kerchovei Lem. (Agavaceae)	Century plant	Mexico	In diabetes (Brena-Bustamante et al., 2013)	The flower buds; The leaves	Flourished and fructified
Agave lechuguilla Torr. (Agavaceae)	Tampico fiber	Northern America	In diabetes (Poss et al., 2003)	The leaves	Has not flourished
Agave schottii Engelm. var. schottii (Agavaceae)	Schott agave	Northern America	Anticancer effects (Harlev et al., 2012)	Aerial parts	Has not flourished
Aloe arborescens Mill. (Liliaceae)	Candelabra aloe, Krantz aloe	South eastern part of Southern Africa	Antidiabetic effects, Anti-inflammatory, Antiproliferative activity (Ceccarelli et al., 2012)	The leaves (the juice is extracted from the leaf)	Flourished
Aloe ferox Mill. (Liliaceae)	Cape Aloe, Bitter Aloe, Red Aloe, Tap Aloe	South Africa	Laxative, antidiabetic effects, anti-oxidant, anti-inflammatory, antimicrobial, anticancer and antihelmintic activity (Chen et al., 2012)	The leaves	Has not flourished
Aloe vera (L.) Burm. f. (Liliaceae)	Indian Aloe, True Aloe, Barbados Aloe.	Northern Africa	Alternative medicine; antibacterial and antifungal properties; anti-inflammatory effect, gastrointestinal effects, antidiabetic effects, laxative, antitumor activity etc. (Sharma, Gautam, 2013); dietary supplement.	The leaves, juice of the leaves	Flourished
Bauhinia fortificata L. (Caesalpiniaceae)	Orchidtree	Asia-Temperate Asia-Tropical	Anxiolytic effect, antidiabetic activity (Cavalcanti et al., 2011); antioxidant, anticoagulant and antifibrinolytic activity (Souza et al., 2009)	Leaves (decoction)	Flourished, but has not fructified
Carica papaya L. (Caricaceae)	Papaya, Pawpaw	Mexico, Southern	In liver diseases (Floria Tănăsescu, Teodorescu,	Seeds	unripe fruit – contra-

		America	2006); Anthelmintic, Laxative, to increase visual acuity, Cure of dyspepsia (Aravind et al., 2013)	Fruits Roots	ceptive in some Asian countries (Aravind et al., 2013)
Cereus jamacaru DC. (Cactaceae)	Queen of the night, Mandacaru	Brazilian northeast	It can be used as a tea, being prepared from the root and used to treat illnesses such as rheumatism, wounds, boils, urinary infections and kidney inflammation (Lucena et al., 2013)	Fruit Marrow Root	Flourished and fructified
Cinnamomum camphora (L.) J. Presl (Lauraceae)	Camphor tree	China oriental, Japan	In respiratory diseases, treats stomachache (Star et al., 2003)	Roots, whole acrian part	Not blooming
Citrus limon (L.) Burm. f. (Rutaceae)	Lemon	Asia	Vitamin supplement Aphrodisiac (Li, 2006)	Fruit Root (infusion)	Flourished and fructified
Citrus sinensis (L.) Osbeck (Rutaceae)	Sweet orange	Asia	Vitamin supplement (Floria Tănăsescu, Teodorescu, 2006)	Fruit	Flourished and fructified
Coffea arabica L. (Rubiaceae)	Coffee tree	Ethiopia	Stimulating and anti-inflammatory effect, antioxidant activity (Pérez-Hernández et al., 2012)	Seeds	Flourished and fructified
Cordyline fruticosa (L.) A. Chev. (Agavaceae)	Tree of kings	Asia-Temperate	Stops bleeding, stomachache (Li, 2006)	Leaves	Flourished
Crinum asiaticum L. (Amaryllidaceae)	Asiatic poisonbulb	Africa, Asia-Temperate, Asia-Tropical, Australia, Pacific	Arthritis, injuries, skin infections and herpes, anti-inflammatory effects, colic, emetic and purgative (Rahman et al., 2013)	Leaves	Flourished The bulb is reputed to be poisonous
Eriobotrya japonica (Thunb.) Lindl. (Rosaceae)	Loquat, Japanese mosmon	China, Japan	Antitussive, expectorant, treats bronchitis, cough, fever, nausea; externally applied to epistaxis, smallpox, ulcers (Li, 2006)	Fruit, Leaf, Flower	Flourished and fructified
Euphorbia tirucalli L. (Euphorbiaceae)	African milkbush, Naked-lady	Africa	Remove warts, cure skin diseases (Phani Kumar, Chaturvedi, 2010)	Latex	<i>Precautions:</i> Poisonous plant for the Vertebrates: mammals
Euphorbia tithymaloides L. (Euphorbiaceae)	Japanese-poinsettia, Redbird flower, Slipperplant	Mexico, Southern America	Cure headache Cure skin diseases Cure urinary problems (Phani Kumar, Chaturvedi, 2010)	Latex Stem and root Whole plant	<i>Precautions:</i> Poisonous plant for the Vertebrates: mammals
Gloriosa superba L. (Liliaceae)	Climbing-lily	Africa, Asia-Temperate, Asia-Tropical	In traditional medicine: Asthma, tussis, amenorrhoea, as anti-inflammatory agent and arthritis (Li, 2006) Anthelmintic (Lal, H. S., Mishra, P. K., 2011)	Rhizome (are rich in the alkaloid colchicine), flowers Whole plant	<i>Caution:</i> every part of the plant is poisonous, especially the rhizomes (Lal, H. S., Mishra, P. K., 2011)
Hoya carnosa	Honeyplant	Asia-	Furuncles (Li, 2006)	Leaf	Has

(L. f.) R. Br. (Asclepiadaceae)		Temperate, Asia-Tropical			flourished, but has not fructified
Laurus nobilis L. (Lauraceae)	Laurel	Mediterranean	Digestive, carminative and antiseptic (Akbulut, Sefa, Bayramoglu, M. M., 2013)	Leaves and fruit	Not blossoming
Lophophora williamsii (Lem. ex Salm-Dyck) J. M. Coult. (Cactaceae)	Divine cactus, Diabolic- root, Indian dope	Northern America	Antirheumatic, analgesic, tonic (Smith, 2002)	Aerial parts	Hallucinogen - contain mescaline
Mimosa pudica L. (Mimosaceae)	Sensitive- plant	Brazil	Is used in tooth ache (Barukial, Sarmah, 2011)	Roots	Flourished and fructified
Myrtus communis L. (Myrtaceae)	Myrtle	Southern Europe, North Africa	Antidiabetic, astringent, haemostatic (Sabiha et al., 2011)	Leaf Fruit	Not blossoming
Olea europaea L. (Oleaceae)	Olive	Mediterranean	In liver diseases (Floria Tănăsescu, Teodorescu, 2006) To treat breast cancer, others take it to prevent colorectal cancer and in cardiovascular complications (Akbulut, Sefa, Bayramoglu, M. M., 2013).	Leaves, Fruit	Flourished and fructified
Ophiopogon japonicus (Thunb.) Ker Gawl. (Liliaceae)	Mondgrass Dwarf lilyturf	Asia- Temperate, Asia-Tropical	Cardioprotective properties, anti-inflammatory, antioxidant effect, antidiabetic effect (Li, 2006)	Root (aqueous extract)	Flourished and fructified
Opuntia cochenillifera (L.) Mill. (Cactaceae)	Prickly Pear	Mexico	To treat mycoses (fungal skin infections) –(Lucena et al., 2013)	The stem (extract)	Flourished and fructified
Opuntia ficus- indica (L.) Mill. (Cactaceae)	Smooth prickly- pear, Tuna cactus, Indian-fig prickly-pear	Mexico, much of Latin America, South Africa and the Mediterranean area	Antidiarrhoeal, for treating diabetes (Poss et al. 2003); burns, bronchial, asthma, and indigestion (Lucena et al., 2013).	Fruit Stem	Flourished and fructified
Origanum majoranum L. (Lamiaceae)	Sweet marjoram	Asia temperate	Digestive, mouth wash, bronch disorders (Floria Tănăsescu, Teodorescu, 2006)	Leaves Aerial parts	Flourished and fructified
Pelargonium graveolens L.Hér. (Geraniaceae)	Rose geranium	Africa	Treatment of dysentery, haemorrhoids, inflammation, heavy menstrual flows and even cancer; diabetes, gastric ulcers, sterility and urinary stones (Sharma, 2013). Antibacterial activity (Ghanadi et al., 2012)	Leaves Stems Flowers	Flourished and fructified
Pelargonium peltatum (L.)L.Hér. (Geraniaceae)	Hanging geranium, Ivy geranium	Southern Africa	Antiseptic and astringent, antimicrobial activity, used in the treatment of sore throat and ulceration of the oral mucosa (Yannitsaros,	Leaves	Flourished and fructified

			1996).		
Piper longum L. (Piperaceae)	Indian long pepper, Jaborandi pepper, Long pepper	Asia Tropical: North east India	To treat chronic bronchitis, asthma, constipation, gonorrhoea, diarrhoea, viral hepatitis, respiratory infections, stomachache, diseases of the spleen, cough, and tumors (Kumar et al., 2011).	Fruit	Not blossoming
Piper nigrum L. (Piperaceae)	Black pepper, Pepper	Asia Tropical: India	Can be used as antiapoptotic, antibacterial, antidepressant, antifungal, antidiarrhoeal, anti-inflammatory, antimutagenic, antioxidative, antipyretic, antihypertensive, hepatoprotective etc. (Ahmad et al., 2012)	Fruit	Not blossoming
Rosmarinus officinalis L. (Lamiaceae)	Rosemary	Africa Asia- Temperate Europe	Antibacterial, antifungal activity (Floria Tănăsescu, Teodorescu, 2006)	Leaves Aerial part	flourished and fructified
Simmondsia chinensis (Link) C. K. Schneid. (Simmondsiaceae)	Jjoba, Goatnut	Northern America	Antimicrobial activity; For treatment renal colic, sunburn, hair loss, headache, wounds and sore throat, for treatment of psoriasis (Sharma, Singh, 2011)	Seeds Root	Not blossoming

Culture of these taxa is directly influenced by the climatic conditions in which they grow. Some of these plants can be easily multiplied to give a number of copies in a relatively short time, some from the seeds are slow-growing (*Agave* species, some cactus etc.), and others have not yet reached the full maturity (not flourished and fructified).

CONCLUSIONS

The work presented in this first note a number of 36 exotic taxa with therapeutic properties of greenhouses in the Botanical Garden in Craiova. They belong to 19 families, most species presented being perennials.

Biological material existing in greenhouses is an important basis for the process of education (including research projects, diploma etc.) and scientific research.

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