EVALUATION OF ORNAMENTAL FEATURES AT SOME SPECIES FROM SPONTANEOUS FLORA OF DOBROGEA

EVALUAREA CARACTERELOR ORNAMENTALE ALE UNOR SPECII DIN FLORA SPONTANĂ A DOBROGEI

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Abstract. *In the paper are presented some species with ornamental value identified in the spontaneous flora of Dobrogea, more precisely in Tulcea County. Were studied and gathered more species from which in the paper are presented 5 species: Achillea coarctata Poiret., Campanula romanica Săvul., Dianthus nardiformis Janka., Globularia punctata Lapeyr., Thymus zygioides Griseb. Identification and sampling activities of spontaneous species with ornamental potential took place during vegetation period. From these species the gathered biologic material was represented by seeds or whole plants with who was settled down the experimental field for their study in crop conditions. The choose of multiplication methods and recommendations regarding the usage methods are based on biologic particularities and on imposed ecologic demands by natural habitats of those species. Taxonomic nomenclature used is the one adopted by V. Ciocârlan and Flora Europaea.*

Key words: spontaneous flora, ornamental potential, biodiversity, Dobrogea.

Rezumat. *În această lucrare sunt prezentate câteva specii cu valoare ornamentală identificate în flora spontană din Dobrogea şi anume în judeţul Tulcea. Au fost studiate şi colectate mai multe specii dintre care în această lucrare sunt prezentate 5 specii: Achillea coarctata Poiret., Campanula romanica Săvul., Dianthus nardiformis Janka., Globularia punctata Lapeyr., Thymus zygioides Griseb. Activităţile de identificare şi colectare a speciilor spontane cu potenţial ornamental au avut loc în timpul perioadei de vegetaţie. De la aceste specii materialul biologic recoltat a fost reprezentat de seminţe sau plante întregi cu care a fost înfiinţat câmpul experimental pentru studierea în condiţii de cultură. Alegerea metodelor de înmulţire şi recomandările cu privire la modalităţile de utilizare se bazează pe particularităţile biologice şi cerinţele ecologice impuse de habitatele naturale a acestor specii. Nomenclatura taxonomică utilizată este cea adoptată de către V. Ciocârlan şi Flora Europaea.*

Cuvinte cheie: flora spontană, caractere ornamentale, biodiversitate, Dobrogea.

INTRODUCTION

Introduction in culture of new species with ornamental potential from spontaneous flora are in according with the demands of the development of suitable agriculture.

Spontaneous flora is an important source of plants with ornamental features, which could be cultivated in different landscape designs, in according with ecologic demands.

The literature enlighten the preoccupation of the researchers in finding ways and methods through which the biodiversity of spontaneous flora to be preserved but also to be used as a source of new plants for horticulture, inclusively in ornamental sector (Halevy A.H., 2003; Heywood V., 2003; Moreno de las Heras M., Nicolau J.M., Espigares F., 2008; Buta Erzsebet, Cantor Maria, Zaharia A., Joung Hyang-Young, Choe H.R., Park S.K., 2009; Manda Manuela, Nicu Carmen, Doina Anton, 2009).

In the paper are presented, in the context of their ornamental importance, species of plants identified in Tulcea County, the studies having as goal the improvement of knowledge regarding utilisation of spontaneous flora as a enrichment source for ornamental plants.

MATERIAL AND METHOD

Studied area for the present paper is represented by Tulcea County, and gathered of biologic materials was realised in three locations as follows: Greci, Turcoaia, Babadag.

The relief of Tulcea County include Măcinului Mountains at west and Danube Delta at east. The climate has a continental temperate character, with large thermo amplitudes, reduced rainfalls, and high atmospheric humidity. Summers are very hot and droughty, autumns are long and dry and winters are frosty and with reduced rainfalls. Is characterized by annual average temperatures of around 10 – 11 ^{0}C and with average quantities of rainfalls which not pass over 500 mm. The most frequent soils in the area are chambic chernozem, redzinas, brown eumezobasic soils, brown clay-loam soils and very rare the grey ones.

Identification, recording and gathering activities of plants species from spontaneous flora, with ornamental potential, took place during vegetation period. Were studied and collected five species: *Achilea coarctata* (whole plants and seeds); *Campanula romanica* (seeds); *Dianthus nardiformis* (seeds); *Globularia punctata* (seeds); *Thymus zygioides* (whole plants).

The biologic material gathered for establishment of experimental field was different (seeds and whole plants), function of plants' biologic particularities (duration of life cycle, phenophase) or sozologic category in which are placed some taxons. Also, at some species, at which were identified populations in different areas, was gathered biologic material from each population, having in view to compare the morphologic characters and multiplication and adaptation capacity (*Campanula romanica, Thymus zygioides*).

The studying method consists in observations regarding the main morphologic and ecologic features of the species, marking the spread areas from Romania (Oprea A., 2005).

Taxonomic nomenclature used is the one adopted by V. Ciocârlan and Flora Europaea (Tutin T.G. et al, (eds.) (1964 – 1980 & 1993).

RESULTS AND DISCUSSIONS

Studies regarding cultivation potential for ornamental purpose of some spontaneous species from Romanian flora were made in the south and south-east part of the country, respectively Tulcea County.

In Tulcea County were studied, recorded and collected from different locations, some interest species, from which in the paper are presented 5 species.

Location - Greci: *Dianthus nardiformis* (seeds); *Campanula romanica* (seeds); *Thymus zygioides* (whole plants).

Location – Turcoaia: *Achilea coarctata* (whole plants and seeds); *Thymus zygioides* (seeds); *Campanula romanica* (seeds).

Location – Babadag Forest: *Globularia punctata* (seeds).

Are presented the studied species, with their main biologic, morphologic, ecologic features, spread area, the place were the material was collected and the ornamental features.

***Achillea coarctata* Poiret., Asteraceae family**, (figure 1), is a hemicryptophyte perennial plant, origin from Pontic-Balkan area, in Romania could be found sporadic from steppe area to sessile floor, in barren grasslands and massive, on fields with sunny exposure. The specie blossoms in summer (June – July) flowers are yellow, small, grouped in corimbe. The biologic material represented by seeds and whole plants was gathered from Turcoaia area.

The decorative part is represented by flowers and port, and the specie could be recommended for usage as a cut flower and in rocky design.

***Campanula romanica* Săvul., Campanulaceae family**, (figure 2), is a perennial specie hemicryptophyte. In Romania is rarely presented, being an endemic specie, in Dobrogea. Decorate through small and blue flowers. The specie blossoms in summer (June – August).

Was recorded and collected from two locations: Greci and Turcoaia, biologic material being represented by seeds.

Plant present ornamental interest due to flowers, with the possibility of their usage in rocky design, ornamental pots.

***Dianthus nardiformis* Janka., Caryophyllaceae** family, (figure 3), specie is perennial with short height 5 - 15 cm, with small pink – violet flowers. It could be found in the rocky areas of Dobrogea, and it is rare specie.

It was recorded in Greci. The gathered biologic material was represented by seeds.

The decorative part is formed by flowers at which could be put the plants' port, respectively the compact bush. It could be used at borders, rocky designs, ornamental pots and groups or massive.

Globularia punctata **Lapeyr. (syn. *Globularia bisnagarica* L.), Globulariaceae family**, (figure 4), it is a hemicryptophyte perennial plant, which is very rarely found from steppe area to the beech floor, in grassy places, dry and rocky, in Muntenia, Dobrogea, Transilvania and Banat. Specie has a central – sub Mediterranean European origin. Plants have simple leaves, alterns and in rosette, flowers have a blue colour, having a globular shape.

Biologic material was represented by seeds. It was collected from Babadag location.

It could be used at borders, rocky designs, ornamental pots, and groups or massive.

Thymus zygioides **Griseb., Lamiaceae family**, (figure 5), is a camefit perennial specie of Balkan origin. In Romania it is considered rare specie and it is spreading in steppe area and silvo-steppe on grassy rocks. Specie capitalized well the droughty plots. Plant grows as a bush with a lower height, (3 – 10 cm). It blossom in summer from (May – July).

Biologic material is represented by seeds and whole plants and was recorded from Greci and Turcoaia

Present ornamental interest due to flowers and bush shape and could be recommended for usage in landscape designs such as borders, ornamental pots, rocks.

Fig. 1. *Achillea coarctata*

Fig. 2. *Campanula romanica*

Fig. 3. *Dianthus nardiformis*

Fig. 4. *Globularia punctata*

Fig. 5. *Thymus zygioides*

CONCLUSIONS

1. The studies realized in Dobrogea area, Tulcea County, allowed the identification of some species (*Achillea coarctata* Poiret., *Campanula romanica* Săvul., *Dianthus nardiformis* Janka., *Globularia punctata* Lapeyr., *Thymus zygioides* Griseb.), which could be recommended for cultivation as ornamental plants.

2. Specific biologic and ecologic particularities are very important in establishing the crop technologies and the usage modalities in decorative assembly.

3. Depend on the above mentioned ornamental features; capitalization could be done both in different types of landscape designs and also as cut flowers.

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