ASPECTS REGARDING THE ORNAMENTAL VALUE OF SOME ROSE NURSEY SPONTANEOUS FROM „TUDOR NECULAI" NURSERY COLLECTION - IAŞI COUNTY

OBSERVAȚII PRIVIND VALOAREA ORNAMENTALĂ A UNOR SPECII SPONTANE DE TRANDAFIRI ÎNTÂLNIȚI ÎN PEPINIERA „TUDOR NECULAI" IAŞI

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***Abstract**: Wild species of the genus Rosa L. have importance for: creating green spaces, getting roses nobles and their use as rootstock for cultivated varieties. The purpose of this paper is to highlight the possibilities of identifying potential ornamental species in the genus Rosa sp. Observations were made at 6 species of wild rose "Rosa californica", "Rosa caudata", "Rosa centifolia", "Rosa damascena", "Rosa multiflora" and "Rosa rugosa". To achieve that goal were made observations and measurements on the main morphological characters, growth of stems, number of buds and abundance of flowers.*
***Key words:** roses, stems, buds, flower*

***Rezumat**: Speciile spontane ale genului Rosa L. au importanță deosebită pentru: amenajarea spațiilor verzi, obținerea trandafirilor nobili şi utilizarea lor ca portaltoi pentru soiurile cultivate. Scopul lucrării este de a pune în evidență potențialul ornamental şi posibilitățile de identificare ale speciilor spontane de Rosa în cadrul genului. Observațiile au fost făcute la 6 specii spontane de trandafiri: „Rosa californica", „Rosa caudata", „Rosa centifolia", „Rosa damascena", „Rosa multiflora" şi „Rosa rugosa". În vederea realizării obiectivului propus s-au efectuat observații şi determinări privind principalele caractere morfologice; ritmul de creştere al lujerilor; numărul de muguri şi abundența florilor.*
***Cuvinte cheie:** trandafiri, lujeri, muguri, flori*

INTRODUCTION

One of the basic components of green spaces which assure the esthetical aspect of localities and contributes to the welfare and good mood of people, which also assure a favourable working and living climate is represented by floral and roses landscapes designs (Wagner, 2002).

Rose was considered from ancient times "Queen of flowers", due to its multiple qualities and particularly great wealth and beauty flowers, scented and with various colours and shapes (Haenchen, 2003).

In the multitude of dendrological species which contains ornamental shrubs, spontaneous species of *Rosa L*. have a real importance for design of green spaces, obtaining of noble roses, and many of them are utilised as parent stocks

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for cultivated sorts (Rudolf, 1978; Popescu, 1986).

The conditions from Romania are generally favourable for this specie. Necessity for diversifying the assortments is a priority, having in view the diversity of biological material and the results obtained in the world. Literature shows, which in this genus are known over 200 species with more than 20,000 sorts (Rusu, 1973, Luban, 1973).

Being known the diversity importance of *Rosa L*. spontaneous species, in the research method was proposed to be realised phenological observations on: stems, leaf, flowers and fruits.

MATERIAL AND METHOD

Observations on roses were carried out at "Tudor Neculai" – Iaşi nursery. Nursery is placed outside Iaşi City, into a field belonging to Miroslava village, being destined for production of planting dendrological and floral material for decoration and beautification of Iaşi City green spaces.

Nursery have also a rich assortment of spontaneous rose species from which we mention: *"Rosa californica"*, *"Rosa canina", "Rosa carolina", "Rosa caudata", "Rosa centifolia", "Rosa corymbifera", "Rosa damascena", "Rosa davidii", "Rosa davurica", "Rosa foetida", "Rosa gallica", "Rosa multiflora", "Rosa rugosa"*, *"Rosa virginiana".*

Observations were made on 6 spontaneous rose species:

- *"Rosa californica"* (Fig. 1);
- *"Rosa caudata"* (Fig. 2);
- *"Rosa centifolia"* (Fig. 3);
- *"Rosa damascena"* (Fig. 4);
- *"Rosa multiflora"* (Fig. 5);
- *"Rosa rugosa"* (Fig. 6).

The aim of the current paper is to highlight the ornamental potential and identification possibilities of *Rosa* spontaneous species in the genus.

Were realised observations and determinations regarding:

- Growing rhythm of stems;
- Number of buds;
- Abundance of flowers.

Observations and determinations regarding phenological particularities were realised for 6 *Rosa L*. spontaneous species, in three repetitions and in five different days, as follows: (28.04, 7.05, 9.06, 11.07 and 10.08). Observations were carried out during 2011-2012 and were studied the growing rhythm of stems, number of buds and abundance of flowers.

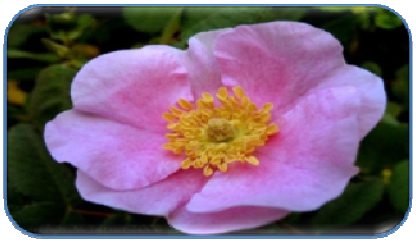


Fig. 1 ***"Rosa californica"***

Fig. 2 ***"Rosa caudata"***

Fig. 3 *"Rosa centifolia"*

Fig. 4 *"Rosa damascena"*

Fig.5 *"Rosa multiflora"*

Fig.6 *"Rosa rugosa"*

RESULTS AND DISCUSSIONS

From measurements made at the end of observation period (10.08) at analysed species regarding height of stems were recorded low growing rates of 11.33 cm at *Rosa californica*, 14 cm at *Rosa rugosa*, and the greatest growing rates were recorded at *Rosa damascena* with a stem growing of 19.66 cm and 16.33 at *Rosa caudata* (Tab. 1).

Table 1

Mean of stem height (cm) during 28.04.2011 – 10.08.2011

No.	Species	28.04	7.05	9.06	11.07	10.08
1	*Rosa californica*	5.33	32	11.66	9.03	11.33
2	*Rosa caudata*	6	7.33	13.66	10.66	16.33
3	*Rosa centifolia*	6	7.66	21.66	1.8	15.33
4	*Rosa damascena*	5	12.66	13.66	14	19.66
5	*Rosa multiflora*	12	12	15	9.66	15.66
6	*Rosa rugosa*	11.66	5.33	14.33	13.66	14

Analysing the number of buds, the lowest values were recorded at specie *Rosa californica* (4.66), and the greatest values were recorded at species *Rosa multiflora* (8.66) and at *Rosa damascena* (10.66) (Tab. 2).

Table 2

Mean of buds number during 28.04.2011 – 10.08.2011

No.	Species	28.04	7.05	9.06	11.07	10.08
1	*Rosa californica*	1	1	4.33	6.66	4.66
2	*Rosa caudata*	-	3.33	1	-	-
3	*Rosa centifolia*	1	2	3.33	-	-
4	*Rosa damascena*	-	1.33	3.33	6	10.66
5	*Rosa multiflora*	-	3.33	11.33	6.66	8.66
6	*Rosa rugosa*	1	1	3	5.33	7

Study realised regarding recorded abundance of flowers at the end of observation period appreciate that the lowest values were recorded by *Rosa californica* (1.33) and the highest values were recorded at *Rosa damascena* (8.66) and *Rosa multiflora* (4) (Tab. 3).

Table nr. 3

Mean of flowers abundance during 28.04.2011 – 10.08.2011

No.	Species	28.04	7.05	9.06	11.07	10.08
1	*Rosa californica*	-	-	1.66	3.33	1.33
2	*Rosa caudata*	-	-	2.33	-	-
3	*Rosa centifolia*	-	-	3.66	-	-
4	*Rosa damascena*	-	-	2	2.33	8.66
5	*Rosa multiflora*	-	-	8	3	4
6	*Rosa rugosa*	-	-	1.33	2.33	3

Also was realised a total mean regarding stems height, buds number and flowers abundance in period 28.04.2011 and 10.08.2011 (Tab. 4) and average for period 09.06.2011 - 09.06.2012 (Tab. 5), and based on them were designed 6 graphs for year 2011 (Fig. 7; Fig. 8; Fig. 9; Fig. 10; Fig. 11; Fig. 12) and 6 graphs for year 2012 (Fig. 13; Fig. 14; Fig. 15; Fig. 16; Fig. 17; Fig. 18).

Table 4

Total mean during 28.04.2011 – 10.08.2011

Nr.	Specie	Height of stems (cm)	Number of buds	Abundance of flowers
1	*Rosa californica*	13.93	3.53	1.26
2	*Rosa caudata*	10.79	0.86	0.46
3	*Rosa centifolia*	13.66	1.26	0.73
4	*Rosa damascena*	13	4.26	2.60
5	*Rosa multiflora*	21.44	6	3
6	*Rosa rugosa*	11.79	3.46	1.33

Table 5

Mean during 9.06.2011 – 9.06.2012

N0.	Species	Mean at 9.06.2011			Mean at 9.06.2012		
		Stems height (cm)	*Buds number*	*Flowers abundance*	*Stems height (cm)*	*Buds number*	*Flowers abundance*
1	*Rosa californica*	11.66	4.33	1.66	13.33	6.33	2.33
2	*Rosa caudata*	13.66	1	2.33	15	2	4
3	*Rosa centifolia*	21.66	3.33	3.66	24	5.33	5.33
4	*Rosa damascena*	13.66	3.33	2	15.66	5	3.33
5	*Rosa multiflora*	15	11.33	8	16.66	13	10.33
6	*Rosa rugosa*	14.33	3	1.33	15.66	4.33	3

Graphs regarding mean from 9.06.2011

Fig. 7

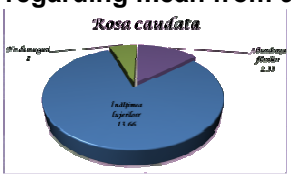


Fig. 8

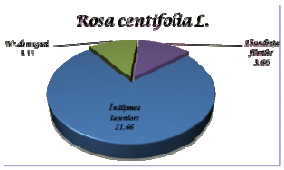
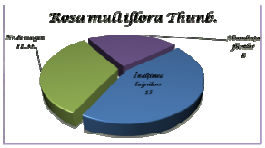


Fig. 9

Fig. 10



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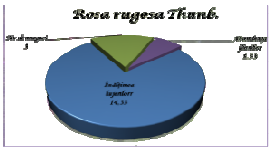

Fig. 12

Graphs regarding mean from 9.06.2012

Fig. 13

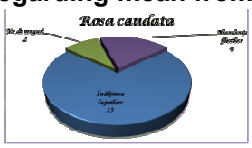

Fig. 14

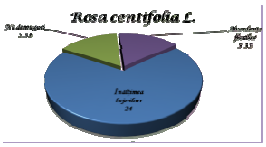

Fig. 15

Fig. 16

Fig. 17

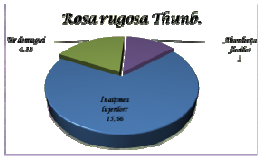

Fig. 18

CONCLUSIONS

Based on the effectuated determinations, observations and analyse of the obtained results we could draw the following conclusions:

1. Regarding the stems growing rhythm:

- spontaneous species of *Rosa* have a different growing rhythm;
- the highest growing rate: *Rosa multiflora* with an annual mean of 21.4 cm, and the lowest one at *Rosa caudata* 10.79 cm.

2. Regarding number of buds:

- buds number is different function of their appearance period on stems and function of specie;
- at *Rosa californica*, *Rosa centifolia* and *Rosa rugosa,* buds appear in the second decade of April and have a mean of 1 bud. At *Rosa multiflora* and *Rosa caudata* buds appear on stems in the first decade of May with a mean of 3.33 buds.

3. Regarding abundance of flowers:

- flowers differs through abundance and decoration period;
- *Rosa centifolia*, decoration period is in June with a flowers abundance mean of 3.66, and *Rosa damascena* have a decoration period between June-July-August with an average of 2.60.

4. Regarding development of *Rosa* spontaneous species between 9.06.2011 and 9.06.2012 we could appreciate that:

- growing rhythm of stems is between 1.33 cm (*Rosa rugosa*) to 2,34 (*Rosa centifolia*);
- buds number in these period increase in average from 1 (*Rosa caudata*) to 2 (*Rosa centifolia* and *Rosa californica*);
- flowers abundance at majority of studied *Rosa* species increases with a mean value around 1.67.

Having in view the tradition of rose cultivation, their biological potential and high decorative value, it is recommended utilisation of *Rosa* genus spontaneous species for:

- parent stock for noble sorts;
- decorative purposes in the majority of landscape designs.

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