

Taxonomic composition and vital forms of woody species of *rosaceae* family in the nakhchivan autonomous republic flora

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Abstract

The article deals with the taxonomic composition and vital forms of the woody species of *Rosaceae* Family in Nakhchivan AR area. As a result of references' data and personal field research materials, the woody species of *Rosaceae* Family in the Nakhchivan AR area is represented by 1 family and 93 species belonging to the 17 genera. It also provides information on genus analysis and vital forms of woody species belonging to *Rosaceae* Family.

Keywords: woody species, vital form, taxonomic composition, family, genus

Introduction

The Nakhchivan Autonomous Republic draws attention with its geographical location, relief and original flora. One of the main natural resources of this region is the rich vegetation. This wealth was created and developed over time in the evolutionary process through the combined effects of natural, historical, environmental, and anthropogenic factors. Rich xerophyte-type flora of Nakhchivan has historically developed in close genetical links with the flora of the Mediterranean, Front Asia and Iran. The plant diversity in the area has long been of interest to researchers, botanists, naturalists, phytochemists and paleobotanists. Studies conducted by florists on different species, genera and families at different times, have been limited to incorporating new taxa (family, genus, species) into the area flora, studying and preserving the beneficial properties of a number of species.

The refore, we consider it important to study the woody species of *Rosaceae* Family in the Nakhchivan AR area.

Materials and Methods

Since 2018, the study of the woody species of the *Rosaceae* Family has begun in the Nakhchivan AR. Expeditions to the Nakhchivan AR regions were regularly organized during the spring and autumn seasons and gathered herbari materials of woody species of *Rosaceae* Family. During the

investigations, there were held phenological observations in the natural conditions of the species and their phytocenoses, formations and associations that they formed, were studied by experimental methods (by setting up sample sites). On specification of species "Flora of the USSR" [4] A.A. Grossheim "Flora of the Caucasus" [5], "Flora of the Azerbaijan" [3]. The latest taxonomic additions and amendments have been held according to the materials of Herbarium of the Institute of Botany of ANSA, the Institute of Bioresources of ANSA and the Nakhchivan State University's Herbari Funds, the International Botanical Nomenclature Code, and S.K. Cherepanov [2], T.H. Talibov, A.Sh. Ibrahimov [6]. and A.Askarov's works [1].

Research discussions and results

There are a number of references in the study area to the materials related to the woody species of *Rosaceae* Family. However, the literature data do not fully reflect the taxonomic range, ecobiological, phytocenological characteristics, assessment of senopopulations, distribution patterns, and usage patterns of the woody species of this family.

As a result of the development of literary data and personal field research materials, the woody species of *Rosaceae* Family in Nakhchivan AR is characterized with 1 family, 17 genera and 93 species.

Table 1: Genus analysis of the woody species included into the *rosaceae* family

No.	Generes	Number of species	Total number, by %
1	<i>Amelanchier</i> Medic.—Roundleaved	1	1,07
2	<i>Amygdalus</i> L.- Almond	3	3,22
3	<i>Cerasus</i> Mill.— Sour Cherry	4	4,30
4	<i>Cotoneaster</i> Medic- Wild apple	4	4,30
5	<i>Crataegus</i> L.-Hawthorn	17	18,27
6	<i>Louiseania</i> Carr.— Louisiana	1	1,07
7	<i>Malus</i> Mill.— Apple	1	1,07
8	<i>Mespilus</i> L.- Medlar	1	1,07
19	<i>Padellus</i> Vass. – Wild Sour Cherry	1	1,07
10	<i>Padus</i> Mill.- Wild Sweet Cherry	1	1,07
11	<i>Prunus</i> L.- Alycha	1	1,07
12	<i>Pyracantha</i> M. Roem.— Tubulga	1	1,07

13	<i>Pyrus</i> L. - Pear	13	13,97
14	<i>Rosa</i> L.- Dog-rose	30	32,25
15	<i>Rubus</i> L.- Blackberry	3	3,22
16	<i>Sorbus</i> L. – Wild Pear	9	9,67
17	<i>Spiraea</i> L. – Topulga	2	2,15
Total:		93	100%

When characterized the woody species of *Rosaceae* Family by genres of the studied area, each of the *Rosa* - 30 (32,25%), *Crataegus* – 17 (18,27%), *Pyrus* - 13 (13,97%), *Sorbus* - 9 (9,67%), *Cotoneaster* -4 (4,30%), *Cerasus* – 4 (4,30%), *Amygdalus* – 3 (3,22), *Rubus* -3 (3,22), *Spiraea* is represented in 2 species (2,15). The rest of the genres are monotype and each has one species.

As adaptation type of vital structures, on one hand it shows the ways in which different species of plants adapt to the same conditions, on the other hand there have been shown the similarity conditions of the plants that are not related to one another by species, genres and families. Therefore, classification of vital forms cannot be consistent with the usual classification of systematics based on the structure of reproductive organs and reflecting the general origin of plants. The classification of life forms is based on the structure of vegetative organs and reflects parallel and convergent ways of ecological evolution.

Taking into account all mentioned above, in the investigated area, we can show the vital forms of woody species included into the *Rosaceae* Family as following:

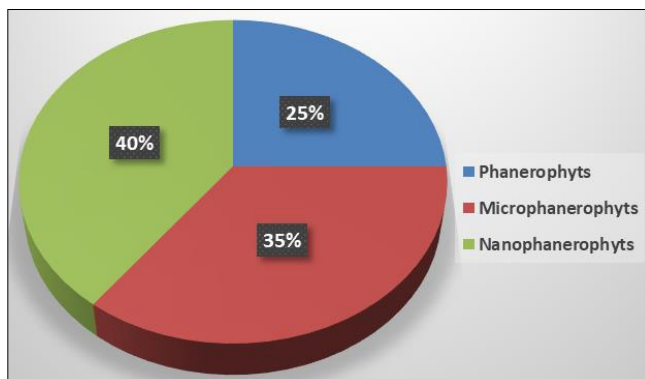


Diagram 1: Vital forms of the woody species included into the *Rosaceae* Family

In Phanerophytic plants, the shoots are wintering or spend the dry season in "open-air," over the soil (trees). In this regard, they protect themselves with specific shells. In the studied area, the species of *Malus domestica*, *Prunus domestica*, *P. wallicata*, *Cerasus avium*, *C. austera*, *Sorbus boissieri*, *Pyrus serotina*, *P. caucasica* and others are included.

Microphanerophytes are trees and shrubs with the height of 2-8 m. In the cold and mild climate these shoots very often spend the winter under snow. In the Nakhichevan MR, the species of *Louiseania ulmifolia*, *Amygdalus communis*, *Amygdalus fenzliana*, *M. orientalis*, *Prunus spinosa*, *Padus avium*, *Padellus mahaleb*, *Rosa sosnovskyana*, *Crataegus ovalis*, *Sorbus aucuparia*, *Pyrus megrica*, *Pyrus raddeana* and others are met.

Nanophanerophytes are the shrubs less than 2 m of height. They include *Amygdalus nairica*, *Cerasus arachina*, *R. brotherorum*, *R. hraciana*, *R. pimpinellifolia*, *Comarum palustre*, *Rubus caesius*, *Pyracantha coccinea*, *Cotoneaster krasnovii*, *Spiraea hypericifolia* and other species.

Result

1. As a result of the literature data and personal field research materials, the woody species of the *Rosaceae* Family in Nakhchivan AR is characterized with 1 family, 18 genres and 97 species.
2. When characterized the woody species of *Rosaceae* Family by genres of the studied area, each of the *Rosa* - 30 (32,25%), *Crataegus* – 17 (18,27%), *Pyrus* - 13 (13,97%), *Sorbus* - 9 (9,67%), *Cotoneaster* -4 (4,30%), *Cerasus* – 4 (4,30%), *Amygdalus* – 3 (3,22), *Rubus* -3 (3,22), *Spiraea* is represented in 2 species (2,22). The rest of the genres are monotype and each has one species.

According to the analysis of vital forms, woody species are found in the types of phanerophytes, Microphanerophytes and Nanophanerophytes.

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