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EFFICIENT USE AND PROTECTION OF THE LESSER CAUCASUS NATURE RESERVES PLANT COVER

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РАЦИОНАЛЬНОЕ ИСПОЛЬЗОВАНИЕ И ЗАЩИТА РАСТИТЕЛЬНОГО ПОКРОВА ОСОБО ОХРАНЯЕМЫХ ПРИРОДНЫХ ТЕРРИТОРИЙ МАЛОГО КАВКАЗА

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Abstract. While using food crops, feed crops, medicinal plants found in nature reserves criteria for the rare and endangered species should be met the International Union for Conservation of Nature (IUCN). Although there is wild fruit spread in 12 Families, 22 Genera belong to 46 species are not used effectively in nature reserves. Appletree, Arachis, Pyrus, Sea Buckthorn, Mespilus, Crataegus, Rubus, Cornus, Ribes, etc. are considered expedient to use the raw material reserves of these fruits for industrial purposes.

Аннотация. При использовании кормовых, продовольственных культур, лекарственных растений, произрастающих в особо охраняемых природных территориях, для определения статуса редких и исчезающих видов должны применяться критерии Международного союза охраны природы (МСОП). Несмотря на широкое распространение диких плодово-ягодных растений (12 семейств, 22 рода, 46 видов) в особо охраняемых природных территориях, используются они не эффективно. Считаем целесообразным использование сырьевых запасов плодов яблони, арахиса, груши, облепихи, мушмулы, боярышника, малины, кизила, смородины и пр. в промышленных целях.

Keywords: plant cover, nature reserves, endangered species, ornamental plants, feed crops, food crops, rock garden plants, medicinal plants.

Ключевые слова: растительный покров, природоохранные территории, исчезающие виды, декоративные растения, кормовые культуры, продовольственные культуры, растения для рокариев, лекарственные растения.

The problem of balanced use of vegetation is closely related to the level of study of plant resources of the area. Various information is found on the use of wild flora of the Specially Protected Natural Areas in different literature [1–5]. However, after the state-level review of the status of the Specially Protected Natural Areas, there is a need to re-approach this problem.

The Caucasus research area is rich in important plants. The best work on important Caucasian plants was written by A. Rollow in 1908. This book provides information about wild plant used by local people. Based on A. A. Grossgeim significant crops in the study area are divided into several groups for their quality degree.

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Decorative Plants

There are over 320 species of plants in the study area that are capable of cultivating various ecological conditions. Many of the discovered plants are useful plants that can preserve their decorative properties in non-moist, non-fertile, stone, clay, sandy soils. *Berberis vulgaris* L. *Taxus baccata* L., *Betula pendula* Roth, *B. litwinowii* Doluch., can be used to create live corners. *Cotoneaster integerrimus* Medikus, *C. saxatilis* Pojark., *Euonymus europaeus* L., *E. latifolius* (L.) Mill., *Spiraea hypericifolia* L., *Rhododendron caucasicum* Pall., *Seseli peucedanoides* (M. Bieb.) Koso-Pol., *Teucrium orientale* L., *Geranium sanguineum* L., *G. columbinum* L., *Geranium ibericum* Cav., *Alchemilla sericea* Willd., *A. raddeana* (Buser) Juz., and so on. species are useful for alpinexia. According to the decorative feature, the herbs are more expensive than trees. *Asplenium viride* Huds., *A. trichomanes* L., *A. ruta-muraria* L., *Woodsia alpina* (Bolton) Gray, *Polypodium vulgare* L., and so on. It can be shown to grass-type ornamental plants.

Feed crops

In general, the plants found in natural feed areas are divided into 3 main groups for their biological characteristics and importance of feed: 1. Grains; 2. Beans; 3. Different herbs. Each group combines plants that are similar to their biological, ecological, and economic characteristics. 253 fodder plants were spread in the study area. In the vegetation cover of specially protected natural areas beans are 51.58%, grains 42.53, and various herbs 5.88% (Table).

Table.

BIOLOGICAL GROUPS OF FEED CROPS ACCORDING TO THEIR NATURE

Family	*Gender*	*Species*	*Percent*
Fabaceae	19	114	51.58
Poaceae	46	94	42.53
Different herbs	12	13	5.88

In addition to the specific biological characteristics of each plant species included in these feed groups, it is important to know them from the point of view of farming. It is difficult to determine the use of these herbs more properly and efficiently without knowing these features.

Bean plants, grains, and herbs in Specially Protected Natural Areas show that the land is rich in fodder plants. For their richness with feed crops *Astragalus* L. (8), *Onobrychis* Hill. (5), *Oxytropis* DC. (2), *Trifolium* L. (7), *Vicia* L. (5) and also *Trigonella spruneriana* Boiss., *Medicago minima* (L.) Bartal., *Amoria bordzilowskyi* (Grossh.) Roskov, *Lotus caucasicus* Kuprian. ex Juz., *Vavilovia formosa* (Steven) Fed. (=*V. aucheri* (Jaub.et Spach) Fed. and so on. are examples of beans. For Grains *Festuca* L. (7), *Poa* L. (5), *Alopecurus* L. (3), *Arrhenatherum* Beauv., and so on.for different herbs *Carum carvi* L., *C. caucasicum* (Bieb.) Boiss., *Chamaesciadium acaule* (Bieb.) Boiss., *Leontodon hispidus* L., *Taraxacum stevenii* DC., dominate in many forms [2].

Food plants

In specially protected natural areas, there are about 100 species of food, including 41 kinds of fruits and berries. Medlar, cornel, alycha, service tree, sallow — thorn, barberry, howthorn, wild grape, wild apple, pear and so on are precious fodder plants. Depending on the chemical composition and application of the plant, the nutritional plants are fruits, berries, vegetables, starchy, spicy and other plants are separated. *Ribes biebersteinii* Berl. ex DC., *Rubus saxatilis* L., *R. buschii* Grossh. ex Sinjkova, *Rhirtus* Waldst. et Kit., *Amelanchier ovalis* Medik., and so on are used for conservation. Berries — *Fragaria vesca* L., *Rubus caesius* L., Fruits — *Cornus mas* L.,

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Cerasus avium (L.) Moench, *Cerasus mahaleb* (L.) Mill., *Prunus spinosa* L., Nut fruits — *Corylus avellana* L., Vegetable crops — *Urtica dioica* L., *Nymphaea alba* L., *Anthriscus sylvestris* (L.) Hoffm., *Chenopodium album* L., *Primula veris* L., Spicy plants — *Descurainia sophia* (L.) Webb ex Prantl., *Allium rotundum* L., *A. sphaerocephalon* L., *Daucus carota* L., *Armoracia rusticana* Gaertn., Mey. et Schreb., *Alliaria petiolata* (Bieb.) Cavara et Grande. Essential oil plants — *Geum urbanum* L., *Origanum vulgare* L., *Nepeta cataria* L., *Mentha pulegium* L. *Mentha arvensis* L., *Thymus marschallianus* Willd., oil plants — *Amygdalus nana* L., *Eupatorium cannabinum* L., Vaccine crops — *Quercus robur* L., *Quercus pubescens* Willd., *Salix alba* L., *Salix caprea* L., Medicinal plants — *Pimpinella saxifraga* L., *Heracleum sibiricum* L., *Crataegus monogyna* Jacq., *Polygonum aviculare* L., *Inula helenium* L., *Teucrium polium* L., *Conyza canadensis* (L.) Cronq., *Taraxacum officinale* Wigg., Poisonous plants — *Hyoscyamus niger* L., *Conium maculatum* L., *Chaerophyllum temulum* L., *Convallaria majalis* L., *Symphytum officinale* L., *Solanum nigrum* L. , Dye plants — *Sambucus ebulus* L., *Iris pseudacorus* L., *Anthemis subtinctoria* Dobrocz., *Echium vulgare* L., Technical plants — *Euonymus verrucosa* Scop., *Euonymus europaeus* L., *Tilia cordata* Mill., Feed crops — *Calamagrostis epigeios* Roth., *Agropyron pectinatum* (Bieb.) Beauv., *Bromopsis inermis* (Leyss.) Holub, *Poa pratensis* L., *Lolium perenne* L., *Trifolium hybridum* L., Different herbs — Asteraceae, Brassicaceae, Mixotroph — *Linaria vulgaris* (L.) Mill., *Tanacetum vulgare* L., *Cynoglossum officinale* L.

Rock plants

There are plants in the specially protected natural areas that use sediments, erosion, and stony slopes. There are 20 types of rock-hardening plants found in the preserved reserves, which are include mainly of Poaceae. We believe that facultative glyareophytes, morenophytes, gypsystorporophytes are include to rock-clinging plants. These group of plants participates in singleness and pedogenesis processes. *Euonymus europaeus* L., *E. verrucosus* Scop., *Alopecurus vaginatus* (Willd.) Pall. ex Kunth, *A. myosuroides* Huds., *Agrostis stolonifera* L., *Imperata cylindrica* (L.) Raeusch., *Empetrum androgynum* V.N. Vassil., *Lamium tomentosum* Willd., *Trisetum buschianum* Seredin, *Salix caprea* L. and so on are the rock plants.

Medicinal herbs

The use of medicinal plants in the modern times is of great importance. Morphophysiologic changes generated by synthetic origin medicines and morphogenetic disturbances indicate the necessity of using medicinal plants. The use of plant stocks on the problem of balancing is closely related to the degree of study of plant resources. There are literary data on the history of the use of the Special Protected Areas of the Western Zone of Azerbaijan [1–2].

120 species of raw materials are known in specially protected natural areas. They are sources of alcohol, glycosoids, samantha, flavonoids.

There are 40 varieties of alkaloids and 34 flavonoids in the study area. Alkoloid components *Artemisia* L. (*Artemisia absinthium* L., *A. splendens* Willd. Willd.), *Berberis vulgaris* L., *Delphinium flexuosum* M. Bieb., *Onosma microcarpa* Steven ex DC., *Corydalis marschalliana* Pers., *Papaver orientale* L., *Pulsatilla: species* and *their distribution*, *Seseli peucedanoides* (M. Bieb.) Koso-Pol. (Bieb.) Kosa, Taxus baccata L., *Eleutherospermum cicutarium* (M. Bieb.) Boiss., *Fumaria schleicheri* Soy.-Will., *Valeriana alpestris* Steven, so on flavanoid components *Amelanchier ovalis* Medikus., *Acantholimon glumaceum* (Jaub. & Spach) Boiss., *Astragalus caucasicus* Pall. *A. glycyphyllos* L. *Alchemilla epipsila* Juz. *Cardamine uliginosa* Bieb., *Helianthemum grandiflorum* (Scop.) DC., *Linum hypericifolium* Salisb.

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Heracleum and Euphorbia and also *Cotoneaster saxatilis* Pojark., *Helianthemum tomentosum* (Scop.) Gray, *Peucedanum ruthenicum* M. Bieb., *Seseli peucedanoides* (M. Bieb.) Koso-Pol., are include to Kumarin and fikokumarin species.

At present, despite the fact that the local population supplies vitamin-containing plants, it is still rich in reserves. Dog rose (Rosa) Ganjachay, Kurekchay Basin *Rosa pulverulenta* M. Bieb. (=*R. azerbajdzhanica* Novopokr. & Rzazade) and *R. marschalliana* Sosn. [3] species create splinters. *Primula ruprechtii* Kusn. is a species rich in Vitamin C.

There are 18 types of essential oils plants in the study area. They are *Peucedanum ruthenicum* M. Bieb., *Lilium ledebourii* (Baker) Boiss., *Carum caucasicum* (M. Bieb.) Boiss., Thymus fedtschenkoi Ronniger (=*T. kjapazi* Grossh.).

Juniperus sabina L., *Reseda lutea* L., *Berberis vulgaris* L., *Hippophae rhamnoides* L. and so on are precious dye crops.

Medicinal herbs are found in all floristic complexes mainly in forests, meadows, steppes, deserts, semi-deserts, xerophyte bushs, swamps, and river basins.The damp upper forests are rich in medicinal herbs in Ganjachay, Shamkirchay, Kurchay, Dashkasanchay, Kurekchay basins [4].

Poisonous plants

These groups contain toxic substances (alcohol, glucose, saponins, organic acids, essential oils, etc.). According to I. V. Larin, 15% of the plants studied in feed quality, or more exactly 378 species, and 336 are partly poisonous. From the plants belonging to this group-common stramony, poppy, spurge-laurel, belladonna, poison crowfoot, leafless itsegek can be shown [5].

In general, 105 poisonous and harmful plants have been identified in 70 species and 18 families of Specially Protected Areas: *Ranunculus* (4 species), *Papaver* (2), *Corydalis* (3), *Euphorbia* (4), *Pedicularis* (2), and *Scrophularia* (2) are rich in toxic substances.

Toxic and harmful plants are included in these families ranunculus, Asteraceae, Laminaceae, Liliaceae, Papaveraceae, Scrophulariaceae, Brassicaceae [5].

There are medicinal, essential oils, dyes, vaccines, insecticides, vitamins, ornaments and so on.in poisonous and harmful plants. Therefore, when dealing with toxic and harmful plants, it is necessary to take into account such features of plants.

While using species food, feed, medicinal plants in Specially Protected Natural Areas should be expected criteria for rare and endangered the International Standard for Nature Conservation (MSOP).

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