

Stenopopulations of *Lagohilus Bunge* (Lamiaceae Lindl.) Generation Distributed in the Flora of Jizzakh Region and Organization of their Small Plantation

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Annotation

*The Central Asian origin of the *Lagochilus Bunge* family is unknown in the literature on the status and ontogenetic characteristics of the *Lagochilus Bunge* species, ontogenesis of rare and endemic species of the genus.*

Keywords: *ontogeny, genus, population, ecosystem, endemic, relict species.*

Global climate change and increasing anthropogenic pressure on natural ecosystems are having a particularly negative impact on the status of rare and endemic components of biodiversity. Today, conservation of rare and endangered species populations is recognized as a key strategic direction for biodiversity conservation. In this context, it is important to assess the status of populations of rare and endemic species and to develop ways to eliminate the factors that negatively affect them.

A number of scientific results have been obtained around the world to identify the causes of the decline of plant populations as a result of various factors, and to assess and maintain changes in them. In this regard, an international system for the conservation of rare and endangered plant species has been established, methods for assessing the scale of factors influencing population crises have been improved, and methods for the protection of species populations under quasi-situ conditions have been developed. In this context, it is important to determine the ontogenetic structure of rare and endangered plant populations and to substantiate a number of organism and population characteristics. The combination of these characteristics determines the ecological and phytocenotic optimums of the species, which are of practical importance for the conservation and protection of natural populations of the species.

Of particular importance is the Central Asian origin of the *Lagochilus Bunge*, which accounts for 26% of the world's rare, endemic and relict species. However, in recent years, the deterioration of the ecological situation in the region has led to the reduction and loss of populations of various species. Accordingly, the assessment of the current status of rare and endemic species of *Lagochilus*, the development of conservation measures and the introduction of promising species in the economy is of great scientific and practical importance.

Research is being conducted in a number of scientific institutions around the world to assess the current state of plant populations, to preserve them in different situ, ex situ, quasi in situ conditions, to ensure the sustainability of rare species populations, to compile their lists and to preserve species whose natural habitats are declining. Assessment of the current state of stenopopulations in the CIS countries by organism and population traits V.A. Cheremushkina, A.Yu. Astashenkov (2009), Ye.B. Kolegova (2010), T.V. Leonova (2011), Ye.M. Oleynikova (2014), I.N. Barsukova (2016), X.F. Shomurodov et al. (2017), O.S. Abduraimov (2017) and others.

There is no information in the literature on the status and ontogenetic characteristics of the populations of the species *Lagochilus Bunge*. Accordingly, the study of the ontogenesis of species of

the *Lagochilus* Bunge family of Jizzakh flora, identification of the structure and types of senopopulations by age, assessment of the state of senopopulations on the basis of organism and population traits, creation of GAT maps showing species distribution and vitality, threatening species the development of conservation measures is of great scientific and practical importance.

There are 76 species of *Lagochilus* on Earth. A.I. According to Vvedensky (1961), there are 13 species in the genus in Uzbekistan. Later, T.I. Sukervanik (1985) noted that 33 species of the genus were distributed in Central Asia, and synonymized the species of *L. intermedius*, previously mentioned for the flora of Uzbekistan. However, he notes that 16 of the 33 species found in Central Asia are endemic to Uzbekistan. The analysis of the samples kept in the National Herbarium Fund showed that 18 species of the genus are found in the flora of Uzbekistan. 4 of them (*L. Vedenskyi*, *L. Olgae*, *L. Proskorjakovii*, *L. inebrians*) are included in the "Red Book" of the Republic of Uzbekistan (2009).

Consider the ontogenesis of rare and endemic species of the *Lagochilus* Bunge family.

The grass (p) consists of seeds and 2 assimilating true leaves. The main root and hypocotyl are clearly developed. The leaves are elliptical (elongated in *L. Vedenskyi*), 0.2-0.8 cm long and 0.2-0.3 cm wide. *L. inebrians* with a band of green leaves 0.6-0.8 cm long, in other species 0.3-0.6 cm long and 0.2-0.3 cm wide. The leaves are covered with glabrous hairs. In *L. gypsaceus*, the hypocotyl is poorly developed and does not exceed 2 mm in length. In other species, the length of the hypocotyl is 7-10 mm and the length of the epicotyl is 1-3 mm. The main root is 2.0-3.0 cm. The duration of the lawn phase is several weeks.

In the year of germination, when the leaves turn yellow, the plant becomes juvenile (j). Juvenile tufts are monopodial solitary branched plants. The trigeminal bud enlarges and forms 2-4 metamers that form an assimilated leaf (6-8 metamer in *L. inebrians*). Depending on the species, the leaves may have an inverted ovate, elliptical, oval plate. The leaves are 0.3-1.5 cm long and 0.2-0.6 cm wide. The open side buds are located in the axils of all the leaves and are composed of 2 metameric and growth cones. The main root is 2.0-8.0 cm, and in the second half of the summer, when it stops growing, the lower axillary buds open and proleptic elongated branches consisting of 1-2 metamers forming assimilated leaves are formed. The seeds and 1-3 pairs (sometimes 1-2 pairs) of buds in the axils of the lower assimilation leaves remain dormant. The first branched branch is formed. The tubes become immature.

The leaves gradually turn yellow and die. Leaves (with band) 2.0-3.0 cm long and 0.5-0.8 cm wide (6-8 pairs). The main root reaches a length of 6.0-8.0 cm, 1-2 apical roots are formed in the apical part. At the end of the growing season, most of the twigs begin to die. Only 2 to 4 metamers remain with open buds. The seminal vesicle is located on the surface of the substrate. *L. proskorjakovii* and *L. gypsaceus* tubers enter the im stage in the 2nd year. Recovery occurs due to the lateral buds of the seeds. At the end of the growing season, most of the primary branch dies. Its basal part becomes a perennial, from which annual branches are formed.

Thus, the primary branch of *L. gypsaceus* is a di-, tricyclic semi-short joint. The caudex begins to form due to the basal part of the primary branch and reaches 0.3–0.6 cm in height and 0.2–0.4 cm in width. The length of the main root is 4.0-6.0 cm, branched to the second order.

In the generative rod structure, the recovery part (3-4 short metamers) is formed, the lower metamers are vegetative, and the upper metamers are generative (paraclady). The main inflorescence consists of 2 opposite elongated inflorescences 8.0-10 cm long. The number of paraclads varies from 2 to 6, the length is 3.0-6.0 cm. After the long metameric part of the branch dies, its basal part can grow and thicken. Immature buds go into dormancy in perennial growths. In this case, partial particulation occurs. The process of extinction begins in the tissue of the first branch and partially occupies the

basal part of the main root. The main root reaches 25-50 cm and branches up to IV order. The duration of this phase is 6-12 years.

In the older generative state (g3), complete particulation occurs and a compact clone of 2 or more particles is formed. From each particle 3-4 generated branched generative rods 8.0-15.0 cm in height are formed. The leaves of the generative stem vary in size, reaching 1.5-4.0 cm in length and 0.6-2.7 cm in width. Over time, part of the central axis of the particle breaks down, reducing the number of particles in the clone. The main root is also eroded, but each particle remains attached to its living part. Subsenyl (ss) plants are short and consist of a single living and several dried caudicles, and a sympodial growing part connected to the main root. The main stem has 2-4 vegetative elongated branches and 4-6 leaves located on a leaf band 3.0-5.0 cm long. The shape of the leaf should be three. Renewal of the branch occurs due to the dormant buds located in the perennial parts of the caudex.

The tubes in the senile (s) state consist of 1-3 long articulated branches formed from the tinim buds preserved in the living parts of the central axis. The stem produces 2-6 pairs of juvenile-like leaves. Part of the main root is preserved. The postgenerative period lasts 2-3 years.

In conclusion, the senopopulations of the species are characterized by normal, most of which are not full members. The absence of certain age groups on the left side of the ontogenetic spectrum is explained by the fact that seed reproduction is not carried out in a balanced way, the elimination of weak tufts under the influence of various climatic factors and regular grazing. The low value of the old fraction in senopopulations is due to the biology of the species, ie the fact that most of the bushes die in the g2 state.

REFERENCES:

1. A.K. Akhmedov. "The state of ontogenetic structure and senopopulations of rare and endemic species of the genus *Lagochilus* Bunge (*Lamiaceae* Lindl.) of the flora of Uzbekistan". – Tashkent. 2018.
2. <http://library.ziyonet.uz/>
3. <https://uzsmart.uz/>