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PLANT HABITATS REDUCTION AND ELIMINATION OF THE ABORIGINAL SPECIES FLORA POPULATIONS IN THE LEFT BANK POLISSIA OF UKRAINE

СОКРАЩЕНИЕ МЕСТОПРОИЗРАСТАНИЙ И ЭЛИМИНАЦИЯ ПОПУЛЯЦИЙ АБОРИГЕННЫХ ВИДОВ ФЛОРЫ НА ЛЕВОБЕРЕЖНОМ ПОЛЕСЬЕ УКРАИНЫ

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Summary. Catastrophic successions of swamp vegetation as a result of drainage reclamation in the Left Bank Polesia of Ukraine in the middle of the 20th century, as well as modern climate changes, lead to the habitats reduction and populations elimination of native flora species. Populations of rare species were eliminated in the Left Bank Polissia, including *Aldrovanda vesiculosa* L., *Betula humilis* Schrank, *Botrychium multifidum* (S.G. Gmel.) Rupr., *B. virginianum* (L.) Sw., *Cypripedium calceolus* L., *Drosera intermedia* Hayne, *D. rotundifolia* L., *Liparis loeselii* (L.) Rich., *Ophioglossum vulgatum* L., *Pulsatilla pratensis* (L.) Mill. s.l., *Salix myrtilloides* L., *Saxifraga hirculus* L. The reason for the habitats reduction and the populations elimination of the natural plant species is also endoecogenetic natural changes in the vegetation cover. Consequently, the disappearance of habitats and the elimination of populations covered plant species of mesotrophic bogs. *Isoetes lacustris* L. and *Gladiolus palustris* Gaudin probably disappeared in the 20th century. from the flora of the Left Bank Polesia of Ukraine.

Key words: anthropogenic impact, flora, elimination, Polissia, Ukraine

The major threats to plant diversity include habitat loss, fragmentation, and degradation, overexploitation, invasive species, pollution, and anthropogenic climate change [1]. It is known that populations occupy one of the key places in the system of biological organization. They are the elementary units that are primarily influenced by environmental factors. From a biological point of view, it is most likely that the migration process begins at the level of populations, later species are involved in it, and later - phytocenoses. In the modern dynamics of the flora of the Left Bank Polesia of Ukraine, the leading role belongs to the anthropogenic factor. The extremely negative impact of this factor leads to the reduction of habitats and the elimination of populations of native species.

The study was carried out on the basis of the results of field studies of rare species of flora and the analysis of literary and herbarium materials of the M.G. Kholodny Institute of Botany of the National Academy of Sciences of Ukraine (KW), Taras Shevchenko Kyiv National University (KWU), M.M. Hryshko National Botanical Garden (KWHA), T.H. Shevchenko National University "Chernihiv Colehium", Mykola Gogol Nizhyn State University.

Catastrophic successions of swamp vegetation, caused by drainage reclamation in the second half of the 20th century, are accompanied by the reduction of habitats and the elimination of populations of aboriginal species in the Left Bank Polesia of Ukraine, primarily in its southern part.

The sphagnum mesotrophic bogs of the *Scheuchzerio-caricetea nigrae* (Nordhagen 1936) R.Tx. 1937 class on the Vydra marsh massif were common at the beginning of the 20th century [3]. Nowadays, this massif is practically drained and transformed, the preserved areas are only in its northern part, where sedge-hypne swamp communities with *Carex juncella* (Fr.) Th.Fr. [4]. It was in these coenoses that *Betula humilis* Schrank was discovered, the findings of which were known from

herbarium collections and publications by F. Levina [3] and L. Balashov [2]. The boundary of the range of this species runs in the Left Bank Polesia of Ukraine along the line between the cities of Kyiv – Kozelets – Chernihiv – Snovsk (Chernihiv region) – Krolevets (Sumy region).

Drainage reclamation leads to the *Betula humilis* populations complete elimination in Polesia. Six locations of this relict species (in particular, in the vicinity of the city of Kyiv, the village of Burivka, Horodnya district, Chernihiv region, the city of Horodnya, the village of Smolin, Chernihiv district, Chernihiv region) in the southern and central parts of the Left Bank Polesia as a result of drainage reclamation swamps in the region have disappeared. We were unable to confirm the *Lycopodiella inundata* (L.) Holub finding which was made by L. Balashov (KW) on the sandy in 1967.

Floristic finds of *Saxifraga hirculus* L., which are currently unconfirmed, were known based on the herbarium collections carried out in the Vydra swamp and the publications of F. Levina [3]. Other locations of this species have also disappeared in the Left Bank Polesia, primarily in the sedge-hypne swamp of the floodplains of the Kryukova River in the vicinity of the village of Velikiy Listven, Horodnyan district, Chernihiv region.

A number of localities of *Drosera anglica* Huds., known from the end of the 19th to the beginning of the 20th century, in particular in the Shakhov swamp in the vicinity of the town of Oster, in the sedge-hypne swamp of the floodplain of the Kryukovy river in the vicinity of the village of Velikiy Listven, Horodnyan district, Chernihiv region, in the floodplain of the Smolyanka river near the village of A log cabin in the Nizhinsky district of the Chernihiv region, in the vicinity of Kyiv near the Rybne Lake, on the Left Bank Polesia, has disappeared.

As a result of drainage, salinization and pollution of water bodies, the *Aldrovanda vesiculosa* L. locations have been lost in the vicinity of Kyiv on the Rybne Lake, in the Shakhova swamp in the vicinity of the Oster town, in the Lavy swamp and in the vicinity of Shachova (Nizhynsky district).

Populations of other species were also eliminated in the Left Bank Polesia, in particular *Botrychium multifidum* (S.G. Gmel.) Rupr., *B. virginianum* (L.) Sw., *Ophioglossum vulgatum* L., *Pulsatilla pratensis* (L.) Mill. s.l., *Salix myrtilloides* L., *Liparis loeselii* (L.) Rich., *Cypripedium calceolus* L., *Drosera intermedia* Hayne, *D. rotundifolia* L.

The reduction of local growth and the elimination of populations of aboriginal species in the Left Bank Polesia occurs both as a result of degrading anthropogenic changes in vegetation and endoecogenetic natural changes in the vegetation cover. F. Levina, describing an oligotrophic swamp on a lowered sandy terrace of the Snov River in the vicinity of the village of Zahrebelna Sloboda (Snovsk District, Chernihiv Region), noted the presence of *Drosera anglica* in the *Scheuchzeria-caricetea nigrae* communities of the forest swamp [3].

The swamp has not undergone drainage reclamation. While conducting research at the beginning of the 21st century, we established an increase in the participation of forest species and a significant participation in the vegetation cover of the *Pinus sylvestris* L. and *Betula pendula* Roth trees, *Salix cinerea* L. and *Salix. rosmarinifolia* L. shrubs, and did not detect the *Drosera anglica* plants in the grass cover. The reason for the disappearance of the species in this location is the gradual natural change of forest-swamp communities into forest coenoses, and possibly a general decrease in the level of groundwater in this region.

Isoetes lacustris L. and *Gladiolus palustris* Gaudin probably disappeared in the 20th century from the flora of the Left Bank Polesia. Other aboriginal species sensitive to the anthropogenic factor generally remained in the flora of the region. At the same time, in the Left Bank Polesia, primarily in

its southern part, there was a disappearance of habitats and the elimination of populations, which primarily covered the species of mesotrophic swamps.

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