

SOME ESSENTIAL OIL PLANTS COMMON IN THE TERRITORY OF KYRTASHTAU, AND THEIR BIOMORPHOLOGICAL FEATURES

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Abstract: This article reviews the essential oil plants prevalent in the Kyrtaştau region, detailing their biomorphological characteristics. The study identifies key species and elucidates their morphological traits, focusing on plants known for their essential oil production. Through field surveys and morphological analyses, this research aims to contribute valuable insights into the diverse flora of Kyrtaştau, emphasizing the significance of these plants for essential oil extraction and potential applications in various industries. The findings highlight the unique biomorphological features of select plant species, offering a comprehensive overview essential for conservation, cultivation, and utilization of these valuable botanical resources.

Key words: *Uzbekistan, Kyrtaştau, plants, territory, species, essential oil, grows*

The territory of Kyrtaştau boasts a rich diversity of flora, including numerous plant species renowned for their production of essential oils. Essential oils are valued for their aromatic properties and have a wide range of applications in industries such as cosmetics, pharmaceuticals, and aromatherapy. Understanding the biomorphological features of these essential oil plants is crucial for their identification, cultivation, and sustainable utilization. This study focuses on identifying and characterizing the essential oil plants that are prevalent in the Kyrtaştau region, located in Uzbekistan. By examining the biomorphological traits of these plants, including their growth habits, leaf morphology, flower structure, and other botanical features, we aim to provide a comprehensive overview of the diverse plant species contributing to the essential oil industry in this region. The research combines field surveys with detailed morphological analyses to elucidate the unique characteristics of each identified species. This knowledge is essential for effective plant conservation, cultivation, and optimization of essential oil extraction methods. Furthermore, understanding the biomorphological features of these plants enhances our appreciation of their ecological roles and potential economic contributions to local communities. Through this exploration of essential oil plants in Kyrtaştau, we seek to contribute valuable insights into the botanical richness of the region and promote sustainable practices for harnessing the benefits of these natural resources.

The territory of Kyrtaştau, located in Uzbekistan, harbors a diverse array of plant species known for their production of essential oils. Understanding the biomorphological characteristics of these plants is essential for their identification,

conservation, and sustainable utilization. Here, we highlight five prominent essential oil plants found in Kyrtashtau and describe their key biomorphological features based on field observations and botanical analyses.

***Torilis arvensis* (Huds.) Link**

Biomorphological Features: *Torilis arvensis*, commonly known as spreading hedge-parsley, is a herbaceous annual plant characterized by its slender, branching stems and finely divided leaves. The leaves are pinnate with narrow, toothed leaflets. Small white flowers form in umbels at the tips of the branches, giving way to fruits with hooked spines. The native range of this species is Europe to Central Asia and Pakistan, Macaronesia, N. Africa to Arabian Peninsula. It is an annual and grows primarily in the temperate biome. [1]



Pic. 1. *Torilis arvensis* is native to Central Asia, including Kyrtashtau [2]

***Mentha longifolia* var. *asiatica* (Boriss) Rech. f.**

Biomorphological Features: *Mentha longifolia* var. *asiatica*, a variety of wild mint, is a perennial herb with elongated lanceolate leaves and a strong minty aroma. It produces dense spikes of small lilac-colored flowers. The stems are square-shaped, a characteristic feature of the mint family (*Lamiaceae*). The native range of this variety is W. Asia to W. China. It is a perennial and grows primarily in the temperate biome. First published in Fl. Iranica 150: 559 (1982)

***Prangos pabularia* Lindl.**

Biomorphological Features: *Prangos pabularia*, a member of the *Apiaceae* family, is a tall perennial herb with compound umbels of small white flowers. The

plant features finely divided, aromatic leaves and a robust taproot. Its fruits are oval-shaped and ribbed.



Pic. 2. *Prangos pabularia* Lindl. [3]

The native range of this species is Afghanistan to Central Asia and W. Himalaya. It is a perennial and grows primarily in the temperate biome.

***Marrubium anisodon* Koch**

Biomorphological Features: *Marrubium anisodon*, also known as horehound, is a perennial herb with woolly leaves and square stems. The leaves are wrinkled and emit a strong, pleasant aroma. Clusters of small white flowers are densely packed in whorls around the stem. The native range of this species is Central Albania to Central Asia and W. Himalaya. It is a perennial and grows primarily in the temperate biome. First published in *Linnaea* 21: 696 (1849) Native to: Afghanistan, Albania, Greece, Iran, Kazakhstan, Kirgizstan, Krym, Pakistan, Tadzhikistan, Transcaucasus, Turkey, Turkmenistan, Uzbekistan, West Himalaya [4]

***Artemisia rutifolia* Steph. ex Spreng. [5]**

Biomorphological Features: *Artemisia rutifolia*, a species of sagebrush, is a shrub characterized by its silvery-gray foliage and aromatic scent. The leaves are deeply lobed or divided into linear segments. This name is reported by *Asteraceae*

as an accepted name in the genus *Artemisia* (family *Asteraceae*). [6] The record derives from TICA (data supplied on 2023-11-28) which reports it as an accepted name Yellowish flower heads are borne in clusters along the branches. First published in *Syst. Veg.*, ed. 16. 3: 488 (1826) The native range of this species is Uzbekistan, Afghanistan to S. Siberia and Himalaya. It is a perennial or subshrub and grows primarily in the temperate biome.

These essential oil plants play significant roles in the local ecosystem and have traditional uses in herbal medicine and culinary practices. The biomorphological descriptions provided here serve as foundational knowledge for identifying and studying these plant species in Kyratashtau. Further research on the chemical composition of their essential oils and their ecological interactions would contribute to a comprehensive understanding of their importance and potential applications.

Conclusion The essential oil plants identified in the territory of Kyratashtau exhibit diverse biomorphological characteristics that contribute to their ecological significance and economic potential. Through this study, we have highlighted five key plant species—*Torilis arvensis*, *Mentha longifolia* var. *asiatica*, *Prangos pabularia*, *Marrubium anisodon*, and *Artemisia rutifolia*—each possessing unique traits that make them valuable contributors to the essential oil industry and local biodiversity. The biomorphological features described, including leaf morphology, flower structure, growth habits, and aromatic properties, serve as essential tools for the accurate identification and conservation of these plants. Understanding the distinct attributes of each species facilitates their sustainable utilization for essential oil extraction, herbal medicine, and other commercial applications. Furthermore, the presence of these essential oil plants underscores the ecological resilience and adaptability of Kyratashtau's flora to its specific environmental conditions. Conserving and promoting the cultivation of these plants not only preserves biodiversity but also supports local livelihoods and promotes sustainable practices in the region. Future research directions may include comprehensive chemical analyses of the essential oils derived from these plants, exploring their pharmacological properties, and investigating their interactions within the local ecosystem. Such endeavors would contribute to a deeper understanding of the botanical resources in Kyratashtau and their potential contributions to various industries and scientific fields.

In conclusion, the study of essential oil plants in Kyratashtau highlights the importance of biodiversity conservation and sustainable resource management. By leveraging the biomorphological knowledge presented here, stakeholders can make informed decisions to harness the benefits of these natural assets while ensuring their long-term preservation for future generations.

References:

1. Plants of the World Online (POWO)
2. <https://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:849502-1>
3. Royal Botanic Garden KEW (copyright reserved)
4. <https://artsandculture.google.com/asset/marrubium-anisodon-k-koch/IgHcCsOs-sKGJQ>
5. <https://www.plantarium.ru/page/view/item/4046.html>
6. <https://www.worldfloraonline.org/taxon/wfo-0000043465>