MORPHOLOGICAL STRUCTURE OF THE TRIPOLIUM PLANT GROWING WILD IN OUR REPUBLIC

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Relevance: The Tripolium plant (especially species such as Tripolium vulgare and Tripolium pannonicum) grows wild in Uzbekistan, but their morphological and chemical characteristics have not been sufficiently studied. For the Pharmacopoeia of the Republic of Uzbekistan, the scientific study of new medicinal plants and the development of quality standards serve as an important source for the production of medicinal preparations.

Research Objective: To study the morphological (external) structure of the Tripolium plant growing wild in Uzbekistan, to identify its main diagnostic features, to create a scientific basis for species-level identification based on morphological data, and to collect preliminary information for future pharmaceutical and botanical research.

Methods and Approaches: For the study, samples of the Tripolium plant growing wild in Uzbekistan were collected from their natural habitats during different phenological stages (flowering and fruiting). The collected material was preliminarily described in the field, and the main ecological conditions were recorded. Morphological analysis was carried out in the laboratory: the external structure, dimensions, color, and shape of vegetative (stem, leaves, flowers) and generative (flowers, fruits) organs were studied organoleptically and with magnifying lenses. Modern floristic manuals and taxonomic keys were used to determine diagnostic features, and the obtained data were compared according to morphological description criteria.

Results: Morphological structure of the Tripolium plant:

Flowers – a composite capitulum, with two types of florets in one head: marginal florets – ligulate, usually violet, bluish, or white in color; central florets – tubular, usually yellow and bisexual. Corolla – tubular and ligulate in shape. Ligulate corolla – elongated to one side. Tubular corolla – 5-toothed, tubular. Stamens – 5, fused into a tube, with anthers opening upwards. Pistil – single, consisting of 2 styles, ovary unilocular, inferior; style slender, bifid. Fruit type – dry fruit with pappus hairs.

Leaves – arranged alternately on the stem. Petiole short or almost absent, sometimes sessile. Leaf blade generally spreading, oblong-oval or lanceolate, sometimes obovate. Broader at the base of the stem, becoming narrower towards the apex. Margin usually entire, without teeth. Surface smooth, shiny, fleshy, succulent, indicating adaptation to saline soils. Color green or gray-green, sometimes slightly bluish.

Stem – erect, herbaceous. Branching: much branched in the upper part, less so in the lower part. Thickness: generally thin, sometimes slightly thickened. Surface covering: green, succulent and smooth, occasionally slightly ridged or finely pubescent. Internal structure: epidermis single-layered, outer surface covered with a thick cuticle. Cortex composed of parenchyma cells, with mechanical tissue (sclerenchyma) in some areas. Vascular tissue arranged in a ring, with xylem and phloem clearly visible. Central part (pith) ends with a cavity (pith cavity), composed of parenchymal cells.

Conclusions: The Tripolium plant growing wild in Uzbekistan has been found to be well adapted to natural conditions, with the ability to grow even in saline soils. The flowers of the

Tripolium plant are composite heads, the leaves are alternately arranged along the stem, and the stem is straight, erect, and herbaceous. These characteristics confirm its belonging to the Tripolium genus, but additional anatomical and molecular studies are required for precise species-level identification.