

## Morphogenesis of the buds and morphology of pollen Wild plum (*Prunus divaricata* L.) in Absheron conditions

Jeyran N. NAJAFOVA<sup>1</sup>

<sup>1</sup>The Central Botanical Garden of Azerbaijan National Academy of Sciences, Baku,  
Azerbaijan  
ceyrann@rambler.ru

**Aim of the study:** There was studied morphogenesis of generative and vegetative buds of *Prunus divaricata* L. introduced in Absheron. It was established that the generative and the vegetative buds of wild plum during a determination phase and in further differentiation were exposed to qualitatively and quantitative changes. The duration of differentiation of generative buds was on average of 219 days, but for vegetative buds this period was 211 days. Wild plum underwent normally all stages of its vegetative and generative development (morphogenesis of vegetative and generative buds, floral, inflorescences, flowering and fructification), so it gives the bases for considering this species as perspective decorative and fruit plant for Absheron.

**Material and Methods:** The characteristics of morphogenesis of wild plum buds were studied by methods of Bullequin with stereomicroscope MBS-1. The morphology and the vital ability of pollens were studied by Pausheva method. The morphological observations were carried in accordance with the methodology developed in primary Botanical Garden of Russia during the per vegetation period in the following phases: the beginning of buds swelling, the beginning of leafing after every 2-3 days, but in spring and in high season after days. Acetocarmine colors cytoplasm of normal pollen grains into rosy color, and the kernel of a generative cell into pale-red, but sterile pollen grains are not colored and remain yellow.

**Results:** Vegetative and generative buds of wild plum introduced to Absheron, were laid in the year preceding flowering and were formed, from the stage of meristematic tubercle until whole development within 10-11 months. The duration of differentiation of generative buds was on average of 219 days, but for vegetative buds, this period was 211 days in Absheron conditions. So, it's necessary to conclude that wild plum introduced to Absheron consistently underwent normally all stages of its vegetative and generative development (morphogenesis of vegetative and generative buds, floral, inflorescences, flowering and fructification). In the article had been identified that, the length of polar axis is 34μ., equatorial diameter 30 μ from the polar outline the pollen grains are rounded-triangular and from the equator are elliptic.

**Acknowledgements:** I would like to express my thanks to the administration of the Botanical Garden of the National Academy of Sciences of Azerbaijan for financial support in carrying out this work.

**Keywords:** morphogenesis, bud, vegetative, generative, pollen grains, apical meristem.