



MICROMORPHOLOGY OF THE FLORAL NECTARY OF RED HORSE CHESTNUT (*AESCULUS* × *CARNEA* HAYNE)

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In Europe *Aesculus* × *carnea* Hayne is planted in cities as an avenue tree. Compared to *A. hippocastanum* L., it is more drought resistant, but less resistant to low temperatures. *A. ×carnea* is a lower tree than *A. hippocastanum* and develops a smaller corolla. It produces dark green, shiny and crinkled leaves. Its flowers have different colours, from bright pink to carmine red. The nectary glands secrete nectar abundantly. Due to the long corolla tube, nectar is difficult to reach for bees.

The aim of this study was to investigate the topography and micromorphology of the nectaries of *A. ×carnea* using scanning electron microscopy.

The study shows that the nectary gland of red horse chestnut forms an incomplete ring around the base of the staminal filaments, surrounding only four stamens out of the seven that occur in the flower. Three stamens are outside the nectary. In its widest place,

the nectary diameter reaches 2.7 mm. Three expanded portions of the gland can be seen in the marginal part of the nectary, adjoining the petals. The part of the nectary adjacent to the filaments forms a convex protrusion with a wavy appearance (shape), which results from the vicinity of the filaments.

Nectar is secreted through numerous stomata located beneath the convex part of the nectary. The stoma length is 21.7 µm, while the width 23.3 µm. In the material examined, most stomata had open pores. Secretion was observed in many places. The stomata were surrounded by 6-7 guard cells; this allows them to be classified as the cyclocytic type. The cells of the stomatal complex were raised above the surface of the other epidermal cells. The walls of the guard cells and of the adjacent epidermal cells were covered by a cuticle with irregular striation.