

BIOMORPHOLOGICAL PECULIARITIES OF SOME SPECIES OF THE GENUS *CUPHEA* IN CONDITIONS OF INTRODUCTION

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Cuphea is a New World genus and the largest of the 32 genera of *Lythraceae* with about 260 species. Economic value of these plants is very diverse but of special interest is the ability of plants to synthesize and store oil (16 to 42%) in seeds containing capric, caprylic, lauric and myristic acids used in production of laundry powders, plasticizers, and also in perfumery, medicine and in production of biodiesel. The purpose of our investigations was to study the manifestation of biological parameters of the representatives of the genus *Cuphea* - *C. lanceolata* (1), *C. viscosissima* (2), *C. lutea* (3), in conditions of their introduction in the Central Area of Moldova. Thus, plants of all genotypes were characterized as herbaceous, annual plants with tap root system and upright stem. They have simple, opposite, and entire-kind leaves. Flowers are small, single, zygomorphic, located interaxillary. Corolla has six unequal petals, they are uniformly violet-cherry colored in plants of the 1st and 2nd species. Plants of the 3rd species have flowers with two violet petals and four white petals with red central vein. Androecium has eleven stamens located in two rings. Gynoecium is syncarpous. Stem, leaves and sepals have sticky hairy surface. Fruit represents a seed case where small oblate brown seeds develop. The investigated species are characterized by a fairly long flowering period (from the second decade of June until the first frosts). Representatives of the first 2 species begin to flower 8-10 days earlier than genotypes of the 3rd species. Fruit formation was noted to begin in the first decade of July and fructification lasted till October. To determine reproductive potential of plants, the analysis of pollen must be conducted because the changes in basic characteristics of pollen influence fertility and reproductive biology of plants. We performed morphological description of pollen grains using scanning electron microscopy method. For characteristics of species, the following parameters were used: diameter, shape, surface and aperture of pollen grain. Pollen grains of the first species have oblate shape, 20.65 to 23.04 μm in diameter. Aperture contains three pores, pore diameter varies within 4.5 to 6.0 μm . Pollen grains are sincolporate and have no apocolpium. The structure is wrinkled in mesocolpium. *Cuphea viscosissima* Jacq. Pollen grains are sincolporate, with three prominent pores and streaks located on the opposite poles. The shape of pollen grains is oblate, 21.0 to 22.86 μm in diameter. Pore diameter varies within 4.0 to 6.0 μm . Mesocolpium surface is smooth except for the area around the pore where it has wrinkled sculpture. *Cuphea lutea* Rose. The shape of pollen grains is oblate, 24.57 to 26.09 μm in diameter. Pore diameter varies within 7.62 to 8.0 μm . Mesocolpium surface is smooth except for the area around the pore where it has wrinkled sculpture. *Cuphea* species investigated show significant potential for productivity and resilience in introductory conditions.

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