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NEW FINDINGS ON FLORAL VARIATION IN *MUNTINGIA CALABURA* L. (MUNTINGIACEAE): IMPLICATIONS ON ITS FLOWER CLASSIFICATION

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Muntingia calabura L. is a tree species commonly found in disturbed sites, such as cities, where its hermaphrodite flowers are important sources of pollen and nectar to insects, mostly bees. Even though all its flowers bear both stamens and ovary, they have differential development of these structures, with ovary size negatively related to stamen number and positively related to fruit production. This trade-off between male and female function leads to a greater degree of sexual differentiation than that observed in other species with hermaphrodite flowers only. Previously, *M. calabura*'s flowers were classified based on stamen number: flowers with less than forty stamens (<40), from forty to seventy stamens (40-70) and more than seventy stamens (>70). In order to investigate floral variation in *M. calabura*, one hundred and twenty flowers from four trees in an anthropized area were sampled and examined under stereoscopic microscope. Ovary and stigma diameter and ovary length was measured and the stamen number was counted. We ran a hierarchical cluster and principal component analysis using these data, resulting in three well supported classes based not only on stamen number but also on ovary size, mostly its diameter. Flowers with few stamens (25.54 ± 4.89) and larger ovary diameter ($3.12 \text{ mm} \pm 0.19$) were classified as "more feminine", flowers with many stamens (96.2 ± 15.22) and large ovary diameter ($2.71 \text{ mm} \pm 0.38$) were classified as "intermediate" and flowers with many stamens ($101.26 \text{ mm} \pm 10.08$) and small ovary diameter (1.77 ± 0.27) were classified as "more masculine". Environmental factors can play an important role in floral sexuality adjustment of *M. calabura*, according to literature. The new pattern of floral variation reported in this study can give further insights into the evolution of *M. calabura*'s sexual system and this approach is currently being under investigation by our team.