



MICROSPOROGENESIS IN TWO TYPES OF ANTHIER IN *TINANTIA ANOMALA* (TORR.) C.B. CLARKE

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Tinantia anomala (Torr.) C.B. Clarke belongs to the genus *Tinantia* (Commelinaceae) which is endemic to the tropical region of Central America. This species has adapted to the conditions in the greenhouse (Botanic Garden in Lublin, Poland) (FADEN 2006).

We studied *T. anomala* due to the occurrence of two types of strikingly different stamens in one flower. During the investigations of *T. anomala*, we compared the morphology and anatomy of two types of stamens. In *T. anomala*'s flower six stamens are present. Three of them are located above the pistil and other three are located under the ovary near the stigma (SIMPSON *et al.* 1986). The upper stamens have round anthers, short filaments and many long brightly colored staminal hairs. The lower stamens are bigger with longitudinal anthers and elongated filaments. The last ones have only short, violet staminal hairs growing at the base of their filaments.

Stamens of one type differ also with each other in size and shape of individual elements. The viability tests showed that during the

microsporogenesis both types of anther produced viable pollen grains in 80%. This process differs in two types of anther because of the various chemical composition of tapetum.

The pollen grains from the two types of stamen in *T. anomala* also differ in their texture, shape, exine pattern and chemical composition. The upper stamens produce grains with a concave triangular profile, while pollen grains from the lower stamens are smaller and exhibit convex triangular profile. Both types of pollen grains has three pores.

References

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