



REPRODUCTIVE BIOLOGY OF *TINANTIA ANOMALA* (TORR.) C.B. CLARKE

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Tinantia anomala (Torr.) C.B. Clarke (Commelinaceae) is an annual plant endemic to central Texas in the United States and Durango in northern Mexico. *T. anomala* has zygomorphic flowers with three different petals, androecium consists of six various stamens and gynoecium consists of three carpels. Furthermore in *T. anomala*'s flowers there are many staminal hairs (FADEN 2006). Its semi-succulent, grass-like leaves emerge in late fall and remain green throughout the cold months. It grows rapidly in early spring and blooms mid-spring (from March to May). A few weeks later the fruits (capsules) with four seeds usually appear. This entire cycle is usually completed by summer, when the plant has often turned yellow and limp.

We studied *T. anomala* due to the occurrence of two types of strikingly different stamens occur in one flower. According to available literature, one type of the stamens (the upper one with smaller anthers) produces sterile pollen grains which do not participate in fertilization but only attract insects. The other type, i.e. the lower stamens with bigger anthers can form abundant pollen grains used for pollination (SIMPSON *et al.* 1986). Our aim was

to investigate type of pollination of *T. anomala*. Using many microscopic methods we were able to analyze and compare the morphology of two types of anthers and staminal hairs in *T. anomala*'s flowers.

We also investigated this species in terms of development of its gametophytes. An embryo sac develops according to the type of *Polygonum*. Pollen grains develop during different ways depending on the chemical composition of each anther. We identified that the insects of Thysanoptera which preys on the withered flowers *T. anomala* could be responsible for pollination of this species under greenhouse condition.

References

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