

**REPRODUCTIVE BIOLOGY *PORTULACA UMBRATICOLA* KUNTH (PORTULACACEAE)
IN PETROLINA, PE, BRAZIL**


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ICPBR Pollination Symposium

June 27-29, 2011



Popularly known as purslane, *Portulaca umbraticola* has ornamental and medicinal potentials. Aiming to contribute with information about pollination ecology, observations of the reproductive biology of 10 individuals of this species were made in the period from January to March 2011, in an area of Caatinga, Petrolina-PE, Brazil. For pollination experiments, buds were bagged and emasculated, if needed. Flowers were marked to estimate pollination under natural conditions (control). To check the viability of pollen grains, the anthers of buds in the pre-anthesis were collected and pollen grains stained with 1.2% carmine solution. The stigma receptivity was tested with hydrogen peroxide vol.10, in flowers collected at 1 hour intervals from anthesis to their senescence. The inflorescences are terminal type, with 3-7 buds and flowers are showy, actinomorphic, monoclin, 2-sepals, 5-petals, imbricate in pre-flowering, stamina numerous, free, bifid stigma, ovary inferior, unilocular. Anthesis is diurnal, occurring between 8:00 a.m. and 9:00 a.m., according to the temperature, prevailing the first time in warmer days. In each inflorescence 1-2 flowers open per day. The duration of the flowers is approximately 4 hours, senescence occurring at around 12:00. The stigma remained receptive throughout the duration of the flower. At the time of the anthesis the pollen grains are viable (81%). During flowering, they were observed the visits of the bees *Halictidae* sp. and *Trigona spinipes*, being the first considered effective pollinator of the species. *T. spinipes* showed two distinct behaviors for pollen visiting open flowers (sternotribic pollination) or piercing the buttons in anthesis for removal of floral resources. As for the reproductive system, *P. umbraticola* is self-fruitlet producing fruits by manual self-pollination (80%), cross-pollination (100%) and in natural conditions (100%). ;
Keywords: *Portulaca*, Purslane, Pollination.