THE BEHAVIOUR OF *BOMBUS IMPATIENS* (APIDAE, BOMBINI) ON TOMATO (*LYCOPERSICON ESCULENTUM* MILL., SOLANACEAE) FLOWERS: POLLINATION AND REWARD PERCEPTION

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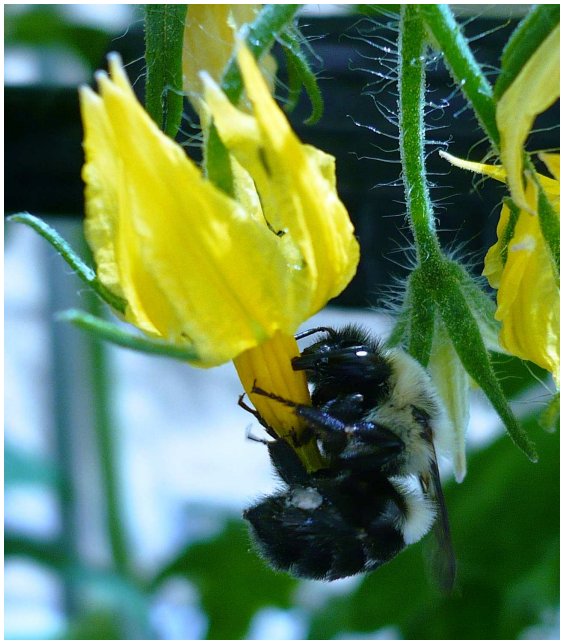
Bumble bees (*Bombus* spp.) are highly efficient pollinators of tomato (*Lycopersicon esculentum* Miller) flowers and, for commercial purposes, yield far better results than honeybees, manual vibration, or self-pollination. Today, approximately 95% of all bumble bee sales worldwide are destined for tomato production. Hence, it is evident the economic value of bumble bees for tomato pollination, but details about its mechanism were scarce.

Given the importance of bumble bees in tomato pollination and considering the putative relationship between the bees' behaviour and their efficiency as pollinators, we investigated the following questions: (1) Do fruit set and production-related parameters (weight and seed number) depend on the number of bumble bee (*Bombus impatiens*) visits? (2) Are big foragers more efficient in pollinating tomato flowers than small individuals? (3) Are *B. impatiens* foragers capable of evaluating the amount of pollen available in a flower during pollination?



*Bumble bee (*Bombus impatiens) *visiting a tomato flower.*