Do floral syndromes predict specialisation in plant pollination systems? Assessment of diurnal and nocturnal pollination of escallonia myrtoidea

Valdivia, Carlos E.

Niemeyer, Hermann M.

Pollination syndromes lead to questions concerning the role of different suites of pollinators on the pollination success of plants. Escallonia myrtoidea exhibits floral traits associated with pollination by diurnal butterflies; however, flowers remain open during the night and, thus, may also be pollinated by nocturnal moths. We assessed frequency of pollinator visits and pollination success in flowers exposed to diurnal and nocturnal pollinators in a factorial design. We also assessed pollinator dependency and limitations for seed set through hand self- and hand cross-pollination tests. Flowers were visited mainly by bees rather than by butterflies or moths. Neither diurnal nor nocturnal pollinators had any effect on seed set over the seed set of always-bagged inflorescences, while hand cross-pollinated flowers produced significantly more seeds than hand self-pollinated flowers or flowers exposed to diurnal and/or nocturnal pollinators. Thus, E. myrtoidea, a tree strongly pollinator-