

Background: Intraspecific variations in floral traits of species over its geographic range can be associated with differences in pollinator assemblages and/or with environmental conditions.

Aims: We evaluated the area of elaiophores in different populations of *Stigmaphyllon bonariense* ($n = 9$) and *S. jatrophifolium* ($n = 6$), and we hypothesised a marked reduction in their size towards their southern limits of distribution, associated with different oil-collecting bee assemblages.

Methods: Area of elaiophores was calculated and we carried out linear correlations with floral size, pollinators, visitation rate and pollinator size along the latitudinal gradient of the plants' distributions. Moreover, we examined the relative size relationships using allometric analyses, to verify this reduction.

Results: Floral elaiophore area decreased with latitude. However, for *S. bonariense* we observed an allometric reduction in elaiophore area with respect to floral size, while for *S. jatrophifolium* an isometric reduction was found. In both species, pollinator richness and visitation rate did not diminish with latitude, but pollinator size for *S. bonariense* varied.

Conclusions: Our results show a reduction in the size of elaiophores in both species along their distribution range, with dissimilar tendencies, suggesting that these species may have different selection pressures that cause variation of their phenotypic traits.

