

Lonicera floral traits change to adapt to environmental variabilities

Wenkai Chen¹, Jinniu Wang², Jie Du³, Jian Sun⁴, Chunya Wang², and Yan Wu²

¹Chengdu Botanical Garden

²Chengdu Institute of Biology, Chinese Academy of Sciences

³Aba Tibetan and Qiang Autonomous Prefecture

⁴Institute of Tibetan Plateau Research Chinese Academy of Sciences

October 22, 2022

Abstract

Species in *Lonicera* genus are magic elves with excellent adaptability to varying environments with the aid of the divergent morphological and color pattern variation. Flowers undergo strong selection of both biotic and abiotic factors with species-specific morphology and color strategies. Take *Lonicera nervosa* (*L. nervosa*) and *Lonicera tangutica* (*L. tangutica*) as representative species, two sister taxa of *Lonicera* widespread in alpine to subalpine ecosystems in the same region, which present ideal subject in terms of evolution and adaptation of flowers to determine underlying ecological implications with close evolutionary relationship: (1) both species present differentiation in floral structure, corolla orientation and anther position; (2) *L. nervosa* has constant color while *L. tangutica* undergoes color change during florescence (3) Both species share the same pollinators, distribution and specimen coordinates show that the two species of *Lonicera* have similar distribution centers.

Hosted file

Manuscript-Lonicera_floral_traits_change_to_adapt_to_environmental_variabilities.docx available at <https://authorea.com/users/516685/articles/591452-lonicera-floral-traits-change-to-adapt-to-environmental-variabilities>







