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The positive effects of a biocontrol pathogen agent introduced against the invasive alien tree miconia (*Miconia calvenscens*, Melastomataceae) on the growth and fertility of two threatened endemic plants *Ophiorrhiza* spp. (Rubiaceae) in Tahiti (French Polynesia)

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Very few studies have demonstrated the positive impacts of biological control agents on the recovery of native species. A fungal pathogen *Colletotrichum gloeosporioides* forma specialis *miconiae* (Coelomycetes, Deuteromycetinae), highly specific to the invasive alien tree miconia (*Miconia calvenscens* DC., Melastomataceae), was successfully released in the tropical island of Tahiti (French Polynesia). It has caused partial defoliation of miconia trees in forest canopy, ranging from 10% to 40% according to elevation. We studied population structure and life history traits of two endemic rare and threatened suffrutescent herbs (*Ophiorrhiza tahitensis* Seem. and *O. subumbellata* Forst., Rubiaceae) growing in the understorey of cloud forests highly invaded by miconia. We compared 12 populations of *O. tahitensis* and 14 populations of *O. subumbellata* in 25 m² plots set up in two sites of Tahiti, located between 800-1100 m elev., and showing different miconia defoliation degrees. Defoliation was estimated by measuring leaf area damages on canopy leaves, and canopy opening was calculated with a spherical densiometer. Our results showed that growth and fertility of *O. subumbellata* were significantly higher in more defoliated miconia forest. These trends were not significant for *O. tahitensis*, a more shade-tolerant species. A better seedling recruitment and survival observed for *O. subumbellata* in one study site might be confirmed by a long term monitoring survey. The miconia biocontrol agent has contributed to the conservation of endemic threatened plants by partially opening the canopy in dense miconia forests.

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