

Tristerix tetrandrus (Loranthaceae) and its host-plants in the Chilean matorral: patterns and mechanisms

Hoffmann, Alicia J.; Fuentes, Eduardo R.; Cortes, Irma; Liberona, Flavia; Costa, Virginia

Abstract

"Interactions between a Chilean mistletoe, quintral (*Tristerix tetrandrus*, Loranthaceae) and its potential host plants were studied at a site with mediterranean type climate. The results show that the distribution of *T. tetrandrus* is related to the behavior of avian dispersers, which feed on its fruit, and evacuate the seeds at random in the field, but the distribution is also influenced by microenvironmental conditions, survival of seedlings is hampered at drier locations. The infection capacity of the seeds is increased after birds have eliminated the fruit coat.

Survival of *T. tetrandrus* seeds differed depending on the species to which they were attached experimentally. Seeds germinated, and plants developed on *Colliguaya odorifera* and *Kageneckia oblonga*, previously reported as susceptible to infection. Survival was significantly higher on *C. odorifera*, although in the field it is infected less frequently than *K. oblonga*. In species on which no *T. tetrandrus* has been previously reported, resistance to infection might be ascribed to different mechanisms: in *Quillaja saponaria*, differentiation of cork layers apparently prevents penetration by haustoria; in *Lithraea caustica* haustoria enter the cortex and phloem, but no further development ensues.

K. oblonga seldom bears more than one *T. tetrandrus* plant. Experimental inoculations showed that significantly more seeds developed into plants on *K. oblonga* individuals not previously infected with quintral, suggesting that they become resistant to infection."

Keywords Germinate, Host Plant, Potential Host, Type Climate, Experimental Inoculation