

Phytochemical Differences between *Calia secundiflora* (Leguminosae) Growing at Two Sites in Mexico

Fernando Zavala-Chávez^a, Rosario García-Mateos^b, Marcos Soto-Hernández^{c,*}, and Geoffrey Kite^d

^a División de Ciencias Forestales, Universidad Autónoma Chapingo, Chapingo, México, 56230

^b Preparatoria Agrícola, Universidad Autónoma Chapingo, Chapingo, México, 56230

^c Programa de Botánica, Colegio de Postgraduados, Montecillo, México, 56230.
E-mail: msoto@colpos.mx

^d Royal Botanical Gardens Kew, Richmond, Surrey TW9 3AB, UK

* Author for correspondence and reprint requests

Z. Naturforsch. **61c**, 155–159 (2006); received July 14/September 23, 2005

The ecology and quinolizidine alkaloid chemistry of *Calia secundiflora* (Ortega) Yakovlev growing at two sites in Mexico were compared. At one site (Hidalgo) the vegetation was dominated by *Flourensia resinosa* and *C. secundiflora*, at the other site (Queretaro) *C. secundiflora* and *Dodanaea viscosa* were dominant. The Hidalgo site had shallower soils with less organic matter, N, P, and CaCO₃. Seeds of *C. secundiflora* from each site accumulated a similar range of quinolizidine alkaloids, but the profile of alkaloids in the leaves and roots were different. The leaves and roots of plants at Hidalgo accumulated a similar range of alkaloids to the seeds with cytisine and/or *N*-methylecytisine being most abundant, whereas at Queretaro the leaves and roots accumulated lupinine, with other alkaloids being relatively minor constituents. The latter profile has not been reported previously for *C. secundiflora*.

Key words: *Calia secundiflora*, Quinolizidine, Alkaloids, Leguminosae