Saltcedar (*Tamarix ramosissima*), an uncommon host for desert mistletoe (*Phoradendron californicum*)

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SALTCEDAR (TAMARIX RAMOSISSIMA), AN UNCOMMON HOST FOR DESERT MISTLETOE (PHORADENDRON CALIFORNICUM)

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Key words: Phoradendron californicum, Tamarix ramosissima, mistletoe, saltcedar, host, parasite.

The genus Tamarix (saltcedar) contains approximately 54 species of phreatophytic plants whose origins are in Europe, Asia, and Africa. Several members of the genus were introduced into the United States in the early 1800s, mainly as ornamental plants. Approximately 8 species have since escaped cultivation and have become naturalized to varying degrees (Baum 1967). Tamarix ramosissima Ledeb. has become established in riparian areas throughout the West and Southwest, where it has proven to be an aggressive invader that eventually displaces native vegetation.

Desert mistletoe (Phoradendron californicum Nutt.) is a native parasitic plant that grows on several species of riparian plant hosts. Its range includes southern Nevada, southwestern Utah, southeastern California, southwestern Arizona, and northern Baja California, Sonora, and Sinaloa (Benson and Darrow 1981). Previously published information on hosts for desert mistletoe include Blumer (1910), Shreve and Wiggins (1964), Walters (1976), Daniel and Butterwick (1992), and Overton (1992), none of whom mentions T. ramosissima. Holland et al. (1977) and Benson and Darrow (1981) state that "saltcedar" and "the introduced tamarisks" are possible hosts, while Muniz and Keck (1965) and McDougall (1973) list Tamarix but mention no particular species. Cohan et al. (1978) state that P. californicum does not occur in saltcedar. This paper describes 2 occurrences of P. californicum on T. ramosissima in southern Nevada.

I found the 1st parasite and host specimen on 27 June 1995 at Hiko Springs in Clark County, Nevada, approximately 11 km west of Laughlin along State Highway 163 (3,894,000 N 711,650 E) at an elevation of 605 m (Fig. 1). A 2nd specimen was found on this host tree on 16 October 1995. Voucher specimens from 1 parasite and host are deposited in the Department of Biological Sciences herbarium, University of Nevada, Las Vegas, accession number 38971.

The host tree was growing in a canyon approximately 2 m from a small, flowing stream on quartz monzonite-derived soil. The first mistletoe clump measured 33 cm long × 32 cm high × 14 cm wide and was growing on the southwest side of a branch 2.1 m above the ground. The branch to which the mistletoe was attached measured 5.2 cm in diameter and 16.2 cm in circumference. The length of the branch from trunk to point of mistletoe attachment was 2.1 m. The trunk base of the 5-m-high saltcedar measured 8 cm in diameter and 29 cm in circumference, which would indicate an age of approximately 24 yr (based on average value of California and Arizona sites as reported by Smith 1989). The 2nd mistletoe also faced southwest and was located on the main trunk of the tree .9 m above the ground. It was a newly sprouted plant that consisted of only 12 stems, the longest of which measured 4 cm. Both mistletoes and the host tree appeared to be healthy, actively growing specimens. The parasites were young plants and were a more vivid green than other mistletoes in the area. Sex of the mistletoes could not be determined.

Other hosts for P. californicum at this site include catclaw acacia (Acacia greggii), honey mesquite (Prosopis glandulosa), and creosote bush (Larrea tridentata). Although many other Tamarix trees occur here, none have been infected by mistletoe. Desert mistletoe is usually spread from host to host by birds, which ingest the seeds and later defecate them onto a branch. Two bird species that occur frequently at this
site and have been seen feeding on mistletoe and perching in saltcedar are the Phainopepla (Phainopepla nitens) and Northern Mockingbird (Mimus polyglottos) (personal observation).

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**LITERATURE CITED**


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Fig. 1. Parasite Phoradendron californicum growing on host plant Tamarix ramosissima.