MISTLETOE ON PERSIMMON

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Phoradendron flavescens (Pursh) Nutt. occurs from "central New Jersey to Ohio, Indiana and Missouri, south to Florida, Texas and New Mexico" (Britton and Brown, 1913). *Diospyros virginiana* L. is throughout this range except for the very southwestern portion (Sargent, 1922). Only four records of mistletoe on this persimmon are at hand.

Harper (1928) reported *Phoradendron* on *Diospyros* near North Alabama Junction, Tuscaloosa Co., Alabama; he stated in a letter of October 27, 1948, that "it may have been only one specimen on one tree". In 1917, near Keysville, Charlotte Co., Virginia, I found mistletoe growing on a persimmon, but I do not recall how many individual parasites there were. And on October 17, 1948, near Lake Drummond in the Great Dismal Swamp, Norfolk Co., Virginia, I saw two clumps of *Phoradendron* on a thirty-foot tree of *D. virginiana.* In both instances it is to be assumed that the mistletoe was referable to *P. flavescens*, for no other representative of the genus has been considered to be in Virginia. Mr. W. H. Pitman (letter of November 29, 1948) wrote me that some years ago in Surry Co., Virginia, he saw mistletoe on persimmon.

Inquiries addressed to Mr. C. C. Deam, Prof. M. L. Fernald, Dr. R. M. Harper, Mr. Bayard Long, Prof. Edgar T. Wherry—all with much field-experience within the ranges of these plants—brought no further record of mistletoe-persimmon association.

Curtiss (1878) wrote that mistletoe is abundant in Florida, "where it may be found on nearly every kind of tree", and recorded it as sometimes parasitic upon itself. Harper (1928) listed for Alabama nineteen genera (including two that are cultivated) as supplying one or more host species for mistletoe, and in the letter cited above he added *Hamamelis* as a twentieth genus. Deam (1940) indicated that four genera—including *Juglans* not mentioned by Harper—are known to serve in Indiana as hosts for mistletoe. In the northeastern part of its range (in New Jersey and Pennsylvania) mistletoe is invariably on *Nyssa sylvatica* and occasionally on *Acer rubrum:* both Mr. Long and Doctor Wherry have written me this.

Harper (1928) stated with respect to *Phoradendron* in Alabama: "it may be divisible into several species, which are to all appearances much alike but cannot be made to grow on trees too different from that to which they have been accustomed". Small (1933) recognized for Florida two species besides *P. flavescens*. Willis (1919) estimated for *Phoradendron* about one hundred species, all of them American.

That *Phoradendron* has such a series of hosts in a part of the area under discussion and in other regions evidences a restricted preference suggests considerable genotypic variation, which may be beyond the specific limits of *P. flavescens*. This becomes all the more significant since the greatest variety of hosts is concentrated in the southern part of the range and where contact with other recognized species is not to be unexpected. It could be that introgressive hybridization has occurred. And surely birds would have assured trial plantings of segregants on a wide variety of hosts. Indications are that only a rare genotype could grow on *D. virginiana*. But it must be remembered, too, that this persimmon is extremely variable and has intraspecific polyploid races (Baldwin and Culp, 1941). To accord with this idea of introgression the mistletoes on rare hosts should be the extremes among populations.

Literature Cited

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Some Grasses new to West Virginia.—As the following grasses are not included in "West Virginia Grasses" published in 1944 by Dr. Core et al. it may be of interest to record their occurrence in that state.

Bromus Dudleyi Fernald. When this was described as a