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DIGITARIA ADSCENDENS AND *D. SANGUINALIS* (GRAMINEAE) IN ARKANSAS

Albert Robinson, Jr.

INTRODUCTION

The genus *Digitaria* constitutes a prominent element among the weedy grasses found in Arkansas. Typical habitats are areas along paths, roads, and other locales which have been disturbed by man's activities. There has been controversy whether *D. adscendens* should be considered a distinct species or lumped with *D. sanguinalis*. In the course of a study of Arkansas grasses, the author has been forced to consider the validity of *D. adscendens* as a species.

Hitchcock (1950) and Steyermark (1963) do not recognize *D. adscendens*, but lump it with *D. sanguinalis*. Henrard (1950) considers *D. adscendens* distinct from *D. sanguinalis*, and Ebinger (1962) presents criteria which have diagnostic value in such differentiation. Contrasted with *D. sanguinalis*, *D. adscendens* has second glumes two-thirds as long as the spikelets, nerves of the sterile lemma smooth, and leaves usually completely glabrous. Gould (1963) reports that specimens morphologically referable to *D. sanguinalis* revealed chromosome counts of $2n=36$, and those referable to *D. adscendens* give counts of $2n=54$. A specimen showing hybrid morphological characteristics gave a count of $2n=48$.

The author examined a total of 92 specimens of Arkansas material. Using Ebinger's criteria, 64 of these could readily be designated as *D. adscendens*; 11 as *D. sanguinalis*; 17 as morphologically intergrading between the two species. The distribution of these specimens is shown in Fig. 1.

DISCUSSION

The distribution pattern shown in Fig. 1 might be altered if extensive collections were made throughout Arkansas. Particularly interesting would be the pattern shown in the Mississippi Alluvial Plain area.

The basic problem, however, is to determine whether one is dealing with introgressive hybridization or clinal hybridization. The answer awaits more intensive study of this taxon.

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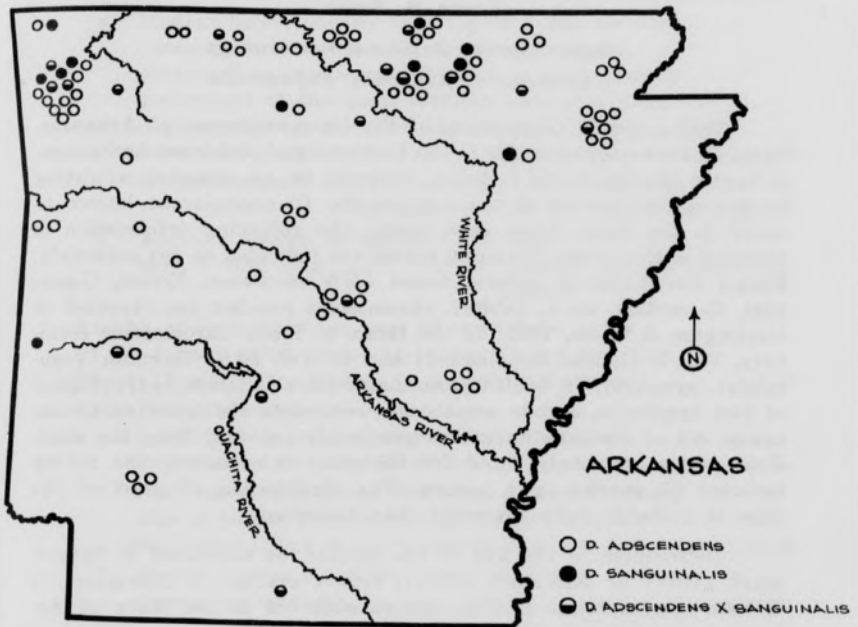


Fig. 1. Distribution of *D. adscendens* and *D. Sanguinalis* in Arkansas.

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