

4-1-1984

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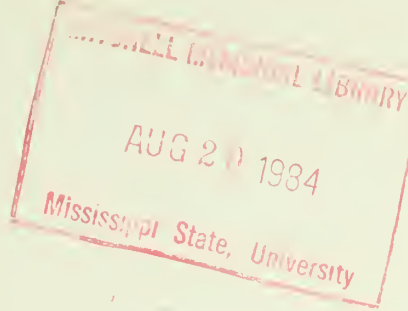
C. Dennis Elmore

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PERENNIAL

VINES

in the Delta of Mississippi



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**PERENNIAL VINES
IN THE
DELTA OF MISSISSIPPI**

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Perennial Vines in the Delta of Mississippi

Perennial vines are common and troublesome weeds in row crops in the Mississippi Delta. They are difficult to control with herbicides now available and are increasing in economic importance throughout the Delta, especially with the emphasis on reduced tillage practices to prevent soil erosion. These weeds reduce yields, increase the difficulty of harvesting, reduce

the quality of harvested produce and greatly increase the cost of production.

Producers and weed science professionals are aware of these weeds, but, due to regional differences, the same weed may have several different common names (e.g.; trumpet-creeper, buck vine and cow itch vine are the same). Some of the less common vines may not be known

by name to producers (e.g.; redberry moonseed). Thus, accurate identification is important for effective communication between producers and weed science professionals. The objective of this publication is to document, by species, the prevalence of perennial vines in row crops in the Delta of Mississippi and to present a simplified, illustrated key for their accurate identification.

Procedure

The 100 sites selected for the field survey in the Delta of Mississippi were apportioned among counties according to the acreages of cotton and soybeans in each county. The sites were determined by randomly selecting a page from the aerial photographs of the county soil survey. The sites then were selected randomly from a grid placed over each selected page. Lakes, forests and other uncultivated sites were not included in the survey. Alternate sites were selected if land use had changed since the aerial photo-

graphs were taken (e.g.; rice paddy or catfish pond). The predetermined sites were surveyed in late August 1981 and late August-early September 1982. Fields were sampled by a walking survey. The data recorded for each site included crop planted, presence of perennial vines by species and an abundance rating by species according to the following scale:

- 0 = none present
- 1 = rare, 1 to a few plants seen (< 1% area coverage)

- 2 = infrequent, more than 1 (1-10% area coverage)
- 3 = occasional (10-20% area coverage)
- 4 = common, (20-50% area coverage)
- 5 = abundant (> 50% area coverage)

Two observers made independent ratings, and assigned rating was by consensus. A few sites were visited by a single observer, but only after considerable rating experience.

Results and Discussion

Redvine was found in 52% of the cotton fields and 37% of the soybean fields (Table 1), with an average infestation of 42% of the row crops. Other perennial vines and their

infestation rate were trumpet-creeper, 29%; honeyvine milkweed, 12%; redberry moonseed, 8%; Illinois bundleflower, 6% and bigroot morningglory, 4%. Vines, with the

exception of Illinois bundleflower, seemed to be more prevalent in cotton than in soybeans, perhaps due to the more open canopy of cotton. Illinois bundleflower was

Table 1. Frequency of occurrence and senerity of infestations of perennial vines in cotton and soybean fields in the Delta of Mississippi, by species, 1982.

Crop	No. of Fields	Perennial vine species																							
		Redvine			Trumpet-creeper			Honeyvine milkweed			Redberry moonseed			Illinois bundleflower			Bigroot morningglory								
		0	1	>1	0	1	>1	0	1	>1	0	1	>1	0	1	>1	0	1	>1						
		Rating ^a																							
		-----%-----			-----%-----			-----%-----			-----%-----			-----%-----			-----%-----								
		\bar{x}			\bar{x}			\bar{x}			\bar{x}			\bar{x}			\bar{x}								
Cotton	35	48	9	43	1.1	71	11	17	0.5	77	17	6	0.3	83	9	9	0.3	97	3	0	>0.1	91	0	9	0.2
Soybean	65	63	6	31	0.8	71	9	20	0.6	94	3	3	0.1	97	2	2	>0.1	92	8	0	0.1	98	0	2	>0.1
Total	100	58	7	35	0.9	71	10	19	0.6	88	8	4	0.2	92	4	4	0.1	94	6	0	0.1	96	0	4	0.1

^aRating follows the scale given in the text.

0 = none found

1 = rate < 1% area coverage

> = greater than 1% area coverage

more abundant in the fine-textured clay soils, which are more often planted to soybeans.

The average rating followed the same pattern as their occurrence. Redvine and trumpet creeper had the highest rating and, of the others, only honeyvine milkweed and redberry moonseed were found with enough frequency to permit a sub-






stantial rating, and then only in cotton.

In a few scattered cases, honeyvine milkweed, redberry moonseed and bigroot morningglory infestations were prevalent enough to be of concern, mostly in cotton. Illinois bundleflower rated no higher than 1. This species, however, may be on the increase with the increased

emphasis on reduced tillage.

Identification of the perennial vines, especially some of the less common ones, is difficult. Most of the less common ones are not listed in current weed identification guides, and the weeds are identified improperly in some of these guides. For this reason, an illustrated key is provided below.

Vegetative Key to Perennial Vines

- | | | |
|--------------------------------|---|---|
| 1. Leaves simple |  | See 2 |
| 2. Leaves opposite |  | <i>Cynanchum laeve</i> (Michx.) Pers. |
| 2. Leaves alternate |  | Honeyvine milkweed (Figure 1).
See 3 |
| 3. Tendrils present |  | <i>Brunnichia cirrhosa</i> (Gaertn.)
Redvine (Figure 2) |
| 3. Tendrils absent | | See 4 |
| 4. Leaves cordate or pandurate |  | <i>Ipomoea pandurata</i> (L.) G. F. W. M.
Big Root morningglory (Figure 3) |

4. Leaves variable, entire
or hastately lobed



Cocculus carolinus (L.) DC

Redberry moonseed (Figure 4)

1. Leaves compound

5. Leaves opposite, once
pinnately compound



See 5

Campsis radicans (L.) Seem.

Trumpet creeper (Figure 5)

5. Leaves twice
pinnately compound



Desmanthus illinoensis

(Michx.) MacM.

Illinois bundleflower (Figure 6)



Figure 1. Honeyvine milkweed [*Cynanchum laeve* (Michx.) Pers.]

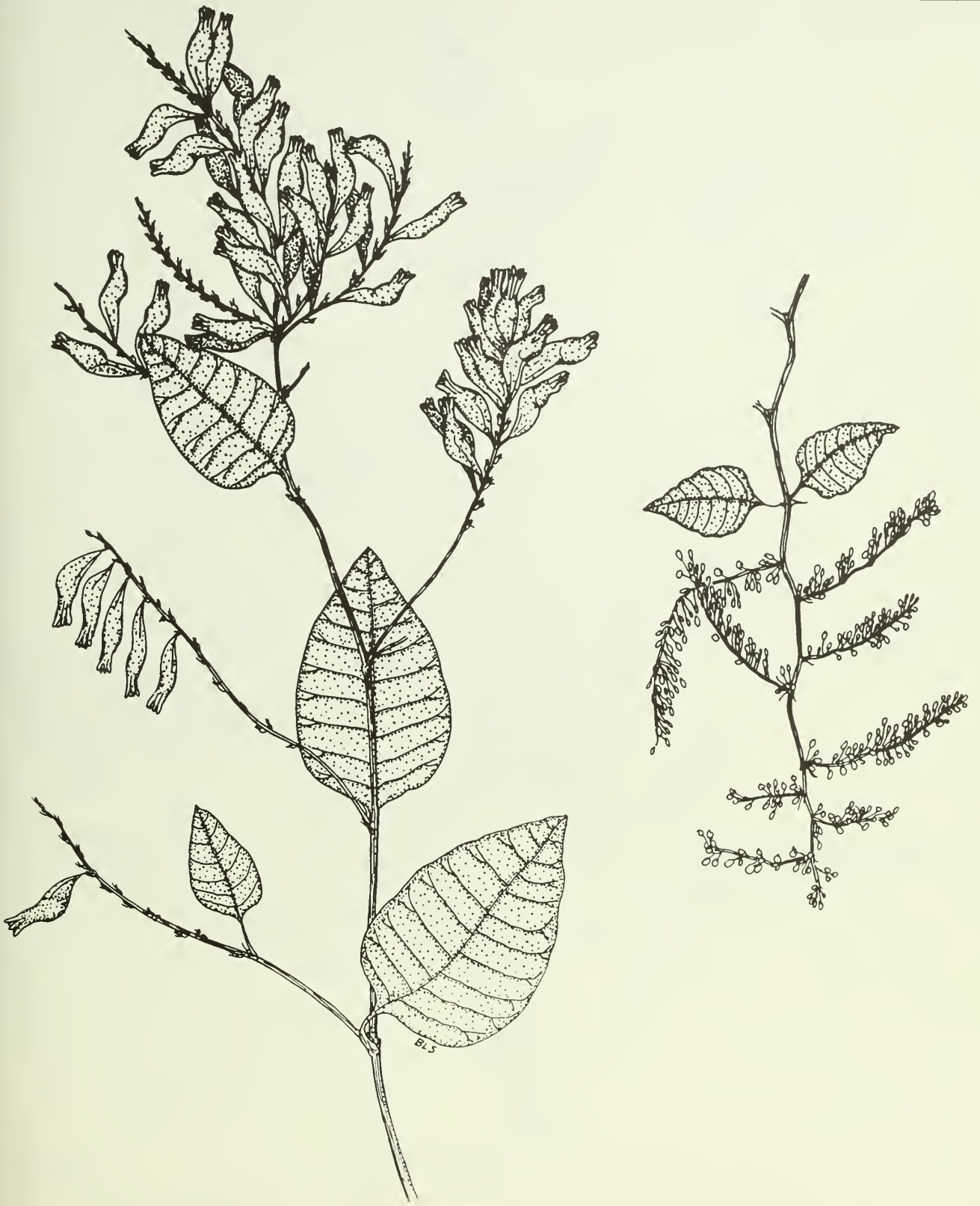


Figure 2. Redvine [*Brunnichia ovata* (Walt.)]



Figure 5. Trumpet creeper [*Campis radicans* (L.) Seem.]

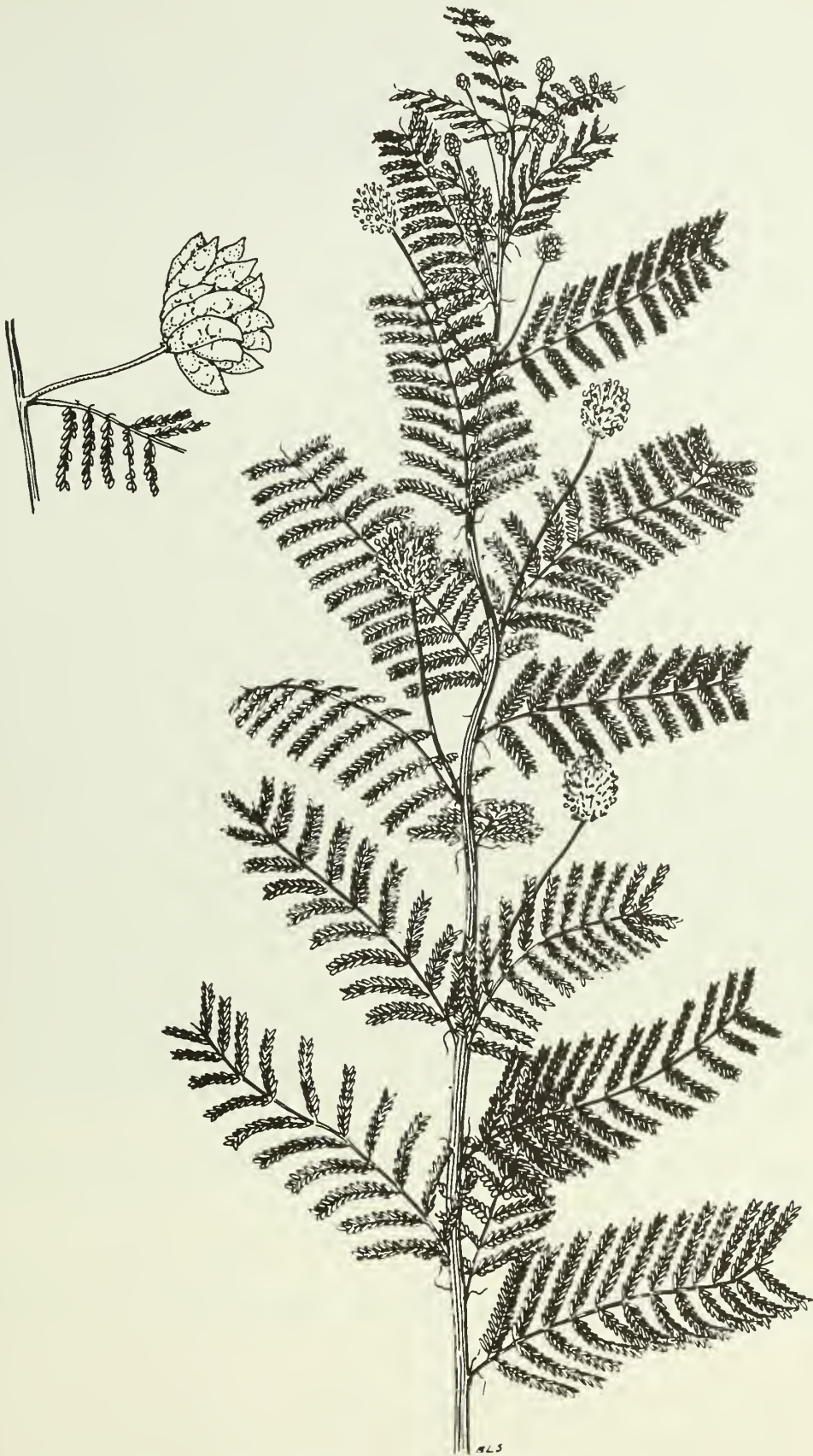


Figure 6. Illinois bundleflower [*Desmanthus illinoensis* (Michx.) MacM.]