THE DIPSACACEAE AND VALERIANACEAE OF OHIO[1]

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This paper presents a current account of the range, habitat, and distribution of Ohio's species of the Valerianaceae and the Dipsacaceae. The information was compiled from my examination of herbarium specimens from seven herbaria located within the state, those of Kent State University, Miami University, Oberlin College, The Ohio State University, Ohio Wesleyan University, and University of Cincinnati.

Three species of the Dipsacaceae, representing two genera, are known to be a part of Ohio's flora. *Dispacus sylvestris*, originally introduced from Europe, has become naturalized as a common roadside weed; it has been collected from approximately two-thirds of Ohio's eighty-eight counties and probably occurs in all counties.

Two other species, rare and adventive, have been known to occur and are reported from single stations. *Dipsacus fullonum* was collected in Ross County by Floyd Bartley in 1957, and *Scabiosa columbaria* was collected in Highland County by Katie M. Roads in 1926.

Six species of the Valerianaceae, representing two genera, are known to occur in Ohio. Of the six, only one, *Valeriana ciliata*, is rare. It has been collected from a single station, Cedar Swamp, in Champaign County. A majority of the herbarium specimens of *Valerianella* examined in this study, especially those of *V. intermedia*, were found to have been examined and annotated by a specialist in that genus, Sarah C. Dyal; as a result, the treatment of that genus closely follows hers published in *Rhodora* (1938).

Economically the Valerianaceae are of importance only for a few ornamentals, notably garden heliotrope (*Valeriana officialis*) and goosefoot corn salad (*Valerianella chenopodifolia*).

In the systematic treatment, dichotomous keys are given to the four genera and nine species of the Dispacaceae and the Valerianaceae found in Ohio. A general statement of the habitat as compiled from labels on herbarium specimens

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is given for each species, as well as a statement of their frequency of occurrence and range in Ohio. An indication of the flowering time of each species follows this information.

The frequency of occurrence of each species is determined according to the following scale based on the number of collecting stations: *rare* if from less than 10 stations, *infrequent* if from 10–30 stations, *frequent* if from 31–50 stations, and *common* if from more than 50 stations.

For species designated as *rare*, all information recorded on each herbarium specimen is given. The county name is presented first; this is followed by these data (when available): location, date, collector, and habitat. Also included are the initials of the herbarium in which the specimen is located. These initials are those given by Lanjouw and Stafleu in the fourth edition of *Index Herbariorum* (1959).

County distribution maps are included for all species. Each symbol on a map represents a specific location from which an herbarium specimen of that particular species was collected; thus, it is possible to tell at a glance the frequency and distribution of that species. In this study, synonyms as indicated in current floristic manuals are listed, as well as colloquial names of frequent usage.

Following all information, there is an indication as to whether the species is native, introduced, naturalized, or adventive. This indication of status is based on information obtained from *Gray's Manual of Botany, 8th Edition* (Fernald, 1950), the *New Britton and Brown Illustrated Flora* (Gleason, 1952), and *Taxonomy of Vascular Plants* (Lawrence, 1951).

VALERIANACEAE (Valerian Family)

Herbs with opposite, simple or compound leaves, estipulate; calyx minute or absent; corolla gamopetalous, tubular or funnelform; stamens one to three, distinct, often exserted; carpels united, style one, ovary one to three loculed; flowers epigynous, terminal, in panicled or clustered cymes, often with bracts or braclets; fruit dry, indehiscent.

KEY TO GENERA OF VALERIANACEAE

1. Leaves simple, sessile, blades entire, never parallel veined; calyx absent..... *Valerianella*
1. Leaves simple and parallel veined or pinnately divided or compound; calyx of inrolled bristles..... *Valeriana*

KEY TO SPECIES OF VALERIANA

1. Leaves parallel veined; basal leaves narrowed to short winged petioles; roots large, fusiform..... 1. *V. ciliata*
1. Leaves pinnately veined; basal leaves on long slender petioles; roots fibrous..... 2
   2. Basal leaves simple; compound leaves with the terminal leaflet much larger than the lateral ones; rachis of lower leaves usually glabrous..... 2. *V. pauciflora*
   2. Basal leaves all pinnately compound, pinnae nearly equal; rachis of lower leaves hirsute..... 3. *V. officinalis*

VALERIANA L. (Valerian)

1. *Valeriana ciliata* T. & G. (Edible Valerian)
   Valeriana edulis Nutt.
   Valeriana ciliata Rydb.

   Rare. Found only in Champaign County. Found near swamps in wet, open soil. May-June. Native.

   Champaign: Cedar Swamp, Werner, May 27, 1893 (OS); J. H. Schaffner, May 30, 1932 (OS); Thomas, May 2, 1938 (OS); F. Bartley, June 8, 1940 (OU).

2. *Valeriana pauciflora* Michx. (Large-Flowered Valerian)

   Frequent. Abundant in southern Ohio, infrequent in northern portion of the state. Generally found in rich, moist soil, along streams, creeks, damp bluffs, and river flats. May-June. Native.

3. *Valeriana officinalis* L. (Garden Heliotrope)

Infrequent. Rare throughout most of the state, frequent in northeastern Ohio. In mixed grasses and weeds along roadsides, waste areas, and open fields. May-June. Introduced from Europe.

KEY TO SPECIES OF VALERIANELLA

1. All bracts and bractlets eciliate; fruit sharply triangular in cross-section..... 1. *V. chenopodifola*
1. Some, or all of bracts and bractlets ciliate; fruit not sharply triangular in cross-section... 2
   2. All bracts and bractlets ciliate; corolla bluish-white; dorsal third of the fruit composed of a corky mass.....2. *V. olitoria*
   2. Bracts ciliate, bractlets immediately subtending the inflorescence nearly all eciliate; corolla white; dorsal third of fruit not composed of a corky mass.....3. *V. intermedia*

VALERIANELLA Mill. (Corn Salad)

1. *Valerianella chenopodifolia* (Pursh) DC. (Goosefoot Corn Salad)

Infrequent. Scattered throughout most of the state except northwestern Ohio. Moist meadows, creek banks, open fields, woods, and low ground along stream banks. May-June. Native.

2. *Valerianella olitoria* (L.) Poll. (Lamb's Lettuce)
   Valerianella locusta Betcke

Infrequent. Very widely scattered in northeastern and southern Ohio. Moist soil in fields, along streams, woods, and roadsides. April-June. Introduced from Europe.

3. *Valerianella intermedia* Dyal (Beaked Corn Salad)
   Valerianella radiata (L.) Dufr. var *intermedia* (Dyal) Gl.

Frequent. Throughout most of Ohio. Alluvial soil in flood plains, low moist ground, wet stream banks, edges of marshes, bogs, and swamps, moist woods and meadows, and along roadside ditches. May-June. Native.

DIPSACACEAE (Teasel Family)

Coarse, tall, biennial or perennial herbs, little branched, some species with very prickly stems; leaves opposite, sessile or connate, estipulate; flowers in dense heads surrounded by an involucre of bracts. True calyx very minute and short, four lobed; corolla gamopetalous, usually four lobed, imbricate; stamens epipetalous, usually four, distinct; pistil one, the ovary inferior, style one and filiform; fruit an achene. Each flower is subtended by a receptacular bract.

KEY TO SPECIES OF DIPSACACEAE

1. Stems, and usually the leaves and involucre, prickly.....*Dipsacus*
2. Stems not prickly.....*Scabiosa*

KEY TO SPECIES OF DIPSACUS

1. Bracts of the involucre tapering into a long flexible awn with a straight point, usually longer than the head.....1. *D. sylvestris*
1. Bracts of the involucre stout with recurving hooked tips, usually shorter than the head.....2. *D. fullonum*

DIPSACUS L. (Teasel)

1. *Dipsacus sylvestris* Huds. (Common Teasel)

Common. Throughout the state. In moist, weedy fields and banks, waste areas in abandoned fields, pasture and grassy swampland, open woods, and along roadsides and railroad tracks. July-Oct. Naturalized from Europe.

2. *Dipsacus fullonum* L. (Fuller's Teasel)

Rare. From southern Ohio.

Ross: Green Twp., F. Bartley, October 15, 1957 (OS). No habitat data given; according to Fernald (1950) the species is spontaneous but not persistent; known to escape from textile mills in which it was formerly used in fulling process. Gleason (1952) states that the species is often considered to be merely a cultivated variety of *D. sylvertris*. July-Oct. Introduced from Europe.

SCABIOSA L. (Scabious)

1. *Scabiosa columbaria* L. (Small Scabious)

Rare. From southern Ohio.

Highland: Hillsboro, waste area in vacant lot. Katie M. Roads, Aug. 13, 1926 (OS).

According to Gleason (1952) this species is rarely adventive; native of Europe, N. Africa, and W. Asia. July-Sept. This specimen was originally determined to be *S. atropurpurea* L. and was cited under that name in the *Revised Catalog of Ohio Vascular Plants* (Schaffner, 1932).

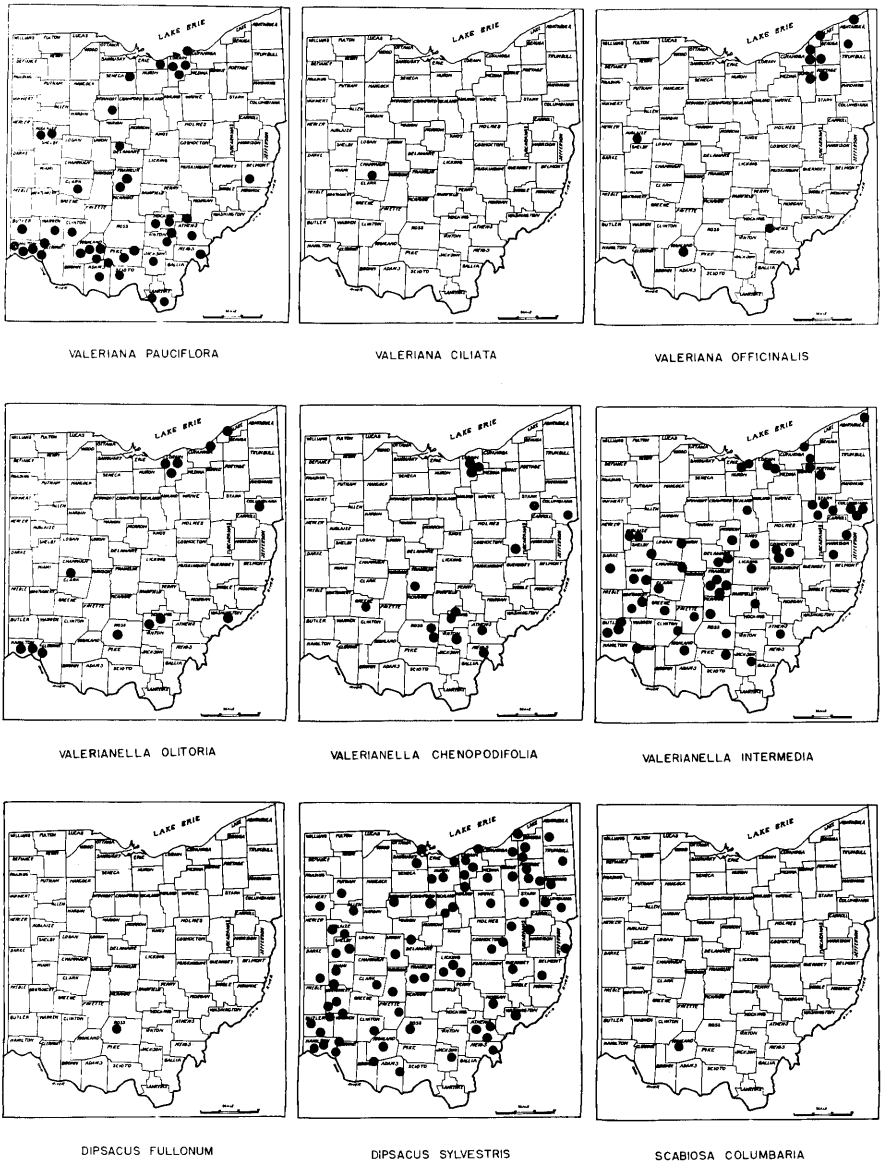

FIGURE 1. Distribution of the Dipsacaceae and the Valerianaceae in Ohio. Each symbol on a map represents a specific location from which an herbarium specimen was collected.

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