1972

A Systematic Survey of the Tribe Cichorieae in Virginia

Craig Lee Nessler

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A SYSTEMATIC SURVEY OF
THE TRIBE CICHORIEAE
IN VIRGINIA

A Thesis
Presented to
The Faculty of the Department of Biology
The College of William and Mary in Virginia

In Partial Fulfillment
Of the Requirements for the Degree of
Master of Arts

by
Craig L. Nessler
1972
APPROVAL SHEET

This thesis is submitted in partial fulfillment of the requirements for the degree of

Master of Arts

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Approved, June 1972

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Donna M. E. Ware

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ACKNOWLEDGEMENTS

I wish to express my sincere gratitude to Dr. Gustav W. Hall, committee chairman, for his inspiration and guidance throughout the course of this study, to Dr. Stewart A. Ware for his assistance and review of the manuscript and to Dr. Mitchell A. Byrd for reading the manuscript.

I gratefully acknowledge the assistance of the curator and/or director of the herbarium at each of the institutions from which specimens were studied.

I am indebted to Mr. Paul Busse and to Mr. Richard Ganser for their assistance with the field work and for their good-natured companionship during extended collecting forays.

A very special word of appreciation goes to Dr. Donna M. E. Ware for her careful review of the manuscript and for her instructive criticism during all phases of this study.
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ABSTRACT

The Cichorieae is the only tribe in the subfamily Liguliflorae of the family Asteraceae (Compositae). Members of this tribe can be distinguished from other composites by their heads of perfect, ligulate flowers and sap of milky-white latex.

This study is a systematic treatment of the Cichorieae, excepting the genera Hieracium and Prenanthes, in Virginia. Data was obtained from the literature, from examination of specimens from eleven herbaria, and from observations and collections made in the field. All counties in Virginia were visited during collecting trips in the spring and summer of 1971.

A total of 1257 specimens were examined and annotated, including 381 which were collected personally. Of these 381, approximately 206 represent the only material seen from the county of origin. Voucher specimens have been deposited in the herbarium of the College of William and Mary.

Keys to genus and species, descriptions and ecological data are presented for each of the twenty-six species of the Cichorieae treated.
THE TRIBE CICORIEAE IN VIRGINIA
The history of botanical activity in the United States begins with the observations and collections made by colonial naturalists in Virginia. John Banister, a missionary from the Church of England and an active naturalist, published the first paper on natural history in America in 1686 entitled: "Catalogus Plantarum in Virginia Observatorium." Banister was a former student of the famous English naturalist John Ray and in 1704 Ray, in his História Plantarum, included a list of approximately 150 plants collected in Virginia by Banister (Massey, 1934).

In 1705 John Clayton immigrated to Virginia from England. For fifty-one years he held the post of Clerk of Gloucester County (Taylor, 1952), and during this time he made extensive collections in the southeastern portion of Virginia and also secured plants from as far west as the Shenandoah Valley (Fernald and Griscom, 1935).

Gronovius, a Dutch botanist and contemporary of Linnaeus, published Flora Virginica Exhibens Plantas Quas V. C. Johannes Clayton In Virginia in 1739 based on Clayton's collections. Linnaeus, then a young student, assisted in the preparation of this flora which was the
first of its kind for Virginia and the United States. Linnaeus later assigned binomials to many of these same plants in his *Species Plantarum* (1753), (Fernald and Griscom, 1935).

John Mitchell, a physician and naturalist, immigrated to Virginia about 1700 and settled at Urbana on the Rappahannock River. A well educated man, Mitchell studied both plants and animals and in 1738 he published "*A Dissertation brevis principiis Botanicum et Zoologorum*." His second publication, "*Nova Plantarum Genera,*" appeared in 1741 and in it Mitchell became one of the first to accept and use Linnaean nomenclature (Massey, 1934a).

Although many prominent botanists collected in Virginia during the nineteenth century, little progress was made toward a comprehensive flora. During this period authorities such as B. S. Barton, Frederick Pursh, Asa Gray, N. L. Britton, John K. Small, Anna Vail and A. A. Heller made collecting forays, especially in the Blue Ridge and western portions of the state (Harvill, 1970). Barton did publish "*Part I*" of *Flora Virginica*, but there is no record of the publication of other parts (Massey, 1961).

During the present century progress toward a flora for Virginia has been erratic. Merritt L. Fernald published a number of papers based on his famous explorations in southeastern Virginia which uncovered many new taxa
and range extensions. Local floras such as Erlanson's *Flora of the Peninsula of Virginia* (1924) and Merriman's *Flora of Richmond and Vicinity* (1930) have contributed much to our knowledge of Virginia's plants. Floristic studies such as those of Barans (1969), Loetterle (1970), Gillespie (1970), and Sallé (1972) have provided much additional data on the flora of the Peninsula of Virginia. Recent treatments of Carphephorus, Mikania, Kuhnia and Liatris in Virginia by Johnson (1971, 1971a) illustrate the usefulness of studying the Virginia flora by taxon on a state-wide basis.

Massey's *Virginia Flora* (1961) is the most recent attempt to catalog all the vascular plant taxa in Virginia. However, it does not include keys, descriptions or cytological data, and as Massey notes, the distribution of many species listed is not fully documented by specimens.

The *Spring Flora of Virginia* (Harvill, 1970) surveys the plants of the state, excepting the grass and sedge families, which flower before the 1st of June. In this work Harvill provides keys and brief descriptions of species and describes distribution in terms of physiographic provinces.

A comprehensive manual of the flora of Virginia is now being compiled under the direction of the Flora Committee of the Virginia Academy of Science. The ultimate purpose of this study is that it be incorporated
in such a manual and thereby contribute to a better understanding of Virginia's flora.
CHAPTER I

METHODS

This study is not a formal revision of the tribe Cichorieae, but rather treats only those members of the tribe occurring in Virginia. Data for this study has been obtained from the literature and from collections from the following institutions: Longwood College, Farmville, Virginia; Lynchburg College, Lynchburg, Virginia; Old Dominion University, Norfolk, Virginia; Randolph-Macon Woman's College, Lynchburg, Virginia; the United States National Arboretum, Washington, D.C.; the United States National Herbarium, Washington, D.C.; University of North Carolina, Chapel Hill, North Carolina; Virginia Commonwealth University, Richmond, Virginia; Virginia Military Institute, Lexington, Virginia; Virginia Polytechnic Institute and State University, Blacksburg, Virginia and the College of William and Mary, Williamsburg, Virginia.

A total of 1257 specimens were examined and annotated, including 381 which were collected personally. Of these 381, approximately 206 represent the only material seen from the county of origin. All counties in the state were visited during the spring and summer of 1971 and collections
made to supplement data from other sources. The most concentrated collecting was done during August and early September since most members of the Cichorieae flower and fruit during this period. Travel funds were provided by the Biology Department of the College of William and Mary. Voucher specimens have been deposited in the herbarium of the College of William and Mary.
CHAPTER II

DESCRIPTION OF THE TRIBE CICHORIEAE

The Cichorieae is the only tribe of the subfamily Liguliflorae of the family Asteraceae (Compositae). Members of this tribe can be distinguished from other composites by their heads of perfect, ligulate flowers and sap of milky-white latex.

The tribe is composed of nearly 100 genera and is found world-wide. Due to its distinctive characters some taxonomists treat the Cichorieae as a family (Cichoriaceae) separate from the Asteraceae (Gundersen, 1950). It is thought that members of this group evolved in the Mediterranean, although their paths of migration have not been clearly defined (Small, 1919).

A number of classical biosystematic studies have centered on members of the Cichorieae. Particularly well known are the cytogenetic and biosystematic studies of Crepis and related genera by E. B. Babcock and G. L. Stebbins Jr. and the work of Marion Ownbey on amphiploidy in the genus Tragopogon. Stebbins (1950) in his classic Variation and Evolution in Plants relies heavily on members of the Cichorieae to illustrate various evolutionary trends and relationships in flowering plants.
Fourteen genera of the Cichorieae are reported to occur within our general area (Fernald, 1950). Two of these, Prenanthes and Hieracium were not included in the present study because they are quite complex taxonomically and would have doubled the number of species under consideration. These genera have, however, been included in the key to genera for the sake of completeness.

The majority of the twenty-six species of the Cichorieae treated here are annual, biennial or perennial weeds of roadsides, fields and other disturbed habitats. Seventeen of these species are not native to Virginia but have been introduced from the Old World, chiefly Europe.
CHAPTER III

SYSTEMATIC TREATMENT OF THE CICHERIEAE IN VIRGINIA

The key to genera provided in the first section of this treatment includes all members of the Cichorieae thought to occur in Virginia (Fernald, 1950). The key characters used here are a combination of those obtained by personal observation and those used by Fernald (1950), Gleason (1954) and Radford, Ahles and Bell (1968). In most cases, mature achenes are necessary for accurate use of this key.

Following the key to genera each genus is treated separately in the order in which each appeared in the key. A brief description is also included for Picris, for which no Virginia specimens could be found, but which may occur in Virginia in a habitat similar to that in which it was found in North Carolina (Radford, Ahles and Bell, 1968). Descriptions of those genera which have only one species occurring in Virginia include both generic and specific characters. For those genera which have more than one species occurring in Virginia a brief generic description is given followed by a key to species. Descriptions of these species include only those characters which distinguish them from other members of their genus.
The nomenclature and descriptions presented here generally follow those of Fernald (1950), Gleason (1954) and Radford, Ahles and Bell (1968).

Following the descriptions, additional information of ecological and taxonomic interest is presented in the order described below.

Chromosome numbers, where known, are included for each species as reported by Darlington and Wylie (1955) or in the annual supplements of the Index to Plant Chromosome Numbers (1959, 1960, 1965, 1968). Flowering and fruiting dates are listed, followed by brief notes on the habitat and physiographic range in Virginia of each species based on personal observations. The distribution of each species in the United States and adjacent Canada is listed. Also cited is the general region from which exotic species have been introduced into the eastern United States.

The approximate number of species in a genus is given at the end of generic descriptions or at the end of species descriptions of genera with only one species occurring in Virginia. The meanings of generic names and specific epithets included with the descriptions are from Fernald (1950).

Distribution maps are provided for each species. Dots (●) represent those counties from which specimens have been seen personally and annotated. Circles (〇)
represent those counties from which specimens have been reported in the literature, but which have not been examined in this study. Both dots and circles are plotted in the middle of the county from which the specimen(s) they represent originated.

Because boundaries of Virginia's independent cities (listed in Appendix 1) are not shown on the distribution maps, triangles placed at the locations of these cities are used to represent specimens from independent cities. Solid triangles ($\Delta$) represent specimens personally examined and annotated, and open triangles (◇) represent specimens reported in the literature, but not seen.

Each county is identified by name in the map of Virginia provided in Appendix 4.
KEY TO GENERA

A. Phyllaries uniseriate, subequal in length............... B.

B. Achenes not beaked; pappus of scales and capillary bristles or none.......................... 1. Krigia

BB. Achenes with beaks 5 mm. or more long; pappus of plumose bristles.................. 2. Tragopogon

AA. Phyllaries not uniseriate, of 2 or more lengths....... C.

C. Achenes filiform-beaked................................. D.

D. Pappus of simple capillary bristles............. E.

E. Achenes strongly muricate or spinulose above........................................ F.

F. Plants strictly scapose with a solitary terminal head; scapes hollow; achenes fusiform............... 3. Taraxacum

FF. Plants branching, with several or numerous heads; stems firm; achenes terete.............. 4. Chondrilla

EE. Achenes smooth or nearly so, not evidently muricate or spinulose above.................. G.

G. Longest phyllaries bilobed or widest at apices; pappus subtended by a ring of villous hairs; achenes subterete... ...................... 5. Pyrrhopappus

GG. Longest phyllaries tapering to acute or obtuse apices; pappus not subtended by a ring of villous hairs; achenes flattened.................. 6. Lactuca

DD. Pappus of plumose bristles...... 7. Hypochoeris

CC. Achenes not filiform-beaked................................. H.

H. Pappus of simple capillary bristles only....... I.

I. Achenes flat or flattened...................... J.

J. Achenes truncate at summit; flowers 50 or more per head........ 8. Sonchus
JJ. Achenes tapering at summit; flowers 6-30 per head....................................... 6. **Lactuca**

II. Achenes columnar or nearly so........................................... K.

K. Heads erect or ascending; ligules bright yellow to orange or orange-red..................... L.

L. Pappus white; taproot present, or with several dominant roots; no rhizome present....................... 9. **Crepis**

LL. Pappus sordid to tawny; roots fibrous; rhizome present........ 10. **Hieracium**

KK. Heads often nodding; ligules pink to purple or sometimes white to pale yellow................... 11. **Prenanthes**

HH. Pappus of plumose bristles, scales or none.......... M.

M. Pappus present......................................................... N.

N. Pappus of plumose bristles; ligules yellow........................................... 12. **Picris**

NN. Pappus of two or three rows of scales; ligules blue, white or pink... 13. **Cichorium**

MM. Pappus absent...................................................... 14. **Lapsana**
1. *Krigia* Schreber Dwarf Dandelion

Annuals or perennials, tending to be fibrous-rooted. STEMS erect to ascending. LEAVES cauline and/or basal; entire to pinnatifid, lobed or dissected. INVOLUCRE campanulate to hemispheric; phyllaries uniseriate, equal. LIGULES yellow or orange. ACHENES short, oblanceolate to triangular-obovoid, subterete, 10-20-nerved, tending to be transversely rugulose. PAPPUS absent, or of minute scales and capillary bristles. Nineteen species, native to North America. (Named in 1791 for David Krig or Krieg, a German physician, who was among the first to collect plants in Maryland.)

Achenes without capillary bristles.... 1. *Krigia oppositifolia*

Achenes with capillary bristles
- Plants branched above..................... 2. *Krigia biflora*
- Plants scapose, or only the lower 1/3 branched
- Achenes 3-4 mm. long; roots tuberiferous; plant perennial..................... 3. *Krigia dandelion*
- Achenes 1.5-1.9 mm. long; roots fibrous; plant annual..................... 4. *Krigia virginica*


Glabrous, often glaucous winter annual from fibrous roots. STEMS 5-45 cm. tall, branching freely. LEAVES narrow, oblong to lanceolate, entire to incised, the bases attenuate; basal leaves 3-12 cm. long, 2-15 mm. wide, petiolate; cauline leaves subtending peduncles, petiolate below, becoming reduced and sessile above. INFLORESCENCE sub-scapose; peduncles 0.5-12 cm. long, 1-5 at a node,
glandular to glandular-bristly below the solitary, terminal heads. **INVOLUCRES** 3-5 mm. long, 4-5 mm. wide, campanulate to hemispheric. **LIGULES** 1- 1.5 cm. long. **ACHENES** 1.4-1.5 mm. long, reddish brown, obovoid, ribbed and transversely scabrous-lineolate. **PAPPUS** absent. June. Roadside ditches. Rare in southern Upper Coastal Plain. Florida to Texas, north to Virginia, Tennessee, Illinois, Missouri, Kansas and Oklahoma.  

**Serenia oppositifolia** (Raf.) Kuntze.

2. **Krigia biflora** (Walter) Blake (two-flowered).  
Glabrous, glaucous perennial from fibrous roots. **STEMS** 10-60 cm. tall. **LEAVES** basal and cauline; basal leaves 5-12 cm. long, 1.5-4.5 cm. wide, forming a rosette, oblanceolate to broadly elliptic, entire to dentate, or lobed toward the base, acute to obtuse, the base attenuate, petiolate; cauline leaves few, sessile and clasping, often much reduced, rarely to bracts, the uppermost often sub-opposite and with several long peduncles in their common axil. **INFLORESCENCE** corymbose; peduncles 1.5-15 cm. long, glabrous or stipitate-glandular; heads 3-5, rarely fewer, terminating the branches. **INVOLUCRES** 7-10 mm. long, 5-7 mm. wide, cylindric to campanulate, much exceeded by the orange ligules. **LIGULES** 1-1.5 cm. long. **ACHENES** 2-2.2 mm. long, dark brown, oblanceolate, faintly ribbed. **PAPPUS** 4-6 mm. long, of tan capillary bristles and some short inconspicuous scales. June-September. Sandy loam
Fig. 2. Distribution of *Krigia biflora* (Walt.) Blake in Virginia.
in woodlands. Rare in Cumberland Mountains and Alleghany Plateau. Massachusetts south to Georgia, Tennessee, Missouri, Oklahoma, New Mexico and Arizona. *Andopogon virginicum* (L.) Kuntze, *Cynthia virginica* (L.) Don.

3. *Krigia dandelion* (L.) Nuttall (from its resemblance to the common weed). Essentially glabrous, glaucous, scapose perennial from a tuber, the latter connected to the rosette by a slender stolon 0.5-5 cm. long. **LEAVES** 3-20 cm. long, 0.2-2.5 cm. wide, ranging from spatulate-oblong to narrowly oblanceolate or elliptic to linear, dentate, lobed or entire, the base attenuate. **INFLORESCENCE** scapose, the scapes 10-60 cm. tall, some with spreading glandular hairs beneath the solitary, terminal head. **INVolUCRE** 7-12 mm. long, 8-10 mm. wide, campanulate. **LIGULES** 1.5-2.5 cm. long. **ACHENES** 3-4 mm. long, dark brown, oblanceolate, ribbed. **PAPPUS** 8-9 mm. long, of numerous tan capillary bristles and short inconspicuous scales. (2n=59) April-May (March, September). Woods, roadsides, fields, pastures, lawns and waste places. Abundant in the Piedmont and Upper Coastal Plain. Florida to Texas, north to New Jersey, Kentucky, Indiana, Illinois, Missouri, Kansas and Oklahoma. *Andopogon dandelion* (L.) Kuntze.
Fig. 3. Distribution of *Krigia* dandelion (L.) Nuttall in Virginia.
4. *Krigia virginica* (L.) Willd. (Virginian). Slender winter annual from fibrous roots, 5-30 cm. tall. LEAVES 2-10 cm. long, 0.5-3 cm. wide, linear to oblanceolate, dentate to incised, acute to obtuse, attenuate at the ciliate bases. INFLORESCENCE scapose or subscapose; peduncles 0.3-3 cm. long, glabrous except for some spreading glandular hairs beneath the solitary, terminal heads. INVOLUCRES 4-7 mm. long, 3-8 mm. wide, cylindric to narrowly campanulate. LIGULES 0.6-1.0 cm. long. ACHENES 1.5-1.9 mm. long, triangular-obovoid. PAPPUS white, of five capillary bristles, 4-5 mm. long, alternating with five membranaceous scales, 0.5-1.2 mm. long. (n=5) Late April-June. Woods, fields, railroad cinder-beds, lawns and waste places. Common throughout Virginia. Florida to Texas, north to Maine, Vermont, New York, Ontario, Michigan, Wisconsin and Iowa. *Adopogon carolinianus* (Walter) Britton.

2. *Tragopogon* L. Goat's-Beard

Biennial or perennial from a taproot. STEMS 0.4-1 m. tall, glabrous, erect. LEAVES 10-30 cm. long, 0.5-2.0 cm. wide near the clasping, sessile bases; alternate, linear, entire, tapered to caudate apex, glaucous, parallel-veined. INFLORESCENCE subscapose; heads terminal. INVOLUCRES large, cylindric or campanulate; phyllaries 1.2-4 cm. in flower, to 7 cm. long in fruit, lanceolate, attenuate,
Fig. 4. Distribution of Krigia virginica (L.) Willd. in Virginia.
uniseriate, equal. LIGULES purple or yellow. ACHENES 1-1.3 cm. long, light tan to brown, fusiform, terete or angled, 5-10-ribbed, muricate, hollowed at base, long-beaked. PAPPUS 2-3 cm. long, of a single series of tan plumose bristles united at the base, a few bristles commonly longer than the others and not plumose near the apex. About thirty-five species, native to the Old World. (Name from the Greek tragos, goat, and pogon, beard.)

Corolla purple............................. 1. Tragopogon porrifolius
Corolla yellow

Phyllaries distinctly surpassing the ligules;
peduncles enlarged and fistulose above in flower and in fruit....................... 2. Tragopogon dubius
Phyllaries as long as or shorter than the ligules;
peduncles not enlarged and fistulose above in flower, scarcely so in fruit......... 3. Tragopogon pratensis

1. Tragopogon porrifolius L. (with leaves of Leek, Allium porrum) Salsify, Vegetable Oyster, Oyster-Plant.

STEMS 1 m. or less high. LEAVES up to 30 cm. long and nearly 2 cm. wide. PEDUNCLE enlarged and fistulous just below the head. PHYLLARIES 8 (5-11), mostly 2.5-4 cm. long in flower and surpassing the ligules, elongating to 4-7 cm. in fruit. LIGULES purple. ACHENES mostly 2.5-4 cm. long, beaks 1.5-2.5 cm. long, the marginal ones strongly scabrous-muricate, the central ones nearly smooth. (n=6) Late April-July. Roadsides and fields. Locally abundant in the Piedmont and Ridge and Valley Province. Nova Scotia to Ontario, south to Georgia, Missouri,
Kansas, Oklahoma and Texas, west to California and Washington. Escaped from cultivation.


3. **Tragopogon pratensis** L. (of meadows) Goat's-Beard. Similar to **T. porrifolius**, but peduncles not at all enlarged in flower, scarcely so in fruit. **PHYLLARIES** usually 8, 12-24 mm. long in flower, equal to or shorter than the ligules, 18-38 mm. in fruit. **LIGULES** yellow. **ACHENES** 1.2-2.4 cm. long, relatively shorter beaked than in the other two species. (n=6) May-July (September). Roadsides and fields. Locally abundant in the Piedmont, Blue Ridge, and Ridge and Valley Province. Quebec to Ontario, Washington, California, Oregon, south to Arizona, Texas, Georgia, Tennessee, Missouri and Kansas. Naturalized from Europe.
Fig. 6. Distribution of *Tragopogon dubius* Scop. in Virginia.
Fig. 7. Distribution of *Tragopogon pratensis* L. in Virginia.
3. **Taraxacum Wiggers** Dandelion

Perennial from a taproot. LEAVES numerous in a basal rosette, oblanceolate, runcinate, acute, the bases attenuate. INFLORESCENCE scapose; heads terminal, solitary, borne on a hollow, floccose scape. INVOLUCRE cylindric, biseriate; the inner phyllaries adherent, truncate or notched at apex; outer phyllaries reflexed. LIGULES yellow, the outer ones often purplish on the back. ACHENES 2.7-3.1 mm. long, columnar or thickly fusiform, muricate above; beaks 8-9 mm. long, swollen at the junction of the pappus. PAPPUS of whitish capillary bristles. More than 50 species described, native to the cold or temperate regions of the Northern Hemisphere and to the more southern regions of the Southern Hemisphere. (Name modified from the Arabic Tharakhchakan.)

- Achenes drab or olivaceous...................... 1. **T. officinale**
- Achenes reddish-brown..................... 2. **T. erythrospermum**

1. **Taraxacum officinale** Weber (of the shops, from the fame of the plant in medicine) Common Dandelion.

LEAVES 5-40 cm. long, 1.5-12 cm. wide, often sparsely hairy below and on the midrib, otherwise generally glabrous, petiolate. PHYLLARIES all or nearly all unappendaged.

ACHENES 2-4 mm. long, drab or olivaceous. (n=12, 16, 20; 2n=24+2, 27) February-November. Roadsides, railroad cinder-beds, lawns, fields and waste places. Cosmopolitan weed throughout most of the United States and Canada.
Fig. 8. Distribution of *Taraxacum officinale* Weber in Virginia.
Leontodon taraxacum L., Taraxacum taraxacum (L.) Karst., Taraxacum officinale Wiggers.

2. Taraxacum erythrospermum Andrzej. (red-seeded)
Red-seeded Dandelion. Similar to T. officinale, often more slender. LEAVES 5-15 cm. long, 1.5-5 cm. wide, deeply cleft for their whole length, nearly or quite to the midrib. PHYLLARIES mostly corniculate-appendaged. ACHENES 2.8-3.5 mm. long, reddish-brown. (n=8, 11, 12, 13) March-August. Roadsides, pastures, lawns and fields. Locally abundant in the southeastern Upper and Lower Coastal Plains and in Shenandoah and Giles Counties (Ridge and Valley Province). Cosmopolitan weed common throughout most of the United States and Canada.
Leontodon erythrospermum (Andrz.) Eichw., Taraxacum laevigatum (Willd.) DC., Taraxacum erythrospermum Andrzej. ex Besser.

4. Chondrilla L. Gum-Succory
Biennial from a taproot. STEMS 30-80 cm. tall, hispid near the base, branching freely. LEAVES basal and cauline; basal leaves 5-13 cm. long, 1.5-3.5 cm. wide, runcinate-pinnatifid, often deciduous; cauline leaves 1-7 cm. long, 1-4 mm. wide, alternate, linear, reduced upward. INFLORESCENCE modified paniculate; heads scattered along
the branches, subsessile or short-pedunculate. INVOLUCRES 9-11 mm. long, 2-4 mm. wide, cylindric; the inner phyllaries narrowly linear, white-tomentose; the outer phyllaries minute. LIGULES 10-15 mm. long, yellow. ACHENES 3-3.4 mm. long, tan, muricate above; beak 5 mm. long. PAPPUS of white capillary bristles, 5-6 mm. long. (2n=15) June-October. Roadsides, fields and waste places. Locally abundant in the Upper Coastal Plain, Piedmont, and Ridge and Valley Province. Naturalized from Europe. The genus includes about 20 species native to the Old World. New York to Virginia, West Virginia and Michigan.

5. **Pyrrhopappus** DC. False Dandelion

1. *Pyrrhopappus carolinianus* (Walt.) DC. (of Carolina). Annual, biennial or rarely perennial from a taproot. STEMS 0.1-1 m. tall, erect to ascending, freely branched, glabrous below, puberulent above, leafy to subscapose. LEAVES 8-25 cm. long, 1-6 cm. wide, entire to pinnatisect, rarely dissected or merely dentate, oblanceolate to narrowly elliptic, acute to acuminate, the base cuneate; basal leaves petiolate, often absent at late anthesis; cauline leaves alternate, partly clasping, reduced upward. INFLORESCENCE subscapose; heads several to solitary, moderately long-pedunculate. INVOLUCRES 1-2 cm. long at anthesis, 1-2 cm. wide, expanding slightly in fruit, cylindric; inner phyllaries uniseriate,
Fig. 11. Distribution of Pyrrhopappus carolinianus (Walt.) DC. in Virginia.
obliquely bilobed or widened at apex, puberulent; outer phyllaries much shorter and in several series. LIGULES 2-2.5 cm. long, yellow. ACHENES oblong or linear, the body 4-5 mm. long, brown, subterete, 5-10-ribbed; beak fragile, filiform, often twice as long as the body. PAPPUS of tawny to reddish plumose bristles, subtended by a ring of villous hairs. (n=6) June-August. Roadsides, railroad cinder-beds, fields, pastures, lawns and waste places. Common throughout Virginia except in the Blue Ridge. About nine species native to North America. Florida to Texas, north to Delaware, Indiana, Missouri and Kansas. (Name composed of the Greek pyrros, flame-colored, and pappos, pappus.) Sitilias Raf.

6. Lactuca L. Lettuce

Annual, biennial or perennial from a taproot. STEMS erect. LEAVES alternate, entire to pinnatifid. INFLORESCENCE paniculate; heads numerous. INVOLUCRES 10-18 mm. long, 3-8 mm. wide, cylindric, tapering inward toward apex; phyllaries imbricate. LIGULES yellow or blue. ACHENES oblanceolate, ovoid or ellipsoid, 1-7 ribs on each face; beaked or beakless. PAPPUS of white or tawny capillary bristles. About 50 species, native to the Northern Hemisphere. (The ancient name of the Lettuce,
L. sativa; from lac, milk, in allusion to the milky juice.)

Achenes with only a median rib on each face, occasionally with a lateral weaker pair.
Pappus 4-6 mm. long, excluding beak; involucre usually less than 1.4 cm. long.............. 1. L. canadensis
Pappus 7-8 mm. long, excluding beak; involucre usually more than 1.4 cm. long.............. 2. L. hirsuta

Achenes prominently several ribbed on each face.
Achenes with a short stout beak or beakless
Pappus white; leaves without clasping bases
................................................. 3. L. floridana
Pappus tawny; leaves with auriculate-clasping bases............................. 4. L. biennis

Achenes with a filiform beak.
Leaves entire to remotely spinulose; midrib glabrous or remotely spiny beneath.... 5. L. saligna
Leaves conspicuously spinulose, midrib prominently spiny beneath............... 6. L. scariola

1. Lactuca canadensis L. (Canadian) Wild Lettuce.
Biennial. STEMS 1-3 m. tall, glabrous, green to reddish, leafy. LEAVES 10-30 cm. long, 2-12 cm. wide, linear to lanceolate or rarely obovate, usually broadest at the base, entire to dentate, usually dissected, acute to acuminate, sagittate or sometimes narrowed to the base. INFLORESCENCE paniculate, spike-like to very broad. INVOLUCRES 1-1.4 cm. long, 4-6 mm. wide. LIGULES orange-yellow. ACHENES 3-4 mm. long, black mottled with brown, oblong or elliptic, with a median rib on each face; beak 2-2.5 mm. long.
PAPPUS 4-5 mm. long, white. (n=17) June-September.
Fig. 12. Distribution of Lactuca canadensis L. in Virginia.
Lactuca sagittifolia Ell., Lactuca canadensis L. var. longifolia (Michx.) Farw., Lactuca canadensis L. var. latifolia Kuntze, Lactuca canadensis L. var. obovata Wieg.

2. Lactuca hirsuta Muhl. (hirsute) Wild Lettuce. Similar to L. canadensis, often more hairy. Leaf bases attenuate to slightly clasping. INVOLUCRES 13-18 mm. long, 1.6-1.9 mm. wide. LIGULES yellow. ACHENES 5 mm. long, black mottled with brown; beak 2-2.5 mm. long. PAPPUS 7-8 mm. long, white. (n=17). June. Woodlands. Infrequent in the Upper Coastal Plain and Piedmont. (Reported for Rockingham County, in the Ridge and Valley Province.) P. E. Island and Ontario, south to Virginia, Missouri, Louisianna and Texas. Lactuca hirsuta Muhl. var. sanguinea (Bigelow) Fernald.

3. Lactuca floridana (L.) Gaertner (of Florida) Wild Lettuce. Biennial. STEMS 0.2-2 m. tall, glabrous, usually reddish, leafy. LEAVES 0.8-20 cm. long, 3-10 cm. wide, lyrate to lanceolate, toothed or often also pinnatifid or dissected or unlobed; leaf bases attenuate, petiolate or sessile. INFLORESCENCE of loose panicles; heads small on divergent peduncles. INVOLUCRES 8-14 mm. long, 4-6 mm. wide. LIGULES blue to dark violet. ACHENES 4-6 mm. long, lance-ovate, 3-5-ribbed; beak absent. PAPPUS 5-6 mm. long, white. (n=17). July-October. Roadsides and woodlands.
Fig. 13. Distribution of *Lactuca hirsuta* Muhl. in Virginia.
Fig. 14. Distribution of *Lactuca floridana* (L.) Gaertner in Virginia.

4. *Lactuca biennis* (Moench) Fernald (biennial). Biennial. STEMS 1.5-3 m. tall, glabrous or nearly so, usually green, leafy. LEAVES 10-25 cm. long, 4-15 cm. wide, lanceolate, acuminate, dentate, usually dissected or lobed, the base clasping to slightly auriculate, sometimes sagittate. INFLORESCENCE a rather narrow panicle. INVOLUCRES 9-14 mm. long, 5-8 mm. wide. LIGULES yellow to blue. ACHIENES 4-5.5 mm. long, mottled dark and light brown, oblong-lanceolate, 5-ribbed, finely cross ribbed; beak absent. PAPPUS 5-5.5 mm. long, tawny. (n=17). August-September. Roadsides, woodland edges, and woodlands. Locally abundant in the Piedmont and Blue Ridge. Newfoundland to British Columbia, south to Nova Scotia, New England, Delaware, Maryland, North Carolina and Tennessee. West to Iowa, Colorado, Oregon, California and Washington. *Mulgedium spicata* (Lam.) Small, *Lactuca spicata* Hitchcock.

5. *Lactuca scariola* L. (Arabic name) Prickly Lettuce. Annual or biennial. STEMS 0.3-1.5 m. tall,
Specimens examined (County)
Specimens cited in literature (County)
Specimens examined (Independent City)
Specimens cited in literature (Independent City)

Fig. 15. Distribution of *Lactuca biennis* (Moench) Fernald in Virginia.
Fig. 16. Distribution of *Lactuca scariola* L. in Virginia.
often prickly below, otherwise glabrous, pale tan to whitish. LEAVES 6-15 cm. long, 1.5-10 cm. wide, lanceolate, prickly toothed on the margins and on the midrib beneath, acute to obtuse, the bases sagittate to hastate-auriculate. INFLORESCENCE of widely spreading, open panicles. INVOLUCRES 10-15 mm. long, 3-5 mm. wide. LIGULES yellow, sometimes blue on drying. ACHENES 3-3.3 mm. long, brown, ob lanceolate, 5-ribbed on each face; beak 3-5 mm. long. PAPPUS 4-5 mm. long, white. (n=9) June-September. Fields, roadsides and waste places. Common throughout Virginia. Quebec to British Columbia, south to Florida, Texas and Missouri; also common in the Pacific states. Lactuca virosa L. (Naturalized from Europe).

6. Lactuca saligna L. (like willow) Willow-leaved Lettuce. Similar to L. scariola. LEAVES 4-20 cm. long, 0.4-5 cm. wide, linear to lanceolate, dentate, not toothed, midrib smooth to sparsely prickled. INFLORESCENCE of virgate panicles. ACHENES averaging slightly smaller and narrower than L. scariola, 5-9 ribbed on each face. (n=9) July-September. Roadsides and lawns. Fairly common in northern Piedmont, Ridge and Valley Province near the Blue Ridge and in the Alleghany Plateau. California and Oregon, eastward to Michigan, Pennsylvania and to the Atlantic seaboard, south to Virginia, Indiana, Kentucky, Illinois and Missouri. (Naturalized from Europe).
Fig. 17. Distribution of Lactuca saligna L. in Virginia.
Lactuca morsii Robinson (for its discoverer, Charles Henry Morss, 1857-1930). A hybrid between L. canadensis and L. biennis. Having the habit, hirsute lower internodes, foliage and blue flowers of L. biennis, but the achenes intermediate in form or resembling either parent. Achenes with a short filiform beak and cream-colored pappus. Attributed to Virginia by Fernald (1950), but no specimens have been seen.

7. Hypochoeris L. Cat's-Ear

1. Hypochoeris radicata L. (having roots; probably from its firm hold in the ground). Perennial from a caudex, fibrous-rooted or more often several of the roots enlarged. STEMS 30-60 cm. tall, striate-angled, bracteate, glabrous to pubescent; branched above or in small plants simple. LEAVES 5-15 cm. long, 2-6 cm. wide, in a basal rosette, oblanceolate, densely pubescent, toothed or pinnatifid, the divisions obtuse or rarely acute, ciliate at apex. INFLORESCENCE a diffuse panicle or corymb; heads 2-7 or rarely more, terminating the branches. INVOLUCRES 15-20 mm. long, 7-14 mm. wide, campanulate; receptacle chaffy-bracted. LIGULES 4-7 mm. long, yellow. ACHENES brown; the body 3.5-4.5 mm. long, fusiform, prominently ribbed; beak 6-9 mm. long, the lower part scabrous. PAPPUS 8-10 mm. long, of tawny plumose bristles. (n=4). April-August, sporadically later. Roadsides, fields,
Fig. 18. Distribution of Hypochoeris radicata L. in Virginia.
lawns and waste places. Common throughout Virginia.
Widely established in the United States and Canada.
(Naturalized from Europe.) About 50 species, native to
Europe, the Mediterranean, Asia and South America.
(A name used by Theophrastus for this or a related genus.)

8. **Sonchus** L. Sow-Thistle

Annual or perennial. STEMS 0.3-2 m. tall, erect,
leafy. LEAVES alternate, unlobed to runcinate.
INFLORESCENCE corymbose. INVOLUCRES cylindric to
narrowly campanulate, imbricate; phyllaries lanceolate.
ACHENES 2.5-3 mm. long, obcompressed, ribbed or obscurely
so, narrowed at the apex; beak absent. PAPPUS of copious,
white, capillary bristles. About 45 species, native to the
Old World. (The ancient Greek name.)

Plant perennial from a rhizome; fruiting involucres
greater than 14 mm. long................1. S. arvensis
Plant annual from a taproot; fruiting involucres
less than 13 mm. long.
Leaf bases rounded; achenes not transversely
tuberculate-rugose....................2. S. asper
Leaf bases sagittate; achenes transversely
tuberculate-rugose....................3. S. oleraceus

1. **Sonchus arvensis** L. (of cultivated ground)
Field Sow-Thistle. Perennial from long vertical roots and
coarse rhizomes. STEMS 3-80 cm. tall, glabrous or stipitate-
glandular above. LEAVES 10-20 cm. long, 2-8 cm. wide,
elliptic to oblanceolate, prickly-marginated, the lower and
Fig. 19. Distribution of *Sonchus arvensis* L. in Virginia.
middle ones pinnately lobed or pinnatifid, acute; the basal auricles rounded; glabrous or slightly pubescent beneath. INVOLUCRES 12-18 mm. long, 8-15 mm. wide; the phyllaries glandular. LIGULES 1.5-2.5 mm. long, golden yellow. ACHENES 2.3-2.8 mm. long, dark brown, elliptic to oblanceolate, 5-7-ribbed on each face, the ribs tuberculate, (n=9, 18, 27, 32). July-August. Railroad cinder-beds. Rare in the northern Piedmont. Newfoundland to Alaska, south to Delaware, Maryland, Ohio, Indiana, Illinois, Missouri, Idaho, Utah, Oregon, Minnesota, Connecticut and in the Pacific states. (Naturalized from Europe.) **Sonchus arvensis** L. var. *glabrescens* Guenth., Grab. & Wimm., **Sonchus uliginosus** Bieb.

2. **Sonchus asper** (L.) Hill (rough) Spiny-leaved Sow-Thistle. Winter annual from a taproot. STEMS 0.3-2 m. tall, glabrous or stipitate-glandular above. LEAVES 6-30 cm. long, 3-10 cm. wide, lanceolate to oblanceolate, prickly-margined and on the midrib below, acute, the basal auricles rounded, glabrous. INVOLUCRES 9-13 mm. long, 8-14 mm. wide, glabrous to slightly stipitate-glandular. LIGULES 0.8-1.3 mm. long, pale yellow. ACHENES 2.7-3 mm. long, reddish-brown, oblanceolate, 3-5-ribbed on each face, not transversely tuberculate-rugose. (n=9). April-July, occasionally later. Roadsides, fields, pastures, lawn
edges and waste places. Scattered throughout. Newfoundland
to British Columbia, south to Florida and California.
Fairly common throughout the continent. (Naturalized from
Europe.)

3. *Sonchus oleraceus* L. (fit to be a vegetable)
Common Sow-Thistle. Similar to *S. asper*. STEMS 0.3-1 m.
tall. LEAVES dentate, but not spinulose, the basal auricles
sagittate. INVOLUCRES 9-13 mm. long, 6-14 mm. wide.
ACHENES dark brown, transversely tuberculate-rugose, not
prominently ribbed. (n=8, 16) June-August (November).
Woodlands, fields, railroad cinder-beds, and waste places.
Locally abundant in Lower and Upper Coastal Plains, Piedmont
and in the Ridge and Valley Province. (Naturalized from
Europe.) Newfoundland to British Columbia, south beyond our
limits.

9. *Crepis* L. Hawk's-Beard
Annual, biennial or perennial from a taproot or
several roots. STEMS erect. LEAVES basal and cauline;
basal leaves in a rosette, entire to pinnatifid; cauline
leaves alternate, sometimes reduced to bracts. INFLOR-
ESCENCE a many-headed corymb. INVOLUCRES cylindric;
reduced outer phyllaries few to many, the longer inner
ones linear. LIGULES yellow. ACHENES fusiform or nearly
columnar, terete or subterete, 10-ribbed; beak absent.
Fig. 21. Distribution of Sonchus oleraceus L. in Virginia.
PAPPUS copious, of soft white capillary bristles. Nearly 200 species, world-wide; all our species introduced. (The Greek name of some plant, from crepis, a boot)

Involucre 4-6 mm. long, 1-2 mm. wide....... 1. C. japonica
Involucre more than 6 mm. long, more than 3 mm. wide.
Involucre glabrous; phyllaries keeled..... 2. C. pulchra
Involucre pubescent; phyllaries not keeled......................... 3. C. capillaris

STEMS 30-75 cm. tall, branching at base, pilose below, glabrous above. LEAVES basal and cauline; basal leaves 8-12 cm. long, 1-2.5 cm. wide, in a rosette, oblanceolate, pinnatisect, dentate, acute, petiolate; cauline leaves few and much reduced. INVOLUCRES 4-6 mm. long, 1-2 mm. wide; outer phyllaries very minute, the inner ones glabrous, keeled. LIGULES 5-6 mm. long. ACHENES 1.5-2 mm. long, reddish brown, prominently 10-ribbed. PAPPUS 3 mm. long. (n=8). April to sporadically at least much later. Lawn edges, plantings. Williamsburg. According to Fernald (1950) this species occurs locally from Pennsylvania to Virginia. It appears to be very rare in Virginia.

Youngia japonica (L.) DC. (Adv. from Asia.)

2. Crepis pulchra L. (handsome). Annual. STEMS 0.3-1 m. tall, pubescent below, often glabrous above. LEAVES 10-20 cm. long, 1.5-7 cm. wide, oblanceolate or spatulate, coarsely toothed or runcinate-pinnatifid,
Fig. 22. Distribution of *Crepis japonica* (L.) Bentham in Virginia.
Fig. 23. Distribution of *Crepis pulchra* L. in Virginia.
acute, short-petiolate; upper cauline leaves sessile, mostly lanceolate, dentate. INVOLUCRES 9-12 mm. long, 4-6 mm. wide; inner phyllaries with thickened keels, the outer ones much reduced. LIGULES 6-8 mm. long. ACHENES 4-5 mm. long, olive-brown, obscurely ribbed. PAPPUS 3-4 mm. long. (n=4). May-August. Roadsides, railroad embankments, and woodland edges. Locally abundant in the Upper Coastal Plain, Piedmont and Ridge and Valley Province. Locally abundant from Virginia to Ohio and Indiana. (Naturalized from Europe.)

3. *Crepis capillaris* (L.) Wallroth (hair-like). Annual or biennial. STEMS 0.1-0.9 m. tall, often branching below, essentially glabrous. LEAVES 6-20 cm. long, 1-8 cm. wide, lanceolate or oblanceolate, denticulate to runcinate-pinnatifid, obtuse or acute; basal leaves petiolate; cauline leaves sessile, often clasping and acutely auriculate. INVOLUCRES 6-8 mm. long, 5-6 mm. wide; phyllaries not keeled; inner phyllaries white-pubescent, often black stipitate-glandular; outer phyllaries half as long as the inner ones or shorter. LIGULES 8-10 mm. long. ACHENES 2.2-2.4 mm. long, brown. PAPPUS 3-4 mm. long. (n=3). June-July (November). Locally abundant in the southern Blue Ridge and Ridge and Valley Province. British Columbia to California and sparingly introduced in the eastern United States. (Adv. from Europe.)
Fig. 24. Distribution of *Crepis capillaris* (L.) Wallroth in Virginia.
12. **Picris L.**

Annual or biennial. STEMS erect, striate, freely branched above. Stems, leaves and involucres pubescent, the trichomes bifurcating at their apices. LEAVES alternate, oblanceolate to lanceolate, dentate, unlobed or shallowly lobed, often clasping, sessile. INFLORESCENCE corymbose. INVOLUCRES cylindric to slightly campanulate; phyllaries lanceolate, imbricate. LIGULES deep yellow. ACHENES reddish brown, oblanceolate to ellipsoid, prismatic to quadrangular in cross section, vertically ribbed and with numerous bands of tuberculate cross bars; beak absent. PAPPUS white, promptly deciduous. **Picris hieracioides** L. has been reported for North Carolina (Radford, Ahles and Bell, 1968), but no specimens for Virginia have been seen. (The Greek name of some allied bitter herb, from *picros*, meaning bitter.)

13. **Cichorium L.** Succory, Chicory

1. **Cichorium intybus** L. (old generic name) Common Cichory, Blue Sailors. Perennial from a long, deep taproot. STEMS 0.3-1.7 m. tall, usually branching freely. LEAVES basal and cauline; basal leaves 8-25 cm. long, 1-7 cm. wide, numerous, often withered by anthesis, oblanceolate to lanceolate, runcinate or rarely merely dentate, petiolar, pubescent at least on the midrib
Fig. 25. Distribution of *Cichorium intybus* L. in Virginia.
below; cauline leaves alternate, few, greatly reduced upward, sessile, entire to slightly toothed. INFLORESCENCE a modified, long-peduncled thyrse; heads sessile to long pedunculate. INVOLUCRES 1-1.5 cm. long, cylindric; outer phyllaries in 1-2 series, callous-thickened at base; inner phyllaries long, narrow. Phyllaries and reduced subtending leaves usually glandular-ciliate. LIGULES blue, rarely white or pink. ACHENES 2-3 mm. long, brown, striate, quadrate or angulate and rounded on the back. PAPPUS a short crown of thin membranaceous scales. (n=9) June-August. Roadsides, fields and waste places. Common throughout Virginia, though local on the Coastal Plain. Common throughout the United States and Canada. Nine species, native to the Old World, chiefly the Mediterranean region. This species naturalized from Europe. (Altered from the Arabian name of the plant.)

14. Lapsana L. Nipplewort

1. Lapsana communis L. (common). Annual from a taproot. STEMS 0.2-1 m. tall, erect, branching freely, hirsute to subglabrous, often with gland-tipped trichomes. LEAVES in a basal rosette and cauline; basal leaves 2.5-8 cm. long, 2-6 cm. wide, ovate to subrotund, dentate, acute or rounded, petiolate, often with a pair of lateral lobes on the petiole; cauline leaves narrowing upward,
Fig. 26. Distribution of *Lapsana communis* L. in Virginia.
petiolate. INFLORESCENCE corymbiform or paniculiform; heads several or numerous. INVOLUCRES 6-7 mm. long, cylindric, minutely calyculate; inner phyllaries subequal, uniseriate, keeled. LIGULES 0.9-1.2 cm. long, yellow. ACHENES 2-2.6 mm. long, light brown to green, striate, curved. PAPPUS absent. Locally abundant in the Piedmont and Ridge and Valley Province. Along the coast of California, Quebec and Ontario, south to Nova Scotia, New England, Virginia, West Virginia and Missouri. About nine species native to the Old World. This species naturalized from Europe. (Name used by Dioscorides for some plant.)
## APPENDIX 1

### LIST OF INDEPENDENT CITIES

1. Alexandria
2. Bristol
3. Buena Vista
4. Charlottesville
5. Chesapeake
6. Clifton Forge
7. Colonial Heights
8. Covington
9. Danville
10. Fairfax
11. Falls Church
12. Franklin
13. Fredericksburg
14. Galax
15. Hampton
16. Harrisonburg
17. Hopewell
18. Lynchburg
19. Martinsville
20. Newport News
21. Norfolk
22. Norton
23. Petersburg
24. Portsmouth
25. Radford
26. Richmond
27. Roanoke
28. South Boston
29. Staunton
30. Suffolk
31. Virginia Beach
32. Waynesboro
33. Williamsburg
34. Winchester
APPENDIX 2

LIST OF HERBARIA CONSULTED

Specimens examined in this treatment were provided by the herbaria listed below. This list includes the standard herbarium abbreviations of Lanjouw and Stafleu (1964). Those marked with an asterisk (*) do not appear in their list, but have been coined for this study.

LGW* Longwood College, Farmville
LHB* Lynchburg College, Lynchburg
NA United States National Arboretum, Washington
ODU* Old Dominion University, Norfolk
RMWC* Randolph-Macon Woman's College, Lynchburg
UNC University of North Carolina, Chapel Hill
US United States National Herbarium, Washington
VCU* Virginia Commonwealth University, Richmond
VMI* Virginia Military Institute, Lexington
VPI Virginia Polytechnic Institute and State University, Blacksburg
WM* The College of William and Mary, Williamsburg
APPENDIX 3

CITATION OF SPECIMENS

1. Krigia Schreber

Southampton Co.--Haleys Bridge, M. Fernald 8517, with B. Long (US).

2. Krigia biflora (Walt.) Blake
Dickenson Co.--Haysi, R. Kral 12611 (VPI); Lee Co.--Hubbard Springs, A. Harvill 18476 (LGW); Wise Co.--Flat Gap, A. Harvill 9063A (LGW).

3. Krigia dandelion (L.) Nuttall
Amelia Co.--Locality unknown, J. Lewis 197 (VPI, 2 sheets), 528 (VPI); Mill Quater Plantation, J. Lewis 1445 (VPI); Arlington Co.--Locality unknown, W. Palmer, 26 May 1901 (VPI); Aurora Hills, E. Walker 708 (UNC); Four Mile Run, G. Jones 93, with T. Tompkins (VPI); Brunswick Co.--Seward Forest, J. Lewis 1944, 2616, 3432 (VPI); Campbell Co.--Altavista, J. Fauntleroy 683 (US); Dinwiddie Co.--Burgess Station, M. Fernald 10054, with B. Long (US); Fairfax Co.--Great Falls, O. Freeman 30 May 1920 (NA); Fauquier Co.--Beverley Mill, H. Allard 4677 (VPI); Greensville Co.--Emporia,
R. Kral 12481 (VPI); Hampton--Locality unknown, P. Standley 9958, with H. Bollman (US); Henrico Co.--Richmond, M. Fernald 7174, with B. Long (US); Mecklenburg Co.--Chase City, A. Massey 28 April 1938 (VPI); Meherrin River, W. Seaman 6587 (UNC); New Kent Co.--Lanexa, M. Gillespie 539 (WM); Newport News--Locality unknown, O. Weiss 107 (VPI); Pittsylvania Co.--Danville, W. Hathaway 19 May 1961 (LHB), 162 (LHB); Prince Edward Co.--Farmville, A. Massey 5 May 1965 (VPI); Stevens March 1935 (LGW); Worsham, A. Harvill 18154 (LGW, UNC); Prince William Co.--Quantico, I. Tidestrom 6275 (NA); Richmond--Locality unknown, R. Carroll 8 May 1949 (VMI); Spottsylvania Co.--Logan, A. Harvill 16142 (LGW).


County unknown--County Route 864, W. Hathaway 1 May 1966 (LHB); Reedsville Beach, L. Henderson 1919 (RMWC); Albemarle Co.--Locality unknown, Collector unknown 6 May 1875 (VPI); Amelia Co.--Locality unknown, J. Lewis 192 (VPI), 1507 (VPI); Rock Stable, J. Lewis 553 (VPI); Augusta Co.--Wilder, E. Killip 32526 (US); Bedford Co.--Locality unknown, A. Curtiss August 18-- (US); Botetourt Co.--Blue Ridge Parkway, D. Crandall 10344A (RMWC); Brunswick Co.--Seward Forest, J. Lewis 3406 (VPI); Buchanan Co.--Grundy, W. Hopkins 10 May 1945 (VPI); Clarke Co.--Boyce, J. Baldwin 5060 (VPI); Charles City Co.--Mount Airy, D. Ware 2840 (WM); Chesapeake Co.--Deep Creek, J. Wells 414 (US); Chesterfield Co.--Dutch Gap F. Knoritie 23 June 1886 (US); Presquile, M. Johnson 3377
VCU); Winterpock, M. Johnson 3974 (UNC, VCU); Dinwiddie
Co.--Burgess Station, A. Harvill 13757 (UNC), 19339 (LGW);
Petersburg, A. Massey 24 May 1939 (VPI); Fairfax Co.--
Great Falls, M. Waite 30 May 1895 (NA); Newington, C. Nessler
194 (WM); Fauquier Co.--Overtop Mountain, H. Allard 2999
(US); Floyd Co.--Buffalo Mountain, W. Hathaway 183 (LHB);
Goochland Co.--Columbia, A. Harvill 16076 (LGW), M. Johnson
3745 (UNC); Oilville, M. Johnson 2369 (VCU); Hampton--
Locality unknown, P. Standley 9960, with H. Bollman (US);
Hanover Co.--Montpelier, M. Johnson 2288 (UNC, VCU, WM);
Henry Co.--Martinsville, G. Straley 6923 (VPI); Isle of
Wight Co.--Dendron, D. Van Dyke 55 (LHB); Lees Mill, A.
Harvill 15945 (UNC); Loudoun Co.--Bluemont, P. Standley
13148 (US); Lunenburg Co.--Meherrin, A. Harvill 16021 (LGW);
Wattsboro, A. Harvill 15479 (UNC); Lynchburg--Locality
unknown, L. Henderson 1308 (RMWC); Coffee Road, L. Henderson
621 (RMWC), 622 (RMWC); Hillside, L. Henderson 5242 (RMWC),
5243 (RMWC); Mecklenburg Co.--Locality unknown, W. De Garmo
22 April 1938 (VPI); Route 47, W. Seaman 7088 (UNC);
Nansemond Co.--Blackwater River, H. Ahles 58153, with W.
Coker & B. Morgan (UNC); Frederick College, A. Austin 28
(UNC), M. Webb 85 (ODU); Suffolk, F. Coville 63, with T.
Kearny (US); New Kent Co.--Diascund Bridge, M. Gillespie
438 (WM); Lanexa, M. Gillespie 537 (UNC, WM), G. Hall
3851 (UNC, WM); Talleysville, W. Hopkins 13 May 1945 (VPI);
Newport News--Locality unknown, O. Weiss 20 April 1958
(VPI); Powhatan Co.--Flat Rock, M. Johnson 2395 (VCU);
Prince Edward Co.--Farmville, Stevens April 1935 (LCW);
Prince William Co.--Antioch, H. Allard 2666 (VPI); Neabsco,
V. Rudd 84 (NA); Rappahannock Co.--Waterfall Branch, E.
Walker 2261 (NA, US); Richmond--Locality unknown, G. De
Chalmont date unknown (US); University of Richmond Campus,
E. Adams 16 May 1968 (UNC); Rockbridge Co.--Kerrs Creek,
J. Harris 23 May 1936 (VMI, 2 sheets); Rockingham Co.--
Locality unknown, R. Carroll 15 May 1934 (VMI, 2 sheets);
Shenandoah Co.--Browns Gap, L. Artz 19 May 1934 (VMI, 3
sheets); New Market, L. Artz 434 (VPI); Southampton Co.--
Sebrell, M. Fernald 7988, with B. Long (US); Spotsylvania
Co.--Fredericksburg, O. Freeman May 1927 (NA); Surry Co.--
Elberon, G. Hanburg 50 (WM); Hog Island Wildlife Refuge,
R. Kral 12382 (VPI); Sussex Co.--Stony Creek, R. Kral 12306
(VPI); Virginia Beach--Locality unknown, A. Stevens 21 April
1894 (US); Cape Henry, F. Egler 40-174 (NA), E. Leonard 218,
with E. Killip (US); Pungo, R. Kral 12420 (VPI); Washington
Co.--Taylors Cove, K. Nicely 828 (VPI, 2 sheets); Williamsburg
--College Woods, A. Barans 231 (UNC, WM); York Co.--Cheatam
Annex Bridge, P. Kline 87, with D. Ware (WM); Harwoods Mill
Reservoir, J. Wells 465 (ODU).

2. Tragopogon L.
1. *Tragopogon porrifolius* L.
   
   Bedford Co.--Forest, R. Freer 23 May 1967 (LHB, UNC), G. Waggoner 4 May 1968 (LHB); Botetourt Co.--Cedar Bluff, A. Harvill 18346 (LGW, UNC); Lynchburg--Hamakers Garden, L. Henderson 3270 (RMWC); Pittsylvania Co.--Whitmell, W. Hathaway 879 (LHB); Roanoke--Cuttigen, R. Winton date unknown (VPI); 22nd Street, R. Winton 8 May 1952 (VPI); Shenandoah Co.--Big Meadows, E. Walker 2572 (US); Strasburg, H. Allard 4628 (US), 4660 (US), F. Hunnewell 18741 (VPI); Strasburg to Mount Jackson, H. Allard 4898 (US, VPI); Woodstock, H. Allard 5080 (NA, 2 sheets, US, VPI); Smyth Co.--Bryants Knob, K. Nicely 546 (VPI).

2. *Tragopogon dubius* Scop.
   
   Bedford Co.--Battle Creek, R. Freer 16 May 1967 (LHB, VPI, UNC); Botetourt Co.--Blue Ridge Parkway, R. Freer 21 June 1967 (LHB, UNC); Stony Point, A. Harvill 18324 (LGW); Campbell Co.--Altavista, G. Ramsey, with W. Ruska & T. Thacker 29 June 1966 (LHB, UNC, VPI); Craig Co.--Broad Run, A. Massey 23 June 1959 (VPI); Floyd Co.--Floyd, W. Hathaway 957 (LHB); Giles Co.--Big Stony Road, collector unknown 10 July 1956 (VPI); Eggleston, G. Straley 52 (VPI); Mc Coy, A. Massey 19 June 1956 (VPI); New River Bridge, K. Nicely 1217 (UNC); Montgomery Co.--Locality unknown, collector unknown 9 June 1893 (VPI); Long Shop, R. Kral 12784 (VPI); Mc Coy, R. Kral 10602 (UNC); Powhatan Co.--Ballsville, M. Johnson 3300 (UNC); Roanoke Co.--Roanoke, A. Massey 4 June
1952 (VPI); Rockbridge Co.--Blue Ridge Parkway, D. Crandall 10346A (RMWC), R. Freer 3980 (UNC, VPI); Rockingham Co.--Lacey Springs, C. Nessler 361 (WM); Shenandoah Co.--Woodstock, H. Allard 4659 (NA, US), 4849 (US, VPI), 5081 (NA, US, 2 sheets, VPI, 2 sheets); Warren Co.--Front Royal, C. Nessler 488 (WM).

3. Tragopogon pratensis L.
Albermarle Co.--Doyle River Overlook, F. Fosberg 39542 (US); Loft Mountain, C. Stevens 432 (LGW); Montgomery Co.--Blacksburg, A. Massey 6 June 1944 (VPI), 4 July 1944 (VPI), C. Nessler 346 (WM); Rappahannock Co.--Range View Shelter, E. Walker 5484 (US); Roanoke Co.--Salem, C. Nessler 386 (WM); Rockbridge Co.--South River Village, R. Freer, with G. Ramsey 6 June 1967 (LHB, UNC); VMI Post, O. Gupton 3514 (VMI); Rockingham Co.--Harrisonburg, W. Bryliss 10 May 1952 (VMI, 2 sheets); Locality unknown, E. Garbee 13 May 1953 (VMI, 3 sheets); Shenandoah Co.--Water Hollow, W. Chick 21 May 1943 (US); Warren Co.--Cedarville, J. Baldwin 526 (VPI).

3. Taraxacum Wiggers

1. Taraxacum officinale Weber
Accomack Co.--Belle Haven, C. Nessler 563, with E. Salle (WM); Albemarle Co.--Locality unknown, collector unknown, April 1875 (VPI); Clover Green Farm, C. Nessler 313, with
P. Busse (WM); Alleghany Co.--Locality unknown, W. Whitehurst
26 April 1953 (VMI, 3 sheets); Clifton Forge, C. Nessler
374 (WM); Route 60, R. Haywood 27 April 1952 (VMI, 3 sheets); 
Amelia Co.--Locality unknown, J. Lewis 183 (VPI); Whites
Mill, M. Johnson 2183 (VCU); Amherst Co.--Locality unknown, 
J. Mapp 24 May 1952 (VMI, 3 sheets); Madison Heights, C. 
Nessler 447 (WM); Appomattox Co.--Spout Spring, D. Canfield, 
with M. Saver 19 April 1970; Arlington Co.--Clarendon, H. 
Allard 8450 (WM); Potomac River, G. Jones 95, with H. 
Tompleuis (VPI); Augusta Co.--Locality unknown, D. Rose 
27 April 1952 (VMI, 3 sheets), F. Shirld 28 April 1956 
(VMI, 3 sheets); Churchville, C. Nessler 362 (WM); Bath 
Co.--Goshen, O. Gupton 3661 (VMI, 2 sheets); Millboro Springs, 
C. Nessler 373 (WM); Bedford Co.--Locality unknown, R. 
Georgiddes 3 May 1953 (VMI, 3 sheets); Moneta, C. Nessler 
440 (WM); Otter River, G. Ramsey with W. Ruska & G. Waggoner 
12 July 1967 (LHB, UNC, VPI); Bland Co.--Ceres, C. Nessler 
523, with R. Ganser (WM); Wolf Creek, L. Uttal 6849 (VPI); 
Botetourt Co.--Locality unknown, W. Higinbotham 16 April 
1955 (VMI, 3 sheets), R. Timms 2 May 1954 (VMI, 3 sheets); 
Boons Mill, W. Higinbotham 16 April 1955 (VMI, 3 sheets); 
Eagle Rock, A. Harvill 13612 (UNC); Purgatory Mountain, C. 
Nessler 383 (WM); Brunswick Co.--Alberta, C. Nessler 272, 
with P. Busse (WM); Buchanan Co.--Council, C. Nessler 532, 
with R. Ganser (WM); Buckingham Co.--Buckingham, C. Nessler 
317, with P. Busse (WM); Eldridge Corner, G. Ramsey with
W. Ruska & G. Waggoner 5 July 1967 (LHB); Campbell Co.--
Locality unknown, H. Nay 11 May 1951 (VMI, 3 sheets);
Caroline Co.--Covingston Corner, C. Nessler 462 (WM);
Carroll Co.--Sylvisatus, C. Nessler 411 (WM); Charles City
Co.--Route 5, C. Nessler 265, with P. Busse (WM); Weyanoke
Plantation, D. Ware 2736, with M. Gillespie (WM); Charlotte
Co.--Keysville, C. Nessler 284, with P. Busse (WM);
Chesterfield Co.--Bon Air, F. Murray 62 (VCU); Marina Drive,
S. Hudde 16 (VCU); Williams Island, D. Gottlieb 105 (VCU);
Clarke Co.--Boyce, C. Nessler 500 (WM); Craig Co.--Huffman,
C. Nessler 396 (WM); Culpepper Co.--Rappahannock River, H.
Ahles 61665, with F. James (UNC); Winston, C. Nessler 337,
with P. Busse (WM); Cumberland Co.--Cumberland, C. Nessler
322, with P. Busse (WM); Dickenson Co.--Herald, C. Nessler
542, with R. Ganser (WM); Dinwiddie Co.--Dinwiddie, C.
Nessler 257, with P. Busse (WM); Petersburg, M. Fernald
with B. Long 21 July 1939 (US); Essex Co.--Ozeana, C.
Nessler 213, with P. Busse (WM); Fairfax Co.--Newington,
C. Nessler 193 (WM); Pleasant Valley, C. Nessler 506 (WM);
Fauquier Co.--Goldvein, C. Nessler 479 (WM); Fluvana Co.--
Charlottesville, M. Ownby 59 (UNC); Kent Store, C. Nessler
306, with P. Busse (WM); Franklin Co.--Locality unknown, C.
Dean 2 May 1954 (VMI, 3 sheets); Frederick Co.--Locality
unknown, F. Scroggins 30 April 1952 (VMI, 3 sheets); Winches-
ter, C. Nessler 496 (WM); Giles Co.--Mountain Lake, W.
West, 1 July 1948 (LHB); Poplar Hill, C. Nessler 401 (WM);
Goochland Co.--Caledonia, M. Johnson 3140 (VCU); Sabot, M. Johnson 2833 (VCU); Sandy Hook, C. Nessler 297, with P. Busse (WM); State Farm, M. Johnson 2104 (VCU, WM); Grayson Co.--Fox, H. Ahles 60355, with G. Tucker (UNC); Mouth of Wilson, C. Nessler 510, with R. Ganser (WM); White Top Mountain, J. Roller 21 September 1940 (VPI); Greene Co.--Midway, C. Nessler 348 (WM); Greenville Co.--Emporia, M. Fernald with B. Long 1 April 1940 (US); Halifax Co.--Locality unknown, E. Chick 15 May 1957 (VMI, 3 sheets); Hanover Co.--Carneals Store, C. Nessler 458 (WM); Henrico Co.--Brittons Hill Farm, S. Fore 2 (VCU); Chickahominy Avenue, P. Dugan 18 (VCU); Richmond, C. Nessler 454 (WM); Henry Co.--Martinsville, C. Nessler 427 (WM); Highland Co.--Locality unknown, R. Foy 20 May 1951 (VMI, 3 sheets); McDowell, C. Nessler 369 (WM); Isle of Wight Co.--Smithfield, C. Nessler 234, with P. Busse (WM); James City Co.--Locality unknown, S. Dickey 6 (ODU); King and Queen Co.--Centerville, C. Nessler 203, with P. Busse (WM); King George Co.--Sealston, C. Nessler 476 (WM); Lee Co.--Stickleyville, C. Nessler 545, with R. Ganser (WM); Loudoun Co.--Locality unknown, J. Holmes September 1888 (US, 2 sheets); Aldie, C. Nessler 505 (WM); Brunswick, R. Downs 5380 (UNC); Harpers Ferry, K. Reese 16 October 1954 (VMI, 3 sheets); Lucketts, R. Downs 5347 (UNC), 5357 (UNC); Neersville, H. Ahles 61264, with F. James (UNC); Potomac River, R. Downs 5463 (UNC), 5479 (UNC); Whites Ferry, R. Downs 5334 (UNC); Winchester,
E. Verloop 45 (VCU); Louisa Co.--Gum Spring, C. Nessler 303, with P. Busse (WM); Lynchburg--Lynchburg College Campus, J. Bidwell 15 (LHB); G. Waggoner 8 April 1969 (LHB); Lynchburg College Lake, Hooten 76, with Lindsey & Clark (RMWC); Randolph-Macon Women's College Campus, W. Lear 3 May 1900 (RMWC), C. Murry 2 May 1905 (RMWC), B. Patterson 8438 (RMWC); Madison Co.--Woodberry Forest, C. Nessler 331, with P. Busse (WM); Mecklenburg Co.--Gaston, W. Seaman 6245 (UNC); South Hill, C. Bell 17250 (UNC); Middlesex Co.--Saluda, C. Nessler 207, with P. Busse (WM); Montgomery Co.--Blacksburg, C. Nessler 389 (WM); Roanoke Valley, W. McIntosh 24 June 1947 (VPI); New Kent Co.--Black Creek, T. Moore 14 (VCU); Lanexa, M. Gillespie 405 (UNC, WM); Newport News--Sweetbriar Drive, C. Nessler 344 (WM); Norfolk--Cape Henry Avenue, S. Thomas 13 (LHB); Old Dominion University Campus, D. Van Dyke 37 (VPI); Robin Hood Road, A. Austin 123 (ODU); Rockbridge Avenue, E. Winslow 5 (UNC); Sir Oliver Road, C. Kimsey 9 (UNC); Northampton Co.--Exmore, C. Nessler 564, with E. Salle (WM); Northumberland Co.--Lottsburg, C. Nessler 227, with P. Busse (WM); Nottaway Co.--Burkville, C. Nessler 293, with P. Busse (WM); Orange Co.--Gordonsville, C. Nessler 327, with P. Busse (WM); Page Co.--Shenandoah, C. Nessler 350 (WM); Patrick Co.--Stuart, C. Nessler 422 (WM); Pittsylvania Co.--Locality unknown, W. Hathaway 101 (LHB); Mount Airy, R. Downs 707 (UNC), 722 (UNC); Portsmouth--Locality unknown, H. Ward 53 (WM); Prince Edward Co.--
Farmville, Stevens May 1935 (LCW); Prince William Co.--
Woodbridge, C. Nessler 195 (WM); Pulaski Co.--Dublin Wayside,
C. Nessler 405 (WM); Rappahannock Co.--Flint Hill, C. Nessler
482 (WM); Richmond--Hanover Drive, S. Goldberg 32 (VCU);
Huguenot Bridge, R. Grenoble 32 (WM); Pony Pasture, S. Fore
22 (VCU), M. Johnson 2523 (VCU), B. Lowery 8 (WM); University
of Richmond Campus, R. Viglione 16 April 1968 (UNC);
Virginia Commonwealth University Campus, M. Bowler 27 (VCU),
M. Hayden 40 (VCU), L. Murphy 69 (WM); Richmond Co.--
Warsaw, C. Nessler 215, with P. Busse (WM); Roanoke Co.--
Locality unknown, J. Owen 2 May 1954 (VMI, 3 sheets);
Salem, C. Nessler 384 (WM); Rockbridge Co.--Locality unknown,
R. Califer 17 September 1929 (VMI); Collierstown, O. Gupton
3296 (VMI, 2 sheets); Lexington, R. Carroll 10 May 1936
(VMI, 2 sheets), W. Chilton January 1930 (VMI), E. Gordon
14 September 1929 (VMI), D. Thrift 15 April 1935 (VMI, 3
sheets); Rockingham Co.--Locality unknown, R. Hanson 17 May
1953 (VMI, 3 sheets), A. Jennette with W. Mears 8 January
1955 (VMI, 3 sheets); Lacey Springs, C. Nessler 360 (WM);
Russell Co.--Honaker, C. Nessler 533, with R. Ganser (WM);
Scott Co.--Pattonsville, C. Nessler 550, with R. Ganser
(WM); Shenandoah Co.--New Market, C. Nessler 355 (WM);
Smyth Co.--Locality unknown, G. Ramsew 4356 (UNC); Hungry
Mother State Park, C. Nessler 514, with R. Ganser (WM);
Southampton Co.--Ivor, C. Nessler 240, with P. Busse (WM);
Stafford Co.--Argyle Heights, C. Nessler 470 (WM); Surry
Co.--Scotland Ferry Dock, C. Kimsey 12 (ODU); Tazewell Co.--
Tazewell, C. Nessler 524, with R. Ganser (WM); Virginia
Beach--Newton Road, W. Walters 5 (WM); Stump Lake, C.
Kimsey 34 (ODU); Upper Brandon Place, N. Kelly 7 May 1962
(ODU); Warren Co.--Front Royal, C. Nessler 492 (WM);
Washington Co.--Ketron, C. Nessler 554, with R. Ganser (WM);
Westmoreland Co.--Three Way, C. Nessler 221, with P. Busse
(WM); Williamsburg--College Woods, A. Barans 205 (WM);
Wise Co.--Toms Creek, C. Nessler 538, with R. Ganser (WM);
York Co.--Cheatham Annex Bridge, P. Kline 17 (WM); Grafton,
C. Nessler 192, with L. Ferryman (WM).

2. Taraxacum erythrospermum Andr. 
Gloucester Co.--Belroi, Duprey 37 (VCU); Greene Co.--Furnance,
F. Fosberg (NA); Middlesex Co.--Deltaville, J. Johnson 6 May
1968 (LGW); Nansemond Co.--Providence Church, C. Nessler 235,
with P. Busse (WM); Norfolk--Old Dominion University Campus,
M. Bryant 2 (UNC), H. Pulley 1 (LHB); Portsmouth--Portsmouth
Blvd., M. Huff 4 (WM); Prince Edward Co.--Farmville, Stevens
May 1935 (LGW); Richmond--Lea Meadows, W. Hopkins 13 April
1946 (VPI); Shenandoah Co.--Mount Jackson, H. Allard 9871
(US); Southampton Co.--Ivor, C. Nessler 241, with P. Busse
(WM).

4. Chondrilla L.
1. Chondrilla juncea L.
Arlington Co.--Four Mile Run, L. Dewey 199 (NA); Augusta Co.--Churchville, C. Nessler 365 (WM); Campbell Co.--Altavista, J. Fauntleroy 650 (US); Clarke Co.--Berryville, F. Hermann 11722 (NA); Dinwiddie Co.--Petersburg, M. Fernald 10847 (US); Fauquier Co.--Hopewell Gap, H. Allard 5307 (VPI); Rattlesnake Mountain, H. Allard 3008 (US); Hanover Co.--Montpelier, E. Corbett U17 (ODU); Loudoun Co.--Bluemont, P. Standley 10604 (US); Madison Co.--Marksville, F. Fosberg 36029 (NA); Northumberland Co.--Callao, C. Nessler 226, with P. Busse (WM); Page Co.--Luray to Stony Man Mountain, I. Tidestrom 6717 (NA, US); Richmond--West Cary Street, J. Reynolds 100 (VCU); Rockingham Co.--Eaton Hollow Overlook, E. Walker 3805 (NA); Pleasant Valley, A. Massey date unknown (VPI); Shenandoah Co.--Maurertown, H. Allard 9382 (US); Woodstock, L. Artz 15 July 1929 (VMI, 3 sheets), 396 (VMI, VPI); Spotsylvania Co.--Mount Pleasant, L. Dewey 522 (NA); Stafford Co.--Locality unknown, J. Sharplesy 30 June 1970 (VCU); Aquia Creek, F. Hermann 9738 (NA); Warren Co.--Front Royal, C. Nessler 491 (WM).

5. Pyrrhopappus DC

1. Pyrrhopappus carolinianus (Walt.) DC
Accomack Co.--Belle Haven, C. Nessler 558, with E. Salle (WM); Albemarle Co.--Clover Green Farm, C. Nessler 311, with P. Busse (WM); Amelia Co.--Locality unknown, J. Lewis 117 (VPI), 663 (VPI); Scotts Fork, M. Johnson 2418 (VCU);
Skinquater, M. Johnson 2932 (VCU); Bedford Co.--Otter River, G. Ramsey with W. Ruska & G. Waggoner 11 July 1967 (LHB);
Brunswick Co.--Alberta, C. Nessler 270, with P. Busse (WM);
Seward Forest, J. Lewis 1940 (VPI), 2894 (VPI), 3585 (VPI);
Charles City Co.--Route 5, C. Nessler 264, with P. Busse (WM); Roxburg, D. Ware 2465 (WM); Charlotte Co.--Pears Corner, G. Ramsey with W. Ruska & G. Waggoner 1 August 1967 (LHB); Keysville, C. Nessler 285, with P. Busse (WM);
Chesapeake Co.--Locality unknown, T. Kearney 1356 (US), 1519 (US); Chesterfield Co.--Robius, M. Johnson 2655 (VCU);
Cumberland Co.--Cumberland, E. Carson date unknown (VPI);
Fluvanna Co.--Fernclift, C. Nessler 308, with P. Busse (WM); Franklin Co.--Dickenson, C. Nessler 436 (WM);
Goochland Co.--Goochland, C. Nessler 298, with P. Busse (WM); Sabot, M. Johnson 2827 (VCU); Greene Co.--Priddys Creek, T. Wieboldt 541 (WM); Greenville Co.--Belfield, O. Meyncke 18 June 1908 (US); Emporia, H. Ahles 58494, with R. Baird (UNC); Jarrett, C. Nessler 252, with P. Busse (WM); Halifax Co.--Griffins Bridge, C. Nessler 276, with P. Busse (WM); Halifax, H. Ahles 60614, with F. James (UNC);
Stith, G. Ramsey with W. Ruska, G. Waggoner & K. Ramsey 23 July 1967 (LHB, UNC); Hanover Co.--Carneals Store, C. Nessler 460 (WM); Montpelier, E. Corbett U 112 (ODU);
Henrico Co.--Elko, A. Harvill 16978 (LGW); Richmond, C. Nessler 455 (WM); Westham Station, W. Hopkins 21 August (VPI); Henry Co.--Smith River, G. Ramsey with W. Ruska,
G. Waggoner & K. Ramsey 25 June 1967 (LHB); Isle of Wight Co.--Benns Church, J. Wells 851 (ODU); Smithfield, C. Nessler 232, with P. Busse (WM); James City Co.--Williamsburg, J. Wells 1010 (ODU); King George Co.--Sealston, C. Nessler 474 (WM); King William Co.--West Point, C. Nessler 201, with P. Busse (WM); Lee Co.--Stickleyville, C. Nessler 548, with R. Ganser (WM); Louisa Co.--Gum Spring, C. Nessler 302, with P. Busse (WM); Lunenburg Co.--North Meherrin River, G. Ramsey with W. Ruska, G. Waggoner & C. Hansrote 14 August 1967 (LHB, UNC, VPI); Pleasant Grove, C. Nessler 281, with P. Busse (WM); Lynchburg --Coffee Road, L. Henderson 608 (RMWC); Mattews Co.--Soles, C. Nessler 211, with P. Busse (WM); Mecklenburg Co.--Clarks-ville, C. Nessler 273, with P. Busse (WM); Route 58, W. Seaman 3071 (UNC); Middlesex Co.--Gray Point, A. Massey 13 August 1938 (VPI); Saluda, C. Nessler 210, with P. Busse (WM); Nansemond Co.--Blackwater River, H. Ahles 58092, with W. Coker & B. Morgan (UNC), 58266 (UNC); New Kent Co.--Barhams-ville, C. Nessler 199, with P. Busse (WM); Diascund Bridge, M. Gillespie 179 (WM); Newport News--Mariners Museum, G.C.M. 869 (VPI); Sweetbriar Drive, C. Nessler 343 (WM); Northampton Co.--Exmore, C. Nessler 562, with E. Salle (WM); Nottaway Co. --Burkville, G. Ramsey with W. Hooks & S. Baxter 6 August 1968 (LHB); Pittsylvania Co.--Callands, C. Nessler 432 (WM); Gretna, A. Massey 24 July 1952 (VPI); Ringgold, H. Ahles 6230, with F. James (UNC); Powhatan Co.--Flat Rock,
M. Johnson 2393 (VCU), C. Nessler 261, with P. Busse (WM); Lake Powhatan, M. Johnson 2531, with J. Reynolds (VCU); Powhatan, M. Johnson 2632 (VCU), 2636 (VCU); Prince Edward Co.--Meherrin, C. Nessler 289, with P. Busse (WM); Warsaw, H. Ahles 62825, with F. James (UNC); Worsham, A. Harvill 19734 (LGW, UNC); Prince George Co.--Petersburg, R. Kral 13137 (VPI); Richmond--Lea Meadows, W. Hopkins 1 June 1946 (VPI); Southampton Co.--Ivor, C. Nessler 238, with P. Busse (WM); Nottaway Swamp, J. Wells 718 (ODU); Stafford Co.--Argyle Heights, C. Nessler 467 (WM); Surry Co.--Route 10, C. Nessler 247, with P. Busse (WM); Spring Grove, C. Nessler 249, with P. Busse (WM); Sussex Co.--Stony Creek, A. Harvill 20893 (LGW); Wakefield, C. Nessler 244, with P. Busse (WM); Virginia Beach--Back Bay, C. Stevens 654 (LGW); Williamsburg--College Woods, A. Barsans 348 (WM), 586 (WM).

6. Lactuca L.

1. Lactuca canadensis L.

Accomack Co.--Belle Haven, C. Nessler 559, with E. Salle (WM); Albemarle Co.--Locality unknown, collector unknown, 9 July 1875 (VPI); Cross Roads, C. Nessler 310, with P. Busse (WM); Alleghany Co.--Clifton Forge, C. Nessler 377 (WM); Amelia Co.--Chula, C. Nessler 263, with P. Busse (WM); Jetersville, M. Johnson 2971 (VCU); Scotts Fork, M. Johnson 2433 (VCU, 2 sheets); Amherst Co.--Blue Ridge
Parkway, R. Freer 3352 (LHB); Appomattox Co.--Locality unknown, D. Crandall 7774 (RMWC); Arlington Co.--Clarendon, collector unknown 11508 (VPI); S. Blake 10858 (NA), 10860 (NA), 11508 (NA); Augusta Co.--Sherando, R. Kral 1342 (VPI); Bath Co.--Millboro Springs, O. Gupton 4005 (VMI), C. Nessler 371 (WM), E. Steele with C. Wheeler 30 August 1907 (US); Bedford Co.--Curry Gap, R. Freer 8 July 1968 (LHB, 2 sheets); Hendricks Store, C. Nessler 439 (WM); Bland Co.--Ceres, C. Nessler 518, with R. Ganser (WM); Blue Ridge Parkway, R. Freer 7094 (LHB, VPI), 7102 (LHB); Botetourt Co.--Purgatory Mountain, C. Nessler 381 (WM); Brunswick Co.--Alberta, C. Nessler 271, with P. Busse (WM); Seward Forest, J. Lewis 3584 (VPI); Buchanan Co.--Council, C. Nessler 529, with R. Ganser (WM); Buckingham Co.--Buckingham, C. Nessler 319, with P. Busse (WM); Campbell Co.--Lynchburg, C. Nessler 443 (WM), W. Ruska 16 July 1969 (LHB); Tyree, G. Ramsey with R. Freer, W. Ruska & W. Thacker 8 July 1966 (LHB); Caroline Co.--Covington Corner, C. Nessler 463 (WM); Carroll Co.--Sylvatus, C. Nessler 412 (WM); Charles City Co.--Cherry Hall, D. Ware 2542 (WM); Route 5, C. Nessler 266, with P. Busse (WM); Charlotte Co.--Abell, G. Ramsey with W. Ruska & G. Waggoner 1 August 1967 (LHB), Harrisburg, H. Ahles 60890, with F. James (UNC); Herman, H. Ahles 60847, with F. James (UNC); Keysville, C. Nessler 282, with P. Busse (WM); Chesapeake Co.--Locality unknown, T. Kearney 1496 (US); Chesterfield Co.--Chesterfield, M. Johnson 2811
Pocahontas State Park, M. Johnson 2617 (WM); Richmond, C. Nessler 451 (WM); River Road, P. Dugan 70 (VCU); Robious, M. Johnson 2680 (VCU); Clarke Co.—Boyce, C. Nessler 478 (WM); Craig Co.—Huffman, C. Nessler 393 (WM); Culpepper Co.—Locusta, C. Nessler 336, with P. Busse (WM); Cumberland Co.—Cumberland, C. Nessler 324, with P. Busse (WM); Dickenson Co.—Herald, C. Nessler 543, with R. Ganser (WM); Dinwiddie Co.—Dinwiddie, C. Nessler 255, with P. Busse (WM); Petersburg, R. Kral 13230 (VPI); Essex Co.—Ozeana, C. Nessler 212, with P. Busse (WM); Fairfax Co.—Centerville, R. Kral 13474 (VPI); Four Mile Run, C. Erlanson 214 (NA), 421 (NA); Langley, S. Blake 11518 (VPI); Mount Vernon Blvd., C. Erlanson 295 (NA); Pleasant Valley, C. Nessler 507 (WM); Plummers Island, E. Walker 1073 (UNC); Fauquier Co.—Goldvein, C. Nessler 477 (WM); Highpoint, H. Allard 5321 (VPI); Hopewell Gap, H. Allard 2038 (VPI); Floyd Co.—Tory Bridge, C. Nessler 417 (WM); Fluvanna Co.—Kent Store, C. Nessler 304, with P. Busse (WM); Franklin Co.—Dickenson, C. Nessler 434 (WM); Frederick Co.—Winchester, C. Nessler 493 (WM); Giles Co.—Newport, R. Kral 13336 (VPI); Gloucester Co.—Glenns, C. Nessler 206, with P. Busse (WM); Goochland Co.—Goochland, M. Johnson 2504 (VCU); Manakin, M. Johnson 2504 (VCU); Sandy Hook, C. Nessler 294, with P. Busse (WM); Greene Co.—Midway, C. Nessler 347 (WM); Pocosin Shelter, F. Fosberg 17173 (NA); Greenville Co.—Emporia, H. Ahles 58496, with
R. Baird (UNC); Fields Cross Roads, C. Nessler 254, with P. Busse (WM); Fountaine Creek, M. Fernald 10850, with B. Long (US); Grayson Co.--Troutdale, C. Nessler 512, with R. Ganser (WM); Halifax Co.--Childry, K. Ramsey with W. Ruska & G. Waggoner 23 July 1967 (LHB); Cluster Springs, H. Ahles 60463, with F. James (UNC); Griffins Bridge, C. Nessler 278, with P. Busse (WM); Perrin Creek, R. Kral 13606 (VPI); Hanover Co.--Carneals Store, C. Nessler 456 (WM); Montpelier, E. Corbett 8 (ODU), U 111 (ODU); Henrico Co.--Richmond, M. Johnson 2022 (WM), 2025 (VCU); Henry Co.--Martinsville, C. Nessler 425 (WM); Highland Co.--Mc Dowell, C. Nessler 366 (WM); Isle of Wight Co.--Smithfield, C. Nessler 233, with P. Busse (WM); King George Co.--Sealston, C. Nessler 473 (WM); Lee Co.--Stickleyville, C. Nessler 547, with R. Ganser (WM); Loudoun Co.--Aldie, C. Nessler 504 (WM); Lucketts, R. Downs 4153 (UNC); Potomac River, R. Downs 4052 (UNC, 2 sheets); Lunenburg Co.--Lunenburg, G. Ramsey with W. Ruska, G. Waggoner & C. Hansrote 14 August 1967 (LHB); North Meherrin River, G. Ramsey with W. Ruska, G. Waggoner & C. Hansrote 14 August 1967 (LHB); Pleasant Grove, C. Nessler 279, with P. Busse (WM); Louisa Co.--Gum Spring, C. Nessler 299, with P. Busse (WM); Lynchburg--Blackwater Creek, Hooten 982, with Lindsey, Clark & Pantaze (RMWC); Madison Co.--Five Forks, C. Nessler 330, with P. Busse (WM); Mecklenburg Co.--Clarksville, C. Nessler 275, with P. Busse (WM); Meherrin River, W. Seaman 4053 (UNC); Middlesex Co.--
Saluda, C. Nessler 209, with P. Busse (WM); Montgomery Co.--Christiansburg, C. Nessler 392 (WM); Roanoke Valley, W. Mc Intosh 21 July 1947 (VPI); Nansemond Co.--Providence Church, C. Nessler 237, with P. Busse (WM); Suffolk, H. Ahles 57518, with R. Baird (UNC); Nelson Co.--Elmington, L. Uttal 1077 (LHB); Norwood, G. Ramsey with W. Ruska & G. Waggoner 7 August 1967 (LHB, VPI); Route 751, R. Freer 19 August 1969 (LHB); Wingina, C. Nessler 316, with P. Busse (WM); New Kent Co.--Barhamsville, C. Nessler 200, with P. Busse (WM); Newport News--Mariners Museum, G. C. M. 870 (VPI); Sweetbriar Drive, C. Nessler 342 (WM); Northampton Co.--Exmore, C. Nessler 566, with E. Salle (WM); Little Creek Ferry, H. Ahles 57584, with R. Baird (UNC); Northumberland Co.--Callao, C. Nessler 225, with P. Busse (WM); Nottaway Co.--Burkville, C. Nessler 292, with P. Busse (WM), G. Ramsey with W. Hooks & S. Baxter 6 August 1968 (LHB); Orange Co.--Gordonsville, C. Nessler 328, with P. Busse (WM); Page Co.--Locality unknown, W. Palmer 124, with W. King (US); Fishers Gap, E. Walker 2529 (US); Knob Mountain, E. Walker 2608 (US); Mount Marshall, H. Allard 767 (US); Patrick Co.--Charity, G. Ramsey with W. Ruska, G. Waggoner & K. Ramsey 24 June 1967 (LHB, 2 sheets); Meadows of Dan, C. Nessler 419 (WM); Pittsylvania Co.--Callands, C. Nessler 430 (WM); Danville, W. Hathaway 302 (LHB, 2 sheets); Powhatan Co.--Flat Rock, C. Nessler 260, with P. Busse (WM); Powhatan, M. Johnson 3486 (VCU); Tobaccoville, M. Johnson
3591, with W. Stepka & J. Reynolds (VCU); Prince Edward Co.--Meherrin, C. Nessler 288, with P. Busse (WM); Red Shop, H. Ahles 62788, with F. James (UNC); Vaughns Creek, G. Ramsey with W. Ruska & G. Waggoner 18 July 1967 (LHB, 2 sheets); Prince George Co.--Garysville, C. Nessler 251, with P. Busse (WM); Prince William Co.--Hopewell Gap, H. Allard 3312 (VPI); Pulaski Co.--Locality unknown, F. S. H. 15 September 1909 (VPI); Walker Creek, C. Nessler 403 (WM); Rappahannock Co.--Flint Hill, C. Nessler 483 (WM); Richmond Co.--Lyells, C. Nessler 218, with P. Busse (WM); Warsaw, C. Nessler 216, with P. Busse (WM); Roanoke Co.--Salem, R. Kral 13585 (VPI), C. Nessler 387 (WM); Rockbridge Co.--Buena Vista, O. Gupton 3921 (VMI), 3922 (VMI); Collierstown, O. Gupton 3207 (VMI, 2 sheets), 3272 (VMI); Kerrs Creek, R. Carroll 17 July 1934 (VMI); Lexington, R. Carroll 7 June 1935 (VMI, 2 sheets), O. Gupton 3008 (VMI, 2 sheets); North River, A. Hawkins 8 June 1929 (VMI); Robinson Gap, R. Freer 18 August 1967 (LHB); Russell Co.--Honaker, C. Nessler 535, with R. Ganser (WM); Scott Co.--Pattonsville, C. Nessler 551, with R. Ganser (WM); Shenandoah Co.--Maurertown, H. Allard 9381 (US); Southampton Co.--Ivor, C. Nessler 239, with P. Busse (WM); Smyth Co.--Hungry Mother State Park, C. Nessler 516, with R. Ganser (WM); Spotsylvania Co.--Paytes, C. Nessler 338, with P. Busse (WM); Stafford Co.--Argyle Heights, C. Nessler 465 (WM); Miles Sharpley's Farm, J. Reynolds 89 (VCU); Surry Co.--Bacons Castle, R. Kral 1101 (VPI); Surry,
C. Nessler 246, with P. Busse (WM); Sussex Co.—Stony Creek, A. Harvill 19895 (LGW); Wakefield, C. Nessler 242, with P. Busse (WM); Tazewell Co.—Tazewell, C. Nessler 527, with R. Ganser (WM); Virginia Beach—Cape Henry, F. Egler 40-15 (NA), E. Killip 6664 (US); Washington Co.—Ketron, C. Nessler 556, with R. Ganser (WM); Westmoreland Co.—Three Way, C. Nessler 220, with P. Busse (WM); Williamsburg—College Woods, A. Barans 438 (WM); Wise Co.—Toms Creek, C. Nessler 539, with R. Ganser (WM); Wythe Co.—Barren Springs, C. Nessler 408 (WM); York Co.—Felgate's Creek, E. Salle 453 (WM); Indian Field Creek, E. Salle 498 (WM).

Amelia Co.—Locality unknown, J. Lewis 640 (VPI); Chesterfield Co.—Winterpock, M. Johnson 4005 (VCU, 2 sheets); Fairfax Co.—Annandale, S. Blake 11500 (NA); Gloucester Co.—Ark, E. Leonard 497, with E. Killip (US); Southampton Co.—Adams Grove, M. Fernald 7720, with B. Long (US); Courtland, H. Ahles 58567, with R. Baird (UNC); Drewryville, M. Fernald 99226, with B. Long (US); Sussex Co.—Chub, M. Fernald 13190, with B. Long (US); Waverly, M. Fernald 10459, with B. Long (US).

3. *Lactuca floridana* (L) Gaertner
County unknown—Sports Run, collector unknown, 2 October 1888 (UNC); Albemarle Co.—Keene, C. Stevens 636 (LGW); Amelia Co.—Locality unknown, J. Lewis 1014 (VPI), 2063 (VPI),
24 August 1936 (VPI); Arlington Co.--Lyon Village, F. Hermann 9608 (NA); Bedford Co.--Montvale, R. Freer 19 August 1968 (LHB, UNC); Brunswick Co.--Baskerville Bridge, A. Harvill 17431 (LGW UNC); Buchanan Co.--Council, C. Nessler 532, with R. Ganser (WM); Campbell Co.--Flat Creek, L. Uttal 20 July 1965 (LHB); Charles City Co.--Rustic, D. Ware 3902, with K. Pendley (WM, 2 sheets); Charlotte Co.--Harrisburg, H. Ahles 60795, with F. James (UNC); Fairfax Co.--Four Mile Run, C. Erlanson 424 (NA); Seneca Creek, B. Fraser 446 (UNC); Fauquier Co.--Round Knob, H. Allard 3704 (VPI); Halifax Co.--Cluster Springs, H. Ahles 60560, with F. James (UNC); Elmo, H. Ahles 60516, with F. James (UNC); Henry Co.--Fairy Stone State Park, W. Hopkins 9 August 1946 (VPI); King George Co.--Sealston, C. Nessler 472 (WM); Loudoun Co.--Lucketts, H. Ahles 61086, with F. James (UNC), 6112 (UNC), 61308 (UNC, 2 sheets); Lunenburg Co.--Meherrin River, G. Ramsey with W. Ruska, G. Waggoner & C. Hansrote 14 August 1967 (LHB); Rehoboth, H. Ahles 61883, with F. James (UNC); Lynchburg--Woodson Park, L. Henderson 981 (RMWC), 982 (RMWC); Madison Co.--Old Rag Mountain, E. Balls 7703 (US); Mecklenburg Co.--Route 626, W. Seaman 6 September 1967 (UNC); Montgomery Co.--Locality unknown, E. Smyth 29 August 1892 (VPI); Nelson Co.--Buffalo Station, G. Ramsey with W. Ruska & G. Waggoner 7 August 1967 (LHB); Route 751, R. Freer 19 August 1969 (LHB); Page Co.--Shenandoah National Park, E. Walker 2662 (US); Patrick
Co.--Stuart, H. Ahles 60085, with R. Clark (UNC); Pittsylvania Co.--Leesville Lake, W. Hathaway 268 (LHB); Powhatan Co.--Route 60, M. Johnson 4040 (UNC); Prince Edward Co.--Locality unknown, J. Smyth 25 August 1880 (US); Farmville, H. Ahles 62962, with F. James (UNC); B. Harvill 231 (LGW); Hobgood Place, A. Harvill 17380 (LGW); Worsham, B. Harvill 20 September 1968 (ODU, UNC); Prince William Co.--Locality unknown, H. Allard 8048 (VPI); Richmond--Route 360, J. Reynolds 271 (VCU); Rockbridge Co.--Lexington, R. Carroll 1 September 1935 (VMI, 3 sheets); Russell Co.--Honaker, C. Nessler 536, with R. Ganser (WM); Shenandoah Co.--Passage Creek, L. Arzt 710 (VMI); Warren Co.--Front Royal, F. Fosberg 17299 (NA); Washington Co.--Abrams Falls, A. Harvill 20147 (LGW); Williamsburg--College Woods, A. Barans 525 (WM).

4. *Lactuca biennis* (Moench) Fernald

County unknown--Locality unknown, J. Holmes August 1888 (US); Amherst Co.--Otter Creek Flats, collector unknown 3351 (LHB); Bedford Co.--Locality unknown, A. Curtiss September 1888 (US); Bland Co.--Ceres, C. Nessler 520, with R. Ganser (WM); Botetourt Co.--Bearwallow Gap, R. Freer 4 September 1968 (LHB, UNC); Culpepper Co.--Culpepper, H. Ahles 61727, with F. James (UNC); Dickenson Co.--Haysi, R. Kral 14219 (VPI); Grayson Co.--Saddle Creek, H. Ahles 60402, with G. Tucker (UNC); Loudoun Co.--Lucketts, H.
Ahles 61294, with F. James (UNC); Montgomery Co.--Locality unknown, R. Kral 11590 (VPI); Nelson Co.--Fork Mountain Overlook, R. Freer 27 September 1967 (LHB, UNC, VPI); Route 751, R. Freer 19 August 1969 (LHB); Page Co.--Bear Wallow, E. Walker 2714 (US); Patrick Co.--Stuart, H. Ahles 60041, with R. Clark (UNC); Pittsylvania Co.--Altavista, H. Ahles 62439, with F. James (UNC); Rockbridge Co.--Blue Ridge Parkway, R. Freer 30 September 1969 (LHB); Route 607, R. Freer 7281 (VPI).

5. Lactuca scariola L.

Accomack Co.--Belle Haven, C. Nessler 561, with E. Salle (WM); Quinby, H. Ahles 57669, with R. Baird (UNC); Albemarle Co.--Clover Green Farm, C. Nessler 312, with P. Busse (WM); Alleghany Co.--Clifton Forge, C. Nessler 376 (WM); Amelia Co.--Locality unknown, J. Lewis 848 (VPI), 17 July 1936 (VPI); Chula, C. Nessler 262, with P. Busse (WM); Amherst Co.--Madison Heights, C. Nessler 446 (WM); Appomattox Co.--Locality unknown, D. Crandall 7786 (RMWC); Appomattox, C. Nessler 448 (WM); Augusta Co.--Churchville, C. Nessler 364 (WM); Bath Co.--Millboro Springs, C. Nessler 370 (WM); Millboro, E. Steele 21 August 1907 (US, 2 sheets, VPI); Bedford Co.--Hendricks Store, C. Nessler 437 (WM); Bland Co.--Ceres, C. Nessler 519, with R. Ganser (WM); Botetourt Co.--Hurricane Hill, L. Henderson 1479 (RMWC); Purgatory Mountain, C. Nessler 380 (WM); Brunswick Co.--Alberta, C.
Nessler 269, with P. Busse (WM); Buchanan Co.--Council, C. Nessler 530, with R. Ganser (WM); Buckingham Co.--Buckingham, C. Nessler 318, with P. Busse (WM); Campbell Co.--Lynchburg, C. Nessler 441 (WM); Caroline Co.--Covington Corner, C. Nessler 464 (WM); Carroll Co.--Sylvatus, C. Nessler 415 (WM); Charle City Co.--Route 5, C. Nessler 267, with P. Busse (WM); Charlotte Co.--Abell, G. Ramsey with W. Ruska & G. Waggoner 1 August 1967 (LHB); Aspen, H. Ahles 61052, with F. James (UNC); Keysville, C. Nessler 283, with P. Busse (WM); Chesterfield Co.--Huguenot Bridge, P. Dugan 71 (VCU); Clarke Co.--Blandy Experimental Farm, J. Baldwin 5259 (VPI); Boyce, C. Nessler 497 (WM); Craig Co.--Huffman, C. Nessler 395 (WM); Culpepper Co.--Locusta, C. Nessler 334, with P. Busse (WM); Rappahannock River, H. Ahles 61659, with F. James (UNC); Cumberland Co.--Cumberland, C. Nessler 323, with P. Busse (WM); Dickenson Co.--Herald, C. Nessler 544, with R. Ganser (WM); Dinwiddie Co.--Dinwiddie, C. Nessler 256, with P. Busse (WM); Fairfax Co.--Pleasant Valley, C. Nessler 509 (WM); Fauquier Co.--Goldvein, C. Nessler 481 (WM); Floyd Co.--Tory Bridge, C. Nessler 416 (WM); Fluvanna Co.--Kent Store, C. Nessler 307, with P. Busse (WM); Franklin Co.--Snow Creek, C. Nessler 433 (WM); Frederick Co.--Winchester, C. Nessler 494 (WM); Giles Co.--Maybrook, C. Nessler 349 (WM); Goochland Co.--Dover Creek, M. Johnson 3429 (VCU); Sandy Hook, C. Nessler 295, with P. Busse (WM); Grayson Co.--Mouth of Wilson, H. Ahles 60336,
with G. Tucker (UNC); Greene Co.--Quinque, J. Harlow 1445, (VPI); Ruckersville, C. Nessler 349 (WM); Greensville Co.--Jarrett, C. Nessler 253, with P. Busse (WM); Hanover Co.--Carneals Store, C. Nessler 459 (WM); Montpelier, E. Corbett V. 114 (ODU); Halifax Co.--Griffins Bridge, C. Nessler 277, with P. Busse (WM); Hyco River, K. Ramsey with G. Ramsey, W. Ruska & G. Waggoner 23 July 1967 (LHB, UNC); Volens, H. Ahles 60582, with F. James (UNC); Henrico Co.--Richmond, C. Nessler 453 (WM); Henry Co.--Martinsville, C. Nessler 428 (WM); Highland Co.--Mc Dowell, C. Nessler 367 (WM); King George Co.--Sealston, C. Nessler 475 (WM); King William Co.--West Point, C. Nessler 202, with P. Busse (WM); Lee Co.--Stickleyville, C. Nessler 546, with R. Ganser (WM); Loudoun Co.--Aldie, C. Nessler 503 (WM); Bluemont, P. Standley 13232 (US); Lucketts, H. Ahles 61325, with F. James (UNC), R. Downs 4233 (UNC); Point of Rocks, R. Downs 2506 (UNC); Whites Ferry, R. Downs 4259 (UNC); Louisa Co.--Gum Spring, C. Nessler 300, with P. Busse (WM); Lunenburg Co.--Lunenburg, G. Ramsey with W. Ruska, G. Waggoner & C. Hansrote 14 August 1967 (LHB); Pleasant Grove, C. Nessler 280, with P. Busse (WM); Madison Co.--Woodberry Forest, C. Nessler 332, with P. Busse (WM); Mecklenburg Co.--Clarksville, C. Nessler 274, with P. Busse (WM); Palmers Point, W. Seaman 3514 (UNC); Middlesex Co.--Saluda, C. Nessler 208, with P. Busse (WM); Montgomery Co.--Blacksburg, C. Nessler 391 (WM); Ironto, W. West 7 July.
1948 (LHB); Nelson Co.--Arrington, G. Ramsey with W. Ruska & G. Waggoner 7 August 1967 (LHB); Taylor Creek, G. Ramsey with W. Hooks & S. Baxter 6 August 1968 (LHB); Three Ridges Overlook, R. Freer 3 September 1965 (LHB, VPI); Northampton Co.--Exmore, C. Nessler 568, with E. Salle (WM); Northumberland Co.--Callao, C. Nessler 224, with P. Busse (WM); Nottaway Co.--Burkville, C. Nessler 290, with P. Busse (WM); Orange Co.--Gordonsville, C. Nessler 325, with P. Busse (WM); Page Co.--Newport, C. Nessler 352 (WM); Patrick Co.--Stuart, C. Nessler 424 (WM); Pittsylvania Co.--Callands, C. Nessler 429 (WM); Danville, W. Hathaway 306 (LHB); Powhatan Co.--Flat Rock, C. Nessler 259, with P. Busse (WM); Prince Edward Co.--Meherrin, C. Nessler 287, with P. Busse (WM); Vaughns Creek, G. Ramsey with W. Hooks & G. Waggoner (LHB, UNC); Prince George Co.--Garysville, C. Nessler 250, with P. Busse (WM); Prince William Co.--Jacksons Hollow, H. Allard 3384 (VPI, 3 sheets); Joplin, G. Breiding 110 (US); Pulaski Co.--Dublin Wayside, C. Nessler 406 (WM); Rappahannock Co.--Flint Hill, C. Nessler 486 (WM); Thorton Gap, E. Walker 2880 (US); Richmond--Virginia Commonwealth University Campus, J. Reynolds 67 (VCU); Richmond Co.--Lyells, C. Nessler 217, with P. Busse (WM); Warsaw, C. Nessler 214, with P. Busse (WM), M. Rice 91 (UNC, VCU); Rockbridge Co.--Lexington, R. Carroll 16 July 1933 (VMI, 3 sheets), O. Gupton 3956 (VMI), A. Knowles 9 September 1931 (VMI,
3 sheets), C. Nessler 378 (WM); Rockingham Co.--Lacey Springs, C. Nessler 327 (WM); Russell Co.--Honaker, C. Nessler 534, with R. Ganser (WM); Scott Co.--Pattonsville, C. Nessler 552, with R. Ganser (WM); Shenandoah Co.--New Market, S. Blake 11351 (NA), C. Nessler 354 (WM); Short Mountain, H. Allard 7913 (US); Smyth Co.--Hungry Mother State Park, C. Nessler 517, with R. Ganser (WM); Spotsylvania Co.--Paytes, C. Nessler 341, with P. Busse (WM); Stafford Co.--Argyle Heights, C. Nessler 466 (WM); Sussex Co.--Wakefield, C. Nessler 243, with P. Busse (WM); Tazewell Co.--Tazewell, C. Nessler 526, with R. Ganser (WM); Warren Co.--Front Royal, C. Nessler 489 (WM); Washington Co.--Ketron, C. Nessler 555, with R. Ganser (WM); Westmoreland Co.--Three Way, C. Nessler 219, with P. Busse (WM); Wise Co.--Toms Creek, C. Nessler 540, with R. Ganser (WM); Wythe Co.--Barren Springs, C. Nessler 410 (WM).

6. Lactuca saligna L.

Augusta Co.--Big Level, W. De Garma 19 August 1939 (VPI); Botetourt Co.--Lithia, R. Freer 11 September 1968 (LHB); Buchanan Co.--Council, C. Nessler 531, with R. Ganser (WM); Clarke Co.--Boyce, C. Nessler 499 (WM); Fauquier Co.--Warrenton, H. Ahles 61461, with F. James (UNC); Frederick Co.--Opeyoon Creek, O. Freeman 10 October 1935 (NA); Grayson Co.--Mouth of Wilson, H. Ahles 60259, with G. Tucker (UNC); Loudoun Co.--Leesburg, H. Ahles 61356, with F. James (UNC);
Potomac River, R. Downs 2531 (UNC); Montgomery Co.--
Christiansburg, H. Allard 12 September 1934 (NA, US);
Pulaski Co.--Alura Springs, A. Harvill 14858 (LGW); Dublin,
E. Leonard 16324, with G. Leonard (US); Rockbridge Co.--
Locality unknown, R. Carroll 7 July 1935 (VMI); Lexington,
R. Carroll 24 August 1959 (VMI, 3 sheets), H. Wilkens
122232 (LGW); Shenandoah Co.--Mount Jackson, H. Allard
3573 (US); Strasburg, O. Freeman 17 September 1937 (NA);
Warren Co.--Cedarville, H. Ahles 61394, with F. James (UNC);
Front Royal, C. Nessler 490 (WM); Riverton, H. Allard 815
(US).

7. Hypochoeris L.

1. Hypochoeris radicata L.
Amherst Co.--Otter Creek, R. Freer 28 May 1966 (LHB, UNC,
VPI); Bland Co.--Ceres, C. Nessler 521, with R. Ganser (WM);
Caroline Co.--Covington Corner, C. Nessler 461 (WM); Charles
City Co.--Camp Weyanoke, C. Nessler 288, with P. Busse (WM);
Charles City, D. Ware 2384 (WM); Chesterfield Co.--Beaver
Lake, S. Greroble 16 (VCU), B. Strickler 22 (WM); Bon Air,
D. Riley 14 (LHB); Richmond, C. Nessler 450 (WM); Winterpock,
M. Johnson 2903 (UNC, VCU); Chesapeake Co.--Dismal Swamp,
Q. Weiss 91 (VPI); Edgewater, H. Meredith 30 May 1922 (US);
Giles Co.--Dismal Creek, A. Massey 11 July 1939 (VPI);
Mountain Lake, R. Freer 30 July 1936 (LHB); Poplar Hill,
G. Straley 226 (LHB, UNC, VPI); Hampton--Aberdeen Road,
O. Weiss 410 (VPI); NASA; R. Deramus 721 (UNC); Hanover Co.--Carneals Store, C. Nessler 457 (WM); Montpelier, J. Wells 546 (ODU); Henrico Co.--Brittons Hill Farm, S. Fore 87 (VCU); Richmond, C. Nessler 452 (WM), M. Smyth 1096 (VPI); King and Queen Co.--Centerville, C. Nessler 204, with P. Busse (WM); Lancaster Co.--H. C. McSwain Co. Apt., A. Massey, 20 June 1961 (VPI); Louisa Co.--Courtyard Creek, A. Harvill 16121 (LGW); Lynchburg--Lakeside Avenue, Hooten 977, with Lindsey & Clark (RMWC); Montgomery Co.--Virginia Polytechnic Institute Campus, A. Massey date unknown (VPI); Nansemond Co.--Dismal Swamp, H. Ahles 58303, with W. Coker (UNC); New Kent Co.--Chickahomininy River, M. Gillespie 577 (UNC, WM); Diascund Bridge, M. Gillespie 181 (WM); Toe Ink Wayside, M. Gillespie 137 (WM); Newport News--Woods Lane, C. Nessler 187, with L. Ferryman (WM); Norfolk--Mantes Street, H. Meredith 20 May 1922 (NA); Norfolk Truck Express Station, H. Le Baron 1 June 1962 (VPI); Old Dominion University Campus, Alman 830 (LHB); Redgate Avenue, D. Van Dyke 400 (ODU); Rosemont Junior High School, D. Van Dyke 141 (ODU); Northampton Co.--Cheritin, H. Ahles 57592, with R. Baird (UNC); Exmore, C. Nessler 565, with E. Salle (WM); Northumberland Co.--Lottsburg, C. Nessler 228, with P. Busse (WM); Patrick Co.--Locality unknown, N. Pendleton 1940 (VPI); Pittsylvania Co.--Danville, W. Hathaway 26 (LHB, 2 sheets); Portsmouth--Portsmouth Blvd., M. Huff 41 (WM); Route 654, H. Ward 99
(UNC); Powhatan Co.--Powhatan, J. Reynolds 57 (VCU); Prince Edward Co.--Meherrin, C. Nessler 286, with P. Busse (WM); Richmond--Interstate 85, J. Reynolds 48 (VCU); North Hamilton Street, J. Reynolds 60 (VCU); Stonybrook Apartments, S. Osburn 13 (WM); University of Richmond Campus, H. Dougherty 20 April 1968 (LGW), S. Lusky 3 May 1943 (VPI), B. Viglione (UNC); Virginia Commonwealth University Campus, P. Dugan 53 (VCU), R. Grenoble 75 (VCU), R. Grunwald 41 (VCU); Westhampton Lake, C. Custalow 23 April 1967 (LGW); Rockbridge Co.--VMI Post, R. Carroll 8 July 1933 (VMI); Smyth Co.--Bryants Knob, K. Nicely 548 (VPI); Southampton Co.--Locality unknown, G. Mason 195 (VPI); Stafford Co.--Argyle Heights, C. Nessler 469 (WM); Fredericksburg, B. Lowery 63 (VCU); Surry Co.--Surry, C. Nessler 245, with P. Busse (WM); Tazewell Co.--Burkes Garden, K. Nicely 976, with G. Straley (UNC, VPI); Westmoreland Co.--Three Way, C. Nessler 222, with P. Busse (WM); Williamsburg--College of William and Mary Campus, M. Berg 10 May 1971; College Woods, A. Barans 147 (WM), 299 (UNC); Wythe Co.--Wytheville, K. Nicely 916, with G. Straley (VPI); York Co.--Grafton, C. Nessler 189, with L. Ferryman (WM); Yorktown Parkway, E. Salle 415 (WM).

8. **Sonchus L.**

1. **Sonchus arvensis L.**

Fauquier Co.--Beverly Mill, H. Allard 10392 (VPI); Prince

2. Sonchus asper (L.) Hill
Accomack Co.--Belle Haven, C. Nessler 560, with E. Salle (WM); Albemarle Co.--Locality unknown, collector unknown 11 June 1875 (VPI); Amelia Co.--Locality unknown, J. Lewis 1492 (VPI); Buckingham Co.--Eldridge Corner, G. Ramsey with W. Hooks, W. Ruska & G. Waggoner 5 July 1967 (LHB, UNC); Campbell Co.--Timber Lake, R. Freer 21 May 1966 (LHB, VPI); Craig Co.--Huffman, C. Nessler 397 (WM); Culpepper Co.--Culpepper, H. Ahles 61736, with F. James (UNC); Fauquier Co.--Beverly Mill, H. Allard 8453 (VPI); Hopewell Gap, H. Allard 649 (VPI, 2 sheets); Giles Co.--Poplar Hill, C. Nessler 402 (WM); Gloucester Co.--Glenns, C. Nessler 205, with P. Busse (WM); Grayson Co.--White Top Mountain, W. Hathaway 975 (LHB); Greene Co.--Quinque, J. Harlow 1341 (VPI); Halifax Co.--Cluster Springs, H. Ahles 60439, with F. James (UNC); Henrico Co.--Westham, J. Florence 16 May 1939 (VPI); Henry Co.--Martinsville, G. Straley 69109 (VPI); Madison Co.--Woodberry Forest, C. Nessler 333, with P. Busse (WM); Mecklenburg Co.--Route 1, W. Seaman 7153 (UNC); Montgomery Co.--Blacksburg, C. Nessler 388 (WM); Roanoke Valley, W. Mc Intosh 1 July 1947 (VPI); Nansemond Co.--Frederick College, M. Huff 93 (WM), J. Mc Laughlin 62 (UNC), R. Palumbo 105 (ODU); Providence Church, C. Nessler 236, with P. Busse (WM); New Kent Co.--M. Gillespie 661 (UNC, WM); Norfolk--Forty-ninth Street,
B. Davidson 65 (UNC); Lamberts Point, T. Kearney 1025 (US, 2 sheets) Old Dominion University Campus, D. Van Dyke 323 (ODU); Rosemont, W. Schmidt 60 (LHB); Wards Corner, D. Van Dyke 229 (ODU); Page Co.--Leaksville, C. Nessler 353 (WM); Prince Edward Co.--Farmville, Stevens June 1935 (LGW); Pulaski Co.--Draper, A. Harvill 18389 (LGW); Rappahannock Co.--Flint Hill, C. Nessler 484 (WM); Richmond--Lea Bog, W. Hopkins 29 June 1946 (VPI); Pony Pasture, M. Johnson 2516 (VCU); University of Richmond Campus, E. Lewis 18 May 1968 (LGW), Snider with Greer 18 May 1968 (UNC); Rockbridge Co.--Lexington, O. Gupton 3122 (VMI); J. Perry 15 September 1949 (VMI, 4 sheets); Virginia Military Institute Campus, R. B. 28 September 1932 (VMI, 2 sheets), R. Carroll 11 June 1933 (VMI, 2 sheets); Rockingham Co.--Lacey Springs, C. Nessler 358 (WM); Shenandoah Co.--Woodstock, Q. Freeman 8 October 1926 (NA); Surry Co.--Hog Island Wildlife Refuge, R. Kral 12368 (VPI); Williamsburg--College Woods, A. Barans 304 (UNC, WM), 344 (WM); College of William and Mary Campus, C. Nessler 196 (WM); Wythe Co.--Barren Springs, C. Nessler 407 (WM); York Co.--Felgates Creek, E. Salle 395 (WM).

3. Sonchus oleraceus L.
Campbell Co.--Locality unknown, N. McDonald 27 October 1946 (VMI); Norfolk--Old Dominion University Campus, D. Van Dyke 39 (ODU), 293 (ODU); Page Co.--Locality unknown, E. Strickler 25 (VPI); Lynchburg--Randolph-Macon Women's
College Campus, L. Henderson 925 (RMWC); Rockbridge Co.--Locality unknown, A. Niemeyer 20 October 1946 (VMI); Lexington, O. Gupton 3955 (VMI), 4115 (UNC, VMI).

9. Crepis L.

1. Crepis japonica (L.) Bentham
Williamsburg--College of William and Mary Campus, C. Nessler 178 (WM).

2. Crepis pulchra L.
Bath Co.--Goshen, O. Gupton 3625 (UNC, WM); Bedford Co.--Battle Creek, R. Freer 5584 (LHB, VPI); Blue Ridge Parkway, R. Freer 21 June 1967 (LHB); Goose Creek Overlook, D. Crandall 10461 (RMWC); Powell Gap, R. Freer 7095 (LHB, UNC, VPI); Botetourt Co.--Stony Point, A. Harvill 18323 (LGW), 19206A (LGW); Fairfax Co.--Colchester, S. Blake 12111 (US); Goochland Co.--Columbia, A. Harvill 16082 (LGW, 2 sheets); Montgomery Co.--Ellett, L. Uttal 6503 (LHB, VPI); Ironto, R. Kral 10319 (UNC, VPI), 12525 (VPI); New River, A. Massey 14 June 1956 (VPI); Pittsylvania Co.--Berry Hill, W. Hathaway 572 (LHB); Pulaski Co.--Hiwassee, L. Uttal 7157 (VPI); Richmond--Westover Hills, W. Hopkins 3 June 1945 (VPI); Rockbridge Co.--Brushy Hills, R. Carroll 20 August 1937 (VMI); Lexington, O. Gupton 3102 (VMI); Natural Bridge, O. Freeman 28 May 1929 (NA); Rockingham Co.--Lacey Springs, O. Freeman 1 June 1939 (NA).
3. **Crepis capillaris** (L.) Wallroth

Carroll Co.--Sylvatus, C. Nessler **411** (WM); Giles Co.--Eggleston, G. Straley **108** (VPI), **111** (UNC, VPI), 8 June 1964 (VPI); Grayson Co.--Galax, W. Hathaway **1000** (LHB); Mouth of Wilson, H. Ahles **60246**, with G. Tucker (UNC); Montgomery Co.--Blacksburg, W. De Garmo 3 June 1938 (VPI); Virginia Polytechnic Institute Campus, M. Byrd, 22 June 1947 (VPI), A. Massey 11 November 1958 (VPI), 8 July 1959 (ODU, VPI); Russell Co.--Locality unknown, R. Kral **12993** (VPI); Tazewell Co.--Burkes Garden, K. Nicely **977**, with G. Straley (VPI); Cedar Bluff, R. Kral **13015** (VPI).

13. **Cichorium** L.

1. **Cichorium intybus** L.

Albemarle Co.--Locality unknown, collector unknown 7 July 1875 (VPI); Cross Roads, C. Nessler **309**, with P. Busse (WM); Alleghany Co.--Clifton Forge, C. Nessler **375** (WM); Amherst Co.--Madison Heights, C. Nessler **445** (WM); Appomattox Co.--Appomattox, C. Nessler **449** (WM); Wreck Island Creek, G. Ramsey with L. Uttal, W. Ruska & G. Waggoner 20 June 1967 (LHB); Augusta Co.--Churchville, C. Nessler **363** (WM); Bath Co.--Goshen, O. Gupton **3618** (VMI, 2 sheets); Millboro Springs, O. Gupton **3996** (VMI), C. Nessler **372** (WM); Bedford Co.--Hendricks Store, C. Nessler **438** (WM); Otter River, G. Ramsey with W. Ruska & G. Waggoner 12
July 1967 (LHB); Bland Co.--Ceres, C. Nessler 522, with R. Ganser (WM); Botetourt Co.--Purgatory Mountain, C. Nessler 382 (WM); Buchanan Co.--Council, C. Nessler 528, with R. Ganser (WM); Buckingham Co.--Buckingham, C. Nessler 320, with P. Busse (WM); Campbell Co.--Lynchburg, C. Nessler 444 (WM); Carroll Co.--Sylvatus, C. Nessler 414 (WM); Chesterfield Co.--Bermuda Hundred, M. Johnson 3413 (VCU, 2 sheets); Clarke Co.--Boyce, C. Nessler 501 (WM); Craig Co.--Huffman, C. Nessler 394 (WM); Culpepper Co.--Locusta, C. Nessler 335, with P. Busse (WM); Cumberland Co.--Cumberland, C. Nessler 321 (WM); Fairfax Co.--Four Mile Run, C. Erlanson 438 (NA); Pleasant Valley, C. Nessler 508 (WM); Fauquier Co.--Goldvein, C. Nessler 478 (WM); Floyd Co.--Tory Bridge, C. Nessler 418 (WM); Fluvanna Co.--Kent Store, C. Nessler 305, with P. Busse (WM); Franklin Co.--Dickenson, C. Nessler 435 (WM); Frederick Co.--Winchester, H. Ahles 61377, with F. James (UNC), C. Nessler 495 (WM); Giles Co.--Kelly Flats, Caswell 15 July 1948 (VMI); Maybrook, C. Nessler 400 (WM); Salt Pond Mountain, W. Wert 27 June 1948 (LHB); Grayson Co.--Mouth of Wilson, C. Nessler 511, with R. Ganser (WM); Greene Co.--Midway, C. Nessler 346 (WM); Quinque, J. Harlow 1364 (VPI); Halifax Co.--Cluster Springs, H. Ahles 60588 (UNC); Henry Co.--Edgewood Station, G. Ramsey with W. Ruska, G. Waggoner & K. Ramsey 6847 (LHB, UNC); Martinsville, C. Nessler 426 (WM); Highland Co.--Mc Dowell, C. Nessler 368
Lee Co.--Stickleyville, C. Nessler 549, with R.
Ganser (WM); Loudoun Co.--Aldie, C. Nessler 502 (WM);
Lucketts, H. Ahles 61109, with F. James (UNC), 61320 (UNC),
R. Downs 4227 (UNC); Louisa Co.--Gum Spring, C. Nessler
301, with P. Busse (WM); Lynchburg--Danville Road, L.
Henderson 3644 (RMWC); Hollins Mill, Hooten 950, with
Lindsey & Clark (RMWC); Madison Co.--Five Forks, C. Nessler
329, with P. Busse (WM); Montgomery Co.--Blacksburg, C.
Nessler 390 (WM); Mecklenburg Co.--Route 644, W. Seaman
4118 (UNC); Nelson Co.--Tye River, G. Ramsey with W. Ruska
& G. Waggoner 7 August 1967 (LHB); Wingina, C. Nessler 314
(WM); Norfolk--Hampton Blvd., R. Deramus 659 (LHB, UNC,
2 sheets, VPI, WM); Nottaway Co.--Burkville, C. Nessler
291, with P. Busse (WM); G. Ramsey with W. Hooks & S.
Baxter 6 August 1968 (LHB); Orange Co.--Gordonsville, C.
Nessler 326, with P. Busse (WM); Page Co.--Locality unknown,
C. Comer 98 (VPI); Shenandoah, C. Nessler 351 (WM); Patrick
Co.--Stuart, H. Ahles 60157, with R. Clark (UNC), C.
Nessler 420 (WM); Pittsylvania Co.--Locality unknown,
W. Hathaway 421 (LHB); Callands, C. Nessler 431 (WM);
Danville, H. Ahles 7224, with F. James (UNC); Mount
Hernaw, W. Hathaway 251 (LHB); Powhatan Co.--Powhatan, D.
Gottlieb 40 (VCU), M. Johnson 2644 VCU, WM); Prince Edward
Co.--Appomattox River, G. Ramsey with W. Ruska & G.
Waggoner 18 July 1967 (LHB); Farmville, Stevens June 1935
(LGW); Pulaski Co.--Locality unknown, F. S. H. 10 Sept-
ember 1910 (VPI); Walkers Creek, C. Nessler 404 (WM);
Rappahannock Co.--Flint Hill, C. Nessler 485 (WM); Thornton Gap, E. Walker 2886 (US); Richmond--West Cary Street, J. Reynolds 61 (VCU); Roanoke Co.--Salem, C. Nessler 385 (WM); Rockbridge Co.--Lexington, O. Gupton 3123 (VMI), 3190 (VMI, 2 sheets), 3270 (VMI, 2 sheets), C. Nessler 379 (WM), S. Nye 17 June 1952 (VMI, 3 sheets); Rockingham Co.--Lacey Springs, C. Nessler 359 (WM); Russell Co.--Honaker, C. Nessler 537, with R. Ganser (WM); Scott Co.--Pattonsville, C. Nessler 553, with R. Ganser (WM); Shenandoah Co.--New Market, C. Nessler 356 (WM); Woodstock, L. Artz (VMI, 2 sheets); Smyth Co.--Hungry Mother State Park, C. Nessler 515, with R. Ganser (WM); Spotsylvania Co.--Paytes, C. Nessler 340, with P. Busse (WM); Stafford Co.--Argyle Heights, C. Nessler 468 (WM); Tazewell Co.--Tazewell, C. Nessler 525, with R. Ganser (WM); Warren Co.--Front Royal, C. Nessler 487 (WM); Washington Co.--Ketron, C. Nessler 557, with R. Ganser (WM); Williamsburg--Cary Street, C. Nessler 345 (WM); Wise Co.--Toms Creek, C. Nessler 541, with R. Ganser (WM); Wythe Co.--Barren Springs, C. Nessler 409 (WM).

14. Lapsana L.

1. Lapsana communis L.

Bedford Co.--Route 460, O. Freeman 22 May 1949 (NA); Giles Co.--Manuels Hollow, L. Uttal 7245 (VPI); Mountain Lake, M. Smyth 1260 (LHB, VPI); Madison Co.--Fork Mountain,
O. Freeman 20 June 1937 (NA, 2 sheets); Montgomery Co.--Blacksburg, M. Smyth 1052 (LHB, VPI, 2 sheets); Nelson Co.--Tye River, R. Freer 13 September 1967 (LHB, VPI).
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In February 1971 the author entered the graduate program in Biology at the College of William and Mary. Received a Graduate Teaching Assistantship, 1971-1972.