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The Flora of Cedar County, Iowa

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The Flora of Cedar County, Iowa

By MARCUS J. FAY

INTRODUCTION

This botanical survey of the vascular plants of Cedar County, Iowa, was made in an effort to increase our knowledge of the vegetation of eastern Iowa. Prior to this survey, relatively little botanical collecting had been done in Cedar County. Thirty-two specimens from Cedar County were found by the writer in looking through the herbarium of the State University of Iowa. These were collected by Prof. B. Shimek and Prof. W. A. Anderson.

The field work was carried on for a period of one growing season. Over 4,000 miles were traveled by the writer in making the survey. The first collections were made April 23, 1950, the last October 16, 1950. 1,939 collections were made, totaling approximately 3,900 specimens. A total of 775 different species of vascular plants are listed, 748 of which were collected by the writer.

Description of the Area

Cedar County is situated in the eastern part of Iowa in the second tier of counties west of the Mississippi River and approximately midway in the State north and south. The county is bordered on the north by Jones County, on the east by Clinton and Scott, on the south by Muscatine and on the west by Johnson and Linn. The extreme southeastern corner is about thirty miles from the Mississippi River at Davenport, Iowa. The County is twenty-four miles square, and contains sixteen full townships. Total area of the county is 576 square miles, or 368,640 acres.

In general, the county comprises three types of topography: 1. more or less hilly uplands, 2. level drift plain, 3. terraces and first bottoms along the Cedar and Wapsipinicon Rivers. Hilly or rolling uplands make up the major area of the county. A flat, narrow plain transects the northern third of the county. Second terraces are present along the Cedar River near the Johnson County line, and from Rochester south to the Muscatine County line.

Most of the county lies in the Cedar River drainage basin. A small area in the northeastern corner is drained by the Wapsipinicon River. The three most important smaller streams of the county are Rock Creek, draining in general the central portion of the

county, Sugar Creek draining the eastern third, and Clear Creek draining the northwestern quarter.

The elevation of Cedar County above sea level ranges from 675 feet at the Muscatine County line to 910 feet north of Mechanicsville.

Climate

The climate is of the extreme midcontinental type. The average annual relative humidity is seventy-two per cent. The mean annual temperature is forty-eight and nine-tenths degrees Fahrenheit. The average growing season, the period between the average date of the earliest killing frost in the fall and the latest killing frost in the spring, is 168 days. The mean annual precipitation is thirty-four and one-half inches.

Geologic History

The indurated rocks of the county were deposited during three periods of geologic time, the Silurian, the Devonian, and the Carboniferous. Shales belonging to the Ordovician are reported from a single deep well near Tipton. Superficial deposits belong to the Pleistocene. The Kansan drift sheet extends over the entire county. The Iowan drift is confined to the northern and western sections. Limestone of Silurian age outcrops at various points in the county. Some of the more conspicuous of these outcrops are along the Cedar River at Cedar Bluffs and Cedar Valley, and near the Wapsipinicon River at Massillon.

Soils

The soils of Cedar County fall into three main divisions: (1) soils derived from loess; (2) soils of glacial origin which are modified by loess; (3) alluvial soils derived from loessial and glacial materials.

The soil of approximately ninety per cent of the area of the county is classified as silt loam. Most of the remainder is classified as sandy loam or as fine sand. Over 5,000 acres of fine sand, often occurring in the form of dunes, exist near the Cedar River in Rochester, Cass and Linn Townships.

"Blowouts" occur frequently in the dunes. Although of little agricultural value, the areas of fine sand offer a relatively specific flora of vast interest to the botanist.

EXPLANATION OF THE LIST OF VASCULAR PLANTS

In the list of vascular plants, the families are arranged according to the Engler and Prantl system. Genera and species within the families are listed in alphabetical order. Introduced species are

indicated by an asterisk. Nomenclature in general follows that of *Gray's Manual of Botany*, Eighth Edition, 1950.

To denote frequency of occurrence, arbitrary terms are used, based upon the following scale:

common.....	7 or more stations
frequent.....	4-6 stations
infrequent.....	2-3 stations
rare.....	1 station

These terms thus denote the number of stations where each species was collected or observed in the county, and do not indicate abundance in place. Some rare species are locally abundant in their specialized habitat.

The description of habitat is taken from the writer's observations of the plants in the field. The descriptions are brief, and could no doubt be made more accurate and specific in continued studies of the county.

One set of the specimens collected during this survey are deposited in the herbarium of the State University of Iowa.

List of Vascular Plants

EQUISETACEAE

- Equisetum arvense* L. Field horsetail. Common along roadsides and fence rows.
Equisetum hyemale L. Scouring-rush. Frequent in moist, calcareous soil along streams.
Equisetum kansanum Schaffner. Smooth scouring-rush. Common along roadsides, fencerows, and sandy prairies.

LYCOPODIACEAE

- Lycopodium lucidulum* Michx. Ravine along Cedar River, opposite Cedar Valley. Collected in June, 1941, by George Deihl. Specimen and information contributed by Dr. H. S. Conard.

OPHIOGLOSSACEAE

- Botrychium virginianum* (L.) Sw. Rattlesnake fern. Common in rich upland woods.

OSMUNDACEAE

- Osmunda claytoniana* L. Interrupted fern. Common in rich upland woods.
Osmunda regalis L. Royal fern. Rare. Sandy bog one mile east of Cedar River.

POLYPODIACEAE

- Adiantum pedatum* L. Maiden-hair fern. Common in rich ravines, upland woods.
Athyrium filix-femina (L.) Roth. Lady fern. Common in rich ravines, upland woods.
Athyrium thelypteroides (Michx.) Desv. Silvery spleenwort. Collected at only one station, in rich moist wooded ravine.
Camptosorus rhizophyllus (L.) Link. Walking fern. Common on limestone ledges.
Cryptogramma stelleri (S. G. Gmel.) Prantl. Rock-brake. Rare on moist limestone ledges.

- Cystopteris bulbifera* (L.) Bernh. Bulblet fern. Frequent on moist limestone ledges.
Cystopteris fragilis (L.) Bernh. Fragile fern. Common in upland woods. Most abundant fern in the county.
Dryopteris hexagonoptera (Michx.) Christens. Broad beech-fern. Infrequent in rich wooded ravines.
Dryopteris spinulosa (Muell.) Watt. Spinulose shield fern. Infrequent in rich upland woods.
Dryopteris thelypteris (L.) Gray. Marsh fern. Infrequent in sandy marshes.
Onoclea sensibilis L. Sensitive fern. Common in alluvial woods and marshy areas.
Pellaea glabella Mett. Frequent on limestone ledges.
Polystichum acrostichoides (Michx.) Schott. Christmas fern. Rare in rich ravines.
Pteridium aquilinum (L.) Kuhn. Common in sandy soil, on roadsides, and in borders of woods.
Woodsia obtusa (Spreng) Torr. Cliff fern. Infrequent on moist limestone ledges.

SALVINIACEAE

- Azolla mexicana* Presl. Rare in shallow quiet water.

TAXACEAE

- Taxus canadensis* Marsh. Canada Yew. Infrequent on limestone bluffs.

PINACEAE

- Juniperus virginiana* L. Eastern red cedar. Common in calcareous soils.

TYPHACEAE

- Typha latifolia* L. Common in marshes, margins of ponds and ditches.

SPARGANIACEAE

- Sparganium eurycarpum* Engelm. Frequent in marshes.

ZOSTERACEAE

- Potamogeton foliosus* Raf. Infrequent in shallow water.

ALISMATACEAE

- Alisma subcordatum* Raf. Infrequent in marshes.
Sagittaria latifolia Willd. Common in shallow water and marshes.

HYDROCHARITACEAE

- Elodea canadensis* Michx. Collected only in muddy border of small pond.

GRAMINEAE

- Agropyron repens* (L.) Beauv. Quack grass. Common along roadsides and in waste places.
Agropyron smithii Rydb. Frequent along roadsides and railroads.
 **Agrostis alba* L. Redtop. Common in many and variable habitats.
Agrostis scabra Willd. Ticklegrass. Frequent in sandy soil.
Alopecurus aequalis Sobol. Collected in hanging bog in upland woods.
Andropogon gerardi Vitman. Tall Bluestem. Common in prairie soil and along roadsides.
Andropogon scoparius Michx. Little Bluestem. Common in prairie soil.
Aristida basiramea Engelm. Frequent in dry rocky soil.
Aristida oligantha Michx. Collected only once in dry, sandy soil.
 **Avena sativa* L. Oat. Common in fields and along roadsides.
Bouteloua curtipendula (Michx.) Torr. Tall Grama grass. Common in dry sandy soil.
Bouteloua hirsuta Lag. Locally abundant in dry sandy or calcareous soil.

- Brachyelytrum erectum* (Schreb.) Beauv. Collected only once in rich upland woods.
- **Bromus inermis* Leyss. Hungarian Brome. Common in fields, upland woods and along roads.
- **Bromus japonicus* Thunb. Common along roadsides.
- Bromus latiglumis* (Shear) Hitchc. Collected at only one station, but probably not rare.
- Bromus purgans* L. Canada Brome. Common in upland woods.
- **Bromus secalinus* L. Chess. Indicated from Cedar County by dots on maps in *Grasses of Iowa*, by Pammel, et al.
- **Bromus tectorum* L. Common along railroads and roadsides.
- Calamagrostis canadensis* (Michx.) Beauv. Common in sloughs and along streams.
- Cenchrus pauciflorus* Benth. Common in sandy fields, roadsides and waste places.
- Cinna arundinacea* L. Wood Reed. Common in upland woods.
- Diarrhena americana* Beauv. Rare in upland woods.
- **Digitaria ischaemum* (Schreb.) Muhl. Smooth crab grass. Frequent in dry sandy soil.
- **Digitaria sanguinalis* (L.) Scop. Common crab grass. Common in lawns, farmyards, and along roads.
- Echinochloa crusgalli* (L.) Beauv. Barnyard grass. Common along roadsides and in waste places.
- Elymus canadensis* L. Wild rye. Common along roadsides and railroads.
- Elymus villosus* Mey. Common along roadsides and railroads.
- Elymus virginicus* L. Virginia Wild Rye. Common along railroads and in waste places.
- Eragrostis capillaris* L. Collected only once in alluvial bottom.
- Eragrostis frankii* C. A. Mey. Collected only once in low ground near Cedar Valley Quarry.
- Eragrostis hypnoides* (Lam.) BSP. Common in moist lowlands and on muddy stream banks.
- **Eragrostis megastachya* (Koel.) Stink grass. Common in fields and waste places.
- Eragrostis pectinacea* (Michx.) Nees. Common in farmyards, along roads and railroads.
- **Festuca elatior* L. Meadow Fescue. Infrequent in moist prairie along railroad.
- Festuca obtusa* Bishler. Common in woods and on calcareous soil.
- Festuca octoflora* Walt. Slender Fescue. Infrequent in dry sandy soil.
- Glyceria striata* (Lam.) Hitchc. Common along streams and in moist lowlands.
- Hordeum jubatum* L. Squirrel-tail grass. Common along roadsides and in waste ground.
- Bordeum pusillum* Nutt. Small Wild Barley. Infrequent in dry sandy soil.
- Hystrix patula* Moench. Bottlebrush grass. Common in upland woods.
- Koeleria cristata* (L.) Pers. June grass. Common in dry sandy prairie.
- Leersia oryzoides* (L.) Sw. Cutgrass. Common in moist sandy soil and marshes.
- Leersia virginica* Willd. White grass. Common in alluvial woods and along streams.
- Leptoloma cognatum* (Schult.) Chase. Common in sandy soil.
- **Miscanthus sinensis* Anderss. Rare. Wet sandy lowlands.
- Muhlenbergia frondosa* (Poir.) Fern. Frequent in alluvial bottoms.
- Muhlenbergia racemosa* (Michx.) BSP. Common in sandy soil.
- Muhlenbergia schreberi* J. F. Gmel. Nimble Will. Frequent along roadsides.
- Muhlenbergia sobolifera* (Muhl.) Collected in alluvial bottoms, base of limestone bluffs.
- Oryzopsis racemosa* (Sm.) Ricker. Infrequent in upland woods.
- Panicum capillare* L. Witch grass. Common in sandy soil on roadsides, and in waste places.

- Panicum dichotomiflorum* Michx. Common along roadsides and in waste places.
- Panicum implicatum* Scribn. Common in moist sandy soil.
- Panicum latifolium* L. Common in woods.
- Panicum leibergii* (Vasey) Scribn. Common in dry sandy soil.
- Panicum oligosanthes* var. *scribnerianum* (Nash) Fern. Common in dry, sandy soil.
- Panicum perlongum* Nash. Frequent in dry sandy soil.
- Panicum villosissimum* Nash. Common in dry sandy soil.
- Panicum virgatum* L. Switch grass. Common along roadsides and waste places.
- Paspalum ciliatifolium* Michx. Common in dry sandy soil.
- Phalaris arundinacea* L. Reed Canary Grass.
- **Phleum pratense* L. Timothy. Common along roadsides.
- **Poa compressa* L. Canada bluegrass. Indicated from Cedar County, by dots on maps in *Grasses of Iowa*, by Pammel, et al.
- Poa palustris* L. Fowl bluegrass. Collected by L. W. Zell.
- **Poa pratensis* L. Kentucky blue grass. Common along roadsides, in fields and waste places.
- Poa sylvestris* A. Gray. Collected at only one station in alluvial woods.
- **Secale Cereale* L. Rye. Common along roadsides.
- **Setaria faberii* Hermm. Infrequent weed of cornfields and fencerows.
- **Setaria italica* (L.) Beauv. Hungarian millet. Indicated from Cedar County by dots on maps in *Grasses of Iowa*, by Pammel, et al.
- **Setaria lutescens* (Weigel) F. T. Hubbard. Yellow Foxtail. Common along roadsides and in waste places.
- **Setaria verticillata* (L.) Beauv. Observed in farmyard by Dr. R. F. Thorne and the writer.
- **Setaria viridis* (L.) Beauv. Green Foxtail. Common along roadsides and in waste places.
- Sorghastrum nutans* (L.) Nash. Indian grass. Frequent in dry sandy soil.
- **Sorghum halapense* (L.) Pers. Johnson grass. Frequent escape on roadsides.
- Spartina pectinata* Link. Slough-grass. Common in marshy lowland and ditches.
- Sphenopholis intermedia* Rybd. Infrequent in moist woods.
- Sphenopholis obtusata* (Michx.) Scribn. Infrequent in sandy soil.
- Sporobolus asper* (Michx.) Kunth. Infrequent in dry sandy soil.
- Sporobolus cryptandrus* (Torr.) A. Gray. Frequent in dry sandy soil.
- Sporobolus heterolepis* A. Gray. Collected in moist prairie soil.
- Sporobolus neglectus* Nash. Infrequent in dry calcareous soil.
- Sporobolus vaginiflorus* (Torr) Wood. Frequent in dry sandy soil.
- Stipa spartea* Trin. Porcupine-grass. Common in prairie soil.
- Stipa viridula* Trin. Specimen in herbarium of State University of Iowa, collected by B. Shimek in prairie soil, May 26, 1921.
- Triplasis purpurea* (Walt.) Chapm. Rare in dry sandy soil.
- **Triticum aestivum* L. Frequent escape from cultivation.

CYPERACEAE

- Bulbostylis capillaris* (L.) C. B. Clarke. Rare in dry sandy soil.
- Carex albusina* Sheldon. Frequent in rich upland woods and calcareous slopes.
- Carex annectens* var. *xanthocarpa* Bickn. Infrequent in moist sandy prairie soil.
- Carex bebbii* Olney. Collected at only one station, in wet prairie soil.
- Carex blanda* Dewey. Common in upland woods.
- Carex bicknellii* Britt. Common in moist prairie soil.
- Carex brevior* (Dew.) Mackenz. Common in sandy soil.
- Carex cephaloidea* Dewey. Rare. Moist sandy soil.
- Carex cephalophora* Muhl. Common in sandy soil, on roadsides, in fields and upland woods.
- Carex conjuncta* Boott. Common in sandy soil in alluvial woods.
- Carex cristatella* Britt. Common in alluvial woods.
- Carex davisii* Schw. and Torr. Common in rich and alluvial woods.

- Carex eburnea* Boott. Rare on dry limestone ledges.
Carex granularis Muhl. Rare. Roadside.
Carex gravida L. H. Bailey. Common in dry sandy prairies and sand hills.
Carex grayii Carey. Common in alluvial woods.
Carex amphibola Steud. Common in rich woods and alluvial bottoms.
Carex haydenii Dew. Rare in moist prairie soil.
Carex hirtifolia Mackenz. Common in upland woods.
Carex hystericina Muhl. Collected in shallow water in marsh.
Carex lacustris Willd. Collected in shallow water in marsh.
Carex lanuginosa Michx. Common in moist prairie.
Carex leavenworthii Dew. Collected in low moist ground.
Carex lupulina Muhl. Common in alluvial woods.
Carex meadii Dewey. Frequent in prairies.
Carex molesta Mackenz. Common in sandy soil, on roadsides, and along railroads.
Carex muhlenbergii Schkuhr. Common in dry sandy soil.
Carex normalis Mackenz. Common in upland woods.
Carex pennsylvanica Lam. Common in upland woods.
Carex rosea Schkuhr. Common in upland and rich woods.
Carex scoparia Schkuhr. Common in sandy soil.
Carex sparganioides Muhl. Common in woods.
Carex stipata Muhl. Infrequent in moist sandy soil and lowlands.
Carex stricta Lam. Collected at only one station.
Carex tribuloides Wahlenb. Common in alluvial woods and moist sandy soil.
Carex vesicaria L. Infrequent in sandy marshes.
Carex vulpinoidea Michx. Common in marshes and wet sandy soil.
Cyperus inflexus Muhl. (*C. aristatus* of authors, not Rottb.) Rare in low moist sandy soil.
Cyperus erythrorhizos Muhl. Infrequent in moist sandy lowlands.
Cyperus esculentus L. Frequent in moist sandy lowlands.
Cyperus filiculmis Vahl. Infrequent in dry sandy soil.
Cyperus rivularis Kunth. Rare. Collected in hanging bog in upland woods.
Cyperus schweinitzii Torr. Common in dry sandy soil.
Cyperus strigosus L. Common in moist sandy lowlands.
Eleocharis acicularis L. Common in moist sandy lowlands.
Eleocharis calva Torr. Infrequent in moist sandy soil and on moist prairies.
Eleocharis engelmanni Steud. Rare in wet sandy lowlands.
Eleocharis macrostachya Britt. Collected at only one station in a marsh.
Eleocharis obtusa (Willd.) Schult. Common in marshy areas throughout the county.
Eleocharis smallii Britt. Infrequent in sandy marshes.
Eleocharis tenuis (Willd.) Schultes. Collected only once in moist prairie along railroad.
Eleocharis wolfii (A. Gray) Patterson. Rare in sandy marshes.
Hemicarpha micrantha (Vahl.) Pax. Rare in moist sandy soil.
Scirpus atrovirens Willd. Common in marshes and shallow quiet water.
Scirpus cyperinus (L.) Kunth. Common in marshes and shallow quiet water.
Scirpus fluviatilis (Torr.) A. Gray. Frequent in marshes.
Scirpus validus Vahl. Common in marshes and wet lowlands.

ARACEAE

- Arisaema dracontium* (L.) Schott. Green Dragon. Frequent in alluvial woods and moist ravines.
Arisaema triphyllum (L.) Schott. Jack-in-the-pulpit. Common in rich upland woods.
Acorus calamus L. Rare in sandy marshes.

LEMNACEAE

- Lemna minor* L. Common in quiet, usually polluted water.
Spirodela polyrhiza (L.) Schleid. Frequent in shallow quiet water, marshes, etc.

COMMELINACEAE

- **Commelina communis* L. Collected only once, in a farmyard.
Tradescantia ohiensis Raf. Very common along roadsides, borders of woods and in waste places.
Tradescantia virginiana L. Rare in moist sandy soil.

JUNCACEAE

- Juncus canadensis* J. Gay. Rare in moist sandy lowlands.
Juncus interior Wieg. Collected only once, in moist sandy soil.
Juncus marginatus Rostk. Collected at only one station, in low boggy area, in sandy soil.
Juncus nodosus L. Infrequent in moist sandy lowlands.
Juncus tenuis Willd. Common along paths, roadsides, railroads, and in fields.
Juncus torreyi Coville. Rare in moist prairie soil.

LILIACEAE

- Allium canadense* L. Frequent in upland woods and moist prairie soil.
Allium tricoccum Ait. Wild Leek. Frequent in moist, shady upland woods.
 **Asparagus officinalis* L. Garden asparagus. Common along roadsides and waste places.
Erythronium albidum Nutt. Common in alluvial and moist upland woods.
 **Hemerocallis fulva* L. Frequent escape to roadsides; found once in dense upland woods.
Lilium michiganense Farw. Rare along roadsides, in sandy soil.
Lilium philadelphicum var. *andinum* (Nutt.) Ker. Rare in dry, sandy prairie soil.
Melanthium virginicum L. Bunchflower. Indicated from Cedar County by dots on maps in *Weed Flora of Iowa*, by Pammel, et al.
Polygonatum commutatum (Schult.) Dietr. Common in upland woods and on roadsides.
Smilacina racemosa (L.) Desf. Common in upland woods and on roadsides.
Smilacina stellata (L.) Desf. Infrequent on roadsides in prairies, and in moist sandy lowlands.
Smilax ecirrhata (Engelm.) Wats. Common in rich upland woods.
Smilax herbacea L. Carrion flower. Common in upland woods and on roadsides.
Smilax hispida Muhl. Common in upland woods.
Trillium flexipes Raf. (*Trillium gleasoni* Fern.) Rare. Rich, moist woods in calcareous soil.
Uvularia grandiflora Sm. Bellwort. Common in upland woods.
Uvularia sessilifolia L. Rare in rich upland woods.

DIOSCOREACEAE

- Dioscorea villosa* L. Frequent in rich upland woods.

AMARYLLIDACEAE

- Hypoxis hirsuta* (L.) Coville. Frequent in dry soil.

IRIDACEAE

- Iris virginica* var. *shrevii* (Small) E. Anders. Common in marshes and shallow quiet water.
Sisyrinchium campestre Bickn. Common in prairies, in dry soil along roadsides, and in clearings in upland woods.

ORCHIDACEAE

- Aplectrum hyemale* (Muhl.) Torr. Putty-root. Rare in rich upland woods.
Cypripedium calceolus var. *pubescens* (Willd.) Correll. Yellow lady's slipper. Rare in rich upland woods.

- Habenaria leucophaea* (Nutt.) Gray. Prairie orchis. Listed by B. Shimek as being in a bog just west of Downey.
Liparis lilifolia (L.) Rich. Rare in calcareous soil, dry upland woods.
Orchis spectabilis L. Showy orchis. Infrequent in rich upland woods.
Spiranthes gracilis (Bigel.) Beck. Slender Ladies' Tresses. Rare. In dry prairie soil.

SALICACEAE

- **Populus alba* L. Write poplar. Infrequent on roadsides.
Populus deltoides Marsh. Cottonwood. Common in bottomlands and along streams.
Populus grandidentata Michx. Frequent in upland woods and on roadsides.
Populus tremuloides Michx. Frequent in dry upland woods and on roadsides.
Salix amygdaloides Anders. Peach-leaved willow. Common along streams and in marshy areas.
Salix cordata Muhl. Found at only one station in the county. In alluvial woods.
Salix discolor Muhl. Pussy Willow. Infrequent on banks of small streams.
**Salix fragilis* L. Brittle Willow. Common in alluvial woods and on shores of streams.
Salix humilis Marsh. Prairie willow. Infrequent in dry, prairie soil.
Salix interior Rowlee. Sandbar willow. Common in low, wet soil along streams.
Salix nigra Marsh. Black willow. Common on banks of streams and in alluvial woods.

JUGLANDACEAE

- Carya cordiformis* (Wang.) K. Koch. Bitternut Hickory. Common in upland woods.
Carya laciniosa (Michx. f.) Loud. Shellbark Hickory. Rare in alluvial bottom woods.
Carya ovata (Mill.) K. Koch. Shagbark Hickory. Common in upland woods and roadsides.
Carya tomentosa Nutt. Mockernut Hickory. Infrequent in dry upland woods.
Juglans cinerea L. Butternut. Common, particularly on slopes along the Cedar River and other streams throughout the county.
Juglans nigra L. Black walnut. Common in woods and along roadsides throughout the county.

CORYLACEAE

- Betula nigra* L. River birch. Common on flood plains and stream banks throughout the county.
Carpinus caroliniana Walt. Blue beech. Found at only one station, on top of dry limestone ledge.
Corylus americana Walt. Common in upland woods and thickets.
Ostrya virginiana (Mill.) K. Koch. Ironwood, Hop-Hornbeam. Common in rich woods, frequent in upland woods.

FAGACEAE

- **Castanea dentata* (Marsh.) Borkh. Rare. The tree found is young, eighteen feet tall, four inches D.B.H., apparently healthy, growing from an old stump which is two feet six inches in diameter at the ground. The original tree was probably introduced.
Quercus alba L. Common in upland woods and on roadsides.
Quercus macrocarpa Michx. Mossy-cup oak. Common in both alluvial and upland woods.
Quercus muhlenbergii Engelm. Chinquapin oak. Collected only once in calcareous soil, top of limestone ledge.
Quercus rubra L. Red oak. Common in upland and frequent in bottomland woods throughout the county.
Quercus velutina Lam. Black oak. Common in upland woods; frequent in bottomland woods.

ULMACEAE

- Celtis occidentalis* L. Common in both bottomland and upland woods.
Ulmus americana L. Common in rich soil, particularly in bottomlands along streams.
 **Ulmus pumila* L. Chinese elm. Commonly planted throughout the county, infrequently escaping to roadsides.
Ulmus rubra Muhl. Slippery or Red Elm. Common in rich upland woods, often in calcareous soil.

MORACEAE

- **Maclura pomifera* (Raf.) Schneid. Osage orange. Frequent along roadsides and fencerows.
 **Morus alba* L. White mulberry. A common weedy tree, escaping from cultivation to woods, roadsides, and waste places.
Morus rubra L. Red mulberry. Infrequent in rich woods.

CANNABINACEAE

- **Cannabis sativa* L. Common weed in waste places and roadsides.

URTICACEAE

- Boehmeria cylindrica* (L.) Sw. Bog-hemp. Frequent in moist ground.
Laportea canadensis (L.) Wedd. Common weed of alluvial woods and stream banks.
Parietaria pennsylvanica Muhl. Common in moist calcareous or sandy soil, and on limestone ledges.
Urtica procera Muhl. Common in alluvial or rich upland woods and waste places, usually in moist soil.

SANTALACEAE

- Comandra umbellata* (L.) Nutt. Frequent in dry, sandy, prairie.

ARISTOLOCHIACEAE

- Asarum canadense* L. Common in rich wooded ravines usually in calcareous soil.

POLYGONACEAE

- **Polygonum aviculare* L. Knotweed. Common weed of roadsides, farmyards, and waste places.
Polygonum coccineum Muhl. Frequent in shallow water and on margins of ponds, usually in sandy soil.
 **Polygonum convolvulus* L. Black bindweed. Common weed of roadsides and waste places.
 **Polygonum cuspidatum* Sieb. and Zucc. Japanese knotweed. Frequent escape to roadsides; introduced from Asia.
Polygonum erectum L. Indicated to be from Cedar County in *Weed Flora of Iowa*, by Pammel et al.
Polygonum hydropiper L. Common smartweed. Common in marshy areas and damp soil in general throughout the county.
Polygonum hydropiperoides Michx. Common in moist soil, particularly on flood plains.
Polygonum lapathifolium L. Common in moist bottomlands and waste places.
Polygonum pennsylvanicum L. Pinkweed. Common weed of moist soil along streams, roadsides, and fencerows.
 **Polygonum persicaria* L. Lady's-thumb. Common weed of roadsides, fencerows, and waste ground, usually in moist soil.
Polygonum punctatum Ell. Common weed of stream banks, marshy areas, etc.
Polygonum ramosissimum Michx. Frequent in dry or moist sandy soil.
Polygonum sagittatum L. Tear-thumb. Frequent in moist sandy soil, usually in marshes.
Polygonum scandens L. Climbing False-buckwheat. Frequent along roadsides and edges of woods.

- Polygonum tenue* Michx. Common in dry, sandy soil, particularly in the Cedar River region.
**Rumex acetosella* L. Common weed of dry clayey or sandy soils.
Rumex altissimus Wood. Pale-dock. Common in rather moist, rich soil.
**Rumex crispus* L. Curly-dock. A common weed of roadsides, fencerows, fields, and waste places.
Rumex mexicanus Meixn. Rather rare; collected only once in sandy soil.
Rumex orbiculatus A. Gray. Water-dock. Infrequent in marshy lowlands.
Rumex verticillatus L. Swamp-dock. Frequent in moist bottomlands, usually in sandy soil.
Tovara virginiana (L.) Raf. Common in shady upland woods.

CHENOPODIACEAE

- **Chenopodium album* L. Lamb's-quarter. Common weed of roadsides and waste places.
Chenopodium leptophyllum Nutt. Narrow-leaved goosefoot. Common in dry sandy soil.
Cycloloma atriplicifolium (Spreng.) Coult. Winged Pigweed. Common in dry, sandy soil in the Cedar River region.
Kochia scoparia (L.) Roth. Indicated from Cedar County in *Weed Flora of Iowa*, by Pammel et al.
**Salsola kali* var. *tenuifolia* Tausch. Russian-thistle. Common weed of roadsides, railroads, and waste places, often in gravelly soil.

AMARANTHACEAE

- Acnida altissima* Riddell. Common weed of moist lowlands and stream banks.
Amaranthus albus L. Tumbleweed. Common weed of moist lowlands and stream banks.
Amaranthus graecizans L. Prostrate amaranth. Common weed of cultivated fields, roadsides, and waste places.
**Amaranthus retroflexus* L. Pigweed. Common weed of waste places, roadsides, and railroads.
Froelichia floridana var. *campestris* (Small) Fern. Infrequent in dry, sandy soil.

NYCTAGINACEAE

- Mirabilis nyctaginea* (Michx.) Mac M. Common along roadsides and railroads throughout the county.

AIZOACEAE

- **Mollugo verticillata* L. Carpetweed. Common weed of cultivated fields, roadsides and waste places, often in sandy soil.

PORTULACACEAE

- Claytonia virginica* L. Common spring wild flower of rich upland woods.
**Portulaca oleracea* L. Common weed of roadsides and waste places.

CARYOPHYLLACEAE

- Arenaria lateriflora* L. Collected at only one station in a clearing in upland woods.
Cerastium nutans Raf. Nodding Mouse-ear Chickweed. Common weed in a variety of habitats, often in calcareous soil.
**Dianthus armeria* L. Deptford Pink. Rare. Weed naturalized from Europe. Dry, sandy prairie.
**Lychnis alba* Mill. Common weed of roadsides and waste places.
Paronychia canadensis (L.) Wood. Infrequent in sandy soil.
Paronychia fastigiata (Ref.) Fern. Infrequent in sandy soil.
**Saponaria officinalis* L. Bouncing Bet. Common weed of roadsides and waste places.
Silene antirrhina L. Sleepy catch-fly. Common weed of dry woods, roadsides, sandy soil, and waste places.

- **Silene noctiflora* L. Common weed of roadsides and waste places.
Silene stellata (L.) Ait. f. Starry Campion. Frequent in sandy soil.
Stellaria longifolia Muhl. Infrequent in sandy soil.
**Stellaria media* (L.) Cyrillo. Common Chickweed.

NYMPHAEEACEAE

- Nuphar advena* Ait. Yellow water-lily. Rare, found only once in a very small pond.

RANUNCULACEAE

- Actaea pachypoda* Ell. White baneberry. Common on rich wooded banks, often in calcareous soil.
Actaea rubra (Ait.) Willd. Red baneberry. Frequent in rich woods and on calcareous slopes.
Anemone canadensis L. Meadow anemone. Common in moist woods, on roadsides, and along streams.
Anemone cylindrica A. Gray. Long fruited anemone. Infrequent in dry calcareous prairie soil.
Anemone quinquefolia L. Wood anemone. Common spring wild flower of rich upland woods.
Anemone virginiana L. Tall anemone. Common in woods, thickets and on roadsides.
Anemonella thalictroides (L.) Spach. Rue-anemone. Common spring wild flower of rich upland woods.
Aquilegia canadensis L. Common on rich calcareous slopes and limestone ledges.
Clematis pitcheri. Leather flower. Common in sandy soil.
Clematis virginiana L. Infrequent in sandy soil, on roadsides, and at edge of woods.
Hepatica acutiloba DC. Common in rich upland woods.
Isopyrum biternatum (Raf.) T. and G. False Rue Anemone. Infrequent in rich, moist, wooded ravines and alluvial woods.
Ranunculus abortivus L. Small-flowered Buttercup. Common in alluvial and rich woods.
Ranunculus fascicularis Muhl. Tufted Buttercup. Common in upland woods, and dry prairie soil.
Ranunculus flabellaris Raf. Collected only once, on shore of a small pond.
Ranunculus septentrionalis Poir. Marsh Buttercup. Common in alluvial woods and moist lowlands.
Thalictrum dasycarpum Fisch and Lall. Frequent in moist prairies and damp meadows.
Thalictrum dioicum L. Infrequent in rich upland woods.

BERBERIDACEAE

- Caulophyllum thalictroides* (L.) Michx. Blue Cohosh. Common in rich upland woods.
Podophyllum peltatum L. May-apple. Common in upland woods.

MENISPERMACEAE

- Menispermum canadense* L. Common in rich upland and alluvial woods.

PAPAVERACEAE

- Dicentra cucullaria* (L.) Bernh. Dutchman's Breeches. Common in rich upland woods.
Sanguinaria canadensis L. Bloodroot. Common in rich upland woods.

CAPPARIDACEAE

- Polanisia graveolens* Raf. Common in sandy soil.

CRUCIFERAE

- Arabis drummondii* Gray. Common on moist limestone ledges.
Arabis hirsuta (L.) Scop. Frequent along rocky slopes of Cedar River.
Arabis perstellata E. L. Br. Frequent on rich calcareous slopes.

- **Armoracia lapathifolia* Gilib. Horseradish. Common along roadsides, and in moist soil.
- **Barbarea vulgaris* R. Br. Yellow rocket. Common weed of roadsides and fields.
- **Brassica kaber* (DC.) L. C. Wheeler. Charlock. Common weed of fields, railroads, roadsides, and waste places.
- **Brassica nigra* (L.) Koch. Black Mustard. Common weed of fields, roadsides, and waste places.
- **Capsella bursa-pastoris* (L.) Medic. Shepherd's purse. Common weed of roadsides, farmyards, and waste places.
- Cardamine bulbosa* (Schreb.) B. S. P. Frequent in wet, marshy lowlands.
- Cardamine pennsylvanica* Muhl. Common on rich moist calcareous ledges and slopes.
- Dentaria laciniata* Muhl. Common in rich, moist woods.
- **Descurainia sophia* (L.) Webb. Common weed of roadsides and waste places.
- Draba reptans* (Lam.) Fern. Common in dry sandy soil.
- **Erysimum cheiranthoides* L. Wormseed-mustard. Common in sandy soil.
- **Hesperis matronalis* L. Rocket. Infrequent escape from cultivation.
- Iodanthus pinnatifidus* (Michx.) Steud. Infrequent in alluvial bottoms.
- **Lepidium campestre* (L.) R. Br. Field Peppergrass. Common weed of railroads, roadsides, and waste places.
- **Lepidium densiflorum* Schrad. Common weed of roadsides and waste places.
- Lepidium virginicum* L. Common Peppergrass. Common weed of dry roadsides and waste places.
- Rorippa islandica* (oeder) Borbas. Common in wet alluvial soil, moist meadows, and stream banks.
- **Sisymbrium altissimum* L. Common along roadsides, railroads, and in waste places.
- **Sisymbrium officinale* L. Scop. Hedge mustard. Common along railroads, roadsides, and in waste places.
- **Thlaspi arvense* L. Field Pennycress. Common weed along railroads, roadsides and waste places.

CRASSULACEAE

- Sedum ternatum* Michx. Wild Stonecrop. Rare in moist wooded ravine, calcareous soil.

SAXIFRAGACEAE

- Heuchera richardsonii* R. Br. Common in prairie soil.
- Mitella diphylla* L. Bishop's-cap. Common in rich wooded ravines.
- Penthorum sedoides* L. Ditch Stonecrop. Common in low, moist ground.
- Ribes americanum* Mill. Wild Black Currant. Frequent in woods.
- Ribes cynosbati* L. Prickly Gooseberry. Common in calcareous woods and thickets.
- Ribes missouriense* Nutt. Common gooseberry. Common in woods and thickets.
- Saxifraga pennsylvanica* L. Infrequent in moist soil.
- Sullivantia renifolia* Rosend. Infrequent on moist limestone ledges.

PLATANACEAE

- Platanus occidentalis* L. Common tree of alluvial bottoms.

ROSACEAE

- Agrimonia parviflora* Ait. Common in sandy upland woods and moist lowlands.
- Agrimonia pubescens* Wallr. Common in rich upland woods.
- Agrimonia striata* Michx. Common in moist woods.
- Amelanchier arborea* (Michx. f.) Fern. Common on bluffs and in rich upland woods, chiefly on calcareous soil.
- Crataegus crusgalli* L. Common in dry rocky soil.
- Crataegus mollis* L. Common in upland woods.
- Crataegus margaretta* Ashe. Frequent in upland woods and thickets.
- Fragaria virginiana* Duch. Wild Strawberry. Common in upland woods and along roadsides.

- Geum canadense* Jacq. White avens. Common in upland woods.
Geum laciniatum Murr. Common in low moist ground.
Physocarpus opulifolius (L.) Maxim. Ninebark. Common on ledges along streams and in moist woods.
 **Potentilla argentea* L. Silvery cinquefoil. Collected at only one station, in sandy soil.
Potentilla arguta Pursh. Tall Cinquefoil. Common in sandy prairie soils.
Potentilla norvegica L. Rough Cinquefoil. Common in moist lowlands.
 **Potentilla recta* L. Frequent in sandy soils.
Potentilla simplex Michx. Common Cinquefoil. Common along roadsides and in upland woods.
Prunus americana Marsh. Wild plum. Common along roadsides and in upland woods.
Prunus serotina Ehrh. Wild Black Cherry. Common in upland woods.
Prunus virginiana L. Chokecherry. Common in woods and thickets.
Pyrus ioensis (Wood) Bailey. Wild Crab. Common in woods and along roadsides.
Rosa blanda Ait. Frequent in sandy or rocky soil.
Rosa carolina L. Pasture Rose. Common in dry sandy or calcareous soil.
 **Rosa eglanteria* L. Sweetbriar. Frequent along roadsides.
Rosa arkansana Porter. Common along roadsides and fencerows.
Rubus allegheniensis Porter. Blackberry. Common in upland woods and thickets.
Rubus occidentalis L. Black Raspberry. Common in upland woods and along roadsides.
Rubus flagellaris Willd. Dewberry. Frequent in dry woods and on borders of thickets.
Spiraea alba DuRoi. Meadowsweet. Common in low moist ground.

LEGUMINOSAE

- Amorpha canescens* Pursh. Lead-plant. Common in prairie soil and on roadsides.
Amorpha fruticosa L. Indigo-bush. Frequent in low moist ground, often in sandy alluvial soil.
Amphicarpa bracteata (L.) Fern. Common in moist woodlands.
Apios americana Medic. Groundnut. Common in moist sandy soil.
Astragalus canadensis L. Common along roadsides and borders of woods.
Baptisia leucantha T. and G. Frequent along roadsides and in moist prairie soil.
Baptisia leucophaea Nutt. Rare in prairie soil.
Cassia fasciculata Michx. Partridge-pea. Common in sandy soil.
Cassia marilandica L. Frequent on roadsides and in moist sandy soil.
Cercis canadensis L. Rare, near the southern edge of the county, in alluvial woods.
Crotalaria sagittalis L. Common in dry sandy soil.
Desmodium canadense (L.) DC. Frequent in upland woods.
Desmodium cuspidatum (Muhl.) Loud. Common in dry prairie soil.
Desmodium glutinosum Muhl. Common in upland woods.
Desmodium illinoense Gray. Common in sandy soil.
Desmodium nudiflorum (L.) DC. Rare in rich upland woods.
Gleditsia triacanthos L. Common in alluvial bottoms and upland woods.
Gymnocladus dioica (L.) K. Koch. Rare in lowland woods.
Lespedeza capitata Michx. Common in dry sandy soil, often in prairies.
 **Lespedeza stipulacea* Mixim. Frequent weed of sandy soils.
 **Medicago sativa* L. Alfalfa. Common along roadsides.
 **Melilotus alba* Desr. Common along roadsides and waste places.
 **Melilotus officinalis* (L.) Lam. Yellow Sweet Clover. Common along railroads and roadsides.
Petalostemum candidum (Willd.) Michx. White prairie clover. Frequent in dry sandy prairies.

- Petalostemum purpureum* (Vent.) Pydb. Frequent in dry sandy prairies.
Robinia pseudo-acacia L. Black locust. Common in upland woods and thickets.
Strophostyles helvola (L.) Britt. Common in dry sandy soil.
Strophostyles leiosperma (T. & G.) Piper. Common in dry sandy soil.
Tephrosia virginiana (L.) Pers. Goat's-rue. Infrequent in dry sandy soil.
 **Trifolium arvense* L. Rabbit-foot Clover. Rare in dry sandy soil.
 **Trifolium dubium* Sibth. Little Hop-clover. Frequent in waste places and on roadsides.
 **Trifolium hybridum* L. Alsike Clover. Common along roadsides and in waste places.
 **Trifolium pratense* L. Red Clover. Common along roadsides and in waste places.
 **Trifolium procumbens* L. Low Hop-clover. Frequent along roadsides and railroads.
 **Trifolium repens* L. White Clover. Common along roadsides, in lanes and waste places.
 **Vicia villosa* Roth. Frequent in dry sandy soil along roadsides.

LINACEAE

- Linum sulcatum* Riddell. Infrequent in dry sandy or calcareous soil.

OXALIDACEAE

- Oxalis europaea* Jord. Common Wood-sorrel. Common along roadsides and in waste places.
Oxalis violacea L. Violet wood-sorrel. Frequent in timber pastures and on roadsides, often in sandy soil.

GERANIACEAE

- Geranium carolinianum* L. Rare in dry sandy soil near the Cedar River.
Geranium maculatum L. Wild cranesbill. Common wild flower of rich upland woods.

RUTACEAE

- Ptelea trifoliata* L. Listed by B. Shimek as being along railroad near Downey.
Xanthoxylum americanum Mill. Prickly-ash. Common shrub of upland woods and thickets.

POLYGALACEAE

- Polygala verticillata* L. Frequent in dry sandy soil, often in sandy prairies.
Polygala incarnata L. Rare in dry sandy prairie.
Polygala sanguinea L. Frequent in sandy soil.
Polygala senega L. Seneca-snakeroot. Infrequent in dry sandy soil.

EUPHORBIACEAE

- Acalypha rhomboidea* Raf. Frequent in moist shady lowlands.
Croton glandulosus L. Var. *septentrionalis* Muell. Common in dry sandy soil.
Euphorbia corollata L. Flowering Spurge. Common in dry sandy soil.
 **Euphorbia cyparissias* L. Cypress Spurge. Infrequent as escape along roadsides and in old cemeteries.
Euphorbia dentata Michx. Observed near the Rochester Cemetery.
Euphorbia geyeri (Engelm.) Small. Infrequent in dry sandy soil.
Euphorbia glyptosperma Engelm. Infrequent in dry sandy soil.
Euphorbia heterophylla L. Painted-leaf. Rare in moist sandy soil.
Euphorbia maculata (L.) Small. Nodding Spurge. Common in dry soil along roadsides and waste places.
 **Euphorbia marginata* Pursh. Snow-on-the-mountain. Observed along roadside.
Euphorbia supina (Raf.) Moldenke. Milk Spurge. Common in dry sandy soil.

CALLITRICHACEAE

- Callitriche heterophylla* Pursh. Rare in standing, stagnant water.

ANACARDIACEAE

- Rhus aromatica* Ait. Fragrant Sumac. Infrequent in dry sandy soil.
Rhus glabra L. Smooth Sumac. Common along roadsides and in upland woods.
Rhus radicans L. Poison Ivy. Common in woods and along roadsides throughout the county.

CELASTRACEAE

- Celastrus scandens* L. Climbing Bittersweet. Common in both upland and alluvial woods.
Euonymus atropurpureus Jacq. Burning-Bush, Wahoo. Infrequent in rich upland woods, and on calcareous slopes.

STAPHYLEACEAE

- Staphylea trifolia* L. Bladdernut. Common in upland woods and on calcareous slopes.

ACERACEAE

- Acer negundo* L. Box-elder. Common tree of alluvial bottoms and stream banks.
Acer nigrum Michx. f. Black Maple. Common tree of upland woods and rich calcareous slopes.
Acer saccharinum L. Silver Maple. Common tree of river-banks and alluvial woods.

BALSAMINACEAE

- Impatiens capensis* Meerb. Spotted Touch-me-not. Common in moist shady soil, usually in lowlands.
Impatiens pallida Nutt. Pale Touch-me-not. Common in moist alluvial bottoms.

RHAMNACEAE

- Ceanothus americanus* L. New Jersey Tea. Common in dry sandy prairies and along roadsides.
Rhamnus lanceolata Pursh. Buckthorn. Infrequent in low woods, in calcareous soil.

VITACEAE

- Parthenocissus inserta* (Kerner) K. Fritsch. Common in rich woods.
Parthenocissus quinquefolia (L.) Planch. Virginia Creeper. Common in wooded areas throughout the county.
Vitis riparia Michx. Riverbank grape. Common in alluvial woods and rich upland calcareous slopes.

TILIACEAE

- Tilia americana* L. Basswood or Linden. Common tree of alluvial bottoms and rich calcareous slopes.

MALVACEAE

- **Abutilon theophrasti* Medic. Velvet-leaf. Common weed of cultivated fields, meadows and waste places.
 **Althaea rosea* Cav. Hollyhock. Frequent escape to roadsides.
Hibiscus militaris Cav. Rare in marshy lowlands.
Hibiscus trionum L. Flower-of-an-hour. Frequent weed of roadsides and cultivated fields.
 **Malva neglecta* Wallr. Common weed of farmyards, and waste places.
 **Sida spinosa* L. Prickly Sida. Frequent weed of waste places.

GUTTIFERAE

- Hypericum mutilum* L. Infrequent in sandy soil.
 **Hypericum perforatum* L. Common St. John's wort. Common along roadsides and in meadows.
Hypericum punctatum Lam. Common in moist woods.
Hypericum sphaerocarpum Michx. Round-fruited St. John's-wort. Common in upland woods and sandy roadsides.

CISTACEAE

- Helianthemum bicknellii* Fern. Frostweed. Frequent in dry sandy soil.
Lechea stricta Leggett. Infrequent in dry sandy soil.
Lechea tenuifolia Michx. Common in dry sandy soil.

VIOLACEAE

- Viola fimbriatula* Sm. Specimen in herbarium of State University of Iowa, collected by B. Shimek in prairie soil, Fremont Twp.
Viola lanceolata L. Lance-leaved violet. Rare in boggy area near the Cedar River.
Viola missouriensis Greene. Common in alluvial bottom woods and meadows.
Viola pallens (Banks) Brainerd. Smooth White Violet. Rare in hanging bog, sandy upland woods near the Cedar River.
Viola papilionacea Pursh. Butterfly Violet. Common in upland woods.
Viola pedata L. Bird-foot violet. Frequent in prairie; infrequent in sandy open woods.
Viola pedatifida Don. Frequent in prairie soil.
Viola pensylvanica Michx. Common yellow violet. Common in rich upland woods.
Viola pubescens Ait. Downy Yellow Violet. Common in rich upland woods.
Viola sagittata Ait. Arrow-leaved violet. Rare in low bog near Cedar River.
Viola sororia Willd. Downy blue violet. Common in upland woods.

CACTACEAE

- Opuntia humifusa* Raf. Prickly Pear. Rare in dry sandy prairie.

THYMELIACEAE

- Dicra palustris* L. Leatherwood. Rare on dry calcareous slopes.

LYTHRACEAE

- Ammannia coccinea* Rothb. Infrequent in low, wet, sandy soil.
Lythrum alatum Pursh. Common Loosestrife. Common in low wet bottom lands and sloughs.

MELASTOMATACEAE

- Rhexia virginica* L. Rare in low, wet sandy soil.

ONAGRACEAE

- Circaea quadrisulcata* (Maxim.) Franch and Cav. var. *Canadensis* (L.) Hara. Common in upland woods.
Epilobium glandulosum Lehm. Frequent in moist lowlands and along small streams.
Gaura biennis L. Collected at only one station, in low, moist ground.
Ludwigia alternifolia L. False Loosestrife. Common in low wet sandy soil.
Ludwigia palustris (L.) Ell. Collected in wet sandy lowland.
Ludwigia polycarpa Short and Peter. Collected in wet sandy lowland.
Oenothera biennis L. Common weed of many habitats.
Oenothera rhombipetala Nutt. Common in dry sandy soil.

ARALIACEAE

- Aralia nudicaulis* L. Common in rich upland woods.
Aralia racemosa L. Frequent on rich calcareous slopes and in rich upland woods.
Panax quinquefolius L. Infrequent in rich upland woods and on calcareous slopes.

UMBELLIFERAE

- Chaerophyllum procumbens* L. Crantz. Common in bottomlands.
Cicuta maculata L. Frequent in moist bottomlands and along streams.
Cryptotaenia canadensis (L.) DC. Common in moist upland woods and alluvial bottom woods.
 **Daucus carota* L. Common along roadsides and in alluvial meadows.

- Eryngium yuccifolium* Michx. Infrequent in prairie soil.
Osmorhiza claytoni (Michx) Clarke. Common in upland woods.
Osmorhiza longistylis (Torr.) DC. Infrequent in rich upland woods.
Oxypolis rigidior (L) Raf. Infrequent in sandy soil.
 **Pastinaca sativa* L. Common along roadsides, railroads, and in waste places.
Sanicula canadensis L. Frequent in woods.
Sanicula gregaria Bickn. Common in woods.
Sium suave Walt. Common in moist lowlands.
Taenidia integerrima (L.) Drude. Infrequent in moist meadows and along streams and roadsides.
Thaspium trifoliatum (L.) Britt. Common in woods.
Zizia aurea (L.) Koch. Common along roadsides and in meadows and damp woods.

CORNACEAE

- Cornus alternifolia* L.f. Alternate-leaved dogwood. Common in rich upland woods.
Cornus drummondii Meyer. Rough-leaved dogwood. Common in moist woods and along streams.
Cornus obliqua Raf. Pale Dogwood. Frequent in moist shady woods and low boggy areas.
Cornus racemosa Lam. Gray Dogwood. Common in woods and on roadsides.
Cornus rugosa Lam. Round-leaved Dogwood. Frequent along streams, usually on calcareous ledges and slopes.

PYROLACEAE

- Monotropa uniflora* L. Indian Pipe. Rare in moist shady upland woods.
Pyrola elliptica Nutt. Shinleaf. Infrequent in rich upland woods and on calcareous slopes.

PRIMULACEAE

- Androsace occidentalis* Pursh. Infrequent in dry, sandy soil.
Dodecatheon meadia L. Common in sandy prairie.
Lysimachia ciliata L. Fringed loosestrife. Common in moist ground.
Lysimachia lanceolata Walt. Common in moist sandy soil in lowlands.
 **Lysimachia nummularia* L. Moneywort. Frequent in moist alluvial soil along streams.
Lysimachia terrestris (L.) BSP. Swamp-candle. Rare in marshy ground near the Cedar River.

OLEACEAE

- Fraxinus americana* L. White ash. Common in rich woods near the Cedar River.
Fraxinus nigra Marsh. Black ash. Frequent in alluvial woods and on high banks and bluffs of streams.
Fraxinus pennsylvanica Marsh. Red ash, green ash. Common in woods, bottomland throughout the county.

GENTIANACEAE

- Gentiana andrewsii* Griseb. Listed by B. Shimek as being in prairie soil in Cedar County.
Gentiana flavida A. Gray. Infrequent in woods and calcareous soil.
Gentiana puberula Michx. Infrequent in dry prairie.
Gentiana quinquefolia L. Frequent on shaded calcareous slopes.

APOCYNACEAE

- Apocynum androsaemifolium* L. Spreading Dogbane. Frequent on borders of upland woods and thickets.
Apocynum cannabinum L. Dogbane. Common along roadsides, railroads, and borders of woods.

ASCLEPIADIACEAE

- Asclepias amplexicaulis* Sm. Frequent in dry sandy soil near Cedar River.
Asclepias incarnata L. Swamp milkweed. Common in marshes and alluvial meadows.
Asclepias exaltata L. Rare in rich upland woods.
Asclepias syriaca L. Common Milkweed. Common in fields and along roadsides.
Asclepias tuberosa L. Butterfly-weed. Frequent along roadsides and borders of thickets.
Asclepias verticillata L. Horsetail Milkweed. Common in sandy fields and along roadsides.
Asclepias viridiflora Raf. Green Milkweed. Frequent in dry sandy soil near the Cedar River.

CONVOLVULACEAE

- Convolvulus arvensis* L. Field Bindweed. Infrequent along railroads and in waste places.
Convolvulus sepium L. Wild Morning Glory. Common along roads, railroads, and fencerows.
Cuscuta polygonorum Engelm. Frequent in moist bottomlands and along streams.
 **Ipomoea purpurea* (L.) Roth. Common morning-glory. Indicated to be from Cedar County in *Weed Flora of Iowa*, by Pammel, et al.

POLEMONIACEAE

- Collomia linearis* Nutt. Infrequent along railroads.
Phlox divaricata L. Blue phlox. Common in alluvial bottom woods.
Phlox maculata L. Wild Sweet William. Rare, along railroad track one mile north of West Branch.
Phlox paniculata L. Fall phlox. Rare, in upland thicket.
Phlox pilosa L. Downy phlox. Common in prairie soil.
Polemonium reptans L. Jacob's Ladder. Common in rich upland woods.

HYDROPHYLLACEAE

- Ellisia nyctelea* L. Common in upland woods and on disturbed road banks.
Hydrophyllum virginianum L. Common in moist rich woods and damp lowlands.

BORAGINACEAE

- **Cynoglossum officinale* L. Indicated to be from Cedar County by dots on maps in *Weed Flora of Iowa*, by Pammel, et al.
Hackelia virginiana (L.) I. M. Johnst. Common in upland and alluvial woods.
Lithospermum canescens (Michx.) Lehm. Common in prairies.
Lithospermum croceum Fern. Common in dry sandy soil.
Lithospermum incisum Lehm. Infrequent in dry, calcareous prairie soil.
Mertensia virginica (L.) Pers. Bluebells. Collected only once at the mouth of a moist ravine near Cedar River.
Myosotis verna Nutt. Collected only once in dry sandy prairie soil.
Onosmodium occidentale MacKenz. Rare in dry sandy soil.

VERBENACEAE

- Lippia lanceolata* Michx. Common in marshes and moist lowlands.
Verbena bracteata Lag. and Rodr. Infrequent weed of roadsides and waste places.
Verbena hastata L. Blue vervain. Common in moist bottomlands.
Verbena simplex Lehm. Narrow-leaved vervain. Infrequent in dry or sandy soil.
Verbena stricta Vent. Hoary vervain. Common weed of dry soils.
Verbena urticifolia L. White vervain. Frequent along boarders of alluvial woods and roadsides.

LABIATAE

- Agastache nepetoides* (L.) Ktze. Frequent along borders of woods and thickets.
Agastache scrophulariaefolia (Willd.) Ktze. Infrequent along borders of woods and thickets.
Blephilia hirsuta (Pursh.) Benth. Frequent in rich alluvial woods.
Hedeoma hispida Pursh. Rough Pennyroyal. Frequent along railroads and on sandy roadbanks.
Hedeoma pulegioides (L.) Pers. American Pennyroyal. Frequent in dry upland woods and clearings.
Isanthus brachiatus (L.) BSP. False Pennyroyal. Frequent in dry, often calcareous soil.
 **Leonurus cardiaca* L. Frequent weed of moist roadsides and waste places.
 **Leonurus marrubiastrum* L. Frequent in moist waste places.
Lycopus americanus Muhl. Common in low moist ground.
Lycopus virginicus L. Common in moist lowlands and along streams.
Lycopus uniflorus Michx. Frequent in moist alluvial woods.
Mentha arvensis L. Wild mint. Frequent in calcareous soil along streams and in moist sandy soil.
Monarda fistulosa var. *mollis* (L.) Benth. Wild Bergamot. Common along roadsides and fencerows.
Monarda punctata L. Infrequent in dry soil.
Nepeta cataria L. Catnip. Common weed of waste places and roadsides.
 **Perilla frutescens* (L.) Britt. Beefsteak plant. Collected in upland woods near a farm home.
Physostegia parviflora Nutt. Frequent in moist alluvial woods and on roadsides.
Prunella vulgaris L. Carpenter-weed. Common in low pastures and waste ground.
Pycnanthemum tenuifolium Schrad. Common in sandy soils.
Pycnanthemum pilosum Nutt. Common along roads, borders of woods, and in prairie soil.
Stachys palustris L. Common in low wet sandy soil.
Stachys tenuifolia Willd. Common in moist bottomland woods and meadows.
Scutellaria epilobiifolia A. Hamilton. Common in moist sandy soil.
Scutellaria lateriflora L. Common in alluvial woods and marshy areas.
Scutellaria ovata Hill. Frequent on calcareous slopes along streams.
Scutellaria parvula Michx. Infrequent in dry or moist prairie soil.
Teucrium canadense L. Common in a variety of habitats, especially moist ground.

SOLONACEAE

- **Datura stramonium* L. Jimson-weed. Common in cultivated fields and waste ground.
Physalis heterophylla Nees. Common in dry soil in cultivated fields and on roadsides.
Physalis lanceolata Michx. Common in dry sandy soil.
Physalis pubescens L. Common in dry sandy soil.
Physalis subglabrata Mack. and Bush. Smooth ground-cherry. Common in dry sandy soil, on roadsides, and in waste places.
Solanum carolinense L. Horse-nettle. Common in sandy soil, often in cultivated fields.
 **Solanum nigrum* L. Common in waste places and along fencerows.
 **Solanum rostratum* Dunal. Infrequent in dry sandy soil.

SCROPHULARIACEAE

- Castilleja coccinea* (L.) Spreng. Rare in rather open upland woods, in sandy soil.
Gerardia tenuifolia Vahb. Infrequent in moist sandy soil and along streams.
Gerardia grandiflora Benth. False Foxglove. Rare on dry slopes, calcareous soil.
Gratiola neglecta Torr. Infrequent in moist soil.

- **Linaria vulgaris* Hill. Butter and Eggs.
Lindernia anagallidea (Michx.) Pennell. Collected only once, in wet sandy soil.
Lindernia dubia (L.) Pennell. Infrequent in low, wet, sandy soil.
Mimulus ringens L. Common in moist lowlands and sloughs.
Pedicularis canadensis L. Lousewort. Frequent in sandy soil, prairies and borders of woods.
Penstemon digitalis Nutt. Fox-glove penstemon. Frequent in sandy soil along roads and in prairie areas.
Penstemon pallidus Small. Infrequent in dry, sandy prairie.
Scrophularia lanceolata Pursh. Frequent in pastures, prairies and edges of woods.
Scrophularia marilandica L. Frequent in sandy soil, in upland woods, and on roadsides.
**Verbascum blattaria* L. Moth mullein. Rare in high, dry sandy soil.
**Verbascum phlomoides* L. Rare along roadsides.
**Verbascum thapsus* L. Common mullein. Common along roads and in waste places.
**Veronica arvensis* L. Common weed of lawns and waste places.
Veronica peregrina L. Neckweed. Common weed along roadsides and in waste places.
Veronicastrum virginicum (L.) Farw. Culver-root. Common in upland woods and along roadsides.
Wulfenia bullii (Eat.) Barnh. Rare in sandy soil and in upland oak woods.

BIGNONIACEAE

- **Catalpa speciosa* Warder. Infrequent escape along roadsides.

ACANTHACEAE

- Ruellia humilis* Nutt. Hairy Ruellia. Common in dry sandy soil.
Ruellia strepens L. Smooth Ruellia. Rare in alluvial woods near Cedar River.

PHRYMACEAE

- Phryma leptostochya* L. Common in upland woods.

PLANTAGINACEAE

- Plantago aristata* Michx. Common in dry sandy soil.
**Plantago major* L. Common plantago. Indicated from Cedar County by dots on maps in *Weed Flora of Iowa*, by Pammel et al.
**Plantago lanceolata* L. Ribgrass. Indicated from Cedar County by dots on maps in *Weed Flora of Iowa*, by Pammel et al.
Plantago purshii R and S. Common in dry sandy soil.
Plantago rugelii Dcne. Common along roadsides and in waste places.

RUBIACEAE

- Cephalanthus occidentalis* L. Common in moist sandy soil along streams and in marshes.
Galium aparine L. Common in woods and in waste places.
Galium asprellum Michx. Rough Bedstraw. Common in moist lowlands.
Galium boreale L. Northern Bedstraw. Infrequent in moist prairie and in borders of woods.
Galium circaezans Michx. Frequent in upland woods.
Galium concinnum T and G. Common in woodlands.
Galium obtusum Bigel. Collected only once, in sandy soil.
Galium tinctorium L. Common in marshy lowlands, usually in sandy soil.
Galium triflorum Michx. Collected only once, in moist upland woods.
Houstonia minima Beck. Infrequent in dry upland pastures and sandy prairies.

CAPRIFOLIACEAE

- Lonicera dioica* L. Common in woods and thickets.
Lonicera prolifera (Kirchn.) Rehd. Infrequent on calcareous slopes.

- Sambucus canadensis* L. Common in moist woodlands.
Symphoricarpos orbiculatus Moench. Coralberry. Infrequent in dry calcareous soil.
Triosteum perfoliatum L. Frequent in rich upland woods.
Viburnum rafinesquianum Schutes. Arrow-wood. Infrequent on calcareous slopes.
Viburnum lentago L. Infrequent in rich woods and along streams.

CUCURBITACEAE

- Echinocystis lobata* (Michx.) T and G. Wild Balsam-apple. Common in alluvial bottomlands.
Sicyos angulatus L. Common in alluvial bottom woods.

CAMPANULACEAE

- Campanula americana* L. Common in moist woods.
Campanula aparinoides Pursh. Collected only once, in sandy marsh.
Lobelia inflata L. Indian tobacco. Common in fields, along roadsides, and in upland woods.
Lobelia siphilitica L. Blue cardinal flower. Common in moist lowlands.
Lobelia spicata Lam. Common along roadsides, in prairie, and in open woods.
Triodanis perfoliata (L.) Nieuwl. Common in dry sandy soil.

COMPOSITAE

- **Achillea millefolium* L. Common in dry sandy soil.
Ambrosia artemisiifolia L. Common weed of fields and roadsides.
Ambrosia psilostachya DC. Frequent in dry sandy soil.
Ambrosia trifida L. Common weed of roadsides, stream banks, and waste places.
Anaphalis margaritacea (L.) C. B. Clarke. Common in dry sandy soil.
Antennaria neglecta Greene. Common in dry upland woods and clearings.
Antennaria plantaginifolia (L.) Hook. Common in dry soils along roadsides and upland woods.
**Anthemis cotula* L. Dog-fennel. Common weed of moist pastures and farm-yards.
Arctium minus (Hill) Bernh. Common weed of roadsides and waste places.
**Artemisia biennis* Willd. Indicated from Cedar County by dots on maps in *Weed Flora of Iowa*, by Pammel et al.
Artemisia ludoviciana Nutt. White Sage. Common in dry sandy soil.
Aster azureus Lindl. Common in prairie.
Aster ericoides L. Common in dry woods, prairies, and thickets.
Aster lateriflorus (L.) Britt. Common along roadsides and in wooded areas.
Aster laevis L. Rare in dry sterile soil.
Aster novae-angliae L. Common along roadsides and borders of woods.
Aster oblongifolius Nutt. Rare in dry, gravelly soil.
Aster ontarionis Wieg. (*Aster pantotrichus* Blake). Listed as being in Cedar County in *The Asters of Iowa*, by Kellogg.
Aster pilosus Willd. Common along roadsides and borders of thickets.
Aster prealuis Pair. Collected at only one station in sandy soil in alluvial woods.
Aster prenanthoides Muhl. Infrequent in low moist soil.
Aster sagittifolius Wedem. (including *A. drummondii*). Common in a wide variety of habitats.
Aster shortii Lindl. Frequent in open woods and on calcareous slopes.
Aster simplex Willd. Common in moist soil, usually near streams.
Aster umbellatus Mill. Rare in low moist sandy soil.
Bidens cernua L. Common in moist lowlands and along streams.
Bidens comosa (A. Gray) Wieg. Common in low wet areas and along streams.
Bidens coronata (L.) Britt. Common in moist alluvial soils.
Bidens frondosa L. Indicated from Cedar County by dots on maps in *Weed Flora of Iowa*, by Pammel, et al.
Bidens vulgata Greene. Common in moist lowlands and on banks of streams.

- Boltonia latisquama* Gray. Collected at only one station, in wet low ground.
- Cacalia muhlenbergii* (Sch. Bip.) Fern. Rare in rich upland woods.
- Cacalia suaveolens* L. Rare on stream banks.
- **Chrysanthemum leucanthemum* L. Frequent along roadsides and railroads.
- **Cichorium intybus* L. Frequent along roadsides and in waste places.
- Cirsium altissimum* (L.) Spreng. Frequent in woods and along streams.
- **Cirsium arvense* L. Canada thistle. Indicated from Cedar County by dots on maps in *Weed Flora of Iowa*, by Pammel, et al.
- Cirsium discolor* (Muhl.) Spreng. Frequent in sparse woods, dry fields and along roads.
- Cirsium undulatum* (Nutt.) Spreng. Infrequent in dry sandy soil.
- **Cirsium vulgare* (Savi) Airy-Shaw. Common in fields and on roadsides.
- Coreopsis palmata* Nutt. Common in prairie and on roadsides.
- Echinacea angustifolia* DC. Rare in dry, rocky prairie.
- Echinacea pallida* Nutt. Frequent along roadsides and in prairies.
- Eclipta alba* (L.) Hassk. Common in moist bottomlands and along streams.
- Erechtites hieracifolia* (L.) Raf. Fireweed. Frequent in moist lowlands.
- Erigeron annuus* (L.) Pers. Common along roadsides and in upland woods.
- Erigeron canadensis* L. Common weed of many and variable habitats.
- Erigeron philadelphicus* L. Common in upland woods, on ledges, and along roads.
- Erigeron pulchellus* Michx. Infrequent in sandy soils.
- Erigeron strigosus* Muhl. Common in upland woods, on roadsides, and in waste places.
- Eupatorium altissimum* L. Tall thoroughwort. Frequent in upland woods and on roadsides.
- Eupatorium maculatum* L. Frequent in moist lowlands.
- Eupatorium perfoliatum* L. Boneset. Common in marshes, low woods, and meadows.
- Eupatorium purpureum* L. Frequent in woods and along streams.
- Eupatorium rugosum* Houtt. White Snake root. Common in upland woods.
- **Grindelia squarrosa* (Pursh.) Dunal. Collected only once, in waste ground at edge of Cedar Valley Quarry.
- Helenium autumnale* L. Common, especially in alluvial lowlands.
- Helianthus annuus* L. Common along railroads and roadsides.
- Helianthus grosseserratus* Martens. Common in moist ground along roadsides, and in borders of woods.
- Helianthus laetiflorus* Pers. Prairie soil, along railroad.
- Helianthus occidentalis* Riddell. Rare in dry sandy soil.
- Helianthus strumosus* L. Frequent in prairie and along borders of woods.
- Helianthus tuberosus* L. Common along roadsides and in waste places.
- Heliopsis helianthoides* (L.) Sweet. Common in prairie and along roadsides.
- Hieracium longipilum* Toff. Rare in dry sandy prairie soil.
- Hieracium scabrum* Michx. Rough Hawkweed. Frequent in dry upland woods.
- Krigia biflora* (Walt.) Blake. Common in dry soil and in prairie.
- Kuhnia eupatorioides* L. Common in dry prairie.
- Lactuca canadensis* L. Common along roadsides and in waste places.
- Lactuca floridana* (L.) Gaertn. Common along roadsides and borders of woods.
- **Lactuca scariola* L. Frequent in dry sandy soil.
- Liatriis aspera* Michx. Frequent in dry sandy soil.
- Liatriis cylindracea* Michx. Rare in dry, calcareous prairie.
- Liatriis pycnostachya* Michx. Infrequent in low, moist, sandy soil.
- **Matricaria matricarioides* (Less.) Porter. Weed of roadsides, waste places, farmyards, etc.
- Parthenium integrifolium* L. Infrequent in prairie.
- Prenanthes alba* L. Common in upland woods and on roadsides.
- Prenanthes aspera* Michx. Rare in dry sandy prairie.
- Prenanthes racemosa* Michx. Rare in moist prairie.
- Ratibida pinnata* (Vent.) Barnh. Common in prairie along roadsides, and in waste places.
- Rudbeckia laciniata* L. Common in moist bottomlands.

- Rudbeckia serotina* Nutt. Common in dry sandy soil.
Rudbeckia triloba L. Common in upland woods and along streams.
Rudbeckia subtomentosa Pursh. Infrequent in low moist soil.
Senecio plattensis Nutt. Common in prairies, upland woods, and on roadsides.
Silphium integrifolium Michx. Common in prairie and along roadsides.
Silphium laciniatum L. Common in moist prairie.
Silphium perfoliatum L. Common in moist bottomlands and along streams.
Solidago altissima L. Common along railroads, fencerows, and in waste places and woods.
Solidago canadensis L. Common in variable habitats.
Solidago flexicaulis L. Common in woods.
Solidago gigantea Ait. Common in woods, on roadsides, and in moist prairie.
Solidago graminifolia L. Frequent in prairie.
Solidago missouriensis Nutt. Infrequent in dry sandy prairie.
Solidago nemoralis Ait. Infrequent in dry calcareous or sandy soil.
Solidago rigida L. Frequent in prairie.
Solidago rugosa Mill. Rare in upland woods.
Solidago speciosa Nutt. Common in prairie, on roadsides, and in borders of woods.
Solidago ulmifolia Muhl. Common in upland woods.
 **Sonchus asper* (L.) Hill. Spiny sow-thistle. Collected only once.
 **Tanacetum vulgare* L. Common Tansy. Infrequent escape to roadsides.
 **Taraxacum officinale* Weber. Common weed of lawns, fields, roadsides and waste places.
 **Tragopogon major* Jacq. Common weed of roadsides and waste places.
 **Tragopogon pratensis* L. Infrequent weed of roadsides and waste places.
Vernonia fasciculata Michx. Common weed of moist lowlands and poorly drained pastures.
Xanthium commune Britt. Common weed of cultivated fields, roadsides and banks of streams.

STATISTICAL SUMMARY

A. Components of the Flora of Cedar County, Iowa

Major Groups	Species		Genera
	Native	Introduced	
Pteridophytes	23	0	16
Gymnosperms	2	0	2
Monocotyledons	192	25	82
Dicotyledons	441	92	288
Total	658	117	388

B. Number of families represented: 103.

C. Largest Families with number of species in each:

Compositae	108	Rosaceae	29
Gramineae	88	Labiatae	27
Cyperaceae	58	Scrophulariaceae	21
Leguminosae	37		

D. Largest Genera with number of species in each:

Carex	37	Eleocharis	8
Polygonum	15	Cyperus	7
Aster	14	Salix	7
Solidago	11	Asclepias	7
Viola	11	Helianthus	6
Panicum	9		

APPENDIX

The Atracheata (Bryophyta) of Cedar County, contributed by Dr. H. S. Conard.

MOSSES

Amblystegium varium (Hedw.) Lindb.
Anomodon attenuatus (Hedw.) Hueben.
Anomodon minor (Beauv.) Lindb.
Anomodon rostratus (Hedw.) Beauv.
Atrichum undulatum (Hedw.) Beauv.
Atrichum undulatum var *altecristatum*
Barbula unguiculata Hedw.
Brachythecium oxycladon (Brid.) J. & S.
Bryhnia graminicolor (Brid.) Grout
Bryum pendulum (Hornsch.) Schimp.
Campylium hispidulum (Brid.) Mitt.
Ceratodon purpureus (Hedw.) Brid.
Chamberlainia acuminata (Hedw.) Grout
Desmatodon obtusifolius (Schw.) Jur.
Ditrichum pallidum (Hedw.) Hampe
Ditrichum pusillum (Hedw.) E.G.B.
Entodon cladorrhizans (Hedw.) C.M.
Entodon compressus (Hedw.) C.M.
Entodon seductrix (Hedw.) C.M.
Eurhynchium hians (Hedw.) J. & S.
Eurhynchium serrulatum (Hedw.) Kindb.
Fissidens minutulus Sull.
Fissidens taxifolius Hedw.
Funaria hygrometrica Hedw.
Grimia apocarpa Hedw.
Gymnostomum aeruginosum Sm.
Gymnostomum calcareum Nees & Hornsch.
Hygroamblystegium irriguum (Wills.) Loeske.
Hypnum patientiae Lindb.
Leptobryum pyriforme (L.) Schimp
Leptodictyum riparium (Hedw.) Warnst.
Leptodictyum brevipes (Card and Ther.) Grout
Leskea gracilescens Hedw.
Mnium affine f. *ciliare* (Grev.)
Mnium cuspidatum Hedw.
Plagiothecium deplanatum (Sull.) Grout
Platygyrium repens (Brid.) Bry. Eur.
Pohlia wahlenbergii (W.&M.) Andr.
Phodobryum roseum (Bry. Eur.) Limpr.
Weisia viridula Hedw.

LIVERWORTS

Abthoceros laevis L.
Conocephalum conicum (L.) Dumort.
Frullania eboracensis Gottsche
Frullania riparia Hampe
Marchantia polymorpha L.
Plagiochila asplenioides (L.) Dumort.
Porella platyphylloidea
Reboulia hemisphaerica (L.) Raddi

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