

DAVENPORT PUBLIC MUSEUM
PUBLICATIONS IN BOTANY

Number 1



THE VASCULAR PLANTS
of
SCOTT AND MUSCATINE COUNTIES

With some reference to adjoining areas of
surrounding Counties in Iowa and to
Rock Island and Whiteside Counties
in Illinois.

by

LUDWIG F. GULDNER
*Honorary Curator of Botany of
The Davenport Public Museum*

A REGIONAL FLORA

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DAVENPORT PUBLIC MUSEUM
PUBLICATIONS 55 BOYDWAY

Number 1



THE VASCULAR PLANTS
of
SCOTT AND MUSCATINE COUNTIES

With some reference to adjoining areas of
surrounding Counties in Iowa and to
Rock Island and Winnebago Counties

PRINTED BY GORDON PRINTING COMPANY
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A REGIONAL FLOW

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Davenport, Iowa

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FOREWORD

Lists by Previous Botanists

Short lists of native wild-flowers growing in and about Davenport were published in the Davenport Gazette in 1845 by Alfred Sanders, and in 1847 by Dr. C. C. Parry.

A small note-book now in the files of the Davenport Public Museum with a title-page reading, "List of Wild Plants found in the vicinity of Davenport, Iowa, 1847, and others found in connection with the Geological Survey, 1848, by C. C. Parry.", and in Parry's own hand appears here in print for the first time as a supplement to the present work in a literal transcription of the part which relates to the plants of Iowa. Some two hundred and seventy-five plants are listed; some of these items are validated by specimens in the Parry Herbarium now at the Iowa State College at Ames.

A more extensive "List of Phanerogamous Plants collected in the Vicinity of Davenport" by J. J. Nagel and J. G. Haupt during the years 1870 to 1876 inclusive was published in the "Proceedings of the Davenport Academy of Natural Sciences," Volume 1, in July 1876. This list is still very incomplete and the treatment very uneven, as may be seen from its mention of no grasses, only four Cyperaceae, and one aster. It must be used with care because of numerous inaccuracies, and from the fact that almost no supporting specimens are at hand.

The first flora that can pretend to comprehensiveness as well as accuracy is the "Flora of Scott and Muscatine Counties" by Barnes, Miller and Reppert published by the Davenport Public Museum (then the Davenport Academy of Natural Sciences) in 1900. It contains 1065 items, and was based on the collections of the authors during the years 1888 to 1898. Actual specimens are available to support practically all of the items mentioned. Considering the period and the literature available to the authors, the accuracy of the determinations is nothing less than astonishing. As evidence of its completeness may be cited its mention of 101 grasses, 49 carices, and 11 potamogetons. Any inadequacies in the work, as in *Viola* and *Rubus*, reflect merely the then existing state of knowledge in the literature.

Changed conditions seem to require fresh treatment.

Changes have, of course, occurred since those days both in additions to botanical knowledge and changes in botanical concepts with corresponding changes in the nomenclature. There are changes, too, in the face of the country-side due to the work of man, such as the introduction of new cultivated species, as well as unwelcome weeds and the elimination of native species, by the broadening of roads, the draining of ponds and marshes and the felling of woods. The native prairie species have all but disappeared, eliminated by cultivation and pastures, leaving only here and there in isolated corners, or along the railroads, pitiful remnants of the ancient and magnificent prairie

flora. The native woodland species have fared somewhat better, but they too, are on the way to extinction, as year by year and bit by bit the trees are being put to the axe to make way for more crop-land or pasture, as if there were not already too much for our needs. The lover of nature among men as well as the botanist sighs with regret at the destruction of such a plant paradise as Lindle's Woods in Muscatine County, where grew the cinnamon fern, the asters umbelliformis and furcatus, *Solidago patula* and *Equistum pratense*, when he sees it given over to the ignoble (as well as uneconomical) use as a hog-lot.

Fifty-eight years have now passed since the appearance of the Flora, and there is need for a new work which takes into account some of the changes which have since taken place, some of the new species since discovered, and to bring the nomenclature more into accord with present usage.

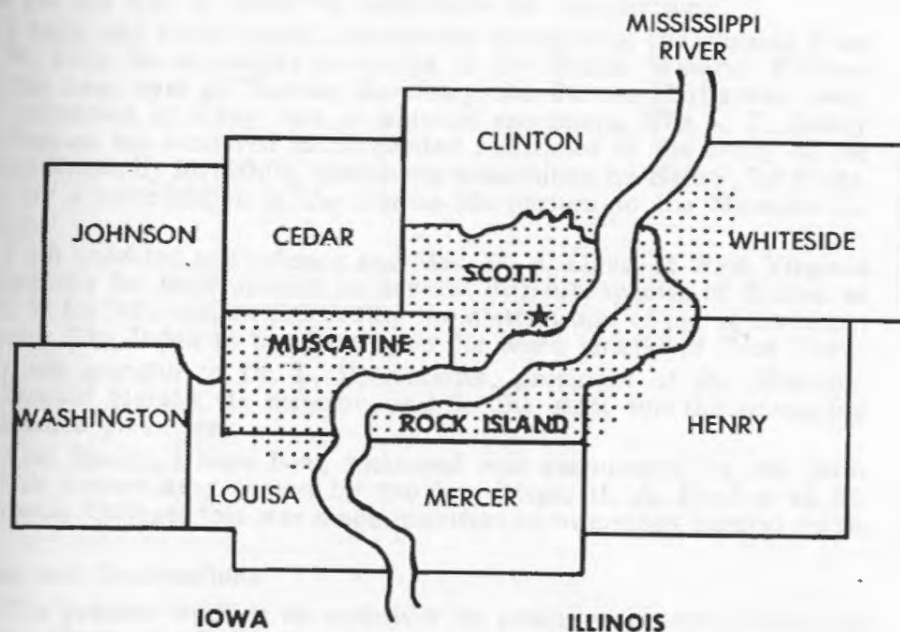
Basis of the Present Work.

The present work is based in part on the "Flora of Scott and Muscatine Counties," in part on the Barnes Herbarium of the Davenport Public Museum. This collection, now numbering over nine thousand specimens of plants collected in and around Scott and Muscatine Counties, is assembled about the original collections by W. D. Barnes, numbering about thirty-five hundred specimens. Other collections numbering about one thousand specimens by Edith Ross and some few hundred by Naomi Melville have been added, as well as my own collections, about five thousand in number and made during the last twelve years. There are also several hundred specimens collected for the most part in Muscatine County by the late Professor Shimek as well as several hundred duplicate sheets by Reppert from Muscatine County; all acquired by the Barnes Herbarium through the kindness of Professor Thorne.

The extensive Reppert Herbarium, composed of plants of Muscatine County and now incorporated in the Herbarium of the State University of Iowa has been freely consulted by permission of the Curator, Professor Thorne, whose kindness is gratefully acknowledged. Thanks are also tendered to Professor Pohl, Curator of the Herbarium at Iowa State College, for permission to consult the Herbarium of that institution, and to examine a number of plants in the C. C. Parry Herbarium, now housed there. A number of plants from our area went to Ames by exchanges by Barnes and Reppert with R. I. Cratty, the then Curator.

Acknowledgements

I have freely asked the help of distinguished authorities in the determination of troublesome specimens, and the favor has invariably been graciously extended. I am particularly grateful to E. J. Palmer, without whose aid the genus *Crataegus* would not have been satisfactorily treated; and to F. J. Hermann for much and repeated help with the Cyperaceae. J. R. Swallen has given much help with the



- AREA OF CONCENTRATED COLLECTING
- AREA OF LESS CONCENTRATED COLLECTING
- ★ DENOTES LOCATION OF DAVENPORT, IOWA

grasses. I am indebted to G. N. Jones for help with *Amelanchier* and the Biotian asters. S. F. Blake and Lloyd H. Shinnars have named some of the asters. The determinations of several of the violets were made by N. H. Russell. I have been greatly helped by C. B. Heiser, who has annotated many troublesome sunflowers, and contributed much to my understanding of that perplexing genus. R. C. Friesner (now deceased) has given help with the goldenrods. I am indebted to J. A. Steyermark for much enlightenment concerning the roses and for the loan of numerous specimens for comparison.

I have had much useful information concerning the climate from L. W. Dick, Meteorologist in charge of the Moline Weather Bureau. To the keen eyes of Thomas Morrissey the Barnes Herbarium owes the collection of many rare or unusual specimens. The L. C. Bailey Hortorium has rendered much needed assistance in the study of the genus *Rubus* by furnishing specimens determined by Bailey, for study, and by a contribution of the Gentes Herbarium to the Museum Library.

I am indebted to Professor and Mrs. W. A. Davis of West Virginia University for their opinion on several difficult species of *Rubus*, as well as for information concerning the distribution of our midwestern species. The Index to the Catalog is the work chiefly of Tom Thew.

I am grateful to Dr. L. H. Kornder, president of the Museum, to Donald Herold, its director, and to the staff for the unsparing assistance given me.

And finally, I have been sustained and encouraged by the faith in this undertaking shown by the late Msgr. U. A. Hauber of St. Ambrose College; this was made manifest in numerous helpful ways.

Plan and Explanations

The present work is an endeavor to produce a record, from my own experience of the vascular plants growing in the general region of Scott and Muscatine counties. It is not intended to be the conventional Flora restricted by county lines, but will range into adjoining areas of surrounding counties in Iowa, and into Rock Island and Whiteside counties across the river in Illinois, these also being areas where I have done some collecting.

It will differ also from the usual county Flora in that, in keeping with the trend shown in the recent Manuals, some introduced and cultivated woody and herbaceous plants have been included. Some readers may regard these as superfluous baggage; others may find them of interest.

The classification and order followed are those of the eighth edition of Gray's Manual; but I have declined to follow Fernald in some of his innovations. The names of the grasses employed by Hitchcock and Chase have been used; and in the case of the *Carices* the descriptions, keys and names given by K. K. Mackenzie have been used.

Keys are omitted because a number of excellent ones are readily available, for example those in Jones' Flora of Illinois, Deam's Flora of Indiana and Gray's Manual, eighth edition; and their inclusion would have been superfluous.

All collections made in counties other than Scott and Muscatine, and not represented by specimens from within these latter counties will be indicated by the character "(" to denote that they would be excluded from the usual county Flora.

Definite citations are made for every taxon mentioned, including mention of the county in which collected, the locality, sometimes the date, and the Herbarium in which the specimen is preserved. When the last datum is lacking it means that the specimen is in the Barnes Herbarium of the Davenport Public Museum.

With only two or three exceptions every taxon mentioned has been seen and verified by me, and a specimen is available for reference in every case. If there are errors in the determinations, I have to assume the responsibility.

The Barnes Herbarium contains many specimens with no, or inadequate, data as to the locality from which they come. Like so many of the older collectors, W. D. Barnes was careless in this respect, and like them seemed to consider possession of the specimen to meet all the requirements. Such specimens I have been in the habit of designating "X" specimens, because their source was not stated. While there is good reason to believe these collections came from our area, obviously they can be used for our purpose only if supported by another specimen definitely indicated to be from our counties, in which case it may be assumed that they are indeed of local origin.

Search was made for such corroborating specimens, when none were present in the Barnes Herbarium, or among the Reppert and Shimek collections, at the State University of Iowa and at Iowa State College. The result was that only a few of these "X" specimens remain unvalidated.

A very limited use has been made of these "X" specimens in the citations and these mostly of species recorded in the Flora of Scott and Muscatine Counties, in the hope that authenticating collections may still be made.

Generally, only a few representative specimens are used in the citations; it will not be inferred that these are all the material available; and no deductions as to frequency can be made from them.

As accessions to the Barnes Herbarium are not numbered, it has been necessary to designate the specimen by the locality and the collector. For our purposes these will nearly always suffice.

A number of symbols have been found convenient in the citations: indicates that the specimen, though present in the Barnes Herbarium, was collected outside the limits of Scott and Muscatine counties.

- X means that no precise locality has been assigned for the specimen.
 - S Scott County
 - M Muscatine County
 - RI Rock Island County
 - Ill. Illinois
 - SUI The Herbarium of the State University of Iowa
 - ISC The Herbarium of the Iowa State College of Agriculture
 - Fl. "The Flora of Scott and Muscatine Counties" by Barnes, Miller and Reppert.
 - G. The present author
- All other names of counties and collectors are spelled out.

Several lesser known localities mentioned:

- Lindle's Woods, Section 6, Lake Township
- Brasenia Pond, Section 6, Lake Township
- Pontederia Pond, Section 8, Lake Township
- Nelumbo Pond, Section 15, Lake Township
- Weiss Slough, Section 18, T78 N., R2W, all in Muscatine county.

Names of collectors, with the approximate dates of their field work.

William D. Barnes	1890 — 1900
Ferdinand K. Reppert	1878 — 1900
Edith Ross	1878 — 1888
Naomi Melville	1892 — ?
Bohumil K. Shimek	1898 — 1937
Ulrich A. Hauber	1910 — 1936
J. H. Paarmann and	
Sarah F. Sheldon	1902 — 1928
Thomas Morrissey	1950 —
Ludwig F. Guldner	1946 —

Much care has been taken to insure the correctness of the short notes on the habitat. They are made throughout from my own experience, except for a few quotations which are indicated as from the "Flora of Scott and Muscatine Counties." When my experience seemed insufficient to warrant an opinion for a general note on the habitat, it was omitted entirely, and a bare citation made. Thus, there was occasionally offered the opportunity to give a specific habitat for a rare or infrequent specimen. Nothing has been lifted from the literature, as this work is intended to be a reflection of my work in the field, which covered a period of twelve years, during which most of Scott County and much of Muscatine has been repeatedly visited. These notes are derived from observations in the field, not compiled in the herbarium.

Exception may be taken to the notes on frequency of occurrence. Possibly the term "common" or "abundant" often might better have been used in place of "frequent." But estimates of frequency can at best be only rough approximations. To be of value, they must be based on observations extending over a considerable period of years. They are too much a product of chance and circumstance to have scientific value. On repeated visits to the same localities, I am constantly more deeply impressed by the immense changes in the character and abundance of the covering vegetation which occur from year to year. For a discussion of this subject, see "Deam's Flora of Indiana," page 1126, under the heading 'Distribution.'

While Scott and especially Muscatine county have been probably the most thoroughly botanized regions in the state, much more could be done. I could have wished to compile a calendar of blossoming times proper to the region. I could have wished to have given adequate attention to the Kansan uplands of both counties and to have more thoroughly canvassed the sands and marshes of Muscatine Island and the bottoms of the lower Cedar River. *Crataegus*, *Potamogeton* and *Rubus* might have been more thoroughly studied, had time permitted, and numerous other gaps might have been filled. However, the time has come when it is the part of prudence to commit these notes to print for what they are worth, in the hope that they may merit favor with those who may be interested.

Would that something of the quality and flavor, the feeling, of the region, something of the smell of the land, something of the freshness of its woods and fields and waters might have stolen into these pages!

Everything flows.
Heraclitus

INTRODUCTION

The early settler, on arriving in the region and making his way up to the top of the wooded bluffs which skirted the river, saw lying out before him to the west, as far as the eye could see, a vast green sea of waving grass with only an occasional isolated dot or island of dark woods; this was the primeval Prairie.

In all this immensity of green, the prevailing and characteristic feature was the tall grasses. Four or five of the most common species grew as tall or taller than a man, the dominant ones being the greater and lesser blue-stems (*Andropogon Gerardi* and *Andropogon scoparius*), the Indian grass (*Sorghastrum nutans*), the porcupine-grass (*Stipa spartea*), and the slough-grass (*Spartina pectinacea*). These covered at least three quarters of the prairie of the region and of the state; and of these, only the lesser blue-stem grew less tall than man. Other species of lesser height were infrequent. In moist places the slough-grass might attain a height of eight feet or more. Occasional poorly drained areas might have a covert of tall sedges. And scattered here and there in this vast expanse of grass were some of three or four score flowering plants, many of them tall Compositae; and many late-blooming, which were at home on the prairie.

It is hard for us who live nowadays to realize that in all this wilderness of grass there grew not a single blade of the common blue-grass which is now seen everywhere; it came in only with the white man.

Our early settler was not much taken with the prairie and avoided it as much as he could. He came from wooded country in the east, and his natural preference was for wood-lands not too distant from the streams. He chose a site for his house near the edge of a woods and felled some trees, with which he built his cabin. Where he had come from they believed that a land which grew no trees, like the prairie, was not a fertile land and was not fit for farming. After a few attempts, he had discovered that the thick, compact, tenacious sod formed by the prairie grasses was too tough for his old-fashioned plow and his oxen to cope with. The ground he had cleared in the woods, he used to plant his corn and beans. The soft, crumbly mellow mold of the forest floor, though encumbered with stumps, was easily tilled, and yielded well. The prairie would provide his oxen and his horse, if he had one, with pasturage; that was all he required of it.

The first impact of the coming of the white man fell upon the woods; and they have continued to slowly melt away ever since. The attack upon the prairie took place only later and began in earnest about the year 1847 when the new plow, invented by John Deere came into use. With its self-scouring steel moldboard it bit into the

tough prairie sod and turned it over, something the plows hitherto in use had not been capable of doing. In a year or two the sod rotted away sufficiently to render the soil tillable, and in the course of time the prairie became one of the most productive grain-bearing soils known.

Under the incessant encroachments of man, the prairie has now all but vanished, persisting only as remnants along railroad right-of-ways and in out of the way and unfrequented corners; and with it much of its rich and varied flora of grasses and flowering plants.

The woods, too, are slowly and almost imperceptibly yielding ground and being turned into pasture or cropland. Fringe-lands which should have remained untouched are being pressed into cultivation. Marshlands and ponds have been tilled and drained; lean sandy fields are fortified with fertilizer and put to the plow and virgin woods put to use as pig-pastures. Less than five per cent of the land in Scott County is not in use; in Muscatine County the percentage is somewhat higher.

The picture of the green sea of waving grasses with an occasional island of dark woods has given way to a prospect of fat and fertile fields of corn and beans, of green pastures stocked with sleek cattle, and prosperous farmsteads with comfortable homes and barns and with bulging granaries.

THE REGION: LOCATION, TOPOGRAPHY AND SOILS

Our two adjoining counties lie in the middle of the lap of the great central valley of the country, on the eastern border of the state of Iowa. The Mississippi River here makes a great bend to the west before resuming its course to the south, and forms the southern and eastern boundaries of the counties. Some part of each county lies across the line of latitude forty-one.

Both are somewhat similar in shape, being roughly short-rectangular; each has a large part of its lower right-hand corner cut off by the river. Muscatine County lies south of and partly west of Scott, and there is a common boundary for some distance. The combined area is 887 square miles or 567,689 acres, nearly equally divided between them.

Scott County is bounded on the north by Clinton and on the west by Cedar and Muscatine. Muscatine County has Scott on the north, to the west lie Johnson and Louisa Counties, and to the south Louisa. On the Illinois side of the river and facing our two counties their full length lies Rock Island County, and at its north, Whiteside.

The grand features of the present topography were laid down on the foundation of native rock, in the main by the glaciers which successively covered the region. The debris brought in and left by the earlier glaciers was leveled off, the material ploughed up and re-worked by the succeeding ones, which in turn left fresh deposits and fresh contours. The third, or Illinoian glacier, advancing into the region from the east pushed before it the great river, now the Mississippi which flowed along its front, as far west as the present Cedar. Near Columbus Junction the ice blocked the gap between the bluffs through which the river flowed, in this way ponding its waters far up its course, and that of its tributary, the present Iowa. The extensive inundation which followed gave rise to the glacial Lake Calvin, whose bed occupies part of the northwest third of Muscatine County. It is known as the West Liberty Plain.

Eventually the glacier receded to the east; the river also withdrew and found a new channel somewhat to the east of its present course. The waters of Lake Calvin disappeared, leaving exposed its flat bed. The westerly winds which prevailed began to pick up sand and silt and clay from its dried-out bed, and to deposit the material over the uplands which had been exposed by the recession of the ice-sheet. These wind-borne deposits in the course of years reached a thickness of some forty feet on the bluffs overlooking the Mississippi River. They are much less thick over most of the uplands. This dusty mantle is the loess.

The dust-laden winds tended to deposit their cargo over the higher places of the surface over which they swept, thus not only increasing the thickness of the mantle, but also accentuating its contours, and giving the land a more gently rolling character, which was further enhanced by weathering and erosion.

The accumulation of layers of unconsolidated material which covers the native rock may be illustrated by a road-cut made in 1947 on Middle Road in Section 35, Lincoln Twp.

Proceeding from the surface,

- Black top-soil
- Peorian loess (buff-colored)
- Farmdale loess (red to red-brown)
- Illinoian gumbotil
- Illinoian drift
- Kansan gumbotil
- Kansan drift

Only one evidence of Nebraskan deposit has been noted in Scott County. Professor Richard C. Anderson of Augustana College recently found an exposure in the road—cut through the bluff at the intersection of routes 61 and 22, west of Rockingham in Scott County. I have seen this exposure and agree with his conclusion.

Weathering and erosion was of course continuously, though at varying rates, taking place during the glaciations. It may well be that some of the wider and deeper creek valleys had their beginnings during or even before the earliest ice-invasions.

The Uplands

The high loess-covered lands are the Upland or Illinoian Drift Plain. It comprises all of Scott County (except its northwestern corner which the glacier did not reach, and a narrow strip along the northern border). It also comprises all of Muscatine County (except the northwest corner and the area of Lake Calvin). In the northwest corner of both counties the Kansan drift lies directly under the loess.

The surface of the upland plain is flat, or at most very gently undulating over by far the greater part. Only on approaching the main streams, at a distance of some five miles does one see the swales deepening into valleys, and the terrain becoming more rugged.

A wide, flat divide runs through the upland, passing from the northeast to the southwest through Eldridge, Stockton and Summit at altitudes of 780, 726 and 727 feet respectively. The surface here is flat and level and the drainage is (or formerly was) poor. In places there still remain shallow pools or ponds or wet areas covered with marsh grasses and sedges. Such areas are often underlain by black, sticky, impervious clay loams. They may have provided the "buffalo-wallows" for the herds which roamed the region.

The drainage from this divide is to the north into the Wapsipinicon, to the west into the Cedar, and to the east and south into the Mississippi. As the numerous creeks approach the rivers, the land becomes more rolling and the creek-valleys deepen, the intervening upland remaining in the form of headlands or bluffs, most prominent along the Mississippi, where they rise some 150 feet above the stream. Bluffs are also present along the Cedar River, but here

they are mostly low. In many places the loess has been washed away, exposing the drift, and along the Mississippi erosion has cut deep gorges even into the underlying Devonian limestone. The bluffs are mostly too steep for cultivation, and many retain some of the original forest cover which crept up from the bottomlands. Some are used for pasture, others have been selected for home sites. In numerous places stands of bur-oaks may be seen clinging to the sides of the low hills in the county not far from the rivers; and clusters of ancient bur-oaks are scattered throughout the older parts on the hills of the town. They may well be the survivors of the Eastern Deciduous Forest, remnants of the "oak-openings" described by Shimek.

These uplands are the region of the primeval Prairie. From its ground-material, the dark fertile soil distinctive of the prairie was fashioned by the tall grasses, and time, and the weather.

The loess-derived prairie soils are dark in color and contain much organic matter. They are nearly neutral in reaction, and while free lime is absent, yet provide sufficient calcium and bases, loosely united with colloids, to make it one of the most fertile grass and grain bearing soils known. The soil scientists refer them to the Muscatine and Clinton silt loams, the Lindley silt loam and the Knox fine, sandy loam. They comprise not quite three quarters of the area of Scott County and not quite two-thirds that of Muscatine.

The region covered by these soils is the crop-land of the counties. Being used almost exclusively for agriculture, it provide but scanty fare for the collector. Such native plants as might a few years ago have been found along the unimproved roads and in the fence-rows are now being exterminated by the bulldozers of the road-building crews busily providing the farmer with the "farm to market" roads thought necessary in this modern age of progress.

The Lowlands

The lowlands, comprising the terraces and the bottoms subject to overflow, occupy about 25 per cent of the area of Scott County and a somewhat larger percentage (about 35) of Muscatine. The most extensive are the regions known as Muscatine Island and the West Liberty Plain in Muscatine County, and the region of the Iowan drift along the southern shore of the Wapsipinicon in Scott County.

The tract of bottomlands called Muscatine Island is the wide expansion of floodplains and terraces which line the banks of the Mississippi River. It extends the whole length of the two counties in a strip varying from a few rods to mostly a half mile wide. Below the city of Muscatine, it attains a width of six or seven miles and extends beyond the southern limits of the county for a distance of six or seven miles. Here it rises to a height of some thirty feet above the surrounding level in the remains of an ancient terrace known as the Sand Mound. As the name indicates, the Sand Mound is a massive heap of sand, partly in the form of shifting dunes and blowouts, partly as sandy prairie relatively fixed by vegetation. Its flora is

exquisitely psammophile with characteristic and common sand-loving plants like *Panicum pseudopubescens*, *Cyperus Schweinitzii*, *Froelichia floridana*, *Tephrosia virginiana* and *Ambrosia psilostachya*, and such rare ones as *Pentstemon grandiflorus* and *Physostegia virginiana* (L.) Benth. var. *arenaria* Shimek. An attractive small lake near the east side of the Mound supports a considerable growth of *Nelumbo* and in the moist sand of its bordering thickets at the south end grow *Aster dumosus*, *Bidens bipinnata* and *Potentilla pentandra*.

While parts of the Sand Mound are cultivated, and given over to the raising of melons, milo or corn, much of it remains in the wild state with the native sand vegetation undisturbed.

The broad expanse of Muscatine Island is divided through the middle by the Slough, with its marshes and its lake, the remains of the river which once occupied this course. The part next to the river is a flat expanse of sand dotted here and there with abandoned gravel pits, whose sand heaps form its only relief, except at its southern end where the Sand Mound lies. The lean sandy soil is unproductive without fertilization and the chief crops are melons and milo. The part adjoining the curving line of the hills is made up of terrace soils derived from the loessial soils washed down from the uplands. It is mostly in general cultivation. The soils of the Slough are of the black, sticky, heavy loams of the Wabash series, and support a lush cover of sedges, marsh grasses and aquatic flowering plants.

Dark alluvial soils are found as bays or wide indentations towards the bluffs near Nahant and Pleasant Valley in Scott County, and at various other places along the river. When not subject to flooding, they may be in use as truck gardens or for raising tomatoes or onions, or, if lower-lying, left for pasture. When not in use they may support a vigorous growth of marsh grasses and sedges; such expanses are sometimes called lowland prairies or wild hay fields, but a more appropriate name would be sedge-meadows. When the bottomlands are wooded, as they usually are on the islands, they may bear stands of willow, cottonwood, soft maple, river birch, green ash, swamp white oak, and an occasional walnut or shag-bark hickory or sycamore.

The West Liberty Plain, the most extensive of the lowlands, lies in the northwest corner of Muscatine County. Its broad expanse was once the bed of the glacial Lake Calvin. The plain has a relief of only a few feet, and declines gently to the south. The Cedar River winds its way lazily along the base of the low bluffs which mark the western border of the Illinoian upland plain. It flows in a bed it has cut for itself in the soft deposits to a depth of thirty feet below the level of the plain. Though quite flat, the drainage of the plain is adequate and the land is used for general agriculture, except near the southern part which is wet and marshy. The soils are of the terrace and bottomland types.

The first bottoms adjoining the river and subject to overflow form a narrow strip composed of the dark Wabash silt and clay

loams with alternate patches of sand and sandy loams extending to the foot of the hills. The bottoms are generally wooded with lowland forest trees, sparsely in places and given over to pasture, and are broken with wide openings of sedge-meadow and marshland. Small and shallow ponds are numerous especially in the region between Tice and Saulsbury Bridges. The low woods have nearly everywhere ascended the slopes and covered the tops of the low bluffs which skirt the river on the east. The whole region has not been too much disturbed and affords bountiful material for the collector; these parts were favorite collecting grounds for Reppert, and later for Shimek.

The Iowan glacier, or the Iowan phase of the Wisconsin glaciation was the fourth and last to cover any part of the region. Coming from the west, it pushed a long tongue-like lobe eastward as far as the Mississippi, crossing the present course of the Wapsipinicon, and covering a narrow strip, perhaps a mile wide, of the area south of the stream, and now lying in Scott County. Here it left, on its recession, a bizarre patchwork of soils on the former surface. No mantle of loess covers these deposits. The present surface is an alternation of glacial till, in places containing much limestone debris, and wind and water-borne sands and gravels. The area covered by each of these various deposits is mostly small, and their mixture lends the soil maps the appearance of a crazy-quilt. The line of the glacier's southern margin is obscured by the numerous boat-shaped mounds of wind-borne sand and silt called the "paha." In the whole area of the drift-plain sand predominates, lying mostly on the slopes of the low hills; only along the river banks and on the islands of the river is there present the dark alluvial soils of the first bottoms. Near McCausland, however, there is a wide stretch of marsh and swamp land. The whole area of the Wapsipinicon bottoms was formerly poorly drained, and ponds and marshes were numerous; parts of it are covered with alluvial forest with large grassy openings of pastures.

The extensive area of sand lying east of McCausland and some of the lower sandy slopes support goodly growths of typical sand-loving plants; in the drier parts, sedges like *Cyperus Schweinitzii* and *Carex Muhlenbergii*; in the moister parts, *Carex scoparius*, *Carex Haydenii*, several species of *Scirpus* and *Eleocharis*, and numerous species of *Juncus*.

The Kansan Upland lies in the northwest corner of Scott County, separated from the Illinoian uplands by the Cleona Valley, through which coursed the ancient river of Illinoian time. The till deposits here were transported by the second glacier, the last to reach this locality. These lands, like the Illinoian uplands are covered with a blanket of loess and their soils are of the dark kinds derived from that material. Having been subject to erosion thousands of years longer, its topography is more rugged, its steeper hills more timbered and given over to pasture than the Illinoian uplands.

The northwest corner of Muscatine County is also occupied by an area of loess-covered Kansan drift, here separated from the Illinoian by the bottomlands of the glacial Lake Calvin, the present West Liberty Plain.

The limestone gorges along the Mississippi. Wild Cat Den.

As they approach the river, numerous creeks have cut through the loess and drift into the Devonian limestone to a considerable depth, forming gorges with steep sides. Examples occur along the Mississippi above LeClaire, at Spencer Creek, at Devil's Glen, at Sweetland Creek, and along the lower reaches of Pine Creek. These steep limestone walls afford a habitat for some typical calciphiles. Above the mill on Pine Creek at Wild Cat Den are exposures of Pennsylvanian sandstone. Freshets sculptured the soft brown rock into deep ravines and gorges with high perpendicular cliffs, in places showing the laminae which indicate that the rock was formed in running water. The hilltops and the talus slopes are covered with upland forest types of trees. Here *Pinus Strobus* reaches its southernmost limit in Iowa; many other northern species are to be found here, and the ravines are covered with a luxuriant cover of many species of ferns.

No account of the region would be complete without mention of the noble promontory of Wyoming Hill, which rises to a height of some 200 feet above the river and juts forward almost to the water's edge. It affords a magnificent prospect of the river with its chains of islands reaching many miles up and down the stream, and of the steep wooded bluffs which line the eastern shores. How this immense rock of Pennsylvanian sandstone came to be heaved up to such height, and then tilted, can only be conjectured; could it have been the result of some erratic glacial movement, or undercutting by the river?

With such diversity of topography and soils as is afforded by the two counties, it would be strange if suitable habitats and conditions were not provided for the furniture of a rich and varied vegetation.

THE REGION: CLIMATE

A happy combination of soil and climate has made the region once occupied by the prairie one of the most productive croplands of the world, especially for food grains for man and animals. While there is a wide annual range of temperature, mostly exceeding one hundred degrees, the extremes are usually of brief duration, and the normals are highly favorable for the vegetation and especially so for members of the grass family. Within this wide range of extremes there occur abrupt alterations of the weather at intervals averaging about three or five days, thus producing a changeable and varied type of climate. When the departures from the normals are too great or too long sustained, the effects are unfavorable. Excessive or prolonged drought, high winds, and killing frosts late in the spring are damaging factors; the latter is especially important in limiting the northward migration of southern plants.

The range of official recorded temperatures at Davenport is twenty-seven degrees below zero in January 1884, and 111 degrees in August 1936.

The balmy days of late October often carry over into the first weeks of November. Winter is then often ushered in with a storm of rain or sleet accompanied by high winds. Thereafter for some four months there are periods lasting a few days to a week, of cold quietly flowing in from the northwest, (rarely from the southwest), or of cold waves with high winds and snow, alternating with periods of more moderate weather, with possibly a day or two of sunshine.

During our winter the sky is mostly overcast, and the frozen ground covered with snow most of the time. The average coldest day over a long period of years fell on January 21, or a full month after the solstice. The average temperature for January is 22 degrees.

The coming of spring is heralded even before the equinox by faint stirrings in the plant world. Normally the soft maples and the elms are in blossom about the first of April. The earliest wild flowers, the hepatica and the bloodroot may be found in flower in the woodlands at the end of the first week of April, give or take four or five days. The apricot is the earliest of the fruit trees to flower, and is quickly followed by the plum, the peach, and the cherry.

If the spring is a cold one, and if it is dry, the plant calendar may be retarded by as much as two weeks. I have seen the hepatica and the bloodroot reach the height of their bloom as late as April 24.

The coming of spring is always welcome, but its course until finally established, with its relapses and its hesitations, its promises and its disappointments, is often a protracted and bitter travail. Mild balmy days are rudely interrupted by violent thunderstorms with heavy rain or even a late snow-fall. The spring landscape is often exquisitely beautiful, but the tender foliage is only too often blasted by a late killing frost. The average date on which this falls is April 19, but it may occur as much as a month later. These

late spring frosts are among the most displeasing and damaging features of our climate, not only for the immediate damage they cause, but for their influence in determining the kinds of plants that shall survive to make up our flora.

The rainfall for the three spring months is the heaviest for any quarter. It amounts to 11.47 inches. For the summer months, the mean is 10.42 inches; together they account for two thirds of the annual precipitation which is approximately 33.16 inches.

Summer is a long succession of warm to hot days, with abundant sunshine broken at intervals by thunderstorms. The hottest months are July and August and the hottest day over a long term of years falls usually in the third week of July; it may fall in mid-August in unusual seasons. Rainfall is subject to extreme variations, both as to amount and time of occurrence. It has varied from 7.21 inches to 0.14 inches in July and from 9.29 to .60 in September. When there is an annual deficiency in the precipitation, it is likely to occur in the months of July, August or September.

A lack of rain in the late summer, combined with the long hot days of sunshine with the thermometer reaching 90 to 100 degrees, and remaining high for days, combined with the prevailing hot winds from the southwest not infrequently brings about conditions approaching drought. Such a combination of heat and wind and lack of moisture may well be the factor responsible for the establishment of the primeval prairie.

After the first light frosts in October there come a number of warm balmy days in which the earth, having finished her labors for the year, lies back and basks in the mellow sunshine and takes her rest amid a glory of pale yellow and bronze and rusty reds. These days are often the most agreeable of the year. The average date of the first killing frost in autumn is October 16, but such frosts may occur a month earlier. Thus ends the growing season, which has lasted from April 19 to October 16, a period of 189 days.

It may be of interest to note that the temperature values of Scott county run somewhat higher than those of Johnson, as indicated by the officially recorded figures of the Weather Bureau at Davenport and at Iowa City. Iowa City is situated fifteen minutes of latitude farther north than Davenport, but the difference in temperatures is greater than can be ascribed to the difference in latitude. Thus the July and January average figures, and the record extremes run from two to four degrees higher at Davenport, and the growing season is from ten to fourteen days longer. It may be that the water mass of the Mississippi River exerts a tempering influence; air drainage due to topography may also have a bearing.

Late in March there are often strong winds for a number of days. Winds destructive to trees, not infrequently accompanied by violent thunderstorms occur especially during the summer season; damage

by hail to the lesser vegetation rarely occurs. The prevailing winds in winter are from the northwest, with frequent cold waves. The prevailing summer winds are from the southwest and are warm or hot, and dry from their passage over the southwestern plains states. These southwesterly winds of midsummer, especially if overly hot and dry and prolonged, are probably quite harmful to the vegetation by damaging or destroying the guard-cells of the stomata of the foliage, and thus promoting loss of moisture and drying-out. As before mentioned, these hot southwesterly winds probably were the dominant influence in the natural selection of plants which produced the primeval prairie with its black fertile soil; and, once established, have helped to maintain it and defend it against the encroachment of the Eastern Deciduous Forest.

VEGETATION AND ECOLOGY*

THE GRASSLANDS: THE UPLAND, OR TRUE PRAIRIE

The vegetation covering nearly the whole extent of the upland regions is (or rather was) that which is distinctive of the Tall-grass Prairie, in which several of the tall sod-forming species were dominant. Among these the most important and abundant were the greater and lesser blue-stems (*Andropogon Gerardi* and *Andropogon scoparius*), which together covered at least three-quarters of the area of the two counties, and of the state. Other tall species scattered among the blue-stems were the Indian grass (*Sorghastrum nutans*) and the early-flowering needle-grass (*Stipa spartea*). Growing in compact stands of some extent in moist situations was the high, coarse sough or cord-grass (*Spartina pectinacea*); it is more frequent, however, in the lowland prairies and the sedge meadows. The switch grass (*Panicum virgatum*), often attributed to the high prairie, is with us found almost exclusively on lower levels and on sandy soils. The nodding wild rye (*Elymus canadensis*) is rare in our native prairie; it appears more frequently in the guise of straggler along our roadsides. Other species of lesser height growing on the high prairie, but never forming more than a small fractional percentage of the grassy cover, are the June-grass (*Koeleria cristata*), the side-oats grama (*Bouteloua curtipendula*), and the prairie drop-seed (*Sporobolus heterolepis*); most of these prefer more sandy situations than are afforded by the silt loam which covers the uplands.

Scattered among the tall grasses, and mostly blossoming before the tall species have attained much growth, are a number of lower-growing species like the various panic grasses (*Panicum scribnerianum*, *P. praecocius*, *P. perlongum*, *P. depauperatum*, *P. huachucae*) and the hair-grass (*Agrostis scabra*), none of them very frequent, possibly because they too prefer a more sandy habitat.

Sedges are quite infrequent on the upland prairie; *Carex Bicknellii* is occasionally met with and grows to a height of three feet; *Carex Meadii* is rare. I have found *Carex pennsylvanica* once, *Scleria triglomerata* three times.

In early spring, before the growth of the tall grasses has cut off the light, there are many low flowering plants, sprinkling the green with color. Among them appear the prairie and the bird's-foot violets (*Viola pedatifida*, *Viola pedata*), the Robin's plantain (*Erigeron pulchellus*), the yellow puccoon (*Lithospermum canescens*), the over-colored pink prairie phlox (*Phlox pilosa*), the lousewort (*Pedicularis canadensis*), the shooting star (*Dodecatheon Meadii*). Late in the

* The lists of plants which follow in this section are intended to be merely representative and do not pretend to be exhaustive or complete for the localities mentioned. In order to avoid duplication each plant is placed in the habitat in which it is most frequently found; if it is not present where expected it may be found in some other closely similar habitat.

summer appear the tall Compositae, which, though much less abundant, are almost as characteristic of the Tall-grass Prairie as the blue-stems and the Indian grasses; conspicuous among them are the false bone-set (*Kuhnia eupatorioides*), the stiff goldenrod (*Solidago rigida*), the blazing star (*Liatris pycnostachya*), the stiff sunflower (*Helianthus rigidus*), and the purple and yellow cone-flowers (*Echinacea pallida*, *Rudbeckia hirta*).

These plants have in common the ability, achieved by numerous and varied morphological and functional devices, to tolerate the hot afternoon sun, the hot winds, the moderate humidity and occasional droughts, and the extreme range of temperature common to the region. The upland prairie was xeric, though not to the degree of the Short Grass Prairie of the western plains, or even of the sandy prairie of our region. As contrasted with the conditions which now prevail, it was a much wetter place; mud and "ague" stood high among the hardships which the early settler endured.

Flat, poorly drained places occur on the uplands especially towards the middle of the broad divide. They are composed of silty clay loam and sometimes overlay a stratum of Illinoian gumbotill which prevents the downward passing of moisture. Such wet places formerly supported communities of plants more commonly found on the lowland prairie. These low, moist places have by this time been tilled and drained and turned into blue-grass pasture. Remnants which persist may properly be designated moist upland prairies. Such prairies formerly occupied the low grounds north of Eldridge and northwest of Sweetland. The low prairie at Eldridge in 1892 yielded the specimens of Riddell's goldenrod (*Solidago Riddellii*), the white ladyslipper (*Cypripedium candidum*), and the grass of Parnassus (*Parnassia glauca*) now in the Barnes Herbarium.

Plants frequent on, or characteristic of, the upland prairie.

The following are recorded from the prairie remnant on Muscatine silt loam at Pine Hill Cemetery. Note the prevalence of Compositae and of Leguminosae.

<i>Kuhnia eupatorioides</i>	<i>Euphorbia corollata</i>
<i>Liatris scariosa</i>	<i>Ceanothus americanus</i>
<i>Aster azureus</i>	<i>Potentilla arguta</i>
<i>Aster sericeus</i>	<i>Salix humilis</i>
<i>Aster laevis</i>	<i>Viola pedatifida</i>
<i>Aster ericoides</i>	<i>Viola pedata</i>
<i>Solidago rigida</i>	<i>Lithospermum canescens</i>
<i>Solidago missouriensis</i>	<i>Phlox pilosa</i>
<i>Echinacea pallida</i>	<i>Polygala sanguinea</i>
<i>Erigeron pulchellus</i>	<i>Heuchera Richardsonii</i>
<i>Coreopsis palmata</i>	<i>Spiranthes gracilis</i>
<i>Parthenium integrifolium</i>	<i>Gentiana puberula</i>
<i>Prenanthes asper</i>	<i>Eryngium yuccifolium</i>
<i>Hieracium longipilum</i>	<i>Comandra Richardsonii</i>
<i>Erigeron strigosus</i>	<i>Hypoxis hirsuta</i>
<i>Agoseris cuspidata</i>	<i>Sisyrinchium campestre</i>
<i>Amorpha canescens</i>	<i>Helianthus occidentale</i>
<i>Baptisia leucantha</i>	<i>Krigia biflora</i>

Petalostemon purpureum
Desmodium illinoense
Lespedeza capitata

Silphium integrifolium
Dodecatheon Meadii

Even more frequent on the sandy prairie:

Lespedeza capitata
Erigeron strigosus
Liatris scariosa

Found only on the uplands:

Salix humilis
Coreopsis palmata
Asclepias tuberosa
Echinacea pallida
Potentilla arguta

Collected from upland prairies located elsewhere:

Asclepias tuberosa
Helianthus rigidus
Heliopsis helianthoides
Ratibida pinnata

Grasses and sedges of the Pine Hill Prairie:

Andropogon Gerardi
Andropogon scoparius
Sorghastrum nutans
Stipa spartea
Carex Bicknellii
Carex Meadii

Koeleria cristata
Panicum Scribnerianum
Panicum praecocius
Agrostis scabra

more
frequent
in
sandy
soils

Grasses of the upland prairie from other localities:

Panicum perlongum
Panicum depauperatum
Elymus canadensis
Spartina pectinacea (Only in moist places).

THE GRASSLANDS: THE LOWLAND PRAIRIE

The lowland prairie is situated on second bottoms not subject to flooding, and on terraces. The soils are composed of alluvial deposits more or less mixed and covered with wash of drift or loess from the hills, and with variously developed topsoils.

The prairie is commonly assumed to be the same throughout its whole extent; it is not so. Our prairies in the eastern part of the state are clothed with a mesoxerophytic vegetation which differs from the more xerophytic vegetation of the western part, which more resembles that of the Short-grass Prairie of the western plains. The prairie is not even uniform in all parts of our own region. The upland prairie varies in the plants which compose it. Gradual changes in its composition lead, on the one hand, to its merging into the low-lying grasslands of the terraces and the second bottoms (the so-called Lowland Prairie) and continue into the sedge-meadows of the first bottoms. On the other hand it passes into the Sandy Prairie on the wind deposited Knox fine sands of the uplands and further into the fixed Sandy Prairie and the dunes and blowouts on the terraces.

The lowland prairie, being situated on lower and moister ground naturally reflects this condition in the composition and structure of its vegetation. Many of the characteristic plants of the upland prairie become less frequent or disappear and are replaced by others, which find a moister habitat more favorable. Thus, in the case of the grasses, the lesser bluestem which prefers the drier uplands is likely to disappear, while the greater bluestem thrives in lower moister ground. On the rolling native prairie at Pine Hill Cemetery, one may observe the lesser bluestem almost exclusively on the slopes, where the run-off is most rapid, while the greater bluestem occurs in the swales and on the level tops of the swells.

In moister areas of the lowland prairie may appear plants of the reed-grass (*Phalaris arundinacea*) and the red-top (*Agrostis alba*) as isolated plants among the bluestems, or interspersed with stands of the slough-grass (*Spartina pectinacea*) or the rice cut-grass (*Leersia oryzoides*), or with groups of sedges. Or, if the soil becomes sandy, with stands of switch-grass (*Panicum virgatum*), or the lower growing hair-grass (*Agrostis scabra*). Similar shifts in the composition of the vegetation as it relates to the flowering plants occur with these changes in the grass flora.

While probably never very extensive (its natural sites being restricted in area, and occupied by forest), the lowland prairie now scarcely any longer exists in our region. The lands which it occupied were too well suited to agriculture not to be exploited, and have mostly been turned into croplands and bluegrass pastures. Only a few relatively undisturbed remnants are left for reconstruction, and these being very sandy are scarcely representative of the true lowland prairie as it once existed.

Grasses and sedges on the lowland prairie:

<i>Andropogon Gerardi</i>	<i>Carex grvida</i>
<i>Spartina pectinacea</i>	<i>Carex scoparia</i>
<i>Phalaris arundinacea</i>	<i>Carex tenera</i>
<i>Calamagrostis canadensis</i>	<i>Carex lanuginosa</i>
<i>Agrostis alba</i>	<i>Carex stipata</i>
<i>Leersia oryzoides</i>	<i>Carex laevivaginata</i>
<i>Glyceria nervata</i>	<i>Carex vulpinoidea</i>
<i>Panicum virgatum</i>	<i>Carex tribuloides</i>
<i>Muhlenbergia mexicana</i>	

Flowering plants of the lowland prairie, less frequent or absent on the uplands:

<i>Cicuta maculata</i>	<i>Aster praealtus</i>
<i>Asclepias incarnata</i>	<i>Polygonum coccineum</i>
<i>Iris Schrevii</i>	<i>Veronia fasciculata</i>
<i>Apocynum cannabinum</i>	<i>Lobelia syphilitica</i>
<i>Aster simplex</i>	<i>Lobelia cardinalis</i>
<i>Aster nova-Angliae</i>	<i>Lysimachia Nummularia</i>
<i>Lycopus americanus</i>	<i>Lysimachia ciliata</i>
<i>Allium canadense</i>	<i>Spiraea alba</i>
<i>Galium obtusum</i>	<i>Hypericum Ascyron</i>
<i>Liatris pycnostachya</i>	<i>Sium suave</i>
<i>Helenium autumnale</i>	<i>Lilium michiganense</i>
<i>Helianthus grosseserratus</i>	<i>Viola papilionacea</i>
<i>Anemone canadensis</i>	<i>Ranunculus repens</i>
<i>Erigeron annuus</i>	<i>Rudbeckia laciniata</i>

THE GRASSLANDS: THE SEDGE MEADOWS

The low flat grasslands on first bottoms subject to overflow lie on the dark compact silt loams and silty clay loams of the Wabash series. They are sometimes called "wild hay fields," but because of the massive replacement of the grasses with sedges might more appropriately be called sedge meadows. The covering vegetation is mostly composed of sedges belonging to the section *Acutae* (*Carex Haydenii*, *Carex stricta*, *Carex Emoryii*) disposed in extensive beds, or compact stands so closely crowded as to exclude other plants. As great beds commonly fail to produce fruiting heads, the exact determination of the species in hand is uncertain. The slough grass (*Spartina pectinacea*), in tight stands may lie alongside the beds of sedges; and lesser colonies of other moisture loving grasses like the canary-reed grass (*Phalaris arundinacea*) and the Canadian blue-joint (*Calamagrostis canadensis*) and the red-top (*Agrostis alba*) may also be present. The rice-cut grass (*Leersia oryzoides*) occasionally occurs as tight green stands usually close at water's edge. Other sedges are occasionally found, occurring mostly as isolated tufts, such as *Carex trichocarpa*, *Carex lanuginosa* and *Carex scoparia*.

Early in the season a few flowering plants such as the bedstraw (*Galium obtusum*) and the swampcandle (*Lysimachia terrestris*) are occasionally found among the sedges. In the autumn a few colonies, mostly of tall *Compositae*, like the sawtooth sunflower (*Helianthus grosseserratus*) and the Canadian goldenrod (*Solidago gilvocanescens*) may show conspicuous blooms above the sedge. However, flowering plants find it difficult to gain a foothold in the dense sod formed by the luxuriant root-systems of the sedges and grasses. A few other plants among those mentioned under the heading Lowland Prairies may also be found here.

A good example of the sedge meadow is the tract lying east of the road from R. 61 to Nahant.

Plants of the Sedge Meadows:

Sedges:

<i>Carex Haydenii</i>	<i>Carex vulpinoidea</i>
<i>Carex stricta</i>	<i>Carex scoparia</i>
<i>Carex Emoryi</i>	<i>Carex tribuloides</i>
<i>Carex lanuginosa</i>	<i>Carex grvida</i>
<i>Carex trichocarpa</i>	

Grasses:

<i>Spartina pectinacea</i>
<i>Phalaris arundinacea</i>
<i>Calamagrostis canadensis</i>
<i>Agrostis alba</i>
<i>Leersia oryzoides</i>
<i>Panicum virgatum</i> prefers drier more sandy soils

Flowering plants:

Helianthus grosseserratus
Vernonia fasciculata
Eupatorium serotinum
Apocynum sibiricum
Asclepias incarnata
Solidago gilvocanescens
Erigeron annuus
Aster simplex
Galium obtusum

Lobelia siphilitica
Polygonum hydropiperoides
Lythrum alatum
Lysimachia terrestris
Lysimachia ciliata
Cicuta maculata
Erechtites hieracifolia
Epilobium coloratum
Oxypolis rigidior

MARSHLANDS, SHORE PLANTS, AQUATICS

THE MARSHLANDS

The marshlands are scarcely distinguishable from the sedge meadows. When the latter contain pools of water or slow moving streams, they become marshes and their vegetation becomes still more hydrophytic in type. Sedges still abound. The monocotyledons still prevail. If the water remains more or less constant and shallow, a community of tall coarse marsh-plants may appear, such as the cattail (*Typha latifolia*), the bur-reed (*Sparganium eurycarpum*), the soft-stem and the river bulrushes (*Scirpus validus* and *Scirpus fluviatilis*).

Plants listed under the headings of Sedge Meadows and Plants growing in standing water (which see) may also be present, but infrequent.

Examples of marshland are the tract known as Muscatine Slough, between the highway and the bluffs, and the tracts east and northeast of McCausland.

Plants listed under the heading of Standing Water are commonly present in the marshlands; less frequent are plants listed under Sedge meadows and Shore Plants (which see).

Plants often found growing in standing water of ponds, marshes and sloughs, invading the water directly without any intermediate shore line:

Typha latifolia
Sparganium eurycarpum
Scirpus fluviatilis
Scirpus validus
Scirpus americanus
Equisetum fluviatile
Dulichium arundinacea
Eleocharis macrostachya
Phragmites communis
Glyceria septentrionalis

Rumex verticillata
Polygonum Hartwrightii
Pontederia cordata
Acorus calamus
Polygonum hydropiperoides
Hibiscus militaris
Ranunculus flabellaris
Caltha palustris
Bacopa rotundifolia
Sagittaria graminea

SHORE PLANTS

Shore plants inhabit muddy pond-shores and dried-out mud-flats on the black silty loams of the uplands or the bottomlands, and on the silts of river shores.

The transition of the vegetation from land to water may be made through an intermediate beach, more or less broad, composed of silty mud or dried-out mud-flat. Some plants inhabiting muddy shores may, of course, belong to the group which grows in standing water, and have been stranded by its recession. In addition to the narrow leaf monocotyledons such as the sedges, there occur many broad-leaf forms like *Sagittaria* and *Alisma*.

Many dicotyledons, ranging from *Salix* to the *Compositae* also make an appearance.

Plants of the moist or mucky shores of shallow ponds on silty clay loams on the uplands and bottoms:

<i>Carex lupuliformis</i>	<i>Lobelia syphilitica</i>
<i>Carex laeviconica</i>	<i>Lobelia cardinalis</i>
<i>Carex vesicaria</i>	<i>Mentha arvensis</i>
<i>Carex hystricina</i>	<i>Mimulus ringens</i>
<i>Carex crus-corvi</i>	<i>Epilobium coloratum</i>
<i>Carex scoparia</i>	<i>Lythrum alatum</i>
<i>Scirpus atrovirens</i>	<i>Bidens aristosa</i>
<i>Juncus nodosus</i>	<i>Polygonum coccineum</i>
<i>Leersia oryzoides</i>	<i>Caltha palustris</i>
<i>Muhlenbergia mexicana</i>	<i>Acorus calamus</i>
<i>Calamagrostis canadensis</i>	<i>Eupatorium perfoliatum</i>
<i>Phalaris arundinacea</i>	<i>Ludwigia alternifolia</i>
<i>Phragmites communis</i>	<i>Lysimachia hybrida</i>
<i>Rorippa palustris</i>	<i>Cardamine bulbosa</i>
<i>Ranunculus pennsylvanicus</i>	<i>Salix discolor</i>
<i>Ranunculus scleratus</i>	<i>Cornus stolonifera</i>
<i>Lycopus americanus</i>	<i>Penthorum sedoides</i>

Plants of the wet or dried-out silts of ponds and river flats.

Many of these are low or prostrate and root at the nodes, like *Eragrostis hypnoides*, and *Lippia lanceolata*; some are succulent like *Bacopa rotundifolia* and *Nasturtium officinale*.

<i>Eragrostis hypnoides</i>	<i>Polygonum hydropiper</i>
<i>Eleocharis acicularis</i>	<i>Polygonum punctatum</i>
<i>Eleocharis obtusa</i>	<i>Alisma parviflora</i>
<i>Lippia lanceolata</i>	<i>Sagittaria graminea</i>
<i>Nasturtium officinale</i>	<i>Bidens cernua</i>
<i>Eclipta alba</i>	<i>Rorippa sessiliflora</i>
<i>Rotala ramosior</i>	<i>Lindernia dubia</i>

TRUE AQUATICS

These plants, found growing in the quiet waters of ponds and river backwaters fall into three groups:

(a) Plants with attached roots: leaves floating and broad:

Nelumbo lutea
Nymphaea tuberosa
Nuphar advena
Potamogeton illinoensis
Potamogeton nodosus

(b) Plants with attached roots; leaves immersed, often slender or capillary:

Ceratophyllum demersum
Najas flexilis
Myriophyllum exalbescens
Potamogeton pectinacea
Heteranthera dubia

(c) Rootlets unattached; plants free-swimming on the surface and small:

Azolla mexicana
Lemna minor
Lemna trisulca
Spirodela polyrrhiza
Wolffia columbiana

THE HANGING BOGS

The flora of the hanging bogs is so strikingly different from that found in wet mucky places such as occur about some pond shores that separate consideration seems warranted. Peculiar and obscure conditions are produced in these bogs which make them a congenial habitat for many diverse and unusual species, be the cause something in the water or in the drift soils in which they are situated. Hanging bogs are of occasional occurrence and are usually situated part way up or at the base of a bluff; and not infrequently the water may be seen seeping out over a stratum of the gray, plastic and impervious gumbotill of Illinoian or less often Kansan origin, which here has reached the surface through erosion, and evidences of which may sometimes be present. A close study and comparison of our hillside hanging bogs with the sphagnum bogs and calcareous fens which occur in the flat Iowan or Wisconsin drifts of the northern counties of the state should reveal some interesting differences and similarities.

Some of the inhabitants of the northern bogs are also to be found in our local hanging bogs.

The following incomplete list of plants is recorded from the bog at the base of the bluff overlooking the Nelumbo pond in Section 15, Lake Township in Muscatine County. While this bog is presumed to result from seepage from over a stratum of Kansas gumbotill, I have as yet found no clear evidence of it.

<i>Dryopteris Thelypteris</i>	<i>Chelone glabra</i>
<i>Phragmites communis</i>	<i>Gratiola neglecta</i>
<i>Muhlenbergia mexicana</i>	<i>Pedicularis lanceolata</i>
<i>Carex hystricina</i>	<i>Mimulus ringens</i>
<i>Carex cristatella</i>	<i>Scutellaria epilobifolia</i>
<i>Elodea canadensis</i>	<i>Gentiana crinita</i>
<i>Rumex orbiculatus</i>	<i>Gentiana Andrewsii</i>
<i>Boehmeria Drummondii</i>	<i>Campanula aparinoides</i>
<i>Salix discolor</i>	<i>Lobelia syphilitica</i>
<i>Salix rigida</i>	<i>Eupatorium perfoliatum</i>
<i>Saxifraga pennsylvanica</i>	<i>Aster lucidulus</i>
<i>Cassia marilandica</i>	<i>Aster novae-angliae</i>
<i>Viola nephrophylla</i>	<i>Aster umbellatus</i>
<i>Oenothera pilosella</i>	<i>Helianthus giganteus</i>
<i>Epilobium coloratum</i>	<i>Bidens coronata</i>
<i>Cornus stolonifera</i>	

Additional species from hanging bogs located elsewhere in Muscatine County:

Symphoricarpos foetidus
Eupatorium maculatum
Apios tuberosa
Oxypolis rigidior

THE SAND FLORA

Sandy areas in native or relatively undisturbed state are small and rare in Scott County; perhaps the best example is the tract of sandy prairie lying on Shelby sands of the Iowan drift in Section 13 of Winfield Township northeast of St. Anne's Church. Part of this tract has been broken, but has somewhat reverted to its original condition. There are several quiescent blowouts in the area. It is traversed by a slow threadlike stream with borders of sandy marsh-like vegetation on either side, which merges into sandy prairie on the higher levels.

In Muscatine County nearly all of Muscatine Island lies on the Buckner sands; but much of it is under cultivation of sorts. At the extreme southeast corner of the county lies the elevation known as the Big Sand Mound, the remnant of an ancient high river terrace. This tract is also partly under cultivation, though considerable areas are in their native state and are occupied by fixed sandy prairie, shifting dunes and blowouts.

There are large tracts of sandy prairie on each side of Route 80 north of Cordova in Rock Island County. Still farther north along the same road is Whiteside County, where south of Thompson lie great stretches of sand with fine examples of actively shifting dunes and blowouts.

All these areas have been drawn on in compiling the list which follows shortly.

The lean, dry, restless soil of the dunes affords a habitat favorable only to a sparse sprinkling of vegetation. The plants are strongly xerophytic and have become adapted to the rigorous conditions of dryness and heat and wind by means of numerous and diverse structural and functional devices. Among these are annual or early flowering and fruiting, or tufted branching habit, deep-penetrating and fleshy or tuberous roots, much reduced leaf surface resulting from linear or much dissected leaves, or by inrolling leaves or folding leaves, or their vertical position; or especially by thickened epidermis, or the protective covering of pubescence. Such devices are distributed among a wide range of families ranging from Equisetaceae to Compositae.

THE SAND FLORA: DRY SANDY PRAIRIES

These are prairies on dry sand fixed by vegetation; on Knox sands of loessial origin on upland bluffs facing the Cedar and Wapsipinicon Rivers, and on adjoining slopes and terraces; and on Shelby sands of the Iowan drift along the Wapsipinicon; and on Buckner sands of Muscatine Island and along the Cedar River.

Grasses and Sedges of the Sandy Prairie:

The lean and thirsty soils of the sand-fields support but a sparse covering of vegetation. The grasses are mostly low-growing and dis-

posed in tufts or bunches with spaces of bare sand intervening. In these respects our local sandy prairie resembles the Short Grass Prairie of the western plains.

While not so conspicuous as the absence of trees from the true prairie, the absence or scarcity of the tall grasses in the sandy prairie is worthy of remark.

Among the short grasses, *Panicum pseudopubescens* (the *Panicum villosimum* of many authors) is of most frequent occurrence, followed by *Leptoloma cognatum*. When either is present it tends to monopolize the ground to the exclusion of other and secondary species. When *Koeleria cristata* is predominant, other species are frequently interspersed. There are indications that each of these grasses may be the principal member of a loose association; here not further distinguished or described except to mention that the *Panicum pseudopubescens* is dominant on the Big Sand Mound and *Leptoloma cognatum* on the sandy prairie northeast of St. Anne's Church in Winfield Township.

Plants of the Dry Sandy Prairies:

Grasses

Eragrostis capillaris
Eragrostis spectabilis
Festuca octoflora
Bouteloua hirsuta
Paspalum ciliatifolium
Sporobolus cryptandrus
Sphenopholis obtusata
Agrostis scabra
Panicum virgatum
Panicum Scribnerianum
Panicum Lindheimeri
Panicum huachucae
Panicum implicatum
Panicum Wilcoxianum
Panicum Deamii

Sedges

Cyperus Schweinitzii
Cyperus filiculmis
Scirpus cyperinus (occasional)
Carex Muhlenbergii
Carex brevior
Carex heliophila

Forbs, representative of the sandy prairies:

Equisetum laevigatum
Commelina erecta var.
 angustior
Chenopodium leptophyllum
Polygonum tenue
Polygonum ramosissimum
Froelichia floridana
Delphinium virescens
Draba reptans
Cristatella Jamesii
Fragaria illinoensis
Androsace occidentalis
Asclepias amplexicaulis
Lithospermum croceum
Lithospermum incisum
Verbena bracteata
Monarda punctata
Hedeoma hispida
Linaria canadensis
Physostegia virginica var.
 arenaria
Penstemon pallidus

Lespedeza capitata
 Cassia fasciculata
 Petalostemon purpureum
 Strophostyles leisperma
 Polygala verticillata
 Polygala polygama
 Euphorbia hexagona
 Euphorbia corollata
 Polytaenia Nuttallii
 Callirhoe triangulata
 Rhus arenaria
 Lechea tenuifolia
 Opuntia Rafinesquii
 Oenothera rhombipetala
 Oenothera parviflora

Plantago
 Liatris sp. Purshii
 Aster serotinus
 Aster linifolius
 Aster triflorus
 Erigeron annuus
 Solidago strigosus
 Solidago nemoralis
 Solidago longipetiolata
 Solidago speciosa var.
 angustifolia
 Chrysopsis
 Helianthus villosus
 Gnaphalium petollaris
 Artemisia obtusifolium
 Cnicus laevis
 Cnicus caudatus
 Cnicus liliifolius

THE SAND FLORA: THE DUNES

Plants of the shifting sand-dunes and bluffs:
 Aristida tuberculosa
 Cenchrus pauciflorus
 Triplasis purpurea
 Panicum virgatum
 Calamovilfa longifolia
 Sporobolus cryptandrus
 Cyperus Schweinartzii
 Carex Muhlenbergii
 Cycloloma atriplicifolia
 Mollugo verticillata
 Euphorbia
 Euphorbia Geyeri
 Croton glyptosperma
 Croton retusus var.
 Froelichia
 Tephrosia floridana
 Polanisia virginiana
 Penstemon graveolens
 Acerates grandiflorus
 Ambrosia trifida
 Ambrosia artemisiifolia
 Ambrosia psilostachya

From the dunes east of Lock 13 in Whiteside County, Illinois:

Crotonopsis linearis
 Polygonella articulata
 Diodia teres
 Polygala verticillata

Moist interdunal swales and basin:

Carex laeviconica
 Eleocharis compressa
 Salix interior
 Betula nigra
 Juncus acuminatus

Scirpus
 Solidago serotinus
 Viola laricina
 Panicum molle
 Panicum lindheimeri

MARSH-LIKE AREAS ON SANDY SHORES OF PONDS OR STREAMS ADJOINING SANDY PRAIRIES:

When the water level is stable, there may be marsh-like vegetation at the water's edge, but floristically it is quite different from that of the marshy lowlands on the Wabash silt-clays, or that of the muddy pond shores on the Muscatine clay loams of the uplands. When the water level fluctuates, there may be a beach of clean, moist sand surrounded by a zone or low thicket of willow or river birch. The vegetation is hydro-mesophytic but psammophile. Most of the following plants grow in the sandy marsh in the northwest quarter of Section 13 in Winfield Township. The tract is traversed by a slow threadlike body of water whose level is practically constant.

Agrostis scabra
 Leersia oryzoides
 Muhlenbergia mexicana
 Panicum Lindheimeri
 Panicum huachucae
 Panicum implicatum sensu strictu Scribn.
 Carex scoparia
 Carex Haydenii
 Carex stricta
 Carex lanuginosa
 Carex interior
 Carex conoidea
 Carex Buxbaumii
 Cyperus strigosus
 Scirpus rivularis
 Eleocharis calva

Juncus Torreyii
 Juncus marginatus
 Juncus canadensis
 Juncus Greenii
 Onoclea sensibilis
 Dryopteris helypeteris
 Aster umbellatus
 Eupatorium perfoliatum
 Ludwigia alternifolia
 Hypericum majus
 Hypericum mutilum
 Rubus plicatifolius
 Solidago graminifolia
 Lobelia syphilitica
 Viola lanceolata
 Viola fimbriatula

CLEAN, MOIST SANDY POND SHORES AND MOIST SANDY RIVER BEACHES:

Some of the following also occur on muddy pond shores and river banks:

Eragrostis hypnoides
 Eragrostis Frankii
 Leersia oryzoides
 Panicum capillare
 Eleocharis calva
 Fimbristylis autumnalis
 Hemicarpha micrantha
 Bulbostylis capillaris
 Cyperus rivularis
 Cyperus inflexus

Cyperus strigosus
 Juncus acuminatus
 Juncus effusus
 Potentilla pentandra
 Bidens cernua
 Erechtites hieracifolia
 Cephalanthus occidentalis
 Salix interior
 Betula nigra

THE WOODLANDS

THE WOODLANDS: THE UPLAND WOODS

The upland woods are extensions or outliers of the Eastern Deciduous Forest, which stretches from the Appalachians into Nebraska. In its westward migration it infiltrated the land in long slender tongues which closely hugged the streams, and filled the valleys and the bottomlands with willows, cottonwoods, maples, and other trees of the soft-wood, fast-growing kinds. From the bottoms the woods ascended the bluffs, gathering along the way numbers of hard-wooded, slow-growing, more durable kinds of trees such as oaks, hickories, and hard maples.

On reaching the upland plain, the Forest began to encroach upon the Prairie with shrubs of bur-oak leading the advance. An age long struggle ensued to supplant the prairie xerophytes with the forest mesophytic vegetation. The prairie stubbornly but slowly yielded ground. In the course of perhaps two thousand years the forest plants, with the aid of the humus-forming bacteria and fungi of the leaf-mold, transformed the black tough prairie sod into the soft, mellow, light-colored soil of the forest floor.

The trees of our woods are of the tall broad-leaf species which shed their leaves in autumn, and they reflect in their structure the moist conditions which prevail in the forest. In our western upland woods the oaks are usually present in large numbers and in stands of more than one species; often they are associated with one or more species of hickories, and sometimes in much mixed stands with soft-wood trees. The white oak is found only in the high woods, often associated with the bur oak. The bur and red oaks, while preferring the uplands, also do well on the terraces and second bottoms. The red oak has a predilection for the north-facing slopes of steep hills and ravines. The black oak seems to do best on terraces, especially if somewhat sandy and dry.

Sugar maples are occasionally seen on the upper slopes (as at Wild Cat Den, here associated with other boreal species such as *Pinus Strobus*, *Diervilla Lonicera* and *Populus tremuloides*). The linden, the American and slippery elms, the wild black cherry and the American ash are found interspersed with the oaks, while the walnut, the butternut and the hackberry are quite infrequent.

About the sheltered edges of the woods and in clearings and open woods there are usually to be found some low trees and shrubs, among them the wild crab and the wild plum, several species of hawthorns, the wafer ash, and the red cedar; sometimes a belt of the smooth sumac is present on the borders, or an occasional bush of dogwood or honeysuckle.

Trees of the dry upland woods:

<i>Quercus alba</i>	<i>Ulmus americana</i>
<i>Quercus macrocarpa</i>	<i>Ulmus fulva</i>

Quercus velutina
Carya cordiformis
Carya tomentosa
Carya ovata

Acer saccharum
Acer nigrum
Tilia americana
Fraxinus americana
Prunus serotina

Shrubs, vines and small trees of the upland woods:

<i>Corylus americana</i>	<i>Celastrus scandens</i>
<i>Cornus racemosa</i>	<i>Prunus virginiana</i>
<i>Rubus occidentalis</i>	<i>Crataegus Margaretta</i>
<i>Xanthoxylon occidentale</i>	<i>Prunus americana</i>
<i>Ribes gracilis</i>	<i>Staphylea trifolia</i>

The understory in any given area is usually dominated or monopolized by a single species of shrub. Vines are rare in the upland woods.

Grasses and Sedges of the upland woods:

<i>Festuca obtusa</i>	<i>Carex normalis</i>
<i>Hystrix patula</i>	<i>Carex blanda</i>
<i>Bromus purgans</i>	<i>Carex hirtifolia</i>
<i>Brachyelytrum erectum</i>	<i>Carex granularis</i>
<i>Cinna arundinacea</i>	<i>Carex oligocarpa</i>
(in moist places)	<i>Carex pennsylvanica</i>
	<i>Carex Hitchcockiana</i>

Ferns of the upland woods:

Adiantum pedatum
Cystopteris fragilis
Dryopteris hexagonoptera
Dryopteris spinulosa
Athyrium felix-femina
Pteris pennsylvanica
Botrychium virginianum

Herbs of the upland woods:

<i>Orchis spectabilis</i>	<i>Aralia racemosa</i>
<i>Cypripedium pubescens</i>	<i>Panax quinquefolia</i>
<i>Erythronium albidum</i>	<i>Desmodium glutinosum</i>
<i>Anemone quinquefolia</i>	<i>Galium circaezans</i>
<i>Anemonella thalictroides</i>	<i>Galium triflorum</i>
<i>Dentaria laciniata</i>	<i>Sanicula canadensis</i>
<i>Geranium maculatum</i>	<i>Osmorrhiza Claytonii</i>
<i>Viola sororia</i>	<i>Thaspium barbinode</i>
<i>Viola eriocarpa</i>	<i>Phryma Leptostachya</i>
<i>Podophyllum peltatum</i>	<i>Aster sagittifolius</i>
<i>Arisaema triphyllum</i>	<i>Aster lateriflorus</i>
<i>Arenaria lateriflora</i>	<i>Solidago ulmifolia</i>
<i>Polemonium reptans</i>	<i>Helianthus strumosus</i>
<i>Thalictrum dioicum</i>	<i>Cirsium altissium</i>
<i>Dicentra cucullaria</i>	<i>Agastache nepetoides</i>

THE WOODLANDS: LOW OR ALLUVIAL WOODS

These woods are situated on sands and silts of sandbars and islands in the rivers and on first bottoms subject to flooding. Credit Island may be taken as an example of the more mature type of island, as distinguished from the young sandbars. Its higher parts towards the east are situated on Plainfield sandy loam; the lower western end is composed of the black silts of the Wabash series. The Wabash soils are generally more favorable to the sedges; if trees are present, the soft maples seem to find them more congenial than the willows. The Plainfield sands are favorable to the growth of the black and bur oaks, and a fine stand of these trees is present on the higher parts along the north shore.

The characteristic trees of the lowland woods are the fast-growing, soft-wood varieties.

There is a gradual transition of species from the water's edge inland. A belt of sandbar willow follows the shore-line, separated from the water by a sandy beach. A few of the larger willows, such as the black willow and the peach-leaf willow, are interspersed as we proceed away from the water. This is often followed by a zone of the river birch, which may also form dense thickets farther inland. The soft maple often occupies flats of silt near the water level.

The woods of the higher sandy loams on the island are composed mainly of the bur and the black oaks; both species found in upland woods, but also some black walnut and hackberry. The forest on the Wabash silt loams contains many large trees of the swamp white oak and the pin oak, several of the latter being majestic examples; neither of these species is found native on the uplands. Two trees of the rare shingle oak are all that remain here; it has not been found elsewhere in the region. Other species occurring in small numbers are the sycamore, the Kentucky coffee tree, the honey-locust, the green ash and a few black ash. The American elm is occasionally encountered, often associated with the soft maple and the green ash. The aggressive Tartarian mulberry (*Morus alba* of most authors) is gaining a foothold and beginning to dispute the borders with the redbud and the red haw (*Crataegus mollis*) and Drummond's dogwood.

The cottonwood, which is commonly said to be often associated with the soft maple and with willows in the lowland forest, is practically absent from our native woods, whether lowland or upland, though majestic examples of planted trees may occasionally be seen along the county roads. The box elder is also not found in our native woods though saplings grow like weeds along the roadsides.

Shrubs and vines in the middle story include the bladder nut, the burning bush, the carrion vine, the Virginia creeper, the river grape and the poison ivy. A single colony of *Rosa blanda*, the meadow rose, grows in the dense low woods. The balsam-apple and

Pitcher's clematis are also occasionally encountered.

Trees of the Lowland Woods:

<i>Salix nigra</i>	<i>Celtis occidentalis</i>
<i>Salix amygdaloides</i>	<i>Gymnocladus dioica</i>
<i>Acer saccharinum</i>	<i>Betula nigra</i>
<i>Populus deltoides</i>	<i>Juglans nigra</i>
<i>Platanus occidentalis</i>	<i>Quercus velutina</i>
<i>Ulmus americana</i>	<i>Quercus macrocarpa</i>
<i>Fraxinus lanceolata</i>	(Mostly on the uplands.)
<i>Tilia americana</i>	<i>Quercus palustris</i>
	<i>Quercus bicolor</i>

Small trees and shrubs:

<i>Cercis canadensis</i>	<i>Ribes gracilis</i>
<i>Crataegus mollis</i>	<i>Sambucus canadensis</i>
<i>Morus tatarica</i>	<i>Staphylea trifoliata</i>
<i>Xanthoxylum americanum</i>	<i>Euonymus atropurpurea</i>
<i>Cornus Drummondii</i>	<i>Salix interior</i>

Flowering plants of the Lowland Woods:

Herbs of the floor, somewhat in the order of their blossoming:

<i>Claytonia virginica</i>	<i>Erigeron philadelphicus</i>
<i>Erythronium albidum</i>	<i>Galium aparine</i>
<i>Viola sororia</i>	<i>Scrophularia marilandica</i>
<i>Viola missouriensis</i>	<i>Eupatorium purpureum</i>
<i>Viola papilionacea</i>	<i>Lactuca floridana</i>
<i>Viola eriocarpa</i>	<i>Campanula americana</i>
<i>Ranunculus septentrionalis</i>	<i>Circaea lutetiana</i>
<i>Ranunculus abortivus</i>	<i>Lilium michiganense</i>
<i>Chaerophyllum procumbens</i>	<i>Stachys tenuifolia</i>
<i>Smilacina stellata</i>	<i>Geum virginianum</i>
<i>Trillium reflexum</i>	<i>Laportea canadensis</i>
<i>Arisaema dracontium</i>	<i>Pilea pumila</i>
<i>Podophyllum peltatum</i>	<i>Thalictrum hypoglaucum</i>
<i>Phlox divaricata</i>	<i>Polygonum virginianum</i>
	<i>Polygonum caespitosum</i> var. <i>longisetum</i>

Additional plants of alluvial woods, not found at Credit Island.

<i>Carex muskingumensis</i>
<i>Geum laciniatum</i>
<i>Vicia palustris</i>
<i>Bromus latiglumis</i>
<i>Mertensia virginica</i>
<i>Cardamine pennsylvanica</i>

Ferns, grasses and sedges

<i>Onoclea sensibilis</i>	<i>Carex grisea</i>
<i>Poa sylvestris</i>	<i>Carex tenera</i>
<i>Elymus virginicus</i>	<i>Carex blanda</i>
<i>Sphenopholis intermedia</i>	<i>Carex Davisii</i>
<i>Panicum tennesseensis</i>	<i>Carex Jamesii</i>
<i>Cystopteris fragilis</i>	<i>Carex rosea</i>
<i>Muhlenbergia frondosa</i>	<i>Carex amphibola</i> s. s. MacKenzie
<i>Carex Grayii</i>	

THE WOODLANDS: STEEP WOODED SLOPES

The steep, moist, loamy or rocky slopes, ravines and cliffs at Wild Cat Den State Park may serve to exemplify the plants which find a favorable habitat in such situations. This area has the most rugged and broken terrain to be found in the region. Here Pine Creek and a small tributary creek, together with seasonal freshets have sculptured an outcrop of soft bluff-colored Pennsylvania sandstone into deep ravines and gorges and cliffs that rise from fifty to a hundred feet above the talus at their base. A thin layer of Illinoian drift overlies the upper levels of the rock. The whole region is densely covered with woods; many of the trees, however, do not attain great size because their roots find but insecure anchorage in the thin layer of soil and they are easily toppled over.

The trees here are sugar maple, white oak and American ash with a few black oaks and an occasional linden and red oak. The trees, being mostly close set grow very straight and tall and slender, and for the most part lack the characteristic habit of the species when growing in ample room. Not until the uplands are reached do the woods become the typical oak-hickory forest, with white oaks and bur oaks being dominant, but with some black oak and bitternut hickories interspersed. Around the border are a few Margaret's thorns and red cedars.

Along the lower slopes are a number of low-growing trees and saplings of the blue beech (*Carpinus caroliniana*) and the alternate-leaf dogwood, (*Cornus alternifolia*), the burning bush (*Euonymus atropurpurea*) and the bladder nut (*Staphylea trifolia*). Occasional bushes of gooseberry are seen, and vine of the catbriar (*Smilax hispida*).

A few large white pines (*Pinus Strobus*) cling precariously to the edges of the cliffs and form a picturesque feature of the place. They mark the most southerly limits of the species in Iowa, and are the most conspicuous of a number of boreal plants found here scattered through the woods, such as the bush honeysuckle (*Dier-villa Lonicera*), the bishop's cap (*Mitella diphylla*) and the quaking aspen (*Populus tremuloides*).

There is a relic of a boreal association on the crest of a high spur containing, in addition to the white pine, low trees of the service berry (*Amelanchier arborea*), bushes of the huckleberry (*Gaylussacia baccata*), the two-leaf Solomon's seal (*Maianthemum canadense*), and many mosses and lichens.

Another association of different nature is the prairie remnant on the ridge of another spur, containing a score of typical prairie plants, and entirely surrounded by woods.

Ferns are everywhere abundant in the moist hollows. Species collected here are:

Ferns:

Dryopteris Goldiana
Dryopteris spinulosa
Dryopteris hexagonoptera
Dryopteris Phegopteris
Athrium thelyptroides
Athyrium felix-femina
Cystopteris fragilis
Woodsia obtusa
Camptosorus rhizophyllus

Polypodium vulgare
Polystichum polypodioides
Adiantum pedatum
Osmunda Claytoniana
Onoclea sensibilis
Pteridium aquilinum
Pteritis pennsylvanicum
Botrychium virginianum

Grasses:

On the moist wooded slopes:

Panicum latifolium
Festuca obtusa
Cinna arundinacea
Poa languida
Glyceria nervata

Brachyelytrum erectum
Oryzopsis racemosa
Agrostis perennans
Leersia virginica
Panicum huachucae var.
fasciculatum

On the upper levels:

Hystrix patula
Muhlenbergia sobolifera
Muhlenbergii Schreberi

On a prairie opening on a dry hillside slope:

Danthonia spicata
Panicum depauperatum

Sedges:

Carex albursina
Carex blanda
Carex Jamesii
Carex copulata
Carex normalis
Carex rosea

Carex cephalophora
Carex sparganioides
Carex gracilescens
Carex hirtifolia
(in the upland woods)
Carex communis
(on the ledges and talus)
Carex oligocarpa

Shrubs, vines and small trees:

Amelanchier arborea
Carpinus caroliniana
Juniperus virginiana
Ptelea trifoliata
Cornus alternifolia
Corylus americana
Ribes gracilis

Staphylea trifoliata
Euonymus atropurpurea
Menispermum canadense
Smilax hispida
Celastrus scandens
(on the uplands)
Vitis riparia
Ribes Cynosbati

Trees:

Acer saccharum
Quercus alba
Quercus velutina
Quercus rubra

Fraxinus americana
Fraxinus nigra
Tilia americana
Ulmus fulva
Ulmus americana

Flowering plants of moist rich wooded slopes:

Included are several of the early spring wildflowers which bloom before the expanding leaves cut them off from the sunlight.

Flowering plants of steep rich wooded slopes:

<i>Hepatica acutiloba</i>	<i>Aquilegia canadensis</i>
<i>Sanguinaria canadensis</i>	<i>Arabis laevigata</i>
<i>Dicentra Cucullaria</i>	<i>Mitella diphylla</i>
<i>Dicentra canadensis</i>	<i>Viola sororia</i>
<i>Uvularia grandiflora</i>	<i>Aruncus dioica</i>
<i>Isopyrum biternatum</i>	<i>Hydrophyllum virginianum</i>
<i>Polemonium reptans</i>	<i>Prenanthes alba</i>
<i>Ranunculus recurvatus</i>	<i>Cacalia Muhlenbergii</i>
<i>Smilacina racemosa</i>	<i>Aster furcatus</i>
<i>Asarum canadense</i>	<i>Aster prenanthoides</i>
<i>Trillium Gleasonii</i>	<i>Solidago flexicaulis</i>
<i>Ariseaema triphyllum</i>	<i>Hieracium scabrum</i>
<i>Caulophyllum thalictroides</i>	<i>Desmodium glutinosum</i>
<i>Actaea alba</i>	

There is a lull in the blossoming after the first wave of bloom in the spring. In June and July the lower slopes are taken over by a luxurious growth of ferns of many species alternating with vigorous stands of jewel weed in wet places; the upper level areas are filled with plants of sanicle and sweet cicely. In the autumn the blossoming is resumed, especially in the more open parts, by tall compositae.

<i>Solidago ulmifolia</i>	<i>Aster Shortii</i>
<i>Aster lateriflorus</i>	<i>Aster prenanthoides</i>
<i>Aster sagittifolius</i>	<i>Cnicus altissimus</i>
<i>Aster furcatus</i>	<i>Helianthus strumosus</i>
<i>Solidago flexicaulis</i>	

On steep wooded slopes in other locations:

<i>Aster cordifolius</i>	<i>Hydrastis canadensis</i>
<i>Quercus Muhlenbergii</i>	<i>Arabis canadensis</i>
<i>Aster umbelliformis</i>	<i>Aster oblongifolius</i>

On a dry sparsely wooded steep hillside north of Fairport:

<i>Quercus alba</i>	<i>Gleditschia triacanthos</i>
<i>Quercus velutina</i>	<i>Juniperus virginiana</i>
<i>Acer nigrum</i>	<i>Tilia americana</i>

LIMESTONE CLIFFS AND EXPOSURES; CALCIPHILES.

Calciphiles, on steep walls of Devonian limestone of Duck Creek at Devil's Glen, and Spencer Creek at the Country Club, near their emergence from the bluffs to the bottomlands.

<i>Cystopteris bulbifera</i>
<i>Woodsia obtusa</i>
<i>Cryptogramma Stelleri</i>
<i>Pellaea glabella</i>
<i>Parietaria pennsylvanica</i>
<i>Aquilegia canadensis</i>
<i>Arabis hirsuta</i>
<i>Cornus rugosa</i>

WEEDS

A few representative common weeds of roadsides, railroad right-of-ways, croplands, gardens, pastures, dooryards and alleys, and waste places generally, both domestic and imported from abroad:

<i>Agropyron reptans</i>	<i>Rumex crispus</i>
<i>Bromus tectorum</i>	<i>Melilotus officinalis</i>
<i>Digitaria ischaemum</i>	<i>Pastinaca sativa</i>
<i>Echinochloa crus-galli</i>	<i>Plantago Rugelii</i>
<i>Hordeum jubatum</i>	<i>Verbascum Thapsus</i>
<i>Setaria lutescens</i>	<i>Asclepias syriaca</i>
<i>Panicum capillare</i>	<i>Verbena stricta</i>
<i>Polygonum aviculare</i>	<i>Ambrosia trifida</i>
<i>Chenopodium album</i>	<i>Ambrosia artemisifolia</i>
<i>Amaranthus retroflexus</i>	<i>Erigeron canadensis</i>
<i>Brassica nigra</i>	<i>Taraxacum officinale</i>
<i>Capsella bursa-pastoris</i>	<i>Cirsium vulgare</i>
<i>Lepidium virginicum</i>	<i>Helianthus grosse-serratus</i>
<i>Polygonum pennsylvanicum</i>	<i>Solidago gilvocanescens</i>

THE PLANT POPULATION: ITS COMPOSITION, ORIGINS, MIGRATIONS AND CHANGES

As already mentioned, the two counties lie in the middle of a wide belt of territory over which the Eastern Deciduous Forest and the Tall-grass Prairie had been waging an age-long contest for possession. The struggle had lasted for centuries, with the Forest slowly gaining ground, in the opinion of most authorities. With a continuously favoring climate, and without the interference of man, the beeches of the Indiana woods might eventually be seen growing on our hillsides and uplands. But the victory must remain in doubt as the course of nature has been changed by the activities of the white man, which makes more probable the eventual disappearance of both Forest and Prairie, and the extinction alike of the native plants peculiar to each.

The plants of the Forest and the Prairie meet, but do not mingle. The land is partitioned between them into areas which each occupies to the exclusion of the other. The demarcation is sharp, abrupt and conspicuous, or at times obscured only by a few shrubs or low trees. Such a sharp and sudden separation is rare in the plant world; mostly there is a slow and at times almost imperceptible change and flow of the vegetation from one type of habitat into another.

Today there remain only rare and small remnants of true prairie and infrequent and diminishing stands of native woods, situated mostly on bluffs and islands. Practically all the land is in use, being devoted to the production of corn and soybeans, with some small grains, mostly oats, and to pastures of blue grass for livestock. Native and introduced trees and shrubs have been planted for shade and ornament. And there is a goodly number of foreign and domestic weeds inhabiting the roadsides, croplands, pastures, gardens and waste places generally.

Plants native of the surrounding regions are occasionally found growing spontaneously in our area. Allusion has been made to boreal relics, fragments of associations of the Northern Coniferous Forest which, having been left stranded by its northwesterly retreat, have been engulfed in the advancing Eastern Deciduous Forest. Such plants are *Pinus Strobus* and *Taxus canadensis* which grows in the woods near Maquoketa, and has been collected as far south as Van Buren County. Others found in our region are *Populus tremuloides*, *Acer nigrum*, *Diervilla Lonicera*, *Maianthemum canadense* and *Mitella diphylla*.

Towards the western part of the state our True Prairie merges into the Short Grass Prairie of the western plains, and migrants from the west occasionally appear in our area as casual visitors, railroad migrants, or become more or less permanently established. Such plants are the *Silphiums*, the ragweeds, the two species of

sunflower (*HH. petiolaris* and *annuus*), *Coreopsis tinctoria*, *Grindelia squarrosa* and the hairy grama grass. (*Bouteloua hirsuta*)

Invading species from the south, belonging to the Coastal Plain Province are also not infrequently present in our flora, and if the present warming trend of climate continues, may be expected to increase in number. Many southern trees when planted in our area for ornament, like the magnolias, or for shade like the tulip-tree and the sassafras, do well, but do not propagate. Southern trees growing spontaneously in our region include the pecan, the redbud tree, the swamp white and shingle oaks. A small stand of the paw-paw, apparently spontaneous, grows on a steep bluff overlooking the Mississippi near Illinois City in southern Rock Island County.

A few of the movements from place to place, since the recession of the ice, of plants growing in adjoining Biotic Provinces have been briefly mentioned. Of these movements, by far the most important in the determination of the character of the vegetation of the region was the migration of the Forest into the lands occupied by the Prairie, and its partial occupation of these lands. This movement, though not perceptible in a lifetime and obstructed by the activities of man is in all likelihood still continuing in response to secular trends in the ecology.

In addition to external influences of the environment which favor migration, there are forces within the plants, such as hybridization, polyploidy, apomixis, and spontaneous mutation of other kinds, which bring about changes in their form and structure. Changes of this kind are even now to be seen taking place in the genera *Rosa*, *Viola*, *Helianthus*, *Verbena*, *Aster* and *Quercus*. I am persuaded that such transformations are occurring much more widely than has been believed.

Everything flows. The world is in flux. Motion and transformation are the very essence of being, as was proclaimed in the philosophy of Heraclitus, as set forth in the fragmentary "De Rerum Naturae."

Everything flows.
Heraclitus

The naming of things
by their right names
is the beginning of wisdom.

ANCIENT CHINESE PROVERB

CATALOG
OF
THE VASCULAR PLANTS
OF
SCOTT AND MUSCATINE COUNTIES
WITH NOTES

PTERIDOPHYTA

Equisetaceae

Equisetum L. Scouring Rush. Horsetail

- E. arvense L. Common Horsetail
Embankments, roadsides, and lean dry soils generally; common.
S(Waverly Road)G.; (Scott Co.)Ross.
M(Muscatine Co.)G.
- E. pratense L. Meadow Horsetail
M(Sparsely wooded fixed sand dune, Lindle's Woods, Section 7,
Lake Township)G.
Collected from only one station. Easily distinguishes from
the preceding by its more delicate habit.
- E. fluviatile L. Water Horsetail
In standing water and moist sandy meadows; infrequent.
S(In standing water in a roadside pond, southwest $\frac{1}{4}$ Section 10,
Butler Township; Moist sandy field northwest of Nahant.)G.
- E. hyemale L. var. affine (Engelm.) A.A.Eat. Scouring Rush.
Low grounds along streams; often in dry sandy soils; infrequent.
M(Creekside west of Fairport; Weiss' Slough)G.
- E. hyemale L. var. robustum (A. Br.) A.A.Eat.
(Low wet grounds in Pine Creek south of the mill.)G.
- E. laevigatum A.Br. Smooth Scouring Rush.
(Including E. kansanum Schaffn).
Moist or dry sandy soils; infrequent.
S(Roadside west of Pine Hill Cemetery)G.
M(Dry sandy bank at Weiss' Slough)G.

Lycopodiaceae

Lycopodium L. Clubmoss

- L. lucidulum Michx. Shining Clubmoss
M("High north hill, Wild Cat Den," 1952)Williams.
- L. complanatum L. Groundpine.
M(Woods east of Wild Cat Den, no date)Reppert.

Selaginellaceae

Selaginella Beauv. Spike Moss.

- S. rupestris (L.) Spreng.
Old dry prairies; rare to infrequent.
M("Cactus opening on sandy flat, Cedar River bridge west of
Bayfield, Sept. 29, 1911.")Shimek.
Ill. RI. Co.(Dry sandy prairie along R. 80, south of Meredosia)G.
- S. apoda (L.) Spreng.
M("Seepage bog at foot of sandy bluff, southwest $\frac{1}{4}$ Section 15,
Lake Township, Oct. 3, 1958.")Thorne.
Apparently the first station for this species in the state of
Iowa. Here reported through the courtesy of Prof. Thorne.

Ophioglossaceae

Botrychium Sw. Moonwort. Grape-fern.

- B. obtusum Muhl.
- B. dissectum Spreng. f. obtusum (Spreng.) Fern
Ill. RI. Co. (Woodland path north of Blackhawk Road, Watch Tower) G. A single plant.
- B. virginianum (L.) Sw. Rattlesnake Fern.
Rich woods; frequent.
S (Allen's Grove) G.
M (Wild Cat Den) G.
Ill. RI (Watch Tower) G.

Osmundaceae

Osmunda L.

- O. Claytoniana L. Interrupted Fern.
Rich densely wooded slopes; frequent.
S (Devil's Glen) Ross; (Eldridge) Barnes.
M (Wild Cat Den) G.
- O. cinnamomea L. Cinnamon Fern.
M ("Low woods (bog), June, 1892") Reppert.
M ("Boggy wooded ravine bottom on the north facing slope of old fixed dune, Section 7, Lake Township, May 17, 1952") Thorne.
Now probably exterminated there, together with other rare plants, like Aster furcatus, Aster umbelliformis, Solidago patula, Equisetum pratense, Symphoricarpos foetidus and Muhlenbergia brachyphylla, the site having been converted into a hog pasture.
- O. regalis L. Royal Fern.
M ("Moist woods."; no date or precise locality is given.) Reppert.
M ("Swampy depression in the sandy hills near Cedar River, Lake Township, 1891.") Reppert, SUI.
M ("Low place among wooded dunes east of pond 8 miles northwest of Muscatine, June 11, 1928.") Shimek, SUI.
The locality is presumed to be the "Brasenia Pond" on the upland in Section 7, Lake Township. It has not been collected here since 1928. There is a recent collection from Cedar county by Fay at SUI.
Cedar Co. ("Low boggy sandy soil, one mile east of Cedar River, four miles south of Rochester, July 30, 1960.") Fay & Thorne, SUI.

Polypodiaceae

Woodsia R.Br. Woodsia

- W. obtusa (Spreng.) Torr.
Shady limestone or sandstone ledges; infrequent.
S ("Cliffs," LeClaire) Barnes; (Devil's Glen) Ross; G.
M (Wild Cat Den, sandstone rockwall) Hauber; G.
Easily distinguished from Cystopteris by the scurfy or hairy stipe and stalked pinnules.
- Cystopteris Bernh. Bladder Fern.
 - C. bulbifera Bernh. Bladder Fern.
On limestone cliffs and ledges; found only in calcareous situations; rare to infrequent.

S (Devil's Glen; Duck Creek Park, cultivated) G.
M (Muscatine Co.) Reppert.

- C. fragilis (L.) Bernh. Fragile Fern.
Damp woods, lowland and upland; frequent.
S (Allen's Grove) G.
M (Muscatine Co.) Reppert.
- C. fragilis (L.) Bernh. var. protrusa Weatherby
Damp upland and lowland woods; apparently more frequent than the last.
S (Allen's Grove; Devil's Glen) G.
M (Wild Cat Den) G.
Differs in the tip of the rhizome extending up to 2 cm. in advance of the stipe; rhizome densely brown-villous.

Pteritis Raf.

- P. pennsylvanica (Willd.) Fern. Ostrich Fern.
Onoclea Struthiopteris Hoffman of Fl.
Moist to dry rich woods; infrequent.
S (Level upland woods, Hickory Grove) G.
M (Moist talus at base of northfacing cliff, Wild Cat Den) G.;
(Steep north slope, Lindle's Woods) G.

Onocles L. Sensitive Fern.

- O. sensibilis L.
Moist low woods and moist open sandy places; infrequent.
S (Moist sandy shore of marsh northeast of St. Anne's Church) G.
M (Floodplain of creek in Wild Cat Den) G.

Dryopteris Adans.

- D. Thelypteris (L.) Gray var. pubescens (Lawson) Nakai. Marsh Fern.
Aspidium Schwartz. Including Phegopteris (Presl.) Fee.
Aspidium Thelypteris Swartz of Fl.
Boggy places and marshes; frequent.
S (Marsh northeast of St. Anne's Church) G.
M (Hanging bog south of Pine Mill); (Hanging bog, Lindle's Woods) G.
- D. spinulosa (O.E. Muell.) Watt. Spinulose Woodfern.
Aspidium spinulosum Swartz of Fl.
Damp rich wooded hillsides; rare or infrequent.
M (Wild Cat Den); (Lindle's Woods) G.
Ill. Henry Co. (Talus on sandstone quarry bottom north of Colona) G.
- D. cristata (L.) Gray Crested Woodfern.
Aspidium cristatum Swartz of Fl.
Boggy places and wet woods; rare.
S (Duck Creek Park, cultivated) G.
M ("Woods, July, 1895.") Reppert. ("Marsh with abundant sphagnum, Section 15, Lake Township, Sept. 27, 1952.") Thorne, SUI.
- D. Goldiana (Hook.) Gray. Goldie Fern.
Aspidium Goldianum Hook. of Fl.
Damp rich wooded slopes; apparently restricted to Wild Cat Den.
M (Wild Cat Den) G.
- D. Phegopteris (L.) Christens. Northern or Narrow Beechfern.
Phegopteris polypodioides Fee of Fl.
"Wild Cat Den, rare." Fl.
M (Wild Cat Den, July, 1897) Reppert.

- D. hexagonoptera (Michx.)Christens. Broad Beech-fern.
Phegopteris hexagonoptera Fee of Fl.
 Rich woods; frequent.
 S(Allen's Grove)G.; (I & I Park)Shimek.
 M(Wild Cat Den)Barnes; Shimek; G.; (Sweetland Creek)Shimek.
- (D. disjuncta (Ledeb.)Mort. Oak-fern.
Phegopteris dryopteris (L.)Fee.
 Ill. Henry Co.(Foot of wall of abandoned sandstone quarry in shaded talus, June 22, 1950)G.
- Polystichum Roth
- P. acrostichoides (Michx.)Schott. Christmas Fern.
Aspidium acrostichoides Swartz of Fl.
 Shaded rocky banks and ledges; rare.
 S("Duck Creek.")Melville.
 M(Wild Cat Den)Reppert; G.
- Athyrium Roth.
- A. thelypteroides (Michx.)Desv. Silvery Spleenwort
Asplenium thelypteroides Michx. of Fl.
 Rich moist shaded ravine bottoms; rare.
 M(Wild Cat Den, frequent here)Barnes; G.
 Ill. RI(Watch Tower)G.
- A. filix-femina (L.)Roth. var. Michauxii (Spreng.)Desv. Ladyfern.
Asplenium Filix-foemina Bernh. of Fl.
 Moist woods; becoming rare.
 M(Wild Cat Den)Reppert; G.
 Ill. Henry Co.(In shade of wall of abandoned quarry north of Colona)G.
- (A. pynocarpon (Spreng.)Tidestr. Narrowleaf Spleenwort.
 Washington Co.("Moist alluvial woods 6 miles south Riverside, Iowa Township, Section 10, July 6, 1953.")Wagenknecht, SUI.
- Camptosorus Link
- C. rhizophyllus (L.)Link. Walking-leaf Fern.
 On shaded sandstone blocks, Wild Cat Den.
 S(Davenport)Ross.
 M(Wild Cat Den)Barnes; Shimek; G.
- Asplenium L. Spleenwort
- A. platyneuron (L.)Oakes. Ebony Spleenwort
A. ebeneum Ait. of Fl.
 Moist rocky banks and ledges. "Open sandy woods." Fl. Rare.
 S(Allen's Grove, March 30, 1940)Beyer.
 M("Open woods.")Reppert.
 Ill. Henry Co.(Shady base of rock wall of abandoned quarry of Colona)G.
- Pellaea Link Cliff-brake
- P. glabella Mett.
P. atropurpurea Link. of Fl.
 In crevices of rockwalls. Rare.
 S(Devil's Glen)Ross; G.; (Spencer Creek)Shimek.
 M(On east pier of Saulsbury Bridge)G.; (Montpelier)Barnes.

- (*Cheilanthes* Sw. Lipfern.
 C. Feei Moore
 Jackson Co.(Maquoketa Boy Scout Camp)Paarmann-Sheldon.
- Cryptogramma R.Br. Rock-brake
 C. Stelleri (Gmel.)Prantl. Slender Cliff-brake
 Shaded crevices in limestone cliffs; rare.
 S(Devil's Glen, cliffs on west side of creek)G.; Ross; Paarmann-Sheldon.
- Adiantum L. Maidenhair Fern.
 A. pedatum L.
 Rich woods; frequent.
 M(Wild Cat Den)Barnes; G.
 Ill. RI(Watch Tower)Ross.
- Pteridium Gleditsch. Bracken.
 P. aquilinum (L.)Kuhn.
Pteris aquilina L. of Fl.
 Clearings and dry wooded crests; infrequent.
 S(Northwest Davenport)Melville; (Duck Creek Park, cultivated)G.
 M(Wild Cat Den)Reppert; G.
 Ill. Henry Co.(In the open along the railroad north of Colona)G.
- Polypodium Polypody
 P. virginianum L. Rock Polypody
 P. vulgare L. of Fl.
 On rock ledges; rare.
 M(On sandstone, cliffs, Wild Cat Den)Barnes; Reppert; G.

Salviniaceae

- Azolla L. Waterfern.
 A. mexicana Presl.
A. caroliniana Willd. of Fl.
 In quiet water of sloughs, backwaters and ponds; rare or infrequent.
 S(Quiet water west of the Suspension Bridge, with *Wolffia* and *Lemna*)G.
 M(Muscatine Slough)Reppert.

GYMNOSPERMAE

Taxaceae

- Taxus L. Yew.
 T. canadensis L. American Yew.
 A Coniferous Forest shrub which ranges south into Jackson, Cedar and Van Buren counties. It may yet be collected in our area, possibly in the woods of the Kansan Drift in Scott County.
 Cedar Co.("Limestone ledges along Rock Creek northwest of Rochester, Sept. 28, 1959.")Fay, SUI. Infrequently in cultivation in towns as foundation plantings.
 An incomplete list of evergreens frequently seen in cultivation is given in Supplement 1.

THE VASCULAR PLANTS OF SCOTT AND MUSCATINE COUNTIES

L. F. Guldner

Omissions

page 51, directly under GYMNOSPERMAE, insert Pinaceae.

Pinaceae

Pinus L. Pine.

P. Strobus L. White Pine.

S (Spontaneous seedlings in the prairie remnant north of Mt. Nebo Cemetery)
G.

M (Wild Cat Den. Several large trees on the brink of the cliff) G.
These trees mark the southernmost limits of the species in Iowa.

Juniperus L. Juniper.

J. virginiana L. Red Cedar.

Hillsides and open woods. Rare in Scott county, frequent in Muscatine.
S (Prairie remnant north of Mt. Nebo Cemetery) G.
M (Wild Cat Den; Brasenia Pond) G.

Synopsis

"Pteridophytes"	38
Conifers	2
Monocotyledons	333
Dicotyledons	920
Total species of vascular plants	1293

Number of Species in Larger Families:

Compositae	170
Gramineae	132
Cyperaceae	97
Leguminosae	55
Labiatae	43
Rosaceae	44

Scrophulariaceae	37
Cruciferae	41
Ranunculaceae	32
Polygonaceae	34
Umbelliferae	25
Caryophyllaceae	18

Number of Species in the Larger Genera:

<i>Carex</i>	63
<i>Aster</i>	26
<i>Polygonum</i>	24
<i>Viola</i>	15
<i>Euphorbia</i>	13
<i>Panicum</i>	14
<i>Asclepias</i>	9

<i>Salix</i>	13
<i>Chenopodium</i>	13
<i>Helianthus</i>	12
<i>Potamogeton</i>	11
<i>Solidago</i>	14
<i>Cyperus</i>	9
<i>Juncus</i>	12

Errata

Errors obviously typographical are passed over. Mis-spellings and other errors affecting mostly endings of Latin names are here corrected.

- p. 7, line 16 . . . for "Gentes Herbarium" read "Gentes Herbarum"
- p. 8, last paragraph . . . a parenthesis "(" should be inserted in the margin opposite the last three lines.
- p. 22, last line . . . for "Meadii" read "Meadia"
- p. 23, in the list at the bottom of the page for "Comandra Richardsonii" read "Comandra Richardsiana"
- p. 24, in the list at the top of the page, for "Petalostemon" read "Petalostemum;" for "Meadii" read "Meadia"
- p. 30, list a) . . . for "Potamogeton illinoense" read "Potamogeton illinoensis"
- p. 33, list at bottom of page, for "Fragaria illinoensis" read "Fragaria virginiana var. illinoensis"
- p. 34, list at top of page, for "Petalosteon" read "Petalostemum;" for "Cnicus Hillii" read "Cirsium Hillii"
- p. 37, in second list, for "Xanthoxylon" read "Xanthoxylum"
- p. 61, under Calamovilfa, for C. lonifalio" read "C. longifolia"
- p. 69, last sentence, for "Gilley" read "Gilly"
- p. 78, under Arisaema, for "A. triphylla" read "A. triphyllum"
- p. 79, under Tradescantia, for "T. virginica" read "T. virginiana"
- p. 83, for "Amaryllaceae" read "Amaryllidaceae"
- p. 130, for "Petalostemon" read "Petalostemum"
- p. 131, under Coronilla, for "C. varians" read "C. varia"
- p. 139, under Staphylea, for "S. trifoliata" read "S. trifolia"
- p. 154, under Dodecatheon, for "D. Meadii" read "D. Meadia"
- p. 180, under Eupatorium, for "E. maculata" read "E. maculatum"
- p. 189, the paragraph preceded by an asterisk is a footnote and belongs properly at the bottom of page 188.
- p. 202, under Hieracium, for "H. longipilosum" read "H. longipilum"
- p. 203, last line . . . for "would be science" read "would be no science"
- p. 204, under Taxodium, for "distichium" read "distichum"
- p. 207, under Aesculus, for "Hipocastaneum" read "Hippocastanum"
- p. 208, under Taxodium, for "distichium" read "distichum"
- p. 218, under Bailey, for "Gentes Herbarium" read "Gentes Herbarum"
- p. 220, under Steyermark, the complete reference is Rhodora, Vol. 50, No. 604, p.p. 70-79, 1954
- p. 222, delete the word "Orders" from line one
- p. 228, The sentence at the end of the index should read: Deo gratias ago, et benedico, quod in tam pulchro mirabilique horto suo orbis terrarum vitam mihi degere permisit.

Addenda

In 1946, Charles Gilly in his "The Cyperaceae of Iowa," a work which will probably long remain the standard in its field, while stating that *Carex conoidea* is definitely known from only one county (Jasper, p. 580) gives as a specimen examined a plant from Fayette county, June 7, 1898, Gardiner, ISC. He mentions as unconfirmed the reports from Scott and Floyd counties. The specimen from Scott County was collected by Barnes in 1895 and is in the Davenport Public Museum. The station was relocated and specimens taken by Guldner in 1952.

While the only known specimen of *Scirpus Hallii* lay peacefully undisturbed in the Davenport Public Museum (Muscatine County, Reppert, confirmed by Cratty) it was disposed of as doubtful or erroneously reported. It has since (1960) been collected from Louisa County by Guldner.

Although *Polygonum caespitosum* Blume var. *longisetum* (de Bruyn) Stewart is almost certainly not restricted to our region I have never see it reported. It is probably mistaken for an allied species.

Panicum Lindheimeri has not been reported. I have collected it from four different stations.

A list of species and varieties, new or rare in the region with notes on their range and distribution is being prepared by Morrissey and Guldner.

ANGIOSPERMAE
MONOCOTYLEDONEAE

Typhaceae

Typha L. Cat-tail.

T. latifolia L. Common Cat-tail
Ponds, marshes and ditches, in shallow water; frequent.
S(Marsh northeast of St. Anne's Church)G.

T. angustifolia L. Narrow-leaf Cat-tail
S(Wet ditch along tracks at foot of Howell St.)G.

Sparganiaceae

Sparganium L. Bur-reed

S. eurycarpum Engelm. Common Bur-reed
In shallow water of marshes and ponds and on muddy pond shores;
frequent.
S(Credit Island); (Wet alluvial flat, Sea Scout Camp west of Le-
Claire)G.

S. androcladum Engelm.

S. simplex Huds. var. androcladum Engelm.
"Marshy places along Cedar River in Lake Township, Atalissa."Fl.
M(Atalissa)Barnes; Pontederia Pond northeast of Bayfield, July
20, 1922."Shimek, as S. chlorocarpum, redetermined by Beal,
SUI.

S. americanum Nutt.

M("Cedar River region, June 25, 1894.")Reppert, determined by
Beal.

(S. chlorocarpum Rydb.

(X)Reppert. No data are given.

Zosteraceae

Potamogeton L. Potamogeton. Pondweed

P. pectinatus L.

"Ponds and sloughs; not infrequent." Fl.
S(Quiet waters in the Mississippi, Sea Scout Camp west of Le-
Claire); (Basins, Lock 14)G.
M(Pond near Cedar River, July, 1894)Reppert.
Ill. RI(Rock Island Arsenal at the old locks)G.

P. crispus L.

Quiet waters of the river; frequent.
S(Basins at Lock 14)G.
Ill. RI(Rock Island Arsenal, at the locks)G.

P. zosteriformis Fern. Flatstem Pond-weed.

P. zosteriformis Schum. of Fl.
M("Pond near Cedar River, Saulsbury bridge region, May and
August, 1895.")Reppert, SUI.
(X)Barnes.

P. foliosus Raf.

P. paucifolius Pursh of Fl.

S(Davenport)Barnes; (Basins at Lock 14)G.
M("Sloughs near Cedar River, Saulsbury bridge region, July,
1894)Reppert.

(P. Friesii Rupr.

Reported in the Fl. (as P. mucronatus Schrad.) but no specimen
has been located.

P. pusillus L.

M("Muscatine Slough, June 2, 1895.")Reppert (coll. K.K.Mac-
Kenzie), SUI.

(as P. major (Fries)Morong, or P. mucronatus Schrad. by
Reppert)

(as P. panormitanus Biv. by D.P.Rogers.)
(as P. pusillus L. by Beal)

M("Muscatine Slough, June, 1895.")Reppert, SUI.

(as P. panormitanus (Fries)Morong, (fide Cratty) by
Reppert.)

(as P. panormitanus Biv. by D.P.Rogers)
(as P. pusillus L. by Beal.)

S(North basin at Lock 14)G.

P. pusillus L. var. minor (Biv.)Fern.

Louisa Co.("Cut-off pond in alluvial flat at Parker's Landing,
Muscatine Island, August, 1897")Shimek & Meyers, SUI.

(as P. panormitanus (Biv.)Bern. var. minor Biv. by D.P.
Rogers.)

P. pusillus L. var. tenuissimus Mert.&Koch.

M(Slough near Cedar River, July, 1894)Reppert.

(as P. pusillus L. by Cratty and by Beal)

(as P. pusillus L. var. tenuissimus Mert. & Koch. by D.P.
Rogers.)

M("Slough near Cedar River, Saulsbury Bridge region, July, 1894")
Reppert, SUI.

(as P. pusillus L. by Cratty and by Beal)

(as P. pusillus L. var. tenuissimus Mert. & Koch, by D.P.
Rogers.)

P. diversifolius Raf.

P. Spirillus Tuckerm. of Fl.

M("Ponds along CRI & P railroad between Muscatine and Fruit-
land, July, 1894.")MacKenzie. ("Ponds along Cedar River, Ce-
dar Township, September, 1896.")Reppert.

P. epihydrus Rupr.

P. pennsylvanicus Cham. of Fl.

M("Ponds and sloughs near Cedar River, Lake Township, June
25, 1890.") Reppert, SUI.

P. amplifolius Tuckerm.

M("Large pond near Saulsbury Bridge, 1891.")Reppert.

P. nodosus Poir

P. fluitans Roth of Fl.

P. americanus C & S

M(Cedar River at Moscow)Barnes; Mississippi River above Mus-
catine)Reppert; Fish ponds at Fairport)G.

- P. illinoensis* Morong.
M(Moscow, 1892)Barnes; Fish ponds at Fairport)G.
- P. natans* L.
M(Pond near Cedar river, Lake Township, July, 1894)Reppert.
- Zannichellia L. Horned Pondweed
- Z. palustris* L.
"Ponds and sloughs of Muscatine Co.; frequent."Fl.
M(Moscow)Barnes; (Muscatine Co.)Reppert.

Najadaceae

- Najas* L.
- N. flexilis* (Willd.)Rostk.
"Habitat and range of the preceding but less frequent."Fl.
S(Basin at Lock 14)G.
M(Moscow)Barnes; (Muscatine Island)Shimek; (Fairport ponds)G.

Alismaceae

- Alisma* L. Water or Mud-plantain
- A. trivialis* Pursh
- A. Plantago* L. of Fl.
Muddy pond shores and ditches; infrequent.
S(Credit Island; Nobis' Pond)G.
M(Weiss' Slough)G.
- A. subcordatum* Raf.
In similar situations. Flowers and fruit much smaller. Less-frequent.
(Muddy roadside ditch east of Saulsbury Bridge)G.
- Echinodorus* Richard.
- E. cordifolius* (L.)Grieseb. Burhead
"Margin of ponds, Muscatine Island; infrequent". Fl.
M("Pond above Muscatine City, August, 1891.")Reppert, SUI.
- (*Lophothocarpus* Th. Durand.
- L. calycinus* (Engelm)J.G.SM.
Sagittaria calycinus Engelm. of Fl.
Shallow ponds and muddy shores; rare.
Ill. RI(Shallow pond at Illinois City)G.; (Rock Island Arsenal) Shimek.
- Sagittaria* L. Arrow-leaf
- S. latifolia* Willd. Common Arrow-leaf
- S. variabilis* Engelm. of Fl.
In shallow water and muddy shores of ponds and streams; frequent.
S(Duck Creek Park)Paarmann-Sheldon
Ill. RI(Rock Island Arsenal)Paarmann-Sheldon.
- S. brevirostris* Mack. & Bush.
In similar situations; less frequent.
S(Nahant)G.; (Duck Creek Park)Paarmann-Sheldon.
M(Creek bank west of Wilton)G.
- S. graminea* Michx.
Muddy shores and pond bottoms; infrequent.
S(Noels)Barnes.
M(Bottom of Brasenia Pond)G.
Ill. Henry Co.(In quarry bottom north of Colona)G.

- S. rigida* Pursh.
- S. heterophylla* Pursh of Fl.
M("Pond northeast of Bayfield, June 26, 1909")Shimek, SUI.
- (*S. cuneata* Sheldon
Ill. RI(Rock Island Arsenal)Paarmann-Sheldon; (Carbon Cliff) Barnes.

Hydrocharitaceae

- Elodea*. Michx. Waterweed Ditchmoss.
- E. canadensis* Michx.
Anacharis canadensis (Michx.)Rich. of B.&B. 3rd Ed.
Ponds and slow streams; rare.
M(Seepage stream into Nelumbo Pond, Section 15, Lake Township)G. (X)Barnes.
- E. Nuttallii* (Planch)St. John.
Anacharis occidentalis (Pursh)Vict.
M(Fish pond at Fairport, June 28, 1928)Hauber.
- Vallisneria* L. Tape- or Eel-grass
- V. americana* Michx.
"Ponds of Mississippi River islands."Fl.
S(Scott Co., July 21, 1895)Paul Bartsch, ISC.

Gramineae

- Bromus* L. Brome Grass
- The first three are indigenous; the others introduced from Europe as forage grasses; with us usually found as casual roadside weeds.
- B. latiglumis* (Shear)Hitchc.
Moist low woods; infrequent.
S(Allen's Grove)G.; (Davenport)Ross.
M(Saulsbury Bridge)Barnes.
- B. purgans* L.
- B. ciliatus* L. var. *purgans* Gray of Fl.
Rich woods; frequent.
S(Allen's Grove)G.; (Davenport)Ross.
Ill. RI(Watch Tower)G.; (Rock Island Arsenal)Ross.
- B. ciliatus* L. Fringed Brome.
Woods; rare
M(Wild Cat Den)G.
- B. secalinus* L. Cheat or Chess.
S(Oakton)Ross.
- B. inermis* Leyes. Hungarian Brome
Roadsides; abundant locally.
S(Devil's Glen Road; Orphan's Home Road; Nahant)G.
- B. japonicus* Thunb. Japanese Brome
Roadsides and waste grounds; frequent.
S(Nahant; Chapel Hill Road)G.
- B. racemosus* L.
S(Sandy roadside at the marsh northeast of St. Anne's Church)G.

- B. *commutatus* Schrad.
Roadsides and waste places; frequent.
S(Waverly Road; St. Anne's Church)G.
M(Fairport)G.
- B. *tectorum* L. Downy Brome
Along roadsides; abundant locally
S(R. 61 below Rockingham)G.
M(Wyoming Hill)Barnes; Saulsbury Bridge)G.
- Festuca L. Fescuegrass
- E. *ovina* L. Sheep Fescue
In old neglected lawns; frequent.
S(15th & Main); (Terrace, 11th & Main)G.
- (F. *ovina* L. var. *duriuscula* (L.)Koch. Hard Fescue
Ill. RI(Rock Island Arsenal, in a low moist place in lawn)G.
Determined by Swallen.
- (F. *rubra* L. Red Fescue.
Ill. RI(Found once in a low moist place in the meadow west of
the lock tenders' house on Rock Island Arsenal)G.
- F. *elatior* L. Meadow Fescue
F. *elatior* L. var. *pratensis* Gray of Fl.
Occasional in lawns and meadows.
S(15th & Harrison; Meadow northwest of Mercy Hospital)G.
- F. *obtusa* Biehler. Nodding Fescue.
F. *nutans* Willd. of Fl.
Moist woods; frequent
S(Allen's Grove)G.
M(Wild Cat Den)G.
Ill. RI(Watch Tower; Rock Island Arsenal)G.
- F. *paradoxa* Desv. Short's Fescue
F. *Shortii* Kunth of Fl.
Low sandy prairie habitats or low open woods; infrequent.
S(Marsh northeast of St. Anne's Church; Harbor Road)G.
- F. *octoflora* Walt. var. *tenella* (Willd.)Fern.
F. *tenella* Willd. of Fl.
Vulpia *octoflora* (Walt.)Rydb. var. *tenella* (Willd.)Fern
Dry sandy prairies; frequent.
S(Dry sandy field east of Noels); Sandy field at the marsh
northeast of St. Anne's Church;)G.
M(Muscatine Co.)Shimek.
Ill. RI(Sandy field south of Meredosia)G.
- Glyceria R.Br. Manna-grass.
- G. *septentrionalis* Hitchc. Floating Manna-grass.
G. *fluitans* R.Br. of Fl.
Shallow water or very wet situations; infrequent.
S(Edge of pond, Credit Island)G.
M(Muscatine Co.)Reppert.
- G. *striata* (Lam.)Hitchc. Fowl Manna-grass.
G. *nervosa* Trin. of Fl.
Wet grounds about creeks and marshes; wet woods; frequent.
S(Marsh northeast of St. Anne's Church); Eldridge)G.
Ill. RI(Watch Tower)G.
- (G. *grandis* Wats. Reed Manna-grass
Cedar Co.("Slough along US 30 west of Lowden, July 14, 1950.")
Fay, SUI.

- Poa L. Meadow Grass.
- P. *annua* L. Annual Blue grass.
In wet waste places; occasional in damp partially shaded places in
lawns.
S(Wet ravine, Fejervary Park; Lawn, Vanderveer Park)G.
- P. *compressa* L. Canada Blue grass.
In lawns around the bases of trees; in open low and sandy places,
meadow and open woods; frequent.
S(Harbor road; Noels)G.
M(Wild Cat Den)G.
- P. *pratensis* L. Kentucky Blue grass.
Lawns, pastures, roadsides; grows almost anywhere; prefers lime
containing soils.
S(Wapsie bottoms; marsh northeast of St. Anne's Church)G.
M(Wild Cat Den)G.
- P. *palustris* L. Fowl Meadow grass. False Red-top
P. *serotina* Ehrhart. of Fl.
Infrequent.
S(Damp sandy meadows, Wapsie bottoms)G.
- P. *nemoralis* L. Wood Blue-grass
S(Established for seven years under shrubs on the terrace at
7th and Main Sts.)G.
- P. *sylvestris* Gray.
S(In moist alluvial woods, crossroad opposite the woodlot,
Credit Island)G.
- P. *lanuginosa* Hitchc.
P. *debilis* Torr. of Fl.
M(Wild Cat Den. An occasional plant along the paths in the
lower woods; at the cliff edge above the "Kettle".)G.
- P. *bulbosa* L.
M(Muscatine Co., May 25, 1922)J. W. Merrill, ISC.
- Melica L. Melic-grass
- M. *nitens* Walt.
M. *diffusa* Pursh. of Fl.
M("Muscatine County, June 18, 1890.")Reppert, SUI.
M("Along the railroad, Wilton to Moscow, June 28, 1917.")
Shimek, SUI.
- Dactylis L. Orchard Grass.
- D. *glomerata* L.
Roadsides and waste places about cultivated grounds, in the open
or under trees; frequent.
S(15th & Brady Sts.; Old Koenig place)G.
- Eragrostis Beauv. Love-grass
- E. *hynoides* (Lam.)BSP. Creeping Eragrostis.
E. *reptans* Nees of Fl.
Moist or dried-out flats; moist sandy shores; frequent.
Quite variable in habit; frequently forms dense mats.
S(Allen's Grove; Credit Island; Fishertown)G.
Ill. RI(Rock Island Arsenal)G.
- E. *megastachya* (Koel)Link. Stink-grass
E. *cilianensis* (All.)Link.
E. *major* Host. of Fl.
A common weed of waste places.

- S(Davenport)G.; (Blue Grass)Barnes.
M(Sandy open flat near Saulsbury Bridge)Shimek.
Ill. RI(Rock Island Arsenal)G.
- E. pectinacea (Michx.)Nees.
E. Purshii Schrader of Fl.
A common weed in waste places in towns.
S(Credit Island); (Schmidt's Road)G.
M(Muscatine Co.)Shimek.
- E. Frankii C.A. Mey.
Moist sandy pond and stream margins; infrequent.
S(Sandy riverbank, Credit Island)G.
Louisa Co.(Wet sandy shore of lake, Big Sand Mound)G.
- E. capillaris (L.)Nees. Lace-grass.
S(Near top of sparsely wooded north slope on Illinoian upland, Fejervary Park); Dry sandy sparsely wooded north shore of Credit Island)G.
- E. spectabilis (Pursh)Steud. Tumble-grass.
E. pectinaces Gray of Fl.
Dry sandy soils; frequent locally.
S(Devil's Glen); Credit Island; Wapsie bottoms.)G.
M(Wild Cat Den)G.; (Muscatine Co.)Shimek.
- E. trichodes (Nutt.)Wood.
E. tenuis Gray of Fl.
M("Sandy soil, Fruitland, 1895")Barnes.
- (E. poaeoides (L.)Beauv.
E. minor Host.
Washington Co.("Rare; in waste ground of railroad yard, 1953.")
Wagenknecht, SUI.
- Diarrhena Beauv.
D. americana Beauv.
M(Wild Cat Den, July, 1904)Somes, ISC.
Cedar Co.("Upland woods near Rock Creek, 2 miles north of Rochester, September 23, 1960.")Fay, SUI.
Ill. RI(Rock Island Arsenal)Ross.
- Triodia R.Br.
T. flava (L.)Smyth. Tall Red-top. Purple-top.
T. cuprea Jacq. of Fl.
Open grassy woods; sandy soil; a lowland species; infrequent.
S(Credit Island)G.
M(Fairport)Barnes.
Ill. RI(Meredosia)G.
- Triplasis Beauv.
T. purpurea (Walt.)Chapm. Sand-grass.
Triodia purpurea Hack. of Fl.
In pure dry sand as of dune lands; restricted.
S(Sand pile at Austin Crabbs, East River St.)G.
Louisa Co.(Dunes at Big Sand Mound)G.
Ill. RI(Sand hills south of Meredosia)G.
- Phragmites Trin. Reed.
P. communis Trin.
"Borders of ponds; infrequent."
M(Moscow)Barnes; (Marshy border of Nelumbo Pond, Section 15, Lake Township)G.

- Agropyron Gaertn. Wheat grass.
A. trachycaulum (Link)Malte. Slender Wheat grass.
S(Rare. A single collection from a pile of limestone rocks west of the flour mill, East River St.)G.
- A. Smithii Rydb. Blue-stem Wheat grass.
Dry or sandy open places; infrequent.
S(Harbor Road; 12th & Vine Sts.)G.
M(Fruitland)Shimek; (Muscatine Co.)Barnes.
- A. repens (L.)Beauv. Quack-grass. Couch-grass.
An aggressive weed, common along railroad tracks, roadsides and waste places.
S(Lincoln Ave.); (Harbar Road; Long Grove)G.
Our plants are forma aristatum (Schumb)Holmb. and forma Vaillantianum (Wulf & Schreb)Fern.
- Lolium L. Rye-grass.
L. perenne L. Common Rye-grass.
Common in lawns.
S(Davenport)G.
- L. multiflorum Lam. Italian Rye-grass.
S(Meadow northwest of Mercy Hospital; cultivated in Msgr. Hauber's garden at St. Vincent's Home)G.
- Hordeum L. Barley
H. jubatum L. Squirrel-tail Grass.
Frequent along roadsides and waste grassy places.
S(Blue Grass)Barnes; (Wapsie bottoms)G.; (Oakton)Ross.
- H. pusillum Nutt. Little Barley
H. pratense Huds. of Fl.
Lean dry soils along roadsides, railroads and waste places; infrequent.
S(Oakton)Ross; (Scott Co.)Barnes.
M(Roadside near Wild Cat Den; Farmyard opposite Lindle's Woods)G.
- Secale L. Rye
S. cereale L. Cultivated Rye.
Frequent along sides of new roads; sown by the road builders.
S(Escape along R. 6 east of Walcott.)G.
- Triticum L. Wheat
T. aestivum L. Cultivated Wheat.
An infrequent escape from cultivation.
S(Roadside ditch along R. 6 east of Walcott)G.
- Elymus L. Wild Rye
E. virginicus L.
Moist to dry places in the open or in open woods; frequent.
S(Credit Island; Fejervary Park)G.
- E. villosus Muhl. Slender Wild Rye.
E. striatus Willd. var. villosus Gray of Fl.
Moist to dry woods, mostly upland, and shaded slopes; infrequent.
S(Davenport)Ross.
M(Wild Cat Den)G.
Ill. RI(Watch Tower)G.
- E. canadensis L. Canada or Nodding Wild Rye.
Roadsides and prairie habitats; frequent.
S(Credit Island; Duck Creek Park)G.

- E. canadensis* L. var. *glaucofolius* (Muhl.) Gray.
In similar situations; infrequent.
M(Roadside south of Pine Mill)G.
- Hystrix Moench. Bottle-brush Grass
- H. *patula* Moench.
Asprella Hystrix Willd. of Fl.
A woodland species, mostly of the uplands, frequent.
S(Allen's Grove)G.
M(Wild Cat Den)G.
Ill. RI(Rock Island Arsenal)G.
- Sphenopholis Scrib.
- S. *obtusata* (Michx.) Scribn. Prairie Wedge-grass.
Eatonia obtusata Gray of Fl.
Open sandy places and prairies; infrequent.
S(Sandy shore of marsh northeast of St. Anne's Church; Noels)G.
M(Muscatine Co.)Shimek.
- S. *intermedia* Rydb. Slender Wedge-grass.
Eatonia pennsylvanica Gray of Fl.
Dry to moist woodlands, less frequent in meadows and prairies.
S(Noels; Credit Island)G.
Ill. RI(Watch Tower)G.
- Koeleria Pers.
- K. *cristata* (L.) Pers. June Grass
Dry sandy prairie soils; frequent.
S(Pine Hill Cemetery)G.; (Davenport) Ross.
M(Muscatine Co.)Shimek.
Ill. RI(Sandy prairie north of Cordova)G.
- Avena L. Oats.
- (A. *fatua* L. Wild Oats.
"BCR & N tracks, Blue Grass." Fl.
(X) Barnes, without data. Presumably from the above mentioned place.
- A. *sativa* L. Cultivated Oats.
S(Roadside escape south of Allen's Grove)G.
- Danthonia DC. Wild Oat-grass
- D. *spicata* (L.) Beauv. Poverty Grass
Thin dry soils; dry slopes; infrequent.
S(Terrace, 11th & Brady Sts.)G.
M(Dry hillside, Wild Cat Den)G.
- Sporobolus R.Br. Drop-seed
- S. *cryptandrus* (Torr.) Gray. Sand Drop-seed
Dry sandy soils; infrequent.
M(Sandy hill-top, Section 15, Lake Township)G.
Ill. RI(Sands north of Cordova)G.
- S. *vaginiflorus* (Torr.) Wood. Poverty Grass.
Dry sterile soils; infrequent.
S(Terrace 14th Gaines Sts; Terrace 12th & Brady Sts.)G.
- S. *neglectus* Nash.
Dry sterile soils; infrequent.
S(Terrace 29th & Brady Sts.)G.
- S. *asper* (Michx.) Kunth.
Dry soils along highways and railroads; infrequent.
S(Road to Pine Hill Cemetery; Vacant lot, 15th & Brady Sts.)G.
M(R. 61 east of Montpelier; Section 15, Lake Township)G.
- S. *heterolepis* Gray. Prairie Drop-seed.
S("Rock Island tracks west of Davenport, Aug. 30, 1915.") Hauber.
Ill. RI(Old sandy prairie south of Meredosia)G.
- Calamagrostis Adans
- C. *canadensis* (Michx.) Beauv. Blue-joint.
In marshes, ditches and low wet places; infrequent.
S(Ditch at railroad crossing, Allen's Grove; Marsh at McCausland)G.
M(Saulsbury Bridge region)G.
- (Calamovilfa (Gray) Hack.
- C. *lonifalio* (Hook) Scribn. Long-leaf Reed-grass.
Sands and dunes; restricted.
Louisiana Co.(Dunes at the Big Sand Mound)G.
Ill. Whiteside Co.(Dunes and sands at Lock 13)G.
- Agrostis L. Bent-grass.
- A. *alba* L. Red-top.
In lawns, pastures, roadsides and waste places; common; often abundant in marshy places.
S(Harbor Road; Fejervary Park; Pine Hill Cemetery)G.
- A. *tenuis* Sibth. Rhode Island Bent.
A. *alba* L. var. *vulgaris* Thunb. of Fl.
S(Terrace at 11th & Mains Sts.)G.
- A. *hyemalis* (Walt.) BSP. Hair-grass. Tickle-grass
Sandy soils; dry or moist open places; infrequent.
S(Credit Island; Noels)G.
Ill. RI(Watch Tower) Ross.
- A. *scabra* Willd. Hair-grass. Tickle-grass.
Distinguishable from the preceding by its longer spikelets, these not crowded at the tips of the branchlets.
In dry sandy soils; infrequent.
S(Pine Hill Cemetery; Noels)G.
- A. *perennans* (Willd.) Tuckerm. Autumn or Upland Bent.
Moist upland or low woods; prefers some shade. Frequent.
S(Fejervary Park)G.
M(Wild Cat Den)G.
- Cinna L.
- C. *arundinacea* L. Wood Reed-grass.
Moist shady woods; infrequent.
M(Wild Cat Den)G.
S(Credit Island)G.
- Phleum L. Timothy
- P. *pratense* L.
Cultivated and escaped; frequent.
S(Along R. 61 near Buffalo)G.
- Alopecurus L. Foxtail
- A. *carolinianus* Walt.
Segregated from the *A. geniculatus* L. of Fl.

- A casual in rather dry soils.
S(14th & Harrison Sts., waste ground)G.
Ill. RI(Hillside at Ben's Nursery)G.
- (A. *aequalis* Sobol.
Cedar Co.("In a hanging bog, upland woods 4 miles south of Rochester, August 5, 1954.")Fay, SUI.
- Muhlenbergia Schreb.
- M. *Schreberi* Emel. Nimble Will.
M. *diffusa* Schreb. of Fl.
Yards, waste places and open woods; frequent.
S(15th & Brady Sts.; 6th & Gaines Sts.)G.
M(Wild Cat Den)G.
- M. *sobilifera* (Muhl.)Trin.
Open grassy woods; rare.
M(Dry open wooded crest, Wild Cat Den)G.
- M. *tenuiflora* (Willd.)BSP.
M. *Wildenovii* Trin. of Fl.
Open alluvial woods; rare or infrequent.
S(Low open woods, Credit Island; neglected grassy corner, 118 W. 15th St.)G.
- M. *sylvatica* Torr. Woodland Dropseed.
M("Low grounds along Muscatine Slough, Sept. 10, 1892.")Reppert.
As M. *sobilifera* Trin; corrected by Davidson, SUI.
- M. *brachyphylla* Bush.
Low open woods; rare.
S("Shady places, Blue Grass, Sept. 1895.")Reppert & Barnes,
(As M. *sylvatica* Torr. & Gray)SUI.; (Credit Island)G.
M(Low open ground near base of fixed wooded dune, Lindle's Woods)G.
- M. *mexicana* (L.)Trin.
Wet sandy or boggy places; occasional.
S(Sandy marsh shore northeast of St. Anne's Church; Prairie at Pine Hill Cemetery)G.
M(Boggy margin of Nelumbo Pond, Section 15, Lake Township)G.
Ill. RI(Springy ground on bluff, Watch Tower)G.
- M. *frondosa* (Poir)Fern.
M. *mexicana* Trin. of Fl. and of Gray, 7th Ed.
Widespread and weedy; moist woods and thickets; occasional in towns.
S(Duck Creek Park; Credit Island; Pine Hill Cemetery)G.
M(Muscatine Co.)Reppert.
- M. *racemosa* (Michx.)BSP.
M. *glomerata* Trin. of Fl.
Dry open places; infrequent.
S(Duck Creek Park)G.
M(Wild Cat Den; Muscatine Island)G.
- M. *glomerata* (Willd.)Trin.
Dry lean soils; rare.
M(Muscatine Island)G.
Ill. Henry Co.(Railroad tracks north of Colona)G.
- Brachyelytrum Beauv.
- B. *erectum* (Schreb.)Beauv.
Rich upland woods; infrequent.
M(Wild Cat Den)G.
(X)Barnes.

- Dryzopsis* Michx. Mountain Rice.
- O. *racemosa* (Sm.)Ricker.
O. *melanocarpa* Muhl. of Fl.
"Rocky woods, Wild Cat Den."Fl.
M(Wooded bluff along Sweetland Creek, Oct. 20, 1900)Shimek, ISC.
Cedar Co.("Upland woods near Rock Creek, 2 miles north of Rochester, September 25, 1950.")Fay, SUI.
(X)Barnes.
- Stipa L. Spear Grass.
- S. *spartea* Trin. Porcupine-grass.
Prairie remnants; infrequent.
S(Oakton)Ross; (Pine Hill Cemetery; Noels)G.
- (S. *viridula*. Feather Bunch-grass.
Cedar Co.("Low prairie along railroad east of Mechanicsville, May 26, 1920.")Shimek, SUI.
- Aristida L. Triple-awned Grass.
- A. *tuberculosa* Nutt.
On sand dunes and in sand fields; restricted but sometimes abundant locally.
M(Muscatine Co.)Reppert.
Louisa Co.(Big Sand Mound)G.
Ill. Whiteside Co.(Sands near Fulton)G.
- A. *oligantha* Michx. Poverty Grass.
S(Allen's Grove; Noels; Duck Creek Park)G.
- A. *basiramea* Engelm.
Dry sterile soils; frequent.
S(Noels; Fairmount Cemetery)G.
M(Fruitland)Barnes.
- A. *intermedia* Scribn. & Ball.
A. *gracilis* Ell. of Fl.
A. *purpurascens* Poir. in herb.
"With the last at Muscatine Island and Noels." Fl.
M(Fruitland)Barnes
- (A. *dichotoma* Michx. was indicated by Pammel as having been collected in Muscatine County by Reppert, but no specimen has been found.
- Spartina Schreb. Cord or Slough Grass.
- S. *pectinacea* Link.
S. *Michauxiana* Hitchc.
S. *cynosuroides* Willd. of Fl.
Borders of sloughs, marshes, wet ditches, low wet grounds; frequent.
S(Wet roadside ditch, Allen's Grove)G.
- Bouteloua Lag.
- B. *hirsuta* Lag. Hairy Grama Grass.
Sandy prairies; frequent in Rock Island County.
M("Sandy places, Fruitland, July 14, 1911.")Shimek, SUI.
Louisa Co.(Big Sand Mound)G.
Ill. RI(Along the railroad north of Cordova)G.
- B. *curtipendula* (Michx.)Torr. Side-oats Grama Grass.
B. *racemosa* Lag. var. *aristosa* Gray of Fl.
Prairies, often dry or sandy; dry slopes; frequent.
S(Davenport)Ross; (Bridge opposite Buena Vista)G.
M(Moscow)Barnes; (Weiss' Slough)G.

Eleusine Gaertn. Goose-grass.

- E. indica (L.)Gaertn.
S(Davenport)G.
M(Muscatine Co.)Reppert.

Phalaris L.

- P. arundinacea L. Reed Canary Grass.
Marshes, shores and wet meadows; frequent.
S(Walcott; Nahant; north of Allen's Grove)G.
- P. arundinacea L. var. picta Gray. Ribbon Grass.
Cultivated for ornament.
S(Davenport, 1720 Harrison St.)G.
M("Low grounds southeast of Saulsbury Bridge, 1923)Shimek.

(Hierochloa R.Br.

- H. odorata (L.)Beauv. Holy Grass.
Johnson Co.(Woods near Cemetery, Iowa City, 1913)Shimek, SUI.

Leersia Sw. Cut-grass.

- L. virginica Willd. White Grass.
Low moist to wet grounds; frequent. Occasional in moist uplands woods.
S(Credit Island)G.
M(Muscatine Co.)Reppert.
Ill. RI(Rock Island Arsenal)Ross.
- L. oryzoides (L.)Sw. Rice Cut-grass.
Ditches, marshes, wet shores; infrequent.
S(Credit Island; Ditch north of Long Grove)G.
- L. lenticularis Michx. Catch-fly Grass.
Low wet places along streams; infrequent but abundant locally.
S(Credit Island)G.
M("Damp soil along Mississippi river among willows, September 1894.")Reppert.
(X)Barnes.

Zizania L. Wild Rice.

- Z. aquatica L.
"Shallow ponds of Muscatine Island and the Cedar River region; frequent." Fl.
M(Muscatine Island, September 1, 1891)Reppert, ISC.
(X)Barnes.

Digitaria Heist. Crab-grass.

- D. filiformis (L.)Koel. Slender Crab-grass.
Panicum filiformis L. of Fl.
"Dry steep hillsides, Wild Cat Den." Fl.
M(Wild Cat Den)Barnes.
- D. ischaemum (Schreb.)Muhl. Smooth Crab-grass.
Panicum glabrum Gaudin of Fl.
A common weed in lawns and waste places.
S(Davenport)G.
- D. sanguinale (L.)Scop. Common Crab-grass.
Panicum sanguinale L. of Fl.
Common in situations like the last; prefers disturbed ground and sandy soil.
S(Noels)G; (Davenport)Ross.
M(Muscatine Co.)Reppert.

Paspalum L.

- P. ciliatifolium Michx. var. stramineum (Nash)Fern.
- P. setaceum Michx. of Fl.
Frequent in dry sandy soil.
S(Credit Island; Sandy roadside north of Allen's Grove)G.
M(Bayfield)Shimek.
Ill. RI(Sandy field south of the Meredosia)G.

Leptoloma Chase. Fall Witch-grass.

- L. cognatum (Schultes)Chase.
Dry sandy prairies; usually abundant when present.
S(Noels; McCausland)G.
Louisa Co.(Big Sand Mound)G.

Panicum L. Panic-grass.

- P. dichotomiflorum Michx. var. geniculatum (Wood)Fern.
P. proliferum Lam. of Fl.
The common variety; a late weed about gardens and moist disturbed grounds generally.
S(Davenport)Ross.
M(Lindle's Woods)G.
- P. dichotomiflorum Michx.
Erect; sheaths not inflated; found only in dry sandy soil.
S(Noels)G.
- P. capillare L. Old Witch Grass.
Fields, roadsides, dry waste places, sandy shores; common.
S(Pine Hill Cemetery; Credit Island)G.; (Blue Grass)Barnes.
- P. capillare L. var. occidentale Rydb.
S(Terrace, Trinity Cathedral)G. Determined by J. R. Swallen.
- P. philadelphicum Bernh.
M(Dry slope north of the Fish ponds, Fairport)G.; (Muscatine Co., September 1895)Reppert.
- P. virgatum L. Switch Grass.
Sandy fields, dunes and sandy shores; frequent.
S(Credit Island; Noels; Allen's Grove)G.
M(South of Wilton)Shimek.
- P. depauperatum Muhl.
M(Dry open grassy slope west of upper parking lot, Wild Cat Den)G.
- P. perlongum Nash.
Dry sandy prairie remnants; infrequent.
S(Prairie remnant, southeast ¼ Section 11, Winfield Township)G.
M(Prairie remnant, Section 15, Lake Township, overlooking the Nelumbo Pond)G.
Ill. RI(Sandy prairie south of Meredosia)G.
- P. Lindheimeri Nash.
P. lanuginosum Ell. var. Lindheimeri (Nash)Fern.
S(Dry sandy field northeast of St. Anne's Church; Upland bluegrass sward, 12th & Division Sts.; sandy roadside, Butler Township)G.
Louisa Co.(Sandy shore of the lake, under trees at the Big Sand Mound)G.
Ill. Henry Co.(Talus in sandstone quarry bottom north of Colona)G.

- P. *praecocius* Hitchc. & Chase
P. *dichotomum* L. of Fl.?
S(Pine Hill Cemetery, prairie; loess bank on edge of gravel pit, Duck Creek Park)G.
- P. *tennesseense* Ashe.
P. *lanuginosum* Ell. var. *fasciculatum* (Torr.)Fern.
S(Sandy soil on north shore of Credit Island, under trees east of the crossroad; Allen's Grove)G.
- P. *implicatum* Scribn.
P. *lanuginosum* Ell. var. *implicatum* (Scribn.)Fern.
Hardly separable from the following.
S(Sandy strip south of the marsh northeast of St. Anne's Church)G.
M(Muscataine Co.)Reppert.
- P. *huachucae* Ashe.
P. *dichotomum* L. of Fl. in part?
P. *lanuginosum* Ell. var. *fasciculatum* (Torr.)Fern.
Including var. *silvicola* Hitchc. & Chase.
Frequent in rather dry and sandy soils in the open; in moist wooded slopes.
S(Duck Creek Park; Allen's Grove)G.
Louisa Co.(Big Sand Mound)G.
Ill. RI(Rock Island Arsenal; Watch Tower)G.
- (P. *Wilcoxianum* Vasey.
Ill. RI(Sandy prairie south of the Meredosia)G.
- P. *Deamii* Hitchc. & Chase.
M(Small sandy prairie remnant, Section 15, Lake Township, overlooking the Nelumbo Pond)G.
- P. *pseudopubescens* Mash.
P. *commonianum* Ashe var. *euchlamydeum* Shinnars, sensu Pohl and other Iowa authors.
P. *villosissimum* Nash var. *pseudopubescens* (Nash)Fern.
P. *pubescens* Lam of Fl.?
Dry sandy prairie; restricted but abundant locally.
S(Sandy field east of Noels)G.
Louisa Co.(Big Sand Mound)G.
Ill. RI(Old sandy prairie south of the Meredosia)G.
- XP. *pseudopubescens* Nash X P. *Scribnerianum* Nash.
S(Sandy field east of Noels)G. Several collections. Both putative parents present.
- P. *Scribnerianum* Nash.
P. *scoparium* Lam. of Fl.
P. *oligosanthes* Schultes var. *Scribnerianum* (Nash)Fern.
Dry sandy soils in the open; frequent.
S(Prairie at Pine Hill Cemetery; Credit Island; Koenig place)G.
M(Muscataine Co.)Shimek.
- P. *leibergii* (Vasey)Scribn.
S. and M("Woods, infrequent.")Barnes.
S(Railroad tracks near Pine Hill Cemetery, June 4, 1916)Hauber.
M(Sandy flat east of Saulsbury Bridge, June 6, 1923.)Shimek.
- P. *latifolium* L.
Rich moist woods; infrequent. A strictly woodland species.
S(Scott Co.)Barnes.
M(Wild Cat Den)G.

- P. *clandestinum* L.
S(Fresh dry ditch in loess at Allen's Grove)G.
- Echinochloa* Beauv.
E. *pungens* (Poir.)Rydb. Barn-yard Grass. Cock-spur Grass. *Panicum crus-galli* L. of Fl. in part.
Echinochloa crus-galli (L.)Beauv. in part.
Frequent in moist places in waste or cultivated grounds.
S(Allen's Grove; West 14th St.; Wapsie bottoms)G.
- E. *occidentalis* (Wieg.)Rydb.
E. *crus-galli* (L.)Beauv. in part.
Same situations as the last.
S(11th & Vine Sts.; Allen's Grove)G.
Ill. RI(Rock Island Arsenal)G.
- E. *crus-galli* L. var. *mitis* (Pursh)Peterm.
S("Near Tri-City Packing Co.")Barnes.
- E. *crus-galli* L. var. *zelayensis* (HBK)Hitchc.
S("BCR & N tracks near the saw mill.")Barnes
- E. *crus-galli* L. var. *frumentacea* (Roxb.)Wright. "Billion dollar Grass."
(X)Barnes.
- Setaria* Beauv. Foxtail.
S. *glauca* (L.)Beauv. Yellow Foxtail.
S. *lutescens* (Wieg.)Hübb.
Roadsides and waste places; common.
S(Eldridge; Nahant)G.; (Blue Grass)Barnes.
- S. *viridis* (L.)Beauv. Green Foxtail.
Same situations as the last; less frequent.
S(Eldridge Road; Davenport)G.; (Blue Grass)Barnes.
- S. *verticillata* (L.)Beauv. Bur-bristle Grass.
Waste places; frequent.
S(Davenport)G.; Barnes.
- S. *Faberi* Herrm.
Roadsides; becoming frequent. A recent introduction, and spreading rapidly. First collected September 14, 1950.
S(Schmidt's Road)G.
Louisa Co.(Big Sand Mound)G.
- S. *italica* (L.)Beauv. Hungarian Millet.
Formerly cultivated.
S(Pine Hill Cemetery)Ross.
- Cenchrus* L. Sand-bur.
C. *pauciflora* Beauv.
C. *tribuloides* L. of Fl.
S(Noels)G.
M(Bayfield)Shimek.
- Pennisetum* L.
P. *setaceum* (Forsk.)Chiov. Fountain Grass.
Occasionally cultivated for ornament.
S(Vanderveer Park)G.
- Miscanthus* Anders. "Eulalia."
M. *sacchariflorus* (Mixim)Hack.
Planted for ornament and frequently escaped to roadsides.
S(W. Locust St.)G.

Andropogon L. Beard-grass.

- A. scoparius Michx. Lesser Bluestem.
Mostly on rather dry and sandy prairie remnants; frequent.
S(Pine Hill Cemetery)G.
Ill. RI(Rock Island Arsenal)G.
- A. Gerardi Vitam. Bluestem. Greater Bluestem.
A. furcatus Muhl. of Fl.
Prairie remnants; often in moister ground than the preceding;
frequent.
S(Pine Hill Cemetery)G.
- A. Hallii Hack.
"Well established in several places along the CRI & P tracks near
Fairport"Fl.
M(Fairport)Barnes.

Sorghum Adans. Sorghum.

- S. halepense (L.)Pers. Johnson Grass.
"Railroad tracks Wilton, Muscatine, Fairport."Fl.
M(Fairport)Barnes.
- S. vulgare L. var. Milo.
M(Cultivated, Muscatine Island)G.
- S. vulgare L. var. ?
Escaped from cultivation.
S(Utica Ridge Road; railroad tracks at Schmidt's Road)G.

Sorghastrum Nash.

- S. nutans (L.)Nash. Indian grass.
Chrysopogon nutans Benth. of Fl.
Prairie remnants; frequent.
S(Pine Hill Cemetery)G.
Ill. RI(Rock Island Arsenal)Ross.

Tripsacum L. Gama Grass.

- T. dactyloides L.
"A large clump on railroad tracks near Wyoming Hill."Fl.
M(Wyoming Hill)Reppert.

Coix L.

- C. lacryma -iovi L. Job's Tears.
S(Cultivated for ornament in Msgr. Hauber's garden at St.
Vincent's Home)G.

Cyperaceae

Cyperus L. Galingale

- C. diandrus Torr.
Wet sandy river shores; rare or infrequent.
S(Credit Island)G.
- C. rivularis Kunth.
C. diandrus Torr. var. castaneus Torr. of Fl.
Moist sandy or alluvial shores; infrequent.
S(Davenport)Ross; (Sea Scout Camp west of LeClaire; Marsh
northeast of St. Anne's Church)G.
M(Moscow)Barnes.

C. inflexus Muhl.

- C. aristatus Roth of Fl.
Moist sandy river shores; infrequent.
S(Credit Island)G.
(X)Barnes.

(C. acuminatus Torr.

- "Low sandy soils; Noels and near Follets."Fl.
Clinton Co.(Follets)Barnes.

C. erythrorhizos Muhl. Red-rooted Cyperus.

- Moist river or pond shores; frequent.
S(Credit Island)G.
M(Moscow)G.
Louisa Co.(Lake at the Big Sand Mound)G.

C. ferruginescens Boeckl.

- C. speciosus Vahl. of Fl.
Moist river or pond shores; often with the preceding.
S(Nobis' pond; Credit Island)G.
Ill. RI(Hennepin Canal)Barnes.

C. esculentus L. Nut-sedge.

- Sandy river shores; fence rows about cultivated ground; frequent.
S(Utica Ridge Road; Credit Island; Noels)G.
Ill. RI(Rock Island Arsenal)G.

C. strigosus L.

- Moist sandy grounds and ditches; frequent.
S(Credit Island; Marsh northeast of St. Anne's Church)G.
M(Wild Cat Den)G.

C. filiculmis Vahl. Slender Sedge.

- Dry sandy fields and dunes; infrequent.
S(Credit Island; Noels)G.
M(Wild Cat Den)G.; (Muscatine Co.)Shimek.

C. filiculmis Vahl. var. macilentus Fern.

- With the last; less frequent.
S(Noels)G.
Ill. RI(Rock Island Arsenal)G.

C. Schweinitzii Torr.

- Dry sand fields and dunes; frequent.
S(Marsh northeast of St. Anne's Church)G.
Ill. RI(Hampton)Ross.

Dulichium Pers.

- D. arundinaceum (L.)Britt. Three-way Sedge
D. spathaceum Pers. of Fl.
M("Swampy border of pond among old dunes 8 miles northwest
of Muscatine, July 20, 1922.")Shimek, SUI.

Eleocharis R.Br. Spike-rush.

- E. acicularis (L.)R.&S.
Muddy pond shores; frequent.
S(Credit Island)G.
- E. atropurpurea (Retz)J. & C. Presl.
E. atropurpurea Kunth of Fl.
"In wet sand near Fruitland. Determined by Britton. The speci-
men is at the New York Botanical Garden and was seen by Gilley.

- E. obtusa (Willd.)Schultes. Blunt Spike-rush.
Muddy or sandy shores; frequent.
S(Credit Island; Marsh northeast of St. Anne's Church)G.
Ill. R.I.(Pond shore south of Illinois City)G.
- (E. ovata R.Br.
Two specimens called E. ovata by the collectors. S(Credit Island)G.
and M(X)Barnes were referred to E. obtusa by Dr. H. K. Svenson
who comments that he is coming more and more to the conclusion
that these do not represent distinct species.
- E. Englemanni Steud. Engelmann's Spike-rush.
M(Abandoned gravel-pit southeast of Muscatine)G.; ("Low
ground, Muscatine Island, 1927.")Shimek, SUI.
- (E. palustris (L.)R. & S.
Louisa Co.(Wet swale, Big Sand Mound)G.
- E. palustris (L.)R. & S. var. major Sonder
S(Muddy pond shore northwest of Allen's Grove)G.
- E. Smallii Britt.
S(Waters edge, north shore of pond at Credit Island)G.
- E. macrostachya Britt.
E. palustris R.Br. of Fl.
M(Fairport fish ponds; Weiss' Slough)G.
- E. calva Torr.
E. palustris R.Br. var. glaucescens (Willd.)Gray of Fl.
Moist sandy or muddy shores, low grounds and marshes; frequent.
S(Pine Hill Cemetery; Marsh northeast of St. Anne's Church)G.
- E. compressa Sulliv. Flat-stem Spike-rush.
Moist to dry sands, low moist grounds, sometimes calcareous; in-
frequent.
S(Macadam roadside north of McCausland; Low ground north
of Allen's Grove)G.
Louisa Co.(Big Sand Mound)G.
- E. tenuis (Willd.)Schultes.
S(Moist sand, marsh northeast of St. Anne's Church)G.
Cedar Co.("Moist prairie along railroad one mile west of Mechan-
icsville, June 17, 1950.")Fay & Thorne.
- (E. Wolfii Gray.
Cedar Co.("Mechanicsville, June 17, 1950")Fay, SUI.
- Bulbostylis (Kunth)Clarke
B. capillaris (L.)Clarke
Fimbristylis capillaris Gray of Fl.
Moist to dry sands; infrequent.
S(Marsh northeast of St. Anne's Church)G.
Louisa Co.(Big Sand Mound)G.
Ill. RI(North of Cordova)G.
Henry Co.(Colona)G.
- (B. capillaris (L.)Clarke var. crebra Fern
(X)Barnes
- Fimbristylis Vahl.
F. autumnalis (L.)R.& S.
Moist sandy or alluvial pond shores; infrequent.
S(Wet sand, north shore of pond at Credit Island)G.
Louisa Co.(Sandy shore of lake, Big Sand Mound)G.

Scirpus L. Bulrush.

- S. Hallii Gray
S. supinus L. var. Hallii Gray of Fl.
M("Fruitland; rare.")Reppert.
This is the only specimen of the species known to exist in Iowa.
It was overlooked by Gilley in his preparation for "The Cyper-
aceae of Iowa," 1946.
- (Scirpus americanus Pers.
S. pungens Vahl. of Fl. Three-square Bulrush. Sword Grass.
Wet sandy river shores; infrequent.
Ill. RI(Watch Tower)G.
- S. validus Vahl. var. creber Fern. Soft stem Bulrush.
S. lacustris Vahl. of Fl.
Frequent in marshy places and wet ditches.
S(Fejervary Park; Harbor Road)G.
Ill. RI(Watch Tower)Ross.
- (S. heterochaetus Chase
Louisa Co.("Wet roadside ditch northeast ¼ Section 19, T-75 N,
R. 2 west, July 19, 1954.")Davidson, SUI.
- S. fluviatilis (Torr.)Gray River Bulrush.
In shallow water and marshy places; infrequent.
S(McCausland)G.
- S. atrovirens Willd.
Frequent in ditches and moist grounds.
S(Credit Island; Fejervary Park; Pine Hill Cemetery)G.
M(Wild Cat Den)G.
- S. lineatus Michx.
Eriophorum lineatum Benth. & Hook of Fl.
Wet ditches, shores and bogs; infrequent.
S(Credit Island; Buffalo)G.
Ill. RI(Watch Tower)Ross.
- S. cyperinus (L.)Kunth.
Eriophorum cyperinum L. of Fl.
Moist or dry sandy shores and prairies; infrequent.
S(Marsh northeast of St. Anne's Church; Allen's Grove;
Credit Island)G.
M(Moscow)Barnes.
Louisa Co.(Big Sand Mound)G.
- S. pedicellatus Fern.
Occasional in habitats like the last.
S(Credit Island)G.
M(Fairport)G.
- Eriophorum L. Cotton-grass.
E. angustifolium Honckeney.
E. polystachon L. of Fl.
"Infrequent; in boggy soils."Fl.
S(Eldridge)Barnes.
M(Cedar River)Reppert.
- Hemicarpha Nees.
H. micrantha (Vahl)Pax.
H. subsquarrosa Nees. of Fl.
Wet sandy shores; infrequent.
S(Credit Island)G.
Louisa Co.(Big Sand Mound)G.

Scleria Bergius. Nut-rush.

- S. triglomerata Michx.
Prairies; rare.
S(Pine Hill Cemetery; Noels)G.
M(Wild Cat Den)G.

Carex L. Sedge

- C. praegracilis W. Boott.
S(Dry boulevard at 707 Brady St.)G.
- C. Sartwellii Dew.
S(Oakton)Ross; (Noels)Barnes.
- C. rosea Schkuhr.
Frequent in moist woods.
S(Devil's Glen)Ross; (Credit Island)G.
- C. convoluta Mack.
In similar habitats; sometimes drier situations
M(Wild Cat Den)G.
Ill. RI(Watch Tower; Rock Island Arsenal)G.
- C. cephalophora Muhl.
Wooded hills and low open places; frequent.
S(Credit Island)G.
M(Wild Cat Den)G.
Ill. RI(Watch Tower)G.
- C. Leavenworthii Dew.
Open woods; infrequent.
S(Credit Island; Harbor Road)G.
- C. Muhlenbergii Schkuhr.
Dry sandy fields; frequent locally.
S(Noels)G.
M(Muscatine Co.)Shimek.
Ill. RI(Watch Tower; North of Cordova)G.
- C. gravida Bailey
Low open situations; frequent.
S(Indian Road; Credit Island)G.
- C. gravida Bailey var. Lunelliana (Mack)F.J. Herm.
Dry ditches; frequent.
S(Noels; Koenig place)G.
M(Wild Cat Den)G.
Ill. RI(Rock Island Arsenal)G.
- (C. cephaloidea Dew.
The report in the Fl, based presumably on a collection of Barnes near Valley City is C. gravida. Reported by Fay from Cedar county; the determination is correct. SUI.
- C. sparganioides Muhl.
A species of rich woodlands; infrequent.
S(Credit Island; Allen's Grove)G.
M(Wild Cat Den)G.
Ill. RI(Rock Island Arsenal)G.
- C. vulpinoidea Michx.
Roadsides; ditches and meadows; frequent.
S(Pine Hill Cemetery)Ross; (Credit Island; Marsh northeast of St. Anne's Church)G.

- C. brachyglossa Mack.
C. xanthocarpa Bickn. of Fl.
Roadsides and meadows; frequent.
S(Marsh northeast of St. Anne's Church; Pasture of St. Vincent's Home)G.
M(Wild Cat Den)G.
- C. conjuncta Boott.
Low moist open places; frequent. Omitted from the Fl., presumably by inadvertence.
S(Harbor Road; Credit Island)G.
- C. laevivaginata (Kukenth.)Mack.
Low grounds and wet meadows; infrequent.
A segregate from C. stipata since the Fl. was published.
S(Duck Creek Park; Harbor Road)G.
M(Wild Cat Den)G.
- C. stipata Muhl.
Moist low grounds; infrequent.
S(Oakton)Ross; (Noels; Section 9, Butler township; W. 16th St.)G.
M(Wild Cat Den)G.
Ill. RI(Rock Island Arsenal)Ross.
- C. crus-corvi Shuttlw.
S(At waters edge, pond at Credit Island)G.
- C. interior Bailey.
S(Abundant locally in a small area on the sandy shore of the marsh northeast of St. Anne's Church; Dry edge of woods, Allen's Grove)G.
- C. muskingumensis Schwein.
Alluvial woods; infrequent.
S(Dense low woods on island at Wapsipinicon crossing of R. 61)G.
M(Muscatine Co., 1906)Shimek, SUI.
- C. scoparia Schkuhr.
Low moist sandy places in bottomlands and swales; frequent.
S(Marsh northeast of St. Anne's Church; Credit Island)G.
M(Alluvial flat east of Saulsbury bridge)Shimek.
- C. tribuloides Wahl.
Wet meadows and open alluvial woods; frequent.
S(Credit Island; Marsh northeast of St. Anne's Church)G.
- C. projecta Mack.
Wet ditches; rare.
S(Roadside ditch east of St. Anne's Church; Credit Island)G.
- C. cristatella Britt.
C. tribuloides Wahl. var. cristata Bailey of Fl.
Swampy places; infrequent.
S(Allen's Grove; Duck Creek Park; Fejervary Park)G.
M(Wild Cat Den)G.
- C. Bebbii Olney
In dry open places; rare.
S(Along the railroad east of Walcott)G.
M(Foot of embankment at Saulsbury Bridge)G.
- C. normalis Mack.
Dry open woods; infrequent.
S(Allen's Grove)G.
M(Wild Cat Den)G.
Ill. RI(Watch Tower)G.

- C. *tenera* Dewey.
Low moist open places; swales; open woods; infrequent.
S(Credit Island; Pine Hill Cemetery)G.
Louisia Co.(Big Sand Mound)G.
Ill. RI(Rock Island Arsenal; Cordova)G.
- C. *festucacea* Schkuhr.
Rather dry open situations, often rather sandy; infrequent.
S(Sandy roadsides; Butler Township; Sandy field at Noels;
dry wooded grassy slope, Koenig place)G.
Louisia Co.(Big Sand Mound)G.
Ill. RI(Dry open wooded hillside, Watch Tower)G.
- C. *suberecta*. (Olney)Britt.
C. *straminea* Willd. var. *ferruginea* Bailey of Fl.
S("In a swale near Walcott, 1897.")Barnes, ISC; Mucky border
of shallow pasture pond, Lamp Farm, northeast of Walcott,
1957)G.
- C. *brevior* Dewey.
Dry open places, often in very sandy soil; frequent.
S(Credit Island; Marsh northeast of St. Anne's Church, Butler
Township)G.
- C. *molesta* Mack.
In somewhat moist to rather dry grounds; pastures; infrequent.
S(Credit Island; Pine Hill Cemetery; Butler Township)G.
Ill. RI(Watch Tower)G.
- C. *Bicknellii* Britt.
Dry prairie remnants; infrequent.
S(Pine Hill Cemetery; Duck Creek Park)G.
Ill. Whiteside Co.(Dry prairie remnant at Fulton)G.

In the absence of the specimens, no effort is here made to correlate a number of species-names of the Section Ouales in the Fl. with those in current usage. It may be noted that no mention is made in the Fl. of *C. brevior*, *C. molesta*, *C. tenera*, and *C. normalis*, nor of *C. Bbbii*; but the last species may not have been collected, it being quite rare.

- C. *Jamesii* Schwein.
Rich upland or lowland woods; infrequent.
S(Alluvial woods; Credit Island)G.
M(Wild Cat Den, with *C. copulata*)G.
Ill. RI(Rock Island Arsenal, with *C. oligocarpa*)G.
- C. *pennsylvanica* Lam.
Dry open woods; frequent.
S(Devil's Glen; Duck Creek Park)G.
M(Wild Cat Den)G.
Ill. RI(Watch Tower)G.
- C. *communis* Bailey
M(Wild Cat Den. In tufts on the sandstone walls and the
wooded talus below)G.
- (C. *heliophila* Mack.
C. *pennsylvanica* Lam. var. *digyna* Boeckl.
Dry sands along the railroad tracks above Cordova and the cross-
roads at the "Oasis."
Ill. RI("Oasis")G.
- (C. *eburnea* Hook.
Cedar Co.("Dry limestone ledges along Rock Creek, 2 miles
north of Rochester, Sept. 23, 1950.")Fay, SUI.

- C. *hirtifolia* Mack.
C. *pubescens* Muhl. of Fl.
Rich woodlands; rather frequent.
S(Allen's Grove; Credit Island)G.
M(Wild Cat Den)G.
Ill. RI(Watch Tower)G.; (Rock Island Arsenal)Ross.
- C. *stricta* Lam.
C. *stricta* Lam. var. *angustata* Bailey of Fl.
Wet swales and wet meadows; infrequent.
S(Wet sedge meadow, Duck Creek Park; Marsh northeast of
St. Anne's Church)G.
Ill. RI(Watch Tower)Ross.
- C. *Emoryi* Dewey
S(Low wet roadside, south side of northern most road north of
Allen's Grove; At waters edge, pool at Lock 14)G.
- C. *Haydenii* Dewey
C. *stricta* Lam. var. *decora* Bailey of Fl.
Moist meadows and marshy places; frequent.
S(Pine Hill Cemetery; marsh northeast of St. Anne's Church;
Low ground, river floodplain, south of road to Credit Island)G.
- C. *Buxbaumii* Wahl.
C. *fusca* All. of Fl.
S(Marsh northeast of St. Anne's Church)G.; (Noels)Barnes.
- C. *Shortiana* Dewey.
Wet grounds of ravines and bottoms, in shade; rare to infrequent.
S(Ravine in Fejervary Park; River floodplain south of road
to Credit Island)G.
Ill. RI(Watch Tower, in shade between low path and the
river)G.; (Watch Tower)Ross.
- C. *lanuginosa* Michx.
C. *filiformis* L. var. *latifolia* Boeckl of Fl.
Moist meadows; frequent.
S(Pine Hill Cemetery; Marsh northeast of St. Anne's Church;
Crossroads ditch north of Donahue)G.; (Blue Grass)Barnes.
M(Wild Cat Den)G.
- (C. *gracillima* Schwein.
Ill. RI(Rock Island Arsenal)Ross.
Cedar Co.("Moist woods 7 miles southwest of Tipton, May 22,
1950.")Fay, SUI.
- C. *Davisii* Schwein.
Low grounds and woodlands; especially alluvial; frequent.
S(Noels)Barnes; (Credit Island)G.
Ill. RI(Rock Island Arsenal)Ross.
- (C. *Sprengelii* Dewey
C. *longirostis* Torr. of Fl.
Reported in the Fl. from Big Rock, Scott Co., but the specimen
cannot be located.
Ill. RI(Abundant in moist places on Rock Island Arsenal)G.
(X)Barnes.
- C. *granularis* Muhl.
Upland woods; rare or infrequent.
M("Wooded ravine, Wyoming Hill, along R. 61, 6 miles east
of Muscatine, June 8, 1954.") Davidson, SUI.

- Ill. RI(Watch Tower. A small clump by the side of the path in the high woods north of Black Hawk Road)G.
Cedar Co.("Roadside 5 miles west of Cedar Valley, July 4, 1959.")
Fay, SUI.
- (C. *Crawei* Dewey
Johnson Co.(Iowa City without further data)A.S. Hitchcock, ISC.
- C. *conoidea* Schkuhr.
S(Moist sandy grassy shore of marsh northeast of St. Anne's Church)G. Plant discovered by Barnes in 1895; rediscovered by G. in 1952. Very rare. The specimen in the Barnes Herbarium was overlooked by Gilley in his preparation of "The Cyperaceae of Iowa."
- C. *grisea* Wahl.
C. *amphibola* Steud. var. *turgida* Fern. of Gray, 8th Ed.
Frequent in low woods and meadows.
S(Duck Creek Park; Allen's Grove; Credit Island)G.
Ill. RI(Watch Tower)G.
- C. *amphibola* Steud. sensu strictu Mackenzie, not Fernald.
C. *grisea* Wahl. var. *angustifolia* Boot. of Fl.?
S(Low roadside bank in alluvial woods Credit Island)G.
Very rare. Determination verified by F. J. Hermann.
The only specimen in the original Barnes collection and presumably the one on which the report in the Fl. was based is *C. grisea* Wahl. The report from Cedar Co. by Fay is based on the mis-identification of an immature specimen of *C. grisea* at SUI.
The notes on this and the preceding species in the Fl. must have been inadvertently transposed.
- C. *oligocarpa* Schkuhr.
Rich moist woods; quite infrequent.
S(Hickory Grove, upland woods, with *C. Hitchcockiana*)G.
M(Wild Cat Den)G.
Ill. RI(Rock Island Arsenal, low moist woods.)G.
- C. *Hitchcockiana* Dewey
Rich moist woods rare to infrequent.
S(Credit Island, low woods; Hickory Grove, upland woods)G.
Ill. RI(Rock Island Arsenal)G.
- C. *Meadii* Dewey
C. *tetanica* Schkuhr. var. *Meadii* Bailey of Fl.
Moist meadows to rather dry prairies; infrequent.
S(Pine Hill Cemetery)G.
M(West Liberty)Shimek.
- C. *copulata* (Bailey)Mack.
C. *digitalis* Willd. var. *copulata* Bailey of Fl.
C. *laxiculmis* Schwein. var. *copulata* Bailey.
Rich moist woods; rare.
S(Rich woods, Hickory Grove)G.
M(Rich moist wooded slope, with *C. Jamesii*, at Wild Cat Den)G.
- C. *albursina* Sheldon
C. *laxiflora* Lam. var. *latifolia* Boot. of Fl.
Rich woodland slopes; infrequent.
M(Wild Cat Den)Barnes; G.
- C. *blanda* Dewey
C. *laxiflora* Lam. var. *striatula* Carey of Fl.
Woods and meadows; very frequent.
S(Fairview)Ross; (Allen's Grove)G.
Ill. RI(Watch Tower)G.
- C. *gracilescens* Steud.
C. *laxiflora* Lam. of Fl.
Dry woods and thickets; rare.
S(Credit Island)G.
M(Dry hillside thicket, Wild Cat Den)G.
- C. *laxiflora* Lam. var. *angustifolia* Dewey
Resembles *C. blanda* but the staminate spikes are long-peduncled.
S(Roadside through low woods, Credit Island)G.
- C. *typhina* Michx.
C. *squarrosa* L. of Fl.
Wet alluvial woods; infrequent.
S(Low place in alluvial woods; Credit Island)G.
M(Muscatine slough)Barnes.
- (C. *lacustris* Willd.
Cedar Co.("Sandy marsh ½ mile south of Rochester, 1 mile east of Cedar River, August 1, 1950.")Fay, SUI.
- C. *laeviconica* Dewey
C. *trichocarpa* Muhl. var. *Deweyi* Bailey of Fl.
Sandy or alluvial bottomlands and shores; frequent.
S(Marshy ground north of McCausland)G.
M(Near Saulsbury Bridge)G.
Louisa Co.(Big Sand Mound)G.
- C. *trichocarpa* Muhl.
S(In a very wet place in the sedge meadow, Duck Creek Park; Low woods at crossing of R. 61 at the Wapsipinicon River)G.
- C. *comosa* Boot.
C. *Pseudo-Cyperus* L. var. *americana* Hook of Fl.
"Borders of ponds in the Cedar River region; infrequent."Fl.
M("Swamp, Section 18, T78N, R2W, (Weiss' Slough?), June 30, 1945.") Conard & Anderson, SUI.
- C. *hystricina* Muhl.
Bogs and wet ditches; infrequent.
S(Roadside ditch east of Walcott)G.
M(Hanging bog south of Pine Mill)G.
- C. *Grayii* Carey.
Low alluvial woods, marshy shores; infrequent.
S(Credit Island; Low grounds west of R. 61 at Wapsie Bridge)G.
Ill. RI(Rock Island Arsenal)Ross.
Clinton Co.(Follets)Barnes.
- C. *lupulina* Muhl.
Borders of ponds and rivers; infrequent.
S(Credit Island; Pond shore east of Allen's Grove)G.
M(Muscatine Co.)Reppert.
- C. *vesicaria* L.
C. *monile* Tuckerm. of Fl.
S(Noels)Barnes; (Shallow pasture pond northwest of Allen's Grove)G.
M(Moscow)Barnes.

Araceae

Arisaema Mart.

- A. triphylla (L.) Schoot. Jack-in-the-Pulpit.
Rich moist woods; frequent.
S(Devil's Glen)Whitaker.
Ill. RI(Rock Island Arsenal)Ross.
- A. Dracontium (L.) Schoot. Green Dragon. Dragon-root.
Low alluvial woods; rare.
S(Credit Island)G.
Ill. RI(Watch Tower)Ross.

Symplocarpus Salisb.

- S. foetidus (L.) Nutt. Skunk Cabbage.
Hanging bogs in dense woods; infrequent.
M(Hanging bog northwest of Fairport)G.

Acorus L. Sweet Flag.

- A. Calamus L.
S(Creek west of Blue Grass)G.; (Devil's Glen)Melville.

Lemnaceae

Lemna L. Duck-weed

- L. minor L. Lesser Duck-weed.
Floating on quiet water; common.
S(Credit Island)G.
- L. trisulca L. Star-duckweed.
M(Weiss' Slough)G.

Spirodela Schleid.

- S. polyrhiza (L.) Schleid. Greater Duckweed.
Ponds; infrequent.
S(Ponds at Lock 14)G.

Wolffia Horkel. Water-meal.

- W. columbiana Karst.
Floating in quiet waters; infrequent.
S(Mississippi River below the Suspension Bridge at Bettendorf)G.
M("Pond north of Bayfield, October, 1916.")Shimek, ISC.
- W. punctata Grieseb.
W. Brasiliensis Wed. of Fl.
M("Pond east of Atalissa, 1929.")Shimek, SUI.

Xyridaceae

Xyris L. Yellow-eyed Grass.

- X. torta Sm.
X. flexuosa Muhl. of Fl.
M(Brasenia Pond, Section 7, Lake Township, August 9, 1952.)
Thorne, SUI.
(X)Barnes.

Commelinaceae

Commelina L. Day-flower

- C. communis L.
Dooryards, alleys; cool shaded places; frequent.
S(Pine Hill Cemetery; Alley at 12th & Brady Sts.)G.

- C. communis L. var. lucens(Miquel)Clarke
In the same habitats.
S(Escape, 128 W. 15th St.)G.

C. erecta L. var. angustifolia (Michx) Fern.

- C. virginica L. of Fl.
On dry sand fields and sand dunes; restricted.
S(Sandy roadside 1 mile east of McCausland)G.
Louisa Co.(Big Sand Mound)G.
Ill. RI(North of Cordova)G.
(X)Barnes.
The forma alba Fern. is also present on the Big Sand Mound.

Tradescantia L. Spiderwort.

- T. bracteata Small.
Prairies, roadsides; infrequent. Occasional in gardens.
S(Dooryard 121 W. 16th St.)G.
M(Roadside embankment, Saulsbury Bridge)G.
- T. ohioensis Raf.
Sandy fields, railroads, roadsides; frequent.
S(Noels; Butler Township)G.
M(Muscataine Co.)Shimek.
- (T. virginica L.
("Railroad tracks.")Melville.

Pontederiaceae

Pontederia L.

- P. cordata L. Pickerel-weed
M(Marshy pond, Section 7, Lake Township. "Pontederia Pond.")
Reppert; G.; Shimek.

Heteranthera R. & P. Mud-plantain.

- H. dubia (Jacq.) MacM.
H. raminea Vahl. of Fl.
In quiet waters or on mud-flats; infrequent.
S(Sea Scout Camp west of LeClaire; Lock 14)G.
M(Cedar River)Shimek.
- H. limosa (Sw.) Willd.
M("Pond along Cedar River, June, 1894.")Reppert, SUI. Determined by Beal.

Juncaceae

Juncus L. Bog-rush.

- J. tenuis Willd.
Moist or dry soils; common along open woodland paths.
S(Credit Island)G.
M(Wild Cat Den)G.
- J. tenuis Willd. var. discretiformis F. J. Hermann.
In sandy soils; rare.
S(Credit Island; Marsh northeast of St. Anne's Church)G.
- J. interior Wieg.
Grassy fields and dry sandy roadsides; infrequent.
S(Allen's Grove; Noels; Marsh northeast of St. Anne's Church)G.

- J. *Dudleyi* Wieg.
Moist or dry sandy prairies; in bogs and ditches; frequent.
S(Pine Hill Cemetery; Duck Creek Park; Marsh northeast of St. Anne's Church)G.
- J. *Greenei* Oakes & Tuckerm.
S(In rather dry sand south of the marsh northeast of St. Anne's Church, August 10, 1954.)G.
Only one other collection from Iowa is known, a specimen at SUI under an erroneous name from northwestern Iowa by Shimek.
- (J. *effusus* L. var. *solutus* Fern & Wieg.
Louisa Co. (Wet sandy shore of lake, Big Sand Mound)G.
- J. *balticus* Willd.
M(Wild Cat Den, no date)Savage, SUI.
- J. *marginatus* Rostk.
S(Sandy border of the marsh northeast of St. Anne's Church)G.
- J. *nodosus* L.
S(Border of shallow pasture pond, Lamp farm northeast of Walcott)G.
- J. *Torreyi* Coville
J. *nodosus* var. *megacephalus* Torr. of Fl.
Moist, often sandy soils, and roadside ditches; frequent.
S(Little's Grove; Buffalo; Marsh northeast of St. Anne's Church)G.
- J. *canadensis* J. Gay.
S(Moist sandy shore of the marsh northeast of St. Anne's Church)G.
- J. *acuminatus* Michx.
Wet sandy shores; infrequent.
M(Muscataine Co.)Reppert.
Louisa Co. (Moist sandy shore of lake, Big Sand Mound)G.
- (J. *acuminatus* Michx. f. *sphaerocephalus* F. J. Hermann.
Louisa Co. (Wet sand at waters edge, in the lake at Big Sand Mound)G.
See Leaflets of Western Botany 8; 12; 1956.
- Luzula* DC. Wood-rush
L. *saltuensis* Fern.
L. *acuminata* Raf.
L. *vernalis* DC. of Fl.
M(Wild Cat Den)Barnes; (Muscataine Co.)Reppert.
- (L. *campestris* (L.)DC.
Reported in the Fl.; "Woodlands; infrequent."; but no specimen has been located.

Liliaceae

- (*Melanthium* L. Bunchflower
M. *virginianum* L.
Johnson Co. ("Low ground along the railroad east of Oxford, June 2, 1923.")Shimek, SUI.
- Uvularia* L. Bellwort.
U. *grandiflora* Sm.
Rich wood; frequent.
S(Woods north of Buffalo)G.
M(Sweetland Creek)Shimek.

- (U. *sessilifolia* L.
Oakesia sessilifolia Watson of Fl.
"Cedar River region; infrequent."Fl.
Cedar Co. ("Upland woods one mile north of Cedar Bluff, August 31, 1950.")Fay & Thorne, SUI.

Allium L. Onion

- A. *canadense* L. Wild Onion. Wild Garlic.
Open woods and meadows; frequent.
S(Devil's Glen; Duck Creek Park; Credit Island)G.
M(Muscataine Co.)Reppert.
- A. *Schoenoprasum* L. Chives.
Cultivated; often persistent.
S(Davenport)Melville.
- A. *triccoccum* Ait. Wild Leek.
Rich or open woods; infrequent.
M(Wild Cat Den)G.
Ill. RI(Watch Tower)Ross.

Nothoscordum Kunth. False Garlic

- N. *bivalve* (L.)Britt.
S(Credit Island)U. A. Hauber.
Ill. RI(Rock Island Arsenal)Ross; (Watch Tower)Melville.

Hemerocallis L. Day-lily

- H. *fulva* L. Common or Orange Day-lily.
Roadsides and ditches; often in great colonies; frequent.
S(Harbor Road)G.

Lilium L. Lily

- L. *philadelphicum* L. var. *andinum* (Nutt.)Ker.
S(Prairie remnant at Pine Hill Cemetery; a single collection)G.
- L. *michiganense* Farw. Michigan Lily. Wild Yellow Lily.
L. *canadense* L. of Fl.
Moist places in meadows and woods not infrequent.
S(Swale in Pine Hill Cemetery; bog northwest of Buffalo; Credit Island, in alluvial woods)G.
M(Muscataine Co.)Reppert.
Ill. RI(Rock Island Arsenal)Ross.

Erythronium L. Dog-tooth Violet. Fawn Lily.

- E. *albidum* Nutt. White Dog-tooth Violet.
Open upland and lowland woods.
S(Fejervary Park; Credit Island)G.
M(Wild Cat Den)G.

- (E. *americanum* Ker. Yellow Adder's tongue Lily.
(X)Barnes. A specimen without date or locality.

Camassia Lindl.

- C. *scilloides* (Raf.)Cory. Wild Hyacinth.
Low moist grounds; infrequent.
M("Alluvial prairie southeast of Saulsbury Bridge, June 28, 1923.")Shimek, SUI; (Muscataine Co.)Reppert.
Ill. RI(Rock Island Arsenal) Ross.
Ill. Whiteside Co. (Roadside north of the pumping station)G.

Ornithogalum L. Star of Bethlehem.

- O. umbellatum L.
Grassy roadsides; casual.
S(Jamestown)G.; (Davenport)Ross.
Ill. RI(Rock Island Arsenal)Paarmann-Sheldon.

Yucca L. Spanish Bayonet.

- Y. filamentosa L.
M(Roadside ditch along R. M.; an escape)G.

Muscari Mill. Grape hyacinth.

- M. botryoides (L.)Mill.
In earliest spring, in garden borders.
S(Cultivated, 1416 Main St.)G.

Asparagus L. Asparagus.

- A. officinale L. Garden Asparagus.
Roadsides and fields; frequent; nearly always as a single plant.
S(Pine Hill Cemetery)G.

Smilacina Desf. False Solomon's Seal.

- S. racemosa (L.)Desf. False Spikenard.
Woods and clearings; frequent.
S(Devil's Glen)Ross.; (Allen's Grove)G.
M(Muscatine Co.)Shimek.

S. stellata (L.)Desf.

- Woods and clearings; infrequent.
S(Credit Island)G.
Ill. RI(Rock Island Arsenal)Paarmann-Sheldon.

Maianthemum Weber.

- M. canadense Desf. Wild Lily-of-the-Valley.
M(Wild Cat Den. On a dry spur with Vaccinium, Amelanchier
and Pteridium)G.

Polygonatum Mill. Solomon's Seal.

- P. canaliculatum (Kuhl)Pursh.
P. giganteum Dietr. of Fl.
Moist upland and lowland woods; frequent.
S(Devil's Glen; Pine Hill Cemetery; Koenig place)G.
M(Wild Cat Den)G.

Convallaria L. Lily-of-the-Valley.

- C. maialis L.
Spreading from cultivation into cool moist spots near habitations.
S(Established in a swale at Pine Hill Cemetery)G.

Trillium L. Trillium. Wake-rob-in.

- T. recurvatum Beck. Purple Trillium.
Rich woods; frequent.
S(Credit Island; Allen's Grove)G.
Ill. RI(Rock Island Arsenal)Ross.

T. Gleasoni Fern.

- T. erectum L. of Fl.
Rich upland woods; infrequent.
S(Allen's Grove; Hickory Grove)G.
M(Wild Cat Den)G.

T. nivale Riddell. Snow Trillium.

- M(West Liberty, April 24, 1920.)Shimek & Pammel, ISC.
Johnson Co. ("May 1, 1891.")Shimek, SUI.

Smilax L. Cat-briar.

- S. lasioneura Hook.
S. herbacea L. of Fl.
Rich woods; infrequent.
S(Duck Creek Park; Credit Island)G.
Ill. RI(Watch Tower)Ross.
- S. ecirrhata (Engelm.)S. Wats.
Woods; infrequent.
S(Hickory Grove)G.
M(Wild Cat Den)G.
- S. hispida Muhl. Common Cat-briar
S. tamnoides L. var. hispida (Muhl)Fern.
Moist high or low woods and thickets; frequent.
S(Credit Island; Devil's Glen; Duck Creek Park)G.
M(Wild Cat Den)G.

(S. rotundifolia L.

- Found "in the vicinity of Davenport, May 15, 1847" by Dr. C. C. Parry. There is a sheet in the Parry collection at ISC; the determination is correct but the locality is unknown to me.

Dioscoreaceae

Dioscorea L. Wild Yam.

- D. villosa L.
Woods and thickets; infrequent.
M(Wild Cat Den)G.
Ill. RI(Rock Island Arsenal)Ross.
Ill. Henry Co.(Colona)G.

Amaryllaceae

Hypoxis L. Star-grass

- H. hirsuta (L.)Coville
H. erecta L. of Fl.
Prairies; infrequent.
S(Pine Hill Cemetery; Steep grassy hillside, Fejevary Park)G.

Iridaceae

Belamcanda Adans. Blackberry Lily.

- B. chinensis (L.)DC.
An occasional escape from gardens; long persistent along roadsides.
S(Roadside in Duck Creek Park)G.
M(Roadside west of Pine Mill)G.

Sisyrinchium L. Blue-eyed Grass.

- S. campestre Bickn.
Common in prairie remnants and dry open grassy places.
S(Roadside, Duck Creek Park; Devil's Glen; LeClaire)G.
M(Roadside near Pine Mill)G.; (Muscatine Co.)Shimek.
- (S. angustifolium Mill.
Johnson Co. ("Low woods at Turkey Creek, June 25, 1909.")
Shimek, SUI.

Iris L. Fleur de Lis.

- I. Shrevei Small.
I. versicolor L. of Fl.
Marshes, wet shores; wet meadows; frequent.
S(Devil's Glen; McCausland marsh)G.
M(Wild Cat Den)G.

I. *germanica* L.

A common roadside escape.
S(Roadside bank east of Jamestown)G.

Orchidaceae

Cypripedium L. Lady's-slipper. Moccasin-flower.

C. *pubescens* Willd.

C. *Calceolus* L. var. *pubescens*(Willd.)Correl of Gray's 8th Ed.

Rich woods; rare.

S(Allen's Grove, 1952)G.; (Donahue, 1886)Ross.

Ill. RI(Chippihannock Cemetery, 1891)Melville.

Recorded by Dr. Parry "in the vicinity of Davenport, May 18, 1847. His specimen at ISC bears no data.

The old names are retained until the status of this and the next species are more definitely established. To make a native American plant a variety of a European is to violate the species concept.

C. *parviflora* Salisb. Small Yellow Lady's Slipper

C. *Calceolus* L. var. *parviflora* (Salisb.)Fern of Gray's 8th Ed.

S(Allen's Grove, no date)Barnes.

Ill. RI(Watch Tower)Melville.

C. *candidum* Muhl. White Lady's Slipper.

S(Eldridge, 1892)Barnes; (Long Grove, 1887)Ross.

Recorded by Dr. Parry "in the vicinity of Davenport, May 18, 1847." His specimen at ISC bears no data.

C. *reginae* Walt. Showy Lady's-slipper.

C. *spectabilis* Swartz of Fl.

M("Bogs and damp wooded hills; infrequent, becoming rare; June, 1879")Reppert, SUI.

Recorded by Dr. Parry "in the vicinity of Davenport, June 5, 1847, as *C. spectabilis*. His two specimens at ISC are without data.

Orchis L. Orchis.

O. *spectabilis* L.

Rich moist open woods; infrequent.

S(Allen's Grove)G.

M(Wild Cat Den)G.; (Pine Mill, 1891)Barnes.

Recorded by Dr. Parry "in the vicinity of Davenport, May 18, 1847.

Habenaria Willd. Rein-orchis.

H. *viridis* (L.)R.Br. var. *bracteata* (Muhl)Gray. Long-bracted Orchis.

"Moist rich woodlands; infrequent."Fl.

S(Allen's Grove, 1892)Barnes.

M("Rich woods, June, 1892.")Reppert, SUI.

Cedar Co. ("Woods along limestone bluff above Rock Creek, 3 miles north of Rochester, May 27, 1952.")Fay, SUI.

H. *clavellata* (Michx.)Spreng. Green Woodland Orchis.

H. *tridentata* Hook. of Fl.

"Borders of hilly woods in damp sandy soil along the Cedar River; frequent."Fl.

M("Sandy woods along Cedar River, Lake Township, 1894. First collected by K. K. Mackenzie in 1893.")Reppert, SUI.

H. *flava* (L.)R.Br. Pale Green Orchis.

H. *virescens* Spreng. of Fl.

M("Wet grassy ground, Cedar River bottom, Saulsbury Bridge region, Lake Township; infrequent. 1894.")Reppert, SUI.

Cedar Co. ("Sandy swale one mile east of Cedar River, 4 miles south of Rochester, June 28, 1952.")Fay & Thorne, SUI.

H. *leucophaea* (Nutt.)Gray. Fringed or Prairie Orchis.

"Moist prairie near Eldridge."Fl.

The specimen has not been located.

M("Alluvial flat west of Bayfield, July 11, 1908.")Shimek, ISC.

Reported "in the vicinity of Davenport" by Dr. C. C. Parry, June 18, 1847.

(*Triphora* Nutt.

T. *trianthophora* (Sw.)Rydb.

Johnson Co. ("Spring, 1889.")Mary Linder, SUI.

Calopogon R.Br. Swamp Pink.

C. *pulchellus* (Salisb.)R.Br.

"Boggy places in Cedar River region; dry gravelly hillside at Wild Cat Den; infrequent."Fl.

M(Wild Cat Den, June, 1891)Barnes.

Recorded by Dr. Parry "in the vicinity of Davenport, June 16, 1847." (as *Cymbidium pulchellum*.)

Spiranthes Richard. Lady's Tresses.

S. *cernua* (L.)Richard.

"Wet meadows and boggy places; infrequent."Fl.

S(Eldridge, September 1894)Barnes; (Pine Hill Cemetery, September 14, 1948.)G.

S. *gracilis* (Bigel)Beck.

"Dry soil, Wild Cat Den; Cedar River region; rare."Fl.

S(Prairie remnant at Pine Hill Cemetery, August 30, 1948.) G.; (Sandy prairie north of marsh northeast of St. Anne's Church, September 7, 1950)G.; (Davenport, September 1888)Ross.

(*Goodyera* R.Br. Rattlesnake Plantain.

G. *pubescens*(Willd.)R.Br.

"Wooded ravine at Wild Cat Den; also sparingly in the Cedar River region."Fl.

No specimen from our area has been located.

Johnson Co. (July 23, 1895)Shimek, SUI.

Corallorhiza Chatelain. Coral-root.

C. *odontorhiza* (Willd.)Nutt. Autumn Coral-root.

S("Rich woods at Allen's Grove, September 14, 1892.")Barnes.

Malaxis Sw. Adder's-mouth.

M. *uniflora* Michx. Green Adder's-mouth

Microstylus opioglossoides Nutt. of Fl.

M(Woods along Miller's Creek, Bloomington Township. Collected once by K. K. Mackenzie, 1892.")Reppert, SUI.

Liparis Richard. Twayblade

L. *lilifolia* (L.)Richard. Lily-leaf Twayblade.

"Moist woods; Allen's Grove; Wild Cat Den; infrequent."Fl.

M(Wild Cat Den, no date)Barnes.

Ill. RI(Watch Tower, June, 1890)Ross.

- L. *Loeselii* (L.)Richard. Bog-or Yellow Twayblade.
 "Boggy places, Cedar River region; rare."Fl.
 M(Near spring along Cedar River, no date)Barnes.

(*Aplectrum* (Nutt.)Torr. Putty-root.

A. *hyemale* (Muhl.)Torr.

Cedar Co. ("Rich upland woods, south slope, one mile south of
 Wapsipinicon River near Massilon, June 17, 1951.")Fay &
 Thorne, SUI.

DICOTYLEDONEAE ARCHICHLAMYDEAE

Salicaceae

Salix L. Willow.

- S. *nigra* Marsh. Black Willow
 Frequent along or near streams.
 S(Creek north of Nahant; Credit Island)G.; (Devil's Glen)Ross.
- S. *amygdaloides* Anders. Peach-leaf Willow.
 Low grounds along streams; frequent.
 S(W. Locust St. Road; Credit Island)G.
- S. *lucida* Muhl. Shining Willow.
 S(A young sprout in a rose bush at Fejervary Park; promptly
 destroyed)G.
- S. *fragilis* L. Crack-Willow.
 Once freely planted; propagates freely by rooting of dropped branch-
 lets. Frequent in the uplands.
 S(Duck Creek Park; 16th St. & Bridge Ave.)G.
- S. *babylonica* L. Weeping Willow.
 Occasionally planted for ornament.
 S(Credit Island)G.
- S. *alba* L. White Willow.
 Formerly occasionally planted.
 S(Waverly Road; Oakdale Cemetery)G.
- S. *alba* L. var. *vitellina* (L.)Stokes Golden Willow.
 Once much planted; often along boundary lines.
 S(R. 61 x Eldridge crossroad)G.
- S. interior Rowlee. Sand-bar Willow.
 S. *longifolia* Muhl. of Fl.
 Banks of streams and sand-bars; common.
 S(Credit Island)G.; (Fairview)Reppert.
- S. interior Rowlee var. *pedicellata* (Anders)Ball.
 Leaves only 3-6 mm. wide.
 With the last, less frequent.
 S(Duck Creek Park)G.
- S. *rigida* Muhl.
 S. *cordata* Muhl of Fl.
 Frequent along wet ditches and creeks.
 S(Noels; Ravine, Fejervary Park; Crossroads N. of Donahue)G.
- (S. *Bebbiana* Sarg. Bebb's Willow.
 S. *rostrata* Richardson
 "A single shrub in low ground at Eldridge." Fl.; but no specimen
 from our area can be located.
- S. *discolor* Muhl. Pussy Willow
 In very wet situations, as mucky shores of marshes and in bogs; in-
 frequent.
 M(Lindle's Woods; Bog at Nelumbo Pond, Sec. 15, Lake Town-
 ship)G.
 Louisa Co. (Open woods, in moist sand, Big Sand Mound)G.

- S. *discolor* Muhl. var. *latifolia* Anders. Pussy Willow
In the same situation as the last. Infrequent.
S(Border of marsh at McCausland)G.
M(Hanging bog NW. of Fairport; Wild Cat Den in the dry upper terrace east of Pine Creek)G.
- S. *humilis* Marsh. Prairie Willow
Infrequent or rare on prairie remnants.
S(Pine Hill Cemetery)Ross;G; (Devil's Glen)Ross.
- S. *tristis* Ait. Dwarf Prairie Willow.
S. *humilis* Marsh var. *microphylla* (Anders)Fern.
S(With the last on the prairie remnant at Pine Hill Cemetery)G.
Like it, but smaller in all parts; the relationship is obscure.
- S. *gracilis* Anders.
S. *petiolaris* Smith of Fl.
"Low wet grounds; frequent." Fl. The only specimens located are:
S("Eldridge. Iowa," no date or name; determined by C. R. Ball) ISC.
M("Muscatine, Iowa, Aug. 5, 1927.")Pammel & Porter, ISC.
- S. *capraea* L. Goat Willow
Occasionally planted for ornament; often confused with *S. discolor*.
S(Davenport)G.
- S. *purpurea* L. Basket or Purple Willow.
Planted and used by the pioneers for basket-making.
M("Banks of Mud Creek near Muscatine, April 10, 1892.") Reppert, SUI.

Populus L. Poplar. Aspen.

- P. *tremuloides* Michx. Quaking Aspen.
Borders of woods and clearings; occasional.
S(Duck Creek Park)G.
M(Wild Cat Den)G.
Ill. RI(Rock Island Arsenal)Ross.
- P. *grandidentata* Nichx. Large-tooth Aspen.
Borders of woods; occasional.
S(Devil's Glen)Ross;G.
M(Wild Cat Den)Barnes;G.
- P. *alba* L. White Poplar.
Formerly planted; escapes and persists by suckers.
S(Credit Island)G; (Vanderveer Park)Paarmann-Sheldon.
- P. *alba* L. var. *pyramidalis* Bge.
P. *Bolleana* Lauche.
Not infrequently used for accents or screens in landscape planting.
S(St. Ambrose College)G.
- P. *deltoides* Marsh. Cottonwood.
P. *monilifera* Ait. of Fl.
River-banks and bottomlands; frequent.
S(Davenport)G.
Ill. RI(Rock Island Arsenal)Paarmann-Sheldon.
- P. *nigra* L. var. *italica* Muench. Lombardy Poplar
In landscape planting for accents.
S(12 & Division Sts.)G.
- P. *balsamifera* L. Balsam Poplar. Tacamahac
S(Formerly a row of trees along the W. wall of the Children's Zoo at Fejervary Park; now destroyed)G.

- P. *candicans* Ait. Balm of Gilead.
P. *gileadensis* Roulee of Gray's 8th ed.
Formerly often planted and now persistent on old homestead sites.
Some vigorous young trees grow by the roadside in Sec. 16 Montpelier Township, Muscatine county.
M(N. side of the hill road one mile E. of Wild Cat Den)G.

Juglandaceae

- Juglans L. Walnut. Butternut.
J. *cinerea* L. Butternut.
Infrequent. Mostly on wooded slopes along streams. Occasionally planted.
S(Lau Farm; planted)Paarmann-Sheldon; (South of garage, 131 W. 15th St.)G.
M("Densely wooded slope of dune, NE. of pond, 8 miles NW. of Muscatine Aug. 18, 1920.")Shimek, SUI.
- J. *nigra* L. Walnut.
Infrequent in uplands and low woods; once freely planted in fence-rows along roadsides.
S(Credit Island, near its east end)G.
M(Wild Cat Den)G.
- J. *cathayensis* Dode. Chinese Walnut.
S(A single tree in cultivation at the Lau Farm)G.

Carya Nutt. Hickory

- C. *illinoensis* (Wang.)K. Koch. Pecan
C. *olivaeformis* Nutt. of Fl.
In rich alluvial woods, Muscatine Island.
S(Lau Farm, cultivated)G.; (Near Wyoming Hill)Reppert.
M(Muscatine Island)G.
- C. *cordiformis* (Wang)K. Koch. Pig-nut. Bitternut
C. *amara* Nutt. of Fl.
Prefers moist soil, but is also found on dry slopes and uplands.
S(Fejervary Park)G.
M(Wild Cat Den)G.
- C. *ovata* (Mill)K. Koch. Shell-or Shag-bark.
C. *alba* Nutt. of Fl.
Moist or dry woods and slopes; occurs on both uplands and bottomlands. Frequent.
S(Clifton Hill)Paarmann-Sheldon
M(Muscatine Co.)Reppert.
- C. *laciniosa* (Michx)Loud. Big Shellbark.
"Along Sweetland Creek; infrequent." Fl.
S(Lau Farm, cultivated)G.
M(Muscatine Co.)Reppert.
- C. *tomentosa* Nutt. Mockernut
Infrequent. Mostly in uplands, moist or dry woods.
S(Fejervary Park)G.
M(Muscatine Co.)Reppert.

Corylaceae

- Corylus L. Hazel-nut.
C. *americana* Walt. American Hazel-nut.
Upland woods and thickets; frequent.
S(Allens Grove; Devil's Glen)G.
M(Wild Cat Den)G.

Ostrya Scop. Hop-hornbeam.

- O. virginiana* (Mill)K. Koch var. *lasia* Fern.
Usually as single trees; upland woods; often on creek banks; infrequent.
S(Devil's Glenn; Allen's Grove)G.
M(Wild Cat Den; Fairview)G.

Carpinus L. Hornbeam. Ironwood.

- C. caroliniana* Walt.
M(Rich moist wooded slopes at Wild Cat Den)G.
Apparently the only station in the area.

Betula L. Birch.

- B. lenta* L. Sweet or Black Birch.
S(A planted tree at 250 E. Locust St.)G.
- B. nigra* L. River Birch
B. lutea Michx. of Fl.
River-banks and pond-shores; frequent and abundant locally.
S(Credit Island)G.
M(Muscataine Co.)Shimek.
- B. populifolia* Marsh. White or Gray Birch.
Occasionally planted in our area but short-lived.
S(Fejervary Park)G.

Alnus Ehrh. Alder.

- A. glutinosa* (L.)Gaertn. Black Alder.
Occasionally planted. Thriving stands at Duck Creek Park.
S(Duck Creek Park; Fejervary Park)G.

Fagaceae

Fagus L. Beech.

- F. grandifolia* Ehrh. American Beech.
Rarely planted. A fine large tree west of the clubhouse at Duck Creek Park; also at the Lau Farm.
S(Lau Farm)G.
- F. sylvestris* L. var. *atropurpurea* Ait. Purple or Copper Beech.
S(Cultivated, Vanderveer Park.)G.

Castanea Mill Chestnut.

- C. dentata* (Marsh)Borkh.
Occasional; our trees are probably all planted.
S(121 S. Pine St.; Lau Farm)G.

Quercus L. Oak

- Q. alba* L. White Oak.
Upland woods; frequent. Absent from the bottomlands.
S(Davenport; Lau Farm)G.
M(Bluff W. of Muscatine)G.
- Q. macrocarpa* Michx. Bur Oak.
Uplands, slopes and bottomlands. Frequent.
S(Credit Island; Lau Farm)G.
M(Muscataine Co.)Reppert.
- X *Q. Bebbiana* Schneid.
A natural hybrid between the last two.
S(Fejervary Park)G. This tree has the smooth white bark and habit of *Q. alba*; leaves very variable and resembling those of neither parent; cup without mossy fringe but the acorn shaped like that of *Q. macrocarpa*.

- Q. bicolor* Willd. Swamp White Oak.
Frequent in alluvial woods. Seems to do well when transplanted to upland sites.
S(Credit Island; Vanderveer Park)G.
- Q. Muhlenbergii* Englem. Chestnut or Yellow Oak.
In woods on dry hillsides. Rare in Scott county; infrequent on wooded slopes in Township Seventy-six in Muscatine county.
S(Spencer Creek)Paarmann-Sheldon; (Hillside W. of Fejervary Park)G.
M(Upland wooded slope, Township Seventy-six)G.
Ill. RI(Sparsely wooded bluff, Watch Tower)G.
The trees mentioned in the Fl. are still surviving. They are situated west of the tracks opposite the ravine in Fejervary Park. The largest has attained a diameter of 17½ inches at breast height.
- Q. Prinus* L. Chestnut Oak.
Only in cultivation.
S(Vanderveer Park; Lau Farm)G.
- Q. rubra* L. Red Oak.
In upland woods and north-facing hillsides; less frequent in low woods.
S(1225 Perry St.)G.
M("Cedar bottoms")Reppert.
Ill. RI(Near Illinois City)G.
Possible the tree on Perry St. should be referred to the var. *borealis* (Michx. f.)Farw.
- Q. palustris* Muench. Pin-oak.
Q. palustris Du Roi of the Fl.
Moist or wet alluvial woods; frequent. Also thrives as a planted tree on the uplands.
S(High School Yard; Lau Farm)G.
M(River bank near Montpelier)Barnes.
- (*Q. ellipsoidalis* E. J. Hill. Northern Pin Oak.
"One tree near Big Rock." Fl.
Our specimens are without data.
- Q. velutina* Lam. Black Oak.
Q. coccinea Wang. var. *tinctoria* Gray of Fl.
Frequent; found on both uplands and bottomlands; prefers sandy soils.
S(14th & Scott Sts.)G.
M(Muscataine Co.)Reppert.
- Q. palaeolithicola* Trel.
Q. ellipsoidalis X *Q. velutina*
S(Yard north of the High School)G.
A large tree with the bark and habit of *Q. velutina*, but with fruit the size and shape of that of *Q. ellipsoidalis*. Determined as *Q. palaeolithicola* by the Arnold Arboretum, but by E. J. Palmer referred to *Q. velutina*.
- Q. imbricaria* Michx. Shingle Oak.
"Several trees on Credit Island; also Cedar Township"Fl.
S(Credit Island)G; Barnes; Paarmann-Sheldon.
None of these trees remain on Credit Island; the one which stood along the road south of the comfort station was inadvertently destroyed; one other, south of the lower end of the pond has been crippled by lightning, and is now dead.
- Q. laurifolia* Michx. Laurel Oak
S(A planted tree at the Lau Farm)G.

Ulmaceae

Ulmus L. Elm

- U. rubra Muhl. Red or Slippery Elm
- U. fulva Michx. of Fl.
 - Upland woods; not infrequent. Probably mostly overlooked.
 - S(Allen's Grove; N.W. of Mt. Nebo Cemetery)G.
 - M(Wild Cat Den)G.
- U. procera Salisb. English Elm.
 - A row of large trees along the south side of Locust St. between Ripley and Scott Sts. Introduced. The leaves appear two or three weeks later and remain green much longer than with the American elm.
 - S(Locust St. between Ripley and Scott Sts.)G.
- U. glabra Huds. English or Wych Elm.
 - Also introduced.
 - S(Several trees west of "Monkey Island" in Fejervary Park)G.
- U. americana L. American or White Elm
 - Frequent in upland and low woods. Frequently planted.
 - S(15th & Brady Sts. cultivated); Lau Farm cultivated); Le-Claire)G.
 - The historic tree at LeClaire, known as the "Cody Elm" or "The Green Tree Inn" and registered in the Library of Congress is often referred to in the literature as a rock elm, which it is not.
- U. pumila L. Siberian Elm. Commonly called the Chinese Elm
 - This toy elm is in undeserved favor for planting.
 - S(1148 W. 14th St.; Blue Grass)G.

Celtis L. Hackberry.

- C. occidentalis L.
 - Woods and riverbanks; infrequent.
 - S(Credit Island)G.
 - M(Wild Cat Den)G.
 - Ill. RI(Rock Island Arsenal)Ross.

Moraceae

Morus L. Mulberry.

- M. rubra L. Red Mulberry.
 - Rare.
 - S(Planted tree at the Lau Farm)G.
 - Ill. RI(Rock Island Arsenal, in a clearing in low woods)G.
- M. tatarica L.
 - M. alba L. var. tatarica Loud
 - M. rubra L. of many authors.
 - Ripe fruit purple. Found almost everywhere, the seeds being spread by the birds who are fond of the fruit. Leaves entire to deeply lobed. An aggressive weedy tree.
 - S(Duck Creek Park; Credit Island; Waverly Road)G.
- M. alba L. sensu strictu. White Mulberry
 - Fruit alabaster white.
 - S(Planted tree in front of the Museum Building)G.

Maclura Nutt. Osage orange

- M. pomifera (Raf.)Shneid.
- M. aurantiaca Nutt. of Fl.
 - Formerly much planted for hedges now decrepit; occasionally seen as a thriving single self-sown tree.
 - S(Scott Co.)Barnes.
 - M(Wild Cat Den)G.

Cannabaceae

Cannabis L. Hemp. Marijuana

- C. sativa L.
 - A tall weed along roadsides, in ditches and along railroad tracks; frequent.
 - S(Pine Hill Cemetery)G.
 - M(Low sandy roadside near Tice Bridge)G.

Humulus L. Hops

- H. americanus Nutt.
- H. lupulus L. of Fl.
 - Infrequent; roadsides and waste places near dwellings.
 - S(Utica Ridge Road)G.
 - Ill. RI(Rock Island Arsenal)Ross; Paarmann-Sheldon.
- H. japonicus Sieb. Japanese Hops.
 - S(Near the railroad tracks at Schmidt's Crossing)G.

Urticaceae

Urtica L. Nettle

- U. procera Muhl.
- U. gracilis Ait. of Fl.
 - Moist ground; thickets, low woods and moist roadside ditches; frequent.
 - S(Waverly Road; Duck Creek Park)G.
 - M(Wild Cat Den)G.

Laportea Gaud. Wood-nettle.

- L. canadensis (L.)Wedd.
 - Rich moist low woods; frequent.
 - S(Devil's Glen)G.

Pilea Lindl. Clear-weed

- P. pumila (L.)Grey
 - Moist woods; especially low alluvial; frequent.
 - S(Duck Creek Park; Credit Island)G.

Boehmeria Jacq. False Nettle

- B. cylindrica (L.)Sw.
 - Moist places in low woods; occasionally in moist sandy places in the open; infrequent.
 - S(Credit Island; Lock 14)G.
 - M(Wild Cat Den)G.
- B. Drummondiana Wedd.
 - M(Boggy margin of Nelumbo Pond, Sec. 15, Lake Township)G.

Parietaria L. Pellitory

- P. pensylvanica Muhl.
 - In diverse habitats; infrequent.
 - S(Rockwall, Devil's Glen; Roadside ditch)G.

Santalaceae

- Comandra Nutt. Bastard Toad-flax
C. Richardsiana Fern.
C. umbellata Nutt. of Fl.
Frequent on dry prairies, banks, and open wooded crests.
S(Pine Hill Cemetery)G.
Ill. RI(Watch Tower)G.

Aristolochiaceae

- Asarum L. Wild Ginger.
A. canadense L.
Moist rich woods; infrequent.
S(Davenport)Ross.
M(Wild Cat Den)G.
Ill. RI(Watch Tower)Ross.
A. canadense L. var. acuminatum Ashe.
M(Muscatine Co.)Reppert.
Aristolochia L. Birth-wort.
A. durior Fill. Dutchman's Pipe-vine.
S(Cultivated; Trellis at 1325 Brady St.)G.
A. Serpentaria L. Virginia Snake-root
"Wyoming Hill; Township Seventy-six; rare." Fl.
M("Rich woods; infrequent; near Wyoming Hill and Township
Seventy-six Aug. 14, 1894.")Reppert, SUI.

Polygonaceae

- Rumex L. Dock
R. verticillata L. Swamp Dock.
Most often in shallow standing water, or on muddy margins of ponds; infrequent.
S(Noels)Barnes; Pond, Credit Island; Ditch north of Allen's Grove)G.
R. mexicanus Meisn.
R. triangularis (Danser)Rech.
In dry places in the open, mostly waste; infrequent.
S(Lock 14; Abandoned city dump at 11th & Vine Sts.; Pine Hill Cemetery)G.
R. altissimus Wood. Pale Dock
Not infrequent in moist soils along rivers; moist places along roadsides; also in rather dry waste places; frequent.
S(Sandy soil at the marsh northeast of St. Anne's Church; Sandy roadside, Wapsie bottoms)G.
M(Wet ground near Saulsbury Bridge)G.; Shimek.
R. Patientia L. Patience Dock.
Grown by the old settlers for table greens. Collected only once.
S(Roadside ditch near an old habitation, Chapel Hill Road)G.
R. crispus L. Curly Dock.
Moist to dry waste places; frequent.
S(Pine Hill Cemetery; Duck Creek Park)G.

- R. orbiculatus Gray. Great Water Dock.
R. Brittanica L. of Fl.
Bogs, sloughs, wet pond-shores; very infrequent.
S(Slough near Cemetery, Blue Grass)Barnes.
M(Bog at margin of Nelumbo Pond, Sec. 15, Lake Township)G.
(R. fueginus Phil. Golden Dock
R. maritimus L. var. fueginus (Phil.)Dusen.
Ill. Whiteside Co.(Dry mud-flat on border of marsh south of Thomson)G.
R. obtusifolius L. Bitter Dock. Blunt-leaf Dock
Moist shaded places; infrequent.
S(Wet shady ravine bottom at Fejervary Park)G.
Abundant here.
M("Oak Hill")Barnes.
R. Acetosella L. Sheep-sorrel
Dry sterile or worn-out soils; frequent.
S(Davenport)Ross; (Pine Hill Cemetery)G.
M(Muscatine Island)G.

- Polygonum L. Knot-weed Smart-weed
P. ramosissimum Michx. Bushy Knot-weed
Dry sandy soils; not infrequent.
S(Nahant; Noels)G.
M(Near Tice Bridge)G.
P. erectum L.
Roadsides, waste places; infrequent.
S(Davenport)Ross; (Blue Grass)Barnes
M(Roadside at Weiss' Slough)G.
P. buxiforme Small
Roadsides, waste places; quite infrequent.
S(Schmidt's Road, at turn to the west)G.
P. neglectum Besser.
Roadsides, waste places; common in lawns and dooryards.
S(Schmidt's Road)G.
P. aviculare L. Common Knot-weed
Lawns, waste places, dooryards; frequent.
S(Davenport)Ross; G; (126 W. 15th St.)G.
P. monspeliense Thibaud
P. aviculare L. var. vegetum Lebed.?
M(Roadside embankment near Salisbury Bridge)G.
P. tenue Michx.
Dry sandy open places; quite infrequent.
M(Muscatine Co.)Shimek; Reppert; (Moscow)Barnes.
Ill. RI(Sandy roadside north of Cordova)G.
P. amphibium L. Water Smart-weed
P. Hartwrightii Gray of Fl.
"In water and mud, ponds along the Mississippi, Cedar, and Wapsipinicon Rivers; infrequent" Fl.
var. stipulaceum (Coleman) Fern. Several terrestrial and aquatic forms.

- forma hirsutosum (Farw.) Fern.
(X)Barnes.
forma simile Fern.
M(Islands opposite Montpelier)Barnes.
forma fluitans (Eat) Fern.
P. natans (Michx.) Eat
(X)Barnes.
- P. coccineum Muhl. var. pratincola (Greene) Stanford. Water Smart-weed
P. Muhlenbergii Wats. of Fl.
Shores of marshes and ponds; low grounds; not infrequent.
S(North of Allen's Grove; Credit Island)G.
M(Muscatine Co.)Reppert.
- P. longistylum Small
S(Sandy south shore of Credit Island)G.
- P. pennsylvanicum L. var. laevigatum Fern. Pinkweed.
Frequent in cornfields and low moist waste places.
S(Davenport)Ross; (West Davenport)Barnes.
Ill. RI(Wet river floodplain, Watch Tower)G.
- P. lapathifolium L.
P. lapathifolium L. var. incarnatum Watson of Fl.
Damp grounds near ponds and streams, often sandy; infrequent.
S(Waverly Road)G.; (West Davenport)Barnes.
W(Fairport)G.
- P. orientale L. Prince's Feather
Once occasional in gardens; now rare as an escape.
S(Freshly graded vacant lot at Locust & Main Sts.) G.
M("Waste grounds; common. Aug. 1891.")Reppert, SUI.
Ill. RI(East Moline along the river; an escape.)Morrissey.
- P. Hydropiper L. Water-pepper. Common Smartweed.
Low wet grounds; frequent.
S(Allen's Grove; Creek north of Nahant)G.
- P. caespitosum Blume var. longisetum (DeBruyn) Stewart.
Of comparatively recent introduction; apparently not yet reported.
S(Abundant in low places on Credit Island; occasional in drier
places, as about the Museum and Immaculate Conception build-
ings)G.
- P. Persicaria L. Lady's Thumb
Waste places; frequent.
S(Davenport)Barnes; Ross; (north of Allen's Grove)G.
M(Wild Cat Den)G.
- P. punctatum Ell. Water Smartweed.
P. acre HBK. of Fl.
Wet places; swales, pond shores etc.; frequent.
S(Pine Hill Cemetery; Credit Island; North of Allen's Grove)G.
M(Wild Cat Den)G.
- (P. robustum (Small) Fern.
Clinton Co. (A single collection north of Stevens' Bridge)G.
- P. hydropiperoides Michx. Mild Water Pepper.
In very wet places on shores, and in shallow water; infrequent.
S(Nahant; North of Allen's Grove)G.
Louisiana Co.(Big Sand Mound)G.

- P. sagittatum L. Tear-thumb.
Low moist grounds; infrequent.
S(Marsh northeast of St. Anne's Church)G.
M(Wild Cat Den, creek south of road)G.
- P. Convolvulos L. Black Bind-weed
Frequent in waste places and cultivated fields.
S(Davenport)Ross; (Blue Grass)Barnes; (4th & Pershing
Sts.)G.
- P. scandens L. Climbing False Buck-wheat.
P. dumetorum L. var. scandens Gray of Fl.
Frequent on roadside bushes and embankments.
S(Allen's Grove; Princeton)G.
M(Embankment at Saulsbury Bridge)G.
- P. dumetorum L.
P. cristatum Engelm. & Gray
Same situations as the last; less frequent.
S(Noel's)G.; (Blue Grass)Barnes.
M(Muscatine Co.)Reppert.
- P. Auberti L.
An ornamental vine with wide winged fruits, occasional in gardens.
S(124 W. 14th St.)G.
- P. cuspidatum Sieb. & Zucch. Japanese Knot-week
Occasionally planted and escaped; persistent.
S(Davenport)G.
M(Wilton)Barnes.
- P. cuspidatum Sieb. & Zucch. var. compactum Hook.
S(Planted bushes at 11th & LeClaire Sts., Davenport)G.
- Fagopyrum Mill. Buck-wheat.
F. esculentum Moench.
Rarely cultivated in this region; occasionally escapes.
M("Sandy alluvial flat east of Fruitland, August 1915")Shimek.
Ill. RI(A cultivated field at Andalusia)G.

(Polygonella Michx. Joint-weed

- P. articulata (L.) Meisn.
Only on sand dunes and sand fields.
Louisiana Co.(Big Sand Mound)G.
Ill. Whiteside Co.(Dunes south of Thomson)G.

Chenopodiaceae

Cycloloma Moq. Winged Pigweed

- C. atriplicifolia (Spreng.) Coult. Winged Pigweed. Tumbleweed
C. platyphylla Mog of Fl.
Dry sandy soils, infrequent; restricted. Often abundant on dune
lands.
M(Muscatine Co.)G.
Ill. RI(Kahlke's Boatyard)G.

Kochia Roth

K. scoparia (L.) Schrad.

A frequent weed in waste dry places.

S(5th & Harrison Sts.; Schmidt's Crossing)G.

The cultivated var. *culta* (K. *trichophylla* Stapf.), the Summer Cypress, is used for borders of lawns.

Chenopodium L. Goose-foot

C. murale L. Nettle-leaf Goose-foot

An infrequent weed in alleys.

S(Alley at 120 W. 14th St., Davenport)G.

M("Islands opposite Montpelier.")Barnes.

C. urticum L. City Goose-foot

Frequent in alleys and waste places in the city and along country roadsides.

S(W. Davenport)Barnes; (14th & Harrison Sts.)G.

C. hybridum L. Maple-leaf Goose-foot

C. *gigantospermum* Aellen.

In disturbed grounds; seems promptly to die out.

S(Fresh roadside ditch, Allen's Grove; New fill at 14th & Harrison Sts.)G.; (Blue Grass)Barnes.

C. leptophyllum Nutt. Narrow-leaf Goose-foot

C. *pratericola* Rydb.

Only in dry sandy soils.

S(Sandy field at marsh northeast of St. Anne's Church; Noel's)G.
Louisa Co.(Big Sand Mound)G.

C. Boscianum Moq.'

C. *Standleyanum* Aellen.

Borders and clearings in dry or moist soils; seems to prefer some shade; infrequent.

S(Pine Hill Cemetery; Duck Creek Park)G.; (Blue Grass)Barnes.
M(Moscow)Barnes.

C. album L. Pigweed. Lamb's Quarters

A frequent weed in waste and cultivated grounds.

S(Credit Island; Allen's Grove)G.; (Stockton)Barnes.

M(Fairport)G.

C. album L. forma *lanceolatum* (Michx.) Aellen.

C. *lanceolatum* Michx.

Quite infrequent; in similar situations.

S(Allen's Grove)G.

M(Weiss' Slough; Levee, Lake Township)G.

C. Botrys L. Jerusalem Oak.

M("Banks of Cedar River at Moscow)Barnes.; (Muscatine, Iowa, August, 1878")Reppert, SUI.

C. ambrosioides L.

"Waste places near habitations in Davenport and Muscatine." Fl.

M(Muscatine Co. August, 1894)Reppert, SUI.

C. glaucum L. Oak-leaf Goose-foot

"Waste grounds of Davenport and Muscatine." Fl.

M(Muscatine 1890," (no other data)Reppert, SUI.

(C. *capitatum* (L.) Aschers. Strawberry Blite.
Ill. RI(Rock Island Arsenal)Melville.

C. Bushianum Aellen.

M(Sandy roadside to Weiss' Slough)G.

C. Berlandieri Moq.

Frequently not separated from C. album.

Waste places along roadsides and railroad right of ways; frequent.

S(Abandoned city dump, 10th & Vine Sts.; Waste corner, 15th

M(Hilltop overlooking Nelumbo Pond, Section 15, Lake Township; Railroad right of way west of Durant)G.

Atriplex L. Orache.

A. patula L.

A. *patula* L. var. *hastatula* Gray of Fl.

In lean soils in alleys and waste grounds; infrequent.

S(Abandoned city dump, 10th & Vine Sts.; Waste corner, 15th & Harrison Sts.)G.

(A. *patula* L. var. *hastata* (L.) Gray.

(X)Barnes.

A. hortensis L. Orache.

Formerly cultivated as a potherb by the old settlers.

S("Near BCR & N tracks along a marsh in W. Davenport, 1896")Barnes.

Salsola L.

S. Kali L. var. *tenuifolia* Tausch. Russian Thistle

S. Kali L. var. *tragus* DC. of Fl.

"Railroad tracks at Davenport and Muscatine." Fl.

M("Along the railroad, Muscatine, Iowa. August, 1895.")Reppert, SUI.

M("Muscatine, garden.")Collector not known.

(X)Barnes.

Louisa Co.(Big Sand Mound)G. This may be the species, not the variety.

Ill. RI(Roadside east of Cordova)G.

Amaranthaceae

Amaranthus L. Amaranth

A. cruentus L. Purple Amaranth

Occasionally in gardens.

S(14th & Harrison Sts. in Davenport)G.

A. caudatus L.

Also in gardens.

S(910 Perry St. in Davenport)G.

A. retroflexus L. Pigweed. Green Amaranth.

Waste and cultivated grounds; frequent.

S(Schmidt's Crossing)G.; (Blue Grass)Barnes.

M(Muscatine Co.)Reppert.

A. hybridus L. Pigweed.

A. *chlorostachys* L. and A. *hypochondiacus* L. of Fl.

S(Schmidt's Crossing; 220 W. 14th St.)G.

M(Muscatine Co.)Barnes.

- A. *albus* L. Tumble-weed
Sandy fields, roadsides and waste places; frequent.
S(Roadside north of Allen's Grove; Noel's; Chapel Hill Road)G.
M(Muscatine Co.)Reppert.
- A. *graecizans* L. Prostrate Amaranth.
A. *blitoides* S. Wats. of Fl.
Waste places and cultivated grounds; frequent.
S(6th & Harrison Sts.)G.
- (A. *spinosus* L. Thorny Amaranth.
Apparently collected by Barnes in our area, but without data, and
no supporting specimen has been found.
- A. *Torreyi* (Gray)Benth.
A. *arenicola* L. M. Johnson.
"Railroad tracks from Fruitland to Fairport; frequent." Fl.
M(Fruitland)Barnes.
- Acnida* L. Water Hemp.
A. *altissima* Riddell.
A. *tuberculosa* Moq. of Fl.
Frequent in low grounds along rivers.
S(Marsh north of Allen's Grove; Credit Island; Lock 14)G.
M(Muscatine Co.)G.
- (A. *subnuda* (Wats.) Standl.
Ill. Whiteside Co.(Dried out muddy shore of marsh at Thomson)G.
- A. *tamariscina* (Nutt.)Wood.
S("Milwaukee tracks, E. Davenport, 1892.")Barnes.
- Froelichia* Moench. Cotton-weed.
F. *gracilis* (Hook) Moq.
F. *Floridana* Moq. of Fl.
Dry sand, restricted to sand fields and dunes.
S(Lock 14)G.
Louisiana Co.(Big Sand Mound)G.
- (F. *floridana* (Nutt.) Moq. var. *campestre* (Small) Fern.
F. *Floridana* Moq. of Fl.
Dry sandy soil; restricted.
Ill. RI(Sand fields north of Cordova)G.
Ill. Whiteside Co.(Sands and dunes at Lock 13)G.

Nyctaginaceae

- Mirabilis* L. Four O'clock.
M. *nyctaginea* (Michx.)MacM.
Oxybaphus nyctagineus Sweet of Fl.
Frequent along railroads; occasional along roadsides.
S(Davenport)Ross; G.
M(Roadside Route M)G.
- M. *hirsuta* (Pursh.)MacM.
A railroad migrant from the Northwest.
S("Rock Island tracks west of Davenport, July 1, 1915.")Hauber.

Phytolaccaceae

- Phytolacca* L. Poke-weed
P. *americana* L.
P. *decandra* L. of Fl.
Occasional in odd places in the city; and in moist rich silty or
sandy grounds of islands or riverbanks.
S(Lock 14; Spontaneous at 320 E. 14th St.)G.
Louisiana Co.(Moist sandy ground on river shore, Big Sand Mound)G.

Aizoaceae

- Mollugo* L.
M. *verticillata* L. Carpet-weed.
Sand fields and dunes; occasional in waste places.
S(Nahant; Credit Island; Noel's)G.
Louisiana Co.(Big Sand Mound)G.

Portulacaceae

- Portulaca* L.
P. *oleracea* L. Common Purslane
An occasional weed in waste places or cultivated ground.
S(Play-ground, Harrison and Locust Sts.)G.
- P. *grandiflora* Hool. Rose Moss.
In flower gardens; occasional as a waif.
S(11th & Brady; cultivated)G.
- Claytonia* L. Spring Beauty.
C. *virginica* L.
Rich moist upland and alluvial woods; frequent.
M(Wild Cat Den)G.
Ill. RI(Rock Island Arsenal)Ross.

Caryophyllaceae

- Paronychia* Mill. Whitlow-wort.
P. *canadensis* (L.)Wood.
Anychia canadensis (L.)BSP.
Anychia capillacea DC. of Fl.
Infrequent; in dry sandy woods.
M(Wild Cat Den)G.
Ill. RI(Rock Island Arsenal)Shimek.
- P. *fastigiata* (Raf.) Fern. Forked Chickweed
Anychia polygonioides Raf.
Anychia dichotoma Michx. of Fl. and 6th Ed. of Gray.
In lean or sandy soils; infrequent.
S(Noel's; Blue Grass)Barnes.
M(Levee, Section 15, Lake Township)G.

- Arenaria* L. Sand-wort.
A. *lateriflora* L.
Open woods; infrequent.
S(Allen's Grove; Oakdale)G.
Ill. RI(Watch Tower)Ross; (Rock Island Arsenal)Melville
- Stellaria* L. Chickweed.
S. *media* (L.)Cyrillo. Common Chickweed
Frequent in shaded lawns and damp waste places.
S(Davenport)Ross; (Boulevard at St. Ambrose College)G.

- S. *graminea* L. Stitchwort.
In lawns and grassy places; infrequent.
S(Damp shady grassy slope north of Mt. Nebo Cemetery; Terrace, corner of Lombard and Brady Sts.)G.
Ill. RI(Meadow, Rock Island Arsenal)G.
- S. *longifolia* Muhl. Long-leaf Stitchwort
S(Roadside pond margin at crossing of R. 61 and the Wapipinicon River)G.
M("Low places, Wild Cat Den, May 31, 1924.")Shimek, SUI.
- Cerastium L. Mouse-ear Chickweed.
- C. *nutans* Raf. Nodding Mouse-ear Chickweed.
Moist grounds; grassy fields, and moist waste places; infrequent.
S(Waste place, Waverly Road; Lock 14)G.; (Davenport)Ross.
Ill. RI(Watch Tower)Ross.
(X)Barnes.
- C. *vulgatum* L. Common Mouse-ear Chickweed.
Lawns, fields and waste places; frequent.
S(Credit Island; Lock 14; lawn, 131 W. 15th St.)G.
- C. *viscosum* L.
Dry open sandy places; sandy roadsides; infrequent and restricted.
S(Wapsie; Noel's)Barnes.
M(Saulsbury Bridge)G.
Ill. RI(Sandy roadside, Section 22, Cordova Township)G.
- Agrostemma L. Corn-cockle.
- A. *Githago* L. Purple Corn-cockle.
"Corn fields and railroad tracks; frequent." Fl.
S(Pine Hill Cemetery)Ross; (Scott Co., without precise locality) Melville.
- Lychnis L. Campion
- L. *alba* Mill. White or Evening Campion
Roadsides; infrequent. Often confused with *Silene noctiflora*.
S(Roadside north of Long Grove; Corner of Harrison St. road and Kimberly Road)G.
- (L. *chalconica* L. Scarlet Lychnis. Maltese Cross
Flower gardens; an occasional escape.
(X)Paarmann-Sheldon.
- L. *viscosa* L. German Catch-fly
S(From Naomi Melville's garden)Melville.
- Silene* L. Catch-fly. Campion
- S. *Cucubalis* Wibel. Bladder Campion
Roadsides; rare.
S(Schmidt's Road, south of the railroad tracks)G.
- S. *nivea* (Nutt.)Oth. Snowy Campion.
"Wild Cat Den. Railroad tracks near Montpelier." Fl.
S(Pine Hill Cemetery)Ross.
M("Railroad tracks," (at Montpelier?)Barnes; (Wild Cat Den near the bridge at the rear entrance)G.

- S. *stellata* (L.)Ait. var. *scabrella*(Nieuw.)Palmer & Steyermark
All our plants have crisp-puberulent leaves and stem. Hilly open woods, meadows; infrequent.
S(Devil's Glen)Ross; G.; (Credit Island)G.
M(Muscatine Co.)Fitzpatrick.
Ill. RI(Rock Island Arsenal)Paarmann-Sheldon.
- S. *antirrhina* L. Sleepy Catch-fly.
Prefers dry or sandy soils. Frequent as a weed in waste places, roadsides, and railroad tracks.
S(Sandy roadside, Butler Township; Waste place at 15th and Harrison Sts.)G.
Ill. RI(Rock Island Arsenal)Melville.
- S. *antirrhina* L. var. *divaricata* Robinson.
Inflorescence divaricate, pedicels filiform, capsules smaller.
S(Devil's Glen)Ross.
M(Prairie opening on crest of wooded spur, Wild Cat Den)G.
- S. *noctiflora* L. Night-flowering Catch-fly.
An infrequent weed in waste places.
S(Allen's Grove; Alley back of 1404 Brady St.)G.
- Saponaria L.
- S. *officinalis* L. Bouncing Bet.
Occasional clumps along roadsides.
S(Abandoned dump at 11th & Vine Sts.)G.; (Davenport)Ross.
- (S. *Vaccaria* L. Cow-cockle.
"Railroad tracks; Davenport, Blue Grass." Fl.
(X)Barnes. No specimen with adequate data from our area has been seen.
- Gypsophila L. Baby's Breath.
Gypsophila paniculata L.
Occasionally cultivated in flower gardens and rarely escaped.
S(Cultivated Vanderveer Park)G.
- Dianthus L. Pink Carnation
- D. *armeria* L. Deptford Pink.
Lawns and terraces; infrequent.
S(Terrace 124 E. 13th St.; Terrace 224 W. 13th Sts.; Grassy opening in woods, Dr. Shorey's Place west of Valley City)G.
- D. *barbatus* L. Sweet William
An old-fashioned garden flower.
S(From Naomi Melville's garden)Melville.
- D. *plumarius* L. Grass or Garden Pink.
S(Another old fashioned favorite from Naomi Melville's garden) Melville.

Ceratophyllaceae

- Ceratophyllum L.
- C. *demersum* L. Coon-tail. Hornwort
In quiet water of ponds and streams; frequent.
S(Sea Scout Camp west of LeClaire)G.
M(Moscow)Barnes.

Nymphaeaceae

Nuphar Sm.

- N. advena* (Ait.) Ait. f. Yellow Pond lily. Spatter dock.
M(Ox-bow pond, Weiss' Slough)G.

Nymphaea L. Water Lily

- N. tuberosa* Paine. Tuber-bearing Water Lily
N. reniformis DC. of Fl.
M(With the preceding in the pond at Weiss' Slough)G.

Nelumbo Adans. Lotus

- N. lutea* (Willd.) Pers.
Occasional in ponds and quiet backwaters.
S(Noel's; Credit Island)Ross.
M("Nelumbo Pond" Section 15, Lake Township)G.

Brasenia Schreb. Water-shield

- B. Schreberi* Gmel. Purple Water-shield
B. peltata Bursh.
In our region known only from the "Brasenia Pond" a shallow upland intermittent pond situated in the northwest ¼ of Section 7, Lake Township in Muscatine County.
M("Shallow pond in fixed dune, northwest ¼ Section 7, Lake Township, August 9, 1952.")Thorne, SUI; also Shimek, June 16, 1920. SUI.

Ranunculaceae

Ranunculus L. Buttercup. Crow-foot

- R. trichophyllus* Chaix. White Water Crow-foot
R. aquatilis L. var. *trichophyllus* Gray of Fl. and in herb.
"Ponds; Noels, Muscatine Slough." Fl.
S(Noels)Barnes.
- (*R. longirostris* Goodr. White Water-cup (incl. *R. subrigidus* W. B. Drew)
R. circinatus Sibth. of Fl.
The report of *R. circinatus* in the Fl. "Ponds near Muscatine; rare. (Fitzpatrick.)" apparently rests on the authority of Fitzpatrick. No specimen from Muscatine county has been located and the Fitzpatrick Herbarium was inadvertently destroyed.
- R. flabellaris* Raf. Yellow Water Crow-foot.
R. delphinifolius Torr.
R. multifidus Pursh of Fl.
"Shallow ponds along Cedar and Wapsipinicon Rivers, Muscatine Island; Eldridge; frequent." Fl.
S(Noel's)Barnes; (Shallow roadside pond at the crossing of R. 61 and the Wapsipinicon River)G.; ("Creek.")Melville.
M(Pond east of Cedar River Bridge)Shimek.
- R. flabellaris* Raf. var. *riparius* Fern.
R. multifidus Pursh of Fl. in part.
R. delphinifolius Torr. var. *terrestris* Farw.
S(Noel's)Barnes.
M(Muddy pond-shore near Tice Bridge, Cedar River)G.

R. scleratus L. Cursed Buttercup.

Muddy shore-flats and ditches; infrequent.
S(Muddy river flat, Sea Scout Camp west of LeClaire)G.
Ill. RI(Muddy river shore, Watch Tower)G.

R. abortivus L. Small flowered Buttercup.

Frequent; damp alluvial woods and floodplains; less frequent in upland woods.
S(Credit Island)G.
M(Wild Cat Den)G.

R. recurvatus Poir. Hooked Buttercup.

Rich woods; occasional.
S(Allen's Grove)G.
M(Wild Cat Den)G.
Ill. RI(Watch Tower)Ross.

R. pennsylvanicus L. f. Bristly Buttercup.

S(Sedge-border of shallow pasture pond, Lamp farm, northeast of Walcott)G.
M("Low wet place on Muscatine Island August 1894)Reppert, SUI.

R. fascicularis Muhl. Tufted Buttercup.

Open grassy fields; grassy clearings; mostly rather dry situations.
S(Grassy field north of Allen's Grove; Oakdale Cemetery)G.
M(Muscatine Co.)Reppert.

R. septentrionalis Poir. Swamp or Northern Buttercup.

Low moist woods and meadows; frequent.
S(Credit Island; Allen's Grove)G.
M(Wild Cat Den)G.

R. repens L. var. *villosus* Lamotte. Creeping Buttercup.

Wet ditches and meadows; infrequent.
S(Wet ditch north of Long Grove; roadside north of Donahue)G.
Many specimens in the herbaria referred to *R. repens* are in fact *R. septentrionalis*.

R. acris L. Tall Buttercup. Bachelor's Button

S(Garden, (the double cultivated form)Melville.
M("Waste lot on alluvial flat, south Muscatine, June 10, 1928.") Shimek, SUI.

(*R. macounii* Britt. Macoun's Buttercup

S("Scott Co.; 1890.") A. A. Miller, ex. coll. Reppert, SUI.
This questionable specimen is believed to be *R. repens* var. *villosus*.

Myosurus L. Mouse-tail

- M. minima* L.
"Locally abundant in sandy alluvial soil." Fl.
M("Sandy flat, east bank of Cedar River at Saulsbury Bridge, May 17, 1952)Thorne, SUI. Also Shimek, April 27, 1925, SUI.

Thalictrum L. Meadow-rue.

The separation of the following forms by the keys in current use, based principally on the indumentum, is quite unsatisfactory. The following is proposed in their stead.

Leaves thick, with revolute margins, strongly reticulate beneath.
Mature achenes slenderly elliptic with long styles.

Anthers apiculate

Undersurface of the leaves and the carpels gland-stipitate.—*T. revolutum* DC.

Undersurface of the leaves as well as the whole plant glabrous.—*T. revolutum* f. *glabrum* Penn.

Leaves thin with flat margins, the venation underneath not prominent.
Mature achenes more plump with short styles.

Anthers blunt tipped.

Leaves soft-pubescent or puberulent.—*T. dasycarpum* Fisch. & Lall.
Leaves as well as the whole plant glabrous.—*T. hypoglaucum* (Rydb.) Boivin.

T. dioicum L. Early Meadow-Rue

Sparsely wooded slopes and borders; infrequent.

S(Woods north of Cronkletons house, Allen's Grove; Border of wood, X, Barnes. Creek Park)G.

T. revolutum DC. Purple Meadow-Rue

T. purpurascens L. of Fl.

Prairies, grasslands, roadsides; frequent.

S(Pine Hill Cemetery; Marsh northeast of St. Anne's Church; Duck Creek Park)G.

T. revolutum f. *glabrum* Pennell.

In moister situations.

S(Credit Island; Walcott)G.

T. dasycarpum Fisch. & Lall. Purple Meadow Rue

Low open alluvial woods; infrequent.

S(Credit Island)G.

(*T. hypoglaucum* Rydb.

Ill. RI(Rock Island Arsenal)Ross.

Anemonella Spach.

A. thalictroides (L.)Spach. Rue Anemone

Dry open woods; frequent.

S(Davenport)Ross.

M(Wild Cat Den)G.

Ill. RI(Rock Island Arsenal)Melville.

Hepatica Mill. *Hepatica*. Liver-leaf

H. acutiloba DC.

Rich wooded slopes; frequent.

S(Allen's Grove; Devil's Glen)G.

M(Wild Cat Den)G.

Anemone L. Wind-flower

A. caroliniana Walt. Carolina Anemone.

Rare. Moist places in sandy soils; sometimes abundant locally.

"Here always associated with *Draba carolina* and *Androsace occidentalis*." Dr. C. C. Parry, 1847.

S(Camp McClellan, April 27, 1891)Melville; (Camp McClellan, April 27, 1889)Ross; (Devil's Glen, May 1895)collector unknown. M(Muscataine Co.)Reppert.

Ill. RI(Moist depressions in sandy soil east of the "Oasis" north of Cordova)G. Here were found both blue-and white-flowered forms.

A. cylindrica Gray. Thimble-weed

Open woods and borders; frequent.

S(Oakton)Ross; (Wapsie bottoms)Barnes.

M(Muscataine Co.)Shimek.

A. virginiana L. Thimble-weed

A dry open woodland species; frequent.

S(Allen's Grove; Fejervary Park)G.

Ill. RI(Watch Tower)G.

A. canadensis L. Canada Anemone. Meadow Anemone

A. pennsylvanica L. of Fl.

Low moist places; ditches and moist meadows; frequent.

S(Low meadow northwest of Nahant; Credit Island; Fejervary Park)G.

Ill. RI(Rock Island Arsenal)Melville.

A. quinquefolia L. var. *interior* Fern. Wood Anemone

A. nemoralis L. of Fl.

Rich upland woods; very infrequent.

S(Devil's Glen)Ross; (Woods north of Buffalo)G.

M(Wild Cat Den)G.

(X)Barnes.

A. patens L. var. *Wolfgangiana* (Bess.)Koch. Pasque-flower.

S("Camp McClellan, April 24, 1890.")Melville.

(X)Barnes. (X)by an unknown high school student, 1890.

Clematis I. *Clematis*

C. virginiana L. forma *missouriensis* Rydb. Virgin's Bower.

Thickets and woodland borders; infrequent.

S(Wapsie bottoms)Hauber; (Linwood)Melville; (Devil's Glen)G.

Ill. RI(Watch Tower)G.

C. Pitcheri Torr. Leather-flower.

Low sandy grounds, alluvial thickets, woodland borders; frequent.

S(Credit Island; Harbor Road; Crossing of R. 61 and the Wapsipinicon)G.

M(Weiss' Slough)G.

Isopyrum L.

I. biternatum Raf. False Anemone.

Moist wooded slopes; quite infrequent.

M(Wild Cat Den)G.

Ill. RI(Watch Tower)Ross; G.

(X)Barnes.

Caltha L.

C. palustris L. Marsh Marigold

Marshes and wet meadows; very infrequent.

S(Marsh at McCausland)G.

(X)Barnes.

Eranthis Salisb.

E. hyemalis (L.)Salisb. Winter Aconite

From Europe. Occasionally grown in wild woodland gardens. Blooms in earliest spring.

S(Mrs. Spelletich's garden)G.

Aquilegia L. Columbine

- A. canadensis L.
Steep banks and slopes; frequent.
S(Davenport)Ross.
M(Wild Cat Den)G.

Delphinium L. Larkspur

- D. virescens Nutt.
D. azureus Michx. of Fl.
Dry sandy soil; sand banks; infrequent.
M(Sand bank at Weiss' Slough; sandy roadside overlooking
Nelumbo Pond, Section 15, Lake Township)G.
Louisa Co.(Sand bank at entrance to the Big Sand Mound)G.
D. tricornis Michx.
Native of the southern states; reported from Henry Co., Illinois.
S(Miss Melville's garden)Melville.
D. Ajacis L. Common Garden Larkspur.
A favorite in old-fashioned gardens; occasional as a stray.
S(Garden, 15th & Main Sts.)G.

Actaea L. Bane-berry

- A. pachypoda Ell. White Bane-berry. Doll's Eyes
Rich woods; not infrequent.
M(Wild Cat Den)G.
(X)Barnes,
(A. rubra (Ait.)Willd. Red Bane-berry.
Cedar Co.("Rich woods, calcareous soil, 14 miles north of Spring-
dale, May 14, 1950.")Fay, SUI.

Hydrastis Ell. Yellow Puccoon. Golden Seal

- H. canadensis L.
Rich woods; rare.
M(Rich wooded slope. Township Seventy-six)G.

Berberidaceae

Podophyllum L. May-apple

- P. peltatum L.
Open woods and clearings; frequent.
S(Allen's Grove)G.
M(Wild Cat Den)G; Barnes.

Caulophyllum Michx. Blue Cohosh.

- C. thalictroides L.
Rich moist woods; quite infrequent.
M(Wild Cat Den)Barnes; G.
Ill. RI(Rock Island Arsenal)Ross.

Berberis

- B. vulgaris L. Common Barberry
"In woods two miles west of Montpelier." Fl.
Probably completely exterminated in our area during the first World
War to control the crown rust of oats and wheat, for which it acts
as an intermediate host.
M("Muscatine Co." (no other data)Reppert, SUI.

B. Thunbergii DC. Japanese Barberry.

Commonly planted for hedges and borders; rarely spontaneous.
S(Self-sown plant in the hollow at Fejervary Park)G.

Menispermaceae

Menispermum L.

- M. canadense L. Moonseed
Woods and thickets; infrequent.
S(Hickory Grove)G.
M(Wild Cat Den)G.
Clinton Co.(Fence-row in open, sandy, low ground north of
Stevens' Bridge)G.

Magnoliaceae

No members of this family are native to this region. A number of in-
troduced and cultivated species are listed in Supplement 2. Specimens are
preserved in the Barnes Herbarium.

Calycanthaceae

Calycanthus L.

- C. floridus L. Spice-bush. Carolina Allspice
S(Bettendorf)Shimek; (Davenport)Melville.
(X)Barnes.

Anonaceae

Asimina Adans

- A. triloba (L.)Dunal. Pawpaw
S(Cultivated tree at the Lau Farm)G.
Ill. RI(A group of small trees, probably spontaneous, on a bluff
near Illinois City)G.

Lauraceae

Sassafras Nees. Sassafras

- S. albidum (Nutt.) Nees. var. molle (Raf.)Fern.
From the South; ranges as far north as Lee County.
S(Thriving trees at 928 E. 15th St., and at the Lau Farm)G.

Papaveraceae

Sanguinaria L. Blood-root

- S. canadensis L.
Rich moist woods; frequent.
S(Davenport)Ross.
M(Wild Cat Den)G.

Papaver L. Poppy

- P. Rhoas L. Corn Poppy
Encountered rarely as a roadside waif.
S(Telegraph Road)G.

Argemone L.

- A. Mexicana L. Mexican Poppy
M("In an uncultivated field, September 1896,")Reppert, SUI.

Eschscholzia

- E. californica Cham. California Poppy
S(Roadside escape at the Hetzel Place, Telegraph Road)G.

Fumariaceae

Adlumia Raf. Climbing Fumitory

- A. fungosa (Ait.)Greene.
S(From Naomi Melville's garden)Melville.

Dicentra Bernh.

- D. Cucullaria (L.)Bernh. Dutchman's Breeches.
Rich upland woods; frequent.
S(Davenport)Ross; (Allen's Grove)G.
M(Wild Cat Den)G.

- D. canadensis (Goldie)Walp. Squirrel-corn.
Rich moist wooded slopes; quite infrequent.
M(Wild Cat Den)G.
Ill. RI(Hampton)Sykes.

- D. exilis (Kerr)Toor. Bleeding Hearts.
S(Naomi Melville's garden)Melville.

Corydalis Medic

- (C. flavula (Raf.)DC. Yellow Fume-wort
Ill. RI("Sandy and alluvial soil opposite Muscatine.")MacKenzie.

- C. micrantha (Engelm.)Gray. Slender Fume-wort.
Dry banks; infrequent or rare.
S(Low roadside bank, Credit Island)G.
M(Shoulder of road, Saulsbury Bridge)G.; (Moscow)Barnes.

- C. curvisiliqua Engelm. ssp. grandibractata. (Fedde)Olney.
Determined at the Missouri Botanical Garden. Corresponds to C. campestris (Britt.)Buckholz & Palmer.
Grassy railway right-of-ways and roadsides; infrequent, but sometimes locally abundant.
S(Grassy roadside at Nobis' Farm)G.
M(Sandy soil along Route M.)G.; (Muscatine Co.)Shimek.

Capparidaceae

Cristatella Nutt.

- C. Jamesii T.&G.
M(Dry sandy top of bluff overlooking Nelumbo Pond, Section 15, Lake Township)G.; (BCR.& N. tracks at Cedar River) Barnes.

Polanisia Raf. Clammy-weed.

- P. graveolens Raf.
Dry sandy soils; infrequent.
M("Levee," Section 15, Lake Township)G.
Louisa Co.(Big Sand Mound)G.

- P. trachysperma T. & G.
Sandy situations; infrequent.
S(Davenport)Ross.
M("Sandy soil, Muscatine C.")W.A. Anderson
Louisa Co.(Big Sand Mound)G.

Cleome L.

- C. serrulata Pursh. Stink-clover
Western; also in cultivation.
M("In gardens and waste places; introduced. August — September 1891")Reppert, SUI.
(X)Barnes; Paarmann-Sheldon.
- C. spinosa L. Spider-flower.
Cultivated; rarely escaped.
S(Garden, 15th & Wilkes Sts.)G.

Cruciferae

Draba L.

- D. reptans (Lam.)Fern. Whitlow Grass
D. Caroliniana Walt. of Fl.
Dry sandy soil; infrequent.
M(Sandy pasture west of Brasenia Pond)G.
Ill. RI(Roadsides north of Cordova)G.
(X)Barnes.

None of our specimens have the hispid pods of the var. micrantha (Nutt.) Fern.

Berteroa DC. Hoary Alyssum

- B. incana (L.) DC.
Fields and waste places; infrequent.
S(Sandy field north of marsh northeast of St. Anne's Church)G.;
(Field south of road from R. 61 to McCausland)Morrissety.

Lobularia Desv.

- L. maritima (L.)Desv. "Sweet Alyssum"
In flower gardens and sparingly escaped.
S(Davenport)Melville; G.

Thlaspi L. Penny-dress.

- T. arvense L. Field Penny-Cress
Roadsides, fields, waste places; frequent.
S(Roadside at Nobis' Farm; Eldridge Road; Nahant)G.
M(Saulsbury Bridge)G.

Lepidium L. Pepper-grass

- L. campestre (L.)R. Br. Cow-cress
Frequent in fields and along roadsides.
S(Blue Grass; Walcott)G.
Ill. RI(Hampton)G.

- L. virginicum L. Pepper-grass
Frequent along roadsides and in waste places.
S(15th & Harrison Sts.; Duck Creek Park)G.

L. densiflorum Schrad. Pepper-grass.

- L. apetalum Willd. of Fl.
Frequent; waste places, roadsides, especially if sandy. Much less frequent than the preceding.
S(Lock 14)G. (Waste grounds, 10th & Vine Sts.)G.
Ill. RI(Sandy roadside, Section 22, Cordova Township)G.

- (L. sativum L. Garden Cress
Formerly cultivated as a salad green.
(X)Barnes.
- Cardaria Desv. Hoary Cress
C. Draba Desv.
Roadsides, waste places and fields; frequent.
S(Roadside south of Walcott)G.
Ill. RI(Grassy roadside bank near the Watch Tower)G.
- Capsella Medic.
C. Bursa-pastoris (L.)Medic. Shepherd's Purse
Occurs almost everywhere.
S(N. Harrison St.)G.
Ill. RI(Rock Island Arsenal)Paarmann-Sheldon.
- Camelina Crantz. False Flax
C. microcarpa Andraz
S("Milwaukee tracks north of Davenport, June 13, 1932.")Hauber.
- Brassica L. Mustard
B. Kaber (DC.)L.C. Wheeler. Charlock
B. Sinapistrum Boiss. of Fl.
Railroad tracks and roadsides; infrequent.
S(Blue Grass)Barnes; G. (Roadside north of Maysville)G.
B. nigra L. Black Mustard.
Railroad tracks and roadsides; frequent.
S(Schmidt's Crossing; Roadside north of Nahant)G.
B. juncea (L.)Coss. Brown or Indian Mustard
B. campestris L. of Fl.
Waste places; infrequent.
S(Railroad tracks at Blue Grass)Barnes; (Yard at 12th & Warren Sts.)G.
B. juncea (L.)Coss. var. crispifolia Bailey, Curly Mustard, Japanese Mustard
S(In an abandoned garden plot, 9th & Vine Sts.)G.
B. campestris L. Field Mustard.
An infrequent weed.
S(City dump at 11th & Vine Sts.)G.
B. Napus L. Turnip.
S("River front, July 5, 1923")Shimek, ISC.
- Raphanus L. Radish
R. sativus L.
S(Persisting in an abandoned garden, 9th & Vine Sts.)G.
- Conringia Link.
C. orientalis (L.)Dumort. Hare's-ear Mustard
S(A casual in a flower bed at St. Ambrose College, June 23, 1915)
Hauber; (Abundant on the railroad embankment at Oak St. & Telegraph Road)G.

- Sisymbrium L.
S. officinale (L.)Scop. var. leiocarpum DC. Hedge-mustard
An infrequent weed in waste places.
S(N. Harrison St., Davenport)Ross.
S. altissimum L. Tumble-mustard.
Fields and waste places; prefers sandy soil; infrequent.
S(Tracks, E. River St.; 5th & Pershing Sts.)G.
(Blue Grass)Barnes.
- Descurainia Webb & Berthelot. Tansy Mustard.
D. pinnata (Walt.)Britt. var. brachycarpa (Richard)Fern.
Sisymbrium canescens Nutt. of Fl.
Along railways and in waste places, often sandy; infrequent.
S(Tracks west of Buffalo; Sandy field northeast of St. Anne's Church)G.
M(Near the bog near Pine Mill)G.
(X)Barnes.
D. Sophia (L.)Webb.
Sisymbrium Sophia L. of Fl.
"Railroad tracks and waste places, West Davenport and Blue Grass" Fl.
S(Davenport)Barnes.
Ill. RI(Rock Island Arsenal)Melville.
- Hesperis L. Dame's Rocket.
H. matronalis L.
Occasionally persistent about old gardens.
S(Garden at 348 River Drive, Bettendorf)G.
M(Persistent at Wild Cat Den)G.
- Erysimum L. Treacle-mustard
E. cheiranthoides L. Worm-seed Mustard.
"Banks of streams; infrequent." Fl. Rare; I have never found it in our area.
S(Wapsie bottoms)Barnes.
M(Muscatine Co.)Reppert.
(X)Paarman-Sheldon.
- Rorippa Scop. Yellow Cress.
R. sessiliflora (Nutt.)Hitchc. Marsh Cress
Nasturtium sessiliflora Nutt. of Fl.
Low grounds along river banks; infrequent.
S(Buffalo)Barnes; (Credit Island)G.
R. sylvestris (L.)Bess.
M("Sandy flat along the east bank of Cedar River at Saulsbury Bridge, May 17, 1952")Thorne & Prior, SUI.
R. palustris (L.)Bess. Marsh Cress.
Nasturtium palustre DC. of Fl.
Rorippa islandica (Order) Borbas var. Fernaldina Butt. & Abbe.
A mud plant; frequent on muddy pond and river shores.
S(Davenport)Ross; (Credit Island)G.
R. palustris (L.)Bess. var. hispida (Desv.)Rydb.
Same situations as the last; quite infrequent.
M(Saulsbury Bridge)G.

(Nasturtium R. Br.

- N. officinale R. Br. True Water-cress.
Clinton Co. (Pasture pond north of Rock Creek)G.
(X)Barnes.

Armoracia (Gaertn.)Mey. & Scherb.

- A. aquatica (Eat.)Wieg. Lake-cress
Nasturtium lacustre Gray of Fl.
"Slough along Cedar River near Saulsbury Bridge. Ponds near
Noels." Fl.
S(Noels)Barnes.
M("Slough along the Cedar River, June 1894."Reppert, SUI.
- A. lapathifolium Bilib. Horse-radish
Nasturtium Armoracea Fries of Fl.
An occasional escape to roadsides.
S(North Harrison St. Road)G.; (Pine Hill Cemetery)Melville.

Barbarea R. Br.

- B. vulgaris R. Br. Yellow Rocket.
Frequent in early spring along grassy roadsides.
S(West of Fairmount Cemetery; Walcott)G.

Iodanthus T. & G. Purple Rocket.

- I. pinnatifida (Michx.)Steud.
Thelypodium pinnatifidum Watson of Fl.
M("Wooded Island in the Mississippi near Muscatine, July, 1891")
Reppert, SUI.

Dentaria L. Pepper-root

- D. laciniata Muhl.
Rich moist upland woods; frequent.
S(Maysville)Barnes.
M(Wild Cat Den)G.

Cardamine L. Bitter Cress.

- C. Douglasii (Torr.)Britt. Purple Cress.
C. rhomboidea DC. var. purpurea Torr. of Fl.
"Moist woods along Wapsipinicon River." Fl.
S(Noels)Barnes; (Devil's Glen)Ross.
- C. bulbosa (Schreb.) BSP. Spring Cress.
C. rhomboidea DC. of Fl.
About bogs and springs; frequent.
S(Devil's Glen)Ross.
M(Wild Cat Den)G.
Ill. RI(Rock Island Arsenal)Melville.
- C. pennsylvanica Muhl. Pennsylvania Bitter Cress.
C. hirsuta L. in part of Fl.
Wet grounds, in alluvial woods; frequent.
S(Low alluvial woods north of McCausland)G.
M(Wet ravine at Wild Cat Den)G.
- C. parviflora L. var. arenicola (Britt.)Schulz
C. hirsuta L. in part of Fl.
Wet muddy or sandy places along pond shores; infrequent.

S(Shore of roadside pond at crossing of R. 61 at Wapsie River;
Wet sandy ditch opposite the marsh northwest of St. Anne's
Church)G.

Arabis L. Rock cress

- A. hirsuta (L.)Scop. var. pycnocarpa (Hopkins)Rollins Rock cress
"Rocky places; infrequent." Fl.
S(Big Rock; Devil's Glen)Barnes.
- A. Drummondii Gray
A. confinis Watson, in part, of Fl.
"Sandy soil, Cedar River region; Noels; infrequent." Fl.
S(Noels)Barnes.
- A. laevigata (Muhl.)Poir. Smooth Rock Cress
Wooded slopes; frequent.
M(Wild Cat Den)G.
Ill. RI(Watch Tower)Ross; G.
- A. dentata T. & G. Toothed Cress
A. perstellata ELBr. var. Shortii Fern.
S("Davenport, Iowa.")Dr. C.C. Parry, ISC.
M("Sandy alluvial flat west of Bayfield, May 7, 1903.")Shimek,
SUI.
Ill. RI(Van Dyke's Island)Ross.
- A. canadensis L. Sickle-pod
Wooded slopes; rare. "LeClaire." Fl.
M("Rich wooded ravine, Wyoming Hill along U.S. Highway 61,
June 8, 1954")Davidson, SUI.
Ill. RI(Watch Tower)Barnes; Ross; Morrissey; G.
- (A. glabra (L.)Bess. Tower Mustard
M("Damp soil, Cedar River region, June, 1892."; as A. Drum-
mondii Gray)Reppert, SUI. The identification is open to ques-
tion.

Crassulaceae

Sedum L. Stonecrop

- S. sarmentosum Bunge
Rocky places; an occasional escape.
S(Macadam shoulder of road, Duck Creek Park)G.
- S. Telephium L. Mountain Stonecrop
Occasional in cultivation, and escaped.
S(Roadside, Blue Grass)Barnes; (Pine Hill Cemetery)G.
- S. telephioides Michx. Wild Live-forever
Occasional in cultivation; a rare escape.
S(Cultivated for ornament, 1704 West 2nd St.)G.

Saxifragaceae

Penthorum L. Ditch Stonecrop

- P. sedioides L.
Wet low grounds and shores; infrequent.
S(Devil's Glen)Ross; (Credit Island)G.

(Sullivantia T. & G.

S. renifolia Rosend.

Cedar Co. ("Limestone cliffs, Cedar Co., August 10, 1899.") Reppert;
("Moist limestone ledges, south shore of Cedar River, Section 34,
Cass Township May 28, 1950.") Fay, SUI.
It may yet be found in the northwest corner of Scott county
in the Kansan drift area.

Saxifraga L.

S. pennsylvanica L. Swamp Saxifrage
Bogs and marshy grounds; rare.

S(Davenport) Ross.
M(Boggy shore of Nelumbo Pond, Section 15, Lake Township)G.
(X) Barnes.

(*S. virginiana* Michx.

"High Bridge, 1890." Melville.

While presumably collected in our area, I am unable to discover
the location mentioned.

Heuchera L. Alum root

H. americana L. var. *hirsuticaulis* (Wheelock) R.B. & L.
S(Davenport) Ross.

H. richardsonii R.Br. var. *grayana* R.B. & L.

H. hispida Pursh of Fl.

Dry prairie remnants.

S(Pine Hill Cemetery)G.; (Davenport) Ross.

Mitella L. Miter-wort. Bishop's Cap

M. diphylla L.

Rich steep wooded slopes; infrequent.

M(Wild Cat Den) Reppert; G.

Parnassia L. Grass of Parnassus

P. glauca Raf.

P. carolina Michx. of Fl.

"Boggy places, Cedar River region. Wet meadows, Eldridge." Fl.
S(Eldridge) Barnes.

Philadelphus L. Mock orange

P. inodora L.

S(Cultivated southwest corner of 14th and Brady Sts.)G.

P. pubescens Loisel.

S(Cultivated 131 W. 15th St.)G.

P. coronarius L.

S(Cultivated southwest corner 15th & Main Sts.)G.

P. lemoinei Lemoine.

Small leaves and flowers.

(Cultivated 1111 W. 11th St.)G.

Deutzia Thunb.

D. scabra Thunb.

Occasional in cultivation.

S(Naomi Melville's garden) Melville.

D. gracilis Sieb. & Zucc.

Occasional in cultivation.

S(High School Yard)G.

Hydrangea L.

H. paniculata Sieb. var. *grandiflora* Sieb.

Much planted as an ornamental shrub.

S(1516 Pershing Ave.)G.

Ribes L. Currant. Gooseberry

R. cynosbati L. Prickly Gooseberry

Woods; rare.

S(Devil's Glen) Ross.

M(Wild Cat Den)G.

R. missouriensis Nutt. Missouri Gooseberry

R. gracile Michx. of Fl.

Woods; frequent.

S(Devil's Glen) Ross.

M(Wild Cat Den)G.

R. grossularia L. Garden Gooseberry

Frequent in cultivation.

S(1037 E. 18th St.) Peck.

R. americanum Michx. Wild Black Currant.

R. floridum (L'Her.) of Fl.

Moist roadsides and ditches; open woods; frequent.

S(Duck Creek Park; Waverly Road)G.

M(Weiss' Slough)G.

R. odoratum Wendl. f. Buffalo Currant

R. aureum Pursh. of Fl.

Formerly much planted; occasionally escaped.

S(122 W. 15th St., cultivated)G.

Clinton Co.(Camanche, a wild plant)G.

R. sativum Syme. Garden Currant

R. rubrum hort. not L.

Occasionally cultivated.

S(1037 E. 18th St.) Peck.

Hamamelidaceae

Hamamelis L. Witch-Hazel

H. virginiana L.

M(Muscataine Co., November 2, 1907) M.P. Somes, ISC.

Ill. RI(Open wooded bluff-pasture near Illinois City)G.

Liquidambar L. Sweet Gum

L. styracifolia L.

Southern; rarely planted in our area.

S(Cultivated 428 W. 15th St.)G.

Platanaceae

Platanus L. Sycamore. Plane-tree

P. occidentalis L.

S(Credit Island)G.

Ill. RI(Rock Island Arsenal) Ross.

Rosaceae

- Kerria DC. Kerria
 K. japonica (L.)DC.
 S(Cultivated, Naomi Melville's garden)Melville.
- Rhodotypos Sieb. & Zucch.
 R. scandens (Thunb)Makino
 Occasionally seen in cultivation. Four petals, white.
 S(Hill & Fredericks Chapel)G.
- Physocarpus Maxim. Nine-bark.
 P. opulifolius (L.)Maxim.
 Moist hilly woods and thickets near streams; rare.
 S(Devil's Glen)Ross; (Cultivated, Davenport)Melville; Ross.
 (X)Barnes.
 M("Old prairie dune at schoolhouse, 7 m. northwest of Muscatine")Shimek.
- (P. opulifolius (L.)Maxim. var. intermedia (Rydb.)Robins
 Pedicels and follicles stellate-pubescent.
 (X)Barnes.
- Spiraea L. Spiraea
 S. alba DuRoi. Meadow-sweet
 Moist low ground, low roadsides and wet ditches; infrequent.
 S(Buttermilk Road; roadside north of Allen's Grove; marsh northeast of St. Anne's Church)G.
 M(Muscatine Co.)Reppert.
- S. japonica L. f. Japanese Spiraea
 Cultivated for ornament; flowers pink.
 S(An escape into the grass plot at 12th & Division Sts.)G.
- A number of species are met with as ornamental shrubs, as
 S. Van Houtii (Briot)Zabel. Bridal Wreath. (230 W. Locust)G.
 S. chamaedryfolia L. St. Peter's Wreath (Miss Melville's Garden)
 S. corymbosa L. Meadow-Sweet. (Rock Island Arsenal, cultivated?)G.
 S. Douglasii Hook. (Miss Melville's Garden)
 S. prunifolia Sieb. & Zucc. (124 W. 14th St.)
 S. prunifolia plena Schneider (Corner of Main & Locust)G.
 S. Thunbergii Sieb. & Zucc. (Locust & Main Sts.)
- Aruncus Adans.
 A. dioicus (Walt.)Fern.
 Rich moist woods; shaded rocky ravines; rare.
 M(Wild Cat Den)G.
 Ill. RI(Loud Thunder Forest Preserve)Ade.
- Sorbaria R.Br. False Spiraea
 S. sorbifolia A.Br.
 Frequent in cultivation and occasionally escaped.
 S(Hedge east of Mt. Joy)G.
- Pyrus L. Pear
 P. communis L. Pear
 S(A wildling tree at the northwest corner of the picnic grounds at Duck Creek Park)G.
- P. communis sativa DC. Common cultivated Pear.
 S(Cultivated, 12th & Main Sts.; 15th & Brady Sts.)G.

- P. pyrifolia (Burm.)Nakai. Sand Pear. Japanese or Chinese Pear.
 S(Planted tree at 414 Columbia Ave.)G.
- Malus Mill. Apple. Crab apple
 M. pumila Mill. Common cultivated Apple
 S(Cultivated, Waverly Road & Locust St.)G.
 M(Wildling along back road to Wild Cat Den)G.
- M. ioensis (Wood)Bailey. Wild Crab.
 Pyrus ioensis Bailey of Fl.
 Thickets and along roadsides; frequent.
 S(Duck Creek Park)G.
 M(Muscatine Co.)Reppert.
- X M. Soulardi (Bailey)Britton. Soulard's Crab
 A natural hybrid of M. ioensis and M. pumila.
 M(Wild Cat Den, a single tree east of road after entering from the back)G.
- Several horticultural species are occasionally seen, the most frequent being the following:
 M. ioensis plena Schneid. Bechtel's Crab.
 Flowers double, fragrant.
 S(1420 Main St.)G.
- M. pumila var. Elyi (Bean)Rehd. Ely's Crab.
 Flowers, fruit and early leaves dark red.
 S(Kirkwood Blvd)G.
- M. floribunda Sieb.
 Introduced from Japan? Flowers and fruits in fascicles. Very floriferous.
 S(Jefferson School)G.
- Sorbus L. Mountain Ash.
 S. americana Marsh. American Mountain ash.
 P. americana DC. of Fl.
 "Small trees in woods near Low's Run, Muscatine Co." Fl. No specimens from this station can be located, nor from trees known to be wild.
 S(Cultivated, Davenport)Melville.
- S. aucuparia (L.)Gaertn. European Mountain ash.
 Occasional in cultivation.
 S(14th & Scott Sts., cultivated)G.
- S. hybrida L.
 Occasionally planted.
 S(Pine Hill Cemetery; 17th & Marquette Sts.)G.
- Aronia Reichenb. Choke-berry
 (A. prunifolia (Marsh)Rehd. Purple Choke-berry
 Ill. RI(Rock Island Arsenal, cultivated?)G.
- A. melanocarpa (Michx.)Willd. Black Choke-berry.
 S(909 Farnam St., cultivated)Paarmann-Sheldon.
- Amelanchier Medic. Service-bush. June-berry. Shad-bush
 A. arborea (Michx.F.)Fern.
 A. canadensis T.& G. of Fl.
 Wooded crests of hills; edge of woods; infrequent.
 S(Davenport)Ross.
 M(Wild Cat Den)G.

- A. *laevis* Wieg.
S(Davenport, but without precise locality)Ross. Determined by G.N. Jones.
M(Muscatine Co.)Reppert.
- A. *interior* Nielsen
M(Muscatine Co., June, 1897)Reppert, SUI. (As *canadensis*)
Redetermined by Davidson; verified by Jones.

Crataegus

The Barnes Herbarium has had the good fortune of having all its key specimens determined by Ernest J. Palmer, the acknowledged authority on the genus. Occasion is here taken to again acknowledge with gratitude his helpfulness, not only as respects *Crataegus* but also in other fields.
Crataegus L. Hawthorn

- C. *crus-galli* L. Cock-spur Thorn.
Borders of woods and pastures; open hillsides and lowlands; frequent.
S(Allen's Grove)G.
- (C. *crus-galli* L. var. *pachyphylla* (Sarg.)Palmer.
Ill. RI(Fence-row opposite the quarry north of Port Byron)G.
- C. *crus-galli* L. var. *exigua* (Sarg.)Engelm.
S(Open pasture, Allen's Grove)G.
- C. *fecunda* Sarg.
Handsome in foliage, flower and fruit; only in cultivation in our area.
S(Terrace, Jefferson School)G.
M(At the Post-office Building)G.
- (C. *punctata* Jacq.
Ill. RI(Floodplain of creek near the Watch Tower)G.
- (C. *punctata* Jacq. var. *canescens* Britt.
Ill. RI(Several trees in cultivation at the Administration Bldg.,
Rock Island Arsenal)G.
- C. *Margaretta* Ashe.
C. *coccinea* var. *flabellata* (Spach)Britton of Fl.?
Pastures and woodland borders; infrequent.
S(Ravine at Fejervary Park; Allen's Grove)G.
M(Wild Cat Den, several trees)G.
- C. *Margaretta* Ashe forma *xanthocarpa* Sarg.
S(Open pasture at Allen's Grove)G.
M(Clearing at Wild Cat Den, with the species)G.
- C. *Margaretta* Ashe var. *Brownii* (Britt)Sarg.
M(A single tree in the fence row about 2 m. west of New Era.
Has since been removed)G.
- C. *pruinosa* (Wendl.)K.K.Koch.
S(Planted tree on the terrace of Jefferson School)G. No native
trees have been seen.
- C. *mollis* (T. & G.)Scheele. Common Red-haw
C. *coccinea* var. *mollis* T. & G. of Fl.
Frequent; prefers low grounds and river-bottoms.
S(Devil's Glen)Ross; (Credit Island)G.

- C. *succulenta* Link var. *pertomentosa* (Ashe)Palmer.
C. *coccinea* var. *macrantha* Dudley of Fl.
Banks and hillsides; quite infrequent.
M(Dry hillside, Wild Cat Den)G.
Ill. RI(Dry bank, Watch Tower)G.
- C. *Calpodendron* (Ehrh.)Medic
C. *tomentosa* L. of Fl.
S(Devil's Glen)Ross; (Duck Creek)Hauber.
- (C. *Oxyacantha* L. var. *plena* West. Double-flowered English Hawthorn.
Ill. RI(Rock Island Arsenal. Planted tree near the old Davenport House)G.
- C. *Oxyacantha* L. var. *Paulii* Rehd.
Flowers double, bright red.
S(Cultivated, northeast corner 12th & Scott Sts.)G.
- C. *monogyna* Jacq. English Hawthorn.
S(Cultivated, northwest corner 14th & Farnam Sts.; Cultivated,
Lau Arboretum)G.
- C. *monogyna* Jacq. var. *stricta* (Loud.)Rehd.
Of fastigate habit, with red flowers.
S(Cultivated, 12th & Scott Sts.)G.
- Cotoneaster Ehrh.
C. *acutifolia* Turcz.
From China. Occasionally planted for hedges or foundations.
S(Superintendent's house, Vanderveer Park)G.
- Fragaria L. Strawberry
F. *vesca* L. var. *americana* Porter. Woodland Strawberry
F. *vesca* L. of Fl.
Open woods; infrequent.
M(Wild Cat Den)Barnes.
- F. *virginiana* Duchesne var. *illinoensis* (Prince)Gray. Wild Strawberry
Meadows and grassy roadsides; infrequent. Occasionally on sandy
prairies.
S(Noel's; Allen's Grove)G.
- F. *chiloensis* Duchesne var. *ananassa* Bailey. Cultivated Strawberry
S(Cultivated and escapes at Pine Hill Cemetery)G.
- Potentilla L. Cinquefoil
P. *arguta* Pursh. Prairie Cinquefoil
Dry or sandy prairies; very frequent.
S(Sandy field at the marsh northeast of St. Anne's Church;
Pine Hill Cemetery)G.
M(Upland prairie south of Wilton)Shimek.
- P. *recta* L. Sulphur-flowered Cinquefoil
Roadsides; frequent.
S(Roadside near Nahant)G.
Clinton Co.(Roadside near Wapsie Bridge)G.
- P. *argentea* L. Silver Cinquefoil
In sand; infrequent and restricted.
M(Weiss' Slough, sandy shore of pond)G.
Ill. RI(Sandy roadside at crossroads north of Cordova)G.

- P. pentandra* Engelm.
P. rivalis Nutt. var. *pentandra* Wats. of Fl.
 Moist sandy soils of ponds or streams; quite infrequent.
 M(Saulsbury Bridge)Barnes.
 Louisa Co.(Wooded sandy shore of lake, Big Sand Mound)G.
- P. norvegica* L. Rough Cinquefoil
P. monspeliensis L.
 Roadsides and waste places; frequent.
 S(Credit Island)G.
 M(Muscataine Co.)Shimek.
- P. simplex* Michx.
P. canadensis L. of Fl.
 Fields, open woods, in dry soils; infrequent.
 S(Allen's Grove; Pine Hill Cemetery)G.; (Credit Island)Ross.

Filipendula Mill.

- F. rubra* (Hill)Robins. Queen of the Prairie.
Spiraea lobata Jacq. of Fl.
 M("Moist soil near Cedar River, Lake Township, Muscatine Co. June 1894.")collected by K.K. MacKenzie (as *Spiraea lobata*.)
 Ex. Herb Reppert, SUI.
- F. Ulmaria* (L.) Maxim. Queen of the Meadow.
 S(Established for many years in a fern-bed at 1021 W. 17th St.)G.

Geum L. Avens.

- G. canadense* Jacq. White Avens.
G. album Gmel. of Fl.
 Borders of woods; frequent.
 S(Devil's Glen; Credit Island)G.
 M(Wild Cat Den)G.
- G. laciniatum* Nutt. var. *trichocarpum* Fern. Rough Avens.
G. virginianum L. of Fl.
 Low grounds; infrequent.
 S(Marsh northeast of St. Anne's Church; Allen's Grove)G.

Rubus L. Raspberry Blackberry Dewberry

The determinations in this confusing and difficult genus were made in accordance with the keys and descriptions of the *Gentes Herbarum* by Bailey. The systematic status and validity of many of Bailey's species are yet to be confirmed.

Subgenus *Idaeobatus* Focke.

- R. occidentalis* L. Wild Back Raspberry.
 Open woods and borders; frequent.
 S(Pine Hill Cemetery)G.
 M(Wild Cat Den)G.
- R. strigosus* Michx. Wild Red Raspberry.
 S(A small plot in cultivation on Waverly Road in 1952)G.
- R. ideaus* L. Garden Raspberry.
 Occasionally persisting or spreading.
 S(Cultivated in the caretaker's garden, Wild Cat Den)G.

Subgenus *Eubatus* Focke

- Section *Triviales* P.J. Mueller
R. caesius L. European Dewberry
 S(Lock 14, apparently established on a rock trash pile)G.

Section *Flagellares* Bailey

- R. nefrens* Bailey
 Included in collective species *R. Enslonii* Tratt. by Gleason in B.& B.
 S(Low roadside bank near crossing of R. 61 and Wapsie River)G.
- R. occidualis* Bailey
 Included in collective species *R. arundelanus* Blanch by Gleason in B.& B.; *R. flagellaris* Willd. of most authors, including Deam and Jones.
 S(Low shaded bank, Credit Island)G.
 M(Edge of woods, lower flat, Wild Cat Den)G.
- R. plicatifolius* Blamch.
R. recurvicaulis Blamch. sensu Fern. in Gray's 8th ed;)*;
R. flagellaris of some authors included; in collective species *R. arundelarius* Blamch by Gleason in B.&B.
- R. Baileyanus* Bailey.
 Included in collective species *R. flagellaris* L. by Gleason in B.& B.
 S(Moist ground under a big spruce, Pine Hill Cemetery)G.
- R. minnesotanus* Bailey
 Included in *R. aeundelarius* by Gleason in B & B.
 S(Damp north-facing prairie remnant invaded by shrubs north of Mt. Nebo Cemetery)G.

Section *Arguti*

- R. frondosus* Bigel.
 Included in collective species *R. pensylvanicus* Poir. by Gleason in B & B; but not by Fernald in Gray's 8th Ed. Restricted by Bailey to New England; but indistinguishable plants are said to be found in Indiana and Illinois.
 S(Dry sandy roadside ditch just east of R. 67 along the road to McCausland)G.
- R. abactus* Bailey
 Included in *R. pensylvanicus* by Gleason in B & B and by Fernald in Gray's 8th Ed.
 Determined by Prof. W.A. Davis of West Virginia University.
 Ill. RI(Open wooded hillside, Watch Tower)G.
- R. recurvans* Blanch. sens. lat. Fernald in Gray's 8th Ed., but not sens. strictu Bailey; who restricts the species to New England.
 Included in *R. pensylvanicus* Poir. by Gleason in B & B.
 Collected in Illinois by Davis, who confirms the determination.
 M(Lower and upper prairie flats, Wild Cat Den)G.
- R. laudatus* Bailey
 Included in *R. ostryifolius* Rydb. by Gleason in B & B.
 S(Edge of alluvial woods along side of R. 61 at the Wapsipinicon River)G.
- R. Blakei* Bailey, sens. lat. Fernald. but not Bailey, who restricts the species to New England. Possibly a closely related undescribed species.
 Determination confirmed by Davis.
 Ill. RI(Clearings in upland woods, Watch Tower)G.
- R. Schneckii* Bailey.
 Included in collective species *R. ostryifolius* Rydb. by Gleason.
 S(Sandy field northeast of St. Anne's Church)G.
 M(Lower prairie flat, Wild Cat Den)G.

?R. *avipes* Bailey sens. lat.
A doubtful specimen, tentatively placed here with the approval of Prof. Davis. Possibly an undescribed species.

R. *bractealis* Bailey
S(Pine Hill Cemetery)G.

R. *bellobatus* Bailey
Fairly frequent. Appears in two forms: a) stiff erect canes (up to 5 feet) with long racemes and ascending pedicels, in favorable situations in the open; and b) lower (3 feet) with flexible arching canes, with short racemes and long divaricate pedicels, growing in shade in clearings or on woodland borders.
S(Alluvial thicket, Credit Island)G.
M(Border of hillside woods, Wild Cat Den)G.
Ill. RI(Open hollow, Watch Tower)G.

Section *Alleghenienses* Bailey

R. *allegheniensis* Bailey
S(Pine Hill Cemetery; Fejervary Park; Duck Creek Park)G.

R. *allegheniensis* var. *neo-scotica* Bailey
M(Escape (?) Back road in Wild Cat Den)G.

R. *Roas* Bailey
S(Sandy field northeast of St. Anne's Church)G.
M(Caretaker's Garden, Wild Cat Den, Cultivated)G.

R. *alumnus* Bailey
M(Wooded hillside along lower path, Wild Cat Den)G.

R. *impos* Bailey
S(Edge of woods along roadsides, Allen's Grove)G.
Ill. RI(Woods, hilltop north of pavement, Black Hawk Watch Tower; Woods, Rock Island Arsenal)G.

Agrimonia L. *Agrimony*

A. *gyryposepala* Wallr.
A. *Eupatoria* L. of Fl.
Frequent in woods and thickets.
S(Duck Creek Park; Fejervary Park)G.
M(Wild Cat Den)G.

A. *pubescens* Wallr.
Open woods; frequent.
S(Fejervary Park)G.
M(Wild Cat Den)G.

A. *parviflora* Ait.
Mostly in somewhat sandy soil in clearings; infrequent.
M(Wild Cat Den, grassy hillside clearing; Weiss' Slough, sandy open woods)G.

Rosa L. *Rosa*

R. *blanda* Ait. *Meadow Rose*
Frequent; prefers somewhat protected situations and rather sandy soil not far from streams.
S(Credit Island)G.; (Eldridge)Barnes.
M(Muscatine Co.)Reppert.

R. *blanda* Ait. var. *glandulosa* Schuetten.
Petioles glandular; stipules gland-edged.
S(Middle Road at Duck Creek Crossing)G.

R. *blanda* Ait. var. *carpo-hispida* Farwell
Hypanthium glandular-hispid. A hybrid.
S(Ditch along road from R. 61 to McCausland)G.

(R. *blanda* Ait. var. *hispida* Farwell.
New as well as old stems bristly and prickly.
Ill. RI(Fence row near quarry north of Colona)G.

(R. *blanda* Ait. var. *acicularoides* Schutte
R. *acicularioides* Rydb.
Leaflets doubly gland-serrate, petioles and stipules glandular.
Ill. RI(Sandy roadside one mile east of "Oasis," north of Cordova)G.

R. *blanda* Ait. var. *glabra* Crepin.
R. *subblanda* Rydb.
Plant glandular, leaflets glabrous underneath.
S(Roadside, a thicket on Waverly Road)G.

R. *carolina* L. *Low or Pasture Rose*
R. *humilis* Marsh
Rather dry banks, slopes and fields, upland and bottomland; frequent.
S(Eldridge Road; sandy marsh shore northeast of St. Anne's Church)G.
M(Lower flat at Wild Cat Den)G.
Ill. RI(Watch Tower. Our most typical example)G.

R. *carolina* L. var. *villosa* (Best)Rehd.
R. *Lyonii* Pursh.
Leaflets softly pubescent underneath. Our most frequent wild rose.
S(Mt. Joy; Blue Grass)G.
M(Wild Cat Den)G.

R. *carolina* L. var. *grandiflora* (Baker)Rehd.
R. *obovata* Raf.
Large flowers, broad round leaflets, glaucous underneath.
M(Bank south of north bridge across Pine Creek)G.

R. *carolina* L. var. *glandulosa* (Crepin)Farw.
R. *serrulata* Raf.
Leaflets, or parts of them double gland-serrate.
M("Fixed sand dune (prairie) west of road north of Bayfield. August 17, 1926.")Shimek, SUI.

R. *virginiana* Mill. *Virginia Rose*.
Thickets and woodland borders; prefers some shelter and some shade.
Rare.
M(Roadside embankment one mile north of the school house west of New Era; determined by Steyermark); (Wild Cat Den, thicket in fence row along back road)G.
Also collected in Muscatine county by Reppert and Shimek.
M("Leutziger Creek region, June 1899.")Reppert, SUI.
M("Well-wooded slope of old dune 8 miles northwest of Muscatine, June 19, 1933.")Shimek, SUI.
Its occurrence in our region is denied by some. It goes unrecognized because our western form lacks the stout hooked prickles of the eastern plant; these being modified into slender straight forms.

R. *rudiuscula* Greene.
A long series of natural hybrids between *R. carolina* and *R. suffulta* or their varieties is encountered in the field. The plants vary from

the almost pure species to every conceivable intermediate. *R. rudiuscula* may be taken as representative of the lot, but it can be only loosely defined. The plant generally resembles a strong *R. suffulta* with bristly prickly stem, nine leaflets, but with the receptacle and pedicels strongly stipitate glandular.

S(Prairie at Pine Hill Cemetery)G. The roses here are nearly all hybrids of various degrees.

- R. *arkansana* Porter sensu Rydb.
Leaflets glabrous underneath. Occasional in the lowlands.
S(Credit Island); (Utica Ridge Road)G.
- R. *suffulta* Greene
R. *arkansana* Porter var. *suffulta* (Greene)Cockerell
R. *arkansana* Porter of Fl.
Leaflets pubescent beneath.
More frequent than the preceding; prefers the uplands.
S(Roadside bank east of St. Anne's Church)G.
M(Illinoian prairie east of Bayfield)Shimek.
- R. *polyanthema* Lunell.
This striking plant of the *Arkansana-suffulta* group is taller, more vigorous, winter hardy and is larger in all parts. For full description see Lunell, Am. Midl. Nat. 3:138. 1913. Our specimens have been compared with Lunell's original type material from the University of Minnesota.
M(Grassy roadside embankment, Montpelier Township)G.
- R. *setigera* Michx. var. *tomentosa* T.& G. Prairie Rose.
R. *rubifolia* R.Br.
Not infrequent in cultivation. Rare as a wild plant.
S(1730 W. 12th St. Said to be self-sown)G.
Ill. RI(Watch Tower, open wooded bluff, apparently native)G.
- R. *rubiginosa* L. Sweet Briar, Eglantine.
Once in much favor by early settlers for its aromatic foliage.
Now occasionally persistent about old farmsteads, or escaped to near-by pastures.
S(Pasture along Chapel Hill Road)G.; (Cultivated, Davenport) Melville.
- X R. *corymbifera* x *R. gallica*(?) "Maiden Blush Rose."
An old-fashioned garden rose found four times as an escape.
S(Waverly Road; Eldridge Road)G.
- R. *gallica* L. French or Gallic Rose
An old-fashioned rose now hardly ever seen. Found as an escape to a dry roadside ditch eight miles west of Davenport and covering an area of 20 feet; now exterminated by roadmakers.
S(West of Davenport)G.
- R. *spinosissima* L. var. *pimpinellifolia* Hook. Scotch Rose.
A dainty old-fashioned rose found as an escape on the Eldridge Road on a farmstead terrace five miles north of Davenport.
S(Eldridge Road)G.
- R. *multiflora* Thunb. var. *calva* French & Sav. Multiflora Rose.
Leaflets glabrous beneath.
Frequently planted in the country for hedges and bird refuges; in town as an occasional escape or in cultivation.
S(Pasture east of Pine Hill, an escape; in cultivation at Fejervary Park)G.

- R. *multiflora* Thunb. var. *Thunbergiana* Thory
Leaflets soft-pubescent beneath.
Infrequent as an escape or in cultivation.
S(Fence row on Waverly Road, an escape; cultivated at Vanderveer Park)G.
- R. *multiflora* Thunb. var. *cathayensis* Rehd. & Wils.
Flowers larger, pink, in flat corymbs.
S(In a hedge with the var. *calva* on the Eldridge Road)G.
- R. *palustris* Marsh. Swamp Rose.
In our area met with only in cultivation, and rarely.
Native to Illinois and Missouri, but no collections from Iowa have been located.
S(In cultivation, Vanderveer Park).
- R. *canina* L. The Dog rose
As an interloper in rose gardens from root shoots arising from graft stocks.
S(Vanderveer Park)G.
- R. *rugosa* Thunb. *Rugosa* Rose.
The typical form met with as interlopers in rose gardens arising from suckers from graft-stocks; not infrequent.
S(St. Ambrose Campus; Old French place, 12th & Perry Sts.)G.
Clinton Co.(Roadside plantings by the Highway Commission along R. east of DeWitt and west of Clinton)G. An horticultural hybrid.

A list of Old-fashioned Garden Roses may be found as Supplement 3.

- Prunus L. Plums. Cherries. Peaches. Apricots. Almonds.
- P. *americana* Marsh. Wild Plum
Forms thickets in fence rows and clearings; frequent.
S(Davenport)G.
M(Hill road to Wild Cat Den)G.
- P. *americana* Marsh var. *lanata* Sudw. Woolly Wild Plum
In similar situations.
S(Waverly Road)G.
- (P. *angustifolia* Marsh. Chicasaw Plum
P. *Chicasa* Michx. of Fl.
M("Muscatine Island near the upper end of the big timber." Fl. Reported in the Fl. but no specimen has been located.
- P. *pensylvanica* L.f. Pin Cherry.
S(Two native trees at the west edge of the gravel pit, Duck Creek Park)G.
- P. *serotina* Ehrh. Wild Black Cherry.
Grows to a tall stately tree; woods; infrequent.
S(Noel's; Duck Creek Park)G.
M(Wild Cat Den)G.
- P. *virginiana* L. Choke cherry
Borders of woods; frequent.
S(Devil's Glen; Duck Creek Park)G.

A number of shrubs and trees, introduced, and planted for ornament or fruit:

- (P. tomentosa Thunb.
From E. Asia.
Ill. RI(Rock Island Arsenal. A bush in the midst of the woods east of the Confederate Cemetery; there is a planted tree at the Davenport House grounds one mile west.)G.
- P. persica (L.)Batsch. Peach
Much planted.
S(Lau Farm)G.
- P. Armeniaca L. Apricot
Planted for ornament. The earliest fruit tree to bloom
S(17th and Gaines Sts.)G.
- P. domestica L. Garden Plum
Frequent in cultivation.
S(Opposite St. Margaret's Cemetery)G.
- P. Padus L. European Bird cherry.
Very floriferous; a handsome tree when in bloom.
S(A planted tree on the boulevard at 1730 W. 8th St.)G.
- P. triloba Lindl. var. multiplex (Bge)Rehd. Flowering Almond
Flowers double; handsome in bloom in early spring.
S(Cultivated, 208 E. 12th St.)G.
Ill. RI(Open hilly woods, Watch Tower)G.
- P. cerasus L. Cherry.
Freely planted for fruit.
S(Duck Creek Park; a wildling)G.

Leguminosae

- Sophora L.
S. japonica L. Japanese Pagoda-tree.
S(Planted tree in front of old Court House; now removed)G.
- Caragana Lam.
C. arborescens Lam. Pea-tree.
S(Planted shrub at Davenport Public Library)G.
- Gymnocladus Lam.
G. dioica (L.)K.Koch. Kentucky Coffee-tree.
Alluvial woods; infrequent.
S(Credit Island; Cultivated tree at 1919 Ripley St.)G.
Ill. RI(Rock Island Arsenal)Paarmann-Sheldon; Ross.
- Gleditsia L.
G. triacanthos L. Honey Locust.
Lowlands and slopes not far from streams; infrequent.
S(Davenport)Paarmann-Sheldon; (Fairview)Ross.
M(Slope northwest of Fairport)G.
- Cassia L. Senna.
C. marilandica L. Wild Senna.
Low moist silty grounds; infrequent.
M(Boggy pond shore, Section 15, Lake Township; floodplain at Saulsbury Bridge)G.
- C. fasciculata Michx. Sensitive-plant. Partridge-Pea
C. Chaemocrista L. of Fl.
Dry soils, sandy roadsides and waste places; frequent.

S(Nahant)G.; (Devil's Glen)Ross.
Ill. RI(Rock Island Arsenal)Paarmann-Sheldon; (north of Cor-dova)G.

Cercis L.

- C. canadensis L. Red-bud.
Wooded slopes and low grounds along streams; frequent.
S(Credit Island)G; (Davenport)Ross.
M(Muscatine Co.)Reppert.
Ill. RI(Watch Tower)G.

Baptisia Vent. False Indigo.

- B. leucantha T. & G. White or Prairie False Indigo.
Prairies, roadsides, in somewhat sandy soils; infrequent.
S(Allen's Grove; Buffalo; Blue Grass)G.; (Pine Hill Cemetery) Melville.
Louisa Co.(Big Sand Mound)G.
- B. leucophaea Nutt.
Prairies; quite infrequent.
S(Pine Hill Cemetery, with B. leucantha)G.; (Davenport)Ross.
(X)Barnes.

Crotalaria L.

- C. sagittata L. Rattle-box
Dry sandy places; infrequent.
S(Old gravel pit, Duck Creek Park)G.
M(Fruitland)Barnes.
Ill. RI(Rock Island Arsenal)Ross.

Cladastris Raf. Yellow-wood.

- C. lutea (Michx)K.Koch.
A southern tree ranging into southern Illinois; rarely planted with us.
S(Lau Farm, cultivated)G; Paarmann-Sheldon.

Trifolium L. Clover.

- (T. arvense L. Rabbit's foot Clover
Ill. Henry Co.(Railroad right-of-way north of Colona)G.
- T. pratense L. Red Clover.
Cultivated; a frequent escape to roadsides.
S(Pine Hill Cemetery)G.
Ill. RI(Rock Island Arsenal)Ross.
- T. repens L. White Clover.
In lawns, pastures, roadsides, waste places; common.
S(Middle Road)G.
Ill. RI(Rock Island Arsenal)Paarmann-Sheldon.
- T. reflexum L. var. glabrum Lojac. Buffalo Clover.
M(Muscatine Island)Barnes.
Clinton Co.(Follets)Barnes.
- T. hybridum L. Alsike Clover.
Cultivated; escapes to roadsides and waste places.
S(Waverly Road; Chapel Hill Road; Pine Hill Cemetery)G.
M(Moscow)Barnes.

- T. agrarium L. Yellow or Hop Clover.
Roadsides and waste places; quite infrequent.
S(Near the marsh northeast of St. Anne's Church)G.
(X)Barnes.
- T. procumbens L. Low Hop Clover.
Pastures and open grassy woods; infrequent.
S(In sward at 12th & Division Sts.)G.
Ill. RI(Grassy bluff near Illinois City)G.
- T. dubium Sibth. Hop Clover.
Becoming frequent along roadsides and in waste places. Not reported in the Fl. or by Cratty or Hayden; possible of recent introduction.
S(Pine Hill Cemetery)G.
- Melilotus Mill.
- M. officinalis (L.)Lam. Yellow Melilot or Yellow Sweet Clover.
Frequent along roadsides and dry waste or sandy places.
S(Koenig place; along R. 22)G.
- M. alba Desr. White Sweet Clover.
In similar situations; frequent.
S(Utica Ridge Road; R. 22)G.
- Medicago L. Medick.
- M. sativa L. Alfalfa. Luzerne.
Cultivated as a forage crop and escaped to roadsides and waste places; frequent.
S(Ricker's Hill)Barnes.
M(Muscatine Co.)Reppert.
- M. lupulina L. Black Medic.
Frequent in open or slightly shaded places; open woods.
S(Waverly Road)G.
Ill. RI(Watch Tower)G.
- Lotus L. Birds'-foot Trefoil
- L. corniculatus L.
M(A weed in an upland grain field northwest of Fairport)G.
- Amorpha L. False Indigo.
- A. fruticosa L. var. angustifolia Pursh.
Along streams; frequent.
S(Credit Island)G.; Ross.
Ill. RI(Rock Island Arsenal)Melville.
- A. canescens Pursh. Lead plant.
Dry sandy prairies; frequent.
S(Pine Hill Cemetery)G.; (Devil's Glen)Ross.
M(Muscatine Co.)Shimek.
Ill. RI(Rock Island Arsenal)Melville.
- Petalostemon Michx. Prairie Clover.
- P. candidum (Willd.)Michx. White Prairie Clover.
Prairies; quite infrequent. Like the following and the preceding, a plant of the upland, or true, prairie.
S(Devil's Glen)G.
M(Wild Cat Den)G.
Ill. RI(Sandy prairie north of Cordova)G.

- P. purpureum (Vent.)Rydb. Purple Prairie Clover.
Dry Prairies; infrequent.
S(Pine Hill Cemetery)G.; (Oakton)Ross.
Ill. RI(Sandy prairie north of Cordova)G.
- Tephrosia Pers. Goat's Rue.
- T. virginiana (L.)Pers. var. holosericea (Nutt.)T. & G.
Sandy fields and dune-lands. Restricted to dry sandy soils; sometimes frequent locally.
S(McCausland)G.
M(Muscatine Co.)Reppert.
Ill. RI(North of Cordova)G.
- (Dalea Juss.
- D. alopecuroides Willd.
Clinton Co.(Clinton Co., Sept. 4, 1896)Pammel, ISC.
Johnson Co.(Johnson Co., August, 1894)Fitzpatrick, SUI.
The specimen in the Barnes Herbarium is without data.
- Robinia L. Locust.
- R. Pseudo-Acacia L. Black Locust.
Formerly much planted and freely escaped.
S(Waverly Road; 13th & Brady Sts.)G.
- R. hispida L. Bristly Locust. Rose Acacia.
Cultivated. Occasionally escaped. An old-fashioned garden shrub.
S(Davenport, 1867)Nagel & Haupt.
- R. viscosa Vent. Clammy Locust.
A southern species; planted or escaped in our area.
S(Roadside, Kimberly Road & Brady St., planted)G.
- Wisteria Nutt. Wisteria.
- W. fruticosa (L.)Poir.
A southern species, planted in our area; a vine handsome when in flower.
S(Division & 12th Sts.)G.
- Astragalus L. Milk Vetch.
- A. canadensis L. Canada Milk Vetch.
Low moist grounds or moist prairies; infrequent.
S(Credit Island)Ross; G.; (Donahue)G.; (Oakton)Ross.
M(Muscatine Co.)Reppert.
Ill. RI(Watch Tower)G.; (Rock Island Arsenal)Melville.
- A. distorta T. & G.
M(Sandy Soil; infrequent)Reppert.
- Coronilla L. Crown-vetch.
- C. varians L.
S(Established as a weed on a terrace in McClellan Heights)G.
- Desmodium Desv. Tick-trefoil. Tick-clover
- D. nudiflorum (L.)DC.
Rich woods; infrequent.
M(Wild Cat Den)Barnes; G.
- D. glutinosum (Muhl.)Wood.
D. acuminatum (Michx.)DC. of Fl.

- D. *grandiflorum* (Walt.)Ktze.
Rich woods; frequent.
S(Allen's Grove)G.
M(Wild Cat Den)G.
Ill. RI(Watch Tower)G.
- D. *canescens* DC. Hoary Tick-clover.
(Incl. *D. canescens* var. *villosissimum* Torr & Gray of Fl.)
Infrequent; open rather dry or sandy sites.
S(Gravel-pit, Duck Creek Park; Winfield Township)G.; (Devil's
Glen)Ross.
M(Wyoming Hill)Barnes.
- D. *illinoiense* Gray. Illinois Tick-clover.
Prairie remnants and dry sandy soils; infrequent.
S(Pine Hill Cemetery; Koenig place)G.; (Eldridge)Barnes.
- D. *canadense* (L.)DC. Canada Tick-clover.
Fence-rows, roadsides and dry sandy soils, in the open or along bor-
ders of woods; frequent.
S(Gravel-pit, Duck Creek Park; Open lot, 12th & Vine Sts.)G.
(Pine Hill Cemetery)Ross.
M(Wild Cat Den)Barnes; (Muscatine Co.)Reppert.
- D. *longifolium* (T. & G.)Smyth.
D. *cuspidatum* Torr. & Gray of Fl.
D. *bracteosum* (Michx.)DC. var. *longifolium* (T. & G.)Robins.
Dry open woods and slopes; infrequent.
S(Princeton Township; Border of woods north of Buffalo)G.
M(Wild Cat Den)G.
Ill. RI(Rock Island Arsenal)Ross.
- D. *Dillenii* Darl. Dillen's Tick-clover.
D. *perplexum* Schub. of Gray's 8th Ed.
Borders of woods and in thickets; infrequent.
S(Low moist ground, edge of woods on pond-shore, Credit Is-
land)G.; (Ricker's Hill)Barnes.
M(Wild Cat Den)G.
Inadvertently omitted from the Fl.
- D. *paniculatum* (L.)DC.
Open woods or clearings; rare or infrequent.
M(Wild Cat Den)Barnes; G.
Ill. RI(Watch Tower)G.
- Lespedeza* Michx. Bush-clover.
L. *repens* (L.)Bart. Creeping Bush-clover.
M(Montpelier)Barnes.
- L. *violacea* (L.)Pers. Bush-clover.
Dry hillsides; rare or infrequent.
S(Ricker's Hill)Barnes.
M(Wild Cat Den)G.; (Wyoming Hill)Barnes.
Ill. RI(Watch Tower)G.
- L. *virginiana* (L.)R. Britt. Slender Bush-clover.
L. *reticulata* Pers. of Fl.
M(Wild Cat Den)Barnes; G. In a narrow prairie remnant in a
clearing on the crest of a rocky spur.

- L. *intermedia* (S. Wats)R. Britt.
L. *fruticosa* (L.)Britt.
Dry spots in woods and clearings; not infrequent.
S(Devil's Glen)G.
M(Fairport)Barnes.
Ill. RI(Watch Tower)G.
- L. *capitata* Michx. var. *sericea* (DC.)T. & G. Round-head Bush-clover.
Prairie habitats especially if dry and sandy; when sometimes abundant.
S(Blue Grass)Barnes; (Pine Hill Cemetery)G.
- L. *capitata* Michx. var. *stenophylla* Bissell & Fern.
L. *capitata* var. *longifolia* T. & G. of Fl.
M(Wyoming Hill; Wild Cat Den)Barnes.
- L. *stipulacea* Maxim Korean Bush-clover.
Introduced as a forage crop and freely escaped to roadsides and
waste places.
S(Roadside north of Mercy Hospital)G.
M(Crossroad to Big Sand Mound)G.
- (L. *cuneata* (Dumont)G. Don.
Louisa Co. ("Apparently grown as a roadside erosion check,
bluff above Lake Odessa, Sept. 15, 1955.") Davidson & Thorne,
SUI.
- Vicia* L. Vetch.
V. *sativa* L. Spring Vetch.
S(Blue Grass)Barnes.
- V. *angustifolia* Reichard. Common Vetch.
M(Roadside, hill road north of Montpelier)G.
- V. *villosa* Roth. Hairy Vetch. Winter Vetch.
S(Roadside in LeClaire)G.
- V. *americana* Muhl. American Vetch.
M(Muscatine Co.)Shimek.
- Lathyrus* L. Vetchling Wild Pea.
L. *palustris* L. Vetchling
Thickets in damp grounds; infrequent or rare.
S(Allen's Grove)Barnes; alluvial thicket on island at cross-
ing of R. 61 at the Wapsie)G.
Ill. RI(Watch Tower)Ross.
- L. *latifolia* L. Everlasting Pea.
Occasional in gardens or on fences and escaped.
S(Roadside north Harrison St. Road)G.
- Apios* Medic. Ground Nut. Wild Bean.
A. *americana* Medic
A. *tuberosa* Moench. of Fl.
In rich moist to wet ground; infrequent.
S(Fejervary Park ravine)G.
M(Hanging bog, road south of Pine Mill)G.
- Strophostyles* Ell. Wild Bean.
S. *helveola* (L.)Ell.
S. *angulosa* Ell. of Fl.
Frequent on shores and sandy grounds generally.
S(Credit Island)G.
M(Muscatine Co.)G.

- S. leiosperma (T.& G.)Piper.
- S. pauciflora Wats. of Fl.
- Dry sandy soil, infrequent.
- S(Sandy roadside north of Allen's Grove)G.
- Louisa Co.(Big Sand Mound)G.

Amphicarpa Ell. Hog Pea-nut.

- A. bracteata (L.)Fern.
- A. monoica Nutt. of Fl.
- Woods; fairly frequent.
- S(Credit Island; Pine Hill Cemetery)G.
- M(Muscataine Co.)Reppert.
- A. bracteata (L.)Fern. var. comosa (L.)Fern.
- A. Pitcheri Torr. & Gray of Fl.
- Moist woods and ditches; infrequent.
- S(Waverly Road)G.
- M(Wild Cat Den)G.

Glycine L. Soybean

- G. Max. (L.)Merr.
- Extensively cultivated; occasional as a roadside escape.
- S(Roadside, Blue Grass)G.

Linaceae

Linum L. Flax

- L. usitatissimum L. Common Flax.
- "Railroad tracks; common." Fl. That was sixty years ago. Now no longer seen.
- S("Roadsides, occasional.")Melville.
- L. sulcatum Riddell. Yellow Flax.
- S(Oakton)Ross.
- M(Montpefier)Barnes.

Oxalidaceae

Oxalis L. Wood-sorrel

- O. violacea L. Violet Wood-sorrel
- Rather dry sandy prairies; sandy openings in woodlands.
- S(Pine Hill Cemetery)G.
- M(Wild Cat Den; Lindle's Woods)G.
- O. stricta (L.) var. pileocarpa Wieg. Yellow Wood-sorrel
- In old sterile or sandy soils; infrequent.
- S(Noels; Credit Island)G.
- Ill. RI(Sandy ground, Section 22, Cordova Township)G.
- O. europaea Jord. Lady's Sorrel.
- Fence-rows, roadsides, etc.; a frequent weed.
- S(Allen's Grove; Fairmount Cemetery)G.
- O. europaea Jord. var. Bushii Small.
- In similar situations; less frequent.
- The upper surface of the leaflets appressed-pubescent.
- S(Credit Island)G.
- M(Fairport, pond-margin)G.
- O. floridana Salisb.
- S(Abandoned gravel-pit west of Nahant)G.

O. rufa Small.

- A form with purple or brown foliage.
- S(As a weed in a flower bed at 1113 W. 11th St.)G.

Geraniaceae

Geranium L. Geranium. Crane's-bill.

- G. maculatum L. Wild Geranium
- Open woods and meadows; frequent.
- S(Pine Hill Cemetery)G.
- M(Wild Cat Den)G.
- Ill. RI(Rock Island Arsenal)Melville.
- G. carolinianum L. Carolina Geranium.
- Dry sandy situations; very infrequent.
- M(Lindle's Woods; Brasenia Pond, Lake Township)G.
- Clinton Co.(Sandy shore north of Stevens' Bridge)G.
- Ill. RI(Rock Island Arsenal)Melville.

Zygophyllaceae

Tribulus L.

- T. terrestris L. Caltrop
- Dry waste or sandy soil; infrequent.
- S(Switch yard at Schmidt's Crossing)G.
- M(Muscataine Island)G.

Rutaceae

Xanthoxylum Gmel. Prickly Ash.

- X. americanum Mill.
- An undershrub in rich woods; infrequent.
- S(Allen's Grove)G.
- Ill. RI(Watch Tower)G.

Ptelea L. Wafer Ash.

- P. trifoliata L.
- Borders of woods and thickets; infrequent.
- S(Duck Creek Park; road to McCausland)G.
- Ill. RI(Watch Tower; Rock Island Arsenal)G.

Simarubiaceae

Ailanthus Desf. Tree of Heaven.

- A. altissima (Mill.)Swingle.
- A. glandulosa Desf. of Fl.
- Occasionally planted. Frequently spreading by suckers or seeds.
- S(Southwest corner of Ripley and Locust Sts.)G.

Polygalaceae

Polygala L. Milkwort.

- (P. polygama Walt.
- Dry sandy prairies and sand fields; infrequent.
- Clinton Co.("Grand Mound, June 13, 1938.")Fred Weiss, ISC.
- Ill. RI(Sandy field near "The Oasis" north of Cordova)G.
- Ill.(Whiteside Co. Dunes north of Fulton)G.

- P. *Senega* L. Seneca Snake-root.
 "Dry soil; frequent." Fl.
 M("Along the railroad track 5 miles north of Summit, June 21, 1924)Shimek, SUI.
 M(Open woods, June, 1892)Reppert.
 Cedar Co.(Rochester Cemetery)G.
 Ill. RI(Rock Island Arsenal)Melville.
- P. *incarnata* L.
 M("Old prairie sand dune at school house, 7 miles northwest of Muscatine, August 29, 1929.")Shimek, SUI.
- P. *cruciata* L.
 M("Among moss, in partial shade, outlying border of pond in the sand hills near Cedar River, Lake Township, Muscatine Co. Sept. 4 (no year indicated)Reppert, SUI.
 M(Muscatine Co., Dry hillside, Sept. 1898)Reppert, SUI.
- P. *sanguinea* L.
 Dry prairies; frequent.
 S(Pine Hill Cemetery; sandy prairie at the marsh northeast of St. Anne's Church)G.
 M(Muscatine Co.)Reppert.
- P. *verticillata* L.
 S("Kraft Farm, July 11, 1941.")Hauber.
 M("Margin of pond, Lake Township; rare, October, 1892.")Reppert, SUI; (Open woods west of sphagnum bog northwest of Bayfield, October 5, 1921.)Shimek, SUI.
 Ill. RI(Dry sand fields north of Cordova)G.

Euphorbiaceae

- Croton* L. *Croton*
- C. *glandulosus* L. var. *septentrionalis* (Muell.)Arg. Sand Croton.
 Dry sand fields; frequent locally.
 M(Wild Cat Den; Fairport)G.
 Louisa Co.(Dunes at Big Sand Mound)G.
 Ill. RI(Field south of Meredosia; Cordova)G.
- C. *capitata* Michx. Woolly Croton.
 Dry sandy soils; infrequent.
 S(Bettendorf)Hauber.
 Ill. RI(Rock Island Arsenal)G.
 Clinton Co.(North of Steven's Bridge)G.
- C. *texensis* (Klotsch)Muell. Arg. Skunkweed.
 M("Along the railroad; infrequent, September, 1897")Reppert, SUI.
- (*Crotonopsis* Michx. Rushfoil.
- C. *linearis* Michx.
 Ill. Whiteside Co.(Dunes at Lock 13)G.
- Acalypha* L. Three-seeded Mercury.
- A. *rhomboidea* Raf.
 A. *virginica* of Fl. chiefly.
 A frequent weed in moist shaded places.
 S(Credit Island; 127 W. 14th St.)G.
 M(Wild Cat Den; Lindle's Woods)G.

- A. *virginica* L.
 Moist to dry open wooded hillsides; roadsides; infrequent.
 S(Roadside, Hickory Grove Road; Pine Hill Cemetery)G.
 Ill. Mercer Co.(South of Illinois City)G.

- A. *gracilis* Fray
 A. *virginica* var. *gracilis* Muell. of Fl.
 "Dry sandy soil; frequently and abundant locally." Fl.
 S(Noels)Barnes.
 M(Saulsbury Bridge)Barnes.

Euphorbia L. Spurge.

- E. *supina* Raf. Milk spurge.
Chamaesyce supina (Raf.)Moldenke
Euphorbia maculata L. of Gray's 7th Ed.
 Door yards, alleys, and dry waste places generally; frequent.
 S(Schmidt's Crossing)G.
- (E. *humistrata* Engelm.
 (X)Barnes, a doubtful specimen.
- E. *Geyeri* Engelm.
Chamaesyce Geyeri (Engelm.)Small.
 Sandy fields and sand dunes; local.
 S(Walcott)Barnes.
 M(Moscow)Barnes.
 Louisa Co.(Big Sand Mound)G.
- E. *glyptosperma* Engelm.
Chamaesyce glyptosperma (Engelm.)Small.
 Sandy fields and sand dunes; local; in similar situations as the last.
 S(Walcott)Barnes.
 M(Moscow)Barnes.
 Louisa Co.(Big Sand Mound)G.
- E. *Preslii* Guss. Upright Spurge.
 E. *maculata* L. of Gray's 8th Ed.
 Roadsides and waste places in dry soil; infrequent.
 S(Pine Hill Cemetery)G.; (Pleasant Valley)Ross.
- E. *dentata* Michx. Toothed Spurge.
Poinsettia dentata (Michx.)Small.
 S(A weed in the underpass at Fifth & Brady Sts.)G.
- E. *heterophylla* L. Painted Leaf Spurge.
Poinsettia heterophylla (L.)Klotz & Garcke.
 M(Moscow)Barnes; (Lindle's Woods; R. 22 at Cedar River Crossing)G.
- E. *cuphosperma* Engelm.
Poinsettia cuphosperma (Engelm.)Small.
 S(A single collection from Fairmount Cemetery)G.
- E. *dictyosperma* Fisch. & Mey.
 E. *arkansana* and var. *missouriensis* Norton.
 S(Noels; Wapsie)Barnes.
 Clinton Co.(Follets)Barnes.
- E. *Cyperissias* L. Cypress Spurge.
 Planted and escaped in cemeteries.
 S(Pine Hill Cemetery)G.; (Alley at 17th & Brady Sts.)G.

- E. *Peplus* L. Petty Spurge.
M(Muscatine County)Reppert.
- E. *hexagona* Nutt.
Sandy open grounds; local.
M(Saulsbury Bridge)G.
Louisa Co.(Big Sand Mound)G.
- E. *marginata* Pursh. Snow on the Mountain.
Planted in gardens and occasionally escaped.
S(Nahant)G.; (Scott Co.)Melville.
- E. *corollata* L. Flowering Spurge.
Fields, clearings, roadsides; frequent.
S(Pine Hill Cemetery)Ross; G.
M(Wild Cat Den)G.

Callitrichaceae

Callitriche L. Water-wort. Water Chick-weed. Water-Starwort.

- C. *heterophylla* L.
- C. *verna* of Fl.
M("Pond in creek valley east of Moscow.")Shimek.

Anacardiaceae

Cotinus Dunham. Smoke tree.

- C. *Coggygia* Scop.
Occasional in cultivation.
S(Lau Farm, cultivated)G.

Rhus L. Sumac. Poison Ivy.

- R. *glabra* L. Smooth Sumac.
Dry soils; roadsides, fence rows, dry grasslands; frequent.
S(Locust & Middle Road)G.
Ill. RI(Rock Island Arsenal)Paarmann-Sheldon.
- (R. *aromatica* Ait. var. *illinoensis* (Greene)Rehd. Fragrant Sumac.
R. *canadensis* Marsh of Fl.
Ill. RI(Watch Tower)G. Bushes, possible planted on the dry hillside at the shelter north of Black Hawk Road.
- R. *arenaria* (Greene)G.N. Jones.
R. *canadensis* March of Fl. in part.
R. *triloba* Nutt.
Dry sandy soils; often in bottomlands; more frequent in Muscatine County.
S(Near McCausland)Morrissey.
M(Weiss' Slough; Wild Cat Den)G.
- R. *radicans* L. Poison Ivy.
R. *Toxicodendron* L. of Fl.
In thickets and climbing on trees; frequent in alluvial woods.
S(On a fence east of Noels)G.
Ill. RI(Watch Tower)G.
- (R. *radicans* L. var. *vulgaris* (Michx.)DC. forma *Negundo* (Greene) Fern.
With the last.
Ill. RI(Watch Tower)G.

Celastraceae

Euonymus L. Spindle Tree

- E. *atropurpureus* Jacq. Burning Bush. Wahoo.
Rich woods and thickets.
S(Credit Island)G.
M(Wild Cat Den)G.
Ill. RI(Watch Tower)G.
- E. *Europaeus* L. European Spindle Tree.
Occasionally planted:
S(Vanderveer Park)G.
- E. *alatus* (Thunb.)Sieb. Winged Spindle Tree.
Occasionally planted for ornament. Turns a bright pink in the fall.
S(Credit Island)G.
Ill. RI(Watch Tower)G.

Celastrus L. Bittersweet

- C. *scandens* L.
Thickets, dry or moist woods, river banks; frequent.
S(Credit Island)G.; (Duck Creek Park; Chapel Hill Road)G.;
(Fairview)Ross.
M(Wild Cat Den)G.
- (C. *orbiculatus* Thunb.
From Asia; cultivated and escaped; apparently established at
Ill. RI(Rock Island Arsenal)G.

Staphyleaceae

Staphylea L. Bladdernut

- S. *trifoliata* L.
Rich woods; infrequent.
S(Credit Island)G.
Ill. RI(Rock Island Arsenal)Ross; Paarmann-Sheldon.

Aceraceae

Acer L. Maple

- A. *Pseudo-platanus* L. Sycamore Maple
Rare; as a planted tree.
S(Southwest corner of Main & Lombard Sts.)G.
- A. *Ginnala* Maxim. Tartarian Maple.
A. *tataricum* var. *Ginnala* Maxim
Rarely planted. Blossoms very fragrant.
S(Vanderveer Park; a planted tree)G.
- A. *platanoides* L. Norway Maple.
Frequently (and unwisely) planted in lawns. Several varieties.
S(Fejervary Park; 15th & Ripley Sts.)G.
- A. *saccharum* Marsh. Sugar or Hard Maple.
A. *saccharinum* Wang. of Fl.
Rich hilly and upland woods; frequent. Wild Cat Den. Not infrequently planted in town.
S(724 Brady St., planted; 14th & Pershing Sts., planted; Vanderveer Park)G.

- A. *nigrum* Michx. Black Maple.
A. *saccharinum* Marsh var. *nigrum* Torr. of Fl.
Wooded hillsides; rare.
M(Crest of steep hillside northwest of Fairport)G.
- A. *rubrum* L. Red or Scarlet Maple.
Planted in our area; native in Missouri and southern Illinois. Rare.
S(Vanderveer Park)G.
- A. *saccharinum* L. Silver or Soft Maple.
A. *dasycarpum* Ehrh. of Fl.
A riverbank and bottomland tree; very frequent.
S(Davenport)Ross.
- A. *saccharinum* L. forma ?
A form with bright red twigs, dense foliage, turning bright yellow in the fall, and samaras smaller than in the species.
S(northeast corner of 14th & Washington Sts., planted)G.
- A. *saccharinum* L. var. *laciniatum* (Carr.)Pax. Cut-leaf Maple.
A horticultural form with deeply dissected leaves.
S(Boulevard, E. Kirkwood)G.
- A. *Negundo* L. Box-elder.
Negundo aceroides Moenck of Fl.
Frequent; weedy and spreading aggressively along roadsides. Now rarely planted, and practically absent from our native woods.
S(Davenport)Ross; (Waverly Road)G.
M(Wild Cat Den)G.

Hippocastanaceae

- Aesculus* L. Horse-chestnut. Buckeye.
- A. *glabra* Willd. Ohio Buckeye.
"Formerly frequent." Fl. Now met with only as planted trees.
S(Vanderveer Park; 824 W. 14th St., 410 E. 14th St.)G.
- A. *glabra* Willd. var. *pallida* Schelle.
A. *arguta* Buckl.
S(Planted tree at Columbia Ave.)G.
- A. *octandra* Marsh. Yellow or Sweet Buckeye.
Southern states to lower Illinois
S(Cultivated, 8th & Brady Sts.)Paarmann-Sheldon.
- A. *Pavia* L. Red Buckeye.
Also southern species.
S(Cultivated, 8th & Brady Sts.)Paarmann-Sheldon.
- A. *Hippocastanum* L. Horse-chestnut.
From southern Europe; much planted for shade and ornament.
S(Harrison St. near 15th)G.

Sapindaceae

- Xanthoceras* Bge.
- X. *sorbifolium* Bge
From North China. Showy flowers in early spring.
S(Cultivated, Lau Farm)G.

Balsaminaceae

- Impatiens* L. Jewel-weed. Touch-me-not.
- I. *pallida* Nutt. Pale Touch-me-not.
Moist bottomlands, in clearings or half-shade, less frequent in upland woods; usually abundant when present.
M(Wild Cat Den)Barnes; G.
- I. *biflora* Willd. Spotted Touch-me-not.
Habitats much like the preceding; possibly more frequent.
M(Wild Cat Den)G; (Wyoming Hill)Barnes.

Rhamnaceae

- Rhamnus* L. Buckthorn.
- R. *cathartica* L. Common Buckthorn.
Introduced and planted for hedges; quickly escapes.
S(Duck Creek Park. Planted, escaped, and established in the adjoining woods)G.
- R. *lanceolata* Pursh. Lance-leaf Buckthorn.
"Cedar River region; Princeton; infrequent." Fl.
S(Davenport)Haupt.
M(Cedar River region, August, 1897.)Reppert, SUI.
Ill. RI(Rock Island Arsenal)Melville.
- Ceanothus* L. Redroot.
- C. *americana* L. New Jersey Tea.
Dry upland prairie remnants; infrequent.
S(Pine Hill Cemetery prairie)G; (Oakton)Ross.

Vitaceae

- Ampelopsis* Michx.
- A. *cordata* Michx.
A southern vine frequently seen on brick and stone walls.
S(14th & Brady Sts., cultivated)G.
- Parthenocissus* Planch. Virginia Creeper.
- P. *quinquefolia* (L.)Planch.
Ampelopsis quinquefolia Michx. of Fl.
Tendrils tipped with adhesive suckers.
Fences, clearings, open woods, grassy fields; frequent in low woods.
S(Credit Island)G.
- P. *vitacea* (Knerr.)Hitc.
P. *inserta* (Knerr.)Fritsch.
Low woods, thickets; situations like the last; frequent.
S(Credit Island)G.
Ill. RI(Rock Island Arsenal)Ross.
- Vitis* L. Grape.
- V. *cinerea* Engelm. Downy Grape.
M("Section 15 and 16, Aronia Township, east of Conesville, in bottomland woods.")Thorne, SUI.
Louisia Co.("Muscatine Island, August, 1897.")Shimek & Myers.
- V. *riparia* Michx. River bank Grape.
Frequent. River banks and alluvial woods; occasional in upland woods.
S(Credit Island; Devil's Glen)G.

- V. vulpina L. Frost Grape.
 V. cordata Michx.
 Borders of woods and openings; infrequent.
 M(Open hillside thicket, Wild Cat Den)G.
 Ill. RI(Rock Island Arsenal, border of low woods)G.

- V. Labrusca. Bailey. Cultivated Grapes.
 A group of various cultivated forms; rare as escapes.
 S(128 W. 14th St., cultivated)G.

Tiliaceae

- T. americana L. American Linden.
 Rich woods, lowland and especially upland; frequent.
 S(Credit Island)G.

- T. europaea L. Small-leaf or European Linden.
 Occasionally met with as cultivated trees.
 S(Fejervary Park)G.

Malvaceae

Malva L. Mallow.

- M. sylvestris L. High Mallow.
 M("About dwellings and as an occasional escape from gardens,
 August, 1891.")Reppert, SUI.

- M. neglecta Wallr. Common Mallow. "Cheese."
 M. rotundifolia L. of Fl.
 Dry waste places; infrequent.
 S(Waste place; 14th & Harrison Sts.; 15th & LeClaire Sts.)G.

Althaea L.

- A. rosea Gav. Hollyhock.
 Cultivated and frequently escaped.
 S(Davenport)G.

Callirhoe Nutt. Poppy-Mallow.

- (C. triangulata (Leavenw.) Gray
 Sandy soil; roadsides and railroad right-of-ways; infrequent.
 Ill. RI(Sandy soil between the railroad and R. 80 north of
 Cordova)G.

- C. involucrata (T.&G.) Gray.
 S(Davenport, (without precise locality), June 6, 1895)Shimek,
 SUI.

(Napaea L. Glade-Mallow.

- N. dioica L.
 Ill. RI(Low ground along the Hennepin Canal)Paarmann-
 Sheldon.

Sphaeralcea St. Hil. False Mallow. Glade Mallow.

- S. angusta (Gray) Fern.
 Malvastrum angustum Gray of Fl.
 S("Davenport, from A.A. Miller, 1898)Reppert, SUI.
 M("River bank near Montpelier, June, 1895.")A.A. Miller, SUI.

Sida L.

- S. spinosa L. Prickly Mallow.
 S(Devil's Glen, Sept. 17, 1931)Hauber.
 M(Saulsbury Bridge)G.

Abutilon Mill.

- A. Theophrasti Medic. Velvet-leaf.
 A. Avicennae Gaertn. of Fl.
 Waste places, cultivated fields; frequent.
 S(Pine Hill Cemetery)G.

Hibiscus L. Rose-Mallow.

- H. militaris Cav. Soldier's Rose-mallow.
 In shallow water of sloughs, ponds, marshes, back waters, etc.;
 frequent.
 S(Marsh northeast of Allen's Grove)G.
 M(Muscatine Co.)Reppert.

- H. Trionum L. Bladder Ketmia. Flower-of-a-Day
 In and about cornfields; infrequent.
 S(Allen's Grove; Roadside to Pine Hill Cemetery; waste
 ground, 11th & Vine Sts.)G.

- H. Syriaca L. Rose of Sharon. Shrubby Althaea.
 An Asian shrub; planted for ornament; persistent.
 S(Blue Grass)Barnes; (Cultivated, 15th & Main Sts.)G.

Gossypium L. Cotton.

- G. herbaceum L.
 Appearing with us only as a railroad waif, or planted as a rarity.
 S(Blue Grass)Barnes.

Guttiferae

Hypericum L. St. John's Wort.

- H. pyramidatum Ait. Great St. John's Wort.
 H. Ascyron L. of Fl.
 Low bottomlands; ditches; rare.
 S(Marsh northeast of Allen's Grove)G.; (Davenport)Ross.
 (X)Paarmann-Sheldon

- H. perforatum L. Common St. John's Wort.
 Appears as a casual weed in unexpected places; in dry grounds,
 roadsides and green sward; infrequent and always as only a few
 plants.
 S(Prairie, Pine Hill Cemetery; sunny roadside near McCaus-
 land)G.

- H. punctatum Lam.
 H. maculatum Walt. of Fl.
 Fields, banks and open woods; not infrequent.
 S(Hickory Grove)G.; (Devil's Glen)Ross.
 M(Wild Cat Den)G.

- H. sphaerocarpum Michx.
 H. cistifolium Lam. of Fl.
 Rather dry and sandy fields and roadsides; frequent.
 S(Marsh northeast of St. Anne's Church; Pine Hill Cemetery;
 Devil's Glen)G.
 M(Roadside, Montpelier)G.

- H. mutilum L.
 Damp sandy grounds; not infrequent; sometimes with H. majus.
 S(Sandy ditch northeast of St. Anne's Church; Credit Island)G.
 M(Muscatine Co.)Shimek.
 Louisa Co. (Pond shore, Big Sand Mound)G.

H. majus (Gray)Britt.
Same situations as the last; sometimes with it.
S(Credit Island; marsh northeast of St. Anne's Church)G.

X H. majus X H. mutilum
S(Marsh northeast of St. Anne's Church)G.
Putative parents both present.

H. frondosum Michx. Golden St. John's Wort.
H. aureum Bartr.
S(Low cultivated shrub at Vanderveer Park)G.

(H. spathulatum (Spach.)Steud. Shrubby St. John's Wort.
H. prolificum L. of auth.
Cedar Co.(Fence-row along No. 6, west of Wilton)G.

(H. gymnanthemum Engelm. & Gray
Reported in the Fl."Low ground; frequent." No specimen has been located. A single collection in the Barnes Herbarium is H. majus, which is omitted from the Fl.

H. virginianum L. var. Graseri (Spach.)Fern. Marsh St. John's Wort.
Triadenum Fraseri (Spach.)Gleason.
Elodea campanulata Pursh. of Fl.
"Wet grounds along Cedar River; Noels." Fl.
S(Noels)Barnes.
M(Saulsbury Bridge)Barnes.

(H. gentianoides (L.)BSP. Orange grass. Pin-weed.
H. nudicaule Walt. of Fl.
Sarthra gentianoides L.
"Sandy soil, Lake Township, Muscatine Island; Noels." Fl.
(X)Barnes.

Tamariscaceae

Tamarix L.

T. gallica L. French Tamarisk.
Cultivated for ornament; a native of the Mediterranean region.
S(Vanderveer Park)G.

Cistaceae

Helianthemum Mill. Rock-rose.

H. canadense (L.)Michx. Frost-weed.
Dry sandy soil; rare or infrequent.
M("Sandy alluvial flat east of Cedar River, June 28, 1919.")
Shimek, ISC.
M("Dunes north of Bayfield, October 14, 1919.")Shimek, ISC.
M("Sandy hills along Cedar River, open woods; frequent.
1892.")Reppert, SUI.
Ill. Whiteside Co.(Sandy roadside to Lock 13)G.

H. Bicknellii Fern. Frost-weed.
In dry sandy soils like the last; more frequent.
S(In part shade, prairie at Pine Hill Cemetery)G.
M(Sandy soil east of Brasenia Pond, Lake Township)G.
Ill. RI(Sandy field south of the Meredosia along R. 80)G.

Lechea L. Pin-weed.

L. tenuis Michx.
Dry sandy soil; infrequent.
M(Lake Township)Reppert.
Ill. RI(Sandy prairie south of the Meredosia)G.

L. stricta Leggett.
Dry sandy soils; infrequent; sometimes with the last.
S(Walnut Grove)Miller.
M(Muscatine Co. Cedar River region)Reppert.
Ill. Whiteside Co.(Sandy road to Lock 13)G.

Violaceae

Viola L. Violet.

V. pedata L. Bird's foot Violet.
V. pedata L. var. bicolor Pursh of Fl.
M("Lake Township with the common form. Two upper petals,
deep violet-purple. May"(no year indicated)Reppert, SUI.

V. pedata L. var. lineariloba DC. Bird's foot Violet.
Sandy prairies and sandy open woods and borders; not general but
sometimes abundant locally.
S(Pine Hill Cemetery)Ross; G; (Oakton)Ross.
M(Brasenia Pond, Lake Township)G; (Pine Mill)Reppert.

V. papilionacea Pursh. Butterfly Violet.
Moist meadows and swales; moist grassy roadsides; dooryards; fre-
quent. Our most widely distributed species.
S(Waverly Road; Duck Creek Park; Credit Island)G.
M(Pine Creek)G.

V. sororia Willd. Woolly Wood-violet.
Damp to rather dry open upland or lowland woods and clearings;
frequent.
S(Allen's Grove; Credit Island)G.
Ill. RI(Watch Tower)G.

V. missouriensis Greene. Missouri Violet.
Low damp sandy or silty soils; in part shade; frequent.
S(Duck Creek Park; Credit Island)G.
M(Wild Cat Den; Saulsbury Bridge)G.

V. nephrophylla Greene. Northern Bog-violet.
M(Boggy grassy edge of Nelumbo Pond, Section 15, Lake
Township)G.

V. septentrionalis Greene.
Ill. RI(Open woods on the bluff path, Watch Tower)G.
Sepals pubescent on the face, ciliate on the margins the nar-
row angled auricles ciliate, the lower petal bearded. A single
collection. Verified by Russell.

V. fimbriatula Sm.
V. sagittata Ait of Fl.? and of some authors.
In moist silty and rather dry sandy soils; infrequent.
S(In the silty clay loam, Noels; in loamy sand at the marsh
northeast of St. Anne's Church)G.
M(Moist sandy edge of Brasenia Pond, Lake Township with V.
lanceolata)G.

- V. *pedatifida* G. Don. Prairie Violet.
Upland prairie remnants; infrequent.
S(Pine Hill Cemetery)G.; (Oakton)Ross.
- X V. *papilionacea* Pursh x *V. pedatifida* G. Don
V. palmata L. of Fl.
V. Bernardi Green of some authors.
S(Pine Hill Cemetery; occasional along the disturbed borders of the native prairie)G.
- X V. *papilionacea* Pursh x *V. fimbriatula* Sm.
M(A plant interpreted as this hybrid was collected in the low woods on the upper terrace of Pine Creek on the border of the woods east of the creek)G. Verified by Russell.
- (X V. *missouriensis* Green x *V. sororia* Willd.
Ill.(Moist wooded ravine, Watch Tower)G.
- X V. *missouriensis* Greene x *V. papilionacea* Pursh.
S(Credit Island along edge of trees on north shore, scattered and in a natural bed with both parents present, south of the road just east of the stables)G.
- X V. *papilionacea* Pursh. x *V. sororia* Willd.
A large series of intermediates between these two species are probably best regarded as hybrids.
S(Credit Island, open woods, south border of the north road)G.
- V. *pallens* (Banks)Brainerd
M("Bog among fixed dunes, 8 miles northwest of Muscatine, May 16, 1935.")Shimek, SUI. Redetermined by Russell.
- V. *incognita* Brainerd.
M(Wild Cat Den, (no date and collector unknown); ("On rocky talus at base of sandstone bluff, Wild Cat Den, May 16, 1935.")Shimek, SUI. ("Half-shaded damp places at base of rocky ledges at Pine Mill, July, 1891.")Reppert, SUI. All re-determined by Russell.
- V. *primulifolia* L:
M("Cedar River region, Lake Township in a wet depression in the sandhills; of small area. (In same place where found *Osmunda regalis*), October 1892.")Reppert, SUI.
- V. *lanceolata* L. Lance-leaf Violet
Damp to wet sandy ground; swales and pond-shores; infrequent.
S(Sandy marsh side northeast of St. Anne's Church)G.
M(Margin of Brasenia Pond, Lake Township)G.
- V. *eriocarpa* Schwein. Smooth Yellow Violet
V. pubescens Ait. of Fl.
Rich moist upland or lowland woods; frequent.
S(Credit Island; Allen's Grove)G.
M(Wild Cat Den)G.
Our fruiting specimens from six stations have smooth capsules; two have the capsules woolly. Plants from Rock Island Arsenal show both kinds.
- V. *pubescens* Ait. Downy Yellow Violet.
S(North-facing steep wooded slope at Pineo's Grove)G.
The separation of this plant from the preceding is extremely uncertain. This is the only collection that seems to qualify.

- V. *rugulosa* Greene
M("Dry upland woods, Wild Cat Den, May 31, 1924.")Shimek, SUI.
A number of introduced species are occasionally met with in flower gardens.
- V. *odorata* L. Sweet or English Violet.
S(Mrs. Dow's Garden, 2002 Harrison St.)G.
- V. *canadensis* L. Canada Violet
In our area only in cultivation.
S(1428 N. Main St.)G.
- V. *striata* Ait.
Only in cultivation.
S(1428 N. Main St.)G.
- V. *Priceana* Pollard Confederate Violet.
S(Mrs. Mizener's Garden, 2747 E. High St.)G.
- V. *tricolor* L. Pansy
S("Yard," Davenport)Melville; ("Davenport")Ross.
Flowers 1½ cm. long. May be *V. arvensis*. If this collection came from a garden it is the only garden plant collected by her.

Cactaceae

- Opuntia* Mill. Prickly Pear
O. *Rafinesquii* Engelm.
O. *humifusa* Raf.
Restricted to sand dunes and dry sand prairies. Not observed in Scott County.
M(Sandy hilltop overlooking Nelumbo Pond, Section 15, Lake Township)G.
(X)Barnes.

Thymelaeaceae

- (*Dirca* L.
D. *palustris* L. Leatherwood. Moosewood.
Johnson Co.(Turkey Creek)Thorne, SUI.

Elaeagnaceae

- Elaeagnus* L. Oleaster.
E. *angustifolia* L. Russian olive.
Occasionally planted and escaped.
S(1515 Mound St., a roadside escape)G.

Lythraceae

- Peplis* L.
Peplis diandra Nutt. Water-Purslane
Didiplis linearis Raf. of Fl.
"Bottom of shallow pond near Noels." Fl.
S(Noels, 1896)Barnes.

Rotala L.

- R. *ramosior* L. Koehne var. *typica* Fern & Griseb.
Wet or muddy pond shores; infrequent.
M(Saulsbury Bridge)Barnes; (Muscatine County)G.

- R. ramosior L. Koehne var. interior Fern & Grisc.
Muddy pond shores and bottoms; infrequent.
S(Credit Island)G.
M(Fairport Fishponds)G.
- Amannia L.
A. coccinea Rothb.
Wet shores and muddy flats; infrequent.
S(Nahant; Credit Island)G.
M(Muscatine Co., Fairport)G.
- Lythrum L. Loosestrife
L. alatum Pursh.
Moist low grounds and moist ditches.
S(Allen's Grove; Marsh northeast of St. Anne's Church)G.
M(Montpelier)G.
- L. Salicaria L. Spiked or Purple Loosestrife.
An occasional escape from flower gardens.
S(Abandoned city dump at 11th & Vine Sts.)G.

Nyssaceae

- Nyssa
N. sylvestris Marsh var. caroliniana (Poir) Fern. Tupelo. Sour Gun Tree.
A tree of the southern states; rarely planted with us.
S(Cultivated trees at the Lau Farm)Paarmann-Sheldon; G.

Melastomaceae

- Rhexia L. Meadow Beauty
R. virginica L.
"In a wet depression in the sand-hills in Lake Township." Fl.
M(Lake Township)Reppert., G.

Onagraceae

- Ludwigia L. False Loosestrife.
L. alternifolia L. Seedbox.
Wet muddy or sandy shores and ditches; infrequent.
S(Marsh northeast of St. Anne's Church)G.
M(Northwest of Bayfield)Shimek; (Moscow)Barnes.
Louisa Co.(Big Sand Mound)G.
- L. polycarpa Short.
Pond shores and wet ditches; infrequent.
S(Credit Island; Allen's Grove; McCausland)G.; (Noels) Barnes.
M(Saulsbury Bridge)Barnes.
- L. palustris (L.) Ell. var. americana (DC) Fern & Grisc.
In mud and water of shallow ponds.
S(Noels)Barnes.
Clinton Co.(Fillets)Barnes.
M(On sandy margins of ponds.)Reppert.
- Epilobium L. Willow-herb
E. coloratum Biehler.
Rather frequent; in moist ditches and low wet places.
S(Davenport)Ross; (Fejervary Park; Crossroads north of Donahue)G.
M(Border of Nelumbo Pond, Section 15, Lake Township)G.

Oenothera L. Evening Primrose

- O. biennis L.
Moist or dry waste places and roadsides; frequent.
S(Credit Island)G.
M(Lake Township)G.
- O. biennis L. var. pycnocarpa (Atkinson & Bartlett)Wieg.
S(Waste lot, 11th & Vine Sts.)G.
M(Muscatine Co.)Reppert.
- O. biennis var. canescens T. & G.
M(Montpelier)G.
- O. biennis var. hirsutissima Gray.
O. strigosa Mack & Bush.
Dry banks; infrequent.
M(Road cut in loess, Montpelier Township)G.
- O. parviflora L.
O. muricata L.
Dry sandy prairies and sand dunes; restricted.
S(Marsh northeast of St. Anne's Church; Road cut northeast of Blue Grass)G.
W(Weiss' Slough; Wild Cat Den)G.
- O. grandiflora Ait.
O. biennis var. grandiflora Lindl. of Fl.
From Europe; occasionally in flower gardens and escaped.
S(Eldridge, 1896)Barnes; (Davenport)Ross.
- O. rhombipetala Nutt.
Sandy soils; prairies and dunes; restricted.
S(Noels)G.
M(Lake Township)G.; (Muscatine Co.)Reppert.
Clinton Co.(Camanche)G.
- O. laciniata Hill.
O. sinuata L. of Fl.
Sandy places; rare.
M("Sandy flat east bank of Cedar River at Saulsbury Bridge, May 17, 1952.")Thorne, SUI. ("Muscatine, Iowa.")Reppert.
Ill. Henry Co.(Bottom of an abandoned sandstone quarry)G.
Ill. Whiteside Co.(Sandy flat east of Fulton)G.
- O. pilosella Raf. Sundrops.
O. fruticosa L. of Fl.
O. fruticosa L. var. hirsuta Nutt.
M(In boggy ground of edge of Nelumbo Pond, Section 15, Lake Township; Dry sandy roadside north of Bayfield)G.

Gaura L. Gaura

- G. biennis L.
Dry or moist roadsides, ditches, etc.; infrequent.
S(Buffalo)G.
M(Wild Cat Den)G.
- (G. parviflora Dougl.
Reported in the Fl.; "Front St., Muscatine."; but no specimen has been located.

- Circaea L. Enchanter's Nightshade
 C. quadrisulcata (Maxim) Franch & Sav.
 C. Lutetiana L. of Fl.
 Damp woods; infrequent.
 S(Credit Island; Devil's Glen)G.
 M(Wild Cat Den)G.
 C. alpina L.
 M("Base of wet ledge, Wild Cat Den, August, 1896.")Reppert, SUI.

Halogoraceae

- Myriophyllum L. Water-Milfoil
 M. exalbescens Fern.
 M. spicatum L. of Fl.
 M(Saulsbury Bridge)Reppert.
 M. pinnatum (Walt.) BSP.
 M. scabratum Michx. of Fl.
 M(Pine Mill)Reppert.
 Proserpinaca L. Mermaid-weed.
 P. palustris L.
 M(Saulsbury Bridge, 1896)Barnes.

Araliaceae

- Aralia L.
 A. spinosa L. Hercules' Club
 Southern; ranges to southern Illinois; infrequently planted with us.
 S(Davenport)G.
 A. racemosa L. Spikenard
 Rich woods; not infrequent.
 S(Allen's Grove)G.
 M(Wild Cat Den)G.; (Muscatine Co.)Reppert.
 A. nudicaulis L. Wild Sarsaparilla.
 M("Wild Cat Den, May 17, 1891.")Reppert; ("Wooded bluff, Wild
 Cat Den, May 8, 1903.")Shimek, SUI.
 Panax L. Ginseng.
 P. quinquefolia L.
 Aralia quinquefolia Descne & Planch. of Fl.
 Rich moist woods; infrequent.
 S(Allen's Grove)G.
 M(Township Seventy-six)G.; ("Upland woods southwest of Mus-
 catine, June 12, 1911.")Shimek.
 (X)Barnes.

Umbelliferae

- Sanicula L. Black Snake-root. Sanicle
 S. marilandica L.
 M(Grassy roadside, back road to Wild Cat Den)G.
 S. gregaria Bickn.
 Rich woods; frequent.
 S(Credit Island; Duck Creek Park; Devil's Glen)G.
 M(Lake Township)G.; (Muscatine Co.)Reppert; Shimek.

- S. canadensis L.
 Moist or dry woods; frequent.
 S(Fejervary Park)G.
 M(Wild Cat Den)G.
 S. trifoliata Bickn.
 Woods; rare.
 M(Wild Cat Den)G.

- Eryngium L.
 E. yuccifolium Michx. Rattlesnake-master.
 Prairie habitats; infrequent.
 S(Oakton)Ross; (Pine Hill Cemetery)G.
 M(Muscatine Co.)Reppert.
 E. Leavenworthii T. & G.
 S(The Brandt sisters' garden)Paarmann-Sheldon.

- Chaerophyllum L.
 C. procumbens (L.) Crantz. Chervil
 Moist alluvial woods and flood plains; infrequent.
 S(Credit Island)G.
 M(Saulsbury Bridge)G.
 Ill. RI(Rock Island Arsenal)Ross.

- Osmorhiza Raf. Sweet Cicely
 O. Claytonii (Michx.) C.B. Clarke.
 O. brevistylis DC. of Fl.
 Dry or moist upland woods; frequent.
 S(Allen's Grove)Barnes.
 Ill. RI(Rock Island Arsenal)Ross.
 O. longirostris (Torr.) DC. Anise-root.
 Dry or moist upland woods; infrequent.
 S(Duck Creek Park; Indian Road)G.
 Ill. RI(Rock Island Arsenal)Ross.

- Conium L. Poison Hemlock
 C. maculatum
 An occasional weed in waste places, and along dry roadsides.
 S(Waste place northeast of Pine Hill Cemetery)G.
 M(Roadside west of Durant)G.

- Spermolepis Raf.
 S. inermis (Nutt.) Math. & Const.
 Leptocaulis patens Nutt. of Fl.
 M(Railroad tracks near Montpelier)Barnes.

- Zizia L. Koch. Golden Alexanders.
 Z. aurea (L.) Koch.
 Meadows, open woods; frequent.
 S(Pine Hill Cemetery)G.
 M(Muscatine Co.)Reppert.

- Cicuta L. Water Hemlock
 C. maculata L. Spotted Cow-bane.
 Wet ditches, shores and low, wet places; fairly frequent.
 S(Pine Hill Cemetery; Credit Island)G.
 M(Muscatine Co.)MacBride.
 C. bulbifera L.
 M(BCR & N. Crossing at the Cedar River)Barnes; ("Wet places,
 bottoms, Lake Township, August, 1894.")Reppert.

Cryptotaenia DC. Honeywort

- C. canadensis (L.)DC.
Rich woods.
S(Duck Creek Park; Allen's Grove)G.; (Davenport)Ross.
Ill. RI(Watch Tower)Barnes.

Taenidia Drude. Yellow Pimpernel.

- T. integerrima (L.)Drude.
Pimpinella integerrima Benth. & Hook of Fl.
S(Eldridge)Barnes; (Davenport)Ross; (Davenport)Alf. Sanders.
Ill. RI(Watch Tower)Ross; (Open path along steep loess bluff,
Watch Tower)G.

Sium L. Water-parsnip

- S. suave Walt.
S. cicutaefolium Gmelin of Fl.
Wet ditches and marshy places; infrequent.
S(Wet ditch north of Nahant; Section 9, Butler Township)G.;
(Wapsie)Barnes.
M(Moscow)Barnes.

Anethum L. Dill

- A. graveolens L.
Occasionally cultivated as a garden herb and escaped.
S(Alley near 12th & Harrison Sts.; Alley at 1721 Main St.)G.

Thaspium Nutt. Meadow Parsnip

- T. trifoliatum (L.) Gray.
T. aureum Nutt.
S(Davenport)Ross.
Ill. RI(Rock Island Arsenal)Ross.
- T. barbinode (Michx.)Nutt.
Rich woods; infrequent.
S(Hickory Grove)G.
Ill. RI(Rock Island Arsenal)Ross.

Angelica L. Angelica

- A. atropurpurea L. Purple-stem Angelica.
Moist silty river plain at
S(Sea Scout Camp below LeClaire)G.

Oxypolis Raf. Hog-Fennel

- O. rigida (L.)C.& R. Cow-bane
Tiedemannia rigida Coult & Rose of Fl.
S(North facing slope, shrubland north of Mt. Nebo Cemetery)G.
M(Wild Cat Den, bog)G.

Polytaenia DC.

- P. Nuttallii DC.
Dry, sandy prairie.
S(Davenport)Ross; (Maysville)Barnes.
Ill. RI(Cordova at "Oasis")G.

Pastinaca L. Parsnip

- P. sativa L.
Common along roadsides and waste places.
S(Davenport)Ross; (Duck Creek Park)G.

Heracleum L. Cow-parsnip

- H. maximum Bartr.
H. lanatum Michx.
Moist, low grounds and ditches.
M(Cedar River at Simpsons Bridge)Shimek, SUI(?)
Ill. RI(Low grounds along the railroad at Rapids City)G.

Daucus L. Carrot

- D. Carota L. Wild Carrot. Queen Annes Lace
Frequent along dry roadsides.
S(Chapel Hill Road)G.

Cornaceae

Cornus L. Dog-wood.

- C. stolonifera Michx. Red-osier Dogwood
Marshy ground, wet thickets, wet swales; infrequent.
S(Pine Hill Cemetery)G.
M(Boggy grounds at the Nelumbo Pond, Lake Township, Section
15)G.
- C. rugosa Lam. Round-leaf Dogwood
C. circinata L'Her. of Fl.
"Rocky woods along Sweetland Creek. Mackenzie." Fl.
S(Devil's Glen, 1889)Ross.
- C. Drummondii Meyer. Rough-leaf Dogwood
C. asperifolia Michx. of Fl.
Dry or moist thickets and fence rows; frequent.
S(Credit Island; Allen's Grove)G.
- C. obliqua Raf. Silky Dogwood. Kinnikinick
C. sericea L. of Fl.
C. ammonum Mill. of many authors.
Damp swales and thickets, dry woodland borders; frequently
planted.
S(Allen's Grove; Noels)G.
- C. racemosa Lam. Gray-bark Dogwood.
C. paniculata L'Her of Fl.
Clearings and open woods; infrequent.
S(Devil's Glen)G.
Ill. RI(Watch Tower)G.
- C. alternifolia L.f. Alternate-leaf Dogwood.
Damp wooded slopes; infrequent.
S(Devil's Glen)Ross.
M(Wild Cat Den)G.
- C. florida L. Flowering Dogwood.
Rare; seen only in cultivation.
S(Vanderveer Park)G.

METACHLAMYDEAE

Pyrolaceae

- Pyrola L. Wintergreen. Shin-leaf.
 P. elliptica Nutt. Wild Lily of the Valley
 S(Allen's Grove)Barnes.
 M(Lake Township, June, 1894)Reppert.
 Monotropa L. Indian Pipe. Corpse-plant.
 M. uniflora L.
 In rich woodland humus; rare.
 S(Allen's Grove, 1892)Barnes.
 M(Township Seventy-six, 1951)G.

Ericaceae

- Gaylussacia HBK.
 G. baccata (Wang)K. Goch. Huckleberry
 G. resinosa T.& G. of Fl.
 M(Dry crest of a wooded spur at Wild Cat Den with Pinus Strobus, Maianthemum canadense and Amelanchier arborea)G.

Primulaceae

- Androsace L.
 A. occidentalis Pursh.
 Dry sandy roadsides, sandy fields and sand dunes; restricted.
 S(Devil's Glen)Ross.
 M(Shore of Brasenia Pond, Lake Township)G.
 Louisa Co.(Big Sand Mound)G.
 Dodecatheon L.
 D. Meadii L. Shooting Star.
 Dry or moist prairie remnants; infrequent.
 S(Pine Hill Cemetery)G.
 Lysimachia L. Loosestrife.
 L. punctata L. Garden Loosestrife.
 S(Ditch and grossy slope one mile south of Long Grove; escaped and established)G.
 L. Nummularia L. Money-wort.
 Sedge meadows, wet grassy shores, etc.; infrequent.
 S(Pond shore at the crossing of R. 61, at the Wapsipinicon River)G.
 Ill. RI(Watch Tower)G.
 L. thyrsiflora L. Tufted Loosestrife.
 "Swampy Grounds."Fl.
 S(Eldridge)Barnes.
 L. quadriflora Sims Prairie Money-wort.
 Steironema longifolium Gray of Fl.
 "Moist prairies; common." Fl. Now infrequent or rare.
 S(Eldridge; Blue Grass)Barnes.
 M(In the bog at Nelumbo Pond, Section 15, Lake Township)G.
 L. terrestris (L.)BSP. Swamp Candle.
 L. stricta Ait. of Fl.
 Sedge meadows, wet grassy shores, etc.; infrequent.
 S(Wet meadow north of Nahant; marshy grounds at Lock 14)G.
 M("River Bank" (at Montpelier?)Barnes.

- L. ciliata L.
 Steironema ciliatum Raf. of Fl.
 Moist low grounds, often near streams; moist thickets and borders; frequent.
 S(Credit Island; Pine Hill Cemetery)G.
 M(Pond margin amongst dunes, northwest of Muscatine)Shimek.
 L. lanceolata Walt. Lance-leaf Loosestrife.
 Steironema lanceolatum Gray of Fl.
 Moist grounds about ponds; infrequent.
 S(Credit Island)G.; (Blue Grass)Barnes.
 M(Moscow)Barnes.
 L. hybrida Michx.
 Moist shores of ponds and streams; infrequent.
 S(Credit Island; Allen's Grove)G.
 Louisa Co.(Big Sand Mound)G.

Anagallis L. Pimpernel

- A. arvensis L. Scarlet Pimpernel.
 From Europe.
 S("Waste places.")Melville; ("Davenport, June, 1886.")Ross.

Ebenaceae

- Diospyros L. Persimmon
 D. virginiana L.
 Native in the southern states; ranges into Peoria Co., Illinois, and Van Buren Co., Iowa; planted with us.
 S(348 River Drive, Bettendorf, cultivated)G.; (The Lau Farm)G.

Styraceae

- Halesia Ell.
 H. carolina L. Silver bell or Snow-Drop tree.
 Southern; with us only in cultivation.
 S(Vanderveer Park, cultivated)G.

Oleaceae

- Fraxinus L. Ash.
 F. americana L. White Ash.
 Mostly in upland woods; frequent.
 S(Fejervary Park)G.
 M(Wild Cat Den)Reppert; G.
 F. americana L. var. Biltmoreana (Beadle)Wright. Biltmore Ash.
 Southern; cultivated in our area.
 S(Fejervary Park)G.
 F. pennsylvanica Marsh. Red Ash.
 F. pubescens Lam. of Fl.
 Low grounds and river banks; infrequent.
 S(River bank west of Nahant: 7th & Main Sts., cultivated)G.
 M(Muscatine Co.)Reppert.
 F. lanceolata Borkh. Green Ash.
 F. viridis Michx. of Fl.
 F. pennsylvanica Marsh var. subintegerrima (Vahl)Fern. of Gray, 8th Ed.

Low moist grounds and stream banks; frequent.

M(Wild Cat Den)G.

Ill. RI(Rock Island Arsenal)Ross.

- (F. *quadrangulata* Michx. Blue Ash.
Ill. RI(Rock Island Arsenal, in front of Commandant's house)G.

F. *nigra* Marsh. Black Ash.

F. *sambucifolia* Lam. of Fl.

Low grounds; infrequent.

S(Credit Island)G.; (17th & Myrtle Sts., cultivated)G.

Observed at Wild Cat Den and the Watch Tower.

Forsythia Vahl. *Forsythia*. Golden-bell.

F. *suspensa* (Thunb.)Vahl.

From China. Very freely cultivated.

S(129 W. 15th St.)G.

Chionanthus L. Fringe-tree

C. *virginica* L.

Southern; with us in cultivation; infrequent.

S(Vanderveer Park)G.

Ligustrum L. Privet.

L. *vulgare* L.

Much planted for hedges.

S(131 W. 15th St.)G.

Syringa L. Lilac.

S. *vulgaris* L. Common Lilac

Much planted for ornament and hedges; very persistent. From southern Europe.

S(1921 W. 3rd St., cultivated)G.

S. *persica* L. Persian Lilac

Occasionally seen in cultivation.

S(1328 Pershing Ave.)G.

S. *japonica* Dcne. Japanese Lilac-tree.

S(Medium size tree in cultivation at Vanderveer Park)G.

Gentianaceae

Gentiana L. Gentian

G. *crinita* L. Fringed Gentian

M(Wet ground of bog at Nelumbo Pond, Section 15, Lake Township)G.

G. *quinquefolia* L.

S(Oakton)Ross.

(X)Barnes.

G. *puberula* Michx.

Dry prairie remnants and dry sandy fields; infrequent.

S(Pine Hill Cemetery)G.

Ill. RI(Sandy prairie south of Meredosia)G.

G. *Andrewsii* Grieseb. Closed or Bottle Gentian.

S(Oakton)Ross; (Eldridge)Barnes.

M(Wet ground of bog at Nelumbo Pond, with *G. crinita*)G.

G. *Saponaria* L. Soap-wort Gentian

S(Reported by Dr. Parry "in the vicinity of Davenport, Sept. 16, 1847." A sheet in the Parry collection at ISC bears this inscription in Parry's hand; "*Gentiana Saponaria* L., Iowa and Minnesota, 1848.")

G. *flavida* Gray. Yellow Gentian

G. *alba* Muhl. of Fl.

Damp shaded banks and woods; rare.

M(Pine Mill, Sept. 1892)Barnes.

Ill. Henry Co.(Railroad cut north of Colona)G.

Apocynaceae

Vinca L.

V. *minor* L. Periwinkle. "Myrtle"

Occasionally used as a ground cover for shaded areas.

S(2202 N. Harrison St.)G.

Apocynum L. Dog-bane.

A. *androsaemifolium* L. Spreading Dog-bane.

S(Dry hillside clearing; Devil's Glen)G.

M(Opening on a wooded hill, Wild Cat Den)G.

A. *cannabinum* L. Indian Hemp.

Frequent along roadsides, railroads, open fields, moist or dry ditches.

S(Pine Hill Cemetery)G.

A. *cannabinum* L. var. *glaberrimum* A.DC.

In similar situations.

S(Pine Hill Cemetery; Credit Island)G.

M(Illinoian prairie east of Bayfield)Shimek.

Ill. RI(Rock Island Arsenal)Ross.

A. *cannabinum* L. var. *pubescens* (Mitchell)A.DC.

S(In a moist swale, Pine Hill Cemetery)G.

A. *sibiricum* Jacq.

S(Prairie remnant, Pine Hill Cemetery; Low meadow northwest of Nahant)G.

Louisa Co.(Big Sand Mound)Shimek.

(A. *sibiricum* Jacq. var. *Farwellii* (Farw)Fern.

Densely tomentose — pubescent on leaves and stem.

Louisa Co.(Big Sand Mound)G.

X A. *medium* Greene

A natural hybrid between *A. cannabinum* and *A. androsaemifolium*.

S(Roadside near crossing of old BCR & N railroad and Telegraph Road)G.

Asclepiadaceae

Asclepias L. Milkweed

A. *tuberosa* L. Butterfly-weed

Infrequent; dry prairies and roadsides.

S(R. 6 northwest of Davenport)G.

Ill. RI(Van Dyke Island)Ross.

A. *purpurascens* L. Purple Milkweed

Infrequent.

M(Edge of dry thicket, Wild Cat Den)G.; (Wild Cat Den)

Barnes.

- Ill. RI(Rock Island Arsenal; Open woodland path along bluff, Watch Tower)Ross.
- A. *incarnata* L. Swamp Milkweed
Frequent on low grounds as, damp ditches, moist shores, moist meadows.
S(Credit Island; Marsh at McCausland, and road to it)G.
M(Montpelier)G.
- (A. *quadrifolia* L.
Reported in the Fl. from three places in Muscatine Co., but no specimens have been located.
Cedar Co.("Gray's Timber, June 5, 1953")F. Lord, SUI.
- A. *exaltata* L. Poke-milkweed
A. *phytolaccoides* Pursh of Fl.
Rich woods; infrequent.
M(Wild Cat Den)Barnes; G.
Ill. RI(Rock Island Arsenal)Ross; G.
- A. *Sullivantii* Engelm. Sullivan's Milkweed.
S(Upland field north of Buffalo, east side of road, north of the cemetery)G.
(X)Barnes.
- A. *syriaca* L. Common Milkweed.
A. *Cornuti* Decaisne of Fl.
Frequent; dry roadsides and waste places.
S(Buffalo)G.
- A. *amplexicaulis* Sm.
A. *obtusifolia* Michx of Fl.
In sandy soils, along roadsides and prairies.
S(Pine Hill Cemetery)Ross; G.; (Winfield Township)G.
Louisa Co.(Big Sand Mound)G.
Ill. RI(Cordova)G.
- A. *verticellata* L. White Milkweed.
Dry open woods, roadsides and fields. Frequent.
S(Credit Island)G.; (Devil's Glen)Ross.
M(Wild Cat Den)G.
- A. *Meadii* Torr.
S(A single plant collected by E. O. Ross on the prairie relic at Pine Hill Cemetery on June 24, 1889.)
- Ampelamus* Raf.
A. *albidus* (Nutt) Britt. Honey-vine. Bluevine.
S(Along railroad tracks north of Allen's Grove)G; (Climbing over alley hedge on Mississippi Ave.)Morrissey.
- Cynanchum* L. Black Swallow-wort
C. *nigrum* (L.)Pers.
S(Moist ravine back of W.E. Peck residence, 1102 Kirkwood Blvd.)J. & S. Peck, 1959.
- Acerates* Ell. Green Milkweed.
A. *hirtella* Pennell.
A. *longifolia* Ell. of Fl.
A. *floridana* of auth.
Sand fields, sandy roadsides and true prairie remnants; infrequent.
M(Muscatine Co.)Shimek; (Pleasant Prairie)Barnes.
Louisa Co.(Big Sand Mound)G.

- A. *viridiflora* (Raf.)Eat.
Dry sandy fields and prairies, sandy roadsides; more frequent than the last.
S(Oakton)Ross.
M(Cedar River region)G.
Louisa Co.(Big Sand Mound)G.
Ill. RI(North of Cordova)G.

Convolvulaceae

- Breweria* R.Br.
B. *Pickeringii* (Torr.)Gray.
"Sandy soil along the railroad at Fruitland; local."Fl.
M("Fruitland Station, in sandy soil along CRI & P railroad, August 20, 1892.")Reppert.
(X)Barnes.
- Quamoclit* Moench.
(Q. *coccinea* (L.)Moench. Red Morning Glory
Ipomoea coccinea L. of Fl.
"Spontaneous near an old garden, Blue Grass."Fl.
(X)Barnes. No definitely located specimen has been found.
- Q. *vulgaris* Choisy
Ipomoea Quamoclit L. Cypress-vine.
Occasionally cultivated for ornament.
S(1428 Main St.)G.
- Ipomoea* L. Morning Glory
I. *hederacea* (L.)Jacq.
Dry waste places; rare or infrequent.
S(Switch yards west of Schmidt's Crossing)G.
Louisa Co.(Sandy roadside at the Big Sand Mound)G.
- I. *purpurea* (L.)Roth. Purple Morning Glory. Common Morning Glory
I. *purpurea* Lam. of Fl.
Freely planted; occasionally escaped.
S(14th & Brady Sts.)G.
- I. *pandurata* (L.)G.F.W.Mey. Wild Potato-vine.
"Eroded hillsides and dry river banks, Muscatine and Fairport; infrequent."Fl.
M(Fairport)Reppert.
Ill. RI(Clearing on the bluff, Watch Tower)G.
- I. *lacunosa* L.
"Islands and banks of the Mississippi; frequent."Fl.
M("Along shores of the Mississippi above Muscatine, 1891.")Reppert, SUI.
- Convolvulus* L. Bindweed
C. *spithameus* L. Low Bindweed.
S(Blue Grass, 1891)Barnes.
- C. *sepium* L. Hedge-Bindweed. Wild Morning Glory
S(Neglected garden, Lau Farm)G.
- C. *americanus* (Sims)Greene.
Fields, roadsides; frequent.
S(Credit Island; Buttermilk road)G.

- C. repens L.
C. sepium L. var. repens Gray of Fl.
S(Devil's Glen, June, 1895)Barnes.
- C. arvensis L. Field Bindweed
Fields, roadsides, waste places; frequent.
S(N. Harrison St. Road)G.; (Eldridge)Barnes.
M(Muscatine Co.)Reppert.
- C. incanus Vahl.
Plant canescent, leaves linear-oblong, with villous-ciliate margins.
Western; possible railroad migrant.
M("Muscatine City, Sept. 1895.")Collector unknown.
- Cuscuta L. Dodder
- C. Polygonorum Engelm.
C. chlorocarpum Engelm. of Fl.
"Low grounds along streams; common. Often on Xanthium and
low willows."Fl.
S(East Davenport)Barnes.
- C. Coryli Engelm.
C. inflexa Engelm. of Fl.
"On Compositae and hazel; infrequent."Fl.
S(Blue Grass)Barnes.
M(Muscatine Co.)Barnes.
- C. Gronovii Willd.
"Low grounds, infrequent. On Compositae."Fl.
S(Fairport)Ross.
(X)Paarmann-Sheldon.
- C. cuspidata Engelm.
M("Sandy prairie near Fruitland.")Barnes.
- C. Cephalanthi Engelm.
C. tenuiflora Engelm. of Fl.
"On willows, Compositae and Cephalanthus; frequent."Fl.
M("Along the Mississippi River three miles above Muscatine (no
date)Reppert, SUI. ("Muscatine Co., August 1891.")Reppert,
SUI.
- C. glomerata Choisy.
"Low grounds; frequent. On tall Compositae."Fl.
S(Waste ground west of Mt. Nebo Cemetery)G.; (Scott Co.)
Melville.

Polemoniaceae

- Polemonium L. Jacob's Ladder. Greek Valerian
- P. reptans L.
Rich low or upland woods; frequent.
S(Allen's Grove)G.
M(Wild Cat Den)G.
- Collomia Nutt.
C. linearis Nutt.
M("Sandy prairie along the railway, Wilton to Moscow, June
28, 1917.")Shimek, SUI.

- Phlox L. Phlox
- P. subulata L. Moss-pink.
Cultivated as a border plant.
S(1416 Brady St.)G.
- P. bifida Beck. Cleft-phlox.
S(Cultivated at 2004 Harrison St.)G.
M("Sandy open woods along the Cedar River near Moscow.")
Barnes.
Ill. RI(Dry eroded bluff at the Watch Tower.)G.
- P. divaricata L. Blue Phlox
Damp to dry open woods and borders; frequent.
S(Spencer Creek)G.; (Davenport)Ross.
M(Wild Cat Den)G.
Ill. RI(Watch Tower)G.
- P. pilosa L. Prairie Phlox.
Dry sandy prairies and sandy open woods; infrequent.
S(Pine Hill Cemetery)G.; (Oakton)Ross.
Ill. Whiteside Co.(Fulton)G.
- P. maculata L. Sweet William
Moist sandy soils; infrequent or rare.
S(Noels)Barnes; (Low sandy roadside, Section 9, Butler Town-
ship southwest ¼ of northwest ¼)G.
- P. paniculata L. Garden Phlox.
Infrequent in the wild; frequent in flower gardens.
S(Near the Cemetery on the Chapel Hill Road, an escape)G.
M(Wild Cat Den, low wooded floodplain of creek; roadside
ditch west of Wyoming Hill)G.

Hydrophyllaceae

- Hydrophyllum L. Water-leaf
- H. virginianum L. Virginia Water-leaf.
Frequent in moist woods.
S(Davenport)Ross.
M(Wild Cat Den)G.
- H. appendiculatum Michx.
M(Muscatine Co.)Shimek.
Ill. RI(Rock Island Arsenal)Paarmann-Sheldon.
- Ellisia L.
- E. nyctelea L.
Low open woods, frequent; also as a weed in waste places and dis-
turbed soil.
S(Roadside near Nobis' Farm)G.

Boraginaceae

- Anchusa L. Alkanet
- A. azurea Mill.
S("Roadside near Carmelite Monastery, Bettendorf, June 2,
1932.")Hauber.
- Onosmodium Michx. False Gromwell
- O. occidentalis Mack.
O. Caroliniana DC. var. molle Gray of Fl.
M(Muscatine Co.)Shimek.
Ill. RI(Rock Island Arsenal; Van Dyke's Island)Ross.

- Lithospermum L. Gromwell. Puccoon
 L. arvense L. Bastard Alkanet. Corn Gromwell
 M("Sandy soil along the railroad at Fairport, May, 1899.")Reppert, SUI.
- L. incisum Lehm.
 L. angustifolium Michx. of Fl.
 Dry prairies; infrequent.
 S(Noels; Pineo's Grove)G.
 M(Section 6, Lake Township)G.
 Ill. RI(Sandy field south of the Meredosia)G.; (Rock Island Arsenal)Ross.
- L. croceum Fern. Puccoon.
 L. hirtum Lehm. of Fl.
 L. carolinense (Walt.)MacM.
 Dry sandy soils; sandy prairies and dune fields; restricted but fairly frequent.
 S(Sandy soil near marsh northeast of St. Anne's Church)G.
 M(Prairie, Illinoian plain, east of Bayfield)Shimek.
- L. canescens (Michx.)Lehm.
 Prairie remnants; infrequent.
 S(Pine Hill Cemetery)G.; (Eldridge)Barnes; (Davenport)Ross.
 M(Wilton)Shimek.
- Myosotis L. Forget-me-not
 M. scorpioides L. Forget-me-not.
 Cultivated and occasionally escaped.
 S(Wet pond shore, Duck Creek Park)G.
- M. verna Nutt.
 Dry sandy soils; infrequent.
 S(Credit Island)G.
 M(Saulsbury Bridge)G.; (Muscatine Co.)Shimek.
 Ill. RI(Rock Island Arsenal)Ross.
- Cynoglossum L. Hound's tongue. Beggars' lice.
 C. officinale L.
 Infrequent; pastures and grassy waste places.
 S(Pasture, St. Vincent's Home; pasture northwest of Buffalo; meadow northwest of Mercy Hospital)G.
 M(Fairport)G.
 Ill. RI(Watch Tower)Ross; (Rock Island Arsenal)Melville.
- Mertensia Roth. Blue-bells
 M. virginiana (L.)Pers.
 Rich wooded bottomlands and clearings; low creek-terraces; frequent.
 S(Spencer Creek)G.; (Duck Creek Park)Ross.
 M(Wild Cat Den)G.
- Lappula Moench. Stick-seed
 L. echinata Gilib.
 Echinosperrum Lappula Lehm. of Fl.
 S(Burnside Woods)Barnes.
 Ill. RI(Rock Island Arsenal)Ross.
- Hackelia Opiz. Stick-seed.
 H. virginiana (L.)I.M. Johnson.
 Roadsides and waste places; infrequent.
 S(Pine Hill Cemetery; Fejervary Park)G.; (Davenport)Ross.
 M(Wild Cat Den)G.

Verbenaceae

- Verbena L. Verbena. Vervain.
 V. urticifolia L. White Verbena
 Dry open places and open woodlands; infrequent.
 S(Duck Creek Park; Devil's Glen; Waverly Road)G.
- V. urticifolia L. var. leiocarpa Perry & Fern.
 S(Devil's Glen; Duck Creek Park)G.
- V. simplex Lehm. Narrow-leaf Verbena.
 V. angustifolia L. of Fl.
 Dry sandy fields and roadsides; infrequent.
 S(Devil's Glen)Ross; (Sandy field, 1½ miles northeast of St. Anne's Church)G.
 M(Sandy roadside along Road "M.")G.; (Moscow)Barnes.
- V. stricta Vent. Hoary Verbena.
 Dry open places, especially dry pastures on slopes; frequent.
 S(Davenport)Ross.
 M(Muscatine)Barnes; (Muscatine Co.)Shimek; Reppert.
- V. stricta Vent. var. albiflora Wadmond.
 The white-flowered form is frequent.
 M(Moscow)Barnes; Reppert.
- V. bracteata Lag. & Rodr. Long-bracted Verbena.
 V. bracteosa Michx. of Fl.
 Dry sandy roadsides in the country; along sidewalks and in alleys and waste places in towns.
 S(Boulevard, Masonic Temple; Alley, 400 W. 15th St.; Schmidt's Crossing)G.
 M(Muscatine Island)Reppert; (Adams)Shimek.
 Ill. RI(Sandy roadside at the "Oasis" crossroads)G.
- Hybrids.
 X V. stricta x V. simplex
 M(Moscow)Barnes; (Bayfield)Shimek; (Muscatine Co.)Reppert.
- X V. stricta x V. hastata
 S(Davenport)Ross.
 M(Bayfield)Shimek.
 (X)Barnes.
- X V. stricta x V. bracteata
 M(Moscow)Barnes.
- X V. hastata x V. urticifolia.
 M(Wild Cat Den)Barnes.
- X V. hastata x V. bracteosa
 M(Pine Creek near Wild Cat Den)G.
- X V. Aubletia x V. bracteata
 S(Garden of Minerva Benchhoof)Barnes.
- X V. hastata x V. simplex
 M(Moscow)Barnes.
- Lippia L. Fog-fruit
 L. lanceolata Michx.
 Muddy or wet grassy shores of pond; low wet grassy flats of bottomlands; frequent.
 S(Credit Island)G.; (Davenport)Ross.
 M(Muscatine Co.)Shimek.

Labiatae

Isanthus Michx.

- I. brachiatus (L.)BSP. False Pennyroyal
 I. caeruleus Michx. of Fl.
 Dry sandy or gravelly soils; infrequent.
 S(Bank of basin at Lock 14)G.
 M("Levee," Section 15, Lake Township)G.
 Ill. Whiteside Co.(Gravel field along R. 80)G.

Teucrium L. Germander

- T. canadense L. var. virginicum (L.)Eat. Wood-sage.
 Low moist to dry open grounds; frequent.
 S(Allen's Grove; Devil's Glen)G.
 M(Wild Cat Den)G.
 T. occidentale Gray var. boreale(Bickn.)Fern.
 Low sandy prairies; infrequent.
 S(Sandy marsh shore northeast of St. Anne's Church)G.

Scutellaria L. Skull-cap.

- S. ovata Hill var. versicolor (Nutt.)Fern.
 S. versicolor Nutt. of Fl.
 Open woods, mostly low but some what dry; infrequent.
 S(Credit Island)G.
 Ill. RI(Rock Island Arsenal)Ross; Paarmann-Sheldon; G.
 S. epilobifolia A. Hamilton
 S. galericulata L. of Fl.
 S(Noels, 1894.)Barnes, as S. canescens.
 M(Bog at Nelumbo Pond, Section 15, Lake Township)G.; (Cedar River region)Reppert.
 (S. incana Biehler was reported in the Fl. (as S. canescens Nutt.), "Banks of streams; frequent."; but the specimens are S. epilobifolia.
 S. lateriflora L. Mad-dog Skull-cap.
 Moist to wet shaded places and alluvial grounds; infrequent.
 S(Hollow at Fejervary Park; Lock 14; Sea Scout Camp south of LeClaire)G.
 M(South of Tice Bridge)G.
 S. nervosa Pursh.
 "Shady woods."Fl.
 S(Noels)Barnes.
 Ill. RI(Rock Island Arsenal)Ross.
 S. parvula Michx. (including var. mollis Gray of Fl.)
 Rather dry and sandy soils; often on slopes and banks; infrequent.
 S(Credit Island)Ross.
 M(Sterile hillside, Wild Cat Den)Barnes.
 Ill. RI(Rock Island Arsenal)Ross; Melville; (Watch Tower) Morrissey.
 S. Leonardi Epling.
 In same situations as the preceding.
 S(Pine Hill Cemetery; Oakdale Cemetery)G.; (Railway embankment at Buffalo)Barnes.
 M(Muscataine Co.)Reppert.

Marrubium L.

- M. vulgare L. Common Horehound.
 M("Waste places, Muscatine, Iowa, Sept. 20, 1892.")Reppert, SUI.

Agastache Clayt. Giant Hyssop.

- A. nepetoides (L.)Ktze. Yellow Giant-hyssop.
 Lophanthus nepetoides Benth. of Fl.
 Upland woods and borders; infrequent.
 S(Allen's Grove; Hickory Grove)G.
 M(Wild Cat Den)G.
 Ill. RI(Rock Island Arsenal)Ross.
 A. scrophulariaefolia (Willd.)Ktze. Purple Giant-hyssop.
 Lophanthus scrophulariaefolius Benth. of Fl.
 Woodland borders; infrequent.
 S(Devil's Glen)G.
 M(Moscow)Reppert.
 (X)Barnes.

Nepeta L. Catnip

- N. Cataria L.
 Fence rows, roadsides and waste places near dwellings; frequent.
 S(Davenport)Ross.
 M(Fairport, at the Fishery)G.

Glechoma L. Ground-ivy

- G. hederacea L.
 Nepeta Glechoma Benth. of Fl.
 S(Shady slope north of Mt. Nebo Cemetery)G.
 G. hederacea L. var. parviflora Druce.
 Nepeta Glechoma Benth. of Fl. mostly
 Open woods, clearings, and shady waste places; more frequent than the last.
 S(Oakdale Cemetery)G.
 Ill. RI(Watch Tower)G.

Prunella L. Self-heal.

- P. vulgaris L. var. lanceolata (Bart.)Fern.
 Roadsides, open grassy waste places, open woodlands; frequent.
 S(Pine Hill Cemetery; Duck Creek Park)G.
 (P. vulgaris L. var. hispida Benth. European Self-heal.
 Louisa Co.(Muscatine Island)Shimek.

Physostegia Benth. False Dragon-head.

- (P. virginiana (L.)Benth. var. arenaria Shimek. (See "The Prairies" p. 223).
 Dry sandy prairies; rare.
 Louisa Co.(Big Sand Mound)G.
 P. speciosa Sweet.
 P. Virginiana Benth. of Fl.
 Low moist shaded grounds along streams; infrequent. Occasional flower in gardens.
 S(Credit Island; Pine Hill Cemetery, an escape)G.; (Fairview) Ross.

Leonurus L. Mother-wort

- L. Cardiaca L. Common Mother-wort.
 Waste places and roadsides; frequent.
 S(Davenport)Ross.
 (L. Marrubiastrum L.
 Johnson Co.(Railroad tracks, Iowa City, 1943)R.C. Miller, SUI.

Lamium L. Dead Nettle.

- (L. amplexicaule L. Hen-bit.
"Cultivated grounds near East Davenport." Fl.
Reported in the Fl., but no specimen from our area has been located.
Johnson Co. ("Iowa City, June 22, 1942.") Bass, SUI.

Stachys L. Hedge-nettle

- S. germanica L. var. italica (Mill) Briq.
Dry grassy roadsides; collected twice.
S(Allen's Grove; Hickory Grove)G.
- S. palustris L. var. nipigonensis Jennings.
S. palustris L. in part, of Fl.
Low grounds; frequent.
S(Hickory Grove Road)G.
Ill. RI(Watch Tower)G.
- S. palustris L. var. homotricha Fern.
S. homotricha (Fern.) Rydb.
S. arenicola Britt. of Jones, Flora of Illinois
Moist grounds and ditches; frequent.
S(Walcott)G.; (Davenport)Ross; ("Nursery")Barnes.
- (S. aspera Michx.
S(without locality or data)G.
- S. hispida Pursh.
S. aspera Michx. in part, of Fl.
Wet sandy shores; infrequent.
M(Bank of fish pond, Fairport)G.
Louisa Co.(Wet sandy shore of lake at the Big Sand Mound)G.
- S. tenuifolia Willd. Fr.
Frequent in low moist grounds, alluvial woods and open thickets.
S(Credit Island; Allen's Grove)G.

Salvia L. Sage

- S. azurea Lam. var. grandiflora Benth. Blue Sage.
S(Sand bank at edge of gravel pit, Duck Creek Park)G.
M(Muscatine Co.)Barnes.
- S. reflexa Hornem. Rocky Mountain Sage.
S. lanceolata Willd. of Fl.
"Sandy soils, Muscatine Island; streets of Davenport and Muscatine." Fl.
S(Davenport)Ross.
M(Muscatine Co.)Barnes.
Ill. RI(Rock Island Arsenal)Melville.
- S. splendens Ker. Red Sage.
In frequent cultivation as a border for flower beds.
S(1624 Main St.)G.

Monarda L. Horse-mint.

- M. didyma L. Oswego Tea. Bee-balm.
S(Davenport)Ross.
Ill. RI(Rock Island Arsenal)Melville.
- M. fistulosa L. Wild Bergamot
Frequent. Roadsides, fence rows, border of woods. In dry soils.
S(Pine Hill Cemetery)G.; (Davenport)Ross.
M(Wilton)Shimek.

- M. fistulosa L. var. mollis (L.) Benth.
S(Pineo's Grove)G.

- M. punctata L. Dotted Horse-mint.
Dry sandy fields and roadsides; frequent.
S(Crescent Bridge)Paarmann-Sheldon; (Allen's Grove)G.
M(Muscatine Co.)Shimek; (Sandy pasture west of Brasenia Pond)G.
Louisa Co.(Big Sand Mound)G.

Blephilia Raf.

- B. hirsuta (Pursh) Benth. Wood-mint.
A woodland species; rare.
M(Muscatine Co., no further data)Reppert, SUI.
Louisa Co.(Columbus Junction, August 1, 1892)Reppert, SUI.
Ill. RI(Watch Tower)Barnes; G.

Hedeoma Pers. Mock Pennyroyal.

- H. hispida Pursh. Rough Pennyroyal.
Dry soils; sandy prairies; frequent.
S(Devil's Glen; Marsh northeast of St. Anne's Church)G.
Ill. RI(Watch Tower)G.
- H. pulegioides (L.) Pers. American Pennyroyal
Sandy soils; infrequent.
M(Fairport)G.; (Muscatine Co.)Reppert.

Pycnanthemum Michx. Mountain Mint.

- P. flexuosum (Walt.) BSP.
P. linifolium Push of Fl.
Mostly in rather dry and sandy soils; frequent.
S(Davenport)Ross; (Marsh northeast of St. Anne's Church)P.
M(Dry hillside, Wild Cat Den, with P. virginianum and P. pilosum)G.
- P. virginianum (L.) Durand.
Prairies and dry open woods; frequent.
S(Pine Hill Cemetery)G.; (Blue Grass)Barnes.
M(Wild Cat Den)G.
- P. pilosum Nutt.
P. muticum Pers. var. pilosum Gray of Fl.
Dry hillsides and clearings; infrequent.
S(Davenport)Ross.
M(Wyoming Hill; Wild Cat Den)G.

Mentha L. Mint.

- M. piperita L. Peppermint.
Occasional in cultivation and as a roadside escape.
S(Alley at 218 W. 17th St., an escape)G.
- M. spicata L. Spearmint.
M. viridis L. of Fl.
Occasional in cultivation and escaped, mostly to moist roadsides and shores.
S(Utica Ridge Road)G.
- M. arvensis L. var. villosus (Benth.) Stewart.
M. Canadensis L. of Fl.
Low moist grounds, wet pond shores, etc.; frequent.
S(Davenport)Ross; (Credit Island)G.
M(Muscatine Co.)Reppert.

M. *Cardiaca* Gerarde
S(Davenport)G.; (Railroad Tracks)Melville.

Lycopus L. Bugle-weed. Water-Horehound

L. *virginica*
Low moist grounds; frequent.
S(Credit Island)G.

L. *uniflora* Michx.
Low damp to wet places; often in some shade.
S(Marsh northeast of St. Anne's Church)G.
M(Wild Cat Den)Barnes; ("Slough, Muscatine Co., October, 1894.")Reppert, SUI.

L. *rubella* Moench.
"River banks; frequent." Fl. I have never met with it.
S(Blue Grass)Barnes.

L. *americanus* Muhl.
L. *sinuata* Ell. of Fl.
Moist soils, especially if sandy; frequent.
S(Credit Island; Pine Hill Cemetery; Marsh northeast of St. Anne's Church)G.
M(Muscatine Co.)Reppert.

(*Perilla* L.

P. *fruticosa* (L.)Britt.
P. *ocymoides* L. of Fl.
"Escaped from cultivation near Blue Grass and persistent for over ten years." Fl.
No specimen from our area has been located.
Johnson Co.("City Park, Iowa City, Sept. 25, 1943.")SUI.

Solanaceae

Solanum L. Nightshade

S. *Dulcamara* L. Bittersweet
An occasional escape near dwellings.
S(Davenport)Melville; Ross.

S. *nigrum* L. Common Nightshade.
Grassy roadsides, open woods, shaded waste places; infrequent.
S(Davenport)Ross; (Pine Hill Cemetery)G.

S. *carolinense* L. Horse-nettle.
Sandy fields, roadsides and waste places; infrequent.
S(Pine Hill Cemetery)G.
Ill. RI(Sandy roadside north of Cordova)G.

S. *rostratum* Dunal. Buffalo-bur.
Roadsides; infrequent.
S(Roadside west of Pine Hill Cemetery; Utica Ridge Road)G.
M(Fruitland)Barnes.

Physalis L. Ground Cherry.

P. *pruinosa* L.
Rare; only one collection made. All other collections of soft-pubescent plants have turned out to be *P. heterophylla*.
S(Abandoned city dump at 11th & Vine Sts.)G.

P. *ixocarpa* Brotero. Tomatillo.
S(Several plants from an abandoned garden plot at Schmidt's Crossing)G.

P. *longifolia* Nutt.
P. *subglabrata* Mack. & Bush.
P. *philadelphica* Lam. of Fl.
Fields, roadsides and waste places; our most frequent ground cherry.
S(Lock 14; Pine Hill Cemetery; Credit Island)G.

(P. *lanceolata* Michx.
A specimen without dates presumably collected by a high school student in the vicinity of Davenport.

P. *virginiana* Mill.
Dry sandy soils; infrequent.
S("Wapsie River, June 17, 1925.")Hauber.
Louisa Co.(Big Sand Mound)G.

P. *heterophylla* Nees.
Dry or sandy soils, often in some shade; frequent.
S(Pine Hill Cemetery; McCausland Cemetery)G.
M(Wild Cat Den)G.

P. *heterophylla* Nees. var. *ambigua* (Gray)Rydb.
In similar situations.
S(Noels)G.
M(Wild Cat Den)G.

P. *Alkekengi* L. Chinese Lanterns
Occasional in gardens; rarely escaped or persistent.
S(1313 Harrison St.)G.

Nicandra Adans. Apple of Peru.

N. *physalodes* (L.)Pers.
S(Spontaneous in a fence row at 222 W. 15th St.)G.

Lycium L. Matrimony Vine.

L. *halimifolium* Mill.
L. *vulgare* Dunal of Fl.
Formerly planted as hedges and now persisting or escaped.
S(Davenport)Ross; Melville.

Datura L. Jimsonweed.

D. *Stramonium* L. (including *D. Tatula* L.)
Occasional in waste places and in hog lots.
S(Blue Grass)G.
M(Moscow)Barnes.

D. *innoxia* Mill.
D. *Metel* L.
Occasional in cultivation.
S(1132 W. 4th St.)G.

Petunia Juss. *Petunia*.

P. *axillaris* (Lam.) BSP.
A frequent escape from cultivation.
S(Dump at 11th & Vine Sts.)G.
Ill. RI(Loud Thunder Forest Preserve, an escape)G.

Scrophulariaceae

Verbascum L. Mullein.

- V. Thapsus L. The Common Mullein.
Dry roadsides, bank and pastures; frequent.
S(Davenport)Ross.
Ill. RI(Rock Island Arsenal)Ross; G.

- V. Blattaria L. Moth Mullein.
Pastures, roadsides; rare or infrequent.
S(Terrace, 14th & Warren Sts.)G.
Ill. RI(Rock Island Arsenal)Melville.

- (V. Phlomoides L.
So far as known not yet found in our area.
Cedar Co.("Roadside 2 miles east of West Branch, August 24,
1950.")Fay, SUI.
Johnson Co.("Beck's pasture west of City Park, July 7, 1911.")
Shimek, SUI.

Linaria L. Toad-flax.

- L. vulgaris Hill. Butter-and-Eggs.
Roadsides and fencerows; frequent.
S(Credit Island; Hickory Grove Road)G.
M(Muscatine Co.)Reppert.

- L. canadensis L. Old-field Toad-flax.
Sandy prairies and dune fields; infrequent and restricted.
M("Sandy soil, Muscatine Co., June, 1891.")Reppert, SUI.
Louisa Co.(Big Sand Mound)G.
Ill. RI(Sandy prairie south of the Meredosia)G.

- L. dalmatica (L.)Mill.
S(A garden escape in a dry ditch on the Chapel Hill Road)G.

Antirrhinum L. Snapdragon.

- A. majus L.
An old-fashioned flower garden favorite.
S(Davenport)Melville.

(Chaenorhinum Reichenb. Dwarf Snapdragon.

- C. minus (L.)Lange.
Linaria minus (L.)Desf.
Along railroad tracks; not yet collected in Scott or Muscatine
counties, but no doubt soon will be.
Cedar Co.("Railroad tracks northwest of Mechanicsville, June
17, 1950.")Fay, SUI.; ("One mile west of Lowden, July 12,
1950.")Fay, SUI.

Scrophularia L. Fig-wort.

- S. marilandica L.
S. nodosa L. var. marilandica Gray of Fl.
Rich moist low woods and thickets; frequent.
S(Hickory Grove Road; Credit Island)G.; (Davenport)Ross.
M(Muscatine Co.)Reppert.

S. lanceolata Puesh.

- S. leporella Bickn.
Open woods and borders in drier or more sandy situations; infre-
quent.
S(Lock 14)G.
M(Sandy field east of the Brasenia Pond)G.
Cedar Co.(Rochester Cemetery)G.

S. nodosa L.

- M(Prairie remnant at Pine Creek crossing with R. 61)G.
Collections in successive years from a single station in the
prairie remnant at Pine Creek between the highway and the
railroad tracks. Our plant is *S. nodosa* L., not the var.
marilandica; it matched a specimen collected and identified
by Fernald in the Gray Herbarium.

(S. occidentalis (Rydb)Bickn.

- Inflorescence densely glandular.
Ill. RI(Rock Island Arsenal)Paarmann-Sheldon.

Chelone L. Turtle-head.

- C. glabra L. var. linifolia Coleman.
In bogs; infrequent.

- M(Hanging bog, Lindle's Woods; Bog at Nelumbo Pond, Section
15, Lake Township)G.; (Hanging bog along road south of Pine
Mill)G.; (Saulsbury Bridge)Barnes.

C. obliqua. Rose Turtle head.

- S(A single collection from a moist shallow ditch west of the
pond at Credit Island; with *Iris Shrevei*)G.

Penstemon Mitchell Beard tongue

P. Digitalis Nut. Fox-glove Penstemon.

- P. laevigata Sol. var. Digitalis Gray of Fl.
Moist grounds, often sandy, near streams, to rather dry borders
and openings; infrequent.
S(Devil's Glen)Ross; (Credit Island)G.

P. alluviorum Pennell.

- M(Alluvial flat, floodplain of east branch of Cedar River at
Saulsbury Bridge)G.

(P. calycosus Small.

- Cedar Co.(In a moist swale at Rochester Cemetery)G.

P. pallidus Small

- P. pubescens Solander of Fl.
Dry sandy prairies and roadsides; frequent.
S(McCausland)G.; (Davenport)Ross.
M(Moist sandy soil north of Brasenia Pond)G.
Ill. RI(Sandy roadside north of Cordova)G.

P. grandiflorus Nutt.

- Dry sand fields and dunes; rare.
M(Muscatine Co.)Reppert.
Louisa Co.(Big Sand Mound)G.
(Reported by Dr. Parry as "found in the vicinity of Davenport,
June 5, 1847. A specimen at ISC bears the data "Smoky Hill,
1867.")

Mimulus L. Monkey-flower

M. ringens L.

- Wet places generally; about pond shores, wet ditches and marshes;
frequent.
S(Devil's Glen)Ross; (Credit Island)G.
M(Bog south of Pine Mill)G.

Gratiola L. Hedge hyssop

- G. virginiana L.
Muddy pond shores; boggy meadows; infrequent.
S(Shallow pasture pond-margin south of road to McCausland)G.
M(Muddy flat under Saulsbury Bridge)G.
- G. neglecta Torr.
G. virginiana L. in part, of Fl.
Wet or boggy pond margins, etc., more frequent than the last.
S(Blue Grass)Barnes.
M(Boggy border of Nelumbo Pond)G.
Ill. Henry Co.(Pond in quarry bottom north of Colona)G.

Conobea Aubl.

- C. multifida (Michx.)Benth.
S("Mississippi River banks; frequent.")Barnes.

Bacopa Aubl. Water-hyssop.

- B. rotundifolia (Michx.)Wetts.
Herpestis rotundifolia Pursh of Fl.
Shallow muddy ponds; infrequent.
M("In shallow watery places, Muscatine Island, Sept. 6, 1895.")
Reppert.
Ill. RI(Shallow pasture pond near Illinois City)G.

Lindernia All. False Pimpernel.

- L. dubia (L.)Pennell.
Ilysanthes riparia Raf. of Fl.
Damp or muddy shores; infrequent.
S(Credit Island)G.
M(Pond near Tice Bridge)G.
Ill. Henry Co.(Pond in quarry bottom north of Colona)G.
- L. anagalloides (Michx.)Pennell.
Ilysanthes riparia Raf. in part, of Fl.
In similar habitats.
S(Credit Island)G.; (Devil's Glen)Ross.
M(Fairport ponds)G.
Louisa Co.(Big Sand Mound)G.

Wulfenia Jacq.

- W. Bullii (Eat.)Barnh.
Synthyris Houghtoniana Benth. of Fl.
In sandy soil; rare.
M("Sandy soil in open woods near Cedar River, April, 1890.")
Reppert.
Ill. RI(Sandy roadside, crossroads from R. 80 north of Cordova)G.

Veronicastrum Fabricius Culver's-root.

- V. virginicum (L.)Farw.
Veronica virginica L. of Fl.
Open woods and prairies; frequent.
S(Devil's Glen)Ross; (Credit Island; Sandy flat northeast of
St. Anne's Church)G.

Veronica L. Speedwell.

- V. scutellata L. Skull-cap Speedwell.
"Low wet grounds at Noels; Scott County."Fl.
S(Noels)Barnes.

- V. peregrina L. Purslane Speedwell.
Damp or dry waste grounds or fields; frequent.
S(Waverly Road)G.
M(Muscatine Co.)Reppert.

- V. peregrina L. var. xalapensis (HBK)St. John & Warren.
Stem and capsule glandular pubescent.
With the preceding.
M(Sandy pasture west of Brasenia Pond)G.

- V. arvensis L. Corn Speedwell.
Cultivated and fallow fields and waste places; occasional in city
lawns.
S(Lawn, Telegraph Road; Lock 14)G.; (Dauer's Woods)Barnes.
M(Dry roadside bank south of Pine Mill)G.; (Montpelier Town-
ship)Reppert.

Seymeria Puesh.

- S. macrophylla Nutt. Mullein-Foxglove.
Woods near streams; dry wooded hillsides; infrequent.
S(Moist open woods, Credit Island)G.
Ill. RI(Steep wooded hillside, Watch Tower)G.

Gerardia L. Gerardia

- G. aspera Dougl.
"Cedar River region; infrequent."Fl.
M("Muscatine Co., no further data")Reppert, SUI.
- G. purpurea L. Purple Gerardia
Damp sandy soils; infrequent or rare.
S(Noels)Barnes; (Moist sands at marsh northeast of St. Anne's
Church)G.
- G. tenuifolia Vahl. Slender Gerardia.
Moist low grounds, often sandy, often on pond shores; frequent.
S(Credit Island)G.; (Davenport)Ross.
M(Wild Cat Den)Barnes.
- G. tenuifolia Vahl. var. macrophylla Benth.
G. Besseyana Britt.
M("Muscatine, Iowa." No further data)Reppert.
- G. Skinneriana Wood.
G. tenuifolia Vahl. var. aspera Gray of Fl.
M(In a tiny prairie remnant on the crest of a wooded ridge,
Wild Cat Den)G.
- G. auriculata Michx.
"Low grounds and prairies." Fl.
M("Low grounds, south Muscatine, August 26, 1892.")Reppert, SUI.
("Native Illinoisian prairie south of Wilton, Sept. 2, 1922.")
Shimek, SUI.
- G. grandiflora Benth. var. pulchra (Pennell)Fern.
M(On a high dry thinly wooded spur, Wild Cat Den, with Anten-
naria plantaginifolia and many mosses and lichens)G.; Barnes;
("Somewhat wooded old dune northeast of pond, 8 miles north-
west of Muscatine, Sept. 29, 1926.")Shimek, SUI.

Castilleja Mutis. Painted cup.

C. coccinea (L.) Spreng.

"Dry sterile hills and sandy prairies; becoming scarce." Fl.
I collected this plant in the grassy woods east of Fairview School
in 1907; I have not seen it in the field since.

M(Wild Cat Den) Barnes; (Muscatine Co.) Reppert.

Ill. RI(Watch Tower) Ross; Melville.

Pedicularis L. Lousewort

P. canadensis L. Common Lousewort

Prairie remnant; now rare, at least in Scott County. "Damp hill-
sides, open woods, etc; frequent." Fl.

S(Native prairie at Pine Hill Cemetery) G.; (Oakton) Ross;

(Prairie remnant west of St. Anne's Church) G.

M(Muscatine Co.) Reppert.

P. lanceolata Michx.

"Wet places." Fl.

S(Eldridge, Sept. 1892.) Barnes.

M(Bog at margin of Nelumbo Pond, Section 15, Lake Town-
ship) G.

Bignoniaceae

Campsis Lour. Trumpet flower

C. radicans (L.) Seem.

Tecoma radicans Juss. of Fl.

Introduced; escaped into moist woods and thickets near settle-
ments; quite frequent.

S(Credit Island) G.

Catalpa Scop. Catalpa

C. speciosa Warder.

Frequently planted and occasionally escaped.

S(Schuetzen Park) Paarmann-Sheldon; (Lau Farm) G.

(C. bignonioides Walt.

Infrequently planted.

Ill. RI(Southwest corner of 8th Ave. & 14th St.) Morrissey.

Martyniaceae

Proboscidea Schmidel Unicorn plant

P. louisianica (Mill) Thell.

S(Victor Randolph Farm, northeast ¼ Section 14, Pleasant Valley
Township, 1958) G.

Intentionally introduced about twenty years ago and now
established in the hog pasture.

Orobanchaceae

Orobanche L. Broom rape

O. uniflora L. One flowered Cancer-root

M("Rich woods near Muscatine. One plant, May, 1878.") Rep-
pert, SUI.

Lentibulariaceae

Utricularia L. Bladderwort

U. vulgaris L.

"Ponds and slow flowing waters of Muscatine County; frequent." Fl.

M(Moscow) Barnes; (Weiss' Slough) G.; (Muscatine Co.) Reppert.

U. gibbosa L.

Reported as U. biflora Lam. by Reppert. The specimen at ISC was
examined and redetermined by Thorne as U. gibbosa. I have not
seen it and accept the correction.

M("Ponds near Cedar River, October 1878.") Reppert, ISC.

Acanthaceae

Ruellia L. Ruellia

R. strepens L.

Infrequent; moist borders of low woods, rarely in moist open places.
S(Credit Island; Pine Hill Cemetery) G.

R. humilis Nutt.

R. ciliosa Pursh of Fl.

Dry, often rather sandy, open places and open woods; prairie rem-
nants; frequent.

S(Pine Hill Cemetery) G.

M(Wild Cat Den) G.

Phrymaceae

Phryma L. Lop Seed

P. leptostachya L.

Rich open woodlands; frequent.

S(Davenport) Ross.

M(Wild Cat Den) G.

Plantaginaceae

Plantago L. Plantain

P. cordata Lam.

S("In the vicinity of Davenport, April 29, 1847.") Dr. Parry, ISC.

P. major L. Common Plantain

Waste places, roadsides; a frequent weed.

S(Waste place, 15th & Harrison Sts.) G.

M(Muscatine Co.) Reppert.

P. rugelii Dcne. Rugel's Plantain

Waste places; frequent.

S(15th & Harrison Sts.; Duck Creek Park) G.

M(Muscatine Co.) Reppert.

P. lanceolata L. Rib-grass. English Plantain.

Roadsides, lawns, waste places; frequent.

S(Blue Grass) Barnes; (Roadside near Pine Hill Cemetery) Paar-
man-Sheldon.

M(Fairport ponds) G.

P. aristata Michx. Bracted Plantain.

P. patagonica Jacq. var. aristata, Gray of Fl.

In sandy soils; infrequent.

S(Little's Grove) Barnes.

M(Wild Cat Den) G.

P. purshii B.&S. Pursh's Plantain

Dry sandy places; sandy roadsides; infrequent.

S(Marsh northeast of St. Anne's Church) G.

M(Muscatine Co.) Shimek.

Ill. RI(Sandy roadside north of Cordova) G.

- P. virginica* L. Hoary Plantain.
Dry open places, pastures, in sandy soil; rare or infrequent.
S(Cronkleton's pasture at Allen's Grove)G.; (Wapsie)Barnes.
M(Muscataine Co.)Reppert.

Rubiaceae

- Galium* L. Bed-straw. Cleavers.
G. trifidum Michx. Sweet scented Bed-straw.
Mostly in rich moist woods; frequent.
S(Allen's Grove; Credit Island; Pine Hill Cemetery)G.
M(Wild Cat Den)G.
G. circaezans Michx. Wild Licorice.
Frequent in rich upland woods.
S(Devil's Glen)G.
Ill. RI(Rock Island Arsenal)Ross.
G. circaezans Michx. var. *hypomalacum* Fern.
Rich upland woods; frequent.
S(Allen's Grove; Woods north of Buffalo)G.
M(Wild Cat Den)G.; (Muscataine Co.)Reppert.
G. Aparine L. Goosegrass Cleavers.
Moist open woods, moist roadside ditches; damp places generally;
frequent.
C(Credit Island)G.; Ross.
Ill. RI(Rock Island Arsenal; Watch Tower)G.
G. obtusum Bigel.
Wet sedge meadows; moist alluvial woods; sandy open spaces near
streams; frequent.
S(In sand at Credit Island; prairie at Pine Hill Cemetery;
moist sedge meadow north of Nahant.)G.
G. concinnum T.&G. Pretty Bedstraw.
Woods and thickets rather rare.
S(Allen's Grove)G.
M(Wild Cat Den)G.; ("Rich woods, Moscow, June 14, 1891.")
Reppert, SUI.
G. tinctorium L. Wild Madder
G. trifidum L. var. *latifolium* Torr. of Fl.
Wet meadows; infrequent.
S(Sedge meadow north of Nahant)G.
(*G. boreale* L. Northern Bedstraw.
Collected in Cedar and Johnson counties.
Johnson Co.(Prairie along the railroad east of Iowa City, July
12, 1910)Shimék, SUI.

- (*Diodia* L. Buttonweed
D. teres Walt.
Ill. Whiteside Co.(Sandy field at Lock 13)G.

- Cephalanthus* L. Buttonbush
C. occidentalis L.
Damp sandy or silty alluvial soils of shores of ponds and streams;
frequent.
S(Marsh north of Allen's Grove)G.
M(Moscow)Barnes.

Houstonia L. *Houstonia*

- H. minima* Beck. Bluets.
Dry sandy openings in woods; dry sandy fields; quite infrequent but
sometimes abundant locally.
S(Camp McClellan)Whitaker; (Davenport)Ross.
M(Muscataine Co.)Shimek.
Ill. RI(Rock Island Arsenal)Melville; (Sandy roadside north of
Cordova)G.

Caprifoliaceae

- Diervilla* Duham. Bush-honeysuckle
D. Lonicera Mill.
D. trifida Moench. of Fl.
Dry rocky woods; rare.
S(Davenport)Ross.
M(Wild Cat Den)G.
Lonicera L. Honeysuckle
L. sempervirens L. Trumpet honeysuckle.
Occasional in cultivation.
S(Davenport)Melville; (11th & Gaines Sts., cultivated)G.
L. Periclymenum L.
A handsome garden species.
S(Cultivated, 1428 Main St.)G.
L. prolifera (Kirchn.)Rehd. Grape honeysuckle.
L. glauca Hill of Fl. ?
L. Sullivantii Gray
Dry open upland woods and wooded slopes; infrequent.
S(Allen's Grove; Devil's Glen; Indian Road)G.
L. dioica L. Limber Honeysuckle
M(Edge of woods, lower flat east of Pine Creek, Wild Cat Den)G.
L. japonica Thunb. Japanese Honeysuckle.
Occasional as an ornamental vine; rarely escaped.
S(Climbing on the fence at 11th & Brady Sts.)G.
Ill. Henry Co.(Roadside escape north of Colona)G.
L. Morrowii Gray
Frequently planted and occasionally escaped.
S(Escaped and strongly established in the ravine at Fejervary
Park)G.
L. tatarica L. Tartarian Honeysuckle
Frequently planted and occasionally escaped.
S(Also escaped into the ravine at Fejervary Park)G.
X *L. bella* Zabel
A hybrid of *L. tatarica* and *L. Morrowii*. Frequently planted.
S(131 W. 15th St.)G.

- Symphoricarpos* Duham.
S. albus (L.)Blake. Snowberry
S. racemosa Gray.
Frequently planted and sometimes escaped. A northern species.
S(131 W. 15th St.)G.

- S. orbiculatus Hook. Coralberry. Indian Currant
 S. vulgaris Michx. of Fl.
 Dry open wooded hillsides; dry exposed banks; infrequent.
 M(Dry wooded hill west of Muscatine; roadside embankment east of Saulsbury Bridge)G.
- S. occidentalis Hook. Wolfberry
 M("Along railroad tracks above Muscatine, July, 1897.")Reppert, SUL.
- Triosteum L. Horse Gentain.
 T. perfoliatum L.
 Infrequent. Dry open upland woods; thinly wooded pastures.
 S(Devil's Glen)G.; (Davenport)Ross.
- T. aurantiacum Bickn. Wild Coffee
 In similar situations; infrequent.
 M(Wooded sandy pasture east of Brasenia Pond)G.
- (T. illinoiense (Wieg)Rydb.
 Stems with glandular hairs.
 (X)Paarmann-Sheldon. Probably from Scott County.
- Viburnum L. Viburnum. Arrow-wood.
 V. Lantana L. Wayfaring tree.
 S(Vanderveer Park, cultivated)G.
- V. Lentago L. Sheepberry.
 Borders of woods; occasional.
 S(Allen's Grove)G.; (LeClaire)Barnes.
 M(Wild Cat Den)G.
- (V. Rafinesquianum Schultes. Downy Arrow-wood.
 V. pubescens of auth.
 Ill. RI(Rock Island Arsenal, cultivated)G.
- V. Rafinesquianum Schultes var. affine (Bush)House.
 S(Devil's Glen)Ross; (Spencer Creek)Paarmann-Sheldon.
- V. dentatum L. Southern Arrow-wood
 Several varieties are met with, all probably planted.
 S(Pine St. and Telegraph Road)G.
 M(Wild Cat Den)G.
 Ill. RI(Watch Tower)G.
- V. trilobum Marsh High-bush Cranberry
 Moist woods; occasional.
 S(Fejervary Park; Duck Creek Park)G.
- V. Opulus L. Guelder Rose
 Scarcely separable from the last.
 S(Cultivated, 1645 W. 12th St.)G.
- V. Opulus L. var. roseum L. Common Snow-ball-bush.
 S(Cultivated, 16th & Brady Sts.)G.
- Sambucus L. Elderberry
 S. canadensis L. Common Elderberry
 Thickets along borders of woods, fence rows; frequent.
 S(Davenport)Ross; (Near St. Anne's Church)G.
 M(Weiss Slough)G.

Valerianaceae

- Valeriana L. Valerian
 V. ciliata T.& G.
 V. edulis Nutt. of Fl.
 S(Allen's Grove)Barnes.
 Clinton Co.(Along the railroad east of DeWitt)Morrissey.

Dipsacaceae

- Dipsacus L. Teasel
 D. laciniatus L.
 S(Pine Hill Cemetery)Morrissey; G.
 From discarded funeral-wreaths. Apparently the dyes and gilding do not always destroy the vitality of the seeds.

Cucurbitaceae

- Cucurbita L.
 C. foetida HBK. Missouri Gourd.
 S(Switch yards west of Schmidt's Crossing)G.
- Sicyos L. Bur cucumber.
 S. angulata L.
 Riverbanks, damp alluvial woods and moist open places; frequent.
 S(Credit Island; Utica Ridge Road)G.
 M(Muscatine Co.)Reppert.
 Ill. RI(Rock Island Arsenal)Ross.
- Echinocystis T.&G. Wild Balsam apple
 E. lobata (Michx.)T.& G. Prickly Cucumber.
 Moist alluvial woods, river banks and moist ditches; infrequent.
 S(Davenport)Ross; (Utica Ridge Road)G.
 M(Wild Cat Den)G.

Campanulaceae

- Specularia Fabricius. Venus' Looking-glass
 S. perfoliata (L.)A.DC.
 Triodanis perfoliata (L.)Nieuwl.
 Dry soils, sometimes sandy, of banks, roadsides, open woods. Infrequent.
 S(Sandy soil near marsh northeast of St. Anne's Church; Lock 14)G.
- Campanula L. Bell flower
 (C. rapunculoides L. European Bell flower
 Occasionally seen in flower gardens in our area; rarely escapes.
 Linn Co.(Roadside bank near Mt. Vernon; an escape.)G.
- C. americana L. American Bell flower
 Moist upland and low woods; frequent.
 S(Devil's Glen)Ross; G.
 M(Wild Cat Den)G.
- C. aparinoides Pursh. Marsh Bell flower
 M(Hanging bog west of road to Pine Mill)G.
- (C. uliginosa Rydb.
 (X)Barnes. The identification is doubtful.
- (C. rotundifolia L. Hare bell.
 Johnson Co.("Turkey Creek, Sept. 30, 1931")Shimek, SUL.

Lobeliaceae

Lobelia L. Lobelia

- L. cardinalis L. Cardinal Flower
Moist shores and meadows; not very frequent.
S(Credit Island)G.; (Noels)Barnes.
M(Muscatine Co.)Reppert.
- L. syphilitica L. Blue Cardinal flower.
Low moist or wet grounds, marshes and ditches; frequent.
S(Davenport)Ross; (Fejervary Park ravine)G.
M(Wild Cat Den)G.
- L. spicata L. Spike Lobelia
Prairie remnants, sometimes rather dry or sandy; not infrequent.
S(Pine Hill Cemetery; Fejervary Park)G.
M(Wild Cat Den)G.
- L. inflata L. Indian Tobacco
In various habitats, mostly in dry, often sandy; open woods; infrequent.
S(Allen's Grove; Credit Island; Duck Creek Park)G.
M(Muscatine Co.)Reppert.

Compositae

Vernonia Schreb. Ironweed.

- V. fasciculata Michx.
Low meadows and pastures, moist waste places; frequent.
S(Credit Island)G.; (Davenport)Ross; (Blue Grass)Barnes.
M(Muscatine Co.)Reppert.
Ill. RI(Rock Island Arsenal)G.
- (V. altissima Nutt.
Ill. Henry Co.(Fence row north of Colona)G.
- (V. missurica Raf.
V. illinoensis Gleason.
Ill. Henry Co.(Fence row north of Colona)G.
- (V. baldwinii Torr.
(X)Barnes.

Eupatorium L. Thoroughwort Boneset. Joe-Pye Weed.

- E. maculata L. Spotted-stem Joe-Pye Weed.
Infrequent; in wet or boggy places.
S(McCausland marsh)G.
M(Bog, Wild Cat Den)G.
- E. purpureum L. Green-stem Joe-Pye Weed.
Frequent; in rich dry to moist open woods.
S(Devil's Glen; Credit Island)G.
M(Wild Cat Den)G.
Ill. RI(Watch Tower)G.
- E. altissimum L. Tall Thoroughwort
Prairies, woodlands and borders; less frequent than the last.
M(Wild Cat Den)G.
Ill. RI(Rock Island Arsenal)Ross; G.
(X)Barnes; Paarmann-Sheldon.

- E. perfoliatum L. Thoroughwort. Boneset.
Bogs, marshes, ditches, etc.; frequent.
S(Marsh northeast of St. Anne's Church)G.
Ill. RI(Watch Tower; Loud Thunder Forest Preserve)G.

- E. serotinum Michx. Late Eupatorium
Low moist open woods, bottomlands; frequent.
S(Credit Island; Allen's Grove)G.; (Davenport)Ross; (Marsh northeast of St. Anne's Church)G.
M(Wild Cat Den)G.
Louis Co.(Big Sand Mound)G.

- E. coelestinum L. Blue Boneset. "Ageratum."
Occasionally cultivated and escaped-in cemeteries.
S(Pine Hill Cemetery)G.

- E. rugosum Houtt. White Snake-root.
E. urticaefolium Reich.
E. ageratoides L. of Fl.
Frequent in moist or dry woods.
S(Credit Island; Koenig place)G.; (Davenport)Ross.
Ill. RI(Rock Island Arsenal)Paarmann-Sheldon.

Kuhnia L. False Boneset

- K. eupatorioides L. var. corymbulosa T.& G.
Prairie habitats, roadsides, open woods, frequent.
S(Pine Hill Cemetery; Koenig place)G.
M(Muscatine Co.)Reppert.

- (K. eupatorioides L. var. angustifolia Raf.
Ill. RI(Open woods along the bluff path, Watch Tower)G.

Liatris Schreb. Blazing-Star.

- L. pycnostachya Michx.
Moist prairies; not infrequent.
S(Pine Hill Cemetery)Paarmann-Sheldon; G.; (Oakton)Ross.
M(Durant)G.; (Muscatine)Reppert.
- L. aspera Michx.
L. scariosa L. Willd. of Fl.
Prairie habitats; sandy soils; frequent.
S(Pine Hill Cemetery)Ross.
M(Wild Cat Den)Barnes; G.
Louis Co.(Big Sand Mound)G.
Ill. RI(Cordova)G.

- L. cylindracea Michx.
Dry sandy soils; infrequent.
S(Oakton; Davenport)Ross; (Montpelier)Barnes.
M(Muscatine)Shimek; (Wild Cat Den)Reppert.

Grindelia Willd.

- G. squarrosa (Pursh.)Dunal. Gum Plant
Waste grounds and roadsides.
M("Fruitland Station, 6 miles south of Muscatine, August, 1894.")
Reppert, SUI.
(X)Barnes.

Chrysopsis Ell. Golden Aster.

- G. villosa (Pursh.)Nutt.
In very sandy and dry soils along roadsides and on dunes; frequent.
Locally.

S(Princeton)G.
Clinton Co.(Camanche)G.
Ill. RI(Cordova)G.

Solidago L. Goldenrod

- S. flexicaulis L. Broad-leaf Goldenrod
S. latifolia L. of Fl.
S(Devil's Glen)Ross.
M(Montpelier)Barnes; (Wild Cat Den)Barnes; G.; (Muscatine) Shimek.
- S. speciosa Nutt. Showy Goldenrod.
Borders of woods, thickets, prairies; infrequent.
S(Oakton)Ross.
M(Cedar River at BCR & N crossing; Pine Creek)Barnes.
- S. speciosa var. angustata T.& G.
In sandy soils in the open, along railroad tracks; infrequent.
S(Pine Hill Cemetery)G.
M(Muscatine)Shimek.
Ill. RI(In sand along the tracks north of Cordova)G.
(X)Barnes.
- S. missouriensis Nutt. var. fasciculata Holzinger. Missouri Goldenrod.
S. glaberrima Martens.
Prairie remnants and undisturbed fence-rows; infrequent. Our earliest goldenrod.
S(Oakton)Ross; (Pine Hill Cemetery; Utica Ridge Road; Marsh northeast of St. Anne's Church; Maysville)G.
Ill. RI(Along the tracks north of Cordova)G.
- S. patula Muhl. Rough-leaf Goldenrod
M(Cedar River at the old BCR & N railroad crossing)Barnes;
(Lindle's Woods)Thorne, SUI.
- S. nemoralis Ait. Old-field Goldenrod
Frequent on dry hillsides and banks; fond of loess exposures.
S(Pine Hill Cemetery; Noels)G.; (Devil's Glen)Ross.
M(Montpelier)Barnes; (Wild Cat Den)G.
- S. nemoralis Ait. var. Haleana Fern.
S(In sandy till in the gravel-pit, Duck Creek Park; Prairie remnant at 11th & Vine Sts., with S. gilvocanescens)G.
- S. longipetiolata Mach. & Bush.
S. nemoralis var. decemflora (DC.)Fern.
Dry sandy prairies and roadsides; infrequent.
S(Pine Hill Cemetery)G.
Ill. RI(Sands north of Cordova)G.
- S. ulmifolia Muhl. Elm-leaf Goldenrod
Frequent in dry upland woods.
S(Old Koenig place)G.
M(Wild Cat Den)G.; (Lindle's Woods)G.
Ill. RI(Rock Island Arsenal)Ross.

Collections were made on the old Koenig property of plants resembling *Solidago ulmifolia*, with narrower leaves, but with short floriferous branches extending down the stem in the axils of longer subtending leaves for a distance of 10 to 13 nodes below the main inflorescence; in this respect resembling *S. rugosa* var. *villosa*. This species is not attributed to Iowa; if

these plants are not *S. rugosa* they will be a very anomalous form of *S. ulmifolia*. A string-like stolon was uncovered for a distance of 27 inches.

X *S. ulmifolia* Muhl. X *S. gilvocanescens* (Rydb.)Smyth.

S(Sparsely wooded hillside, old Koenig property)G.

Both parents were present. The inflorescence combines the characteristics of both. The leaves are broader than in *S. gilvocanescens*, the serration more marked and coarser, the pubescence of the under surface much less dense and longer, as is also that of the stem, the reticulation of the veinlets of the leaves midway in coarseness between the two.

S. gilvocanescens ((Rydb.)Smyth. Canada Goldenrod

S. canadensis L. var. *gilvocanescens* Rydb.

S. Canadensis L. of Fl.

Dry fields and roadsides, open waste places.

Typical *S. canadensis* is not found here, and good examples of *S. gilvocanescens* are quite infrequent. Most of our common plants are intermediates between *S. gilvocanescens* and *S. altissima*, and can be regarded as hybrids.

S. altissima L. Tall Goldenrod

Prefers damp situations; roadside ditches, low grounds, etc.; but occasionally seen in dry sandy prairie soil.

Good examples of pure *S. altissima* are also infrequent; nearly all our common plants are hybrids with *S. gilvocanescens*.

S(Allen's Grove)G.

M(Section 9, Montpelier Township; Wild Cat Den)G.

S. altissima L. var. *procera* (Ait.)Fern.

A tall form with straight strongly ascending panicle-branches without recurving tips; probably of little taxonomic importance.

S(Open alluvial ground, Credit Island)G.

M(Wooded island below Muscatine)G.

S. gigantea Ait. Late Goldenrod.

S. serotina Ait. var. *gigantea* Gray of Fl.

Moist soils, low grounds; frequent.

S(Credit Island; Eldridge)G.

S. gigantea Ait. var. *leiophylla* Fern.

S. serotina Ait. of Fl.

Low damp grounds; frequent.

S(Credit Island; Noels)G.

S. Somesii Rydb.

A form of *S. gigantea* with the under surface of the leaves pubescent between the veins as well as on them. Probably a hybrid between *S. gigantea* and *S. gilvocanescens*. Fairly frequent.

S(Pine Hill Cemetery; Credit Island)G.; (Davenport)Barnes.

M(Wild Cat Den)G.; (Montpelier)Barnes.

A number of goldenrods are encountered in the field concerning whose identification it is difficult to be positive, be it on account of excessive variability within the species, or due to crossing and backcrossing for which some species have a marked propensity.

S. rigida L. Stiff Goldenrod

Native prairie habitats; fairly frequent.

S(Pine Hill Cemetery; Dixon)G.

Louisa Co.(Big Sand Mound)G.

M(Muscatine Co.)Reppert.

S. *Riddellii* Frank.

S(Eldridge, September 17, 1892)Barnes.
M(Low prairie, September 18, 1895)Reppert.

S. *graminea* L. var. *Nuttallii* (Greene)Fern.

Frequent in low moist grounds, especially sandy; occasionally in drier situations.

S(Oakton)Ross; (Eldridge road; marsh northeast of St. Anne's Church)G.

M(Muscatine Co.)Reppert.

Boltonia L'Her. *Boltonia*

(B. *latisquama* Gray.

In moist soil in thickets or open alluvial woods.
Louisia Co.(Big Sand Mound)G.

B. *latisquama* Gray var. *recognita* Fern. & Grisc.

B. *asteroides* of Fl. and most authors.

In moist sandy soils in thickets and open woods; frequent.

S(Allen's Grove; Credit Island)G.; (Buffalo)Barnes.

Ill. Henry Co.(Colona)G.

B. *latisquama* Gray var. *microcephala* Fern. & Grisc.

Aster L. *Aster*.

A. *umbelliformis* Burgess.*

*The correct name for this plant is debateable. Nees published *Aster Schreberi* with a short description in 1818. In 1906 Burgess in a monumental and scholarly work segregated Nees' aster into several species, among them *Aster umbelliformis* and *Aster Schreberi*, and gave full and accurate descriptions of each, with excellent illustrations. Burgess' is the first full and detailed description of the plant in question. However, Fernald has thrown the weight of his authority against Burgess' work by adopting the name *Aster Schreberi* of Nees. Burgess' name is entitled to precedence unless the new species *Aster umbelliformis* is adjudged invalid.

A. *curvescens umbelliformis* Burgess, in B & B 2nd Ed.

A. *Schreberi* Nees sensu Fernald in Gray 8th Ed.

A. *Chasei* G.N. Jones in Vascular Plants of Illinois.

A. *corymbosus* Ait. of Fl.

North-facing moist wooded slopes; rare.

S(Devil's Glen, July 22, 1887)Ross, as *Aster corymbosus*.

S(Devil's Glen, July 27, 1932)Hauber, as *Aster divaricatus*.

M("In a woodland about 2 miles north of Muscatine city; scarce; August 18, 1893.")Reppert, SUI, as *Aster corymbosus*.

M(Same locality? (Richman's Woods?) August, 1891)Reppert, SUI, as *Aster corymbosus*.

M("Moist wooded slope of fixed dune northwest quarter Section 7, Lake Township, August 9, 1952)Thorne, SUI, as *Aster furcatus*. A beautiful example.

M("Rich moist wooded slope, Lindle's Woods, Section, Section 7, Lake Township, September 3, 1954.")G.

Ill. RI(Loud Thunder Forest Preserve; moist north-facing wooded slope; August 24, 1956)G.

X A. *umbelliformis* Burgess X *Aster furcatus* Burgess.

M("Sandy wooded slope on large dune northeast of pond, eight miles northwest of Muscatine, September 24, 1927.")Shimek, SUI, as *Aster macrophyllus*. Both parents were present at this station. The determination is based on differences in the involucre, the bracts, the inflorescence, the shape of the upper leaves, the petioles, the pubescence, the teeth of the leaves, and the rootstock.

A. *furcatus* Burgess.

A. *macrophyllus* L. of Fl.

Wooded ravines and north-facing wooded slopes; more frequent than *A. umbelliformis*, but still rare.

M(Wooded north slope, Wild Cat Den; September 9, 1952)G.

M(North-facing wooded hill, Wild Cat Den; September 24, 1949)G.

M(Wooded hillside, Township 76; October 1, 1952)G.

M("Wooded bluff, Sweetland Creek; October 20, 1900")Shimek, as *Aster macrophyllus*.

M("Bog near base of large wooded sand dune northeast of pond, eight miles northwest of Muscatine; August 19, 1925")Shimek, SUI, as *Aster macrophyllus*.

M("Hilly woods, not frequent; September 10, 1901")Reppert, SUI, as *Aster macrophyllus*.

M("Muscatine Co., September, no year; not infrequent in wooded ravines.")Reppert, SUI, as *Aster macrophyllus*.

M("Wooded north-facing slope of fixed dune northwest quarter Section 7, Lake Township; September 27, 1952.")Thorne, SUI.

M("Upland woods, Wild Cat Den, September 11, 1826.")Shimek.

A. *azureus* Lindl. Azure Aster.

True upland prairies; frequent.

S(Pine Hill Cemetery)G.; (Blue Grass)Barnes.

M(Wild Cat Den)G.; (Muscatine Co.)Shimek.

A. *Shortii* Lindl. Short's Aster.

Frequent in dry open upland woods and borders.

S(LeClaire; Fairview)G.

M(Wild Cat Den)G.

Ill. RI(Watch Tower; Rock Island Arsenal)Ross.

A. *cordifolius* L. Blue Wood Aster.

Hilly woods; infrequent; not seen in Scott county.

M(Township Seventy-six)G.; (Muscatine Co.)Shimek.

A. *sagittifolius* Wedem. Arrow-leaf Aster.

Open upland woods and borders; frequent.

S(Oakton; Devil's Glen)Ross; (Allen's Grove)G.

M(Wild Cat Den)Barnes; G.; (Muscatine Co.)Reppert.

A. *Drummondii* Lindl. Drummond's Aster

Dry open woods and borders; occasionally along protected sandy roadsides and dry ditches. More frequent than the preceding; occasionally associated with it. In our area these asters are quite distinct; the following is the only intermediate or hybrid encountered.

S(Pineo's Grove; Waverly Road)G.

X A. *sagittifolius* Wedem. X A. *Drummondii* Lindl.

Intermediates or hybrids are rare in our region.

S(Old Koenig place)G. Our only collection.

A. *patens* Ait. Spreading Aster.

In our area only in gardens; promptly dies out.

S(Garden, 12th & Pershing Ave.)G.

A. *oblongifolius* Nutt. Oblong-leaf Aster.

Dry hills, banks and bluffs, in loess or sandy soils; occasionally on level sandy grounds; infrequent.

S("Bettendorf, September 26, 1914.")M. Marrin & P. Kleinfelder.

M("Hilltop; loess soils; Muscatine County, October 10, 1891.")Reppert. (as the var. *rigidulus* Gray).

- Ill. RI(Sandy prairie south of the Meredosia; Watch Tower, along the bluff path; railroad tracks north of Cordova)G.; (Rock Island Arsenal)Ross.
- (A. oblongifolus Nutt. var. rigidulus Gray.
Seems to be only a depauperate form growing in lean or gravelly soils.
Ill. RI(Sandy prairie south of the Meredosia)G.
- A. novae-angliae L. New England Aster.
Frequent; prefers low moist grounds, moist roadsides, ditches and fields; much less frequent on the drier uplands.
S(Pine Hill Cemetery; Waverly Road; Marsh northeast of St. Anne's Church)G.; (Blue Grass)Barnes.
M(Muscatine Co.)Shimek; (Wild Cat Den)G.
Ill. RI(Watch Tower)G.
- A. novae-angliae L. f. roseus (Desf.)Britt.
Situations like the preceding. There are many intermediates between purple and bright pink.
Not infrequent, especially in gardens.
M(Lake Township)Reppert.
S(1412 Brady St., cultivated)G.
- A. novae-angliae f. geneseensis House.
Flowers white. A single collection.
S(Interurban crossing at Telegraph Road)G.
- A. amethystinus Nutt.
A natural hybrid between A. novae-angliae L. and A. ericoides L.
S("A single clump in a ditch near Blue Grass."; no date)Barnes & Miller, SU1.
- A. prenanthoides Muhl. Crooked-stem Aster.
M(In alluvium on the creek-bank in woods, in Wild Cat Den. Known only from this station.)Reppert; Barnes; G.
- A. puniceus L. Red-stem Aster.
In moist to boggy grounds; quite infrequent.
M(Section 15, Lake Township)G.
- A. puniceus L. var. lucidulus Gray. Glossy-leaf Aster.
In moist situations with the last; infrequent.
S(Allen's Grove; Butler Township)G.
M(Section 15, Lake Township)G.; (Cedar River)Reppert.
- A. sericeus Vent. Silky Aster.
In very dry sandy grounds; sandy prairies; rare or infrequent.
S(Pine Hill Cemetery)Ross. Now extinct.
M(Muscatine Co.)Reppert; ("Native Illinoian prairie south of Wilton, 1922)Shimek.
Louisa Co.(Big Sand Mound)G.
Ill. RI(Dry prairie on the sand hills south of the Meredosia)G.
- A. laevis L. Smooth Aster.
Dry prairies and roadsides; infrequent; rapidly disappearing.
S(Pine Hill Cemetery)Ross; G.; (Railroad right-of-way south of Eldridge)G.; (Blue Grass)Barnes.
M(Prairies, Cedar River region)Reppert.
- A. pilosus Willd. Heath Aster.
A. ericoides L. of Fl.
Very frequent; in dry soils; roadsides, waste places, dry fallow fields.
S(Allen's Grove)G.; (Davenport)Ross.

- A. pilosus Willd. var. platyphyllus (T.& G.)Blekr.
A. ericoides L. var. villosus T.& G. of Fl.
Damp to dry situations; frequent.
S(Pine Hill Cemetery; Credit Island)G.
M(Wilton)G.
Ill. RI(Rock Island Arsenal)G.
- A. pilosus Willd. var. demotus Blake.
A. ericoides L. in part of Fl.
Dry places; quite infrequent.
S(Allen's Grove)G.
M(Muscatine Co.)Shimek.
Louisa Co.(Big Sand Mound)G.
- A. parviceps (Burgess)Mack & Bush.
S("Duck Creek Park, August 25, 1928.")Hauber.
- A. ericoides L. Wreath Aster.
A. multiflorus Ait. of Fl.
An upland prairie plant; prairie remnants, railway rights-of-way, dry roadsides and fence-rows; frequent.
S(Roadside, Wapsie bottoms; Eldridge; Pine Hill Cemetery)G.
M(Railroad tracks east of Wilton)G.
- A. ericoides L. f. Gramsii Behnke
Flowers blue; in similar situations; rare.
S(Eldridge Road)G.
M(Fairport)G.
- A. exiguus (Fern.)Rydb.
A. multiflorus Ait. in part, of Fl.
A. ericoides L. var. prostratus Blake.
In situations like A. ericoides; less frequent.
S(Oakton)Ross; (Eldridge Road)G.
M(Railroad tracks near Wild Cat Den; East of Wilton)G.
- A. dumosus L. Bushy Aster.
Moist shaded places in prairie soils; moist sandy thickets in open woods; infrequent or rare.
S(In the moist lee of a big spruce in native prairie, Pine Hill Cemetery)G.
M(Boggy ground, margin of Nelumbo Pond, Section 15, Lake Township)G.; a hybrid?
Louisa Co.(Big Sand Mound, in thickets and open woods along the sandy shore of the lake.)G.
- Several named varieties of A. dumosus are also found in the thickets along the sandy shore of the lake at the Big Sand Mound; namely
(A. dumosus L. var. strictior T.&G.
(A. dumosus L. var. cordifolius (Michx.)T.& G.
(A. dumosus L. var. gracilipes Wieg.

The following putative hybrids have also been collected here:

- (X A. dumosus L. x A. lateriflorus (L.)Britt.
(X A. dumosus L. x A. missouriensis Britt.
(X A. dumosus L. x A. pilosus Willd.
(X A. dumosus L. x A. simplex Willd.

In the hybrid swarm that is pullulating in this place the species of most frequent occurrence is Aster dumosus; and it appears to be utterly promiscuous in its mating habits.

See note under Aster missouriensis.

- (A. *vimineus* Lam.
Reported from Muscatine County by Reppert, and from Muscatine and Louisa Counties by Davidson, on the basis of four collections in the Herbarium at the State University of Iowa.

M(Muscatine Co., November, 1892)Reppert, (as *A. ericoides* or *A. vimineus*).

M(Roadbed along railroad in first mile south of creek, Wilton, September 27, 1924.)Shimek.

Louisa Co.("Sandy alluvial plain west of Sand Mound, northeast part of Louisa Co., September 25, 1909.")Shimek.

M("Hanging bog north of schoolhouse, 7 miles northwest of Muscatine, September 19, 1932.")Shimek.

The first three are referred by me to *A. dumosus*. The last is quite unrepresentative of *A. vimineus*; the short branches have upward curving tips, and the heads are very immature, with the ligules not yet fully spread out. I do not think *A. vimineus* should be attributed to the region on the evidence of this dubious specimen. The closest collection known to me is from Athens, Illinois, twelve miles northwest of Springfield, and is in the Davenport Public Museum Herbarium.

- A. *lateriflorus* (L.)Britt. Calico Aster. Starved Aster
A. *diffusus* Ait. of Fl.
Dry open upland woods and borders; frequent.
S(Fejervary Park, September 20, 1951; Waverly Road, September 28, 1949)G.

- A. *lateriflorus* (L.)Britt. var. *pendulus* sensu Wieg. not (Ait.)Burgess.
Frequent in the same situations as the last; our most frequent variety.
S(10th & Brown Sts.)G.
M(Wild Cat Den)G.
Ill. RI(Watch Tower)G.

- (A. *lateriflorus* (L.)Britt. var. *angustifolius* Wieg.
Habit resembling *A. vimineus*, for which it is easily mistaken.
Louisa Co.(Moist sandy soil in thicket, Big Sand Mound)G.

- A. *lateriflorus* (L.)Britt. var. *hirsuticaulis* (Lindl.)Porter.
Occasional in dry roadside ditches or dry woodland borders. Difficult to separate from *A. missouriensis*, having the pubescent leaves and stem of that species; and it may be a hybrid with it. The ligules are pinkish, the disk turns dark in age, and the disk corollas are goblets shaped, as in *A. lateriflorus*.

S(Duck Creek Park)G.

The var. *glomerellus* (T.& G.)Porter, with simple stem, large leaves and short flowering branches or glomerules in the axils, is occasionally seen. It appears to be a hybrid with *A. simplex*.

M(Wild Cat Den)G.

Louisa Co.(Big Sand Mound)G.

Ill. RI(Rock Island Arsenal)G.

A form seen usually in the open and growing three to four feet tall, has long rigid branches spreading at right angles to the stem with the flowers crowded into bunches, and appearing at times almost destitute of leaves may be the var. *bifrons* (Gray)Fern. of the older authors.

S(Allen's Grove; Credit Island)G.

- A. *missouriensis* Britt.* Missouri Aster
A. *pantotrichus* Blake
A. *diffusus* Ait. var. *thyrsoides* Gray of Fl.
A. *ontarionis* Wieg. sensu Fern. in Gray's 8th Ed.

Low moist alluvial grounds and wooded borders; damp places along roadsides, often in some shade; frequent.

S(Credit Island; Pine Hill Cemetery; Schmidt's Crossing)G.

Louisa Co.(Damp thickets along lake shore, Big Sand Mound)G.

Ill. RI(River flood-plain, Watch Tower)G.

Hybridizes freely with *Aster dumosus*:

S(Pine Hill Cemetery)G.

Louisa Co.(Big Sand Mound)G.

and with *A. lateriflorus*.

S(Pine Hill Cemetery)G.

Louisa Co.(Big Sand Mound)G.

The various forms of *Aster dumosus*, *Aster lateriflorus* and *Aster missouriensis* hybridize freely among themselves as well as with other asters, and all kinds of confusing intermediates may be encountered. The Barnes Herbarium contains dozens of such intermediate plants from the moist thickets along the sandy shore of the lake at the Big Sand Mound, many of them unnamed or attributed with reservation to putative parents.

- A. *praealtus* Poir. Willow Aster
A. *salicifolius* Ait. of Fl.
"Open woods, frequent."Fl. This is the only specimen of the species (not the variety) I have seen.
M("Muscatine Co.")Reppert.

- A. *praealtus* Poir. var. *subasper* (Lindl.)Wieg.
Damp places; woodland borders, roadside ditches; occasionally in drier places, as in fence-rows; frequent.
S(Fence-row, uplands west of Blue Grass; ditch on Telegraph Road)G.
M(Ditches along railroad west of Pine Creek)G.

- A. *simplex* Willd.
A. *paniculatus* Lam. of Fl.
Moist places, mostly in the open or in part shade; low grounds, ditches along roadsides or railways; frequent.
S(Credit Island; Fejervary Park; Pine Hill Cemetery)G.;
(Blue Grass)Barnes.
M(Damp soil along Mississippi)Reppert.

- A. *simplex* Willd. var. *ramosissimus* (T.& G.)Cronq.
A. *paniculatus* Lam. var. *bellidiflorus* Britt. of Fl.
In damp places; often in woodland borders; infrequent.
S(McCausland; Credit Island)G.
M("Low grounds, Nichols.")Reppert.

*The name *Aster ontarionis* to designate this plant is unacceptable. I am not persuaded that the old name *Aster missouriensis* (or for that matter its successor *Aster pantotrichus*) should be superseded. But if another name is desirable it should be some other than *Aster ontarionis*: its author having plainly indicated that it was not to apply to *Aster missouriensis*. If Fernald required a new name, after apparently finding Wiegand's new species invalid, he should also have rejected its name.

- A. *simplex* Willd. var. *interior* (Wieg.)Cronq.
A. *Tradescantii* L. of Fl.
Low grounds; rare.
S(Marshy ground east of Schoolhouse north of Allen's Grove)G.
Louisa Co.(Thicket, moist sand south of lake, Big Sand Mound)G.

- A. *tataricus* L. Tartarian Aster
In cultivation at 17th & Main Sts. Up to six feet tall, with immense basal leaves. Blooms in the last week in October.
S(Cultivated, 17th & Main Sts.)G.

- A. *ptarmicoides* (Nees) T. & G.
"Dry sandy prairies, Bayfield." Fl.
S(Oakton) Ross.
- A. *umbellatus* Mill. Flat-top Aster.
Marshes, bogs and damp sandy places; infrequent.
S(Sandy border of marsh northeast of St. Anne's Church; Damp
sandy roadside, Section 6, Butler Township) G.
M(Bog at Nelumbo Pond, Lake Township) G.
- A. *linarifolius* L. Stiff Aster.
Sandy prairies and dune-fields; restricted; rare.
M("Sandy open woods, Cedar Township, September 1892") Reppert, SUI.
Louisa Co.(Big Sand Mound) G.
Ill RI(Sandy field along R. 80 at the crossroad north of Cordova) G.
- Erigeron L. Fleabane
- E. *pulchellus* Michx. Robin's Plantain.
E. *bellidifolius* Muhl. of Fl.
Prairie remnants; abundant at Pine Hill Cemetery.
S(Pine Hill Cemetery) Melville; G.
M(Wild Cat Den) G.; Barnes.
- E. *philadelphicus* L. Philadelphia Fleabane
A frequent weed in moist meadows and damp open woods.
S(Credit Island; Pine Hill Cemetery) G.
- E. *annuus* (L.) Pers. Daisy Fleabane White-top.
Frequent in moist grounds, roadside ditches, etc., in the open or in slight shade.
S(Marsh northeast of St. Anne's Church; Waverly Road; Fejervary Park) G.; (Blue Grass) Barnes.
- E. *strigosus* Muhl. Narrow-leaf White-top.
Frequent in dry sandy open habitats; sandy prairies and fields; rare along roadsides.
S(Koenig place; Pine Hill Cemetery) G.
Ill. RI(Sandy prairie south of the Meredosia) G.
- E. *strigosus* Muhl. var. *septentrionalis* Fern.
An occasional weed in the city; blossoms three weeks later than the species.
S(14th & Main Sts.; 1620 Main St.) G.
- E. *canadensis* L. Horse-weed. Butter weed.
Frequent in dry waste places in the open.
S(Fairmount Cemetery; 8th & Brady Sts.) G.
- E. *divaricatus* Michx. Spreading Fleabane
Dry neglected terraces and dry pastures; infrequent.
S(Terrace, 11th & Brady Sts.; Lock 14) G.
M(Oepping's Pond, Moscow) Barnes.
- Antennaria Gaertn. Everlasting. Pussy-toes.
- A. *plantaginifolia* (L.) Hook.
Dry fields and banks; frequent.
S(Pine Hill Cemetery; Fejervary Park) G.
M(Wild Cat Den) G.
Ill. RI(Watch Tower) G.

- A. *neglecta* Greene.
Dry soils on slopes and banks; dry prairies; frequent.
S(14th & Brady Sts.; Oakdale Cemetery) G.
M(Wild Cat Den; Saulsbury Bridge) G.
- (Filago L.
- F. *germanica* (L.) Huds. Herba Impia.
Johnson Co.(As a weed along a building near the Hawkeye Office, August 4, 1952) Morrissey, SUI.
- Gnaphalium L. Cudweed.
- G. *obtusifolium* L.
G. *polycephalum* Michx. of Fl.
Dry sandy prairie habitats; frequent.
S(Blue Grass) Barnes; (Noels) G.
M(Wild Cat Den) G.; (Muscatine Co.) Shimek.
- (*Anaphalis margaritacea* (L.) Clarke was reported from Iowa county by Easterly and from Cedar County by Fay. However neither reports *Gnaphalium obtusifolium*.)
- Inula L. Elecampane
- I. *Helenium* L. Elecampane
M("Muscatine, Iowa, July 18, 1876.") Reppert, SUI.
- Iva L. Marsh-elder
- I. *xanthifolia* Nutt.
M(Muscatine, 1892) Reppert.
- Ambrosia L. Ragweed
- A. *trifida* L. Great Ragweed. (including var. *integifolia* T. & G.)
Fields, roadsides, stream-banks and waste places generally; common.
S(Fairmount Cemetery; 15th & Harrison Sts.) G.
M(Muscatine) Shimek; Reppert.
- A. *artemisifolia* L. var. *elatior* (L.) Descourtils.
A. *elatior* L.
Common everywhere.
S(Credit Island; Pine Hill Cemetery; 7th & Brady Sts.) G.
- A. *psilostachya* DC. var. *coronopifolia* T. & G.
A. *coronopifolia* T. & G. Western Ragweed.
Restricted to dry sandy areas; dunes and sandy prairies; often abundant locally.
S(Marsh northeast of St. Anne's Church) G.
M(Muscatine) Reppert.
Ill. RI(Cordova) G.
- Xanthium L. Cocklebur.
- X. *pennsylvanicum* Wallr. Smooth-fruited Cocklebur.
S(Credit Island) G.; (Riverbank at West Davenport) Barnes.
- X. *italicum* Moretti. Hairy-fruited Cocklebur.
River banks, waste and cultivated fields, etc.; frequent.
S(City dump at 11th & Vine Sts.; Switchyard at Schmidt's Road) G.
- X. *varians* Greene.
S("Banks of Mississippi, West Davenport, September 9, 1896.") Barnes.

- (X. speciosum Kearney
(X)Barnes.
- Polymnia L. Leafcup.
P. canadensis L. var. radiata Gray.
M("Saulsbury Bridge, June 25, 1891")Reppert, SUL; (Muscatine Co., July, 1894)Reppert.
- Silphium Rosin-Weed.
S. perfoliatum L. Cup-plant.
Low grounds along roadsides. Open wooded, hillsides; frequent.
S(Davenport)G.; Ross.
M(Wild Cat Den)G.
Ill. RI(Illinois City)G.
- S. integrifolium Michx. Entire-leaf Rosin-weed.
Frequent in low places in prairies, often along railroads.
S(Oakton)Ross; (Pine Hill Cemetery; Dixon)G.
M(Muscatine)Shimek.
- S. integrifolium Michx. var. Deamii Perry.
Involucre glandular-pubescent.
S(Pine Hill Cemetery)G.
- S. laciniatum L. Compass-plant.
Dry prairie remnants; infrequent.
S(Pine Hill Cemetery; Dixon)G.; (Oakton)Ross.
- Parthenium L. Feverfew. Wild Quinine.
P. integrifolium L.
Upland prairies; infrequent, but at times abundant locally.
S(Pine Hill Cemetery)G.
(X)Barnes; Paarmann-Sheldon.
- Heliopsis Pers. Ox-eye. Heliopsis
H. helianthoides (L.)Sweet.
H. laevis Pers. of Fl.
Prairies and roadsides; infrequent.
S(Blue Grass; 16th & Marquette Sts., cultivated)G.
- H. helianthoides Sweet var. scabra Dunal. Rough Heliopsis
H. scabra Dunal of Fl.
Prairie habitats; woodland borders; railroad tracks; frequent.
S(Pine Hill Cemetery; Blue Grass; Eldridge)G.
M(Lake Township)G.
- Eclipta L.
E. alba (L.)Hassk.
Muddy pond shores; not infrequent.
S(Credit Island)G.; (Blue Grass; Davenport)Barnes.
M(Muscatine Co.)Shimek.
- Rudbeckia L. Cone-flower.
R. laciniata L. Cut-leaf Cone-flower.
Low moist bottomlands; ditches and borders; infrequent.
S(Davenport)Ross; Allen's Grove)G.
M(Wild Cat Den)G.
- R. subtomentosa Pursh. Sweet Cone-flower.
Low sandy or alluvial grounds or prairie remnants; infrequent.
S(Allen's Grove; Noels)G.
M(Muscatine Co.)Shimek.
Ill. Henry Co.(Colona)G.
- R. triloba L. Brown-eyed Susan
From moist borders of low woods to dry hilly open woods; frequent.
S(Devil's Glen)Ross; (Walnut Hill)G.
M(Bloomington Township; Weiss' Slough; Lindle's Woods)G.
- R. hirta L. Brown-eyed Susan
R. serotina Nutt. of Gray, 8th Ed.
Dry prairies, fields and clearings; very frequent.
S(Pine Hill Cemetery)G.
M(Bloomington Township)G.
- R. hirta L. var. pulcherrima (Farw.)
Ligules red at the base.
S(Pine Hill Cemetery)G.
M(Prairie remnant at Pine Creek along R. 61)G.
- Echinacea Moench. Purple Cone-flower
E. purpurea (L.)Moench. Purple Cone-flower.
Our specimens are all from cultivated plants or escapes.
S(Walnut Hill; 425 W. 14th St.)G.
- E. pallida Nutt. Pale Cone-flower.
True upland prairies; infrequent.
S(Oakton)Ross; (Pine Hill Cemetery)G.
- (E. angustifolia DC. Narrow-leaf Cone-flower.
Reported in the Fl., but no specimen from our area can be located.
- Ratibida Raf. Prairie Cone-flower.
R. pinnata (Vent.)Barnh. Gray-headed Cone-flower.
Lepachys pinnata Torr. & Gray of Fl.
Prairies, fields and roadsides; frequent.
S(Pine Hill Cemetery; Road to Donahue)G.
Ill. RI(Watch Tower)G.
- R. columnaris (Nutt.)Wooten & Standl. Long-headed Cone-flower.
S(Blue Grass)Barnes; (Brady St. within the city limits, Sept. 1914)Hauber, St. Ambrose College.
- Helianthus L. Sunflower.
H. annuus L. Common Sunflower.
Waste places and railroad tracks; infrequent.
S(N. Harrison St. road (an escape?)G.
- H. petiolaris Nutt. Prairie Sunflower.
Along railroads and roadsides, especially if sandy; sandy prairies and dunes; more frequent in Muscatine county.
S(Railroad embankment at 4th & LeClaire Sts.)G.
M(Fruitland)Barnes.
- H. occidentalis Riddell.
Sandy prairies and roadsides; infrequent; rarely in sandy clearings.
S(Prairie remnant at Pine Hill Cemetery)G.
M(Prairie remnant on the crest of a ridge, Wild Cat Den)G.
Ill. Whiteside Co.(Sand field opposite Lock 13)G.

- H. *rigidus* Desf. Stiff Sunflower.
Prairie remnants, dry soils and banks; infrequent.
Plant scabrous, with thick narrow leaves, bracts plump, smooth on the back, ovate, blunt-tipped; disk mostly purple, but occasionally yellow, these latter possibly representing some degree of hybridization.
Passes into *H. laetiflorus* and *H. subrhomboides*.
S(Allen's Grove; Pine Hill Cemetery)G.
M(Roadside bank east of Wyoming Hill; "Levee" Section 15, Lake Township)G.
Louisa Co.(Big Sand Mound)G.
- H. *laetiflorus* Pers.
Dry soils, often along roadsides; occasionally seen in cultivation.
A taller more branching plant with thinner broader leaves, sometimes very long peduncles; bracts longer and acute-tipped, pubescent; disk yellow. "Almost certainly a hybrid between *H. rigidus* and *H. tuberosus*." Prof. C. B. Heiser.
S(Garner's farm; Roadside north of Allen's Grove; Railroad tracks at Eldridge)G.
M(Wild Cat Den)Barnes.
- H. *subrhomboides* Rydb. L.
Low, generally unbranched, with thick subrhomboid leaves, short obtuse bracts and purple disk; infrequent; closely related to *H. rigidus*.
S(Railroad tracks south of Eldridge)G.
- H. *mollis* Lam. Ashy Sunflower.
Rare. A colony has flourished under the the sumac at Duck Creek Park for more than twenty years. The late Msgr. Hauber collected it on the grounds of St. Ambrose College in 1914.
S(Duck Creek Park)G.
M("Railroad tracks, Muscatine, 1896.")Barnes.
- H. *strumosus* L. Woodland Sunflower.
Woodland borders and clearings; frequent.
Extremely polymorphous. Tetraploid like *H. decapetalus*, with which it intergrades or hybridizes; also hexaploid like *H. tuberosus* and *H. rigidus*, and hybridizing freely with the various forms of both. The result of these various mixtures is a vast array of ambiguous plants which, in the present state of our knowledge, cannot be identified with any certainty, and whose parentage can only be surmised. Some of these have been described as new species. Prof. C.B. Heiser has annotated many specimens in the Barnes Herbarium as such hybrids. The studies of Heiser and his co-workers on the genetics and taxonomy of the perennial sunflowers will continue to shed much needed light upon this difficult genus.
Representative of *H. strumosus* in the Barnes Herbarium are the following collections:
S(CRI & P Railroad right-of-way south of Locust St. bridge, 1898)Barnes.
M(Roadside bank east of Fairport, marked 444)Barnes.
Unusual forms, described as new species by E. E. Watson, but not generally accepted are represented in the herbarium by
H. leoninus Watson
S(Allen's Grove)G.
and *H. chartaceus* Watson
S(Duck Creek Park)G.
Forms with the leaves densely soft-pubescent may be distinguished as the var. *mollis* T. & G.

- S(Allen's Grove, August 13, 1947)G.
S(Duck Creek Park, August 11, 1956)G.
Short-petioled forms sometimes identified as *H. divaricatus* L. are perhaps best regarded as belonging to *H. strumosus*.
- H. *decapetalus* L. Thin-leaf Sunflower.
In twelve years of collecting I have found no plants that would qualify as this species. Plants most closely following the descriptions were called *H. tuberosus* X *H. strumosus* by Prof C.B. Heiser and Prof. Dale M. Smith, both of whom I consider the best authorities to pass on them. I conclude that most reports, if not all, from this or neighboring regions are based upon mistaken identifications.
Since the above was written Professor Heiser has discovered and verified a specimen from Muscatine County, collected by Reppert, but without precise locality or data.
- (H. *hirsutus* L. Hairy Sunflower.
Typical *H. hirsutus* has not been found. A specimen provisionally referred to the var. *stenophyllus*, and blossoming in late July was referred to *H. tuberosus* by Heiser.
- (H. *trachelifolius* Mill.
An ambiguous plant. May be represented by —
Ill. RI(Rock Island Arsenal)G.
- (H. *divaricatus* L.
The plants passing under this name are almost certainly not the Linnaean species. Our plants, in their extreme form have short petioles, relatively short-triangular leaves, truncate at the base, with the lateral nerves joining the midrib at the base, the leaves sometimes hard-tomentose underneath. The plant may be regarded as a form of *H. strumosus*, with which it merges.
S(Hickory Grove, August 14, 1956; Allen's Grove, August 7, 1948)G.
- H. *tuberosus* L.
Frequent in moist or dry situations; along railways and roadsides, fence-rows and fields.
S(Pine Hill Cemetery; Allen's Grove; Fairmount Cemetery)G.
M(Wild Cat Den)G.
Polymorphous, its various forms hybridizing freely with the *H. rigidus* and the *H. strumosus* complexes, resulting in a perplexing variety of forms.
- H. *tuberosus* L. var. *subcanesens* Gray.
H. subcanescens (Gray)E.E. Watson.
Very gray, leaves strictly opposite, inflorescence cymose, bracts short, obtuse. Almost certainly a hybrid with *H. strumosus* or *H. rigidus*.
M(Dry ditch, roadside east of Wild Cat Den)G.
- H. *grosse-serratus* Martens. Saw-tooth Sunflower.
Moist grounds, low prairies, roadside ditches; frequent.
S(Duck Creek Park; Pine Hill Cemetery; Eldridge)G.
- H. *Maximiliani* Schrad. Maximilian's Sunflower.
Along railroads as a waif; soon dies out in our area.
S(Along the old BCR & N railroad tracks at Blue Grass. Fine vigorous specimens)Barnes; (Schmidt's Crossing)G.

- H. *giganteus* Raf.
A single collection.
M(Mucky border of bog at Nelumbo Pond, Section 15, Lake Township)G.
- Actinomeris Nutt. Wing-stem.
- A. *alternifolia* L. Yellow Iron-weed.
A. *squarrosa* Nutt. of Fl.
Rich alluvial soil in thickets, along streams and in borders; infrequent.
M(Creek side at Wilton)G.; ("Swampy wooded slope, Wyoming Hill, September 11, 1926.")Shimek, SUI.
Ill. RI(Rock Island Arsenal)Ross; (Watch Tower)Barnes; G.
- Coreopsis L. Coreopsis. Tick-seed.
- C. *tinctoria* Nutt.
S(As a weed along the tracks, E. River St.; vegetable garden, 11th & Brown Sts.)G.
- C. *lanceolata* L. Lance-leaf Coreopsis.
Cultivated and occasionally escaped.
S(14th & Vine Sts.; an escape?: Black Hawk)G.
Ill. RI(Section 22, Cordova Township apparently indigenous on a sand bank)G.
- C. *palmata* Nutt. Finger Coreopsis
Upland prairie remnants and fence-rows, occasional.
S(Pine Hill Cemetery; Buttermilk Road)G.; (Oakton)Ross.
- C. *tripteris* L. Tall Coreopsis
Frequent along R. No. 6, near the Cedar River.
M(Moscow)Barnes; ("Borders of woods and copses, August, 1891.")Reppert, SUI.
Ill. Henry Co.(Colona)G.
- C. *tripteris* L. var. *Deamii* Standl.
Lower surface of leaves and involucre more or less pubescent.
M(Moscow)Barnes.
- Bidens L. Beggar-ticks. Bur-marigold.
- B. *cernua* L. Nodding Beggar-ticks.
Wet muddy or sandy pond and stream shores; frequent.
S(Allen's Grove; Credit Island; Creek-valley, Harrison and Kimberly Road)G.; (Blue Grass)Barnes.
- B. *connata* Muhl.
Infrequent; low moist grounds.
S(Credit Island)G.
M(Muscatine Co.)Reppert.
- B. *comosa* (Gray)Wieg.
Moist thickets and waste places; frequent.
S(Credit Island; Allen's Grove; LeClaire)G.
Louisa Co.(Big Sand Mound)G.
- B. *vulgata* Greene. Beggar-ticks.
Low grounds, waste places, roadsides; frequent.
S(Credit Island; Alley, 7th & Brady Sts.; Bettendorf)G.

- B. *frondosa* L.
Frequent; waste places, damp or dry situations.
S(Pine Hill Cemetery; Waverly Road; Marsh northeast of St. Anne's Church)G.
- B. *coronata* (L.)Britt. Tick-seed Sunflower.
Coreopsis *trichosperma* Michx. of Fl.
Bogs, marshy grounds; wet floodplains; infrequent.
M(Wet pond shore, Nelumbo Pond, Section 15, Lake Township; Creek west of Wilton)G.
Ill. RI(Floodplain of creek, Watch Tower)G.
- B. *aristosa* (Michx.)Britt. Tick-seed Sunflower
Coreopsis *aristosa* Michx. var. *mutica* Gray of Fl.
Moist low grounds; pond shores; infrequent.
S(Oakton)Ross; (Credit Island)G.
M(Moscow; Brasenia Pond)G.
Ill. RI(Watch Tower)G.
- B. *polylepis* Blake
Coreopsis *involucrata* Nutt. of Fl.
S(Moist low sandy area northwest of Nahant.)G.
- (B. *discoidea* (T. & G.)Britt.
Reported in the Fl. as Coreopsis *discoidea*; "Wet low grounds, West Davenport," but no specimen can be located.
- B. *bipinnata* L. Spanish Needles.
Louisa Co.(Moist sandy thicket, lake shore, Big Sand Mound)G.
- Galinsoga Ruiz & Pavon.
- G. *ciliata* (Raf.)Blake
G. *parviflora* Cav. of Fl.
Frequent locally in waste grounds.
S(Fairgrounds)Barnes; (Alley, 15th & Brady Sts.)G.
- Helenium L.
- H. *autumnale* L. Sneeze-weed.
Frequent in low grounds and pastures; roadside ditches, damp shores.
S(Davenport)Ross; Credit Island; Eldridge Road; Pine Hill Cemetery)G.
- Gaillardia Foug.
- G. *pulchella* Foug.
An occasional garden escape.
S(Davenport)G.
- Dyssodia Cav. Fetid Marigold.
- D. *papposa* (Vent.)Hitchc.
D. *chrysanthemoides* Lag. of Fl.
Waste places, farmyards, roadsides; infrequent.
S(Blue Grass)Barnes, (5th & Harrison Sts.)G.
M(Fairport; Farmyard, Goshen Township)G.
Ill. RI(Rock Island Arsenal)Ross.

Achillea L. Yarrow

- A. *Millefolium* L. Common Yarrow
Frequent; fields and roadsides.
S(Davenport)Melville; (Blue Grass)Barnes; (Duck Creek Park)G.
M(Summit)Shimek.

Anthemis L. Chamomile

- A. *Cotula* L. Dog-fennel. Mayweed.
Frequent; roadsides, waste places in the country; frequent in abandoned hog-lots.
S(Eldridge Road; Blue Grass)G.
M(Muscatine Co.)Reppert.
- A. *tinctoria* L. Yellow Chamomile
An occasional escape from gardens.
S(Fence-row, east side of St. Ambrose Field)G.

Matricaria L. Wild Chamomile Pineapple-weed.

- M. *matricarioides* (Less.)Porter.
M. *suaveolens* (Pursh)Buchenau.
Fields and roadsides; frequent.
S(Curb at 7th & Brady Sts.)G.
- M. *chamomilla* (L.)
M("Waste ground in city, August 1, 1891.")Reppert, SUI.
Original identification as *Anthemis arvensis* L. corrected by Robert A. Davidson.

Chrysanthemum L. Chrysanthemum.

- C. *leucanthemum* L. var. *pinnatifidum* Lecoq & Lamotte
Grassy roadsides and fields; frequent.
S(Blue Grass; Pine Hill Cemetery)G.
Ill. RI(Rock Island Arsenal)Ross.

Tanacetum L. Tansy.

- T. *vulgare* L. Common Tansy
Escaped to roadsides and waste places; infrequent.
S(Roadside east of Maysville; railroad embankment, 4th & Pershing Sts.; waste grounds west of Mt. Nebo Cemetery)G.

Artemisia L. Wormwood.

- A. *caudata* Michx.
Sandy soils; dunes and sandy prairies; restricted.
S(Noels)G.; (Maysville)Barnes.
M(Section 15, Lake Township)G.; (Muscatine Co.)Shimek.
Louisia Co.(Big Sand Mound)G.
- A. *dracunculoides* Pursh.
A. *glauca* Pall. var. *dracunculina* (S.Wats)Fern. of Gray, 8th Ed.
M("In dry soil of banks and hillsides, three to four feet tall, September 18, 1894.")Reppert, SUI.
- A. *biennis* Willd. Biennial Wormwood
S("Along the Milwaukee tracks north of Davenport, September 27, 1931.")Hauber.

- A. *annua* L.
S(A casual weed in the garden at 1422 Main St.)G.
M("Waste place, September 1895.")Reppert, SUI.

- A. *Abrotinum* L. Southern Wormwood.
M("In old gardens and about dwellings, October 1892.")Reppert, SUI.

- A. *vulgaris* L. Common Mugwort.
S("Rock Island tracks near Capt. Clarks.")Barnes.

- A. *ludoviciana* Nutt. Western Mugwort. White Sage.
S(Marsh northeast of St. Anne's Church)G.
(X)Paarmann-Sheldon.

- A. *ludoviciana* Nutt. var. *latifolia* (Bess.)T. & G.
Upland fence-rows; infrequent.
S(Fence-row, high ridge west of Pineo's Grove)G.

- A. *gnaphaloides* Nutt. White Sage.
A. *ludoviciana* Nutt. var. *gnaphaloides* (Nutt.)T. & G.
Banks and fence-rows; not infrequent.
S(Marsh northeast of St. Anne's Church)G.; ("Railroad tracks.")Melville.

- A. *serrata* Nutt.
Roadsides and fence-rows; not infrequent.
S(Noels; Telegraph Road)G.; (Graveyard Creek)Barnes.
M(Saulsbury Bridge)Barnes; (R. 61 at Pine Creek)G.
Ill. Henry Co.(North of Colona)G.

- A. *Stelleri* Besser.
Frequently seen as grave decorations.
S(Cultivated, Pine Hill Cemetery)G.

- A. *tridentata* Nutt. Western Sage-brush.
S(Established on the terrace at 7th & Main Sts.)G.

Erechtites Raf. Fire-weed.

- E. *hieracifolia* (L.)Raf.
Damp open places and thickets; frequent.
S(Roadside near Pine Hill Cemetery)G.
M(Muscatine Island)G.

Cacalia L. Indian Plantain.

- C. *suaveolens* L.
S(Duck Creek north of St. Vincent's Home, September 16, 1914)Hauber.
M(Cedar River)Reppert.
- C. *atriplicifolia* L. Pale Indian Plantain
Dry prairie habitats; along railroad right-of-ways; occasional in open woods.
S(Davenport)Ross.
M(Muscatine Co.)Reppert.
Ill. RI(Watch Tower; Cordova)G.
- C. *Muhlenbergii* (Sch.Bip.)Fern. Great Indian Plantain
C. *reniformis* Mill. of Fl.
M(Rocky wooded slope; a few plants only, Wild Cat Den)G.

- C. tuberosa* Nutt.
Dry upland prairies; infrequent.
S(Pine Hill Cemetery)G.; Paarmann-Sheldon; (Oakton)Ross.
(X)Barnes.
- Senecio L. Ragwort.
S. pauperculus Michx. var. Balsamitae (Muhl.)Fern.
S. aureus L. var. Balsamitae (L.)T.& G. of Fl.
Prairies, meadows and grassy roadsides; frequent. Intergrades with
S. plattensis.
S(Credit Island)G.; (Oakton)Ross.
M(Stockton)Barnes.
Ill. RI(Watertown)G.
- S. plattensis Nutt.
In nearly the same habitats; less frequent than the last.
S(Pine Hill Cemetery; Walnut Grove)G.
- S. aureus L. Golden Ragwort.
Boggy slope at Wild Cat Den; rare.
M(Wild Cat Den)Barnes; G.
- Arctium L. Burdock.
A. minus (Hill)Bernh. Common Burdock.
Waste places about farmyards; an infrequent weed.
S(Harrison St.; W. 17th St.)G.
- (Carduus L. Plumeless Thistle.
C. nutans L. Musk-thistle.
Louisia Co.("U.S. Highway 61, roadside near railway overpass.")
Davidson, SUI.
- Cirsium Mill. Thistle.
C. vulgare (Savi)Tenore. Common or Bull Thistle.
Cnicus lanceolatus Hoffm. of Fl.
Pastures and waste places; frequent.
S(Davenport)G.
- C. undulatum (Nutt.)Spreng.
Cnicus undulatus Gray of Fl.
M("East of Montpelier, a single plant.")Barnes.
- C. discolor (Muhl.)Spreng. Field Thistle.
Cnicus altissimus Willd. var. discolor Gray.
Roadsides and dry waste places; frequent.
S(Davenport)G.; Ross; (Fejervary Park)G.
- C. altissimum (L.)Spreng. Wood Thistle.
Cnicus altissimus Willd. of Fl.
Clearings and borders; infrequent.
S(Allen's Grove)G.
M(Wild Cat Den)G.; (Muscatine Co.)Reppert.
Ill. RI(Rock Island Arsenal)Ross.
- C. Hillii (Canby)Fern.
Dry sandy prairies; infrequent.
S(Pine Hill Cemetery)Ross; G.
M(Bayfield)Shimek.
(X)Barnes.

- C. arvense* (L.)Scop. Canada Thistle.
Cultivated and waste grounds; infrequent.
S(Middle Road; County Farm)G.
M(Near Moscow)Reppert.
- Cichorium L. Chickory
C. Intybus L. Chickory
Dry roadsides; frequent.
S(Roadside north of Nahant)G.
(X)Paarmann-Sheldon.
- Krigia Spreng.
K. biflora (Walt.)Blake.
K. amplexicaulis Nutt. of Fl.
Upland prairies; infrequent.
S(Pine Hill Cemetery)G.; (Eldridge)Barnes.
- Tragopogon L. Goat's-beard. Salsify.
(T. pratense L.
Grassy roadsides; infrequent.
Ill. RI(Rock Island Co.)G.
- T. major Jacq.
T. dubius Scop.
Grassy roadsides and along railways; frequent.
S(North of Cram Field; North of McCausland)G.
- Taraxacum Zinn. Dandelion
T. officinale Weber. Common Dandelion.
Frequent in lawns, grasslands, roadsides, waste places.
S(Davenport)Ross.
- (T. erythrospermum Androz. Red-fruited Dandelion.
Ill. RI(Rock Island Arsenal)Paarmann-Sheldon.
- Sonchus L. Sow-thistle.
S. asper (L.)Hill. Spiny-leaf Sow-thistle.
An infrequent weed of waste places.
S(Davenport)Ross; G.; (Pine Hill Cemetery)G.
- S. oleracea L. Common Sow-thistle
Waste places; infrequent.
S(Davenport; 8th & Main Sts.)G.
M(Muscatine Co.)Reppert.
- S. arvensis L. var. glabra G.G.& W. Field Sow-thistle
Occasional along roadsides in damp ditches.
S(Eldridge Road)G.
- Lactuca L. Lettuce.
L. Scariola L. Prickly Lettuce.
Frequent along roadsides and in waste places.
S(Pine Hill Cemetery; Waverly Road; Harbor Road)G.
- L. canadensis L. Canada Wild Lettuce.
Fields, thickets and borders, roadsides, waste places; frequent.
S(Davenport; Eldridge)Barnes; (Pine Hill Cemetery)G.
Ill. RI(Loud Thunder Forest Preserve)G.

- L. ludoviciana (Nutt.) Riddell.
M("Borders of fields, fence-rows, etc., August, year missing")
Reppert.
- L. floridana (L.) Gaertn. Blue Woodland Lettuce.
Damp rich woods; most often in bottomlands.
S(Credit Island; Allen's Grove)G.
M(Wild Cat Den)G.; (Moscow)Barnes.
- L. villosa Jacq.
L. floridana L. var. villosa (Jacq.) Cronq.
S(Eldridge)Barnes.
- L. biennis (Moench.) Fern.
L. leucophaea Gray of Fl.
Rich low woods; rare.
S(Blue Grass)Barnes.
M(Muscatine Co.)Reppert.
Ill. RI(Watch Tower)G.
- Agoseris Raf. False Dandelion.
- A. cuspidata (Pursh) Raf.
Troximum cuspidatum Pursh of Fl.
Dry prairies and dry grassy slopes; rare.
S(Davenport)Ross; (Pine Hill Cemetery)Whitaker, May 4, 1895;
(Dry hillside pasture, Pineo's Grove)G.
- Pyrrhopappus DC.
- P. caroliniana (Walt.) DC. False Dandelion.
S(Cemetery at McCausland)Morrissey.
- Prenanthes L. Rattlesnake-root.
- P. alba L. White Rattlesnake-root.
Frequent; woods and prairies.
S(Fejervary Park; Allen's Grove)G.
M(Bloomington Township)G.
Ill. RI(Rock Island Arsenal)Ross.
- P. aspera Michx.
Dry prairies; infrequent.
S(Oakton)Ross; (Pine Hill Cemetery)G.; Paarman-Sheldon.
- P. racemosa Michx.
M("Bayfield; no date")Reppert, SUI.
- Hieracium L. Hawkweed.
- H. canadense Michx.
"Dry wooded hillsides; infrequent." Fl:
S(Davenport)Ross.
M(Wild Cat Den)Barnes; (Muscatine Co.)Reppert.
- H. scabrum Michx.
Dry open woods; rare.
M(Wild Cat Den)Barnes; G.; (Muscatine Co.)Reppert.
- H. longipilosum Torr.
Dry prairie remnants; rare.
S(Pine Hill Cemetery)G.

APOLOGIA

A work of this kind is never finished, or complete. There comes a time when the author, with regret, yet with relief, lays down the work and simply calls it done.

I am not ashamed of the unabashed subjectivism disclosed in some parts of the work. Without the imagination of a personal consciousness there would be science, and the outer world would have no meaning.

Supplement I

EVERGREENS FREQUENTLY PLANTED

Pinus Strobus L. White Pine
P. Banksiana Lamb. Jack- or Scrub-pine
P. sylvestris L. Scotch Pine
P. resinosa Ait. Red or Norway Pine
P. Mugho Turra. Mountain Pine
P. nigra Arnold var. *austriaca* Asch. & Graebn. Austrian Pine

Picea pungens Engelm. var. *glauca* Rehd. Colorado Blue Spruce
 (Moench) Voss. White Spruce.
P. Abies (L.) Karst. Norway Spruce
P. pungens Engelm. Colorado Spruce
P. Albertiana S. Br. Black Hills Spruce 2625 Main St.
P. glauca (Moench) Voss

Abies balsamea (L.) Mill Balsam Spruce
A. concolor (Gord.) Engelm. Colorado Fir

Tsuga canadensis (L.) Carr. Common Hemlock

Taxus canadensis Marsh. Canada Yew
T. media Rehd. var. *Hicksii* Rehd.
T. media Rehd. var. *Hatfieldii* Rehd.
T. media Rehd.
T. cuspidata Sieb. & Zucc var. *capitata* Hort

Juniperus virginiana L. Red Cedar
J. communis L. Common Juniper
J. Sabina L. Savin
J. chinensis L. var. *Pfitzeri* Spach
J. chinensis var. *pyramidalis* (Carr) Beiss (J. *Japonicus* Carr)
J. horizontalis Moench. Creeping Juniper

Larix decidua Mill. European Larch

Taxodium distichum Rich. Bald Cypress

Ginkgo biloba L. Ginkgo

Pseudotsuga taxifolia Britt. Douglas Fir

Thuja occidentalis L. American Arbor-vitae
T. orientalis L. Oriental Arbor-vitae

Examples of nearly all of this list may be seen at Vanderveer Park or Pine Hill Cemetery. A windbreak of Norway Pine stands opposite the Country Club.

Supplement 2

MAGNOLIACEAE

Species all introduced and cultivated in this region. Specimens in the Barnes Herbarium.

Magnolia L. *Magnolia*.

M. acuminata L. Cucumber tree.
 Southern; ranges up to lower Illinois
 S(222 W. 15th St.; Lau Farm)G.

M. Fraseri Walt.
 Large leaves auriculate at the base.
 S(Vanderveer Park)G.

M. stellata Sieb. & Zucch.
 From Japan.
 S(Vanderveer Park)G.

M. Soulangeana Soul.
 Blossoms pinkish. The earliest to bloom. Frequent
 S(17th Main St.)G.

M. tripetala L. Umbrella Tree.
 Very large leaves at the tips of the branches.
 S(1720 W. 17th St.)G.

M. liliflora Derouss. var. *nigra* (Nichols)Rehd.
 Blossoms dark red.
 S(NE corner of Carey Ave. & High St.)G.

M. liliflora Derouss.
 Blossoms dark purple-red outside; pink inside.
 S(W. Central Park Ave.)G.

M. glauca L. Sweet Bay
 Fragrant.
 S(Vanderveer Park)G.

?*M. Sieboldii* K. Koch.
 Sepa; s pink.
 S(Lau Farm)H.

Liriodendron L. Tulip Tree

L. Tulipifera L.
 A stately tree too infrequently planted.
 S(Vanderveer Park, Lau Farm)G.

OLD-FASHIONED GARDEN ROSES COLLECTED IN DAVENPORT

- R. *Hugonis* Hemsl. Yellow China Rose.
The earliest rose to bloom, usually about May 12.
Corner Harrison St. and W. Dover Court
- R. *Harrisonii* Rivers. Harrison's Double Yellow Rose.
Both old favorite yellow roses.
Vanderveer Park Rose Garden.
- R. *foetida* Herrm. Austrian Briar.
- R. *foetida* Herrm. var. *bicolor* (Jacq.) Willm. Austrian Copper Rose
Vanderveer Park Rose Garden.
- R. *rugosa* Thunb.
Many varieties and hybrids.
Vanderveer Park Rose Garden.
- R. *alba* L. The White Rose.
120 W. 14th St.
- R. *centifolia* L. Cabbage Rose.
Flowers pink, nodding.
1421 LeClaire St.
- R. *centifolia* L. var. *muscosa* (Mill.) Ser. Musk-rose.
Vanderveer Park
- R. *centifolia* L. var. *cristata* Trevost. Goethe Rose.
Vanderveer Park
- R. *Damascens* Mill. Damascus Rose.
Vanderveer Park
- R. *Damascens* Mill. var. *versicolor* West. York and Lancaster Rose.
Vanderveer Park
- R. *Moyesii* Hemsl.
Seven to thirteen leaflets.
Vanderveer Park
- R. *omiensis* Rolfe. var. *pteracantha* (Franch.) Rehd & Wils.
With wide-based thorns and pear-shaped fruits.
Vanderveer Park
- R. *Soulieana* Crep.
Dr. Plagman's Garden
- R. *spinosissima* L. var. *altaica* (willd.) Rehd.
Dr. Plagman's Garden
- R. *moschata* Herr. Musk-rose.
Dr. Plagman's Garden
- R. *Watsonii* Crep.
Leaflets linear.
Vanderveer Park

THE MAGNOLIA CREST ARBORETUM

The Lau farm is situated two miles east of Mt. Joy at the end of the Jersey Ridge Road. Peter Lau settled here in 1853, and the place has been the family home ever since. This magnificent collection of trees, covering an area of nearly a city block was begun by him and has been continued by his descendents. Many of the trees are over seventy years old and of great size. One majestic oak must be over one hundred years old and a good-sized tree when Peter Lau settled here. The age of many of the trees is evidenced by their great size. Among the scores of various kinds may be mentioned magnificent examples of red oak, cucumber tree, ginkgo, and many other species native of the south.

Following is an incomplete list of trees and shrubs:

- | | |
|--------------------------------|--------------------------------|
| <i>Acer negundo</i> | <i>J. mandshurica</i> |
| <i>A. saccharum</i> | <i>Liriodendron tulipifera</i> |
| <i>A. saccharinum</i> | <i>Maclura pomifera</i> |
| <i>A. platanoides</i> | <i>Morus rubra</i> |
| <i>A. pseudoplatanus</i> | <i>M. tatarica</i> |
| <i>Alnus glutinosa</i> | <i>Nyssa sylvestris</i> |
| <i>Aralia spinosa</i> | <i>Platanus occidentalis</i> |
| <i>Asimina triloba</i> | <i>Quercus alba</i> |
| <i>Aesculus hippocastaneum</i> | <i>Q. imbricaria</i> |
| <i>Betula nigra</i> | <i>Q. macrocarpa</i> |
| <i>Carya laciniosa</i> | <i>Q. laurifolia</i> |
| <i>C. illinoensis</i> | <i>Q. palustris</i> |
| <i>Cercis canadensis</i> | <i>Q. rubra</i> |
| <i>Catalpa speciosa</i> | <i>Q. prinus</i> |
| <i>Castanea dentata</i> | <i>Robinia pseudoacacia</i> |
| <i>Celtis occidentalis</i> | <i>Sassafras albidum</i> |
| <i>Cladostriis lutea</i> | <i>Tilia americana</i> |
| <i>Crataegus monogyna</i> | <i>T. europea</i> |
| <i>Diospyros virginiana</i> | <i>Ulmus americana</i> |
| <i>Fagus grandifolia</i> | <i>U. rubra</i> |
| <i>F. sylvestris</i> | <i>Xanthoceras sorbifolia</i> |
| <i>Fraxinus lanceolata</i> | <i>Magnolia acuminata</i> |
| <i>Gleditsia triacanthos</i> | <i>Magnolia tripetala</i> |
| <i>Gymnocladus dioica</i> | <i>Magnolia soulageana</i> |
| <i>Juglans nigra</i> | |

Evergreens:

Taxodium distichium
Pinus nigra var austriaca
Larix decidua
Juniperus virginiana
Thuja occidentalis
Ginkgo biloba

Abies concolor
Abies balsamea
Picea glauca
Picea Abies
Pseudotsuga taxifolia

Fruit trees:

Malus pumila
Prunus Cerasus
Prunus Persica
Prunus domestica

Pyrus sativa
Rubus idaeus
Rubus sp? (blackberry)

Shrubs and small trees:

Ptelea trifolia
Spiraea Vanhoutii
Syringa vulgaris
Sambucus canadensis
Philadelphus Lemoinei
Cotinus Coggyria

Lonicera sp?
Vitis Labrusca
Ampelapsis sp?
Exochorda sp?
Prunus triloba

Supplement 5

THE PARRY LIST OF 1847

The following is a transcription, verbatim et literatim, of a list of Iowa plants by Dr. C. C. Parry in his own hand, in the files of the Davenport Public Museum, and never heretofore published so far as known. It purports to be a list of "wild plants growing in the vicinity of Davenport, 1847," though apparently made on a trip from Davenport to "Raccoon Park" (Des Moines?) by way of Bloomington (now Muscatine) and Iowa City.

The latter part of the list, containing names of plants found in Illinois and Wisconsin "in connection with the geological survey" is here omitted. The list is here made available for its historical as well as its taxonomic value; it is a collector's item.

List of wild
plants
found in the vicinity
of
Davenport,
Iowa
1847

And others found
in connection
with the

Geological Survey
of the North West
— 1848 —

by
C. C. Parry

List of wild plants
found in the vicinity
of
Davenport, Iowa
1847

And others found in connection
with the
Geological Survey
1848

By
C. C. Parry

April 6th
Thalictrum anemonoides

April 10th
Hepatica triloba

April 22nd
Ranunculus fascicularis

April 23rd
Cercis canadensis
Pulmonaria virginica
Sanguinaria canadensis

April 29th
Erythronium albidum
Dielytra cucullaria
Trillium sessile
Dentaria laciniata
Viola (Pedata) (cucullata)
(pubescens) (sagittata)
Batschia canescens
Dracontium foetidum
Caltha palustris
Uvularia grandiflora
Plantago cordata
Phlox
Claytonia virginica
Oxalis violacea
Leontice thalictroides
Androsace occidentalis

May 3rd
Anemone caroliniana
Draba caroliniana
Corydalis aurea
Ribes missouriense

May 6th
Polemonium reptans
Cardamine rotundifolia
Sisymbrium canescens
Pyrus coronaria
Pedicularis canadensis
Dodecatheon meadia
Crataegus coccinea var mollis
Ranunculus abortivus
Ranunculus recurvatus
Euchroma coccinea
Prunus americana
Cerasus serotina
Staphylea trifoliata
Zanthoxylum fraxineum
Geranium maculatum
Ornithogolum umbellatum
Capselleo bursa-pastoris
Ribes floridum
Acer dasycarpum-fruit

May 14th
Hypoxis erecta
Rhamnus lanceolatus

Ranunculus repens
Ranunculus purshii
Batschia longiflora
Cerasus virginiana
Aquilegia canadensis
Ellisia ambigua

May 15th
Phalangium esculentum
Aralia nudicaulis
Vaccinium resinosum
Mitella diphylla
Ribes cynosbati
Fragaria vesca
Senecio aureus var balsam
Taraxacum dens-leonis
Smilax rotundifolia
Convallaria stellata
Convallaria multiflora

May 18th
Podophyllum peltatum
Cypripedium candidum
Cypripedium pubescens
Phlox
Erigeron bellidifolius

May 20th
Troximon cuspidatum
Crataegus crusgalli
Scutellaria parvula
Morus
Celtis
Panax quinquefolius
Actaea alba
Nasturtium palustre
Cardamine hirsuta
Crataegus tomentosa
Osmorhiza brevistylis
Viburnum lentago
Orchis spectabilis

May 24th
Silene antirrhina
Robinia pseudoacacia
(Nasturtium natans?)
amphibium?
Anemone pennsylvanica
Heuchera richardsonii
Arabis dentata
Hydrophyllum virginianum
Allionia nyctaginea

May 25th
Asarum canadense
Spiraea opulifolia
Zizia aerea
Zizia integerrima
Cynoglossum officinale

Veronica peregrina
Arabis
Amelanchier botryapium
Triosteum perfoliatum
Betula rubra mx.
Rhus toxicodendron
Tradescantia virginiana

May 26th
Chaerophyllum procumbens
Osmorhiza longistylis
Potentilla canadensis

May 27th
Cynthia virginica
Nemophila appendiculatum
Utricularia vulgaris
Amorpha fruticosa
Vitis riparia

May 31st
Gymnocladus canadensis
Lepidium virginicum
Scrophularia marilandica
Convallaria racemosa
Verbena augustifolia
Oxalis stricta
Rosa blanda
Ptelea trifoliata
Astragalua

June 1st
Trifolium repens
Trifolium pratense
Rubus occidentalis
Rubus villosus hispidus

June 4th
Fragaria - fruit
Geranium carolinense
Erigeron philadelphican
Erigeron strigosum

June 5th
Euphorbia obtusa
Monarda
Verbena bracteosa
Rhus aromatica (Lam)
Penstemon grandiflorus
Cypripedium spectabile
Achillea millefolium

June 9th
Clematis viorna
Campanula amplexicaulis
Menispermum canadense
Comus paniculata
Lonicera (flava) ?

June 10th
Rosa lucida
Physalis pennsylvanica
Cymbidium puechellum
Batschia gmelini
Cryptotaenia canadensis
Lobelia claytoniana
Euonymus atropurpureus

June 11th
Anemone cylindrica
Saxifraga pennsylvanica

June 13th
Euphorbia corollata
Trifolium
Cornus sericea
Echinospemum lappula
Apocynum androsaemifolium

June 15th
Lilium philadelphicus
Helianthemum canadense
Sinapis nigra
Achillea millefolium

June 18th
Leave for Raccoon Park.
List found on the road, mostly
in Polk County.
Delphinium azureum
(Between Bloomington & Iowa
City also interior counties.)

Tilia
Heracleum lanatum
Habenaria leucophaea
Iowa River

Lythrum alatum
Negundo aceroides
Cacilia tuberosa
Baptisia leucantha
Coreopsis palmata
Phlox maculata &c
Rudbeckia hirta
Rudbeckia triloba
Echinacea augustifolia
Lepachys pinnata
Thaspium aureum
Menyanthes trifoliata
(Polk Co.)

Apocynum cannabinum
Apocynum pubescens
(Polk Co.)

Ceanothus ovalis
Asclepias tuberosa
Asclepias
Asclepias
Acerates
Aesculus
Linum rigidum

Anemone virginiana
Circaea lutetiana
Phryma leptostachya
Acer saccharinum
Potentilla arguta
Petalostemum violaceum
Petalostemum candidum
Quellia strepens
Hypericum
Oenothera

June 18th

Oenothera serrulata
Euchromia grandiflora
Astragalus canadensis
(from Polk Co.)
Astragalus
Polygala verticillata
Polygala
Polygala incarnata Linn
Desmodium acuminatum
Campanula americana
Campanula erinoides
Leptandra virginica
Silene cucubalus
Amorpha canescens
Cassia chamaecrista
Silphium lacciniatum
Silphium integrifolium
Silphium perfoliatum
Maruta cotula
Artemisia ludoviciana
Artemisia
Artemisia
Erechtites hierocifolia

August 12th

Davenport

Croton ellipticum
Asclepias verticilaris
Asclepias
Gausa
Scutellacia
D. Stramonium
Cacalia
Eupatorium perfoliatum
Eupatorium ageratoides
Eupatorium serotinum

August 24th

Lobelia syphillitica
Echinostylis lobata
Gerardia tenuifolia
Gerardia
Mimulus

August 30

Dysodia chrysanthemoides
Kuhnia eupatorioides

Rudbeckia subtomentosa
Echinacea purpurea
Xanthium strumarium
Solidago rigida
Heliopsis laevis
Helianthus occidentalis
Helianthus vigidus
Parthenium integrifolium
Vernonia fasciculata
Laitris
Laitris
Laitris
Helenium autumnoli

August 30th

Nabalus albus
Solidago latifolia
Solidago memorialis
Solidago ulmifolia
Solidago speciosa
Solidago canadensis
Solidago gigantea ?

September 9th

Nabalus asper
Coreopsis
Neottia
Lobelia inflata
Aster oblongifolius
Pycnanthemum
Phaseolus
Lobilia cardinolis
Aster sericeus

September 14th

Actinomeris

September 16th

Gentiana saponaria

September 24th

Aster multiflorus

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Deo gratias ego et benedica quod in tam pulchro mirabilique horto suso orbis terrarum vitam mihi degere permisit.



Native upland or true prairie at Pine Hill Cemetery. The tract contains three and one half acres and has never been ploughed or grazed. The soil is Muscatine silt loam. Most of the grasses in the foreground are the greater bluestem; a few spears of the Indian grass appear at the lower left. Thomas Morrissey in his *Flora of the Pine Hill Prairie Relict* (Proc. Ia. Acad. Sc. 1956) listed 191 species collected from this tract.

Photo by Henry Priester



Sedge-meadow north of Nahant. The soil is a clay silt loam, and the tract is subject to frequent flooding. The vegetation is sedges, with much slough grass intermixed. Flowering plants are very infrequent.

Photo by Henry Priester



Marsh northeast of McCausland. Late fall aspect. *Calamagrostis*, *Phalaris* and cattail in the foreground, sedges in the middle ground and to the left.

Photo by Stewart Peck



Shore plants. Mud-flat on the pond-shore on R. 61 at the Wapsipinicon River. The lanceolate leaves in the foreground are the swamp water-dock; present here also is the arrowhead. At the far right are sedges. The bushes are the button-bush. There is *Lemna* floating on the water. In the background is alluvial forest, with pin and swamp white oaks, saplings of soft maple, and river birch.

Photo by Stewart Peck



Hanging bog and "Nelumbo Pond" in Section 15 Lake Township. The pond is so called because of its extensive beds of lotus, usually called the water-lily. The bog is directly in the foreground. The tall grass is *Phragmites*. Many rare species grow here, as, in addition to many sedges, the fringed and the closed gentians, the crested wood-fern, *Selaginella apoda*, *Boehmeria Drummondii*, the asters *lucidulus* and *umbellatus*.

Photo by Henry Priester



Fixed sandy prairie northeast of St. Anne's Church. The fine Shelby loamy sand is fixed by a luxuriant growth of *Leptoloma cognatum*. "Leptoloma Prairie".

Photo by Henry Priester



Shifting dunes at the Big Sand Mound at the northeast corner of Louisa County. The small mounds in the distance are topped and fixed by *Calamovilfa longifolia*. The plants in the left foreground are *Oenothera rhombipetala*; at the right are plants of *Helianthus petiolaris*. There is much *Aristida tuberculosa* sprinkled about everywhere.

Photo by Henry Priester



Marsh on Shelby sands northeast of St. Anne's Church. Late fall aspect. The light area through the middle is *Leersia oryzoides* which forms a water-soaked mat extending several hundred yards to the east. On each side are lush growths of *Cyperaceae* (including *Carex conoidea*) many species of *Juncus* the marsh and sensitive ferns, *Aster umbellatus* and *Eupatorium perfoliatum*. To the south the ground rises and forms a sandy prairie.

Photo by Henry Priester



Native upland woods at Allen's Grove showing a typical stand of almost pure white oak and shag-bark hickory. "Oak-hickory forest."

Photo by Henry Priester



Alluvial woods on the island at the crossing of R. 61 and the Wapsipinicon River. The area is subject to frequent flooding. From right to left are saplings of soft maple, an American elm, a river birch, two cottonwoods and a swamp white oak. Much pin oak, as well as some hackberry is also present.

Photo by Stewart Peck

Steep rocky wooded slopes at Wild Cat Den. The tall slender erect close-set trees are mostly hard maple and white oak, with an occasional red oak interspersed. Soft-wood species like linden and black ash are rare. Craggs of Pennsylvanian sandstone are seen on each side. Photo by Henry Prister










The general region treated in this work. Scott county has been thoroughly explored. Muscatine county has been well investigated and studied, as has the northeast corner of Louisa county in Iowa and the north half of Rock Island and the south half of White-side counties in Illinois. A few collections were made along the southern border of Clinton county. Cedar, Johnson and Washington counties were studied mainly from reports and herbarium specimens.

The hachures along the upper part of the map indicate the area over-run by the Iowan glacier, the last to cover any part of our region. The hachures between the Cedar and Iowa Rivers indicate the site of the glacial Lake Calvin of Illinoian time. The whole region south and east of these areas was covered by the Illinoian ice-sheet; north and west lie the uplands last covered by the preceding Kansan glacier.



LEGEND

-  MOUNTAIN, DESERT, AND COASTAL ASSOCIATIONS
-  GRASSLANDS
-  DECIDUOUS FOREST
-  CONIFEROUS FOREST
-  PINE-HEMLOCK FOREST
-  ASPEN FOREST
-  SOUTHERN EVERGREEN FOREST

Approximate ranges of the principal types of vegetation of North America, omitting those of the Rocky Mountains and westward. The tundra of the arctic regions is left blank.