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Ohio State Academy of Science.

SPECIAL PAPERS NO. 1.

SANDUSKY FLORA.

A CATALOGUE

OF THE

FLOWERING PLANTS and FERNS

GROWING WITHOUT CULTIVATION, IN ERIE COUNTY, OHIO,
AND THE PENINSULA AND ISLANDS
OF OTTAWA COUNTY,

By E. L. MOSELEY, A. M.

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TO THE MEMORY

OF THE

MEMBER OF THE ACADEMY

WHOSE DEATH IS ANNOUNCED,

AS THE PROOF OF THE LAST PAGES OF THIS "SPECIAL PAPER"

ARE BEING RETURNED TO THE PRINTER,

MANNING F. FORCE.

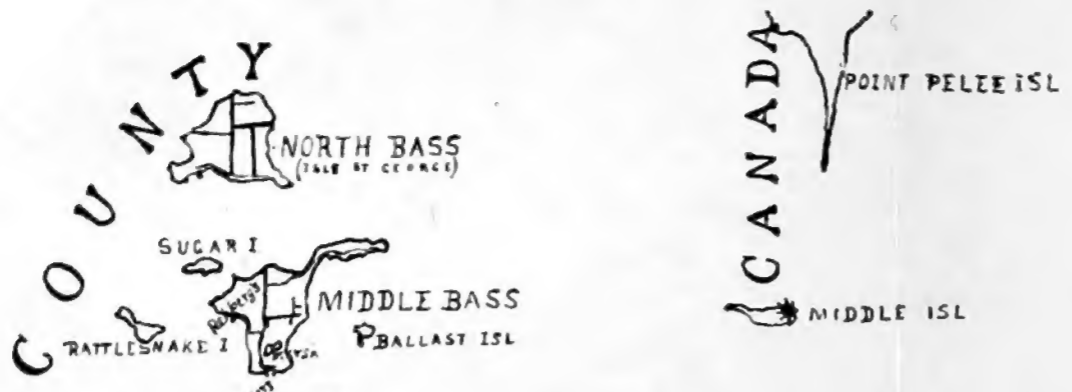
GENERAL, JURIST, SCIENTIST, AND ABOVE ALL, A MAN WHOM

NO DESIRE FOR WEALTH OR FAME COULD DIVERT

FROM THE FAITHFUL SERVICE OF HIS

FELLOW MEN, THIS WORK IS

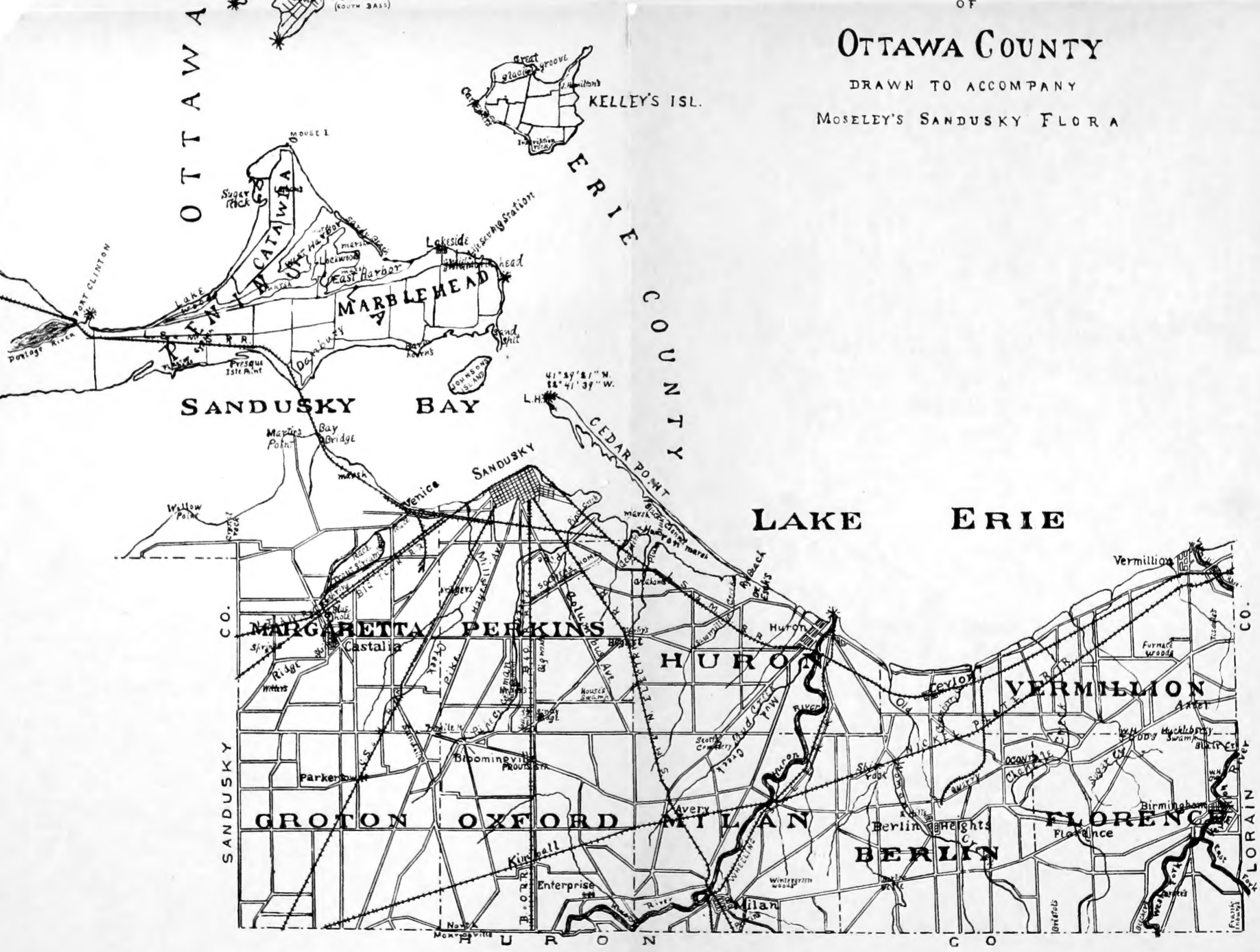
DEDICATED.



MAP OF
ERIE COUNTY, OHIO
 WITH THE
ISLANDS AND PART OF THE PENINSULA
 OF

OTTAWA COUNTY

DRAWN TO ACCOMPANY
 MOSELEY'S SANDUSKY FLORA



41° 39' 21" N.
 82° 41' 39" W.

OTTAWA COUNTY

ERIE COUNTY

SANDUSKY BAY

LAKE ERIE

MARGARETTA PERKINS HURON VERMILION
 GROTON OXFORD MILAN BERLIN FLORENCE
 SANDUSKY CO. HURON CO. LORAIN CO.

SANDUSKY FLORA.

The flora of the Sandusky district is a rich one. We believe there is no other local collection of Ohio plants that approaches within three hundred species of the number collected in the past seven years, in Erie county and the eastern part of Ottawa county, and now preserved at the Sandusky High School. Of the many local lists published in other states, we have seen none that give so many native species as have been found near Sandusky, although several of them cover much larger areas and represent the labors of many botanists working for long periods of time. Some of these lists, moreover, include territory that is regarded especially rich in plants.

The "Flora of Buffalo and its Vicinity," by David F. Day, presents the names of all the plants which have been detected within fifty miles of Buffalo, a territory many times as large as Erie county, Ohio, and including on the one side the whole of the Niagara river with its profusion of flowers and ferns, and, on the other mountains with an altitude of 2300 feet above the sea. "The Cayuga Flora" by William R. Dudley, published as a Bulletin of the Cornell University, covers an area 65 miles in extreme length and is based on numerous collections, the first of which was made in 1827. The "Plants of Monroe county, New York, and Adjacent Territory," published by the Rochester

Academy of Science, in addition to Monroe county, which is about three times as large as Erie county, Ohio, includes portions of five other counties and gives twenty species reported by early botanists, but no longer found. All of these districts border on Lake Ontario and one of them on Lake Erie also.

The whole of England contains but about 1200 native phenogams; surpassing the little district about Sandusky by less than a hundred species.

Although several hundred native plants not found in Erie county grow in one place or another in Ohio, yet so well is the flora of the state represented here, that it is probably not too much to say that excepting the counties bordering on the Ohio river and those that contain sphagnous swamps or bogs, there are few counties in the state where a botanist, unfamiliar with the territory would be likely to find in a single day's search more than half a dozen native species that do not grow somewhere in Erie county. The surpassing richness of the Sandusky flora is not due to the fact that it includes islands within its territory, for scarcely any of its species are confined to the islands, nor is it in very large measure due to the fact that it includes species that are confined to the lake shore but rather to peculiarities of climate and geological features, both of which depend to some extent on the proximity of the lake.

CLIMATIC INFLUENCE OF LAKE ERIE ON VEGETATION.

The Catalogue of Canadian Plants in six volumes includes the whole territory lying north of the Great Lakes and extending from the Atlantic to the Pacific. The Sandusky district contains 165 native species and varieties not given in the Canadian catalogue besides a

number of others which in Canada are confined to Pt. Pelee or Pt. Pelee Island, spots only a few miles distant from the islands of Ottawa and Erie counties, Ohio. The Sandusky district contains 67 native plants not known to grow anywhere in Michigan and many others which in Michigan are confined to the southwestern part where the climate is tempered by Lake Michigan. But what seems quite as remarkable is the fact that the Sandusky district contains 305 native plants not known to grow within fifty miles of Buffalo, while the Buffalo district has about 244 native species and varieties not given in the Sandusky list. But even this great difference between two regions bordering on Lake Erie is largely due to climate, for the summer at Buffalo is not only cooler but lasts less than three-fourths as long as at Sandusky. Since the prevailing winds have traversed Lake Erie for nearly its whole length before reaching Buffalo the mean temperature in summer there is about 3° lower than at Sandusky. In the spring the difference is even greater than in summer, being about $5\frac{1}{4}^{\circ}$ lower in April and May. This is due to the fact that when the ice breaks up it is blown to the east end of the lake and remains so crowded there as to prevent navigation three weeks or more after Sandusky Bay has been clear. The average date of the last killing frost in spring in Sandusky, is April 14; at Buffalo, May 20, that is 36 days later. Moreover, Sandusky is protected by its position from cold north-west winds in autumn, while Buffalo is not, so that the first killing frost at Sandusky does not come on an average until October 23, but at Buffalo October 5, that is 18 days earlier.

Like an east and west mountain range, Lake Erie protects the plants on its south side from cold north winds while they get the full force of winds from the south, but with the vegetation on the north side it is the reverse. Moreover, the heat given out by the

water in winter as it freezes, modifies the climate of the adjacent land. It would seem that an equal amount of heat should be absorbed by the ice in melting, and thus the winter prolonged into spring, but for the region about the western end of the lake this is not true, because a great part of the ice is blown away toward the east end of the lake, whose period of cold is prolonged thereby. And so it comes that the climate on the south side of Lake Erie is not only milder than that on the north side but much milder than that at the east end, and, if we reckon the length of summer from the average date of the last killing frost in spring to the average date of the first killing frost in autumn, we find the summer at Sandusky to last 192 days and at Buffalo only 138 days.

The counties of Ohio lying to the east of Erie county and bordering on the lake have a climate somewhat less mild than that of the Sandusky region for their land rises more abruptly from the water, and the prevailing winds pass over more of the lake before reaching them. In Erie county the land within a few miles of the lake is mostly much less than a hundred feet in elevation. The temperature at Sandusky in spring and summer averages about one and a half degrees higher than at Cleveland, and one degree higher than in the eastern part of Erie county, four miles back from the lake shore where Mr. W. H. Todd has recorded observations for the government for many years.

It is interesting to observe that the protection from frost afforded by Lake Erie scarcely extends beyond the counties that border upon it and, as a result we have many plants in these that have not been reported from any other county north of the middle of the state, and quite a number that have been found nowhere else in Ohio except in the southern part, within forty miles of the Ohio River. Even so far south as Columbus, the

last killing frost in spring occurs on an average six days later than at Sandusky and the first killing frost in autumn five days earlier.

CLIMATE OF THREE CITIES

ON LAKE ERIE AND ONE A HUNDRED MILES SOUTH OF
IT FROM TIME OF ESTABLISHMENT OF WEATHER
BUREAU IN EACH PLACE TO END OF 1897.

	Sandusky.	Cleveland.	Buffalo.	Columbus.	
WEATHER BUREAU ESTABLISHED.	1878.	1869.	1870.	1878.	
MEAN TEMPERATURE.	January.....	26.2	26	25	28.4
	February.....	29.4	26	25.3	32.1
	March.....	34.7	33	30.5	38.1
	April.....	47.7	46	42.5	51.2
	May.....	59.5	58	54.2	62.0
	June.....	68.8	68	65.4	71.3
	July.....	73.6	72	70.2	74.9
	August.....	71.6	70	69.1	72.3
	September.....	65.6	64	62.5	66.1
	October.....	53.7	52	51.2	53.7
	November.....	41.2	40	38.4	41.2
	December.....	32.8	31	30.5	33.3
	Annual.....	50.4	48.8	47.1	52.1
Lowest Minimum.	-16	-17	-14	-20.3	
Highest Maximum	100	99	95	103	
Av. date last kill- ing frost in spring	April 14.	May 1.	May 20.	April 20.	
Av. date 1st kill- ing frost in fall.	Oct. 23.	Oct. 11.	Oct. 5.	Oct. 18.	
Av. rainfall in inches.....	34.69	34.82	39.66	38.74	
Av. relative hu- midity.....	72.07	72.0	74.5	71.4	

GEOLOGY.

The physical feature of Erie county which causes most difference between its flora and that of the counties to the east is the existence of prairies in its southern and western part. These prairies are of two

sorts, each having its characteristic plants, while many species not known to grow farther east in the state are found on both of them.

Extending over the greater part of the township of Oxford, and over portions of the townships of Milan, Huron, Perkins, Margaretta and Groton is a nearly level prairie which probably at one time formed the bottom of the glacial lake that preceded Lake Erie and later of a bay or bays partly shut off from the lake by sand bars which still exist. Underlying most of this prairie is the Ohio shale, which in many places is close to the surface. The ground requires tiling to produce good crops. The other prairie lies north and west of the village of Castalia, extending to the western boundary of the county. The soil of this is different from the other, being a calcareous deposit from the water of the Castalia springs. Within the memory of men still living a great deal of this prairie was under water much of the time. A considerable portion of the region extending south of Castalia for a distance of over fifty miles has no surface streams, but the water descends through the joints of the limestone and flows through subterranean passages which it has made in the soluble rock of the Waterlime formation. This water charged with lime carbonate issues from the ground in numerous bold springs in the vicinity of Castalia, which owes its name to this circumstance. These springs are the largest and most beautiful in Ohio. The slope from Castalia to Sandusky Bay is very gradual and before any artificial drainage was established, the region was a marsh filled more or less with the calcareous water whose deposits have formed over thousands of acres to a depth of many feet. In some places these deposits are indurated forming a tufa, in others, soft making a shell marl containing the remains of millions of *Limnea* and *Planorbis* of the same species as live in the bay now. The tufa is composed mostly of petrified *Chara*

and other plants. The shape and venation of leaves is well preserved, one of the most common kinds being that of *Hypericum kalmianum* which grows over much of the surface. On this prairie as well as on the Oxford prairie grow many plants not found east of the Huron river either in Erie county or the counties beyond.

Sandusky and Margaretta as well as Marblehead Peninsula and Kelley's Island are underlaid by Corniferous limestone which comes near the surface over much of this region. In many places, especially on Marblehead, the covering of soil is only a few inches or a fraction of an inch deep and consists of partially decomposed vegetation and lime carbonate derived from the underlying rock. Quite a number of species are characteristic of this calcareous soil. Catawba Island, as it is called, and the islands of the Put-in-Bay group have a similar character but the rock is older, belonging to the Waterlime formation. Over the greater part of Sandusky and in many places on the islands, the limestone is covered with clay of variable thickness, but in many parts the soil is too thin for trees to attain a large size, for even if they could obtain nourishment enough, they are likely to be uprooted by a strong wind. The glacier that passed over this region left traces that still show in hundreds of places, including some grooves on Kelley's Island and Marblehead which so far as we know are unsurpassed elsewhere in the world. It is interesting to observe that the grooves on the different Islands, on the Peninsula and in Sandusky and Margaretta have the same direction, running about twelve degrees south of west, or parallel with the axis of Lake Erie, excepting a few which have quite a different direction and indicate a movement of the ice at a different time. Where the superimposed drift has protected the rock from weathering, it not only retains the deep grooves but shows everywhere a highly polished surface marked with fine parallel lines.

In many places in Sandusky this polished limestone requires no quarrying to serve admirably for basement floors. So level is the rock and the overlying drift that for miles around the city, the eye can scarcely detect any elevations or any depressions with the exception of slight ones made by small streams.

Many of the rare plants of Erie County grow in sand, especially in the sand deposits east of the village of Milan and along the sand ridges that stretch east and west in Margaretta township and along the border of the prairie in the southern part of Perkins township. These were formerly lake beaches and just below the sand ridge that extends south-west from Castalia is a ledge of limestone which shows very plainly the action of the waves, though it is now four miles from the water. When the lake had settled to a lower level, it must have beat against the foot of this ledge, undermining the rock and causing it to break away in large masses, as it is doing now at the west end of Rattlesnake Island and elsewhere. These detached masses often settled but a few feet, leaving deep but narrow chasms between them and the parent cliff, and these chasms are but partially filled even to the present day with dirt washed in from above. In places, trees grow out of them and the walls are bedecked with ferns. The rich woods covering the side of this hill, which I have called Margaretta Ridge, the sandy fields at the top and the prairie below afford a variety of plants found nowhere else in the county and a large number of species unknown in the counties farther east.

The Huron River divides Erie county into an eastern and western part. Few of the plants which grow in Erie county and not in Lorain or Cuyahoga counties are found east of this river. West of it are no natural surface streams that continue to flow all summer and except near the river no ravines. The

valley of the Huron and its tributaries therefore afford some species not found nearer Sandusky, but as it is cut through shale, it is not so rich as the valleys farther east. At Berlin Heights, the Old Woman Creek has cut a picturesque ravine through the Waverly sandstone and into the Ohio shale. Here grow several interesting plants not found farther west. But still deeper ravines have been formed in Florence township by the Vermillion River and its tributaries, the walls mainly of shale, but in the southern part of the township also of sandstone. Here have been found many species of sedges and other plants that do not seem to grow along the Huron or west of it, though most of them grow in the counties to the east where there are still deeper ravines in the sandstone. The walls of these ravines like the walls of a cellar are warmed slowly in summer, so that on the north side of steep, wooded slopes, are some cooler spots than any near Sandusky and hence many plants which are more common farther to the north and east.

The lake shores and marshes furnish quite a number of species not found in the interior of the state. Cedar Point consists of low sand ridges thrown up by the lake and separating it from Sandusky bay and its marshes for a distance of seven miles. Throughout most of its length the plants are comprised in few species but toward the end it is wider and probably older, having a richer soil and more varied flora. Although more accessible from Sandusky than any other good collecting ground and appearing not to have a great number of species, yet so many rare forms grow there in one place or another that it is not improbable that some plant not on our list at all may yet be found there. Seven years ago, before the work of making a herbarium had been commenced, the writer thought he had found on Cedar Point about all the species that grew there, but each year he has added

something from that region, which he had never found before either there or elsewhere. In the number of rare species, Cedar Point is surpassed by Marblehead, though the latter has a larger area. Altogether the Sandusky district has furnished more than a hundred species and varieties that were not known to be growing wild any where in the state, previous to their discovery here.

FLORA OF THE ISLANDS AND ITS ORIGIN.

With the exception of some of the little ones, the islands of Ottawa county, and Kelley's—the only island belonging to Erie county,—have been visited many times and at different seasons. Of the plants growing on six of the islands in the lake, separate lists have been kept and an attempt made to make them complete. These lists are not published except as a part of the general list of plants comprised in the Sandusky flora, but a fair idea of the results may be obtained from this by bearing in mind that all the plants marked common or abundant have been found on one and, in nearly all cases, on more than one of the islands, except a few which are noted otherwise. The names of plants not common on the mainland but occurring on Kelley's Island and two or more of the Put-in-Bay group are followed by the word—Islands. If found on Kelley's island and only one other, or not on Kelley's the names of the islands on which the plant has been found are given. The number recorded for each island is as follows:

Kelley's Island.....	461.
Put-in-Bay.....	439.
Middle Bass.....	306.
North Bass.....	282.
Rattlesnake.....	192.
Green Island.....	115.

It will be seen that the numbers correspond pretty well with the size of the islands, the largest island having the greatest number of species, the next in size the next greatest number, etc. The different islands are very similar in character, consisting of limestone covered more or less with clay and without any permanent streams. The difference in physical features and the difference in flora between the islands are much less than between parts of the mainland of Erie county separated by shorter distances. The entire number of different species is 612. Fourteen of these are Naiadaceae growing in the water of bays or along the shore, most of them at Put-in-Bay and North Bass. The islands are poor in ferns, the whole number of species being only eight, of which Kelley's has six, Put-in-Bay three, all scarce, Green Island two, Middle Bass and Rattlesnake one each, and North Bass none. We have found on them no orchids and no Ericaceae. Kelley's island, owing to its extensive commerce and cultivation, together with the protection from frost afforded by the water, has many naturalized species, especially along the south shore, two or three of which have not been noticed elsewhere. Excepting these and three rare sedges, and one rare golden rod, the islands appear to have no plants that have not been found also on the mainland of Erie county or on Marblehead, —not so many species as are afforded by each township of Erie county, excepting Groton. However, in view of the fact that the islands have no permanent streams, no ravines, no alluvial soil and little or no sand except the barren sand in some places along the shores, their flora is probably as varied as that of equal areas on the mainland where these defects exist. Their combined area is only about ten square miles.

It has been supposed that the lake, which after the melting of the southern portion of the glacier overspread a larger area than Lake Erie does now, sub-

sided until what are now the islands appeared above its surface. This view is doubtless correct, but there is now much evidence to show that it continued to subside until the islands formed part of the mainland and afterward rose and isolated them again, and is still rising and likely to submerge them again. The old beaches which may be traced for long distances running nearly parallel to the present shores of the Great Lakes, must have been level at the time they were formed, but they are not now level, and there has therefore been a tilting of that part of the earth's crust which includes the basins of the Great Lakes, as there has been of many other parts. These beaches all have gentle slopes, toward the south and south-west, indicating that in this part of North America, there has been an uplifting of the land toward the north north-east or a depression toward the south south-west or both. The effect of this tilting of the basins of these lakes has been to raise the water on the south and west as compared with that on the opposite sides, just as the tipping of a saucer partly filled with water would do. The fluctuation of the water due to variable winds and rainfall make such comparisons difficult, but Mr. G. K. Gilbert found by comparing the heights above the normal level of Lake Erie in 1895, of a certain point in Cleveland, and a certain point at the head of the Welland canal with the heights of the same two points as carefully determined in 1858, that the point near the north-east end of the lake rose 0.239 foot as compared with the point in Cleveland. This is a small amount and in view of the difficulty of determining the normal level and measuring the exact height of any point on the land above it even by measurements many times repeated, it might well be attributed to some inaccuracy in the measurements if it were an isolated case, but it is not. Similar comparison of points on Lake

Ontario and on Lake Huron and Michigan also, indicate tilting, and tilting in the same direction as at Lake Erie and not only that but the amount corresponds with the distance apart of the two points compared. Furthermore the direction of the tilting indicated by these measurements is the same as that indicated by the dip of the old lake beaches. We are therefore forced to the conclusion that the basins of the great lakes have been considerably tilted and that this tilting has been going on in the present century. As the outlet of Lake Erie is at that end of the basin which has been raised more than any other part, the result has been to deepen the water throughout, but especially at the opposite end where the islands are situated. The spreading of the waters over the land should be here more noticeable for another reason also, viz.; because the shores are so low. We should therefore expect to find here in the form of submerged forests and other things that could not have formed under water, evidence of the spreading of the waters of the lake over the land, and so we do.

OLD TREES KILLED BY RISE OF THE WATER.

By the high water that prevailed in 1858 to 1860 large trees were killed in many places where the waves could not reach them. Mr. George Hine, who owns land bordering the marsh east of Sandusky, had hickory trees two feet in diameter killed in this way. On Kelley's Island large sycamore trees standing on the border of the south marsh, on Put-in-Bay elm and sycamore, on Middle Bass big trees growing by the marsh near Rehberg's, and at Toussaint and elsewhere along the shore between Port Clinton and Toledo old walnut trees, were killed at this time by high water keeping the ground too wet around their roots. Persons who came to Erie county in the forties remember seeing about the marshes connected with the bay many

dead trees which they believed to have been killed by high water, and old residents of Put-in-Bay and Kelley's Island have told me the same thing about trees there. It is probable that these trees were killed in 1838 when the water was nearly as high as in 1858, though it did not remain high so long. Hundreds of walnut stumps are still standing along the border of the marshes east of Sandusky wherever now, although the water is lower than usual, it is too wet for walnut trees to grow. One that stood recently on ground only six inches above the present lake level measured 5 feet 4 inches in diameter. We may infer from this that during the life of this tree, probably over three hundred years, the water was not so high as in the present century.

SUBMERGED FORESTS.

Stumps and logs with roots attached have been found under water and show that when the trees grew the water must have been considerably lower than it has been during the present century. In the lake at Deisler's bathing beach, Put-in-Bay, was a sycamore stump that was dangerous to persons swimming, as it did not show above the water, and had to be blasted out. Other stumps in the water not far from where this one stood may still be seen. Near the Black Channel in Sandusky bay are cedar stumps standing upright with roots in place and completely submerged, except at such low stages of the water as rarely occur, when a little of the tops project. About a mile west of Venice many buried cedar stumps have been found below the level of the lake.

Besides stumps a large amount of submerged timber that fell without being cut has been found where it fell, and much of it is to be seen now. The greatest quantity is in the Huron marsh connected with Sandusky Bay. In parts where the water and mud are not very deep the logs may be easily seen in such numbers

and variety as to show that a forest was once there, but in the deeper water they are also abundant and are often struck by the pole of a hunter pushing his boat through the marsh. When in a very dry season, the ditch was dug through the marsh in order to float boats from the club house out to open water, logs of sassafras with the roots on, and a cedar with branches were found at the bottom, *i. e.* 3 or 4 feet below the present lake level. Even in the deeper parts a few logs are still to be seen partly above the water, having been supported by roots, or roots and branches until the marsh had grown up under them. A cedar out about 60 rods from land where the muck is five feet deep, has roots extending down into it at least three feet. It is 17 inches in diameter, and has about 60 rings. A pine log two feet in diameter and with 91 rings lies where the muck is over six feet deep. It has roots running down some distance and 30 years ago was not yet prostrate but the other end stuck up as much as seven feet above the water, and formed a landmark for fishermen. This is out about 80 rods from the present shore of the marsh. A walnut tree that forks into two huge and crooked branches whose ends are buried in the muck must have grown near where it lies, but this also, though a mile or more from the pine log, is some 80 rods out from shore, and the water at this place is now seven feet deep. It is still 23 inches in diameter and probably required nearly two centuries to grow. Observations on these trees were made March 5th and 6th, 1898, when the readings of the water gauge at Cleveland show the lake to have been $3\frac{1}{2}$ feet lower than the high water mark. During the life of these trees the lake must have been at least eight feet lower than it has been during much of the time for the last forty years.

A great quantity of submerged timber still retaining roots and branches was removed from the water in

front of the club house on Put-in-Bay by Mr. Vroman. There were soft maple, oak and sycamore, some of the logs four or five feet in diameter.

SUBMERGED STALAGMITES.

In several of the caves at Put-in-Bay nearly half a mile from shore, is deep water which rises and falls with fluctuations in the level of Lake Erie. The floors of these caves are covered with stalagmites, and the roofs were formerly studded with stalactites. In three caves I have seen stalactites hanging down in the water and in two stalagmites rising in the water. In one cave about thirty stalagmites may be seen on a submerged floor of a few square rods extent. They are, most of them, nearly cylindrical in shape, and represent merely the cores of larger stalagmites which once probably formed a crust over the whole floor, the remainder having been dissolved away. Those in the deeper water appear to have been dissolved more than those in the shallower parts. Many were standing in water from $2\frac{1}{2}$ to $3\frac{1}{2}$ feet deep, March 12 and 13, 1898. As stalactites and stalagmites would not form under water, the water from which the calcium carbonate was precipitated to form them must have flowed to a lower level than where the lowest stalagmites now exist. We may therefore infer that during the period of their formation, which certainly lasted many years, and probably some centuries, the lake was at least five feet lower than the mean level of the past forty years.

If these caves were formed in preglacial times, the argument still holds good, for if the lake had been as high or higher than now ever since the melting of the glacier and stalagmites had existed in the caves then, they would have been dissolved long ago. The stalagmites visible now are evidently not preglacial. Where the water does not cover the floor of the caves they are forming at the present time.

RIVER CHANNELS BELOW THE LAKE LEVEL.

In the Huron marsh off the mouth of Plum Brook, a setting pole may be pushed down 12 feet. This may be done along a line extending from the mouth of the creek out into the marsh, but a few rods on either side the pole goes down only two or three feet. When the stream cut this channel Lake Erie must have been at least 12 feet lower. Not only has the lake spread its waters over all the lowland through which this creek formerly flowed, and other creeks, whose submerged channels could doubtless be found by searching, but it has extended far up into the valleys of all the streams. This effect must result from the rise of the lake, for the streams had cut their valleys below the general level of the country, though not below the level to which the water had to flow while the cutting was going on. The Portage, the Sandusky, the Huron, and the other so-called rivers as well as all the smaller streams that enter this part of the lake, have the lower portions of their valleys filled by the water of the lake. Into the valley of the Old Woman Creek the lake has extended two miles farther than the present shore line, into the valley of the Huron five miles measured in a straight line from the present shore, into the Sandusky 22 miles beyond the Cedar Point light house, and more than 25 miles measured in a straight line from Rye Beach, for it is probable that the Black Channel at the east end of what is now Sandusky Bay is a part of the old river channel, also that the "Harbor" between Marblehead and Catawba is part of the old valley of the Portage, the lake having spread over the land to the west of Catawba and made an opening for the river at Port Clinton. This is not as yet quite certain, but there is no uncertainty about the valley of the Huron; it is still uninterrupted from the village of Huron on the lake shore to the place five miles inland where the flowing stream meets the water of the lake. The valley was

cut by the river when its waters continued to descend to Huron and beyond, but this must have been when the lake was not less than 32 feet lower than now, for the bottom of the channel is 32 feet below the present lake level at a point more than four miles from the lake, and the depth of the water above the mud is between 17 and 32 feet all the way from this place to the lake.

Even Mud Creek, a small tributary of the Huron, has all the lower part of its channel deep below the present lake level. The entire drainage area of this creek is only about four square miles, yet its waters reach the present level of the lake nearly a mile measured along the valley of the stream above its junction with the Huron, and at a bridge about three-fourths mile up the valley the water and mud are 12 or 14 feet deep.

EVIDENCE OF THE WATER'S DEEPENING IN THE PRESENT CENTURY.

Records of the lake level kept at different places show that at four times in the first half of the century the water was lower than at any time in the last half. In 1810 and in 1819 it was lower than any time since 1820, in 1841 and 1846 lower than at any time since the latter date. In the absence of any record of exact measurement of lake levels west of Cleveland we have, nevertheless, evidence that the water about Sandusky and the islands was lower in the early part of the century. Mr. Shook, now living at Port Clinton, remembers that in 1828 Mr. Ramsdell made hay of the wild grass that grew on what is now the harbor west of Lakeside, and that there was very little water then where it has since been four feet deep. Similar statements are made by other persons regarding this and other places in this region.

When Harrison's army passed near Huron in 1813

a corduroy road about 60 rods long was built across Mud Creek bayou, which, it is said, had been submerged for many years, when, in 1867, the water being temporarily very low, Mr. Carpenter removed many of the logs.

A survey made in 1887 of the Huron marsh at the east end of Sandusky bay shows that a tract of land one-half mile square, surveyed in 1809 has since become marsh with the water and mud 12 to 18 inches deep, and for two miles west of it, as far as it was surveyed, the shore line has moved south about five rods. These changes are certainly *not* due to erosion. Elsewhere about Sandusky bay and along the shore of the lake land has disappeared, partly from erosion and partly because of the rising water covering it and giving the waves new points of attack. The western part of the city of Sandusky has suffered much from the encroachment of the bay and along nearly the whole shore west to Martin's Point and beyond land has disappeared. So it is also along the lake. The surveys show that for seven miles west from the Vermillion River the lake has encroached upon the land between 20 and 34 rods since 1809. From the Huron River to Dr. Esch's place, about one and one-half miles west, the shore line has moved south a distance varying from 18 to 28 rods, west of this not so much. Since 1809 more than 500 acres have been lost to Erie county along the lake and in the eastern part of the bay, and many acres more between Sandusky and the western limit of the county. On the north side of the bay, too, the water has extended, open water covering ground where cat-tails once grew. John Stone of Put-in-Bay, and Warren Smith of Sandusky, remember when rushes grew over much of Sandusky Bay where now is open water. Until the middle of the century an island known as Peninsula Point extended across nearly the whole breadth of what is now the mouth of the bay. For the

length of a mile its height was 20 to 25 feet or more, and along the west side was clay covered with six inches of black soil bearing shell bark hickory trees and white oaks two and one-half feet in diameter. The last of this large island disappeared in 1860.

Gull Reef, north of Kelley's Island, has for many years been the greater part of the time under water. As late as 1850 it was an island on which stood a fish shanty and a tree that probably took a hundred years to grow.

DERIVATION OF THE ISLAND FLORA.

The facts stated in the preceding paragraphs suggest the possibility of many of the plants now on the islands having spread over them when a land connection existed between them and the mainland. Mr. Gilbert and others have concluded from a study of the old lake beaches that when the melting of the ice to the north opened an outlet for the glacial lake at Niagara the waters went down till it occupied only one-sixth the area that Lake Erie does now, and extended no farther west than Erie, Pa. We have seen that the submerged forests and stalagmites in the region about Sandusky and the islands prove a lower condition of the water when these were formed than has existed in the present century, and that the submerged river channels in this region indicate that the depression of the land as compared with the water has amounted to not less than 32 feet. A lowering of the water 22 feet would make it possible to walk from Kelley's island to Catawba, and 30 feet from Put-in-Bay to Catawba, excepting for a narrow channel, like a river which is deeper than the rest. We would be entitled, therefore, to conclude, even without a knowledge of observations made in other regions, that the islands were connected with the mainland in postglacial times. With this conclusion it is much easier to harmonize the facts

ascertained regarding the plants now growing on the islands than to see how all of them could have been transported across several miles of water.

The seeds of many plants are provided with such means of transportation as would render their safe passage over a few miles of water an easy matter. Some produce fruit that is swallowed whole by birds and the pulp digested but not the seeds. The latter may thus be transported over land or water and propagate the species miles away from the parent plant. A mountain ash found growing on Rattlesnake Island in a thicket where birds roost was doubtless carried there in this manner. Some seeds like those of thistle have down so light that the wind may carry them long distances. Some are capable of floating for a time and then germinating. Some seeds are so small that they are likely to be carried in the mud that sticks to the feet of rails or other birds that frequent marshy places. In several instances a single specimen of orchid has been found growing on some springy bank or damp place in the woods of Erie county and not another of the same kind within many miles. In two instances the single specimens are the only ones we have ever found in the county. These probably came from seeds that stuck to the feet of woodcocks or other birds that transported them from some distant bog. *Ammania coccinea* and some other mud-inhabiting species were probably transported in this way to the shore of Sandusky bay from much farther south for they are not known to grow elsewhere within more than a hundred miles.

When the ice forms a bridge between the islands and the mainland it would seem that weeds or their seeds might be blown across it or be carried across in the hair of animals. Seeds might also have been transported in former times by the Indians in their boats. In the present century the flora of the islands has been

materially increased through the agency of man. Several cultivated plants have run wild and become well established there, including several species which are seldom found flourishing in the wild state so far north. The islands seem to have their full share of weeds and most of these have probably been introduced with impure seed. Others have probably been transported in baled hay and in packing material, and some, like the hore-hound, by sticking to people's clothes.

So numerous are the ways in which seeds may be transported that it would seem quite possible for the islands in the course of a few thousand years to have acquired all the plants that grow on them without any closer connection with the mainland than now exists. When, however, we consider more carefully these means of transportation in relation to all the species on the islands, we find it difficult to understand how some of them could have reached the islands in any of these ways.

A tornado passing first over the land and then the islands might carry seeds of any sort, but it would require more than one tornado to distribute seeds to all the islands and if any of the islands owed part of their plants to this agency we should expect to find on them some species well distributed which do not grow on the other islands at all, but this is not the case, with the exception of some species recently introduced by man. Other winds would not be likely to carry so far any but the lightest of seeds. Violent winds coming from the south where the mainland is nearest are generally accompanied by rain.

Any plant whose seeds are safely transported in the alimentary canal of birds might reach the islands in this way. Of the species that grow in muddy or marshy places and produce small seeds likely to be transported in mud on the feet of woodcocks, etc., not

many occur on the islands and some of the islands have no places which such birds frequent.

Men who have often crossed the ice in winter say it would be impossible for seeds to be blown along on the ice all the way to the islands. Not only is the ice apt to be rough in many places, but it is crossed by numerous drifts of snow and is always intersected by long cracks in which seeds would lodge. Cakes of floating ice might transport seeds some distance, but would usually be prevented from landing them on distant shores by other ice getting in the way, and the freezing of the seeds to the floating ice would prevent them from blowing off. However, some littoral species may have reached the islands in this way. In those instances in which animals have succeeded in swimming so far, any seeds that were clinging to their hair at the start would probably be washed off on the way. Yet many species that rely upon mammals for transportation from place to place are there and give evidence of having been there longer than civilized man. These plants mature their seeds from four to six months before the ice would permit an animal to cross to the islands, and some of them have lost all their seeds by that time.

The following list gives the names of some of the plants on the islands whose seeds are adapted to transportation in the hair of animals: *Desmodium canescens*, *Desmodium paniculatum*, *Agrimonia eupatoria*, *Geum album*, *Geum virginianum*, *Circaea luteiana*, *Osmorrhiza brevistylis*, *Osmorrhiza longistylis*, *Sanicula marylandica*, *Sanicula marylandica* var. *canadensis*, *Galium aparine*, *Galium boreale*, *Galium circaezans*, *Galium triflorum*, *Coreopsis trichosperma* var. *tenuiloba*, *Echinosperrum virginicum*.

Colonel James Smith in the narrative of his captivity with the Indians, 1755-59, says: "These islands are but seldom visited; because early in the spring and

late in the fall it is dangerous sailing in their bark canoes; and in the summer they are so infested with various kinds of serpents, (but chiefly rattlesnakes,) that it is dangerous landing." It is not probable then that the Indians planted anything there, or that any great number of seeds were introduced by them accidentally.

The difficulty of seeds floating to the islands is two-fold. The prolonged soaking in the absence of definite currents to carry them in that direction is sufficient to destroy the vitality of many kinds. The shores of the islands do not afford conditions suited to the growth of many of the species found in the interior. On Green and Rattlesnake islands there is not a single spot where it seems possible for a plant to start from seeds washed ashore, except such as grow on bare rocks. Six kinds of oak and three of hickory grow on the islands. If all these kinds came from nuts that drifted ashore, one would expect to find somewhere on the shore of some island a tree so situated as to suggest the possibility of its having originated in this way, but not a single one has been found. These are long lived trees, and if within the period represented by the growth of a large oak or hickory, there has not been a single instance of a nut drifting ashore and finding a suitable place to grow it may well be doubted, if in several thousand years there would be opportunities for all the different kinds to reach so many different islands. The fact that acorns left in the water soon lose their power to germinate increases the difficulty, yet it is not easy to see how, except by floating, acorns or pig-nuts would be likely to reach the islands as long as they were separated from the mainland as far as they are now.

The weeds that have followed civilized man from the Old World, or have spread since the cultivation of the land from other parts of this, grow on

the islands as well as the mainland. That they have reached the islands mainly through man's agency is shown by the fact that those islands which have the most extensive commerce have the greatest variety of weeds. Green Island, being still wild, may be left out of consideration, but the greater part of Rattlesnake is cultivated, and there many kinds of weeds grow with a luxuriance that tries the patience of the owner. Yet there are fourteen kinds of weeds that grow on all four of the other islands, which are not to be found on Rattlesnake, without counting a number that need a damper soil than there prevails. Not only are most of these fourteen common on all the islands that enjoy much commerce, but among them are included a number of the most abundant weeds in this part of North America. The list is as follows: *Lepidium virginicum*, *Abutilon avicennæ*, *Melilotus alba*, *Medicago lupulina*, *Bidens frondosa*, *Sonchus asper*, *Xanthium canadense* var. *echinatum*, *Marrubium vulgare*, *Amarantus albus*, *Amarantus blitoides*, *Acalypha virginica*, *Juncus tenuis*, *Bromus secalinus*, *Panicum sanguinale*. Why are these species, elsewhere so abundant, not represented on Rattlesnake Island? For many years the island has been cultivated and the conditions suitable to the growth of these fourteen kinds of weeds, most of which have abounded for many years all around Lake Erie, but the island has been the abode of only a single family and its commerce, therefore very limited, and the seeds have not found any way to reach the island, or, if they floated to it, no way to get up onto soil where they could grow.

If a large portion of the plants on the islands have reached them in ways which may be called accidental and not by means that may be seen operating in the present century, then we ought to find deficiencies in the flora of certain islands due to the failure of certain species to reach them. Some plants that are well

distributed on certain islands should be altogether wanting on others where the conditions for their growth are just as suitable. Moreover we should expect to find that some species not adapted to passing over the water had failed to reach any of the islands. But what we do find is the reverse. Every native species that is well distributed in similar soil on the mainland grows also on the islands and in no case, we believe, is a native species common over one island and lacking on others where similar conditions exist.

The leading facts bearing on the origin of the island flora may be summarized as follows: Within the present century the waters of Lake Erie and of the bays and marshes connected with it have encroached upon the land in the vicinity of Sandusky, covering many hundreds of acres of what was, at the time of the first surveys, solid ground. Trees several centuries old have been killed by high water in the present century. Submerged forests have been found in different parts of the region, submerged stalactites and stalagmites in the caves of Put-in-Bay, and submerged river valleys both east and west of Sandusky. When the trees grew and the stalagmites and valleys were formed, the land must have been above the level of the lake. The valleys are now deeper below the surface of the lake than is the lake bottom between the islands and the mainland. At the time they were formed, therefore, the lake did not separate the islands from the mainland. The flora of the islands is different from what we should expect to find, if all the species growing there had reached them by being transported across the water. It is probable then that many species have been on the islands since a time when these formed part of the mainland.

We may picture to ourselves woods such as grow at Lakeside now stretching north to Put-in-Bay and Kelley's island, interspersed here and there with prairies, perhaps, like those on the Peninsula now. We may

well believe the picture to represent what was once a reality. How long ago this was we cannot tell. Some observations make it seem probable that it was not a great many centuries ago, perhaps less than twenty. Sometime we may find better means of judging.

SOUTHERN AND WESTERN PLANTS WHICH GROW NEAR LAKE ERIE.

Owing to the long summer enjoyed by places situated on the south shore of Lake Erie, many plants grow here which are not found farther north. As the country farther east lacks prairies such as occupy a considerable part of Erie county, quite a number of species appear to reach their eastern limit here. Since a number of the species are both southern and western, no separation of southern and western species is attempted in the following list. Many of the southern species grow east of the southern part of Lake Michigan, and some of them in southern Minnesota, where the summer isotherms reach a higher latitude than in the eastern part of the country. The species in the list are believed to be wholly wanting or of rare or local occurrence in that part of North America, which lies east and north of the meridian and parallel of Cleveland. Few of them are found in northern Ohio anywhere east of Erie county. The plants whose names are followed by an asterisk I have not found, but Mr. David F. Day, of Buffalo, who collected at Toledo in 1865, tells me that he found them there.

Echinacea purpurea is inserted in the list because of a Toledo specimen in the herbarium of the Ohio State University.

Viola pedatifida.
Hypericum gymnanthum.
*Hibiscus militaris.**
Aesculus glabra.

Polygala verticillata ambigua.
Desmodium lineatum.
Desmodium illinoense.
*Petalostemon candidus.**

<i>Silphium trifoliatum.</i>	<i>Phlox maculata.*</i>
<i>Solidago speciosa angustata.</i>	<i>Hydrophyllum macrophyllum.</i>
<i>Vernonia altissima.</i>	<i>Phacelia purshii.</i>
<i>Asclepias sullivantii.</i>	<i>Cuscuta chlorocarpa.</i>
<i>Petalostemon violaceus.*</i>	<i>Cuscuta decora.</i>
<i>Psoralea melilotoides.</i>	<i>Conobea multifida.</i>
<i>Geum vernum.</i>	<i>Gerardia auriculata.</i>
<i>Pyrus angustifolia.</i>	<i>Gratiola sphaerocarpa.</i>
<i>Spiræa lobata.</i>	<i>Seymeria macrophylla.</i>
<i>Ammannia coccinea.</i>	<i>Tecoma radicans.</i>
<i>Eryngium yuccæfolium.</i>	<i>Lippia lanceolata.</i>
<i>Thaspium barbinode angustifolium</i>	<i>Pycnanthemum muticum pilosum.</i>
<i>Valeriana pauciflora.</i>	<i>Scutellaria nervosa.</i>
<i>Actinella acaulis glabra.</i>	<i>Scutellaria versicolor.</i>
<i>Aster shortii.</i>	<i>Euphorbia dentata.</i>
<i>Coreopsis aristosa.</i>	<i>Salix glaucophylla.</i>
<i>Echinacea purpurea.</i>	<i>Iris cristata.</i>
<i>Eclipta alba.</i>	<i>Smilax ecirrhata.</i>
<i>Eupatorium altissimum</i>	<i>Trillium sessile.</i>
<i>Helianthus grosse-serratus.</i>	<i>Carex conjuncta.</i>
<i>Helianthus hirsutus.</i>	<i>Carex shortiana.</i>
<i>Helianthus mollis.</i>	<i>Carex stenolepis.</i>
<i>Helianthus occidentalis.</i>	<i>Carex granularis haleana.</i>
<i>Helianthus parviflorus.</i>	<i>Carex mnhlenbergii enervis.</i>
<i>Helianthus trachelifolius.</i>	<i>Cyperus refractus.</i>
<i>Kuhnia eupatorioides.</i>	<i>Rhynchospora cymosa.</i>
<i>Liatris pycnostachya.*</i>	<i>Aristida gracilis.</i>
<i>Liatris squarrosa intermedia.</i>	<i>Melica diffusa.</i>
<i>Prenanthes aspera.</i>	<i>Poa brevifolia.</i>
<i>Prenanthes crepidinea.</i>	<i>Triodia cuprea.</i>
<i>Rudbeckia triloba.</i>	<i>Equisetum robustum.</i>

A "List of Plants Observed Growing Wild in the Vicinity of Cincinnati," by C. G. Lloyd, with additions furnished by Walter H. Aiken, includes six hundred and forty-five species and varieties. Of these only fifty-one native species are lacking in Erie county. A greater number than this have been found in Lorain county, which borders Erie on the east, and might probably be found in each of the lake counties beyond.

DEFICIENCIES IN THE SANDUSKY FLORA.

Of the four counties, Lorain, Cuyahoga, Franklin and Licking, each two or three times as large as Erie, lists of plants have been published. Several hundred species are common to the four counties. Only four of these species, *Viola canadensis*, *Hieracium venosum*, *Veronica americana* and *Habenaria orbiculata*, have we failed to find in Erie county.

However twenty-five species not found in Erie county, grow in both Lorain and Cuyahoga. If we had complete lists for the counties farther east, Lake and Ashtabula, we should probably find in them a still larger number that do not grow in Erie county. Their higher hills and deeper ravines, give them a more northern flora, than one finds in the neighborhood of Sandusky. Moreover the Sandusky district contains no genuine bog or sphagnous swamp. Such a bog encircles a little lake a few miles south-east of Erie county in Camden township, Lorain county. The list of plants growing at Camden Lake and not in Erie county, is probably incomplete. For some of the names, I am indebted to Isabel S. Smith who has found the specimens in the Oberlin herbarium.

The list of other plants growing in northern Ohio is based mainly on the work of other collectors. It includes only those species which are said to grow in two or more counties bordering on the Lake. Of some of the species I have seen no specimens. Many other species have been reported and many others undoubtedly grow in one place or another, but this list together with the catalogue of plants of Sandusky and vicinity and the plants of Camden are thought to include all the native phenogams and vascular cryptogams which grow in the Lake counties, excepting such as are very rare or local.

PLANTS GROWING AT CAMDEN LAKE.

<i>Coptis trifolia.</i>	<i>Pogonia ophioglossoides.</i>
<i>Sarracenia purpurea.</i>	<i>Smilacina trifolia.</i>
<i>Nemopanthus fascicularis.</i>	<i>Calla palustris.</i>
<i>Potentilla palustris.</i>	<i>Peltandra undulata.</i>
<i>Viburnum cassinoides.</i>	<i>Scheuchzeria palustris.</i>
<i>Cassandra calyculata.</i>	<i>Carex canescens.</i>
<i>Vaccinium oxycoccus.</i>	<i>Carex debilis.</i>
<i>Menyanthes trifoliata.</i>	<i>Carex trisperma.</i>
<i>Alnus serrulata.</i>	<i>Eriophorum virginicum album.</i>
<i>Arethusa bulbosa.</i>	<i>Rhynchospora alba.</i>
<i>Habenaria orbiculata.</i>	<i>Glyceria canadensis.</i>
	<i>Woodwardia virginica.</i>

OTHER PLANTS NOT FOUND NEAR SANDUSKY, BUT
SAID TO GROW IN TWO OR MORE OF THE
COUNTIES OF OHIO THAT BORDER
ON LAKE ERIE.

<i>Adlumia cirrhosa.</i>	<i>Hieracium venosum.</i>
<i>Corydalis glauca.</i>	<i>Polymnia uvedalia.</i>
<i>Stylophorum diphyllum.</i>	<i>Solidago squarrosa.</i>
<i>Viola canadensis.</i>	<i>Solidago uliginosa.</i>
<i>Viola hastata.</i>	<i>Pyrola secunda.</i>
<i>Viola rotundifolia.</i>	<i>Rhododendron nudiflorum.</i>
<i>Acer spicatum.</i>	<i>Vaccinium stamineum.</i>
<i>Polygala polygama.</i>	<i>Monotropa hypopitys.</i>
<i>Astragalus cooperi.</i>	<i>Phlox maculata.</i>
<i>Prunus pennsylvanica.</i>	<i>Cynoglossum virginicum.</i>
<i>Waldsteinia fragarioides.</i>	<i>Melampyrum americanum.</i>
<i>Ribes oxycanthoides.</i>	<i>Pentstemon laevigatus digitalis.</i>
<i>Ribes rubrum subglandulosum.</i>	<i>Veronica americana.</i>
<i>Saxifraga virginiensis.</i>	<i>Rumex salicifolius.</i>
<i>Oenothera biennis grandiflora.</i>	<i>Myrica asplenifolia.</i>
<i>Aralia hispida.</i>	<i>Alnus incana.</i>
<i>Diervilla trifida.</i>	<i>Betula lutea.</i>
<i>Lonicera ciliata.</i>	<i>Cypripedium parviflorum.</i>
<i>Cornus canadensis.</i>	<i>Pogonia verticillata.</i>
<i>Antennaria margaritacea.</i>	<i>Spiranthes latifolia.</i>
<i>Aster patens.</i>	<i>Smilax glauca.</i>
<i>Cacalia suaveolens.</i>	<i>Uvularia perfoliata.</i>

Veratrum viride.	Larix americana.
Carex umbellata.	Asplenium trichomanes.
Cyperus erythrorhizos.	Ophioglossum vulgatum.
Milium effusum.	Phegopteris polypodioides.
	Woodsia obtusa.

EXTINCT SPECIES.

The only plant no longer found in the county, but known to have formerly grown in considerable quantity, is the Pitcher Plant, *Sarracenia purpurea* Mr. W. H. Todd remembers that this used to grow in the old huckleberry swamp near Axtell, in the eastern part of the county. This swamp of a hundred acres extent, is said to have produced yearly hundreds of bushels of blueberries, and a hundred bushels or so of cranberries. About 1856 a fire started in the muck, which lasted for a year, burning in places to a depth of four to six feet. This and drainage killed all the cranberries and nearly all the blueberries, and, how many other species, no body will ever know. It is now overgrown with a dense tangle of blackberry bushes interspersed with aspen and soft maple; the soil too light to be of much account. Had the original swamp been preserved, it would now be valuable for the berries it would produce. Only after repeated visits and prolonged searching in this wilderness by several persons, were two surviving bushes of the swamp blueberry discovered. Cranberries, which formerly grew also in a swamp near Berlin Heights, are now confined to a few square yards of ground, along a road near Milan.

Poison sumach formerly grew in the Axtell swamp. It is now all but extinct in the county. Leatherwood formerly abounded on Beecher's flats along the west branch of the Vermillion River. A single specimen remains, probably the only one in the county. A sedge collected on Cedar Point several years ago, and called by Prof. Wheeler, *Cyperus Houghtonii*, was afterward lost and so is not included in our catalogue. Likewise

we omit Strawberry Blite, *Chenopodium capitatum*, seen on Green Island in 1892, but not collected, and *Hedeoma hispida*, given in a list of plants, analyzed in the eastern part of Erie county by Josephine Fish, a number of years ago. The last has been found in Lorain County by Prof. Kelsey, but perhaps is not indigenous to Ohio.

FOREST TREES.

Most of the land of Erie county is now under cultivation. Much of it was treeless when the earliest settlements were made. Nevertheless, it supports a greater variety of trees than do most of the counties of Ohio, greater, perhaps, than any similar area farther north in America. Birch, alder and tamarack, which grow farther east in Ohio, are lacking in Erie county, but it has ten kinds of oak, six of hickory, five of ash, four of maple, four of poplar, four of willow, three of thorn, two of elm, two of ironwood, two of wild crab, and one each of black cherry, chokecherry, plum, juneberry, basswood, box elder, buckeye, staghorn sumach, papaw, tulip, cucumber, red-bud, locust, coffee-tree, dogwood, pepperidge, sassafras, mulberry, hackberry, buttonwood, beach, chestnut, walnut, butternut, hemlock, cedar and pine. Besides these, there are several cultivated kinds that have become naturalized. The distribution is given in the catalogue, where the names may be found by referring to the index. Erie county has five times as many native trees as the whole of Great Britain.

THE CATALOGUE.

The catalogue that follows gives the names of the phenogams and vascular cryptogams in the herbarium of the Sandusky high school which have been collected in the region shown on the accompanying

map, i. e. Erie county, and the islands of Ottawa county, with the eastern portion of the peninsula, extending as far west as Port Clinton. Specimens of all the species and varieties have been examined by Prof. C. F. Wheeler, of Michigan, to whom I am indebted also for assistance in the determination of my earlier collections of Cyperaceæ and Naiadacæ, as well as of many puzzling forms found since.

Furthermore, a collection of most of the rarer species has been deposited in the Gray Herbarium, Cambridge, Mass., and another set in the Ohio State Herbarium, at the University at Columbus, and at both places botanists have examined them to see if there were errors in the identification.

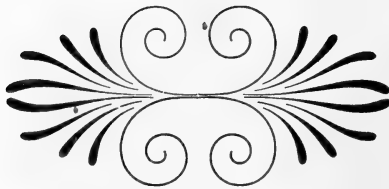
To Dr. Erwin F. Smith, of Washington, I am also indebted for valuable suggestions and assistance.

In a region where so many rare native species occur one would expect to find some exotic plants thriving, better than in most places in this latitude. As in the Philippine Islands where it has been introduced, so also in Sandusky, the tomato grows wild, coming up like a weed in many places, but especially along the bay shore, where it ripens its fruit year after year. It is difficult in some cases to say whether a species is naturalized or not. Oats grow on the shores of the islands, as well as about the docks in Sandusky, and along roads, but herbs of which all the specimens found have probably sprung directly from the seeds of cultivated plants, are not included in the catalogue. A watermelon vine with fruit was found on the shore of Cedar Point, and this and muskmelon, squash and pumpkin, on waste ground in Sandusky near the Bay. Peanuts, which are raised in small quantities by many people in and near Sandusky, have been found spontaneous in two places in the city. Snapdragon, gilliflower, candytuft, common honesty, petunia, and others, have been found growing in waste places, but

are excluded from the catalogue under the rule given above. On the other hand plants that are never cultivated in this region are included, even if merely adventive.

In nomenclature I have, in the main, followed the Index Kewensis, giving in parenthesis the names used in the sixth edition of Gray's Manual, in the few cases where those differ materially from the names of the Kew Index. Names of species not native to this part of the world, are printed in italics. An asterisk indicates that the species is at present known to grow in few, if any places in Ohio, except in the neighborhood of Sandusky.

Relative abundance is expressed by the following terms in the order named; rare, scarce, infrequent, frequent, common, abundant. When standing alone or coming first, they refer to Erie county as a whole.



CATALOGUE.

PTERIDOPHYTA.

OPHIOGLOSSACEÆ.

BOTRYCHIUM, Swartz.

- B. TERNATUM, Swartz.
 Eastern Milan, Berlin, Florence, Vermillion; infrequent. Varies greatly.
- B. VIRGINIANUM, Swartz.
 Frequent. Put-in-Bay.

FILICES.

ADIANTUM, L.

- A. PEDATUM, L. Maiden-hair Fern.
 Common. Not on the Islands.

ASPIDIUM, Swartz.

- A. ACROSTICHOIDES, Swartz. Shield Fern.
 Scarce in Perkins. Common on high banks of Huron and Vermillion Rivers.
- A. CRISTATUM, Swartz.
 Vermillion River bottoms, Florence; rare.
- A. GOLDIANUM, Hook.
 Florence and Kromer's woods, Perkins; scarce.
- A. MARGINALE, Swartz.
 Common on steep river banks.
- A. NOVEBORACENSE, Swartz.
 Infrequent.

A. SPINULOSUM, Swartz.

Frequent in rich woods.

A. SPINULOSUM INTERMEDIUM, D. C. Eaton.

Frequent. Neither this nor the species seen on Peninsula or Islands.

A. THELYPTERIS, Swartz.

Common.

ASPLENIUM, L. Spleenwort.

A. ANGUSTIFOLIUM, Michx.

Infrequent.

A. EBENEUM.

Common in Furnace woods, Vermillion, "Cedar Point," J. R. Schacht.

A. FILIX-FOEMINA, Bernh.

Common. Not on Peninsula or Islands.

A. THELYPTEROIDES, Michx.

Perkins and Florence ; scarce.

CAMPTOSORUS, Link, Walking-fern.

C. RHIZOPHYLLUS, Link.

On sides of sandstone rocks, Vermillion River, S. Florence ; on limestone, three places in Margaretta, Catawba, Kelley's sland.

CYSTOPTERIS, Bernh, Bladder Fern.

C. BULBIFERA, Bernh.

Frequent. Islands.

C. FRAGILIS, Bernh.

Common. Kelley's Island.

DICKSONIA, L'Her.

D. PILOSIUSCULA, Willd.

Vermillion River ; frequent. Big woods, Perkins ; scarce.

ONOCLEA, L.

O. SENSIBILIS L. Sensitive Fern.

Common. Not on the Islands.

- O. STRUTHIOPTERIS, Hoffman.
Vermillion River bottoms, frequent.

OSMUNDA, L.

- O. CINNAMOMEA, L. Cinnamon Fern.
Infrequent; Florence, Milan "Perkins."
O. CLAYTONIANA, L.
Common in moist woods. Not on Peninsula or
Islands.
O. REGALIS, L. Flowering Fern.
Infrequent in wet woods.

PELLÆA, Link, Cliff-Brake.

- P. ATROPURPUREA, Link.
Sandstone quarry, Furnace woods, Vermillion;
on limestone, Margaretta, Peninsula, Catawba,
Kelley's Island, Put-in-Bay.

PHEGOPTERIS, Fee, Beech Fern.

- P. HEXAGONOPTERA, Fee.
Frequent from the Huron river east.

POLYPODIUM, L., Polypody.

- P. VULGARE, L.
Rocky banks of rivers and Kelley's Island;
scarce.

PTERIS, L.

- P. AQUILINA, L., Common Brake.
Frequent.

EQUISETACEÆ.

EQUISETUM, L., Horsetail.

- E. ARVENSE, L.
Common but not observed on the Islands, except
Kelley's.

- E. LAEVIGATUM, Braun.
Frequent, at least in the western part of the county.
- E. LIMOSUM, L.
Lake marshes, Huron Tp.
- E. LITTORALE, Kuhl.*
Perkins; rare.
- E. PRATENSE, Ehrh.
Frequent.
- E. ROBUSTUM, Braun,
Common, apparently entirely supplanting *E. hyemale*. Put-in-Bay and Kelley's Island but no others
- E. VARIEGATUM, Schleicher,*
Cedar Point and elsewhere; rare.

LYCOPODIACEÆ.

LYCOPODIUM, L., Club-Moss.

- L. COMPLANATUM, L. Ground-Pine.
East fork of Vermillion River; rare.
- L. DENDROIDEUM, Michx.
East of Milan; rare.
- L. LUCIDULUM, Michx.
Quarry in Furnace woods, Vermillion; rare.
Each of the three kinds of club-moss has been found in but a single spot, and of the last two, only a few specimens.

GYMNOSPERMÆ.

CONIFERÆ.

JUNIPERUS, L.

J. COMMUNIS, L.

Mr. Latham's woods, Catawba; very rare.

J. VIRGINIANA, L., Red Cedar.

Frequent in dry soil in various parts of Erie and Ottawa counties. Formerly abundant on the islands where its wood was one of the first sources of income to the early settlers. Many stumps two feet or more in diameter still remain on Kelley's Island, though they are being used for kindling and for boat knees. The trees grew in the thin soil overlying the limestone, and so the roots following the level surface of the rock were given off from the trunk at a right angle. Having greater strength than an artificial joint and great durability sections of these stumps make excellent knees for small boats. Large cedars grew formerly also on Cedar Point where small ones are common now.

PINUS, Tourn.

P. STROBUS, L. White Pine.

Cedar Point and Vermillion River. Both this and Red Cedar grew once where Sandusky Bay is now.

TAXUS, Tourn.

T. CANADENSIS, Willd. American Yew. Ground Hemlock.

Shores of Islands and Vermillion River; infrequent.

TSUGA, Carriere.

T. CANADENSIS, Carr. Hemlock.

Common along the Old Woman Creek at Berlin Heights and along the Vermillion River.

MONOCOTYLEDONES.

TYPHACEÆ.

SPARGANIUM, Tourn, Bur-reed.

- S. ANDROCLADUM, Engelm.
Lake marshes. Middle Bass.
- S. EURYCARPUM, Engelm.
Lake marshes. Middle Bass.
- S. SIMPLEX, Huds.
Southern Florence, Shinrock.

TYPHA, Tourn.

- T. AUGUSTIFOLIA, L.
Castalia stream, Portage River and North Bass;
scarce.
- T. LATIFOLIA, L. Common Cat-tail.
Common.

NAIADACEÆ.

NAIAS, L., Naiad.

- N. FLEXILIS, Rostk, and Schmidt.
Common.
- N. FLEXILIS ROBUSTA, Morong.*
Infrequent.
- N. GRACILLIMA, A. Br.*
"Portage River" A. J. Pieters.

POTAMOGETON, Tourn. Pond-weed.

- P. AMPLIFOLIUS, Tuckerm, Deep water; infrequent.
- P. FOLIOSUS, Raf.
East Harbor, Put-in-bay, North Bass; mostly in
shallow water.
- P. FOLIOSUS NIAGARENSIS, (Tuckerm.) Morong.*
North Bass and small streams in Erie County,
especially Mills Creek.

- P. FRIESII, Rupr.*
Sandusky Bay, Put-in-Bay; infrequent.
- P. HETEROPHYLLUS, Schreb.*
Frequent; especially the variety *longipeduncula-*
tus. The variety *maximus* occurs at North Bass.
- P. HILLII, Morong.*
East Harbor; rare.
- P. INTERRUPTUS, Kitaibel.*
Sandusky Bay, Put-in-Bay; rare.
- P. LONCHITES, Tuckerm.
Common.
- P. LUCENS, L.*
Frequent.
- P. NATANS, L.
Common, as is also the so called variety, *prolixus*.
- P. PECTINATUS, L.
Abundant-
- P. PERFOLIATUS, L.
Frequent.
- P. PERFOLIATUS RICHARDSONII A. Bennett.
Abundant.
- P. PRAELONGUS, Wulf.*
Sandusky Bay, August Guenther. Perhaps its
habit of withdrawing beneath the water, as
soon as its fruit is set, has prevented us from find-
ing much of it.
- P. PUSILLUS, L.*
Infrequent.
- P. ROBBINSII, Oakes.
Sandusky Bay; scarce.
- P. ZIZII, Roth.*
Sandusky Bay; scarce.
- P. ZOSTERÆFOLIUS, Schum.
Common.
- TRIGLOCHIN, L. Arrow-Grass.
- T. PALUSTRE, L.*
Castalia Sporting Club grounds; rare.

ZANNICHELLIA, Mitchell, Horned Pond-Weed.

Z. PALUSTRIS.

The "variety" *pedunculata* grows, or did grow in one of the rivulets flowing from the Blue Hole, Castalia; rare.

ALISMACEÆ.

ALISMA, L. Water-Plantain.

A. PLANTAGO, L.
Common.

LOPHOTOCARPUS, T. Durand.

L. CALYCINUS, (Engelm) J. G. Smith.*
In a small pond bordering the southern boundary of Sandusky.

SAGITTARIA, L. Arrow-Head.

- S. ARIFOLIA, Nutt.**
Oxford, Danbury; scarce.
- S. GRAMINEA, Michx.***
Sandusky Bay. "East Harbor," A. J. Pieters.
- S. LATIFOLIA, Willd. (S. VARIABILIS, Engelm.)**
Common and variable.
- S. RIGIDA, Pursh. (S. HETEROPHYLLA, Pursh.)**
Sandusky Bay, Put-in-Bay, Harbors; frequent.
In deeper water than the last.

HYDROCHARIDACEÆ.

ELODEA, Michx. Water-Weed.

- E. CANADENSIS, Michx.**
Common. Kelley's Island, Put-in-Bay. Filling the cove east of Sandusky so as to make it difficult to row a boat there.

VALLISNERIA, L. Tape-Grass, Eel-Grass.

- V. SPIRALIS, L.**
Common.

GRAMINEÆ.**AGROPYRON, Gaert.**

- A. CANINUM, Beauv.***
Berlin Heights; rare.
- A. GLAUCUM, R. & S.***
L. S. & M. S. Ry., Sandusky; scarce.
- A. REPENS, Beauv.** Couch-Grass, Quitch-Grass.
Infrequent. Kelley's Island.

AGROSTIS, L. Bent-Grass.

- A. ALBA, L.**
Common, as is the variety *vulgaris*, Red Top.
- A. PERENNANS, Tuckerm,** Thin-Grass.
Frequent.
- A. SCABRA, Willd.** Hair-Grass.
Infrequent. Put-in-Bay, Middle Bass.

ALOPECURUS, L. Foxtail-Grass.

- A. GENICULATUS ARISTULATUS, Torr.**
Islands, Peninsula and Milan; rare in Erie county.

AMMOPHILA, Host.

- A. ARUNDINACEA, Host.** Sea Sand-Reed.
Cedar Point and Marblehead Sand Spit.

ANDROPOGON, L. Beard-Grass.

- A. PROVINCIALIS, Lam.** (**A. FURCATUS, Muhl.**)
Frequent.
- A. SCOPARIUS, Michx.**
Frequent. Not observed in Ottawa county.

ARISTIDA, L. Triple-awned Grass.A. **GRACILIS, Ell.***

Unplowed prairie, Perkins.

A. **PURPURASCENS, Poir.***

Roadside, Joseph Smith's, Perkins.

ASPERELLA, Humb. Bottle-brush Grass.A. **HYSTRIX, Humb.**

Common.

BOUTELOUA, Lag. Muskit-Grass.B. **RACEMOSA, Lag.**Castalia cemetery and southwest, Marblehead ;
dry ground ; scarce.Our forms approach the variety *aristosa*.**BRACHYELYTRUM, Beauv.**B. **ERECTUM, Beauv.** (**B. ARISTATUM R. & S.**)

Frequent.

BROMUS, L. Brome-Grass.B. **CILIATUS, L.**Common. Kelley's Island., Rattlesnake Island.
The variety *purgans* also common, but not on
the Islands.B. **KALMII, Gray.** Wild Chess.

Margaretta Ridge ; rare.

B. *racemosus*, L. Upright Chess.

Common.

B. *secalinus*, L. Cheat or Chess.

Not so common as the last.

B. *tectorum*, L.Along Big Four Ry., Sandusky and Castalia ;
elsewhere also, but scarce.**CENCHRUS, L.** Hedgehog or Bur-Grass.C. **TRIBULOIDES, L.**

Common in sand.

CHRYSOPOGON, Trin.

- C. *NUTANS*, Benth, Indian Grass, Wood Grass.
Frequent.

CINNA, L. Wood Reed-Grass.

- C. *ARUNDINACEA*, L.
Frequent.

DACTYLIS, L. Orchard-Grass.

- D. *glomerata*, L.
Frequent.

DANTHONIA, D C. Wild Oat-Grass.

- D. *SPICATA*, A. & S.
Common. Not on Islands, except Put-in-Bay.

DEYEUXIA, Raf.

- D. *CANADENSIS*, Beauv. Blue-Joint Grass.
Frequent. Middle Bass, North Bass.

EATONIA, Raf.

- E. *OBTUSATA*, Gray.*
Infrequent. Margaretta Ridge, Marblehead,
North Bass, etc.

- E. *PENNSYLVANICA*, Gray.
Frequent. Islands.

- E. *PURPURASCENS* Raf. (E. *DUDLEYI*, Vasey. E. *NITIDA*
Nash.)
Florence, and Furnace woods, Vermillion.

ELEUSINE, Gaertn.

- E. *indica*, Gaertn. Dog's-tail or Wire Grass.
Formerly seldom seen, but now common along
many sandy lanes.

ELYMUS, L. Lyme-Grass, Wild Rye.

- E. *CANADENSIS*, L.
Frequent, especially on sand beaches. Islands.
The so called variety *glaucifolius* occurs in a
number of places but does not appear at all dis-
tinct.

E. STRIATUS, Willd.

Infrequent. Kelley's Island. The so called variety *villosus* was found in Perkins.

E. VIRGINICUS, L

Frequent along streams and shores of the Islands.

ERAGROSTIS, Host.

E. CAPILLARIS, Nees.

Willow Point, Margaretta and different parts of the Peninsula.

E. FRANKII, Steud.

Perkins, Castalia, Lockwood's woods, Catawba.

E. *major*, Host.

Abundant.

E. PURSHII, Schrader.

Common in Erie Co., especially along railroads. Kelley's Island.

E. REPTANS, Nees.

Infrequent.

E. SPECTABILIS, Steud.* (E. PECTINACEA SPECTABILIS, Gray) Lake sands of Cedar Point, Marble-head Spit, and Port Clinton; local.

FESTUCA, L. Fescue-Grass.

F. *elatior*, L. Meadow Fescue.

Common. The variety *pratensis* common in Sandusky and along some country roads.

F. NUTANS, Spreng.

Common. Not noticed on Kelley's Island.

F. TENELLA, Willd.

Marblehead, Cedar Point and east of Milan.

GLYCERIA, R. Br. Manna Grass.

G. FLUITANS, R. Br.

Infrequent. Islands.

G. NERVATA, Trin.

Common.

- G. *PALLIDA*, Trin.
Port Clinton; rare.

HIEROCHLOE, S. G. Gmel.

- H. *BOREALIS*, R. & S.
"Perkins" Elon House.

HORDEUM, L.

- H. *JUBATUM*, L. Squirrel-tail Grass.
Common along L. S. & M. S. Ry. in Ottawa Co.
Blue Hole, Castalia. Kelley's Island, where
probably introduced in baled hay. Marblehead.

KOELERIA, Pers.

- K. *CRISTATA*, Pers.*
Catawba, where first found by A. D. Selby.
Margaretta Ridge, Oxford; also ten miles west of
Toledo.

LEERSIA, Swartz.

- L. *ORYZOIDES*, Swartz. Rice Cut-grass.
Common.
L. *VIRGINICA*, Willd. White Grass.
Common but not noticed on any island except
Kelley's.

LOLIUM, L.

- L. *perenne*, L. Common Darnel, Ray or Rye-Grass.
Sandusky, Soldier's Home, Kelley's Island, Put-in-
Bay; infrequent. Not noticed until 1897.

MELICA, L. Melic-Grass.

- M. *DIFFUSA*, Pursh.*
Castalia; rare.

MUHLENBERGIA, Schreb. Drop-seed Grass.

- M. *GLOMERATA*, Trin.*
West of Castalia; rare; also ten miles west of
Toledo.

- M. MEXICANA, Trin.
Common.
- M. SCHREBERI, J. F. Gmel. (M. DIFFUSA, Schreb.)
Common.
- M. SOBOLIFERA, Trin.*
Florence, Catawba; rare.
- M. SYLVATICA, Torr. & Gray.
Perkins, Florence, Middle Bass; infrequent.
- M. WILLDENOWII, Trin.
Vermillion River, Huron, Milan, Perkins, Margareta Ridge; infrequent.

ORYZOPSIS, Michx. Mountain Rice.

- O. MELANOCARPA, Muhl.
Margaretta Ridge, Vermillion River, Put-in-Bay;
rare.

PANICUM, L. Panic-Grass.

- P. AGROSTOIDES, Muhl.
Huron, Milan, Oxford, Perkins, North Bass;
local.
- P. BARBULATUM, Michx.
Berlin; rare.
- P. CAPILLARE, L. Old-witch Grass.
Common.
- P. CLANDESTINUM, L.
Cedar Point, Perkins, and common along river
channels.
- P. COLUMBIANUM, Scribn.
Castalia, Cedar Point. Formerly called *P. dichotomum*.
- P. *crus-galli*, L. Barnyard-Grass.
Abundant.
- P. CRUS-GALLI HISPIDUM, Muhl.
Frequent on wet ground about Sandusky Bay
and East Harbor.
- P. DEPAUPERATUM, Muhl.
Catawba and high banks of Vermillion River and
Old Woman Creek.

P. DICHOTOMUM, L.

Common and variable, the so called variety *gracile*, found only at Berlin Heights, seeming most distinct from other forms.

P. FLEXILE, Scribn.

Castalia prairie; common. Oxford.

P. glabrum, Gaudin. Small Crab-Grass.

Common. North Bass the only island.

P. LATIFOLIUM, L.

Common in Erie County.

P. MILIACEUM, L. Millet.

Adventive. "Cedar Point," E. Claassen.

Sandusky near the Bay, one specimen growing on rubbish.

P. PROLIFERUM, Lam.

Sandusky, Oxford; rare.

P. PUBESCENS, Lam.

Common in Erie County.

P. sanguinale, L. Large Crab-Grass.

Abundant.

P. SCOPARIUM, Lam.

Oxford, Margaretta, Cedar Point, Port Clinton; common.

P. VIRGATUM, L.

Frequent. Kelley's Island. Abundant on sandy shores of Lake Erie.

PASPALUM, L.**P. SETACEUM, Michx.**

Dell Lindsley's orchard, Perkins, where it has probably been for many years.

PHALARIS, L.**P. ARUNDINACEA, L.**

Cedar Point, Huron, western Margaretta, Middle Bass; infrequent. The variety *picta* Ribbon-Grass, has become established along some roadside ditches.

P. canariensis, L. Canary-Grass.

Adventive in Sandusky.

PHLEUM, L.

- P. pratense*, L. Timothy.
Abundant.

PHRAGMITES, Trin. Reed.

- P. COMMUNIS*, Trin.
Frequent on wet ground. Huron, Castalia, Port
Clinton, Harbors.

POA, L. Meadow-Grass.

- P. ALSODES*, Gray.
Florence; scarce.
- P. annual*, L. Low Spear-Grass.
Frequent.
- P. compressa*, L. Wire-Grass.
Abundant.
- P. DEBILIS*, Torr.
Furnace woods, Vermillion; rare.
- P. PRATENSIS*, L. June Grass. Kentucky Blue-Grass.
Abundant. One specimen has a panicle eleven
inches long.
- P. SEROTINA*, Ehrhart.
Huron; rare.
- P. SYLVESTRIS*, Gray.
Parker's Creek, Florence; rare.
- P. trivialis*, L.
Shinrock; rare.

SETARIA, Beauv.

- S. glauca*, Beauv. Foxtail. Pigeon-Grass.
Abundant. The worst weed we have.
- S. italica*, Beauv. Italian Millet, Hungarian Grass.
Rarely escaped. Middle Bass, North Bass.
- S. verticillata*, Beauv.
Sandusky near Big Four dock, 1898.
- S. viridis*, Beauv. Green Foxtail.
Less abundant than *S. glauca*.

SPARTINA, Schreb. Marsh Grass.

- S. SCHREBERI, J. F. Gmel.** (*S. CYNOSUROIDES* Willd.)
Fresh-water Cord-Grass.
Frequent. Middle Bass.

SPOROBOLUS, R. Br. Rush-Grass.

- S. ASPER, Kunth.**
L. S. & M. S. Ry, east of Sandusky; rare.
- S. CRYPTANDRUS, Gray.**
Frequent on Cedar Point and several places on the Peninsula.
- S. NEGLECTUS, Nash.**
Sandusky, Castalia, Plaster Beds.
- S. VAGINÆFLORUS, Vasey.**
Common. Kelley's and Put-in-Bay the only Islands.

STIPA, L.

- S. SPARTEA, Trin.*** Porcupine Grass.
In sand; Cedar Point, Perkins, Bloomingville cemetery; rare.

TRIODIA, R. Br.

- T. CUPREA, Jacq.*** Tall Red-Top.
In sand near the road through the woods between Port Clinton and Catawba; rare.

TRIPLASIS, Beauv.

- T. PURPUREA, Chapm.** Sand-Grass.
Frequent on all sandy shores of Lake Erie; in places abundant. Kelley's Island.

ZIZANIA, L.

- Z. AQUATICA, L.** Indian Rice. Water Oats.
Abundant in shallow parts of Sandusky Bay, the Harbors, etc. Middle Bass.

CYPERACEÆ.

CAREX, L., Sedge.

- C. ALBICANS, Willd.*
Put-in-Bay; rare.
- C. ALBURSINA, Sheldon, (C. LAXIFLORA LATIFOLIA Boott.)
Frequent. Kelley's Island.
- C. AQUATILIS, Wahl.
Huron, Cedar Point, Put-in-Bay; scarce.
- C. ARCTATA, Boott.
Florence, Berlin, Oxford; rare.
- C. AUREA, Nutt.*
One vigorous plant growing on a stump that stands in a stream near the Blue Hole, Castalia.
- C. BICKNELLII, Britton (C. STRAMINEA CRAWEI, Boott.)
Berlin Heights; rare.
- C. BROMOIDES, Schkuhr.
Florence, Berlin Heights, Milan; local.
- C. CAREYANA, Torr.
Beecher's flats, Vermillion River; rare.
- C. CEPHALOIDEA, Dewey.
Frequent.
- C. CEPHALOPHORA, Muhl.
More frequent than the last. Bass Islands.
- C. COMMUNIS, Bailey.
Florence, Margaretta Ridge; scarce.
- C. COMMUNIS WHEELERI, Bailey.*
Vermillion River, Florence; rare.
- C. CONJUNCTA, Boott.
Florence, Berlin, Perkins; scarce.
- C. CRAWEI, Dewey.*
Castalia prairie, Marblehead; local.
- C. CRINITA, Lam.
Frequent from the Huron River east, especially in Berlin..

- C. *DAVISII*, Schwein & Torr.
Shinrock, Perkins, Port Clinton, Kelley's Island;
infrequent.
- C. *DIGITALIS*, Willd.
Common in Florence; frequent in Vermillion,
Berlin and Milan.
- C. *DIGITALIS COPULATA*, Bailey.
Florence, Berlin, Milan; frequent.
- C. *EBURNEA*, Boott.*
Kelley's Island. Put-in-Bay; rare.
- C. *FILIFORMIS*, L.
Frequent?
- C. *FGENEA PERPLEXA*, Bailey.*
Furnace woods, Vermillion; rare.
- C. *FUSCA*, All.
Throughout Erie Co; infrequent.
- C. *GLAUCODEA*, Tuckerm.
Vermillion, Berlin, Milan; infrequent.
- C. *GRACILLIMA*, Schwein.
Frequent in Erie Co.
- C. *GRANULARIS*, Muhl.
Frequent. Kelley's Island.
- C. *GRANULARIS HALEANA*, Porter.* (C. *HALEANA*, Olney)
Florence, Castalia, Groton; infrequent.
The Groton specimens have very broad leaves.
- C. *GRAYII*, Carey.
Huron, Milan and east; infrequent.
- C. *GRISEA*, Wahl.
Rather frequent.
- C. *HITCHCOCKIANA*, Dewey.
Florence; scarce.
- C. *HYSTERICINA*, Muhl.
Common. Put-in-Bay and Middle Bass the only
islands.
- C. *INTERIOR*, Bailey.*
Castalia; rare.
- C. *INTUMESCENS*, Rudge.
Berlin, Vermillion, Florence; infrequent.

- C. JAMESII, Schwein.
Berlin; rare. Florence; infrequent.
- C. LANUGINOSA, Michx. (C. FILIFORMIS LATIFOLIA,
Boeckl.)
Frequent. Put-in-Bay.
- C. LAXICULMIS, Schwein.
Florence, Vermillion, Milan; infrequent.
- C. LAXIFLORA, Lam.
Frequent. Kelleys Island.
- C. LAXIFLORA PATULIFOLIA, Carey.
Florence, Berlin, Huron; infrequent.
- C. LAXIFLORA STRIATULA, Carey.
Common.
- C. LAXIFLORA VARIANS, Bailey.
Common. Kelley's the only island.
- C. LUPULINA, Muhl.
Common. The so-called variety *hedunculata*
occurs in Florence.
- C. LURIDA, Wahl.
Frequent. Hybrids of this and the last occur in
Florence and Berlin.
- C. MONILE, Tuckerm.
Vermillion, Berlin, Kimball; scarce.
- C. MUHLENBERGII, Schkuhr.*
Cedar Point; frequent.
- C. MUHLENBERGII ENERVIS, Boott.
Catawba; rare.
- C. *muricata*, L.
Furnace woods, Vermillion; rare.
- C. MUSKINGUMENSIS, Schwein.*
Catawba; rare.
- C. OLIGOCARPA, Schkuhr.
Prout's, Shinrock, Vermillion, Florence: in-
frequent.
- C. PALLESCENS.
Berlin Heights and Florence; rare.
- C. PEDUNCULATA, Muhl.
Steep banks of Vermillion River, Florence; rare.

- C. PENNSYLVANICA, Lam.
Abundant. Put-in-Bay the only island.
- C. PLANTAGINEA, Lam.
Steep banks of Vermillion River and tributaries
in southern Florence; infrequent.
- C. PLATYPHYLLA, Carey.
High banks, Vermillion River, Florence; rare.
- C. PRASINA, Wahl.
Infrequent.
- C. PSEUDO-CYPERUS AMERICANA, Hochst. (C. COMOSA,
Boott.)
Islands, Cedar Point, Castalia, South Florence;
local.
- C. PUBESCENS, Muhl.
Frequent, especially in Florence.
- C. RICHARDSONII, R. Br.*
Castalia cemetery; rare.
- C. RIPARIA, Curtis.
Infrequent.
- C. ROSEA, Schkuhr.
Common. Middle Bass the only island.
- C. ROSEA RADIATA, Dewey.
Florence; rare.
- C. SARTWELLIANA, Olney.* (C. SARTWELLII, Dewey.)
Castalia; scarce. Huron, Cedar Point; rare.
- C. SCABRATA, Schwein.
Springy banks of Vermillion River; rare.
- C. SCOPARIA, Schkuhr.
Common. Not on the Islands.
- C. SETACEA, Dewey.
Oxford; rare or else taken for *C. vulpinoidea*.
- C. SHORTIANA, Dewey.
Perkins, Castalia, Berlin and common in Milan.
- C. SICCATA, Dewey.*
Perrin's, Milan; Margaretta Ridge; rare.
- C. SPARGANIOIDES, Muhl.
Frequent. Kelley's Island. Rattlesnake.

- C. SQUARROSA*, L.
Frequent.
- C. STENOLEPIS*, Torr.
Common, especially near Sandusky. Middle Bass the only island.
- C. STERILIS*, Schkuhr.
Castalia; rare.
- C. STERILIS CEPHALANTHA*, Bailey.
Tisdell's, Vermillion; rare.
- C. STIPATA*, Muhl.
Common.
- C. STRAMINEA*, Willd.
Infrequent.
- C. STRAMINEA BREVIOR*, Dewey.* (*C. FESTUCACEA*, Schkuhr.)
Marblehead, Johnson's Island, Kelley's, Green.
- C. STRAMINEA MIRABILIS*. Tuckerm.
Huron, Milan and east; rare.
- C. STRICTA*, Lam.
Scarce.
- C. STRICTA DECORA*, Bailey.* (*C. HAYDENII*, Dewey.)
Kimball; rare.
- C. TENELLA*, Schkuhr.
Vermillion River flat, Florence; one place.
- C. TERETIUSCULA*, Gooden.
Castalia; scarce.
- C. TETANICA*, Schkuhr.
Castalia prairie; frequent.
- C. TETANICA MEADII*, Bailey.*
Castalia prairie.
- C. TETANICA WOODII*, Bailey.
Huron and southern Florence in woods. Differs from the species in habitat and appearance.
- C. TORTA*, Boott.
Infrequent. One specimen considered a hybrid of this and *C. crinita*.

- C. TRIBULOIDES, Wahl.
Frequent, especially the variety *turbata*. North Bass.
- C. TRIBULOIDES CRISTATA, Bailey.
Common. North Bass the only island.
- C. TRIBULOIDES REDUCTA, Bailey.*
Florence and Huron ; rare.
- C. TRICEPS HIRSUTA, Bailey.
Frequent.
- C. TRICHOCARPA, Muhl.
Huron River, Milan. The variety *imberbis* grows in Florence. Both scarce.
- C. TRICHOCARPA ARISTATA, Bailey.*
Huron, Castalia ; infrequent.
- C. TYPHINOIDES, Schwein.
East Berlin ; local.
- C. TUCKERMANNI, Boott.
Infrequent.
- C. UTRICULATA, Boott.
Blair Creek, Florence ; rare. The so-called variety *minor* at Tisdell's, Vermillion ; rare.
- C. VARIA, Muhl.
Frequent.
- C. VIRESCENS, Muhl.
Oxford, Huron and east ; common.
- C. VIRESCENS COSTATA, Dewey.
Berlin Heights and east ; infrequent.
- C. VIRIDULA, Michx.* (C. FLAVA VIRIDULA, Bailey.)
Castalia prairie ; local.
- C. VULPINOIDEA, Michx.
Common.
- C. WILDENOWII, Schkuhr.
Florence ; rare.
- CLADIUM, P. Br.** Twig-Rush.
- C. TRIGLOMERATUM, Nees. (C. MARISCOIDES, Torr.)
Perkins, "Castalia," E. Claassen.

CYPERUS, L. Galingale.

- C. **DIANDRUS**, Torr.
Frequent. Islands. The so-called variety *castaneus* on Cedar Point.
- C. **ESCULENTUS**, L.
Frequent in cultivated ground.
- C. **FILICULMIS**, Vahl, (*MARISCUS GLOMERATUS*, Barton.)
Rather frequent in sand.
- C. **FLAVESCENS**, L.*
Frankinberg's pasture, south-eastern Florence.
- C. **MICHAUXIANUS**, Schult, (*C. SPECIOSUS*, Vahl.)
About Sandusky Bay; scarce.
- C. **REFRACTUS**, Engelm.*
East branch, Vermillion River; one specimen.
- C. **SCHWEINITZII**, Torr.
Cedar Point; common. Port Clinton.
- C. **STRIGOSUS**, L.
Common and variable. Abundant in many pastures. One specimen over three feet tall has primary rays 8 inches long, secondary rays $2\frac{1}{2}$ inches, spikelets nearly 1 inch.

DULICHIMUM, Pers.

- D. **SPATHACEUM**, Pers.
Perkins, Milan, Cedar Point; local.

ELEOCHARIS, R. Br. Spike-Rush.

- E. **ACICULARIS**, R. Br.
Castalia and borders of marshes connected with Lake Erie; frequent. Bass Islands.
- E. **ACUMINATA**, Nees.* (*E. COMPRESSA*, Sullivant.)
Sandusky, Cedar Point, Huron, Marblehead; scarce.
- E. **ENGELMANNI**, Steud.*
North of Tisdell's, Vermillion; rare.
- E. **INTERMEDIA**, Schult.
Cedar Point, Johnson's Island, Marblehead, Bass Islands; frequent.

- E. OVATA, R. Br.
Frequent. Kelley's Island. North Bass.
- E. PALUSTRIS, R. Br.
Frequent.
- E. PALUSTRIS GLAUDESCENS, Gray.
Frequent. Put-in-Bay.
- E. PALUSTRIS VIGENS, Bailey.*
Sandusky Bay; in water several feet deep.
- E. TENUIS, Schult.
Infrequent.

ERIOPHORUM, L. Cotton-Grass.

- E. POLYSTACHYON, L.
"Huron River" Henry Schoepfle.

FIMBRISTYLIS, Vahl.

- F. AUTUMNALIS, R. & S.
A little bog near the Cedar Point light house.
- F. CAPILLARIS, Gray.*
In sand, south Perkins and east of Milan; local.

RYNCHOSPORA, Vahl. Beak-Rush.

- R. CAPILLACEA, Torr.
Prairie along L. E. & W. Ry., west of Castalia;
local.
- R. CYMOSA, Nutt.*
East of Milan; local.
- R. GLOMERATA, Vahl.*
East of Milan; local. Also ten miles west of
Toledo.

SCIRPUS, L. Bulrush.

- S. ATROVIRENS.
Common.
- S. ERECTUS, Poir.* (S. DEBILIS, Pursh.)
Along shore of East Harbor west of Lakeside.

- S. **ERIOPHORUM**, Michx. (**ERIOPHORUM CYPERINUM**, L.)
Frequent. The variety *laxum* occurs in Florence, Milan, and, probably, elsewhere.
- S. **LACUSTRIS**, L. Great Bulrush.
Common. Extensively used in the vineyards for tying up the vines.
- S. **LINEATUS**, Michx. (**ERIOPHORUM LINEATUM**, Benth & Hook.)
Frequent. Kelley's Island. North Bass.
- S. **MARITIMUS**, L. (**S. FLUVIATILIS**, Gray.) River Club-Rush.
Common in the marshes east of Sandusky and in the East Harbor; elsewhere infrequent. Put-in-Bay.
- S. **POLYPHYLLUS**, Vahl.
Frequent. Middle Bass.
- S. **PUNGENS**, Vahl.
Common, especially about Sandusky Bay and Lake Erie.
- S. **SYLVATICUS**, L.*
"Pond near U. S. Fish Hatchery, Put-in-Bay."
A. J. Pieters.
- S. **TORREYI**, Olney.*
North side of East Harbor; rare.

SCLERIA, Berg. Nut-Rush.

- S. **PAUCIFLORA**, Muhl.*
East of Milan; local. Also ten miles west of Toledo.
- S. **TRIGLOMERATA**, Michx.*
East of Milan; local. Also ten miles west of Toledo.

ARACEÆ.

ACORUS, L. Sweet Flag.

- A. **CALAMUS**, L.
Frequent. Abundant near Port Clinton. Put-in-Bay. "Kelley's Island."

ARISÆMA, Mart.

- A. DRACONTIUM, Schott. Green Dragon, Dragon-root.
Scarce.
- A. TRIPHYLLUM, Schott. Indian Turnip.
Common.

SYMPLOCARPUS, Salisb. Skunk Cabbage.

- S. FOETIDUS, Nutt.
Infrequent.

LEMNACEÆ.**LEMNA, L.** Duck-weed, Duck's-meat.

- L. MINOR, L.
Common at Castalia and on still water connected
with Lake Erie. Islands.
- L. POLYRRHIZA, L. (SPIRODELA POLYRRHIZA, Schleid.)
Common on still water connected with the Lake.
Florence.
- L. TRISULCA, L.
Castalia and still waters connected with the
Lake; infrequent- Put-in-Bay.

WOLFFIA, Workel.

- W. COLUMBIANA, Karsten.
Mouth of Old Woman Creek, Pipe Creek, Put-in-
Bay; local.

COMMELINACEÆ.**TRADESCANTIA, L.** Spiderwort.

- T. VIRGINIANA, L.
Frequent, especially on Cedar Point.
- T. VIRGINIANA OCCIDENTALIS, Britton.
B. & O. Ry. seven miles south of depot; rare.

PONTERIACEÆ.

HETERANTHERA, Ruiz & Pav. Mud-Plantain.

H. GRAMINEA, Vahl.

Common in still water connected with Lake Erie.

PONTERIA, L. Pickerel-weed.

P. CORDATA, L.

Frequent in shallow water connected with Lake Erie.

JUNCACEÆ.

JUNCUS, L. Rush. Bog-Rush.

J. ACUMINATUS, Michx.

Florence; rare.

J. ALPINUS INSIGNIS, Fries.

Castalia, Oxford, shores of Lake Erie; frequent. Kelley's Island.

J. BALTICUS LITTORALIS, Engelm.

Castalia, Cedar Point, Marblehead sand spit; locally abundant.

J. BUFONIUS, L.

Sandusky near B. & O. and L. S. & M. S. Ry's; rare.

J. CANADENSIS.

Shinrock and Sandusky where the so-called variety *longicaudatus* grows.

J. CANADENSIS BRACHYCEPHALUS, Engelm.

Castalia, Willow Point, Sandy Beach.

J. EFFUSUS, L. Common or Soft Rush.

Frequent. North Bass.

J. MARGINATUS, Rostk.

Berlin, Vermillion, east of Milan; infrequent.

J. NODOSUS, L.

Frequent.

- J. **NODOSUS MEGACEPHALUS**, Torr.
Frequent. Islands.
- J. **SCIRPOIDES**, Lam.*
Oxford, southern Perkins, Vermillion; infrequent.
- J. **TENVIS**, Willd.
Common.

LUZULA, D C. Wood-Rush.

- L. **CAMPESTRIS**, D C.
Frequent, especially in Milan.
- L. **VERNALIS**, D C.
Vermillion River, Chapelle Creek; scarce.

LILIACEÆ.

ALETRIS, L.

- A. **FARINOSA**, L.*
Perrin's, Milan and Joseph Smith's, Perkins; rare

ALLIUM, L.

- A. **CANADENSE**, L. Wild Garlic.
Infrequent. Kelley's Island.
- A. **CERNUUM**, Roth. Wild Onion.
Common on the Islands, Peninsula, and at
Castalia.
- A. **TRICOCCUM**, Ait. Wild Leek.
Islands, Peninsula, Florence; infrequent.

ASPARAGUS, L.

- A. *officinalis*, L. Garden Asparagus.
Escaped in many places. Islands.

CAMASSIA, Lindl.

- C. **FRASERI**, Torr. Wild Hyacinth.
Infrequent, but occurs on eight islands and in
eight townships.

CHAMAELIRIUM, Willd.

- C. CAROLINIANUM, Willd. Blazing-Star.
Southern Perkins, Margaretta Ridge, east of
Milan, Berlin Heights; rare.

DISPORUM, Salisb.

- D. LANUGINOSUM, Nichols.
Florence, Berlin; scarce.

ERYTHRONIUM, L.

- E. ALBIDUM, Nutt. White Dog's-tooth Violet.
A weed in vineyards west of Sandusky.
Common on Huron River bottoms, Infrequent
or rare in other parts of the county.
Johnson's Island, Kelley's, Rattlesnake, Port
Clinton.
- E. AMERICANUM, Ker. Yellow Adder's-tongue.
Common.

HEMEROCALLIS, L.

- H. *fulva*, L.
Roadsides; infrequent. North Bass.

LILIUM, L.

- L. CANADENSE, L. Wild Yellow Lily.
Infrequent. Kelley's, Island.
- L. PHILADELPHICUM, L. Wild Orangered Lily. Wood
Lily.
Scarce.
- L. SUPERBUM, L. Turk's-cap Lily.
Milan, Florence, Vermillion; rare. Mr. Haise of
Florence found "several years ago a lily with
forty or fifty flowers."

MAIANTHEMUM, Wigg.

- M. CONVALLARIA, Wigg. (M. CANADENSE, Desf.) False
Lily-of-the-valley.
Cedar Point and high banks of Old Woman
Creek, Chapelle Creek and Vermillion River;
infrequent.

MEDEOLA, L. Indian Cucumber-root.

M. VIRGINICA, L.

Florence, Berlin, Milan, Perkins; scarce.

OAKESIA, Watson.

O. SESSILIFOLIA, Watson.

Florence; rare.

ORNITHOGALUM, L. Star-of-Bethlehem.O. *umbellatum* L.

Perkins, Sandusky, Put-in-Bay; rare.

POLYGONATUM, Adans.

P. BIFLORUM, Ell. Smaller Solomon's Seal.

Common.

P. GIGANTEUM, Dietrich. Great Solomon's Seal.

Common.

SMILACINA, Desf. False Solomon's Seal.

S. RACEMOSA, Desf. False Spikenard.

Common.

S. STELLATA, Desf.

Common; less so on the mainland than the preceding.

SMILAX, L. Greenbrier.

S. ECIRRHATA, Watson.

Perkins, Groton, Catawba, Kelley's Island; scarce.

S. HERBACEA, L. Carrion-Flower.

Common.

S. HISPIDA, Muhl.

Frequent. Islands.

S. ROTUNDIFOLIA, L. Horse-brier.

Infrequent. Put-in-Bay.

The "variety" *crenulata* S. & H. found at Chapelle Creek.**TRILLIUM, L.** Wake Robin.

T. ERECTUM, L.

Common.

T. GRANDIFLORUM, Salisb.

Common.

T. SESSILE, L.

Vermillion River flats; frequent.

UVULARIA, L. Bellwort.

U. GRANDIFLORA.

Infrequent. Islands.

ZYGADENUS, Michx.

Z. ELEGANS, Pursh.*

Marblehead; rare.

AMARYLLIDACEÆ.

HYPOXIS, L. Star-Grass.

H. ERECTA, L.

Infrequent.

DIOSCOREACEÆ.

DIOSCOREA, L. Yam.

D. VILLOSA, L. Wild Yam-root.

Frequent. Kelley's Island, Put-in-Bay.

IRIDACEÆ.

IRIS, L. Flower-de-Luce.

[I. CRISTATA, Ait, Crested Dwarf Iris.

Our specimens of this rare plant were collected along the Vermillion River in what was said to be Erie County, but the spot proves to be a few yards south of the line. Eli Beecher, who owns the adjacent flats in Erie County, says he has seen it there.]

I. **VERSICOLOR, L.** Larger Blue Flag.
Frequent. Islands.

SISYRINCHIUM, L. Blue-eyed Grass.

S. **ANGUSTIFOLIUM, Mill.**
Infrequent.

S. **GRAMINOIDES, Bicknell.**
Infrequent.

ORCHIDACEÆ.

APLECTRUM, Torr. Putty-Root. Adam-and-Eye.

A. **HYEMALE, Torr.**

Rare. Puckrin's woods, Perkins.
"Smith's, Perkins," Ross Ransom. "Cedar Point,"
Claassen and Krebs. "Marblehead," Gertrude
Johnson. "Vermillion," Otto Todd. "Formerly
considerable near the quarry on west branch of
Vermillion River," Eli Beecher.

CALOPOGON, R. Br.

C. **PULCHELLUS, R. Br.**

South-west of Castalia; rare. Seen only in 1895.

CORALLORHIZA, Haller. Coral-root.

C. **MULTIFLORA, Nutt.**

Florence, Huron, Catawba; rare.

C. **ODONTORHIZA, Nutt.**

Blair Creek, Florence; Graham's woods, Huron;
Smith's woods, Perkins; rare.

CYPRIPEDIUM, L. Lady's Slipper. Moccason-flower.

C. **CANDIDUM, Muhl.*** Small White Lady's Slipper.

Along a railroad near Castalia; locally common.

C. **PUBESCENS, Willd.** Larger yellow Lady's Slipper.

In seven townships, but rare.

C. **SPECTABILE, Salisb.** Showy Lady's Slipper.

One spot on high, wet, shale bank of east branch,
Vermillion River. An orchid found by Job Fish
"about 1859, the most beautiful wild flower" he
"ever found" was probably of this species.

GOODYERA, R. Br. Rattlesnake-Plantain.

G. PUBESCENS, R. Br.

Florence, Berlin, Milan, Oxford, Perkins; scarce.

HABENARIA, Willd. Reint-Orchis.

H. BRACTEATA, R. Br.

In five townships; rare.

H. HERBIOLA, R. Br. (H. VIRESCENS, Spréng.)

In five townships; rare.

H. HOOKERIANA, Torr.

"Margaretta Ridge," Henry Schoepfle; one plant.

H. LACERA R. Br. Ragged Fringed-Orchis.

Perkins, Milan, Vermillion; rare.

H. PSYCODES, Gray. Purple Fringed-Orchis.

Florence, Milan, "Cedar Point," Leslie Stair: rare.

H. TRIDENTATA, Hook.

East of Milan; one plant.

LIPARIS, Richard. Twayblade.

L. LÆSELI, Richard.

Bog near Cedar Point Light House,

ORCHIS, L.

O. SPECTABILIS, L. Showy Orchis.

Rather frequent in Florence, infrequent in four townships.

POGONIA, Juss.

P. PENDULA, Lindl.

"Florence," Josephine Fish, also Otto Todd; East Berlin; "Perkins," Ransom; local.

SPIRANTHES, Richard. Ladies' Tresses.

S. CERNUA, Richard.

Local. This and *Orchis spectabilis* are less rare than our other orchids.

S. GRACILIS, Beck.

"Bloomingville," W. A. Kellerman. Perkins; rare.

DICOTYLEDONES.

SAURURACEÆ.

SAURURUS, L. Lizard's-tail.

S. CERNUUS, L.

Frequent in eastern part of the county; infrequent in Huron, Milan and Perkins.

JUGLANDACEÆ.

CARYA, Nutt. Hickory.

- C. ALBA, Nutt.** Shell-bark or Shag-bark Hickory.
Abundant. Hickory is used in Sandusky by two wheel works and two whip-stalk factories; also by the Sandusky Tool Company for chisel handles, for tin-smith's mallets, and for ladder-rounds that are sent to Northern Michigan for use in the copper mines.
- C. AMARA, Nutt.** Bitter-nut or Swamp Hickory.
Frequent. One in the German Settlement has a circumference of 9 feet, 8 inches.
- C. MICROCARPA, Nutt.**
Frequent, at least in Perkins.
- C. SULCATA, Nutt.** Big Shell-bark. King-nut.
Frequent.

- C. *TOMENTOSA*, Nutt. Mocker-nut. White-heart Hickory.
Frequent. Put-in-Bay.
- C. *PORCINA*, Nutt. Pig-nut or Broom Hickory.
Frequent. Islands.

JUGLANS, L.

- J. *CINEREA*, L. Butternut. White Walnut.
Infrequent.
- J. *NIGRA*, L. Black Walnut.
Frequent. Said to have grown formerly on Kelley's Island, and Middle Bass. The number and size of the walnut stumps along the border of the Huron marsh east of Sandusky and of the prostrate trunks in the marsh is remarkable. See page 14.

SALICACEÆ.

POPULUS, L.

- P. *alba*, L. White Poplar. Abele.
Frequent in the vicinity of planted trees.
Kelley's Island. Put-in-Bay.
- P. *GRANDIDENTATA*, Michx. Large-toothed Aspen.
Rather frequent. Put-in-Bay. Plentiful along the lake shore drive east of Huron.
- P. *HETEROPHYLLA*, L. Downy Poplar.
Florence, Huron; rare.
- P. *MONILIFERA*, Ait. Cotton-wood. Necklace Poplar.
Common.
- P. *TREMULOIDES*, Michx. American Aspen.
Frequent, especially on the Islands.

SALIX, L. Willow. Osier.

- S. *alba cærulea*, Koch. Blue Willow.
Cedar Point and Sandusky near the Bay; rare.

- S. *alba vitellina*, Koch. Golden Osier.
Frequent. Islands.
- S. *AMYGDALOIDES*, Anders.
Frequent.
- S. *CANDIDA*, Willd.* Sage Willow. Hoary Willow.
Castalia prairie; rare.
- S. *CORDATA*, Muhl. Heart-leaved Willow.
Common, but not noticed on Kelley's Island.
- S. *CORDATA ANGUSTATA*, Anders.
Infrequent. Put-in-Bay.
- S. *DISCOLOR*, Muhl. Glaucous Willow.
Frequent, as is also the "variety" *eriocephala*.
- S. *GLAUCOPHYLLA*, Bebb.
Cedar Point, Castalia; infrequent.
- S. *HUMILIS*, Marsh. Prairie Willow.
Oxford; scarce.
- S. *LONGIFOLIA*, Muhl.
Common, especially along the lake.
- S. *LUCIDA*, Muhl.
Florence, Marblehead, Put-in-Bay; infrequent.
- S. *NIGRA*, Marsh. Black Willow.
Frequent. Islands.
- S. *NIGRA FALCATA*, Torr.
Frequent.
- S. *PETIOLARIS*, Smith.
House's swamp, southern Perkins.
- S. *purpurea*, L. Purple Willow.
Infrequent. Kelley's Island. Put-in-Bay.
- S. *ROSTRATA*, Richardson.
Infrequent. Islands.
- S. *SERICEA*, Marsh. Silky Willow.
House's swamp, Perkins. Milan?
- S. *fragilis* × *alba*.
Castalia, etc.

BETULACEÆ.**CARPINUS, L.** Iron-wood.

- C. AMERICANA, Michx. American Hornbeam. Blue or Water Beech.
Frequent. "Formerly many on Kelley's Island."
Lester Carpenter.

CORYLUS, L.

- C. AMERICANA, Walt. Hazel-nut.
Common. Not on the Islands.

OSTRYA, L. Iron-wood.

- O. VIRGINICA, Willd. American Hop-Hornbeam. Lever-wood.
Common, especially on rocky shores of the Islands.

FAGACEÆ.**CASTANEA, L.**

- C. SATIVA AMERICANA, Watson. Chestnut.
Common in Erie County in sandy soil.
Chestnut fence posts sometimes put forth leafy shoots.

FAGUS, L.

- F. FERRUGINEA, Ait. American Beech.
Not on Islands or Peninsula, nor within five miles of Sandusky. A few in Kromer's woods and farther south along Pipe Creek. Infrequent along Huron River in Milan, frequent in Berlin, common in Vermillion, abundant in Florence. "Two trees on Put-in-Bay thirty years ago," Vroman. "Formerly a few on Middle Bass." Wood found in the submerged forest, Huron Marsh. Most Sandusky children do not know beech nuts. Wood used by Sandusky Tool Company for planes.

QUERCUS, L. Oak.

- Q. ALBA, L. White Oak.
Common.
- Q. BICOLOR, Willd. Willd. Swamp White Oak.
Frequent. Kelley's Island.
- Q. COCCINEA, Wang. Scarlet Oak.
East of Milan; frequent. Marblehead, Port Clinton, Catawba and probably elsewhere.
- Q. IMBRICARIA, Michx. Laurel or Shingle Oak.
Common in middle and western parts of Erie County. Abundant in Oxford and on Cedar Point.
- Q. MACROCARPA, Michx. Bur Oak, Over-cup or Mossy-cup Oak.
Frequent. Islands. Under the large Bur Oak at the corner of Wayne and Jefferson Sts., the Indians used to hold their councils. It is said to have grown very little since the early settlers came to Sandusky.
- Q. MUHLENBERGII, Engelm. Yellow Oak. Chestnut Oak.
Common on the Peninsula and Islands. Less frequent in Erie County.
- Q. PALUSTRIS, Du Roi. Swamp Spanish or Pin Oak.
Common. Not noticed on the Islands.
- Q. PRINUS, L. Rock Chestnut Oak.
Sandusky. Marblehead, Islands and elsewhere? The oak in Judge Mackey's yard on Columbus Ave. south of the fair grounds is of this species.
- Q. RUBRA, L. Red Oak.
Common.
- Q. VELUTINA, Lam. (Q. TINCTORIA,) Bartram. Black Oak. Quercitron.
Common. Kelley's and Put-in-Bay the only islands. On Cedar Point, where this species abounds, is a tree which I should call *Q. marylandica*, Muench., were I not advised differently, and other trees of the same sort or else hybrids between it and *Q. velutina*. None of these were noticed until September, 1898.

ULMACEÆ.

CELTIS, L.

- C. OCCIDENTALIS, L. Hackberry. Sugar-berry.
Frequent. Common on the Islands and Cedar Point.

ULMUS, L.

- U. AMERICANA, L. American or White Elm.
Common. Wood used for the handles and bands of baskets and for lime barrels.
- U. FULVA, Michx. Slippery or Red Elm.
Frequent. All the Islands.

MORACEÆ.

CANNABIS, L.

- C. *sativa*, L. Hemp.
Roadside, Margaretta or Groton; very rare.

HUMULUS, L.

- H. LUPULUS, L. Hop.
Castalia, Milan; infrequent.

TIACLURA, Nutt.

- M. AURANTIACA, Nutt. Osage Orange.
Found only near where it has been planted; scarcely naturalized. The row of trees on the Ransom place, Castalia road, probably surpasses any farther north in America.

MORUS, L.

- M. *alba*, L.* White Mulberry.
Rare in woods, where the seeds have probably been dropped by birds.
- M. RUBRA, L. Red Mulberry.
Throughout, but infrequent. "Formerly common at Port Clinton." Islands.

URTICACEÆ.**BŒHMERIA, Jacq.**

- B. **CYLINDRICA**, Sw. False Nettle.
Common.

LAPORTEA, Gaudichaud.

- L. **CANADENSIS**, Gaudichaud. Wood-Nettle.
Common.

PARIETARIA, L.

- P. **PENNSYLVANICA**, Muhl. Pellitory.
Abundant.

PILEA, Lindl.

- P. **PUMILA**, Gray. Richweed. Clearweed.
Common. Kelley's the only island.

URTICA, L. Nettle.

- U. **GRACILIS**, Ait.
Common.

SANTALACEÆ.**COMANDRA, Nutt. Bastard Toad-flax.**

- C. **UMBELLATA**, Nutt.
Frequent.

ARISTOLOCHIACEÆ.**ARISTOLOCHIA, L.**

- A. **SERPENTARIA**, L. Virginia Snakeroot.
Florence, Berlin, Perkins, Margareta; scarce.

ASARUM, L. Wild Ginger.

- A. **ACUMINATUM**, Bicknell.
Florence and probably elsewhere.

A. REFLEXUM, Bicknell.

Huron River, Milan, and probably elsewhere.
The variety *ambiguum* also occurs.

POLYGONACEÆ.

FAGOPYRUM, Gaertn.

F. ESCULENTUM, Moench. Buckwheat.

Infrequent, except in fields where it has sometime
been sown.

POLYGONUM, L. Knotweed.

P. ACRE, H. B. K. Water Smartweed,
Common.P. AMPHIBIUM, L.*
Marblehead; rare.P. ARIFOLIUM, L. Halberd-leaved Tear-thumb.
Bristol's woods, Florence.P. AVICULARE, L. Knot-grass. Door-weed.
Abundant.P. CAREYI, Olney.*
Southern Perkins.P. *convolvulus*, L. Black Bindweed.
Common.P. DUMETORUM, L. Copse or Hedge Buckwheat.
Milan, Marblehead. This or P. SCANDENS is
common and grows on the Islands.P. ERECTUM, L. Erect Knotweed.
Common.P. HARTWRIGHTII Gray.*
A few plants near L. S. & M. S. freight house.
Doubtless introduced.P. HYDROPIPER. Smart-weed. Water Pepper.
Common.P. HYDROPIPEROIDES, Michx. Mild Water Pepper.
Infrequent. Kelley's Island.

- P. *INCARNATUM* Ell.
Frequent in wet places near Lake Erie and Sandusky Bay, also at Castalia.
- P. *LAPATHIFOLIUM*, L.
Cedar Point, Lockwood's; infrequent.
- P. *LITTORALE*, Link.*
Sandusky; frequent. Kelley's Island, and probably many other places near Lake Erie. We failed to distinguish it, till recently, from *P. aviculare*.
- P. *MUHLENBERGII*, Watson.
Frequent. Islands.
- P. *orientale*, L.
Barely naturalized in two or three places.
- P. *PENNSYLVANICUM*, L.
Abundant. Kelley's and Middle Bass the only islands where it has been noticed.
- P. *persicaria*, L. Lady's Thumb.
Abundant.
- P. *RAMOSISSIMUM*, Michx.*
Hill's woods, southern Perkins; one plant.
- P. *SAGITTATUM*, L. Arrow-leaved Tear-thumb.
Frequent.
- P. *SCANDENS*, L. Climbing False Buckwheat.
Margaretta, Cedar Point and probably elsewhere. See *P. dumetorum*.
- P. *TENUÉ*, Michx.*
Marblehead; frequent. Margaretta, between quarry and Castalia road. Only in thin soil overlying the lime stone.
- P. *VIRGINIANUM*, L.
Common. Not on the Islands.

RUMEX, L.

- R. *acetosella*, L. Field or Sheep Sorrel.
Abundant. Put-in-Bay; rare. "Kelley's Island."
Not on other islands.

- R. *ALTISSIMUS*, Wood. Pale Dock.
Sandusky by Big Four track, Put-in-Bay; rare;
also Oak Harbor, Ottawa County.
- R. *BRITANNICA*, L. Great Water-Dock.
Marshes connected with Sandusky Bay; frequent.
- R. *crispus*, L. Curled Dock.
Abundant.
- R. *obtusifolius*, L. Bitter Dock.
Common.
- R. *VERTICILLATUS*.
Common in marshes.

CHENOPODIACEÆ.

ATRIPLEX, L. Orache.

- A. *ARGENTEA*, Nutt.
Near Big Four R. R., Sandusky and Castalia;
rare.
- A. *HASTATA*, L.
Common near Lake and Bay. In many places in
Sandusky the most common weed.
- A. *LITTORALIS*, L.*
Sandusky; frequent. Huron.

CHENOPODIUM, L. Pigweed.

- C. *album*, L. Lamb's Quarters. Pigweed.
Common.
- C. *album viride*, Moq.
Common.
- C. *ambrosioides*, L. Mexican Tea.
L. S. & M. S. R. R. yards, Sandusky; rare.
- C. *BOSCIANUM*, Moq.
Cedar Point, Perkins, Kelley's Island, and,
doubtless, elsewhere.

- C. botrys*, L. Jerusalem Oak. Feather Geranium.
Western part of Erie Co., mostly along railways
(C. S. & H. and L. E. & W.). Marblehead.
Kelley's Island. Infrequent except on Marble-
head.
- C. glaucum*, L. Oak-leaved Goosefoot.
Castalia prairie and along L. E. & W. Ry. at
Castalia and Sandusky; rare.
- C. HYBRIDUM*, L. Maple-leaved Goosefoot.
Islands, Peninsula, Cedar Point, Perkins,
Margaretta; frequent.
- C. LEPTOPHYLLUM*, Nutt.*
Cedar Point and probably elsewhere; infrequent.
- C. murale*, L.
Sandusky; infrequent.
- C. urbicum*, L.
Rather frequent on the Peninsula, and in the
western third of Erie Co. Kelley's Island.

AMARANTACEÆ.

ACNIDA, L.

- A. TUBERCULATA*, Moq.
Wet ground near Lake and Bay and at Castalia;
infrequent. Kelley's Island. Middle Bass

AMARANTUS, L. Amaranth.

- A. ALBUS*, L. Tumble Weed.
Common.
- A. BLITOIDES*, Watson.
Common.
- A. chlorostachys*, Willd.
Common.
- A. hypochondriacus*, L.
Sandusky, Perkins; scarce.

A. paniculatus, L.

Roadsides, Sandusky and Islands; infrequent.

A. retroflexus, L.

Common.

PHYTOLACCACEÆ.

PHYTOLACCA, L.

P. DECANDRA, L. Poke. Scape. Pigeon-berry. Garget. Common.

NYCTAGINACEÆ.

OXYBAPHUS, Vahl.

O. NYCTAGINEUS, Sweet.

L. S. & M. S. Ry. in eastern Sandusky.

AIZOACEÆ.

MOLLUGO, L.

M. VERTICILLATA, L. Carpet-weed.

Sandusky, southern Perkins, Milan; local.

PORTULACACEÆ.

CLAYTONIA, L.

C. VIRGINICA, L. Spring Beauty.

Abundant.

PORTULACA, L.

P. oleracea, L. Purslane.

Abundant.

CARYOPHYLLACEÆ.

ANYCHIA, Michx. Forked Chickweed.

A. CAPILLACEA, DC.

Infrequent. Put-in-Bay.

A. DICHOTOMA, Michx.

Marblehead, Catawba; infrequent. Plentiful in places on the shale in Oxford and Perkins.

ARENARIA, L. Sandwort.

A. LATERIFLORA, L.

Lake woods, Port Clinton and Big woods, Perkins; rare.

A. *serpyllifolia*, L. Thyme-leaved Sandwort.

Islands, Peninsula, Margaretta, western Perkins; frequent.

A. STRICTA, Michx.

Islands, Peninsula, Margaretta, western Perkins, Cedar Point; locally common.

CERASTIUM, L. Mouse-ear Chickweed.

C. NUTANS, Raf.

Frequent. Islands.

C. OBLONGIFOLIUM, Torrey.*

More frequent than the last on Islands and Peninsula and in the western half of Erie Co.

C. *vulgatum*, L.

Common.

LYCHNIS, L.

L. *dioica*, L. Red Lychnis.

Avery; probably adventive.

L. *githago*, Scop. Corn Cockle.

Common. Kelley's the only Island.

L. *vespertina*, Sibth.

Franz Otto's, Perkins.

SAPONARIA, L.

- S. officinalis*, L. Soapwort. Bouncing Bet.
Frequent. Islands.

SILENE, L.

- S. ANTIRRHINA*, L. Sleepy Catchfly.
Frequent. Kelley's Island.
- S. conica*, L.* Corn Catchfly.
"Sandy field west of B. & O. R. R., southern Perkins." Ross Ransom. The first recorded appearance of this plant in the United States was at Clyde, Sandusky County, where it was introduced in Crimson Clover seed, 1896.
- S. cucubalus*, Wibel.* Bladder Campion.
Well established and increasing in a field of James Hamilton, Kelley's Island.
- S. dichotoma*, Ehrh. Forked Catchfly.
Northeast of Port Clinton; probably adventive.
- S. noctiflora*, L. Night-flowering Catchfly.
Sandusky; scarce.
- S. VIRGINICA*, L. Fire Pink.
Put-in-Bay; frequent. Kelley's Island. Catawba, Hartshorn's, Johnson's Island. "Cedar Point," Alden Knight.

STELLARIA, L.

- S. LONGIFOLIA*, Muhl. Long-leaved Stitchwort.
Frequent.
- S. media*, Cyrill. Common Chickweed.
Abundant.

NYMPHÆACEÆ.

BRASENIA, Schreber.

- B. PELTATA*, Pursh. Water-shield.
Cedar Point; one plant.

NELUMBIUM, Adans. Sacred Bean.

N. LUTEUM, Willd. American Nelumbo or Lotus.
Water Chinkapin or Wankapin.

In still, deep, water at several places about Sandusky Bay, in the East and West Harbors, at Port Clinton where a large amount of it grows in the Portage River, and west to Monroe, Michigan, but believed to grow nowhere along the American shore of Lake Erie east of the mouth of the Old Woman Creek. A hundred acres of it at the head of Sandusky Bay and along the river, more, probably, than the whole quantity in the United States farther east. The lotus has the largest flowers and largest leaves of any plant in the Sandusky flora. Petioles sometimes 9 feet long; "blades 26 inches broad."

NUPHAR, Smith. Spatter-Dock.

N. ADVENA, Ait. Yellow Pond-Lily.
Sandusky Bay, Middle Bass, Blair Creek;
frequent.

NYMPHAEA, Tourn. Water-Lily.

N. TUBEROSA, Paine.
Common in still waters connected with the Bay
and Lake.

CERATOPHYLLACEÆ.**CERATOPHYLLUM, L.** Hornwort.

C. DEMERSUM, L.
Sandusky Bay, East Harbor, Port Clinton, Put-
in-Bay; common.

MAGNOLIACEÆ.**LIRIODENDRON, L.** Tulip-tree.**L. TULIPIFERA, L.**

Scarce in the western but frequent in the eastern part of the county, where many of the largest trees in the primeval forest were of this species. Lakeside. Commonly called White-wood and improperly, Yellow Poplar and White Poplar. The wood suitable for pumps, troughs and hollow ware.

MAGNOLIA, L.**M. ACUMINATA, L.** Cucumber-tree.

Two trees near the iron bridge across east branch of Vermillion River. "Big woods, Perkins."

AMONACEÆ.**ASIMINA, Adans.****A. TRILOBA, Dunal.** North American Papaw.

Not found near Sandusky, but near Milan and in many places east from there to the Vermillion River, especially along the Old Woman Creek and other streams. Also in the forest west of Castalia in Sandusky Co. "Formerly on Kelley's Island."

RANUNCULACEÆ.**ACTÆA, L.****A. ALBA, Mill.** White Baneberry.

Frequent.

A. SPICATA RUBRA, Ait. Red Baneberry.

Cedar Point, Perkins, Margaretta Ridge; scarce. "Berlin."

ANEMONE, L.

- A. ACUTILOBA, Laws. (*Hepatica acutiloba*, D C.)
Liver-leaf.
Frequent. Islands.
- A. CYLINDRICA, Gray. Long-fruited Anemone.
Infrequent but observed in eight townships.
- A. DICHOTOMA, L. (*A pennsylvanica*, L.)
Common. All islands, except Kelley's.
- A. HEPATICA, L. (*Hepatica triloba*, Chaix) Liver-leaf.
Frequent. Not observed in Florence where *A. acutiloba* is rather common. Islands. Both species more frequent on the Peninsula than in Erie Co.
- A. NEMOROSA, L. Wind-flower. Wood Anemone.
Common.
- A. THALICTROIDES, L. Rue-Anemone.
Common. Sometimes double. In blossom as late as September.
- A. VIRGINIANA, L.
Frequent. Islands.

AQUILEGIA, L. Columbine.

- A. CANADENSIS, L.
Not noticed near Sandusky, except on Cedar Point, but common among rocks on the Peninsula and Islands and at Margareta Ridge. Berlin, Vermillion, Florence. Adorns the rocky shores of the islands.

CALTHA, L. Marsh Marigold.

- C. PALUSTRIS, L.
Frequent.

CIMICIFUGA, L. Bugbane.

- C. RACEMOSA, Nutt. Black Snakeroot. Black Cohosh.
Common in woods in eastern part of Erie Co, and extending west to Perkins.

CLEMATIS, L. Virgin's Bower**C. VIRGINIANA, L.**

Frequent. North Bass.

DELPHINIUM, L. Larkspur.**D. ajacis, L.**

Spontaneous in gardens and near them.

D. AZUREUM, Michx.

One plant found by L. S. & M. S. Ry. between Venice and Bay Bridge, by Will Newberry. Probably adventive.

HYDRASTIS, Ellis. Orange-root.**H. CANADENSIS, L.** Golden Seal.

Frequent in rich woods long undisturbed. "Kelley's Island." "Catawba."

ISOPYRUM, L.**I. BITERNATUM, Torr & Gray.**

Vermillion River, southern Florence; scarce. "Huron River at Norwalk" Leslie D. Stair.

NIGELLA, L.**N. damascena, L.** Fennel-flower.

Spontaneous in gardens and rarely escaped.

RANUNCULUS, L. Crowfoot. Buttercup.**R. ABORTIVUS, L.** Small-flowered Crowfoot.

Common.

R. acris, L. Tall or Meadow Buttercup.

Florence, Berlin, Huron, Sandusky, Put-in-Bay; infrequent.

R. CIRCINATUS, Sibth. Stiff Water Crowfoot.

Sandusky Bay, Castalia, Mill's Creek; frequent.

R. FASCICULARIS, Muhl. Early Buttercup.

Margaretta, Huron, Peninsula, Johnson's Island, Kelley's Island; locally plentiful.

- R. **MULTIFIDUS**, Pursh.
House's swamp, Perkins; Castalia; Peninsula;
Islands; infrequent.
- R. **OBTUSIUSCULUS**, Raf. (*R. ambigens*, Watson.)
Water Plantain Spearwort.
Millan and Florence; rare.
- R. **PENNSYLVANICUS**, L. f. Bristly Buttercup.
Sandnsky and Willow Point near the Bay,
Catawba; rare.
- R. **RECURTATUS**, Poir. Hooked Crowfoot.
Frequent, especially along rivers.
- R. **SCELERATUS**, L. Cursed Crowfoot.
Frequent. Islands.
- R. **SEPTENTRIONALIS**, Poir. Swamp or Marsh Butter-
cup.
Common. Kelley's and "Put-in-Bay" the only
islands.

THALICTRUM, L. Meadow-Rue.

- T. **DIOICUM**, L. Early Meadow-Rue.
Common.
- T. **POLYGAMUM**, Muhl. Tall Meadow-Rue.
Frequent.
- T. **PURPURASCENS**, L. Purplish Meadow-Rue.
Frequent, especially near Castalia.

BERBERIDACEÆ.

BERBERIS, L. Barberry.

- B. **VULGARIS**, L. Common Barberry.
Woods, Milan and Huron; rare. Seeds
probably dropped by birds.

CAULOPHYLLUM, Michx. Blue Cohosh.

- C. **THALICTROIDES**, Michx.
Florence, Vermillion, Berlin, Perkins, Johnson's
Island; infrequent.

JEFFERSONIA, Barton. Twin-leaf.**J. BINATA, Barton, (J. DIPHYLLA, Pers.)**

Johnson's Island, but nowhere else near Sandusky. Lockwood's woods, Peninsula. Several places along Vermillion River, Florence.

PODOPHYLLUM, L. Mandrake.**P. PELTATUM, L.** May-Apple.

Abundant. Fruit edible. "Leaves and roots poisonous." Gray.

MENISPERMACEÆ.**MENISPERMUM, L.** Moonseed.**M. CANADENSE, L.**

Frequent. Islands.

LAURACEÆ.**LINDERA, Thumb.****L. BENZOIN, Meisn.** Spice-bush. Benjamin-bush.

In rich woods in Erie County the most abundant shrub.

SASSAFRAS, Nees.**S. OFFICINALE, Nees.**

Frequent. "Formerly on the Islands." Submerged trunks found in Huron Marsh. See page 15. Some trees on the Peninsula measured by J. R. Kelly have trunks with circumferences as follows: 8 ft. 1 in.; 7½ft.; 6 ft. 10 in.; 6 ft. Formerly sassafras oil was made in Sandusky.

PAPAVERACEÆ.**CHELIDONIUM, L.** Celandine.**C. majus, L.**

Scarce.

PAPAVER, L. Poppy.

- P. argemone*, L. Rough-fruited Corn-Poppy.
 "In a Crimson Clover field, Perkins." Ross
 Ransom. Probably adventive.
- P. somniferum*, L. Opium Poppy.
 Along a railroad, Sandusky; rare and
 adventive.

SANGUINARIA, Dell. Blood-root.

- S. CANADENSIS*, L.
 Frequent. Islands.

FUMARIACEÆ.**CORYDALIS, Vent.**

- C. AUREA*, Willd. Golden Corydalis.
 "Port Clinton," Leslie D. Stair.
- C. FLAVULA*, D C.
 Peninsula and Islands including Johnson's.
 "Cedar Point." Krebs.

DICENTRA, Borkh.

- D. CANADENSIS*, Walp. Squirrel Corn.
 Berlin, Florence, Milan, Perkins; rare.
 "Vermillion" Otto K. Todd.
- D. CUCULLARIA*, Bernh. Dutchman's Breeches.
 Frequent. All the Islands.

FUMARIA, L. Fumitory.

- F. officinalis*, L.
 Sandusky, Cedar Point, Kelley's Island; rare.

CRUCIFERÆ.**ALYSSUM, L.**

- A. CALYGINUM*, L.
 "Catawba" Nettie Schnaitter.

ARABIS, L. Rock Cress.

- A. **CANADENSIS**, L. Sickle-pod.
Perkins, Margaretta, Peninsula, Johnson's
Island, Put-in-Bay. Middle Bass; infrequent.
- A. **DENTATA**, Torr & Gray.
Cedar Point, Florence, Johnson's Island, North
Bass, Green Island; infrequent.
- A. **DRUMMONDII**, Gray. (A. **CONFINIS**. Watson.)
Cedar Point and Islands; frequent.
- A. **HIRSUTA**, Scop.
Marblehead; common. Catawba, Mouse Island,
Margaretta, Huron River.
- A. **LÆVIGATA**. DC.
Frequent. Islands.
- A. **LYRATA**. L.
Cedar Point; common. Perkins, Marblehead.
- A. **PERFOLIATA**, Lam. Tower Mustard.
Johnson's Island; rare.

BARBAREA, R. Br. Winter Cress.

- B. **VULGARIS**, R. Br. Yellow Rocket.
Frequent, Green Island. Some of the specimens,
at least, belong to the "variety" *stricta*, which
may be distinct.

BRASSICA, L.

- B. *napus*, L. Rape.
Sandusky, Vermillion; adventive.
- B. *nigra*, Kock. Black Mustard.
Common.
- B. *sinapistrum*, Boiss. Charlock.
Abundant.

CAKILE, Tourn. Sea-Rocket.

- C. **MARITIMA**, Scop. (C. **AMERICANA**, Nutt.)
Shores of Lake and Bay; common.

CAMELINA, Crantz. False Flax.

- C. sativa*, Crantz.
Sandusky and Avery; rare.

CAPSELLA, Medic. Shepherd's Purse.

- C. bursa-pastoris*, Medic.
Abundant.

CARDAMINE, L. Bitter Cress.

- C. DIPHYLLA*, Wood. Two-leaved Toothwort.
Huron River near Millan; rare. Florence;
scarce. "Berlin Heights" Chas. Judson.
- C. LACINIATA*, Wood. Toothwort. Pepperrout.
Common.
- C. PENNSYLVANICA*, Muhl.
Frequent. Kelley's Island. North Bass.
- C. RHOMBOIDEA*, DC. Spring Cress.
Common.
- C. RHOMBOIDEA PURPUREA*, Torr.
Common.

COCHLEARIA, L.

- C. armoracia*, L. (*Nasturtium armoracia*, Fries.)
Horseradish.
Frequent. Islands.

CONRINGIA, Link.

- C. orientalis*, Dum.* Hare's-ear Mustard.
Four plants found along railroad near ice houses,
eastern Sandusky, 1897, by Geo. Gilbert.

DRABA, Dill. Whitlow-Grass.

- D. CAROLINIANA*, Walt.
Common on Marblehead and in some places in
Margaretta in thin soil overlying the limestone.
- D. verna*, L.
"Perkins," Lindsey House. rare.

ERYSIMUM, L. Treacle Mustard.

E. *PARVIFLORUM*, Nutt.*

One place along L. E. & W. Ry., west of Castalia;
rare.

LEPIDIUM, L. Pepperwort. Peppergrass.

L. *APETALUM*, Willd. (L. *INTERMEDIUM*, Gray.)

Sandusky; infrequent.

L. *campestre*, R. Br.

Sandusky, Perkins, Margaretta, Peninsula,
Kelley's Island, Put-in-Bay. Common in places,
especially on the Peninsula.

L. *virginicum*, L. Wild Peppergrass.

Common.

NASTURTIUM, R. Br. Water-Cress.

N. *LACUSTRE*, Gray. Lake Cress.

Shinrock; rare.

N. *officinale*, R. Br. True Water-Cress.

Castalia; frequent.

N. *PALUSTRE*, D C. Marsh Cress.

Common. On the Islands, and generally near
the Lake or Bay, the variety *hispidum* is more
common.

N. *sylvestre*, R. Br.* Yellow Cress.

Four places in Perkins, three of them near or not
far from Pipe Creek.

SISYMBRIUM, L.

S. *alliaria*, Scop.

"Kelley's Island." Probably adventive.

S. *CANESCENS*, Nutt. Tansy Mustard.

Cedar Point, Marblehead, Islands; frequent.

S. *officinale*, Scop. Hedge Mustard.

Common.

THLASPI, L.

T. *arvense*, L. Field Pennycress.

Sandusky; rare and adventive.

CAPPARIDACEÆ.**CLEOME, L.**

- C. GRAVEOLENS, Raf. (POLANISIA GRAVEOLENS, Raf.)
Common on sandy beaches. Also in gravel along
L. E. & W. R. R.

RESEDACEÆ.**RESEDA, L.** Mignonette.

- R. *lutea*, L.
Sandusky, Kelley's Island; rare and adventive.

DROSERACEÆ.**DROSER, L.** Sundew.

- D. ROTUNDIFOLIA, L.
East of Milan; very rare.

CRASSULACEÆ.**PENTHORUM, Gronov.** Ditch Stone-crop.

- P. SEDOIDES, L.
Frequent. Islands.

SEDUM, L. Stone-crop. Orpine.

- S. *acre*, L. Mossy Stone-crop.
Kelley's Island, roadside by the cemetery. Cedar
Point near the Light House. Escaped.
- S. *telephium*, L. Orpine. Live-for-ever.
Bogart, Castalia, and Sandhill cemeteries. Put-
in-Bay, North Bass, "Marblehead" U G. Sanger
- S. TERNATUM, Michx. Wild Stone-crop.
Frequent at the foot of steep shale banks of
streams. Put-in-Bay. Gibraltar.

SAXIFRAGACÆ.**CHRYSOSPLENIUM, L.** Golden Saxifrage.**C. AMERICANUM, Schwein.**

Vermillion River, Florence; two places.

HEUCHERA, L. Alum-root.**H. AMERICANA, L.**

Common.

MITELLA, L. Bishop's-Cap. Mitrewort.**M. DIPHYLLA, L.**

Infrequent.

PARNASSIA, L. Grass of Parnassus.**P. CAROLINIANA, Michx.**Castalia; frequent. Perkins, Milan, Florence;
rare.**PHILADELPHUS, L.****P. coronarius, L.** Mock Orange. Syringa.Springly escaped at Sandusky and Berlin
Heights.**SAXIFRAGA, L.** Saxifrage.**S. PENNSYLVANICA, L.** Swamp Saxifrage.

Milan and Florence; scarce.

TIARELLA, L. False Mitrewort.**T. CORDIFOLIA, L.**

East fork, Vermillion River; rare.

GROSSULARIACÆ.**RIBES, L.****R. AUREUM, Pursh.** Missouri or Buffalo Currant.Well established on south side of Kelley's Island.
Roadside near a house in Margaretta.**R. CYNOSBATI, L.** Gooseberry.

Common.

- R. FLORIDUM, L'Her. Wild Black Currant.
 Infrequent. Kelley's Island.
- R. LACUSTRE, Poir.
 "Cedar Point." Millie Carter.

HAMAMELIDACEÆ.

Hamamelis, L. Witch-Hazel.

- H. VIRGINIANA, L.
 Florence, Vermillion, Berlin, Milan; frequent.
 "Portage River."

PLATANACEÆ.

Platanus, L. Sycamore.

- P. OCCIDENTALIS, L. Buttonwood.
 Frequent. Islands. The largest tree in Erie county is probably the buttonwood six miles south of Sondusky, in the woods, but near the road and a little east of Pipe Creek.

ROSACEÆ.

Agrimonia, L. Agrimony.

- A. EUPATORIA, L.
 Common. Kelley's the only Island.
- A. MOLLIS, Torr. & Gray.
 Perkins and doubtless elsewhere.
- A. PARVIFLORA, Soland.
 Frequent. In places, abundant.
- A. STRIATA Michx.
 Margaretta Ridge. Probably elsewhere.

Fragaria, L. Strawberry.

- F. VESCA, L.
 Peninsula, Kelley's Island, Put-in-Bay, Cedar Point, Margaretta, Berlin; frequent in rocky places.

F. VIRGINIANA, Duchesne.

Common. Kelley's, Put-in-Bay and Mouse the only Islands. Many specimens answer to description of the "variety" *illinoense*.

GEUM, L. Avens.

G. ALBUM, Gmelin.

Common.

G. STRICTUM, Soland.

Southern Perkins; rare.

G; VERNUM, Torr. & Gray.

Johnson's Island, Marblehead, Berlin, Perkins, etc.; rather frequent.

G. VIRGINIANUM, L.

Frequent. Kelley's Island? Put-in-Bay.

NEILLIA, D. Don. Ninebark.

N. OPULIFOLIA, Benth. & Hook.

Common on rocky shores of Peninsula and Islands. Vermillion River; rare.

POTENTILLA, L. Cinquefoil.

P. ANSERINA, L. Silver-weed.

Common on sandy shores of Lake and Bay, back a few yards from the water. Middle Bass, North Bass, Rattlesnake Island.

P. ARGUTA, Pursh.

Marblehead, Port Clinton, Put-in-Bay, Margaretta Ridge, Krieger's, Perkins; infrequent.

P. CANADENSIS, L. Five-finger.

Common. Not on the Islands.

P. FRUTICOSA, L. Shrubby Cinquefoil.

Castalia prairie; common. In blossom as late as October 10th.

P. NORVEGICA, L.

Frequent. In places abundant. Put-in-Bay.

P. SUPINA, L.

Huron and several places about Sandusky Bay.

ROSA, L. Rose.

- R. **BLANDA**, Ait.
Cedar Point, Oxford, Groton, Margareta; local.
- R. **CAROLINA**, L.
Common.
- R. **HUMILIS**, Marsh.
Common. Kelley's and Put-in-Bay the only Islands.
- R. *rubiginosa*, L. Sweetbrier. Eglantine.
Frequent. Islands.
- R. **SETIGERA**, Michx. Climbing or Prairie Rose.
Perkins, Groton, Cedar Point, Johnson's Island, Peninsula, Mouse Island, Kelley's Island, Middle Bass; common. Well worth cultivating.

RUBUS, L. Bramble.

- R. **CANADENSIS**, L. Low Blackberry, Dewberry.
Common.
- R. **HISPIDUS**, L. Running Swamp Blackberry.
East of Milan, Berlin, Vermillion, Joseph Smith's, Perkins; local.
- R. **OCCIDENTALIS**, L. Black Raspberry. Thimbleberry.
Common.
- R. **ODORATUS**, L. Purple-flowering Raspberry.
"Near Vermillion River north of Birmingham"
Mrs. W. H. Olds. I have seen this handsome species at Buffalo, Ashtabula, Cleveland and in Lorain County within a few rods of Erie County, but no farther west.
- R. **SETOSUS**, Bigel.* Bristly Blackberry.
Prairie, Oxford and Perkins; common.
- R. **STRIGOSUS**, Michx. Wild Red Raspberry.
Old huckleberry swamp near Axtell; rare.
"Other places"?
- R. **TRIFLORUS**, Richardson. Dwarf Raspberry.
German settlement, Perkins, and east fork of Vermillion River; rare. Also in the forest west of Castalia, in Sandusky County.

R. **VILLOSUS**, Ait. High Blackberry.
Common.

SPIRÆA, L. Meadow-Sweet.

- S. **LOBATA**, Jacq.* Queen of the Prairie.
Southwest of Castalia; local.
A beautiful plant.
- S. **SALICIFOLIA**, L. Common Meadow-sweet.
Oxford, Perkins, Milan, Florence; infrequent.
- S. **TOMENTOSA**, L. Hardhack. Steeple-Bush.
Oxford prairie; very rare.

POMACEÆ.

AMELANCHIER, Medic. June-berry.

- A. **CANADENSIS**, Torr & Gray. Shad-bush. Service-berry.
Frequent. Islands.
- A. **OBLONGIFOLIA**, Torr & Gray.
Cedar Point, Mouse Island, Kelley's Island;
scarce.

CRATÆGUS, L. Thorn.

- C. **COCCINEA**, L.
Common. Put-in-bay; scarce. North Bass. No other islands.
- C. **CRUS-GALLI**, L. Cockspur Thorn.
Frequent.
- C. *oxyacantha*, L. English Hawthorn.
In a thicket, Vermillion and two places in Huron.
Seed probably dropped by birds.
- C. **PUNCTATA**, Jacq.
Perkins, Shinrock, Florence. Frequent in Florence. "Marblehead" Gertrude Johnson.
- C. **SUBVILLOSA**, T. & G. (C. **COCCINEA MOLLIS**, T. & G.)
Common. Kelley's the only Island.
- C. **TOMENTOSA**, L.
Infrequent. Kelley's Island. Middle Bass.

PYRUS, L.

- P. AMERICANA*, D C.* American Mountain-Ash.
In thickets, Rattlesnake Island, Put-in-Bay and
several places in Erie County. Doubtless from
seeds dropped by birds.
- P. ANGUSTIFOLIA*, Ait.*
"Margaretta" Flossie Nolan. Perkins, scarce.
- P. ARBUTIFOLIA*, L. f. Choke-berry.
Tisdell's, Vermillion; rare.
- P. ARBUTIFOLIA MELANOCARPA*, Hook.
Milan, Berlin, Vermillion, Marblehead; infrequent
- P. communis*, L. Pear.
In woods or by roadsides, Perkins, Groton,
Catawba, Put-in-Bay; rare. "Kelley's Island."
- P. CORONARIA*, L. American Crab-Apple.
Frequent. Put-in-Bay.
- P. malus*, L. Apple.
Frequent. Islands.

DRUPACEÆ.**PRUNUS, L.**

- P. AMERICANA*, Marshall. Wild Yellow or Red Plum.
Rather frequent. Kelley's Island. Put-in-Bay.
- P. avium*, L. Sweet Cherry.
In several woods where, doubtless, it has started
from pits dropped by birds. Kelley's Island.
- P. CUNEATA*, Raf.*
Oxford prairie; rare.
- P. persica*, Stokes. Peach.
Roadsides; infrequent. Islands. 300,000 bushels
of peaches, raised on Catawba, were shipped from
there in 1898, enough to have supplied more than
a peck to every family in the western half of
the United States.

- P. **SEROTINA**, Ehrh. Wild Black Cherry.
Common. Timber found in the submerged forest, Huron marsh. Mr. W. H. Todd says that these cherries are more attractive to birds than grapes, and that it pays to plant the trees near vineyards for this reason. Are they not worth planting for the timber?
- P. **VIRGINIANA**, L. Choke-Cherry.
Abundant on Cedar Point and Islands. Much less common elsewhere.

CÆSALPINACEÆ.

CASSIA, L. Senna.

- B. **CHAMÆCRISTA**, L. Partridge Pea.
Common on the shale in Oxford, Perkins, and Huron near the "slate" cut. Infrequent along railroads in Sandusky. Catawba.
- C. **MARYLANDICA**, L. Wild Senna.
Margaretta, Johnson's Island, Marblehead; infrequent. "Port Clinton."

CERCIS, L. Judas-tree.

- C. **CANADENSIS**, L. Red-bud.
Peninsula; frequent. Margaretta; infrequent. Milan; scarce.

GLEDITSCHIA, L. Honey-Locust.

- G. **TRICANTHOS**, L. Three-thorned Acacia. Honey-Locust.
Common, especially near Sandusky and in Ottawa county. A tree of great expanse stands on Osborn St. near Hayes Ave.

GYMNOCLADUS, Lam. Kentucky Coffee-tree.

- G. **CANADENSIS**, Lam.
Distribution peculiar and the tree not generally known. It grows on all of the eight islands on

which I have collected, yet on Put-in-Bay seems limited to one spot near the south point. Marblehead, one standing by the side of the principal street; Catawba; Port Clinton where Dr. Hitchcock said there were fifty on one acre, Margareta, several places; Perkins, Gurley's; Huron, one by the Sandusky road; Berlin, formerly on Sterling Hill's place and elsewhere; Vermillion, near Axtel; Florence, near Terryville.

PAPILIONACEÆ

AMPHICARPÆA, Ell. Hog Pea-nut.

A. MONOICA, Ell.

Common.

A. PITCHERI, Torr & Gray.*

Perkins, Milan, Cedar Point, Catawba, Islands; frequent.

APIOS, Boerhaave. Ground-nut. Wild Bean.

A. TUBEROSA, Moench.

Rather frequent. "Tubers edible."

ASTRAGALUS, L. Milk-Vetch.

A. CANADENSIS, L.

Shores of the Islands and about Sandusky Bay; frequent.

BAPTISIA, Vent. False Indigo.

B. LEUCANTHA, Torr & Gray.

Oxford and southern Perkins; infrequent.

B. TINCTORIA, R. Br. Wild Indigo.

Oxford, Perkins, eastern Milan, Vermillion, Florence; infrequent.

DESMODIUM, Desv. Tick-Trefoil.

D. ACUMINATUM, DC.

Common. Not on the Islands. Some specimens show a reversion of loment to leaves. See sixth annual report, page 32.

- D. CANADENSE, DC.
Frequent.
- D. CANESCENS, DC.
Common.
- D. CILIARE, DC.
Margaretta Ridge, Berlin Heights, east of Milan
and Joseph Smith's woods, Perkins; infrequent.
- D. CUSPIDATUM, Hooker.
Infrequent.
- D. DILLENII, Darlingt.
Frequent. Put-in-Bay.
- D. ILLINOENSE, Gray.*
Marblehead, Margaretta, southern Perkins;
scarce.
- D. LINEATUM, DC.*
Joseph Smith's woods, Perkins; local.
- D. MARYLANDICUM, F. Boott.
Margaretta Ridge; rare.
- D. NUDIFLORUM, DC.
Frequent.
- D. PANICULATUM, DC.
Frequent. Put-in-Bay.
- D. RIGIDUM, DC.
Infrequent.
- D. ROTUNDIFOLIUM DC.
Rather frequent in sandy woods, occurring in, at
least, fourteen places in Erie County and on the
Peninsula.
- D. SESSILIFOLIUM, Torr. and Gray.*
Sandy fields on Margaretta Ridge; common.
Sandhill cemetery. Also ten miles west of Toledo.
- LATHYRUS, L.** Vetchling.
- L. MYRTIFOLIUS, Muhl.
Huron River near Enterprise. "L. S. & M. S. Ry.
Sandusky," Elmer Unchr.ich.
- L. OCHROLEUCUS, Hook.
Peninsula and Islands.

L. PALUSTRIS, L.

Common.

L. VENOSUS, Muhl.*

Margaretta Ridge; considerable.

LESPEDEZA, Michx. Bush-Clover.**L. CAPITATA, Michx.**

Common, at least in sandy soil.

Not on the Islands.

L. NUTTALLII, Darl.*

Margaretta Ridge.

L. POLYSTACHYA, Michx.Margaretta Ridge, East of Milan, Berlin Heights,
Vermillion, Florence; frequent.**L. PROCUMBENS, Michx.**

Vermillion; rare.

L. RETICULATA, Pers.

Margaretta, Huron, Marblehead, Catawba.

L. STUVEI INTERMEDIA, Watson.

Frequent.

L. VIOLACEA, Pers.

Frequent.

LUPINUS, L. Lupine.**L. PERENNIS, L.** Wild Lupine.Margaretta Ridge; Joseph's Smith's, Perkins;
east of Milan; local. "Scott's cemetery"
Gertrude Taylor.**MEDICAGO, L.** Medick.**M. lupulina, L.** Black Medick. Nonesuch.

Frequent. Islands.

M. sativa, L. Lucerne. Alfalfa.Sandusky, Perkins, Marblehead, Put-in-Bay;
roadsides, scarce. Can be raised in the dry soil of
the Peninsula and Islands.**MELILOTUS, Juss.** Melilot. Sweet Clover.**M. alba Desv.** White Melilot.

Abundant.

- M. *officinalis*, Lam. Yellow Melilot.
Sandusky, Johnson's Island, Put-in-Bay; infrequent.

PHASEOLUS, L.

- P. *DIVERSIFOLIUS*, Pers. (STROPHOSTYLES ANGULOSA, Ell.) Trailing Wild Bean.
Common on sandy shores. Islands.

PSORALEA, L.

- P. *MELILOTOIDES*, Michx.*
Bloomingville cemetery and southeast of Kimball; indigenous but rare.

ROBINIA, L. Locust-tree.

- R. *PSEUDACACIA*, L. Common Locust. False Acacia.
Infrequent. Islands. Naturalized on banks of Huron River and elsewhere.
The first tree of this species taken to Europe, 1638, was still standing in the *Jardin des Plantes*, Paris, in 1890.

TEPHROSIA, Pers. Hoary Pea.

- T. *VIRGINIANA*, Pers. Goat's Rue. Cat-gut.
Castalia cemetery.

TRIFOLIUM, L. Clover.

- T. *HYBRIDUM*, L. Alsike Clover.
Frequent. Put-in-Bay.
T. *pratense*, L. Red Clover.
Common.
T. *REFLEXUM*, L.* Buffalo Clover.
"Johnson's Island." Minnie Matern.
T. *REPENS*, L. White Clover.
Common.

VICIA, L. Vetch.

- V. *AMERICANA*, Muhl.
Sandusky, especially along L. S. & M. S. R. R. west of Hancock St., Margaretta Ridge, Catawba, Kelley's Island, North Bass; local.

V. CAROLINIANA, Walt.

Islands, Peninsula and western part of Erie county; common.

V. *sativa*, L.

Lakeside, North Bass, Rattlesnake Island; rare.

GERANIACEÆ.

ERODIUM, L'Her. Storksbill.

E. *cicutarium*, L'Her.

"East of Milan." Will Bittner.

GERANIUM, L. Cranesbill.

G. CAROLINIANUM, L.

Frequent in cultivated ground. Islands.

G. MACULATUM, L. Wild Cranesbill.

Common. Kelley's the only Island.

G. ROBERTIANUM, L. Herb Robert.

Common in rocky woods on the Peninsula and all the Islands. In sand, Cedar Point; frequent. Florence, but scarce so far from the Lake. Seldom if ever seen in the interior of Ohio or Michigan. I have seen it in Great Britain, where it is also native but not so common as on our Islands and Peninsula. Here it probably thrives better than anywhere farther south in America. It blooms from May till late in October and adds much to the beauty of woodland and rocky shores.

OXALIDACEÆ.

OXALIS, L. Wood-Sorrel.

O. CYMOSA, Small.

Common.

O. STRICTA, L.

Common.

O. VIOLACEA, L. Violet Wood-Sorrel.

Frequent along a stream in south-eastern Milan and in woods in southern Perkins. Infrequent in Berlin, Huron, near the Soldiers' Home and near the West Harbor. "Florence."

LINACEÆ.

LINUM, L. Flax.

L. SULCATUM.

Widder's woods and Castalia cemetery, Margaretta; Sandhill cemetery; Latham's, Catawba; rare.

L. *usitatissimum*, L. Common Flax.

Along railroads; infrequent. Kelley's Island.

L. VIRGINIANUM, L.

Dry unbroken ground, especially at the top of high steep banks, Oxford and east; scarce.

RUTACEÆ.

PTELEA, L. Hop-tree.

P. TRIFOLIATA, L. Shrubby Trefoil.

Common on the Islands and generally on sandy shores of the Lake. Occurs also in Florence and Margaretta. One on Cedar point has a circumference of thirty-four inches, one foot above the ground.

ZANTHOXYLUM, L. Prickly Ash.

Z. AMERICANUM, Mill. Prickly Ash. Toothache-tree.

Perkins, Groton, Cedar Point, Marblehead, Port Clinton, Kelley's Island, Middle Bass; frequent.

SIMARUBACEÆ.

AILANTHUS, Desf. Tree-of-Heaven.

A. glandulosa, Desf. Chinese Sumach.

Naturalized on Cedar Point and in many places in Sandusky, especially about lumber yards and near buildings where the shelter from wind, the reflected sunlight and the protection afforded by the Bay from untimely frosts enable it to thrive better than in most places so far north. Woods, Florence, and creek valleys, Berlin; rare.

POLYGALACEÆ.

POLYGALA, L. Milkwort.

P. SANGUINEA, L.

Abundant on the shale, Oxford and southern Perkins. Huron, south-east of Milan, Berlin, Vermillion; locally common.

P. SENEGA, L.

Margaretta Ridge, Marblehead, Perkins cemetery; scarce. The variety *latifolia* grows at Catawba.

P. VERTICILLATA, L.

Dry soil, especially at the top of steep banks; infrequent.

P. VERTICILLATA AMBIGUA, Wats & Coult.

South of Huron; rare.

EUPHORBIACEÆ.

ACALYPHA, L. Three-seeded Mercury.

A. VIRGINICA, L.

Abundant.

EUPHORBIA, L. Spurge.

- E. COMMUTATA**, Engelm.
Marblehead, Johnson's Island, Cedar Point, Willow Point; rare except near the railroad on Marblehead.
- E. COROLLATA**, L.
Frequent.
- E. cyparissias**, L. Cypress Spurge.
Spreading in and from cemeteries and yards. Islands.
- E. DENTATA**, Michx.*
Islands, Peninsula and mainland near Sandusky Bay; frequent.
- E. HIRSUTA**, Wiegand.*
Common, but not on the Islands.
- E. MACULATA**, L.
Abundant.
- E. MARGINATA**, Pursh.
Naturalized in flower gardens, frequent; elsewhere rare.
- E. pepus**, L.*
Along fence, Jefferson St., near Fulton St., Sandusky, where it has been for a number of years.
- E. POLYGONIFOLIA**, L.
Abundant on sandy shores of Lake Erie. Islands.
- E. PRESLI**, Guss.
Common.
- E. SERPENS**, HBK.*
Johnson's Island; rare. A lot in Sandusky, vacant in 1896, but since used for a building site.

CALLITRICHACEÆ.**CALLITRICHE, L. Water-Starwort.**

- C. HETEROPHYLLA**, Pursh.
Berlin; rare.

C. VERNA, L.

Birmingham and Kimball; rare.

LIMNANTHACEÆ.

FLÆRKEA, Willd. False Mermaid.

F. PROSERPINACOIDES, Willd.

Common in alluvial soil.

ANACARDIACEÆ.

RHUS, L. Sumach.

R. AROMATICA, Ait. Fragrant Sumac.

Cedar Point and Marblehead; common. Other parts of the Peninsula, Islands, Margaretta, western Perkins; frequent.

R. COPALLINA, L. Dwarf Sumac.

Oxford and southern Perkins; common. South-east of Milan.

R. GLABRA, L. Smooth Sumac.

Common.

R. RADICANS, L. (**R. TOXICODENDRON,**) Poison Ivy.

Everywhere except on Green Island. Common. Berries eaten and seeds distributed by birds.

R. TYPHINA, L. Staghorn Sumac.

Islands, Peninsula and Cedar Point; abundant. Lester Carpenter of Kelley's Island has bookshelves of this wood, and says that one tree was sixteen inches in diameter near the ground, and about fourteen inches, at a height of six feet. Where else does sumac attain such a size?

R. VENENATA, DC. Poison Sumac.

Vermillion; almost exterminated. "Formerly in old huckleberry swamp near Axtel" A. A. Blair and L. W. Washburn.

ILICACEÆ.**ILEX, L.** Holly.

- I. **VERTICILLATA, Gray.** Winterberry. Black Alder.
Rather frequent. Green Island.

CELASTRACEÆ.**CELASTRUS, L.** Shrubby Bitter-sweet.

- C. **SCANDENS, L.** Wax-work, Climbing Bitter-sweet.
Common.

EUONYMUS, L. Spindle-tree.

- E. **ATROPURPUREUS, Jacq.** Burning-Bush. Wahoo.
Frequent. Kelley's Island.
- E. **OBOVATUS, Nutt.** Running Strawberry Bush.
Islands; Sugar Rock, Catawba; Hartshorn's;
frequent. Vermillion River, Florence.

STAPHYLEACEÆ.**STAPHYLEA, L.** Bladder-nut.

- S. **TRIFOLIA, L.** American Bladder-nut.
Frequent. Green Island.

ACERACEÆ.**ACER, L.** Maple.

- A. **DASYCARPUM, Ehrh.** White or Silver Maple.
Common. Planted for shade.
Wood used in Sandusky in making baskets.
- A. **RUBRUM, L.** Red or Swamp Maple.
River banks; infrequent.

A. SACCHARINUM, Wang. Sugar or Rock Maple.

Common in Florence, where there are many sugar bushes. Less common in other parts of the county, on the Peninsula and all the Islands. Wood used by the Sandusky Furniture Company for making bowling alleys, and by the Tool Company for the jaws of hand-screws.

A. SACCHARINUM NIGRUM, Torr & Gray. Black Sugar Maple.

Frequent. Kelley's Island. North Bass.

NEGUNDO, Moench. Ash-leaved Maple. Box Elder.

N. ACEROIDES, Moench.

Vermillion River, Huron River, Pipe Creek, Shinrock, Bay Bridge, Port Clinton, Put-in-Bay; scarce except along rivers.

HIPPOCASTANACEÆ.

ÆSCULUS, L.

Æ. GLABRA, Willd. Fetid or Ohio Buckeye.

Frequent along streams and on Johnson's Island. Marblehead, Kelley's Island; scarce. Middle Bass, one. "North Bass, one." "Buckeye Island, formerly."

BALSAMINACEÆ.

IMPATIENS, L. Balsam. Jewel-weed.

I. AUREA, Muhl. (I. PALLIDA, Nutt.) Pale Touch-me-not.

Frequent in rich soil in damp woods. Rattlesnake Island.

I. BIFLORA, Walt. (I. FULVA, Nutt.) Spotted Touch-me-not.

Common, especially on Cedar Point and shores of the Islands.

RHAMNACEÆ.

CEANOTHUS, L. Red-root.

- C. AMERICANUS, L. New Jersey Tea.
Peninsula, Margeretta Ridge, Perkins, Oxford,
east of Milan; frequent.
- C. OVATUS, Desf.
Peninsula; frequent.

VITACEÆ.

VITIS, L. Grape.

- V. BICOLOR, LeConte. Blue or Winter Grape.
Infrequent. A vine in Peter Mainzer's woods,
German Settlement, Perkins, is about 80 feet
high and measures $28\frac{1}{4}$ inches in circumference.
- V. CORDIFOLIA, Michx. Frost or Chicken Grape.
Milan, Berlin, Vermillion; rather frequent. John-
son's Island.
- V. HEDERACEA, Ehrh. (AMPELOPSIS QUINQUEFOLIA,
Michx.) Virginia Creeper.
Common.
- V. LABRUSCA, L. Northern Fox Grape.
Vermillion, Florence, Berlin, Milan, Oxford.
Rather frequent in Florence.
- V. RIPARIA, Michx. Riverside or Sweet scented Grape.
Common. Abundant on Cedar Point. Nearly all
the wild grape vines near Sandusky and on the
Islands and Peninsula are of this species. Wild
grapes formerly abounded on the Islands. Vine-
yards have for many years occupied half or more
of the cultivated ground of the Islands,—more
than half the entire area of Middle Bass and North
Bass. Of late they have been to some extent sup-
planted by peach orchards. The yield continues
good,—between six and nine million pounds an-
nually for Ottawa county, surpassed the last few
years by Lake and Cuyahoga counties,—but the
price has been low.

TILIACEÆ.**TILIA, L.** Linden.**T. AMERICANA, L.** Basswood.

Common. Wood used in Sandusky for making excelsior and small boxes. Crayon made in Sandusky is used in nearly every school-house in the United States and to some extent in Europe. For the crayon boxes, basswood logs four feet long, steamed and stripped of bark, are revolved in front of a knife that peels off long sheets of the required thickness. The cores of the logs, about six inches thick, are sent to Muncie, Indiana, for making paper pulp.

MALVACEÆ.**ABUTILON, Gaertn.** Indian Mallow.**A. avicennae, Gaertn.** Velvet-Leaf.

Common. Cultivated in western China for its fibre: here a garden weed.

ALTHÆA.**A. rosea, Cav.** Hollyhock.

Escaped into streets and vacant lots in a hundred places, in Sandusky; also in many other places in Erie county and on the Islands and Peninsula.

HIBISCUS, L. Rose-Mallow.**H. MOSCHEUTOS, L.** Swamp Rose-Mallow.

In marshes connected with Sandusky Bay and the Harbors; frequent. Port Clinton. North Bass. A showy plant.

- H. trionum*, L. Bladder Ketmia. Flower-of-an-Hour.
Venice Mallow. Black-eyed Susan.
Frequent. Not yet well known, but occurring
throughout Frie county, on the Peninsula and on
Kelley's Island. Plentiful in some places.

MALVA, L. Mallow.

- M. moschata*, L. Musk Mallow.
Scarce. Kelley's Island.
M. rotundifolia, L. Common Mallow.
Abundant.
M. sylvestris, L. High Mallow.
Rare.

SIDA, L.

- S. spinosa*, L.
Sandusky, Perkins, Peninsula; local. Kelley's
Island; frequent.

HYPERICACEÆ.

HYPERICUM, L. St John's-wort.

- H. ASCYRON*, L. Great St. John's-wort.
Vermillion River, Huron River, Shinrock;
infrequent.
H. CANADENSE, L.*
South-east of Milan; rare.
H. CANADENSE MAJUS, Gray.*
Perkins, Groton; infrequent.
H. GYMNANTHUM, Engelm & Gray.*
Prairie, Oxford and Perkins; common.
H. KALMIANUM, L.
Prairie north and west of Castalia; common.
Middle Bass; rare. "Put-in-Bay."
H. MACULATUM, Walt.
Frequent. Rattlesnake Island.

- H. MUTILUM, L.
Frequent. Common on Oxford prairie.
- H. perforatum, L. Common St. John's-wort.
Frequent. Common in parts of Berlin. Kelley's
Island. Middle Bass.
- H. SAROTHTRA, Michx. (H. NUDICAULE Walt.)
Orange-grass. Pine-weed.
Oxford; common on the shale. Huron, Ver-
million; local.
- H. VIRGINICUM, L. (ELODES CAMPANULATA, Pursh.)
Marsh St Johns-wort.
Infrequent.

CISTACEÆ.

HELIANTHEMUM, Pers. Frost-weed.

- H. CANADENSE, Michx.
Margaretta Ridge and Perkins; rare.
- H. MAJUS, (L) B. S. P.
East of Milan; infrequent. Cedar Point and
southern Perkins; local.

LECHEA, Kalm. Pinweed.

- L. LEGGETTII, Britt & Holl.
Leonard's Hazel Patch, Perkins.
- L. MAJOR, Michx.
Wintergreen woods east of Milan, Bloomingville
cemetery, Castalia cemetery, Smith's, Perkins;
local. "Cedar Point" Claassen.
- L. MINOR, L. (L. THYMIFOLIA of Gray's Manual.)
Vermillion, southern Perkins and east of Milan;
local and scarcer than the last.

VIOLACEÆ.

IONIDIUM, Vent.

- I. CONCOLOR, Benth & Hook. Green Violet.
Vermillion River, Florence; rare.

VIOLA, L. Violet.

- V. *BLANDA*, Willd. Sweet White Violet.
One wet field in Margaretta, since plowed up.
"Perkins." "Berlin."
- V. *BLANDA PALUSTRIFORMIS*, Gray.*
Damp cool rocks, Vermillion River and tributary
ravines; scarce.
- V. *CANINA MUHLENBERGII*, Gray. Dog Violet.
Vermillion River near Birmingham; one specimen.
Also Rocky Ridge, Ottawa county.
- V. *CUCULLATA*, Ait. Common Blue Violet.
Abundant. In bloom October 8.
- V. *LANCEOLATA*, L. Lance-leaved Violet.
Oxford and Perkins prairie; rather frequent.
Vermillion southeast of the village; locally
plentiful.
- V. *OVATA*, Nutt.*
Castalia cemetery; rare.
- V. *PALMATA*, L.
Sandusky, Catawba; scarce.
- V. *PEDATIFIDA*, G. Don.*
Marblehead; scarce. Margaretta and Perkins
rare.
- V. *PUBESCENS*, Ait. Downy Yellow Violet.
Common.
- V. *PUBESCENS SCABRIUSCULA*, Torr & Gray.
Perkins, Milan. Apparently common: we have
confounded it with the species.
- V. *ROSTRATA*, Pursh. Long-spurred Violet.
Florence; frequent. Berlin Heights, but not
nearer Sandusky.
- V. *SAGITTATA*, Ait. Arrow-leaved Violet.
Prairie, Oxford and Perkins; common. East of
Milan. Vermillion. In bloom October 5.
- V. *STRIATA*, Ait. Pale Violet.
Common along rivers and, locally, elsewhere.

- V. TENELLA, Muhl. (*Viola tricolor arvensis* DC., perhaps.) Field Pansy. Cedar Point, Johnson's Island, Marblehead, Catawba. Put-in-Bay; infrequent but apparently indigenous. *V. tricolor* L., Pansy, persists where it has been cultivated. Three other species grow in Cuyahoga county. See page 30.

CACTACEÆ.

OPUNTIA, Mill. Prickly Pear.

- O. RAFINESQUII, Engelm.*
Cedar Point and one field in Margareta;
common. Marblehead; scarce.

THYMELÆACEÆ.

DIRCA, L. Leatherwood. Moosewood.

- D. PALUSTRIS, L.
One bush on Beecher's flats, Vermillion River,
southern Florence. "Formerly plentiful" there.

ELÆAGNACEÆ.

SHEPHERDIA, Nutt.

- S. CANADENSIS, Nutt.
One spot on east fork Vermillion River; rare.
"Cedar Point," W. A. Kellerman.

LYTHRACEÆ.

AMMANNIA, L.

- A. COCCINEA, Rottb.*
Presque Isle Point, Peninsula; local.

LYTHRUM, L. Loosestrife.**L. ALATUM, Pursh.**

Common, especially on wet prairies.

Put-in-Bay and Middle Bass the only Islands.

NESÆA, Comm, Juss.**N. VERTICILLATA, HBK.** (DECODON VERTICILLATUS. Ell.) Swamp Loosestrife.

Marshes connected with Bay and Lake; common. Islands.

ROOTALA, L.**R. RAMOSIOR, Koehne.**

Marblehead; rare. The only spot in northern Ohio.

MELASTOMACEÆ.**RHEXIA, L.** Deer-Grass. Meadow-Beauty.**R. VIRGINICA, L.***

Southern Perkins and East of Milan; plentiful in a few places; regarded rare until 1898.

ONAGRACEÆ.**CIRCÆA, L.** Enchanter's Nightshade.**C. ALPINA, L.**

Florence, mostly on old logs; scarce.

C. LUTETIANA, L.

Common. Put-in-bay the only Island.

EPILOBIUM, L. Willow-herb.**E. ADENOCaulon, Haussk.**

Castalia, Vermillion in old quarry, Marblehead, Kelley's Island, North Bass; infrequent.

- E. *ANGUSTIFOLIUM*, L. Great Willow-herb. Fire-weed.
Infrequent.
- E. *COLORATUM*, Muhl.
Frequent. Kelley's Island. Middle Bass.
- E. *LINEARE*, Muhl.
Castalia and Peninsula; infrequent.

GAURA, L.

- G. *BIENNIS*, L.
Rather frequent.

LUDWIGIA, L. False Loosestrife.

- L. *ALTERNIFOLIA*, L. Seed-box.
Common on the shale. Cedar Point.
- L. *PALUSTRIS*, Ell. Water Purslane.
Frequent.
- L. *POLYCARPA*, Short & Peter.
Oxford, Perkins, Vermillion; infrequent.

ŒNOTHERA, L. Evening Primrose.

- Œ. *BIENNIS*, L. Common Evening Primrose.
Common.
- Œ. *FRUTICOSA*, L. Sundrops.
Kimball; locally plentiful.
- Œ. *OAKESIANA*, Robbins.*
Sandusky and probably Cedar Point and elsewhere about the Lake. Not distinguished from Œ. *bennis* until 1898, probably for the reason that it is not annual, as described. Several years ago August Guenther, at my suggestion, pulled up a large number of Œnotheras on Cedar Point and elsewhere, but failed to find one with an annual root. One or the other species is very common on the shores of the Islands.

- CE. PUMILA, L.
Oxford, southern Perkins, east of Milan, Vermillion; scarce. "Southern Margaretta," Elsie Johns.
- CE. RHOMBIPETALA, Nutt.*
Cedar Point.

HALORAGIDACEÆ.

MYRIOPHYLLUM, L. Water-Milfoil.

- M. SPICATUM, L.
Sandusky Bay, East Harbor, Catawba, Put-in-Bay; common.

PROSERPINACA, L. Mermaid-weed.

- P. PALUSTRIS, L.
Perkins, Castalia, Marblehead; in swamps.

ARALIACEÆ.

ARALIA, L.

- A. NUDICAULIS, L. Wild Sarsaparilla.
Rather frequent. Green Island, Kelley's Island.
- A. QUINQUEFOLIA Decsne & Planch. Ginseng.
A few years ago frequent; now nearly exterminated. The ginseng dug on Put-in-Bay, 1892 and 1893, sold for about \$800 at about \$3 a pound.
- A. RACEMOSA, L. Spikenard.
Frequent on steep banks of streams, and occurs in several other places.
- A. TRIFOLIA, Decsne & Planch. Dwarf Ginseng.
Ground-nut.
Two places in Florence.

UMBELLIFERÆ.

ARCHANGELIGA, Hoffm.

- A. *ATROPURPUREA*, Hoffm.
Castalia; frequent. Perkins.
- A. *HIRSUTA*, Torr & Gray.
Sandy soil; infrequent.

CARUM, L. Caraway.

- C. *carvi*, L.
Infrequent. Islands.

CHÆROPHYLLUM, L.

- C. *PROCUMBENS*, Crantz.
Infrequent. Kelley's Island.

CICUTA, L. Water Hemlock.

- C. *BULBIFERA*, L.
Frequent. Islands.
- C. *MACULATA*, L. Musquash Root.
Frequent. Kelley's Island.

CONIUM, L. Poison Hemlock.

- C. *maculatum*, L.
Roadside, Groton; local.

CRYPTOTÆNIA, DC. Honewort.

- C. *CANADENSIS*, DC.
Frequent.

DAUCUS, L. Carrot.

- D. *carota*, L.
A weed in some places in the eastern part of Erie county. Infrequent or scarce in Sandusky and elsewhere, but, perhaps, spreading from the east.

ERIGENIA, Nutt. Harbinger-of-Spring.**E. BULBOSA, Nutt.**

Rather frequent near streams.
Kelley's Island.

ERYNGIUM, L.**E. YUCCÆFOLIUM, Michx.***

Rattlesnake-Master. Button Snake-root.
Southeast of Kimball; plentiful. Roadside west
of Union Corners, and roadside at Joseph Smith's,
Perkins; rare.

FCENICULUM, Adans, Fennel.**F. vulgare, Mill.** (*F. officinale*, All.)

Sandusky and Groton; rare.

HERACLEUM, L. Cow-Parsnip.**H. LANATUM, Michx.**

Perkins, Florence, Port Clinton; infrequent.

HYDROCOTYLE, L. Water Pennywort.**H. AMERICANA, L.**

Florence; rare.

OSMORRHIZA, Raf. Sweet Cicely.**O. BREVISTYLIS, DC.**

Common.

O. LONGISTYLIS, DC.

Common.

PEUCEDANUM, L.**P. sativum, Benth & Hook.** Parsnip.

Common. Kelley's the only island.

P. TERNATUM, Nutt. (*TIEDEMANNIA RIGIDA*, Coult & Rose.) Cowbane.

Infrequent.

PIMPINELLA, L.**P. INTEGERRIMA, Benth & Hook.**

Frequent, especially on rocky hillsides. Kelley's Island, Put-in-Bay.

SANICULA, L. Sanicle. Black Snakeroot.

S. CANADENSIS, L.

Frequent or common. Put-in-Bay group.

S. MARYLANDICA, L.

Frequent or common. Kelley's Island.

The two species of sanicle are so much alike that I have not always attempted to distinguish between them. The U. S. National Museum has a specimen of *S. trifoliata* from Lorain county, and the same might probably be found in Erie county by diligent searching.

SIUM, L. Water Parsnip.

S. CUCUTÆFOLIUM, Schrank.

Frequent. Kelley's Island.

THASPIUM, Nutt. Meadow-Parsnip.

T. AUREUM, Nutt.

Sandusky, Margaretta, Marblehead: infrequent.

The so-called variety *atropurpureum* in Florence.

T. AUREUM TRIFOLIATUM, Coult & Rose.

Frequent on the Peninsula and in the western part of Erie county. Put-in-Bay.

T. BARBINODE, Nutt.

Margaretta, Peninsula, Islands; frequent. "Cedar Point."

T. BARBINODE, ANGUSTIFOLIUM, Coult & Rose.

Cedar Point, Johnson's Island, Marblehead, Mouse Island; frequent.

ZIZIA, Koch.

Z. AUREA, Koch.

Frequent. Kelley's Island.

CORNACEÆ.**CORNUS, L.** Cornel. Dogwood.

- C. **ALTERNIFOLIA**, L. f.
Florence, Catawba; scarce.
- C. **AMOMUM**, Mill. (C. **SERICEA**, L.)
Silky Cornel. Kinnikinnik.
Common.
- C. **ASPERIFOLIA**, Michx.
Common.
- C. **CANDIDISSIMA**, Mill. (C. **PANICULATA**, L'Her.)
Frequent.
- C. **CIRCINATA**, L'Her. Round-leaved Cornel or Dogwood.
Frequent, especially on the Peninsula and along the Vermillion River. Kelley's Island.
- C. **FLORIDA**, L. Flowering Dogwood.
Common. Kelley's the only Island.
- C. **STOLONIFERA**, Michx, Red-osier Dogwood.
Castalia; rare. Shore of Lake Erie east of Huron.

NYSSA, L. Tupelo.

- N. **MULTIFLORA**, Wang. (N. **SYLVATICA**, Marsh.)
Pepperidge. Sour Gum.
Rich soil; infrequent.

PYROLACEÆ.**CHIMAPHILA, Pursh.** Pipsissewa.

- C. **MACULATA**, Pursh. Spotted Wintergreen.
Furnace woods, Vermillion.
- C. **UMBELLATA**, Nutt. Prince's Pine.
Cedar Point; east of Milan; Vermillion River, Florence; rare.

PYROLA, L. Wintergreen.

P. ELLIPTICA, Nutt. Shin-leaf.

Florence, Milan, Perkins, Cedar Point, Marblehead; infrequent.

P. ROTUNDIFOLIA, L.

Florence, Berlin Heights, Milan, Perkins, Margaretta Ridge; infrequent.

MONOTROPACEÆ.

MONOTROPA, L. Indian Pipe.

M. UNIFLORA, L. Corpse-Plant.

Infrequent.

ERICACEÆ.

ARCTOSTAPHYLOS, Adans. Bearberry.

A. UVA-URSI, Spreng.*

Cedar Point; frequent. Vermillion River, Vermillion; rare.

EPIGÆA, L. Ground Laurel.

E. REPENS, L. Trailing Arbutus.

Berlin Heights; rare.

GAULTHERIA, L. Aromatic Wintergreen.

G. PROCUMBENS, L. Creeping Wintergreen.

One woods east of Milan; frequent. Berlin Heights and Vermillion River; rare. Formerly so plentiful on the banks of the Vermillion River north of Birmingham that they were known locally as the "Wintergreen Banks."

VACCINIACEÆ.

GAYLUSSACIA, H. B. K. Huckleberry.

- H. RESINOSA, Torr & Gray. Black Huckleberry.
Oxford and east; frequent.

OXYCOCCUS, Hill. Cranberry.

- O. MACROCARPUS, Pers. Large or American Cranberry.
Milan; nearly exterminated. "Formerly east of
Berlin Heights and plentiful near Axtel."

VACCINIUM, L. Blueberry.

- V. CORYMBOSUM, L. High-bush or Swamp Blueberry.
A few bushes on and near Tisdale's Vermillion,
and in the old swamp near Axtel where years
ago, "grew a thousand bushels of berries." See
page 31.
- V. PENNSYLVANICUM, Lam. Dwarf Blueberry.
Vermillion River, Vermillion; rare.
- V. VACILLANS, Solander. Low Blueberry.
Frequent from the Huron River east. This and
the Black Huckleberry are the only *Ericaceæ* often
met with in Erie county and these not often west
of the Huron River. I know of none of this order
on the Islands and, excepting the Shin-leaf and
"Indian Pipe," none on the Peninsula.

PRIMULACEÆ.

ANAGALLIS, L. Pimpernel.

- A. *arvensis*, L. Common Pimpernel.
"Sandusky." Victor Hommel.

DODECATHEON, L. American Cowslip.

- D. MEADIA, L.* Shooting-Star.
Castalia; rare. Called also Pride-of-Ohio, but
probably not one in a thousand of the people now
living in Ohio ever saw it growing wild.

LYSIMACHIA, L. Loosestrife.

- L. nummularia*, L. Moneywort.
Frequent in damp places along roads and occasional elsewhere. Middle Bass.
- L. QUADRIFOLIA*, L.
Rather frequent.
- L. STRICTA*, Ait.
Infrequent. Bass Islands.
- L. THYRSIFLORA*, L. Tufted Loosestrife.
Perkins, Huron, Cedar Point, Catawba; infrequent.

SAMOLUS, L. Water Pimpernel: Brook-weed.

- S. VALERANDI AMERICANUS*, Gray.
Florence, Shinrock, Huron, Milan, Groton; infrequent.

STEIRONEMA, Raf.

- S. CILIATUM*, Raf.
Common.
- S. LONGIFOLIUM*, Gray.
Sandusky, Oxford, Margaretta, Peninsula, Put-in Bay, Middle Bass, Rattlesnake Island; frequent.

OLEACEÆ.**FRAXINUS, L.** Ash.

- F. AMERICANA*, L. White Ash.
Common. Wood used by the Sandusky Tool Company for hoe handles.
- F. PUBESCENS*, Lam. Red Ash.
Frequent. Islands. On Kelley's Island fruit 2¼ inches long and 5-12 inch wide.
- F. QUADRANGULATA*, Michx. Blue Ash.
Islands and Peninsula; frequent. Margaretta Ridge.

- F. *SAMBUCIFOLIA*, Lam. Black Ash.
 Infrequent. Islands.
 F. *VIRIDIS*, Michx. f. Green Ash.
 Cedar Point and Vermillion River.

LIGUSTRUM, L.

- L. *vulgare*, L. Privet. Prim.
 Cedar Point, Milan, etc; rare.

SYRINGA, L.

- S. *vulgaris*, L. Lilac.
 Kelley's Island; well established. Sandusky.

GENTIANACEÆ.

BARTONIA, Muhl.

- B. *TENELLA*, Muhl.
 East of Milan; rare.

FRASERA, Walt. American Columbo.

- F. *CAROLINENSIS*, Walt.
 Margaretta Ridge, Perkins, Huron, Berlin; scarce.

GENTIANA, L. Gentian.

- G. *ANDREWSII*, Griseb. Closed Gentian.
 Frequent along ditches.
 G. *CRINITA*, Froel. Fringed Gentian.
 Castalia, southern Perkins, eastern Milan, Oxford
 near Huron River; infrequent. "Marblehead."
 G. *DETONSA* Rottb. (G. *SERRATA*, Gunner.)
 Vermillion River, Florence; one young plant found
 on wet shale cliff.
 G. *PUBERULA*, Michx.*
 Southern Perkins; beautiful but very rare.

G. QUINQUEFLORA, Lam.

Vermillion River; frequent on the east fork. Margaretta Ridge; rare. The variety *occidentalis* in southern Perkins.

SABBATIA, Adans.

S. ANGULARIS, Pursh.

"Florence, 1888." Josephine Fish.
Eastern Milan and Vermillion River, Florence;
scarce.

APOCYNACEÆ.

APOCYNUM, L.

A. ANDROSÆMIFOLIUM, L. Spreading Dogbane.

Frequent. Put-in-Bay. Middle Bass.

A. CANNABINUM, L. Indian Hemp.

Frequent but on lower ground. Islands.

VINCA, L.

V. *minor* L. Periwinkle, Myrtle.

Spreading in and from yards and cemeteries.
Kelley's Island. Middle Bass.

ASCLEPIADACEÆ.

ACERATES, Ell. Green Milkweed.

A. LONGIFOLIA, Ell.*

Prairie; Oxford, Perkins, Huron; frequent.

A. VIRIDIFLORA, Ell.

Oxford, Margaretta, Cedar Point, Marblehead, Catawba. Infrequent, except on Marblehead, where the "variety" *lanceolata* also occurs.

ASCLEPIAS, L. Milkweed.

- A. **INCARNATA, L.** Swamp Milkweed.
Common.
- A. **INCARNATA PULCHRA, Pers.**
Castalia; rare.
- A. **OBTUSIFOLIA, Michx.***
In sand, Margaretta Ridge, Castalia cemetery,
southern Perkins; rare.
- A. **PHYTOLACCOIDES, Pursh.** Poke Milkweed.
In nine places, but scarce. Put-in-Bay.
- A. **PURPURASCENS, L.** Purple Milkweed.
Perkins, Margaretta, Groton, Marblehead,
Catawba; infrequent.
- A. **QUADRIFOLIA, Jacq.**
Huron River and Perkins; rare.
- A. **SULLIVANTII, Engelm.***
Oxford and Sandusky; scarce.
- A. **SYRIACA, L.** Common Milkweed or Silkweed.
Common.
- A. **TUBEROSA, L.** Butterfly-weed. Pleurisy-root.
Frequent. Put-in-Bay. North Bass.
- A. **VERTICILLATA, L.**
Southern Margaretta, Groton, Marblehead,
Catawba; scarce.

CONVOLVULACEÆ.**CONVOLVULUS, L.** Bindweed.

- C. **arvensis, L.** Small Bindweed.
Sandusky and Islands; local.
- C. **SEPIUM, L.** (CALYSTEGIA SEPIUM, R. Br.)
Hedge Bindweed.
Common. A rank weed in corn fields in Perkins.
On portions of the bay shore of Cedar Point so
thick as to make walking difficult.

- C. *SEPIUM REPENS*, Gray.*
Oxford; frequent? Catawba. "Marblehead,"
U. G. Sanger.

IPOMŒA, L. Morning Glory.

- I. *PANDURATA*, Meyer. (I. *FASTIGIATA*. Sweet.) Wild
Potato-vine. Man-of-the-earth.
Frequent.
- I. *purpurea*, Roth. Morning-glory.
Escaped into roads and waste places; Sandusky;
Peninsula, Put-in-Bay, North Bass; infrequent.

CUSCUTACEÆ.

CUSCUTA, L. Dodder.

- C. *ARVENSIS*, Beyrich.*
Oxford, Florence, Port Clinton; rare.
- C. *CHLOROCARPA*, Engelm.*
Catawba; frequent. East Harbor, Castalia,
Willow Point, Sandusky, Oxford; infrequent.
- C. *DECORA*, Engelm.*
Marblehead; rare.
- C. *GRONOVII*, Willd.
Common.
- C. *INFLEXA*, Engelm.*
Oxford and Margaretta Ridge; scarce.
- G. *TENUIFLORA*, Engelm.
Perkins, Oxford, Port Clinton, Put-in-Bay;
Infrequent.

POLEMONIACEÆ.

PHLOX, L.

- P. *DIVARICATA*, L.
Common. A specimen from Johnson's Island has
narrow, acuminate, corolla lobes.

P. PANICULATA, L.

Spreading from gardens to roadsides in several places.

P. PILOSA, L.

Margaretta Ridge, Oxford, southern Perkins, Huron, Catawba; locally common.

P. SUBULATA, L. Ground or Moss Pink.

Catawba; frequent. Vermillion or Florence; rare. "Berlin" Sterling Hill.

POLEMONIUM, L. Greek Valerian.**P. REPTANS, L.**

Near the Huron and Vermillion rivers; infrequent, "Hartshorn's, Peninsula." Pearl Green.

HYDROPHYLLACEÆ.**HYDROPHYLLUM, L. Waterleaf.****H. APPENDICULATUM, Michx.**

Frequent, especially on the Islands and Peninsula.

H. CANADENSE, L.

Florence and Vermillion; rare.

H. MACROPHYLLUM, Nutt.

One spot on west bank of west fork of Vermillion River; a dozen or more plants growing with a few of the preceding species. Unknown elsewhere so far north.

H. VIRGINICUM, L.

Common. Islands, except Kelley's and Put-in-Bay.

PHACELIA, Juss.**P. PURSHII, Buckley.**

Johnson's Island; common. Milan, Vermillion, Peninsula, Kelley's Island; scarce.

BORAGINACEÆ.**BORAGO, L.**

- B. officinalis*, L. Borage.
Spontaneous near the Soldiers' Home.

CYNOGLOSSUM, L.

- C. officinale*, L. Hound's-tongue.
Common.

ECHINOSPERMUM, Lehm. Stickseed.

- E. lappula*, Lehm.
Peninsula, Kelley's Island, Middle Bass, Perkins,
Sandusky; rather frequent.
- E. VIRGINICUM*, Lehm. Beggar's Lice.
Frequent. Kelley's Island. Put-in-Bay.

ECHIUM, L. Viper's Bugloss.

- E. vulgare*, L. Blue-weed.
Well established in the L. E. & W. freight yard,
Sandusky.

LITHOSPERMUM, L.

- L. arvense*, L. Corn Gromwell.
Abundant One of the worst weeds on Kelley's
Island and elsewhere.
- L. CANESCENS*, Lehm. Hoary Puccoon.
Peninsula, Margaretta, southern Perkins;
infrequent.
- L. HIRTUM*, Lehm.* Hairy Puccoon.
Cedar Point; common.

MERTENSIA, Roth. Lungwort.

- M. VIRGINICA*, DC. Virginia Cowslip. Blue-bells.
Johnson's Island, Huron River; frequent.
Marblehead, Kelley's Island, North Bass, Berlin,
Vermillion River; infrequent or scarce.

MYOSOTIS, L. Scorpion-grass.

- M. VERNA, Nutt.**
Rather frequent. Put-in-Bay.

ONOSMODIUM, Michx.

- O. CAROLINIANUM, DC.**
Margaretta, western Perkins, Peninsula, Johnson's Island; infrequent.

VERBENACEÆ.**LIPPIA, L.**

- L. LANCEOLATA, Michx.** Fog-fruit.
Sandusky, Margaretta, Groton, Johnson's Island, Peninsula, Put-in-Bay; infrequent.

VERBENA, L. Vervain.

- V. ANGUSTIFOLIA, Michx.**
Common in dry calcareous soil. Kelley's the only island.
- V. BRACTEATA, Lag & Rodr.***
Near the L. E. & W. freight house; rare.
- V. HASTATA, L.** Blue Vervain.
Common.
- V. URTICAEFOLIA, L.** White Vervain.
Frequent. Islands. Hybrids between this and the preceding occur.

LABIATÆ.**BLEPHILIA, Raf.**

- B. CILIATA, Raf.**
Johnson's Island, Marblehead, Catawba, Kelley's Island, Put-in-Bay, Margaretta, western Perkins; locally plentiful.

B. HIRSUTA, Benth.

In woods, Erie county and Catawba; infrequent.

CALAMINTHA, Lam.**C. CLINOPODIUM, Benth. Basil.**

Islands, Peninsula, Cedar Point; common.

Smith's woods, Perkins.

C. NUTTALLII, Benth.

Prairies, Castalia and Marblehead; common.

COLLINSONIA, L. Horse Balm.**C. CANADENSIS, L. Rich-weed.**

Frequent.

HEDEOMA, Pers.**H. PULEGIOIDES, Pers. American Pennyroyal.**

Common.

ISANTHUS, Michx.**I. CAERULEUS, Michx. False Pennyroyal.**

Dry calcareous soil; frequent, especially about quarries. Kelley's Island. Common on Marblehead.

LAMIUM, L. Dead-Nettle.**I. amplexicaule, L.**

Throughout but scarce. Islands.

L. purpureum, L.

"Soldiers' Home." Carl Anderson.

LEONURUS, L.**L. cardiaca, L. Motherwort.**

Common.

LOPHANTHUS, Benth. Giant Hyssop.**L. NEPETOIDES, Benth.**

Peninsula; frequent. Kelley's Island, Cedar Point, Johnson's Island, Groton, Perkins, Bloomingville, Florence; infrequent.

- L. SCROPHULARIAEFOLIUS, Benth.
East of Milan; rare. Also at Oak Harbor,
Ottawa county.

LYCOPUS, L. Water Hoarhound.

- L. RUBELLUS, Moench.
Infrequent. Islands.
L. SINUATUS, Ell.
Frequent. Islands.
L. VIRGINICUS, L. Bugle-weed.
Common.

MARRUBIUM, L. Hoarhound.

- M. *vulgare*, L. Common Hoarhound.
Islands and Peninsula; common. Margaretta
Sandusky, Milan; local.

MELISSA, L. Balm.

- M. *officinalis*, L. Common Balm.
Woods, Put-in-Bay and Vermillion; rare.

MENTHA, L. Mint.

- M. CANADENSIS, L. Wild Mint.
Common.
M. *piperata*, L. Peppermint.
Frequent, especially about Castalia. "The
continuous inhalation of the oil for several days
will cure catarrh."
M. *viridis*, L. Spearmint.
Common. Put-in-Bay the only island.
M. CLINOPODIA, L. *CLINOPODIA*, L. *CLINOPODIA*, L.
Milan; rare.
M. FISTULOSA, L. Wild Bergamot.
Common. The variety *mollis* seems to be the
more common form.

NEPETA, L. Cat-Mint;

N. cataria, L. Catnip.

Common.

N. glechoma, Benth. Ground Ivy. Gill.

Common. Not noticed on the Islands, except Rattlesnake, where it appeared about 1892, and Put-in-Bay. Along rivers it has become superabundant.

PHYSOSTEGIA, Benth. False Dragon-head,

P. VIRGINIANA, Benth.

Marblehead, Put-in-Bay, Middle Bass, Groton, eastern Sandusky; scarce.

PRUNELLA, L. Self-heal.

P. VULGARIS, L. Heal-all.

Common.

PYCNANTHEMUM, Michx. Mountain Mint.

P. LANCEOLATUM, Pursh.

Castalia; common. Oxford, Milan, Peninsula; frequent. Put-in-Bay.

P. LINIFOLIUM, Pursh.

Oxford prairie and Vermillion River flats; rare.

P. MUTICUM PILOSUM, Gray.

East of Port Clinton; rare.

SATUREIA, L. Savory.

S. hortensis, L. Summer Savory.

Well established in and near the village of Marblehead.

SCUTELLARIA, L. Skullcap.

S. GALERICULATA, L.

Common. Put-in-Bay and Middle Bass the only islands.

- S. *LATERIFLORA*, L. Mad-dog Skullcap.
Common.
- S. *NERVOSA*, Pursh.
Vermillion, woods east of the river and Florence
along west fork; rare.
- S. *PARVULA*, Michx.
Mostly in calcareous soil, Margaretta, Peninsula,
Kelley's Island; frequent.
- S. *VERSICOLOR*, Nutt.
Marblehead; frequent. Cedar Point, Johnson's
Island, Put-in-Bay, Catawba, Margaretta, Per-
kins; infrequent.

STACHYS, L. Hedge-Nettle.

- S. *ASPERA*, Michx.
Sandusky, Cedar Point, Peninsula; common.
Middle Bass, North Bass:
- S. *TENUIFOLIA*, Willd. (S. *ASPERA GLABRA*, Gray.)
Old Woman Creek, Berlin Heights; rare.

TEUCRIUM, L. Germander.

- T. *CANADENSE*, L. Wood Sage.
Common especially on the shores of the Islands.

SOLANACEÆ.

DATURA, L. Jamestown or Jimson-weed.

- D. *stramonium*, L.
Margaretta; frequent; elsewhere scarce.
- D. *tatula*, L.
Frequent. Kelley's Island.

LYCIUM, L. Matrimony Vine.

- L. *vulgare*, Dunal.
Escaped from gardens in some places. Kelley's
Island.

LYCOPERSICUM, Hill.

- L. esculentum*, Mill. Tomato.
Sandusky; well established near the Bay. Kelley's Island. Put-in-Bay.

NICANDRA, Adans. Apple of Peru.

- N. physaloides*, Gaertn.
Perkins; scarce.

PHYSALIS, L. Ground Cherry.

- P. HETEROPHYLLA*, Nees. (*P. VIRGINIANA*, Gray.)
Common.
- P. HETEROPHYLLA AMBIGUA*, Gray.
Marblehead.
- P. HETEROPHYLLA NYCTAGINEA*, Dunal.
Huron, Milan, Perkins, Danbury.
- P. LANCEOLATA*, Michx.
Sandusky, Perkins, Port Clinton, Kelley's Island,
"Marblehead."
- P. PHILADELPHICA*, Lam.
Perkins, Groton.
- P. PRUINOSA*, L.
Kelley's Island.

SOLANUM, L. Nightshade.

- S. CAROLINENSE*, L. Horse-Nettle.
Several places near railroads; scarce.
- S. dulcamara*, L. Bittersweet.
Frequent, especially on the Peninsula and Islands.
Abundant in Lake woods east of Port Clinton. Appearing to be indigenous.
- S. NIGRUM*, L. Common Nightshade.
Common.
- S. ROSTRATUM*, Dunal.
Marblehead, about the quarry, where the dry soil seems adapted to this western weed, but we hope Mr. Harsh has succeeded in exterminating it. Put-in-Bay and "west of Sandusky," 1895.

SCROPHULARIACEÆ.**CASTILLEJA, L.** Painted-Cup.

- C. COCCINEA, Spreng.** Scarlet Painted-Cup.
Hartshorn's, Peninsula and Catawba; rare.

CHELONE, L. Turtle-head.

- C. GLABRA, L.** Snake-head.
Throughout Erie county; infrequent.

CONOBEA, Aublet.

- C. MULTIFIDA, Benth.***
Prairies, Castalia, Marblehead, Kelley's Island;
scarce.

GERARDIA, L.

- G. AURICULATA, Michx.***
Marblehead; rare.
- G. FLAVA, L.** Downy False Foxglove.
"Huron River?" Henry Schoepfle.
- G. PURPUREA, L.** Purple Gerardia.
Castalia, where it adorns the grounds of the
Trout Club, Oxford, southern Perkins, Perrin's,
Milan, Cedar Point, Peninsula; infrequent.
- G. PURPUREA PAUPERCULA, Gray.***
Oxford and southern Perkins; rare.
- G. QUERCIFOLIA, Pursh.** Smooth False Foxglove.
Infrequent.
- G. TENUIFOLIA, Vahl.** Slender Gerardia.
Frequent. Kelley's Island.

GRATIOLA, L. Hedge-Hyssop.

- G. SPHAEROCARPA, Ell.***
DeLamater's, Kimball; rare.
- G. VIRGINIANA, L.**
Rather frequent.

ILYSANTHES, Raf.

- I. **RIPARIA, Raf.** False Pimpernel.
Sandusky. Huron River, Peninsula; infrequent.

LINARIA, Juss. Toad Flax.

- L. *vulgaris*, Mill. Butter and Eggs.
Common.

MIMULUS, L. Monkey-flower.

- M. **ALATUS, Solander.**
Frequent in the eastern part of Erie county.
Milan and Perkins; infrequent.

- M. **RINGENS, L.**
Frequent. Bass Islands.

PEDICULARIS, L. Lousewort.

- P. **CANADENSIS, L.** Wood Betony.
Infrequent. Kelley's Island. Put-in-Bay.
P. **LANCEOLATA, Michx.**
Milan, Margaretta, Perkins; infrequent.

PENTSTEMON, Mitchell. Beard-tongue.

- P. **PUBESCENS, Solander.**
Frequent, especially on the Islands and Peninsula.

SCROPHULARIA, L. Figwort.

- S. **NODOSA MARYLANDICA, Gray.**
Frequent. Islands,

SEYMERIA, Pursh.

- S. **MACROPHYLLA, Nutt.** Mullein-Foxglove.
Cedar Point, Port Clinton, Vermillion River;
scarce.

VERBASCUM, L. Mullein.

- V. *blattaria*, L. Moth Mullein.
Frequent. Kelley's Island. Middle Bass.

- V. thapsus*, L. Common Mullein.
Common.

VERONICA, L. Speedwell.

- V. ANAGALLIS*, L. Water Speedwell.
Margaretta, Huron, Berlin, Kelley's Island;
infrequent.
- V. arvensis*, L. - Corn Speedwell.
Common.
- V. hederæfolia*, L.* Ivy-leaved Speedwell.
"Yard on east Market St., Sandusky." Ione
Pratt.
- V. OFFICINALIS*, L. Common Speedwell.
Margaretta Ridge and east of Port Clinton;
rare. "Florence." Josephine Fish.
- V. PEREGRINA*, L. Neckweed. Purslane Speedwell.
Frequent. Put-in-Bay, North Bass, Rattlesnake
Island.
- V. SCUTELLATA*, L. Marsh Speedwell.
Infrequent.
- V. SERPYLLIFOLIA*, L. Thyme-leaved Speedwell.
Frequent. Put-in-Bay.
- V. VIRGINICA*, L. Culver's-root. Culver's Physic.
Infrequent.

LENTIBULARIACEÆ.

UTRICULARIA, L. Bladderwort.

- U. GIBBA*, L.*
Cedar Point; local.
- U. VULGARIS*, L. Greater Bladderwort.
Sandusky Bay and East Harbor; frequent. Cas-
talia; infrequent.

OROBANCHACEÆ.**APHYLLON, Mitchell.**

A. UNIFLORUM, Gray. One-flowered Cancer-root.

Sandusky, three places; "Bogart" James D. Parker, Jr.; Florence; "Catawba" Earl Covell: scarce.

CONOPHOLIS, Wallroth. Squaw-root. Cancer-root.

C. AMERICANA, Wallroth.

Local. Put-in-Bay, northwest woods; plentiful. Perkins, big woods. Florence; two places.

EPIFAGUS, Nutt. Beech-drops. Cancer-root.

E. AMERICANUS, Nutt. (EPIPHEGUS VIRGINIANA, Bart).

Florence, Vermillion, Berlin; frequent.

BIGNONIACEÆ.

TECOMA, Juss. Trumpet-flower.

T. RADICANS, Juss. Trumpet Creeper.

Frequent in woods and probably indigenous.

Abundant on Cedar Point. Islands.

ACANTHACEÆ.

DIANTHERA, Gronov. Water-Willow.

D. AMERICANA, L.

Marblehead, Put-in-Bay, Middle Bass; rare.

"Mills Creek; plentiful" Hommel.

PHRYMACEÆ.

PHRYMA, L. Lopseed.

P. LEPTOSTACHYA, L.

Frequent. Kelley's Island. Put-in-Bay.

PLANTAGINACEÆ.

PLANTAGO, L. Plantain.

- P. *ARISTATA*, Michx.
Sandy field on Margaretta Ridge and near L. E.
& W. freight house, Sandusky; rare.
- P. *CORDATA*, Lam.
Huron and Florence; rare.
- P. *lanceolata*, L. Ribgrass. Ribwort. English
Plantain.
Frequent but not common in most parts. Kelly's
Island, Put-in-Bay.
- P. *MAJOR*, L. Common Plantain.
Common.
- P. *RUGELII*, Decaisne.
More common than the preceding.
- P. *VIRGINICA*, L.
Sandy field on Margaretta Ridge; rare.

RUBIACEÆ.

CEPHALANTHUS, L. Button-bush.

- C. *OCCIDENTALIS*, L.
Common.

GALIUM, L. Bedstraw. Cleavers.

- G. *APARINE*, L. Cleavers. Goose-Grass.
Abundant.
- G. *ASPRELLUM*, Michx. Rough Bedstraw.
Infrequent. Islands.
- G. *BOREALE*, L. Northern Bedstraw.
Perkins, Margaretta, Marblehead, Catawba,
Kelley's Island; scarce.
- G. *CIRCÆZANS*, Michx. Wild Liquorice.
Rather common. Put-in-Bay, Middle Bass,
Rattlesnake Island.

- G. **CONCINNUM**, Torr & Gray.
Common. Not on the Islands.
- G. **LANCEOLATUM**, Torr. Wild Liquorice.
Florence, Vermillion, Berlin Heights; rare.
- G. **PILOSUM**, Ait.
Frequent. One specimen shows a reversion of flowers to leaves.
- G. **TRIFIDUM**, L. Small Bedstraw.
Frequent. Put-in-Bay. Middle Bass. The variety *pusillum* occurs at Castalia and "Cedar Point."
- G. **TRIFIDUM LATIFOLIUM**, Torr.
Infrequent.
- G. **TRIFLORUM**, Michx. Sweet-scented Bedstraw.
Frequent. Rattlesnake Island.

HOUSTONIA, L.

- H. **CÆRULEA**, L. Bluets. Innocence.
Not found near Sandusky but in many places from southern Perkins south and east. East of Milan I have seen several million blossoms on three or four acres of ground, appearing at a distance as if a light snow had fallen, not completely covering the grass.
- H. **CILIOLATA**, Torr.
Marblehead; common. Margaretta. Soldier's Home.
- H. **LONGIFOLIA**, Gaertn.
Rocky shores of Rattlesnake Island and Put-in-Bay; frequent. Marblehead.

MITCHELLA, L. Partridge-berry.

- M. **REPENS**, L.
Banks of Vermillion River and tributaries; common. Old Woman Creek at Berlin Heights; frequent. Milan, Perkins, Groton; scarce.

CAPRIFOLIACEÆ.**LONICERA, L.** Honeysuckle.

- L. GLAUCA**, Hill.
Margaretta Ridge; rare.
- L. GLAUDESCENS**, Rydb.
Infrequent. Islands.
- L. SEMPERVIRENS**, L. Trumpet or Coral Honeysuckle.
Woods near Huron, where the seed was doubtless
dropped by birds; rare.

SAMBUCUS, L. Elder.

- S. CANADENSIS**, L. Common Elder.
Common.
- S. RACEMOSA**, L. Red-berried Elder.
Eastern Sandusky; east of Milan; Vermillion
River, Florence; scarce.

SYMPHORICARPOS, Juss. Snowberry.

- S. ORBICULATUS**, Moench. (**S. VULGARIS**, Michx.)
Indian Currant. Coral-berry.
Sandusky and Milan; escaped.
- S. RACEMOSUS**, Michx. Snowberry.
Marblehead; common. Elsewhere scarce.
- S. RACEMOSUS PAUCIFLORUS**, Robbins.
Cedar Point; common.

TRIOSTEUM, L. Horse-Gentian.

- T. PERFOLIATUM**, L. Fever-wort.
Frequent.

VIBURNUM, L. Arrow-wood.

- V. ACERIFOLIUM**, L. Dockmackie.
Frequent from the Huron River east. Put-in-
Bay.
- V. DENTATUM**, L.
Florence and eastern Berlin; infrequent.

- V. LENTAGO, L. Sweet Viburnum. Sheep-berry.
Infrequent. Kelley's Island, Middle Bass.
- V. OPULUS, L. Cranberry-tree.
"Groton" and big woods, Perkins; rare.
- V. PUBESCENS, Pursh.
Marblehead, Catawba, Kelley's Island, Put-in-Bay; frequent.

VALERIANACEÆ.

VALERIANA, L. Valerian.

- V. PAUCIFLORA, Michx.
Lake woods east of Port Clinton, Florence, Milan; rare.

VALERIANELLA, Poll. Corn-Salad. Lamb-Lettuce.

- V. *olitoria*, Poll.
Shinrock; rare.
- V. RADIATA, DuRoi.
Perkins, Milan, Shinrock; scarce.
- V. WOODSIANA, Walp.*
Woodbury's woods, Berlin; local.

DIPSACACEÆ.

DIPSACUS, L. Teasel.

- D. *sylvestris*, Mill.
Common. Kelley's the only island.

CUCURBITACEÆ.

ECHINOXYSTIS, Torr & Gray. Wild Balsam-apple.

- E. LOBATA, Torr & Gray.
Lake woods east of Port Clinton; abundant. Elsewhere infrequent.

SICYOS, L.

- S. ANGULATUS, L.** One-seeded Bur-Cucumber.
Green Island; common. Rattlesnake Island, Put-in-Bay, Catawba, Port Clinton, Cedar Point, Sandusky; infrequent.

CAMPANULACEÆ.**CAMPANULA, L.** Bellflower.

- C. AMERICANA, L.** Tall Bellflower.
Common.
- C. APARINOIDES, Pursh.** Marsh Bellflower.
Cedar Point, Venice, Peninsula; locally common.
- C. ROTUNDIFOLIA.** Harebell.
Common on rocky shores but apparently absent from Kelley's Island.

LOBELIA, L.

- L. CARDINALIS, L.** Cardinal-flower.
Infrequent. Islands.
- L. INFLATA, L.** Indian Tobacco.
Rather frequent. Put-in-Bay.
- L. KALMII, L.**
Common on rocky shores. Florence; rare.
- L. SPICATA, Lam.**
Common on the prairies.
- L. SYPHILITICA, L.** Great Lobelia.
Common. Kelley's, Middle Bass and North Bass the only islands.

SPECULARIA, Heister. Venus's Looking-glass.

- S. PERFOLIATA, A. DC.**
Infrequent. Kelley's Island, Put-in-Bay.

CICHORIACEÆ.

CICHORIUM, L. Chicory. Succory.

C. *intybus*, L.

Roadsides in a number of places; local. Common at Port Clinton and Catawba. Kelley's Island, Middle Bass.

HIERACIUM, L. Hawkweed.

H. CANADENSE, Michx.*

Huron, Milan, Oxford, Marblehead, Catawba; infrequent.

H. GRONOVII, L. Hairy Hawkweed.

Infrequent. The "variety" *subnudum* in the Bloomingville cemetery.

H. PANICULATUM, L.

Vermillion River and Berlin Heights; infrequent.

H. SCABRUM, Michx.

Frequent.

KRIGIA, Schreb. Dwarf Dandelion.

K. AMPLEXICAULIS, Nutt.

Frequent in Milan Township. Elsewhere infrequent. Kelley's Island.

LACTUCA, L. Lettuce.

L. ACUMINATA, Spreng.

Perkin's, Margaretta, Port Clinton; infrequent.

L. ALPINA, Benth & Hook, (L. LEUCOPHÆA, Gray.)

Frequent. Kelley's Island, Put-in-Bay.

L. CANADENSIS, L. Wild Lettuce.

Common.

L. FLORIDANA, Gaertn.

Margaretta Ridge, Cedar Point, Peninsula, Put-in-Bay, Green Island; frequent.

L. *scariola*, L. Prickly Lettuce.

Abundant. One of the worst weeds.

PRENANTHES, L. Rattlesnake-root.

- P. ALBA, L.** White-lettuce.
Common.
- P. ALTISSIMA, L.**
Infrequent. Put-in-Bay.
- P. ASPERA, Michx.***
Prairie east of Kimball; rare.
- P. CREPIDINEA, Michx.**
Near Pipe Creek in German Settlement woods;
rare.
- P. RACEMOSA, Michx.**
Prairies. West of Castalia; frequent. Oxford,
Groton, "Perkins," "Gypsum"; infrequent or
scarce.

SONCHUS, L. Sow-Thistle.

- S. asper, Vill.** Spiny-leaved Sow-thistle.
Infrequent. Islands.
- S. oleraceus, L.** Common Sow-Thistle.
Frequent. Islands.

TARAXIUM, L. Dandelion.

- T. officinale, Weber.** Common Dandelion.
Abundant. "In blossom when the boys were
skating" Freyensee.

TRAGOPOGON, L. Goats-beard.

- T. porrifolius, L.** Salsify. Oyster-plant.
Roadsides; infrequent. Islands.
- T. pratensis, L.** Goats-beard.
Sandusky, in vacant lots near Central Avenue
and elsewhere; spreading.

COMPOSITAE.**ACHILLEA, L.** Yarrow.

- A. MILLEFOLIUM, L.** Common Yarrow or Milfoil.
Abundant.

ACTINELLA, Nutt.**A. ACAULIS GLABRA, Gray.***

Marblehead prairie; infrequent but occurring at places widely separated and, apparently, indigenous.

ACTINOMERIS, Nutt.**A. SQUARROSA, Nutt.**

Frequent on flood grounds of streams.

AMBROSIA, L. Ragweed.**A. ARTEMISIÆFOLIA, L. Ragweed. Roman Worm-wood.**

Abundant. After *Setaria glauca* probably the worst weed.

A. TRIFIDA, L. Great Ragweed.

Common. The so-called variety *integrifolia* is infrequent.

ANTENNARIA, Gaertn. Everlasting.**A. PLANTAGINEA, R. Br. Plantain-leaved Everlasting.**

Common. Kelley's and Put-in-Bay the only islands. A specimen collected on Marblehead by Ralph H. McKelvey is what Greene would call *A. neglecta* and one in Perkins by Will Sprow *A. neodioica*.

ANTHEMIS, L. Chamomile.**A. cotula, L. May-weed.**

Common.

ARCTIUM, L. Burdock.**A. lappa majus, Gray.**

"Bogart" H. D. Banks.

A. lappa minus, Gray.

Common.

ARTEMISIA, L. Wormwood.

A. annua, L.

Sandusky, well established near the Big Four docks.

A. BIENNIS, Willd.

Sandusky, Castalia, Johnson's Island, Marblehead, Middle Bass, North Bass; frequent only near railroads or docks.

A. CAUDATA, Michx.*

Cedar Point and Marblehead sand spit; common.

A. LUDOVICIANA, Nutt.* Western Mugwort.

Established in one spot on embankment of L. S. & M. S. Ry., eastern Sandusky.

A. vulgaris, L. Common Mugwort.

Escaped in cemeteries and from gardens to roads; scarce.

ASTER, L.

A. AZUREUS, Lindl.

Sandy soil from Margaretta Ridge to Berlinville; infrequent. Catawba.

A. CORDIFOLIUS, L.

Frequent.

A. CORYMBOSUS, Ait.

Florence and Milan; scarce.

A. DIFFUSUS, Ait.

Frequent and variable.

A. DUMOSUS, L.*

Sandy soil, Milan, southern Perkins; infrequent. Oxford; frequent? Flowers white.

A. ERICOIDES, L.

Common on rocky shores.

A. ERICOIDES PLATYPHYLLUS, Torr & Gray.*

Castalia; rare.

- A. JUNCEUS, Ait.*
Castalia and east of Milan; scarce.
- A. LAEVIS, L.
Milan, Huron, Oxford, Margaretta, Florence, Catawba; rather frequent.
- A. MACROPHYLLUS, L.
Frequent but not observed near Sandusky. Put-in-Bay.
- A. MULTIFLORUS, Ait.
Dry soil in the limestone region; frequent. Put-in-Bay.
- A. NOVÆ-ANGLIÆ, L.
Along roads near Sandusky and south next to the most common Aster. Not so common in the eastern part of the county and on the Peninsula. Kelley's Island, Put-in-Bay; scarce.
- A. PANICULATUS, Lam.
Our most common Aster.
- A. POLYPHYLLUS, Willd.
Marblehead, Put-in-Bay, Gibraltar, and probably other islands.
- A. PRENANTHOIDES, Muhl.
Perkins, Bloomingville, Milan, Berlin, Florence; infrequent.
- A. PTARMICOIDES, Torr & Gray.*
Marblehead; local.
- A. PUNICEUS, L.
Castalia, Bloomingville, Milan, Florence; infrequent.
- A. PUNICEUS LUCIDULUS, Gray.*
Castalia, along the mill race.
- A. SAGITTIFOLIUS, Willd.
Common.
- A. SALICIFOLIUS, Ait.
Oxford, Milan, Groton, Margaretta, Sandusky, Catawba; infrequent. Many specimens of *A. paniculatus* approach this species.

- A. **SHORTII**, Hook.
Peninsula and Islands; common. Huron and Vermillion Rivers; frequent.
- A. **TRADESCANTI**, L.
Frequent, at least in Perkins and Oxford. Kelley's Island.
- A. **UMBELLATUS**, Mill.
Infrequent.
- A. **VIMINEUS**, Lam.*
Perkins and probably elsewhere.

BIDENS, L. Bur-Marigold.

- B. **BECKII**, Torr.* Water Marigold.
Black Channel, Biemiller's Cove, East Harbor; scarce.
- B. **BIPINNATA**, L. Spanish Needles.
Sandusky, Cedar Point, Catawba, North Bass; rare.
- B. **CERNUA**, L. Smaller Bur-Marigold.
Perkins and Margaretta; scarce.
- B. **CHRYSANTHEMOIDES**, Michx. Larger Bur-Marigold.
Frequent. Islands.
- B. **CONNATA**, Muhl. Swamp Beggar-ticks.
Common. One specimen seven feet tall. Some specimens have the awns upwardly barbed.
- B. **CONNATA COMOSA**, Gray.
Frequent.
- B. **FRONDOSA**, L. Common Beggar-ticks. Stick-tight.
Common. A troublesome weed.

BOLTONIA, L'Her.

- B. **ASTEROIDES**, L'Her.
Sheltered beaches of Lake Erie and Sandusky Bay especially Johnson's Island and the beach stretching from Port Clinton towards Catawba. Not on rocks nor pure sand. Put-in-Bay the only island in the lake.

CALENDULA, L. Marigold.

- C. officinalis*, L. Garden Marigold.
Sandusky and Put-in-Bay; spreading and escaping, but seldom far from gardens. Hardly naturalized.

CENTAUREA, L.

- C. cyanus*, L. Blue-bottle. Corn-flower.
Kelley's Island and elsewhere; sparingly escaped.

CHRYSANTHEMUM, L.

- C. balsamita*, L. Costmary.
Escaped from gardens in several places.
- C. leucanthemum*, L. Ox-eye or White Daisy. White-weed.
Common in several places but not generally distributed. Put-in-Bay.
- C. parthenium*, Bernh. Feverfew.
Escaped to waste places in Sandusky and well established in woods on Put-in-Bay.

CNICUS, L.

- C. ALTISSIMUS*, Willd.
Infrequent. Kelley's Island.
- C. arvensis*, Hoffm. Canada Thistle.
Frequent, especially near the Lake and Bay. Islands.
- C. DISCOLOR*, Muhl.
Frequent.
- C. lanceolatus*, Willd. Common Thistle.
Common.
- C. MUTICUS*, Ell. Swamp Thistle.
Infrequent.

COREOPSIS, L. Tickseed.

- C. ARISTOSA*, Michx.
Castalia and Venice marshes; common. Cedar Point, Catawba, Vermillion; frequent.

- C. DISCOIDEA, Torr & Gray.
Sandusky, Cedar Point, Oxford; locally plentiful.
- C. TRICHOSPERMA, Michx. Tickseed Sunflower.
Infrequent.
- C. TRICHOSPERMA TENUILOBA, Gray.
Frequent, especially on wet prairies. Kelley's Island. Hundreds of acres of marsh near Bay Bridge glow in autumn with the yellow blossoms, a sight worth going far to see.
- C. TRIPTERIS, L. Tall Coreopsis.
Frequent from Milan and Cedar Point west. Peninsula.

ECLIPTA, L.

- E. ERECTA, L. (E. ALBA Hassk.)
Sandusky, East Harbor, Lockwood's; scarce.

ERECHTITES, Raf. Fireweed.

- E. PRÆALTA, Raf. (E. HIERACIFOLIA, Raf.)
Common.

ERIGERON, L. Fleabane.

- E. ANNUUS, Pers. Daisy Fleabane. Sweet Scabious.
Common.
- F. BELLIDIFOLIUS, Muhl. Robin's Plantain.
Milan, Perkins, Margaretta Ridge; infrequent.
- E. CANADENSIS, L. Horse-weed. Butter-weed.
Common.
- E. PHILADELPHICUS, L. Common Fleabane.
Common.
- E. STRIGOSUS, Muhl. Daisy Fleabane.
Frequent or common. Islands. Abundant on Marblehead.

EUPATORIUM, L. Thoroughwort.

- E. AGERATOIDES, L. White Snakeroot.
Common. Rattlesnake the only island. This plant H. H. Lockwood says is the "Trembleweed" and the cause of milk sickness.

- E. **ALTISSIMUM**, L.
Northwestern Margareta; infrequent. Johnson's, Marblehead; rare.
- E. **PERFOLIATUM**, L. Thoroughwort. Boneset.
Common.
- F. **PURPUREUM**, L. Joe-Pye Weed. Trumpet-Weed.
Common. Not on the Islands.
- E. **SESSILIFOLIUM**, L. Upland Boneset.
Milan, Huron, Catawba; rare.
- GNAPHALIUM**, L. Cudweed.
- G. **DECURRENS**, Ives. Everlasting.
Catawba and Florence; very rare.
- G. **OBTUSIFOLIUM**, L. (G. **POLYCEPHALUM**, Michx.)
Common Everlasting.
Common.
- G. **PURPUREUM**, L. Purplish Cudweed.
Infrequent.
- G. **ULIGINOSUM**, L. Low Cudweed.
Infrequent.
- HELENIUM**, L. Sneeze-weed.
- H. **AUTUMNALE**, L.
Common at Sandusky and vicinity. Florence.
Catawba.
- HELIANTHUS**, L. Sunflower.
- H. **ANNUUS**, L.
Frequently escaped. "Cedar Point, far from any house" Ralph H. McKelvey.
- H. **DECAPETALUS**, L.
Frequent.
- H. **DIVARICATUS**, L.
Frequent, especially on Marblehead and the Islands.

- H. GIGANTEUS, L.
Sandusky to Milan and west; common. The so-called variety, *ambiguus*, occurs in Perkins and Oxford, and near Port Clinton.
- H. GROSSE-SERRATUS, Martens.
Oxford, Groton, Margaretta; frequent.
- H. HIRSUTUS, Raf.
Cedar Point, Peninsula, Oxford, Margaretta, Groton; rather common.
- H. MOLLIS, Lam.*
Prairie, Oxford and Huron; enough to supply the botanists of the world.
- H. OCCIDENTALIS, Riddell.
Castalia cemetery and Kimball; scarce.
- H. PARVIFLORUS, Bernh.
Frequent.
- H. STRUMOSUS MOLLIS, Torr & Gray.*
Oxford, Groton, Castalia, Cedar Point, Port Clinton; infrequent. Apparently all our specimens of *H. strumosus* are of this variety.
- H. TRACHELIIFOLIUS, Willd.
Florence, Port Clinton; scarce?
- H. TUBEROSUS, L. Jerusalem Artichoke.
Frequent. Kelley's Island. Put-in-Bay.

HELIOPSIS, Pers. Ox-eye.

- H. LÆVIS, Pers.
Common.
- H. SCABRA, Dunal.
Rather frequent.

INULA, L. Elecampane.

- I. *helenium*, L.
Infrequent. Florence; frequent.

KUHNIA, L.**K. EUPATORIOIDES, L.**

Dry soil near Castalia; locally common. Sandusky and Perkins; scarce.

LEPACHYS, Raf.**L. PINNATIFIDA, Raf.**

Common on prairies.

LIATRIS, Schreb. Button Snakeroot.**L. SCARIOSA, Willd.**

Catawba, Cedar Point, Margaretta Ridge, southern Perkins, Kimball; plentiful in some places.

L. SPICATA, Willd.

Castalia prairie; abundant and showy. Marblehead, Cedar Point, Oxford, southern Perkins, Groton, east of Milan; frequent on undisturbed damp ground.

L. SQUARROSA INTERMEDIA, DC.* Blazing-Star.

Castalia and Sandhill cemeteries.

POLYMNIA, L. Leaf-Cup.**P. CANADENSIS, L.**

Cedar Point, Peninsula, Islands; infrequent.

RUDBECKIA, L. Cone-flower.**R. HIRTA, L.**

Common. Not on the Islands.

R. LACINIATA, L.

Frequent.

R. TRILOBA, L.

"Port Clinton" Wm. Krebs.

SENECIO, L. Groundsel.**S. ATRIPPLICIFOLIUS, Hook. (CACALIA ATRIPPLICIFOLIA, L.) Pale Indian Plantain.**

Vermillion River, Florence; frequent. Elsewhere infrequent.

- S. AUREUS, L. Golden Ragwort.
Frequent.
- S. AUREUS OBOVATUS, Torr & Gray. Squaw-weed.
Common. Kelley's the only island.
- S. AUREUS BALSAMITÆ, Torr & Gray.
Castalia, Perkins, Marblehead, Catawba; frequent. Put-in-Bay.

SILPHIUM, L. Rosin-weed.

- S. PERFOLIATUM, L. Cup-Plant.
Huron and Vermillion rivers; infrequent. Castalia; local.
- S. TEREBINTHENACEUM, Jacq. Prairie Dock.
Common on the prairies.
- S. TRIFOLIATUM, L.
Frequent.

SOLIDAGO, L. Golden-rod.

- S. BICOLOR, L.
Frequent.
- S. BICOLOR CONCOLOR, Torr & Gray.
Rocky shores of the Put-in-Bay Islands; infrequent.
- S. CAESIA, L.
Common in rich woods. Islands.
- S. CANADENSIS, L.
Abundant.
- S. JUNCEA, Ait.
Frequent.
- S. LANCEOLATA, L.
Common.
- S. LATIFOLIA, L.
Florence; frequent. Vermillion, Berlin Heights, Milan, Perkins, Catawba, Kelley's Island, Green Island, Rattlesnake; scarce.

- S. NEMORALIS, Ait.
Frequent. Islands.
- S. OHIOENSIS, Riddell.
Castalia prairie; infrequent.
- S. PATULA, Muhl.
Florence, Milan, Castalia, Kelley's Island;
infrequent.
- S. RIDDELLII, Frank.
Castalia; frequent. Marblehead, Groton, House's
swamp, Perkins; infrequent.
- S. RIGIDA, L.
Marblehead and Oxford; frequent. Huron, Sandusky, Margaretta, Groton, Middle Bass; local.
- S. RUGOSA, Mill.
East of Milan; local.
- S. SEROTINA, Ait.
Frequent.
- S. SEROTINA GIGANTEA, Gray.
Milan, Oxford, southern Perkins; scarce.
- S. SPECIOSA, Nutt.
Huron River and Peninsula; infrequent. Southern Perkins; scarce.
- S. SPECIOSA ANGUSTATA, Torr & Gray.*
Leonard's Hazel Patch, Perkins; rare.
- S. TENUIFOLIA, Pursh.
Oxford prairie; abundant.
- S. ULMIFOLIA, Muhl.
Marblehead; frequent. Elsewhere infrequent. Islands.

TANACETUM, L. Tansy.

- T. *vulgare*, L.
Roadsides; frequent. Islands. The ordinary form is the variety *crispum*, but the other occurs in "Perkins" and on "Kelley's Island."

VERNONIA, Schreb. Iron-weed.V. **ALTISSIMA**, Nutt.

Common. Kelley's the only island.

V. **ALTISSIMA GRANDIFLORA**, Nutt.

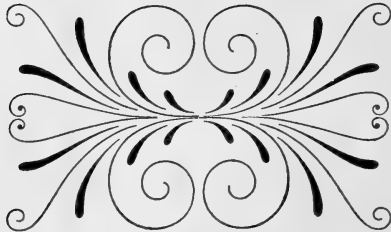
Huron, Willow Point, Kelley's Island; infrequent.

V. **FASCICULATA**, Michx.

Prairies; frequent.

XANTHIUM, L. Cocklebur.X. **CANADENSE**, Mill.

Common. The so-called variety *echinatum* is the common form near the Bay and Lake.



CORRECTIONS.

- Page 7. For *Hypericum kalmianum* read *Potentilla fruticosa*. The two grow together on the prairie but the latter is more abundant and to it belong the small petrified leaves collected.
- Page 28. The four names at the top of first column should be at the bottom.
- Page 50. For *P. annual* read *P. annua*.
- Page 54. For *hedunculata* read *pedunculata*.
- Page 63. For *J. TENVIS* read *J. TENUIS*.
- Page 76. Place a mark of doubt —?— after occurs, at end of third line.
- Page 84. For **AMONACEÆ** read **ANONACEÆ**.
- Page 94. For **SAXIFRAGACÆ** read **SAXIFRAGACEÆ**.
- Page 150. For *T. pratensis* read *T. pratensis*.

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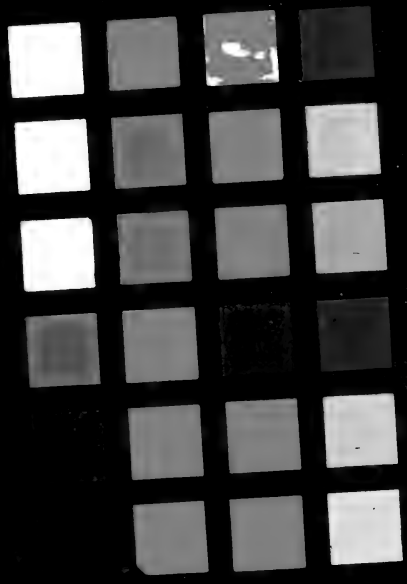
* * The names of families are in capitals. In the catalogue the genera of each family and the species of each genus are arranged alphabetically.

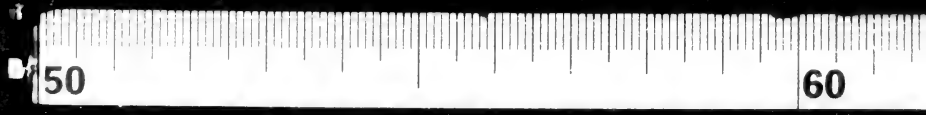
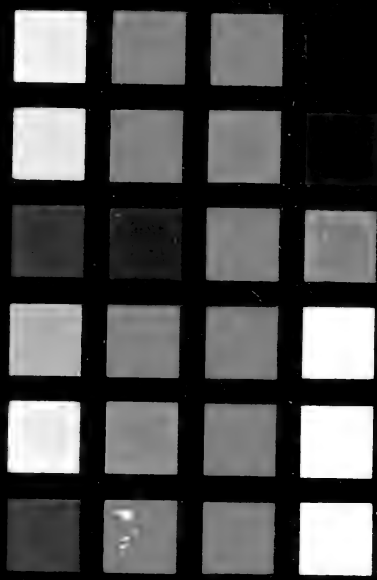
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PLANTS OF ILLINOIS.



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CATALOGUE

—OF THE—

PHÆNOGAMOUS

—AND—

VASCULAR CRYPTOGAMOUS

PLANTS OF ILLINOIS.

NATIVE AND INTRODUCED.



OQUAWKA, ILL.:
"SPECTATOR" PRINT.
1876.

P R E F A C E .



The following Catalogue is intended to be an almost complete list of the Phænogamous and higher Cryptogamous Plants of Illinois, with the more common introduced plants. The latter are printed in italics.

My own botanical explorations in the State having been confined to Henderson county, the Catalogue is made up mostly from lists and notes furnished by the following well known Illinois botanists :

- | | |
|---|---|
| M. S. BEBB, Fountaindale, Winnebago Co. ; | Dr. FREDERICK BRENDÉL, Peoria ; |
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And by Dr. GEO. ENGELMANN of St. Louis, and the late Dr. I. A. LAPHAM of Milwaukee.

The following 14 species are given on the authority of GRAY'S MANUAL : *Draba cuneifolia*, Nutt. ; *Chrysogonum Virginianum*, L. ; *Bidens Beckii*, Torr. ; *Verbesina Virginica*, L. ; *Bumelia lanuginosa*, Pers. ; *Utricularia biflora*, Lam. ; *Stachys hyssopifolia*, Mx. ; *Chamælrimum luteum*, Gray ; *Heteranthera limosa*, Vahl. ; *Carex decomposita*, Muhl. ; *Trisetum palustre*, Torr. ; *Erianthus alopecuroides*, Ell. ; *Houstonia minima*, Beck.

Plants confined to the Northern part of the State are marked N. ; Central C., and Southern S. In many cases the information at hand was not sufficient to indicate the frequency of the plant, but where it seemed to be rare I have usually named all the counties wherein it has been found by the botanists named above.

When unacquainted with the habitat of the plant I have usually copied from GRAY'S MANUAL ; the arrangement of species in the same excellent work has also been followed closely.

List of Natural Orders, with number of Indigenous and Introduced Plants found in Illinois, and whole number of species native in the Northern U. S., Kentucky and Virginia, as given in GRAY'S MANUAL, 5th edition, 8th issue :

Orders.	Ill. Plants.		Indigenous in Northern U. S.		Orders.	Ill. Plants.		Indigenous in Northern U. S.
	Indigenous.	Introduced.				Indigenous.	Introduced.	
Ranunculaceae.....	39	2	55		Cruciferae.....	26	7	46
Magnoliaceae.....	3		5		Capparidaceae.....	1	2	1
Anonaceae.....	1		1		Violaceae.....	11		17
Menispermaceae.....	3		3		Cistaceae.....	4		8
Berberidaceae.....	3		5		Droseraceae.....	2		4
Nymphaeaceae.....	6		6		Hypericaceae.....	15	1	19
Sarraceniacae.....	1		2		Elatinaceae.....	2		1
Papaveraceae.....	2	1	2		Caryophyllaceae.....	14	7	35
Fumariaceae.....	6		7		Portulacaceae.....	3	1	4

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Orders.	Indigenous.	Introduced.	Indigenous in northern U. S.
Malvaceae.....	7	5	12
Tiliaceae.....	2		2
Camelliaceae.....			2
Linaceae.....	3		3
Geraniaceae.....	7		9
Rutaceae.....	2		3
Anacardiaceae.....	6		6
Vitaceae.....	6		8
Rhamnaceae.....	5		6
Celastraceae.....	3		3
Sapindaceae.....	6		10
Polyga'aceae.....	8		14
Leguminosae.....	69	4	101
Rosaceae.....	50		72
Calycanthaceae.....			3
Saxifragaceae.....	12		35
Crassulaceae.....	3		7
Hamamelaceae.....	2		3
Haloragaceae.....	7		9
Onagraceae.....	18		29
Melastomaceae.....	1		3
Lythraceae.....	6		9
Loasaceae.....	1		1
Cactaceae.....	1		3
Passifloraceae.....	1		2
Cucurbitaceae.....	2		3
Umbelliferae.....	25	3	39
Araliaceae.....	4		6
Cornaceae.....	9		11
Caprifoliaceae.....	14		29
Rubiaceae.....	18		20
Valerianaceae.....	4		7
Dipsacae.....		1	
Compositae.....	188	12	289
Lobeliaceae.....	7		13
Campanulaceae.....	5		5
Ericaceae.....	14		68
Galacineae.....			1
Aquifoliaceae.....	2		11
Ebenaceae.....	1		1
Sapotaceae.....	2		2
Styracaceae.....			5
Plantaginaceae.....	5	2	7
Plumbaginaceae.....			1
Primulaceae.....	10	1	16
Lentibulaceae.....	5		13
Bignoniaceae.....	4		4
Orobanchaceae.....	5		5
Scrophulariaceae.....	28	4	54
Acanthaceae.....	3		3
Verbenaceae.....	8		9
Labiatae.....	37	6	51
Borraginaceae.....	11	5	16
Hydrophyllaceae.....	8		12
Polemoniaceae.....	8		14
Convulvulaceae.....	13	2	18
Solanaceae.....	6	5	7
Gentianaceae.....	12		25
Loganiaceae.....	1		5
Apocynaceae.....	4		4
Asclepiadaceae.....	19		23

Orders.	Indigenous.	Introduced.	Indigenous in northern U. S.
Oleaceae.....	6		9
Aristolochiaceae.....	3		6
Nyctaginaceae.....	1		1
Phyto'aceae.....	1		3
Chenopodiaceae.....	4	7	12
Amarantaceae.....	3	4	5
Polygonaceae.....	21	8	27
Lauraceae.....	2		5
Thymelaeaceae.....	1		1
Elaeagnaceae.....	1		2
Santalaceae.....	1		3
Loranthaceae.....	1		1
Saururaceae.....	1		1
Ceratophyllaceae.....	1		1
Callitrichaceae.....	4		4
Podostemaceae.....			1
Euphorbiaceae.....	20	2	29
Empetraceae.....			2
Urticaceae.....	13	2	15
Platanaceae.....	1		1
Juglandaceae.....	8		9
Cupuliferae.....	16		24
Myricaceae.....	1		3
Betulaceae.....	5		11
Salicaceae.....	19		22
Coniferae.....	11		21
Araceae.....	5		7
Lemnaceae.....	5		9
Typhaceae.....	3		5
Naiadaceae.....	18		29
Alismaceae.....	11		14
Hydrocharidaceae.....	3		3
Burmanniaceae.....			1
Orchidaceae.....	28		57
Amarylhidaceae.....	3		4
Haemodoraceae.....	1		4
Bromeliaceae.....			1
Iridaceae.....	3	1	7
Dioscoreaceae.....	1		1
Smilacaceae.....	5		10
Liliaceae.....	32		57
Juncaceae.....	13		31
Pontederiaceae.....	4		4
Commelynaceae.....	5		6
Xyridaceae.....	1		5
Eriocaulonaceae.....			5
Cyperaceae.....	131		248
Gramineae.....	99	21	177
Total Phænogamous.....	1376		2275
Equisetaceae.....	8		11
Filices.....	36		57
Lycopodiaceae.....	5		19
Hydropterides.....	1		3
Total.....	1426	116	2365
No. enumerated in Lap- ham's List, (1856).....	1052	75	
No. species added in this Catalogue.....	374	41	

GEOGRAPHICAL DISTRIBUTION OF ILLINOIS PLANTS.

No. plants found only in the Northern third of the State.....	156
“ Northern plants extending into or through centre of State 57—Northern plants :	213
“ confined to Southern third of State.....	156
“ Southern plants extending into or through centre of State 128—Southern plants :	284
“ confined to Western portion of the State.....	20
“ “ “ central “	11
“ plants (mostly maritime) found only near Lake Michigan.. 14—Of limited range :	542
“ plants ranging throughout the State.....	787
“ “ whose range is not yet satisfactorily determined.....	97

I shall be happy to receive, from persons who have collected, or may in future collect in Illinois, information concerning :

I. Any native or thoroughly naturalized plant not given in this Catalogue, with a specimen of the plant :

II. Extension of the range of plants marked N., C., S., &c.—if only to a single county ;

III. Notes on any peculiarities of our plants, new hybrids, etc., not mentioned in our Botanies.—These additions and corrections will be issued in a supplement, at the end of each collecting season.

OQUAWKA, ILLS., March 1, 1876.

HARRY N. PATTERSON.



CATALOGUE.

RANUNCULACEÆ.

CLEMATIS

Viorna, L. C. & S.

Along Crooked Creek and Illinois River near Beardstown, Mead. Wabash county, Schneck. Near Carbondale, Jackson county, and borders of lakes in Union, Forbes. Rare.

Pitcheri, T. & G.

River banks. Near Jo'iet, Will county, Munroe, and common in Kankakee, Hill; Fulton, Mead; Marion and Sangamon, Bebb; Wabash, Schneck. From Henderson county (rare) southward along the Mississippi. Rather rare.

Virginiana, L.

Banks of streams. Rare northward.

ANEMONE

patens, L. var. Nuttalliana, Gr. N.

Prairies of the extreme north, where it is not rare: McHenry county, Vasey; Winnebago, Bebb; Jo Daviess, Brendel.

Caroliniana, Walt.

Prairies and barrens. Ogle county, Bebb; and southward. Scarce.

cylindrica, Gray.

Dry prairies and barrens. Infrequent.

Virginiana, L.

With the last species and more common.

Pennsylvanica, L.

Low grounds, borders of woods, &c. Common.

memorosa, L.

Woods. Infrequent.

HEPATICA

triloba, Chaix.

Hillsides. McHenry, Vasey: near Jo'iet, Babcock; along the Wabash River. Forbes, Schneck. Rare.

acutiloba, DC.

Hillsides. Common.

THALICTRUM

anemonoides, Michx.

Woods. Common.

dioicum, L.

Dry woods, &c. Frequent.

purpurascens, L.

Low grounds, borders of thickets, &c. Common.

var. ceriferum, C. F. Austin.

With the last, near Chicago, Babcock, and Kankakee, Hill.

Cornuti, L.

Low grounds. Frequent.

TRAUTVETTERIA

palmata, Fisch. & Meyer.

In moist ground along a branch of the Sangamon River, near the Mounds, about three miles North-east of Beardstown, Cass county, Mead.

RANUNCULUS

divaricatus, Schrank. C. & N.

Ponds. Frequent in Mississippi bottoms, Henderson county: Hancock, Mead; Menard, Hall; and northward. Scarce.

aquatilis, L., v. trichophyllus, Chx.

Ponds near Chicago, Babcock; McHenry county, Vasey; Winnebago, Bebb; Wabash, Schneck. Scarce.

multifidus, Pursh.

Ponds, throughout the State. Common.

var. terrestris, Gray. N.

Hyde Park near Chicago, Babcock.

oblongifolius, Ell. S.

Wet prairie near Odin, Marion county, Bebb; St. Clair, Brendel; Jackson, Forbes. Scarce.

- alismæfolius*, Geyer. C. & S.
Margins of ponds. Hancock county, Mead, and common in Fulton, Wo'f; St. Clair, Brendel; Washington, French.
- Cymbalaria*, Pursh. N-E.
Lake shore near Chicago. Babcock, and Calumet, Ill.
- rhomboideus*, Goldie. N.
Prairies of the extreme north. Winnebago Co., the very earliest harbinger of spring, Bebb; and McHenry, Vasey.
- abortivus*, L. Common.
Damp woods along streams.
- var. *micranthus*, Gray.
With the typical form in Menard county, Hall; Marion, Bebb, and Washington, French.
- sceleratus*, L.
Near West Side artesian well, Chicago, Munroe.
- recurvatus*, Poir. Common.
Woods.
- Pennsylvanicus*, L.
In ditches, along streams, &c.
- fascicularis*, Muhl. Common.
Dry prairies, hillsides.
- repens*, L. Common.
Banks of streams, wet meadows.
- var. *HISPIDUS* in Hancock and Washington.
- acris*, L.
Wabash county, Schneck.
- MYOSURUS
minimus, L. W. & S.
Damp prairies of Hancock co., Mead; Marion, Bebb, and Washington, French. Rare.
- ISOPYRUM
bitermum, T. & G. Common.
Moist, shady places.
- CALTHA
palustris, L. C. & N. Frequent.
Wet meadows, &c., from Fulton county (Wo'f) northward.
- AQUILEGIA
Canadensis, L. Common.
Rocky hillsides.
- DELPHINIUM
Consolida, L.
Sparingly escaped from gardens.
- tricornis*, Michx. C. & S.
Rich prairies, Henderson Co., Peoria (Brendel) and southward.
- azureum*, Michx. W.
Prairies and barrens, not rare in Henderson and Hancock counties near the Mississippi.
- HYDRASTIS
Canadensis, L.
Rich woods throughout the State, but rare.
- ACTÆA
spicata, L. var. *rubra*, Michx. Rich woods, Hancock county, Mead, and northward. Also in Wabash, Schneck. Scarce.
- alba*, Bigel. Rich woods, throughout the State.
- CIMICIFUGA
racemosa, Ell. Rich woods. St. Clair county, Vasey, Brendel; Wabash, Schneck; Winnebago, Miss Norton. Rare.
- MAGNOLIACEÆ
- MAGNOLIA
acuminata, L. S.
Johnson county, Schneck; common in Union, Vasey, Forbes, Wolf.
- Umbrella*, Lam. S.
This species was given in Mr. I. A. Lapham's Catalogue of Illinois Plants in Trans. Ills. Ag'ry Soc'y, Vol. II. He says of it:
My herbarium contains a specimen of leaves received from the late Robert Kennicott marked "No. 6, Cucumber Magnolia; Cache bottoms." As the leaves are too narrow and too much tufted at the ends of the branches to agree with *M. ACUMINATA*, I added to the label the specific name *UMBRELLA*: this is my authority for including it in the List of Illinois Plants.
Dr. Brendel has "sought for it in vain along the Cache River, where it is said to grow."
- LIRIODENDRON
Tulipifera, L. S.
River banks from Jackson and Wabash counties southward.
- ANONACEÆ
- ASIMINA
triloba, Dunal. River bottoms. Lee county near Dixon, Vasey; Kankakee, Hill; rare. More common south.

MENISPERMACEÆ.

COCCULUS

Carolinus, DC. S.
Banks of streams. Wabash county, Schneck ;
Jackson, French; and southward.

MENISPERMUM

Canadense, L. Common.
Banks of streams.

CALYCOCARPUM

Lyonii, Nutt. S.
Jackson county, French, Forbes. Rare.

BERBERIDACEÆ.

CAULOPHYLLUM

thalictroides, Michx. Frequent.
Rich woods.

JEFFERSONIA

diphylla, Pers.
Woods. Peoria county, Brendel ; Kankakee,
Hill ; Kane, Vasey. Rare.

PODOPHYLLUM

peltatum, L. Common.
Rich woods.

NYMPHÆACEÆ.

CABOMBA

Caroliniana, Gray. S.
Reported by Dr. Schneck as not rare in Wabash
county. I have not seen specimens.

BRASENIA

peltata, Pursh. Scarce.
McHenry Co., Vasey ; Cook, Munroe ; Cass, near
Beardstown, Mead ; Wabash, Schneck ; Union,

NELUMBIUM

luteum, Willd. Frequent.
Ponds, throughout the State, especially in the
Mississippi bottoms.

NYMPHÆA

tuberosa, Paine. Common, especially north.
Ponds and sloughs.

NUPHAR

advena, Ait. Common.
Ponds and slow streams.
sagittifolia, Pursh. S.
Wabash county, Schneck.

SARRACENIACEÆ.

SARRACENIA

purpurea, L. N.
Bogs near Chicago, Babcock ; McHenry, Vasey.

PAPAVERACEÆ.

ARGEMONE

Mexicana, L.
Sparingly escaped from gardens to roadsides
and waste places.

STYLOPHORUM

diphyllum, Nutt. Rare.
Rich woods. Near Makanda, Jackson county.
French.

SANGUINARIA

Canadensis, L. Common.
Rich woods on hillsides.

FUMARIACEÆ.

ADLUMIA

cirrrosa, Raf. N.
Ogle county, Bebb ; Kankakee, Hill ; near Lin-
coln Park, Chicago, probably introduced, Bab-
cock. Rare.

DICENTRA

Cucullaria, DC. Common.
Rich woods on hillsides.
Canadensis, DC. N.
Frequent about Lockport, Will county, Babcock.

CORYDALIS

glauca, Pursh.
Very sparingly on a sandstone cliff below Ore-
gon, Ogle county, Bebb.

flavula, Raf. S.
Wabash county, Schneck.

area, Willd.
Dr. Mead collected specimens in the Mississipi
bottoms, near Warsaw, with pendant pods,
but without flowers ; in Kankakee county Rev.
Hill finds plants with mostly the minute flowers
of the variety MICRANTHA, but some of the up-
per flowers conspicuously spurred—the pods all
ascending.

var. micrantha, Engelm.
Sandy river banks, &c., throughout the State.
Scarce.

NASTURTIUM

officinale, R. Br.
Northern counties, Bebb, Vasey.

- sessiliflorum*, Nutt. C. & S.
Henderson, Peoria and Kankakee counties, and southward. Scarce.
At Oquawka the typical form, growing in the edges of ponds, flowers in May and June, while a dwarf, much branched form, common on sand bars and low banks of the Mississippi, flowers until killed by frost in October.
- obtusum*, Nutt. Rare.
Menard county, Hall.
- palustre*, DC. Common.
Low grounds.
- lacustre*, Gray. Hancock, Mead; and northward. Frequent.
Wabash, Schneek; Sangamon, Hall: Hancock, Mead; and northward. Frequent.
- A Armoracia, Fries.* Frequent.
Escaped from gardens.
- DENTARIA
laciniata, Muhl. Common.
Rich woods.
- CARDAMINE
rhomboidea, DC. Common.
Along streams.
var. *purpurea*, Torr. N.
Kankakee, Hill; Chicago, Munroe: Winnebago, Bebb.
hirsuta, L. Common.
Low grounds.
var. *sylvatica*, Gray. C. & S.
Hancock, Mead; and southward.
- ARABIS
Ludoviciana, Meyer. C. & S.
Banks of the Mississippi near Warsaw, Mead; Fulton county, Wolf; Menard, Hall; common in waste places about Salem, Marion county, Bebb; St. Clair, Brendel.
lyrata, L. N.
Sandy barrens and rocky hills. Kankakee and Cook counties and westward. Common in Henderson.
dentata, T. & G. Rich woods along streams.
hirsuta, Scop. Dry woods and rocky hills.
laevigata, DC. Infrequent.
Rocky hillsides.
Canadensis, L. C. & N.
Hancock and Menard counties and northward.
- hesperidoides*, Gray. N.
River banks. Will county, Monroe: Peoria, Brendel; Henderson; and southward. Scarce.
perfoliata, Lam. N.
Rocky hillsides. Winnebago county, Miss Norton; Elgin, Kane county, Vasey.
Drummondii, Gray. N.
Rocky hillsides. Lee county near Dixon, Vasey; Winnebago, Bebb.
- BARBAREA
vulgaris, R. Br. N.
McHenry county, Vasey; and about gardens at Augusta, Mead.
- ERYSIMUM
cheiranthoides, L. N.
Banks of streams. Hancock county, Mead, and Henderson: Kankakee, Hill; Winnebago, Bebb. Rare.
asperum, DC., var. *Arkansanum*, Nutt. Barrens, Mason and Cass counties, Mead, Wolf. Rare.
- SISYMBRIUM
officinale, Scop. Roadsides and waste places. A common weed.
canescens, Nutt. Throughout the State. Frequent.
Sophia, L. Roadsides in a German settlement, Stephenson county, evidently a chance importation from "fatherland"—Bebb.
- BRASSICA
Sinapistrum, Boissier. Fields and waste places. About Chicago, Kankakee, Mt. Carmel, &c. Scarce.
nigra, Gray. Fields and waste places. Frequent.
- DRABA
brachycarpa, Nutt. S.
Wabash county, Schneek.
cuneifolia, Nutt. S.
Credited to Illinois in Gray's Manual.
Caroliniana, Walt. Common.
Dry prairies and barrens.
var. *micrantha*, Gray. Winnebago county, Bebb.

CAPSĒLLA

Bursa-pastoris, *Mench.*

A common weed.

LEPIDIUM

Virginicum, L.

Roadsides.

Common.

intermedium, Gray.

Marion and Washington counties, Bebb, French; common about Chicago, Babcock: McHenry. Vasey.

CAKILE

Americana, Nutt.

N-E.

Lake shore at Chicago, Munroe, Babcock.

CAPPARIDACEÆ.

POLANISIA

graveolens, Raf.

Sandy river banks, roadsides. Common north.

CLEOME

integrifolia, T. & G.

Common and spreading along roadsides and in waste places about Oquawka: sparingly escaped from cultivation at Chicago, Munroe. As it is not eaten by domestic animals, this pretty plant will probably become a common roadside weed.

speciosissima, *Deppe.*

Sparingly escaped from gardens southward.

VIOLACEÆ.

SOLEA

concolor, Ging.

C. & S.

Woods. Tazewell county, Brendel: Menard, Hall; Marion, Bebb. Rare.

VIOLA

lanceolata, L.

Lee county, Vasey; Chicago, Babcock. Rare.

blanda, Willd.

Cook county, Babcock, and near Elgin. Vasey.

cucullata, Ait.

Low grounds. Common.

var. palmata, Gray.

With the typical form. Frequent.

delphinifolia, Nutt.

Prairies, throughout. Common.

"In cultivation the leaf seems to revert to *V. cucullata*"—Babcock. "Apparently an extreme variation of *V. palmata*"—Bebb.

pedata, L.

Dry prairies and barrens. Flowers sometimes pure white. Common.

var. bicolor, Gray.

With the typical form in Henderson county: Hancock, Mead: Peoria, Brendel. Rare.

sagittata, Ait.

Prairies and fields. Common.

canina, L., *var. sylvestris*, Regel.

Rich woods. Hancock county, Mead: Peoria, Brendel: common near Chicago, Babcock.

striata, Ait.

C. & S.

Rich woods. Hancock county, Mead: Marion, Bebb; Wabash, Schneek. Scarce.

pubescens, Ait.

Rich woods. Common.

var. eriocarpa, Nutt.

Winnebago and Marion counties, Bebb. Rare, or unnoticed.

var. scabriuscula, T. & G.

Kankakee county, Hill.

tricolor, L., *var. arvensis*, Gray.

Cultivated grounds, Hancock county, Mead; and southward. "Undoubtedly native south," Vasey.

CISTACEÆ.

HELIANTHEMUM

Canadense, Michx.

Dry prairies and barrens. Common.

HUDSONIA

tomentosa, Nutt.

N.

Near Dixon, Vasey.

Rare.

LECHEA

major, Michx.

Dry prairies and woods. Infrequent.

minor, Lam.

Prairies and barrens. Common.

A tall "Western form with strict habit and caescent foliage" in Winnebago county, Bebb.

L. *TENUIFOLIA*, Mx.—Sandstone cliffs, Ogle county, also in Marion, Bebb: common in barrens of Henderson; Adams, Mead.

L. *RACEMULOSA*, Mx.—Schuyler county, Mead.

DROSERACEÆ.

DROSERA

rotundifolia, L.

N.

Bogs near Chicago, Babcock.

- longifolia*, L. N.
Near Chicago, Babcock; Kankakee county, Hill.
- HYPERICACEÆ.**
- ASCYRUM
Crux-Andreæ, L. S.
Washington county, French; Union, Brendel.
- HYPERICUM
pyramidatum, Ait. C. & N.
Banks of streams. Menard county, (a single plant.) Hall; Hancock, Mead; Peoria, Brendel; and northward. Rare.
- Kalmianum*, L. N-E.
Common along lake shore about Chicago, flowering from June to October. Babcock.
- prolificum*, L. C. & S.
Dry banks of streams in Hancock county, Mead; and southward.
- adpressum*, Barton. S.
St. Clair county, Brendel; Wabash, Schneck.
- nudiflorum*, Michx.
Low grounds, Cook and Lee counties, Vasey; and southward. Scarce.
- sphaerocarpon*, Michx.
Dry prairies and rocky hillsides, throughout the State. Scarce.
- ellipticum*, Hook.
St. Clair county, Brendel; Fulton, Wolf.
- perforatum*, L.
Chicago, Babcock; Peoria, Brendel; Wabash county, Schneck. Rare.
- corymbosum*, Muhl.
Damp places. Common.
"There is a narrow-leaved variety"—Brendel.
- mutilum*, L. Common.
Low grounds.
- var. *gymnanthum*, Gray.
Kankakee county, Hill; Hancock, Mead; Mason and Menard, Bebb, Hall. Scarce.
- Canadense*, L.
Low grounds. Menard county, Hall; and northward.
- var. *major*, Gray.
With the typical form, Hancock county, Mead; Kankakee, Hill; and northward.
- Drummondii*, T. & G. S.
Marion and Washington counties, Bebb, French; Union, Forbes.
- Sarothra*, Michx.
Sandy grounds. Frequent.
- ELODES
Virginica, Nutt.
Swamps. McHenry county, Vasey; Peoria, Brendel; and southward.
- petiolata*, Pursh. S.
Wabash county, Schneck.
- ELATINACEÆ.**
- ELATINE
Americana, Arnott. C.
Floating on the surface and rooting in the margin of a stagnant pond in Sangamon county, Bebb; Menard, Hall.
- BERGIA
Texana, Seubert.
"Diffusely branched from the base; stems ascending, puberulent; leaves oblong-spatulate, rather acute, serrate, tapering into a short petiole; flowers on short pedicels, mostly solitary in the axils.—Stems 6–10 in. high, glandular or hispid-pubescent; sepal's denticulate, exceeding the narrowly oblong obtuse petals; stamens 5 or 10; dehiscence septifragal, as in ELATINE, the entire sepalum remaining attached to the axis."—KING'S REPORT, Vol. V.
Southern Texas; Nevada. Found in St. Clair county, two miles south of St. Louis, by Mr. H. Eggert.—Engelmann.
- CARYOPHYLLACEÆ.**
- SAPONARIA
officinalis, L.
Roadsides and waste places about gardens.
- VACCARIA
vulgaris, Host.
In wheat fields, along railroads, &c. Scarce.
- SILENE
stellata, Ait.
Woods. Common.
- nivea*, DC.
Sangamon county, Bebb; Peoria, Brendel; along creeks in Hancock and Schuyler, Mead; Ogle, Bebb. Also along railroad in Henderson county, and near Chicago, Babcock. Rare.
- inflata*, Smith.
Occasionally found in wheat fields.
- regia*, Sims. S.
St. Clair county, Brendel. Rare.

Virginica, L.
Abundant on wooded banks of Desplaines River near Chicago, Babcock. Rare.

antirrhina, L.
Dry prairies and sandy barrens. Common.

LYCHNIS
Githago, Lam.
Wheat fields. Frequent.

ARENARIA
stricta, Michx. N.
Kankakee county, Hill; Winnebago, Bebb; McHenry, Vasey; Cook, Babcock.

lateriflora, L. C. & N.
Damp woods. Hancock county, Mead; and northward. Infrequent.

STELLARIA
media, Smith.
Damp places. Frequent.

longifolia, Muhl.
Wet meadows. Frequent.

crassifolia, Ehrh. N.
Ringwood, McHenry county, Vasey.

CERASTIUM
vulgatum, L. Frequent.
viscosum, L. Frequent.
nutans, Raf. Common.
Damp places.

oblongifolium, Torr.
Wabash county, Schneck; Lee, Vasey; Kankakee, Hill; Winnebago, Bebb. Scarce

SAGINA
subulata, Wimmer? S.
Common in Jackson and Union counties, Vasey. Forbes. "Apetalous late in the season," Vasey.

ANYCHIA
dichotoma, Michx.
Dry woods, &c. Common.

MOLLUGO
verticillata, L.
Roadsides, sandy river banks. Common.

PORTULACACEÆ
PORTULACA
oleracea, L.
A common weed in gardens and fields.

TALINUM
teretifolium, Pursh.
Sandy prairies and barrens. Henderson county; Ogle, Bebb; near Dixon, Vasey. Rare, or overlooked. Easily found when the flowers are expanded, about four o'clock in the afternoon.

CLAYTONIA
Virginica, L. Common.
Rich woods.

Caroliniana, Michx.
With the last in Hancock county, Mead; near Chicago, Vasey. Rare.

MALVACEÆ
MALVA
rotundifolia, L. Common.
Roadsides and waste places.

silvestris, L.
Spring'y escaped from gardens.

CALLIRRHÖE
triangulata, Gray.
Sandy barrens. Cass county, Mead; and northward. Scarce.

NAPEA
dioica, L. C. & N.
Open bushy places near Peca'onica, Winnebago county, and along Railroad near Freeport, Bebb; McHenry county, Vasey; Will, Munroe; Peoria. Brendel; along Spoon River, Fulton county. Mead, Wolf. Rare.

MALVASTRUM
angustum, Gray. W.
On Rock Island, 1866—the locality now covered with buildings—Engelmann.

SPHERALCEA
acerifolia, Nutt. N.
"Scabrous with a stellate pubescence; leaves cordate, deeply 5-7-lobed; lobes acute, coarsely serrate; racemes leafy below, naked above, the flowers clustered on short peduncles; carpels 12-14, pointless. Stem 3-6 feet high, much branched; leaves 2-6 in. in diameter; petals 3-1½ in. in length, light purple or nearly white."
—KING'S REPORT, Vol. V.
A pretty plant, formerly found only near the Pacific coast. Discovered by Rev. E. J. Hill on an island in the Kankakee River near Alton, Kankakee county.

SIDA
spinosa, L. C. & S.
Roadsides and waste places. Common in Henderson county; Peoria, Brendel; and southward.

ABUTILON

Avicennæ, Gaertn.

Fields and waste places. Becoming too common in many places.

HIBISCUS

Moscheutos, L. S.

River banks. St. Clair county, Brendel; Wabash, Schneck.

grandiflorus, Michx. S.

River banks. Marion county, Bebb; Washington, French; Wabash, Schneck; and southward.

militaris, Cav. C. & S.

River banks. Henderson county; Peoria, Munroe, Brendel; Kankakee, Hill; and southward. Frequent.

Trionum, L.

Escaped from gardens to roadsides and waste places. Frequent.

TILIACEÆ.

TILIA

Americana, L.

River banks. Common.

var. pubescens, Gray.

Fulton county, Wolf.

heterophylla, Vent.

Fulton county, Wolf; Wabash, Schneck.

LINACEÆ.

LINUM

Virginianum, L.

Dry soils. McHenry, Vasey; near Chicago, Munroe; and frequent southward.

striatum, Walt.

Richview, Washington county, Vasey.

sulcatum, Riddell.

Prairies. Frequent.

GERANIACEÆ.

GERANIUM

maculatum, L.

In woods. Common.

Carolinianum, L.

Throughout the State. Frequent.

FLÆRKEA

proserpinacoides, Willd.

Banks of streams, &c. Peoria county, Brendel, Wolf; near Chicago, Munroe, Babcock. Rare.

IMPATIENS

pallida, Nutt.

Rich woods along streams. Common.

fulva, Nutt.

With the last. Common.

OXALIS

violacea, L.

Dry prairies and hillsides. Common.

stricta, L.

Open woods, roadsides and waste places. Common.

RUTACEÆ.

ZANTHOXYLUM

Americanum, Mill.

Rocky hillsides and banks of streams. Frequent.

PTELEA

trifoliata, L.

Banks of streams. Common.

ANACARDIACEÆ.

RHUS

typhina, L.

Chicago, Vasey; Wabash county, Schneck; in herb. Miss Holmes from Bureau county. Rare.

glabra, L.

Hillsides. Common.

copallina, L.

Rocky hillsides. Ogle county, Bebb; McHenry, Vasey; Chicago, Babcock; also from Adams county, Mead, southward.

venenata, DC. N.

Swamps, McHenry county, Vasey; near Chicago, Babcock.

Toxicodendron, L.

Rich woods along streams, &c. Common.

aromatica, Ait.

Sandy river banks. Infrequent.

VITACEÆ.

VITIS

æstivalis, Michx.

Woods along streams. Common.

var. ? cinerea, Engelm.

River banks. Common at Canton landing on the Illinois River, Fulton county. Wolf; Menard, Hall; and southward.

cordifolia, Michx.

Woods. Common.

riparia, Michx.

With the last.

indivisa, Willd. C. & S.

River banks. Schuyler county. Mead; St. Clair, Brendel; Jackson and Union. Vasey. French, Forbes.

bipinnata, T. & G. S.

Near Chester, Randolph county, Mead; Grand Tower, Jackson county. French, Forbes; Union, Wolf, and Pulaski, Brendel.

AMPELOPSIS

quinquefolia, Michx.

Woods. Common.

RHAMNACEÆ.

RHAMNUS

lanceolatus, Pursh. C.

River banks. From Henderson, Hancock and Menard counties eastward. Infrequent.

alnifolius, L'Her. N.

Swamps. Peoria county, Brendel; McHenry, Vasey. Rare.

FRANGULA

Caroliniana, Gray. S.

River banks. Grand Tower, Jackson county, Vasey, Brendel, &c.; Union, Wolf.

CEANOTHUS

Americanus, L.

Dry prairies and barrens. Common.

ovalis, Bigel. N.

Winnebago county, near Beloit, Wis., Bebb.

CELASTRACEÆ.

CELASTRUS

scandens, L.

Woods along streams. Common.

EUONYMUS

atropurpureus, Jacq.

Rich woods. Common.

Americanus, L.

Near Chicago, Babcock; Wabash Co., Schneek. Rare.

var. obovatus, T. & G.

Riverside, Cook county, Babcock, Munroe; Jackson county, Vasey. Rare.

SAPINDACEÆ.

STAPHYLEA

trifolia, L.

Woods along streams. Frequent.

ÆSCULUS

glabra, Willd. C. & S.

River banks. Henderson county; Peoria, Brendel; and southward. Common. A tree with smooth fruit near Oquawka.

ACER

saccharinum, Wang.

River banks. Common.

var. nigrum, Gray. C. & S.

Hancock county, Mead; and southward.

dasycarpum, Ehrh.

River banks. Common.

rubrum, L.

River banks. Marion county, Bebb; and common southward.

NEGUNDO

aceroides, Mœnch.

River banks. Common.

POLYGALACEÆ.

POLYGALA

incarnata, L.

Prairies. Scarce.

sanguinea, L.

Wet meadows. Common.

cruciata, L. N.

Borders of swamps. Lee county, Vasey; Kankakee, Hill; and northward. Frequent.

verticillata, L.

Dry prairies and barrens. Common.

ambigua, Nutt.

Chicago, Vasey; Hancock county, Mead; Marion, Bebb; Washington, French.

Senega, L.

Prairies and open woods. Common.

var. latifolia, T. & G.

With the typical form in Henderson county; Marion county, Bebb.

- polygama, Walt.** C. & N. PETALOSTEMON
Cass county, Mead; Kankakee, Hill; Chicago, Babcock. Scarce. **violaceus, Michx.**
Prairies. Common.
- paucifolia, Willd.** N. **candidus, Michx.**
Thornton, Cook county, Hill. Rare. Prairies. Common.
- LEGUMINOSÆ.**
foliosus, Gray.
Banks of Fox River, Kane county, Burgess Truesdell, in Gray's Manual; on the gravelly banks of an island in the Kankakee River, near Altorf, Kankakee county. Rev. Hill found a few plants in 1873. Very rare.
- LUPINUS**
perennis, L.
Kankakee county, Hill; Ogle, Bebb; McHenry, Miss Holmes; common about Chicago, Babcock. I do not hear of it southward.
- CROTALARIA**
sagittalis, L. C. & S.
Peoria county, Brendel; Cass, Mead; and common southward.
- TRIFOLIUM**
arvense, L.
Roadsides, &c. Scarce.
- pratense, L.**
Common in fields, &c.
- reflexum, L.**
Near Chicago, Babcock; Peoria county, Brendel; Fulton, Wolf; Marion, Bebb; Jackson and Union, Forbes. Scarce.
- stoloniferum, Muhl.**
Hancock county, Mead; Washington, French.
- repens, L.**
Everywhere.
- MELILOTUS**
officinalis, Willd.
Waste places. Scarce.
- alba, Lam.**
Waste places about gardens. Frequent.
- PSORALEA**
Onobrychis, Nutt.
River banks. Kankakee (abundant) Hill; Hancock, Mead; Peoria, Brendel; and southward. Scarce.
- melilotoides, Michx.** S.
Marion, Bebb; St. Clair, Brendel; and southward.
- floribunda, Nutt.**
Cook county, Babcock, and Will, Hill; Peoria, Brendel; Hancock, Mead; Menard, Hall. Rare.
- DALEA**
alopecuroides, Willd. S.
St. Clair county, Brendel; Union, Vasey.
- AMORPHA**
fruticosa, L.
Banks of streams. Frequent.
- canescens, Nutt.**
Prairies and barrens. Common.
- ROBINIA**
Pseudacacia, L. S.
Commonly cultivated and spontaneous. "Undoubtedly indigenous on the banks of the Ohio," Vasey, Forbes.
- WISTARIA**
frutescens, DC. S.
Washington county, French; Wabash, Schneck.
- TEPHROSIA**
Virginiana, Pers.
Prairies and barrens. Common.
- ASTRAGALUS**
Mexicanus, A. DC. S.
Near Alton, Miss Holmes; St. Clair county, Brendel.
- Plattensis, Nutt.,**
var. Tennesseensis, Gray.
Sandy banks of Rock River, Ogle county, 1858, but not since found, Bebb; Will county, Vasey.
- Canadensis, L.**
Banks of streams. Common.
- distortus, T. & G.**
Mason county, Mead, Bebb; Menard, Hall.
- DESMODIUM**
nudiflorum, DC.
Woods. Common.
- acuminatum, DC.**
Woods. Common.
- pauciflorum, DC.**
Woods. Near Chicago, Munroe; Peoria, Brendel; and southward. Scarce.

- rotundifolium*, DC. S.
Jackson county, French, Vasey; Union, Forbes.
- canescens*, DC. Frequent.
Damp places.
- cuspidatum*, T. & G. Frequent.
Woods.
A hairy form of this species found in Marion county, Bebb; Fulton, Wolf.
- lævigatum*, DC. S.
Jackson county, and southward, Vasey.
- viridiflorum*, Beck. S.
Washington county, French; Wabash, Schneck; and southward.
- Dillenii*, Darlington.
Peoria county, Brendel; Kankakee, Hill; and southward.
- paniculatum*, DC.
Peoria county, Brendel; and southward.
- Canadense*, DC. Common.
Open woods and prairies.
- Illinoense*, Gray.
"Resembling *D. CANESCENS* in leaves and flowers, but *D. RIGIDUM* in raceme and fruit. Stem 3-5 feet high, with the leaves roughish with fine pubescence, leaflets ovate-oblong or ovate-lanceolate, 2-4 inches long, subcoriaceous, whitish beneath, much reticulated with rather prominent veins and veinlets, lateral nearly equalling the petiole; persistent stipules and deciduous bracts ovate-lanceolate, taper pointed, striate; pod slightly stalked, scarcely more than an inch in length, sinuate at the sutures on both sides, more deeply below, joints 3-5, oval, not exceeding 3 lines in length."
Dry prairies and hillsides, from Marion county (Bebb) northward. Frequent.
- sessilifolium*, T. & G. Frequent.
Dry hillsides, &c.
- rigidum*, DC. S.
Dry hillsides, &c., southward, Vasey, Schneck.
- ciliare*, DC. C. & S.
Menard county, Hall; and southward.
- Marilandicum*, Boott. C. & S.
Menard county, Hall; and southward.
- LESPEDEZA
- procumbens*, Michx. S.
Cobden, Union county, and southward, Vasey.
- repens*, T. & G. S.
Washington county and southward, Vasey.
- violacea*, Pers. Common.
Dry woods.
The vars. *DIVERGENS*, *SESSILIFLORA* and *ANGUSTIFOLIA* all occur in the State.
- hirta*, Ell. Washington county, Vasey; and southward.
- capitata*, Michx. Common.
Dry prairies and barrens.
- var. *angustifolia*, Gray.
Winnebago county, Bebb; McHenry, Vasey; Hancock, Mead.
- STYLOSANTHES
- elator*, Swartz. S.
Jackson and Union counties.
- VICIA
- Caroliniana*, Walt. N.
Common in northern counties.
- Americana*, Muhl. C. & N.
Peoria county, Brendel; and common north.
- LATHYRUS
- maritimus*, Bigel. N-E.
Sands of lake shore about Chicago, Babeock.
- venosus*, Muhl. N.
Kankakee county, Hill; and northward.
- ochroleucus*, Hook. N.
About Chicago, Munroe, Babcock; McHenry, Vasey.
- palustris*, L. Frequent.
Low grounds.
- var. *myrtifolius*, Gray. N.
Kankakee county, Hill; near Chicago, Babcock.
- APIOS
- tuberosa*, Mœnch. Frequent.
Woods along streams.
Very rarely found in fruit in Illinois.
- PHASEOLUS
- perennis*, Walt. S.
Madison Co., Miss Holmes; Wabash, Schneck; Union and Franklin, Forbes.
- diversifolius*, Pers. Common.
Sandy river banks.
- helvolus*, L. C. & S.
Peoria county, Brendel; and southward.
- pauciflorus*, Benth. Banks of Rock River in Ogle county, Bebb; and southward.

CLITORIA

Mariana, L. S.

Frequent in thickets in Jackson county, Forbes.

AMPHICARPEA

monoica, Nutt.

Rich woods. Common.

GALACTIA

mollis, Michx. S.

Jackson county and southward, Forbes.

BAPTISIA

tinctoria, R. Br.

Northern counties, Miss Holmes.

leucantha, T. & G.

Low prairies. Common.

leucophæa, Nutt.

Sandy prairies and barrens. Common.

CERCIS

Canadensis, L. C. & S.

River banks, Henderson, Peoria and Kankakee counties, and southward. Common.

CASSIA

Marilandica, L.

River banks. Frequent.

obtusifolia, L. S.

Banks of the Ohio, Vasey, Brendel.

Chamæcrista, L.

Sandy river banks, &c. Common.

nictitans, L. C. & S.

Sandy barrens. Henderson county; and southward.

GYMNOCLADUS

Canadensis, Lam.

Near Chicago, Babcock; Peoria county, Brendel; Henderson; and southward. Frequent.

GLEDITSCHIA

tricanthos, L. C. & S.

River banks, from Kankakee, Peoria and Henderson counties southward. Common.

monosperma, Walt. S.

Jackson county, Forbes; Union, near Jonesboro, Vasey; Pulaski, Brendel. Rare.

DESMANTHUS

brachylobus, Benth. C. & S.

Kankakee county, Hill; Peoria, Brendel, Munroe; and southward.

ROSACEÆ.

PRUNUS

Americana, Marshall.

Low grounds. Common.

Chicasa, Michx. S.

West of Jonesboro, Union county, Vasey.

pumila, L. N.

Sandstone cliffs, Ogle county, Bebb; Kankakee, Hill; and northward.

Pennsylvanica, L. N.

Winebago county, Bebb; McHenry, Vasey; Lake shore near Chicago, H. A. Warne.

Virginiana, L.

Banks of streams. Common.

serotina, Ehrh.

Rich woods. Common.

SPIRÆA

opulifolia, L.

Rocky banks of streams. Frequent.

salicifolia, Raf.

Low grounds. Frequent.

tomentosa, L.

Kankakee county, Hill; near Chicago, Babcock.

lobata, Murr. C.

Peoria county, Brendel; Fulton, Wolf; Tazewell, Munroe; Mason, Hall; Cass, Mead. I do not hear of it north or south.

Aruncus, L. C. & S.

Woods. Peoria, Brendel; and southward.

GILLENIA

stipulacea, Nutt. C. & S.

Schuyler county, Mead; Sangamon, Bebb; and southward.

POTERIUM

Canadense, Gray.

Near Beardstown, Cass county, Mead.

AGRIMONIA

Eupatoria, L.

Open woods. Common.

parviflora, Ait.

With the last. Frequent.

GEUM

album, Gmelin.

Woods. Common.

Virginianum, L. Infrequent.
 Woods.
 macrophyllum, Willd. N.
 McHenry county, Vasey.
 strictum, Ait. C. & N.
 Wet meadows. Fulton county, Wolf; Kankakee, Hill; and northward.
 vernum, T. & G. C. & S.
 Hancock county, Mead; and southward.
 rivale, L. N.
 Near Elgin, Kane county, Vasey; McHenry, Miss Holmes.
 triflorum, Pursh. N.
 McHenry county, Vasey; Winnebago, Bebb.
 "One of the few rare plants of our northern prairies which seems thus far to hold its place—growing as it does on sterile knolls too stony to plow and too poor to give blue grass a chance for encroachment; either cattle leave it alone or else the leaves lie so flat on the ground as to escape pasturage."—Bebb.

POTENTILLA
 Norvegica, L. Common.
 Low grounds.
 paradoxa, Nutt. S-W.
 St. Clair county, Brendel.
 Canadensis, L. Common.
 Dry hillsides, &c.
 arguta, Pursh. C. & N.
 Prairies. Menard county, Hall; and northward.
 Anserina, L. N.
 Common in damp sandy soil along lake shore about Chicago.
 fruticosa, L. N.
 Low grounds about Chicago, Babcock, and Kane county, Miss Holmes.
 palustris, Scop. N.
 McHenry county, Vasey.

FRAGARIA
 Virginiana, Ehrh. Common.
 Hillsides and barrens.
 var. Illinoensis, Gray.
 With the typical form; scarce, or not distinguished from it by most persons.
 vesca, L. Apparently scarce.
 Shady hillsides, &c.

RUBUS
 triflorus, Richard. N.
 Kane county, Miss Holmes; Cook county, near Evanston, Vasey, Calumet, Babcock.
 strigosus, Michx.
 Ogle county, Bebb; McHenry, Vasey; Chicago, Babcock; also in Washington county, French.
 occidentalis, L. Common.
 Open woods.
 villosus, Ait. Common.
 With the last.
 Canadensis, L.
 Near Chicago, Babcock. Menard county, Hall; and southward. Probably rare northward.
 hispidus, L. N.
 Kankakee county, Hill; Chicago, Babcock.

ROSA
 setigera, Michx. C. & S.
 Peoria county, Brendel; and southward.
 Carolina, L. Frequent.
 Low grounds, throughout.
 lucida, Ehrh. Common.
 Hillsides, &c.
 blanda, Ait. Common.
 With the last.

CRATEGUS
 cordata, Ait. Common.
 Wabash county, Schneck.
 coccinea, L. Common.
 Woods.
 tomentosa, L.:
 var. pyrifolia, Gray.
 Kankakee county, Hill.
 var. punctata, Gray. Frequent.
 var. mollis, Gray. Frequent.
 Crus-galli, L. Common.
 Woods.

PYRUS
 coronaria, L. Common.
 Banks of streams.
 angustifolia, Ait. S.
 Washington county, French; Wabash, Schneck.
 arbutifolia, L. N.
 Kankakee county, Hill; Ogle, Bebb.

AMELANCHIER

Canadensis, T. & G. :
var. *Botryapium*, Gray.

Rocky banks of streams. Frequent.

var. *oblongifolia*, Gray.

Ciffs near Oregon, Ogle county, Bebb ; Makanda, Jackson county, French.

var. *rotundifolia*, Gray.

Near Chicago, Babcock ; Fountain Bluff, Jackson county, French.

var. *alnifolia*, Gray.

Ogle county, Bebb.

SAXIFRAGACEÆ.

RIBES

Cynosbati, L. C. & N.

Rocky banks of streams. Henderson county ; Kankakee, Hill ; and northward.

hirtellum, Michx. N.

Evanston, Cook county, Vasey.

rotundifolium, Michx. C. & N.

Open woods. Henderson, Peoria and Kankakee counties ; and northward.

floridum, L.

Rich woods along streams. Frequent.
I do not hear of it south of Menard county.

HYDRANGEA

arborescens, L. C. & S.

Peoria county, Brendel, Munroe ; and southward.

PARNASSIA

Caroliniana, Michx.

Marion county, Bebb ; and northward.

Frequent.

SAXIFRAGA

Pennsylvanica, L. C. & N.

Bogs. Peoria county, Brendel ; and northward.
Common.

Forbesii, Vasey. S.

Damp hillside 1 mile north of Makanda, Jackson county, east side of railroad—May, June—Forbes ; Cobden, Union county, Vasey.

HEUCHERA

Rugellii, Shuttlew. S.

Common on Union county bluffs, July and Aug., Forbes ; Jackson county, French.

Americana, L.

Marion county, Bebb ; and southward.

hispida, Pursh.

Hillsides. Marion county, Bebb ; and northward. Frequent.

MITELLA

diphylla, L.

Damp hillsides. Scarce.

CRASSULACEÆ.

PENTHORUM

sedoides, L.

Wet places. Common.

SEDUM

pulchellum, Michx. S.

Jackson and Union counties, Vasey, French.

ternatum, Michx.

Rocky woods. Kankakee county, Hill ; Wabash, Schneck. Rare.

HAMAMELACEÆ.

HAMAMELIS

Virginica, L.

Damp woods. White county, Schneck ; Peoria, Brendel ; and frequent northward.

LIQUIDAMBAR

Styraciflua, L. S.

Wabash and Jackson counties, and southward.

HALORAGEÆ.

MYRIOPHYLLUM

spicatum, L.

McHenry county, in Fox river, Vasey.

verticillatum, L. C. & N.

Menard county, Hall ; McHenry, Vasey.

heterophyllum, Michx.

McHenry county, Vasey ; Hancock, Mead. Rare.

scabratum, Michx. C. & S.

Henderson county, frequent ; Menard, Hall ; Franklin, Forbes. Rare.

ambiguum, Nutt.,

var. *capillaceum*, Gray. S.

Wabash county, Schneck.

PROSERPINACA

palustris, L.

Swamps. Scarce.

HIPURIS

vulgaris, L.Wabash county, Schneck; McHenry, Vasey.
Very rare.

ONAGRACEÆ.

CIRCEÆ

Lutetiana, L.

Rich woods. Common.

GAURA

biennis, L.

Dry places. Common.

EPILOBIUM

angustifolium, L. N.

Low places. - Winnebago and McHenry counties.

palustre, L.var. *lineare*, Gray. C. & N.

Low grounds. Menard county, Hall; and northward. Frequent.

molle, Torr. C. & N.

With the last.

coloratum, Muhl.

Low grounds. Common.

CENOTHERA

biennis, L.

Dry copses, fields, &c. Common.

Varieties *MURICATA*, *GRANDIFLORA*, *PARVIFLORA* and *CRUCIATA* are found in the State.*rhombipetala*, Nutt.

Sandy prairies and barrens. Menard county, Hall; frequent in Henderson; near Chicago, Babcock, Vasey; Ogle county, Bebb. Scarce.

fruticosa, L.

Low prairies, &c. Frequent.

linearis, Michx. S.

Carbondale, Jackson county, Forbes.

Missouriensis, Sims. S.

Near Nashville, Washington county, Vasey.

JUSSLÆA

repens, L. S.

Jonesboro, Union county, Miss Holmes; Mound City, Vasey.

decurrens, DC. S.

Perry and Union counties, Forbes.

LUDWIGIA

alternifolia, L.

Low grounds. Frequent.

sphærocarpa, Ell.

Chicago, Dr. Scammon, in herb. M. S. Bebb; Menard county, Hall; Union, Forbes; Mound City, Miss Holmes. Rare.

polycarpa, Short & Peter.

Wet places. Common.

cylindrica, Ell. S.

Mound City, Vasey.

palustris, Ell.

Ponds and ditches. Common.

MELASTOMACEÆ.

RHEXIA

Virginica, L.

Lee county, Vasey; Kankakee, Hill; Mason, Bebb; Cass, Mead; and probably southward. Rare.

LYTHRACEÆ.

AMMANNIA

humilis, Michx.

Margins of ponds, &c. Scarce.

latifolia, L. C. & S.

Wet places. Henderson county; Peoria, Munroe, Brendel; Kankakee, Hill; and southward. Frequent.

Nuttallii, Gray.

In ponds, and rooting in their margins as the water evaporates. Henderson county; Hancock, Mead; Menard, Hall. Rare.

LYTHRUM

alatum, Pursh.

Wet places. Common.

NESÆA

verticillata, H. B. K.

Low grounds. Near Chicago, Vasey; Wabash county, Schneck; Franklin, Forbes. Rare.

CUPHEA

viscosissima, Jacq. C. & S.

Dry places. Hancock county, Mead; Peoria, Brendel; and southward.

LOASACEÆ.

MENTZELIA

oligosperma, Nutt. W.

Prairies. Pike county, Mead.

CACTACEÆ.

OPUNTIA

Rafinesquii, Engelm.

Sandy prairies and barrens. Frequent.

PASSIFLORACEÆ.

PASSIFLORA

lutea, L.

S.

Damp woods. Madison and St. Clair counties, Miss Holmes, Brendel; Marion, Bebb; Wabash, Schneck; and southward. Frequent.

CUCURBITACEÆ.

SICYOS

angulatus, L.

River banks. Common.

ECHINOCYSTIS

lobata, T. & G.

Banks of streams. Common.

UMBELLIFERÆ.

SANICULA

Canadensis, L.

Open woods. Common.

Marilandica, L.

With the last. Common.

ERYNGIUM

yuccæfolium, Michx.

Prairies. Common.

DAUCUS

Carota, L.

Sparingly escaped from gardens to roadsides and waste places.

POLYTAENIA

Nuttallii, DC.

Prairies and barrens. Scarce.

HERACLEUM

lanatum, Michx.

Damp places. Common.

PASTINACA

sativa, L.

Roadsides and waste places. Common.

ARCHEMORA

rigida, DC.Also the var. *AMBIGUA*, Gray. Wet prairies, ravines, &c. Roots tuberiferous. Scarce.

ARCHANGELICA

hirsuta, T. & G.

S.

Washington Co., and southward, Vasey, Forbes. Rare.

atropurpurea, Hoffm. C. & N.

Low grounds, Fulton, Wolf; Kankakee, Hill; and northward.

CONIOSELINUM

Canadense, T. & G.

N.

Elgin, Kane county, Vasey.

THASPIUM

barbinode, Nutt.

Rich woods. Scarce.

aureum, Nutt.

River banks, &c. Common.

var. *apterum*, Gray.

Winnebago and Marion counties, Bebb.

trifoliatum, Gray.

Open woods, &c. Scarce.

var. *atropurpureum*, T. & G.

Menard county, Hall; and southward.

var. *apterum*, Gray.

Winnebago and Marion counties, Bebb.

ZIZIA

integerrima, DC.

Dry hillsides. Frequent.

DISCOPLEURA

capillacea, DC.

S.

Mound City, Vasey.

var. ? *costata*, DC.

S.

St. Clair county, Brendel; Mound City, Vasey.

Nuttallii, DC.

S.

Jackson and Union counties, Forbes, Wolf.

CICUTA

maculata, L.

Low grounds. Common.

bulbifera, L.

N.

Peoria county, Brendel; Stephenson and Winnebago, Miss Holmes; McHenry, Vasey.

SIUM

angustifolium, L.

C. & N.

Fulton county, Wolf; Peoria, (frequent), Brendel; Winnebago, (rare), Bebb; McHenry, Vasey.

"I have found this in northern Illinois invariably associated with *MIMULUS JAMESII*."—Ecbb.

lineare, Michx. Common.
 Low grounds.

CRYPTOTENIA
 Canadensis, DC. Common.
 Woods.

CHLEROPHYLLUM
 procumbens, Lam. Common.
 Damp woods.

OSMORRHIZA
 longistylis, DC. Frequent.
 Rich woods.

 brevistylis, DC. Frequent.
 Rich woods.

CONIUM
maculatum, L. Waste places. Elgin, Kane county, Vasey, and Chicago, Babcock; Wabash, Schneck.

EULOPHUS
 Americanus, Nutt. Scarce.
 Moist thickets, throughout.

ERIGENIA
 bulbosa, Nutt. C. & S.
 Hancock county, Mead; and southward.

ARALIACEÆ.

ARALIA
 spinosa, L. S.
 Jackson and Union counties, and southward.

 racemosa, L. Common.
 Rich woods.

 nudicaulis, L. Frequent.
 Rich woods.

 quinquefolia, Gray. Infrequent.
 Rich woods.

CORNACEÆ.

CORNUS
 Canadensis, L. N.
 Near Chicago, Munroe; Winnebago county, Miss Holmes. Rare.

 florida, L. C. & S.
 Woods. Schuyler county, Mead; and southward. Frequent.

 sericea, L. Common.
 Wet places.

 circinata, L'Her. Near Elgin, Kane county, Vasey; once found near Peoria, Brendel. Rare.

 stolonifera, Michx. C. & N.
 Low grounds. Menard county, Hall; and northward. Common.

 asperifolia, Michx. C. & S.
 Peoria and Henderson counties, and southward. In Henderson county it grows mostly in river bottoms—rarely in dry places. Common.

 paniculata, L'Her. Common.
 Woods along streams.

 alternifolia, L. Open woods, especially along streams. Apparently rare southward.

NYSSA
 multiflora, Wang. S.
 Washington county, French; Wabash, Schneck; and southward.

CAPRIFOLIACEÆ.

LINNÆA
 borealis, Gronov. N.
 North of Chicago, Vasey.

SYMPHORICARPUS
 occidentalis, R. Br. Wabash county, Schneck; Washington, French; McHenry, Vasey. Rare.

LONICERA
 flava, Sims. C. & N.
 Rocky banks of streams. Menard county, Hall; and northward. Frequent.

 parviflora, Lam. C. & N.
 With the last. Hancock county, Mead; Peoria, Brendel; and probably northward.

 var. Douglasii, Gray. N.
 Deer Park, La Salle county, Forbes; and northward. Frequent.

DIERVILLA
 trifida, Mœnch. N.
 Cook county—near Chicago, Babcock, and Evanston, Vasey. Rare.

TRIOSTEUM
 perfoliatum, L. Frequent.
 Rich woods.

 angustifolium, L. S.
 St. Clair county, Brendel; Union, French.

SAMBUCUS

Canadensis, L.

River banks, borders of woods, &c. Frequent.

VIBURNUM

Lentago, L.

Banks of streams, &c. Frequent.

prunifolium, L.

Dry copses. Scarce northward.

dentatum, L.

River banks. Scarce.

pubescens, Pursh. N.

Winnebago county, Bebb; McHenry, Vasey.

acerifolium, L. N.

Near Chicago, Babcock; Winnebago Co., Bebb; McHenry, Vasey.

Opulus, L. N.

Near Chicago, Munroe, Babcock.

RUBIACEÆ.

GALIUM

Aparine, L.

Moist thickets. Common, especially northward.

asprellum, Michx.

Moist thickets. Washington county, French; Wabash, Schneck; McHenry, Vasey. Scarce.

concinnum, T. & G.

Dry prairies and hillsides, also in rich woods. Common.

trifidum, L.

Wet places. Common.

triflorum, Michx.

Rich woods. Common.

pilosum, Ait. C. & S.

Dry copses. Cass county, Mead; and southward.

circæzans, Michx.

Rich woods. Common.

lanceolatum, Torr.

Wabash county, Schneck.

boreale, L. N.

Near Chicago, Babcock; Winnebago county, Bebb; McHenry, Vasey.

SPERMACOCE

glabra, Michx. C. & S.

River banks. Peoria county, Brendel; Fulton, Wolf; and southward.

DIODIA

Virginica, L. S.

River banks. Marion county, Vasey; and southward.

teres, Walt. C. & S.

Dry, sandy places. Hancock county, Mead; and southward.

CEPHALANTHUS

occidentalis, L.

Wet places. Common.

MITCHELLA

repens, L.

Damp hillsides at Makanda, Jackson county, Forbes.

HOUSTONIA

purpurea, L. C. & S.

Woods. Menard county, Hall; and southward.

var. *ciliolata*, Gray.

Marion county, Brendel.

angustifolia, Michx. S.

Jackson and Union counties, Vasey, Forbes.

minima, Beck. W.

Dry hillsides, western Illinois, Gray's Manual.

cærulea, L.

Near Chicago, Babcock; St. Clair county, Brendel; Washington and southward, Vasey.

VALERIANACEÆ.

VALERIANA

pauciflora, Michx. S.

Woods. Wabash county, Schneck; Jackson, Vasey; and southward.

edulis, Nutt. N.

Abundant in one locality south-west of Hyde Park, Cook county, Babcock; Winnebago, Bebb; McHenry, Vasey.

FEDIA

radiata, Michx.

Low grounds. Frequent.

umbilicata, Sulliv.

Banks of Kankakee river, Kankakee county, Hill.

DIPSACEÆ.

DIPSACUS

silvestris, Mill.

Waste places. Wabash county, Schneck; Frequent in McHenry, Vasey.

COMPOSITÆ.

VERNONIA

Noveboracensis, Willd.

River banks. Hancock county, Mead.

fasciculata, Michx.

River banks. Common.

ELEPHANTOPUS

Carolinianus, Willd. S.

St. Clair county, Brendel; Marion, Bebb; and southward. Frequent.

LIATRIS

squarrosa, Willd.

Cook county, Munroe, Hill; and southward. Frequent.

cylindracea, Michx.

Prairies. Common.

scariosa, Willd.

Prairies and barrens. Common.

spicata, Willd.

Moist prairies. McHenry county, Vasey; Cook, Babcock, Hill. Rare.

pycnostachya, Michx.

Prairies. Common.

KUHNTIA

eupatorioides, L.

Prairies and barrens. Common.

EUPATORIUM

purpureum, L.

Low grounds. Common.

altissimum, L.

Dry hillsides, &c. Common.

sessilifolium, L. C. & S.

Peoria county, Brendel; Hancock, Mead; and southward.

perfoliatum, L.

Wet places. Common.

serotinum, Michx.

River banks, throughout. Common.

ageratoides, L.

Rich woods. Common.

aromaticum, L. S.

Jackson county, French.

MIKANIA

scandens, L. S.

Wabash county, Schneck.

CONOCLINIUM

celestinum, DC. C. & S.

Mason county, Mead; Menard, Hall; and southward. Frequent.

ASTER

corymbosus, Ait.

Woods. Menard county, Hall; Hancock, Mead; Peoria, Brendel. Scarce.

macrophyllus, L. N.

Near Chicago, Babcock, Munroe.

sericeus, Vent.

Prairies and barrens. Common.

patens, Ait. S.

Union and Wabash counties; and southward.

lævis, L. var. *lævigatus*, Gray.

Dry open woods. Common northward.

var. *cyaneus*, Gray.

With the last.

turbinellus, Lindl. C. & S.

Prairies and barrens. Hancock county, Mead; Menard, Hall; St. Clair, Brendel; Union, French. Rare.

azureus, Lindl.

Prairies and copses. Frequent.

Shortii, Boott.

Rich woods. Winnebago county, Bebb; Hancock, Mead; Peoria, Brendel; and southward, Vasey. Scarce.

undulatus, L.

Dry copses. Common.

Drummondii, Lindl.Wooded hillsides, &c., throughout. Frequent. Runs into *A. UNDULATUS*.*cordifolius*, L.

Woods. Frequent.

sagittifolius, Willd.

Dry hillsides, &c. Common.

ericoides, L.

Dry open places. Frequent.

var. *villosus*, Ait.

With the typical form. Frequent.

multiflorus, Ait.

Dry prairies and barrens. Common.

dumosus, L.

Thickets. Frequent.

- Tradescanti, L.**
Damp places. Frequent.
- miser, L.**
Woods and open damp places. Common.
- simplex, Willd.**
Woods, and open places in low grounds. Common.
- tenuifolius, L.**
Low grounds. Frequent.
- carneus, Nees.**
Damp places. Frequent.
- æstivus, Ait.**
McHenry county, Vasey; Peoria, Brendel.
- longifolius, Lam.**
Moist places. Near Chicago, Babcock; Kankakee county, Hill; Peoria, Brendel.
- puniceus, L.**
Low thickets, &c. Scarce.
- var. vimineus, Gray.**
Winnebago county, Bebb; also in Henderson.
- preanthoides, Muhl.**
Fulton county, Brendel, Wolf.
- oblongifolius, Nutt.**
River banks. Frequent.
- amethystinus, Nutt.**
Peoria county, Brendel; Fulton, Wolf; Menard, Hall. Rare.
- Novæ-Angliæ, L.**
Moist ravines, &c. Common.
- anomalus, Engelm.** W.
Rocky hillsides. Peoria county, Brendel; Fulton, Wolf; Hancock, Mead; St. Clair, Engelmann. Scarce.
- acuminatus, Michx.** N.
McHenry county, Vasey.
- ptarmicoides, T. & G.** C. & N.
Prairies. Menard county, Hall; and northward.
- ERIGERON**
- Canadense, L.**
Waste places. Common.
- divaricatum, Michx.**
Dry roadsides, prairies, &c., throughout the State. Common.
- bellidifolium, Muhl.**
Moist hillsides. Common.
- Philadelphicum, L.**
Moist places. Common.
- annuum, Pers.**
Low grounds. Common.
- strigosum, Muhl.**
Prairies and fields. Common.
- DIPLOPAPPUS**
- linariifolius, Hook.**
Dry prairies and barrens. Common.
- umbellatus, T. & G.** C. & N.
Moist thickets. Menard county, Hall; and northward.
- BOLTONIA**
- glastifolia, L'Her.**
Low grounds. Common.
- var. ? decurrens, T. & G.**
Leaves elongated lanceolate, rather thin, decurrent on the stem! the broad decurrent portions usually terminated by short and triangular divaricate lobes, thus appearing sagittate. * * Perhaps a distinct species.—Flora N. A., II, 188.
Fulton county, Wolf.
- diffusa, L'Her.** S.
Washington county, Vasey; St. Clair, Brendel; and southward.
- SOLIDAGO**
- bicolor, L.**
McHenry county, Vasey; Union, Forbes.
- latifolia, L.** C. & N.
Rich woods. Menard county, Hall; and northward. Frequent.
- cæsia, L.**
Rich woods. Scarce.
- stricta, Ait.** N.
Wet places. Winnebago county, Bebb.
- speciosa, Nutt.**
Prairies and barrens. Common.
- petiolaris, Ait.**
Rocky bluffs opposite St. Louis, Engelmann.
- Virga-aurea, L.**
var. humilis, Gray. N.
Near Chicago, Babcock.
- rigida, L.**
Dry prairies and barrens. Common.
- Ohioensis, Riddell.** N.
Moist prairies. Peoria county, Brendel; and northward.

Riddellii, Frank.			
Low prairies.	Frequent.		
neglecta, T. & G.		N.	
Wet places. Peoria county, Brendel; near Chicago, Babcock; McHenry county, Vasey.			
patula, Muhl.			
Swamps.	Scarce.		
arguta, Ait.			
Prairies. Near Chicago, Babcock; Peoria county, Brendel; Washington, French. Scarce.			
Muhlenbergii, T. & G.			
Near Chicago, Babcock.			
altissima, L.			
Hancock county, Mead; Fulton, Wolf; southern Illinois, Vasey.			
ulmifolia, Muhl.			
Low copses.	Common.		
Drummondii, T. & G.		S.	
Rocky hillsides opposite St. Louis, Engelmann.			
odora, Ait.		S.	
Wabash county, Schneck.			
nemoralis, Ait.			
Prairies and barrens.	Common.		
radula, Nutt.		W.	
With the last species. Henderson county; Fulton, Wolf; Menard, Hall.			
Missouriensis, Nutt.			
Prairies.	Common.		
Canadensis, L.			
Borders of woods, fields, &c. Common.			
serotina, Ait.			
Woods, and open places in low grounds. Common.			
gigantea, Ait.			
With the last. Common.			
lanceolata, L.			
Low grounds.	Common.		
tenuifolia, Pursh.			
Dry places, throughout. Frequent.			
CHRYSOPSIS			
villosa, Nutt.			
Prairies. Near Dixon, Vasey; Peoria county, Brendel; Mason, Mead, Bebb.			
INULA			
Helenum, L.			
Sparingly escaped from gardens to roadsides and waste places.			
PLUCHEA			
fœtida, DC.			S.
River banks. Wabash and Jackson counties, and southward. Frequent.			
POLYMNIA			
Canadensis, L.			
Damp hillsides in woods.	Scarce.		
var. discoidea, Gray.			
Carroll county, Henry Shimer, in Gray's Manual.			
Uvedalia, L.			S.
St. Clair county, Brendel; Wabash, Schneck; and southward.			
CHRYSOGONUM			
Virginianum, L.			
Credited to Illinois in Gray's Manual.			
SILPHIUM			
laciniatum, L.			
Prairies.	Common.		
terebinthinaceum, L.			
Prairies.	Common.		
trifoliatum, L.			
Near Thornton, Cook county, Hill.			
integrifolium, Michx.			
Prairies.	Common.		
Var <i>LEVE</i> at Normal, McLean county, Hill.			
perfoliatum, L.			
Rich soil along streams.	Common.		
PARTHENIUM			
integrifolium, L.			
Prairies.	Common.		
IVA			
ciliata, Willd.			
Union county, Forbes.			
AMBROSIA			
bidentata, Michx.			C. & S.
Prairies. Peoria county, Brendel; and southward. Frequent.			
trifida, L.			
River banks.	Common.		
artemisifolia, L.			
Fields, waste places, especially in low grounds. Common.			
psilostachya, DC.			
Dry prairies and barrens.	Common.		

XANTHIUM

strumarium, L.

Banks of streams. Common.

var. *echinatum*, Gray.

Near Chicago, Babcock, Vasey; Warsaw, Hancock county, Mead.

spinosum, L.

Chicago, Cairo and Mound City, Vasey.

ECLIPTA

procumbens, Michx. C. & S.

River banks, from Kankakee, Peoria and Henderson counties southward.

HELIOPSIS

laevis, Pers.

Dry woods, &c. Common.

Also the var. *SCABRA*.

ECHINACEA

purpurea, Mœnch.

Prairies. Common.

angustifolia, DC.

Prairies. Common.

RUBEBECKIA

laciniata, L.

Woods along streams. Frequent.

subtomentosa, Pursh.

Low prairies. Common.

triloba, L. C. & S.

Dry woods, Henderson, Peoria and Kankakee counties, and southward.

speciosa, Wenderoth. C. & S.

Menard county, Hall; Wabash, Schneck.

hirta, L.Dry prairies and woods. Common.
Mr. Bebb has seen this with a yellow disk.

LEPACHYS

pinnata, T. & G.

Dry prairies and woods. Common.

HELIANTHUS

annuus, L.

Persistent about gardens.

atrorubens, L.

Washington Co., French; and probably southward.

rigidus, Desf.

Dry prairies. Common.

laetiflorus, Pers.

Dry prairies, throughout. Infrequent.

occidentalis, Riddell.

Dry prairies and barrens. Common.

mollis, Lam.

With the last. Rare northward.

microcephalus, T. & G. S.

Wabash county, Schneck; Franklin, Forbes; and southward.

giganteus, L.

Low grounds. Near Chicago, Babcock; Peoria county, Brendel; Wabash, Schneck.

grosse-serratus, Martens.

Prairies. Common.

strumosus, L.

Woods and low grounds. Frequent.

divaricatus, L.

Dry woods, &c. Near Chicago, Babcock; Hancock county, Mead; Wabash, Schneck.

hirsutus, Raf.

Dry prairies, &c. Scarce.

tracheliifolius, Willd.

Copses. Near Chicago, Babcock; Peoria county, Brendel; Wabash, Schneck.

decapetalus, L.

Moist copses. Frequent.

doronicoides, Lam.

Banks of streams. Common.

tuberosus, L.

Sparingly escaped from gardens.

ACTINOMERIS

squarrosa, Nutt. C. & S.

Peoria county, Brendel; Kankakee, Hill; and southward.

helianthoides, Nutt.

Near Chicago, Babcock; Peoria, Brendel; and southward.

COREOPSIS

auriculata, L. S.

Rich woods. Washington county, Vasey; and southward.

lanceolata, L.

Rich soil. Frequent.

palmata, Nutt.

Dry prairies and barrens. Common.

tripteris, L.
 Open, dry woods. Common.
aristosa, Michx.
 Low grounds. Frequent.
 var. mutica, Gray.
 With the typical form. Scarce.
trichosperma, Michx.
 Low grounds. McHenry county, Vasey; near Chicago, Babcock; Fulton county, Wolf. Scarce.
discoidea, T. & G. C. & S.
 Frequent in Mississippi bottoms in Henderson county; Pulaski, Vasey. Rare.

BIDENS
frondosa, L.
 Low grounds. Common.
connata, Muhl.
 Low grounds. Common.
 Var. comosa is common along the Mississippi about Oquawka.
cernua, L. N.
 Wet places. Peoria and Henderson counties, and northward.
chrysanthemoides, Michx.
 Banks of streams. Common.
Beckii, Torr.
 Illinois—Gray's Manual.
bipinnata, L. C. & S.
 In dry soil. Menard county, Hall; and southward.

VERBESINA
Siegesbeckia, Michx. S.
 Banks of the Ohio, Vasey.
Virginica, L.
 Illinois—Gray's Manual.

DYSODIA
chrysanthemoides, Lag.
 Roadsides and waste places. Common.

HYMENOPAPPUS
scabiosæus, L'Her.
 Barrens of Mason county, Mead, Hall.

ACTINELLA
scaposa, Nutt., var. glabra, Gray.
 On an Indian mound at Joliet, Will county, Dr. Scammon, W. Boott, in Gray's Manual.

HELENIUM
autumnale, L.
 Banks of streams. Common.

LEPTOPODA
brachypoda, T. & G. C. & S.
 Barrens of Hancock county, Mead; and southward.

MARUTA
Cotula, DC.
 Roadsides, &c. Common.

ACHILLEA
Millefolium, L.
 Prairies and barrens. Common.

LEUCANTHEMUM
vulgare, Lam.
 Chicago, Babcock; Kankakee, Hill; once found at Peoria, Brendel; Cass county, Mead. Rare.

MATRICARIA
discoidea, DC. W.
 Opposite St. Louis, Engelmann.

TANACETUM
vulgare, L.
 Springly escaped from gardens to roadsides.

ARTEMISIA
dracunculoides, Pursh.
 Near Dixon, Lee county, Vasey.
caudata, Michx.
 Sandy prairies and barrens. Common.
Ludoviciana, Nutt. N.
 Henderson county; Peoria, Brendel; and northward.
serrata, Nutt. N.
 "Stem tall and herbaceous, leaves lanceolate, acuminate at either extremity, margin serrate, upper side smooth, under tomentose and white; fls. paniculate, partly glomerate, erect; calyx small cylindric-ovate, and nearly smooth. Stem 5 or 6 feet high; fls. very small; leaves 6 to 8 inches long and an inch wide, sharply but not very regularly serrate. Hab.: Near the Prairie du Chien, on the banks of the Mississippi, also on the banks of the Missouri, in open alluvial soil."—NUTT. GENERA, II. 142.
 Winnebago county, Bebb; McHenry, Vasey.
biennis, Willd.
 Low grounds, especially by roadsides. Common.

GNAPHALIUM
polycephalum, Michx.
 Dry woods, &c. Common.
purpureum, L.
 McHenry county, Vasey; Fulton, Wolf; Peoria, (only once found), Brendel; Wabash, Schneck.

ANTENNARIA

margaritacea, R. Br.

Not rare in Wabash county, Schneck.

plantaginifolia, Hook.

Dry open places.

Common.

ERECOTHITES

hieracifolia, Raf.

Woods.

Common.

CACALIA

suaveolens, L.

Rich woods. McHenry county, Vasey; Peoria and Fulton, Brendel; Wolf; Hancock, Mead; Wabash, Schneck.

Scarce.

reniformis, Muhl.

C. & S.

Rich woods. Peoria county, Brendel; and southward.

Scarce.

atriplicifolia, L.

Rich woods.

Frequent.

tuberosa, Nutt.

Prairies.

Frequent.

SENECIO

lobatus, Pers.

S.

Jackson county, French.

aureus, L.

Vars. BALSAMITE and OBOVATUS.

Common.

CIRSIUM

lanceolatum, Scop.

Roadsides.

Common.

Pitcheri, T. & G.

N-E.

Lake shore about Chicago, Babcock, Vasey.

discolor, Spreng.

Open woods, &c.

Common.

altissimum, Spreng.

With the last species. Intermediate forms occur, probably hybrids—Bebb.

Virginianum, Michx.var. *filipendulum*, Gray.

S.

Jackson and Union counties, French, Vasey.

muticum, Michx.

Woods in low grounds.

Frequent.

pumilum, Spreng.

Dry woods and fields.

Scarce.

arvensis, Scop.

Along railroads about Chicago, Babcock, Vasey; in one locality near Peoria, Brendel; Fulton county, Wolf. Fortunately rare as yet. Since

the enactment of the Canada Thistle Law most of the other species have suffered at the hands of the Commissioners, especially *LANCEOLATUM*.

LAPPA

officinalis, All., var. *major*.

Roadsides and waste places.

Common.

KRIGIA

Virginica, Willd.

Fulton county, Wolf; Mason, Brendel; Menard, Hall; and probably southward.

CYNTHIA

Virginica, Don.

Prairies.

Frequent.

Dandelion, DC.

S.

Washington county, Vasey; Wabash, Schneck; and southward.

Troximon

cuspidatum, Pursh.

C. & N.

Prairies. Menard county, Hall; and northward. Now extinct in many localities where it was once found.

Scarce.

HIERACIUM

Canadense, Michx.

N.

Near Chicago, Babcock, Munroe; Winnebago county, Bebb; McHenry, Vasey.

scabrum, Michx.

Dry open woods.

Scarce.

longipilum, Torr.

Prairies.

Scarce.

Gronovii, L.

Dry woods.

Scarce.

NABALUS

albus, Hook.

Rich woods.

Frequent.

altissimum, Hook.

Rich woods. Boone county, French; not rare in Wabash, Schneck.

Rare.

racemosus, Hook.

Menard county, Hall; and northward.

C. & N.

Frequent.

asper, T. & G.

Prairies.

Frequent.

crepidineus, DC.

C. & S.

Rich woods along streams. Henderson county; Peoria and Fulton, Brendel; Wolf; Hancock, Mead; Menard, Hall; and probably southward.

TARAXACUM

Dens-leonis, Desf.

Fields, roadsides, &c. Common.

LACTUCA

Canadensis, L.

Rich soil. Common.

var. *integrifolia*, T. & G.

Dry open woods. Frequent.

var. *sanguinea*, T. & G.

Peoria and Fulton counties, Brendel, Wolf; Wabash, Schneck.

MULGEDIUM

acuminatum, DC. C. & S.

Peoria county, Brendel: and southward. Scarce.

Floridanum, DC.

Rich soil. Frequent.

leucophæum, DC.

Low grounds. Winnebago county, Bebb; near Chicago, Munroe: Wabash county, Schneck.

SONCHUS

oleraceus, L.

Waste places. Frequent.

asper, Vill.

Waste places. Frequent.

LOBELIACEÆ.

LOBELIA

cardinalis, L.

River banks. Common.

syphilitica, L.

Low grounds. Common.

puberula, Michx. S.

Jackson county, Forbes.

leptostachys, A. DC. C. & S.

Peoria and Kankakee counties, and southward.

inflata, L.

Dry or damp woods and open places.

spicata, Lam.

Prairies. Common.

Kalmii, L. N.

Peoria county, Brendel; Chicago, Babcock.

CAMPANULACEÆ.

CAMPANULA

rotundifolia, L.

Jackson county, French, and not rare north.

aparinoides, Pursh.

Wet meadows. Common.

divaricata, Michx. S.

White county, rare, Schneck.

Americana, L.

Rich woods. Common.

SPECULARIA

perfoliata, A. DC.

Dry open places. Common.

ERICACEÆ.

GAYLUSSACIA

resinosa, T. & G.

Ogle county, Bebb; Kankakee, Hill; Chicago, Babcock; also in Union county, Wolf.

VACCINIUM

macrocarpon, Ait. N.

Swamps. Thornton, Cook county, Hill; McHenry, Vasey.

arboreum, Marshall. S.

Jackson and Union counties, Vasey.

Pennsylvanicum, Lam. N.

Kankakee county, Hill.

Canadense, Kalm. N.

Near Dixon, Vasey; Thornton, Cook co., Hill.

vacillans, Solander.

Dry woods. Near Thornton, Hill; Peoria county, Brendel; Jackson and Union, French, Forbes.

corymbosum, L.

Winnebago county, Bebb.

var. *atrococcum*, Gray.

Near Dixon, Lee county, Vasey.

ARCTOSTAPHYLOS

Uva-ursi, Spreng. N.

Peoria county, Brendel: near Chicago, Babcock. Rare.

ANDROMEDA

polifolia, L. N.

McHenry county, Vasey.

AZALEA

nudiflora, L. S.

Common in the Pine Hills, in the western part of Union county; it also occurs along bluffs bordering a little stream on the road from South Pass to Anna.—Forbes.

PYROLA

elliptica, Nutt. N.

Rich woods. Near Chicago, Babcock; McHenry, Vasey; and other counties in the northern tier.

chlorantha, Swartz. N.

McHenry county, Vasey.

CHIMAPHILA

umbellata, Nutt.

Jackson county, French; McHenry, Vasey.

MONOTROPA

uniflora, L.

Rich woods. Frequent.

AQUIFOLIACEÆ.

ILEX

decidua, Walt. S.

Low grounds. St. Clair county, Brendel; Wabash, Schneck; and southward.

verticillata, Gray.

Low grounds, throughout. Scarce.

EBENACEÆ.

DIOSPYROS

Virginiana, L.

Peoria county, Brendel; and southward.

SAPOTACEÆ.

BUMELIA

lycioides, Gærtn. S.

Low grounds. Union county, Wolf; and southward.

lanuginosa, Pers. S.

"Opposite St. Louis and southward"—Gray's Manual.

PLANTAGINACEÆ.

PLANTAGO

major, L.

Waste places. Common.

sparsiflora, Michx. C. & S.

Fulton county, Wolf; Menard, Hall; and southward.

cordata, Lam.

Wet places. Frequent.

lanceolata, L.

Roadsides, &c., in a few localities.

Virginica, L.

Dry grounds. Peoria county, Brendel; and southward.

pusilla, Nutt. C. & S.

Hancock county, Mead; and southward.

Patagonica, Jacq.,
var. *aristata*, Gray. S.W.

Adams county, Mead; and southward.

PRIMULACEÆ.

ANDROSACE

occidentalis, Pursh. N.

Hillsides. Fulton county, Wolf; Kankakee, Hill; and northward.

DODECATHEON

Meadia, L.

Prairies and open rich woods. Frequent.

var. *Frenchii*, Vasey.

"Distinguished by its small size, few-flowered scape, and thin, broad ovate leaves, abruptly contracted into a margined petiole which is longer than the leaf."—Vasey.

Bluffs of Jackson and Union counties, French.

LYSIMACHIA

thyrsoflora, L. C. & N.

Swamps and ponds. Cass county, Mead; and northward. Scarce.

stricta, Ait.

Low grounds. Scarce.

ciliata, L.

Woods along streams. Common.

lanceolata, Walt.

Low grounds. Common.

longifolia, Pursh. C. & N.

Low grounds from Menard county northward.

ANAGALLIS

arvensis, L.

A common garden weed about Athens, Menard county, Hall.

CENTUNCULUS

minimus, L. C. & S.

Low grounds. Hancock county, Mead; Menard, Hall; and southward.

SAMOLUS

Valerandi, L.,

var. *Americanus*, Gray.

Wet places. Frequent.

HOTTONIA

inflata, Ell. S.

Wabash county, Schneck; Union, Forbes; and southward. Rare.

LENTIBULACEÆ.

UTRICULARIA

vulgaris, L. Frequent.

Ponds.

minor, L. N.

McHenry county, Vasey.

intermedia, Hayne. C. & N.

Peoria county, Brendel; McHenry, Vasey.

biflora, Lam.

Credited to Illinois in Gray's Manual.

gibba, L.

McHenry county, Vasey; in a pond near Pinckneyville, Perry county, Forbes. Rare.

BIGNONIACEÆ.

BIGNONIA

capreolata, L. S.

River banks. Near Alton, Miss Holmes; Wabash county, Schneck; and southward.

TECOMA

radicans, Juss.

River banks, from Henderson and Peoria counties southward.

CATALPA

bignonioides, Walt. S.

Common and undoubtedly indigenous in Wabash county, Schneck, and in other lower counties along the Ohio, Vasey.

MARTYNIA

proboscidea, Glox.

Probably indigenous in southern counties; and a common roadside weed in many localities north.

OROBANCHACEÆ.

EPIPHEGUS

Virginiana, Bart. S.

Near Jonesboro, Union county, Vasey.

CONOPHOLIS

Americana, Wallroth.

Menard county, Hall; Marion, Bebb.

PHELIPÆA

Ludoviciana, Don. C.In the Sangamon river bottoms, Menard county, mostly parasitic on *AMBROSIA TRIFIDA*; very plentiful some seasons, in Sept. and Oct.—Hall.

APHYLLON

uniflorum, T. & G.

Woods. Frequent.

fasciculatum, T. & G. N.

Near Dixon, Lee county, Vasey.

SCROPHULARIACEÆ.

VERBASCUM

Thapsus, L.

Roadsides. Common.

Blattaria, L.

Roadsides, &c. Scarce.

LINARIA

Canadensis, Spreng.

Prairies and barrens. Scarce.

vulgaris, Miller.

Escaped from gardens to roadsides.

SCROPHULARIA

nodosa, L.

Rich woods. The narrow leaved form common by roadsides.

COLLINSIA

verna, Nutt.

Damp places, throughout.

CHELONE

glabra, L.

Banks of streams. Frequent.

PENTSTEMON

pubescens, Solander.

Prairies and barrens. Frequent.

Digitalis, Nutt.

River banks, throughout. Scarce.

grandiflorus, Fraser. N-W.

Frequent along the Mississippi in Henderson county above Oquawka, especially at Bald Bluff; Jo Daviess co., above Galena, in 1853, Brendel.

MIMULUS

ringens, L.

Wet places. Common.

alatus, Ait. C. & S.

Low grounds. Hancock county, Mead; Fulton, Wolf; and southward.

<i>Jamesii</i> , Torr.	N.	
Cold springs. Peoria county, Brendel; near Elgin, Kane county, Vasey; Winnebago, Bebb. Rare.		
CONOBEA		
<i>multifida</i> , Benth.		
River banks and sand bars. Henderson, Peoria and Kankakee counties, and southward.		
HERPESTIS		
<i>rotundifolia</i> , Pursh.	C. & S.	
Wet places. Hancock county, Mead; Menard, Hall; and southward. Rare.		
GRATIOLA		
<i>Virginiana</i> , L.		
Wet places. Common.		
<i>sphaerocarpa</i> , Ell.	C. & S.	
Ponds and ditches, from Henderson co. southward. Rare.		
ILYSANTHES		
<i>gratioloides</i> , Benth.		
Wet places. Common.		
SYNTHYRIS		
<i>Houghtoniana</i> , Benth.	C. & N.	
Prairies and barrens. Menard county, Hall; Henderson, (common about Oquawka); Lee, Vasey; Ogle, Bebb. Scarce.		
VERONICA		
<i>Virginica</i> , L.		
Woods. Common.		
<i>Anagallis</i> , L.	C. & N.	
Ponds and ditches. Menard county, Hall; and northward. Scarce.		
<i>Americana</i> , Schw.		
Peoria county, Brendel.		
<i>scutellata</i> , L.	N.	
Bogs. Fulton county, Wolf; and northward.		
<i>serpyllifolia</i> , L.		
Fulton county, Wolf; and southward. Scarce.		
<i>peregrina</i> , L.		
Common in wet and dry fields, &c.		
<i>arvensis</i> , L.		
Fields, &c. Frequent.		
BUCHNERA		
<i>Americana</i> , L.		
Menard county, Hall; St. Clair, Brendel. Rare.		
SEYMERIA		
<i>macrophylla</i> , Nutt.		
River banks, throughout. Rare.		
GERARDIA		
<i>purpurea</i> , L.		
Low grounds. Common.		
<i>aspera</i> , Dougl.		
Low grounds. Scarce.		
<i>tenuifolia</i> , Vahl.		
Open woods, &c. Common.		
<i>setacea</i> , Walt.		
McHenry county, Vasey; Winnebago, Bebb; Menard, Hall.		
<i>flava</i> , L.		
Hancock county, Mead.		
<i>quercifolia</i> , Pursh.		
Rich woods. Infrequent.		
<i>integrifolia</i> , Gray.		
Fulton county, Mead.		
<i>grandiflora</i> , Benth.		
Woods. McHenry county, Vasey; Winnebago, Bebb; Peoria, Brendel; Menard, Hall. Rare.		
<i>pedicularia</i> , L.		
Woods. Frequent.		
<i>auriculata</i> , Michx.		
Low grounds. Frequent.		
CASTILLEJA		
<i>coccinea</i> , Spreng.		
Prairies. Common.		
<i>sessiliflora</i> , Pursh.	N.	
Winnebago county, Bebb; McHenry, Vasey.		
PEDICULARIS		
<i>Canadensis</i> , L.		
Dry prairies and woods. Common.		
<i>lanceolata</i> , Michx.		
Wet places. Common.		
ACANTHACEÆ.		
DIANTHERA		
<i>Americana</i> , L.		
Margins of streams. Frequent.		
RUELLIA		
<i>ciliosa</i> , Pursh.		
Dry grounds. Common.		

strepens, L.
Rich woods. Infrequent.

VERBENACEÆ.

VERBENA
angustifolia, Michx.
Dry grounds, throughout.

hastata, L.
Low grounds. Common.

urticifolia, L.
Roadsides, &c. Common.

stricta, Vent.
Roa isides in dry grounds. Common.

bracteosa, Michx.
With the last. Common.

Anbletia, L. S.
Frequent and undoubtedly indigenous in the Pine Hills of Union county, Forbes.

LIPPIA
lanceolata, Michx.
Low grounds. Common.

PHRYMA
Leptostachya, L.
Rich woods. Frequent.

LABIATÆ.

TEUCRIUM
Canadense, L.
Low grounds. Common.

TRICHOSTEMA
dichotomum, L.
Dry grounds. Scarce.

ISANTHUS
cæruleus, Michx.
Dry hillsides, fields, &c. Frequent.

MENTHA
viridis, L.
Wet places. Scarce.

piperita, L.
Wet places. Rare.

Canadensis, L.
Low grounds. Common.

LYCOPUS
Virginicus, L.
Low grounds. Common.

Europæus, L.,
var. *integrifolius*, Gray.
Low grounds. Frequent.

var. *sinuatus*, Gray.
Low grounds. Common.

CUNILA
Mariana, L. S.
Marion county, Vasey ; and southward.

PYCNANTHEMUM
incanum, Michx.
Rocky woods and hills. Peoria county, Munroe ; and southward.

pilosum, Nutt.
Dry woods, &c. Henderson, Peoria and Kankakee counties, and southward.

muticum, Pers. S.
Wabash county, (rare), Schneck.

lanceolatum, Pursh.
Dry woods and hillsides. Common.

linifolium, Pursh.
With the last. Scarce northward.

CALAMINTHA
glabella, Benth., var. *Nuttallii*, Gr.
Near Chicago, Babcock, Vasey ; Kankakee co., Hill. Rare.

HEDEOMA
pulegioides, Pers.
Dry woods and roadsides. Common.
hispida, Pursh. N. & W.

Sandy barrens and river banks. Winnebago county, Bebb ; McHenry, Vasey ; Lee, Miss Ho'mes ; Henderson ; St. Clair, Brendel.

COLLINSONIA
Canadensis, L. S.
Wabash county, Schneck ; Jackson, French ; and southward.

SALVIA
lyrata, L. S.
Jackson county, Vasey ; and southward.

MONARDA
Clinopodia, L.
"Sparingly villous-pubescent or nearly glabrous ; stem rather acutely angled (2-4 ft. high) ; leaves ovate-lanceolate and ovate, acuminate, slender petioled, thin, coarsely and sharply serrate ; bracts whitish ; calyx moderately hirsute in the throat, hardly more so than in *M. DIDYMA* :

corolla an inch long, slightly pubescent, greenish-white or flesh-colored."—Gray.

In open rich woods near Oquawka, Henderson county : Marion county, Bebb.

fistulosa, L.

"Soft-pubescent with short hairs, or somewhat hoary, or glabrate : stem mostly with obtuse angles, (1-3 ft. high) : leaves commonly of rather firmer texture than in the preceding : bracts whitish or rarely purplish, dotted, the inner mostly hirsute-ciliate : calyx conspicuously and densely bearded at the throat : corolla (1-1½ in. long) pubescent, at least on the upper lip, purple or purplish."—Gray.

Wooded hillsides, &c. Common.

Bradburiana, Beck.

Woods. Schuyler county, Mead : and southward. Also near Chicago, Babcock—Int.?

punctata, L.

Barrens. Scarce.

BLEPHILIA

ciliata, Raf.

Dry open places, throughout.

hirsuta, Benth.

Rich woods. Frequent.

LOPHANTHUS

nepetoides, Benth.

Borders of woods. Common.

scrophulariaefolius, Benth.

With the last. Common.

NEPETA

Cataria, L.

Roadsides. Frequent.

Glechoma, Benth.

Occurs sparingly about gardens and in fields.

SYNANDRA

grandiflora, Nutt. S.

Jackson county, French ; Union, Forbes.

PHYSOSTEGIA

Virginiana, Benth.

The broad leaved form on river banks, a narrow leaved, taller form in dry woods. Common.

BRUNELLA

vulgaris, L.

Woods. Common.

SCUTELLARIA

versicolor, Nutt.

Woods along streams. Frequent.

canescens, Nutt.

C. & S.

Menard county, Hall ; and southward.

serrata, Andrews.

S.

Woods. Wabash county, Schneck.

nervosa, Pursh.

C. & S.

Woods. Peoria county, Brendel ; and southward.

parvula, Michx.

Dry hills and barrens. Common.

var. *mollis*, Gray.

"Diffuse, rather large, softly pubescent throughout with sub-viscid hairs : leaves often ¾ of an inch long."

Sandy banks and rocky cliffs. Along the Mississippi north of Oquawka ; also in Menard co., Hall ; Fulton, Wolf ; and northward to Kankakee (Hill) and Ogle (Bebb).

galericulata, L.

Damp woods, throughout. Scarce.

lateriflora, L.

Banks of streams. Common.

MARRUBIUM

vulgare, L.

Roadsides and waste places. Common.

STACHYS

palustris, L.

Wet places. Common.

var. *aspera*, Gray.

Low grounds. Common.

var. *glabra*, Gray.

Woods along streams. Frequent.

var. *cordata*, Gray.

Low grounds. Scarce.

hyssopifolia, Michx.

Illinois—Gray's Manual.

LEONURUS

Cardiaca, L.

Waste places. Common.

BORRAGINACEÆ.

SYMPHYTUM

officinale, L.

Sparingly escaped from gardens.

ONOSMODIUM

Carolinianum, DC.

River banks. Frequent.

molle, Michx.
 Dry hillsides, &c.

LITHOSPERMUM
arvense, L.
 Only in a few localities.
angustifolium, Michx.
 (Including *L. LONGIFLORUM*, Spreng., which is only the early flowering form—as was first discovered by Mr. Bebb, in 1873.)
 Prairies, throughout. Scarce.
latifolium, Michx.
 Borders of woods. Frequent.
hirtum, Lehm.
 Dry prairies and barrens. Common.
canescens, Lehm.
 Dry prairies and barrens. Common.

MERTENSIA
Virginica, DC.
 Rich woods. Frequent.

MYOSOTIS
verna, Nutt.
 Dry hills. Frequent.

ECHINOSPERMUM
Lappula, Lehm.
 Roadsides and waste places. Common.

CYNOGLOSSUM
officinale, L.
 Waste places. Common.
Virginicum, L. S.
 Rich woods. Marion county, Bebb; and southward.
Morisoni, DC.
 Borders of woods. Common.

HELIOTROPIUM
Curassavicum, L. C. & S.
 Menard county, Hall; and southward.

HELIOPHYTUM
Indicum, DC. C. & S.
 Waste places. From Menard county southward.

HYDROPHYLLACEÆ.
 HYDROPHYLLUM
macrophyllum, Nutt. S.
 Wabash county, Schneck.

Virginicum, L.
 Rich woods. Frequent.
Canadense, L.
 Rich woods. Scarce.
appendiculatum, Michx.
 Rich woods. Frequent.

ELLISIA
Nyctelea, L.
 (Including *E. AMBIGUA*, Nutt.) Common.

PHACELIA
bipinnatifida, Michx. S.
 Rich woods. St. Clair county, Brendel; Wabash, Schneck; and southward.
Purshii, Buckley. S.
 Moist shaded banks. Wabash county, Schneck; Union, Forbes.

HYDROLEA
affinis, Gray. S.
 Union county, Brendel; Pulaski, Vasey.

POLEMONIACEÆ.
 POLEMONIUM
reptans, L.
 Woods. Frequent.

PHLOX
paniculata, L. C. & S.
 Woods. Hancock county, Mead; Mason, Brendel; and southward.
maculata, L.
 Rich woods. Near Dixon, Vasey; Woodford county, Brendel; Hancock, Mead. Rare.
glaberrima, L.
 Prairies. Frequent.
pilosa, L.
 Prairies and open dry woods. Common.
divaricata, L.
 Rich woods. Common.
Stellaria, Gray. S.
 "Glabrous, caespitose, somewhat perennial at base; leaves narrow linear and rather rigid, the upper slightly ciliate at base; peduncles elongated, mostly 1-flowered; corolla pale blue or nearly white, the lobes bifid with short-oblong segments. Cliffs of the Kentucky river, only by Dr. Short."
 "Bake Oven" and other rocks about Grand Tower, Jackson county, French.

bifida, Beck.

Prairies and dry woods. Common on lake shore south of Chicago, Babcock; Kankakee county, Hill; Peoria, Brendel; Mason and Cass, Mead; Menard, Hall; and southward. (Union county, Forbes.) Scarce.

CONVOLVULACEÆ.

QUAMOCLIT

coccinea, MENCH. C. & S.

Damp fields and river banks from Hancock co. southward.

IPOMŒA

Nil, Roth.

Damp fields, &c. Henderson county; and southward.

lacunosa, L. C. & S.

River banks. Henderson and Peoria counties, and southward.

pandurata, Meyer.

Banks of streams. Frequent.

CALYSTEZIA

sepium, R. Br.

Moist banks and low grounds. Common.

spithamæa, Pursh.

Dry open places. Frequent.

BONAMIA

Pickeringii, Gray. Int. ?

Common and perfectly hardy on a sandy prairie near the Mississippi, 4 miles north of Oquawka, Henderson county. If introduced it must have been long since.

CUSCUTA

tenuiflora, Engelm.

River banks, from Menard county northward.

inflexa, Engelm.

In dry grounds. Peoria and Fulton counties, Brendel, Wolf.

decora, Choisy. S-W.

Low prairies. Fulton county, Wolf; Menard, Hall; Washington, Vasey.

arvensis, Beyrich.

Dry prairies and barrens. Kankakee county, Hill; Fulton, Wolf; Cass, near Beardstown, Mead.

chlorocarpa, Engelm.

Low grounds. Kankakee county, Hill; Peoria, Brendel; Wabash, Schneck.

Gronovii, Willd.

Low grounds. Frequent.

compacta, Juss. C. & S.

From Kankakee and Peoria counties southward.

glomerata, Choisy.

Damp prairies. Frequent.

SOLANACEÆ.

SOLANUM

Dulcamara, L.

Sparingly escaped from cultivation to roadsides.

nigrum, L.

Waste places. Common.

Carolinense, L. C. & S.

Fields and river banks. Henderson and Peoria counties and southward. Common.

PHYSALIS

Philadelphica, Lam.

Rich grounds. Kankakee county, Hill; Fulton, Wolf; Henderson; Wabash, Schneck. Rare.

angulata, L.

Menard county, Hall; Union, Vasey.

pubescens, L. C. & S.

Low grounds. Kankakee county, Hill; Fulton, Wolf; and southward.

viscosa, L.

Dry grounds. Frequent.

Pennsylvanica, L.

In dry or damp grounds. Frequent.

var. *lanceolata*, Gray.

Sandy prairies and barrens. Frequent.

NICANDRA

physaloides, Gærtn.

Waste places. Scarce.

DATURA

Stramonium, L.

Roadsides and waste places. Common.

Tatula, L.

With the last. Common.

GENTIANACEÆ.

SABBATIA

angularis, Pursh. C. & S.

Dry grounds from Hancock county southward. Frequent.

FRASERA

Carolinensis, Walt.

Fulton county, Wolf; and frequent southward.

GENTIANA

quinqueflora, Lam.

Hillsides. Scarce.

var. *occidentalis*, Gray.

With the typical form. Frequent.

crinita, Frœl. N.

Low grounds. Common near Chicago, Babcock; Winnebago county, Bebb.

detonsa, Fries. N.

With the last.

alba, Muhl.

Low grounds, throughout. Frequent.

Andrewsii, Griseb.

With the last. Frequent.

Saponaria, L.

Moist woods. Thornton, Cook county, Hill; Ogle, Miss Holmes. Rare.

puberula, Michx.

Dry prairies. Frequent.

BARTONIA

tenella, Muhl.

Woods. Kankakee county, Hill.

OBOLARIA

Virginica, L. S.

Rich woods. Jonesboro, Union county, Vasey; Wabash, Schneck.

MENYANTHES

trifoliata, L. N.

Bogs. Peoria county, Brendel; and northward.

LOGANIACEÆ.

SPIGELIA

Marilandica, L. S.

Rich woods. Near Jonesboro, Union county, Vasey; Jackson county, Brendel.

APOCYNACEÆ.

AMSONIA

Tabernæmontana, Walt. C. & S.

Low grounds. Peoria county, Brendel; and southward.

FORSTERONIA

difformis, A. DC. S.

River banks. Union county, Brendel.

APOCYNUM

androsæmifolium, L.

Borders of woods. Common.

cannabinum, L.

Banks of streams. Common.

ASCLEPIADACEÆ.

ASCEPIAS

Cornuti, Decaisne.

Rich soil. Common.

Sullivantii, Engelm. C. & N.

Low grounds. Frequent from Menard county northward.

phytolaccoides, Pursh.

Open rich woods, hillsides. Frequent.

purpurascens, L.

Borders of woods. Frequent.

variegata, L.

Dry woods. McLean county near Bloomington. Vasey; Wabash, Schneck. Rare.

ovalifolia, Decaisne. N.

Near Ringwood, McHenry county, Vasey.

quadrifolia, Jacq.

Hillsides in woods. Henderson county; Peoria, Brendel; Menard, Hall. Rare.

perennis, Walt. S.

Low grounds. Wabash county, Schneck; Jackson, Brendel; and southward.

incarnata, L.

Low grounds. Common.

obtusifolia, Michx.

Sandy prairies and barrens. Frequent.

Meadii, Torr. W.

Prairies. Near Augusta, Hancock co., Mead; Peoria, Brendel; Menard, Hall. Rare.

tuberosa, L.

Dry hills and barrens. Common.

verticillata, L.

Prairies and barrens. Common.

ACERATES

viridiflora, Ell.

Barrens. Common.

- lanuginosa*, Decaisne. N.
Prairies. Winnebago county, Bebb; McHenry, Vasey.
- longifolia*, Ell. Frequent.
Moist prairies.
- paniculata*, Decaisne. C. & S.
Prairies. Near Bloomington and Decatur, Miss Holmes; Marion county, Bebb, Vasey.

ENSLERIA

- albida*, Nutt. C. & S.
River banks. Hancock county, Mead; Menard, Hall; and southward.

GONOLOBUS

- lævis*, Michx. S.
Wabash county, Schneck.

OLEACEÆ.

FRAXINUS

- Americana*, L. Common.
River banks.
- pubescens*, Lam. Frequent.
Banks of streams.
- viridis*, Michx. f. Frequent.
River banks.
- sambucifolia*, Lam. C. & N.
Swamps. Fulton and Peoria counties, Wolf, Brendel; Kankakee, Hill; and probably north.
- quadrangulata*, Michx. Frequent.
Rich woods.

FORESTIERA

- acuminata*, Poir. C. & S.
River banks. Menard county, Hall; and southward.

ARISTOLOCHIACEÆ.

ASARUM

- Canadense*, L. Common.
Rich woods.

ARISTOLOCHIA

- Serpentaria*, L. C. & S.
Rich woods, from Peoria county (Brendel) southward.
- tomentosa*, Sims. S.
River banks. Wabash county, Schneck; Jackson, Vasey; and southward.

NYCTAGINACEÆ.

OXYBAPHUS

- nyctagineus*, Sweet.
Sandy and rocky river banks and barrens. Likely to become a troublesome weed in cultivated grounds, where it spreads rapidly. Frequent.

PHYTOLACCACEÆ.

PHYTOLACCA

- decandra*, L. Frequent.
Low grounds, waste places.

CHENOPODIACEÆ.

CYCLOLOMA

- platyphyllum*, Moq. W. & N.
Sandy river banks. Menard county, Hall; Fulton, Wolf; common along the Mississippi about Oquawka, and probably northward. Chicago, (rare), Babcock; perhaps introduced. Also at Grand Tower, Jackson county, French, doubtless adventive from the north.

CHENOPODIUM

- album*, L. Common.
Fields, gardens, &c.
- glaucum*, L. N.
Streets of Chicago, Babcock; Winnebago county, Bebb; Kankakee, Hill. Scarce.
- urbeicum*, L. Scarce.
Waste places.
- murale*, L. S.
Southern Illinois, Vasey.
- hybridum*, L. Frequent.
Waste places.
- Botrys*, L. Common.
Escaped from gardens to roadsides.
- ambrosioides*, L. Common.
Roadsides, &c.
- var. anthelminticum*, Gr. Common.
Roadsides, &c.

BLITUM

- capitatum*, L. N.
McHenry county, Vasey.

ATRIPLEX

- patula*, L.
Abundant at Canton, Fulton county, Wolf; Chicago, Babcock.

CORISPERMUM

hyssopifolium, L. N-E.

Abundant on lake shore about Chicago, Babcock.

AMARANTACEÆ.

AMARANTUS

paniculatus, L.

Sparingly escaped from gardens.

retroflexus, L.

Fields, gardens, &c.

Common.

albus, L.

Roadsides and waste places.

Common.

spinosus, L.

Waste places, from Peoria county southward.

C. & S.

Scarce.

MONTELIA

tamariscina, Gray.

River banks.

Common.

IRESINE

celosioides, L.

Wabash county, Schneck.

S.

FRÆLICHIA

Floridana, Moq.

Sandy barrens. Henderson county; Mason and Menard, Mead, Hall.

W.

POLYGONACEÆ.

POLYGONUM

orientale, L.

Spontaneous about gardens.

Pennsylvanicum, L.

Damp places.

Common.

incarnatum, Ell.

Low grounds.

Common.

Hartwrightii, Gray.

Winnebago county, Bebb.

N.

Persicaria, L.

Roadsides, &c.

Common.

Hydropiper, L.

Low grounds.

Common.

acre, H. B. K.

Low grounds.

Common.

hydropiperoides, Michx.

Margins of ponds, &c.

Frequent.

amphibium, L.

In ponds and damp grounds.

Common.

Virginianum, L.

Rich woods.

Scarce.

articulatum, L.

Near Dixon, Vasey; Ogle county, Bebb.

N.

aviculare, L.

Roadsides and waste places.

Common.

var. *erectum*, Roth.

Common.

ramosissimum, Michx.

River banks and barrens.

Frequent.

tenue, Michx.

Dry prairies and barrens.

Frequent.

arifolium, L.

Low grounds. McHenry county, Vasey.

sagittatum, L.

Low grounds.

Frequent.

Convolvulus, L.

Fields, and waste places.

Common.

dumetorum, L.

Moist thickets.

Common.

FAGOPYRUM

esculentum, Mœnch.

Persistent in fields.

RUMEX

Patientia, L.

Spontaneous about gardens at Augusta, Hancock county, Mead.

orbiculatus, Gray.

Wet places. Menard county, Hall; and northward.

C. & N.

Scarce.

Britannica, L.

Low grounds.

Frequent.

conglomeratus, Murray.

Kankakee county, Hill.

verticillatus, L.

Wet places.

Frequent.

crispus, L.

Gardens and waste places.

Common.

obtusifolius, L.

With the last.

Frequent.

maritimus, L.

McHenry county, Vasey.

N.

Engelmanni, Ledeb.

Formerly in St. Clair county, station now destroyed by cultivation, Engelmann.

S-W.

- Acetosella*, L.
Dry fields, roadsides, &c. Common.
- BRUNNICHIA
cirrhosa, Banks. S.
Pulaski county, Brendel.

LAURACEÆ.

- SASSAFRAS
officinale, Nees. Frequent.
Rich woods.
- LINDERA
Benzoin, Meisner. C. & S.
Damp woods. Fulton county, Wolf; and southward.

THYMELEACEÆ.

- DIRCA
palustris, L. N.
Damp woods. Peoria county, Brendel; and northward.

ELÆAGNACEÆ.

- SHEPHERDIA
Canadensis, Nutt.
Near Chicago, Babcock.

SANTALACEÆ.

- COMANDRA
umbellata, Nutt. Common.
Dry prairies.

LORANTHACEÆ.

- PHORADENDRON
flavescens, Nutt. S.
Wabash and Jackson counties; and southward.

SAURURACEÆ.

- SAURURUS
cernuus, L. Scarce.
Swamps.

CERATOPHYLLACEÆ.

- CERATOPHYLLUM
demersum, L. Frequent.
Ponds.

CALLITRICHACEÆ.

- CALLITRICHE
Austini, Engelm.
Damp grounds. Menard county, Hall; Washington, Vasey.
- verna*, L.
Ponds. Peoria and Fulton counties, Brendel, Wolf.
- heterophylla*, Pursh. C. & S.
Ponds. Menard county, Hall; Wabash, Schneck.
- autumnalis*, L.
Hancock county, Mead; Fulton, Wolf.

EUPHORBIACEÆ.

- EUPHORBIA
polygonifolia, L. N-E.
Common on sands of lake shore about Chicago, Babcock.
- Geyeri*, Engelm. C. & N.
Sandy prairies and barrens of Menard, Mason and Cass counties; Henderson; Lee, Vasey.
- serpens*, H. B. K. S-W.
In rich soil. Menard county, Hall; St. Clair, Engelm. Common along R., R. I. & St. L. Railroad at Monmouth, Warren county, probably adventive from the south.
- glyptosperma*, Engelm.
St. Clair county, Engelm.; Menard, Hall; Winnebago, Bebb. Rare.
- maculata*, L. Common.
Dry or moist open places.
- humistrata*, Engelm. W.
Alluvial river banks. Henderson county; Fulton, Wolf; Menard, Hall; and southward.
- hypericifolia*, L. Common.
Fields, dry open woods, &c.
- corollata*, L. Common.
Dry open woods and prairies.
- dentata*, Michx. C. & S.
Henderson county (common along C. B. & Q. Railroad east of Sagetown, perhaps introduced); Peoria, Brendel; Adams, Vasey; Menard, Hall; and probably southward. Scarce.

heterophylla, L.

- Rocky hillsides, &c. Winnebago county, Bebb; Kankakee, Hill; Peoria, Brendel; Mason and Menard, Mead, Hall; and probably southward. Infrequent.

- obtusata*, Pursh.
Damp woods. Kankakee county, Hill; Peoria, Brendel; Hancock, Mead. Rare.
- Helioscopia*, L.
About gardens in Menard and Hancock counties, Hall, Mead.
- Cyparissias*, L.
Sparingly escaped from cultivation.
- commutata*, Engelm.
Near Chicago, Babcock; banks of Rock river in Winnebago and Ogle counties, Bebb, and at Dixon, Vasey.
- ACALYPHA
Virginica, L.
Open woods, fields, &c. Common.
var. *gracilens*, Gray.
In drier places.
Caroliniana, Walt. S.
Near Jonesboro, Union county, Vasey; Wabash, Schneck.
- TRAGIA
macrocarpa, Willd. S.
Banks of the Ohio at Golconda, Pope county, Forbes.
- CROTON
glandulosus, L. C. & S.
Common in sandy barrens about Oquawka, Henderson county; Fulton, Wolf; and southward. Scarce.
capitatus, Michx. C. & S.
Barrens and roadsides. Menard county, Hall; and southward.
monanthogynus, Michx. S.
Barrens. Marion county, Vasey; St. Clair, Brendel; and southward.
- CROTONOPSIS
linearis, Michx. C. & S.
Barrens. Menard county, Hall; and southward.
- PHYLLANTHUS
Carolinensis, Walt. C. & S.
From Fulton and Mason counties southward.
- URTICACEÆ.
ULMUS
fulva, Michx.
River banks. Common.
Americana, L.
With the last. Common.
- racemosa*, Thomas. N.
Near Elgin, Kane county, Vasey.
- alata*, Michx. S.
Wabash and Jackson counties; and southward.
- CELTIS
occidentalis, L.
Banks of streams. Common.
Mississippiensis, Bosc. S.
River banks. Wabash and Jackson counties; and southward.
- MORUS
rubra, L.
Rich soil along streams. Common.
- URTICA
gracilis, Ait.
Moist grounds. Scarce.
dioica, L.
Waste places. Hancock county, Mead; Fulton, Wolf; Wabash, Schneck. Scarce.
- LAPORTEA
Canadensis, Gaud.
Damp rich woods. Frequent.
- PILEA
pumila, Gray.
Damp woods and banks. Common.
- BØHMERIA
cylindrica, Willd.
Damp woods. Frequent.
- PARIETARIA
Pennsylvanica, Muhl.
Shaded rocks, hedges, &c. Common.
- CANNABIS
sativa, L.
Waste places. Common.
- HUMULUS
Lupulus, L.
Banks of streams. Frequent.
- PLATANACEÆ.
PLATANUS
occidentalis, L. C. & S.
River banks. Henderson, Peoria and Kankakee counties, and southward. Common.

JUGLANDACEÆ.

JUGLANS

cinerea, L.

Banks of streams. Common.

nigra, L.

With the last. Common.

CARYA

olivæformis, Nutt. C. & S.

River banks. Common in Mississippi bottoms at Oquawka, Henderson county (and probably further north); Peoria, Brendel; and southward.

alba, Nutt.

Dry hillsides, &c. Common.

sulcata, Nutt.

River bottoms from Henderson and Peoria counties southward; and probably northward to Wisconsin along the Mississippi. The nut varies greatly in size and in the texture of the shell, which is sometimes thin and white as in the last.

tomentosa, Nutt.

Dry hillsides and barrens. Common.

porcina, Nutt.

Woods. Common.

amara, Nutt.

Woods along streams. Common.

CUPULIFERÆ.

QUERCUS

alba, L.

Rich woods. Common.

obtusiloba, Michx.

Barrens. Scarce northward.

macrocarpa, Michx.

In rich soil. Common.

[Fertile hybrids of ALBA and MACROCARPA occur in Menard county, Hall; Winnebago, Bebb.]

lyrata, Walt. S.

Near Jonesboro, Union county, Vasey, Wolf; Wabash, Schneck.

bicolor, Willd.

Banks of streams. Frequent.

Prinus, L.

Elgin, Kane county, Vasey; and frequent southward.

var. *monticola*, Michx.

Menard county, Hall.

var. *acuminata*, Michx.

Rich woods. Frequent.

imbricaria, Michx.

Near Joliet, Munroe; and southward.

nigra, L.

Sandy barrens. Near Chicago, Babcock; Henderson county; and southward. Common.

LEANA, Nutt.—This hybrid occurs in Peoria county, Brendel; Fulton, Wolf; and formerly in Hancock, Mead; also in Southern Ills., Forbes. Prof. Wolf has seen an IMBRICARIA tree with the leaves of LEANA on the lower branches.

falcata, Michx. S.

Jackson and Union counties, French, Vasey.

coccinea, Wang.

Rich, or dry and sandy soil. Common.

var. *tinctoria*, Gray.

With the last. Common.

rubra, L.

Mostly in rich soil along streams. Common.

palustris, Du Roi.

River banks. Scarce northward.

FAGUS

ferruginea, Ait. S.

Wabash and Jackson counties; and southward.

CORYLUS

Americana, Walt.

Hillsides and ravines. Common.

OSTRYA

Virginica, Willd.

Rich woods. Common.

CARPINUS

Americana, Michx.

Banks of streams. Frequent.

MYRICACEÆ.

COMPTONIA

asplenifolia, Ait. N.

Kankakee county, Hill, about Chicago, Munroe, Vasey, Babcock.

BETULACEÆ.

BETULA

lenta, L.

Near Dixon, Vasey; Wabash county, Schneck.

papyracea, Ait. N.

Lake shore about Chicago, (rare), Babcock; and Evanston, Vasey.

nigra, L. C. & S.

River banks. Kankakee and Henderson counties and southward. Common.

pumila, L. N.

Wet places. Near Chicago, Munroe; McHenry county, Vasey.

ALNUS

serrulata, Ait.

Bureau, McLean, Macon and Madison counties, Miss Holmes; White, Schneck; Union, French.

SALICACEÆ.

SALIX (By M. S. BEBB.)

candida, Willd. N.

In cold bogs, Peoria county, Brendel; McHenry, Vasey; Cook, Babcock; Winnebago! Rare.

tristis, Ait.

Sterile knolls and warm sandy prairies. Widely distributed but Infrequent.

humilis, Marshall.

Prairies and barrens. Everywhere our most common Willow.

Mr. Walsh has described (Proc. Ent. Soc'y Phila.) the "astonishing number of ten distinct galls" produced by this species: the number borne by other common Willows varying from one to (usually) three or four.

discolor, Muhl.

Banks of streams, throughout. Common. Probably including several species confused by cross fertilization.

sericea, Marshall.

Peoria county, Brendel. Rare. This species was published in 1785. *S. PETIOLARIS* was founded upon a cultivated plant, supposed to be of British origin, and published by Sir J. E. Smith (Linn. Trans. Vol. 6) in 1802, though the paper was received in 1801: therefore, should the two be united as has been done by Andersson, *S. SERICEA* should take precedence as the type of the aggregated species.

petiolaris, Smith.

Wabash county, Schneck; reported by others only at the north, where it is frequent.

var. *gracilis*, Anders.

Both forms, *SERICOCARPA* and *LEIOCARPA*, at Fountaindale, Winnebago county.

From *S. SERICEA*, Marsh. through this species and *S. ANGUSTATA*, Pursh to *S. CORDATA*, Muhl. an unbroken series of transitional forms occur—

the result of cross fertilization—making the limitation of species very difficult, if not purely arbitrary. The hybrid *SERICEXCORDATA* presents, very nearly, the technical characters of *S. PETIOLARIS*, Smith.

adenophylla, Hook. N-E.

Lake shore near Chicago, Babcock, Vasey.

Retains under cultivation its remarkably distinct character: the tomentose, glandular-serrate leaves, very unlike those of any other Willow occurring in the States east of the Mississippi.

cordata, Muhl.

Low, wet prairies and along streams. Common.

(?) var. *glaucophylla*, Bebb.

On the lake shore, associated with *S. ADENOPHYLLA*—Babcock; Fountaindale, (only three plants.)

In the Willow garden at Fountaindale, where several forms of this fine Willow sent by Mr. Babcock are under cultivation, it has every appearance of being specifically distinct from *S. CORDATA*.

rostrata, Richardson. N.

Henderson county, Patterson; otherwise only reported from the northern counties, where it is not uncommon.

lucida, Muhl.

Along streams, usually growing at the water's edge. Common at the north.

nigra, Marsh.

Common along water courses, especially southward.

amygdaloides, Anders.

(*S. NIGRA*, var., Anders. in DC.) Peoria county, Brendel; Henderson, Patterson; Cook, Babcock; Winnebago!

There is a similarity between the characters which distinguish this from the typical form of *S. NIGRA* and those which separate *S. PETIOLARIS* from *S. SERICEA*. If *S. PETIOLARIS* is admitted as a valid species, *S. AMYGDALOIDES* claims equal distinction.

longifolia, Muhl.

Wet places, throughout. Common.

var. *argyrophylla*, Anders.

Winnebago county!

myrtilloides, L. N.

Cold peat bogs. Peoria county, Brendel; McHenry, Vasey. Rare.

Widely distributed in sub-arctic regions, extending southward along the Pacific coast to Oregon, and on the Atlantic side to New Jersey. Its occurrence so far south in the Mississippi valley as found by Dr. Brendel, taken in connection with the equally unexpected finding of *S. CANDIDA*, indicates an exceptionally cold spot for the latitude.

POPULUS

- tremuloides, Michx. Common.
Woods.
- grandidentata, Michx. C. & N.
From Menard county northward. Frequent.
- heterophylla, L. S.
River banks. Wabash and Jackson counties,
and southward.
- monilifera, Ait. Common.
River banks.
- angulata, Ait.
Hancock county, Mead.

CONIFERÆ.

PINUS

- Banksiana, Lambert. N.
Abundant at Pine Station, near Chicago, Bab-
cock; Ogle county, Bebb.
- mitis, Michx. S.
Jackson and Union counties, Forbes.
- Strobis, L. N.
Cook county, Vasey; Winnebago, Bebb.

LARIX

- Americana, Michx. N.
McHenry county, Vasey.

THUJA

- occidentalis, L. N.
Swamps. One very old tree noticed near Peoria,
many years ago, Brendel; Chicago, Babcock,
and Elgin, Kane county, Vasey.

CUPRESSUS

- thyoides, L. S.
Gallatin county, Schneck.

TAXODIUM

- distichum, Richard. S.
Swamps. Wabash county, Schneck; Union,
Vasey, Brendel.

JUNIPERUS

- communis, L.
Near Chicago, Babcock; Kankakee county, Hill;
Wabash, Schneck. Scarce.
- Virginiana, L.
Rocky hillsides, &c. Frequent.
- Sabina, L.,
var. procumbens, Pursh. N-E.
Near Chicago, Babcock.

TAXUS

- baccata, L.,
var. Canadensis, Gray. N.
Winnebago county, Bebb.

ARACEÆ.

ARISÆMA

- triphylllum, Torr. Common.
Rich woods.
- Dracontium, Schott. Common.
Woods along streams.

PELTANDRA

- Virginica, Raf.
Ponds. Kankakee county, Hill; Peoria, Bren-
del; Cass, Mead; and in S. Illinois, Forbes.
Scarce.

SYMPLOCARPUS

- fetidus, Salisb.
Wet places, especially near cold springs.
Infrequent.

ACORUS

- Calamus, L. Frequent.
Margins of ponds, &c.

LEMNACEÆ.

LEMNA

- trisulca, L. Infrequent.
Ponds.
- minor, L. Frequent.
Ponds.
- polyrrhiza, L. Common.
Ponds.

WOLFFIA

- Columbiana, Karsten.
Ponds. Menard county, Hall; Fulton, Wolf;
St. Clair, Engelm.
- Braziliensis, Weddell.
Menard county, Hall.

TYPHACEÆ.

TYPHA

- latifolia, L. Common.
Margins of ponds.

SPARGANIUM

- eurycarpum, Engelm. Common.
Wet places.
- simplex, Hudson. N.
McHenry county, Vasey.

- var. *androcladum*, Gray. S.
 Wabash county, Schneck.
 var. *angustifolium*, Gray. N.
 McHenry county, Vasey.

NAIADACEÆ.

NAIAS

- flexilis*, Rostk.
 Ponds. Frequent.
Indica, var. *gracillima*, Braun.
 Ponds. Wabash county, Schneck.

ZANNICHELLIA

- palustris*, L.
 Ponds. Peoria, Menard, Fulton and Henderson
 counties, and probably elsewhere, but Scarce.

POTAMOGETON

- natans*, L. Frequent.
Claytonii, Tuckerman.
 Fulton county, Wolf.
Vaseyi, Robbins. N.
 Near Ringwood, McHenry county, Vasey.
Spirillus, Tuckerman.
 McHenry county, Vasey.
hybridus, Michx.
 Ponds. Infrequent.
rufescens, Schrader. N.
 McHenry county, Vasey.
lonchites, Tuckerman. N.
 Chicago, Babcock; McHenry county, Vasey.

- pulcher*, Tuckerman.
 Mason county, Hall.
gramineus, L.
 Near Chicago, Babcock; McHenry county, Va-
 sey; Hancock, Mead.
lucens, L.
 McHenry county, Vasey; Kankakee, Hill; Wa-
 bash, Schneck.
perfoliatus, L.
 McHenry county, Vasey; Kankakee, Hill.
compressus, L.
 McHenry county, Vasey; Kankakee, Hill; Me-
 nard, Hall.
pauciflorus, Pursh.
 Peoria county, Brendel; Kankakee, Hill; Mc-
 Henry, Vasey.

- pusillus*, L.
 Peoria and Fulton counties, Brendel, Wolf; Me-
 nard, Hall.
pectinatus, L.
 Ponds. Frequent.

ALISMACEÆ.

TRIGLOCHIN

- palustre*, L. N.
 Peoria county, Brendel; Kane and McHenry,
 Vasey.
maritimum, L. N-E.
 Chicago, Babcock; McHenry county, Vasey.

SCHEUCHZERIA

- palustris*, L. C. & N.
 Menard county, Hall; McHenry, Vasey.

ALISMA

- Plantago*, L., var. *Americanum*, Gr.
 Margins of ponds, &c. Common.

ECHINODORUS

- parvulus*, Engelm.
 Mason and Cass counties, Mead.
rostratus, Engelm. C. & S.
 About ponds, &c. Peoria county, Brendel; and
 southward.
radicans, Engelm.
 Menard county, Hall; and southward.

SAGITTARIA

- variabilis*, Engelm.
 Ponds and ditches. Common.
calycina, Engelm.
 Margins of ponds in Mississippi bottoms about
 Oquawka, Henderson county; Menard county,
 Hall. Rare.
heterophylla, Pursh.
 Ponds, often in water two or three feet deep.
 Frequent.
graminea, Michx.
 Margins of ponds. Scarce.

HYDROCHARIDACEÆ.

LIMNOBIUM

- Spongia*, Richard. S.
 Ponds. Union county, Vasey, Brendel.

ANACHARIS

- Canadensis*, Planchon.
 Ponds and slow streams. Common.

VALLISNERIA

spiralis, L.

Slow streams.

Infrequent.

ORCHIDACEÆ.

ORCHIS

spectabilis, L.

Rich woods throughout, but

Scarce.

HABENARIA

virescens, Spreng.

Near Chicago, Babcock; Peoria county, Brendel.

viridis, R. Br.,var. *bracteata*, Reich. N.

Near Chicago, Babcock; Kankakee county, Hill; Winnebago and McHenry, Bebb, Vasey.

Hookeri, Torr.

Glencoe, Cook county, Babcock.

ciliaris, R. Br.

Kankakee county, Hill; near Jonesboro, Union county, Miss Holmes.

leucophæa, Gray.

Moist prairies.

Scarce.

lacera, R. Br.

Calumet, Cook county, Babcock.

psycodes, Gray.

Winnebago county, Miss Holmes.

peramœna, Gray. S.

Marion county, Bebb; and southward.

GOODYERA

repens, R. Br.

Woods. Union county, French.

pubescens, R. Br.

Woods. McHenry county, Vasey.

SPIRANTHES

latifolia, Torr.

Menard county, Hall.

cernua, Richard.

Prairies.

Scarce.

gracilis, Bigelow.

Prairie hillsides.

Scarce.

POGONIA

ophioglossoides, Nutt.

McHenry county, Vasey; Kankakee, Hill.

pendula, Lindley.

Damp woods. Peoria county, Brendel; Menard, Hall; in the highlands of Union county, very common in certain localities, occurring in patches about old logs, &c., Forbes; Wabash, Schneck.

CALOPOGON

pulehellus, R. Br.

Prairies.

Infrequent.

MICROSTYLIS

monophyllos, Lindl.

C. & N.

Swamps. Menard county, Brendel; Elgin, Kane county, Vasey.

Rare.

ophioglossoides, Nutt.

Rich woods, in Henderson, Hancock and Menard counties.

Rare.

LIPARIS

lilifolia, Richard.

Rich woods.

Scarce.

Lœselii, Richard.

Bogs. Peoria county, Brendel; Menard, Hall.

Rare.

CORALLORHIZA

odontorhiza, Nutt.

C. & S.

Woods. Henderson county; Menard, Hall; Wabash, Schneck; Union, Forbes.

Rare.

multiflora, Nutt.

Dry woods. St. Clair county, Brendel.

APLECTRUM

hyemale, Nutt.

Rich woods. Winnebago county, Miss Holmes; Peoria, Brendel; Hancock, Mead; Menard, Hall; common near Makanda, Jackson county, Forbes; Wabash, Schneck.

Scarce.

CYPRIPEDIUM

candidum, Muhl.

Dry or moist prairies. Becoming scarce.

parviflorum, Salisb.

Damp prairies and woods.

Scarce.

pubescens, Willd.

Rich woods.

Frequent.

spectabile, Swartz.

Bogs and damp woods.

Scarce.

AMARYLLIDACEÆ.

PANCRATIUM

rotatum, Ker.

S.

Swamps. Wabash county, Schneck; Jackson and Union, Vasey, Forbes.

AGAVE

Virginica, L. S.

Rocky hillsides, &c. St. Clair county, Brendel ;
Wabash, Schneck ; and southward.

HYPOXYS

erecta, L. Common.
Open grassy places.

HEMODORACEÆ.

ALETRIS

farinosa, L. E.

Woods. Common at Hyde Park, near Chicago,
Babcock ; Kankakee county, Hill ; Wabash,
Schneck.

IRIDACEÆ.

IRIS

versicolor, L. Common.
Low grounds.

cuprea, Pursh.

Mound City, Pulaski county, Vasey.

PARDANTHUS

Chinensis, Ker.

Thoroughly naturalized at Grand Tower, Jack-
son county, Vasey ; and sparingly escaped from
cultivation in other localities.

SISYRINCHIUM

Bermudiana, L. Common.
Moist prairies, &c.

DIOSCOREACEÆ.

DIOSCOREA

villosa, L. Frequent.
Rich woods.

SMILACEÆ.

SMILAX

rotundifolia, L. Infrequent.
Rich woods.

var. *quadrangularis*, Gray. S.

From St. Clair and Wabash counties southward.

glauca, Walt. C. & S.

Woods. Springfield, Vasey ; and southward.

tamnoides, L. S.

Thickets. Jackson county, French ; and south-
ward.

hispidula, Muhl.

Rich woods. Frequent.

herbacea, L.

Woods and open places along streams.

LILIACEÆ.

TRILLIUM

sessile, L.

Moist woods. Kankakee county, Hill ; Wabash,
Schneck. Rare.

recurvatum, Beck.

Rich woods. Common.

grandiflorum, Salisb.

Abundant in ravines at Glencoe, Cook county,
Babcock ; Wabash, Schneck. Rare.

erectum, L., var. *album*, Pursh.

Rich woods. Scarce.

var. *declinatum*, Gray.

Rich woods, northward.

cernuum, L. N ?

Moist woods. McHenry county, Vasey ; Kan-
kakee, Hill.

nivale, Riddell. N.

Rich woods. Fulton and Peoria counties, Wolf,
Brendel ; near Dixon, Vasey. Rare.

MEDEOLA

Virginica, L.

Near Chicago, Babcock.

MELANTHIUM

Virginicum, L.

Damp prairies. Infrequent.

ZYGADENUS

glauca, Nutt. N.

Elgin, Kane county, Vasey.

STENANTHIUM

angustifolium, Gray. C. & S.

Pleasant Vale, Pike county, Mead ; Jonesboro,
Union county, Miss Holmes.

VERATRUM

Woodii, Robbins.

On dry wooded hillsides, near limestone ridges,
along Warsaw road, between West Point and
Bear Creek, Hancock county, Mead. July.

CHAMÆLIRIUM

luteum, Gray.

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TOFIELDIA			
	<i>glutinosa</i> , Willd.	N.	
	Near Chicago, Babcock; McHenry co., Vasey.		
UVULARIA			
	<i>grandiflora</i> , Smith.		
	Rich woods.	Frequent.	
	<i>perfoliata</i> , L.		
	Rich woods.	Scarce.	
SMILACINA			
	<i>racemosa</i> , Desf.		
	Rich woods.	Frequent.	
	<i>stellata</i> , Desf.		
	Moist banks.	Frequent.	
	<i>trifolia</i> , Desf.		
	Near Chicago, Babcock; Hancock county, Mead.		
	<i>bifolia</i> , Ker.	N.	
	Moist woods. Kankakee, Hill; and northern counties.		
POLYGONATUM			
	<i>biflorum</i> , Ell.		
	Open woods.	Common.	
	<i>giganteum</i> , Dietrich.		
	Woods.	Common.	
LILIUM			
	<i>Philadelphicum</i> , L.		
	Prairies.	Common.	
	<i>Canadense</i> , L.		
	Moist prairies.	Infrequent.	
	<i>superbum</i> , L.		
	Moist prairies.	Infrequent.	
ERYTHRONIUM			
	<i>Americanum</i> , Smith.	N.	
	Near Chicago, Babcock; McHenry co., Vasey.		
	<i>albidum</i> , Nutt.		
	Moist rich woods.	Common.	
SCILLA			
	<i>Fraseri</i> , Gray.		
	Low prairies.	Common.	
ALLIUM			
	<i>tricoceum</i> , Ait.		
	Rich woods.	Frequent.	
	<i>cernuum</i> , Roth.	N.	
	Common on prairies about Chicago, Babcock; Kankakee county, Hill; La Salle, Fortes; McHenry, Vasey.		
	<i>stellatum</i> , Nutt.	W.	
	On rocky edges of the bluffs on both sides of the Mississippi below St. Louis; on sandstone precipices above Prairie du Rocher; Engelmann.		
	<i>Canadense</i> , Kalm.		
	Damp prairies and woods.	Common.	
	<i>striatum</i> , Jacq.	C. & S.	
	Prairies and open woods. Fulton county, Vasey; and southward.		
		Frequent.	
JUNACEÆ.			
LUZULA			
	<i>campestris</i> , DC.		
	Dry woods, &c.	Frequent northward.	
JUNCUS			
	<i>effusus</i> , L.		
	Low grounds.	Scarce.	
	<i>Balticus</i> , Dethard.	N-E.	
	Common on lake shore about Chicago, Babcock.		
	<i>marginatus</i> , Rostk.		
	Kankakee county, Hill; Hancock, Mead; and southward.		
	<i>bufonius</i> , L.		
	Damp places by roadsides. Henderson county; McHenry, Vasey.		
		Rare.	
	<i>Gerardi</i> , Loisel.	N-E.	
	Chicago, Vasey.		
	<i>tenuis</i> , Willd.		
	Common in wet meadows, &c. Var. <i>SECUNDUS</i> in Hancock county, Mead.		
	<i>Greenii</i> , Oakes & Tuck.	N-E.	
	River banks near Kankakee, Hill.		
	<i>Vaseyi</i> , Engelm.	N.	
	Near Ringwood, McHenry county, Vasey.		
	<i>alpinus</i> , var. <i>insignis</i> , Fries.	N.	
	Near Ringwood, McHenry county, Vasey.		
	<i>acuminatus</i> , Michx.:		
	var. <i>legitimus</i> , Engelm.		
	Low grounds, throughout.		
	var. <i>robustus</i> , Engelm.	C. & S.	
	From Hancock county (Mead) southward.		
	var. <i>debilis</i> , Engelm.	S.	
	Southern Illinois, Vasey.		
	<i>nodosus</i> , L.	N.	
	Swamps. Kankakee county, Hill; and northward.		

var. *megacephalus*, Torr. C. & N.

Menard county, Hall; and northward.

brachycarpus, Engelm.

Moist woods and prairies. Scarce.

Canadensis, J. Gay.:var. *longicaudatus*, Eng. N.

Kankakee county, Hill; McHenry, Vasey.

var. *brachycephalus*, Eng. N.

Peoria county, Brendel, and probably northward.

var. *coarctatus*, Engelm. N.

Kankakee county, Hill.

PONTEDERIAACEÆ.

PONTEDERIA

cordata, L.

Ponds. Infrequent.

HETERANTHERA

reniformis, Ruiz & Pav. S.

Wabash county, Schneck.

limosa, Vahl.

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SCHOLLERA

graminea, Willd.

In ponds and slow streams. Frequent.

COMMELYNACEÆ.

COMMELYNA

erecta, L. S.

Wabash county, Schneck.

Virginica, L. C. & S.

Henderson county, (in sandy barrens); Mason, Mead; and southward.

Cayennensis, Richard. S.

Madison county, Hall; and southward.

TRADESCANTIA

Virginica, L.

Open woods and prairies. Common.

pilosa, Lehm. C. & S.

Hancock county, Mead; and southward.

XYRIDACEÆ.

XYRIS

flexuosa, Muhl.

Calumet, Cook county, (rare), Babcock; Kankakee, Hill; Mason, Hall. Rare.

CYPERACEÆ.

CYPERUS

flavescens, L. S.

Low grounds. Jonesboro, Union county, Vasey.

diandrus, Torr.

Low grounds. Common.

erythrorhizos, Muhl.

River banks, throughout. Frequent.

inflexus, Muhl.

River banks, close to the water. Common.

acuminatus, Torr. C. & S.

Low grounds, from Henderson and Peoria counties southward. Rare.

phymatodes, Muhl.

Wet places. Frequent.

strigosus, L.

Low grounds. Common.

Michauxianus, Schultes.

Low grounds. Frequent.

Engelmanni, Steud.

Low grounds. McHenry county, Vasey; banks of Cahokia creek, St. Clair county, Engelmann.

Schweinitzii, Torr. C. & N.

Sandy river banks, from Mason county northward. Frequent.

filiculmis, Vahl.

Barrens. Frequent.

ovularis, Torr. C. & S.

Barrens. Peoria county, Brendel; and southward.

KYLINGIA

pumila, Michx. C. & S.

Low grounds. Menard county, Hall; and southward.

DULICHIMUM

spathaceum, Pers.

Orders of ponds. Frequent.

FUIRENA

squarrosa, Michx. S.

Jonesboro, Union county, Vasey.

HEMICARPHA

subsquarrosa, Nees.

Sandy river banks, close to the water.

ELEOCHARIS

quadrangulata, R. Br. S.

St. Clair county, Brendel.

- obtusa*, Schultes.
Wet places. Common.
- Engelmanni*, Steud.
Differs from the last in its cylindrical spikes, shorter bristles and always 2-cleft style. Mississippi bottoms opposite St. Louis, Engelmann.
- var. *detonsa*, Gray.
Bristles wanting, or only their bases present. Spikes sometimes proliferous at base. Mississippi bottoms 1 mile south of Oquawka.
- palustris*, R. Br.
Wet places. Common.
- Wolfii*, Gray.
"Perennial, with very slender creeping rhizomes in small, scattered tufts; culm a foot high, slender, pale-glaucous, two-edged, flat on one side, convex on the other, faintly striate on both, sheath with obliquely truncate hyaline opening; spike ovate-oblong, acute; scales oblong-ovate, obtuse, scarious, pale tinged with purple; style 3-parted; achenium obovate, somewhat shining, faintly costate with about 9 ribs, the spaces between the ribs transversely marked with dotted lines, tubercle small, depressed-truncate and with the center more or less beaked; bristles of the perigynium (always?) none."
Margins of ponds. Peoria county, Brendel; Fulton, Wolf; Menard, Hall.
- compressa*, Sullivant. C. & N.
Wet places, from Menard county northward.
- intermedia*, Schultes. C. & N.
With the last.
- tenuis*, Schultes.
Wet places. Common.
- acicularis*, R. Br.
Margins of ponds. Common.
- SCIRPUS
- pauciflorus*, Lightfoot. N.
Wet places. McHenry county, Vasey.
- cæspitosus*, L. N.
McHenry county, Vasey.
- pungens*, Vahl.
Wet places. Frequent.
- validus*, Vahl.
Ponds. Common.
- debilis*, Pursh.
Hancock county, Mead; Menard, Hall.
- supinus*, L., var. *Hallii*, Gray.
Mason county, Hall.
- fluviatilis*, Gray. C. & N.
Margins of ponds and streams, from Menard county northward.
- atrovirens*, Muhl.
Wet prairies. Frequent.
- polyphyllus*, Vahl. S.
Wet places. St. Clair county, Brendel; S. Ill., Vasey.
- lineatus*, Michx.
Low grounds. Common, except at the north.
- Eriophorum*, Michx.
Wet places. Frequent.
- ERIOPHORUM
- Virginicum*, L.
Near Chicago, Babcock.
- polystachyon*, L. N.
Bogs. Common near Chicago, Babcock; Winnebago county, Bebb; McHenry, Vasey.
- gracile*, Koch. N.
Bogs. Peoria co., Brendel; McHenry, Vasey.
- FIMBRISTYLIS
- spadicea*, Vahl., var. *castanea*, Gray.
Sandy low grounds. Near Chicago, Babcock; Kankakee county, Hill; Henderson; St. Clair, Brendel. Rare.
- laxa*, Vahl.
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- autumnalis*, Rœm. & Schult.
Margins of streams and ponds, with *CYPERUS INFLEXUS* and *ERAGROSTIS REPTANS*.
- capillaris*, Gray.
Sandy barrens. Scarce.
- RHYNCHOSPORA
- cymosa*, Nutt.
Kankakee county, Hill.
- alba*, Vahl. N.
Bogs. Peoria co., Brendel; McHenry, Vasey.
- capillacea*, Torr.
Elgin, Kane county, Vasey; St. Clair, Brendel.
- glomerata*, Vahl.
Near Chicago, Babcock; Kankakee co., Hill.
- corniculata*, Gray. S.
Mound City, Pulaski county, Vasey.
- SCLERIA
- triglomerata*, Michx.
Prairies. Frequent.

CLADIUM

mariscoides, Torr. N.Bogs. Cook county, Seamon in Herb. Bebb ;
McHenry, Vasey.

CAREX

polytrichoides, Muhl.

Low grounds. Scarce.

Stuedelii, Kunth.Near Chicago, and Elgin, Kane county, Vasey ;
and frequent southward.*siccata*, Dew. C. & N.

Barrens. Menard county, Hall ; and northward.

disticha, Huds. C. & N.

Menard county, Hall ; and northward.

teretiuscula, Good. C. & N.

Wet prairies, from Fulton county northward.

var. *major*, Koch. N.

With the last in Winnebago county, Bebb.

decomposita, Muhl.

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vulpinoidea, Michx.

Low grounds. Common.

crus-corvi, Shuttleworth.Wet places bordering woods and thickets.
Frequent.*stipata*, Muhl.

Low grounds. Common.

conjuncta, Boott.

Low grounds. Scarce.

sparganioides, Muhl.

Low grounds. Frequent.

cephaloidea, (Dew.) Boott. C. & N.Open grassy places. Fulton county, Wolf ; and
northward. Not so averse to animal manures as
most Carices, and hence spreading in top-dressed
meadows.—Bebb. Scarce.*cephalophora*, Muhl.

Woods and fields. Frequent.

Muhlenbergii, Schk.

Barrens. Scarce.

rosea, Schk.

Moist woods and meadows. Frequent.

retroflexa, Muhl. S. ?Moist woods and meadows, southward. (Wash-
ington county, Vasey ; Jackson, French.)*chordorhiza*, Ehrh. N.

Cold bogs. McHenry county, Vasey.

sterilis, Willd. N.Wet places. Peoria county, Brendel ; Kankakee,
Hill.*stellulata*, L. C. & N.

Wet places. Menard co., Hall ; and northward.

var. *scirpoides*, Gray. C. & N.

With the typical form.

arida, Schw. & Torr.

Damp woods and meadows. Frequent.

scoparia, Schk.

Wet meadows. Common.

Bebbii, Olney. N.Moist prairies. Winnebago county, Bebb—(and
along the great lakes and westward.)*lagopodioides*, Schk.

Moist meadows and shady places. Common.

cristata, Schw.

Low grounds. Frequent.

var. *mirabilis*, Boott.

With the typical form. Frequent.

fœnea, Willd., var. ? *ferruginea*, Bt.

Menard county, Hall ; Wabash, Schneck.

straminea, Schk.

Damp prairies and borders of woods. Common.

Vars. *TYPICA*, *TENERA* and *FESTUCACEA* are
common ; var. *CRAWEI* in Winnebago county,
Bebb ; var. *MEADII* in Hancock county, Mead.*aquatilis*, Wahl. N.

McHenry county, Vasey.

aperta, Boott.

Low prairies, &c. Frequent.

stricta, Lam.

Low grounds. Common.

crinita, Lam.Low grounds. McHenry county, Vasey ; Han-
cock, Mead ; Jackson, French. Scarce.*limosa*, L. N.

Bogs. Peoria county, Brendel.

Buxbaumii, Wahl.

Bogs. Not rare northward.

Shortiana, Dew. C. & S.

Swamps, from Peoria county southward.

aurea, Nutt. N.Near Chicago, Babcock. Also the var. *ANDRO-
GYNÆ*, Olney.

- panicea*, L., var. *Meadii*, Olney.
Moist prairies. Infrequent.
- var. *Bebbii*, Olney. N. ?
Winnebago county, Bebb; Chicago, Babeock.
- tetanica*, Schk.
Margins of lakes and streams. Frequent.
- Crawei*, Dew. N.
South-west of Hyde Park, Cook county, (rare), Babeock.
- granularis*, Muhl.
Low grounds. Common.
- conoidea*, Schk.
Moist prairies. Scarce.
- grisea*, Wahl.
Moist woods. Common.
- Davisi*, Schw. & Torr.
Moist meadows and damp woods. Frequent.
- virescens*, Muhl. C. & S.
Woods, from Hancock county southward.
- triceps*, Michx. C. & S.
Woods and meadows, from Peoria county (Brendel) southward.
- plantaginea*, Lam.
Rich woods. Washington county, French.
- Careyana*, Torr. S.
Rich woods. Marion county, Bebb; Jackson and Union, Vasey, Brendel.
- platyphylla*, Carey.
Rich woods. McHenry county, Vasey.
- retrocurva*, Dew.
Elgin, Kane county, Vasey.
- digitalis*, Willd.
Peoria county, Brendel; southern Ills., Vasey.
- laxiflora*, Lam.
Open rich woods. Common.
- oligocarpa*, Schk. C. & S.
Woods. From Kankakee and Peoria counties southward.
- Hitchcockiana*, Dew. C. & S.
Woods. Peoria county, and southward.
- pedunculata*, Muhl. N.
Elgin, Kane county, Vasey.
- umbellata*, Schk.
Rocky hillsides. Menard county, Hall; and northward. Scarce.
- Emmonsii*, Dew.
Dry woody hillsides. Menard county, Hall, and southward, Vasey, French. Rare.
- Pennsylvanica*, Lam.
Dry hillsides and barrens. Common.
- varia*, Muhl.
With the last. Frequent.
- Richardsonii*, R. Br. C. & N.
Prairies. Menard county, Hall; Peoria and Fulton, Brendel, Wolf; Winnebago, Bebb. Rare.
- pubescens*, Muhl.
Rich woods. Frequent.
- debilis*, Michx. S.
Southern Illinois, Vasey.
- Æderi*, Ehrh. N.
Chicago, Babeock; McHenry county, Vasey.
- filiformis*, L. N.
Bogs. Peoria county, Brendel; and northward. (Winnebago and McHenry, Bebb, Vasey.)
- lanuginosa*, Michx.
Low grounds. Common.
- riparia*, Curtis.
Wet places. Infrequent.
- trichocarpa*, Muhl. C. & N.
Low grounds. Menard county, Hall; and northward.
- var. *imberbis*, Gray. C. & N.
With the typical form.
- comosa*, Boott.
Wet places. Frequent.
- hystricina*, Willd.
Wet meadows. Common.
- tentaculata*, Muhl.
Moist prairies. Frequent.
- intumescens*, Rudge.
Wet places. Infrequent.
- Grayii*, Carey.
Damp, open woods along streams. Frequent.
In the Ojawa plant the fruit is "smooth and shining," but other Illinois specimens have a rough-beaked fruit. It is, however, easily distinguished from the last species by the "globose, densely flowered spikes, the perigynia spreading and reflexed."
- lupulina*, Muhl.
Common along streams and about ponds.

- lupuliformis*, Sartwell.
With the last. Peoria county, Brendel; Winnebago, Bebb; Chicago, Babcock.
- squarrosa*, L. C. & S.
Low grounds, from Henderson and Peoria counties southward. Common.
- stenolepis*, Torr. C. & S.
Wet places, from Menard county southward.
- retrorsa*, Schw.
McHenry and Winnebago counties, Vasey, Bebb; also in Wabash, Schneck. Probably rare, except at the north.
- gigantea*, Rudge. S.
Wabash county, Schneck.
- utriculata*, Boott.
Swamps. Frequent.
- monile*, Tuckerman.
Swamps. Infrequent.
- Tuckermani*, Boott. N.
Wet places, from Hancock county northward.
- bullata*, Schk.
Hancock county, Mead.
- longirostris*, Torr. N.
Rich woods, from Hancock county (Mead) northward. Scarce.
- GRAMINEÆ.**
- LEERSIA**
- Virginica*, Willd.
Damp woods. Common.
- oryzoides*, Swartz.
Margins of streams and ponds. Common.
- lenticularis*, Michx. C. & S.
River banks, from Peoria and Henderson counties southward.
- ZIZANIA**
- aquatica*, L.
Margins of ponds and sloughs. Common.
- ALOPECURUS**
- pratensis*, L.
Peoria county, Brendel.
- geniculatus*, L.
Wet meadows. Common near Oquawka, Henderson county; Marion, Bebb.
- PHLEUM**
- pratense*, L.
Fields, and escaped to roadsides. Common.
- VILFA**
- aspera*, Beauv.
Dry hills and barrens. Common.
- vaginæflora*, Torr.
With the last. Common.
- Virginica*, Beauv.
Fulton county, Wolf. (Determined by Prof. A. Wood.)
- SPOROBOLUS**
- heterolepis*, Gray.
Dry prairies and barrens. Frequent.
- cryptandrus*, Gray. N.
Sandy river banks and barrens. Common along the Mississippi at Oquawka; near Chicago, Babcock. Root perennial.
- AGROSTIS**
- perennans*, Tuckerm.
Damp woods. Infrequent.
- scabra*, Willd.
Prairies and barrens. Common.
- vulgaris*, With.
Damp meadows. Common.
- alba*, L.
With the last. Scarce.
- CINNA**
- arundinacea*, L.
Damp woods. Common.
- var. *pendula*, Gray. N.
Kankakee county, Hill; Elgin, Kane co., Vasey.
- MUHLENBERGIA**
- sobolifera*, Trin.
Open rocky woods. Infrequent.
- glomerata*, Trin. C. & N.
Bogs, from Menard county northward.
- Mexicana*, Trin.
Low grounds. Common.
- sylvatica*, T. & G.
Woods. Frequent.
- Willdenovii*, Trin.
Rocky woods. Common.
- diffusa*, Schreber.
Open woods. Frequent.
- BRACHYELYTRUM**
- aristatum*, Beauv.
Shaded rocky hillsides. Frequent.

CALAMAGROSTIS

Canadensis, Beauv.

Wet prairies and swamps.

Common.

longifolia, Hook.

C. & N.

Sandy barrens. Mason county, Hall; along the Mississippi above Oquawka; lake shore at Chicago, Babcock.

Scarce.

arenaria, Roth.

N-E.

Lake shore at Chicago, Babcock.

ORYZOPSIS

melanocarpa, Muhl.

Rocky woods. Peoria county, Brendel.

STIPA

spartea, Trin.

C. & N.

Prairies and barrens, from Menard county northward.

Common.

ARISTIDA

ramosissima, Engelm.

S.

Dry prairies. St. Clair county, Brendel; Wabash, Schneck; Marion, (the var. *UNIARISTATA*) Vasey.*dichotoma*, Michx.

C. & S.

Barrens. Hancock county, Mead; Fulton, Wolf; and southward.

gracilis, Ell.

C. & S.

Barrens, from Hancock county southward.

stricta, Michx.

Mason county, Mead.

oligantha, Michx.

C. & S.

Barrens, from Henderson county southward.

purpurascens, Poir.

C. & S.

Fulton county, Wolf; Menard, Hall; and southward.

tuberculosa, Nutt.

Sandy prairies and barrens. Near Chicago, Babcock; and from Henderson county southward.

SPARTINA

cynosuroides, Willd.

River bottoms.

Common.

BOUPELOUA

oligostachya, Torr.

N.

Sandy prairies. Dixon, Lee county, Vasey.

hirsuta, Lagasca.

W.

Sandy prairies and barrens. From Lee county to Mason and Cass, and westward. Frequent.

curtipendula, Gray.

Prairies and barrens.

Frequent.

var. *aristosa*, Gray.

With the typical form.

DACTYLOCTENIUM

Ægyptiacum, Willd.

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ELEUSINE

Indica, Gært. n.

C. & S.

Gardens, &c., from Henderson and Peoria counties southward.

LEPTOCHLOA

mucronata, Kunth.

S.

Mound City, Pulaski county, Vasey.

fascicularis, Gray.

C. & S.

Low grounds. Menard county, Hall; and southward.

TRICUSPIS

seslerioides, Torr.

C. & S.

Barrens, from Henderson and Peoria counties southward.

purpurea, Gray.Sandy prairies and barrens, with *BOUPELOUA HIRSUTA* and *PANICUM AUTUMNALE*, from Henderson to Fulton (Wolf) and Mason (Mead) counties.

DIARRHENA

Americana, Beauv.

C. & S.

Rich woods, from Peoria county southward.

DACTYLIS

glomerata, L.

Fields and yards.

Frequent.

KÆLERIA

crisata, Pers.

Prairies and barrens. Washington co., French, and common northward.

EATONIA

obtusata, Gray.

In dry soil.

Frequent.

Pennsylvanica, Gray.

Moist woods and meadows.

Frequent.

MELICA

mutica, Walt.

Prairies and borders of woods.

Frequent.

GLYCERIA

Canadensis, Trin.

N.

Bogs. Kane and McHenry counties, Vasey.

nervata, Trin.

Low grounds.

Common.

fluitans, R. Br.
Margins of ponds. Common.

POA
annua, L.
Roadsides and waste places. Frequent.

compressa, L.
Roadsides, woods, &c., in dry soil. Frequent.

serotina, Ehrhart.
Low grounds. Frequent.

pratensis, L.
Common everywhere.

sylvestris, Gray.
Woods and meadows. Infrequent.

alsodes, Gray.
Woody hillsides. Hancock county, Mead.

ERAGROSTIS
reptans, Nees.
Margins of streams and ponds, close to the water.

poaeoides, Beauv.
Sandy roadsides, river banks, &c.
var. megastachya, Gray.
With the last and more common.

pilosa, Beauv.
Sandy waste places, river banks, &c. Common.

Frankii, Meyer.
River banks, throughout. Frequent.

tenuis, Gray. C. & S.
Sandy barrens, from Henderson co. to Menard ;
Wabash, Schneck. Scarce.

capillaris, Nees.
Sandy barrens. Frequent.

pectinacea, Gray.
And var. *SPECTABILIS*, Gray. Common in sandy
barrens.

FESTUCA
tenella, Willd.
Common in dry grounds.

elator, L.
Meadows. Scarce.

nutans, Willd.
Open woods and prairies. Common.

BROMUS
secalinus, L.
Fields. Common.

racemosus, L.
Fields. Scarce.

Kalmii, Gray. C. & N.
Prairies, from Fulton county northward.

ciliatus, L.
Woody hillsides. Common.

UNIOLA
latifolia, Michx. S.
Rich woods on hillsides. Marion county, Bebb ;
and southward.

PHRAGMITES
communis, Trin.
River bottoms and swamps. Common.

ARUNDINARIA
macrosperma, Michx. S.
Jackson and Union counties, French.

tecta, Muhl. S.
River banks. Wabash county, Schneck ; Union.
Wolf ; and southward.

LEPTURUS
paniculatus, Nutt. W.
Open grounds and salt licks in Hancock county.
Mead.

TRITICUM
repens, L.
Reported only from the northern counties, where
it is common.

caninum, L. N.
McHenry county, Vasey.

HORDEUM
jubatum, L.
Sandy prairies. Infrequent.

pratense, Huds. C. & S.
Prairies. From Peoria and Henderson counties
southward.

ELYMUS
Virginicus, L.
River banks. Common.

Canadensis, L.
And var. *GLAUCIFOLIUS*, Gray. Common.

striatus, Willd.
Borders of woods. Infrequent.

GYMNOSTICHUM
Hystrix, Schreb.
Rich woods. Frequent.

DANTHONIA
spicata, Beauv.
 Dry grounds. Infrequent.

TRisetum
palustre, Torr.
 Illinois—Gray's Manual.

HOLCUS
lanatus, L.
 Moist meadows. Adams county. Mead.

HIEROCHLOA
borealis, R. & S. N.
 Wet prairies. Grundy county, Brendel; and northward.

PHALARIS
arundinacea, L.
 Wet places. Frequent.

MILIUM
effusum, L. N.
 Elgin, Kane county, Vasey.

PASPALUM
fluitans, Kunth. S.
 Swamps. St. Clair county, Brendel; and southward.
Walterianum, Schultes. S.
 St. Clair county, Brendel
setaceum, Michx. C. & S.
 Sandy barrens. Kankakee county, Hill; and southward.
laeve, Michx. S.
 Damp grounds. Marion county, Bebb; and southward.

PANICUM
filiforme, L. C. & S.
 Sandy barrens, from Henderson county southward.
glabrum, Gaudin.
 Waste places. Common.
sanguinale, L.
 Common in cultivated grounds.
anceps, Michx. C. & S.
 Low grounds. Peoria county, Brendel; and southward.
agrostoides, Spreng. C. & S.
 Wet places, from Hancock county southward.
proliferum, Lam. C. & S.
 River banks, damp fields, &c., from Henderson county southward.

capillare, L.
 Common in dry soil.

autumnale, Bosc.
 Sandy prairies and barrens. Lee county, Vasey; Kankakee, Hill; rather common from Henderson and Peoria to Menard; and probably southward. Root perennial!

virgatum, L.
 Low grounds. Common.

latifolium, L.
 Rich woods. Frequent.

clandestinum, L.
 Moist woods and open damp places. Frequent.

microcarpon, Muhl. S.
 Woods. Marion county, Bebb; and southward.

pauciflorum, Ell. ?
 Prairies. Common.

dichotomum, L.
 Dry or damp prairies and woods. Common.

depauperatum, Muhl.
 Dry prairies and barrens. Common.

Crus-galli, L.
 And var. *HISPIDUM*. Damp grounds. Common.

SETARIA
verticillata, Beauv.
 Cultivated grounds. Infrequent.
glauca, Beauv.
 Common in gardens and fields.
viridis, Beauv.
 Cultivated grounds. Frequent.

CENCHRUS
tribuloides, L.
 Sandy river banks. Too common in many localities.

TRIPSACUM
dactyloides, L. C. & S.
 Low grounds. Along Spoon River in Fulton county, Mead; and southward.

ERIANTHUS
alopecuroides, Ell. S.
 Illinois—Gray's Manual.

ANDROPOGON
furcatus, Muhl.
 Prairies and barrens. Common.
scoparius, Michx.
 Dry prairies and barrens. Common.

- Virginicus*, L. S.
St. Clair county, Brendel; and southward.
- SORGHUM**
nutans, Gray.
Common in dry grounds.
- EQUISETACEÆ.**
- EQUISETUM**
arvense, L. Common.
Damp places.
palustre, L. N.
Wet places. Peoria county, Wolf, Brendel.
limosum, L.
In shallow water. Cass county, Mead; Peoria, Brendel; McHenry, Vasey. Scarce.
lævigatum, Braun. C. & S.
In dry or moist clay and sand, from Henderson and Peoria counties southward.
robustum, Braun. C. & S.
River banks, from Peoria county southward.
hyemale, L. Frequent.
Wet banks.
variegatum, Schleicher. N.
Peoria county, Brendel.
scirpoides, Michx. N.
Ringwood, McHenry county, Vasey.
- FILICES.**
- POLYPODIUM**
vulgare, L.
Sandstone cliffs of Og'le county, Bebb; common in Jackson and Union, French, Forbes.
incanum, Swartz. S.
On trees and rocks. Jackson county, French; Wabash, Schneck; and southward.
- ADIANTUM**
pedatum, L. Common.
Rich woods.
- PTERIS**
aquilina, L. Common.
Copses.
- CHEILANTHES**
vestita, Swartz. S.
Rocks. St. Clair county, Brendel; and southward.
- lanuginosa*, Nutt. W.
Clefts of rocks. Near Galena, Brendel; Pike county, Mead; Jackson, French.
- PELLÆA**
gracilis, Hook.
In rocky ravines near the Kankakee river (rare) in Kankakee county, Hill.
atropurpurea, Link. Infrequent.
On dry rocks.
- ASPLENIUM**
pinnatifidum, Nutt.
On rocks. Jackson and Union counties, French; Pope, Schneck.
Trichomanes, L. S?
On shaded rocks. Jackson and Union counties, French; Wabash, Schneck.
ebeneum, Ait. Scarce.
Open rocky woods.
angustifolium, Michx. Scarce.
Rich woods.
thelypteroides, Michx. Rare.
Rich woods. Peoria and Fulton counties, Brendel, Wolf; Wabash, Schneck.
Filix-fœmina, Bernh. Frequent.
Rich woods.
- CAMPTOSORUS**
rhizophyllus, Link. Scarce.
Shaded rocks, throughout, but
- PHEGOPTERIS**
polypodioides, Fee. Damp woods. Menard county, Hall.
hexagonoptera, Fee. Frequent.
Rich woods.
- ASPIDIUM**
Thelypteris, Swartz. Frequent.
Swamps.
Novaboracense, Swartz. Scarce.
Swamps. Elgin, Kane county, Vasey; Kankakee, Hill; Wabash, Schneck.
spinulosum, Swartz, var. *intermedium*, Eaton. Infrequent.
Woods.
Goldianum, Hook. Frequent.
Rich woods. Peoria and Fulton counties, Brendel, Wolf; Makanda, Jackson county, Forbes.

<i>marginale</i> , Swartz.		<i>Claytoniana</i> , L.	
Shaded rocky hillsides.	Scarce.	Moist ravines.	Common.
<i>acrostichoides</i> , Swartz.		BOTRYCHIUM	
Moist, shady hillsides.	Infrequent.	<i>Virginicum</i> , Swartz.	
CYSTOPTERIS		Rich woods.	Frequent.
<i>bulbifera</i> , Bernh.		<i>lunarioides</i> , Swartz, var. <i>obliquum</i> .	
Shaded rocks.	Frequent.	Woods. S. Ill., Vasey, Schneck.	
<i>fragilis</i> , Bernh.		OPHIOGLOSSUM	
Rich woods on hillsides.	Common.	<i>vulgatum</i> , L.	
STRUTHIOPTERIS		Wabash county, (a single plant), Schneck.	
<i>Germanica</i> , Willd.		LYCOPODIACEÆ	
Damp woods.	Infrequent.	LYCOPODIUM	
ONOCLEA		<i>lucidulum</i> , Michx.	N.
<i>sensibilis</i> , L.		Damp woods. Evanston, Cook county, Vasey ;	
Wet places.	Common.	Ogle, Bebb.	
WOODSIA		<i>Selago</i> , L.	N.
<i>obtusa</i> , Torr.	S. ?	"Collected by J. W. Powell near Ottawa"—Vasey.	
Rocks. Marion co., Bebb ; Wabash, Schneck ;		SELAGINELLA	
and southward.		<i>rupestris</i> , Spring.	
<i>Ilvensis</i> , R. Br.	N.	Dry rocks and barrens. Henderson county ;	
Occurs sparingly on sandstone cliffs near Oregon,		Ogle, Bebb. Rare, or overlooked.	
Ogle county, Bebb.		<i>apus</i> , Spring.	
DICKSONIA		Low, shady places.	Scarce.
<i>punctilobula</i> , Kunze.		ISOETES	
Wabash county, Schneck.		<i>melanopoda</i> , J. Gay.	C. & N.
OSMUNDA		Wet prairies and ponds. Menard county, Hall ;	
<i>regalis</i> , L.		Fulton, Wolf ; McHenry, Vasey.	
Wet woods.	Infrequent.	HYDROPTERIDES.	
<i>cinnamomea</i> , L.		AZOLLA	
Damp woods. Common near Chicago, Babcock ;		<i>Caroliniana</i> , Willd.	C. & S.
Kankakee county, Hill ; Menard, Hall.		Ponds, from Henderson and Peoria counties	
		southward.	Scarce.



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