FLORA OF WABAUNSEE COUNTY, KANSAS

by

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INTRODUCTION

The work upon which this thesis is based was done in Wabaunsee County, Kansas, during the growing seasons of 1926-1927. It is my purpose to give in this paper a list of...
of the species of plants in the county with some account of their distribution, habitat and time of first flowers or fruiting.

As early as 1893, some collections were made in Wabaunsee County by J. E. Norton, C. L. Clothier and A. S. Hitchcock. Seemingly they were limited to the northern portion of the county.

GEOGRAPHY

Wabaunsee County is an area of 804 square miles situated in the eastern third of the State of Kansas, having the eastern boundary near 96° W. and extending west to just beyond 96°30'. The northern boundary is the Kansas River. It is extremely irregular, following the winding course of the Kansas River, the northeast corner being six miles south of the northwest corner. The south boundary is at latitude 39°45' N.

The altitude varies throughout the county. Near the headwaters of Mission Creek immediately east of Keene, the altitude, according to the U. S. Geological Survey, is 1000 feet and points five miles west are 1250 feet. In the northern portion of the county at the western boundary it is recorded as 1150 feet while at Maple Hill
on the extreme eastern boundary it is 1000 feet. Barridge is 1412 feet and McFarland 1025 feet.

Streams are numerous in the county, the major one being ill Creek. In addition there is Elm Creek and the headwaters of Locust, Elk, Chicken and Onion creeks. These smaller tributaries are dry a portion of the year. These are all, except Mill Creek, south flowing streams. The northern three-fourths of the county is well drained with quite large permanent streams flowing northeastward and emptying into the Kansas River. The main one, as mentioned before, is ill Creek with West Branch Mill Creek, Illinois Creek, Middle and East Branch, Kohring Creek and Linsley Creek. Four other smaller streams flow northward and empty directly into the Kansas River. The eastern part of the county is drained by Dragoon and Mission Creeks, with their respective tributaries.

GENERAL DESCRIPTION

The east and west portions of the county are undulating prairie, but the north and central portions are hilly, breaking into bluffs along streams. The valleys, ordinarily are about a mile wide. The timber belts are con-
fined exclusively to the borders of the streams and vary in width from a few rods to one-fourth of a mile. Thick ledges of limestone underlie the entire county. Thin veins of coal have been found at various places. The red granular soil, according to geologists, is of sandstone origin while the yellow clay soil is of limestone origin. Glacial drift is evident in the northern portion of the county and also comes to the surface on the east boundary of Mission creek.

Figures 1-10 following show a variety of environments with their respective plant formations and geologic sections of the county.
Fig. 1. High prairie near Maple Hill. Photo by author, June, 1926.

Fig. 2. wooded area south of Alma. Photo by author, June, 1926.
Fig. 3. Tree-shrub formation on sandstone cliff on mission Creek east of Boone. Photo by author, June, 1926.

Fig. 4. Open woodland of elm, walnut, oak west of abuasee. Photo by author, April, 1927.
Fig. 5. High prairie sloping into wooded valley southeast of Alma. Altitude 1300 feet. Photo by author, July, 1927.

Fig. 6. Rhus-Symphoricarpus association west of Kabunsee. Photo by author, July, 1927.
Fig. 7. Sagittaria-Eleocharis association east of Wabaunsee. Photo by author, June, 1927.

Fig. 8. Glacial drift as exposed on high prairie east of Wabaunsee. Photo by Author, June, 1927.
Fig. 9. Geologic section of the southern portion of Wabaunsee County. By John G. Hall.

Fig. 10. Geologic section from eastern to western boundary of Wabaunsee County in northern portion. By Bennet and Adams.
HISTORY OF THE COUNTY

Wabaunsee county has an ancient history of surpassing interest, partly printed in the old Spanish Chronicles and partly determined by archaeological evidence, the two making a record recently completed (1902) which covers a period of 500 years. In 1897, Dr. J. Brower discovered near Alma, in Mill Creek Valley, an ancient village site from which he gathered chert spearheads, arrow points, knives, scrapers and pieces of clay pots. Judge J. T. Keagy and others, associated with Dr. Brower in the work, have continued explorations and investigations until the identity of the people who inhabited this country during the pre-columbian age has been ascertained as the same people who were discovered by Coronado in 1541, at two provinces called Quivira and Marahey, part of which constituted the prairies and valleys of Wabaunsee County, the dividing line crossing Deep Creek and Mill Creek near Volland (now Volland). (Kansas Cyclopedia, Vol. 11, p. 650.)

Prior to 1833 the county now known as "Wabaunsee County belonged to the Kaw Indians. In that year Rev.
Isaac McCoy, a missionary having charge of the location of the different Indian tribes, assisted by his son, John McCoy, surveyed a strip 20 miles in length from east to west, and 19 miles in width from north to south, for an outlet for the Shawnee Indians from their reservation to the buffalo country. This was known as the Shawnee Purchase. By a treaty with the Kaws, January 14, 1846, the Pottawatomies were granted a tract of land thirty miles square, a part of which comprised a portion of Shawnee County.

Wabaunsee was one of the 33 counties created by the first territorial legislature in 1855, and at that time was named Richardson. In 1859 the legislature changed the name to Wabaunsee in memory of the Pottawatomee Chief "Wabonsa" signifying 'The Dawn of Day.'

The earliest permanent settlers were about 1853-54. One of the first settlers, a few miles north of the present town of Wilmington, was Henry Harvey and in 1869 a post-office was established and named Harveyville in honor of him. In 1856, the Beecher Bible and Rifle Company from Connecticut, 65 in number, exclusive of women and children, encamped May 1, 1866, on the south bank of the Kansas River where Wabaunsee now stands.
A saw-mill was purchased at Kansas City and brought to this vicinity, and as there was a good supply of timber, log cabins were soon built.

A second colony was formed by a party of Germans in Cincinnati, Ohio, who upon their arrival in Wabaunsee County selected a site near the two branches of Mill Creek and laid out the town of Alma. This colony starved out but in 1857 many settlers came directly from Germany and the first grist mill was built, also a saw-mill. The white population of Wabaunsee County at the close of 1857 was about 400.

The first railroad to enter the county was a branch of the Atchison, Topeka and Santa Fe, running from Burlingame northwest through Harveyville, Eskridge to Alma, which was built about 1880. Since then the Chicago, Rock Island and Pacific has been built entering near the northeast corner and crossing the county in a southwest direction to Alta Vista. A branch of the same system leaves the main line at McFarland and runs northwest through Wabaunsee and Manhattan. There are over 75 miles of main track in the county.
FACTORS AFFECTING NATIVE PLANT GROWTH AND THE INTRODUCTION OF NEW SPECIES

As is indicative of the thin veins of coal that have been found in the county, geological records tell us that there must have been in geological times a luxuriant growth of plant life. (State Geological Survey of Kansas, Bull. No. 3, p. 161 and 347.)

We have no records of the nature of the flora from the archaeological investigations nor from Coronado's journey in 1541. However, it probably was of much the same character as when the Indians owned it in 1855 and when Rev. Isaac McCoy made a survey. Early travellers into Kansas leave records of the nature of the country as follows. "As we descended from the high prairie into these timber bottoms, we found thick growth of tall thrifty trees; oaks, elms, cottonwoods, sycamores mingled with hickory and ash, forming a wide grove on either side of the stream." (Boynton and Mason, 1855)

The Indians that travelled frequently over the county did not alter the plant life materially, however, they recognized certain plants which were valuable for
food and no doubt collected those to some extent.

Such animals as are reported to have been observed and many killed were the wildcat, deer, buffalo, turkey, goose, brant, bear, catamount, gray wolf, beaver, panther, muskrat, mink, grouse, skunk, jack-rabbit, buffalo fish and cat fish. All of these were able to maintain themselves either on the flesh of their kind or the plants that grew in the vicinity. Undoubtedly certain plant species were distributed more rapidly because of the animals than had their distribution been dependent upon natural invasion over the area. No record is given of the birds, which by means of migrations, made it possible for the introduction of new plant species.

The prairie fire as a factor played an important part in limiting the growth of seedlings up into the prairies. From records of items from the press and other sources, prairie fires swept thru portions of the county in the years of 1869, 1870, 1871, 1873, 1889, 1891 and in 1874 the locusts devoured foliage of every growing plant which was equally as destructive as the nearly annual prairie fires which gave the established species no chance to spread further or conquer barriers and the
introduced species no opportunity to become established. (Matt Thomson, 1901, pp. 315-350.)

When the settlement of the earliest permanent pioneers came, it marked the beginning of a factor that had the most influence upon the introduction and destruction of species. Along with the pioneer came the responsibility of the prairie fire, the saw mill, and the introduction and cultivation of certain food plants and the destruction of others. The building of the railroads was favorable for the distribution of foreign species even from Europe. With this means of transportation and the natural facilities for cattle grazing, the Alma Signal reported in 1893 that 15,000 foreign cattle grazed in the county in that year and in the issue of the same paper on April 26, 1896, it was reported that 7,000 cattle were owned by people of the county and in addition to those nearly 20,000 head belonging to outsiders would be grazed in the vicinity of Alma. This enormous increase in numbers of cattle coming yearly into the county influences the flora by giving an opportunity for wider and more rapid distribution of native plant species as well as limiting some because of constant pasturage.
Plan is chiefly responsible for the orderly growth of the Osage Orange hedges as expressed in Boynton and Masan's book, "A Journey Through Kansas," p. 72. It reads as follows: "To some, perhaps, the following statement, from one who has had experience in hedge growing, may be useful.

"Plant the seed in a nursery, with ground very carefully prepared. In the following spring (April in Kansas) transplant; cut the young plants close to the ground or 'down to the yellow bark,' and, on ground prepared with care, and to be kept free from weeds set them out in diagonal lines six inches apart, thus ----. The plants will then shoot out branches thickly, close to the ground and form an impenetrable fence, sufficient to turn any stock the third year, and which even the second year is a good defense. One quart of seed, as is said properly managed, will produce plants enough for one-fourth mile of hedge. The seed should be silled and sprouted before planting."

In addition man brought with him seeds of other species from other parts of United States and Europe, which he placed under cultivation as soon as he could
break the virgin prairie. No doubt several of these species were exterminated because of unfavorable climatic conditions while others established themselves permanently.

Physiographic factors such as slope, or the degree to which the surface of the land departs from the level have been discussed in general under the head of Geography. Those factors that have to do with local variations in soil relations are called edaphic factors. These include the physical and chemical composition of the soil or other substratum, the degree of acidity or alkalinity. Physiographic factors which change the local conditions such as erosion, soil leaching, landslides are also of great importance in determining the plant species of a community. All of these factors have entered into the change of the flora of this county to a greater or lesser degree. This would present a very interesting problem from the ecological standpoint.

Two climatic factors along with type of soil determine largely the plant species of any region. The following table will express the relationship of these two factors, temperature and precipitation and the resulting plant formations.
Table I. - Showing the relation between the temperature, the amount and distribution of precipitation and the type of vegetation.

<table>
<thead>
<tr>
<th>Formation</th>
<th>Amount of rainfall</th>
<th>Cold</th>
<th>Warm</th>
<th>Trop-</th>
<th>Distribution of</th>
<th>Rainfall</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Forest</td>
<td>20-30&quot;: 40-60&quot;: 70-80&quot;: all distributed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) Grassland</td>
<td>10-20&quot;: 30-40&quot;: 30-70&quot;: dry winters, moist summers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) Sclerophyllous Forest</td>
<td>10-20&quot;: 30-40&quot;: 30-70&quot;: dry summers, moist winters</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(d) Desert</td>
<td>10&quot;: 20&quot;: 30&quot;: dry practically all of the time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Referring to the meteorological records of Manhattan, just to the west and the closest station with a long record, (Table No. II) it is evident that grassland is to be expected, except in the immediate vicinity of streams.
Table II.—Meteorological data for Manhattan, Riley Co., Kansas (1891-1903)

<table>
<thead>
<tr>
<th>Month</th>
<th>Temperature</th>
<th>Precipitation</th>
<th>Direction of prevailing winds</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Maximum</td>
<td>Minimum</td>
</tr>
<tr>
<td>Dec.</td>
<td>30</td>
<td>45</td>
<td>23</td>
</tr>
<tr>
<td>Jan.</td>
<td>26</td>
<td>40</td>
<td>18</td>
</tr>
<tr>
<td>Feb.</td>
<td>30</td>
<td>40</td>
<td>18</td>
</tr>
<tr>
<td>Inter mean</td>
<td>29</td>
<td>42</td>
<td>20</td>
</tr>
<tr>
<td>March</td>
<td>40</td>
<td>54</td>
<td>28</td>
</tr>
<tr>
<td>April</td>
<td>54</td>
<td>71</td>
<td>44</td>
</tr>
<tr>
<td>May</td>
<td>64</td>
<td>78</td>
<td>54</td>
</tr>
<tr>
<td>Spring mean</td>
<td>53</td>
<td>68</td>
<td>42</td>
</tr>
<tr>
<td>June</td>
<td>73</td>
<td>87</td>
<td>62</td>
</tr>
<tr>
<td>July</td>
<td>76</td>
<td>91</td>
<td>66</td>
</tr>
<tr>
<td>Aug.</td>
<td>76</td>
<td>92</td>
<td>64</td>
</tr>
<tr>
<td>Season</td>
<td>Total</td>
<td>44</td>
<td>33</td>
</tr>
<tr>
<td>--------</td>
<td>-------</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Summer</td>
<td>mean</td>
<td>76</td>
<td>64</td>
</tr>
<tr>
<td>Autumn</td>
<td>mean</td>
<td>54</td>
<td>70</td>
</tr>
<tr>
<td>Annual</td>
<td>mean</td>
<td>53</td>
<td>67</td>
</tr>
</tbody>
</table>

(a) Sept. incomplete 11 days.
There are several areas of local interest which would well bear detailed study. I'll mention two areas which I think are outstanding. In the northern and central parts of the county, where the land breaks into bluffs, usually bordering large streams, one will note that some of the hills are entirely void of trees while others support tree growth perhaps to the very top of the hill. The valleys intervening are in nearly every case heavily wooded. For the most part the soil on the hills is deficient in soil moisture and will not support tree growth while the moisture in the intervening valleys is sufficient for tree growth. However, the lack of tree growth may not be entirely due to this factor. There may be sufficient moisture on some of the hills, but because of the heavy growth of grasses, the fruits of the trees find it difficult to light in proper germinating conditions and if such is the case the tree seedling cannot compete with the tall grasses for a number of years, thus invasion into the prairie is not favorable, but not impossible. Two reasons may explain the few hills which support heavy tree growth. One
may be a matter of protection from the early prairie fires and the trees have had sufficient time to gradually invade the prairie and the second point of reasoning lies in the fact that there are in these hills several layers of limestone (pp. 3-4) and in several cases a permanent spring, which would supply sufficient moisture for the growth of trees.

The second area which is outstandingly conspicuous, is situated on a steep (150-200 ft.) north bluff directly south and west of McFarland along a branch of Mill Creek. This area is composed of a number of trees of native Junipers or red cedar and it is the only such area in the county to my knowledge. The Juniper has been protected from the prairie fires that swept thru portions of this county annually. Not only has it had the protection from fires but from animals and prairie grasses. The seedlings of Junipers have a difficult time for the first five years. They are very small and grow slowly; grasses grow over them and shade them too much, then too, they are subject to trampling by stock and pedestrians which result in their death before they are well enough established to withstand all these destructive forces. The native Junipers in this area have been in a favorable environment and have grown
to full-sized trees.

Figures 11 and 12 show distant views of this bluff at McFarland.
Fig. 11. Southeastward to bluff at McFarland on which native Junipers (Juniperus virginiana) are growing.
Photo by author, June, 1927.

Fig. 12. Southward to bluff at McFarland on which native Junipers are growing.
Photo by author, June, 1927.
IMPORTANT SPECIES OF POISONOUS PLANTS

Krobert (in Pammel, 1910) and other physicians define a poison as "A non-organized body, either organic or inorganic, which under certain conditions affects temporarily or permanently one or more organs of the body, when in a state of health or in a healthy condition." Such poisons may develop in the body or may come from without. Some substances act injuriously in a mechanical way, that is, they may set up disturbances by irritating some parts of the body. Other substances, while poisonous to one is entirely harmless to other persons or animals in a state of health.

Plants which cause mechanical injury are excluded from this list and only the more important plants are listed and these are listed from the standpoint of stock poisoning. With the increasing knowledge of chemistry, has grown the interest in kinds and effects of poison in plants. Factors affecting poisonous substances are light, heat, season, climate, culture, and soil.
Acoculas arguta
Apocynum cannabinum
Asclepias verticillata
Baptisia australis
Baptisia bracteata
Baptisia lohcantha
Cicuta maculata
Datura stramonium
Dolichinum carolinianum
Dolichinum tricorne
Dolichinum virescens
Eupatorium urticaefolium
Euphorbia corollata
Euphorbia marginata
Phytolacca americana
Robinia pseudocacia
Solanum nigrum
Sycamorus nuttalii

ANNOTATED LIST OF PLANTS OF ARBOUR COUNTY

In the following annotated list the species are arranged in alphabetical order by families. Authority for identification is based on the 2nd edition of "Illustrated
Flora of the United States and Canada by Britton and Brown, altho in certain cases comparisons were made with specimens in Kansas State College Herbarium.

The tabular view of the work is arranged according to Bessey's phylogenetic classification of flowering plants. He attempts a natural classification, using as a basis of his work all the characters of the plant rather than one or two characters as Linnaeus did in his artificial classification.

In this list are included only those species collected or observed by the author during the course of her work.

ACANTHACEAE

Ruellia ciliosa Pursh
Herb, common in moist and dry soil in sunny habitats, flowering from June to September. 20.

ACERACEAE

Acer negundo L.
Tree, common in moist soil flowering in April. Dioecious. 189.

Acer saccharinum L.
Tree, well distributed throughout the county near farmsteads, flowering in March. 181.
AESCULACEAE

**Aesculus carnea** Buch.  
Shrub, frequent in damp woods, flowering in April. 146.

ALISMACEAE

**Sacittaria latifolia** Willd.  
Herb, common in wet ravines, flowering from June. 101.

ANACARDIACEAE

**Rhus glabra** L.  
Shrub, abundant on rocky hillslopes, flowering in June. 29.

**Rhus trilobata** Nutt.  
Shrub, common on rocky hillslopes. Stems when broken produce a fetid odor. Flowers appear in March. 50.

**Rhus crenata** (Mill.) Greene  
One shrub, on roadside 8 miles north of Harveyville and ½ mile east, flowering in April before the leaves appear, sweet scented. 162.

**Toxicodendron radicans** (L.) Kuntze  
Liana, common throughout the county in waste land and more abundant along moist woods and old rock walls, flowering in June.

APIACEAE

**Eryngium yuccacolium** Michx.  
Herb, common along dry banks and prairies, flowering in July. 34.
Plciotaenia nuttallii (DC.) Coult. and Rose
   Herb, common on dry rocky hills, flowering in May. 55.

Cogswellia foeniculacea (Futt.) Coult. and Rose
   Herb, abundant on moist and dry prairies, flowering in April and May. 149.

Sanicula marylandica L.
   Herb, frequent in moist woods, flowering from May. 201.

Chaerophyllum texanum Coult. and Rose (?)
   Herb, in moist woods flowering in April. 152.

Cleista aculeata L.
   Herb, common along creeks and low ground, flowering from June to August. 281.

APOCYNACEAE

Apocynum sibiricum Jacq.
   Herb, common in waste and borders of cultivated fields, flowering from June. 10.

ARACEAE

Arisaema dracontium (L.) Schott.
   Herb, frequent in moist shaded soil, flowering in May. 273.
ASCLEPIADACEAE

Asclepias verticillata L.
Herb, common on prairies, flowering from July to September. 278.

Asclepias tuberosa L.
Herb, common on hillsides and meadows, flowering in June. 9.

Asclepiodora viridis (alt.) Gray
Herb, common in dry soil, flowering in June. 11.

Acerastes angustifolia (Nutt.) Dec.
Herb, occasional in dry soil, flowering in June. 56.

Acerastes lanuginosa (Nutt.) Dec.
Rare herb, in dry soil, flowering in May. 134.

BERBERIDACEAE

Podophyllum peltatum L.
Herb, occasional in southern and central part of the county in shaded moist soils, flowering in April. 143.

BIGNONIACEAE

Catalpa speciosa Harv. r.
Tree, commonly cultivated and escaped from cultivation, flowering in June. 185.
BORAGEACEAE

Lichospermum lineatifolium Coldie

Herb, very common on dry upland soil, flowering in April. 135.

Onosmodium occidentale Mackenzie

Herb, frequent on dry rocky hill slopes, flowering in May. 174.

BRASSICACEAE

Lepidium virginicum (Tourn.) L.

Herb, very common adjacent to cultivated fields. 58.

Brassica nigra (L.) Koch.

Herb, growing in roadside ditch east of Elmridge, flowering in June. 99.

Brassica campestris L.

Herb, collected along railroad, flowering in April. 159.

Braya caroliniana .alt.

Herb, common on prairies, flowering in April. 113.

Alliaria alliaria Britton

Herb, occasional in moist waste places, flowering in April. 147.

Bursa bursa-pecoris (L.) Britton

Herb, abundant in waste places, flowering in April. 150.

Dentaria laciniata Muhl.

Herb, occasional in damp rich woods, flowering in April. 141.
Sophia pinnata ("alt") Howell

Herb, frequent in waste grounds, flowering in April. 188.

Radicula sinuata (Butt.) Crooke

Herb, frequent in waste grounds, flowering in May. 188.

Thalaspi arvense L.

Herb, occasional in railroad stock yards, fruiting in May. 195.

CACTACEAE

Opuntia humifusa Tourn.

Fleshy herb, frequent in dry open prairie, flowering in June. 46.

Cactus missouriensis Sweet.

Fleshy rare herb, in dry rocky soil. One cluster of specimens growing 24 miles northwest of Lincoln. 205.

CAMPANULACEAE

Specularia perfoliata (L.) DC.

Herb, common in moist shaded or partially sunny habitat, flowering from June to September. 7.

Specularia leptocarpa (Nutt.) A.Gray

Herb, frequent in moist soils, flowering from June. 265.

Lobelia leptostachya A.DC.

Herb observed. Flowering from June.
CANNABINACEAE

Cannabis sativa L.
Herb, occasional, growing in fine moist soil, flowering in July. 116.

CAPRIFOLIACEAE

Sa. buxus canadensis L.
High shrub, common on rich moist soil, flowering in June. 47.

Triosteum perfoliatum L.
Herb, occasional in dry upland soil, flowering in May. 176.

Symphoricarpos symphoricarpos (L.) MacM.
Shrub, abundant in lowland pastures, flowering in July. 100.

CARYOPHYLLACEAE

Saponaria officinalis L.
Herb in partial-shade, escaped from cultivation, flowering in June. 3.

Silene antirrhina L.
Herb, frequent in dry upland soil, flowering in May. 172.

Cerastium brachypodum Engelm.
Herb, frequent in pastures and meadows, flowering in April. 156.
Silene stellata L.

Herb, frequent in moist soil, flowering from June. 261.

CASSIACEAE

Cercis canadensis L.

Tree, common in woods, flowering in April. 144.

Gleditsia triacanthos L.

Tree, common in woods, flowering in May. 242.

Gymnocladus dioica (L.) Koch.

Tree, observed, frequent in woods, flowering in May.

CELASTRACEAE

Celastrus scandens L.

Liana, common in woods twining on trees and shrubs, flowering in May. 63.

Bryonyca atropurpurea Jacq.

Herb, in moist soils, flowering in May. 206.

CHENOPODIACEAE

Chenopodium album L.

Herb, common on borders of cultivated fields, flowering from June. 106.

Salsola pestifer A. Nelson

Herb, frequent in the north and west portion of the county. A troublesome weed. 207.
Tradescantia bracteata Small

Herb, common along moist banks, flowering from May.

COMPOSITAE

Tragopogon pratensis L.

Herb, occasional in dry soil, fruiting in June.

Ageratia cuspidata (Pursh) E. Dietr.

Herb, frequent on upland prairies and rocky slopes, flowering in April.

Senecio lattensis Nutt.

Herb, frequent in pastures and meadows, flowering in May.

Sorinia oppositifolia (Kaf.) kuntze

Herb, in moist pastureland, flowering in May.

Lactuca floridana (L.) Gaerth.

Herb, common in moist woods, flowering from July to September.

Lactuca spicata (Lam.) Kitch.

Herb, common in moist soil, flowering in July and August.

Ratibida columnaris (Sims) D. Don.

Herb, common on dry roadsides and prairies, flowering from June.
Silphium laciniatum L.
Herb, common on dry prairies and roadsides, flowering from June. 57.

Silphium integrifolium A. Gray.
Herb, common in dry prairies, flowering from July. 234.

Cirsium undulatum (Nutt.) Spreng. (?)
Herb, in prairie soil, flowering from June. 75.

Liatris scariosa (L.) Mill.
Herb, frequent in prairies, flowering from August to September. 234.

Aster sericosus Vant.
Herb, occasional in dry open soil, flowering from August to September. 290.

Hieracium longipilum Torr.
Herb, occasional in prairie soil, flowering from July to September. 267.

Braunia pallida (Nutt.) Britton
Herb, common in prairies, flowering from May to July. 277.

Braunia purpurea (L.) E. Fenzl.
Herb, common throughout the county on the prairies, flowering from June. 50.

Chrysopsis leucantha L.
Herb, Indigenous to localities in dry prairies, flowering in June. 19.

Achillea millefolium L.
Herb, abundant on prairies, flowering from May to June. 23.
**Erigeron philadelphicus** L.

Herb, in moist meadows, flowering from May. 170.

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**Erigeron ramosus** (Hult.) L.S.P.

Herb, common in dry meadows, flowering in May and June. 190.

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**Mesadenia tuberosa** (Nutt.) Britton

Herb, common in moist and dry soil, flowering from June. 140.

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**Helianthus petiolaris** Nutt.

Herb, in dry waste soil, flowering from June. 108.

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**Artemisia ludoviciana** Nutt.

Herb, common on upland prairies, flowering in August. 109.

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**Artemisia canadensis** Britton

Herb, occasional in dry prairies flowering from July. 123.

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**Antennaria canadensis** Rydberg

Herb, common on upland prairies, flowering in April. 125.

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**Antennaria neglecta** Greene

Herb, in open woods, flowering in April. 2.

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**Echinopra papposa** (Vent.) Hyrb.

Herb, frequent in dry prairies, flowering in May. 230.

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**Ambrosia elatior** L.

Herb, common in dry soil, flowering from July. 91.
Astronia pallidaezya DC.
   Herb, found in wet ditches, flowering from July. 96.

Astronia trifida L.
   Herb in river bottoms.

Xanthium americanum alt.
   Herb, abundant in waste grounds and cultivated fields, fruiting in August. 73.

Vernonia missurica Raf.
   Herb, abundant in prairies, flowering in August. 274.

Solidago missouriensis Nutt.
   Herb, common in prairies, flowering from June to October. 256.

Taraxacum vulgare Lam.
   Herb in waste land.

Tulipa tenuifolium Nutt.
   Herb, Five plants along railroad near Babamsee. (Gates, No. 13535.)

*CONVOLVULACEAE*

*Convolvulus sepium L.*
   Herb, common in waste grounds, flowering from June. 15.

*Convolvulus sepium L.*
   Herb, common on dry prairies and waste grounds, flowering in May and June. 171.
Ipoaca hederacea Jacq.

Herb, common in moist rich cultivated fields, flowering from July. 254.

**COMM. ACEAE**

**Cornus asperifolia** Richx.

Shrub, commonly grows at the borders of woods, flowering in June. 24.

**CUCUR. ITAC.**

**Dodon foetidissima** HBK


**Sicyos angulatus** L.

Vine, frequent in moist shaded soil, flowering from July. 226.

**CUSCUTACEAE**

**Cuscuta sp.**

Vine, frequent in low grounds, flowering in June. 186.

**CYPERACEAE**

**Cyperus filiculmis** Vahl.

Sedge, occasional in dry meadows, flowering from June to August. 263.
Scirpus atrovirens Huhl.

Sedge, common in wet ravines, fruiting in June. 258.

Scirpus pallidus (Britton) Fernald

Herb, common in wet ravines, fruit maturing in July. 95.

Scirpus lineatus Michx.

Herb, in wet ditch on upland soil. Fruits in June. 95.

Eleocharis tenuis (iliid.) Schultes

Herb in wet ditch, fruits mature in June. 104.

Carex pennsylvanica Lam.

Herb, common in dry prairies, flowering in April. 122.

Carex hystericina Muhl.

Herb, in wet ravine, fruits maturing in June. 229.

Carex festucacea Schkuhr.

Herb, in dry open soil, fruiting in May. 232.

Carex stricta Lam.

Herb, in moist soil, fruiting in May. 233.

Carex vulpinoides lichx.

Cod-e, frequent in wet soil, fruiting in June. 257.

EQUISETACEAE

Equisetum sp.

Herb, frequent in moist soil, fruiting in June. 214.
**EUPHORBIACEAE**

*Tithymalopsis corollata* Kl. and Garcke

Herb, in upland rocky soil, fruiting in June. 111.

*Tithymalopsis cynarifolia* (L.) Hill

Herb, in open prairie, flowering in April. 107.

*Tithymalus missouriensis* (Norton) Small

Herb, in open prairie flowering in May. 61.

*Dichrocephalum marginatum* (Pursh) Kl. and Garcke

Herb, abundant in dry and moist soil, flowering from July to October. 271.

*Croton canaletti* Aechx.

Herb, frequent in dry soil. June to Oct. 279.

*Chamaecyparis presili* (Guss.) Arthur

Herb, frequent in dry waste soils. 280.

**PAPAVERACEAE**

*Purshia pseudocacalia* L.

Tree, common in timber, flowering in May. 61.

*Amorpha canescens* Pursh

Herb, very common in dry prairie, flowering from June. 71.

*Amorpha cana* Nutt.

Herb, in dry upland soil, flowering in May. 307
Anoptera fruticosa L.
Herb, common in wet ditches, flowering in May. 200.

Acitonia illinoensis (Gray) Nuttze
Herb, common in dry prairies, flowering from June. 97.

Baptisia leucanthe T. and G.
Herb, common in dry prairies, flowering from June. 113.

Baptisia bracteata Ell.
Herb, common on dry prairies, flowering in April. 51.

Baptisia australis (L.) P. Br.
Herb, common in dry prairies, flowering in May. 15.

Trifolium pratense L.
Herb, frequently cultivated as a forage crop, flowering from May to September. 200.

Trifolium repens L.
Herb, common throughout county.

Petalostemum purpureum (Vent.) Rydb.
Herb, very common on dry upland prairies, flowering in June. 66.

Petalostemum candidum (Milld.) Richx.
Herb, common on dry upland prairies, flowering in June. 67.

Heliotus officinalis (L.) Lam.
Herb, abundant and widely distributed on dry waste soils, flowering from June. 69.
**Cassia alba** Deev.

Herb, abundant and widely distributed on dry waste soils, flowering from June. Sometimes it is cultivated. 70.

**Lepidolaena capitata** Michx.

Herb, frequent on prairies, flowering from August to September. 228.

**Vicia searsii** Nutt.

Herb, occasional in dry soil, flowering in April. 48.

**Medicago sativa** L.

Herb, commonly cultivated, flowering from June to October.

**Psoralea floribunda** Nutt.

Herb, abundant in prairies, flowering from June. 35.

**Psoralea argophylla** Pursh.

Herb, rare in prairies, flowering from June. 79.

**Psoralea esculenta** Pursh.

Herb, occasional in dry prairies, flowering in May and June. 184.

**Geoprunan platensae** (Purt.) Rydb.

Herb, rare in prairie, flowering in May. 225.

**Geoprunan crassicarpum** (Purt.) Rydb.

Herb in prairies, flowering in April, fruit maturing in May. 130.

**Glycyrrhiza lepidota** Pursh.

Herb in prairie. 196.
GENTIANACEAE

Centaurium tomentosum Griseb.

Herb, occasional in dry open soil, flowering in June. 21.

GERANIACEAE

Geranium carolinianum L.

Herb, common in waste ground, fruiting in June. 6.

GROSSULARIACEAE

Grossularia missouriensis (Nutt.) Cov. and Britton

Shrub, common in moist woods, flowering in April. 155.

ONAGRAEACEAE

Nyctelea nyctelea (L.) Britt.

Herb, common in damp soil usually in woodlands, flowering in May. 177.

URSIACEAE

Astranthe campestris Picknell

Herb, occasional in prairie, flowering in April. 249.

JUGLANDACEAE

Juglans nigra L.

Tree, common in moist soils along streams, flowering in April. 60.
JUNCACEAE

Juncus dudleyi Legard

Herb, common in wet ravines, fruiting in June. 221.

LAMIACEAE

Conandra fistulosa L.

Herb, abundant in moist and dry soils, flowering in June. 14.

Teucrium canadense L.

Herb, common in moist shaded soils, flowering from July. 41.

Leonurus cardicae L.

Herb, rare in upland waste soil, flowering in May. 63.

Prunella vulgaris L.

Herb, common fields, woods and waste places, flowering from June to September. 276.

Larrabium vulgare L.

Herb, occasional in waste lands, flowering from June. 262.

Lycopus anecanmus Muhl.

Herb, common in wet soil. 93.

Salvia lanceifolia Poir.

Herb, frequent in dry soil, flowering in May. 134.
**Scutellaria parvula** Michx.

Herb, occasional in dry soil, flowering in May. 135.

**Perata cataria** L.

Herb, in moist soil, flowering in June. 142.

**Pedea hispida** Pursh.

Herb, in dry stony soil, flowering in June. 234.

**LILIACEAE**

**Smilax hispida** Uhl.

Liana, common in woods. 105.

**Smilax herbacea** L.

Liana, in moist woods. 68.

**Erythronium americanum** Knorr.

Herb, common near woods, flowering in March. 120.

**Erythronium albidum** Nutt.

Herb, common on upland soils, flowering in April. 131.

**Erythronium americanum** Ker.

Herb, common in rich moist woods, flowering in April. 145.

**Allium canadense** L.

Herb, common in prairies, flowering in May. 217.

**Zyadenia nuttallii** Gray

Herb, common in prairies, flowering in May. 173.
**Asparagus officinalis** L.

Shrub, rare in open soils, escaped from cultivation. Fruits mature in autumn. 204.

**Polygonatum commutatum** (R. and S.) Dietr.

Herb, common in moist woods, flowering in May. 241.

**LILIACEAE**

**Linum gulgatum** (Middle) Small

Herb, common on open prairies, flowering in June and July. 28.

**MALVACEAE**

**Callirhoe involucrata** (T. and G.) Gray

Herb, common in variable soils, flowering from June 1.

**Callirhoe digitata** Nutt.

Herb, frequent on rocky hillslopes, flowering in May. 193.

**Callirhoe alceaoides** (Michx.) A. Gray

Herb, common in dry prairies, flowering in May. 250.

**Callirhoe triangulata** Leavenw.

Herb, in prairie soil, flowering in May. 230.
Abutilon abutilon (L.) Rusby

Herb, in low rich grounds, flowering from June. 50.

Hibiscus trionum L.

Herb, common in waste places, flowering from August to September 281.

MALACRACEAE

Crataegus sp.

Tree, occasional in woods, flowering in April. 151.

SISPERMACEAE

Menispernum canadense L.

Vine, abundant in moist woods, flowering in May. 45.

Mimosaceae

Pachysandra terminalis Lidd.

Herb, common in dry prairie soils, flowering from June. 8.

Rubiaceae

Toxylon pomiforum Raf.

Tree, frequent in dry and moist soils. Introduced as defense against stock in the early days. 192.

Morus rubra L.

Tree, occasional on upland soils, fruiting in June. 192.
Horus alba L.

Tree, occasional on upland soil, fruiting in June. 233.

**NYCTAGINACEAE**

*Allionia nyctaminea* Richx.

Herb, very common on moist and dry soils, flowering in May. 62.

*Allionia linearis* Pursh.

Herb, common in dry soil, flowering in June. 94.

**COMNOSTRACEAE**

*Recepterium missouriense* Sims.

Herb, common in dry open soils, flowering in May. 16.

*Periplix serrulata* (Futt.) alp.

Herb, common in open prairies, flowering in June. 209.

*Stenostiphe lineiolium* (Futt.) Britton

Herb, occasional in open soils, flowering in June. 52.

*Eupompona laciniata* (Mill) Rooo

Herb, occasional in sandy soil, flowering in May. 189.

*Anogra albicaulis* (Pursh) Britton

Herb, frequent in sunny habitat, flowering from May. 233.

*Caura biennis* L.

Herb, common on dry banks, flowering from June. 295.
Charaeceria aquatilgium (L.) Scop.
Erect herb, common in open prairies, flowering from June to September. 275.

Oxalidaceae

Fraxinus americana L.
Tree, common in moist woods, fruiting in May. 252.

Fraxinus pennsylvanica Marsh.
Tree, in moist soil. Dioecious. 266.

Fraxinus cons/tviana lanceolata (Poir. & Kausen) 'argent'.
Tree, in low ground and planted as an ornamental.

Oxalidaceae

Oxalis cymosa Small
Herb, common in dry waste soils, flowering in June. 27.

Oxalis violacea (L.) Small
Herb, abundant in dry rocky soil, flowering in April. White flowers are rare. 163.

Oxalis stricta L.
Herb, common in open soils, flowering in April. 49, 269.

Papaveraeae

Artemisia intermediate Sweet
Milky herb, rare in open sandy soil, flowering in June. 48.
Cappnoides ristothamen (L.) Britten

Herb, common in low damp woods and road-sides, flowering in April. 160.

Bisuculla cucullaria (L.) Millsp.

Herb, in rich woods, flowering in April. 189.

**PHYTOLACCACEAE**

**Phytolacca americana** L.

Herb, common in moist rich woods, flowering in June and July. 77.

**PITACEAE**

Thuja orientalis L.

Tree, rarely cultivated in farmyards and cemeteries. 105.

Juniperus virginiana L.

Tree, common in farmyards and along moist bluffs and a few specimens along limestone ledges. 249.

**Pinus sylvestris** Ait.

One tree cultivated in cemetery east of Wabaunsee. 103.

**PLANTAGINACEAE**

Plantago lanceolata L.

Herb, common in dry waste soils. 78.
Plantago virginica L.

Plantago media L.
Herb, common in sun-plant formation, flowering in May. 218.

Plantago purshii R. and S.
Herb, in sunny habitat, flowering in June. 220.

PLATANACEAE

Platanus occidentalis L.
Tree frequent along streams. 43.

POACEAE

Tripsacum dactyloides L.
Grass, common throughout the county in moist habitats, flowering in June. 84.

Agropyron smithii Rydb.
Grass, in moist soil, mature fruits in July. 247.

Bromus japonicus Thumb.
Grass, abundant on dry waste ground. 89.

Lolium virginicum L.
Grass, common in moist soil, fruiting in July. 110.

Phleum pratense L.
Grass, occasionally cultivated.
Poa pratensis L.

Grass in lawns and generally escaped, fruiting in June.

Poa compressa L.

Grass abundant in dry and moist soils.

Leptinella crusgalli L. Beauv.

Grass, in farmyards and waste places. August to September. 272.

Hordeum jubatum L.

Grass, occasional in dry soil. June to August. 193.

Helichrysum dactyloides (B. Mut.) Raf.

Grass, frequent in prairies. 205.

Agrostis hyemalis (B. Mut.) B.S.P.

Grass, frequent in wet ravines. June to August. 180.

Koeleria criarata Pers.

Grass, frequent in cultivated fields. 211.

Panicum scribnerianum Nash.

Grass, frequent in open soils, fruiting in May. 236.

POLYGONIACEAE

Phlox divaricata L.

Herb, common in damp rich woods, flowering in April. 40.
POLYGONACÉAE

**Rumex crispus** L.
Herb, common in low moist wastes. 87.

**Rumex britannica** S. Wats.
Herb, common in low waste grounds. 88.

**Rumex altissimus** Wood.

**Polygonum aviculare** L.
Herb, common in dooryards and waste. 90.

**Polygonum pensylvanicum** L.
Herb, common in moist waste soil, flowering from July to September. 239.

**Polygonum virginianum** L.
Herb, frequent in moist woods, flowering from July. 292.

**Polygonum tenue** Lich.

**Polygonum convolvulus** L.
Herb, occasional in dry open soil. June to July. 296.

**Polygonum erectum** L.
Herb, in waste soils.
POLYPODIACEAE

Polypodium atropurpurea (L.) Link.
Herb, common in northern part of the county on limestone ledges. 154.

PRIMULACEAE

Androsace occidentalis Pursh.
Herb, abundant in upland prairies, flowering in March and April. 124.

Steironema ciliatum (L.) Raf.
Herb, frequent in moist waste, flowering from June to August. 225.

FRAGARACEAE

Prunus americana Marsh
Shrub, common in wastes, flowering in April. 231.

Prunus virginiana (L.) Mill.
Shrub, common in moist soil, flowering in April. 53.

RANUNCULACEAE

Dolphinsium virens occur Nutt.
Herb, common in upland soil, flowering in June. 18.

Dolphinsium trilobum Michx.
Herb, in moist soil, flowering in May. 197.

Anemone decapetala Ard.
Herb, common on upland prairies, flowering in April. Colors range from bluish purple to white. 126.
Ranunculus abortivus L.
Herb, common in damp woods, flowering in April. 148.

Thalictrum dioicum L.
Herb, in moist woods, flowering in June. 64.

Vierna pitcheri (T. & G.) Britton
Vine, occasional in moist soils, flowering from June. 225.

Rhamnaceae

Ceanothus ovatus Desf.
Low shrub, frequent on rocky slopes, flowering in May. 33.
var. pubescens
Low shrub, on rocky hill slope. 107.

Ceanothus americanus L.
Shrub, frequent on rocky hill slopes, flowering in June. 112.

Rhamnus lancelolata Pursh.
Shrub, common in waste grounds, fruiting in June. 225.

Rosaceae

Rosa arkansana Greene
Shrub, frequent along roadsides, flowering in June. 187.

Rosa woodsii
Shrub, flowering in May. 215.
Rosa blanda Lindl.

Shrub, occasional in sunny habitats, flowering in May. 245.

Fragaria virginiana Euchene

Herb, common in moist soil, flowering in April. 251.

RUBIACEAE

Houstonia minima Beck.

Small herbaceous plant in dry prairie, reported to be extremely abundant east of Emporia in the spring season of 1927. I also collected specimens in Riley county this same spring. 128.

Galium cincanum Richx.

Herb, common in damp woods, fruiting in May. 175.

Galium aparine L.

Herb, frequent in damp woods, flowering in May. 173.

Symphoricarpos symphoricarpos (L.) Mac.

Shrub, abundant in moist soils, flowering in July. 100.

RUTACEAE

Zanthoxylum acriumum Mill.

Shrub, occasional on rocky hillslopes and woods, flowering in April before the leaves appear. 132.

SALICACEAE

Populus italica Poenex.

A rare cultivated tree. 191.
Populus alba L.
A rare cultivated tree. 237.

Populus sericea Dode
Tree, common in moist soil. 244.

Salix longifolia Muhl.
Tree, common along Kansas River.

SANTALACEAE

Comandra pallida A. DC.
Herb, rare on upland soil, flowering in May. 12.

SCROPHULARIACEAE

Pentastemon cobaea Nutt.
Herb, common in dry prairies, flowering in June. 60.

Pentastemon grandiflorus Nutt.
Herb, frequent on dry prairies, flowering in May. 212.

Verbascum thapsus (Tourn.) L.
Herb, common in dry prairies, flowers in July. 44.

Linum geyeri Torr.
Herb, below permanent spring. Rare, flowering in May. 219.

Veronica peregrina L.
Herb, occasional in moist soil, flowering in May. 291.
Solanaceae

**Solanum carolinense** L.

 Herb, common in dry and moist soils, flowering in July. 5.

**Solanum rostratum** Dunal.

 Herb, very common in waste soils, flowering in June. 4.

**Datura stramonium** L.

 Fleshly herb, common in moist rich soil, flowering from June to September. 26.

Staphyleaceae

**Staphylea trifolia** L.

 Shrub, occasional on the borders of woods, flowering in April. 155.

Typhaceae

**Typha latifolia** L.

 Herb, common along creeks and in ponds, fruiting from August to September. 263.
ULMACEAE

Ulmus fulva Michx.
Tree, common in timber. 54.

Ulmus americana L.
Tree, common in moist soil, flowering in March and April. Samaras ripe in May. 270.

Celtis occidentalis L.
Tree, common in open woodland. 32.

URTICACEAE

Urtica gracilis Ait.
Herb, abundant in moist waste soils.

VERBENACEAE

Verbena stricta vent.
Herb, very common in dry and moist soil, flowering from July to September. 30.

Verbena canadensis (L.) Britton
Herb, occasional in dry rocky soil, flowering in April. 36.

Verbena angustifolia Michx.
Herb in prairie.
VIOLACEAE

**Viola rafinesquii** Greene

Herb, abundant in upland meadows, flowering in April. 127.

**Viola pedatifida** G. Don.

Herb, very common in upland prairie soil, flowering in April. 127.

**Viola palmata** L.

Herb, on dry rocky hillslopes, flowering in April. 123.

**Viola criscarpa** Schwein.

Herb, common in moist woods, fruit mature in May. 161.

**Viola papilionacea** Pursh.

Herb, in moist woods. Fruit mature in May. 157.

VITACEAE

**Parteocissus quinquefolia** L. Planch.

Liana, abundant in moist soils in woods and along fences, fruiting in August. 114.

**Vitis vulpina** L.

Liana, frequent in rich woods and borders of cultivated fields, flowering in April. 115.

**Vitis palmata** Vahl.

Liana, occasional in moist grounds. 193.

**Vitis cordifolia** Michx.

Liana, occasional in moist soil. 264.
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**GENERAL CONSIDERATION OF THE FLORA OF THE COUNTY**

In considering the flora of Wabaunsee County in its entire aspect one may say that the flora of the county has changed very materially since the establishment of pr-
manent homes with respect to the numbers of individuals of certain species. It would be difficult to say with certainty whether or not species as a whole have increased or decreased in numbers or whether new species have merely replaced the old ones and the number is nearly the same. One fact is very evident with respect to its flora. On virgin prairie, where neither cultivation nor pasturage has been permitted, bright colored flowers are conspicuous. Where cultivation occurs plants of economic value have displaced the prairie, while in the case of areas that are pastured, one no longer finds the display of prairie flowers. Grasses are able to withstand cropping and spread without seed formation while other plants are crowded out. There may not be a great difference in number of species but a vegetation differing in appearance.

The variety of environments throughout the county, that is, high prairie, wet ravines, springs, and woods make it very favorable for a diversity in types of species.

Up to date 477 species have been reported from the county. The 19 families which have the largest number of species are:

- Compositae 60 species
- Poaceae 33 species
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To compare my work with that done up to 80 years ago, the following three lists were made, namely:

1. Species not listed by A.S. Hitchcock in 1899 which I have collected.

2. Species reported by both A.S. Hitchcock (1859) and myself.
3. Species reported by A.S. Hitchcock which I did not collect.

List No. 1.—Species not listed by A.S. Hitchcock in 1939 which I have collected.

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Referring to list number 1, it does not mean that because these species were not reported by Hitchcock that they were not in the county, for example, the osage orange *Zanthoxylum americanum* was introduced into the county in early pioneer days but Mr. Hitchcock does not include it in his list and even again maple trees (*Acer saccharinum*) are well over 100 years of age. In the case of the cultivated plants which are few in number and are cultivated for ornamental purposes primarily, these may not all have been cultivated at that time, however, it is quite likely that *Linus sylvestris* and *Catalpa speciosa* were, basing my judgment on the size of the trees I observed and knowing that they do not grow rapidly. As far as the other species are concerned it would be safe to say that several have migrated into the county from the west or east. I have observed the *Argemone intermedia* only at the extreme western boundary of the county. It has probably migrated to that point from the west as 10 miles west the plant is quite abundant in waste ground.

*Cactus missourianus* is not abundant in the county as I observed it in only one locality northwest of Eskridge. It too, is probably a migrant from the west.
List No. 2.—Species reported by both A. S. Hitchcock (1909) and the writer. (The collection numbers are those of the writer in 1926-27.)

<table>
<thead>
<tr>
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<td>Aesculus arguta</td>
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<td>Allicia nystagineus</td>
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<td>Gallirhoal alceoides</td>
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Cannabis sativa 116
Carex festucacea 232
Carex hystericina 239
Carex vulpinoides 257
Cuscuta ovatus pubescens 107
Colastrus acridens 63
Celtis occidentalis 32
Gercia caradensis 144
C. amaceaee Persil 230
Chrysanthemum leucanthemum 19
Cicuta maculata 282
Cirium undulatum (?) 75
Convolvulus sejium 15
Croton monanthogynus 279
Cyperus filiculmis 200
Datura stramonium 26
Delphinium tricorne 197
Dichrophyllum marginatum 271
Draba cynololia 119
Dysodia papposa (Dobera pa-) 230
Equisetum arvense (?)
Elygron ramosus 190
Buonumus atropurpurens 206
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Stenosiphon linifolium 52
Symphoricarpos symphoricarpos 100
Taraxacum vulgare
Tithymalopsis corollata 111
Trifolium pratense 209
Trifolium repens
Trifolium daetlyoides 84
Typha latifolia 283
Ulmus americana 270
Ulmus fulva 54
Urtica gracilis
Verbena angustifolia
Verbena canadensis 36
Verbena stricta 30
Vernonia fasciculata 274
Viola pal.ata 123
Viola pedatifida 137
Viola eriocarpa 161
Viorna pitcheri 225
Vitis vulpina 115
Xanthium americanum 73
Vitis cordifolia 264
List No. 3.—Species reported by A.S. Hitchcock but not collected by the writer during the course of her trips.

Acalypha ostryaefolias
Acalypha virginica
Acnida tamariscina
Acuan illinoensis
Aegania macrophylla
Agastache neptoides
Agrimonia mollis
Agrimonia parviflora
Agropyron repens
Allionia albida
Allium stellatum
Amaranthus blitoides
Amaranthus graecizans
Amaranthus retroflexus
Amaranthus spinosus
Ampelopsis cordata
Andropogon scoparius
Anemone virginiana
Apiacum patens (Spermolopsis patens)
Apocynum cannabinum
Arabis canadensis
Arctium minus
Argemone alba
Arisaema triphyllum
Artemisia dracunculoides
Artemisia graphaloides
Asclepias sullivantii
Asclepias syriaca
Asimina triloba
Aster laevis
Aster multiflorus
Astragalus canadensis
Botrychium virginianum
Bouteloua oligostachya
Bouteloua curtipendulus
Brassica juncea
Calceolaria verticillata
Campanula americana
Capnoides aureus
Cirsium lanceolatum
Cirsium altissimum
Carex crus-corvi
Carex laxiflora
Carex Muhlenbergii var. xalapensis
Chamaecrista fasciculata
Chenopodium berueckatum
Chenopodium boscianum
Chenopodium hybridum
Chenopodium leptophyllum
Chenopodium leptophyllum var. sublabrum
Chrysopogon avenaceus (Sorghastrum nutans)
Casswolia daucifolia
Comandra umbellata
Consolida virginica
Croton capitatus
Cuscuta polygonorum
Cycloloma atriplicifolium
Cyperus esculentus
Cyperus speciosus
Delphinium carolinianum
Dianthera americana
Eatonia obtusata (Sphenopholis obtusata)
Eleocharis palustris (Glaucoscens)
Elymus canadensis
Eupatorium altissimum
Eupatorium urticaefolium
Euphorbia dentata (Poinsettia dentata)*
Euphorbia heterophylla (Poinsettia heterophylla)*
Euphorbia hexagona (Zygophyllum hexagona)*
Euphorbia maculata (Chamaesyce maculata)*
Euphorbia serpens (Chamaesyce serpens)
Euphorbia nuttallii (Chamaesyce zygophyloides)*
Euphorbia strictospora
Euthamia graminifolia (Solidago graminifolia)
Evolvulus pilosus
Fragostis capillaris
Fragostis ciliennis*
Fragostis pectinacea*
Falcata pitcheri
Festuca nutans
Galium concinum
Galium triflorum
Gaura parviflora
Gentiana puberula (Dasystephana puberula)
Gerardia densiflora (Otophylla densiflora)
Geum canadense
Grindelia squarrosa*
Hartmannia speciosa
Helianthus annuus*
Helianthus grossae-serratus
Helianthus maximilianii
Helianthus erythrospermum
Heliomera scaberrima
Heliopsis acabra
Hibiscus haroldiae
H. lappuliflorus
H. malvaceus
H. petiolaris
H. spathulata
H. truncatus

Holocodon pusillus
Houstonia angustifolia
Houstonia capensis
Hydrophyllum virginianum
Hypericum cistifolium
Impatiens pallida
Ipomoea sandurata
Ipomoea purpurea
Chaetochloa lutescens
Chaetochloa viridia
Juncus torreyi
Kuhnia eupatoricoides
Lacinaria punctata (Liatris punctata)
Lappula virginiana
Lepidium densiflorum
Leptodon canadense
Lespedeza violacea
Lippia cuneifolia
Lippia lanciolata
Lycium vulgare (Lycium halimifolium)
Lythrum alatum
Malva rotundifolia
Meibomia grandiflora
Meibomia canescens
Mentha canadensis
Mentzelia oligosperma
Mesadenia atriplicifolia
Nimusurus ringens
Mollugo verticillata
Monolepsis nuttalliana
Oenothera biennis
Onosmodium molle
Ostrya virginiana
Panicularia nervata
Panicum capillare
Parietaria pennsylvanica
Parosola dalesa
Paspalum ciliatifolium
Penthorum sedoides
Petalostemma multiflora
Cogswellia daucifolia
Phryna leptostachya
Physalis heterophylla
Physalis longifolia
Physalis pmila
Pilea pmila
Plantago aristata
Plantago rugolli
Polygala verticillata
Polygonum muhlenbergii
Polygonum littorale
Polygonum ramosissimum
Polygonum scardens
Polygonum persicaria
Polygonum punctatum
Populus deltoides
Portulaca oleracea
Quercus prinoides
Ratibida pinnata
Radicula palustris
Radicula sessiliflora
Rubus canadensis
Rubus occidentalis
Rubus Baileyanus
Rudbeckia hirta
Ruellia strepens
Rumex acertosella
Sagittaria ambigua
Salix amygaloides
Salix cordata
Salvia pitcheri
Schoennardus paniculatus
Scirpus validus
Scrophularia marylandica
Sida spinosa
Tridens flava
Sisymbri um officinalis *(Erysimum officinalis)*
Sisymbrium angustifolium
Solanum clacagnifolium
Solanum nigrum
Sonchus asper
Sophia incisa
Spartina michauxiana
Sporobolus cryptandrus
Stipa spartea
Strophostyles pauciflora
Syntherisma sanguinale
Teucrium occidentale
Thalesia uniflora
Thalictrum revolutum
Tilia glabra
Tradescantia virginiana
Tragia ramosa
Ulna latifolia
Verbena alternifolia
Verbena bracteosa
Verbena hastata
Verbena urticaefolia
Vernonia baldwinii
Viola papilionacea
Vitis cinerea

*denotes plant species that are without a doubt present in the county flora, but were not collected during the present study, for the reason that they were not in season for identification.

A continued study of the county, especially during the autumn and in other parts of the county, would without doubt cut down List No. 3. Some of these are plants of very special habitats.
SUMMARY

1. Wabaunsee County is an area of 804 square miles situated in the eastern third of the state of Kansas, bounded on the north by the Kansas River. The altitude varies from about 1000 to 1900 feet. The streams are well distributed throughout the county. Limestone outcrops are common, while glacial drift is evident in the northern part of the county.

2. As a result of continuous dry winters and moist summers grass thoroughly dominates the vegetation.

3. The earliest permanent settlers came about 1853-54.

4. Portions of the county were swept by prairie fires in the years 1869-71; 1873; 1889 and 1891, for which the early settlers were responsible. They also introduced the saw mill and many new plant species which were cultivated for food. After the railroad was built many cattle were shipped in and grazed on the open prairie.

5. Areas which have been protected by fires, trampling by stock, and cultivation, for example high bluffs and valleys along streams with sufficient moisture to support quite a dense tree growth, otherwise the area is open prairie. One area of local interest supports the growth of native junipers.
6. Nineteen species of important stock poisoning plants are found in Wabaunsee County.

7. A tabulated list shows a total of 477 species of which composites were most numerous, grasses and legumes second, and mustards third.

8. In 1899, A. S. Hitchcock listed about 356 species from the county. In 1926-27, the author collected and observed 292 which included 115 not previously listed which leaves 195 species not found in the limited time. However, 52 of these are without question in the county.

BIBLIOGRAPHY

Boynton, Rev. C.B. and Mason, T.B.
1855. A journey through Kansas.

Britton, N.L. and Brown, H.C.
1913. Illustrated flora of the northern states and Canada. 2nd Ed.

Garruth, J.H.


Henry, Alfred Judson  

Hitchcock, A.S.  

Gibson, J.H.  
Geary and Kansas.

Kansas Cyclopedia, Vol. 11, p. 850

Fennel, L.H.  

Smyth, B.E.  


Thompson, Matt.  
1901. Early history of Wabaunsee County, Kansas.

The writer wishes to acknowledge her indebtedness to Dr. P. C. Gates, for valuable suggestions and criticisms.

I wish to express my thanks to others who have aided in the preparation of this manuscript.
EXPLANATION OF MAPS

In the instances where the map is plotted with S it refers to the fact that the specimen has actually been collected by the writer in the general location indicated. The symbol ◆ merely means the species has been observed by the writer but not collected and its position on the map has no reference to general location. The symbol ▲ indicates that A. S. Hitchcock has reported the species in the county previous to 1899 and its position on the map has no specific significance.
Reported by A. S. Hitchcock.

Specimen collected by author.

Species observed by author.
**OPHIOGLOSSACEAE**
Botrychium virginianum
L. Sw.

**POLYPODIACEAE**
Pellaea atropurpurea (L.) Link
EQUISETACEAE

Equisetum arvense L.

Wabaunsee County
Map No. 5

Equisetum hyemale L. (?)

Wabaunsee County
Map No. 4
**PINACEAE**

Juniperus virginiana L.

Map No. 5

Juniperus communis L. (?)
PINACEAE
Thuja orientalis L.

WAUSAUNSEE COUNTY
Map No. 7

Pinus sylvestris Ait.

WAUSAUNSEE COUNTY
Map No. 8
ALISMATACEAE

Sagittaria ambiguа J.
G. Sm.

WABAUNSEE COUNTY
Map No. 9

Sagittaria latifolia Willd.

WABAUNSEE COUNTY
Map No. 10
Typhaceae

Typha latifolia L.
LILIACEAE

Asparagus officinalis L.

Polygonatum commutatum (R & S) Dietr.
LILIACEAE
Erythronium mesochoreum
Kneer

Erythronium albidum Nutt.
LILIACEAE
Smilax hispida Muhl.

Notoscorodum bivalve (L)
Britton
Allium canadense L.

LILIACEAE
Smilax herbacea L.
Allium stellatum Ker.

LILIACEAE
Toriscordon nuttallii
(A. Gray) Rydb.
COMMELINACEAE
Commelina virginica L.

Tradescantia bracteata Small
COMMELINACEAE

Tradescantia virginiana L.

JUNCIACEAE

Juncus dudleyi Woigund
JUNCACEAE
Juncus tenuis Willd.

Juncus torreyi Coville
ARACEAE
Arisaema triphyllum (L.) Schott.

Arisaema dracontium (L.) Schott.
Cyperaceae
Carex pennsylvanica Lam.

Wabaunsee County
Map No. 30

Scirpus atrovirens pallidus
Britton

Wabaunsee County
Map No. 31
Cyperaceae

Carex hystricina Muhl.

Wakarusa County
Map No. 32

Carex laxiflora Lam.
Cyperaceae

Carex mullenbergii
Schlr.

Map No. 34

Wabaunsee County

Carex vulpinoidea Michx.

Map No. 35

Wabaunsee County
GYPHERACEAE
Carex crus-corvi
Shuttlw.

WAUAUNSEE COUNTY
Map No. 36

Carex festucacea Schkuhr.

WAUAUNSEE COUNTY
Map No. 37
Cyperus apeciosus Vahl

Cyperaceae

Carex stricta Lam.

Wabaunsee County
Map No. 38

Cyperus speciosus Vahl.

Wabaunsee County
Map No. 39
Cyperaceae
Cyperus coccusentus L.

WABAUNSEE COUNTY
Map No. 40

Cyperus filiculmis Vahl.

WABAUNSEE COUNTY
Map No. 41
Cyperaceae
Scirpus lineatus Michx.

Warauense County
Map No. 42

Scirpus validus Vahl.

Warauense County
Map No. 43
Eleocharis tenuis (Willd) Schultes
GRAMINEAE
Eleocharis palustris
(Willd.) Gray
glaucoscens

GRAMINEAE
Agropyron smithii Rydb.

WABAUNSEE COUNTY
Map No. 45

WABAUNSEE COUNTY
Map No. 46
Hordeum jubatum L.

Hordeum pusillum Nutt.
OMNADAE
Tripsacum dactyloides
L.

UNIOEA latifolia Michx.

Wabaunsee County
Map No. 49

Wabaunsee County
Map No. 50
Syntherisma sanguinale (L.)

Dalac.
**GPAI INEAR**

*Spinobolus cryptancheus* (Torr.) Cray

**Map No. 53**

*Muhlenbergia cuspidatus* (Torr.) Nash

**Map No. 54**
Spartina cynosuroides (L.) Roth.
GRAMINEAE
Sorgastrum nutans
(L.) Nash

Sphenopholis obtusata (Michx.) Scribn.
Schedonnardus paniculatus (Nutt.) Trel.
ORAMDEE
Atheropogon curtipendulius (Michx.)
Fourn.

Map No. 61

Cenchrus tribuloides L.

Map No. 62
GRAMINEAE
Paspalum ciliatifolium
Michx.

Phleum pratense L.
GRAMINEAE
Agrostis hyemalis (Walt)
B.S.P.

Schizachyrium scoparium
(Michx.) Nash
ORAM

Agropyron repens (L.) Beauv. (glaucum) Hitchc.

Bromus japonicus D.C.
Routelousa

Bouteloua oligostachy

(Nutt.) Torr.

**Hulbilis daesuloidalès (Nutt.)**

nař.
I. Festuca nutans Spreng.

II. Eragrostis major Host.

III. Gramineae

WABAUNSEE COUNTY
Map No. 73

WABAUNSEE COUNTY
Map No. 74
GRAMINEAE
Chaetochloa glauca L.
Scribn.

WAUANSEE COUNTY
Map No. 77

Chaetochloa viridis (L.)
Scribn.

WAUANSEE COUNTY
Map No. 78
Gramineae

Echinochloa crus-galli
(L.) Beauv.

Wabaunsee County
Map No. 79

Panicularia nervata Willd.
Kuntze

Wabaunsee County
Map No. 80
GRAMINEAE
Panicum scribnerianum

Koeleria cristata Pers.

WAKAUNSEE COUNTY
Map No. 85

WAKAUNSEE COUNTY
Map No. 86
IPIDACEAE

Sisyrinchium campestre
Bicknell

Sisyrinchium angustifolium
Mill.

WABAUNSEE COUNTY
Map No. 85

WABAUNSEE COUNTY
Map No. 86
MAC-NOLIACEAE
Asimina triloba Dunal.

SAURURACEAE
Juglans nigra L.
RANUNCULACEAE

Thalictrum revolatum DC.
RAUNICULACEAE

Thalictrum dioicum L.

WABAUNSEE COUNTY
Map No. 90

Viorna pitcheri (T & G)
Britton

WABAUNSEE COUNTY
Map No. 91
RANUNCULACEAE
Ranunculus abortivus L.

Dolphinium virgencens Nutt.
Delphinium carolinianum
Walt.

Delphinium tricorne Michx.

Wabaunsee County
Map No. 94

Wabaunsee County
Map No. 95
Anemone virginiana L.

Wabaunsee County
Map No. 97

Anemone decapetala Ard.
Ipnispernum canadense L.

Podophyllum peltatum L.
MALVACEAE

Callirhoo digitata Nutt.

Callirhoo triangulata Leavenw.

WAGANSEE COUNTY
Map No. 100

WAGANSEE COUNTY
Map No. 101
MALVACEAE

Gallirhoe alcooides
(Michx.) A. Gray

WASHINGTON COUNTY
Map No. 102

Gallirhoe involucrata (T & G)
Gray

WASHINGTON COUNTY
Map No. 103
Hibiscus militaris Cav.

Hibiscus trionum L.
MALVACEAE
Abutilon abutilon (L.) Rusby

Abutilon atropurpureum (L.) Rusby

Wabaunsee County
Map No. 106

Malva rotundifolia L.
Ulmus americana L.

Ulmus fulva Michx.
MORACEAE
Morus rubra L.

WABAUNSEE COUNTY
Map No. 112

MORACEAE
Morus alba L.

WABAUNSEE COUNTY
Map No. 113
MORACEAE

Cannabis sativa L.

Humulus lupulus L.

Wabaunsee County
Map No. 114

Wabaunsee County
Map No. 115
URTICACEAE

Parietaria pennsylvanica
Nuhl.

Wabaunsee County
Map No. 117

Urtica gracilis Ait.

Wabaunsee County
Map No. 118
URTICACEAE
Coltis occidentalis L.

Pilea pumila (L.) Gray

Map No. 119

Map No. 120
GERANIACEAE
Geranium carolinianum L.
OXALIDACEAE
Xanthoxalis cymosa Small.

Oxalis violacea (L.) Small
OXALIDACEAE
Xanthoxylis corniculata (L.) Small

WABAUNSEE COUNTY
Map No. 124

Xanthoxylis stricta (L.) Small

WABAUNSEE COUNTY
Map No. 125
LIJACEAE
Cathartolinum sulcatum
(Ridd.) Small

WAHAUNSEE COUNTY
Map No. 126

BALSAIJEIACEAE
Impatiens pallida Nutt.

WAHAUNSEE COUNTY
Map No. 127
RUTACEAE
Xanthoxylum americanum
Mill.

WABAUNSEE COUNTY
Map No. 128

SIMARUBACEAE
Ailanthus glandulosa Desf.

WABAUNSEE COUNTY
Map No. 129
EUPHORBIAEAE
Tithymalopsis corollata
(L.) Kl. & Garcke

WABAUNSEE COUNTY
Map No. 131

Tithymalos cyparissias (L.) Hill

WABAUNSEE COUNTY
Map No. 132
EUPHORBIAE

Groton capitatus Michx.

WAUAUNSEE COUNTY
Map No. 133

Groton monathogynus Michx.

WAUAUNSEE COUNTY
Map No. 134
Poinsettia dentata
(Michx.) Small

Poinsettia heterophylla (L.)
Kl. & Garcke
VAHAU*S£

Euphorbiaceae
Euphorbia strictospera
(Engelm.)

Dichrophyllum marginatum
(Pursh.) Kl. & Garcke

WABAUNSEE COUNTY
Map No. 139

WABAUNSEE COUNTY
Map No. 140
BUPHORIACEAE

Chamaesyce maculata (L.) Small

Warraunsee County
Map No. 141

Chamaesyce serpens (H.B.K.) Small

Warraunsee County
Map No. 142
EUPHORBIACEAE
Chamaesyce zygophylloides
(Boiss.) Small

Tithymalus missouriensis
(Norton) Small
EUPHORBIACEAE

Acalypha ostryefolia
Ridd.

WABAUNSEE COUNTY
Map No. 145

Acalypha virginica L.

WABAUNSEE COUNTY
Map No. 146
**EUPHORBIACEAE**

*Zygophyllidium hexagonum*

(Nutt.) Small

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**Tragia ramosa Cav.**

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**Wabaunsee County**

Map No. 147

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**Wabaunsee County**

Map No. 148
Hypericum cistifolium Lam.

Viola palmata L. cucullata Gray
OEAE
Viola
rafinesquii
Green

Calceolaria alceoides (Ort.)
Kuntze
VIOLACEAE

Viola pedatifida Don.

Viola eriocarpa Schwein.
Viola papilionacea
Fursh.

Viola palmata L.
PAPAVERACEAE

Argemone alba Lestib.

Argemone intermedia Sweet (probably)

WABAUNSEE COUNTY
Map No. 157

WABAUNSEE COUNTY
Map No. 158
BRASSICACEAE

Thlaspi arvense L.

WABANSEE COUNTY
Map No. 160

Lepidium apetalum Willd.

WABANSEE COUNTY
Map No. 160
BRASSICACEAE

Arabis canadensis L.

Radicula sinuata (Nutt.)
Greene
BRASSICACEAE
Radicula palustris (L.) Moench

WABAUNSEE COUNTY
Map No. 163

Radicula sessiliflora (Nutt.) Greene

WABAUNSEE COUNTY
Map No. 164
Dentaria laciniata Muhl.

Wabaunsee County
Map No. 165

DRASSICACEAE
Alliaria alliaria Britton

Wabaunsee County
Map No. 166
BRASSICACEAE

Draba caroliniana Walt.

Draba cuneifolia Nutt.
BRASSICACEAE
Sophia atroirrensis (?)
BRASSICACEAE

Bursa bursa-pastoris
(L.) Britton

Sophia pinnata (Walt.)
Howell
BRASSICACEAE
Brassica campestris L.

Lepidium virginicum (Tourn.) L.
**BRASSICACEAE**

**Brassica nigra (L.) Koch**

**Brassica juncea (L.) Cosson**
BRASSICACEAE
Erysimum officinale
(L.) Scop.
CARYOPHYLLACEAE
Saponaria officinalis L.

Silene antirrhina L.

WABAUNSEE COUNTY
Map No. 178

WABAUNSEE COUNTY
Map No. 179
CARYOPHYLLACEAE

Cerastium brachypodum

Engelm.
CARYOPHYLLACEAE
Silene stellata (L.) Ait.

PORTULACACEAE
Portulaca oleracea L.
SALICACEAE
Populus sargentii Dode

Populus deltoides Marsh
Populus alba L.

Populus italica Moench.
Salix amygdaloides Anders.

Salix cordata Muhl.
SALICACEAE
Salix longifolia Muhl.

PHYTOLACCAEAE
Phytolacca americana L.
AMARANTHACEAE

Amaranthus retroflexus

L.

WABAUNSEE COUNTY
Map No. 191

Amaranthus spinosus L.

WABAUNSEE COUNTY
Map No. 192
Amaranthus blitoides
S. Lats.

Amaranthus grsecizans L.
AMARANTHACEAE
Acnida tamariscina
(Nutt.) Wood

WAUSAUNSEE COUNTY
Map No. 195

CHENOPODIACEAE
Monolepsis nuttalliana
(R & S) Wats.

WAUSAUNSEE COUNTY
Map No. 196
Cycloloma atriplicifolium (Spreng.) Coulter.
Chenopodium hybridum L.

Chenopodiaceae
Chenopodium boscianum

Wabaunsee County
Map No. 109

Wabaunsee County
Map No. 200
Chenopodium leptophyllum (Moq.) Nutt.

Chenopodium leptophyllum subglabrum S. Wats.
POLYGONACEAE
Rumex acetosella L.

Rumex altissimus Wood
POLYCOMACEAE
Polygonum littorale
Link.

POLYGONUM
Polygonum ramosissimum Michx.
POLYGONACEAE
Persicaria persicaria
(L.) Small

WABAUNSEE COUNTY
Map No. 213

Persicaria punctata Ell.

WABAUNSEE COUNTY
Map No. 214
POLYGONACEAE
Persicaria muhlenbergii
(S.Wats.) Small

WABAUNSEE COUNTY
Map No. 217

Tianaria scandens (L.) Small

WABAUNSEE COUNTY
Map No. 218.
NYCTAGINACEAE
Allionia albida Walt.

WABAUNSEE COUNTY
Map No. 219

Allionia nyctaginea Michx.

WABAUNSEE COUNTY
Map No. 220
STEIRONEMA

ciliatum L. Raf.

Androsace occidentalis

Pursh.
As! Tm &r PLANTAGINACEAE
Plantago lanceolata L.

Plantago rugelli Done.
Plantago media L.

Plantago virginica L.
Plantago aristata Michx.

Plantago purshii R. & S.
**CONVOLVULACEAE**

Convululus sepium L.

**Evolvulus pilosus Nutt.**

WABAUNSEE COUNTY
Map No. 230

WABAUNSEE COUNTY
Map No. 231
CONVOLVULACEAE

Convolvulus repens L.

WABANSEE COUNTY
Map No. 232

POLYGONIACEAE

Phlox divaricata L.

WABANSEE COUNTY
Map No. 233
CONVOLVULACEAE
Ipomoea hederacea Jacq.

Ipomoea pandurata (L.)
G.F.W. Mey.
Ipomoea purpurea (L.) Roth.

Cuscuta polygonorum Bagel.
Hydrophyllum virginianum L.
Onosmodium occidentale
Mackenzie
Solanum nigrum L.

Map No. 243

WHAUNSEE COUNTY

Map No. 244

Solanum rostratum
Dunal.
Solanum carolinense L.

Solanum elaeagnifolium Cav.

WABAUNSEE County
Map No. 245

WABAUNSEE County
Map No. 246
Physalia heterophylla
Nees

Physalis longifolia Nutt.
Fraxinus pennsylvanica
Marsh.

Fraxinus campestris Britton
Oleaceae

Fraxinus americana L.
GENTIANACEAE

Gentaurium toxense
(Griseb.)

WASAUNSEE COUNTY
Map No. 254

Dasystephana puberula (Michx.)
Small

WASAUNSEE COUNTY
Map No. 256
ASCLEPIADACEAE
Acerates angustifolia (Nutt.) Dec.

Acerates lanuginosa (Nutt.) Dec.
ASCLEPIADACEAE
Aesclepias sullivantii
Engelm.

WABAUNSEE COUNTY
Map No. 261

Aesclepias syriaca L.

WABAUNSEE COUNTY
Map No. 262
Asclepias tuberosa L.

Asclepias verticillata L.

Wabaunsee County
Map No. 263

Wabaunsee County
Map No. 264
Asolepiodora viridis
(Walt.) A. Gray
SCROPHULARIACEAE

Mimulus ringens L.

Mimulus geyeri Torr.

WABAUNSEE COUNTY
Map No. 266

WABAUNSEE COUNTY
Map No. 267
SCROPHULARIACEAE
Pentastemon cobaea Nutt.

WABAUNSEE COUNTY
Map No. 268

Pentastemon grandiflorus Nutt.

WABAUNSEE COUNTY
Map No. 269
Otophylla densiflora (Benth.) Small

Verbascum thapsus (Tourn.) L.

SCROPHULARIACEAE
Scrophularia marylandica

Map No. 272

Afzelia macrophylla (Nutt.) Kuntze

WaroNUMSE COUNTY
Map No. 273
EIONONIACEAE
Catnipula speciosa Warder.

LENTIBULARIACEAE
Thalesia uniflora L.

WABAUNSEE COUNTY
Map No. 274

WABAUNSEE COUNTY
Map No. 275
Phryma leptostachya

Ruellia strepens L.
ACANTHACEAE
Ruellia cilioa Pursh.

Dianthera americana L.
VERBENACEAE
Verbena angustifolia
Michx.

Map No. 280

WANAUNSEE COUNTY

Verbena bracteosa Michx.

Map No. 281

WANAUNSEE COUNTY
VERBENACEAE

Verbena canadensis (L.)

Britton
VERBENACEAE
Verbena hastata L.

WAHAUNSEE COUNTY
Map No. 283

Verbena lanceolata Michx.
VERBENACEAE
Verbena stricta Vent.

Verbena urticifolia L.

WABAUNSEE COUNTY
Map No. 285

WABAUNSEE COUNTY
Map No. 286
VERBENACEAE

Lippia cuneifolia (Torr.) Steud.

Lippia lanceolata Michx.

WABAUNSEE COUNTY
Map No. 237

WABAUNSEE COUNTY
Map No. 238
LABIATAE
Leonurus cardiaca L.

Mentha canadensis (L.)
Briquet
LABIATAE
Lycopus americanus Muhl.

Scutellaria parvula Michx.
Hedeoma hispida Pursh.

LABIATAE
Nepeta cataria L.
LABIATAE
Monarda fistulosa L.

Agastache nepetoides (L.)
Kuntze
LABIATAE

Teucrium canadense L.

Map No. 897

Teucrium occidentale A. Gray

Map No. 297

Map No. 298
LABIATAE
Salvia lancifolia Poir.

Salvia pitcheri Torr.
LABIATAE

Prunella vulgaris L.
Rosa arkansana (?)

Rosa woodsii Lindl.

WABAUNSEE COUNTY
Map No. 302

WABAUNSEE COUNTY
Map No. 303
ROSACEAE
Rosa pratina/Greene

WABAUNSEE COUNTY
Map No. 304

Rosa blanda Ait.

WABAUNSEE COUNTY
Map No. 305
Spirea vanhouttei Zabel.
Agrimonia mollis
(T. & G.) Britton

Agrimonia parviflora Soland.
ROSACEAE.  
Fragaria virginiana  
Duchesne

MALACEAE  
Crataegus
ROSAEAE
Rubus canadensis L.

WHAUNSEE COUNTY
Map No. 312

Rubus occidentalis L.

WHAUNSEE COUNTY
Map No. 313
PRUNACEAE
Prunus virginiana (L.) Hill.

WHAUNSEE COUNTY
Map No. 315

Prunus americana Marsh.

WHAUNSEE COUNTY
Map No. 316
MIMOSACEAE
Morongia uncinata Willd.

CASSIACEAE
Chamaecrista fasciculata
(Michx.) Greene
FABACEAE

Glycyrrhiza lepidota Pursh.
CASSIACEAE
Gymnocladus dioica
(L.) Koch.

Gleditsia triacanthos L.
LEGUMINOSAE
Robinia pseudacacia L.

CASSIAEAE
Cercis canadensis L.
LEGUMINOSAE
Geoprummon plattense
(Nutt.) Rydb.

Map No. 325

Geoprummon crassicarpus
(Nutt.) Rydb.

Map No. 326
LEGUMINOSAE

Melilotus officinalis
(L.) Lam.

Melilotus alba Desv.
LEGUMINOSAE

Petalostomum purpureum
(Vent.) Rydb.

Map No. 339

WABANSEE COUNTY

Petalostomum candidum (Willd.) Michx.

Map No. 339

WABANSEE COUNTY
LEGUMINOSAE

Petalostemum multiflorum Nutt.

Viola sparsifolia Nutt.
LEGUMINOSAE

Baptisia australis
(L.) R. Br.

WABAUNSEE COUNTY
Map No. 333

Baptisia bracteata Ell.

WABAUNSEE COUNTY
Map No. 334
LEGUMINOSAE
Baptisia leucantha T. & C.

WANAUNSEE COUNTY
Map No. 335

Amorpha nana Nutt.

WANAUNSEE COUNTY
Map No. 336
FABACEAE

Amorpha canescens Pursh.

WABAUNSEE COUNTY
Map No. 337

Amorpha fruticosa L.

WABAUNSEE COUNTY
Map No. 338
FABACEAE
Meibomia grandiflora
(Kuntze)

Meibomia canescens (L.) Kuntze
FABACEAE
Medicago sativa L.

WAUSAUNSEE COUNTY
Map No. 541

Medicago illinoensis (A. Gray)
Kuntze

WAUSAUNSEE COUNTY
Map No. 542
FABACEAE
Psoralea floribunda Nutt.

Psoralea agrophylla Pursh.
Fabaceae
Psoralea esculenta
Pursh.

Wabaunsee County
Map No. 345

Falcata pitcheri (T & G) Kuntze

Wabaunsee County
Map No. 346
Fabaceae

Astragalus canadensis L.

Glycyrrhiza lepidota (Nutt.) Pursh.
Fabaceae
Lespedeza violacea
(L.) Pers.

Lespedeza capitata Michx.
FABACEAE

Trifolium pratense L.

Trifolium repens L.
GROSSULARIACEAE
Grossularia missouriensis
(Nutt.) Cav. & Britt.

WABAUNSEE COUNTY
Map No. 355

CRASSULACEAE
Penthorum sedoides L.

WABAUNSEE COUNTY
Map No. 356
PLATANACEAE

Plantanus occidentalis

LYTHRACEAE

Lythrum alatum Pursh.
OENOTHERACEAE
Meriolix serrulata (Nutt.) Walp.

Oenothera biennis L.

WABUNSEE COUNTY
Map No. 360
Hartmannia laciniata (Hill)
Rose

Hartmannia speciosa (Nutt.)
Small

Map No. 361
Map No. 362
OENOTHERACEAE

Stereosiphon linifolium (Nutt.) Britton

Anopra albicaulis (Pursh.) Britton
Gaura biennis L.

Gaura parviflora Dougl.
Oenothera erectula Kutt.

Oenothera serrulata Nutt.
Opuntia humifusa
Tourn.

Coryphantha missouriensis
(Sweet) Britton & Rose

WABAUNSEE COUNTY
Map No. 369

KANSAS RIVER

WABAUNSEE

Map No. 370
LOASACEAE
Mentzolia oligosperma Nutt.
CUCURBITACEAE
Pepo foetidissima
N.B.K. Britton

Sicyos angulatus L.
Rhamnaceae
Ceanothus ovatus var. pubescens T. & G.; S. nats.

Ceanothus americanus L.

Wabaunsee County
Map No. 376

Wabaunsee County
Map No. 377
RHAMNACEAE
Rhamnus lanceolata
Pursh.

Ceanothus ovatus Deaf.
Ceanothus americ anus L.

Rhamnaceae
Ceanothus ovatus
var. pubescens T. & G.; S. Wats.

Map No. 376

Wabaunsee County

Map No. 377

Wabaunsee County
Vitis cinerea Engelm.

Vitis cordifolia Michx.

Wabaunsee County
Map No. 378

Wabaunsee County
Map No. 379
UTACEAE
Vitus vulpina L.

Ampelopsis cordata Michx.
VITACEAE
Parthenocissus quinquefolia (L.) Greene

Vitis palmata Vahl.

WABAUNSEE COUNTY
Map No. 382

WABAUNSEE COUNTY
Map No. 383
Celastraceae
Celastrus scandens L.

staphylea trifolia L.
CELASTRACEAE
Euonymus atropurpureus
Jacq.
SANTALACEAE
Comandra umbellata
(L.) Nutt.

Comandra pallida A. DC.

WABAUNSEE COUNTY
Map No. 387

WABAUNSEE COUNTY
Map No. 388
Quercus prinoides Willd.
Quercus macrocarpa Michx.

Quercus muhlenbergii Engelm.

Map No. 391

Map No. 392
ACERACEAE
Acer negundo L.

Acer saccharinum L.

WARAUNSEE COUNTY
Map No. 393

WARAUNSEE COUNTY
Map No. 394
ABACARDIACEAE

Rhus crenata (Mill)
Greene

Toxicodendron var. radicans
(L.) Vent.
Rhus glabra L.

Rhus trilobata Nutt.
JUGLANDACEAE
Nicoria cordiformis
(Wang.) Britton

BETULACEAE
Ostrya virginiana (Mill)
K. Koch
FUMARIACEAE
Bicuculla cucullaria
(L.) Millsp.

Capnoides micronanthum (Engel.)
Britton
FUMARIACEAE
Capnoides aureum (Willd.)
Kuntze
APIACEAE
Cogswellia foeniculaceae
(Nutt.) Coult. & Rose

Cogswellia daucifolia (Nutt.)
M.E. Jones
Spermolepis patens (Nutt.) Robinson

Washingtonia longistylis (Torr.) Britton
Chaerophyllum texanum (?)

Cout. & Rose
Pleiotraenia nuttallii (DC.)
Coults & Rose
Aptaceae

Drynaria yuccaefolium
Michx.

Cerifolium cerifolium (L.)
Britton
APIACEAE
Zizia aurea (L.) Koeh.

CORNACEAE
Cornus asperifolia Michx.
Rubiaceae
Houstonia minima Bokh.

Houstonia angustifolia Michx.
Gallium concinnum Torr. & Gray

Gallium triflorum Michx.
Rubiaceae
Galium aparine L.

Wabaunsee County
Map No. 420

Galium circassica Michx.
CAPRIFOLIACEAE
Triosteum porfoliatum L.

Rubiaceae
Cophalanthus occidentalis L.
Symphoricarpos syphoricarpos (L.) MacM.
CAMPANULACEAE
Campanula americana L.

Specularia perfoliata (L.) A. DC.

WAUSAUSee COnTyr
Map No. 427

WAUSAUSee COnTY
Map No. 428
Sonchus asper (L.) Hill

Lactuca spicata (Lam.) Will.
Lactuca ludoviciana (Nutt.) DC.

Lactuca floridana (L.) Gaertn.
CICHORIACEAE
Tragopogon pratensis L.

Agoseris cuspidata (Pursh.)
D. Dietr.

WABAUNSEE COUNTY
Map No. 433

KANSAS RIVER

WABAUNSEE

Map No. 434
Seneio plattensis Nutt.

Senis opporitifolia Raf.
Kuntze
COMPOSITAE
Antennaria campestris
Rydb.

Antennaria neglecta Greene
COMPOSITAE
Silphium laciniatum L.

WABAUNSEE COUNTY
Map No. 441

Silphium integrifolium Michx.

WABAUNSEE COUNTY
Map No. 442
COMPOSITAE
Grindelia squarrosa
(Pursh) Dunal.

Chrysanthemum leucanthemum L.
COMPOSITAE
Leontodon taraxacum L.

Heliopsis scabra Dunal.
COMPOSITAE

Artemisia dracunculoides Pursh.

Artemisia gnaphalodes Nutt.

WAUSAUNSEE COUNTY
Map No. 448

WAUSAUNSEE COUNTY
Map No. 449
COMPOSITAE
Artemisia ludoviciana
Nutt.

Cirsium lanceolatum (L.) Hill.
Cirsium undulatum (Nutt.) Spreng.

Cirsium altissimum (L.) Spreng.
**Helianthus annuus L.**

**Helianthus grosse-serratus Martens.**
Helenium maximilianii
Schrad.

Helenium orgyalis DC.
COMPOSITAE
Ambrosia trifida L.

WABAUNSEE COUNTY
Map No. 462

Euthamia graminifolia (L.)
Nutt.

WABAUNSEE COUNTY
Map No. 463
Aster laevis L.

Aster multiflorus Ait.
Arctium minus Bernh.

Boebiera papposa (Vent.) Rydb.
Achillea millefolium

Erigeron philadelphicus L.
COMPOSITAE

Frigeron ramosus
(Walt.) Britton

Leptilon canadense (L.) Britton
COMPOSITAE
Eupatorium altissimum
L.

Eupatorium urticaefolium
Reichard
COMPOSITAE
Liatris punctata
(Hook) Kuntze

WASAUNSEE COUNTY
Map No. 474

Liatris var. squarrosa
Michx.

WASAUNSEE COUNTY
Map No. 475
COMPOSITAE
Brauneria pallida
(Nutt.) Britton

WABAUNSEE COUNTY
Map No. 476

Brauneria purpurea (L.) Moench.

WABAUNSEE COUNTY
Map No. 477
COMPOSITAE
Mesadenia atriplicifolia
(L.) Raf.

Mesadenia tuberosa (Britton.)
Britton.
COMPOSITAE
Ratibida pinnata
(Vent.) Barnhart

Ratibida columnaris (Sims)
D. Don.
COMPOSITAE
Veronia baldwinii Torr.

Veronica fasciculata Michx.

WABAUNSEE COUNTY
Map No. 482

WABAUNSEE COUNTY
Map No. 483
COMPOSITAE
Kuhnia eupatorioïdes
L.

Rudbeckia hirta L.
COMPOSITAE

Solidago missouriensis

Mutt.

Xanthium americanum Mill.

WABAUNSEE COUNTY
Map No. 496

KANSAS RIVER

WABAUNSEE

Map No. 497