

THE FLORA OF SUNNER COUNTY, KANSAS

A Thesis ¹⁹⁶⁴

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Introduction

The purposes of the study are to establish a checklist of the flowering plants which occur in Sumner County, Kansas, and to determine certain phenological and ecological data for each species. The area is an ecotone between the predominantly limestone soils of the Flint Hills of Cowley County and the red soils of Barber and Harper Counties, Kansas, and Alfalfa and Grant Counties, Oklahoma. Little previous floristic work has been done on the area except for a few scattered collections.

Sumner County is located in the Wellington and Arkansas River Lowlands in south-central Kansas and is characterized by gently rolling plains and wide, flat valleys except where sand dunes have formed along the major river systems. It is bordered on the west by Harper and Kingman Counties, on the north by Sedgwick County, on the east by Cowley County, and on the south by Kay and Grant Counties, Oklahoma. It is the fourth largest county in the state with an area of 1188 square miles (36 miles east to west and 33 miles north to south). A relief of approximately 400 feet occurs in the county with the highest point of 1461 feet occurring in the northwest corner near Milton (Fig. 1) and the lowest points in the southern and southeastern parts on the Chikaskia and Arkansas Rivers (Fig. 1) where the elevations are 1028 and 1110 feet respectively (Walters, 1961).

The aquatic habitats of the county are provided by large southeasterly-flowing streams, one lake, numerous farm ponds, and many smaller streams. The Arkansas River and Cowskin Creek cross the extreme northeastern and eastern parts of the county. The Ninnescah River enters north-centrally and joins the Arkansas River in the east-central part of the county. Slate Creek with its headwaters in the northwestern corner

of the county flows southeastwardly before joining the Arkansas River north of Gueda Springs in the southeast corner of the county. The Chikaskia River enters the county on the west near Argonia and flows southeastwardly leaving near Drury in the south-central part of the county. Fall and Bluff Creeks drain the southwestern corner of the county and join east of Caldwell before flowing into Oklahoma (Fig. 1). Wellington Lake with a surface area of approximately 280 acres is located seven miles west of Wellington. The lake is surrounded by grassland and several mesic wooded areas. In addition, many farm ponds and small streams (which usually become dry in the summer) are scattered throughout the county.

The climate of the county consists of mild winters and hot summers with a moderate average annual rainfall of 31.11 inches. Normally, about seventy per cent of the precipitation occurs from April to September. The spring of 1966 was relatively wet but a severe drought was experienced from mid-June 1966 until mid-April 1967. During the period of the study, which was from March 1966 until August 1967, the rainfall was considerably below normal especially in the western and southern portions of the county.

Table I. The average monthly precipitation from 1922 to 1955 and the monthly precipitation for 1966 and January to July 1967.*

Month	Avg.	1966	1967	Month	Avg.	1966	1967
Jan	1.02**	0.38	0.68	Jul	3.00	1.14	6.16
Feb	1.27	1.43	0.12	Aug	2.99	2.97	
Mar	1.68	0.23	0.38	Sep	3.36	0.74	
Apr	3.09	2.40	2.60	Oct	2.23	0.61	
May	4.74	2.43	2.86	Nov	1.69	0.00	
Jun	4.60	3.25	10.26	Dec	1.36	0.84	

* Records from the U.S. Weather Bureau Station at Wellington, Kansas.

** Precipitation recorded in inches

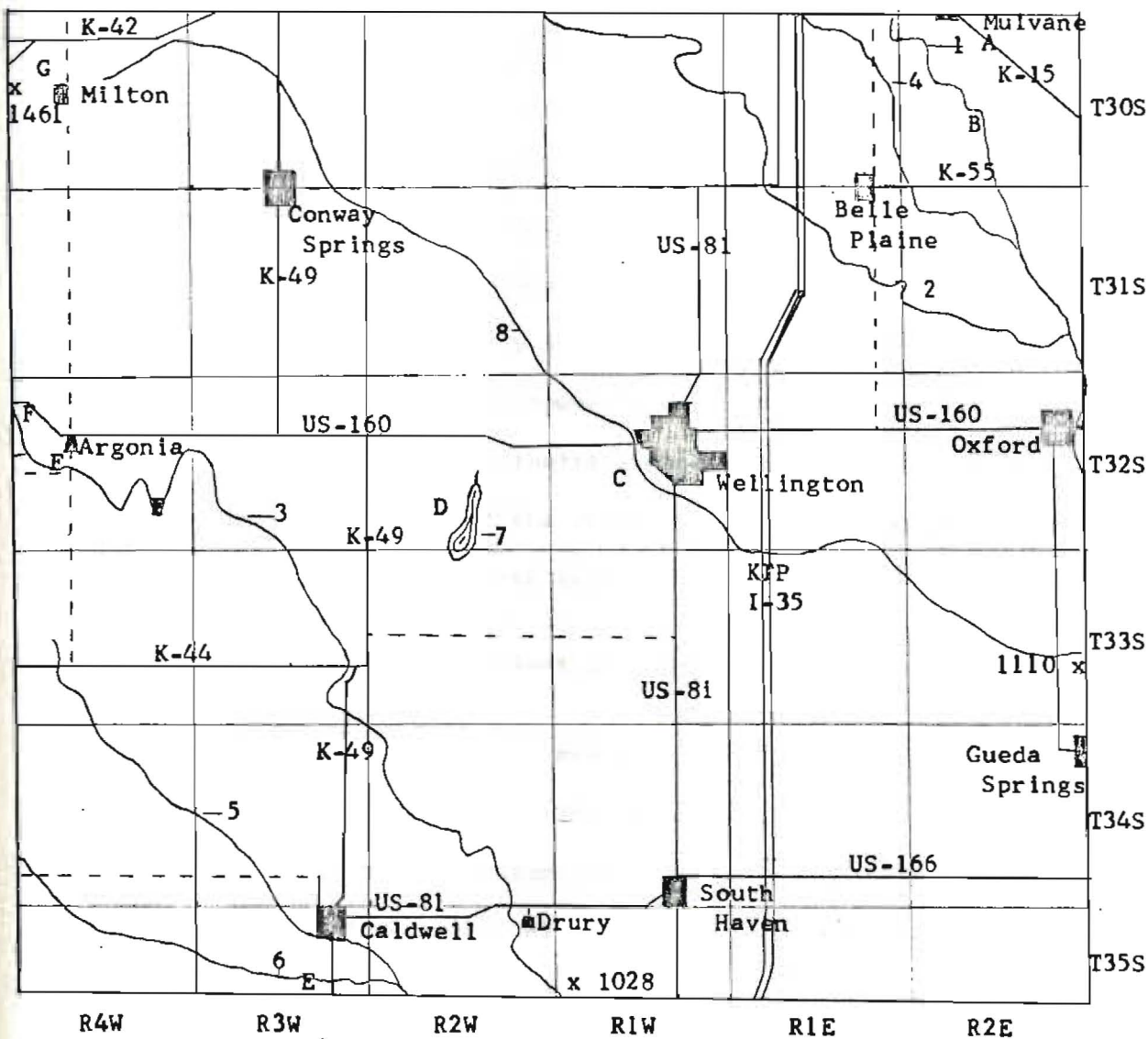


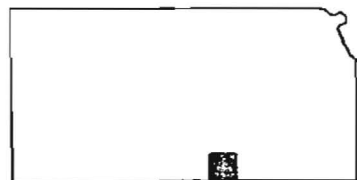
Fig. 1. General Highway Map of Sumner County, Kansas.

Streams and Lake

1. Arkansas River
2. Ninnescah River
3. Chikaskia River
4. Cowskin Creek
5. Fall Creek
6. Bluff Creek
7. Wellington Lake
8. Slate Creek

Specific Collecting Areas

- A. Mulvane meadow area
- B. Arkansas River bottom
- C. Limestone hill area
- D. Wellington Lake Area
- E. Red hill area
- F. Chikaskia River bottom
- G. Upland collecting area



General Geology

The rocks of Sumner County are mostly sedimentary in origin and range in age from Paleozoic to Recent. The Wellington Formation and the Ninescah Shale of the Leonardian Stage of the Permian age form the bedrock surface of the county which outcrop occasionally where they are not covered by Pleistocene deposits. Cenozoic deposits of Nebraskian-Aftonian age underlie the surface in the northwestern part near Conway Springs and deposits of Kansas-Yarmouthian age are extensive in the southern and eastern parts. Illinoisan-Sangamonian and Wisconsinian terrace deposits border most of the major streams of the county. Recent deposits form the flood plains and sand dunes (Walters, 1961).

Geological Formations and Vegetation

Certain geological formations are important because of the different types of vegetation they support. The Wellington Formation (Fig. 2) provides the limestone soils and outcroppings which are characteristic of the tall grass prairies of the Flint Hills region. The red soils of the Ninescah Shale which are most abundant in the southwest quarter of the county and the sand dunes along the major river systems support many xerophytic species. The arkosic sand and gravels of the terrace deposits and Alluvium soils support most of the vegetation along the major river systems.

The Wellington Formation underlies the entire county except possibly for small areas in the Arkansas River Valley. In the western third of the county it is covered by Ninescah Shale. The formation includes all the beds between the Nolans limestone below and the Ninescah Shale above. The lower part consists mainly of gray to gray-green silty shale but also includes several discontinuous limestone and dolomitic limestone

beds. The middle portion consists of salt and the upper part consists of red and purplish-red shale (Walters, 1961).

The Nineseah Shale forms the bedrock in the western third of the county. Although they are rare, several good exposures of the shale occur in roadcuts near Caldwell. The shale is chiefly reddish-brown with a few scattered gray-green spots. The upper parts contain thin beds of very fine grained sandstone.

Numerous sand dunes occur along the Arkansas and Chikaskia Rivers. The dunes usually lie to the north of the streams and are composed of fine- and medium-grained rounded quartz sand, which has been blown from the flood plains of the rivers during periods of prevailing southerly winds. Many of these dunes are only sparsely vegetated.

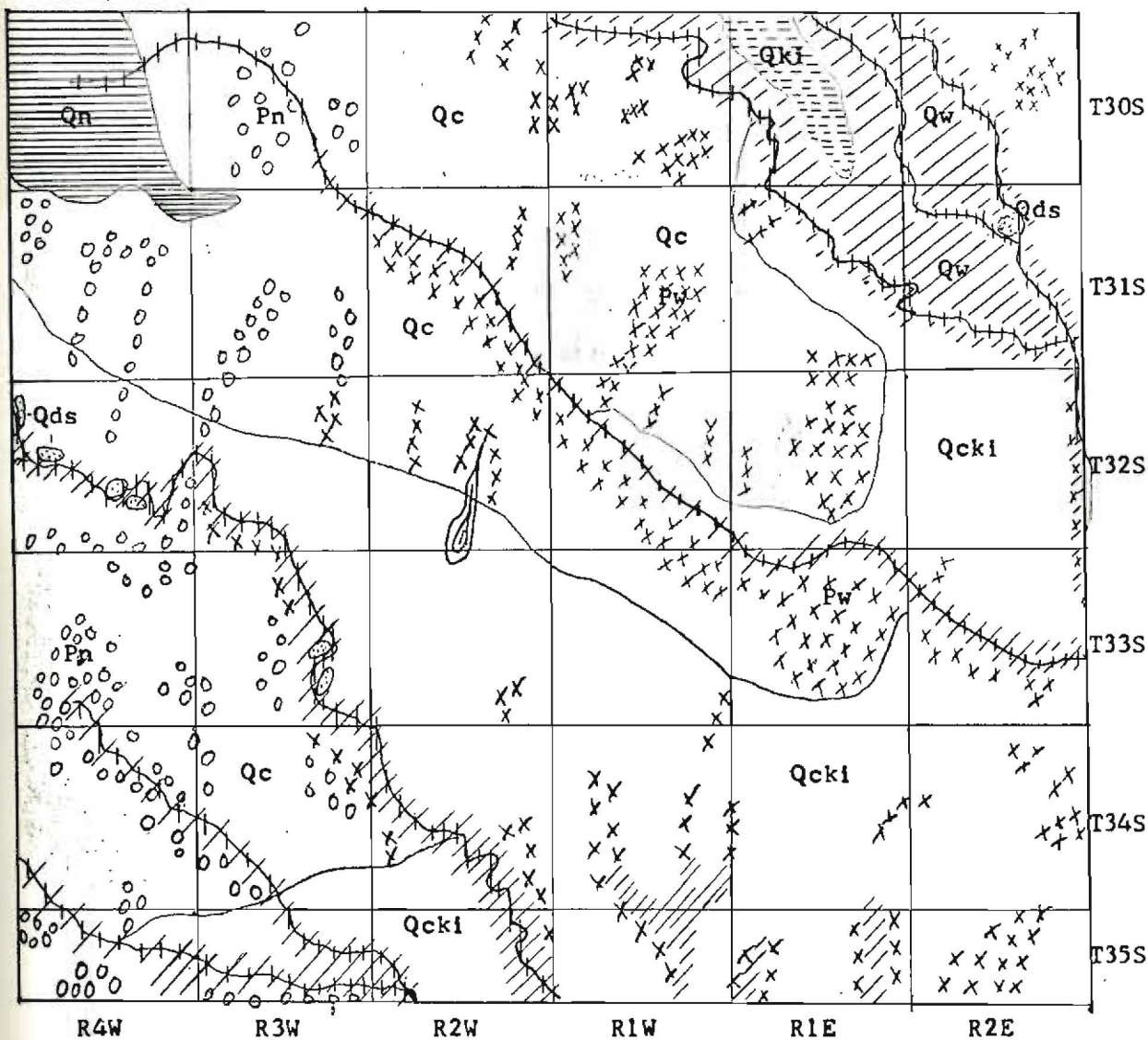
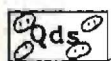
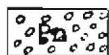


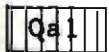
Fig. 2. Areal Geology of Summer County, Kansas (Walters, 1961).



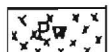
Dune sand



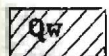
Ninnescah Shale



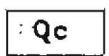
Alluvium



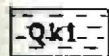
Wellington Formation



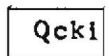
Wisconsin
Terrace deposits



Colluvium



Kansas-Illinois
Terrace deposits



Colluvium underlain by
Kansas-Illinois Terrace
deposits



Nebraskian
Terrace deposits

Collection Areas

Collections were systematically made throughout the county two or three times a month from March 1966 to July 1967. Some areas were collected more extensively than others. These areas are described below and their locations are shown on the general highway map (Fig. 1).

- A. Mulvane meadow area. The area consists of both short and tall grass areas, several wet areas, and a railroad right-of-way. The area is located one mile southeast of Mulvane.
- B. Arkansas River bottom. The area consists of a wooded area, grassy flood plains, sand dunes, and a sandy riverbank. The area is located four miles south of Mulvane.
- C. Limestone hills area. The area consists of mixed and tall grass pastures with rocky outcroppings and is located two miles southwest of Wellington.
- D. Wellington Lake area. The area provides excellent aquatic habitats, good tall grass meadows, and mesic woods.
- E. Red hills area. The area consists of short grass pastures and rocky hillsides. The area is located along the southern border of the county near Caldwell.
- F. Chikaskia River bottom. The areas consist of wooded areas, sand dunes, and aquatic habitats. The areas are located south and west of Argonia.
- G. Upland collecting area. The area consists of tall and short grass areas, waste ground, and cultivated fields. The area is located on the west edge of Milton.

Explanation of the Checklist and References Used

The checklist consists of the species of flowering plants personally collected as well as those housed in several Kansas herbaria. The herbaria of Kansas State Teachers College (KSTC), Emporia, Kansas State University (KSG), Manhattan, and the University of Kansas (KANU), Lawrence, were checked for species not personally collected and those found are marked with the abbreviation for the herbarium (Janjou and Stafleu, 1964). The species which were personally collected are housed in the herbarium at Kansas State Teachers College.

The checklist follows the arrangement of the families given in Gray's Manual of Botany (Fernald, 1950). Within each family the genera and species are arranged in alphabetical order. The common name and phenological and ecological information for each species are listed. This information includes the flowering dates, flower color, habitats, and growth habit.

The native and naturalized plants and the common escapes (which are marked with an E) are included in the checklist. The species of flowering plants which should occur in the county according to Gates (1940) but have not been personally collected or found in the Kansas herbaria are listed separately (Table V).

The Manual of the Grasses of the United States (Hitchcock, 1951), the Flora of Missouri (Steyermark, 1963), and the Flora of Oklahoma (Waterfall, 1962) were used in the identification of the flowering plants of Sumner County. Most of the species were checked with the descriptions in Gray's Manual of Botany (Fernald, 1950) and the Manual of the Plants of Colorado (Harrington, 1964). A list of the plants which occur in Sumner County and adjacent counties was taken from Gates' Flora of Kansas (1940).

Summary

Of the 560 species of flowering plants identified from Sumner County, Kansas, 262 are new records compared to Gates' checklist (1940). These were either collected personally or found in one of several Kansas herbaria between March 1966 and August 1967. There are 82 families (11 Monocotyledoneae and 71 Dicotyledoneae) and 297 genera (69 Monocotyledoneae and 228 Dicotyledoneae) (Table II). The number of genera per family ranges from one in several families to forty-three genera and eighty species in Compositae and forty-five genera and eighty-five species in Gramineae (Table III). Although there are large genera which include Carax (13 species), Polygonum (11), Cyperus (10), and Euphorbia (10), most of the genera contain from one to three species.

Table II. Number of families, genera, and species of Monocotyledoneae and Dicotyledoneae.

Class	Families	Genera	Species
Monocotyledoneae	11	69	157
Dicotyledoneae	71	228	403

Table III. Number of genera and species in the ten largest families.

Family	Genera	Species	Family	Genera	Species
Gramineae	45	85	Euphorbiaceae	5	19
Compositae	43	80	Chenopodiaceae	8	17
Leguminosae	24	43	Polygonaceae	3	15
Cyperaceae	5	33	Scrophulariaceae	7	12
Cruciferae	11	20	Onagraceae	5	12

Table IV. Number of species in the ten largest genera.

Genera	No. of species	Genera	No. of species
Carex	13	Asclepias	9
Polygonum	11	Eragrostis	8
Cyperus	10	Oenothera	6
Euphorbia	10	Solanum	6
Chenopodium	9	Helianthus	6

Flowering Plants of Sumner County, Kansas

Class Monocotyledoneae

Fam. 1 TYPHACEAE (Cat-tail Family)

1. TYPHA L.

1. T. angustifolia L. Narrow-leaved Cat-tail. Perennial; flowers green, brown in fruit; margins of streams and ponds, wet roadside ditches; May-July.
2. T. latifolia L. Common Cat-tail. Perennial; flowers green, brown in fruit; margins of streams, lakes, and ponds, wet roadside ditches; May-July.

Fam. 2 ALISMATACEAE (Water-plantain Family)

1. ALISMA L.

1. A. Plantago-aquatica L. Water Plantain. Perennial; flowers white; muddy banks of streams and ponds; late May-Sept.

2. SAGITTARIA L.

1. S. latifolia Willd. Common Arrowhead. Perennial; flowers white; margins of streams and ponds; June-Oct.
2. S. montevidensis Cham. & Schl., subsp. calycina (Engelm.) Bogin Perennial; flowers white; margins of streams and ponds; June-Sept.

Fam. 3 GRAMINEAE (Grass Family)

1. AEGILOPS L.

1. A. cylindrica Host Goat Grass. Annual; waste ground, roadsides, along railroads; May-Aug.

2. AGROPYRON Gaertn.

1. A. desertorum (Fisch.) Schult. Annual or weak perennial; waste ground, sandy soils, roadsides; June-Sept.
2. A. smithii Rydb. Western Wheat Grass. Perennial; waste ground, pastures, roadsides; May-Aug.

3. AGROSTIS L.

1. A. hyemalis (Walt.) BSP. Annual; waste ground, wet roadside ditches; June-Aug.

4. ALOPECURUS L. Fextail

1. A. carolinianus Walt. Annual; meadow, fallow fields, roadsides; April-Aug.

5. ANDROPOGON L. Beard Grass

1. A. gerardi Vitman Big Bluestem. Perennial; prairies, meadows, roadsides, along railroads; June-Sept.
2. A. saccharoides Swartz Silver Beardgrass. Perennial; roadsides, along railroads; July-Oct.
3. A. scoparius Michx. Little Bluestem. Perennial; meadows, roadsides, along railroads; Aug.-Oct.

6. ARISTIDA L. Three-awn Grass

1. A. longiseta Steud., var. robusta Merr. Red Three-awn Grass. Perennial; rocky hillsides, roadsides; May-June.
2. A. oligantha Michx. Prairie Three-awn Grass. Annual; dry fallow fields, roadsides; Aug.-Oct.
3. A. purpurea Nutt. Purple Three-awn Grass. Perennial; over-grazed pastures, roadsides; July-Oct.

7. AVENA L. Oats

1. A. sativa L. Annual; cultivated ground, roadsides; May-June. (E)

8. BOUTELOUA Lag. Grama Grass

1. B. curtipendula (Michx.) Torr. Sidecoats Grama. Perennial; meadows, roadsides, along railroads; July-Sept.
2. B. gracilis (H.B.K.) Lag. Blue Grama. Perennial; prairies, roadsides; July-Sept.
3. B. hirsuta Lag. Hairy Grama. Perennial; prairies, rocky hillsides, roadsides; July-Sept.

9. BROMUS L.

1. B. brizaeformis Fisch. & Mey. Rattle Grass. Perennial; margins of streams, roadsides; June-Oct.
2. B. catharticus Vahl Rescue Grass. Annual or biennial; meadows, roadsides; late April-July.
3. B. inermis Leyss. Smooth Brome. Perennial; waste ground, roadsides; late May-July.

4. B. japonicus Thunb. Japanese Brome. Annual; waste ground, roadsides; late May-July.
5. B. secalinus L. Chess. Annual; prairies, roadsides, along railroads; May-July. (KSC)
6. B. tectorum L. Downy Chess. Annual; waste ground, roadsides; April-early June.

10. BUCHLOE L.

1. B. dactyloides (Nutt.) Engelm. Buffalo Grass. Perennial; pastures, lawns, roadsides; May-Aug.

11. CALAMOVILFA Hack.

1. C. longifolia (Hook.) Scribn. Sand Reed Grass. Perennial; sandy soils; July-Sept.

12. CENCHRUS L.

1. C. pauciflorus Benth. Sandbur. Annual; waste ground, sandy roadsides, along railroads; late May-Oct.

13. CHLORIS Swartz

1. C. verticillata Nutt. Windmill Grass. Perennial; waste ground, dry meadows, lawns, roadsides; May-Oct.
2. C. virgata Sw. Feather Finger Grass. Perennial; cultivated ground, along railroads; July-Oct.

14. CYNODON L. Rich.

1. C. dactylon (L.) Pers. Bermuda Grass. Perennial; waste ground, sandy soils, roadsides; June-Oct.

15. DACTYLIS L.

1. D. glomerata L. Orchard Grass. Perennial; waste ground, fence rows, roadsides; May-Aug. (KSC)

16. DIGITARIA Heister

1. D. sanguinalis (L.) Scop. Crab Grass. Annual; waste ground, cultivated fields, roadsides; July-Nov.

17. DISTICHIS Raf.

1. D. stricta (Torr.) Rydb. Inland Salt Grass. Perennial; waste ground, alkaline soils; June-July.

18. ECHINOCHLOA Beauv.

1. E. crusgalli (L.) Beauv. Barnyard Grass. Annual; stream banks, moist ditches, roadsides; June-Nov.
- 1a. E. crusgalli (L.) Beauv., var. frumentacea (Roxb.) W.F.Wight Annual; moist places; June-Oct.
- 1b. E. crusgalli (L.) Beauv., var. mitis (Pursh) Peterm. Annual; moist roadsides; June-Oct.

19. ELEUSINE Gaertn.

1. E. indica (L.) Gaertn. Goose Grass. Annual; sandy soils, waste ground, roadsides; July-Oct.

20. ELYMIS L.

1. E. canadensis L. Canada Wild Rye. Perennial; waste ground, pasture, meadow, roadsides; June-Oct.
2. E. virginicus L. Wild Rye. Perennial; waste ground, pastures, riverbottom, roadsides; May-Sept.

21. ERAGROSTIS Beauv. Love Grass

1. E. ciliaris (All.) lutati Stink Grass. Annual; waste ground, cultivated fields, roadsides, along railroads; June-Oct.
2. E. curtipedicellata Buckl. Perennial; meadows, roadsides, along railroads; June-Sept.
3. E. curvula (Schrad.) Nees. Weeping Love Grass. Perennial; sandy soils, roadsides; June-Aug.
4. E. hypnoides (Lam.) BSP. Creeping Love Grass. Annual; margins of streams, lakes, and ponds; July-Nov.
5. E. pectinata (Michx.) Nees. Annual; open ground, prairies, along streams and ponds, roadsides; July-Oct. (KSC)
6. E. reptans (Michx.) Nees. Annual; wet lake shores; Aug.-Oct.
7. E. spectabilis (Pursh) Steud. Purple Love Grass. Perennial; sandy open ground, prairies, roadsides; July-Oct. (KSC)
8. E. trichodes (Nutt.) Wood Sand Love Grass. Perennial; sandy soil along streams and roadsides; July-Oct.

22. ERIOCHLOA H.B.K.

1. E. contracta Hitch. Prairie Cup Grass. Annual; cultivated and waste ground, sandbars, sandy stream banks; July-Oct.

23. FESTUCA L.

1. F. arundinacea Schreb. Alta Fescue. Perennial; waste ground, meadows, roadsides; April-Oct. (E)
2. F. octoflora Walt. Six-week Fescue. Annual; waste ground, prairies, roadsides; April-June. (KSC)

24. HORDEUM L.

1. H. jubatum L. Foxtail Barley. Perennial; waste ground, pastures, roadsides, along railroads; May-Oct.
2. H. pusillum Nutt. Little Barley. Annual; waste and cultivated ground, pastures, roadsides; April-June.

25. KOELERIA Pers.

1. K. cristata (L.) Pers. June Grass. Perennial; meadows, pastures, roadsides; April-May.

26. LEERSIA Swartz

1. L. oryzoides (L.) Swartz Ricecut Grass. Perennial; margins of lakes and streams; June-Oct.

27. LEPTOCHLOA Chase

1. L. fascicularis (Lam.) A. Gray Salt Meadow Grass. Annual; margins of streams and ponds, along railroads; July-Oct.

28. LEPTOLOMA Chase

1. L. cognatum (Schultes) Chase Fall Witch Grass. Perennial; waste ground, sandy soils, pastures, roadsides, along railroads; May-Oct.

29. LOLIUM L.

1. L. multiflorum Lam. Italian Rye Grass. Perennial; waste ground, meadows, roadsides; May-Aug.

30. MUHLENBERGIA Schreb. Muhly

1. M. cuspidata (Torr.) Nash. Plains Muhly. Perennial; limestone soils, prairies, July-Oct. (KSC)
2. M. racemosa (Michx.) BSP. Perennial; stream banks, bottomland, moist shaded ditches; Aug.-Oct.
3. M. sobolifera (Muhl.) Trin. Perennial; sandy soils, roadsides; July-Oct.

31. PANICUM L. Panic Grass

1. P. capillare L. Witch Grass. Annual; waste and cultivated ground, roadsides, along railroads; July-Oct.
2. P. dichotomiflorum Michx. Fall Panicum. Annual; waste and cultivated ground, gravel bars, roadsides; July-Oct.
3. P. scribnerianum Nash. Perennial; stream banks, roadsides; May-July(vernial), June-Nov.(autumnal).
4. P. virgatum L. Switch Grass. Perennial; prairies, meadows, roadsides, along railroads; July-Sept.

32. PASPALUM L.

1. P. ciliatifolium Michx. Perennial; prairies, sandbars, roadsides, along railroads; May-Oct.
2. P. pubescens Muhl. Perennial; prairies, sandy soils, roadsides, along railroads; June-Sept.
3. P. pubiflorum Rupr. Perennial; meadows, sandy roadsides; June-Sept.
4. P. stramineum Nash. Annual; sandy soils, roadsides; June-July.

33. PHLEUM L.

1. P. pratense L. Timothy. Perennial; meadows, roadsides, along railroads; May-August. (KSC)

34. POA L. Blue Grass

1. P. arida Vasey Plains Blue Grass. Perennial; alkaline meadows, roadsides; May-August.
2. P. pratensis L. Kentucky Blue Grass. Perennial; waste ground, meadows, roadsides; May-July.

35. SCHEDONNARDUS Steud.

1. S. paniculatus (Nutt.) Trel. Tumble Grass. Perennial; waste ground open fields, roadsides; May-Oct.

36. SETARIA Beauv. Foxtail Grass

1. S. Faberii Herrm. Nodding Foxtail. Annual; disturbed fields, roadsides; July-Oct.
2. S. geniculata (Lam.) Beauv. Prairie Foxtail. Perennial; prairies, roadsides; July-Oct.

3. S. lutescens (Wieg.) Hubb. Yellow Foxtail. Annual; pastures, waste and cultivated ground, roadsides; June-Oct.
4. S. viridis (L.) Beauv. Green Foxtail. Annual; waste and cultivated ground, roadsides; June-Oct.

37. SORGHASTRUM Nash

1. S. nutans (L.) Nash Indian Grass. Perennial; prairies, meadows, along railroads; Aug.-Sept.

38. SORGHUM Moench

1. S. halepense (L.) Pers. Johnson Grass. Perennial; waste ground, roadsides, along railroads; July-Sept.

39. SPARTINA Schreb.

1. S. pectinata Link Slough Grass. Perennial; low meadows, swampy open ground, margins of sloughs and ponds; June-Sept.

40. SPHENOPHOLIS Scribn.

1. S. obtusata (Michx.) Scribn. Prairie Wedgegrass. Perennial; meadows, prairies; May-July.

41. SPOROBOLUS R. Br. Dropseed

1. S. asper (Michx.) Kunth Perennial; dry prairies, roadsides, along railroads; Aug.-Oct.
- 1a. S. asper (Michx.) Kunth, var. Hookeri (Trin.) Vasey Perennial; dry prairies, along railroads; Aug.-Sept.
2. S. cryptandrus (Torr.) A. Gray Sand Dropseed. Perennial; dry sandy soils, roadsides; June-Oct.
3. S. giganteus Nash Giant Dropseed. Perennial; riverbottom; Aug.-Oct.
4. S. neglectus Nash Poverty Grass. Annual; waste ground, along railroads; Aug.-Nov.
5. S. texanus Vasey Perennial; sandy soils, grasslands; July-Sept.

42. STIPA L.

1. S. spartea Trin. Porcupine Grass. Perennial; meadows, roadsides; May-June.

43. TRIDENS Roem. & Schult.

1. T. elongatus (Buckl.) Nash Perennial; rocky hillsides, roadsides; June-Oct.

2. T. flavus (L.) Hitch. Purpletop. Perennial; waste ground, pastures, open ground, roadsides; July-Aug.

44. TRIPLASIS Beauv.

1. T. purpurea (Walt.) Chapm. Purple Sand Grass. Annual; sandy open ground, sand dunes; Aug.-Oct.

45. TRIPSACUM L.

1. T. dactyloides (L.) L. Gama Grass. Perennial; prairies, roadsides, along railroads; May-Sept.

Fam. 4 CYPERACEAE (Sedge Family)

1. CAREX L. Sedge

1. C. amphibola var. globosa Bailey Perennial; meadows, roadsides; April-July.
2. C. brevior (Dew.) Mackenz. Perennial; wet riverbottoms, roadsides; May-June.
3. C. caroliniana Schwein., var. cuspidata (Dewey) Shinners Perennial; meadows, roadsides; May-June.
4. C. Crawei Dewey Perennial; meadows, roadsides; April-June.
5. C. festucacea Schkuhr Perennial; upland prairies, roadsides; May-July.
6. C. grvida Bailey, var. Lunelliana (Mackenz.) Herm. Perennial; dry meadows, roadsides; May-June.
7. C. laeviconica Dew. Perennial; along streams, lakes, and ponds; April-July.
8. C. lanuginosa Michx. Perennial; wet meadows, roadsides; April-July.
9. C. molesta Mackenz. Perennial; upland meadows, riverbottoms, roadsides; May-early July.
10. C. Muhlenbergii Schk. Perennial; wooded areas, roadsides; June-July.
11. C. physorhyncha Liebm. Perennial; wet areas, roadsides; April-June.
12. C. tribuloides Wahlenb. Perennial; riverbottoms, along railroads; June-Sept.
13. C. vulpinoidea Michx. Perennial; riverbottoms, wet roadsides; June-Aug.

2. CYPERUS L. Umbrella Sedge

1. C. acuminatus Torr. & Hook. Annual; muddy margins of streams and ponds; late June-Oct.
2. C. erythrorhizos Muhl. Annual; mud flats, stream banks, wet areas; Aug.-Oct.
3. C. esculentus L. Perennial; wet open fields, sandbars; June-Oct.
4. C. ferruginescens Boechl. Annual; mud flats, stream banks; Aug.-Oct.
5. C. filliculmis Vahl Perennial; dry fallow fields, sandy open ground, along railroads; late May-Oct.
6. C. inflexus Muhl. Annual; moist sand, mud, and gravel bars, moist cultivated ground; late May-Oct.
7. C. schweinitzii Torr. Perennial; dry sandy prairies, low sandy ground; late June-Sept.
8. C. setigerus Torr. & Hook. Perennial; sandy alluvial flats, roadsides; June-Sept.
9. C. strigosus L. Perennial; lake shores, along streams, roadsides; mid-June-Oct.
10. C. filliculmis Vahl X schweinitzii Torr. (hybrid) Perennial; dry sandy prairies, sandy open ground; June-Sept.

3. ELEOCHARIS R. Br. Spike Rush

1. E. acicularis (L.) R. & S. Perennial; margins of ponds, moist ditches; July-Oct.
2. E. calva Torr. Perennial; margins of ponds, meadows; June-Sept.
3. E. compressa Sulliv. Perennial; margins of ponds, wet ditches, roadsides; early May-July.
4. E. macrostachya Britt. Perennial; margins of ponds and streams; May-Aug.
5. E. montividentis Kunth Perennial; wet areas, roadsides; May-Oct.

4. FIMBRISTYLIS Vahl

1. F. caroliniana (Lam.) Fern. Perennial; sandy prairies, margins of ponds; May-July. (KSC)

5. SCIRPUS L. Bulrush

1. S. acutus Muhl. Great Bulrush. Perennial; along streams, ponds, and lakes; May-Sept.
2. S. americanus Pers. Chairmakers' Rush. Perennial; along sandbars and muddy margins of streams, wet roadside ditches; May-Sept.
- 2a. S. americanus Pers., var. polyphyllus (Boechl.) Beetle Perennial; margins of streams and ponds; May-Aug.
3. S. paludosus A. Nels. Bayonet Grass. Perennial; margins of streams and ponds; June-Oct.
4. S. validus Vahl., var. creber Fern. Great Bulrush. Perennial; along streams, lakes, and ponds; May-Sept.

Fam. 5 LEMNACEAE (Duckweed Family)

1. LEMNA L.

1. L. perpusilla Torr. Duckweed. Annual; rivers and ponds.

2. SPIRODELA Schleid.

1. S. polyrhiza (L.) Schleid. Water-flaxseed. Annual; margins of streams and ponds, (KSC)

Fam. 6 COMELINACEAE (Spiderwort Family)

1. COMELINA L. Dayflower

1. C. communis L. Annual; flowers blue and white; waste ground, roadsides; May-Oct.
2. C. diffusa Burn. Annual; flowers blue; moist ground, riverbottoms, roadsides; early July-Oct.
3. C. erecta L., var. angustifolia (Michx.) Fern. Perennial; flowers blue and white; sandbars, stream banks; late May-Oct.

2. TRADESCANTIA L. Spiderwort

1. T. bracteata Small Perennial; flowers blue; meadows, roadsides, along railroads; May-July.
2. T. hirsuticaulis Small Perennial; flowers red-lavender; roadsides; May-July.
3. T. ohioensis Raf. Perennial; flowers blue; prairies, meadows, roadsides, along railroads; May-July.

Fam. 7 JUNCACEAE (Rush Family)

1. JUNCUS L.

1. J. biflorus Ell. Annual; damp ground, roadsides; June-Nov.
- 1a. J. biflorus Ell., form adinus Fern. & Griseb. Annual; damp ground, roadsides; June-Oct.
2. J. diffusissimus Buckl. Perennial; moist ground; June-July.
3. J. interior Wieg. Perennial; meadows, roadsides; May-Aug.
4. J. Torreyi Coville Perennial; wet margins of streams and ponds, wet roadsides; July-Oct.

Fam. 8 LILIACEAE (Lily Family)

1. ALLIUM L. Onion

1. A. canadense L. Wild Garlic. Perennial; flowers white or pink; wet meadows, roadsides; early May-July.
- 1a. A. canadense L., var. Fraseri Ownbey Perennial; flowers white; wet meadows; May-July.
2. A. Drummondii Regel Wild Onion. Perennial; flowers lavender; dry prairies; May-June.
3. A. mutabile Michx. Wild Onion. Perennial; flowers lavender-white; meadows, roadsides; late April-late June.
4. A. perdulce S.V. Fraser Perennial; flowers white; meadows, roadsides; May-July.

2. ANDROSTEPHIUM L.

1. A. coeruleum (Scheele) Greene Perennial; flowers blue; meadows; April-May. (KSTC)

3. ASPARAGUS L.

1. A. officinalis L. Garden Asparagus. Perennial; flowers greenish-yellow; sandy ground, roadsides; May-June. (KSC)

4. NOTHOSCORDUM Kunth

1. N. bivalve (L.) Britton False Garlic. Perennial; flowers white; meadows, pastures; March-May.

5. SMILAX L.

1. S. tamnoides L., var. hispidula (Muhl.) Fern. Bristly Greenbrier.
Shrub; flowers greenish-brown; riverbottoms, thickets; May-July.

6. YUCCA L.

1. Y. glauca Nutt. Bear Grass. Perennial; flowers white; along roadsides and railroads; May-July.

7. ZIGADENUS Michx.

1. Z. Nuttallii Gray Death Camas. Perennial; flowers white; moist meadows; April-May.

Fam. 9 AMARYLLIDACEAE (Amaryllis Family)

1. ZEPHYRANTHES Herb.

1. Z. brasosensis Traub. Zephyr Lily. Perennial; flowers pink-white; meadows, prairies; July-Sept. (KSC)

Fam. 10 IRIDACEAE (Iris Family)

1. NEMASTYLIS Nutt.

1. N. gemiflora Nutt. Prairie Iris. Perennial; flowers lavender-blue; prairies; April-June. (KSC)

2. SISYRINCHIUM L. Blue-eyed Grass

1. S. angustifolium Mill. Perennial; flowers blue; meadows, prairies; May-July.

2. S. campestre Bickn. Prairie Blue-eyed Grass. Perennial; flowers blue; prairies, meadows, roadsides; April-June.

- 2a. S. campestre Bickn., forma kansanum (Bickn.) Steyerl. Perennial; flowers white; prairies, meadows, roadsides; April-June.

Fam. 11 ORCHIDACEAE (Orchis Family)

1. SPIRANTHES Richard

1. S. vernalis Engelm. & Gray Perennial; flowers creamy-yellow; prairies, wet meadows; July-Sept. (KSC)

Class DICOTYLEDONEAE

Fam. 12 SALICACEAE (Willow Family)

1. POPULUS L.

1. P. deltoides Marsh. Cottonweed. Large Tree; along streams, low wet ground; March-May.

2. SALIX L. Willow

1. S. humilis Marsh. Prairie Willow. Shrub; prairies, along streams; March-May.

- 1a. S. humilis Marsh., var. microphylla (Anderss.) Fern. Dwarf Gray Willow. Shrub; thickets, along streams; March-May.

2. S. interior Rowlee Sandbar Willow. Tree; sandbars, mudflats, along streams; May-June.

3. S. nigra Marsh. Black Willow. Tree; borders of streams and ponds; April-May.

Fam. 13 JUGLANDACEAE (Walnut Family)

1. CARYA Nutt. Hickory

1. C. illinoensis (Wang.) K. Koch Pecan. Tree; along streams; April-May.

2. JUGLANS L. Walnut

1. J. nigra L. Black Walnut. Tree; along streams, roadsides; April-May.

Fam. 14 FAGACEAE (Beech Family)

1. QUERCUS L.

1. Q. velutina Lam. Black Oak. Large tree; flowers green; along streams, roadsides; April-May.

Fam. 15 ULMACEAE (Elm Family)

1. CELTIS L. Hackberry

1. C. occidentalis L. Tree; along streams; April-May.

2. C. tenuiflora Nutt. Dwarf Hackberry. Tree; along streams; April-May.

2. ULMUS L.

1. U. americana L. American Elm. Large tree; along streams, lawns; Feb.-April.
2. U. pumila L. Dwarf Elm. Tree; roadsides, tree rows; March-April.
3. U. rubra Muhl. Slippery Elm. Large tree; along Arkansas River; Feb.-April.

Fam. 16 MORACEAE (Mulberry Family)

1. MACLURA Nutt.

1. M. pomifera (Raf.) Schneid Osage Orange. Tree; fence rows, along streams, along railroads; May-June.

2. MORUS L.

1. M. rubra L. Red Mulberry. Tree; flowers green; along streams, roadsides; April-May.

Fam. 17 URTICACEAE (Nettle Family)

1. PARIETARIA L.

1. P. pennsylvanica Muhl. Pellitory. Annual; flowers green; moist open ground, thickets; May-Oct. (KSC)

2. URTICA L.

1. U. dioica L. Tall Nettle. Perennial; waste ground, riverbottoms; May-Oct.

Fam. 18 POLYGONACEAE (Buckwheat Family)

1. ERIOGONUM Michx.

1. E. annuum Nutt. Umbrella Plant. Annual; flowers white; sandy soils, pastures; June-Sept.

2. POLYGONUM L.

1. P. aviculare L. Knotweed. Annual; flowers white; waste ground, around dwellings, along streets; May-Nov.
2. P. bicornis Raf. (P. longistylum Small) Pinkweed. Annual; flowers pink; low wet ground near streams, roadsides, and railroads; July-Oct.

3. P. coccineum Muhl. Water Smartweed. Perennial; flowers pink; margins of lakes and streams, wet ditches; June-Oct.
4. P. convolvulus L. Black Bindweed. Annual; flowers white; waste ground, fence rows, roadsides; May-Nov.
5. P. Hydropiper L. Perennial; flowers white; riverbottoms; June-Nov.
6. P. hydropiperoides Michx. Wild Water Pepper. Perennial; flowers white; margins of streams, lakes, and ponds; June-Oct.
7. P. lapathifolium L. Smartweed. Annual; flowers white; margins of streams and lakes, moist waste ground; June-Oct.
8. P. pennsylvanicum L. Pinkweed. Annual; flowers pink, sometimes white; margins of streams, lakes, and ponds, wet roadside ditches; June-Oct.
- 8a. P. pennsylvanicum L., var. laevigatum Fern. Annual; flowers pink; margins of streams, wet roadside ditches; June-Oct.
9. P. punctatum Ell. Water Smartweed. Perennial; flowers white; wet waste ground, margins of streams and lakes; July-Oct.
- 9a. P. punctatum Ell., var. confertiflorum (Moism.) Fassett. Annual; flowers white; margins of streams; July-Oct.
10. P. ramossissimum Michx. Bushy Knotweed. Annual; flowers white; prairies, roadsides; July-Oct.
11. P. scandens L. False Buckwheat. Perennial; flowers green; along streams, lakes, and fence rows; July-Nov.

3. RUMEX L. Dock

1. R. altissimus Wood Pale Dock. Perennial; flowers green; meadows margins of streams, roadsides; April-May.
2. R. crispus L. Sour Dock. Perennial; flowers green; waste ground, margins of streams and lakes, roadsides; April-May.
3. R. stenophyllus Ledeb. Perennial; flowers green; along streams; May-June.

Fam. 19 CHENOPODIACEAE (Cocklefoot Family)

1. ATRIPLEX L. Grass

1. A. argentea Nutt. Silver Grass. Annual; flowers green; waste ground, along railroads; June-Oct.
2. A. patula L., var. hastata (L.) Gray Spear Grass. Annual; flowers green; cultivated and waste ground, along railroads; June-Nov.

2. CHENOPODIUM L. Goosefoot, Pigweed

1. C. album L. Lamb's Quarters. Annual; flowers green; cultivated and waste ground, roadsides; May-Oct.
2. C. Berlandieri Moq., var. Zschackei (Murr.) Murr. Annual; flowers green; cultivated and waste ground, along railroads; June-Oct.
3. C. Boscianum Moq. Annual; waste ground, roadsides; July-Oct.
4. C. desiccatum A. Nelson Annual; waste ground; June-Oct.
- 4a. C. desiccatum A. Nelson, var. leptophylloides (Murr.) Wahl. Annual; cultivated and waste ground, roadsides; June-Oct.
5. C. gigantespermum Aellen Maple-leaved Goosefoot. Annual; waste ground, roadsides; July-Oct.
6. C. glaucum L. Oak-leaved Goosefoot. Annual; waste ground, roadsides; July-Oct.
- 6a. C. glaucum L., var. salinum (Standley) Bevin. Annual; waste ground; July-Oct.
7. C. lanceolatum Muhl. Annual; flowers green; cultivated and waste ground; July-Oct.
8. C. leptophyllum Nutt. Annual; waste ground, roadsides; June-Oct.
9. C. pallescens Standley Annual; sandy open ground, waste ground, along railroads; June-Oct.

3. CYCLOLOMA Moq.

1. C. atriplicifolium (Spreng.) Coult. Winged Pigweed. Annual; sandy soil along streams; June-Oct.

4. KOCHIA Roth

1. K. scoparia (L.) Schrad. Fire Bush. Annual; waste ground, roadsides, along railroads; July-Oct.
- 1a. K. scoparia (L.) Schrad., var. gulta Parw. Annual; waste ground, fence rows, roadsides; July-Oct.

5. MONOLEPIS Schrad.

1. M. Nuttalliana (R. & S.) Greene Poverty Weed. Annual; waste ground, roadsides, along railroads; May-Oct.

6. SALSOLA L.

1. S. kali L. var. tenuiflora Tausch. Russian Thistle. Annual; flowers white; cultivated and waste ground, fence rows; July-Oct.

7. SUAEDA Forsk.

1. S. depressa (Pursh) Wats. Sea Blite. Perennial; salt marsh, alkaline soils; July-Oct.

8. SUCKLEYA L.

1. S. Suckleyana (Torr.) Rydb. Annual; salt marsh, waste ground; July-Sept.

Fam. 20 AMRANTHACEAE (Amaranth Family)

1. AMRANTHUS L.

1. A. albus L. Tumbleweed. Annual; flowers green; disturbed and waste ground; July-Oct.
2. A. gracians L. Spreading Pigweed. Annual; flowers green; cultivated and waste ground, roadsides, along railroads; June-Oct.
3. A. hybridus L. Green Amaranth. Annual; flowers green; cultivated and waste ground, around dwellings, along railroads; Aug.-Oct. (KSC)
4. A. retroflexus L. Rough Green Amaranth. Annual; flowers green; cultivated fields, farm lots, roadsides; July-Oct.
5. A. tamariscinus Nutt. (Acnida tamariscina (Nutt.) Wood) Water Hemp. sandbars along streams, cultivated fields, roadsides; July-Oct.

2. FROELICHIA Moench. Cottonweed

1. F. gracilis (Hook.) Moq. Annual; flowers white; sandy open ground, sandbars along streams, along railroads; May-Sept.
2. F. floridana (Nutt.) Moq. Annual; flowers white; sandy open ground, sandbars along streams; May-Sept.

Fam. 21 NYCTAGINACEAE (Four - o'clock Family)

1. MIRABILIS L. Four - o'clock

1. M. albidia (Walt.) MacM. Perennial; flowers cream-lavender; meadows, roadsides; May-Oct.
2. M. linearis (Pursh) Heimerl Perennial; flowers cream-lavender; meadows, pastures, roadsides; May-Oct.

3. M. nyctaginea (Michx.) MacM. Wild Four O'clock. Perennial; flowers lavender; waste ground, roadsides, along railroads; May-Oct.

Fam. 22 PHYTOLACCACEAE (Pokeweed Family)

1. PHYTOLACCA L.

1. P. americana L. Pokeweed. Perennial; flowers pinkish-white; waste ground, fence rows, around farm dwellings, roadsides; May-Oct.

Fam. 23 AIZOACEAE (Carpetweed Family)

1. MOLLUGO L.

1. M. verticillata L. Carpetweed. Annual; flowers white; cultivated and waste ground, roadsides, along railroads; May-Sept.

Fam. 24 PORTULACACEAE (Purslane Family)

1. CLAYTONIA L.

1. C. virginica L. Spring Beauty. Perennial; flowers pink-lavender; meadows, lawns; Feb.-May.

2. PORTULACA L. Purslane

1. P. mmdula Johnston Annual; flowers rose-lavender; wet areas, pastures; May-Oct.
2. P. oleracea L. Common Purslane. Annual; flowers yellow; cultivated and waste ground, roadsides; June-Nov. (KSC)

Fam. 25 CARYOPHYLLACEAE (Pink Family)

1. ARENARIA L.

1. A. serpyllifolia L. Thyme-leaved Sandwort. Annual; flowers green; meadows, lawns, roadsides; April-Aug.

2. CERASTIUM L.

1. C. viscosum L. Clammy Chickweed. Annual; flowers white; lawns, along roadsides and railroads; March-July.

3. HOLOSTEUM L.

1. H. umbellatum L. Jagged Chickweed. Annual; flowers white; lawns, along roadsides and railroads; March-May.

4. SILENE L.

1. S. antirrhina L. Sleepy Catchfly. Annual or biennial; flowers white; dry open woods, meadows; May-Sept.

5. STELLARIA L.

1. S. media (L.) Cyrill Chickweed. Annual; flowers green; waste ground, lawns; Jan.-Dec.

Fam. 26 NYMPHAEACEAE (Water Lily Family)

1. NELUMBO Adans.

1. N. lutea (Willd.) Pers. American Lotus. Perennial; flowers yellow; shallow waters of lakes and ponds; June-Sept.

Fam. 27 RANUNCULACEAE (Crowfoot Family)

1. ANEMONE L.

1. A. caroliniana Walt. Prairie Anemone. Perennial; flowers white-blue; meadows, pastures; late March-May.

2. CLEMATIS L.

1. C. Pitcheri T. & G. Leather Flower. Perennial; flowers lavender-white; roadsides; May-late Sept.

3. DELPHINIUM L.

1. D. Ajacis L. Rocket Larkspur. Annual; flowers lavender-blue; waste ground, roadsides; May-Sept. (E)

2. D. virescens Nutt. Prairie Larkspur. Perennial; flowers white; prairies, roadsides, along railroads; May-July.

4. MYOSURUS L.

1. M. minimus L. Mousetail. Annual; flowers white; waste ground, moist ditches, margins of streams, lakes, and ponds; March-May.

5. RANUNCULUS L.

1. R. abortivus L. Small-flowered Crowfoot. Annual; flowers yellow; moist margins of ponds and streams, wet roadsides; March-June.

2. R. sceleratus L. Cursed Crowfoot. Annual or short-lived perennial; flowers yellow; along streams, wet ditches; May-Aug.

Fam. 28 MENISPERMACEAE (Moonseed Family)

1. COCCULUS DC.

1. C. carolinus (L.) DC. Carolina Moonseed. Woody vine; flowers greenish-white; thickets along streams; July-Aug.

Fam. 29 PAPAVERACEAE (Poppy Family)

1. ARGEMONE L. Prickly Poppy

1. A. albiflora Hornem., subsp. texana G.B. Ownbey Annual or biennial; flowers white; waste ground, sandy pastures; May-Aug.
2. A. polyanthemos (Fedde) G.B. Ownbey Annual or biennial; flowers white; sandy pastures, roadsides; May-Sept.

Fam. 30 FIBRARIACEAE (Fumitory Family)

1. CORYDALIS Medic.

1. C. curvisiliqua Engelm. Biennial; flowers yellow; roadsides; May-Aug.
2. C. micrantha (Engelm.) Gray Small-flowered Corydalis. Biennial; flowers yellow; stream banks, roadsides; May-June.

Fam. 31 CAPPARIDACEAE (Caper Family)

1. CLEOME L.

1. C. serrulata Pursh Stinking Clover. Annual; flowers white; waste ground, damp sandy soils, prairies; May-Sept.

2. POLANISIA Raf. Clammy Weed

1. P. dodecandra (L.) DC. Annual; flowers white; waste ground, sandy soil along streams; May-Oct.
2. P. trachysperma T. & G. Annual; flowers white; sandbars, open sandy ground; June-Sept.

Fam. 32 CRUCIFERAE (Mustard Family)

1. BRASSICA L.

1. B. nigra (L.) Koch Black Mustard. Annual or biennial; flowers yellow; waste ground, roadsides; April-Nov.

2. CAMELINA Grantz

1. C. microcarpa Andrz. False Flax. Annual; flowers white; roadsides, along railroads; April-Sept.

3. CAPSELLA Medic.

1. C. bursa-pastoris (L.) Medic. Annual; flowers white; meadows, lawns, roadsides; March-May.

4. CARDAMINE L.

1. C. pennsylvanica Muhl. Bitter Cress. Perennial; flowers white; meadows, roadsides; March-July.

5. DESCURAINIA Webb, & Berth.

1. D. pinnata (Walt.) Britt. Tansy Mustard. Annual or biennial; flowers yellow; waste ground, roadsides; March-May.
2. D. sophia (L.) Webb. Tansy Mustard. Annual or biennial; flowers yellow; waste ground, roadsides; May-July.

6. DRABA L.

1. D. brachycarpa Nutt. Whitlow Grass. Annual or biennial; flowers white; pastures, lawns, roadsides; March-April.
2. D. reptans (Lam.) Fern. Annual or biennial; flowers white; waste ground, pastures, roadsides; March-May.
- 2a. D. reptans (Lam.) Fern., var. micrantha (Nutt.) Fern. Annual or biennial; flowers white; waste ground, pastures, roadsides; March-May.

7. ERYSIMUM L.

1. E. inconspicuum (S.Wats.) MacM. Biennial; flowers yellow; waste ground, roadsides; May-June.
2. E. repandum L. Treacle Mustard. Biennial; flowers yellow; waste ground, roadsides, along railroads; April-June.

8. LEPIDIUM L.

1. L. campestre (L.) R. Br. Field Cress. Annual or biennial; flowers white; waste ground, roadsides; April-June.
2. L. densiflorum Schrad. Pepper Grass. Annual or biennial; flowers white; waste ground, pastures, roadsides; April-Nov.
3. L. oblongum Small Annual or biennial; flowers white; lawns; April-May.
4. L. virginicum L. Pepper Grass. Annual or biennial; flowers white; waste ground, pastures, roadsides, along railroads; March-Oct.

9. RORIPPA Scop.

1. R. islandica (Oeder) Borbas Marsh Yellow Cress. Annual or biennial; flowers yellow; fallow fields, along streams, roadsides; May-Oct.
- 1a. R. islandica (Oeder) Borbas, var. Fernaldiana Nutt. & Abbe Annual or biennial; flowers yellow; fallow fields, along streams; May-Oct.
2. R. obtusa (Nutt.) Britt. Blunt-leaved Yellow Cress. Annual or biennial; flowers yellow; prairies, roadsides; May-Sept.
3. R. sessiliflora (Nutt.) Hitchc. Sessile-flowered Cress. Annual or biennial; flowers yellow; margins of streams; April-Oct.
4. R. sinuata (Nutt.) Hitchc. Spreading Yellow Cress. Perennial; flowers yellow; along streams, roadsides, and railroads; April-Oct.

10. SIBARA Greene

1. S. virginica (L.) Rollins Annual or biennial; flowers white; fallow fields, waste ground, along roadsides; March-May.

11. THLASPI L.

1. T. arvense L. Field Penny Cress. Annual; flowers white; waste ground, meadows, roadsides, along railroads; April-June.

Fam. 33 SAXIFRAGACEAE (Saxifrage Family)

1. RIBES L.

1. R. odoratum Dougl. Golden Currant. Shrub; flowers yellow; fence rows, roadsides; April-June.

Fam. 34 PLATANACEAE (Plane Tree Family)

1. PLATANUS L.

1. P. occidentalis L. Sycamore. Large tree; along streams, lowlands; April-June.

Fam. 35 ROSACEAE (Rose Family)

1. GEUM L.

1. G. canadense Jacq., var. camporum (Rydb.) Fern. White Avens. Perennial; flowers white; sandy thickets, along streams, roadsides; May-Oct.

2. PRUNUS L.

1. P. americana Marsh. Wild Plum. Shrub; flowers white; thickets, sandy soils, roadsides; April-May.
2. P. angustifolia Marsh. Chickasaw Plum. Shrub; flowers white; thickets, sandy soils, roadsides; March-April.
3. P. serotina Ehrh. Black Cherry. Tree; flowers greenish-white; wooded areas around lakes; April-May.

3. PYRUS L.

1. P. communis L. Pear. Tree; flowers white; hedge rows; April-May. (E)

4. ROSA L.

1. R. arkansana Porter, var. suffulta (Greene) Cockerell Wild Rose. Shrub; flowers pink; prairies, fence rows, roadsides, along railroads; May-July.
2. R. multiflora Thunb. Multiflora Rose. Shrub; flowers white-pink; fence rows, thickets, roadsides; May-June. (E)

5. RUBUS L.

1. R. jugosus Bailey High Bush Blackberry. Shrub; flowers white; thickets along streams; May-June. (KSC)
2. R. occidentalis L. Black Raspberry. Shrub; flowers white; thickets along streams; April-July. (KSC)
3. R. pensylvanicus Poir High Bush Blackberry. Shrub; flowers white; meadows, pastures, fence rows, roadsides; April-June.

Fam. 36 LEGUMINOSAE (Pea Family)

1. AMORPHA L.

1. A. canescens Pursh Lead Plant. Shrub; flowers purple; prairies, roadsides; May-Aug.
2. A. fruticosa L. False Indigo. Shrub; flowers purple; along streams and ponds, roadsides; May-June.

2. ASTRAGALUS L. Milk Vetch

1. A. canadensis L. Rattleweed. Perennial; flowers white; meadows, pastures, roadsides; May-Aug.
2. A. crassicarpus Nutt. Ground Plum. Perennial; flowers lavender; meadows, roadsides; April-May.

3. A. distortus T. & G. Bent Milk Vetch. Perennial; flowers light lavender; limestone slopes, meadows, roadsides; April-June.
4. A. nuttallianus DC. Perennial; flowers lavender; pastures; May-Aug.
5. A. plattensis Nutt. Ground Plum. Perennial; flowers white with lavender tips; pastures, roadsides; May-June.

3. BAPTISIA Vent.

1. B. australis (L.) R. Br., var. minor (Lehm.) Fern. Blue False Indigo. Perennial; flowers blue; prairies; May-June.
2. B. leucophaea Nutt. Long-bracted Wild Indigo. Perennial; flowers white; prairies; late April-June.

4. CASSIA L.

1. C. fasciculata Michx. Partridge Pea. Annual; flowers yellow; riverbanks, roadsides, along railroads; June-Oct.

5. CERCIS L.

1. C. canadensis L. Eastern Redbud. Tree; flowers rose; borders of woods, roadsides; late March-May.

6. CROTALARIA L.

1. C. sagittalis L. Rattlebox. Annual or short-lived perennial; flowers yellow; open ground, prairies, along railroads; May-Sept. (KSC)

7. DALEA Willd.

1. D. aurea Nutt. Perennial; flowers yellow; pastures, roadsides; June-Aug.

8. DESMANTHUS Willd.

1. D. illinoensis (Michx.) MacM. Prairie Mimosa. Shrub; flowers white; prairies, roadsides, along railroads; mid-June-Aug.

9. DESMODIUM Desv. Tick Trefoil

1. D. canescens (L.) DC. Perennial; flowers pinkish-green; sandy soils, prairies; July-Sept. (KSC)
2. D. illinoense Gray Perennial; flowers lavender; disturbed meadows, prairies; early June-Sept.
3. D. sessilifolium (Torr.) T. & G. Perennial; flowers pinkish-lavender; dry sandy soils, prairies; July-Sept. (KSC)

10. GLEDITSIA L.

1. G. triscanthes L. Honey Locust. Large tree; flowers greenish; wooded areas along streams and lakes, roadsides; May-June.

11. GLYCYRRHIZA L.

1. G. lepidota (Nutt.) Pursh Wild Licorice. Perennial; flowers white; open waste ground, prairies, along railroads; May-Aug.

12. GYMNOCLADUS Lam.

1. G. dioica (L.) K. Koch Kentucky Coffee Tree. Large tree; flowers white; wooded areas along streams; May-June.

13. LESPEDEZA Michx.

1. L. capitata Michx. Perennial; flowers creamy white; riverbottoms, along railroads; July-Oct.
2. L. stipulacea Maxim. Korean Clover. Annual; flowers pinkish; pastures, roadsides, along railroads; July-Oct.
3. L. virginica (L.) Britt. Perennial; flowers white; margins of streams, prairies, roadsides, along railroads; May-Sept. (KSC)

14. LOTUS L.

1. L. americanus (Nutt.) Bisch. Prairie Trefoil. Annual; flowers pink mixed with yellow-white; prairies, roadsides, along railroads; May-Sept.

15. MEDICAGO L.

1. M. lupulina L. Black Medick. Annual; flowers yellow; waste ground, roadsides; March-Sept.
2. M. sativa L. Alfalfa. Perennial; flowers lavender; cultivated ground, roadsides, along railroads; April-Oct. (E)

16. MELILOTUS Mill.

1. M. alba Desv. White Sweet Clover. Annual or biennial; flowers white; waste ground, roadsides, along railroads; May-Oct.
2. M. officinalis (L.) Lam. Yellow Sweet Clover. Annual or biennial; flowers yellow; waste ground, roadsides, along railroads; May-Oct.

17. PETALOSTEMON Michx.

1. P. candidum (Willd.) Michx. White Prairie Clover. Perennial; flowers white; rocky limestone prairies, roadsides; May-July.

2. P. purpureum (Vent.) Rydb. Purple Prairie Clover. Perennial; rocky limestone prairies, roadsides; May-Sept.
3. P. villosum Nutt. Silky Prairie Clover. Perennial; flowers pink-rose; sandy ground, prairies; July-Sept.

18. PSORALEA L. Scurf-pea

1. P. argophylla Pursh Perennial; flowers white; dry prairies, roadsides; June-Aug.
2. P. cuspidata Pursh Perennial; flowers deep lavender; dry prairies, rocky hillsides; June-July.
3. P. tenuiflora Pursh Perennial; flowers deep lavender; pastures, meadows; May-Sept.
- 3a. P. tenuiflora Pursh, var. floribunda (Nutt.) Rydb. Perennial; flowers deep lavender; pastures, meadows; May-Oct.

19. ROBINIA L.

1. R. Pseudo-acacia L. Black Locust. Tree; flowers white; along streams, prairies, roadsides; May-June. (KSC)

20. SCHRANKIA Willd.

1. S. uncinata Willd. Sensitive Brier. Perennial; flowers lavender; prairies, roadsides; May-Sept.

21. STROPHOSTYLES Ell. Wild Bean

1. S. helvola (L.) Ell. Annual; flowers green; fallow fields, sand and gravel bars, roadsides; June-Oct.
- 1a. S. helvola (L.) Ell., var. missouriensis (S. Wats.) Britt. Annual; flowers green; sandy open ground, roadsides; June-Oct.
2. S. leiosperma (T. & G.) Piper Annual; flowers greenish-brown; fallow fields, prairies, roadsides; June-Oct.

22. TEPHROSIA Pers.

1. T. virginiana (L.) Pers. Goat's Rue. Perennial; flowers yellow-white; rocky hillsides, prairies; May-Aug. (KSC)

23. TRIFOLIUM L.

1. T. carolinianum Michx. Annual; flowers lavender and white; sandy fields, prairies, roadsides; April-June.
2. T. repens L. White Clover. Perennial; flowers white; lawns, meadows, roadsides; May-Oct.

24. VICIA L.

1. V. villosa Roth Hairy Vetch. Annual or biennial; flowers purple; cultivated fields, roadsides; May-Oct. (E)

Fam. 37 LINACEAE (Flax Family)

1. LINUM L. Flax

1. L. sulcatum Riddell Annual; flowers yellow; meadows, prairies, roadsides; May-Sept.
2. L. usitatissimum L. Annual; flowers light lavender; waste and cultivated ground, roadsides, along railroads; May-Sept.

Fam. 38 OXALIDACEAE (Wood Sorrel Family)

1. OXALIS L.

1. O. stricta L. Yellow Wood Sorrel. Perennial; flowers yellow; waste ground, meadows, roadsides; May-Oct.
2. O. violacea L. Violet Wood Sorrel. Perennial; flowers lavender; fallow fields, roadsides; April-July.

Fam. 39 GERANIACEAE (Geranium Family)

1. ERODIUM L'Her

1. E. cicutarium (L.) L'Her Pink Needle. Annual or biennial; flowers lavender; waste ground, lawns, roadsides; March-Nov.

2. GERANIUM L.

1. G. carolinianum L. Annual or biennial; flowers white-lavender; waste ground, meadows, roadsides, along railroads; May-July.

Fam. 40 ZYGOPHYLLACEAE (Caltrop Family)

1. KALLSTROEMIA Scop.

1. K. hirsutissima Vail Annual; flowers yellow; waste ground, roadsides; June-Sept.

2. TRIBULUS L.

1. T. terrestris L. Puncture Vine. Annual; flowers yellow; sandy waste ground, roadsides, along railroads; June-Sept.

Fam. 41 SIMAROUBACEAE (Quassia Family)

1. AILANTHUS Desf.

1. A. altissima (Mill.) Swingle Tree of Heaven. Tree; flowers yellowish-green; along streams, roadsides; May-June. (E)

Fam. 42 EUPHORBIACEAE (Spurge Family)

1. ACALYPHA L. Three-seeded Mercury

1. A. gstryaefolia Riddel Perennial; flowers green; waste ground, pastures; June-Oct.
2. A. virginica L. Annual; flowers green; cultivated ground, gravel bars, prairies, roadsides, along railroads; July-Oct. (KSC)

2. CROTON L.

1. C. capitatus Michx. Hogwort. Annual; fallow fields, prairies, pastures, roadsides; June-Oct.
2. C. glandulosus L., var. septentrionalis Muell. Arg. Croton. Annual; flowers white; waste ground, prairies, roadsides; July-Oct.
3. C. monanthogynus Michx. Prairie Tea. Annual; acid soil, waste ground, roadsides; late May-Sept.
4. C. texanus (Klotzsch) Muell. Arg. Annual; flowers white; pastures, roadsides; May-Oct.

3. EUPHORBIA L. Spurge

1. E. corollata L. Flowering Spurge. Perennial; flowers white; fallow fields, pastures, roadsides; May-Oct.
2. E. dentata Michx. Annual; waste ground, prairies, roadsides, along railroads; July-Oct.
- 2a. E. dentata Michx., forma cuphosperma (Engelm.) Fern. Annual; waste ground, prairies, roadsides; July-Sept.
3. E. Geyeri Engelm. Annual; flowers white; sandy soils, waste ground, roadsides; July-Oct.
4. E. hexagona Nutt. Annual; flowers green; open ground, riverbottoms; July-Sept.
5. E. maculata L. Nodding Spurge. Annual; flowers green; fallow fields, roadsides, along railroads; May-Oct.

6. E. marginata Pursh Snow-on-the-Mountain. Annual; flowers white; pastures, roadsides, along railroads; June-Oct.
7. E. missurica Raf. Prairie Spurge. Annual; flowers white or pink; sandy waste ground, roadsides; May-Sept.
- 7a. E. missurica Raf., var. intermedia (Engelm.) L. Wheeler Annual; flowers white; waste ground, roadsides; May-Sept.
8. E. prostrata Ait. Annual; flowers white; waste ground, roadsides; June-Oct.
9. E. serpens HBK. Annual; flowers white; along streams, roadsides; May-Oct.
10. E. supina Raf. Milk Purslane. Annual; flowers white; waste and cultivated ground, sidewalks, roadsides; May-Oct.

4. STILLINGIA Garden

1. S. sylvatica L. Queen's Delight. Perennial; flowers green; sandy soils, pastures; May-July.

5. TRAGIA L.

1. T. ramosa Torr. Annual; flowers white; meadows, roadsides; June-Sept.
2. T. urticifolia Michx. Annual; flowers white; sandy open fields, meadows, roadsides; June-Sept.

Fam. 43 ANACARDIACEAE (Cashew Family)

1. RHUS L.

1. R. aromatica Ait. Fragrant Sumac. Shrub; flowers greenish-yellow; thickets, along streams, roadsides; March-April.
2. R. glabra L. Smooth Sumac. Shrub; flowers greenish-yellow; thickets, prairies, roadsides; May-July.
3. R. radicans L. Poison Ivy. Shrub; flowers greenish; along streams and fence rows, roadsides; May-July.

Fam. 44 CELASTRACEAE (Staff-tree Family)

1. CELASTRUS L.

1. C. scandens L. Shrub; flowers greenish; thickets, fence rows, along streams; May-June. (KSC)

2. EUONYMUS L.

1. E. atropurpureus Jacq. Burning Bush. Shrub; flowers lavender; thickets, along streams; June-July. (KSC)

Fam. 45 ACERACEAE (Maple Family)

1. ACER L.

1. A. negundo L. Box-elder. Tree; flowers green; along streams, roadsides; June-Oct.

Fam. 46 SAPINDACEAE (Soapberry Family)

1. SAPINDUS L.

1. S. drummondii Hook. & Arn. Soapberry. Tree; flowers white; along streams, roadsides; May-July.

Fam. 47 RHAMNACEAE (Buckthorn Family)

1. RHAMNUS L.

1. R. lanceolata Pursh Buckthorn. Shrub; flowers yellowish-green; thickets, limestone exposures; April-June. (KSC)

Fam. 48 VITACEAE (Grape Family)

1. AMPELOPSIS Michx.

1. A. cordata Michx. Raccoon Grape. Shrub; flowers white; margins of streams, fence rows; May-July. (KSC)

2. PARTHENOCISSUS Planch.

1. P. quinquefolia (L.) Planch. Virginia Creeper. Vine; flowers greenish; wooded areas along streams, fence rows; May-Aug.

3. VITIS L.

1. V. cinera Engelm. Graybark Grape. Vine; flowers greenish-white; along streams; June-July.
2. V. riparia Michx. Riverbank Grape. Vine; flowers greenish; thickets, along streams, roadsides; May-June.
3. V. vulpina L. Winter Grape. Vine; flowers greenish; thickets, along streams; May-June

Fam. 49 MALVACEAE (Mallow Family)

1. ABUTILON Mill.

1. A. theophrasti Medic. Indian Mallow. Annual; flowers yellow; cultivated ground, roadsides, along railroads; June-Oct.

2. CALLIRHOE Nutt.

1. C. alcaeoides (Michx.) Gray Poppy Mallow. Perennial; flowers light lavender-white; waste ground, meadows, roadsides; May-Aug.
2. C. involucrata (T. & G.) Gray Purple Poppy Mallow. Perennial; flowers purple; meadows, prairies, roadsides; May-Aug.

3. HIBISCUS L.

1. H. trionum L. Flower-of-the-hour. Annual; flowers white; cultivated and waste ground, pastures, roadsides; June-Sept.

4. MALVA L.

1. M. neglecta Wallr. Common Mallow. Biennial; flowers white; waste ground, around dwellings, roadsides; April-Oct.

5. SIDA L.

1. S. spinosa L. Prickly Mallow. Annual; flowers yellow; waste and open ground; June-Oct.

6. SPHAERALCEA St. Hil.

1. S. coccinea (Pursh) Rydb. Red False Mallow. Perennial; flowers red-orange; sandy pastures, roadsides; May-Aug.

Fam. 50 TAMARICACEAE (Tamarisk Family)

1. TAMARIX L.

1. T. gallica L. French Tamarisk. Shrub; flowers pink; mudflats along streams and sloughs; May-Sept.

Fam. 51 VIOLACEAE (Violet Family)

1. VIOLA L. Violet

1. V. kitaibeliana R. & S., var. rafinesquii (Greene) Fern. Field Pansy. Annual; flowers light lavender; waste ground, meadows, roadsides; March-May.
2. V. Langloisii Greene Perennial; flowers lavender; meadows, roadsides; April-June.

3. V. papilionacea Pursh Common Violet. Perennial; flowers white-lavender; wet ditches, meadows, roadsides; March-June.

Fam. 52 LOASACEAE (Loasa Family)

1. MENTZELIA L.

1. M. decapetala (Pursh) Urban & Gilg. Perennial; flowers white; rocky hillsides, dry prairies; July-Sept.
2. M. oligosperma Nutt. Stickleaf. Perennial; flowers yellow; rocky hillsides, roadsides; June-Aug.

Fam. 53 CACTACEAE (Cactus Family)

1. MANILLARIA Haw.

1. M. missouriensis Sweet. Perennial; flowers yellow; pastures, roadsides; April-May.

2. OPUNTIA Mill.

1. O. compressa (Salisb.) Macbr. Prickly Pear. Perennial; flowers yellow; pastures, roadsides; April-June.

Fam. 54 ELAEAGNACEAE (Oleaster Family)

1. ELAEAGNUS L. Oleaster

1. E. angustifolia L. Russian Olive. Tree; flowers yellow; meadows, roadsides; May-July. (E)

Fam. 55 LYTHRACEAE (Loosestrife Family)

1. AMBIANNIA L.

1. A. coccinea Rottb. Tooth-cup. Annual; flowers pink-lavender; midflats of streams and lakes; Aug.-Oct.

2. LYTHRUM L.

1. L. alatum Pursh, var. lanceolatum (Ell.) T. & G. Winged Loosestrife. Perennial; flowers lavender; wet prairies, margins of streams and ponds; June-Sept.

Fam. 56 ONAGRACEAE (Evening Primrose Family)

1. GAURA L.

1. G. biennis ~~Levar.~~ Pitcheri Pickering Biennial Gaura. Biennial; flowers white; waste ground, roadsides; June-Oct.
2. G. coccinea Pursh Scarlet Gaura. Perennial; flowers scarlet; waste ground, pastures, along railroads; May-Aug.
3. G. parviflora Dougl. Velvety Gaura. Perennial; flowers white; waste ground, prairies, roadsides, along railroads; June-Oct.
- 3a. G. parviflora Dougl., forma glabra Munz. Perennial; flowers white; waste ground, prairies, roadsides; June-Sept.

2. JUSSIAEA L.

1. J. repens L., var. glabrescens Ktze. Floating Primrose Willow. Perennial; flowers yellow; shallow water and margins of streams and ponds; May-Oct.

3. LUDWIGIA L.

1. L. palustris (L.) Ell., var. americana (DC.) Fern. & Grisc. Water Purslane. Perennial; flowers greenish-lavender; shallow water and muddy margins of sloughs, streams, and ponds; June-Sept. (KSC)

4. OENOTHERA L.

1. O. biennis L. Biennial; flowers yellow; waste and cultivated ground, prairies, roadsides; June-Oct.
- 1a. O. biennis ~~Levar.~~ canescens T. & G. Biennial; flowers yellow, waste and cultivated ground, roadsides; June-Oct.
2. O. laciniata Hill Annual; flowers yellow; cultivated fields, roadsides; May-Oct.
3. O. missouriensis Sims Missouri Primrose. Perennial; flowers yellow; limestone soils, pastures, roadsides; May-Aug.
4. O. serrulata Nutt. Perennial; flowers yellow; waste ground, meadows, roadsides; May-Sept.
5. O. speciosa Nutt. White Evening Primrose. Perennial; flowers white-pink; waste ground, prairies, roadsides; May-July.
6. O. triloba Nutt. Winter annual or biennial; flowers yellow; prairies, roadsides; April-May.

5. STENOSIPHON Spach

1. S. linifolius (Nutt.) Britt. Perennial; flowers white; rocky roadsides; July-Oct.

Fam. 57 UMBELLIFERAE (Parsley Family)

1. CHAEROPHYLLUM L.

1. C. procumbens (L.) Crantz Annual; flowers white; along streams, roadsides, and railroads; early April-June.
2. C. Tainturieri Hook. Annual; flowers white; waste ground, roadsides; March-May.
3. C. texanus Coult. & Rose Annual; flowers white; roadsides, along railroads; April-June.

2. CONIUM L.

1. C. maculatum L. Poison Hemlock. Biennial; flowers white; waste ground, fence rows, roadsides; May-Aug.

3. LOMATIUM Raf.

1. L. foeniculaceum (Nutt.) C. & R. Hairy Parsley. Perennial; flowers yellow; prairies, meadows, roadsides; April-June.

4. PTILIMNIUM Raf.

1. P. Nuttallii (DC.) Britt. Mock Bishop's Weed. Annual; flowers white; wet prairies, riverbottom, roadsides; June-Aug.

5. SANICULA L.

1. S. canadensis L. Black Snakeroot. Biennial; flowers greenish; riverbottoms; May-July.

Fam. 58 CORNACEAE (Dogwood Family)

1. CORNUS L.

1. C. drummondii Meyer Rough-leaved Dogwood. Shrub; flowers white; thickets, prairies; May-June.

Fam. 59 ERICACEAE (Heath Family)

1. VACCINIUM L.

1. V. arboreum Marsh. Farkleberry. Shrub; flowers white; thickets, along streams; May-June. (KSC)

Fam. 60 PRIMULACEAE (Primrose Family)

1. ANDROSACE L.

1. A. occidentalis Pursh Annual; flowers white; pastures, meadows, lawns; March-May.

Fam. 61 SAPOTACEAE (Sapodilla Family)

1. BUMELIA Sw.

1. B. lanuginosa (Michx.) Pers. False Buckthorn. Tree; flowers white; along streams; June-July. (KANU)

Fam. 62 EBENACEAE (Ebony Family)

1. DIOSPYROS L.

1. D. virginiana L. Persimmon. Tree; flowers yellow; borders of woods, along streams; late May-June.

Fam. 63 OLEACEAE (Olive Family)

1. FRAXINUS L.

1. F. pennsylvanica Marsh., var. subintegerrima (Vahl) Fern. Green Ash. Tree; flowers greenish; along streams; April-May.

Fam. 64 APOCYNACEAE (Dogbane Family)

1. APOCYNUM L.

1. A. cannabinum L., var. glaberrimum A. DC. Indian Hemp. Perennial; flowers greenish-white; waste ground, riverbottoms; May-Aug.

Fam. 65 ASCLEPIADACEAE (Milkweed Family)

1. ASCLEPIAS L. Milkweed

1. A. Engelmannia Woodson Perennial; flowers greenish; meadows, roadsides; June-Aug.
2. A. incarnata L. Swamp Milkweed. Perennial; flowers rose-purple; mudflats, riverbanks; June-Aug.
3. A. obovata Ell. Perennial; flowers white; rocky hillsides, roadsides; June-Aug.

4. A. speciosa Torr. Perennial; flowers lavender-pink; prairies, roadsides; June-Aug.
5. A. stenophylla Gray Perennial; flowers greenish; limestone soils, prairies; June-July. (KSC)
6. A. Sullivantii Engelm. Perennial; flowers lavender-white; along streams, meadows; June-July. (KSC) (Collection unkeyable, identified by Clothier and Whitford, Aug., 1897.)
7. A. tuberosa L. Butterfly Milkweed. Perennial; flowers orange; meadows, roadsides; May-Sept.
8. A. verticillata L. Whorled Milkweed. Perennial; flowers greenish-white; meadows, roadsides, along railroads; May-Sept.
9. A. viridiflora Raf., var. lanceolata (Ives) Torr. Green Milkweed. Perennial; flowers greenish; pastures, roadsides; June-Aug.

2. ASCLEPIODORA Gray

1. A. viridis (Walt.) Gray Green-flowered Milkweed. Perennial; flowers green; roadsides; May-June.

Fam. 66 CONVULVULACEAE (Morning Glory Family)

1. CONVOLVULUS L.

1. C. arvensis L. Field Bindweed. Perennial; flowers white; waste ground, roadsides; May-Sept.
2. C. sepium L. Hedge Bindweed. Perennial; flowers white; pastures, roadsides, along railroads; May-Sept.

2. CUSCUTA L. Dodder

1. C. cuspidata Engelm. Parasite; flowers white; fence rows, riverbottoms, roadsides; July-Oct.
2. C. glomerata Choisy Parasite; flowers white; prairies, along streams; July-Sept. (KSC)

3. EVOLVULUS L.

1. E. Nuttallianus Schultze Perennial; flowers lavender; limestone soils, rocky hillsides, pastures; April-July. (KANU)

4. IPOMOEA L. Morning Glory

1. I. leptophylla Torr. Perennial; fence rows, roadsides; July-Oct.
2. I. purpurea (L.) Roth Common Morning Glory. Perennial; flowers blue-lavender; fallow fields, waste ground, roadsides, along railroads; July-Oct.

Fam. 67 HYDROPHYLLACEAE (Waterleaf Family)

1. ELLISIA L.

1. E. nyctelea L. Aunt Lucy. Annual; flowers light lavender; waste ground, stream banks, roadsides; April-June.

Fam. 68 BORAGINACEAE (Borage Family)

1. LITHOSPERMUM L.

1. L. arvense L. Corn Gromwell. Annual; flowers white; lawns, cultivated and waste ground, roadsides; April-June.
2. L. canescens (Michx.) Lehm. Puccoon. Perennial; flowers yellow-orange; roadsides, along railroads; March-June.
3. L. incisum Lehm. Yellow Puccoon. Perennial; flowers yellow; sandy open ground, meadows, pastures, roadsides; April-June.

Fam. 69 VERBENACEAE (Vervain Family)

1. LIPPIA L. Fog Fruit

1. L. cuneifolia (Torr.) Steud. Perennial; flowers whitish-pink; roadsides, along railroads; June-Sept.
2. L. lanceolata Michx. Perennial; flowers whitish-pink; margins of streams, lakes, and ponds, wet roadside ditches; May-Sept.

2. VERBENA L. Vervain

1. V. bipinnatifida Nutt. Perennial; flowers lavender; open ground, lawns, roadsides; May-Sept.
2. V. bracteata Lag. & Rohr. Perennial; flowers lavender; waste ground, roadsides, along railroads; April-Oct.
3. V. hastata L. Blue Vervain. Perennial; flowers blue-lavender; meadows, lake shores; July-Sept.
4. V. stricta Vent. Perennial; flowers lavender; waste ground, prairies, roadsides; May-Sept.
5. V. urticifolia L. White Vervain. Perennial; flowers white; cultivated ground, along streams, roadsides; June-Oct.

Fam. 70 LABIATAE (Mint Family)

1. HEDEOMA Pers.

1. H. hispida Pursh Annual; flowers blue; sandy open ground, prairies, roadsides, along railroads; May-July. (KSC)

2. LYCOPUS L.

1. L. americanus Muhl. American Bugle Weed. Annual; flowers white; along streams and ponds, along railroads; June-Oct.

3. MONARDA L.

1. M. citriodora Cerr. Lemon Mint. Annual; flowers lavender; sandy soils, pastures, roadsides; June-Oct.
2. M. punctata var. occidentalis (Epling) Palmer & Steyerl. Dotted Monarda. Perennial; flowers cream-colored; sandy open ground, roadsides; June-Oct.

4. NEPETA L.

1. N. cataria L. Catnip. Perennial; flowers white; waste ground, along streams, roadsides, and railroads; June-Sept. (KSC)

5. SALVIA L.

1. S. azurea Lam., var. grandiflora Benth. Blue Sage. Perennial; flowers blue; prairies, meadows, roadsides; July-Sept.
2. S. reflexa Hornem. Sage. Annual; flowers lavender-blue; dry open soil, roadsides; May-Oct.

6. SCUTELLARIA L.

1. S. lateriflora L. Mad-dog Skullcap. Perennial; flowers blue; wet meadows, along streams; June-Oct.

7. TEUCRIUM L.

1. T. canadense L. American Wood Sage. Perennial; flowers lavender; prairies, meadows, along streams, roadsides; June-Sept.
- 1a. T. canadense L., var. virginicum (L.) Eat. Perennial; flowers lavender; prairies, meadows, roadsides; June-Sept.
2. T. occidentale Gray Germander. Perennial; flowers lavender; along streams; July-Aug.

Fam. 71 SOLANACEAE (Nightshade Family)

1. PHYSALIS L. Ground Cherry

1. P. lobata Torr. Perennial; flowers lavender; dry rocky roadsides; May-July.
2. P. pumila Nutt. Perennial; flowers brownish-yellow; prairies, roadsides; May-Aug. (KSTC)
3. P. virginiana Mill., var. hispida Waterfall Perennial; flowers brownish-yellow; prairies, roadsides; May-Sept.
4. P. virginiana Mill., var. sonorae (Torr.) Waterfall (P. longifolia Nutt.) Perennial; flowers brownish-yellow; prairies, roadsides; May-Sept.

2. SOLANUM L.

1. S. americanum Mill. Black Nightshade. Annual; flowers white; fallow fields, pastures, along streams, roadsides; May-Nov.
2. S. carolinense L. Horse Nettle. Perennial; flowers lavender; waste ground, fallow fields, pastures, roadsides; May-Oct.
- 2a. S. carolinense L., forma albiflorum (O. Ktze.) Benke Horse Nettle. Perennial; flowers white; waste ground, roadsides; May-Oct.
3. S. elaeagnifolium Cav. White Horse Nettle. Perennial; flowers light blue-lavender; waste ground, pastures, roadsides; July-Sept.
4. S. rostratum Dunal. Buffalo Bur. Annual; flowers yellow; waste ground, pastures, roadsides, along railroads; May-Oct.
5. S. sarachoides Sendtner Annual; flowers white; waste ground, along railroads; July-Oct.
6. S. Torreyi Gray Perennial; flowers lavender; sandy open ground, roadsides; May-Sept.

Fam. 72 SCROPHULARIACEAE (Figwort Family)

1. CONOBEA Aubl.

1. C. multifida (Michx.) Benth. Annual; flowers white to light blue; along streams, lakes, and ponds; June-Oct.

2. LINDERNIA All. False Pimpernel

1. L. anagallidea (Michx.) Pennell Annual; flowers lavender; sandy soil along streams, lakes, and ponds; June-Oct.
2. L. dubia (L.) Pennell Annual; flowers lavender; sandy soil along streams, lakes, and ponds; June-Oct.

3. GERARDIA L.

1. G. skinneriana Wood Perennial; flowers lavender; prairies, margins of streams; July-Sept.

4. LINARIA Mill.

1. L. canadensis (L.) Dumont. Blue Toadflax. Perennial; flowers blue; cultivated fields, roadsides, along railroads; April-Sept.

5. PENSTEMON Mitchell

1. P. Cobaea Nutt. Beard-tongue. Perennial; flowers white-lavender; limestone soils, pastures, roadsides; April-June.
- 1a. P. Cobaea Nutt., var. purpureus Pennell Perennial; flowers rose-purple; limestone soils, pastures, roadsides; April-June.

6. VERBASCUM L.

1. V. thapsus L. Mullein. Biennial; flowers yellow; waste ground, pastures, roadsides; May-Sept.

7. VERONICA L. Speedwell

1. V. anagallis-aquatica L. Water Speedwell. Perennial; flowers bluish-lavender; along streams; May-Oct.
2. V. arvensis L. Corn Speedwell. Annual; flowers lavender-blue; waste ground, lawns; March-April.
3. V. comosa Richter Water Speedwell. Perennial; flowers white; wet places, pastures, lawns; May-Oct.
4. V. peregrina L. Neckweed. Annual; flowers white; cultivated ground, roadsides; April-Aug.
- 4a. V. peregrina L., var. xalapensis (HBK.) St. John & Warren Annual; flowers white; fallow fields, meadows, roadsides; April-July.
5. V. polita Fries Annual; flowers blue; waste ground, lawns; March-May.

Fam. 73 BIGNONIACEAE (Trumpet Creeper Family)

1. CAMPSIS Lour.

1. C. radicans (L.) Seem. Trumpet Creeper. Perennial; flowers orange; creek banks, roadsides; May-Aug. (E)

2. CATALPA Scop.

1. C. bignonioides Walt. Catalpa. Tree; flowers white; waste ground, woods, riverbottoms, roadsides; May-June.

Fam. 74 MARTYNIACEAE (Unicorn Plant Family)

1. PROBOSCIDEA Schmidel

1. P. louisianica (Mill.) Thell. Devil's Claw. Annual; flowers white; waste and cultivated ground, sandy ground, along streams and ponds; June-Sept.

Fam. 75 ACANTHACEAE (Acanthus Family)

1. JUSTICIA L.

1. J. americana (L.) Vahl Water Willow. Perennial; flowers white to lavender; along streams and lakes; June-Oct.

2. RUELLIA L.

1. R. humilis Nutt. Wild Petunia. Perennial; flowers lavender; prairies, pastures; May-Oct.
- 1a. R. humilis Nutt., var. longifolia (Gray) Fern. Perennial; flowers lavender; prairies, pastures; May-Oct.

Fam. 76 PLANTAGINACEAE (Plantain Family)

1. PLANTAGO L. Plantain

1. P. purshii R. & S. Salt-and-pepper Plant. Annual or short-lived perennial; flowers white; waste ground, dry meadows; May-Aug.
2. P. rugelii Dcne. Rugel Plantain. Perennial; flowers white; waste ground, along streams, roadsides, and railroads; May-Oct.
3. P. virginica L. Hoary Plantain. Annual or biennial; flowers white; fallow fields, pastures, lawns, roadsides; April-June.

Fam. 77 RUBIACEAE (Madder Family)

1. CEPHALANTHUS L.

1. C. occidentalis L. Buttonbush. Shrub; flowers white; borders of streams, upland sink-holes, ponds; early June-Aug.

2. DIODIA L.

1. D. teres Walt., var. setifera Fern. & Griseb. Rough Buttonweed. Annual; flowers lavender; waste ground, fallow fields, along railroads; June-Oct.

3. GALIUM L.

1. G. aparine L. Cleavers. Annual; flowers white; waste ground, roadsides, along railroads; May-July.

4. HOUSTONIA L.

1. H. minima Beck Bluets. Annual; flowers blue; pastures, lawns; March-April.
2. H. nigricans (Lam.) Fern. Perennial; flowers light lavender; pastures, stream banks; May-Oct.

Fam. 78 CAPRIFOLIACEAE (Honeysuckle Family)

1. SAMBUCUS L.

1. S. canadensis L. Elderberry. Shrub; flowers white; thickets, fence rows, along streams, roadsides; May-July.

2. SYMPHORICARPOS Duham.

1. S. orbiculatus Moench. Coral Berry. Shrub; thickets, along streams, pastures, along railroads; July-Aug.

Fam. 79 VALERIANACEAE (Valerian Family)

1. VALERIANELLA Mill.

1. V. stenocarpa (Engelm.) Krok., var. parviflora Dyal Annual; flowers white; pastures, rocky roadsides; April-May.

Fam. 80 CUCURBITACEAE (Gourd Family)

1. CUCURBITA L. Gourd

1. C. foetidissima HBK. Missouri Gourd. Perennial; flowers yellow; roadsides, along railroads; mid-June-July.

Fam. 81 CAMPANULACEAE (Bell Flower Family)

1. LOBELIA L.

1. L. cardinalis L. Cardinal Flower. Perennial; flowers red; margins of streams and sloughs; July-Oct.

2. SPECULARIA Fabr.

1. S. perfoliata (L.) A. DC. Venus' Looking Glass. Annual; flowers cream-lavender; sandy ground, prairies, along streams; April-Aug.

Fam. 82 COMPOSITAE (Composite Family)

1. ACHILLEA L.

1. A. millefolium L. Common Milfoil. Perennial; flowers white; waste ground, prairies, roadsides; May-Nov.

2. AMBROSIA L.

1. A. psilostachya DC., var. coronopifolia (T. & G.) Farw. Western Ragweed. Perennial; flowers greenish; pastures, roadsides, along railroads; late June-Sept.
2. A. trifida L. Giant Ragweed. Annual; flowers greenish; fallow fields, roadsides, along railroads; late June-Sept.

3. ANTENNARIA Gaertn.

1. A. neglecta Greene Pussy's Toes. Perennial; flowers white; meadows, prairies, lawns; April-June.

4. ARTEMISIA L.

1. A. ludoviciana Nutt. White Sage. Perennial; flowers yellow to purple; waste ground, over-grazed pastures, roadsides; June-Sept.

5. ASTER L. Aster

1. A. ericoides L. Perennial; flowers white (rays), yellow (disks); dry soils, roadsides, along railroads; July-Oct.
2. A. oblongifolius Nutt. Perennial; flowers lavender-blue (rays), yellow (disks); dry prairies, meadows, along railroads; Sept.-Oct.
3. A. praealtus Poir Perennial; flowers lavender (rays), yellow (disks); thickets, meadows, roadsides; Aug.-Oct.
4. A. sericeus Vent. Silky Aster. Perennial; flowers lavender-blue (rays), yellow (disks); limestone soils; prairies, roadsides; Aug.-Oct. (KSC)
5. A. simplex Willd., var. ramosissimus (T. & G.) Cron. Perennial; flowers white (rays), yellow (disks); meadows, along railroads; Aug.-Oct.
6. A. subulatus Michx., var. ligulatus Shinn. Annual; flowers lavender (rays), yellow (disks); meadows, pastures, roadsides; July-Sept.

6. BERLANDIERA L.

1. B. texana DC. Perennial; flowers yellow; rocky hillsides, roadsides; June-Oct.

7. BIDENS L.

1. B. bipinnata Nutt. Spanish Needles. Annual; flowers yellow; sandy soils, waste ground, roadsides; Aug.-Oct.
2. B. cernua L. Sticktight. Annual or short-lived perennial; flowers yellow; margins of streams and ponds; Aug.-Oct.
3. B. frondosa L. Beggars Tick. Annual; flowers yellow; waste ground, margins of streams and ponds; Aug.-Oct.
4. B. polylepis Blake Tickseed Sunflower. Annual or short-lived perennial; flowers yellow; waste and cultivated ground, margins of streams and ponds, roadsides; Aug.-Oct. (KSC)

8. CENTAUREA L.

1. C. cyanus L. Cornflower. Annual; flowers blue; waste ground, roadsides, along railroads; May-Sept. (E)

9. CHRYSOPSIS Nutt.

1. C. villosa (Pursh) Nutt. Golden Aster. Perennial; flowers yellow; meadows, pastures; July-Oct.
- 1a. C. villosa (Pursh) Nutt., var. canescens Gray Perennial; flowers yellow; meadows, pastures, rocky hillsides; July-Oct.
- 1b. C. villosa (Pursh) Nutt., var. stenophylla Gray Perennial; flowers yellow; pastures, rocky hillsides; July-Oct.

10. CIRSIUM Mill.

1. C. altissimum (L.) Spreng. Tall Thistle. Biennial or perennial; flowers pink; pastures, roadsides, along railroads; July-Oct.
2. C. undulatum (Nutt.) Spreng. Common Thistle. Biennial or perennial; flowers lavender-white; dry open soil, roadsides; June-Oct.
- 2a. C. undulatum (Nutt.) Spreng., var. megacephalum (Gray) Fern. Biennial or perennial; flowers lavender-white; roadsides; June-Sept.
3. C. vulgare (Savi) Tenore Bull Thistle. Biennial or perennial; flowers lavender; waste ground, cultivated fields, roadsides; June-Sept.

11. COREOPSIS L.

1. C. tinctoria Nutt. Tickseed. Annual; flowers yellow (rays), deep red (disks); sandy ground, wet cultivated ground, river-bottoms, roadsides; July-Sept.

12. DYSSODIA Cav.

1. D. papposa (Vent.) Hitchc. Field Marigold. Annual or biennial; flowers yellow; waste ground, roadsides; July-Oct. (KSC)

13. ECHINACEA Moench

1. E. angustifolia DC. Purple Coneflower. Perennial; flowers purple; dry prairies, rocky hillsides; May-Aug.
2. E. pallida Nutt. Purple Coneflower. Perennial; flowers purple; prairies, rocky hillsides, roadsides; June-July.

14. ECLIPTA L.

1. E. alba (L.) Hassk. Annual; flowers white; waste ground, along streams, roadsides; Aug.-Oct.

15. ENGELMANNIA T. & G.

1. E. pinnatifida T. & G. Perennial; flowers yellow; roadsides, along railroads; July-Aug.

16. ERIGERON L. Fleabane

1. E. annuus (L.) Pers. Daisy Fleabane. Annual or biennial; flowers white (rays), yellow (disks); waste ground, pastures, meadows; June-Oct.
2. E. canadensis L. Horse Weed. Annual; flowers white (rays), yellow (disks); waste ground, roadsides, along railroads; June-Nov.
3. E. divaricatus Michx. Dwarf Fleabane. Annual; flowers white (rays), yellow (disks); waste ground, pastures, roadsides; May-Sept.
4. E. strigosus Muhl. Daisy Fleabane. Annual or short-lived perennial; flowers white (rays), yellow (disks); meadows, roadsides, along railroads; May-Sept.
- 4a. E. strigosus Muhl., var. Beyrichii (Fisch. & Meyer) T. & G. Annual; flowers white (rays), yellow (disks); meadows, roadsides; May-Sept.
5. E. tenuis T. & G. Annual; flowers white (rays), yellow (disks); waste ground, pastures; May-June.

17. EUPATORIUM L.

1. E. altissimum L. Tall Thoroughwort. Perennial; flowers white; waste ground, prairies, along railroads; Aug.-Oct. (KSC)
2. E. coelestinum L. Mist Flower. Perennial; flowers lavender; along streams and ponds; July-Oct.

3. E. rugosus Houtt. White Snakeroot. Perennial; flowers white; along streams, roadsides; July-Oct.

18. GAILLANDIA Foug.

1. G. pulchella Foug. Indian Blanket. Annual; flowers red-orange (rays), yellow or purple (disks); waste ground, roadsides, along railroads; May-Sept.
2. G. suavis (Gray & Engelm.) Britt. & Rusby Annual; flowers yellow (disks); pastures, roadsides; May-Oct.

19. GRINDELIA Willd.

1. G. lanceolata Nutt. Biennial or perennial; flowers yellow; waste ground, rocky prairies, roadsides; Aug.-Oct. (KSC)

20. GUTIERREZIA Lag.

1. G. dracunculoides (DC.) Blake Broomweed. Annual; flowers yellow; fallow fields, over-grazed pastures, roadsides; July-Oct.

21. HAPLOPAPPUS Cass.

1. H. ciliatus (Nutt.) DC. Annual or biennial; flowers yellow; waste ground, prairies, roadsides, along railroads; July-Oct.
2. H. divaricatus (Nutt.) Gray Annual or biennial; flowers yellow; along roadsides and railroads; Sept.-Nov.
- 2a. H. divaricatus (Nutt.) Gray, var. Hookerianus (T. & G.) Waterfall Annual or biennial; flowers yellow; along roadsides and railroads; Sept.-Nov.
3. H. phyllocephalus DC., var. annuus (Rydb.) Waterfall Annual; flowers yellow; waste ground, prairies, roadsides; June-Sept.
4. H. spinulosus (Pursh) DC. Perennial; flowers yellow; meadows, pastures, rocky hillsides; June-Sept.

22. HELIANTHUS L. Sunflower

1. H. annuus L. common Sunflower. Annual; flowers yellow (rays), reddish-purple (disks); waste and cultivated ground, roadsides, along railroads; July-Nov.
2. H. grosseserratus Marteni Perennial; flowers yellow (rays and disks); along streams; July-Oct.
3. H. laetiflorus Pursh, var. rigidus (Cass.) Fern. Perennial; flowers yellow (rays), deep purple (disks); dry prairies, roadsides, along railroads; Aug.-Oct.

4. H. Maximiliani Schrad. Perennial; flowers yellow (rays and disks); prairies, along railroads; July-Oct.
5. H. petiolaris Nutt. Prairie Sunflower. Annual; flowers yellow (rays), reddish-purple (disks); waste ground, roadsides, along railroads; May-Oct.
6. H. tuberosa L. var. subcanescens Gray Jerusalem Artichoke. Perennial; flowers yellow (rays and disks); waste ground, roadsides, along railroads; Aug.-Oct.

23. HETEROTHECA Cass.

1. H. latifolia Buckley Golden Aster. Perennial; flowers yellow; sandy waste ground, rocky hillsides; Aug.-Nov.

24. HYMENOPAPPUS L'Her

1. H. tenuifolius Pursh Perennial; flowers white; sandy open ground, along railroads; April-June.

25. HYMENOXYIS Hook.

1. H. linearifolia Hook. Annual; flowers yellow; pastures, roadsides; April-June.

26. IVA L.

1. I. ciliata Willd. Marsh Elder. Annual; flowers greenish-white; along streams, ponds, and wet ditches; July-Oct.

27. KRIGIA Schreb.

1. K. Dandelion (L.) Nutt. Dwarf Dandelion. Perennial; flowers yellow; sandy fields, meadows, prairies, roadsides; April-June.
2. K. virginica (L.) Willd. Annual; flowers yellow; meadows; April-Aug.

28. KUHNIA L.

1. K. eupatorioides L. False Boneset. Perennial; flowers white; thickets, along streams, rocky slopes; July-Oct.

29. LACTUCA L.

1. L. ludoviciana (Nutt.) DC. Lettuce. Annual or biennial; flowers white; waste ground, roadsides; June-Aug.
2. L. Scariola L. Prickly Lettuce. Annual or biennial; flowers yellow; waste ground, pastures, roadsides; June-Oct.

30. LIATRIS Schreb.

1. L. punctata Hook., var. nebraskensis Gaiser Gaiser Snakeroot. Perennial; flowers pinkish-lavender; prairies, pastures, roadsides; Aug.-Oct.
2. L. squarrosa (L.) Michx. Perennial; flowers lavender; rocky hillsides, pastures, roadsides; July-Sept. (KSC)

31. PLUCHEA Cass.

1. P. purpurascens (Sw.) DC. Annual; flowers pink; along streams, roadsides; June-Sept.

32. PYRRHOPAPPUS DC.

1. P. carolinianus (Walt.) DC. False Dandelion. Annual or biennial; flowers yellow; fallow fields, margins of streams and ponds, roadsides, along railroads; May-Oct.

33. RATIBIDA Raf.

1. R. columnifera (Nutt.) W. & S. Long-headed Coneflower. Perennial; flowers white; waste ground, prairies, roadsides; June-Sept.

34. RUDBECKIA L.

1. R. amplexicaulis Vahl (Dracopis amplexicaulis (Vahl) Cass.) Annual; flowers yellow (rays), brown (disks); waste ground, wet roadsides; June-July.
2. R. hirta L. Black-eyed Susan. Perennial; flowers yellow (rays), brown (disks); meadows, prairies, roadsides, along railroads; May-Oct.
- 2a. R. hirta L., var. pulcherrima Farwell Perennial; flowers yellow (rays), brown (disks); meadows, prairies, roadsides; May-Oct.

35. SENECIO L.

1. S. plattensis Nutt. Prairie Ragwort. Annual; flowers yellow; meadows, prairies, roadsides; May-June.

36. SILPHIUM L.

1. S. integrifolium Michx. Rosinweed. Perennial; flowers yellow; sandy prairies, roadsides; July-Sept.
2. S. laciniatum L. Rosinweed. Perennial; flowers yellow; prairies, rocky roadsides; July-Sept.

37. SOLIDAGO L.

1. S. altissima L. Tall Goldenrod. Perennial; flowers yellow; fallow fields, prairies, along streams, roadsides; Aug.-Nov.
2. S. canadensis L., var. glivocanescens Rudb. Perennial; flowers yellow; prairies, along streams; July-Sept. (KSC)
3. S. gigantea Ait., var. lellophylla Fern. Late Goldenrod. Perennial;
4. S. gymnospermoides (Greene) Fern. Perennial; flowers yellow; meadows, dry prairies, along railroads; Aug.-Oct.
5. S. missouriensis Nutt. Perennial; flowers yellow; prairies, roadsides; July-Sept.
6. S. rigida L. Stiff Goldenrod. Perennial; flowers yellow; prairies, wet meadows; Aug.-Oct. (KSC)

38. SONCHUS L.

1. S. asper (L.) Hill, forma glandulosus Beckh. Spiny-leaved Sow Thistle. Annual; flowers yellow; waste ground, barnyards, pastures, roadsides; May-Oct.

39. TARAXACUM Zinn.

1. T. officinale Wiggers Common Dandelion. Biennial or perennial; flowers yellow; lawns, meadows, roadsides; March-Sept.

40. THELESPERMA Less.

1. T. megapotamicum (Spreng.) Kuntze Perennial; flowers yellow; pastures, along railroads; May-July.

41. TRAGOPOGON L.

1. T. major Jacq. Goat's Beard. Biennial or perennial; flowers yellow; waste ground, meadows, roadsides, along railroads; March-June.

42. VERNONIA Schreb.

1. V. Baldvini Torr. Perennial; flowers lavender; waste ground, meadows, prairies, roadsides; May-Sept.

43. XANTHIUM L.

1. X. strumarium L. Cocklebur. Annual; flowers greenish; waste and sandy open ground, pastures; Aug.-Oct.

Table V. Plants which were listed by Gates (1940) but were not collected or found in several herbaria.

Family	Scientific Name
COMMELINACEAE	<u>Commelina virginica</u> L.
MORACEAE	<u>Cannabis sativa</u> L.
POLYGONACEAE	<u>Polygonum persicaria</u> L.
MENISPERMACEAE	<u>Menispermum canadense</u> L.
POLYGALACEAE	<u>Polygala verticillata</u> L.
EUPHORBIACEAE	<u>Euphorbia glyptosperma</u> Engelm.
UMBELLIFERAE	<u>Spermolepis inermis</u> (Nutt.) Math. & Const.
ASCLEPIADACEAE	<u>Asclepias latifolia</u> (Torr.) Raf. <u>Cynanchum laeve</u> (Michx.) Pers.
CONVOLVULACEAE	<u>Ipomoea hederacea</u> (L.) Jacq.
LABIATAE	<u>Marrubium vulgare</u> L. <u>Monarda fistulosa</u> L.
SOLANACEAE	<u>Datura stramonium</u> L.
CUCURBITACEAE	<u>Sicyos angulatus</u> L.
COMPOSITAE	<u>Ambrosia artemisiifolia</u> L. <u>Solidago ulmifolia</u> Muhl. <u>Vernonia missurica</u> Raf.

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