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***Third Report on Kansas Weeds—Descriptive List, with  
Distribution.***

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The present bulletin includes a descriptive list of the weeds of Kansas, based upon the information at hand at the present time. It has been somewhat difficult to draw the line between plants which become weeds and those which do not. It will be seen that the list includes many plants which are not seriously troublesome or which have shown themselves to become troublesome only in certain localities. While fungi might be considered as weeds, it has seemed best to confine the list to flowering plants, the only ones that are ordinarily thought of as weeds. Weedy plants may be conveniently divided into three groups: those found in cultivated soil, those found in waste places, those found in pastures of wild grass.

To the first group belong the most troublesome weeds, such as cocklebur, sandbur, and purslane. They are chiefly annuals, and are frequently species introduced from Europe. There are among them, however, several perennials, as the bindweed and the ox-eye daisy, and several that are natives of Kansas.

The second group includes those weeds which are found chiefly in waste places, old fields, vacant lots, yards, road-sides, and similar localities. They are much less troublesome.

Finally we have the pasture weeds. These are native plants

which for various reasons are not eaten by stock. As the grass in the pasture decreases the weeds tend to increase, and in close-fed pastures they often become very abundant and troublesome. To this group belong the iron-weed, pasture thistle, some of the golden-rods and the snow-on-the-mountain.

No sharp line can be drawn between these groups, as the same species of plant may sometimes be included in any of the groups. Most of the weeds found in cultivated ground may occur in waste places, but there are many of the second group that are rarely troublesome in cultivated ground.

From lack of space, a further discussion of the general characters of weeds and a summary of the information and statistics already gathered will be deferred till a later bulletin.

For the same reason the descriptions in the following list have been made as brief as possible. The descriptions include only the prominent characters—those which most easily catch the eye. It is hoped that these descriptions, together with the drawings, will enable the readers to identify the weeds included in the list.

The plates of maps illustrate the distribution by counties of all the weeds described. The herbarium of the Kansas State Agricultural College contains specimens from all the localities indicated by the maps. It will be observed that several counties are not at all and several others scarcely at all represented in the distribution.

The drawings represent for the most part only the leaves, in order to save space. If the leaves are opposite on the stem, either both leaves are drawn or, where they are too large, only the base of the stalk of the second leaf is shown. The size of each drawing is indicated in parentheses following the description in the list. The drawings were made by Mr. G. L. Clothier and Miss Bertha Kimball.

The weeds in the list are numbered consecutively. Each map and each drawing is provided with the number corresponding to this plant in the list. This will aid reference from one place to the other. The order of presentation follows that given in Gray's *Manual of Botany*, sixth edition, and the scientific names are the same as those given in that work. Several of the weeds from the western part of the state are not described in Gray's *Manual*; most of these will be found in Coulter's *Rocky Mountain Flora*.

Under the common names of the weeds we have included, so far as our present information permits, all those by which each is called. The most appropriate or the most distinctive name is given first.

KEY TO THE WEEDS.

The following key will aid in the determination of the weeds included in the list. To illustrate the manner in which the key is used, we will take an example, the common purslane, and trace it to its proper number. All the plants or weeds of the list are divided into two groups, each marked 1, namely, shrubs and herbs. The former are small, woody plants, such as sumach and buckbush. Our plant is an herb, and will therefore go in the second of these groups. We find, immediately following this, 8 in parenthesis (8). We then pass down the column of figures on the left-hand side till we come to the divisions marked 8, four in number. We are now to decide in which of these four divisions our plant belongs. It is neither a grass, a cactus, nor a vine, hence must go in the last division, which refers to (14). This number is found on the left-hand side; and we must notice whether the leaves are opposite, two at the same place on opposite sides of the stem, or whether they are alternate—that is, only one at a joint, the next being above and part way around the stem. The purslane evidently has opposite leaves, which refers us to (15). As our weed has no stinging hairs, as is the case with nettles, we pass to (16). The purslane being a low, spreading plant, we take (17). The leaves of our plant are entire—that is, without any teeth or notches on the edge; hence we go to (18). The plant has no milky juice, so we go to (19). Of the two number 19's we must choose the first, as the leaves are thick and fleshy, and also smooth. We are now referred to No. 20, which appears at the right, and does not refer us to the key again, but to No. 20 in the list, page 10. Turning to this number, we find the purslane described. Looking at the plates, we find the leaves represented by figure 20. Map No. 20 shows the distribution so far as is indicated by specimens in our possession.

The numbers in parenthesis refer to the left-hand column of the key; the numbers on the extreme right-hand refer to the descriptions in the body of the bulletin.

- 1. Shrubs. (2).
- 1. Herbs. (8).
- 2. Leaves compound (divided into separate leaflets, as in the Clover or Wild Rose). (3).
- 2. Leaves simple. (7).
- 3. Plant prickly..... No. 40.
- 3. Not prickly. (4).
- 4. Leaves opposite ..... No. 52.
- 4. Leaves alternate. (5).
- 5. Leaflets three ..... No. 32.
- 5. Leaflets numerous. (6).

- 6. Twigs smooth ..... No. 30.
- 6. Twigs hairy ..... No. 31.
- 7. Leaves opposite ..... No. 53.
- 7. Leaves alternate ..... No. 29.
- 8. Grasses or grass-like ..... Nos. 186 to 209.
- 8. Cactuses, fleshy, prickly plants ..... Nos. 44 to 49.
- 8. Vines, climbing or trailing. (9).
- 8. Not as above. (14).
- 9. Leafless, stem yellow ..... No. 118.
- 9. Green plants. (10).
- 10. Leaves opposite. .... No. 107.
- 10. Leaves alternate. (11).
- 11. Leaves compound ..... Nos. 36, 37.
- 11. Leaves simple. (12).
- 12. Leaves arrow or spear-shaped. (13).
- 12. Leaves heart-shaped, entire or three-lobed ..... Nos. 113, 114.
- 13. Annual, flowers small, greenish ..... No. 174.
- 13. Perennial, flowers white or pinkish, bell-shaped ..... Nos. 115 to 117.
- 14. Leaves opposite. (15).
- 14. Leaves alternate or in a basal rosette. (35).
- 15. Plant provided with stinging hairs ..... No. 185.
- 15. No stinging hairs. (16).
- 16. Low, spreading plants, often forming mats (sometimes erect when growing among other plants). (17).
- 16. Upright plants. (21).
- 17. Leaves entire or only minutely toothed. (18).
- 17. Leaves deeply toothed or lobed ..... Nos. 139, 140.
- 18. Juice milky ..... Nos. 175 to 178.
- 18. Juice not milky. (19).
- 19. Leaves thick and fleshy, smooth ..... No. 20.
- 19. Leaves thin. (20).
- 20. Leaves smooth, broadest near the tip ..... No. 50.
- 20. Leaves hairy ..... Nos. 18, 19, 155.
- 21. Leaves entire or toothed. (22).
- 21. Leaves more or less deeply lobed or cut. (30).
- 22. Juice milky. (23).
- 22. Juice not milky. (24).
- 23. Leaves entire, elliptical; plants two feet or more tall ..... Nos. 105, 106.
- 23. Leaves narrow, or if elliptical the margins toothed; plants a foot or two high ..... Nos. 179, 180, 182.
- 24. Stem square. (25).
- 24. Stem cylindrical. (26).
- 25. Leaves with a mint-like odor ..... Nos. 141, 142.
- 25. No mint-like odor; leaves elliptical, toothed ..... Nos. 137, 138.
- 26. Plants tall, two feet or more high. (27).
- 26. Plants small, a few inches to a foot high. (29).
- 27. Leaves entire ..... No. 148.
- 27. Leaves toothed. (28).
- 28. Annual ..... Nos. 71, 72.
- 28. Perennial ..... No. 85.
- 29. Leaves with long bristles at the base ..... No. 54.
- 29. Leaves without bristles ..... No. 135.

- 30. Stem square; leaves three-lobed; a perennial. . . . . No. 143.
- 30. Stem cylindrical. (31).
- 31. Leaves three-lobed; a tall annual. . . . . No. 74.
- 31. Leaves cut into numerous lobes, the notches extending nearly to the mid-rib. (32).
- 32. Fruit provided with two to four little bristles by which they stick to clothing . . . . . Nos. 88, 89.
- 32. Fruit without barbed bristles. (33).
- 33. Plant strong-smelling, usually not over a foot high. . . . . No. 91.
- 33. Plants two feet or more high. (34).
- 34. Flowers on long stalks, showy; plant smooth. . . . . No. 87.
- 34. Flowers inconspicuous, plants rough hairy. . . . . Nos. 75, 76.
- 35. Leaves compound; that is, divided into completely separate leaflets. (36).
- 35. Leaves deeply lobed or cut, but not compound. (41).
- 35. Leaves entire, or with notches reaching not much beyond the middle. (48).
- 36. Leaflets three. (37).
- 36. Leaflets more than three. (40).
- 37. Leaflets toothed . . . . . Nos. 33, 34.
- 37. Leaflets entire. (38).
- 38. Leaflets heart-shaped at end. . . . . Nos. 26 to 28.
- 38. Leaflets narrow, pointed. (39).
- 39. Stalk bearing the three leaflets, very short. . . . . No. 35.
- 39. Stalk bearing the three leaflets, half an inch or more long. . . . . Nos. 16, 17.
- 40. Leaflets five to seven, all growing from the top of the leaf stalk. . . . . No. 184.
- 40. Leaflets numerous, scattered along the main stalk. . . . . Nos. 38, 39.
- 41. Plant prickly. . . . . No. 123.
- 41. Plant not prickly. (42).
- 42. Small biennial, with leaves cut into numerous small divisions; flowers yellow . . . . . No. 4.
- 42. Perennial. (43).
- 42. Annual. (45).
- 43. Leaves white-downy beneath. . . . . No. 77.
- 43. Leaves not white-downy beneath. (44).
- 44. Flowers yellow, one-half to one inch in diameter. . . . . No. 1.
- 44. Flowers inconspicuous; base of leaves sheathing the stem; fruit provided with small hooks. . . . . No. 51.
- 44. Flowers inconspicuous; plant rough hairy, common on prairie. . . . . No. 76.
- 45. Flowers or flower heads showy. (46).
- 45. Flowers inconspicuous. (47).
- 46. Flowers yellow with a dark purple eye . . . . . No. 24.
- 46. Flower heads yellow with white rays. . . . . No. 92.
- 46. Flower heads yellow with light purple rays. . . . . No. 66.
- 47. Flowers very small; yellow, followed by oblong pods containing small seeds. . . . . Nos. 9, 10.
- 47. Flowers white or pink; a low plant. . . . . No. 25.
- 47. A hairy plant with the lower leaves opposite. . . . . No. 75.
- 48. Leaves provided with a sheath enclosing the stem for a short distance above the base of the leaf stalk. Smart-weeds and Docks.  
[Nos. 163 to 173.
- 48. Flowers very small, but collected in close heads. These heads are generally taken to be the flower. To this group belong the Sunflower, Golden-rod, Thistle, Wild Lettuce, Dandelion, etc. The heads are

often again aggregated into clusters, as in the Golden-rods. The heads of flowers are often provided around the edge with appendages, called rays, as in the common Sunflower. To this group belong a few common weeds which do not show this character of the flowers in a well-defined manner, such as the Cocklebur and Ragweeds.

[Nos. 57 to 104.

- 48. Plants not included in the above groups. (49).
- 49. Leaves prickly; flowers white or bluish. (50).
- 49. Leaves not prickly, though they may be spiny pointed. (51).
- 50. Juice milky; flowers about two or three inches wide. . . . . Nos. 2, 3.
- 50. Juice not milky; flowers an inch or less wide. . . . . Nos. 121, 122.
- 51. Juice milky; leaves entire, the upper white margined. . . . . No. 181.
- 51. Juice not milky. (52).
- 52. Leaves all in a basal rosette; low plants (Plantains). . . . Nos. 144 to 147.
- 52. Stem more or less leafy. (53).
- 53. Flowers small, yellow or white, in elongated clusters, soon bearing pods below and continuing for some time to bear flowers above. Leaves usually tasting peppery. The Mustard family. Annuals, winter annuals, or biennials . . . . . Nos. 5 to 15.
- 53. Not as above. (54).
- 54. Flowers inconspicuous, greenish; annuals. (55).
- 54. Flowers small, one-fourth inch or less, white or blue; annual or biennial. (59).
- 54. Flowers larger, or if small some other color than white or blue. (60).
- 55. Plant scurfy or mealy. (56).
- 55. Plant not scurfy or mealy, but sometimes somewhat hairy. (57).
- 56. Leaves more or less spear-shaped. . . . . No. 159.
- 56. Leaves narrow and entire, or wider and toothed, but not spear-shaped. [No. 157.
- 57. Leaves heart-shaped at base, toothed . . . . . No. 183.
- 57. Leaves not heart-shaped. (58).
- 58. Plant peppery; little pods disk-shaped forming a long cluster. . . . No. 15.
- 58. Plants not peppery. Several kinds forming tumble-weeds. Includes the Pigweeds and Amaranths. . . . . Nos. 149 to 154, 156 to 161.
- 59. Plants hairy, not peppery . . . . . Nos. 109 to 112.
- 59. Plants smooth, peppery. . . . . Nos. 113, 114.
- 60. Perennials; fruit a small berry. (61).
- 60. Annuals or biennials. (62).
- 61. Plant low and spreading; no inflated sack around berry. . . . . No. 124.
- 61. Plants upright, often bushy branched; berry inclosed in an inflated sack; Ground Cherries . . . . . Nos. 125 to 131.
- 61. Plant tall and smooth; berries dark purple, in an elongated cluster; no sack around berry. . . . . No. 162.
- 62. Fruit a berry inclosed in a sack. . . . . No. 126.
- 62. Fruit not inclosed in a sack. (63).
- 63. Fruit a berry. . . . . Nos. 119, 120.
- 63. Fruit dry. (64).
- 64. Flowers yellow. (65).
- 64. Flowers not yellow. (68).
- 65. Divisions of the flower (corolla) four. (66).
- 65. Divisions of the flower five. (67).
- 66. Plant tall and slender; flowers half an inch or more across. . . . . No. 41.

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- 66. Plants smaller, if tall then also branched; flowers small, scarcely one-fourth of an inch. Mustards..... Nos. 5 to 12.
  - 67. Flower stalk tall and slender, from a cluster of velvety root leaves, No. 134.
  - 67. Plant branched; no cluster of root leaves..... Nos. 22, 23.
  - 68. Flowers funnel-shaped, as much as three inches long..... Nos. 132, 133.
  - 68. Flowers not funnel-form. (69).
  - 69. Leaves heart-shaped at base. (70).
  - 69. Leaves not heart-shaped. (71).
  - 70. Leaves toothed, smooth; flowers white; plant spreading.....No. 21.
  - 70. Leaves entire, clammy hairy; flowers spotted; plant upright.....No. 136.
  - 71. Flowers pink or whitish; stem tall and slender; fruit smooth. Nos. 42, 43.
  - 71. Flowers red-brown; stem low and stout; fruit forming a bur. . . . No. 108.

## DESCRIPTIONS OF KANSAS WEEDS.

### **RANUNCULACEÆ. (Buttercup Family.)**

This family includes a few bad weeds, but none have become troublesome in Kansas.

1. **RANUNCULUS ACRIS, L.** (Tall Buttercup.)

A common and troublesome weed in eastern United States in meadows and fields, introduced from Europe. We have Kansas specimens only from Pottawatomie county. (Plate I; one-half natural size.)

### **PAPAVERACEÆ. (Poppy Family.)**

2. **ARGEMONE MEXICANA ALBIFLORA, DC.** (Mexican Poppy, Prickly Poppy, Bull Thistle.)

Plant a foot or two high, stem prickly and covered with a bloom like a cabbage leaf. Leaves alternate, lobed, the margins and nerves beneath prickly, surface often blotched or mottled with white. Juice yellow. Flowers white, two or three inches in diameter, the petals soon falling off. Fruit a dry prickly capsule containing numerous seeds. The young plant forms a rosette of long, prickly, mottled leaves. Roadsides, waste places, and pastures. Southern states, extending north through central Kansas into Nebraska. A native plant, not troublesome except for prickles. The name adopted for this plant in Gray's Synoptical Flora is *Argemone alba*, Lestib. (Plate I; *a*, upper leaf; *b*, lower leaf; one-half natural size.)

3. **ARGEMONE PLATYCERAS, Link & Otto.** (Mexican Poppy, etc.)

This plant is quite similar to the preceding, but is more densely prickly, the prickles being more slender and weaker. A native of the plains of Kansas and Texas, extending westward to California.

### **FUMARLACEÆ. (Fumitory Family.)**

4. **CORYDALIS AUREA, Willd.** (Golden Corydalis.)

A low, delicate plant, with much-divided leaves, producing several stems from a single root. Flowers yellow, and about half an inch long, narrow, produced below into a rounded sack; in clusters terminating the stems. Leaves mostly from near the ground, a few smaller ones on the stem. Flowering in spring. Rather common in eastern Kansas, in moist shady places, sometimes troublesome in lawns and gardens in spring. This plant is a native of eastern United States, extending westward into Kansas. (Plate I; one-half natural size.)

### **CRUCIFERÆ. (Mustard Family.)**

The weeds belonging to this family are characterized by having a pungent or peppery taste. They are mostly winter annuals, germinating in the autumn, forming then a rosette of leaves which



spread out flat on the ground. In this condition they pass the winter, the foliage often turning a reddish brown. In the spring the flower stalk is sent up, bearing comparatively small flowers. The flowers are in racemes, the lower flowers blooming first. Usually the fruit ripens on the lower part of the raceme while the upper part is still producing flowers. Fruit a two-celled capsule with few or numerous seeds. Leaves alternate, mostly lobed.

5. *CAMELINA SATIVA*, Crantz. (False Flax, Gold of Pleasure.)

Flowers yellow, fruit globular. Introduced from Europe and common eastward, but found here only in Riley and Wyandotte counties. (Plate I; leaf and pod natural size.)

6. *NASTURTIUM SINUATUM*, Nutt. (Yellow Cress.)

Flowers yellow; fruit oblong, curved, pedicels slender. Common in moist places. Not troublesome.

7. *NASTURTIUM SESSILIFLORUM*, Nutt. (Yellow Cress.)

Resembling the last; fruit straight, on short pedicels. Common in moist places; frequent in gardens and low grass-land. (Plate I; *a*, leaf; *b*, two pods; natural size.)

8. *ERYSIMUM ASPERUM*, DC. (Western Wall Flower.)

Flowers yellow, large for the family. Fruit long and straight, widely spreading (three to four inches long). A native of the plains. Common in western Kansas on the prairie, also along fire-guards and in recently-broken sod. (Plate I; *a*, leaf; *b*, pod; natural size.)

9. *SISYMBRIUM CANESCENS*, Nutt. (Tansy Mustard, Pepper Grass.)

A slender plant with very small yellow flowers and oblong pods on slender spreading pedicels. A native of the plains and Mississippi valley. Common in waste and rather sterile land. Flowering in spring. (Plate I, natural size.)

10. *SISYMBRIUM OFFICINALE*, Scop. (Hedge Mustard.)

Becoming a tall and widely-branched plant (two to four feet). Flowers small, yellowish; fruit pointed, closely pressed to the stem. A native of Europe; common in eastern United States in waste places, along fences, roadsides, and frequent in gardens. Flowering in spring and early summer. (Plate I; *a*, lower leaf and three pods, natural size; *b*, lower leaf, one-half natural size.)

11. *BRASSICA SINAPISTRUM*, Boiss. (English Charlock.)

Flowers yellow; pods knotty, pointed, spreading. Plant two to three feet high. A common weed in grain fields through eastern United States. Not yet common in Kansas. Introduced from Europe. Flowering in early summer. (Plate I; *a*, upper leaf, one-half natural size; *b*, leaf from near middle of stem, natural size; *c*, lower leaf, one-half natural size.)

12. *BRASSICA NIGRA*, Koch. (Black Mustard.)

Similar to the preceding, but the pod short and closely appressed to the stem. Introduced from Europe, and common eastward, but not abundant in Kansas except in certain counties in the eastern part of the state. Mostly in waste places. Troublesome when in grain fields.

Flowering in early summer. (Plate II; *a*, upper leaf, one-fourth natural size; *b*, lower leaf, one-fourth natural size.)

13. *CAPSELLA BURSA-PASTORIS*, Moench. (Shepherd's Purse.)

A small plant, common in early spring in gardens, yards, and along roadsides. Flowers white. Pods heart-shaped (obcordate). Introduced from Europe. (Plate II; *a*, upper leaf; *b*, lower leaf; natural size.)

14. *LEPIDIUM VIRGINICUM*, L. (Pepper Grass, Tongue Grass.)

A common weed in the eastern part of the state. Flowers white or greenish, very small, appearing in early spring. Somewhat resembling Shepherd's Purse, especially as to the winter rosette, and found in similar situations. Pods disk-shaped, small. (Plate II; *a*, upper leaf; *b*, lower leaf; natural size.)

15. *LEPIDIUM INTERMEDIUM*, Gray. (Pepper Grass.)

Closely resembling the preceding (usually lower and more branching), and much more common, extending all over the state. The plant is called *L. apetalum* Willd. in Gray's Synoptical Flora. (Plate II; *a*, upper leaf; *b*, lower leaf; natural size.)

**CAPPARIDACEÆ. (Caper Family.)**

16. *POLANISIA TRACHYSERMA*, Torr. & Gray.

Clammy annual, with a disagreeable odor. Leaves divided into three leaflets. Flowers with four yellowish white petals about one-eighth of an inch long. Stamens pink, much longer than the flower. Common in sandy fields. Native. (Plate II; one-half natural size.)

17. *CLEOME INTEGRIFOLIA*, Torr. & Gray. (Rocky Mountain Bee Plant, Wild Rocket, Spider Flower.)

A smooth annual, usually tall. Leaves alternate, divided into three leaflets. Flowers in a raceme, pink. Fruit a one-celled capsule, on a long pedicel. Low ground; a native of the plains, frequent in fields and along roadsides, in the valleys, especially in the western part of the state. Flowering in summer. (Plate II; leaf and pod, one-half natural size.)

**CARYOPHYLLACEÆ. (Pink Family.)**

18. *CERASTIUM VULGATUM*, L. (Mouse-ear Chickweed, Chickweed.)

A low, spreading plant, common eastward in gardens and lawns. Infrequent in Kansas. (Plate II; natural size.)

19. *CERASTIUM NUTANS*, Raf. (Chickweed.)

Similar to the above; not common. (Plate II; natural size.)

**PORTULACACEÆ. (Portulaca Family.)**

20. *PORTULACA OLERACEA*, L. (Purslane, Pursley.)

A very common weed in cultivated ground. Common all over Kansas. A prostrate annual, with fleshy stems and leaves. It thrives even in the dry western portions of the state, the succulent stems resisting the drought, while the leaves turn upward during the heat of the day, thereby presenting less surface to the sun. Introduced from Europe. (Plate II; one-half natural size.)

**MALVACEÆ. (Mallow Family.)**

Our weeds belonging to this family are all herbs, mostly annuals, with alternate leaves having three or more strong veins radiating from the base. Flowers mostly showy, on stalks coming from the axils of the leaves. Petals five.

21. MALVA ROTUNDIFOLIA. (Common Mallow, Cheeses, Mallard, Round-Leaved Mallow, Low Mallow.)  
 Stems creeping, leaves round on long stalks. Biennial. Flowers whitish, a quarter to a half an inch wide. Introduced from Europe; common eastward, and extending into eastern Kansas, where it occurs in waste places, door-yards and roadsides. (Plate II; one-half natural size.)
22. SIDA SPINOSA, L. (Sida.)  
 A slender annual, a foot or two high, with oblong leaves. Flowers rather small, yellow. A native of the tropics, extending north into Kansas, where it becomes in many localities a troublesome weed. Common in eastern and southern Kansas in cultivated soil and waste lands. (Plate II; one-half natural size.)
23. ABUTILON AVICENNAE, Gaertn. (Velvet Leaf, Velvet Weed, Button Weed, Butter Cup, Indian Mallow, American Jute, Butter Print, Pie Marker, Cotton Weed.)  
 A tall annual (two to four feet high), with velvety stem and leaves, the latter round, heart-shaped, with a rather long point. Flowers orange yellow, three-quarters of an inch wide. Fruit hemispherical, 12- to 15-celled, the cells with beaks at the outer corner. A native of tropical Asia. Common through eastern Kansas in waste places, especially barn-yards. (Plate II; one-fourth natural size.)
24. HIBISCUS TRIONUM, L. (Bladder Ketmia, Flower-of-an-hour, Black-eyed Susan, Mallow.)  
 A low annual with three-parted leaves; flowers large and showy, an inch or more wide, yellow with a dark center or "eye," opening in sunshine, soon withering. In fruit the calyx becomes enlarged and purple-veined, enclosing the five-celled capsule. Native of Europe. A common and troublesome weed in eastern Kansas. Waste places and cultivated land, especially grain fields. (Plate II; one-half natural size.)

**GERANTACEÆ. (Geranium Family.)**

25. GERANIUM CAROLINIANUM, L. (Wild Geranium.)  
 Not troublesome. In some localities becomes abundant in sandy or barren fields. (Plate II; leaf and fruit, natural size.)
26. OXALIS VIOLACEA, L. (Wood Sorrel, Sheep Sorrel.) The name Sheep Sorrel should be reserved for number 167.  
 A stemless plant from a scaly bulb. Leaves with three leaflets. Juice sour. Flowers pink or violet; petals five. Frequent in fields, but not troublesome. Native. (Plate III; natural size.)
27. OXALIS CORNICULATA, L. (Yellow Wood Sorrel, Ladies' Sorrel, Yellow Sheep Sorrel.)  
 Stem low; no bulb. Leaves with three leaflets. Flowers yellow; petals five. Fruit erect on reflexed stalks. Common in fields, especially stub-

ble, but not troublesome. Native. (Plate III; *a*, leaf, one-half natural size; *b*, fruit, natural size.)

28. OXALIS CORNICULATA STRICTA, Sav. (Yellow Wood Sorrel.)  
 Similar to the preceding, but the fruit on ascending stalks. Native. (Plate III; fruit, natural size.)

**RHAMNACEÆ. (Buckthorn Family.)**

29. CEANOTHUS OVATUS, Desf. (Red Root, New Jersey Tea.)  
 A low shrub a foot or two high, with oblong leaves and clusters of small white flowers. Often abundant in pastures, especially in sterile or rocky soil. Eastern half of the state. Native. (Plate II, one-half natural size.)

**ANACARDIACEÆ. (Cashew Family.)**

30. RHUS GLABRA, L. (Smooth Sumach.)  
 A low or tall shrub, with smooth brown stem and compound leaves with numerous leaflets. Juice milky. Flowers small, yellow, in a terminal cluster. Fruit small and red; handsome in autumn. Often abundant in pastures, forming copses especially near timber. Native. (Plate III; one-fourth natural size.)
31. RHUS COPALLINA, L. (Downy Sumach.)  
 Similar to the preceding, but branches downy. Only in the eastern counties. Native. (Plate III; small leaf, one-fourth natural size.)
32. RHUS TOXICODENDRON, L. (Poison Ivy, Poison Oak, Poison Vine.)  
 A shrub, then called Poison Oak, or a vine climbing on trees or stone walls by rootlets. Leaflets three. Common in woods, along stone walls, fences, and low ground among tall plants. Native. (Plate III; one-half natural size.)

**LEGUMINOSÆ. (Pulse Family.)**

A large family, including the pea, bean, and clover. Leaves usually compound, alternate. Flowers usually of a peculiar shape, like the pea. Fruit a pod with one cell. The flowers often furnish honey for bees.

33. MELILOTUS OFFICINALIS, Willd. (Yellow Sweet Clover, Yellow Melilot.)  
 Tall and branching (two to four feet high). Flowers small in long racemes, yellow. Leaflets three. Not common. Waste places. Introduced from Europe. (Plate III; natural size.)
34. MELILOTUS ALBA, Lam. (White Sweet Clover, Bokhara Clover, Tree Clover, White Melilot.)  
 Similar to the preceding, but the flowers white. Becoming common, and in some localities troublesome. Along roadsides, waste places, and cultivated soil. Introduced from Europe. (Plate III; one-half natural size.)
35. HOSACKIA PURSHIANA, Benth.  
 Becomes a weed in some localities. Native. (Plate III; natural size.)

36. STROPHOSTYLES ANGULOSA, Ell. (Wild Bean.)  
 A climbing or trailing annual vine. Leaflets three. Flowers pink, few in a cluster on a long stalk. Fruit resembling a small bean pod. Common in eastern Kansas in cultivated ground in moist sandy soil. Native. (Plate III; one-half natural size.)
37. STROPHOSTYLES PAUCIFLORA, Watson. (Wild Bean.)  
 Similar to the preceding, but leaflets narrower. Native. (Plate III; one-half natural size.)
38. CASSIA MARILANDICA, L. (Wild Senna, Wild Indigo.)  
 Stem three to four feet high. Leaflets several pairs. Flowers yellow, the petals nearly equal. Pods flat, and somewhat curved, three to four inches long. Waste places and sometimes in damp cultivated soil. Not troublesome. (Plate III; one-fourth natural size.)
39. CASSIA CHAMAECRISTA, L. (Partridge Pea, Wild Sensitive Plant.)  
 Stem one to two feet high. Leaflets smaller and flowers larger than the preceding; pods smaller, and nearly straight. Frequent in sterile soil. Not troublesome. Native. (Plate IV; natural size.)

**ROSACEÆ. (Rose Family.)**

40. ROSA ARKANSANA, Porter. (Wild Rose, Briar.)  
 The only plant that seems to become troublesome in the Rose Family is the common wild rose or briar. It is a deep-rooted perennial that is difficult to exterminate where a foothold has been obtained. Common in eastern Kansas. Most troublesome in grain fields. A native of the western plains. (Plate IV; one-half natural size.)

**ONAGRACEÆ. (Evening-Primrose Family.)**

41. OENOTHERA BIENNIS, L. (Evening Primrose, Golden Candlestick, Speckled John.)  
 Stem tall and scarcely branched. Biennial. Leaves alternate, hairy. Flowers yellow, one-half to two inches wide in a close terminal spike. Fruit a woody capsule an inch long, splitting apart at the top. Common in old fields, waste places, roadsides, and more or less in cultivated land. A native of the United States. (Plate IV; *a*, upper surface; *b*, under surface of leaf; one-half natural size.)
42. GAURA BIENNIS, L.  
 Resembling the preceding, but often more branching. Flowers pink, about one-half inch wide when fully expanded. Fruit one-fourth inch long, spindle shaped. Waste places and pastures. A native of the United States. (Plate IV; natural size.)
43. GAURA PARVIFLORA, Dougl.  
 In habit resembling *G. biennis*. Leaves softly velvety. Flowers much smaller, yellowish. Fruiting spike becoming a foot or two long. In similar situations. Often becoming abundant in closely fed pastures. Native. (Plate IV; one-half natural size.)

**CACTACEÆ. (Cactus Family.)**

Familiar fleshy plants furnished with spines. The cactuses may be considered as weeds when they occur in pasture land, as is so frequently the case. They are all native plants.

44. MAMILLARIA VIVIPARA, Haw. (Globe Cactus, Ball Cactus.)  
 Plant globose, two to four inches broad. Spines (not barbed) on the ends of tubercles. Flowers red. Fruit green. High prairie.
45. MAMILLARIA MISSOURIENSIS, Sweet. (Bird's Nest Cactus.)  
 Resembles the preceding, but flowers greenish yellow and fruit scarlet. Often grows in large clusters.
46. OPUNTIA RAFINESQUII, Engelm. (Prickly Pear, Old Man's Hand, Indian Fig.)  
 Plant made up of oval flat joints bearing minutely barbed spines. Joints usually four or five inches broad. Flowers yellow. Fruit prickly, one and a half inches long. Sandy soil and on the high prairie.
47. OPUNTIA MISSOURIENSIS. (Prickly Pear, etc.)  
 Closely resembling the preceding. The joints are usually smaller, and the spines reddish at the base. Fruit half as large, scarcely pulpy. High prairies of western Kansas.
48. OPUNTIA FRAGILIS, Haw.  
 Joints small, an inch or two long, oval, scarcely flattened. The joints of a single plant become very numerous and separate easily. They attach themselves readily to animals, by which means they are carried about.
49. CEREUS VIRIDIFLORUS, Engelm.  
 Plant cylindrical, two to five inches high, single or in clusters of two to eight. Only in southwestern Kansas.

**FICOIDEÆ.**

50. MOLLUGO VERTICILLATA. (Carpet Weed.)  
 A prostrate annual, forming mats in low or sandy ground. Frequent in moist corn fields after the corn is laid by. (Plate IV; one-half natural size.)

**UMBELLIFERÆ. (Parsley Family.)**

51. SANICULA MARYLANDICA, L. (Black Snake-root.)  
 Stem one to three feet high. Leaves alternate with sheathing stalks, the blade divided into three to seven parts. Flowers inconspicuous. Fruit small, covered with hooked prickles, separating into two parts. A perennial plant, found in damp shady soil. Not often troublesome. Native. (Plate IV; one-half natural size.)

**CAPRIFOLIACEÆ. (Honeysuckle Family.)**

52. SAMBUCUS CANADENSIS, L. (Elder, Elderberry.)  
 A familiar shrub, frequent in the eastern part of the state. Often abundant in old fields, barnyards, and low rich soil. Sometimes also in cultivated fields. Native. (Plate IV; one-fourth natural size.)

53. SYMPHORICARPOS VULGARIS, Michx. (Buck Bush, Coral Berry, Indian Currant, Bird Eye, Pride of China.)

A low shrub with opposite oval leaves, forming in summer long runners. Fruit red, about the size of small bullets, in clusters from the axils of the leaves; conspicuous in autumn and early winter. Common in prairie land in eastern Kansas, and frequently troublesome in pastures. Native. (Plate IV; one-half natural size.)

**RUBIACEÆ. (Madder Family.)**

54. DIODIA TERES, Walt. (Button Weed, Compass Weed.)

A small hairy annual with narrow opposite leaves bearing bristles at the base. Extending into southeast Kansas. Sandy fields. Native. (Plate IV; natural size.)

**COMPOSITÆ. (Sunflower Family.)**

A large order, including some of our commonest and most troublesome weeds. The members of this family can usually be distinguished by the fact that the flowers are very small, but combined in heads, each head surrounded by a number of scale-like leaves. Common examples are the Sunflower, Daisy, Golden-rod, Aster, Dandelion, and Thistle. A few, such as the Cocklebur and Rag-weed, do not show this character so well. When the head is provided with appendages surrounding the edge, as in the Sunflower, these are designated as rays.

KEY TO COMPOSITÆ.

1. Flowers inconspicuous. This group includes the Cockle-bur, Ragweeds, and Marsh Elder. The flowers are not noticeable except on close examination. (2.)
1. Flowers more or less showy; the heads, on close examination, plainly seem to be a collection of small flowers. (8.)
2. Fruit a bur..... Nos. 78, 79.
2. Fruit not a bur. (3.)
3. Annuals. (4.)
3. Perennials. (7.)
4. Leaves cut into fine divisions..... No. 75.
4. Leaves toothed or lobed, but not deeply cut. (5.)
5. Leaves with three large lobes..... No. 74.
5. Leaves toothed but not lobed. (6.)
6. Leaves alternate, having a tooth on each side near the base..... No. 73.
6. Leaves, except the uppermost, opposite..... Nos. 71, 72.
7. Leaves white-downy beneath..... No. 77.
7. Leaves hairy but not whitened beneath.....No. 76.
8. All the flowers of the head strap-shaped (examples, the Dandelion and Lettuce. (9.)
8. Only the outer flowers (rays) of the head strap-shaped (examples, the Sunflower and Goldenrod. (10.)
8. None of the flowers of the head strap-shaped (examples, Thistle and Burdock. (23.)
9. All the leaves in a cluster at the ground (Dandelion).....No. 100.
9. Stems tall and leafy (Wild Lettuces).....Nos. 101 to 104.
10. Rays, purple .....No. 66.
10. Rays, white. (11.)
10. Rays, yellow; sometimes with a brown base. (13.)
11. Perennial, heads an inch or more wide..... No. 93.
11. Annual or biennial; heads smaller. (12.)
12. Leaves finely cut into numerous divisions..... No. 92.

- 12. Leaves entire or toothed, stems not much branched..... Nos. 67 to 69.
- 13. Rays short, not often more than one-eighth of an inch long. (14.)
- 13. Rays showy, one-half inch or more long. (17.)
- 14. Plant emitting a strong resinous odor..... No. 91.
- 14. Plants with no conspicuously strong odor. (15.)
- 15. Annual ..... No. 59.
- 15. Perennial. (16.)
- 16. Leaves small and narrow, plant low, much branched, woody at base.....No. 58.
- 16. Plant upright, leaves broad, more or less toothed..... Nos. 63 to 65.
- 17. Leaves cut into small divisions, rays with a brown base.....No. 87.
- 17. Leaves entire or toothed. (18.)
- 18. Rays purple or brown at base..... No. 90.
- 18. Rays all yellow. (19.)
- 19. Scales surrounding the head of flowers, narrow and spreading, covered with a gummy or sticky exudation ..... Nos. 60, 61.
- 19. Scales sometimes exuding drops of resinous substance, as in the Rosin-Weed, but not sticky. (20.)
- 20. Annual or biennial. (21.)
- 20. Perennial ..... Nos. 82 to 85.
- 21. Leaves alternate, the base clasping the stem by two ears. (22.)
- 21. Leaves without ears, leaves all opposite..... Nos. 80, 81.
- 22. Rays 12 to 15, three-toothed at summit, about an inch long..... No. 86.
- 22. Rays about 20, narrow and shorter..... No. 62.
- 23. Stem stout, rising from a basal rosette or cluster of leaves. (24.)
- 23. No basal rosette of leaves. (25.)
- 24. Leaves prickly (Thistles) .....Nos. 95 to 99.
- 24. Leaves not prickly, very large.....No. 94.
- 25. Leaves opposite, cut into numerous divisions.....Nos. 88, 89.
- 25. Leaves alternate. (26.)
- 26. Plant low, about a foot high, woolly, flowers white..... No. 70.
- 26. Plants tall and slender, flowers purple..... Nos. 55 to 57.

VERNONIA. Nos. 55 to 57. (Ironweeds.)

There are several species of this genus, all more or less troublesome in pastures. Perennial herbs, usually tall and unbranched. Leaves alternate. Flowers purple in small heads without rays. Heads numerous in a flat-topped cluster. Native plants.

- 55. VERNONIA ARKANSANA, DC.  
Heads large, one-half inch wide, the bracts narrow and spreading.  
(Plate IV; natural size.)
- 56. VERNONIA FASCICULATA, Michx.  
Leaves broader, smooth. (Plate IV; one-half natural size.)
- 57. VERNONIA BALDWINII, Torr. (Queen of the Meadow.)  
Heads small, leaves downy. Very common on prairie and in pastures.  
(Plate IV; *a*, one-half natural size; *b*, hybrid with fasciculata one-half natural size.)
- 58. GUTIERREZIA EUTHAMIAE, T. & G.  
A low perennial with numerous stems, woody at the base. Leaves very narrow, alternate. Flowers yellow. Heads small and crowded. Common in west Kansas. Prairies and pastures. (Plate V; natural size.)
- 59. AMPHIACHYRIS DRACUNCULOIDES, Nutt.  
Stems slender, much branched, one to two feet high, the branches bearing on the ends small heads of yellow flowers. Rays small. Annual. Common in prairie pastures and waste places. Southeastern Kansas. Native. (Plate V; natural size.)



60. *GRINDELIA SQUARROSA*, Dunal. (Gum Weed, Wax Weed.)  
A common pasture weed with heads of yellow flowers one-half to three inches broad. Rays numerous, one-half inch long. Leaves alternate. The narrow scales of the head secrete a sticky substance. Native. (Plate V; one-half natural size.)

61. *GRINDELIA SQUARROSA GRANDIFLORA*, Gray.  
Common in the bottom lands of southwestern Kansas. Stem tall and unbranched, heads considerably larger. Native. (Plate V; natural size.)

62. *HETEROTHECA LAMARCKII*, Cass.  
Also common in the bottom lands of southwest Kansas. Flowers yellow. Rays present. Native. (Plate V; natural size.)

*SOLIDAGO*. Nos. 63 to 65. (Golden-rods.)  
Perennial herbs with alternate leaves. Flowers yellow, heads small, variously clustered. Species several, but only a few becoming weedy. Native plants.

63. *SOLIDAGO SEROTINA*, Ait.  
A tall smooth species, becoming a weed along fences and roadsides. (Plate V; natural size.)

64. *SOLIDAGO CANADENSIS*, L.  
Similar to the preceding, but leaves and stems downy. More abundant in neglected spots. (Plate V; natural size.)

65. *SOLIDAGO RIGIDA*, L.  
Usually two to three feet high. Heads in a flat-topped cluster. Leaves thick and rough. Becoming sometimes very abundant in close-fed pastures. (Plate V; stem leaf, one-half natural size.)

*ASTER*. (Aster.)  
Several species of this genus are common in Kansas, but none become troublesome except the following:

66. *ASTER TANACETIFOLIUS*, HBK. (Tansy Aster.)  
Heads large, three-fourths of an inch wide, yellow with purple rays. Annual. A common weed in sandy fields in western Kansas. Native. (Plate V; natural size.)

67. *ERIGERON CANADENSIS*, L. (Horse Tail, Horse Weed, Mare's Tail, Cow's Tail, Fireweed, Butter Weed, Fleabane.)  
A tall unbranched weed with very numerous narrow leaves. Heads small and inconspicuous. Foliage bitter resinous. Very common in waste places, and more or less in cultivated soil. A native of the United States. (Plate V; *a*, leaves, one-half natural size; *b*, habit of plant much reduced.)

68. *ERIGERON ANNUUS*, Pers. (Daisy Fleabane, White-top.)  
Heads medium size, yellow; the rays very numerous, narrow, white or purplish. Not common in Kansas but abundant in the eastern states. Native. (Plate V; natural size.)

69. *ERIGERON STRIGOSUS*, Muhl. (Daisy Fleabane.)  
Resembling the preceding but much more common. Fields and waste places. Native. (Plate VI; *a*, two root leaves; *b*, leaf from middle of stem; *c*, upper leaf; all one-half natural size.)

70. *GNAPHALIUM POLYCEPHALUM*, Michx. (Life Everlasting, Cudweed.)  
A woolly annual, the scales of the small heads pearly white. Old sandy fields. Not common in Kansas. Native. (Plate V; one-half natural size.)
71. *IVA CILIATA*, Willd.  
A rough, hairy annual, usually two to three feet high; the leaves mostly opposite, the slender stalks hairy along the edge. Heads in a spike interspersed with small ovate leaves. Moist soil, waste places, and cultivated ground. Central and eastern Kansas. Native. (Plate V; *a* and *b*, one-half natural size.)
72. *IVA XANTHIIFOLIA*, Nutt. (False Sunflower, Giant Ragweed, Marsh Elder.)  
A tall, coarse annual; leaves opposite on long stalks, white-downy beneath. The leaves resemble in shape those of the Sunflower, but are more cut-toothed on the edge. A native of the plains. Common especially in western Kansas. Cultivated soil and waste places. Native. (Plate V; one-half natural size.)
73. *AMBROSIA BIDENTATA*, Michx.  
A slender, leafy annual (one to three feet high.) Leaves alternate, having a tooth on each side near the base. Common in southeastern Kansas, especially in bottom-land fields. Native. (Plate V; natural size.)
74. *AMBROSIA TRIFIDA*, L. (Horse Weed, Great, Tall or Big Ragweed, Wild Hemp.)  
A tall annual (sometimes as much as 10 or 12 feet), with opposite three-lobed leaves. Flowers inconspicuous, but producing an abundance of pollen which gives rise to clouds of yellow dust, when the plant is shaken during the flowering season (July and August.) A very common weed in cultivated soil, especially low lands. Native. (Plate VI; one-half natural size.)
75. *AMBROSIA ARTEMISIAEFOLIA*, L. (Ragweed, Hay-weed, Ox Tail, Bitter Weed, Roman Wormwood.)  
Annual, one to three feet high, much branched. Leaves mostly opposite, much cut and lobed. Very common in waste places and cultivated soil, except in western Kansas. Native. (Plate VI; one-half natural size.)
76. *AMBROSIA PSILOSTACHYA*, DC. (Perennial Ragweed, Bitter-weed, Roman Wormwood.)  
Much resembling the preceding, but the leaves less lobed, and the root perennial. Very common, especially in central and western Kansas, where it becomes one of the most troublesome weeds. Native. (Plate VI; one-half natural size.)
77. *FRANSERIA TOMENTOSA*, Gray.  
Somewhat resembling Ragweed. The leaves downy white beneath. Perennial. Cultivated soil. Central Kansas. Native. (Plate VI; natural size.)
78. *XANTHIUM CANADENSE*, Mill. (Cocklebur, Clotbur.)  
A familiar and very common weed, which needs no description. Most troublesome in eastern Kansas. A native of North America. (Plate VI; one-half natural size.)

79. XANTHIUM STRUMARIUM, L. (Cocklebur.)

Differing from the preceding in having a smaller and less spiny bur.  
 Rare in Kansas. A native of the old world.

HELIANTHUS. Nos. 80 to 85. (Sunflowers.)

Several species of this genus become weeds. The heads are large, brown or yellow, with long yellow rays. Native plants.

80. HELIANTHUS ANNUUS, L. (Common Sunflower.)

A tall rough annual with somewhat heart-shaped, three-ribbed leaves. Stalks of the heads only a few inches long. Common in cultivated soil all over the state. (Plate VII; one-half natural size.)

81. HELIANTHUS PECTIOLARIS, Nutt. (Sand-hill Sunflower.)

Much resembling the preceding. The heads are on stalks often a foot or more long, and the leaves are smaller, scarcely toothed and crinkled on the edges. Common in sandy soil. (Plate VII; one-half natural size.)

82. HELIANTHUS ORGYALIS, DC.

Stem tall and very leafy, not much branched. Leaves narrow. Perennial. Southeastern Kansas. (Plate VI; one-half natural size.)

83. HELIANTHUS GROSSE-SERRATUS, Martens. Ironweed, but this name more properly belongs to Vernonia.)

Stem tall, smooth, covered with a bloom like a cabbage leaf. Leaves long lance-shaped. Perennial. Common in eastern Kansas, becoming weedy in low fields near sloughs. (Plate VII; natural size.)

84. HELIANTHUS MAXIMILIANI, Schrad. (Ironweed.)

Similar to the preceding. Extending farther west. Found mostly on dry or rocky soil. (Plate VII; one-half natural size.)

85. HELIANTHUS TUBEROSUS, L. (Jerusalem Artichoke, Artichoke.)

Somewhat resembling the common Sunflower, but perennial and bearing tubers among the roots. (Plate VII; one-half natural size.)

86. VERBESINA ENCELIOIDES, Benth. & Hook. (Dog-weed.)

An annual herb, one to three feet high with medium-sized heads with yellow rays. Frequent in the valley of the Arkansas river. Native. (Plate VII; natural size.)

87. COREOPSIS TINCTORIA, Nutt.

Annual, two to three feet high. Leaves opposite, deeply lobed and cut. Heads medium-sized on long stalks. Center flowers of head brown. Rays yellow, usually more or less brown at the base. Rather common in stubble fields in central Kansas. Native. (Plate VII; one-half natural size.)

88. BIDENS FRONDOSA, L. (Beggar-ticks, Spanish-needles, Stick-tight, Beggar's-lice, Bur Marigold, Pitchfork, Stick-seed.)

An annual, two to three feet high or even taller, with opposite leaves divided into three to five divisions. Heads medium sized. Rays none or very small. Scales surrounding the head large and more or less leaf-like. The flat seed-like fruits are provided with two downwardly barbed prickles, by which they attach themselves readily to the clothing or to animals. A common weed in moist places through eastern Kansas. Native. (Plate VII; *a* and *b*, one-half natural size.)

89. *BIDENS BIPINNATA*, L. (Spanish-needles, Beggar-ticks.)  
 Usually smaller than the preceding; the fruits four-sided, slender, with three or four prickles. Fields and waste places. Not common in Kansas; appearing introduced from the southeast. (Plate VIII; natural size.)
90. *GAILLARDIA PULCHELLA*, Foug. (Nigger-toe.)  
 An annual about a foot high. Heads, including rays, about two inches across, center dark, rays yellow with a red base. A common weed in sandy soil through western Kansas. Native. (Plate VIII; natural size.)
91. *DYSODIA CHRYSANTHEMOIDES*, Lag. (Stink-weed, Fetid Marigold, May-weed, Dog Fennel.)  
 A low annual, characterized by a strong resinous odor. A common roadside weed. Not troublesome. Native. (Plate VIII; *a* and *b*, one-half natural size.)
92. *ANTHEMIS COTULA*, DC. (May-weed. Dog Fennel.)  
 An annual with finely-dissected leaves and a strong odor. Heads yellow with white rays. A European plant, common in eastern United States. Frequent in eastern Kansas. (Plate VIII; one-half natural size.)
93. *CHRYSANTHEMUM LEUCANTHEMUM*, L. (Ox-eye Daisy, White-weed, Bull's-eye, Daisy.)  
 Perennial. Usually unbranched, bearing a single long-stalked large head, with white rays and yellow center. A European plant, very troublesome in the East, but as yet not widely introduced into Kansas. (Plate VIII; natural size.)
94. *ARCTIUM LAPPA*, L. (Burdock.)  
 A stout biennial herb, with very large triangular, heart-shaped leaves, smooth above and woolly beneath. Scales surrounding the head hooked at the apex, these forming at maturity a bur which adheres readily to animals and clothing. Introduced from Europe. Common in eastern Kansas. (Plate VIII; one-eighth natural size.)
- CNICUS. Nos. 95 to 99. (Thistles.)  
 Mostly biennial herbs with prickly leaves. Heads nearly spherical, the scales ending in a prickle. Rays absent; flowers purple.
95. *CNICUS LANCEOLATUS*, Hoffm. (Common Thistle, Bull Thistle, Boar Thistle, Pasture Thistle.)  
 Leaves running down the stem, forming two wings. Plant green. Frequent in eastern Kansas. Introduced from Europe. (Plate VIII; *a*, root leaf; *b*, stem leaf, lower surface; plate IX, *c*, stem leaf, upper surface; all one-half natural size.)
96. *CNICUS UNDULATUS*, Gray. (Pasture Thistle, Bull Thistle.)  
 Low and stout. Whole plant white woolly. Common in central Kansas in prairie, and becoming a bad weed in pastures. Native. (Plate VIII; *a*, leaf from middle of stem; *b* and *c*, upper leaves; all one-half natural size.)
97. *CNICUS OCHROCENTRUS*, Gray. (Western Thistle.)  
 Resembling the preceding, but more prickly; prickles yellow. Western Kansas. Native.

98. *CNICUS ALTISSIMUS*, Willd. (Tall Thistle, Common Thistle.)  
A tall, slender thistle with leaves green above and white beneath.  
Found in woods, along fences and in waste places. Not usually very  
troublesome. Native. (Plate IX; one-half natural size.)
99. *CNICUS ARVENSIS*, Hoffm. (Canada Thistle.)  
Perennial by creeping rootstocks, low (one to three feet high), and usu-  
ally slender. Heads smaller than any of our other species. A native  
of Europe (not of Canada), introduced extensively into eastern United  
States, but rare in Kansas. A bad weed. (Plate IX; natural size.)
100. *TARAXACUM OFFICINALE*, Weber. (Dandelion.)  
A small plant with a basal rosette of smooth, toothed leaves and heads of  
yellow flowers. A familiar plant, common in eastern Kansas in lawns  
and along roadsides. Introduced from Europe. (Plate IX; one-half  
natural size, less deeply-toothed than usual.)
101. *LACTUCA SCARIOLA*, L. (Prickly Lettuce.)  
An unbranched plant, with milky juice and small heads of yellow flowers.  
Leaves on the margin and along the midrib below, and the lower part  
of the stem armed with small prickles. Leaves tending to place them-  
selves with the edges north and south. Waste places. Becoming  
common in eastern Kansas. Introduced from Europe. (Plate IX;  
natural size.)
102. *LACTUCA CANADENSIS*, L. (Wild Lettuce, Trumpet-weed, Devil's  
Iron-weed, Horse-weed.)  
Often tall (five or six feet). Leaves usually deeply-lobed. Common in  
waste places in eastern Kansas. Not troublesome. Native. (Plate  
IX; one-half natural size.)
103. *LACTUCA PULCHELLA*, DC. (Wild Lettuce.)  
Stem one to three feet high. Leaves narrow. Heads large, flowers blue.  
Western Kansas, becoming weedy, but not very troublesome. In rich  
bottom lands. Native. (Plate IX; natural size.)
104. *SONCHUS ASPER*, Vill. (Sow Thistle.)  
Somewhat resembling Wild Lettuce, but heads of yellow flowers larger.  
An annual with simple stem one or two feet high. Introduced from  
Europe. Waste places, not common. (Plate IX; one-half natural size.)

**APOCYNACEÆ. (Dogbane Family.)**

105. *APOCYNUM CANNABINUM*, L. (Indian Hemp, Dogbane, Milk-weed,  
Silk-weed.)  
A branching perennial herb with deep-seated roots. Leaves opposite.  
Juice milky. Moist ground. Sometimes a bad weed in cultivated  
soil; difficult to eradicate on account of its deep roots. Native. (Plate  
X; one-half natural size.)

**ASCLEPIADACEÆ. (Milkweed Family.)**

106. *ASCLEPIAS CORNUTI*, Decaisne. (Milkweed.)  
Stem simple. Leaves opposite, broad, on a very short stalk. Flowers  
pink, numerous in a cluster on slender stalks, starting from the same  
point. Juice milky. Perennial, from a deep-seated root. Common in

eastern Kansas. Sometimes troublesome in cultivated ground. Native. (Plate X; one-half natural size.)

107. *ENSLERIA ALBIDA*, Nutt. (Climbing Milkweed.)

A climbing herbaceous vine with milky juice, long stalked opposite heart-shaped leaves and small whitish flowers in clusters from the axils of the leaves. Eastern Kansas. Often troublesome in cultivated ground. Native. (Plate X; natural size.)

**BORRAGINACEÆ. (Borage Family.)**

108. *CYNOGLOSSUM OFFICINALE*, L. (Hound's Tongue, Dogbur, Wool-mat, Tory-bur.)

A biennial with a basal rosette of large soft-hairy leaves. Flowers small, dark red. Fruit separating into four parts, each covered with short barbed prickles, by which it clings to animals. Frequent in eastern Kansas. Introduced from Europe. Waste places and pastures. (Plate X; *a* and *b*, two leaves, one-half natural size.)

109. *ECHINOSPERMUM VIRGINICUM*, Lehm. (Beggar's-lice, Stickseed, Sheep-bur.)

Stem two to three feet high. Leaves alternate. Flowers very small, blue. Fruit similar to the preceding, but smaller. Biennial. Woods and thickets, extending into pastures. Native. (Plate X; *a*, lower leaf; *b*, upper leaf and flower cluster; one-half natural size.)

110. *ECHINOSPERMUM REDOWSKII OCCIDENTALE*, Watson. (Small Beggar's-lice.)

A low much-branched annual, common in western Kansas. Frequent along fire-guards and roadsides. Fruit similar to the preceding. Native. (Plate X; natural size.)

111. *ECHINOSPERMUM REDOWSKII CUPULATUM*, Gray.

Very similar to the preceding. Native.

112. *KRYNITZKIA CRASSISEPALA*, Gray.

A low annual, very hairy with stiff sharp hairs. Western Kansas, with the preceding. Native. (Plate X; natural size.)

**CONVOLVULACEÆ. (Morning Glory Family.)**

113. *IPOMOEA HEDERACEA*, Jacq. (Morning Glory.)

Annual twining vine with alternate heart-shaped, three-lobed leaves and purple or bluish bell-shaped flowers (one to one and a half inches long.) Eastern Kansas. Cultivated and waste ground. Often a troublesome weed. Introduced from tropical America. (Plate X; one-half natural size.)

114. *IPOMOEA PURPUREA*, Lam. (Common Morning Glory.)

Introduced from the tropics. Similar to the preceding, but flowers larger, and leaves not lobed. Escaped from cultivation. Usually not abundant enough to be troublesome. (Plate X; one-half natural size.)

115. *CONVOLVULUS SEPIUM*, L. (White Morning Glory, Bindweed, Rutland Beauty.)

Perennial by creeping rootstocks. Stem twining, smooth. Leaves spear-shaped, alternate. Flowers white or pinkish, bell-shaped, about

two inches long. Moist soil. Often extending into fields. Native. (Plate XI; *a*, natural size. Plate X; *b*, one-half natural size.)

116. CONVULVULUS SEPIUM REPENS, Gray.  
 Similar to the preceding, but stems downy and mostly trailing rather than twining. Similar situations. Native.
117. CONVULVULUS ARVENSIS, L. (Bindweed, Field Bindweed.)  
 Resembling the preceding, but stems much shorter. Flowers about three-fourths of an inch long. Introduced from Europe. When it has obtained a foothold, it spreads and becomes a very bad weed. (Plate X; natural size.)
118. CUSCUTA ARVENSIS, Beyrich. (Dodder, Love-vine.)  
 An orange-colored parasitic vine, occurring on alfalfa; doing considerable damage in some localities. (Plate XI; portion of vine twining around a stem, natural size.)

**SOLANACEÆ. (Nightshade Family.)**

119. SOLANUM TRIFLORUM, Nutt. (Spreading Nightshade, Wild Potato.)  
 A low spreading annual with small, seven- to nine-lobed leaves, and small white flowers, followed by green berries as large as small cherries. Waste places and cultivated ground in western Kansas. Native. (Plate XI; natural size.)
120. SOLANUM NIGRUM, L. (Nightshade.)  
 A smooth, branched annual, with alternate leaves and angled stem, small white flowers and black berries. Moist ground and cultivated soil. Eastern Kansas. (Plate XI; one-half natural size.)
121. SOLANUM CAROLINENSE, L. (Horse-nettle, Bull-nettle, Bull-thistle, Sand Brier.)  
 Perennial, stem upright, this and the toothed-leaves prickly. Flowers the size and shape of a potato flower, bluish white; berry yellow. Cultivated soil, eastern Kansas. A troublesome weed when abundant. Native. (Plate XI; *a*, under surface of leaf; *b*, upper surface; one-half natural size.)
122. SOLANUM ELAEAGNIFOLIUM, Cav. (Prickly Nightshade.)  
 White-woolly all over, stem and leaves more or less prickly. Flowers and fruit smaller than the preceding. Perennial. Southern Kansas. Prairie and cultivated soil. Often a bad weed. Native. (Plate XI; one-half natural size.)
123. SOLANUM ROSTRATUM, Dunal. (Texas-nettle, Buffalo Bur, Bull-nettle, Spanish Thistle, Mexican Thistle, Texas Thistle, Colorado Bur, Bull Thistle, Beaked Horse-nettle, Spiny Nightshade.)  
 Annual, very prickly. Leaves lobed. Flowers yellow. Fruit prickly. A common and troublesome weed found throughout Kansas. Native. (Plate XI; one-half natural size.)
124. CHAMAESARACHA SORDIDA, Gray.  
 Resembling *Solanum triflorum*, but flowers yellow or purple and leaves less toothed. Roadsides and waste places. Western Kansas. Native. (Plate XI; natural size.)

PHYSALIS. Nos. 125 to 131. (Ground Cherries.)

Low herbs with yellow or purple bell-shaped flowers. Fruit a many-seeded berry, enclosed in a more or less five-sided inflated sack. All native plants.

125. PHYSALIS LOBATA, Torr.

Low and spreading, perennial. Flowers purple. Western Kansas. (Plate XI; natural size.)

126. PHYSALIS PUBESCENS, L.

Root annual. Flowers small, scarcely half an inch in diameter. Sandy soil.

127. PHYSALIS VIRGINIANA, Mill.

A foot or two high from a deep and slender rootstock. Flowers about an inch in diameter when fully expanded, the eye brown. Leaves ovate, toothed. (Plate XI; one-half natural size.)

128. PHYSALIS HEDERAEFOLIA, Gray.

Perennial from a rather thick rootstock. Leaves roundish, kidney-shaped. Flowers about as in the preceding. Western Kansas. (Plate XI; natural size.)

129. PHYSALIS LANCEOLATA, Michx.

Low perennial with narrower, mostly entire, leaves, more or less hairy. Fields and prairie. Common. (Plate XI; natural size.)

130. PHYSALIS LANCEOLATA PUMILA, Gray.

Similar, but nearly smooth. Western Kansas.

131. PHYSALIS LONGIFOLIA, Nutt.

Taller, occasionally as much as three feet high. Leaves large, toothed, whole plant smooth or nearly so. Fields. Common in eastern Kansas. (Plate XI; *a*. Plate XII, *b*; both one-half natural size.)

132. DATURA STRAMONIUM, L. (White Jimson Weed, Thorn Apple, Stramonium.)

A tall, much-branched, smooth annual with angled leaves and funnel-form white flowers about three inches long. Fruit a dry, prickly pod with numerous seeds. Whole plant possessing a disagreeable odor. Waste and cultivated soil, especially barnyards. Eastern Kansas. Introduced from the old world. (Plate XII; one-half natural size.)

133. DATURA TATULA, L. (Purple Jimson Weed, Jamestown Weed, Purple Thorn Apple.)

Similar to the preceding, but stem and flowers purple. Eastern Kansas. Introduced from the tropics. (Plate XII; one-half natural size.)

**SCROPHULARIACEÆ. (Figwort Family.)**

134. VERBASCUM THAPSUS, L. (Common Mullein.)

A tall slender biennial with a basal rosette of large, very woolly leaves. Flowers yellow in a long dense spike. Sterile fields and pastures. Eastern Kansas. Introduced from Europe. (Plate XII; *a*, under surface leaf; *b*, upper surface; small leaves; one-half natural size.)

135. VERONICA PEREGRINA, L. (Neckweed, Purslane Speedwell.)

A small, slender annual with very small white flowers and rounded



notched seed-pods. Common in gardens and along roadsides where the soil is damp. Not troublesome. Eastern Kansas. Native. (Plate XII; natural size.)

### PEDALIACEÆ.

136. MARTYNIA PROBOSCIDEA, Glox. (Devil's Claw, Unicorn Plant.)  
A low, much-branched annual with a large, hollow stem and round heart-shaped leaves. Whole plant clammy-hairy, and emitting a peculiar, strong odor. Flowers bell-shaped, irregular, white or purple, with yellow spots. Fruit when mature provided with two long curved horns. Cultivated soil and waste places. Western Kansas. Native. (Plate XII; one-half natural size.)

### VERBENACEÆ. (Vervain Family.)

137. VERBENA URTICAEFOLIA, L. (White Vervain.)  
A rather tall perennial with opposite leaves. The small white flowers in numerous long and slender spikes. Pastures, eastern Kansas. Native. (Plate XII; natural size.)
138. VERBENA STRICTA, Vent. (Blue Vervain, Hoary Verbena.)  
A simple-stemmed perennial with blue flowers and downy leaves. Common in pastures. Eastern and central Kansas. Native. (Plate XIII; *a* and *b*, one-half natural size.)
139. VERBENA BRACTEOSA, Michx. (Vervain, Spreading Verbena.)  
A spreading annual with small blue flowers. Yards and roadsides. Not troublesome. Eastern Kansas. Native. (Plate XIII; natural size.)
140. VERBENA BIPINNATIFIDA, Nutt. (Western Verbena.)  
Spreading perennial, with more showy flowers than the preceding. Roadsides and waste places. Western Kansas. Native. (Plate XIII; natural size.)

### LABIATÆ. (Mint Family.)

141. SALVIA LANCEOLATA, Willd. (Wild Sage.)  
A low annual with square stems, opposite narrow leaves, and small, blue flowers. Plant possessing an aromatic odor. Cultivated ground. Throughout the state, but not very troublesome. Native. (Plate XIII; natural size.)
142. NEPETA CATARIA, L. (Catnip, Cat-mint.)  
A perennial, woolly herb with square stem, opposite, heart-shaped, toothed leaves and clusters of small, whitish flowers. Waste ground, especially near dwellings. Introduced from Europe. (Plate XIII; one-half natural size.)
143. LEONURUS CARDIACA, L. (Motherwort.)  
A tall perennial with cut-lobed, opposite leaves, in whose axils occur the close round clusters of small pink flowers. Waste places, eastern Kansas. Introduced from Europe. (Plate XIII, one-half natural size.)

**PLANTAGINACEÆ (Plantain Family.)**

144. *PLANTAGO MAJOR*, L. (Common Plantain, White Man's Foot, Ribwort.)  
A low perennial plant with strongly-ribbed leaves, forming a basal rosette, the base of the leaf-stalk green. Flowers very small, forming long, slender spikes. Streets, yards, and waste ground. Eastern Kansas. Not common. Introduced from Europe, or at least from the eastern states. (Plate XIII; natural size.)
145. *PLANTAGO RUGELII*, Decaisne. (Plantain, Broad-leaved Plantain.)  
Resembles the preceding closely, but is usually larger and is much more common. The leaves are smooth and often coarsely notched, the base of the leaf-stalk purple. The spikes of flowers are longer, often one to one and a half feet long, and with a slender point. This is a native plant, abundant in the woods. Also a weed in lawns and yards. Eastern Kansas. Native. (Plate XIII; one-half natural size.)
146. *PLANTAGO LANCEOLATA*, L. (Rib Grass, Ripplegrass, English Plantain, Long-tongued Plantain, Buck Horn or Buck Plantain.)  
Leaves oblong, tapering into a slender stalk, three- or five-ribbed. The spike is short and thick, the flowers therefore forming a spherical or oblong cluster, at the end of a long and slender stalk (as much as a foot or two long). Introduced from Europe. Becoming a bad weed in lawns and grass land. Eastern Kansas. (Plate XIII; *a*, natural size; *b*, one-half natural size.)
147. *PLANTAGO PATAGONICA ARISTATA*, Gray. (Bracted Plantain.)  
Leaves very narrow. Spike of flowers slender, bearing numerous pointed leaves one-half to one inch long. Frequent, waste places. (Plate XIII; natural size.)

**NYCTAGINACEÆ. (Four-o'clock Family.)**

148. *OXYBAPHUS NYCTAGINEUS*, Sweet. (Wild Four-o'clock.)  
A smooth, deep-rooted perennial, with forked stems. Flowers clustered, pink, about one-fourth inch broad, opening early in the morning. In some localities becoming a troublesome weed in cultivated ground. Eastern Kansas. Native. (Plate XIII; one-half natural size.)

**AMARANTACEÆ. (Amaranth Family.)**

149. *AMARANTUS RETROFLEXUS*, L. (Pigweed, Red-root, Beet-root, Careless Weed, Hogweed, Green Amaranthus.)  
Stem usually somewhat downy, leaves alternate on rather slender stalks. Root and lower part of stem often a red color. Annual. One of the most common and widely distributed weeds in the state. In western Kansas it sometimes occupies cultivated land almost to the exclusion of everything else. Introduced from tropical America. Plate XIV; *a* and *b*, one-half natural size.)
150. *AMARANTUS CHLOROSTACHYS*, Willd. (Pigweed, etc.)  
Similar to the preceding, but the flower clusters more slender. Apparently confined to eastern Kansas. Introduced from tropical America. (Plate XIV; *a* and *b*, one-half natural size.)

151. *AMARANTUS ALBUS*, L. (Tumble-weed.)  
A smooth, diffusely-branched annual with small pale-green leaves and whitish stem. At maturity the plant breaks off at the base and tumbles along before the wind, scattering its seed as it goes. Common, especially in central and western Kansas. Cultivated ground and waste places. Native. (Plate XIV; one-half natural size.)
152. *AMARANTUS BLITOIDES*, Watson. (Pigweed Purslane, Mat-weed, Large Mat-weed, Spreading Amaranthus.)  
Foliage resembling the preceding, but the stems prostrate, forming a mat. Common along roadsides, in yards and wherever the soil is open and hard. Throughout the state. Native. (Plate XIV; *a*, *b*, and *c*, one-half natural size.)
153. *AMARANTUS SPINOSUS*, L. (Spiny Amaranthus, Careless Weed, Thorny Amaranthus.)  
Somewhat resembling the Tumble-weed, but stem reddish and plant spiny. Spines, two at the base of each leaf. Cultivated and waste soil. Southeast Kansas. Introduced from tropical America. (Plate XIV; one-half natural size.)
154. *ACNIDA TUBERCULATA*, Moq. (Water Hemp, Pigweed, Red-root.)  
Resembling the Green Amaranthus. Stem often streaked with red. Flowers in long, slender spikes. A common weed throughout Kansas, growing in dry, sandy or moist soil. Native. (Plate XIV; *a*, habit of plant, much reduced; *b* and *c*, leaves, one-half natural size.)
155. *CLADOTHRIX LANUGINOSA*, Nutt.  
A spreading annual with opposite, rounded leaves. Plant white with stellate down. Cultivated soil and moist ground. Common in western Kansas. Native. (Plate XV; natural size.)

**CHENOPODIACEÆ. (Goosefoot Family.)**

516. *CYCLOLOMA PLATYPHYLLUM*, Moq. (Sand-hill Tumble-weed, Winged Pigweed.)  
A diffusely-branched annual with sinuate-toothed leaves, becoming at maturity a tumble weed. Sandy soil. Common throughout Kansas. Native. (Plate XV; *a*, upper portion of mature plant; *b*, habit of plant in mature state, much reduced.)
157. *CHENOPODIUM ALBUM*, L. (Lamb's-quarters, Pigweed, Goosefoot.)  
An annual with alternate leaves, the surface more or less mealy with waxy particles. Stem often with red and green stripes. A very common weed all over Kansas in gardens, fields and waste places. Very variable; sometimes the leaves are broad and thin with several large teeth, sometimes small and narrow without any teeth. Stem usually two to four feet high. Introduced from Europe. (Plate XV; *a* and *b*; one-half natural size.)
158. *CHENOPODIUM HYBRIDUM*, L. (Maple-leaved Goosefoot.)  
Resembling broad-leaved forms of the preceding, but green throughout. Leaves often four to five inches long. (Plate XV; one-half natural size)

- 159. *ATRIPLEX ARGENTEUM*, Nutt. (Salt Weed.)  
A low, much-branched, gray, scurfy annual, found in southwest Kansas, mainly in the bottom land of the Arkansas river, where it becomes a common weed. Native. (Plate XV; one-half natural size.)
- 160. *CORISPERMUM HYSSOPIFOLIUM*, L. (Bug-seed.)  
A low, much-branched annual, with narrow leaves, which at maturity become hard and almost spiny. Sandy soil. A common weed in western Kansas. This plant is often mistaken for the Russian Thistle, which it resembles. Native. (Plate XV; *a* and *b*; natural size.)
- 161. *SALSOLA KALI TRAGUS*, Moq. (Russian Thistle, Russian Cactus, Russian Tumble-weed.)  
A diffusely-branched, bushy annual, with awl-shaped, prickly-pointed leaves. Becomes a tumble-weed. A bad weed, becoming common in western Kansas. A full description of this plant is given in a bulletin issued by the Kansas State Board of Agriculture, published in August, 1894. Introduced from Europe, but coming into Kansas from Nebraska. (Plate XV; single leaf, and end of flowering branch; natural size.)

**PHYTOLACCACEÆ. (Pokeweed Family.)**

- 162. *PHYTOLACCA DECANDRA*, L. (Pokeweed, Scape, Garget, Pigeon Berry, Poke-root, Ink Berry.)  
A stout perennial herb with red or purple stems, small white flowers followed by dark purple berries in a loose cluster. Root large, poisonous. Waste places, especially barn-yards. Eastern Kansas. Native. (Plate XV; one-half natural size.)

**POLYGONACEÆ. (Buckwheat Family.)**

- RUMEX. Nos. 163 to 167. (Docks and Sorrels.)  
All our weeds of this group are perennials. The leaves are provided at the base with a sheath which clasps the stem. Fruit a triangular, smooth, seed-like nutlet resembling buckwheat, enclosed in three close-fitting scales. Stems usually striate.
- 163. *RUMEX PATIENTIA*, L. (Patience Dock.)  
A tall plant with large oblong leaves, those from the root being two or three feet long. Introduced from Europe. Along roadsides. Rare in Kansas. (Plate XV; one-fourth natural size.)
- 164. *RUMEX ALTISSIMUS*, Wood. (Pale Dock, Narrow Dock.)  
Tall; leaves smaller than the preceding. Color pale green. Moist fields and pastures. Eastern Kansas. Common. Native. (Plate XVI; *a* and *b*, one-half natural size.)
- 165. *RUMEX CRISPUS*, L. (Curled Dock, Yellow Dock, Narrow Dock, Sour Dock.)  
Usually not so tall as Pale Dock. Leaves with a conspicuously crisp or wavy-curved margin. Waste places and cultivated soil. Common in eastern Kansas. Introduced from Europe. (Plate XVI; one-fourth natural size.)
- 166. *RUMEX OBTUSIFOLIUS*, L. (Bitter Dock, Broad-leaved Dock.)  
Can be distinguished from the other species by the heart-shaped base

of the leaves. Waste places. Rare in Kansas. Introduced from Europe. (Plate XVI; one-half natural size.)

167. RUMEX ACETOSELLA, L. (Sheep Sorrel, Field Sorrel, Horse Sorrel, Red Weed.)

A low plant, about a foot high, the lower leaves spear-shaped. Fields and pastures. Eastern Kansas. Not abundant, but a bad weed where established. Introduced from Europe. (Plate XVI; natural size.)

POLYGONUM. Nos. 168 to 174. (Smartweeds.)

Our weeds mostly annuals. A sheath around the stem at the base of the leaf. Little nutlets, three-cornered or disk-shaped, smooth and black.

168. POLYGONUM AVICULARE, L. (Door-weed, Yard-grass, Knot-grass, Goose-grass.)

Prostrate, forming mats, bluish green. Leaves small. A common weed along roadsides and in door-yards. Native. (Plate XVI; natural size.)

169. POLYGONUM RAMOSISSIMUM, Michx. (Knot-grass, Wire-weed, Tall Knot-weed.)

Two to four feet high, with long, slender branches and small leaves. Common along roadsides. Native. (Plate XVI; one-half natural size.)

170. POLYGONUM LAPATHIFOLIUM, L. (Smart-weed, Black-heart.)

Tall, usually three or four feet high; flowers white or pinkish, in a narrow spike. Joints swollen. Moist fields. Common in eastern Kansas. Native. (Plate XVI; one-half natural size.)

171. POLYGONUM PENNSYLVANICUM, L. (Smart-weed, Heart's-ease, Heart-weed, Black-heart.)

Resembles the preceding. Flowers white or often bright pink, more showy; spike cylindrical. Moist fields. Common in eastern Kansas. Native. (Plate XVI; one-half natural size.)

172. POLYGONUM MUHLENBERGII, Watson. (Water Smart-weed, Water-weed, Smart-weed, Heart's-ease, Black-heart, Devil's Shoe-string.)

Perennial by numerous long and tough underground stems. Stem usually more or less creeping at base, hairy. Flowers pink, the narrow, cylindrical spike or cluster rather showy. Fields and pastures where the ground is moist. Often quite troublesome. Native. (Plate XVI; one-half natural size.)

173. POLYGONUM PERSICARIA, L. (Ladies' Thumb, Spotted Knot-weed.)

Resembling *Polygonum pennsylvanicum*, but only a foot or two high and branching at base. Leaves often with a dark spot in the middle. Sheath bristly. Waste ground or moist fields. Common, but not troublesome. Annual. Introduced from Europe. (Plate XVI; natural size.)

174. POLYGONUM CONVOLVULUS, L. (Wild Buckwheat, Black Bindweed, Bindweed.)

A low, climbing or spreading annual vine with spear-shaped leaves and inconspicuous greenish flowers. Nutlets three-angled. Cultivated ground, especially stubble-fields. Common. Introduced from Europe. (Plate XVI; *a*, one-half natural size.) A large perennial species resembling this (*Polygonum dumetorum scandens*), occurs in thickets, but is scarcely weedy. (Plate XVII; *b*, one-half natural size.)

**EUPHORBIACEÆ. (Spurge Family.)**

EUPHORBIA. Nos. 175 to 182. (Spurges. Some kinds improperly called Milkweeds.) Herbs; our weeds all native annuals with milky juice and inconspicuous flowers.

A.— *Prostrate, spreading species, with small, opposite leaves. Plants often forming extensive mats.*

175. EUPHORBIA SERPENS, HBK.

Smooth. Leaves rounded. Stems often rooting at the joints. Common in most cultivated soil. (Plate XVII; natural size.)

176. EUPHORBIA GLYPTOSPERMA, Engelm.

Smooth. Leaves narrow and somewhat curved. Common in eastern and central Kansas. (Plate XVII; one-half natural size.)

177. EUPHORBIA MACULATA, L.

Hairy. Leaves oval or oblong, often with a dark red spot in the middle. Plant pale green or pink. Common in eastern Kansas. (Plate XVII; one-half natural size.)

178. EUPHORBIA STICTOSPORA, Engelm.

Closely resembling the preceding, but leaves larger, and color of the plant dark green. Common in central and western Kansas. (Plate XVII; natural size.)

**B.— Upright Species.**

179. EUPHORBIA PRESLII, Guss.

Nearly smooth, one to two feet high. Branches two-ranked, curving outwards. Leaves one-half to one and one-half inches long, sometimes with a dark spot. Common in cultivated ground. Often abundant in close-fed pastures. Eastern Kansas. (Plate XVII; one-half natural size.)

180. EUPHORBIA HEXAGONA, Nutt.

Stem erect, one to two feet high, about six-angled. Leaves narrow. Sandy fields. Frequent in central Kansas. (Plate XVII; one-half natural size.)

181. EUPHORBIA MARGINATA, L. (Snow-on-the-Mountain.)

Erect, two or three feet high, leaves elliptical, light green. The uppermost leaves at maturity of the plant white-bordered, forming a conspicuous rosette. Common throughout Kansas. Troublesome in close-fed pastures. (Plate XVII; *a*, upper leaf with white border; *b*, lower leaf; one-half natural size.)

182. EUPHORBIA DENTATA, Michx.

About a foot high, erect, roughish; leaves variable in shape, narrow and entire, to oval and toothed, but mostly opposite. Cultivated ground. Common, central and eastern Kansas. (Plate XVII; one-half natural size.)

183. ACALYPHA CAROLINIANA, Ell. (Three-seeded Mercury.)

Erect annual herb with alternate, heart-shaped toothed leaves. Cultivated soil. Abundant in some localities. Native. (Plate XVII; one-half natural size.)

**URTICACEÆ. (Nettle Family.)**

184. CANNABIS SATIVA, L. (Hemp.)  
 A tall annual (five or six feet high) with alternate leaves (or lower opposite) divided into five to seven narrow divisions. Waste places. Introduced from Europe, or escaped from cultivation. (Plate XVII; one-half natural size.)
185. URTICA GRACILIS, Ait. (Nettle.)  
 Slender, erect perennial, with opposite, oblong leaves. Whole plant provided with stinging hairs. Waste places, eastern Kansas. Native. (Plate XVII; one-half natural size.)

**CYPERACEÆ. (Sedge Family.)**

186. CYPERUS ESCULENTUS, L. (Nut Grass, Chufa, Galingale, Sedge.)  
 A grass-like perennial with triangular stem. Sandy fields. Native. Several other species of sedges are occasionally found in cultivated ground, but do not become bad weeds. (Plate XVIII; *a*, whole plant, one-sixth natural size; *b*, portion of the flower-cluster, natural size.)

**GRAMINEÆ. (Grass Family.)**

The long, narrow, two-ranked leaves are sufficiently characteristic so far as our weeds are concerned.

187. PASPALUM SETACEUM, Michx.  
 Ascending or spreading; stem and leaves hairy. Flowers in one or two slender spikes. Sandy fields. Native. (Plate XIX; one-half natural size.)
188. ERIOCHLOA POLYSTACHYA, HBK.  
 Bottom land fields in the valley of the Arkansas river. Native. (Plate XIX; one-half natural size.)
189. PANICUM GLABRUM, Gaudin. (Crab-grass.)  
 A more or less spreading annual, smooth; about six to 12 inches high. Flowers in two to six slender spikes all radiating from about the same place. Eastern Kansas. Fields, lawns, and pastures. Introduced from Europe.
190. PANICUM SANGUINALE, L. (Crab-grass, Quack Grass, Couch Grass, Finger Grass, Mock Sandbur, Crow-foot Grass.)  
 Larger than the preceding, sometimes two feet or more long; more or less rooting at the joints, usually hairy. Spikes of flowers often larger and more numerous. Cultivated ground. Common in eastern Kansas. Introduced from Europe. (Plate XVIII; *a*, about one-half natural size. Plate XIX; *b*, flower cluster, one-half natural size.)
191. PANICUM PROLIFERUM, Lam. (Knee-grass, Water-grass.)  
 A spreading annual with much branched flower clusters. Found along roadsides in eastern Kansas. (Plate XX; one-half natural size.)
192. PANICUM CAPILLARE, L. (Tickle Grass, Old-Witch Grass.)  
 Annual, stems and leaves very hairy. Flower cluster widely spreading, the flowers on long hair-like stalks; at maturity breaking away and tumbling before the wind. Single portions of the flower cluster about

one-twelfth of an inch long. Waste and cultivated soil. **Common.** Native. (Plate XIX; one-half natural size.)

193. PANICUM CRUS-GALLI, L. (Barnyard Grass, Bull Grass, Cock's-foot Grass.)

Annual, erect or spreading, smooth, leaves rough on the edge. Flower cluster crowded, usually turning purple; the separate portions of the cluster provided with a bristle of variable length. Cultivated soil and waste places, especially barnyards. Introduced from Europe, but the erect variety, common in western Kansas, appears to be native.

194. SETARIA GLAUCA, Beauv. (Yellow Foxtail, Pigeon Grass, Summer Grass.)

An annual, erect or sometimes spreading at base. Smooth. Leaves with a single spiral twist. Cluster of flowers dense, cylindrical, bristly, yellow at maturity. Cultivated soil. Common in eastern Kansas. Introduced from Europe. (Plate XXI; one-fourth natural size.)

195. SETARIA VIRIDIS, Beauv. (Green Foxtail, Pigeon Grass, Bottle Grass, Puss Grass, Wild Timothy, Wild Millet.)

Similar to the preceding. Leaves shorter without a twist. Flower cluster remaining green at maturity and then becoming tawny. Cultivated soil. Common. Introduced from Europe. (Plate XVIII; one-half natural size.)

196. CENCHRUS TRIBULOIDES, L. (Sand-bur, Bear Grass, Bur Grass, Hedgehog Grass, Sand Spur, Cock-spur Bur.)

A stout, spreading annual, bearing at maturity globose burs provided with spines minutely downwardly barbed. A familiar and common plant throughout the state, especially on sandy soil. (Plate XXI; one-fourth natural size.)

- ARISTIDA. Nos. 197 to 198. (Spear Grasses.)

Smooth, tufted grasses. The flowers have long three-parted bristles, which at maturity break away, bearing the sharp-pointed, barbed seed. These are blown about by the wind and become in western Kansas very troublesome. The species are not easily distinguished except by careful examination. The two common forms, however, are the following:

197. ARISTIDA OLIGANTHA, Michx. (Wire Grass.)

A bushy-branched annual. Eastern Kansas. Native. (Plate XXII; portion of a large cluster, one-half natural size.)

198. ARISTIDA PURPUREA, Nutt. (Poverty Grass, Wire Grass.)

Tufted perennial. Common on the plains of western Kansas. Native. (Plate XXII; portion of a large cluster, one-half natural size.)

199. SPOROBOLUS VAGINAEFLORUS, Vasey. (Drop-seed Grass, Wire Grass.)

More or less spreading annual. The flower clusters partially hidden in the bases of the leaves. Common along roadsides and in waste places. Eastern Kansas.

200. SPOROBOLUS CRYPTANDRUS, Gray. (Drop-seed Grass, Wire Grass.)

Root perennial. Flower cluster spreading, only the base inclosed in the uppermost leaf. Common in sandy soil. (Plate XXII; one-half natural size.)



201. *SCHEDONNARDUS TEXANUS*, Steud.  
 A low annual. Flowers in slender, branched spikes, which increase to a surprising length at maturity. Then the central spike becomes as much as two feet long and curved in a loose spiral. The whole mass is tumbled along before the wind. Common along roadsides and fire-guards, as well as on the prairies in western Kansas. Native. (Plate XIX; one-half natural size.)
202. *ELEUSINE INDICA*, Gaertn. (Dog's-tail Grass, Wire Grass, Bull Grass, Crab Grass, Yard Grass.)  
 A low, spreading annual with flat stems. Flowers in two to five flat spikes. Common southward, extending into southeastern Kansas. Yards and roadsides. Introduced from the tropics of the old world. (Plate XXI; one-half natural size.)
203. *MUNROA SQUARROSA*, Torr. (False Buffalo Grass.)  
 A low, much branched annual. Leaves very sharp-pointed, pale green, in close clusters at the joints. Common in newly-broken land in western Kansas. (Plate XIX; one-half natural size.)
204. *ERAGROSTIS MAJOR*, Host. (Stinking Grass, Stink Grass, Candy Grass, Tickle Grass, Snake Grass.)  
 Spreading annual. Flower cluster oblong, loose. Plant emitting an unpleasant, snake-like odor. Common in cultivated ground. Introduced from Europe. (Plate XIX; one-half natural size.)
205. *ERAGROSTIS PURSHII*, Schrad.  
 Annual, erect or spreading at base. Flower cluster loose and spreading. Along roadsides. Not troublesome. (Plate XIX; one-half natural size.)
206. *ERAGROSTIS PECTINACEA SPECTABILIS*, Gray.  
 A smooth perennial with a very loose and spreading flower-cluster resembling Old-witch Grass. The separate portions are, however, about one-fourth inch long, and usually purple. At maturity the cluster becomes a tumble weed, as in Old-Witch Grass. Common in sandy fields in eastern Kansas. Native. (Plate XX; one-half natural size.)
207. *BROMUS SECALINUS*, L. (Cheat, Chess.)  
 An erect annual with a loose spreading flower cluster; the separate portions comparatively few, bristly. Waste places and grain fields. Eastern Kansas. Introduced from Europe. (Plate XXI; one-fourth natural size.)
208. *HORDEUM JUBATUM*, L. (Squirrel-tail Grass, Wild Barley.)  
 Erect annual. Flower cluster cylindrical, armed with long bristles (two inches long). Neglected fields and waste places. Eastern Kansas (Plate XXI; one-half natural size.)
209. *ELYMUS SITANION*, Schultes. Wild Rye, Wild Barley.)  
 A tufted perennial about a foot high, each stem bearing a single flower cluster; resembling the preceding, the awns or bristles being two or three inches long and widely spreading at maturity, at which time the cluster breaks away and is blown about by the wind. Common in western Kansas. Native. (Plate XX; one-half natural size.)

INDEX TO COMMON NAMES OF WEEDS.

	Number.		Number.
Amarantus .....	149 to 153	Bull Thistle .....	2, 95, 96, 121, 123
American Jute .....	23	Burdock .....	94
Artichoke .....	85	Bur Grass .....	196
Aster, Tansy .....	66	Bur Marigold .....	88
Ball Cactus .....	44	Butter Cup .....	23
Barley, Wild .....	208, 209	Butter Print .....	23
Barnyard Grass .....	193	Butter Weed .....	67
Beaked Horse-nettle .....	123	Button Weed .....	23
Bean, Wild .....	36	Cactus .....	44 to 49
Bear Grass .....	196	Canada Thistle .....	99
Bee Plant, Rocky Mountain .....	17	Candy Grass .....	204
Beet-root .....	149	Careless Weed .....	149, 153
Beggar's-lice .....	88, 109	Carpet Weed .....	50
Beggar's-lice, Small .....	110	Cat-mint .....	142
Beggar-ticks .....	88, 89	Catnip .....	142
Big Ragweed .....	74	Charlock, English .....	11
Bindweed .....	115, 117, 174	Cheat .....	207
Bindweed, Black .....	174	Cheeses .....	21
Bird Eye .....	53	Chess .....	207
Bird's-nest Cactus .....	45	Chickweed .....	18, 19
Bitter Dock .....	166	Chufa .....	186
Bitter Weed .....	75	Climbing Milkweed .....	107
Black Bindweed .....	174	Clotbur .....	78
Black Eyed Susan .....	24	Clover, Bokhara .....	34
Black-heart .....	170, 172	Cocklebur .....	78, 79
Black Mustard .....	12	Cock's-foot Grass .....	193
Black Snake-root .....	151	Cock-spur Bur .....	196
Bladder Ketmia .....	24	Colorado Bur .....	123
Blue Vervain .....	138	Common Mallow .....	21
Boar Thistle .....	95	Common Morning Glory .....	114
Bokhara Clover .....	34	Common Plantain .....	144
Bottle Grass .....	195	Common Sunflower .....	80
Bracted Plantain .....	147	Common Thistle .....	95, 98
Briar .....	40	Coral Berry .....	53
Broad Leaved Dock .....	166	Couch Grass .....	190
Broad Leaved Plantain .....	145	Cotton Weed .....	23
Buck-bush .....	53	Cow Tail .....	67
Buck-horn Plantain .....	146	Crab Grass .....	189, 190, 202
Buck Plantain .....	146	Cress, Yellow .....	6, 7
Buffalo Bur .....	123	Crow-foot Grass .....	190
Bug-seed .....	160	Cudweed .....	70
Bull Grass .....	193, 202	Curled Dock .....	165
Bull-nettle .....	121, 123	Daisy .....	93
Bull's-eye .....	93	Daisy Fleabane .....	68, 69

	Number.		Number.
Dandelion .....	100	Hedge Mustard .....	10
Devil's Claw .....	136	Hemp .....	184
Devil's Iron-weed .....	102	Hemp, Wild .....	74
Devil's Shoe String .....	172	Hoary Verbena .....	138
Dock .....	163 to 167	Hogweed .....	149
Dodder .....	118	Horse-nettle .....	121
Dogbur .....	108	Horse-nettle, Beaked .....	123
Dog Fennel .....	91, 92	Horse Sorrel .....	167
Dog's-tail Grass .....	202	Horse Tail .....	67
Dog-weed .....	86	Horseweed .....	67, 74, 102
Door-weed .....	168	Hound's Tongue .....	108
Downy Sumach .....	31	Indian Currant .....	53
Drop-seed Grass .....	199, 200	Indian Fig .....	46
Elder .....	52	Indian Hemp .....	105
Elderberry .....	52	Indian Mallow .....	23
English Charlock .....	11	Ink Berry .....	162
English Plantain .....	146	Ironweeds .....	55 to 57
Evening Primrose .....	40	Ironweed .....	83, 84
False Buffalo Grass .....	203	Jamestown Weed .....	133
False Flax .....	5	Jerusalem Artichoke .....	85
False Sunflower .....	72	Jimson Weed .....	132, 133
Fetid Marigold .....	91	Knee-grass .....	191
Field Bind-weed .....	117	Knot-grass .....	168, 169
Field Sorrel .....	167	Knot-weed, Spotted .....	173
Finger Grass .....	190	Knot-weed, Tall .....	169
Fireweed .....	67	Ladies' Sorrel .....	27
Fleabane .....	67 to 69	Ladies' Thumb .....	173
Flower-of-an-hour .....	24	Lamb's-quarters .....	157
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Foxtail .....	194, 195	Lettuce, Wild .....	102, 103
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Garget .....	162	Long tongued Plantain .....	146
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Giant Ragweed .....	72	Mallard .....	21
Globe Cactus .....	44	Mallow .....	21, 24
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Golden Corydalis .....	4	Mare's Tail .....	67
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Ground Cherries .....	125 to 131	Milkweed, Climbing .....	107
Gum Weed .....	60	Mock Sandbur .....	190
Hay-weed .....	75	Morning Glory .....	113
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Heart-weed .....	171	Motherwort .....	143
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	Number.		Number.
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Mustard, Hedge	10	Ragweed	73 to 76
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Neckweed	135	Rib Grass	146
Nettle	185	Ribwort	144
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Nigger-toe	90	Round Leaved Mallow	21
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Nightshade, Spiny	123	Rutland Beauty	115
Nightshade, Spreading	119	Salt Weed	159
Nut Grass	186	Sand Brier	121
Old Man's Hand	46	Sand-bur	196
Old Witch Grass	192	Sand-hill Sunflower	81
Ox-eye Daisy	93	Sand-hill Tumbleweed	155
Ox Tail	75	Sand Spur	196
Pale Dock	164	Scoke	162
Partridge Pea	39	Sedge	186
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Patience Dock	163	Sensitive Plant, Wild	39
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Pigeon Berry	162	Shepherd's Purse	13
Pigeon Grass	194, 195	Sida	22
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Pigweed Purslane	152	Small Beggar's-lice	110
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Poke-weed	162	Snow-on-the-Mountain	181
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Poison Oak	32	Sorrel, Horse	167
Poison Vine	32	Sorrel, Ladies'	27
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Prickly Poppy	2	Spanish Thistle	123
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	Number.		Number.
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Tall Knot-weed .....	169	White Vervain .....	137
Tall Ragweed .....	74	White-weed .....	93
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Tansy Mustard .....	9	Wild Buckwheat .....	174
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Thistle, Canada .....	99	Wild Millet .....	195
Thistle, Mexican .....	123	Wild Potato .....	119
Thistle, Pasture .....	.95, 96	Wild Rocket .....	17
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Thistle, Sow .....	104	Wild Rye .....	209
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Thistle, Texas .....	123	Wild Senna .....	38
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Velvet Leaf .....	23	Yellow Foxtail .....	194
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Vervain .....	.138, 139	Yellow Sweet Clover .....	33
Wall Flower, Western .....	8	Yellow Wood Sorrel ... ..	.27, 28

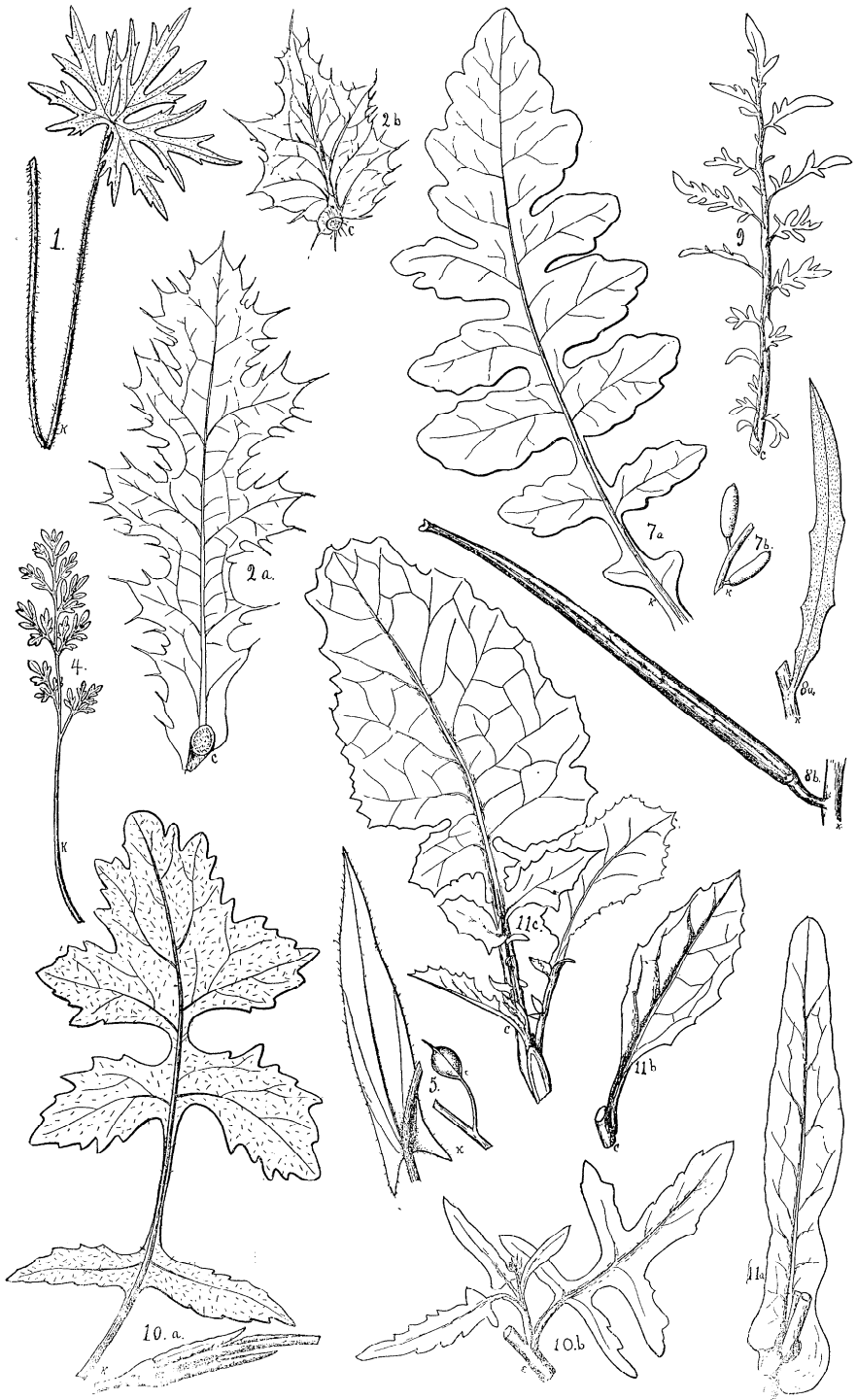


Plate I. TYPICAL LEAVES.



Plate II. TYPICAL LEAVES.



Plate III. TYPICAL LEAVES.



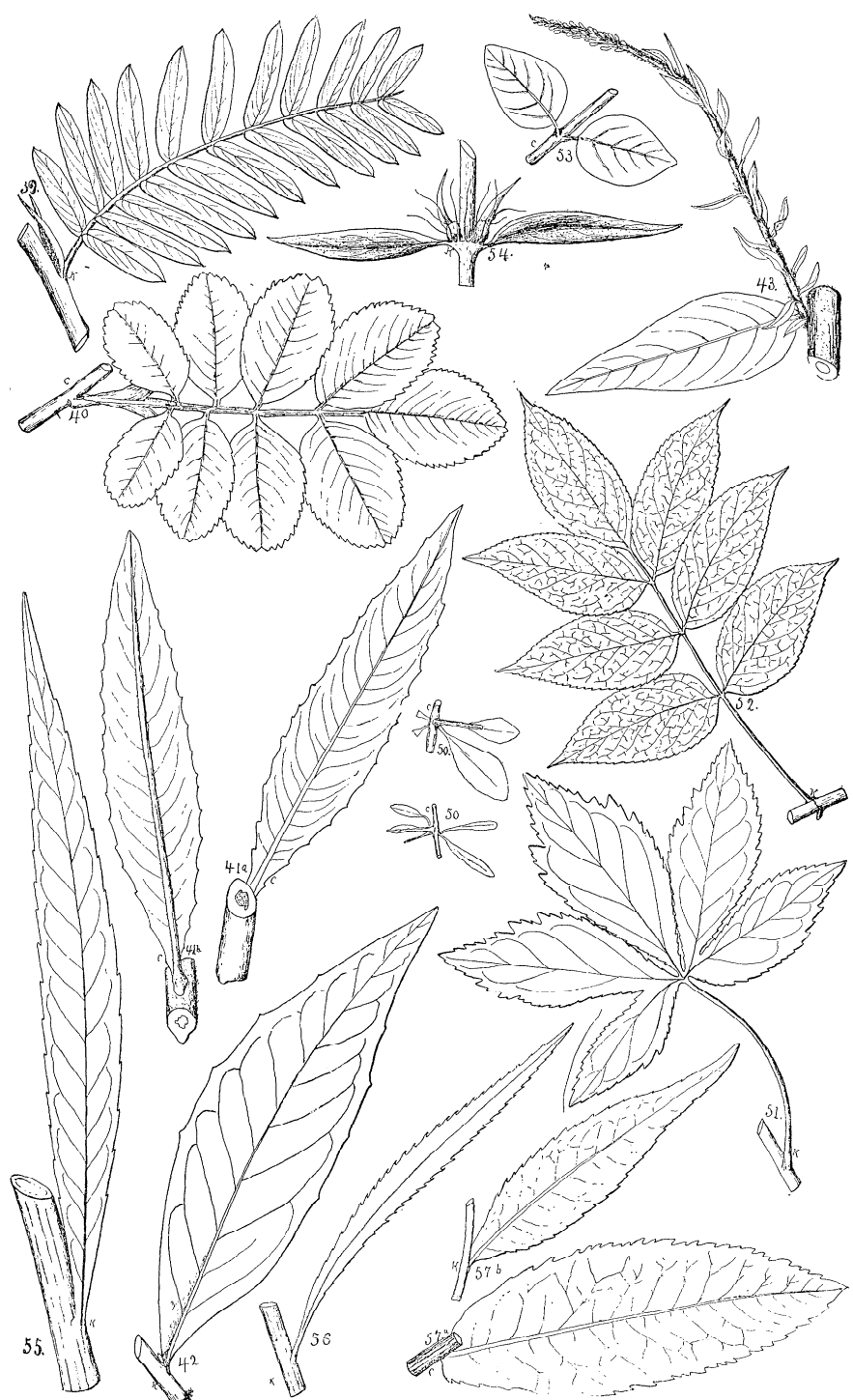


Plate IV. TYPICAL LEAVES.



Plate V. TYPICAL LEAVES.



Plate VI. TYPICAL LEAVES.



Plate VII. TYPICAL LEAVES.

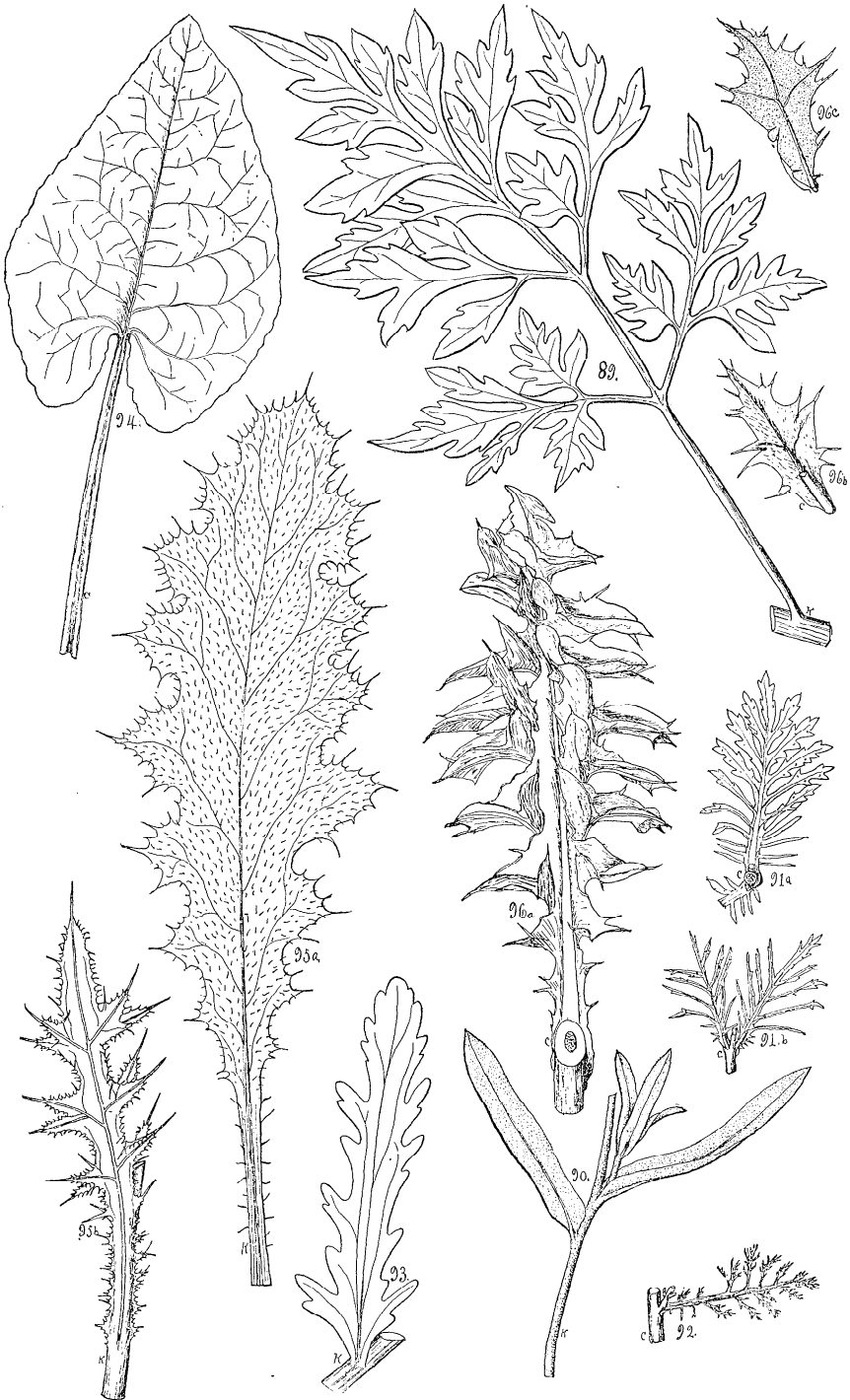


Plate VIII. TYPICAL LEAVES.

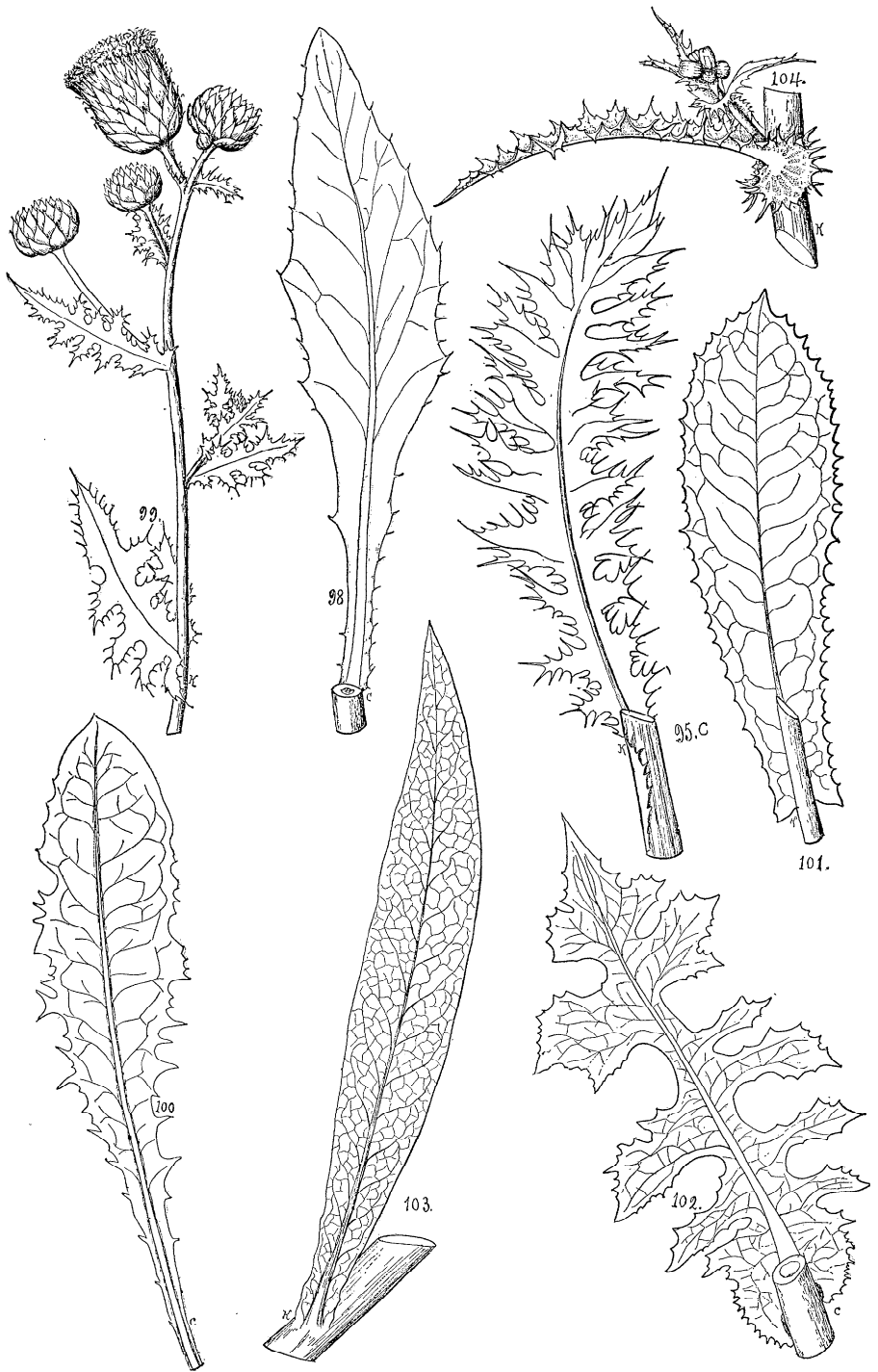


Plate IX. TYPICAL LEAVES.

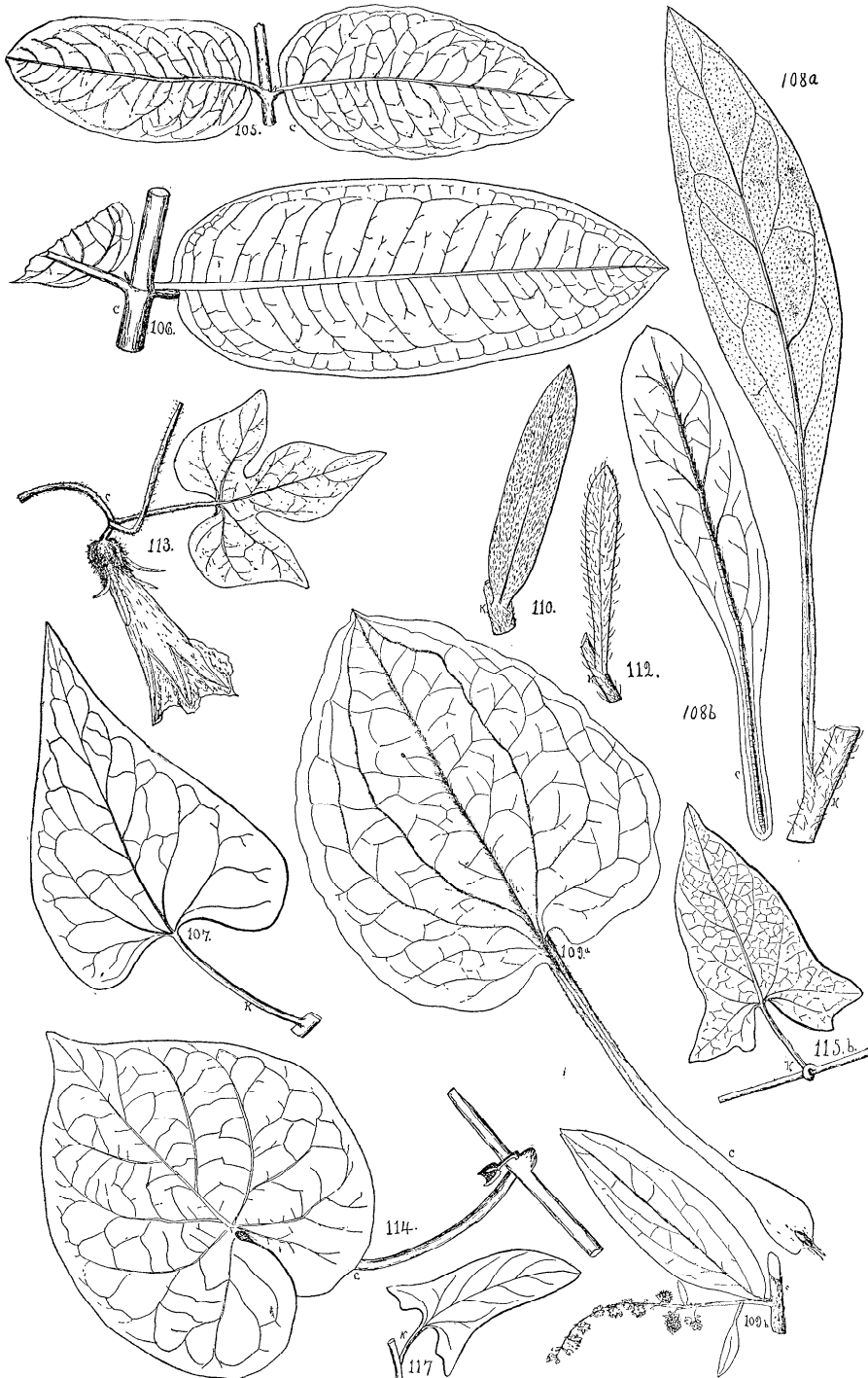


Plate X. TYPICAL LEAVES.



Plate XI. TYPICAL LEAVES.





Plate XII. TYPICAL LEAVES.

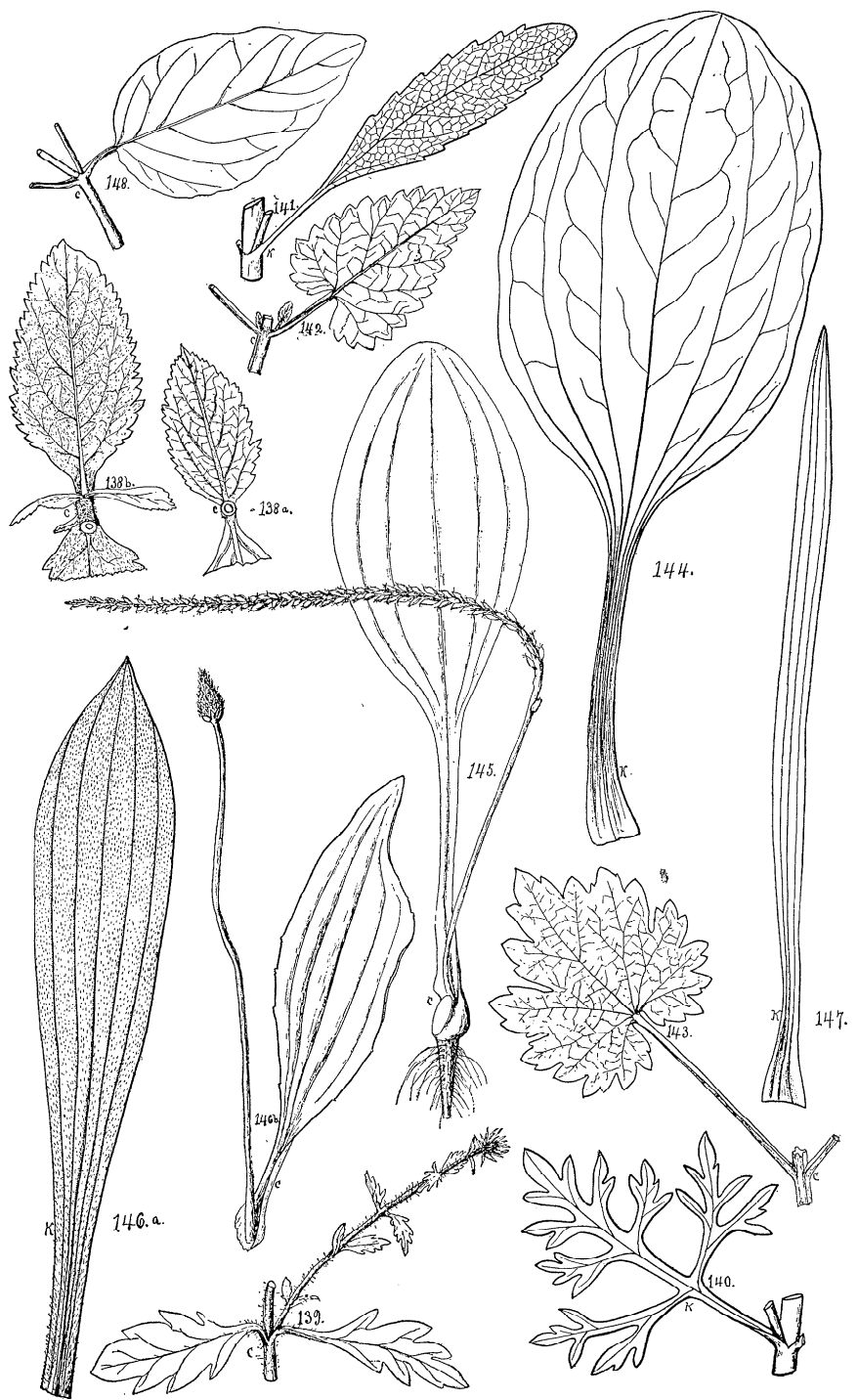


Plate XIII. TYPICAL LEAVES.



Plate XIV. TYPICAL LEAVES.

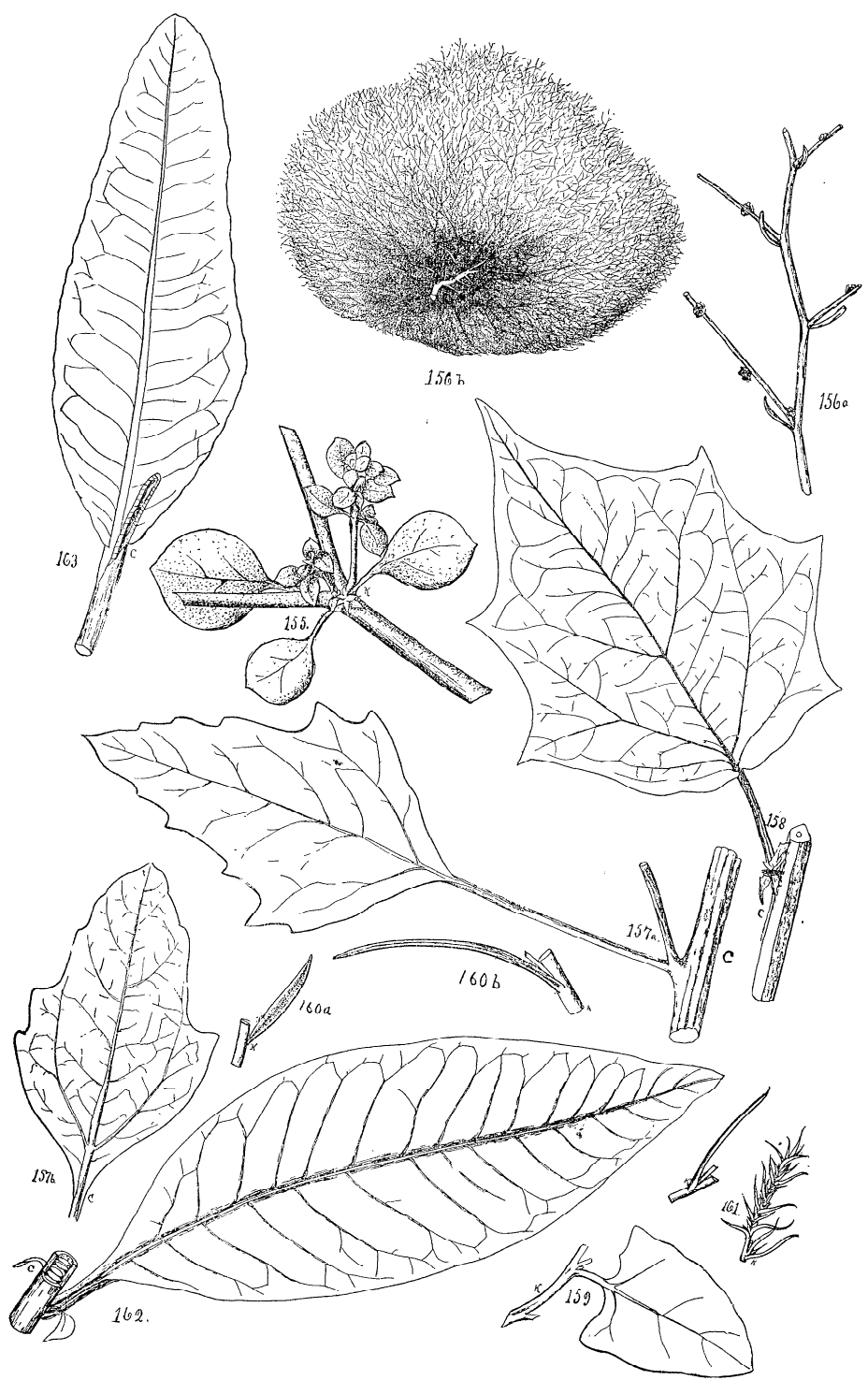


Plate XV. TYPICAL LEAVES.



Plate XVI. TYPICAL LEAVES.

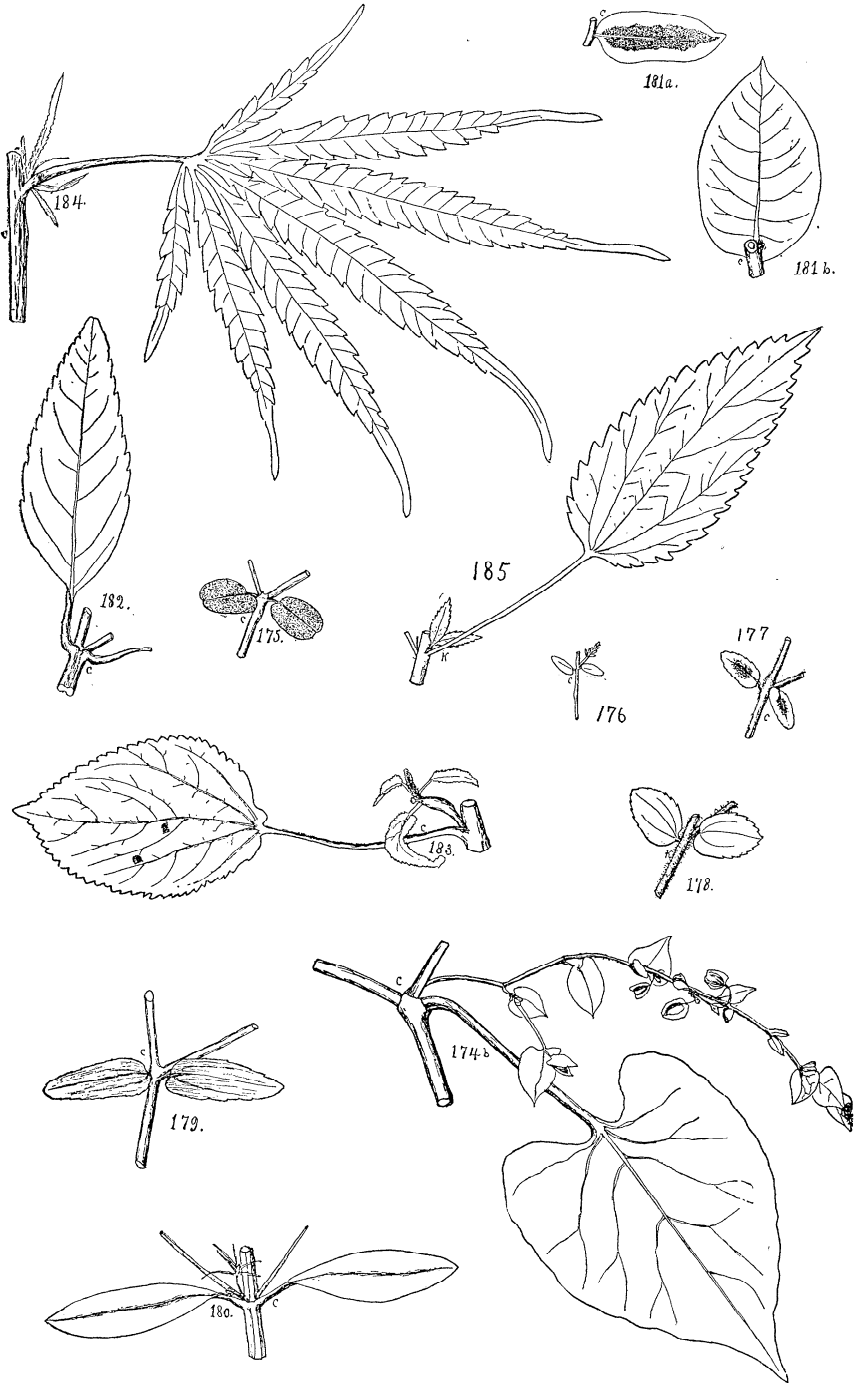


Plate XVII. TYPICAL LEAVES.



Plate XVIII. GRASSES AND SEDGES.

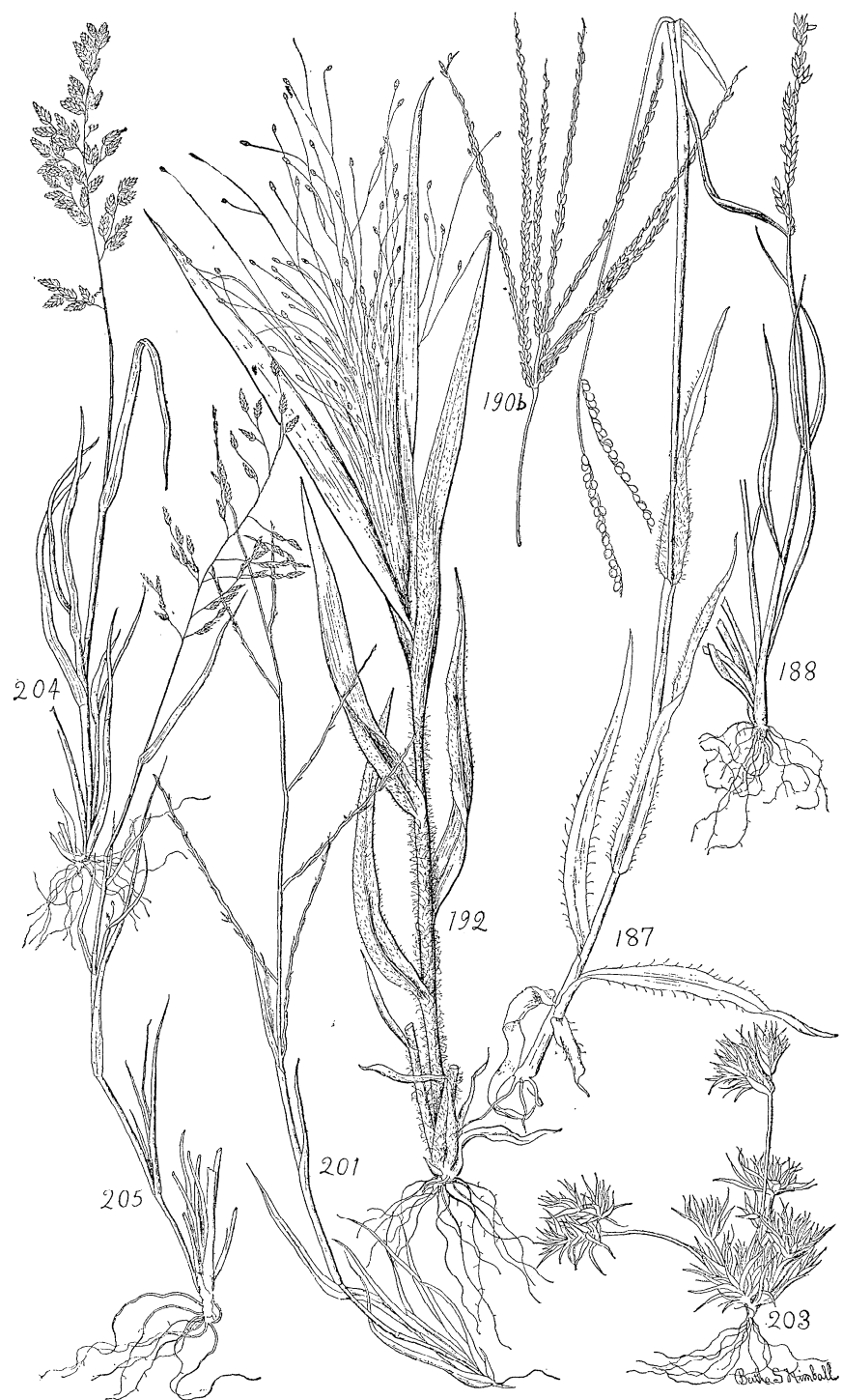


Plate XIX. GRASSES.





Plate XX. GRASSES.

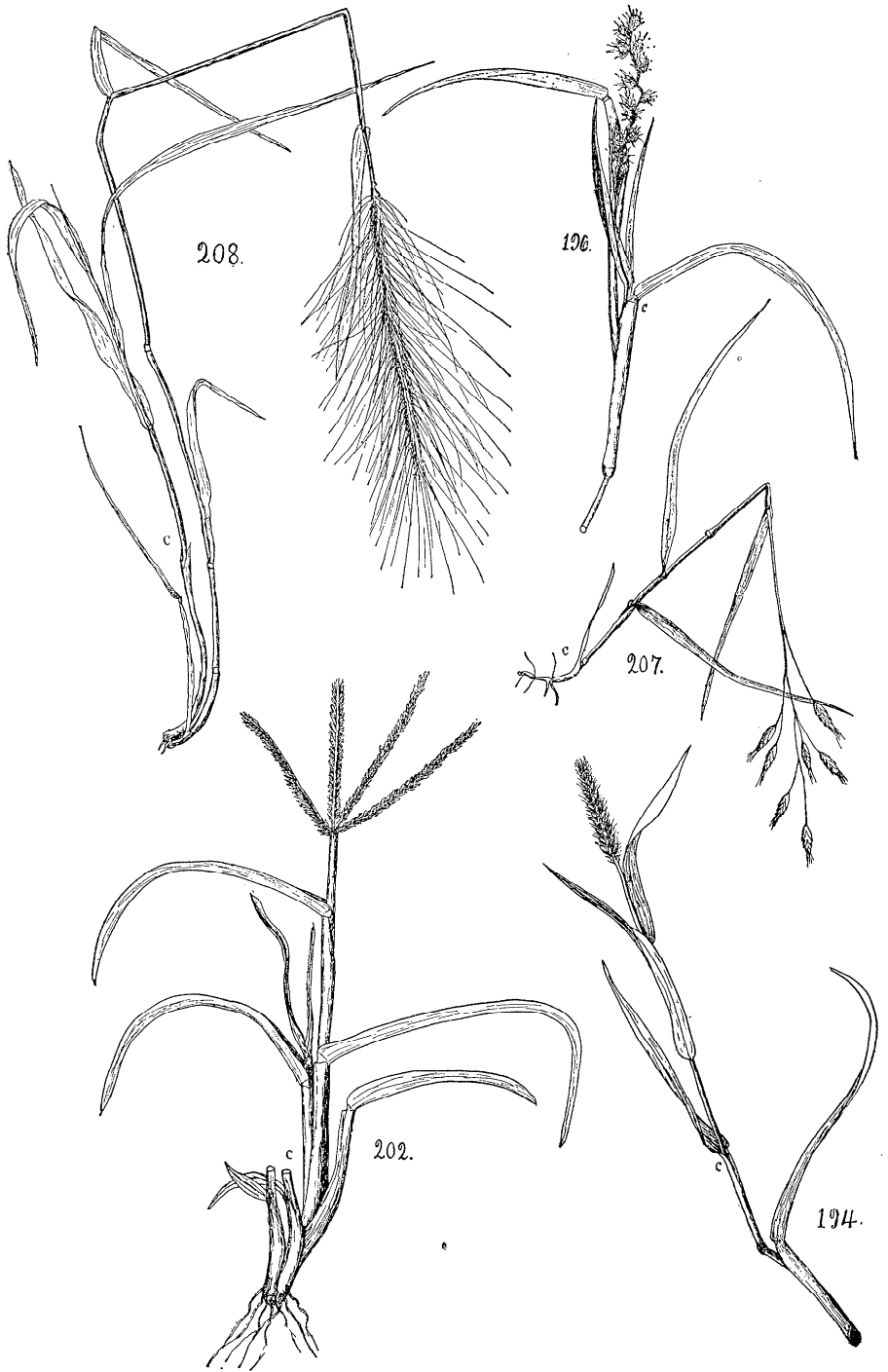
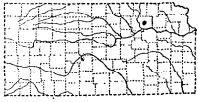


Plate XXI. GRASSES.

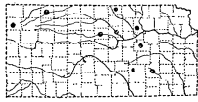


Plate XXII. GRASSES.

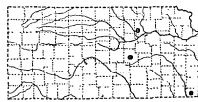
Geo. S. Kimball



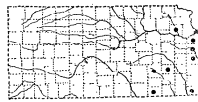
1. *Ranunculus acris.*



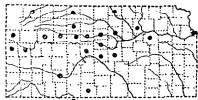
11. *Brassica sinapisstrum.*



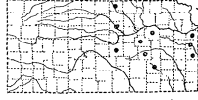
21. *Malva rotundifolia.*



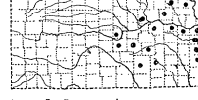
31. *Rhus copallina.*



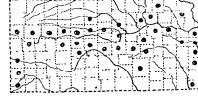
2. *Argemone mexicana albiflora.*



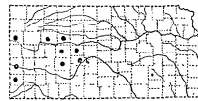
12. *Brassica nigra.*



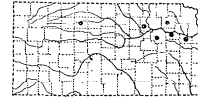
22. *Sida spinosa.*



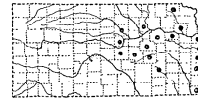
32. *Rhus Toxicodendron.*



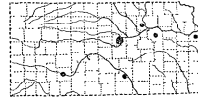
3. *Argemone platyceras.*



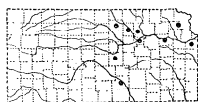
13. *Capsella Bursa-pastoris.*



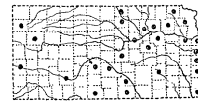
23. *Abutilon Arizennae.*



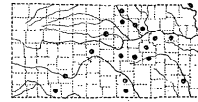
33. *Melilotus officinalis.*



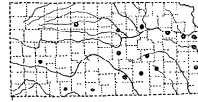
4. *Corydalis aurea.*



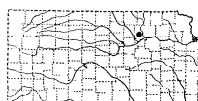
14. *Lepidium virginicum.*



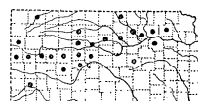
24. *Hibiscus Trionum.*



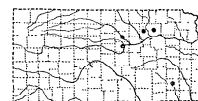
34. *Melilotus alba.*



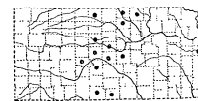
5. *Camelina sativa.*



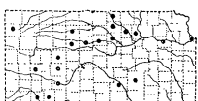
15. *Lepidium intermedium.*



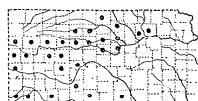
25. *Cerastium Canlinianum.*



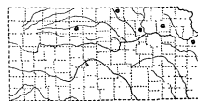
35. *Hosackia Purshiana.*



6. *Nasturtium sinuatum.*



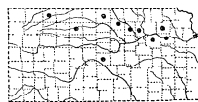
16. *Polanisia frachysperma.*



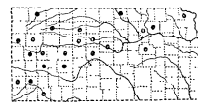
26. *Oxalis violacea.*



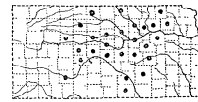
36. *Strophostyles angulosa.*



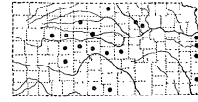
7. *Nasturtium sessiliflorum.*



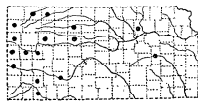
17. *Cleome integrifolia.*



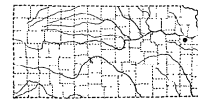
27. *Oxalis corniculata.*



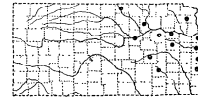
37. *Strophostyles pauciflorus.*



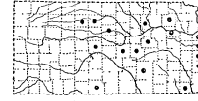
8. *Erysimum asperum.*



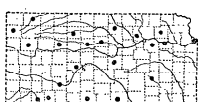
18. *Cerastium vulgatum.*



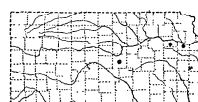
28. *Oxalis corniculata stricta.*



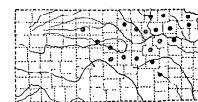
38. *Cassia Marylandica.*



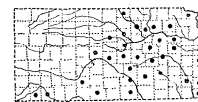
9. *Sisymbrium canescens.*



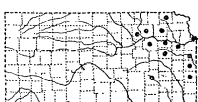
19. *Cerastium nutans.*



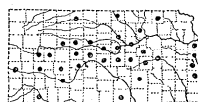
29. *Ceanothus ovatus.*



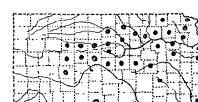
39. *Cassia Chamacrista.*



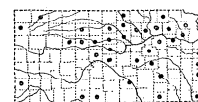
10. *Sisymbrium officinale.*



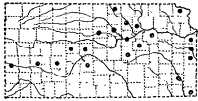
20. *Portulaca oleracea.*



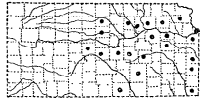
30. *Rhus glabra.*



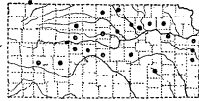
40. *Rosa Arkansana.*



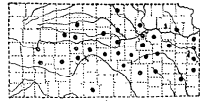
41. *Oenothera biennis.*



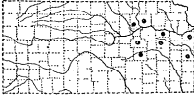
52. *Sambucus Canadensis.*



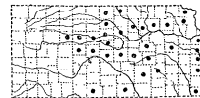
63. *Solidago serotina.*



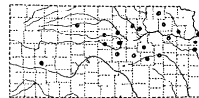
74. *Ambrosia trifida.*



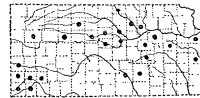
42. *Gaura biennis.*



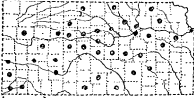
53. *Symphoricarpos vulgaris.*



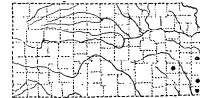
64. *Solidago Canadensis.*



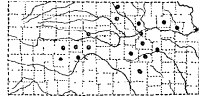
75. *Ambrosia artemisiifolia.*



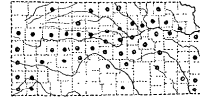
43. *Gaura parviflora.*



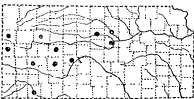
54. *Diodia hexes.*



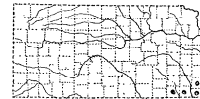
65. *Solidago rigida.*



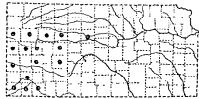
76. *Ambrosia psilostachya.*



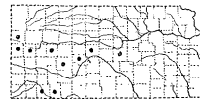
44. *Mamillaria vivipara.*



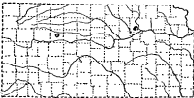
55. *Vernonia Arkansasana.*



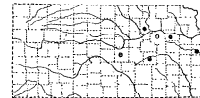
66. *Aster tanacetifolius.*



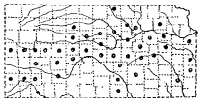
77. *Franseria tomentosa.*



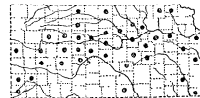
45. *Mamillaria Missouriensis.*



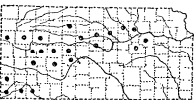
56. *Vernonia fasciculata.*



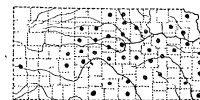
67. *Erigeron Canadensis.*



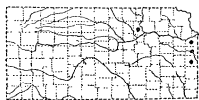
78. *Xanthum Canadense.*



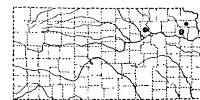
46. *Opuntia Rafinesquii.*



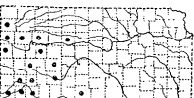
57. *Vernonia Baldwinii.*



68. *Erigeron annuus.*



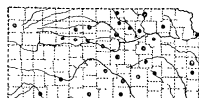
79. *Xanthum strumarivum.*



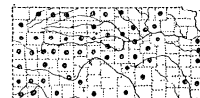
47. *Opuntia Missouriensis.*



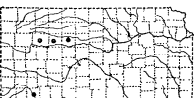
58. *Gutierrezia Euthamiae.*



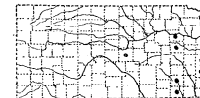
69. *Erigeron strigosus.*



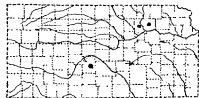
80. *Helianthus annuus.*



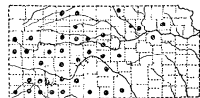
48. *Opuntia fragilis.*



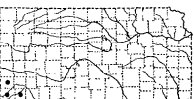
59. *Amphichyris discoloroides.*



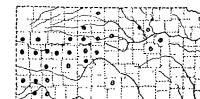
70. *Gnaphalium polycephalum.*



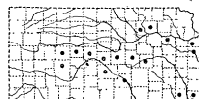
81. *Helianthus petiolaris.*



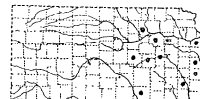
49. *Cereus viridiflorus.*



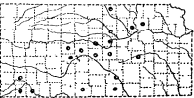
60. *Grindelia squarrosa.*



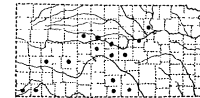
71. *Iva ciliata.*



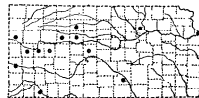
82. *Helianthus orgyaliis.*



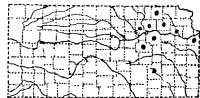
50. *Mollugo verticillata.*



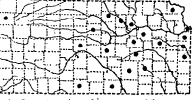
61. *Grindelia squarrosa grandiflora.*



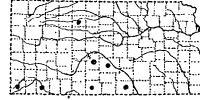
72. *Iva xanthifolia.*



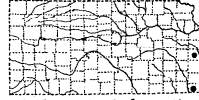
83. *Helianthus grosso-cerratus.*



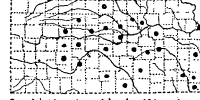
51. *Banicula Marylandica.*



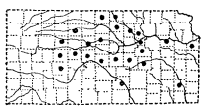
62. *Heterotheca Lamarchii.*



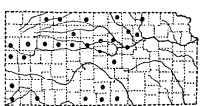
73. *Ambrosia bidentata.*



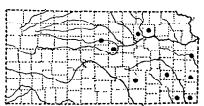
84. *Helianthus Maximiliani.*



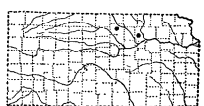
85. *Helianthus tuberosus.*



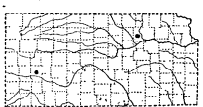
96. *Cnicus undulatus.*



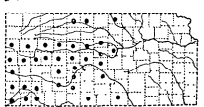
107. *Eriogonum albidum.*



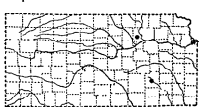
118. *Cuscuta arvensis.*



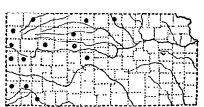
86. *Verbena encelioides.*



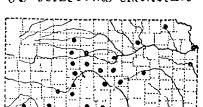
97. *Cnicus ochrocentrus.*



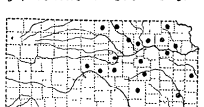
108. *Cynoglossum officinale.*



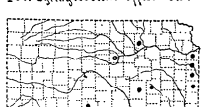
119. *Solanum triflorum.*



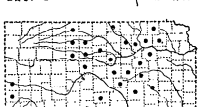
87. *Coreopsis tinctoria.*



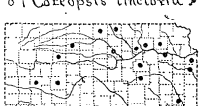
98. *Cnicus altissimus.*



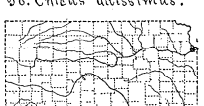
109. *Echinopermium Virginicum.*



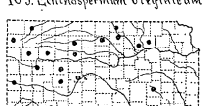
120. *Solanum nigrum.*



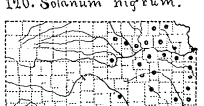
88. *Bidens frondosa.*



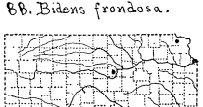
99. *Cnicus arvensis.*



110. *Rehnospermum Robertsii*



121. *Solanum Carolinense.*



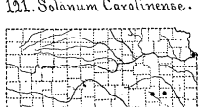
89. *Bidens bipinnata.*



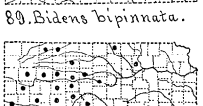
100. *Taraxacum officinale.*



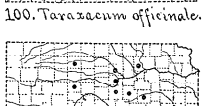
111. *Echinopermium Robertsii*



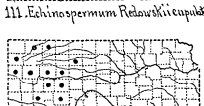
122. *Solanum eleagnifolium.*



90. *Gaillardia pulchella.*



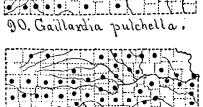
101. *Lactuca Scariola.*



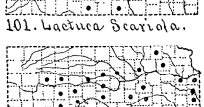
112. *Krynitzkia crassisepta.*



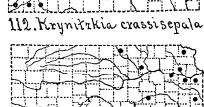
123. *Solanum rostratum.*



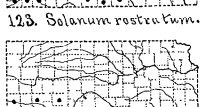
91. *Dysotis chrysanthemoides.*



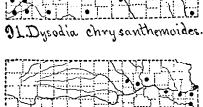
102. *Lactuca Canadensis.*



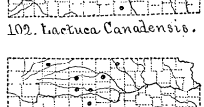
113. *Ipomoea hederacea.*



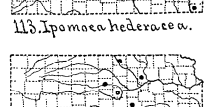
124. *Chamaecarpha sordida.*



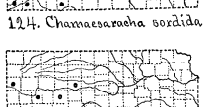
92. *Anthemis Cotula.*



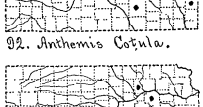
103. *Lactuca pulchella.*



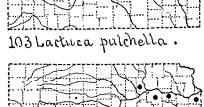
114. *Ipomoea purpurea.*



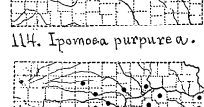
125. *Physalis lobata.*



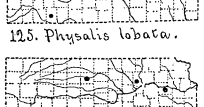
93. *Chrysanthemum Leucanthemum*



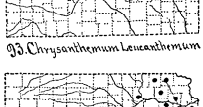
104. *Sonchus asper.*



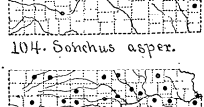
115. *Convolvulus sepium.*



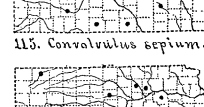
126. *Physalis pubescens.*



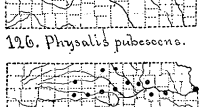
94. *Aretium Lappa.*



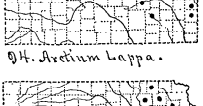
105. *Apocynum cannabinum.*



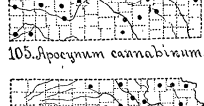
116. *Convolvulus sepium repens.*



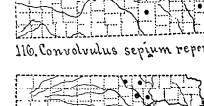
127. *Physalis Virginiana.*



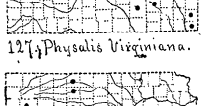
95. *Cnicus lanceolatus.*



106. *Jsclepias Cornuti.*



117. *Convolvulus arvensis.*



123. *Physalis heterophylla.*

Plate XXV. DISTRIBUTION BY COUNTIES.

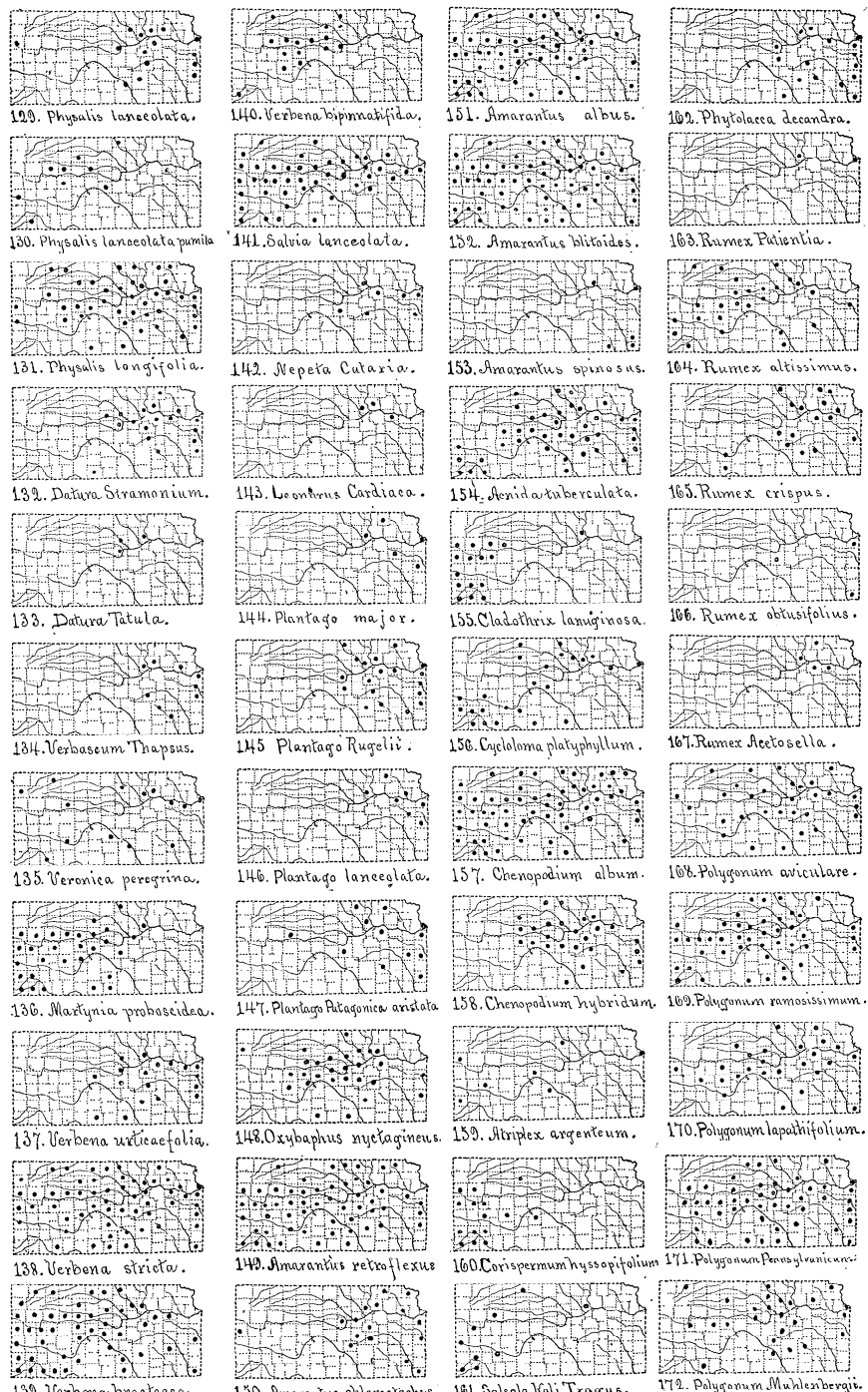
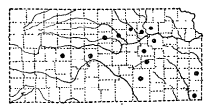
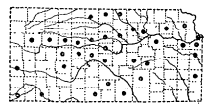


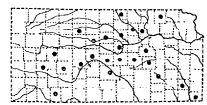
Plate XXVI. DISTRIBUTION BY COUNTIES.



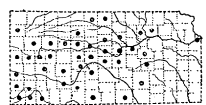
173. *Polygonum Persicaria*.



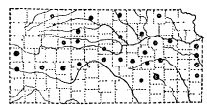
182. *Euphorbia dentata*.



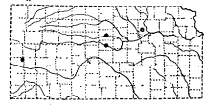
191. *Panicum proliferum*.



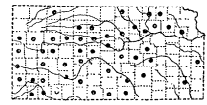
200. *Sporobolus cryptandrus*.



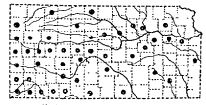
174. *Polygonum Corniculatum*.



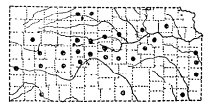
183. *Acalypha Caroliniana*.



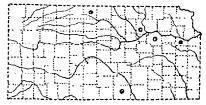
192. *Panicum capillare*.



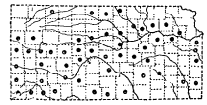
201. *Schedonardus Texanus*.



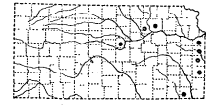
175. *Euphorbia serpens*.



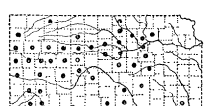
184. *Cannabis sativa*.



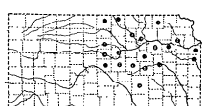
193. *Panicum Crus-galli*.



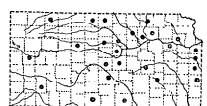
202. *Eleusine Indica*.



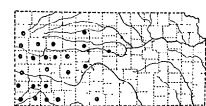
176. *Euphorbia glyptosperma*.



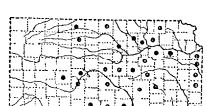
185. *Urtica gracilis*.



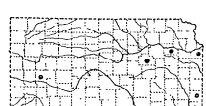
194. *Setaria glauca*.



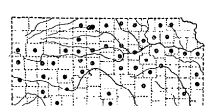
203. *Munroa squarrosa*.



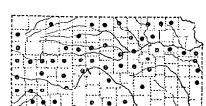
177. *Euphorbia maculata*.



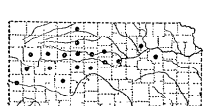
186. *Cyperus esculentus*.



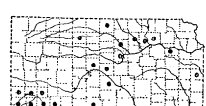
195. *Setaria viridis*.



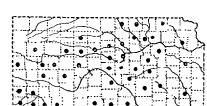
204. *Eragrostis major*.



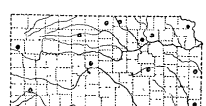
178. *Euphorbia stictospora*.



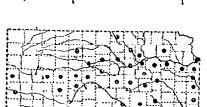
187. *Paspalum setaceum*.



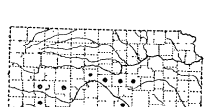
196. *Cenchrus tribuloides*.



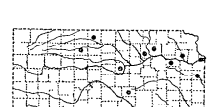
205. *Eragrostis Purshii*.



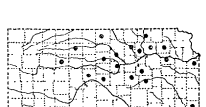
179. *Euphorbia Preslii*.



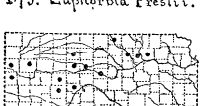
188. *Eriochloa polystachya*.



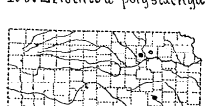
197. *Aristida oligantha*.



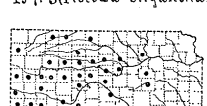
206. *Eragrostis pedunculata spectabilis*.



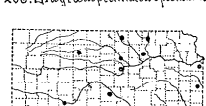
180. *Euphorbia hexagona*.



189. *Panicum glabrum*.



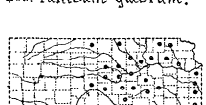
198. *Aristida purpurea*.



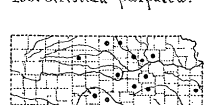
207. *Bromus secalinus*.



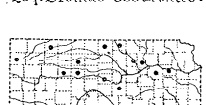
181. *Euphorbia marginata*.



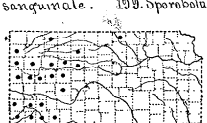
190. *Panicum sanguinale*.



199. *Sporobolus vaginiflorus*.



208. *Hordeum jubatum*.



209. *Elymus Sitanion*.

Plate XVII. DISTRIBUTION BY COUNTIES.