Dickinson County Flora (A Preliminary Check-List of the Vascular Plants of Dickinson County, Iowa, Based Largely on the Herbarium of the Iowa Lakeside Laboratory)

Martin L. Grant

Iowa State Teachers College
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I. Geography

Dickinson County is in the northernmost tier of counties in the state of Iowa, it being the third county to the east from the western border of the state. It is bounded on the north by Minnesota, west by Osceola Co., south by Clay Co., and east by Emmet Co. It touches O'Brien Co. at the southwest corner, and Palo Alto Co. at the southeast. Just west of Osceola Co. is Lyon Co., the northwesternmost county in the state. The Iowa Lakeside Laboratory on Miller's Bay, West Lake Okoboji, is at 43° 20' N. Latitude, and 95° 7' W. Longitude. The county has an area of 379 square miles.

The county seat is Spirit Lake. Other towns are Arnold's Park, Lake Park, Milford, Montgomery, Okoboji, Orleans, Superior, and Terril.

The southwestern quarter of the county is covered by Tazewell drift (oldest), the southeastern quarter by Cary drift (intermediate), and the northern half by Mankato drift (youngest), all three representing stages of Wisconsin glaciation. No bed-rock is exposed. The entire area is one of terminal moraines, particularly the Bemis and Altamont, and the topography is thus relatively hilly, with occasional local differences of elevation exceeding one hundred feet. The altitude of West Lake Okoboji is 1392'. The only mineral resources are sand and gravel.

The area is drained entirely (except the northeast corner) by the Little Sioux River (and its tributaries, the largest being Stony and Muddy Creeks), which flows into the Missouri.

The county is perhaps best known for its many large glacial lakes, the biggest being Spirit Lake (5684 acres), West Okoboji (3939), East Okoboji (1875), Silver (1058), Swan (371), Hottes (312), Center (264), Little Spirit (214), Marble (175), Diamond (166), Prairie (136), Jefferson Slough (100), Pleasant (82) and Welch (75). West Okoboji has a maximum depth of 132 feet, while Spirit Lake is 40, and East Okoboji is 27. Of the eight largest natural lakes in Iowa, four are in Dickinson Co., with one each in the adjacent counties of Palo Alto (Lost Island Lake), Clay
(Trumbell Lake), and Emmet (West Swan Lake). (The remaining one, third in size, is Clear Lake, in Cerro Gordo Co.)

The land area is largely prairie, almost all of which is in cultivation or pasture, with only a few small undisturbed sites remaining. There are forest fringes around many of the lakes (Figs. 1-2) and along the Little Sioux River. For a full discussion of the vegetation see Shimek (1915) and Anderson (1938 and 1943).
II. History of Plant Collecting


By far the most complete of all collections to date are those of Shimek, resulting in his definitive “Plant Geography of the Lake Okoboji Region” (1915), in which he lists, based exclusively on his own collections, 611 full species of wild vascular plants, including 57 introductions. Nine of the native species listed by Shimek, however, are recorded only from Emmet Co., and this has given rise to some confusion in recent literature, in that all of Shimek’s records have been attributed to Dickinson Co. These nine species are indicated in the check-list below.

Since Shimek’s paper is written primarily with an ecological viewpoint, it is a bit inconvenient to use as a taxonomic check-list. There are three major lists of plants (swamp, forest, and prairie) and eight minor ones, but when these are put together, it becomes an admirable annotated list of the species then known from the county, with fairly precise locality and habitat records for each. Shimek continued his studies, adding thirty species to the flora of the county (1917a), and repeating and publishing other county records in more general papers (1917b).

W. A. Anderson published several short papers of an ecological nature (1938-1949), which added a number of native and introduced species to the county list.

Additional Dickinson Co. records have been published in Cratty’s Iowa Flora (1933), one of the supplements by Hayden (1945), in Pammel’s Weed Flora (1913 and 1926, though the second edition is not separately cited in the annotated list below unless it differs in treatment from the first edition) and his Honey Plants (1930), in Gilman & Archer’s list of hosts of fungi (1929), and in a number of state taxonomic lists: Grasses (Adams, 1931; and Augustine, 1940), Salix (Ball, 1900), Cyperaceae (Cratty, 1898; Gilly, 1946; and Bennett, 1949), Oxalis (Conard and Hubbard, 1946), Umbelliferae (Murley, 1946), Lysimachia (Goodman and Leyendecker, 1943), Apocynum (Murley, 1947), Boraginaceae (Gilly & O’Brien, 1949), Labiatae (Bass, 1944), Heliantheae (Johns, 1931 and 1935), and Aster (Kellogg, 1948).
III. The Iowa Lakeside Herbarium

The Iowa Lakeside Laboratory was founded in 1909, and set up on Miller's Bay, on the west side of West Lake Okoboji, where, managed indirectly through the State University of Iowa, it has ever since served as a center for biological research and teaching in the Lake Region of Iowa.

The Lakeside Herbarium was founded in 1923 when H. S. Conard collected and mounted 372 sheets of local plants, and added them to 438 of Shimek's collections (1896-1913) and 53 of L. M. Cavanagh's (1910) which Shimek sent up from duplicates of the Iowa City Herbarium.

Various other students and teachers contributed as follows, with dates, and with the numbers of collections in parentheses: 1881 R. I. Cratty (1); 1923 M. Hitchings (3), M. L. Sloan (2), H. L. Tiffany (1), B. O. Wolden (1); 1925 K. A. Gilmore (4), M. L. Lohman (17); 1926 H. E. Jaques (1), L. Sawyer (1); 1932 E. Harrington (1), K. A. Reinke (1), D. Rogers (4); 1933 C. M. Holmes (5), L. W. Miller (13), A. J. Stanley (1); 1940 C. Brooks (1); 1941 W. B. Fox (6).

W. A. Anderson taught at the Laboratory for ten summers (1932, 1934-42), and added 52 collections to the Herbarium, making a total there of 978 sheets of plants. The writer spent the summers of 1948 and 1949 also teaching at the Laboratory, collecting 596 numbers, of which over 500 have so far been inserted. (Duplicates of these will eventually be deposited at the State University of Iowa and at Iowa State College.) Other additions in 1949 were H. S. Conard (1), R. L. King (1), D. Tabb (9), and K. Takehara (13). The Herbarium consists, thus, of approximately 1500 sheets of plants.

IV. Explanation of the Check-List

The annotated list below is primarily a list of the species in the Lakeside Herbarium, and all specimens, unless otherwise noted, are in that collection. All records, both of specimens seen and records from the literature, are from Dickinson Co. A number of specimens have been studied in other herbaria in the state, but no other herbarium has been completely checked for Dickinson Co. records. Some specimens cited have not been personally confirmed, e.g., Miss Ada Hayden's published records have been unequivocally incorporated in this paper without comment. The other herbaria are cited as follows: State University of Iowa (SUI), Iowa State College (ISC), Grinnell College (G), and Parsons College (P).
Obviously these (and other) herbaria contain a great many uncited Dickinson Co. records.

Three methods of citing herbarium specimens have been used. It would have been best, of course, to cite the full collection data for each sheet, but that would have made a mere check-list of this sort too long to justify the space involved. First, field numbers have been used whenever they were given by the collector, since that makes possible definitive comparison with duplicate sheets in other herbaria, but unfortunately this applies to very few of the collections except those of the writer. Second, about half of the Lakeside Herbarium has been number-stamped (Pteridophyta through the Nyctaginaceae, arranged according to the Engler-Prantl system), and these numbers have been the next choice. They are always cited here preceded by the letter L. Third, where neither of these numbers existed, the year in which the collection was made is cited. (Bibliographic references are also cited by date, but are here always enclosed in parentheses to distinguish them from collection dates, which are never parenthesized.) It is just a coincidence that no field numbers are included which are the same numerals as the years covered by the collections (1880-1949). For each species the collections cited are generally arranged chronologically.

Secondly, the annotated list below attempts to include all published records of additional species not in the Lakeside Herbarium. In general, published records of species seen in the herbaria consulted have not been cited unless they are listed under different binomials. All bibliographic references have the date of publication enclosed in parentheses. The bibliography at the end includes only those papers cited in the text. This bibliographic searching is probably incomplete, and doubtless many records have been overlooked.

The families are arranged according to the Engler-Prantl system, and the prefixed numbers are those given by Torre and Harms to the families so arranged. While this is not a modern arrangement, it is the only one in general use which has been given standard numbers. To make the list cover the Pteridophyta also, numbers preceded by the small letter p have been given to those families. Within the families, genera and species are arranged alphabetically. All nominative specific and varietal names have been decapitalized.

The synonymy attempts to include all names under which the species have been previously reported for Dickinson Co. Otherwise the usual custom of citing the names given in the seventh edition of Gray's Manual (1908) has not been consistently followed, inas-
much as the new edition of the Manual will be out before this paper appears in print.

The treatment of varieties and forms is not consistent. In some cases they are cited in addition to the species proper, in other cases they are ignored, depending sometimes on the distinctness of the entity involved, and sometimes on the number of specimens available.

Species names in capital letters represent introductions that have become accidently established. Species occurring only in cultivation are omitted. An asterisk (*) appears before the names of species for which no published county record has been found. A number sign (#) appears before a few (16) species which are excluded as based on misidentifications or incomplete records. Additional exclusions are discussed under the species with which they probably should be identified. Further checking of the specimens on which records have been published will doubtless result in other exclusions. Species marked with a dagger (†) represent, in addition to those marked with an asterisk, those not included in Shimek's list (1915).

V. Statistical Summary of the Flora

Table 1 shows the numbers of families, genera, and species of native and introduced plants in each of the major taxonomic groups. All but ten species are flowering plants. The total flora is 785 full species, of which 113 are introduced. (About 50 additional varieties and forms are mentioned in the annotated list, and perhaps an equal number of frequently recognized subspecific entities are omitted.)

Shimek's list (1915), for Dickinson Co. only, included 602
species, of which 57 were introduced. Since then, and in some earlier literature, there have been published records for 155 other species, including 41 introductions, all of which are marked with a dagger (†) in the check-list below. Some 30 of these were reported by Shimek himself (1917a). Then, there are reported in this paper 49 additional species, including 16 introductions, for which no published records have been found, which 49 are marked with an asterisk (*) in the check-list, making a grand total of 204 species added to Shimek's original flora of the county. If this 204 is added to Shimek's original 602, the total, 806, is greater (by 21 species) than the 785 recognized above. This is due to the rejection of some records and the synonymizing of some others.

Table 2 is a list of the numbers of species in the fifteen largest families in the county flora, which includes all those with ten or more species. These fifteen families include two-thirds (67.3%) of the species in the flora. The largest genera are Carex (44 species); Aster (17); Potamogeton (15); Polygonum (13); Ranunculus

<table>
<thead>
<tr>
<th>Families</th>
<th>Nat.</th>
<th>Intr.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Compositae</td>
<td>111</td>
<td>19</td>
<td>130</td>
</tr>
<tr>
<td>2. Gramineae</td>
<td>61</td>
<td>19</td>
<td>80</td>
</tr>
<tr>
<td>3. Cyperaceae</td>
<td>68</td>
<td>0</td>
<td>68</td>
</tr>
<tr>
<td>4. Leguminosae</td>
<td>30</td>
<td>8</td>
<td>38</td>
</tr>
<tr>
<td>5. Rosaceae</td>
<td>30</td>
<td>1</td>
<td>31</td>
</tr>
<tr>
<td>6. Labiatae</td>
<td>26</td>
<td>4</td>
<td>30</td>
</tr>
<tr>
<td>7. Ranunculaceae</td>
<td>22</td>
<td>0</td>
<td>22</td>
</tr>
<tr>
<td>8. Cruciferae</td>
<td>8</td>
<td>14</td>
<td>22</td>
</tr>
<tr>
<td>9. Umbelliferae</td>
<td>16</td>
<td>2</td>
<td>18</td>
</tr>
<tr>
<td>10. Polygonaceae</td>
<td>13</td>
<td>5</td>
<td>18</td>
</tr>
<tr>
<td>11. Liliaceae</td>
<td>15</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td>12. Scrophulariaceae</td>
<td>14</td>
<td>3</td>
<td>17</td>
</tr>
<tr>
<td>13. Potamogetonaceae</td>
<td>16</td>
<td>0</td>
<td>16</td>
</tr>
<tr>
<td>14. Euphorbiaceae</td>
<td>9</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>15. Chenopodiaceae</td>
<td>3</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>442</td>
<td>86</td>
<td>528</td>
</tr>
</tbody>
</table>

Table 3
Numbers of Vascular Species (and Varieties, Except for Dickinson Co.) in Selected Areas in Iowa.

<table>
<thead>
<tr>
<th>Area</th>
<th>Reference</th>
<th>Native</th>
<th>Introd.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Dickinson Co.</td>
<td>Grant</td>
<td>672</td>
<td>113</td>
<td>785</td>
</tr>
<tr>
<td>2. Emmet Co.</td>
<td>Wolden (1934)</td>
<td>800</td>
<td>130</td>
<td>930</td>
</tr>
<tr>
<td>3. Clay &amp; Palo Alto Cos.</td>
<td>Hayden (1943)</td>
<td>623</td>
<td>204</td>
<td>827</td>
</tr>
<tr>
<td>4. SE. Iowa (10 Cos.)</td>
<td>Gilly &amp; MacDon. (1949)</td>
<td>723</td>
<td>162</td>
<td>885</td>
</tr>
<tr>
<td>5. Jefferson Co.</td>
<td>&quot;</td>
<td>821</td>
<td></td>
<td>821</td>
</tr>
<tr>
<td>6. Johnson Co.</td>
<td>Somes (1913)</td>
<td></td>
<td>1005</td>
<td></td>
</tr>
<tr>
<td>7. Mahaska Co.</td>
<td>Augustine (1941)</td>
<td>478</td>
<td>112</td>
<td>590</td>
</tr>
</tbody>
</table>
Cyperus, Chenopodium, Euphorbia, Helianthus, and Solidago (9 each); and Panicum, Juncus, Asclepias, and Cirsium (7 each).

Table 3 is a comparison of the flora (size) with other regions of the state. These figures are not strictly comparable, since the Dickinson Co. figure does not include additional varieties, as do all the other totals. Also, some areas have been collected more carefully, and over longer periods of time.

**VI. Annotated List of Species**

**A. PTERIDOPHYTA**

p5. EQUISETACEAE (Horse-tail Family)

_Equisetum arvense_ L. — Cavanagh L8, Conard L7.

_E. fluviatile_ L. — Conard L9.


_E. kansanum_ Schaffn. — Shimek 110, 111.

_E. laevisulatum_ A. Br. — Cavanagh L13, Conard L14. (Probably = _E. hyemale_.)


p6. OPHIOGLOSSACEAE (Adder’s-tongue Family)

_Botrychium virginianum_ (L.) Sw. — Takehara 1.

p8. OSMUNDACEAE (Royal Fern Family)

_Osmunda claytoniana_ L. — Reported by Shimek (1915), but from Emmet Co., not Dickinson Co.

p14. POLYPODIACEAE (Polypody Fern Family)

_Adiantum pedatum_ L. — Reported by Shimek (1915), but from Emmet Co., not Dickinson Co.

_Athyrium angustum_ (Willd.) Presl. — Reported by Shimek (1915), as _Asplenium filixfoemina_ (L.) Bernh.


**B. GYMNOSPERMAE**

6. PINACEAE (Pine Family)

_Juniperus virginiana_ L. — Cavanagh L23, Conard L24.

**C. MONOCOTYLEDONAE**

8. TYPHACEAE (Cat-tail Family)

_Typha angustifolia_ L. — Fox L28; Anderson, Grant, and Hayden 11230 (ISC).

_T. latifolia_ L. — Conard L23.

10. SPARGANIACEAE (Bur-reed Family)

_Sparganium americanaum_ Nutt. — Reported by Shimek (1915) as var. _androcladum_ (Eng.) Fern. & Eames.
*S. chlorocarpum* Rydb. — Conard L32 (as *S. diversifolium* Graebn.), Grant 8708.

*S. chlorocarpum* var. *acaule* (Beeby) Fern. — Shimek L33 (as *S. simplex* Huds.).

*S. curtocarpum* Englem. — Shimek L31, Sigler 61 (ISC).

11. **POTAMOGETONACEAE** (Pond-weed Family)

*Potamogeton amplifolius* Tuckerm. — Shimek L41, Conard TAO.

*P. epihydrus* Raf. — Reported by Shimek (1915).

*P. foliosus* Raf. var. *macellus* Fern. — Conard L38, Sigler 150 (ISC).

*P. friesii* Rupr. — Reported by Pammel (1896) as *P. mucronatus* Schrad., and by Shimek (1915).

*P. gramineus* L. var. *graminifolius* Fries. — Reported by Shimek (1915), as *P. heterophyllus* Schreb.

*P. illinoensis* Morong. — Sigler 42 (ISC), Sigler & Hayden 5 (ISC).

*P. natans* L. — Shimek L42, Conard L43, Sigler 50 (ISC), Sigler & Hayden 3 (ISC), Grant 11177.

*P. nodosus* Poir. — Conard L39 (as *P. americanus* C. & S.), Sigler & Hayden 50 (ISC), Grant 8776. Reported by Pammel (1896) as *P. lonchites* Tuck.

*P. panormitanus* Biv. — Shimek L45 (as *P. pusillus* L.), Shimek (ISC 25026), Cratty (ISC 12593), Sigler & Hayden 6 (ISC), Grant 8770. Reported by Shimek (1897) as *P. major* (Fries) Morong.

*P. pectinatus* L. (including *P. interruptus* Kitaibel). — Shimek L47, Conard L48, Grant 8780.

*P. praelongus* Wulf. — Hitchcock 86959 (ISC), Shimek L49, Conard L50, Grant 8775, 11176.

*P. richardsonii* (Benn.) Rydb. — Shimek L53, Conard L54, Sigler 37 (ISC), Sigler & Hayden 2 (ISC), Grant 8772, 8774. Reported by Pammel (1896) and Shimek (1897) as *P. perfoliatus* var. *richardsonii* Bennett.

*P. spirillus* Tuck. — Reported by Shimek (1915), as *P. dimorphus* Raf.

*P. strictifolius* Benn. — Hitchcock 12594 (ISC).

*P. zosteriformis* Fern. — Hitchcock 12554 (ISC), Shimek L57 (as *P. zosterifolius* Schum.), Conard L56, Sigler 49 (ISC), Grant 8771. *Zannichellia palustris* L. — Shimek L60, Conard L61, Miller L62, Sigler 67 (ISC), Grant 8782, 8948.

12. **NAIADACEAE** (Naias Family)

*Naias flexilis* (Willd.) R. & S. — Shimek L34, Sigler 31 (ISC), Grant 8783.

†*N. guadalupensis* (Spreng.) Magnus. — Sigler 63 (ISC), Grant 8980 (det. S. S. Chase).

14. **JUNCAGINACEAE** (Arrow-grass Family)

†*Triglochin maritima* L. — Anderson L66, Grant 8723, 8955.

*T. palustris* L. — Grant 8956.

15. **ALISMACEAE** (Water-plantain Family)

*Alisma subcordatum* Raf. — Shimek L68, L69-70, as *A. plantago-aquatica* L.; Sigler & Hayden 26 (ISC).

*Echinodorus cordifolius* (L.) Griseb. — Reported by Shimek (1915).

†*Lophotocarpus calycinus* (Engelm.) J. G. Smith. — Sigler & Hayden 25 (ISC), Grant 8976, 11210.

*Sagittaria brevirostra* Mack. & Bush. — Conard L73, as *S. arifolia* Nutt.
S. cuneata Sheldon. — Shimek L75 (as S. arifolia Nutt.), Anderson L74, Sigler & Hayden 27 (ISC).
S. latifolia Willd. — Shimek L76, Lohman L77, Sigler 69 (ISC).
*S. rigida Pursh. — Grant 8987.

17. HYDROCHARITACEAE (Frog's-bit Family)

Vallisneria americana Michx. — Shimek L82 (as V. spiralis L.), Gilmore L83, Sigler & Hayden 1 (ISC), Grant 8785.

19. GRAMINEAE (Grass Family)

Agropyron pauciforum (Schwein.) Hitchc. (A. trachycaulum var.) — Shimek L108 (as A. tenerum Vasey), Conard L109, Grant 11158, 11159, 11160.
†A. REPENS (L.) Beauv. — Cratty 1921 [ISC, fide Augustine (1940)].
A. smithii Rydb. — Shimek L110, Conard L111, Grant 11178.
A. subsecundum (Link.) Hitchc. (A. trachycaulum var.). — Shimek L112 (as A. richardsonii Schrad.), Shimek L113 [as A. caninum (L.) Beauv.], Conard L115, L118, Grant 8732, 8817; Cratty 1920, and Hitchcock n.d., both (ISC) fide Augustine (1940).
AGROSTIS ALBA L. — Shimek L137.1, L139, Conard L138.
A. hyemalis (Walt.) B. S. P. — Shimek L140, L141.
Allopecurus aequalis Sobol. — Shimek L142 (as A. geniculatus L.), Conard L143, Sigler & Hayden 92 (ISC), Grant 8834.
Andropogon furcatus Muhl. — Conard L214, Grant 8813. (A. gerardi Vitm.)
A. scoparius Michx. — Shimek L216, Conard L217.
Aristida fastiramea Engelm. — Reported by Shimek (1915).
†AVENA SATIVA L. — Reported by Anderson (1938).
Beckmannia syzigachne (Steud.) Fern. — Shimek L170 (as B. eruciformis (L.) Host), Conard L171, Sigler & Hayden 34 (ISC), Grant 8730.
Bouteloua curtipendula (Michx.) Torr. — Shimek L173, Conard L174, Grant 8814.
B. gracilis (H. B. K.) Lag. — Shimek L176 [as B. oligostachya (Nutt.) Torr.], Conard L177, Grant 8902.
B. hirsuta Lag. — Shimek L179, Conard L180, Grant 8903.
†Bromus altissimus Pursh. — Anderson L84, Adams 1929 [SUI, fide Adams (1931)]. [B. latiglumis (Shear) Hitchc.]
B. ciliatus L. — Conard L85.
*B. COMMUTATUS Schrad. — Anderson 2015, Grant 11163.
†B. INERMIS Leyss. — Reported by Anderson (1946).
B. pungens L. — Shimek L87.
B. SECALINUS L. — Shimek L88.
Calamagrostis canadensis (Michx.) Nutt. — Shimek L145, Conard L146.
†C. inexpansa Gray. — Anderson L148, Grant 8950.
†Cenchrus longispinus (Hack.) Fern. — Miller L92. Reported by Pammel (1913) as C. tribuloides L., and by Shimek (1917b) as C. carolinianus Wilt.
*Clinna arundinacea L. — Shimek L149.
†DACTYLIS GLOMERATA L. — Reported by Shimek (1917a).
†DIGITARIA SANGUNALIS (L.) Scop. — Conard L193.
ECHINOCHLOA CRUSGALLI (L.) Beauv.—Shimek L194, Conard L195, Sigler 56 (ISC).

Elymus canadensis L., including var. robustus (Scribn. & Smith) Mack. & Bush.—Shimek L119.

*E. macounii Vasey.—Shimek L123 [as E. striatus Willd. var. arkansanus (S. & B.) Hitchc.].

*E. riparius Wiegi.—Grant 8963.

*E. villosus Muhl.—Shimek L121 (as E. striatus Willd.), Conard L122, Grant 11161 (det. R. W. Pohl).

E. villosus forma arkansanus (Scribn. & Ball) Fern.—Shimek L120.

*E. macounii Vasey.—Shimek L123 [as E. striatus Willd.], Conard L122, Grant 11161 (det. R. W. Pohl).

*E. hypnoides (Lam.) B. S. P.—Conard L89, Grant 8905.

*E. pectinacea (Michx.) Nees.—Shimek L92.

†E. PILOSA (L.) Beauv.—Conard L90.

Festuca obtusa Biehler.—Shimek L93, as F. nutans Spreng.

F. octofiora Walt.—Shimek L94. [Vulpia octofiora (Walt.) Rydb.]

Glyceria grandis S. Wats.—Shimek L95, Conard L96, Sigler & Hayden 36 (ISC), Grant 11162.

G. striata (Lam.) Hitch.—Shimek L97 [as G. nervata (Willd.) Trin.], Conard L98, Grant 11143.

†Hierochloe odorata (L.) Beauv.—Reported by Pammel (1913) as H. borealis R. & S., and by Anderson (1943).

HORDEUM JUBATUM L.—Shimek L126, Conard L127. Native?

Hystrix patula Moench.—Shimek L129, Conard L130.

Koeleria cristata (L.) Pers.—Cavanagh L133, Conard L135, Grant 8738.

Leersia oryzoides (L.) Sw.—Shimek L186, Conard L187, Sigler & Hayden 36 (ISC), Grant 11282.

L. virginica Willd.—Shimek L188, Conard L189.

†LOLIUM TEMULENTUM L.—Reported by Pammel (1913).

Muhlenbergia cuspidata (Nutt.) Rydb.—Shimek L162, as Sporobolus brevifolius (Nutt.) Scribn.; Conard L163.

*M. foliosa (R. & S.) Trin.—Anderson L151. [M. mexicana (L.) Trin.]

M. frondosa (Poir.) Fern.—Shimek L152 [as M. mexicana (L.) Trin.], Conard L153.

M. racemosa (Michx.) B. S. P.—Shimek L155, Conard L156, Grant 8951.

M. sobolifera (Muhl.) Trin.—Reported by Shimek (1915).


Oryzopsis racemosa (Smith) Ricker.—Shimek L158, Grant 11217.

Panicum capillare L.—Shimek L196-7 (including his P. gattingeri Nash), Conard L198.

*P. depauperatum Muhl.—Reported by Shimek (1915) on the basis of Shimek L199, but the specimen is indeterminate and was questioned by Shimek himself. According to R. W. Pohl it is not this species.

P. implicatum Scribn.—Shimek L200 (as P. dichotomum L. var. villosum Vasey), Shimek L201 (as P. huachucan Ashe var. silvicola Hitchc. & Chase), Conard L204 (as P. meridionale Ashe).

P. leibergii (Vasey) Scribn.—Shimek L202, Conard L203.
P. oligosanthes Schult. var. scribnerianum (Nash) Fern. — Shimek L205
(as P. scribnerianum Nash).

*P. philadelphicum Bernh. — Grant 8904.
P. virgatum L. — Shimek L206, Grant 11245.
†P. wilcoxianum Vasey. — Anderson L207.

Phalaris arundinacea L. — Shimek L184, Conard L185.

PHLEUM PRATENSE L. — Conard L159.

Phragmites communis Trin. — Shimek L99, Conard L100.

Poa compressa L. — Cavanagh L101, Conard L102.
P. palustris L. — Shimek L104, 105, and 106, (as P. tri flora Gilib.), Conard L107.

P. pratensis L. — Conard L103.

Setaria lutescens (Weigel) F. T. Hubb. — Shimek L208, 210, [as
S. glauca (L.) Beauv.], Conard L209 (det. R. W. Pohl), Grant 8908.

S. verticillata (L.) Beauv. — Stanley L211.

P. pallescens (Bichler) Scribn. — Reported by Shimek (1915), but according to Hitchcock (1935) this species is known only from Pennsylvania and South Carolina.

Sporobolus asper (Michx.) Kunth. — Shimek L160.

S. cryptandrus (Torr.) Gray. — Shimek L164, Sigler 99 (ISC).

S. heterolepis Gray. — Shimek L165.

Stipa spartea Trin. — Shimek L166, Conard L167.

*S. viridula Trin. — Anderson L168.

*S. pallescens (Bichler) Scribn. — Reported by Shimek (1915) but according to Hitchcock (1935) this species is known only from Pennsylvania and South Carolina.

Bulbostylis capillaris (L.) C. B. Clarke. — Reported by Shimek (1915 and 1917b), as Stenophillus c. (L.) Britt., but unconfirmed by Gilly (1946).


†C. amphihala steud. var. turgida Fern. — Reported by Bennett (1949) as collected by Shimek.

†C. annectens (Bickn.) Bickn. var. xanthocarpa (Bickn.) Wieg. — Reported by Gilly (1946).

†C. aquatilis Wahl. var. altilor (Ryd.) Fern. — Anderson L220, as C. stricta Lam., corrected (apparently by Anderson) to C. substricta (Kuk.) Mack., and published (1943) as C. aquatilis Wahl.

C. atherodes Spreng. — Anderson L221, Grant 8706, 8824. Reported by Shimek (1915) as C. trichocarpa Muhl. var. aristata (R. Br.) Bailey.

C. bebbii Olney. — Conard L224.


C. blanda Dewey. — Shimek L227, as C. laxiflora Lam. var. blanda (Dewey) Boott.; Anderson L228 (as C. l. var. varians Bailey); Sigler 115 (ISC). Not confirmed by Gilly (1946), but verified by Bennett (1949).
C. brevior (Dewey) Mack.—Cavanagh L229, L230. Reported by Cratty (1898) and Shimek (1915) as C. foenea Willd. var. perplexa L. H. Bailey, and by Anderson (1938) as C. festucacea Schkuhr. ex Willd. var. brevior (Dewey) Fern.
*tC. buxbaumii Wahl.—Reported by Gilly (1946).
C. comosa Boott.—Reported by Shimek (1915 and 1917b) and Gilly (1946).
*C. crawei Dewey.—Shimek L231, as C. tenuis Schkuhr var. Meadii (Dewey) Bailey.
C. cristatella Britt.—Shimek L232 (as C. cristata Schw.), Conard L233.
*C. crus-corvi Shuttlw. ex Kunze.—Reported by Gilly (1946).
*C. deweyana Schw.—Arthur 967b (ISC), according to Cratty (1898 and 1933); Gilly (1946).
*C. eburnea Boott.—Gilly (1946) cites this as reported from Dickinson Co., but unconfirmed. The reference he gives is to Shimek (1915), where, however, it is reported from Emmet Co., not Dickinson. It does occur in the adjacent counties of Clay and Emmet.
C. cleocharis L. H. Bailey.—Shimek L234 (as C. stenophylla Wahl.)
C. festucacea Schkuhr. ex Willd.—Reported by Cratty (1898) and Shimek (1915 and 1917b) but not confirmed by Gilly (1946).
C. gratia L. H. Bailey, including var. laxifolia Bailey.—Cavanagh L235, Shimek L236, Conard L237.
*C. haydenii Dewey.—Reported by Gilly (1946).
C. hirtifolia Mack.—Shimek L238, as C. pubescens Muhl. Not confirmed by Gilly (1946).
C. hystrix Muhl.—Shimek L240, Conard L241, Grant 8691. According to Gilly (1946) this species includes Arthur's (1886) record of C. pseudocyperus L.
*C. interior Bailey.—Reported by Bennett (1949) as collected by Shimek.
*C. lacustris Willd.—Grant 8707. Previously reported by Pammel (1913), but not confirmed by Gilly (1946).
*C. lasiocarpa Ehrh.—Grant 8693. Var. americana Fern., reported by Gilly (1946) from Dickinson Co., occurs in the same clump with the typical form.
C. lasiocarpa var. latifolia (Boeck.) Gilly.—Sigler 7 (ISC), Anderson L243 (as C. lanuginosa Michx.).
*C. lurida Wahl.—Reported by Anderson (1943), not confirmed by Gilly (1946).
C. meadii Dewey.—Reported by Gilly (1946). See C. crawei above.
*C. normalis Mack.—Reported by Gilly (1946).
C. pensylvanica Lam.—Shimek L244.
*C. praegecrapis Boott.—Reported by Bennett (1949), as collected by Shimek.
*C. projecta Mack.—Anderson L245.
*C. retrorsa Schwein.—Reported by Gilly (1946).
C. rosea Schkuhr ex Willd. var. pusilla Peck ex Howe.—Conard L246.
*C. rostrata Stokes var. utriculata (Boott) Bail.—Anderson L247, as C. rostrata.

C. stipata Muhl. ex Willd. — Miller L253, Grant 8694.

*C. straminea* Willd. — Reported by Cratty (1898) based on Arthur's Spirit Lake specimen (June 4, 1881). I have been unable to locate Gilly's (1946) disposition of this sheet. It has quite probably been identified with one of the many closely related species.

†C. stricta Lam. — Grant 8709. Reported by Cratty (1898), but not confirmed by Gilly (1946). Collected by Shimek, according to Bennett (1949).

C. sychnocepha1a Carey. — Shimek 1258, Sigler & Hayden 12 (ISC), Grant 8858, 8977.

†C. tenera Dewey. — Reported by Cratty (1898), but not confirmed by Gilly (1946). Collected by Shimek, according to Bennett (1949).


†C. vesicaria L. — Anderson L262.

C. vulpinoides Michx. — Cavanagh L263, Sigler 5 (ISC).

Cyperus inficxus Muhl. — Shimek L265, Conard L263, Grant 8859.

†C. engelmanni Steud. — Reported by Gilly (1946).

C. erythrorhi.::os Muhl. — Fox L268, Grant 8846, 8867.


†C. filiculmis Vahl. — Reported by Shimek (1917b), but the record not mentioned by Gilly (1946).

C. odoratus L. var. squarrosus (Britt.) Gilly. — Shimek L276 (as C. speciosus Wahl.), Shimek L277 (as C. strigosus L.), Conard L278, Grant 8861. Reported by Shimek (1917b) as C. ferax Rich.

C. rivularis Kunth. — Shimek L269, L270, Conard L272, Grant 8860. According to Gilly (1946) this includes the reports of *C. diandrus* Torr. by Pammel (1896) and Shimek (1917b).

C. schweinitzii Torr. — Shimek L274, Conard L275, Grant 8985.

C. strigosus L. — Lohman L279, Sigler 59 (ISC), Grant 8868.

Eleocharis acicularis (L.) R. & S. — Shimek L281, Conard L282, Sigler & Hayden 14 (ISC), Grant 8831.


E. macrostachya Britt. in Small. — Shimek L283, L284, and L285, as *E. palustris* (L.) R. & S.; Cavanagh L286, as *E. tenuis* (Willd.) Schultes: Conard L287, as *E. ovata* (Roth) R. & S.; Conard L288; Sigler & Hayden 13 (ISC).

E. obtusa (Willd.) Schultes. — Shimek L290, as *E. ovata* (Roth) R. & S. Gilly (1946) maps this in Dickinson Co., but also lists it in the "unconfirmed county reports."

E. wolflii Gray. — Reported by Shimek (1915), but not confirmed by Gilly (1946).

†Eriophorum angustifolium Honc. — Grant 8702. Gilly (1946) states that Shimek (1917a) reported *E. praelite* Koch, but the reference there is to *E. angustifolium.*

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Rhynchospora capillacea Torr. — Rogers L294, Grant 8952.
†Scirpus acutus Muhl. — Conard L295, Sigler 33 (ISC).
†S. americanus Pers. — Anderson L297, L298, Grant 8727.
S. atrovires Willd. — Shimek L299, Conard L300, Sigler & Hayden 10 (ISC).
S. fluviatilis (Torr.) Gray. — Shimek L302, Conard L303, Sigler 34 (ISC), Grant 8720.
*S. paludosus A. Nels. — Grant 8945. The only other Iowa specimen is Miss Hayden's record (1943) from Palo Alto Co.
S. validus Vahl. var. ccerber Fern. — Shimek L306, Cavanagh L307, Conard L308, Sigler 70 (ISC), Grant 8888.
†Scleria triglomerata Michx. — Collected by Shimek, according to Bennett (1949).

23. ARACEAE (Arum Family)
Acorus calamus L. — Shimek L310, Tiffany 1311, Grant 8731.
Arisaema triphyllum (L.) Schott. — Conard L312.

24. LEMNACEAE (Duckweed Family)
†Lemna minor L. — Anderson L314, Sigler 54 (ISC), Grant 8717.
L. trisulca L. — Shimek L316, L317, Conard L318, Sigler 11 (ISC), Grant 8712.
Spirodela polyrhiza (L.) Schleid. — Shimek L320, Grant 8711.
†Wolffia columbiana Karst. — Rogers L321, Grant 8715, 8821.
W. punctata Griseb. — Grant 8716, 8822.

33. COMMELINACEAE (Spiderwort Family)
Tradescantia bracteata Small. — Cavanagh L325, Shimek L326, Grant 8699.
T. brevicaulis Raf. — Reported by Shimek (1915).
†T. occidentalis (Britt.) Smyth. — Conard L327.

34. PONTEDERIACEAE (Pickerel-weed Family)
Heteranthera dubia (Jacq.) Macm. — Shimek L331, Conard L332, Lohman L333, Grant 8784, 11208, Takehara 2. Reported by Shimek (1897) as H. graminica Vahl.
H. dubia forma terrestris (Farw.) Vic. — Grant 8978.

36. JUNCACEAE (Rush Family)
*Juncus alpinus Vill. var. fuscescens Fern. — Grant 8953. Apparently a new state record.
†J. brachycarpus Engelm. — Reported by Anderson (1943).
J. bufonius L. — Shimek L336, Conard L337.
J. nodosus L. — Conard L342, Anderson L343, Grant 8865.
J. torreyi Cov. — Shimek L346, Sigler & Hayden 23 (ISC), Grant 11211.
J. vasesyi Engelm. — Reported by Shimek (1915).

38. LILIACEAE (Lily Family)
Allium canadense L. — Anderson 1965, Grant 8737.
A. stellatum Fras. — Shimek L350, L351, Conard L352, Grant 8873.
A. tricoccum Ait. — Shimek L355, Grant 11195, Takehara 3.
ASPARAGUS OFFICINALIS L. — Shimek L360, Conard L361, Sigler 87 (ISC).

*CONVALLARIA MAJALIS L. — Reported by Kelley in manuscript.

Lilium michiganense Farw. — Conard L356, Grant 8807. Reported by Shimke (1915) as L. canadense L.

L. philadelphicum L. var. andinum (Nutt.) Ker. — Conard L358, Grant 8749.

†Polygonatum biflorum (Walt.) Ell. — Shimek L363, as P. commutatum (R. & S.) Dietr.; Conard L362.


Smilacina racemosa (L.) Desf. — Sigler 101 (ISC).

S. stellata (L.) Desf. — Shimek L364, Cavanagh L366, Conard L367, Grant 8728.

Smilax ceirrhata (Engelm.) S. Wats. — Reported by Shimke (1915).

S. herbacea L. — Conard L369.

S. hispida Muhl. — Shimek L370, Conard L371. (S. tannoides L. var.)

*Trillium flexipes Raf. — Holmes L359.

Untlaria grandiflora Smith. — Shimek L368.

Zigadenus clegans Pursh. — Shimek L373 (as Z. chloranthus Rich.), Grant 8704. Reported by Anderson (1943) as Z. glaucus Nutt.

40. AMARYLLIDACEAE (Amaryllis Family)

Hypoxis hirsuta (L.) Cov. — Cavanagh L376, Grant 8700.

44. IRIDACEAE (Iris Family)

Iris virginica L. — Shimek L377 and L378 (as I. versicolor L.); Anderson, Ewers, and Kochler L379.

Sisyrinchium campestre Birk. — Cavanagh L380.

50. ORCHIDACEAE (Orchid Family)

†Cypripedium candidum Muhl. — Shimek 1916, 1917, and 1919, (all SUI); Anderson L382; Grant 8725.

C. calceolus L. var. pubescens (Willd.) Correll. — Shimek 1917 (SUI).

A single plant was seen by the writer in 1949.

†Habenaria viridis (L.) R. Br. — Reported by Shimek (1917a).

†H. hyperborea (L.) R. Br. — Shimek 1918 (SUI), Conard L383.

H. leucophaea (Nutt.) Gray. — Shimek 1916 (SUI).

†Liparis loeselii (L.) Rich.—Grant 8724.

†Spiranthes cernua (L.) Rich. — Reported by Anderson (1943), but possibly is based on the same species as is the next record.

*S. romansoffiana Cham. — Grant 11180.

D. DICOTYLEDONEAE: APETALAE (Mainly)

56. SALICACEAE (Willow Family)

†Populus balsamifera L. — Reported by Shimek (1917a) and Wolden (1934) as "evidently native."

P. deltoides Bartr. ex Marsh. — Conard L387. Reported by Macbride (1900) as P. monilifera Aiton.

P. tremuloides Michx. — Conard L388, Sigler 124 (ISC).

Salix amygdaloides Anders. — Shimek L391; Shimek (SUI), fide Bali (1900); P. A. Anderson (ISC), fide Pammel (1930); Conard L392; Grant 8685.
S. cordata Muhl., including S. missouriensis Bebb. — Shimek L398 (as S. discolor Muhl.), Grant 11277.

S. discolor Muhl. — Shimek (SUI), fide Ball (1900); Conard L393.

S. interior Rowlee. — Shimek L395, as S. longifolia Muhl.; Shimek (SUI), as S. fluitatilis Nutt., fide Ball (1900); Austin & Pammel (ISC) fide Pammel (1930); Conard L396, L397, Grant 8686, 11275.

*S. lucida Muhl. — Reported by Anderson in manuscript.

*S. nigra Marsh.? — Grant 11276. Shimek (1915) reported this, but only from Emmet Co.

60. JUGLANDACEAE (Walnut Family)

Carya cordiformis (Wang.) K. Koch. — Shimek L399, Anderson L400, Sigler 130 (ISC).

C. ovata (Mill.) K. Koch. — Reported by Shimek (1915) and Wolden (1934).

Juglans nigra L. — Reported by Macbride (1900) and Shimek (1915).

61. BETULACEAE (Birch Family)

Corylus americana Walt. — Reported by Macbride (1900), Shimek (1915) and Pammel (1930).

Ostrya virginiana (Mill.) K. Koch. — Conard L401, Takehara 5.

62. FAGACEAE (Oak Family)

Quercus alba L. — Reported by Shimek (1915) and Wolden (1934).

Q. borealis Michx. var. maxima (Marsh) Sarg. — Grant 11283. Reported by Macbride (1900) and Shimek (1915) as Q. rubra L.

Q. macrocarpa Michx. — Shimek L402, Conard L403, Sigler 125 (ISC).

63. ULMACEAE (Elm Family)

Celtis occidentalis L. — Conard L404, Sigler 134 (ISC).

Ulmus americana L. — Shimek L405, Conard L406.

U. fulva Michx. — Shimek L407, Conard L408; Sigler 149a (ISC), as U. rubra Muhl.

U. thomasi Sarg. — Reported by Shimek (1915) from Emmet Co., as U. racemosa Thomas, and by Macbride (1900) as "uncommon throughout our region" (Osceola and Dickinson Cos.). No positive reports from Dickinson Co.

64. MORACEAE (Mulberry Family)

CANNABIS SATIVA L. — Anderson L409.

Humulus lupulus L. — Reported by Shimek (1917a).

65. URTICACEAE (Nettle Family)

Boehmeria cylindrica (L.) Sw. — Reported by Shimek (1915).

Laportea canadensis (L.) Wedd. — Shimek L410, L411, Conard L412.

Parietaria pensylvanica Muhl. — Shimek L413, Conard L414.

Pilea pumila (L.) Gray. — Reported by Shimek (1915).

Urtica procera Muhl. — Shimek L415 (as U. gracilis Ait), Conard L416, Lohman L417, Sigler 106 (ISC).

69. SANTALACEAE (Sandalwood Family)

Comandra richardsiana Fern. — Cavanagh L419; Conard L420, as C. umbellata (L.) Nutt.; Grant 11152.
74. ARISTOLOCHIACEAE (Birthwort Family)  
*Aralum canadense* L. var. acuminatum Ashe. — Reported by Shimek (1915), but as from Emmet Co. only. No Dickinson Co. records.

77. POLYGONACEAE (Buckwheat Family)  
*Polygonum aviculare* L. — Conard L427, Sigler & Hayden 32 (ISC).  
*P. coccineum* Muhl. — Shimek L435, as *P. muhlcerifii* (Meisn.) Wats.; Conard L436; Sigler & Hayden 33 (ISC).  
*P. CONVOLVULUS* L. — Shimek L428, L429, Conard L430.  
*P. erectum* L. — Conard L431.  
†*P. HYDROPIPER* L. — Sigler 82 (ISC).  
*P. Hydroploroides* Michx. — Anderson L432.  
*P. HYDROPIPER* L. — Sigler 82 (ISC).  
*P. natans* A. Eaton. — Shimek L424, as *P. amphibimn* L.; Conard L426, as *P. a. var. hartwrightii* (Gray) Bissell; Miller L425; Sigler 36 (ISC).  
*P. pensylvanicum* L. — Shimek L440, Conard L441.  
*P. PERSICARIA* L. — Shimek L442, Conard L443, Grant 8805, 11212.  
*P. punctatum* Ell. — Shimek L421 and L422, as *P. acre* H. B. K.; Conard L423.  
*P. ramosissimum* Michx. — Shimek L445, Conard L446, Sigler & Hayden 41 (ISC).  
*P. scandens* L. — Reported by Gilman & Archer (1929) as *P. duncetum* L.  
†RUMEX ACETOSELLA L. — Reported by Pammel (1913).  
*R. altissimus* Wood. — Shimek L447, Conard L448, L449, L450, as *R. mexi-

canus* Meisn.  
*R. brittanica* L. — Reported by Shimek (1915, 1917b). (R. orbiculatus Gray.)  
†R. CRISPUS L. — Reported by Pammel (1913).  
*R. mariitimus* L. — Shimek L451 and 452, as *R. persicariooides* L.; Conard L453; Gilmore L454.

78. CHENOPODIACEAE (Goosefoot Family)  
*Chenopodium Album* L. — Conard L455, Sigler 93 (ISC).  
†C. AMBROSIOIDES L. — Shimek L456. Reported by Shimek (1915) as *C. murale* L.  
C. BOTRYS L. — Reported by Shimek (1915).  
C. gigantospermum Aellen.— Shimek L460, as *C. hybridum* L.; Conard L461;  
Sigler 122 (ISC). (C. hybridum var. Houleau.)  
*C. GLAUCUM* L. — Conard L459.  
*C. pratericola* Rydb. — Shimek L462, as *C. leptophyllum* Nutt.  
*C. rubrum* L. — Grant 11273.  
C. standleyanum Aellen. — Shimek L457, as *C. bosceanum* Moq.; Conard  
L458; Sigler 112 (ISC). (C. hybridum var. Fern.)  
C. URBICUM L. — Reported by Shimek (1915).  
*Salsola Pestifer* A. Nels. — Conard L463, as *S. kali* L. var. tenui-

folia Tausch.

79. AMARANTHACEAE (Amaranth Family)  
*Acnida altissima* Riddell — Shimek L467, as *A. tuberculata* Moq.; Conard  
L464, L465, L466.  
†AMARANTHUS ALBUS L. (A. graecizans Auth., non L.) — Conard L471, Grant 8909.
A. **GRAECIZANS** L. — Shimek L468, as *A. blitoides* S. Wats.; Conard L469.
A. **RETROFLEXUS** L. — Shimek L472, Conard L473, Sigler 107 (ISC).

80. **NYCTAGINACEAE** (Four-o’clock Family)

*Mirabilis hisuta* (Pursh) MacM. — Shimek L474, as *Oxybaphus hisutus* (Pursh) Sweet; Shimek L475, as *O. albida* (Walt.) Sweet; Conard L476; Grant 8859.

*M. nyctaginea* (Michx.) MacM. — Shimek L477, as *O. nyctagineus* (Michx.) Sweet; Conard L478; Sigler 95 (ISC).

85. **PORTULACACEAE** (Purslane Family)

†*PORTULACA OLERACEA* L. — Reported by Pammel (1913) and Anderson (1938).

87. **CARYOPHYLLACEAE** (Chickweed Family)

†*AGROSTEMMA GITAGO* L. — Reported by Pammel (1913).

*Silene antirrhina* L. — Shimek 1912, Conard 1923.

*S. NOCTIFLORA* L. — Conard 1923, Hitchings 1923.

*S. stellata* (L.) Ait. — Shimek 1909, Lohman 1925, Grant 11187, Takehara 7.

†*SAPONARIA I’ACCARIA* L. — Reported by Pammel (1913).


**E. DICOTYLEDONEAE: CHORIPETALAE** (Mainly)

88. **NYMPHAEACEAE** (Waterlily Family)

*Nymphaea tuberosa* Paine. — Reported by Shimek (1915) as *Castalia t.* (Paine) Greene. The writer has seen the plant only as an introduction.

*Nuphar advena* Ait. f. — Shimek 1912, as *Nymphaca advena* Ait.

89. **CERATOPHYLLACEAE** (Hornwort Family)

*Ceratophyllum demersum* L. — Shimek 1910, Conard 1923, Sigler 43 (ISC), Grant 8781, 11182.

91. **RANUNCULACEAE** (Buttercup Family)

*Actaea rubra* (Ait.) Willd. — Grant 11186.

*A. rubra* forma *neglecta* (Gillm.) Robins. — Reported by Shimek (1915) as *A. alba* (L.) Mill.

*Anemone canadensis* L. — Conard 1923.

*A. cylindrica* Gray. — Cavanagh 1910, Conard 1923, Grant 8739.


*A. virginiana* L. — Conard 1923.

*Aquilegia canadensis* L. — Cavanagh 1910, Conard 1923.

*Caltha palustris* L. — Conard 1923, Anderson 1935.

*Clematis virginiana* L. — Shimek 1910.

*Delphinium virescens* Nutt. — Shimek 1912 (as *D. penardi* Huth.), Cavanagh 1910, Conard 1923, Grant 8740.

†*Hepatica acutiloba* DC. — Reported by Shimek (1915), but from Emmet Co. only.

*Ranunculus abortivus* L. — Cavanagh 1910.
R. cymbalaria Pursh. — Shimek 1901, Conard 1923, Grant 8844, Takehara 6.
R. fascicularis Muhl. — Reported by Shimek (1915).
R. longirostris Godron. — Shimek 1910 (as R. cirinatus Sibth.), Conard 1923, Lohman 1925, Grant 8688.
R. pensylvanicus L. f. — Shimek 1901, 1910, Conard 1923, Lohman 1923, Grant 8849.
†R. purshii Richards. — Reported by Cratty (1933). (R. gmelini DC.)
R. sceleratus L. — Shimek 1910, Conard 1923, Sigler 3 (ISC), Grant 8687.
R. trichophyllus Chaix. var. typicus Drew. — Reported by Shimek (1915) as R. aquatilis L. var. capillaceus DC.

Thalictrum dasycarpum Fisch. & Lall. — Shimek 1910, 1912, Conard 1923 (as T. polygamum Muhl.), Grant 8705.
T. dioicum L. — Shimek 1909.

93. BERBERIDACEAE (Barberry Family)
Caulophyllum thalictroides (L.) Michx. — Reported by Shimek (1915).

94. MENISPERMACEAE (Moonseed Family)
Menispermum canadense L. — Shimek 1911, Conard 1923.

104. PAPAVERACEAE (Poppy Family)
Sanguinaria canadensis L. — Reported by Shimek (1915).

104a. FUMARIACEAE (Fumitory Family)
Corydalis micrantha (Engelm.) Gray — Shimek 1912, Conard 1923.
Dickatra cucullaria (L.) Bernh. — Reported by Shimek (1915).

105. CRUCIFERAE (Mustard Family)
Arabis perstellata E. L. Br. var. shortii Fern. Shimek 1912, as A. dentata T. & G.
A. pycnocarpa Hopkins. — Grant 11156. Reported by Shimek (1915, 1917b) as A. hirsuta (L.) Scop. (A. hirsuta var. Rollins.)
†BARBAREA VULGARIS R. Br. — Reported by Pammel (1913).
*BERTEROA INCANA (L.) DC. — Hitchings 1923, Jaques 1926.
†BRASSICA JUNCEA (L.) Cosson. — Conard 1923.
B. KABER (DC.) Wheeler. — Conard 1923, as B. arvensis (L.) Ktze.
B. NIGRA (L.) Koch. — Shimek 1910.
CAMELINA MICROCARPA Andrz. — Conard 1923. Reported by Pammel (1913) and Shimek (1915) as C. sativa (L.) Crantz.
CAPSELLA BURSA-PASTORIS (L.) Medic. — Shimek 1911, Conard 1923.

Cardamine bulbosa (Schreb.) B. S. P. — Anderson 1935.
Dentaria laciniata Muhl. — Reported by Shimek (1915).
Descurainia pinnata (Walt.) Britt. var. brachycarpa (Richards) Fern. — Shimek 1912, as Sisymbrium canescens Nutt. and var. brachycarpa (Richards) Wats.
†Draba reptans (Lam.) Fern. var. micrantha (Nutt.) Fern. — Fitzpatrick (ISC 89808), fide Hayden (1945). Listed as D. caroliniana Walt. in Cratty (1933).
ERYSIMUM CHEIRANTHOIDES L. — Shimek 1910, Conard 1923, Lohman 1925, Grant 11215.
*LEPIDIUM CAMPESTRE (L.) R. Br. — Anderson 1942.
L. DENSIFLORUM Schrad. — Shimek 1909 (as L. apetalum Willd.), Conard 1923.
†L. virginicum L. — Reported by Pammel (1913).
†RADIICULA ARMORACIA (L.) Robins. — Reported by Pammel (1913),
but, through a mixture of the maps, not cited for Dickinson Co. in the
second edition (1926). (Armoracia lapathifolia Gilib.)
Rorippa islandica (Oeder ex Murr.) Borbas. — Shimek 1910,
as Radicula palustris (L.) Moench.; Conard 1923, Lohman 1925, Grant 8892.
R. islandica var. hispida (Desv.) Butters & Abbe. — Shimek 1911, Conard 1923, Grant 8848.
SISYMBRIUM ALTISSIMUM L. — Shimek 1910, Conard 1923.
S. OFFICINALE (L.) Scop. — Shimek 1901, Conard 1923, Grant 8842.
*THLASPI ARVENSE L. — Anderson 1942.

107. CAPPARIDACEAE (Caper Family)
P. trachysperma T. & G. — Shimek 1901, Conard 1923, Grant 8979, 11246.

115. CRASSULACEAE (Stonecrop Family)
Penthorum sedoides L. — Shimek 1896, Grant 8857.

117. SAXIFRAGACEAE (Saxifrage Family)
Heuchera richardsonii R. Br. var. grayana Ros., But., Lak. — Cavanagh 1910, as H. hispida Pursh; Conard 1923, Grant 8748.
Parnassia glauca Raf. — Shimek 1909, as P. caroliniana Michx.; Grant 8949.
Ribes americanum Mill. — Shimek 1911, 1912, as R. floridum L’Her.; Grant 8818.
†R. cynosbati L. — Sigler 135 (ISC).
R. missouriense Nutt. — Anderson 1932, as R. gracile Michx.

126. ROSACEAE (Rose Family)
Agrimonia gryposepala Wallr. — Conard 1923.
A. striata Michx. — Shimek 1910.
Amelanchier arborea (Michx. f.) Fern. — Shimek 1910, 1912, and 1913, as
A. spicata (Tam.) C. Koch and A. canadensis (L.) Medic.
Crataegus calpodendron (Ehrh.) Medic. — Shimek 1910, as C. tomentosa L.
†C. chrysocarpa Ashe. — Possibly this is the basis of the “C. coccinea L.” of
Macbride (1900).
C. margaretta Ashe. — Reported by Shimek (1915).
C. mollis (T. & G.) Scheele. — Shimek 1901, Conard 1923, Sigler 129 (ISC).
C. punctata Jacq. — Reported by Shimek (1915) and Pammel (1930).
C. succulenta Link. — Conard 1923. Reported by Shimek (1915) as C. macro-
cantha Lodd.
Fragaria vesca L. var. americana Porter. — Cavanagh 1910, Conard 1923.
F. virginiana Duch. — Cavanagh 1910.
F. virginiana var. illinoensis (Prince) Gray. — Reported by Shimek (1915).
Genus aleppicum Jacq. var. strictum (Ait.) Fern. — Conard 1923. Reported
by Shimek as G. macropyllum Willd. (1915) and as G. strictum Ait.
(1917).
G. canadense Jacq., including G. album Gmelin. — Shimek 1910, Conard 1923.

G. laciniatum Murr. — Reported by Shimek (1915) as G. virginianum L.

†Malus iowensis (Wood) Britt. — Reported by Macbride (1900) as Pyrus coronaria L. [P. iowensis (Wood) Bailey.]

*M. PUMILA Mill. — Reported as an escape by A. P. Kelley in manuscript.

†Potentilla anserina L. — Reported by Anderson (1943).

P. arguta Pursh. — Shimek 1912, Grant 8734.

P. non:egica L. — Shimek 1910 and 1911 as P. monspeliensis L., Conard 1923.

P. parado:rn Nutt. — Shimek 1910, Conard 1923, Sigler & Hayden 45 (ISC).

P. rir11ia11a L. — Shimek 1912, 1913, Conard 1923, Sigler 149 (ISC), Grant 8804.

Rosa arkansana Port. & Coult. — Shimek 1912 (as R. pratincola Greene), Conard 1923. Reported by Anderson (1943) as R. suffulta Greene.

R. blanda Ait. — Shimek 1909, Sigler 108 (ISC).

R. woodsii Lindl. — Reported by Shimek (1915).

Rubus occidenta!is L. — Shimek 1912, 1913, Conard 1923, Sigler 114 (ISC), Grant 8804.

*Spiraea alba DuRoi. — Reported by Shimek (1915) as S. salicifolia L.

128. LEGUMINOSAE (Bean Family)

Amorpha canescens Pursh. — Shimek 1912, Conard 1923, Grant 8828.

A. fruticosa L. var. angustifolia Pursh. — Shimek 1909, Conard 1923, Grant 8836.

A. nana Nutt. — Reported by Shimek (1915) as A. microphylla Pursh.

Amphicarpa bracteata (L.) Fern. — Reported by Shimek (1915) as A. monoica (L.) Ell.

A. bracteata var. comosa (L.) Fern. — Shimek 1909, as A. pitcheri T. & G.; Conard 1923, Grant 8874.

†Apios americana Medic. — Reinke 1932. Reported by Shimek (1917a) as A. tuberosa Moench.

Astragalus canadensis L. — Shimek 1910, Conard 1923, Grant 8823.

A. caryocarpus Ker. — Cavanagh 1910, Conard 1923, Anderson 1935, Grant 11145.

†A. goniatus Nutt. — Grant 11146, 11175. Reported by Anderson (1938) as A. hypoglottis L., but is A. hypoglottis Richards., non L.

Baptisia leucantha T. & G. — Reported by Shimek (1915).

†B. leucophaca Nutt. — Reported by Pammel (1930) as B. bracteata (Muhl.) Ell.

*Cassia fasciculata Michx. — Fox 1941.

Dalea alopecuroides Willd. — Shimek 1909, as D. enneandra Nutt.

Desmanthus illinoensis (Michx.) MacM. — Shimek 1899, 1909. Reported by Pammel (1896) as D. brachylobus Benth.

Desmodium canadense (L.) DC. — Shimek 1910, Conard 1923, Grant 11171.

D. glutinosum (Muhl. ex Willd.) Wood. — Shimek 1910, as D. grandiflorum (Walt.) DC.; Conard 1923.
D. illinoense Gray — Reported by Shimek (1915, 1917b).

Glycyrrhiza lepidota (Nutt.) Pursh. — Shimek 1910, 1912, Conard 1923, Grant 8889.

Glycyrrhiza lepidota (Nutt.) Pursh. — Shimek 1910, 1912, Conard 1923, Grant 8889.

Gymnocladus dioica (L.) Koch. — Reported by Shimek (1915).

Lathyrus palustris L. — Brooks 1940, Grant 8696.


Lespedeza capitata Michx. — Shimek 1910, 1910, Conard 1923.

Lespedeza capitata Michx. — Shimek 1910, 1910, Conard 1923.

Lespedeza capitata Michx. — Shimek 1910, 1910, Conard 1923.

Lespedeza capitata Michx. — Shimek 1910, 1910, Conard 1923.

Lespedeza capitata Michx. — Shimek 1910, 1910, Conard 1923.

Lespedeza capitata Michx. — Shimek 1910, 1910, Conard 1923.

Lespedeza capitata Michx. — Shimek 1910, 1910, Conard 1923.

Lespedeza capitata Michx. — Shimek 1910, 1910, Conard 1923.

Lespedeza capitata Michx. — Shimek 1910, 1910, Conard 1923.

Lespedeza capitata Michx. — Shimek 1910, 1910, Conard 1923.

Lespedeza capitata Michx. — Shimek 1910, 1910, Conard 1923.

Lespedeza capitata Michx. — Shimek 1910, 1910, Conard 1923.

Lespedeza capitata Michx. — Shimek 1910, 1910, Conard 1923.

Lespedeza capitata Michx. — Shimek 1910, 1910, Conard 1923.

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Lespedeza capitata Michx. — Shimek 1910, 1910, Conard 1923.

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Lespedeza capitata Michx. — Shimek 1910, 1910, Conard 1923.

Lespedeza capitata Michx. — Shimek 1910, 1910, Conard 1923.

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Lespedeza capitata Michx. — Shimek 1910, 1910, Conard 1923.

Lespedeza capitata Michx. — Shimek 1910, 1910, Conard 1923.

Lespedeza capitata Michx. — Shimek 1910, 1910, Conard 1923.

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Lespedeza capitata Michx. — Shimek 1910, 1910, Conard 1923.

Lespedeza capitata Michx. — Shimek 1910, 1910, Conard 1923.

Lespedeza capitata Michx. — Shimek 1910, 1910, Conard 1923.

Lespedeza capitata Michx. — Shimek 1910, 1910, Conard 1923.

Lespedeza capitata Michx. — Shimek 1910, 1910, Conard 1923.

Lespedeza capitata Michx. — Shimek 1910, 1910, Conard 1923.
†E. glyptosperma Engelm. (Chamaesyce Small). — Shimek 1909, Conard 1923.

E. heterophylla L. (Poinsettia Kl. & Garcke). — Shimek 1911, Sigler 120 (ISC).

E. maculata L. (Chamaesyce Small). — Shimek 1909, as E. preslii Guss; Conard 1923. Probably includes E. preslii.

†E. MARGINATA Pursh. (Dichrophyllum Kl. & Garcke). — Reported by Pammel (1913); probably an escape, though not so listed.

E. preslii Guss. (Chamaesyce Arthur). — Sigler 77, as E. nutans Lag. (ISC). Reported by Shimek (1915) as E. maculata L.

*S. polygonifolia L. (Chamaesyce Small). — Reported by Gilman & Archer (1929), but probably an error in identification, since this Coastal Plain species is otherwise unknown in Iowa.


148. CALLITRICHACEAE (Water-starwort Family)

Callitriche palustris L. — Reported by Shimek (1915).

153. ANACARDIACEAE (Cashew Family)

Rhus glabra L. — Shimek 1911, Conard 1923.

R. toxicodendron L. — Shimek 1912, Conard 1923. (R. radicans L.)

158. CELASTRACEAE (Staff-tree Family)

Celastrus scandens L. — Reported by Shimek (1915).

†Euonymus atropurpureus Jacq. — Sigler 131 (ISC).

163. ACERACEAE (Maple Family)

Acer negundo L. — Conard 1923, Sigler 85 (ISC).

A. saccharinum L. — Reported by Macbride (1900) as “probably native.” Reported by Shimek (1915), but for Emmet Co. only. Status doubtful.

A. saccharum Marsh. — Reported by Shimek (1915).

A. saccharum var. nigrum (Michx.) Britt. — Reported by Shimek (1915).

168. BALSAMINACEAE (Touch-me-not Family)

Impatiens capensis Meerb. — Shimek 1909, as I. biflora Walt.; Conard 1923.

I. pallida Nutt. — Shimek 1910, 1910, Grant 8869.

169. RHAMNACEAE (Buckthorn Family)

Ceanothus americanus L. — Shimek 1909, Conard 1923.

†C. ovatus Desf. — Reported by Shimek (1917a).

*RHAMNUS CATHARTICA L. — Reported by W. A. Anderson in manuscript.

170. VITACEAE (Grape Family)

Parthenocissus quinquefolia (L.) Planch. — Shimek 1909, Conard 1923. Also P. inserta (Kern.) K. Fritsch is to be expected, but no specimens are available.

Vitis riparia Michx. — Shimek 1911, as V. vulpina L.; Conard 1923.

174. TILIACEAE (Basswood Family)

Tilia americana L. — Shimek 1909, Conard 1923, Sigler 133 (ISC), Takehara 8.

175. MALVACEAE (Mallow Family)

†ABUTILON THEOPHRasti Medic. — Reported by Pammel (1913).
HIBISCUS TRIONUM L. — Conard 1923.
*MALVA NEGLECTA* Wallr. — Conard 1923, as *M. rotundifolia* L.

187a. HYPERICACEAE (St. John’s-wort Family)

*Hypericum majus* (Gray) Britt. — Reported by Shimek (1915).

*Hypericum sphaerocarpum* Michx. — Reported by Shimek (1915), as *H. cistifolium* Lam.

*Hypericum virginicum* L. — Shimek 1910, Grant 8901.

193. CISTACEAE (Rockrose Family)

†*Helianthemum bicknellii* Fern. — Reported by Shimek (1917a) as *H. majus* B. S. P.

198. VIOLACEAE (Violet Family)

*Viola pensylvanica* Michx. var. *leiocarpa* (Fern. & Wieg.) Fern. — Reported by Shimek (1915) as *V. scabriuscula* Schwein.

†*V. nephrophylla* Greene. — Reported by Anderson (1943).

*V. pedatifida* Don. — Cavanagh 1910; Shimek 1912 as *V. palmata* L.

*V. pubescens* Ait. — Reported by Shimek (1915).

*V. septentronics* Greene. — Cavanagh 1910, as *V. cucullata* Ait.

*V. sororia* Willd. — Cavanagh 1910, 1911.

215. ELAEAGNACEAE (Oleaster Family)

†*ELAEAGNUS ANGUSTIFOLIA* L. — Reported by Cratty (1933).

216. LYTHRACEAE (Loosestrife Family)

*Lythrum alatum* Pursh. — Shimek 1910, Conard 1923, Grant 8982.

224. ONAGRACEAE (Evening-primrose Family)

*Circaea latifolia* Hill. — Conard 1923, Grant 8853. Reported by Shimek (1915) as *C. lutea* L.

†*Epidobium coloratum* Biehler. — Shimek 1910.

†*E. leptophyllum* Raf. — Grant 11280. (*E. densum* Raf.)

*E. glandulosum* Lehm. var. *adenocaulon* (Haussk.) Fern. — Conard 1923, Grant 8863.

*Ludwigia polycarpa* Short & Peter. — Shimek 1910.

*Oenothera biennis* L. — Reported by Pammel (1913), Gilman & Archer (1929), Anderson (1938).

†*O. parviflora* L. — Shimek 1909, as *O. biennis* L.; Conard 1923.

*O. serrulata* Nutt. — Conard 1923, Grant 8744.

225. HALORAGACEAE (Water-milfoil Family)

†*Hippurus vulgaris* L. — Grant 8845.

*Myriophyllum extrabascens* Fern. — Shimek 1910 (as *M. spicatum* L.), Conard 1923, Gilmore 1925, Sigler 28 (ISC), Grant 8777.

227. ARALIACEAE (Ginseng Family)

$Aralia nudicaulis$ L. — Reported by Shimek (1915), but from Emmet Co. only.

*A. racemosa* L. — Shimek, 1910.

228. UMBELLIFERAE (Umbel Family)


*Cicuta bulbifera* L. — Shimek 1910.

*C. maculata* L. — Shimek 1909, Conard 1923.
Cryptotaenia canadensis (L.) DC. — Shimek 1912, Conard 1923.

*DAUCUS CAROTA* L. — Reported by A. P. Kelley in manuscript.

Eryngium yuccifolium Michx. — Shimek 1912.

Heracleum maximum Bartr. — Shimek 1909, Conard 1923. (*H. lanatum* Michx.)

Osmorhiza claytoni (Michx.) Clarke. — Shimek 1912, Conard 1923.

O. longistylis (Torr.) DC. — Shimek 1912.

O. longistylis var. villicaulis Fern. — Reported by Shimek (1915) and Murley (1946).

PASTINACA SATIVA L. — Shimek 1910, Conard 1923.

Sanicula canadensis L. — Anderson 1941, Grant 1921.

S. gregaria Bickn. — Shimek 1911, as *S. marilandica* L.; Grant 11173.

S. marilandica L. — Conard 1923.

Sium suave Walt. — Shimek 1910, 1912, as *S. cicutaefolium* Schrank; Sigler & Hayden 43 (ISC).

Taenidia intcgerrima (L.) Drude. — Shimek 1912, Grant 11120.

Thaspium barbinode (Michx.) Nutt. — Shimek 1911, 1912, as *T. aureum* Nutt.; Conard 1923, Grant 11165.

Zizia aurea (L.) Koch. — Cavanagh 1910, Conard 1923, Anderson 1932, Grant 8735.

*Z. aptera* (Gray) Fern. (*Z. cordata* (Walt.) DC.). — Grant 8736.

CORNACEAE (Dogwood Family)

Cornus alternifolia L. f. — Reported by Shimek (1915).

C. obliqua Raf. — Shimek 1912 (as *C. amomum* Mill.), Grant 8819.

C. racemosa Lam. — Holmes 1933, Grant 8718, 8959. Reported by Shimek (1915) as *C. paniculata* L'Her.

C. stolonifera Michx. — Reported by Macbride (1900) and Shimek (1915).

F. DICOTYLEDONEAE: SYMPETALAE

233. ERICACEAE (Health Family)

Monotropa uniflora L. — Reported by Shimek (1915).

237. PRIMULACEAE (Primrose Family)

Lysimachia ciliata L. — Shimek 1912, as *Steironema c.* (L.) Raf.; Lohman 1925.

†L. *hybrida* Michx. — Reported by Goodman and Leyendecker (1943).

L. *quadrijlorum* Sims. — Conard 1923, Grant 11179. Reported by Shimek (1915) as *Steironema quadrijlorum* (Sims) Hitchc., by Pammel (1930) as *S. quadrijlorum* (Sims) Hitchc., and by Anderson (1943) as *Lysimachia longifolia* Pursh.

†L. *thrysiflora* L. — Anderson 1915, Grant 11244.

243. OLEACEAE (Olive Family)

*Fraxinus americana* L. — Reported by Macbride (1900) as “Common everywhere” (in Dickinson Co.), but his failure to mention the following is assurance it was a misidentification.

F. *pennsylvanica* Marsh. and vars. *subintegerrima* (Vahl) Fern. and *austini* Fern. — Shimek 1911, Sigler 123 (ISC), Grant 11164.

246. GENTIANACEAE (Gentian Family)

†Gentiana andrewsii Griseb. — Holmes 1933.

†G. *crinita* Froel. — Reported by Shimek (1917a).
GRANT: DICKINSON COUNTY FLORA (A PRELIMINARY CHECK-LIST OF THE VASCULAR PLANTS OF DICKINSON COUNTY, IOWA, BY RICHARD E. SHIMEK, 1950)

DICKINSON COUNTY FLORA

†G. procera Holm. — Holmes 1933, Grant 11279.
G. puberula Michx. — Miller 1933.

247. APOCYNACEAE (Dogbane Family)

Apocynum androsaemifolium L. — Shimek 1911.
A. cannabinum L. — Shimek 1909, Conard 1923.
A. cannabinum var. glaberrimum A. DC. — Reported by Murley (1947).
A. sibiricum Jacq. — Shimek 1910, 1911, 1912, as A. cannabinum var. hypericifolium (Ait.) Gray; Conard 1923.
A. sibiricum var. cordigerum (Greene) Fern. — Reported by Murley (1947).

248. ASCLEPIADACEAE (Milkweed Family)

Acerates lanuginosa (Nutt.) Dcne. — Reported by Shimek (1915).
A. viridiflora (Raf.) Eaton. — Shimek 1912, 1912, Conard 1923, Grant 8741, 8742. The varieties of this based on leaf shape are not recognizable, since two or more of them may occur on the same plant. (Asclepias Raf.)
Asclepias incarnata L. — Conard 1923, Grant 8875, 8876.
A. ovalifolia Dcne. — Anderson 1935.
†A. speciosa Torr. — Reported by Pammel (1913, 1930).
A. sullivantii Engelm. — Shimek 1911.
A. syriaca L. — Conard 1923, Sigler 79 (ISC).
A. tuberosa L. — Shimek 1910, Conard 1923, Grant 8714.
A. verticillata L. — Shimek 1910, Conard 1923, Grant 8878, Takehara 9.

249. CONVOLVULACEAE (Morning-glory Family)

*CONVOLVULUS ARVENSIS L. — Conard 1923.
C. sepium L. — Shimek 1910, Conard 1923.
Cuscuta cephalanthi Engelm. — Shimek 1901, Conard 1923.
C. glomerata Choisy. — Shimek 1901, Sloan 1923, Grant 11218, Takehara 11.
†C. gronovii Willd. — Conard 1923.
†C. pentagona Engelm. — Conard 1923. Reported by Pammel (1913) as C. arvensis Beyrich.
C. polygonorum Engelm. — Shimek 1910 (as C. obtusiflora H. B. K.), Conard 1923, Lohman 1925, Grant 8856.

250. POLEMONIACEAE (Phlox Family)

†Gilia linearis (Nutt.) Gray. — Conard 1923. (Collomia Nutt.)
Phlox divaricata L. — Reported by Shimek (1915).
P. pilosa L. — Shimek 1910, Conard 1923, Grant 8703, 11148, 11149. Includes pink-flowered and white-flowered forms.
Polemonium reptans L. — Reported by Shimek (1915).

251. HYDROPHYLLACEAE (Waterleaf Family)

Ellisia nyctelea L. — Shimek 1912, Conard 1923, Grant 8695.
Hydrophyllum virginianum L. — Shimek 1912.

252. BORAGINACEAE (Borage Family)

†CYNOGLOSSUM OFFICINALE L. — Reported by Pammel (1913), as C. virginianum L., but no specimens available according to Gilly and O’Brien (1949).
Hackelia americana (Gray) Fern. — Shimek 1896 (SUI), and McDonald 3607 (P), according to Gilly and O’Brien (1949); Shimek 1912, as Lappula deflexa (Wahlenb.) Garcke var. americana (Gray) Greene.

Published by UNI ScholarWorks, 1950
H. virginiana (L.) Johnston.—Shimek 1911, as Lappula v. (L.) Greene; Conard 1923; Grant 8941.

LAPPULA ECHINATA Gilib.—Conard 1923.

L. REDOWSKII (Hornem.) Greene var. OCCIDENTALIS (Wats.) Rydb. — Reported by Shimek (1915, 1917b).

Lithospermum canescens (Michx.) Lehmann.—Cavanagh 1910, Conard 1923.

L. incisum Lehmann.—Cavanagh 1910 (as L. angustifolium Michx.), Grant 8879, 11155.

Onosmodium occidentale Mack.—Shimek 1909, Cavanagh 1910, Conard 1923.

SYMPHYTUM OFFICINALE L.—Sargent 1928 (G), the only specimen known from Iowa, according to Gilly and O’Brian (1949).

253. VERBENACEAE (Verbena Family)

†Verbena bracteata Lag. & Rodri.—Conard 1923, as V. bractcosa Michx.; Grant 8942.

V. hastata L.—Shimek 1909, Conard 1923, Grant 11207.

V. stricta var. —Shimek 1909, Conard 1923, Grant 8893. Also with white-flowered and pink-flowered forms.

V. urticifolia L.—Shimek 1909, Conard 1923, Sigler 140 (ISC), Grant 8847.

254. LABIATAE (Mint Family)

Agastache foeniculum (Pursh.) Ktze.—Shimek 1911, Conard 1923.

†A. nepetoides (L.) Ktze.—Reported by Pammel (1930).

A. scrophulariaefolia (Willd.) Ktze.—Shimek 1909.

Dracocephalum parviflorum Nutt.—Shimek 1911.

GLECHOMA HEDERACEA L.—Reported by Pammel (1913) and Shimek (1915) as Nepeta h. (L.) Trev.

Hedeoma hispida Pursh.—Shimek 1912.

LEONURUS CARDIACA L.—Shimek 1912, Conard 1923.

Lycopus americanus Muhl.—Shimek 1911, Sigler & Hayden 46 (ISC), Grant 8851.

L. asper Greene.—Shimek 1910, 1912, as L. lucidus Turcz. var. americanus Gray; Sigler and Hayden 47 (ISC), Grant 8729, 8850.

L. rubellus Moench.—Grant 8864, 8957.

*L. uniflorus Michx.—Conard 1923, 1923. Reported by Shimek (1915) as L. virginicus L.

Mentha arvensis L. var. violosa (Benth.) Steward.—Shimek 1912, Grant 8830.

Monarda fistulosa L.—Shimek 1912.

M. mollis L.—Shimek 1909, Conard 1923. Bass (1944) maintains these two species.

Nepeta CATARIA L.—Shimek 1910, Conard 1923.

*Physostegia virginiana (L.) Benth. var. speciosa (Sweet) Gray.—Miller 1933, Grant 8967. Reported by Shimek (1915) as P. parviflora Nutt.

†Prunella vulgaris L.—Reported by Pammel (1913).

Pycnanthemum tenuifolium Schrad.—Shimek 1910, as P. flexuosum (Walt.) B. S. P.

P. virginianum (L.) Dur. & Jack.—Conard 1923, Grant 8815. Reported by Pammel (1896) as P. lanceolatum Pursh.

†Salvia azurea Lam. var. grandiflora Bentham. (S. pitcheri Torr.).—Reported by Bass (1944).

†S. reflexa Hornem.—Conard 1923, Grant 8943.
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S. SYLVESTRIS L. — Reported by Cratty (1933) and Bass (1944).

Scutellaria epilobiifolia Hamilton. — Shimek 1910, 1911, Conard 1923, as S. galericulata L.

S. lateriflora L. — Anderson 1932.

S. leonardi Epling. — Shimek 1910, as S. parvula Michx. var. ambigna (Nutt.) Fern.; Anderson 1935, as S. nervosa Pursh.; Grant 8747, 8900.

S. parvula Michx. — Reported by Shimek (1915).

Stachys palustris L. — Shimek 1911.

Teucrium canadense L. — Conard 1923.

T. occidentale Gray. — Shimek 1910, 1911, Grant 8877.

T. occidentale var. boreale (Bickn.) Fern. — Reported by Bass (1944).

Trichostema urachiatum L. — Shimek 1901, as Isanthus brachiatus (L.) B. S. P.

256. SOLANACEAE (Nightshade Family)

†DATURA TATULA L. — Reported by Pammel (1913).

‡Physalis heterophylla Nees. — Shimek 1912 (as P. pruinosa L.), Conard 1923, Grant 8690.

‡P. IIXOCARP A Broi. — Conard 1923.

P. PUBESCENS L. — Conard 1923.

‡P. virginiana Mill. — Shimek 1911, Conard 1923.

‡SOLANUM DUALAMARA L. — Conard 1923.

S. NIGRUM L. — Shimek 1909, Conard 1923.

S. ROSTRATUM Dunal. — Shimek 1911, Conard 1923, Lohman 1925.

257. SCROPHULARIACEAE (Snapdragon Family)

Castilleja sessiliflora Pursh. — Cavanagh 1910, Conard 1923, Grant 11153.

†Gerardia auriculata Michx. — Miller 1933.

G. aspera Doug. — Shimek 1909, Grant 8970.

‡G. purpurea L. — Anderson 1932, Grant 11278.


LINARIA VULGARIS Hill. — Shimek 1901.

Lindernia dubia (L.) Pennell var. typica Pennell. — Grant 8832. Reported by Shimek (1915) as Ilysanthcs d. (L.) Barnh.

Minulus ringens L. — Shimek 1910, Conard 1923, Grant 8837.


†PENSTEMON DIGITALIS Nutt. — Conard 1923, as P. laevigatus Ait.

P. grandiflorus Nutt. — Shimek 1913, Anderson 1935.

Scrophularia lanceolata Pursh. — Shimek 1909 (as S. leporella Bickn.), Conard 1923, Grant 11172.

S. marilandica L. — Shimek 1910, 1911.

†VERBASCUM THAPSUS L. — Miller 1933, Sigler 147 (ISC), Takehara 13.

Veronica comosa Richter. — Conard 1923, Grant 8862. Reported by Shimek (1915) as V. anagallis-aquatica L.

Veronicastrum virginicum (L.) Pennell. — Shimek 1909 (as Veronica virginica L.), Conard 1923, Grant 8827.

260. MARTYNIACEAE (Unicorn-plant Family)

MARTYNA LOUISIANA Mill. — Reported by Shimek (1915).
261. OROBANCHACEAE (Broom-rape Family)
†Orobanche fasciculata Nutt. — Collected by Hitchcock, according to Cratty (1933).
O. uniflora L. — Cavanagh 1910.

264. UTRICULARIACEAE (Bladderwort Family)
*Utricularia minor L. — Rogers 1932.
U. vulgaris L. var. americana Gray. — Conard 1923, Sawyer 1926, Miller 1933, Sigler 1 (ISC), Grant 8701. Reported by Anderson (1943) as U. macrorhiza LeConte.

268. PHRYMACEAE (Lopseed Family)
Phryna leptostachya L. — Shimek 1912, Conard 1923, Takehara 10.

269. PLANTAGINACEAE (Plantain Family)
†PLANTAGO MAJOR L. — Reported by Pammel (1913).
P. rugelii DC. — Conard 1923.

270. RUBIACEAE (Madder Family)
*Cephalanthus occidentalis L. — Grant 8826.
Galium aparine L. — Conard 1923.
G. boreale L. — Cavanagh 1910, Conard 1923.
$G. latifolium Michx. — Reported by Shimek (1915), but this is an Appalachian species, otherwise unknown in Iowa.
G. obtusum Bigel. — Conard 1923. Reported by Shimek (1915) as G. tinctorum L.
$G. palustris L. — Reported by Shimek (1917a), but this is an eastern species, occurring west to Michigan, and otherwise unknown in Iowa.
G. tinctorum L. — Reported by Shimek (1915) as G. claytoni Michx.
G. trifidum L. — Conard 1923.
G. triflorum Michx. — Conard 1923.

271. CAPRIFOLIACEAE (Honeysuckle Family)
Lonicera dioica L. — Shimek 1912.
L. SEMPERVIRENS L. — Shimek 1912.
Sambucus canadensis L. — Shimek 1910, Conard 1923, Sigler 149b (ISC).
Symphoricarpos occidentalis Hook. — Shimek 1909, Conard 1923, Sigler 105 (ISC).
S. orbiculatus Moench. — Reported by Shimek (1915).
Triosteum perlomatium L. — Reported by Shimek (1915).
Viburnum lentago L. — Shimek 1910, Conard 1923, Grant 8947.
V. prunifolium L. — Reported by Shimek (1915).
†V. rafinesquianum Schult. — Reported by Shimek (1917a) as V. pubescens (Ait.) Pursh.

275. CUCURBITACEAE (Gourd Family)
Echinocystis lobata (Michx.) T. & G. — Shimek 1909, Conard 1923.
Sicyos angulatus L. — Sigler 119 (ISC).

276. CAMPANULACEAE (Bluebell Family)
Campanula americana L. — Miller 1933, Grant 11185.
C. aparinooides Pursh. — Reported by Shimek (1915).
*C. RAPUNCULOIDES L. — Holmes 1933 (as C. rotundifolia L.), Grant 11167.
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†Lobelia kalnii L. — Anderson 1932, Grant 8944.
L. siphilitica L. — Shimek 1909, Conard 1923, Sigler & Hayden 44 (ISC).
L. spicata Lam. var. hirtella Gray. — Shimek 1910.
L. spicata var. leptostachys (A. DC.) Mack. & Bush. — Shimek 1912, Conard 1923, Grant 8899, 11150.

280. COMPOSITAE (Composite Family)

Achillea lanulosa Nutt. — Shimek 1909 (including A. millefolium Iowa authors), Conard 1923.
Ambrosia coronopifolia T. & G. — Shimek 1910 (as A. psilostachya DC.), Conard 1923, Grant 8886.
A. elatior L. — Shimek 1909 (as A. artemisiifolia L.), Conard 1923.
#Antennaria campestris Rydb. — Reported by Shimek (1915) as questionable.
A. neodioica Greene. — Reported by Shimek (1915).
A. plantaginifolia (L.) Hook. — Reported by Shimek (1915).
ANTHEMIS COTULA L. — Conard 1923, Grant 8843.
ARCTIUM MINUS (Hill) Bernh. — Shimek 1910, Conard 1923. Reported by Pammel (1913) as A. lappa L.
ARTEMISIA BIENNIS Willd. — Reported by Pammel (1913), Shimek (1915), Gilman & Archer (1929).
A. caudata Michx. — Shimek 1909, Conard 1923, Sigler 78 (ISC).
A. glauca Pall. — Shimek 1909, as A. dracunculoides Pursh.
A. serrata Nutt. — Shimek 1909, Conard 1923.
A. ludoviciana Nutt. — Conard 1923. Reported by Shimek (1915, 1917b). No specimens are available of the var. gnaphalodes (Nutt.) T. & G.
†Aster concinnus Willd. — Reported by Kellogg (1948).
A. cordifolius L. — Shimek 1901, Conard 1923, Sigler 143 (ISC, as A. finkii Rydb. var. moratus Shinners.)
A. ericoides L. — Shimek 1909, as A. multiflorus Ait.
A. ericoides forma caeruleus (Benke) Blake. — Reported by Kellogg (1948).
A. ericoides forma grandis Benke. — Reported by Kellogg (1948).
A. ericoides forma prostratus (Ktze.) Fern. (A. exigus Rydb.) — Reported by Kellogg (1948).
A. laevis L. — Shimek 1909.
†A. lateriflorus (L.) Britt. — Reported by Pammel (1930); not confirmed by Kellogg (1948).
A. lucidulus (Gray) Wieg. — Shimek 1911, as A. puniceus L. var. lucidulus Gray.
A. novae-angliae L. — Reported by Shimek (1915, 1917b) and Anderson (1943).
A. oblongifolius Nutt. — Shimek 1909.
A. paniculatus Lam. — Sigler 137 (ISC).
A. paniculatus var. simplex (Willd.) Burgess. — Reported by Kellogg (1948).
A. pilosus Willd. — Reported by Shimek (1915) and Wolden (1934) as A. ericoides L.
†A. praecaltus Poir. — Reported by Pammel (1913), as A. solicifolius Ait.
†A. premnathoides Muhl. ex Willd. — Reported by Pammel (1930), but not confirmed by Kellogg (1948).

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A. ptarmicoides (Nees) T. & G. — Shimek 1909, Grant 8880.
†A. puniceus L. — Reported by Anderson (1943).
A. sagittifolius Wedem. — Reported by Shimek (1915), Pammel (1930), and Wolden (1934).
A. sagittifolius var. drummondii (Lindl.) Shinners.—Conard 1923. Reported by Shimek (1915) and Wolden (1934) as A. drummondii Lindl.
A. sericeus Vent. — Shimek 1909.
A. umbellatus Mill. — Shimek 1909.
A. umbellatus var. pubens Gray. — Miller 1933.
†Bidens aristosa (Michx.) Britt. — Reported by Johns (1935).
B. beckii Torr. — Shimek 1912, Sloan 1923. (Megalodonta Greene.)
B. cernua L. — Shimek 1911, Sigler 65 (ISC).
B. frondosa L. — Shimek 1911, Lohman 1925, Sigler & Hayden 48 (ISC).
†B. laevis (L.) B.S.P. — Reported by Shimek (1917a).
B. vulgata Greene. — Shimek 1912.
B. vulgata var. tuberula (Wieg.) Greene. — Reported by Shimek (1915, 1917b).
Boltonia asteroides (L.) L'Her. var. recognita (Fern. & Griscom) Cronq. (B. latisquama var. Fern. & Griscom.) — Shimek 1910, Conard 1923.
Cacalia tuberosa Nutt. — Shimek 1910.
CARDUUS ACANTHOIDES L. — Anderson 2022, Grant 11205.
C. NUTANS L. — Reported by Anderson (1949).
Cirsium altissimum (L.) Spreng. [Including C. iowensis (Pammel) Fern. and its var. Crattyi Pammel.]. — Shimek 1901, Grant 8913.
C. ARVENSE (L.) Scop. — Shimek 1910, Lohman 1925.
C. discolor (Muhl.) Spreng. — Shimek 1909; Conard 1923, as C. altissimum (L.) Spreng.; Grant 8870.
C. fodorani (Rydb.) Arthur. — Shimek 1901 (as C. canescens Nutt.), Grant 8841, 8872.
C. muticum Michx. — Reported by Shimek (1915).
C. undulatum (Nutt.) Spreng. — Shimek 1911.
C. VULGARE (Savi) Tenore. — Shimek 1910, as C. lanceolatum (L.) Hill; Conard 1923, Sigler 148 (ISC), Grant 8838, 8871. (B. lanceolatum var. Crattyi Pammel.)
Coreopsis palustris Nutt. — Shimek 1912, Conard 1923, Grant 11170.
†Dysodia papposa (Vent.) Hitchc. — Reported by Pammel (1913).
Echinacea angustifolia DC. — Shimek 1910, as Braueria a. (DC.) Heller; Conard 1923.
Eclipta alba (L.) Hassk. — Reported by Shimek (1915).
†Erechtites hieracifolia (L.) Raf. — Reported by Pammel (1913).
Erigeron annuus (L.) Pers. — Reported by Pammel (1913) and Shimek (1915).
E. canadensis L. — Shimek 1909, Conard 1923, Sigler 75 (ISC), Grant 8898.
E. denticulatus Michx. — Shimek 1901, Conard 1923.
E. philadelphicus L. — Cavanagh 1910, Conard 1923, Grant 11142.
E. strigosus Muhl. — Shimek 1909, as E. ramosus (Walt.) B. S. P.; Conard 1923, Grant 11144.
Eupatorium altissimum L. — Shimek 1910, as E. purpurascens L. var. maculatum (L.) Darl.; Conard 1923.
E. foliolatum L. — Shimek 1909, Conard 1923.
E. purpurascens L. — Shimek 1909, Grant 8960.
E. rugosum Houtt. — Shimek 1911 (as E. urticaefolium Reich.), Conard 1923, Lohman 1925, Sigler 117 (ISC).

*GALINSOGA CILIATA* (Raf.) Blake. — Grant 11274.

*GRINDELIA SQUARROSA* (Pursh.) Dunal. — Fox 1941.

†Haplopappus spinulosus (Pursh.) DC. — Anderson 1932, Hayden 10772 (ISC).

*Helenium autumnale* L. — Shimek 1909, Conard 1923, Grant 8946.

†HELIANTHUS ANNUUS* L. — Reported by Pammel (1913).

H. decapetalus L. — Reported by Shimek (1915) and Johns (1931).

H. grosseserratus Martens. — Shimek 1909.

H. laetiflorus Pers. — Reported by Shimek (1915) and Gilman & Archer (1929).

H. maximiliani Schrad. — Shimek 1911.

H. rigidus (Cass.) Desf. — Shimek 1896 (as H. scaberrimus Ell.), Conard 1923. (H. laetiflorus Pers. var. Fern.)

†H. strumosus L. — Shimek 1910.

*H. subrhomboideus* Rydb. — Grant 8887. (H. laetiflorus Pers. var. Fern.)

H. tuberosus L. — Shimek 1896.

H. tuberosus var. subcanescens Gray. — Reported by Shimek (1915).

*Helianthus helianthoides* (L.) Sweet var. scabra (Dunal) Fern. (H. scabra Dunal). — Shimek 1912, Conard 1923, Grant 8697.

*Hieracium canadense* Michx. — Conard 1923.

Iva xanthifolia Nutt. — Shimek 1901, 1909, Conard 1923.


†Lactuca biennis* (Moench.) Fern. — Reported by Gilman & Archer (1929)

as L. spicata (Lam.) Hitchc.

†L. campestris Greene. — Cratty 1931 (ISC). (L. ludoviciana f. Fern.)

L. canadensis L. — Conard 1923, Sigler 145 (ISC).

L. canadensis var. integrifolia (Bigel.) Gray. — Shimek 1911. Reported by Pammel (1896) as L. integrifolia Bigel. This is possibly also the plant reported by Shimek (1917b) as L. sagittifolia Ell., which is Appalachian.

L. ludoviciana (Nutt.) Ridd. — Pammel 1913 (ISC), Grant 8854.

L. pulchella (Pursh.) DC. — Conard 1923, Grant 8914.

L. SCARIOLA L. — Shimek 1909, Conard 1923, Sigler 109 (ISC).

L. SCARIOLA var. INTEGARTA Gren. & Godr. — Shimek 1896 (SUI), Cratty 1901 (SUI), Shimek 1909.

†LAPSANA COMMUNIS* L. — Anderson 1941.

*Liatris acidota* Engelm. & Gray. — Grant 8912.

L. aspera Michx. — Shimek 1909 (as L. scariosa Willd.), Conard 1923.

L. cylindracea Michx. — Reported by Shimek (1915, 1917b).

L. punctata Hook. — Shimek 1909, Conard 1923.

L. psycostachya Michx. — Shimek 1910, Conard 1923, Grant 8968.


Lygodesmia juncea (Pursh.) D. Don. — Shimek 1901, 1910, Conard 1923, Grant 8988.

*MATRICARIA MATRICARIOIDES* (Less.) Porter. — Lowey 1949 (Herb. Lowey).

Prenanthes aspera Michx. — Shimek 1909, Grant 8969.

P. racemosa Michx. — Miller 1933.
Ratibida columnifera (Nutt.) Woot. & Standl. — Reported by Shimek (1915) as Lepachys columnaris (Sims) T. & H., and by Johns (1931).

R. pinnata (Vent.) Barnhart. — Shimek 1911, as Lepachys pinnata (Vent.) T. & G.; Conard 1923.

†Rudbeckia hirta L. — Reported by Pammel (1913) and Johns (1931).

R. laciniata L. — Shimek 1911, Conard 1923.


Senecio aureus L. — Anderson 1935, Grant 1891.


S. palustris (L.) Hook. — Shimek 1912.

Rudbeckia hirta L. — Reported by Pammel (1913) and Johns (1931).

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R. laciniata L. — Shimek 1911, Conard 1923.


Senecio aureus L. — Anderson 1935, Grant 1891.


S. palustris (L.) Hook. — Shimek 1912.

VIII. Finding-List For Families And Genera

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