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A Flora of Webster County, Iowa

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A FLORA OF WEBSTER COUNTY, IOWA.

COMPILED BY O. M. OLESON AND M. P. SOMES.

Webster county lies just north and west of the geographical center of Iowa and is somewhat larger than any of the surrounding counties having an area of 720 miles. The county is primarily a prairie county, its only forests being narrow strips along the streams. The average elevation of the county as a whole is about 1100 feet. Along the Des Moines River, which crosses the county from north to south, the forest fringe varies from a quarter of a mile to more than three miles in width and is made up of such trees as oak, hickory, elm, ash, basswood and the like. Both branches of Lizard Creek are wooded and Soldier Creek and most of the other streams have more or less of woods along them. The larger part of the surface of the county is open rolling prairie with a soil of "Wisconsin Drift" for the most part with a few morainic hills of coarse gravel, most noticeable in the northern parts of the county, but some isolated mounds in the south part are very striking.

The natural drainage system of the country is quite young and the stream systems are comparatively simple. As a result of these conditions marshes, ponds and sloughs of considerable area abound, although these areas are now being reclaimed by ditching.

In the southern part of the county the Des Moines and its tributaries flow through the "Coal Measures Sandstones" and their valleys are bounded by abrupt escarpments of the sandstone, with steep cliffs from forty to one hundred feet in height.

Another element which perhaps enters into the conditions producing such an abundant and varied series of plants here, is the fact that the portion of the country about Fort Dodge, in the central part of the county, is underlaid by beds many feet thick of gypsum or "land plaster" and while it has been contended that these underlying beds have no direct influence on the vegetation of this section, the fact still remains that the areas near the exposures of the gypsum beds, viz. the valley of "Two Mile Creek" or as it is more familiarly known "Gypsum-Hollow", and the Des Moines Valley near "Blandén's Mill" have an entirely distinctive flora from any other points, not only as to species but as to relative density of growth.

The plants listed in this Flora, which we know and acknowledge to be incomplete, are the result of the past three years work and while we have been able to examine the northern parts of the county carefully, we have not, by reason of the size of the county, been able to work out the southern parts as closely as we wish. We present this list however as a definite beginning and we expect to add to it from time to time as we may.

In connection with the title of this paper we wish to give here full credit to the work of Dr. C. H. Churchill of Fort Dodge, who has been intimately associated with us in the collecting and identifying of the plants here listed and we wish to explain that while Dr. Churchill is not yet a member of this Academy, and for that reason wished us to present this paper under our names only, yet he is entitled to full credit for his share in the work.

We wish to thank all our friends, both botanists and flower lovers, who have helped us in collecting and classifying. We wish especially to thank Professors Macbride and Shimek of the Iowa State University, Prof. L. H. Pammel of Iowa State College of Agriculture, Prof. Aven Nelson of State University of Wyoming and Mr. R. I. Cratty of Armstrong, Iowa, who have kindly assisted us with difficult species.

The nomenclature of this list follows that of the first edition of Britton's Manual of the Flora of the Northern U.S. and Canada except in the case of one or two species not listed in that work.

Practically all of the species listed herein are represented by specimens in the Herbarium of The Webster County Botanical Club of Fort Dodge and while we realize that some of these species are far from their homes as designated by the range given in the texts, we can only plead that the plants are, apparently, not strict respecters of the limits placed upon them.

SUBKINGDOM PTERIDOPHYTA

ORDER FILICALES

OPHIOGLOSSACEAE.

BOTRYCHIUM.

1. *B. virginianum* (L.) Sw. Common in rich woods.

OSMUNDACEAE.

OSMUNDA.

2. *O. cinnamomea* L. Rare in woods.
3. *O. claytoniana* L. Plenty in woods.

POLYPODIACEAE.

POLYODIUM.

4. *P. vulgare* L. Scarce in rocky places.

ADIANTUM.

5. *A. pedatum* L. Common in woods.
6. *A. capillus-veneris* L. Very rare.

CRIPTOGRAMMA.

7. *C. stelleri* (Gmel) Prantl. Rare. (*Pellaea stelleri* [S. G. Gmel] Watt.)

ASPLENIUM.

8. *A. filix-femina* (L.) Bernh. ..

CAMPTOSORUS.

9. *C. rhizophyllus* (L.) Link. Scarce on rocks.

DRYOPTERIS.

10. *D. thelypteris* (L.) A. Gray.
11. *D. cristata* (L.) A. Gray. Rare.
12. *D. goldieana* (Hook) A. Gray. Plenty.
13. *D. spinulosa* (Retz) Kuntze. Rare.

FILIX.

14. *F. bulbifera* (L.) Underw. Plenty in woods.
15. *F. fragilis* (L.) Underw. Abundant in woods.

WOODSIA.

16. *W. ilvensis* (L.) R. B. Very rare.
17. *W. obtusa* (Spreng) Torr. Abundant in woods.

MATEUCCIA.

18. *M. struthiopteris* (L.) Todaro. Plenty. [*Onoclea struthiopteris* (L.) Hoffm.]

ONOCLEA.

19. *O. sensibilis* L. Scarce.

ORDER EQUISETALES

EQUISETACEAE.

EQUISETUM.

20. *E. arvense* L.
21. *E. pratense* Erhr.
22. *E. sylvaticum*.
23. *E. fluviale* L.
24. *E. robustum* A. Br.
25. *E. hyemale* L.
26. *E. laevigatum* A. Br.

SUBKINGDOM SPERMATOPHYTA.

CLASS I GYMNOSPERMAE.

PINACEAE.

JUNIPERUS.

27. *J. virginiana* L. Almost extinct; formerly plenty.

CLASS II ANGIOSPERMAE.

TYPHACEAE

TYPHA.

28. *T. latifolia* L. Common in swamps and marshes.

SPARGANIACEAE.

SPARGANIUM.

29. *S. eurycarpum* Engelm. Common in swamps.
30. *S. androcladum* (Engelm) Morong. Rare.
31. *S. simplex* Huds. Scarce.

NAJADACEAE.

POTAMOGETON.

32. *P. natans* L.
33. *P. lonchites* Tuckerm.
34. *P. foliosus* Raf.
35. *P. pusillus* L. Rare.

ZANNICHELLIA.

36. *Z. palustris* L. Rather scarce.

NAIAS.

37. *N. flexilis* (Willd) Rost. & Schmidt. Rather scarce.

ALISMACEAE.

ALISMA.

38. *A. plantago-aquatica* L. Common in swamps and marshes.

SAGITTARIA.

39. *S. longirostra* (Micheli) J. G. Smith. Plenty.
40. *S. latifolia* Willd. Common.
41. *S. arifolia* Nutt.
42. *S. graminea* Michx. Plenty.

VALLISNERIACEAE.

PHILOTRIA.

43. *P. canadensis* (Michx.) Britton.

GRAMINEAE.

ANDROPOGON.

44. *A. scoparius* Michx.
45. *A. furcatus* Muhl.

SORGHASTRUM.

46. *S. avenaceum* Nash.
[*Chrysopogon avenaceus* (Michx.) Benth.]

SYNTHERISMA.

47. *S. linearis* (Krock) Nash.
48. *S. sanguinalis* (L) Dulac. Common marshy places.

ECHINOCHLOA.

49. *E. crus-galli* (L) Beauv. Abundant.
(*Panicum crus-galli* L.)

PANICUM.

50. *P. capillare* L. Common.
51. *P. virgatum* L. Plenty.
52. *P. pubescens* Lam.
53. *P. miliaceum* L.
54. *P. liebergii* (Vasey) Scribn.
55. *P. scribnorianum* Nash.
56. *P. macrocarpon* LeConte.

CHAETOCLOA.

57. *C. verticillata* (L). (*Ixophorus verticillatus* (L) Nash.)
58. *C. glauca* (L) Schibn. (*Ixophorus glaucus* (L) Nash.)
59. *C. viridis* (L) Scribn. (*Ixophorus viridis* (L) Nash.)
60. *C. italicica* (L) Scribn. (*Ixophorus italicicus* (L) Nash.)

CENCIURUS.

61. *C. tribuloides* L. Abundant on sandy soil.

ZIZANIA.

62. *Z. aquatica* L. Plenty, though not so abundant as formerly
- HOMALOCECHRUS.

63. *H. virginicus* (Willd) Britton. Plenty in damp places.
64. *H. oryzoides* (L) Poll. Common in swamps.

PHALARIS.

65. *P. arundinacea* L. Frequent in marshes.

SAVASTANA.

66. *S. odorata* (L) Scribn.

ARISTIDA.

67. *A. basiramea* Engelm. Scarce. In dry places.

STIPA.

68. *S. spartea* Trin.

ORYZOPSIS.

69. *O. melanocarpa* Muhl. Rocky woods.

MUHLENBERGIA.

70. *M. sobolifera* (Muhl) Trin. In rocky woods.
71. *M. racemosa* (Michx.) B. S. P. Plenty in moist places.
72. *M. mexicana* (L) Trin. Common in wet places.
73. *M. tenuiflora* (Willd) B. S. P.
74. *M. diffusa* Schreb. On dry hillsides.

BRACHYELYTRUM.

75. *B. erectum* (Schreb) Beauv. Scarce in moist places.

PHLEUM.

76. *P. pratense* L. Common.

ALOPECURUS.

77. *A. geniculatus* L. Scarce in marshy meadows.

SPOROBOLUS.

78. *S. neglectus* Nash.
79. *S. airoides* Torr.
80. *S. heterolepis* A. Gray.
81. *S. asperifolius* Nees & Meyen.

AGROSTIS.

82. *A. alba* L. Abundant everywhere.
83. *A. perennans* (Walt.) Tuckerm. Along streams, etc.
84. *A. hyemalis* (Walt.) B. S. P. Common.

CALAMAGROSTIS.

85. *C. canadensis* (Michx) Beauv. Common in wet meadows.

DANTHONIA.

86. *D. spicata* (L) Beauv. Plenty in dry woods.

SPARTINA.

87. *S. cynosuroides* (L) Willd. Common in swamps and marshes.

BOUTELANA.

88. *B. hirsuta* Tag. Locally plenty.

ATHEROPOGON.

89. *A. curtisii wilcoxii* (Michx.) Fourn. Plenty on prairies. (*Bouteloua c. ciliatula* (Michx.) Torr.)

PHRAGMITES.

90. *P. phragmites* (L) Karst. Common in marshes.

TRICUSPIS.

91. *T. sesleri* (Michx.) Torr. (*Sieglungia sesleroides* (Michx.) Scribn...)

DIPLOACHNE.

92. *D. fasciculata* (Lam.) Beauv. Rare. In a brackish marsh.

ERAGROSTIS.

93. *E. capillaris* (L) Nees. In dry places.

94. *E. pusilla* Schrad. Abundant in dry waste ground.

95. *E. major* Host. Cultivated and abundant in waste places.

96. *E. hypnoides* (Lam.) B. S. P. Common along muddy banks of streams.

EATONIA.

97. *E. obtusa* (Michx.) A. Gray. Plenty in dry places.

98. *E. pennsylvanica* (DC.) A. Gray. Not so common as above.

KOELERIA.

99. *K. cristata* (L) Pers. Abundant on dry prairies.

MELICA.

100. *M. diffusa* Pursh. Plenty.

KORYCARPUS.

101. *K. diandra* (Michx.) Kuntze. In rich woods.

DACTYLIS.

102. *D. glomerata* L. Scarce.

POA.

103. *P. pratensis* L. Abundant.

104. *P. debilis* L. In open woods.

PANICULARIA.

105. *P. nervosa* (Willd.) Kuntze. Plenty in swamps and marshes.
(*Glyceria nervata* Trin.)

106. *P. americana* (Torr.) (*Glyceria grandis* S. Watts.)

107. *P. fluitans* (L) Kuntze. Plenty in marshes. (*Glyceria fluitans* R. R. Br.)

FESTUCA.

108. *F. octoflora* Walt.

BROMUS.

109. *B. ciliatus* L. Plenty in woods.

110. *B. kalmii* A. Gray. Plenty in woods and thickets.

111. *B. secalinus* L. Scarce in fields.

112. *B. brevicristatus* (Hook) Buckl. Very rare.

AGROPYRON.

113. *A. glaucum* R. & S.

114. *A. tenerum* Vasey. Plenty in dry soil.

HORDEUM.

115. *H. jubatum* L. Abundant. A very troublesome weed.

ELYMUS.

116. *E. striatus* Willd. In open woodlands.
117. *E. virginicus* L. Common along streams.
118. *E. canadensis* L. Common in moist fields and along streams.
119. *E. robustus* Scribn. & Sm. Common in moist places.

HYSTRIX.

120. *H. hystrix*. Common in woods.

CYPERACEAE.

CYPERUS.

121. *C. diandrus* Terr. In marshes.
122. *C. rivularis* Kunth. Along streams.
123. *C. inflexus* Muhl. Plenty along streams.
124. *C. schweinitzii* Torr. Rare.
125. *C. erythrorhizos* Muhl. In wet meadows.
126. *C. speciosus* Vahl. Plenty in marshes.
127. *C. strigosus* L. Common in swamps.
128. *C. filiculmis* Vahl. Dry fields.

ELEOCHARIS.

129. *E. atropurpurea* (Retz.) Kunth. Plenty in marshy places.
130. *E. palustris* (L.) R. & S.
131. *E. palustris, glaucescens*, (Willd.) Gray.
132. *E. acicularis* (L.) R. & S.

SCIRPUS.

133. *S. americanus* Pers.
134. *S. lacustris* L. Common in marshes.
135. *S. fluviatilis* (Torr.) Gray. Abundant along edges of streams.
136. *S. atrovirens* Muhl. Abundant in marshy places.
137. *S. lineatus* Michx. In swamps and marshes.

ERIOPHORUM.

138. *E. polystachyon* L. Scarce in marshy places.
139. *E. gracile* Koch. Rare in marshy places.

FUIRENA.

140. *F. squarrosa* Michx. Scarce in marshes.

HEMICARPA.

141. *H. micrantha* (Vahl.) Britton. Rare in marshes.

CAREX.

142. *C. retrorsa* Schwein.
143. *C. hystricina* Muhl. Plenty in swamps.
144. *C. comosa* Boott. In swamps.
145. *C. trichocarpa* Muhl. Plenty in swamps.
146. *C. aristata* R. Br. Scarcer than above species.
147. *C. lanuginosa* Michx. Quite common in swamps.
148. *C. stricta, angustata* (Boott) Bailey.
149. *C. fusca* All. In wet places.
150. *C. aquatilis* Wahl. Rare in marshy places.

151. *C. longirostris* Torr.
152. *C. grisea* Wahl. Scarce in woods.
153. *C. conoidea* Schk.
154. *C. oligocarpa* Schk. In woods.
155. *C. hitchcockiana* Dewey. In woods.
156. *C. meadii* Dewey.
157. *C. laxiflora, blanda* (Dewey) Boott. Scarce in thickets.
158. *C. digitalis* Willd. In woods.
159. *C. alburnina* Sheldon. Plenty in woods.
160. *C. setifolia* (Dewey) Britton.
161. *C. pennsylvanica* Lam. In dry soil.
162. *C. pubescens* Muhl. In woods.
163. *C. stipata* Muhl. Common. Fields and marshes.
164. *C. rosea* Schk. Common in woods.
165. *C. rosea, radiata* Dewey. Scarce in woods.
166. *C. gravida* Bailey.
167. *C. vulpinoidea* Michx. Abundant.
168. *C. sparganioides* Muhl. In woods.
169. *C. cephalophora* Muhl. In dry soil.
170. *C. deveyana* Schwein. Rare.
171. *C. cristatella* Britton. Abundant in meadows.
172. *C. straminea* Willd. In dry soil.
172. *C. festucacea* Willd. Plenty in meadows.
174. *C. bicknellii* Britton.

ARACEAE.

ARISAEAE.

175. *A. triphyllum* (L) Torr. Abundant in moist woods.
176. *A. dracontium* (L) Schott. Scarce in rich woods.

LEMNACEAE.

SPIRODELA.

177. *S. polyrhiza* (L) Schleid. Scarce in ponds.

LEMNA.

178. *L. trisulca* L. Common in ponds.

COMMELINACEAE.

TRADESCANTIA.

179. *T. virginiana* L. Abundant.
180. *T. reflexa* Raf. Some rather doubtful specimens apparently belong to this species but were too old when found.

PONTEDERIACEAE.

HETERANTHERA.

181. *H. dubia* (Jacq) MacM. Rare in swamps.

JUNCACEAE.

JUNCUS.

182. *J. effusus* L. Abundant in swamps and marshes.
183. *J. balticus* Willd. Rare.
184. *J. tenuis* Willd. Abundant.
185. *J. marginatus* Rostk. Plenty.
186. *J. nodosus* L. Plenty in moist soil.
187. *J. torreyi* Coville. Plenty.

MELANTHACEAE.

UVULARIA.

188. *U. grandiflora* J. E. Smith. Common in rich woods.

LILACEAE.

ALLIUM.

189. *A. tricoccum* Ait. Common in woods Flowers rarely noticed as the broad leaves have disappeared before flowering time.
190. *A. stellatum* Ker. Abundant on open prairies.
191. *A. canadense* L. Plenty.

LILIUM.

192. *L. philadelphicum* L. Common in thickets. Some forms here appear to approach *L. umbellatum* Pursh. in appearance and in habitat.
193. *L. canadense* L. Common in meadows. Ours are mostly of the red flowered form.

ERYTHRONIUM.

194. *E. albidum* Nutt. Abundant in moist woods.

CONVALLARIACEAE.

ASPARAGUS.

195. *A. officinalis* L. Escaped from cultivation.

VAGNERA.

196. *V. racemosa* (L) Morong. Abundant in rich woods.
197. *V. stellata* (L) Morong. Abundant in woods and fields.

UNIFOLIUM.

198. *U. canadense* (Desf.) Greene. Scarce in rich woods.

SALOMONIA.

199. *S. biflora* (Walt.) Britton. Scarce in woods.
200. *S. commutata* (R & S) Britton. Common in woods and fields.

TRILLIUM.

201. *T. nivale* Riddell. Abundant in rich woods.
202. *T. cernuum* L. Rare in rich woods.
203. *T. erectum* L. Rare in rich woods.

SMILACEAE.

SMILAX.

- 204. *S. herbacea* L. Plenty in woods.
- 205. *S. ecirrhata* (Engelm.) S. Wats. Plenty in woods.
- 206. *S. rotundifolia* L. Common along streams and in woods.
- 207. *S. hispida* Muhl. In thickets.

AMARYLLIDACEAE.

HYPOXIS.

- 208. *H. hirsuta* (L.) Coville. Abundant, not only in dry soil but in marshy meadows as well.

DIOSCOREACEAE.

DIOSCOREA.

- 209. *D. villosa* L. Plenty in thickets.

IRIDACEAE.

IRIS.

- 210. *I. versicolor* L. Abundant in swamps and marshes.

SISYRINCHIUM.

- 211. *S. angustifolium* Miller. Abundant in fields and meadows.

ORCHIDACEAE.

CYPRIPEDIUM.

- 212. *C. candidum* Willd. Scarce in meadows; formerly abundant.
- 213. *C. hirsutum* Mill. Scarce in woods. Occasionally very large plants over 1 m. have been noted.

GALEORCHIS.

- 214. *G. spectabilis* (L.) Rydb. Rare in rich woods. (*Orchis spectabilis* L.)

COELOGLOSSUM.

- 215. *C. bracteatum* (Willd.) Parl. Rare in woods and meadows.
(*Habenaria bracteata* (Willd.) R. Br.)

BLEPHARIGLOTTIS.

- 216. *B. leucophaea* (Nutt.) Rydb. Plenty on open prairie. (*Habenaria leucophaea* (Nutt.) Gray.)

GYROSTACHYS.

- 217. *G. cernua* (L.) Kuntze. Plenty in moist meadows. Ours is a very stout form and seldom over 4 dm. high.

SALICACEAE.

POPULUS.

- 218. *P. alba* L. Rather scarce.
- 219. *P. balsamifera* L. Scarce.
- 220. *P. dilatata* Ait. Escaped from cultivation.
- 221. *P. deltoides* Marsh. Plenty.
- 222. *P. grandidentata* Michx.
- 223. *P. tremuloides* Michx. Plenty.

SALIX.

- 224. *S. nigra* Marsh. Scarce.
- 225. *S. myrsinoides* Anders.
- 226. *S. lucida* Muhl.
- 227. *S. alba, vitellina* (L) Koch. Escaped from cultivation.
- 228. *S. cordata* Muhl. Plenty in marshy places.
- 229. *S. fluvialis* Nutt. Abundant along streams.
- 230. *S. discolor* Muhl. In marshy places.
- 231. *S. humilis* Marsh. Common on open prairie.
- 232. *S. tristis* Ait. In dry rocky woods.
- 233. *S. candida* Fluegge.

JUGLANDACEAE.

JUGLANS.

- 234. *J. nigra* L. Comparatively scarce in woods.
- 235. *J. cinerea* L. Much more common.

HICORIA.

- 236. *H. ovata* (Mill.) Britton. Common in woods.
- 237. *H. laciniosa* (Michx.) Sarg. Scarce in woods.
- 238. *H. glabra* (Mill.) Britton. Abundant in woods.

BETULACEAE.

CARPINUS.

- 239. *C. caroliniana* Walt. Plenty in woods.

OSTRYA.

- 240. *O. virginiana* (Mill.) Willd. Abundant in woods.

CORYLUS.

- 241. *C. americana* Walt. Abundant in woods.

FAGACEAE.

QUERCUS.

- 242. *Q. rubra* L. Plenty in woods.
- 243. *Q. palustris* DuRoi. Scarce. In marshy woods.
- 244. *Q. schneckii* Britton. Scarce.
- 245. *Q. coccinea* Wang. Plenty.
- 246. *Q. borealis* Michx. Scarce in woods.
- 247. *Q. velutina* Lam. Common in woods.
- 248. *Q. alba* L. Common in woods.
- 249. *Q. macrocarpa* Michx. Abundant in woods.
- 250. *Q. platanooides* (Lam.) Sudw. Scarce.

ULMACEAE.

ULMUS.

- 251. *U. americana* L. Abundant.
- 252. *U. racemosa* Thomas. Not so common as above.
- 253. *U. fulva* Michx. Abundant in woods.

CELTIS.

- 254. *C. occidentalis* L. Plenty in woods.

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MORACEAE.

HUMULUS.

255. *H. lupulus* L. Abundant in thickets.

CANNABIS.

256. *C. sativa*. L. L. Abundant along roadsides and in waste places.

URTICACEAE.

URTICA.

257. *U. dioica* L. Scarce. In waste places.

258. *U. gracilis* Ait. Common.

URTICASTRUM.

259. *U. divaricatum* (L) Kuntze. Common in woods.

ADICEA.

260. *A. pumila* (L.) Raf. Abundant in damp places.

BOEHMERIA.

261. *B. cylindrica* (L.) Willd. Common in damp places.

PARIETARIA.

262. *P. pennsylvanica* Muhl. Common in damp woods.

SANTALACEAE.

COMANDRA.

263. *C. umbellata* (L.) Nutt. Abundant. Along railways, etc.

ARISTOLOCHIACEAE.

ASARUM.

264. *A. acuminatum* (Ashe) Bicknell. Common in rich woods.

265. *A. reflexum ambiguum* Bicknell. Plenty in woods.

POLYGONACEAE.

RUMEX.

266. *R. acetosella* L. Abundant in fields and meadows.

267. *R. verticillatus* L. Plenty in swamps.

268. *R. altissimus* Wood. Plenty in wet places.

269. *R. britannica* L. Plenty in swamps.

270. *R. occidentalis* S. Wats. Rare in wet places.

271. *R. crispus* L. Quite abundant.

272. *R. sanguineus* L. Scarce.

273. *R. persicariaeoides* L. Scarce in swampy places.

FAGOPYRUM.

274. *F. fagopyrum* (L.) Karst. Escaped from cultivation.

POLYGONUM.

275. *P. amphibium* L. Scarce in ponds.

276. *P. hartwrightii* A. Gray. Common in swamps and marshes.

277. *P. emersum* (Michx.) Britton. Abundant at edges of swamps.

278. *P. incarnatum* Ell.

279. *P. lapathifolium* L. Along streams.

280. *P. lapathifolium, nodosum* (Pers) Small.

281. *P. pennsylvanicum* L.
282. *P. persicaria* L. Plenty.
283. *P. persicaroides* H. B. K.
284. *P. opelousanum* Riddell. Scarce.
285. *P. hydropiperoides* Michx. Abundant in swampy places.
286. *P. hydropiper* L. Plenty in swampy places.
287. *P. punctatum* Ell. Plenty.
288. *P. orientale* L. Escaped from gardens.
289. *P. virginianum* L. Scarce.
290. *P. aviculare* L. Common.
291. *P. littorale* Link.
292. *P. rayi* Babingt.
293. *P. exsertum* Small.
294. *P. ramoissimum* Michx.
295. *P. camphorum* Meisn. Rare; on sandy hills.
296. *P. tenue* Michx.
297. *P. convolvulus* L.
298. *P. scandens* L.

CHENOPodiaceae.

CHENOPodium.

299. *C. album* L. Abundant everywhere. Very variable in form.
300. *C. glaucum* L. Rare in waste places.
301. *C. bosciatum* Moq. Plenty in woods.
302. *C. hybridum* L. Plenty in waste places.
303. *C. bonus-henricus* L. Scarce. In wet places.

CYCLOLOMA.

304. *C. atriplicifolium* (Spreng.) Coulter. Scarce in sandy soil.

ATRIPLEX.

305. *A. patula* L. Scarce. In waste places.
306. *A. hastata* L. Scarce in waste places.

SALSOLA.

307. *S. tragus* L. Scarce; hardly holds its own.

AMARANTHACEAE.

AMARANTHUS.

308. *A. retroflexus* L. Abundant everywhere.
309. *A. hybridus* L. Rather scarce.
310. *A. hybridus, paniculatus* (L.) Uline & Bray. Scarce.
311. *A. blitoides* S. Wats. Common everywhere.
312. *A. graecizans* L. Scarce; formerly abundant.

ACNIDA.

313. *A. tamariscina* (Nutt.) Wood.

NYCTAGINACEAE.

ALLIONIA.

314. *A. nyctaginea* Michx. Abundant.
315. *A. hirsuta* Pursh. Rather scarce in dry fields.

AIZOACEAE.

MOLLUGO.

316. *M. verticillata* L. Scarce.

PORFULACACEAE.

CLAYTONIA.

317. *C. virginica* L. Abundant in rich woods. Some forms approach
C. caroliniana Michx.

PORFULACA.

318. *P. oleracea* L. Abundant in fields and gardens.

CARYOPHYLLACEAE.

AGROSTEMMA.

319. *A. githago* L. Rare in fields.

SILENE.

320. *S. stellata* (L.) Ait. Abundant.
321. *S. antirrhina* L. Common in waste places.
322. *S. noctiflora* L. Rare along railways.

LYCIUM.

323. *L. alba* Mill. Plenty in waste places.

SAPONARIA.

324. *S. officinalis* L. Scarce. Escaped from gardens.

VACCARIA.

325. *V. vaccaria* (L.) Britton. Rare in waste places.

ALSINE.

326. *A. longifolia* (Muhl) Britton. Plenty in rich woods.
327. *A. media* L. Abundant.

CERASTIUM.

328. *C. vulgatum* L. Common in woods and fields.

ANYCHIA.

329. *A. canadense* (L.) B. S. P. Common in woods.

NYMPHACEAE.

NYMPHAEA.

330. *N. advena* Soland. Common in swamps and marshes.

CASTALIA.

331. *C. tuberosa* (Paine) Greene. Plenty in ponds.

CERATOPHYLLACEAE.

CERATOPHYLLUM.

332. *C. demersum* L. Scarce in swamps and marshes.

RANUNCULACEAE.

CALTHA.

333. *C. palustris* L. Abundant in swamps.

ISOPHYBUM.

334. *I. binternatum* (Raf.) T. & G. Abundant.

ACTAEA.

335. *A. rubra* (Ait.) Willd. Plenty in rich woods.

AQUILEGIA.

336. *A. canadensis* L. Abundant in rocky woods.

DELPHINIUM.

337. *D. carolinianum* Walt. Plenty on prairies.

338. *D. tricorne* Michx. Plenty.

339. *D. albecens* Rydb. Abundant on prairies.

ANEMONE.

340. *A. caroliniana* Walt. Plenty on prairies.

341. *A. cylindrica* A. Gray. Abundant in fields and open woods.

342. *A. virginiana* L. Scarce; open prairies.

343. *A. canadensis* L. Abundant everywhere.

344. *A. quinquefolia* L. Plenty in rich woods.

HEPATICAE.

345. *H. acuta* (Pursh) Britton. Abundant in rich woods.

SYNDESMON.

346. *S. thalictroides* (L.) Hoffm. Scarce in rich woods.

PULSATILLA.

347. *P. hirsutissima* (Pursh.) Britton. Plenty on prairie hillsides.

CLEMATIS.

348. *C. virginiana* L. Abundant in woods and thickets.

RANUNCULUS.

349. *R. delphinifolius* Torr. Abundant in swamps. The variety "terrestris" is occasionally found.

350. *R. ovalis* Raf. Plenty on open prairie.

351. *R. abortivus* L. Abundant in woods and fields.

352. *R. sceleratus* L. Scarce in swamps.

353. *R. recurvatus* Poir. Plenty in rocky woods.

354. *R. septentrionalis* Poir. Abundant in swamps and moist meadows.

355. *R. hispidus* Michx.

356. *R. fascicularis* Muhl. Abundant on prairies.

Batrachium.

357. *B. divaricatum* (Schrank.) Wimm. Rare in ponds.

OXYGRAPHIS.

358. *O. cymbalaria* (Pursh) Prantl. Abundant in swamps.

THALICTRUM.

359. *T. dioicum* L. Scarce in rocky woods.

360. *T. purpurascens* L. Abundant in woods.

361. *T. polygamum* Muhl. Abundant.

BERBERIDACEAE.

BERBERIS.

362. *B. vulgaris* L. Scarce in woods and thickets.

CAULOPHYLLUM.

363. *O. thalictroides* (L.) Michx. Common in rich woods.

MENISPERMACEAE.

MENISPERMUM.

364. *M. canadense* L. Abundant in woods and along streams.

PAPAVERACEAE.

SANGUINARIA.

365. *S. canadensis* L. Very abundant in rich woods.

BICUCULLA.

366. *B. cucullaria* (L.) Millsp. Very abundant.

367. *B. canadensis* (Goldie) Millsp. Rare in rich woods.

ADLUMIA.

368. *A. fungosa* (Ait.) Greene. Sparingly escaped from gardens.

CAPNOIDES.

369. *C. aureum* (Willd.) Kuntze. Abundant in sandy soil.

370. *C. curvisiliqum* (Engelm.) Kuntze. Rare.

CRUCIFERAE.

LEPIDIUM.

371. *L. virginicum* L. Scarce in waste places.

372. *L. apetalum* Willd. Abundant in fields and along roadsides.

THLASPI.

373. *T. arvense* L. Scarce in waste places.

SISYMBRIUM.

374. *S. officinale* (L.) Scop. Abundant.

375. *S. altissimum* L. Plenty.

BRASSICA.

376. *B. nigra* (L.) Koch. Abundant in fields and waste places.

377. *B. arvensis* (L.) B. S. P. Scarcer than above.

378. *B. campestris* (L.) Scarce along railway right-of-way.

RORIPA.

379. *R. palustris* (L.) Bess. Abundant in swamps and marshes.

380. *R. hispida* (Desv) Britton. Not so common.

381. *R. nasturtium* (L.) Rusby. Rather scarce in brooks and streams.

382. *R. armoracia* (L.) A. S. Hitchcock. Escaped from gardens.

CARDAMINE.

383. *C. pennsylvanica* Muhl. Plenty in moist soil.

384. *C. flexuosa* Willd. Scarce in wet woods.

385. *C. bulbosa* (Schreb.) B. S .P. Common in swamps and marshes.

DENTARIA.

386. *D. laciniata* Muhl. Abundant in rich woods.

BURSA.

387. *B. bursa-pastoris* (L.) Britton. Abundant everywhere.

CAMELINA.

388. *sativa* (L.) Crantz. Scarce in waste places.

NESLIA.

389. *N. paniculata* (L) Desv. Very rare in Iowa.

DRABA.

390. *D. caroliniana micrantha* (Nutt.) A. Gray. Abundant on prairies.

SOPHIA.

391. *S. pinnata* (Willd.) Britton. Abundant in dry soil.
392. *S. intermedia* Rydb. Scarcer.

STENOPHRAGMA

393. *S. thaliana* (L.) Celak. Rare in rocky woods.

ARABIS.

394. *A. dentata* T. & G. Rather scarce in rich woods.
395. *A. canadensis* L. Abundant in rich woods.
396. *A. glabra* (L.) Bernh. Rare in fields.
397. *A. hirsuta* (L.) Scop. Plenty in rocky woods.

ERYSIMUM.

398. *E. cheiranthoides* L. Plenty along streams.

HESPERIS.

399. *H. matronalis* L. Rare, escaped from gardens.

CAPPARIDACEAE.

POLANISIA.

400. *P. graveolens* Raf. Very rare along streams.
401. *P. trachysperma* T. & G. Scarce on prairies.

PENTHORACEAE.

PENTHORUM.

402. *P. sedoides* L. Abundant in moist places.

SAXIFRAGACEAE.

HEUCHERA.

403. *H. hispida* Pursh. Abundant.

MITELLA.

404. *M. diphylla* L. Plenty in deep ravines.

GROSSULARIACEAE.

RIBES.

405. *R. cynosbati* L. Common in woods.
406. *R. missouriensis* Nutt. Plenty in woods.
407. *R. uva crispa* L. Scarce; escaped from gardens.
408. *R. floridum* L'Her. Plenty in woods and along streams.
409. *R. aureum* Pursh. In thickets.

ROSACEAE.

RUBUS.

410. *R. americanus* (Pers.) Britton. Quite rare in moist woods.
411. *R. strigosus* Michx. Plenty in dry woods.
412. *R. occidentalis* L. Common in rocky woods.
413. *R. canadensis* L. Rare in rocky woods.

DRYMOCALLIS.

414. *D. arguta* (Pursh.) Rydb. Abundant in dry soil.

FRAGARIA.

415. *F. virginiana grayana* (Vilm.) Rydb. Rather scarce. (*F. virginiana illinoensis* Gray.)
416. *F. americana* (Porter) Britton. Quite abundant. (*F. vesca americana* Porter.)

COMARUM.

417. *C. palustre* L. Scarce in swamps.

POTENTILLA.

418. *P. argentea* L. Rare. Very rare in Iowa.
419. *P. monspeliensis* L. Common.
420. *P. pentandra* Engelm. Rather scarce.
421. *P. leucocarpo* Rydb. Rare in damp soil.
422. *P. canadensis* L. Plenty in dry woods.

GEUM.

423. *G. canadense* Jacq. Abundant in rich woods.
424. *G. virginianum* L. Rare in moist fields.
425. *G. strictum* Ait. Scarce in moist fields.

AGRIMONIA.

426. *A. hirsuta* (Muhl.) Bicknell. Abundant in woods and thickets.
(*A. eupatoria hirsuta* Muhl.)
427. *A. mollis* (T. & G.) Britton. Scarce in woods and thickets. (*A. eupatoria mollis* T. & G.)

ROSA.

428. *R. setigera* Michx. Some doubtful specimens, placed here until further investigation.
429. *R. blanda* Ait. Scarce in rocky soil.
430. *R. arkansana* Porter. Abundant on prairies and along streams.
431. *R. woodsii* Lindl. Scarce on dry prairies. (*R. fendleri* Crepin).
432. *R. rubiginosa* L. Scarce; escaped from gardens.

POMACEAE.

MALUS.

433. *M. ioensis* (Wood.) Britton. Abundant. (*Pyrus coronaria ioensis* Wood.)

AMELANCHIER.

434. *A. canadensis* (L.) Medic. Abundant.

CRATAEGUS.

435. *C. crus-galli* L. Scarce in woods.
436. *C. punctata* Jacq. Abundant in woods.
437. *C. coccinea* L. Scarce in woods.
438. *C. macracantha* Lodd. Scarce in woods. (*C. coccinea macraca* D.)
439. *C. mollis* (T. & G.) Scheele. Abundant in woods and thickets.
440. *C. tomentosa* L. Rare in woods.

DRUPACEAE.

PRUNUS.

- 441. *P. americana* Marsh. Abundant in woods and along roadsides.
- 442. *P. pennsylvanica* L. f. Plenty in woods.
- 443. *P. virginiana* L. Abundant in woods and along streams.
- 444. *P. demissa* (Nutt.) Walp. Rare on prairies.
- 445. *P. serotina* Ehrh. Abundant in woods.

MIMOSACEAE.

ACUAN.

- 446. *A. illinoensis* (Michx.) Kuntze. Plenty along streams.

CAESALPINACEAE.

CASSIA.

- 447. *C. chamaecrista* L. Abundant in sandy soil.

GLEDITISIA.

- 448. *G. triacanthos* L. Plenty in woods and along streams.

GYMNOCLADUS.

- 449. *G. dioica* (L.) Koch. Plenty in woods.

PAPILIONACEAE.

BAPTISIA.

- 450. *B. bracteata* Ell. Abundant in fields and prairies.
- 451. *B. leucantha* T. & G. Plenty in fields and meadows.

CROTALARIA.

- 452. *C. sagittalis* L. Scarce in meadows.

MEDICAGO.

- 453. *M. sativa* L. Plenty; escaped and thriving.

MELILOTUS.

- 454. *M. alba* Desv. Very abundant along roadside, a very troublesome plant. Has overrun the country within the last few years.
- 455. *M. officinalis* (L.) Lam. Scarce but spreading.

TRIFOLIUM.

- 456. *T. aureum* Poll. Scarce in dry soil. (*T. agrarium* L. In part.)
- 457. *T. procumbens* L. Rather scarce.
- 458. *T. pratense* L. Abundant.
- 459. *T. hybridum* L. Abundant in fields and meadows.
- 460. *T. repens* L. Abundant in fields and meadows.

PSORALEA.

- 461. *P. argophylla* Pursh. Abundant on prairies.
- 462. *P. esculenta* Pursh. Plenty on prairies.

AMORPHIA.

- 463. *A. canescens* Pursh. Abundant on prairies.
- 464. *A. fruticosa* L. Common along streams.
- 465. *A. nana* Nutt. Nearly extinct, formerly common on prairies.

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PAROSELLA.

466. *P. dalea* (L.) Britton. Rare, adventive.

KUHNISTERA.

467. *K. candida* (Wild.) Kuntze. Abundant in meadows. (*Petalostemon candidus* Michx.)

468. *K. purpurea* (Vent.) MacM. Abundant in meadows. (*Petalostemon violaceus* Michx.)

ROBINIA.

469. *R. pseudacacia* L. Scarce in woods and escaped from cultivation

ASTRAGALUS.

470. *A. crassicarpus* Nutt. Abundant on prairies.

471. *A. carolinianus* L. Plenty.

GLYCYRRHIZA.

472. *G. lepidota* Pursh. Plenty in moist soil.

MEIBOMIA.

473. *M. grandiflora* (Walt.) Kuntze. Plenty in woods. (*Desmodium acuminatum* D. C.)

474. *M. sessilifolia* (Torr.) Kuntze. Scarce. (*D. sessilifolium* T. & G.)

475. *M. longifolia* (T. & G.) Vail. In woods and on prairies. (*D. canadense longifolium* T. & G.)

476. *M. illinoensis* (A. Gray) Kuntze. Scarce on prairies. (*D. illinoense* A. Gray.)

477. *M. canadensis* (L.) Kuntze. Abundant in thickets and on prairies. (*D. canadense* DC.)

LESPEDEZA.

478. *L. violacea* (L.) Pers. Rare in dry stony soil.

479. *L. hirta* (L.) Ell. Scarce on dry prairies.

480. *L. capitata* Michx. Abundant on prairies.

VICIA.

481. *V. americana* Muhl. Common in fields and meadows.

482. *V. linearis* (Nutt.) Greene. Rare in meadows.

483. *V. caroliniana* Walt. Plenty on prairie hillsides.

LATHYRUS.

484. *L. venosus* Muhl. Abundant.

485. *L. palustris* L. Scarce in moist meadows.

486. *L. decaphyllus* Pursh. Plenty in moist soil.

487. *L. ochroleucus* Hook. Rather rare in woods.

FALCATA.

488. *F. comosa* (L.) Kuntze. Abundant in swamps.

489. *F. pitcheri* T. & G. Occasional in swamps.

APIOS.

490. *A. apios* (L.) MacM. Abundant in swamps.

GALACTIA.

491. *G. volubilis* (L.) Britton. Rare in fields.

STROPHOSTYLES.

492. *S. helvola* (L.) Britton. Abundant in sandy soil.

493. *S. pauciflora* (Benth.) S. Wats. Rare in sandy soil.

GERANIACEAE.

GERANIUM.

494. *G. maculatum* L. Scarce, formerly plenty in woods.
495. *G. rotundifolium* L. Rare. Very rare in Iowa.

OXALIDACEAE.

OXALIS.

496. *O. violacea* L. Abundant. Often with white flowers.
497. *O. stricta* L. Abundant everywhere.
498. *O. cymosa* Small. Scarce in woods.

LINACEAE.

LINUM.

499. *L. usitatissimum* L. Sparingly escaped from cultivation.
500. *L. sulcatum* Riddell. Common on prairies.

RUTACEAE.

XANTHOXYLUM.

501. *X. americanum* Mill. Abundant in woods.

PTELEA.

502. *P. trifoliata* L. Plenty in woods.

POLYGALACEAE.

POLYGALA.

503. *P. verticillata* L. Common in meadows.
504. *P. viridescens* L. Scarce in meadows.
505. *P. senega* L. Scarce in rocky woods.

EUPHORBIACEAE.

ACALYPHA.

506. *A. virginica* L. Abundant in woods.

EUPHORBIA.

507. *E. serpyllifolia* Pers. Scarce.
508. *E. glyptosperma* Engelm. Scarce.
509. *E. nutans* Lag.
510. *E. corollata* L. Abundant on prairies.
511. *E. maculata* L. Abundant in fields and gardens.
512. *E. dentata* Michx. Scarce in waste places.
513. *E. heterophylla* L. Common in waste places.
514. *E. obtusata* Pursh. Scarce in dry soil.
515. *E. missouriensis* (Norton) Small. Scarce in sandy soil.
(*E. dichotisperma* of Britton and Brown's Illustrated Flora
but not of F. & M.)
516. *E. cyparissias* L. Common; escaped from gardens.

ANACARDACEAE.

RHUS.

517. *R. glabra* L. Common in woods.
518. *R. radicans* L. Common in woods and spreading to fields.

CELASTRACEAE.

EUONYMUS.

519. *E. atropurpureus* Jacq. Plenty in woods and along streams.

CELASTRUS.

520. *C. scandens* L. Common in woods and along streams.

STAPHYLEACEAE.

STAPHYLEA.

521. *S. trifolia* L. Plenty in woods.

ACERACEAE.

ACER.

522. *A. saccharinum* L. Common in woods.
523. *A. saccharum* Marsh. Scarce in woods.
524. *A. nigrum* Michx. Common in woods.
525. *A. negundo* L. Common.

HIPPOCASTANACEAE.

AESCRULUS.

526. *A. octandra* Marsh. Plenty in woods.

BALSAMINACEAE.

IMPATIENS.

527. *I. biflora* Walt. Abundant in swamps and marshes.
(*I. fulva* Nutt.)
528. *I. aurea* Muhl. Similar situations and nearly as abundant.
(*I. pallida* Nutt.)

RHAMNACEAE.

CEANOOTHUS.

529. *C. americanus* L. Abundant on prairies.
530. *C. ovatus pubescens* T. & G. Scarce on stony hillsides.

VITACEAE.

VITIS.

531. *V. vulpina* L. Common along streams.
532. *V. palmata* Vahl. Rather rare in woods.

PARTHENOCISSUS.

533. *P. quinquefolia* (L.) Planch. Abundant in woods.
(*Ampelopsis quinquefolia* Michx.)

TILIACEAE.

TELI.

534. *T. Americana* L. Abundant in woods.

MALVACEAE.

MALVA.

535. *M. rotundifolia* L. Abundant in waste places.

CALLIRRHOE.

536. *C. triangulata* (Leavenw.) A. Gray. Rare. One colony along a railway right-of-way. Flowers very light for this species.
537. *C. involucrata* (T. & G.) A. Gray. Rare on dry prairie.

ABUTILON.

538. *A. abutilon* (L.) Abundant in fields and waste places.
(*A. avicennae* Goertn.)

HIBISCUS.

539. *H. trionum* L. Plenty in fields and waste places.

HYPERICACEAE.

HYPERICUM.

540. *H. ascyron* L. Scarce along streams.
541. *H. muticum* L. Abundant in moist soil.

CISTACEAE.

HELIANTHEMUM.

542. *H. majus* (L.) B. S. P. Common on prairie hillsides.
543. *H. canadense* (L.) Michx. Rare in sandy soil.

LECHEA.

544. *L. tenuifolia* Michx. Rare in stony soil.

VIOLACEAE.

VIOLA.

545. *V. palmata* L. Abundant in open woods.
546. *V. pedatifida* Don. Common on prairies.
547. *V. pedata* L. Not so common; sandy hillsides.
548. *V. obliqua* Hill. Common on prairies and in woods. (*V. cucullata* Ait. *V. affinis* LeConte.)
549. *V. papilionacea* Pursh. Scarce in woods and meadows.
550. *V. pubescens* Ait. Common in rich woods. Some forms are near *V. scabriuscula* (T. & G.) Schwein.

THYMELEACEAE.

DICCA.

551. *D. palustris* L. Rare in rocky woods.

LYTHRACEAE.

LYTHRUM.

552. *L. alatum* Pursh. Abundant in swampy soil.

ONAGRACEAE.

LUDWIGIA.

553. *L. polycarpa* Short & Peter. Scarce in swamps and marshes.
A very peculiar procumbent form is found here rarely, which does not agree with the generic characteristic of "erect" plants.

EPILOBIUM.

554. *E. lineare* Muhl. Plenty in swamps.
555. *E. coloratum* Muhl. Plenty in swamps.
556. *E. adenocaulon* Haussk. Scarcer, along streams.

ONAGRA.

557. *O. biennis* (L) Scop. Common in meadows.

MERIOLIX.

558. *M. serrulata* (Natt.) Walp. Abundant on prairie hillsides.

CIRCAEA.

559. *C. Lutetiana* L. Abundant in rich woods.

HALORAGIDACEAE.

MYRIOPHYLLUM.

560. *M. spicatum* L. Common in swamps.
561. *M. verticillatum* L. Scarce in swamps.

ARALIACEAE.

ARALIA.

562. *A. racemosa* L. Common in woods.
563. *A. nudicaulis* L. Plenty in woods.

PANAX.

564. *P. quinquefolium* L. Scarce in rich woods. Formerly common.
(*Aralia quinquefolia* Dec. *Ginseng quinquefolium* Wood.)

UMBELLIFERAE.

SANICULA.

565. *S. marylandica* L. Abundant in woods.
566. *S. gregaria* Bicknell. Scarce in woods.
567. *S. trifoliata* Bicknell. Rare in woods.
568. *S. canadensis* L. Scarce in woods.

ERYNGIUM.

569. *E. aquaticum* L. Common in moist meadows. (*E. yuccaeifolium* Michx.)

WASHINGTONIA (OSMORRHIZA) Raf.)

570. *W. claytoni* (Michx.) Britton. Abundant in woods.
571. *W. longistylis* (Torr.) Britton. Scarce in woods.

ZIZIA.

572. *Z. aurea* (L.) Koch. Common in fields and meadows.

CICUTA.

573. *C. maculata* L. Scarce in marshy places.

574. *C. bulbifera* L. Scarce in marshy places.

DERINGA.

575. *canadensis* (L.) Kuntze. Abundant in rich woods. (*Cryptotaenia canadensis* DC.)

CARUM.

576. *C. carvi* L. Scarce; escaped from gardens.

TAENIDIA.

577. *T. integriflora* (L.) Drude. Abundant. (*Pimpinella integriflora* A. Gray.)

SIUM.

578. *S. cicutacefolium* Gmel. Rather scarce in wet places.

THASPIUM.

579. *T. barbinode* (Michx.) Nutt. Plenty in woods.

PASTINACA.

580. *P. sativa* L. Plenty in fields and waste places.

HERACLEUM.

581. *H. lanatum* Michx. Scarce in moist places.

DAUCUS.

582. *D. pusillus* Michx. Very rare in high sandy fields.

CORNACEAE.

CORNUS.

583. *C. circinata* L'Her. Abundant in woods and along streams.

584. *C. amomum* Mill. Scarce in damp places.

585. *C. stolonifera* Michx. Rather scarce in moist soil.

586. *C. candidissima* Marsh. Very common in woods and along roads.
(*C. paniculata* L'Her.)

587. *C. alternifolia* L. f. Scarce in rocky woods.

MONOTROPACEAE.

MONOTROPA.

588. *M. uniflora* L. Rare in deep woods. Commonly called "Corpse-plant" from its changing from waxy white to black when picked.

PRIMULACEAE.

LYSIMACHIA.

589. *L. quadrifolia* L. Scarce in open woods.

STEIRONEMA.

590. *S. ciliatum* (L.) Raf. Abundant in moist soil.

591. *S. lanceolatum* (Walt.) A. Gray. Rare in wet places.

592. *S. quadriflorum* (Sims.) Hitchc. Abundant in moist fields.

NAUMBURGIA.

593. *N. thyrsiflora* (L.) Duby. Plenty in swamps and marshes.
(*Lysimachia thyrsiflora* L.)

OLEACEAE.

FRAXINUS.

594. *F. americana* L. Plenty in woods.
 595. *F. lanceolata* Borck. Common in deep woods.
 596. *F. nigra* Marsh. Plenty in moist woods.

GENTIANACEAE.

GENTIANA.

597. *G. puberula* Michx. Plenty on prairie hillsides.
 598. *G. andrewsii* Griseb. Abundant in swamps and marshes.
 599. *G. flavidia* A. Gray. Plenty in moist thickets.
 600. *G. rubricaulis* Schwein. Scarce in moist soil.

MENYANTHACEAE.

MENYANTHES.

601. *M. trifoliata* L. Scarce in swamps.

APOCYNACEAE.

APOCYNUM.

602. *A. androsaemifolium* L. Abundant in fields and woods.
 603. *A. cannabinum* L. Very abundant in fields and waste places.
 604. *A. hypericifolium* Ait. Rather scarce in dry soil.

ASCLEPIADACEAE.

ASCLEPIAS.

605. *A. tuberosa* L. Common on prairies. "Pleurisy-root".
 606. *A. purpurascens* L. Scarce in woods.
 607. *A. incarnata* L. Common in swamps.
 608. *A. sullivantii* Engelm. Rare in open fields.
 609. *A. syriaca* L. Common in fields and waste places. (*A. cornuti* Dec.)
 610. *A. ovalifolia* Dec. Scarce in dry soil.
 611. *A. verticillata* L. Common on prairies and in waste places.

ACERATES.

612. *A. viridiflora* (Raf.) Eaton. Common on dry prairies.
 613. *A. lanuginosa* (Nutt.) Dec. Scarce on dry prairies.

CONVOLVULACEAE.

IPOMOEA.

614. *I. purpurea* (L.) Roth. Plenty; escaped from gardens.

CONVOLVULUS.

615. *C. sepium* L. Abundant in fields and along streams.
 616. *C. arvensis* L. Scarce in dry fields.

CUSCUTACEAE.

CUSCUTA.

617. *C. arvensis* Beyrich. On *Solidago serotina*. Rare.
 618. *C. polygonorum* Engelm. Plenty on Polygonaceae.
 619. *C. paradoxa* Raf. Common on Compositae. Distinguished from our other species by the thick flower clusters. (*C. glomerata* Choisy. *C. aphylla* Raf.)

POLEMONIACEAE.

PHLOX.

620. *P. glaberrima* L. Rare in open woods.
 621. *P. pilosa* L. Abundant in meadows.
 622. *P. divaricata* L. Abundant in woods.

HYDROPHYLLACEAE.

HYDROPHYLLUM.

623. *H. virginicum* L. Common in moist woods.
 624. *H. appendiculatum* Michx. Plenty in rich woods. (*Ellisia* L.)

MACROCALYX

625. *M. nyctelea* (L.) Kuntze. Abundant in moist soil.

BORAGINACEAE.

CYNOGLOSSUM.

626. *C. officinale* L. Common in waste places.

LAPPULA.

627. *L. lappula* (L.) Karst. Common in waste places. Spreading.
 (*Echinospermum lappula* Lehm.)
 628. *L. virginiana* (L.) Greene. Common in dry woods. (*E. virginicum* Lehm.)
 629. *L. americana* (A. Gray) Rydb. Scarce in thickets. (*E. deflexum* Var *Americanum* A. Gray.)

AM SINCKIA.

630. *A. spectabilis* F. & M. Very rare in waste places; adventive.
 Identification verified by Prof. Aven Nelson, Univ., Wyo.

LITHOSPERMUM.

631. *L. latifolium* Michx. Plenty in woods.
 632. *L. canescens* (Michx.) Lehm. Abundant on dry prairies.
 633. *L. linearifolium* Goldie. Plenty in dry sandy soil. (*L. angustifolium* Michx.)

ONOSMODIUM.

634. *O. carolinianum* (Lam.) DC. Common on prairies.
 635. *O. mollle* Michx. Plenty on prairies.

VERBENACEAE.

VERBENA.

636. *V. urticifolia* L. Common in woods and fields.
 637. *V. hastata* L. Abundant in fields.
 638. *V. hastata pinnatifida* (Lam.) Britton. Scarce on prairies.
 639. *V. stricta* Vent. Abundant on prairies. This and the above
 three species hybridize freely producing puzzling forms.
 640. *V. bracteosa* Michx. Plenty in dry fields and waste places.

LIPPIA.

641. *L. lanceolata* Michx. Scarce in swamps.

LABIATAE.

TEUCRIUM.

642. *T. occidentale* A. Gray. Common in swampy places.

SCUTELLARIA.

643. *S. lateriflora* L. Common along streams.
 644. *S. parvula* Michx. Plenty in swampy places.
 645. *S. galericulata* L. Scarce in swampy places.

AGASTACHE.

646. *A. nepetoides*. (L.) Kuntze. Scarce in woods. (*Lophanthus nepetoides* Benth.)
647. *A. scrophulariaeefolia* (Willd.) Kuntze. Common in woods. (*L. scrophulariaeefolius* Benth.)

NEPETA.

648. *N. cataria* L. Common in woods and waste places.

GLECOMA.

649. *G. hederacea* L. Plenty in waste places.

PRUNELLA.

650. *P. vulgaris* L. Very abundant in woods and fields.

PHYSOSTEGIA.

651. *P. virginiana* (L.) Benth. Plenty in moist places.

LEONURUS.

652. *L. cardiaca* L. Plenty in woods and waste places.

STACHYS.

653. *S. ambigua* (A. Gray) Britton. Rare in moist places.

654. *S. palustris* L. Abundant in swampy places.

655. *S. tenuifolia* Willd. Rare in moist thickets.

MONARDA.

656. *M. fistulosa* L. Abundant in fields.

HEDEOMA.

657. *H. pulegioides* (L.) Pers. Rare. In dry soil.

658. *H. hispida* Pursh. Abundant in sandy soil.

KOELLIA.

659. *K. flexuosa* (Walt.) MacM. Plenty in woods and fields. (*Pycnanthemum linifolium* Pursh.)

660. *K. virginiana* (L.) MacM. Abundant in woods and fields. (*P. lanceolatum* Pursh.)

LYCOPUS.

661. *L. virginicus* L. Plenty in swamps.

662. *L. americanus* Muhl. Common in marshy places. (*L. sinuatus* Ell.)

663. *L. lucidus* Turcz. Scarce in marshy places.

MENTHA.

664. *M. canadensis* L. Common in swampy places.

SOLANACEAE.

PHYSALIS.

665. *P. pruinosa* L. Scarce in waste places.

666. *P. philadelphica* Lam. Common in dry soil.

667. *P. lanceolata* Michx. Plenty on prairies.

668. *P. virginiana* Mill. Scarce in dry soil. (*P. lanceolata* Roem. Not of Michx.)

669. *P. comata* Rydb. Scarce on prairie hillsides.

SOLANUM.

670. *S. nigrum* L. Abundant in waste places.

671. *S. rostratum* Dunal. Rare in waste places.

DATURA.

672. *D. stramonium* L. Scarce in waste places.
 673. *D. tatula* L. Scarce in waste places.

SCROPHULARIACEAE.**VERBASCUM.**

674. *V. thapsus* L. Abundant in fields and waste places.

LINARIA.

675. *L. linaria* (L) Karst. Scarce in waste places. Adventive.

SCROPHULARIA.

676. *S. marylandica* L. Abundant in woods and along streams. (*S. nodosa* var *marylandica* A. Gray.)
 677. *S. leporella* Bicknell. Less common and in similar localities.

MIMULUS.

678. *M. ringens* L. Abundant along streams and in swampy places.

GRATIOLA.

679. *G. virginiana* L. Scarce in wet places.

ILYSANTHES.

680. *I. dubia* (L.) Barnh. Scarce in wet places. (*I. gratioloides* (L.) Benth.)

VERONICA.

681. *V. anagallis-aquatica* L. Scarce in marshy soil.

682. *V. peregrina* L. Common in marshy soil.

LEPTANDRA.

683. *L. virginica* (L) Nutt. Abundant in woods and meadows.
 (*Veronica virginica* L.)

GERARDIA.

684. *G. purpurea* L. Rare in moist meadows.
 685. *G. paupercula* (A. Gray) Britton. Prairies, quite common.
 686. *G. besseyana* Britton. Abundant on prairies and in open woods.
 687. *G. auriculata* Michx. Plenty in waste places.

CASTILLEJA.

688. *C. sessiliflora* Pursh. Scarce on high prairies.

PEDICULARIS.

689. *P. lanceolata* Michx. Common in swamps.
 690. *P. canadensis* L. Abundant. Most descriptions give the habitat of this species as "Dry woods and thickets" but ours is more common in moist meadows and even in swampy places.

LENTIBULARIACEAE.**UTRICULARIA.**

691. *U. vulgaris* L. Common in swamps.

PHRYMACEAE.**PHRYMA.**

692. *P. leptostachya* L. Abundant in woods and thickets.

PLANTAGINACEAE.**PLANTAGO.**

693. *P. major* L. Abundant everywhere.
 694. *P. rugelii* Dec. Common in fields and woods.
 695. *P. lanceolata* L. Scarce in waste places.
 696. *P. purshii* R. & S. Plenty on dry prairies.
 697. *P. aristata* Michx. Scarce on high prairies.

RUBIACEAE.

GALIUM.

698. *G. aparine* L. Plenty in woods and fields.
 699. *G. mollugo* L. Rare. Some doubtful specimens appear to belong
 hère.
 700. *G. boreale* L. Common in woods and along streams.
 701. *G. tinctorium* L. Common in marshy meadows.
 702. *G. concinnum* T. & G. Abundant in rocky woods.

CAPRIFOLIACEAE.

SAMBUCUS.

703. *S. canadensis* L. Common in woods and along streams.

VIBURNUM.

704. *V. pubescens* (Ait.) Pursh. Scarce in rocky woods. (*V. dentatum pubescens* Ait.)
 705. *V. lentago* L. Common in thickets and along roadsides.

TRIOSTEUM.

706. *T. perfoliatum* L. Scarce in low woods.
 707. *T. aurantiacum* Bicknell. More common in rich woods.

SYMPHORICARPUS.

708. *S. racemosus* Michx. Abundant in woods and on rock banks
 of streams.
 709. *S. occidentalis* Hook. Scarce in thickets.

LONICERA.

710. *L. glaucescens* Rydb. Plenty in woods. (*L. douglasii* Lind.)
 711. *L. dioica* L. Plenty in woods.

DIERVILLA.

712. *D. diervilla* (L.) MacM. Rare in rocky woods.

CUCURBITACEAE.

MICRAMPHELIS.

713. *M. lobata* (Michx.) Greene. Abundant in thickets and along
 streams. (*Echinocystis lobata* T. & G.)

SICYOS.

714. *S. angulatus* L. Rare in woods.

CAMPANULACEAE.

CAMPANULA.

715. *C. rotundifolia* L. Plenty in rocky places. The rotund base
 leaves usually very inconspicuous.
 716. *C. aparinoides* Pursh. Plenty in swamps and marshes. Flowers
 mostly white.
 717. *C. americana* L. Abundant in thickets and along streams.

SPECULARIA.

718. *S. perfoliata* (L.) A. DC. Plenty in woods and rarely on open
 prairie.

LOBELIA.

719. *L. syphilitica* L. Abundant in moist soil.
 720. *L. spicata* Lam. Abundant in fields and meadows.
 721. *L. leptostachys* A. DC. Scarcer in dry meadows.

CICHORIACEAE.

CICHORIUM.

722. *C. intybus* L. Scarce in thickets and waste places.

TRAGOPOGON.

723. *T. pratensis* L. Rare in waste places.

724. *T. porrifolius* L. Scarce in waste places. Escaped from cultivation.

TARAXACUM.

725. *T. taraxacum* (L.) Karst. Abundant everywhere. (*T. dens* *leonis* Desf.)

726. *T. erythrospermum* Andrez. Scarcer but not rare.

SONCHUS.

727. *S. oleraceus* L. Common in fields and waste places.

728. *S. asper* (L.) All. Plenty in waste places.

LACTUCA.

729. *L. scariola* L. Abundant as a weed in fields and in waste places.

730. *L. canadensis* L. Scarce in moist soil.

731. *L. ludoviciana* (Nutt.) DC. Scarce in waste places.

732. *L. floridana* (L.) Gaertn. In moist soil. Sometimes 10 feet high.

LYGODESMIA.

733. *L. juncea* (Pursh.) D. Don. Rare on high prairies

NOTHOCALAIIS.

734. *N. cuspidata* (Pursh.) Greene. Abundant on prairie hillsides.

HIERACIUM.

735. *H. canadense* Michx. Scarce in dry woods.

NAEALUS.

736. *N. albus* (L.) Hook. Abundant in woods. (*Prenanthes alba* L.)

737. *N. asper* (Michx. T. & G.) Plenty on dry prairies. (*Prenanthes aspera* Michx.)

738. *N. racemosus* (Michx.) DC. Scarce along edges of woods and on open prairie. (*P. racemosa* Michx.)

AMBROSIACEAE.

IVA.

739. *I. xanthifolia* (Fresen.) Nutt. Common in swampy fields.

AMBROSIA.

740. *A. trifida* L. Plenty in fields and waste places.

741. *A. trifida integrifolia* (Muhl.) T. & G. Scarcer; with the above.

742. *A. artemisiæfolia* L. A common and troublesome weed everywhere.

743. *A. psilostachya* DC. Rather scarce on dry prairies.

XANTHIUM.

744. *X. canadense* Mill. Common in waste places.

COMPOSITAE.

VERNONIA.

745. *V. fasciculata* Michx. Abundant in moist places.

EUPATORIUM.

746. *E. maculatum* L. Common in swamps and marshes.
747. *E. purpureum* L. Common in open woods and thickets.
748. *E. altissimum* L. Plenty in sandy soil.
749. *E. perfoliatum* L. Very abundant in swampy places.
750. *E. ageratoides* L. f. Common in open woods.

KUHNIA.

751. *K. eupatorioides* L. Scarce on dry prairies.
752. *K. glutinosa* Ell. Common in dry soil.

LACINARIA.

753. *L. squarrosa* (L.) Hill. Scarce on prairies. (*Liatris squarrosa* Willd.)
754. *L. punctata* (Hook.) Kuntze. Common on prairie hillsides. (*Liatris punctata* Hook.)
755. *L. acidota* (Engelm. & Gray) Kuntze. Very rare. This western species has been found here on two occasions; along the right of way of a railway in both cases.
756. *L. pycnostachya* (Michx.) Kuntze. Abundant on prairies.
757. *L. scariosa* (L.) Hill. Plenty on prairies.

SOLIDAGO.

758. *S. caesia* L. Rare in woods and thickets.
759. *S. flexicaulis* L. Plenty in woods and thickets.
760. *S. hispida* Muhl. Scarce in rocky woods.
761. *S. rigidiuscula* (T. & G.) Porter. Common on prairie hillsides.
762. *S. rugosa* Mill. Scarce along edges of woods.
763. *S. ulmifolia* Muhl. Common in woods and thickets.
764. *S. rupestris* Raf. Scarce in rocky woodlands.
765. *S. serotina* Ait. Plenty in woods and prairies.
766. *S. missouriensis* Nutt. Scarce on prairie hillsides.
767. *S. canadensis* L. Abundant in fields and woods. Possibly one or more of the listed varieties also occur.
768. *S. nemoralis* Ait. Common on dry prairies.
769. *S. mollis* Bartl. Scarce on high prairies.
770. *S. rigida* L. Common on prairies.
771. *S. riddellii* Frank. Plenty in most fields.

EUTHAMIA.

772. *E. graminifolia* (L.) Nutt. Plenty in moist fields.

BOLTONIA.

773. *B. asteroides* (L.) L'Her. Abundant in moist fields.

ASTER.

774. *A. azureus* Lindl. Plenty on prairies.
776. *A. drummondii* Lindl. Very rare in woods.
776. *A. Drummondii* Lindl. Very rare in woods.
777. *A. phlogifolius* Muhl. Some specimens from a moist woodland which were found in '04, but not noted since.
778. *A. novae-angliae* L. Abundant in fields, swamps and thickets.
779. *A. oblongifolius* Nutt. Plenty on prairie hillsides.
780. *A. amethystinus* Nutt. Abundant on prairies.

781. *A. prenanthoides* Muhl. Rare in rocky woods. Found in one locality only.
782. *A. laevis* L. Abundant in woods and fields.
783. *A. concinnus* Willd. Rarely on prairies.
784. *A. sericeus* Vent. Common on prairie hillsides.
785. *A. dumosus* L. Rare in dry soil.
786. *A. salicifolius* Lam. Common on high prairies.
- 786½. *A. paniculatus* Lam. Abundant in fields.
787. *A. paniculatus simplex* (Willd.) Burgess. Plenty in moist places.
788. *A. tradescanti* L. Plenty in fields and meadows.
789. *A. ericoides* L. Rather scarce on prairies.
790. *A. lateriflorus* (L.) Britton. Scarce in fields and along edges of
791. *A. hirsuticaulis* Lindl. Very rare in open woods.
792. *A. multiflorus* Ait. Abundant in woods and on prairies.
woodlands and thickets.

ERIGERON.

793. *E. philadelphicus* L. Plenty in fields and woods.
794. *E. annuus* (L.) Pers. Common in fields and meadows.
795. *E. ramosus* (Walt.) B. S. P. Abundant in fields and meadows.

LEPTILON.

796. *L. canadense* (L.) Britton. Very abundant everywhere.
797. *L. divaricatum* (Michx.) Raf. Scarce along streams.

DOLLINGERIA.

798. *D. umbellata* (Mill.) Nees. Scarce in marshes.

ANTENNARIA.

799. *A. campestris* (Rydb.) Scarce on prairies.
800. *A. plantaginifolia* (L.) Richards. Abundant not only in woods
but also in open places.

SILPHIUM.

801. *S. perfoliatum* L. Common in fields and meadows.
802. *S. laciniatum* L. Common in fields and meadows.

HELIOPSIS.

803. *H. scabra* Dunal. Abundant in fields and along roadsides.

RUDBECKIA.

804. *R. triloba* L. Common in woods and moist fields.
805. *R. hirta* L. Abundant in woods and fields.
806. *R. subtomentosa* Pursh. Rare on open prairie.
807. *R. laciniata* L. Plenty in the thickets.

RATIBIDA.

808. *R. pinnata* (Vent.) Barnh. Common on prairies.
809. *R. columnaris* (Sims) D. Don. Rare in dry soil.

BRAUNERIA.

810. *B. angustifolia* (DC.) Heller. Plenty in dry soil.
811. *B. pallida* (Nutt.) Britton. Common on prairies.

HELIANTHUS.

812. *H. annuus* L. Plenty in waste places.
813. *H. scaberrimus* Ell. Common in dry soil.
814. *H. maximiliani* Schrad. Rather scarce in dry soil.

815. *H. grosse-serratus* Martens. Common on prairies and along streams.

816. *H. decapetalus* L. Scarce along streams.

817. *H. tuberosus* L. Scarce in moist soil.

COREOPSIS.

818. *C. palmata* Nutt. Abundant on prairies.

BIDENS.

819. *B. laevis* (L.) B. S. P. Scarce in fields and meadows.

820. *B. cernua* L. Plenty in waste places.

821. *B. connata* Muhl. Scarce in moist soil.

822. *B. comosa* (A. Gray) Wiegand. Scarce in moist soil.

823. *B. frondosa* L. Abundant in fields and woods.

824. *B. trichosperma tenuiloba* (A. Gray) Britton. Rare. Adventive.

825. *B. involucrata* (Nutt.) Britton. Scarce in swamps.

GALINSOGA.

826. *G. parviflora* Cav. Rare in waste places.

HELENIUM.

827. *H. autumnale* L. Abundant in fields and swamps.

BOEBERA.

828. *B. papposa* (Vent.) Rydb. Common in waste places. (*Dysodia papposa* (Vent.) A. S. Hitchc.)

ACHILLEA.

829. *A. lanulosa* Nutt. Abundant on prairies.

830. *A. millefolium* L. Less common and usually in the pink flowered form.

ANTHEMIS.

831. *A. cotula* L. Common in waste places and along roadsides.

832. *A. arvensis* L. Scarce in fields.

TANACETUM.

833. *T. vulgare* L. Common, usually escaped from gardens.

ARTEMISIA.

834. *A. caudata* Michx. Common in sandy soil.

835. *A. canadensis* Michx. Rare, adventive.

836. *A. dracunculoides*, Pursh. Plenty in dry soil.

837. *A. biennis* Willd. Plenty on prairies.

838. *A. serrata* Nutt. Scarce on prairies.

839. *A. longifolia* Nutt. Plenty on prairie hillsides.

840. *A. gnaphalodes* Nutt. Abundant on dry prairies.

ERECHITITES.

841. *E. hieracifolia* (L.) Raf. Plenty in woods and thickets.

MESADENIA.

842. *M. tuberosa* (Nutt.) Britton. Abundant in moist fields and meadows.

SENECIO.

843. *S. balsamitae* Muhl. Plenty in sandy soil.

844. *S. aureus* L. Common in swamps and fields.

845. *S. palustris* (L.) Hook. Rare in swamps and marshes.

ARCTIUM.

846. *A. lappa* L. Abundant in woods and waste places.

847. *A. minus* Schk. Rare in waste places.

CARDUUS.

848. *C. lanceolatus* L. Abundant in fields and waste places.

849. *C. altissimus* L. Plenty in woods and fields.

850. *C. discolor* (Muhl.) Nutt. Common in fields.

851. *C. arvensis* (L.) Robs. Plenty in fields and waste places.

852. *C. ionense* Pammel. Scarce on prairies.