

THE UREDINALES OF INDIANA.

BY H. S. JACKSON.

The first authentic record of the collection of any species of plant rust in Indiana of which we have any knowledge was made by Dr. J. M. Coulter in the Botanical Bulletin (Botanical Gazette) 1:20, 1876. In a short article he noted the common occurrence of *Uromyces lespedezae* Schw. on *Lespedeza violacea*, presumably in the vicinity of Hanover.

The first account of the rusts of the State presented before the Indiana Academy of Science was included in a paper by E. M. Fisher on the Parasitic Fungi of Indiana, which was read at the annual meeting for 1890. This paper listed a considerable number of species of Uredineae, but unfortunately was not published and is unavailable. The specimens on which the paper was based were deposited in the herbarium of the United States Department of Agriculture. A list of the species was, however, obtained by Dr. L. M. Underwood and included in his "List of the Cryptogams at present known to inhabit the State of Indiana," which was printed in the Proceedings for 1893.

The latter list forms the basis of our knowledge of the cryptogamic flora of the State and enumerates 88 species of Uredinales including the unattached aecial and uredinial forms. Supplementary lists by various authors have appeared in the Proceedings from time to time since that date, only the most noteworthy of which need be mentioned.

In 1896 Miss Lillian Snyder presented a list of the rusts of Tippecanoe county, supplementing the work in 1898 with lists from Madison and Noble counties. The rusts of Hamilton and Marion counties were listed by G. W. Wilson in 1905.

Two complete State lists have been presented to the Academy by Dr. J. C. Arthur. The first was read in 1898 and enumerated 80 species; the second was presented in 1903 and included 105 species. Both these lists were prepared in such form as to illustrate the latest developments in revised nomenclature. The unattached aecial and uredinial forms were omitted.

The present list is based on the information contained in all the preceding ones which have appeared in the Proceedings of the Academy, together with the wealth of material collected in all parts of the State contained in the

Arthur herbarium at the Purdue Experiment Station. An attempt has been made to show the distribution within the State by counties. Under each host is given a list of the counties within which the species has been collected, together with the name of the person making the *first* collection and the year in which the collection was made. A considerable number of the collections which have been recorded in the first lists were not available to the writer. These have been included in the distribution only when there seemed to be no chance of mistaking their identity. A few species evidently wrongly determined of which no specimens were available, have been omitted.

The nomenclature followed is that of Dr. J. C. Arthur as used in the *N. Am. Flora*, volume 7, in so far as that admirable work has been completed, or as proposed for the unpublished portion. The nomenclature of the hosts in general conform to that of Britton & Brown, *Illustrated Flora*, 2nd edition.

For convenience in consulting the list, the species not previously recorded are marked *. Hosts not previously recorded are printed in black-faced type. References are inserted following the host name to the year and page of preceding volumes of the *Proceedings*, where additional information may be obtained. Wherever Indiana rusts have appeared in published sets of *exsiccati* reference is made following the collector's name. Reference by number is made to the rusts included in the set of *Parasitic Fungi* distributed by the Indiana Biological Survey, December, 1894. Series I. (See *Proceedings* 1894:154-156. 1895.)

It is the plan of the writer to submit additions and corrections to this list as material is collected. It would be greatly appreciated if collectors would send duplicates of their collections to the writer.

The writer wishes to acknowledge his indebtedness to Dr. J. C. Arthur for the unrestricted use of his herbarium and notes in the preparation of this list without which any approach to completeness would have been impossible. Dr. Arthur has also kindly read the manuscript and offered many helpful suggestions.

COLEOSPORIACEAE.

- *1. COLEOSPORIUM CAMPANULAE (*Pers.*) *Lev.*
 On **Campanula americana** L.
 Delaware, 1915 (Jackson); Hamilton, 1907 (Wilson); Tippecanoe,
 1907 (Arthur & Kern).
- *2. COLEOSPORIUM DELICATULUM (*Arth. & Kern*) *Hedg. & Long*
 On **Euthamia graminifolia** (L.) Nutt.
 Harrison, 1915 (Fogal); Jefferson, 1914 (Demaree); Johnson,
 1915 (Pipal); Orange, 1915 (Jackson).
- *3. COLEOSPORIUM ELEPHANTOPODIS (*Schw.*) *Thum.*
 On **Elephantopus carolinianus** Willd.
 Gibson, 1915 (Hoffer); Jefferson, 1915 (Demaree); Orange, 1915
 (Jackson).
- *4. COLEOSPORIUM HELIANTHI *Schw.*
 On **Helianthus decapetalus** L.
 Owen, 1893 (Underwood); Tippecanoe, 1915 (Ludwig).
 On **Helianthus hirsutus** Raf.
 Orange, 1915 (Jackson).
5. COLEOSPORIUM IPOMOEAE (*Schw.*) *Burrill.*
 On *Ipomoea pandurata* (L.) Mey. 1896:171, 218.
 Tippecanoe, 1895 (Arthur); 1896 (Snyder); 1914 (Ludwig in
 Barth. Fungi Col. 4519).
6. COLEOSPORIUM SOLIDAGINIS (*Schw.*) *Thum.* 1908:89.
 On *Aster azureus* Lindl. 1893:50.
 Montgomery, 1890 (Fisher), 1893 (Olive).
 On *Aster cordifolius* L. 1893:51.
 Montgomery, 1890 (Fisher); Tippecanoe, 1896 (Snyder).
 On **Aster Drummondii** Lindl.
 Tippecanoe, 1904 (Arthur).
 On *Aster ericoides* L. 1905:179.
 Delaware, 1915 (Jackson); Hamilton, 1905 (Wilson); Orange,
 1915 (Jackson); Tippecanoe, 1915 (Mrs. Emily Arthur).
 On **Aster longifolius** Lam.
 Putnam, 1907 (Wilson).

- On *Aster Novae-angliae* L. 1893:51.
Johnson, 1890 (Fisher); Montgomery, 1890 (Fisher); Tippecanoe, 1904 (Arthur).
- On *Aster paniculatus* Lam. 1893:51, 1905:179.
Franklin, 1912 (Ludwig); Hamilton, 1905 (Wilson); Montgomery, 1890 (Fisher); Tippecanoe, 1896 (Snyder).
- On *Aster puniceus* L. 1893:51.
Henry, 1915 (Jackson); Johnson, 1890 (Fisher); Steuben, 1903 (Kellerman); Tippecanoe, 1896 (Snyder).
- On *Aster sagittifolius* Willd. 1893:51.
Delaware, 1915 (Jackson); Johnson, 1890 (Fisher); Tippecanoe, 1896 (Snyder).
- On *Aster salicifolius* Lam. 1893:51.
Henry, 1915 (Jackson); Johnson, 1890 (Fisher).
- On *Aster Shortii* Hook. 1893:51.
Montgomery, 1890 (Fisher).
- On *Aster Tradescanti* L. 1893:51.
Johnson, 1890 (Fisher).
- On *Callistephus hortensis* Cass.
Jefferson, 1914 (Demaree).
- On *Solidago arguta* Ait. 1893:51.
Montgomery, 1890 (Fisher).
- On *Solidago caesia* L. 1893:51.
Johnson, 1890 (Fisher); Montgomery, 1890 (Fisher); Tippecanoe, 1912 (Pipal).
- On *Solidago canadensis* L. 1893:51. 1905:179.
Hamilton, 1905 (Wilson); Johnson, 1890 (Fisher); Marion, 1905 (Wilson); Montgomery, 1890 (Fisher); Orange, 1915 (Jackson); Tippecanoe, 1915 (Jackson); Tipton, 1915 (Pipal); Wabash, 1890 (Miller).
- On *Solidago flexicaulis* L. (*S. latifolia* L.) 1893:51 1896:218.
Montgomery, 1890 (Fisher); Owen, 1893 (Underwood Ind. Biol. Survey No. 54); Tippecanoe, 1896 (Snyder).
- On *Solidago patula* Muhl. 1893:51.
Montgomery, 1890 (Fisher); Tippecanoe, 1906 (Kern).

On *Solidago rugosa* Mill. 1893:51.

Johnson, 1890 (Fisher); St. Joseph, 1901 (Cunningham); Tippecanoe, 1904 (Arthur).

On *Solidago serotina* Ait. 1893:51.

Johnson, 1890 (Fisher); Owen, 1893 (Underwood Ind. Biol. Survey, 54 in part); Steuben, 1903 (Kellerman).

On *Solidago ulmifolia* Muhl.

Montgomery, 1907 (Fitzpatrick); Tippecanoe, 1896 (Snyder).

Following the usage of earlier American authors this species has often erroneously been referred to the European *C. Souchei-arcensis* (Pers.) Lev.

*7. COLEOSPORIUM TEREBINTHINACEAE (*Schw.*) *Arth.*

On *Silphium integrifolium* Michx.

Tippecanoe, 1915 (Ludwig).

On *Silphium terbinthinaceum* Jacq.

Tippecanoe, 1912 (Hoffer); 1914 (Ludwig, in Barth. N.Am. Ured. 1109).

8. COLEOSPORIUM VERNONIAE *B. & C.*

On *Vernonia fasciculata* Michx. 1893:51. 1905:179.

Hamilton, 1905 (Wilson); Montgomery, 1893 (Olive); Orange, 1915 (Jackson); Putnam, 1891 (Underwood); Tippecanoe, 1896 (Snyder).

On *Vernonia noveboracensis* (L.) Willd. 1893:51.

Jefferson, 1915 (Demaree); Johnson, 1890 (Fisher).

On *Vernonia altissima* Nutt.

Delaware, 1915 (Jackson); Hamilton, 1905 (Wilson); Henry, 1915 (Jackson); Orange, 1915 (Jackson); Tippecanoe, 1905 (Kern).

UREDINACEAE.

*9. BUBAKIA CROTONIS (*Cooke*) *Arth.*

On *Croton monanthogynus* Michx.

Franklin, 1912 (Oskamp); Lawrence, 1915 (Hoffer); Putnam, 1907 (Wilson).

10 HYALOPSORA POLYPODII (DC.) Magn.

Uredo polypodii DC.

On *Felix fragilis* (L.) Underw. (*Cystopteris fragilis* (L.) Bernh.
1893:56. 1903:143.

Putnam, 1893 (Underwood Ind. Biol. Survey 53).

*11. MELAMPSORA ABIETIS-CANADENSIS (Farl.) Ludwig.

On **Populus deltoides** Marsh.

Jasper, 1913 (Arthur & Fromme).

On *Populus grandidentata* Michx. 1893:51.

Putnam, 1893 (Underwood Ind. Biol. Sur. 50).

On **Populus heterophylla** L.

Tippecanoe, 1914 (Ludwig).

On **Populus tremuloides** Michx.

Steuben, 1903 (Kellerman).

Some of above collections were previously recorded in the
Proceedings as *M. Medusae* Thüm.

12. MELAMPSORA BIGELOWII Thüm. 1908:89.

On *Salix amygdaloides* Anders. 1903:143.

Lagrange, 1907 (Arthur); Steuben, 1903 (Kellerman).

On *Salix cordata* Muhl. 1893:51. 1905:180.

Hamilton, 1905 (Wilson); Montgomery, 1893 (Olive); Tippecanoe,
1904 (Arthur).

On *Salix discolor* Muhl. 1893:51. 1896:218.

Montgomery, 1890 (Fisher); Tippecanoe, 1896 (Snyder).

On *Salix interior* Rowlee (*S. longifolia* Muhl.) 1893:51. 1905:180.

Hamilton, 1905 (Wilson); Johnson, 1890 (Fisher); Montgomery,
1893 (Olive); Marion, 1905 (Wilson); Owen, 1893 (Under-
wood Ind. Biol. Sur. 49); St. Joseph, 1904 (Cunningham);
Steuben, 1903 (Kellerman); Tippecanoe, 1898 (Stuart).

On *Salix nigra* Marsh. 1893:51.

Henry, 1915 (Jackson); Montgomery, 1890 (Fisher); Tippecanoe,
1887 (Arthur).

On **Salix Wardii** Bebb. (1893:51 as *S. nigra* Marsh.)

Johnson, 1890 (Fisher).

Following frequent usage of American authors this species
has been variously referred to in the Proceedings as *Melampsora*

Salicina Lev., *M. farinosa* (Pers.) Schroet. and *M. Salicis-cupreae* (Pers.) Wint., all of which apply to European species.

13. MELAMPSORA MEDUSAE *Thüm.* 1908:89.

On *Populus balsamifera* L. 1893:51.

Montgomery, 1890 (Fisher).

On *Populus deltoides* Marsh. (*P. monilifera* Ait.) 1893:51. 1896:218. 1905:180.

Hamilton, 1905 (Wilson); Johnson, 1890 (Fisher); Marion, 1905 (Wilson); Montgomery, 1893 (Olive); Putnam, 1891 (Underwood); Tippecanoe, 1914 (Ludwig, in Barth. Fungi Col. 4737 and in Barth. N.Am. Ured. 1122); 1888 (Bolley), 1896 (Snyder); Warren, 1909 (Kern & Johnson).

On *Populus grandidentata* Michx. 1893:51.

Montgomery, 1890 (Fisher); Putnam, 1890 (Underwood).

On *Populus tremuloides* Michx. 1893:51. 1898:188.

Marshall, 1893 (Underwood); Noble, 1897 (King).

This species has occasionally been erroneously referred in the Proceedings to *M. populina* (Jacq.) Lev., a European species.

14. MELAMPSORIDIUM BETULAE (*Schum.*) *Arth.*

Melampsorium betulinum (Pers.) Kleb.

On *Betula lutea* Michx. 1903:143. 1908:89.

Steuben, 1903 (Kellerman).

15. PUCCINIASTRUM AGRIMONIAE (*Schw.*) *Tranz.*

Cacoma Agrimoniae Schw.

On *Agrimonia hirsuta* (Muhl.) Bickn. (*A. Eupatoria* Am. Auct.) 1893:50.

Montgomery (Rose); Owen, 1893 (Underwood); Putnam, 1891 (Underwood); 1907 (Wilson).

On *Agrimonia mollis* (T. & G.) Britton. 1893:50. 1896:218. 1905:180.

Delaware, 1915 (Jackson); Hamilton, 1905 (Wilson); Johnson, 1890 (Fisher); Orange, 1915 (Jackson); Tippecanoe, 1896 (Snyder).

On *Agrimonia parviflora* Soland. 1893:50.

Jefferson, 1915 (Demaree); Marshall, 1893 (Underwood); Putnam, 1893 (Underwood, Biol. Surv. 51); Tiptecanoe, 1913 (Travelbee).

16. PUCCINIASTRUM HYDRANGEAE (*B. & C.*) Arth.

Uredo Hydrangeae *B. & C.*

Coleosporium Hydrangeae (*B. & C.*) Snyder.

Thecopsara Hydrangeae (*B. & C.*) Magn.

On *Hydrangea arborescens* L. 1893:56. 1896:218. 1903:143.

Marion, 1890 (Tracy); Montgomery, 1890 (Fisher); Putnam, 1891 (Underwood); Tiptecanoe, 1896 (Snyder).

AECIDIACEAE.

17. ALLODUS AMBIGUA (*A. & S.*) Arth.

Puccinia ambigua (*A. & S.*) Lagerh.

Dicacoma ambigua (*A. & S.*) Kuntze.

On *Galium Aparine* L. 1896:172. 1903:146.

Jefferson, 1903 (Arthur); Tiptecanoe, 1896 (Snyder).

*18. ALLODUS CLAYTONIATA (*Schw.*) Arth.

Cacoma (Accidium) Claytoniatum Schw.

Puccinia Mariac-Wilsoni G. W. Clinton.

On *Claytonia virginica* L.

St. Joseph, 1904 (Cunningham).

19. ALLODUS PODYPHYLLI (*Schw.*) Arth.

Puccinia Podyphylli Schw.

Dicacoma Podyphylli (*Schw.*) Kuntze.

On *Podyphyllum peltatum* L. 1893:54. 1896:221. 1898:184, 189. 1905:182.

Brown, 1893 (Underwood); Dearborn, 1889 (Bolley); Fayette, 1914 (Ludwig in Barth. N. Am. Ured. 1166 and in Barth. Fungi Col. 4760); Franklin, 1912 (Ludwig); Hamilton, 1905 (Wilson); Jasper, 1915 (Arthur); Jefferson, 1910 (Johnson); Johnson, 1890 (Fisher); Montgomery, 1893 (Olive); Monroe, 1893 (Underwood); Noble, 1897 (King); Owen, 1893 (Underwood); Posey, 1906 (Arthur & Kern); Putnam, 1892; 1893

(Underwood, Ind. Biol. Sur. 15); St. Joseph, 1905 (Cunningham); Tippecanoe, 1896 (Snyder); Wabash, 1890 (Miller); Vigo, 1893 (Underwood).

20. ALLODUS TENUIS (*Schw.*) *Arth.*

Cacoma (Accidium) tenue Schw.

Puccinia tenuis Burr.

Dicaoma tenue (Burr.) Kuntze.

On *Eupatorium urticaefolium* Reich. (*E. agratoides* L.) 1893:55.
1896:221. 1903:151.

Putnam, 1893 (Underwood); Tippecanoe, 1896 (Snyder).

*21. BULLARIA BARDANAE (*Cda.*) *Arth.*

Puccinia Bardanae Corda.

On *Arctium Lappa* L.

Carroll, 1915 (Hoffer); Delaware, 1915 (Jackson); Henry, 1915 (Jackson); Tippecanoe, 1915 (Jackson).

*22. BULLARIA BULLATA (*Pers.*) *Arth.*

Puccinia bullata (Pers.) Wint.

On *Taenida integerrima* (L.) Drude.

Tippecanoe, 1915 (Ludwig).

23. BULLARIA CHRYSANTHEMI (*Roze*) *Arth.*

Puccinia Chrysanthemi Roze.

Dicaoma Chrysanthemi (Roze) *Arth.*

On *Chrysanthemum Sinense* Sabine. 1903:147.

Tippecanoe, 1899 (Dorner); 1900 (Arthur).

*24. BULLARIA GLOBOSIPES (*Pk.*) *comb. nov.*

Puccinia globosipes Pk.

Uredo similis Ell.

On *Lycium halimifolium* Mill.

Shelby, 1890 (Fisher); Type of *Uredo similis* Ell. *Jour. Myc.* 7:275. 1893.

*25. BULLARIA HIERACII (*Schum.*) *Arth.*

Puccinia Hieracii (Schum.) Mart.

On *Hieracium scabrum* Michx.

Montgomery, 1913 (Arthur).

26. **BULLARIA KUHNIAE** (Schw.) comb. nov.*Puccinia Kuhniae* Schw.*Dicoma Kuhniae* (Schw.) Kuntze.On *Kuhnia eupatorioides* L. 1893:54. 1896:220.

Harrison, 1915 (Fogal); Tippecanoe, 1888 (Bolley); 1900 (Arthur).

27. **BULLARIA TARAXACI** (Reb.) Arth.*Puccinia Taraxaci* (Reb.) Plowr.*Dicoma Taraxaci* (Reb.) Kuntze.On *Leontodon Taraxacum* L. (*Taraxacum Taraxacum* (L.) Karst. 1893:53. 1896:219. 1898:188. 1903:51. 1905:182.

Franklin, 1915 (Ludwig); Henry, 1915 (Jackson); Hamilton, 1905 (Wilson); Jefferson, 1910 (Johnson); Johnson, 1890 (Fisher); Marion, 1905 (Wilson); Miami, 1915 (Ludwig); Montgomery, 1893 (Olive); Noble, 1897 (King); Putnam, 1893 (Underwood); Tippecanoe, 1888 (Bolley), 1896 (Snyder); Vigo, 1893 (Arthur).

On *Leontodon erythrospermum* (Andrz.) Britton (*Taraxacum erythrospermum* Andrz.)

Hamilton, 1909 (Kern & Johnson); Jefferson, 1910 (Johnson); Tippecanoe, 1907 (Arthur).

Reported erroneously in the Proceedings as *Puccinia flosculosorum* (A. & S.) Wint. and *Dicoma flosculosorum* (A. & S.) Martins.28. **DASYSPORA ANEMONES-VIRGINIANAE** (Schw.) Arth.*Puccinia Anemones-virginianae* Schw.*Dicoma Anemones-virginianae* (Schw.) Arth.On *Anemone cylindrica* A. Gray. 1896:219.

Tippecanoe, 1892 (Arthur).

On *Anemone virginiana* L. 1903:146.

Steuben, 1903 (Kellerman); Tippecanoe, 1903 (Arthur).

29. **DASYSPORA ASTERIS** (Duby) Arth.*Puccinia Asteris* Duby.*Dicoma Asteris* (Duby) Kuntze.On *Aster azureus* Lindl.

Tippecanoe, 1896 (Stuart).

On *Aster cordifolius* L. 1893:52.

Montgomery, 1890 (Fisher).

On *Aster longifolius* Lam.

Putnam, 1907 (Wilson); Tippecanoe, 1905 (Wilson).

On *Aster Novae-angliae* L.

Tippecanoe, 1910 (Johnson & Orton).

On *Aster paniculatus* Lam. 1893:52. 1896:219. 1905:181.

Hamilton, 1905 (Wilson); Montgomery, 1890 (Fisher); Tippecanoe, 1896 (Snyder).

On *Aster puniceus* L.

Tippecanoe, 1905 (Kern).

On *Aster sagittifolius* Willd.

Delaware, 1915 (Jackson).

30. DASYSPORA CIRCAEAE (*Pers.*) *Arth.*

Puccinia Circaeae Pers.

Dicaeoma Circaeae (*Pers.*) Kuntze.

On *Circaea Lutetiana* L. 1893:53. 1896:219. 1905:181.

Hamilton, 1905 (Wilson); Johnson, 1890 (Fisher); Putnam, 1893 (Underwood, Ind. Biol. Sur. 28); Tippecanoe, 1896 (Snyder); Wabash, 1886 (Miller).

31. DASYSPORA DAYI (*Clint.*) *Arth.*

Puccinia Dayi Clinton.

Dicaeoma Dayi (*Clint.*) Kuntze.

On *Steironema ciliatum* (L.) Raf. 1893:53. 1905:181.

Hamilton, 1905 (Wilson); Johnson, 1890 (Fisher); Kosciusko, 1913 (Hoffer); Putnam, 1893 (Underwood, Ind. Biol. Sur. 25).

32. DASYSPORA GLECOMATIS (*DC.*) *Arth.*

Puccinia verrucosa (Schultz) Lk.

On *Agastache nepetoides* (L.) Kuntze. 1905:181.

Hamilton, 1905 (Wilson); Johnson, 1915 (Pipal); Sullivan (Hoffer); Tippecanoe, 1910 (Johnson).

33. DASYSPORA LOBELIAE (*Ger.*) *Arth.*

Puccinia Lobeliae Ger.

Dicaeoma Lobeliae (*Ger.*) *Arth.*

On *Lobelia syphilitica* L. 1893:54. 1896:220.

Fulton, 1893 (Underwood); Johnson, 1890 (Fisher); Putnam, 1893 (Underwood, Ind. Biol. Sur. 20); Tippecanoe, 1883 (Arthur); Vermillion, 1889 (Arthur) Vigo, 1893 (Underwood).

*34. **DASYSPORA MALVACEARUM** (Bert.) Arth.

Puccinia malvacearum Bert.

Dicacoma malvacearum (Bert.) Kuntze.

On ***Althaea rosea*** L.

Huntington, 1915 (Miller); Marion, 1915 (Dietz); Marshall, 1915 (Arthur); Montgomery, 1915 (Anderson); St. Joseph, 1915 (Bordner).

On ***Malva rotundifolia*** L.

Marshall, 1915 (Arthur); St. Joseph, 1914 (Anderson).

35. **DASYSPORA PHYSOSTEGIAE** (P. & C.) comb. nov.

Puccinia Physostegiae P. & C.

Dicacoma Physostegiae (P. & C.) Kuntze.

On *Dracocephalum virginianum* L. (*Physostegia virginiana* (L.) Benth.) 1894:151. 1896:220.

Marshall, 1893 (Underwood, Ind. Biol. Sur. 13); Tippecanoe, 1895 (Arthur).

36. **DASYSPORA RANUNCULI** (Seymour) Arth.

Puccinia Ranunculi Seymour.

Dicacoma Ranunculi (Seym.) Kuntze.

On *Ranunculus septentrionalis* Poir. 1893:55.

Montgomery, 1893 (Olive); 1903 (Hughart).

*37. **DASYSPORA SAXIFRAGAE** (Schlecht.) Arth.

Puccinia Saxifragae Schlecht.

On ***Micranthes pennsylvanica*** (L.) Han. (*Saxifraga pennsylvanica* L.)

Porter, 1913 (Deam).

*38. **DASYSPORA SEYMERIAE** (Burr.) Arth.

Puccinia Seymeriae Burr.

On ***Azelia macrophylla*** (Nutt.) Kuntze.

Tippecanoe, 1907 (Dorner).

The combination *D. Seymeriae* (Burr.) Arthur was made in Result. Sci. Congr. Bot. Vienne 347. 1906. By a typographical error the specific name was written "Seymouriae." *Puccinia Seymeriae* Burr. not *Puccinia Seymourii* Lindl. was clearly intended. The latter is probably not a *Dasyscypha* and in any case is a synonym of *P. muscuii* E. & E.

39. **DASYSPORA SILPHII** (Schw.) Arth.

Puccinia Silphii Schw.

Dicaeoma Silphii (Schw.) Kuntze.

On *Silphium integrifolium* Michx. 1903:151.

Tippecanoe, 1901 (Dorner).

On **Silphium perfoliatum** L.

Tippecanoe, 1906 (Wilson, Olive, Kern).

On *Silphium* sp. 1893:55.

Putnam, 1891 (Underwood).

40. **DASYSPORA XANTHII** (Schw.) Arth.

Puccinia Xanthii Schw.

Dicaeoma Xanthii (Schw.) Kuntze.

On *Ambrosia trifida* L. 1896:222. 1905:182.

Gibson, 1915 (Hoffer); Hamilton, 1905 (Wilson); Tippecanoe, 1896 (Snyder).

On *Xanthium americanum* Walt. 1893:56.

Johnson, 1890 (Underwood); Montgomery, 1893 (Olive); Orange, 1913 (Arthur & Ludwig); Putnam, 1891 (Underwood); Tippecanoe, 1905 (Wilson).

On **Xanthium communis** Britton.

Allen, 1911 (Orton); Montgomery, 1910 (Jennison); Tippecanoe, 1914 (Travelbee).

On *Xanthium pennsylvanica* Wallr. 1893:56. 1896:222. 1905:182.

Fountain, 1914 (Arthur); Hamilton, 1905 (Wilson); Marion, 1905 (Wilson); Montgomery, 1890 (Fisher); Putnam, 1893 (Underwood); Tippecanoe, 1896 (Snyder).

On **Xanthium spinosum** L.

Tippecanoe, 1895 (Arthur).

The earlier collections recorded in the Proceedings were mainly

referred to as occurring on *Xanthium canadense* Mill. and *X. strumarium* L. The exact identity of the host can not now be determined and the collections so referred are here placed under *X. pennsylvanicum* and *X. americanum* respectively.

41. DICAEOOMA(?) ALETRIDIS (B. & C.) Kuntze.

Puccinia Aletridis B. & C.

On *Aletris farinosa* L. 1903:146.

Lake, 1884 (Hill).

42. DICAEOOMA ANDROPOGONIS (Schw.) Kuntze.

Accidium Penstemonis Schw.

Puccinia Andropogi Schw.

I. On *Penstemon hirsutus* (L.) Willd. 1896:217. 1908:90.

Tippecanoe, 1896 (Stuart in Arth. & Holw. Ured. Exsicc. et Icones, 39a).

III. On *Andropogon furcatus* Muhl. 1896:219.

Tippecanoe, 1896 (Stuart, Snyder).

On *Schizachyrium scoparium* (Michx.) Nash (*Andropogon scoparius* Michx.) 1896:219.

Tippecanoe, 1896 (Snyder in Arth. & Holw. Ured. Exsicc. et Icones, 39f); 1898 (Stuart in Arth. & Holw. Ured. Exsicc. et Icones, 39e).

43. DICAEOOMA ANGUSTATUM (Pk.) Kuntze.

Puccinia angustata Peck.

Accidium Lycopi Gerard.

I. On *Lycopus americanus* Muhl. (*L. sinuatus* Ell.) 1893:50. 1898:189; 1908:91.

Jasper, 1903 (Arthur); Tippecanoe, 1898 (Snyder); Vigo, 1893 (Underwood).

On *Lycopus uniflorus* Michx.

Jasper, 1903 (Arthur); Tippecanoe, 1908 (Johnson).

III. On *Scirpus atrovirens* Muhl. 1893:52. 1896:219. 1905:181.

Hamilton, 1905 (Wilson); Jefferson, 1914 (Demaree); Johnson, 1890 (Fisher); Putnam, 1891 (Underwood); Owen, 1911 (Pipal); Tippecanoe, 1889 (Bolley); 1896 (Snyder).

On *Scirpus cyperinus* (L.) Kunth. 1893:52.

Fulton, 1893 (Underwood); Putnam, 1891, 1893 (Underwood, in Ind. Biol. Sur. 32); Steuben, 1903 (Kellerman).

*44. **DICAEOMA(?) ANTIRRHINII** (*D. & H.*) *comb. nov.*

Puccinia Antirrhinii Diet. & Holw.

On ***Antirrhinum majus*** L.

Hendricks, 1915 (Miller); Lagrange, 1915 (Hissong); Montgomery 1914 (Rees).

45. **DICAEOMA ASPARAGI** (*DC.*) *Kuntze.*

Puccinia Asparagi DC.

On *Asparagus officinalis* L. 1903:146. 1905:181.

Fountain, 1900 (Beatty); Franklin, 1913 (Ludwig, in Barth. Fungi Col. 4255); Hamilton, 1905 (Wilson); Jefferson, 1914 (Demaree); Lake, 1899 (Breyfogle); Steuben, 1903 (Kellerman); St. Joseph, 1915 (Balzer); Tippecanoe, 1900, 1901 (Arthur)

46. **DICAEOMA ASPERIFOLII** (*Pers.*) *Kuntze.* 1908:91.

Aecidium Asperifolii Pers.

Puccinia rubigo-vera (DC.) Wint. p.p.

On *Secale cereale* L. 1896:221.

Carroll, 1913 (Pipal); Marion, 1896 (Chapman); Posey, 1910 (Johnson); Tippecanoe, 1889 (Arthur); Vigo, 1914 (Cox.)

*47. **DICAEOMA CALTHAE** (*Grev.*) *Kuntze.*

Aecidium Calthae Grev.

Puccinia Calthae (Grev.) Link.

On ***Caltha palustris*** L.

Tippecanoe, 1914 (Hoffer).

48. **DICAEOMA CANALICULATUM** (*Schw.*) *Kuntze.*

Sphaeria canaliculata Schw.

Puccinia Cyperi Arth.

Puccinia nigrovelata Ell. & Tracy.

Dicacoma Cyperi (Arth.) Kuntze.

1. On ***Ambrosia trifida*** L.

Tippecanoe, 1896 (Snyder).

On ***Xanthium americanum*** Walt.

Tippecanoe, 1903 (Arthur).

On *Xanthium commune* Britton.

Montgomery, 1899 (Arthur); Tippecanoe, 1895 (Arthur).

III. On *Cyperus Engelmannii* Steud.

Newton, 1913 (Arthur & Fromme).

On *Cyperus esculentus* L. 1896:220 (as *C. strigosus* L.)

Tippecanoe, 1896 (Snyder).

On *Cyperus filiculmis* Vahl. 1896:219 (as *C. strigosus* L.)

Tippecanoe, 1896 (Snyder).

On *Cyperus strigosus* L. 1893:53, 54. 1894:154, 157. 1905:181.
1908:94.

Hamilton, 1905 (Wilson); Marion, 1890 (Earle); Putnam, 1893
(Underwood); Tippecanoe, 1904 (Arthur).

On *Cyperus Schweinitzii* Torr.

Montgomery, 1893 (Underwood).

*49. **DICAEOMA CEPHALANTHI** (*Seym.*) *comb. nov.*

Accidium Cephalanthi Seymour.

Puccinia Seymouriana Arth.

I. On *Cephalanthus occidentalis* L.

Jasper, 1915 (Arthur).

III. On *Spartina Michauxiana* Hitchc.

Jasper, 1913 (Arthur & Fromme); Starke, 1903 (Arthur).

50. **DICAEOMA CNICI** (*Mart.*) *Arth.*

Puccinia Cnici Mart.

Puccinia Cirsii-lanceolati Schroet.

Jackya Cirsii-lanceolati (Schroet.) Bub. 1898:182.

On *Cirsium lanceolatum* (L.) Hill (*Carduus lanceolatus* L.) 1893:
53. 1898:182. 1903:152.

Marion, 1890 (Bolley); Marshall, 1893 (Underwood); Putnam,
1893 (Underwood); Steuben, 1903 (Kellerman); Tippecanoe,
1904 (Arthur).

Previously reported in the Proceedings (1893:53; 1898:182) as
P. flosculosorum (A. & S.) Roehl and *Dicoma flosculosorum*
(A. & S.) Mart.

51. DICAEOOMA CLEMATIDIS (DC.) Arth.

Accidium Clematidis DC.*Accidium Aquilegiae* Pers.*Puccinia tomipara* Lagerh.*Puccinia Agropyri* E. & E.*Puccinia Paniculariae* Arth.I. On *Aquilegia* sp. 1893:49.

Tippecanoe, 1889 (Bolley).

On *Clematis virginiana* L.

Tippecanoe, 1907 (Arthur).

On *Syndesmon thalictroides* (L.) Hoffmg. 1894:151.

Montgomery, 1894. (Olive).

III. On *Agropyron repens* (L.) Beauv.

Miami, 1912 (Holman); Tippecanoe, 1898 (Arthur, Stuart).

On *Bromus ciliatus* L.

Tippecanoe, 1898 (Stuart).

On *Bromus japonicus* Thunb.

Tippecanoe, 1914 (Roberts).

On *Bromus purgans* L.

Tippecanoe, 1903 (Arthur).

On *Bromus secalinus* L.

Franklin, 1912 (Ludwig).

On *Hordeum jubatum* L.

Tippecanoe, 1910 (Johnson).

On *Panicularia grandis* (S. Wats.) Nash.

Jasper, 1913 (Arthur & Fromme).

*52. DICAEOOMA CONOCLINII (Seymour) Kuntze.

Puccinia Conoclinii Seymour.On *Eupatorium coelestinum* L.

Orange, 1915 (Jackson & Pipal).

53. DICAEOOMA CONVULVULI (Pers.) Kuntze.

Puccinia Convolvuli (Pers.) Cast.On *Convolvulus sepium* L. 1893:53. 1896:219. 1905:181.

Carroll, 1912 (Ludwig); Hamilton, 1905 (Wilson); Marion, 1905 (Wilson); Montgomery, 1899, Putnam, 1891, 1893 (Underwood, Ind. Biol. Sur. 21); Tippecanoe, 1895 (Stuart); Tipton, 1915 (Pipal).

*54. DICAEOOMA(?) CYPRIPEIDII (Arth.) Kuntze.

Puccinia Cypripedii Arth.On **Limodorum tuberosum** L.

Kosciusko, 1914 (Hoffer).

55. DICAEOOMA EATONIAE Arth.

Accidium Ranunculi Schw.*Puccinia Eatoniae* Arth.I. On *Ranunculus abortivus* L. 1893:50. 1908:91.

Brown, 1893 (Underwood); Decatur, 1889 (Arthur); Putnam, 1892, 1893, 1894 (Underwood, Ind. Biol. Sur. 55); St. Joseph, 1904 (Cunningham); Tippecanoe, 1894 (Golden).

III. On *Sphenopholis pallens* (Spreng.) Scribn. (*Eatonia pennsylvanica* A. Gray). 1903:148.

Jasper, 1915 (Arthur); Tippecanoe, 1903 (Arthur).

56. DICAEOOMA ELEOCHARIDIS (Arth.) Kuntze.

Puccinia Eleocharidis Arth.I. On **Eupatorium maculatum** L.

Tippecanoe, 1908 (Johnson).

On *Eupatorium perfoliatum* L. 1894:151. 1896:217. 1908:91.

Jasper, 1903 (Arthur); Montgomery, 1894 (Olive); Tippecanoe, 1896 (Snyder).

On **Eupatorium purpureum** L.

Tippecanoe, 1899 (Arthur).

III. On *Eleocharis palustris* (L.) R. & S. 1893:53. 1896:219. 1908:91.

Lagrange, 1907 (Arthur); Montgomery, 1907 (Dorner); Tippecanoe, 1888 (Bolley), 1896 (Snyder).

57. DICAEOOMA ELLISIANUM (Thum.) Kuntze.

Puccinia Ellisiana Thum.I. On **Viola papilionacea** Pursh.

Tippecanoe, 1897 (Arthur).

III. On *Schizachyrium scoparium* (Michx.) Nash (*Andropogon scoparius* Michx.) 1903:148.

Tippecanoe, 1898 (Stuart).

58. DICAEOOMA EMACULATUM (*Schw.*) Kuntze.*Puccinia emaculata* Schw.On *Panicum capillare* L. 1893:53. 1896:220. 1905:181.

Fayette, 1912 (Ludwig); Franklin, 1913 (Ludwig); Grant, 1915 (Pipal); Hamilton, 1905 (Wilson); Henry, 1897 (Pleas); Jasper, 1903 (Arthur); Montgomery, 1893 (Olive); Noble, 1906 (Whetzel); Putnam, 1892 (Underwood, Ind. Biol. Sur. 29); Tippecanoe, 1896 (Snyder).

On *Panicum miliaceum* L.

Tippecanoe, 1910 (Orton).

59. DICAEOOMA EPIPHYLLUM (*L.*) Kuntze.*Puccinia Poarum* Niels.On *Poa pratensis* L. 1893:57. 1898:189. 1908:91.

Fayette, 1912 (Ludwig); Franklin, 1912 (Ludwig); Hamilton, 1909 (Kern & Johnson); Henry, 1915 (Jackson); Johnson, 1890 (Fisher); Owen, 1911 (Pipal); Putnam, St. Joseph, 1904 (Cunningham); Tippecanoe, 1896 (Snyder).

On *Alopecurus geniculatus* L.

Clinton, 1910 (Maish).

Reported erroneously in the Proceedings (1893:57) as *Uromyces dactyloides* Otth.60. DICAEOOMA ERIOPHORI (*Thum.*) Kuntze.*Puccinia Eriophori* Thüm.On *Eriophorum angustifolium* Roth. (*E. polystachyon* L.) 1903:146.
Noble, 1884 (Van Gorder).On *Eriophorum virginicum* L. 1903:146.

Lake, 1914 (Hoffer); Noble, 1884 (Van Gorder); Wells, 1905 (Deam).

61. DICAEOOMA EXTENSICOLA (*Plowr.*) Kuntze. 1908:92.*Puccinia extensicola* Plowr.*Puccinia Dulichii* Syd.*Puccinia vulpinoïdis* D. & H.*Dicaeoma Caricis-erigerontis* Arth.*Dicaeoma Caricis-asteris* Arth.*Dicaeoma Caricis-solidaginis* Arth.*Dicaeoma Dulichii* (Syd.) Arth.

- I. On *Aster cordifolius* L. 1893:49.
 Montgomery, 1893 (Olive); Tippecanoe, 1897 (Arthur).
 On *Aster Drummondii* Lindl. 1903:147.
 Tippecanoe, 1901 (Arthur).
 On *Aster paniculatus* Lam. 1903:147. 1905:181.
 Hamilton, 1905 (Wilson); Tippecanoe, 1901 (Arthur).
 On *Aster sagittifolius* Willd. 1893:49.
 Montgomery, 1893 (Olive).
 On *Aster salicifolius* Lam.
 Tippecanoe, 1901 (Arthur).
 On *Doellingeria umbellata* (Mill.) Nees.
 Jasper, 1903 (Arthur).
 On *Erigeron annuus* (L.) Pers. 1891:151.
 Montgomery, 1889 (Arthur), 1894 (Olive); Posey, 1906 (Arthur);
 Tippecanoe, 1899 (Arthur).
 On *Erigeron ramosus* (Walt.) B. S. P. 1903:147.
 Jasper, 1903 (Arthur).
 On *Leptilon canadense* (L.) Britt. 1903:147.
 Jasper, 1903 (Arthur).
 On *Solidago caesia* L. 1893:49.
 Montgomery, 1893 (Olive).
 On *Solidago canadensis* L. 1893:49.
 Jasper, 1915 (Mrs. J. C. Arthur); Laporte, 1893 (Arthur); Tippecanoe, 1896 (Snyder).
 On *Solidago flexicaulis* L. (*S. latifolia* L.) 1893:49.
 Putnam, 1893 (Underwood); Tippecanoe, 1894 (Golden).
 On *Solidago patula* Muhl. 1903:147.
 Tippecanoe, 1902 (Arthur).
 On *Solidago scrotina* Ait.
 Vigo, 1899 (Arthur).
 On *Solidago ulmifolia* Muhl.
 Putnam, 1896 (Wilson); Tippecanoe, 1891 (Golden).
- III. On *Carex cephalophora* Muhl. 1903:147.
 Newton, 1913 (Arthur & Fromme); Tippecanoe, 1898 (Snyder);
 1902 (Arthur).
 On *Carex cephaloidea* Dewey(?)
 Tippecanoe, 1898 (Snyder).

- On *Carex conoidea* Schk. 1905:181.
Hamilton, 1905 (Wilson); Tippecanoe, 1900 (Stuart).
- On *Carex festucacea* Schk. 1903:147.
Marion, 1913 (Overholtz & Young); Tippecanoe, 1899, 1901 (Arthur).
- On *Carex foenea* Willd. 1903:147.
Lagrange, 1912 (Arthur); Tippecanoe, 1901 (Arthur).
- On *Carex nebraskensis* Dewey (*Carex Jamesii* Torr.) 1903:147.
Fayette, 1913 (Ludwig); Jefferson, 1913 (Arthur); Tippecanoe, 1902 (Arthur).
- On *Carex oligocarpa* Schk.
Fayette, 1915 (Ludwig).
- On *Carex Pennsylvanica* Lam.
Tippecanoe, 1906 (Kern & Olive).
- On *Carex sparganioides* Muhl.
Lagrange, 1907 (Arthur); Tippecanoe, 1897 (Arthur).
- On *Carex straminea* Willd. 1893:52.
Johnson, 1890 (Fisher).
- On *Carex tetanica* Schk. 1903:147.
Tippecanoe, 1899 (Arthur).
- On *Carex vulpinoidea* Michx. 1893:56. 1896:221.
Fayette, 1912 (Ludwig); Lagrange, 1907 (Arthur); Orange, 1913 (Arthur & Ludwig); Tippecanoe, 1888 (Bolley); 1896 (Snyder):
- On *Dulichium arundinaceum* (L.) Britt. 1893:52.
Jasper, 1915 (Arthur & Ford); Marshall, 1893 (Underwood).

*62. DICAEOOMA FRAXINI (Schw.) Arth.

Accidium Fraxini Schw.

Puccinia peridermiospora Arth.

On *Spartina Michauxiana* Hitchc.

Lagrange, 1907 (Arthur); Jasper, 1913 (Arthur & Fromme).

63. DICAEOOMA GROSSULARIAE (Schum.) comb. nov. 1908:92.

Accidium Grossulariae Schum.

Puccinia albiperidia Arth.

Puccinia quadriporula Arth.

Puccinia uniporula Orton.

- I. On *Grossularia Cynosbati* (L.) Mill. (*Ribes Cynosbati* L.) 1893-50. 1898:188.
 Montgomery, 1893 (Olive); Noble, 1897 (King); Putnam, 1892 (Underwood); Tippecanoe, 1906 (Kern).
- On *Grossularia missouriensis* (Nutt.) Cov. & Britt. (*Ribes gracile* Pursh).
 Tippecanoe, 1906 (Kern).
- On *Grossularia oxyacanthoides* (L.) Mill. (*Ribes oxyacanthoides* L.)
 Montgomery, 1899 (Arthur).
- On *Grossularia rotundifolia* (Michx.) Cov. & Britt. (*Ribes rotundifolium* Michx.) 1893:50.
 Putnam, 1893 (Underwood, Ind. Biol. Sur. 58).
- On *Grossularia setosa* (Lindl.) Cov. & Britt. (*Ribes setosum* Lindl.)
 Tippecanoe, 1909 (Johnson).
- III. On *Carex crinita* Lam.
 Jasper, 1915 (Arthur & Ford); Tippecanoe, 1904 (Arthur).
- On *Carex digitalis* Willd.
 Franklin, 1912 (Ludwig).
- On *Carex hirtifolia* MacKenzie (*C. pubescens* Muhl.) 1903:145.
 Tippecanoe, 1901 (Arthur).
- On *Carex Hitchcockiana* Dewey.
 Fayette, 1912 (Ludwig).
- On *Carex laxiflora* Lam.
 Fayette, 1915 (Ludwig); Tippecanoe, 1897 (Arthur).
- On *Carex squarrosa* L.
 Tippecanoe, 1906 (Kern).
- On *Carex stricta* Lam.
 Lagrange, 1912 (Arthur).
- On *Carex tetanica* Schk.
 Tippecanoe, 1899 (Arthur).
64. DICAEOMA HELIANTHI (Schw.) Kuntze.
Puccinia Helianthi Schw.
 On *Helianthus annuus* L. 1893:55. 1905:181.
 Delaware, 1915 (Jackson); Hamilton, 1905 (Wilson); Henry, 1915 (Jackson); Jefferson, 1914 (Demaree); Johnson, 1890

- (Fisher); Marion, 1905 (Wilson); Montgomery, 1893 (Olive); Putnam, 1891, 1892 (Underwood); Tippecanoe, 1906 (Kern).
 On *Helianthus divaricatus* L. 1893:55.
 Jasper, 1903 (Arthur); Montgomery, 1890 (Fisher); Steuben, 1903 (Kellerman); Tippecanoe, 1905 (Kern).
 On *Helianthus giganteus* L. 1903:148.
 Steuben, 1903 (Kellerman); Tippecanoe, 1907 (Arthur).
 On *Helianthus grosse-serratus* Mart. 1893:55. 1896:221.
 Montgomery, 1893 (Olive); Steuben, 1903 (Kellerman); Tippecanoe, 1906 (Snyder).
 On ***Helianthus hirsutus*** Raf.
 Harrison, 1915 (Fogal); Orange, 1915 (Jackson).
 On *Helianthus mollis* Lam. 1903:148.
 Jasper, 1903 (Arthur); Tippecanoe, 1896 (Snyder).
 On ***Helianthus occidentalis*** Riddle.
 Harrison, 1915 (Fogal).
 On ***Helianthus petiolaris*** Nutt.
 Tippecanoe, 1905 (Wilson).
 On *Helianthus strumosus* L. 1893:55.
 Johnson, 1890 (Fisher); Putnam, 1903 (Underwood); Tippecanoe, 1888 (Bolley); 1894 (Golden).
 On *Helianthus tuberosus* L. 1905:181.
 Jefferson, 1914 (Demaree); Marion, 1905 (Wilson).
 On *Helianthus trachelifolius* Mill. 1893:55.
 Montgomery, 1890 (Fisher); Shelby, 1890 (Fisher).
65. DICAEOOMA HELIOPSISIDIS (*Schw.*) *Kuntze.*
Puccinia Heliopsisidis Schw.
 On *Heliopsis helianthoides* (L.) Sweet. 1893:54.
 Johnson, 1890 (Fisher); Tippecanoe, 1901 (Stuart).
66. DICAEOOMA HIBISCIATUM (*Schw.*) *Arth.*
Caecoma Hibisciatum Schw.
Accidium Napaeae Arth. & Holw.
Puccinia Muhlenbergiae Arth.
 I. On *Napaea dioica* L. 1894:151.
 Tippecanoe, 1889 (Arthur).

- III. On *Muhlenbergia mexicana* (L.) Trin.
 Henry, 1915 (Jackson); Johnson, 1915 (Pipal); Lake, 1913 (Pipal); Lawrence, 1905; Tippecanoe, 1896 (Stuart, Snyder).
 On *Muhlenbergia Schreberi* Gmel. (*M. diffusa* Schreb.) 1893:53, 55. 1905:181.
 Delaware, 1915 (Jackson); Hamilton, 1905 (Wilson); Johnson, 1890 (Fisher); Owen, 1911 (Pipal); Tippecanoe, 1896 (Snyder in Arth. & Holw. Exsic. et Icon. 50a).
- On *Muhlenbergia tenuiflora* (Willd.) B. S. P.
 Montgomery, 1915 (Mrs. J. C. Arthur).
- On *Muhlenbergia umbrosa* Schreb. (*M. sylvatica* Torr.) 1896. 221.
 Johnson, 1915 (Pipal); Tippecanoe, 1896 (Snyder).
67. DICAEOA IMPATIENTIS (Schw.) Arth.
Accidium Impatientis Schw.
Puccinia perminuta Arth.
- I. On *Impatiens biflora* Walt. (*I. fulva* Nutt.) 1893:50.
 Jefferson, 1915 (Demaree); Johnson, 1890 (Fisher); Montgomery (Rose); Putnam, 1893 (Underwood); Tippecanoe, 1914 (Ludwig in Barth. Fungi Columb. 4757, and Barth N. Am. Ured. 1254).
- On *Impatiens pallida* Nutt. (*I. aurea* S. Wats.) 1896:217.
 Carroll, 1910 (Hoffer); Fayette, 1913 (Ludwig); Putnam, 1903. (Wilson); Tippecanoe, 1896 (Snyder).
- III. On *Agrostis perennans* (Walt.) Tuckerm.
 Delaware, 1915 (Jackson); Fayette, 1912 (Ludwig); Johnson 1890 (Fisher).
- On *Elymus canadensis* L.
 Tippecanoe, 1896 (Snyder).
- On *Elymus striatus* Willd.
 Jefferson, 1903 (Arthur); Tippecanoe, 1902 (Arthur).
- On *Elymus virginicus* L. 1893:55. 1896:221. 1908:91.
 Tippecanoe, 1888 (Bolley), 1900 (Arthur).
- On *Hystrix Hystrix* (L.) Millsp. 1893:52.
 Jefferson, 1914 (Demaree); Johnson, 1890 (Fisher).

*68. DICAEOOMA IRIDIS (DC.) Kuntze.

Uredo Iridis DC.On *Iris versicolor* L.

Marshall, 1893 (Underwood, Ind. Biol. Sur. 52).

69. DICAEOOMA MAJANTHAE (Schum.) Arth.

Accidium Majanthae Schum.On *Phalaris arundinacea* L. 1903:149. 1909:90.

Tippecanoe, 1899 (Stuart).

70. DICAEOOMA MELICAE (Syd.) Arth.

On *Melica mutica* Walt. 1903:149.

Tippecanoe, 1899 (Stuart).

71. DICAEOOMA MENTHAE (Pers.) S. F. Gray.

Puccinia Menthae Pers.On *Blephila ciliata* (L.) Raf.

Hamilton, 1905 (Wilson).

On *Blephila hirsuta* (Pursh) Torr. 1893:54. 1896:220. 1905:181.

Hamilton, 1905 (Wilson); Johnson, 1890 (Fisher); Montgomery, 1890 (Fisher); Posey, 1906 (Arthur); Tippecanoe, 1899, 1901 (Arthur), 1896 (Snyder); Vermillion, 1889 (Arthur).

On *Cunila origanoides* (L.) Britton (*C. mariana* L.) 1893:54.

Martin, 1915 (Hoffer); Monroe, 1886 (Blatchley).

On *Koellia pilosa* (Nutt.) Britton (*Pycnanthemum muticum pilosum* A. Gray). 1893:54.

Vigo, 1893 (Underwood).

On *Koellia virginiana* (L.) MacM. (*Pycnanthemum lanceolatum* Pursh). 1893:54. 1896:220.

Marshall, 1893 (Underwood); Tippecanoe, 1896 (Snyder).

On *Mentha canadensis* L. 1893:54. 1905:181.

Grant, 1915 (Pipal); Hamilton, 1905 (Wilson); Johnson, 1890 (Fisher); Marshall, 1893 (Underwood, Ind. Biol. Sur. 11), Steuben, 1903 (Kellerman); Tippecanoe, 1883 (Arthur).

On *Mentha spicata* L.

Hamilton, 1915 (Pipal).

On *Monarda fistulosa* L. 1893:54. 1896:220. 1905:181.

Carroll, 1912 (Ludwig); Hamilton, 1905 (Wilson); Jefferson, 1914 (Demaree); Marion, 1905 (Wilson); Marshall, 1893 (Underwood); Montgomery, 1890 (Fisher); Steuben, 1903 (Kellerman); Tippecanoe, 1894 (Golden); 1896 (Snyder); Vigo, 1893 (Underwood).

*72. *DICAEOMA MINUTISSIMUM* (Arth.) comb. nov.

Aecidium Nesaeae Ger.

Puccinia minutissima Arth.

I. On *Decodon verticillatus* (L.) Ell.

Jasper, 1915 (Arthur).

III. On *Carex lasiocarpa* Ehrh. (*C. filiformis* Good).

Fulton, 1893 (Underwood); Jasper, 1913 (Arthur & Fromme).

*73. *DICAEOMA MONTANENSE* (Ellis) Kuntze.

Puccinia montanensis Ellis.

On *Elymus canadensis* L.

Tippecanoe, 1896 (Arthur).

74. *DICAEOMA ARGENTATUM* (Schultz) Kuntze.

Puccinia nolitangeris Corda.

Uredo Impatiens Rehb.

Puccinia argentata (Schultz) Wint.

III. On *Impatiens biflora* Walt. (*I. fulva* Nutt.) 1893:52. 1896:220. 1903:146.

Johnson, 1890 (Fisher); Tippecanoe, 1896 (Snyder).

*75. *DICAEOMA OBSCURUM* (Schroet.) Kuntze.

Puccinia obscura Schroet.

On *Juncoides campestris* (L.) Kuntze (*Luzula campestris* DC.)

Montgomery, 1913 (Arthur).

76. *DICAEOMA OBTECTUM* (Pk.) Kuntze. 1908:91.

Puccinia oblecta Pk.

On *Scirpus americanus* Pers. 1894:151.

Marshall, 1893 (Underwood, Ind. Biol. Sur. 12); Tippecanoe, 1906 (Kern).

On *Scirpus validus* Vahl. (*S. lacustris* L.) 1894:151.

Montgomery, 1893 (Olive); Vermillion, 1889 (Wright).

77. DICAEOMA ORBICULA (Peck & Clinton) Kuntze.

Puccinia orbicula Peck & Clinton.On *Nabalus albus* (L.) Hook. 1893:55. 1896:221.

Putnam, 1890 (Arthur); Tippecanoe, 1895 (Golden); Vigo, 1893 (Arthur).

Erroneously reported in the Proceedings as *P. Prenanthes* (Pers.) Fekl., which is a Brachy-form (*Bullaria*) not recorded for Indiana.

78. DICAEOMA PAMMELII (Trel.) Arth.

Accidium Pammelii Trel.*Puccinia Panici* Diet.I. On *Tithymalopsis corollata* (L.) Kl. & Gareke (*Euphorbia corollata* L.) 1893:49. 1901:284. 1903:149. 1908:90.

Johnson, 1890 (Fisher); Tippecanoe, 1901 (Stuart).

III. On *Panicum virgatum* L. 1901:283. 1903:149. 1908:90.

Jasper, 1903 (Arthur); Lake, 1910 (Johnson); Newton, 1913 (Arthur & Fromme); Starke, 1905 (Arthur); Tippecanoe, 1901 (Stuart).

79. DIAECOMA PATRUELI (Arth.) comb. nov.

Accidium compositarum lactucae Burrill.*Puccinia patruelis* Arth.I. On *Lactuca canadensis* L. 1894:151.

Jasper, 1906 (Arthur); Lagrange, 1912 (Arthur); Montgomery, 1894 (Olive); Tippecanoe, 1903 (Seaver).

On *Lactuca floridana* (L.) Gaertn.

Tippecanoe, 1906 (Olive).

On *Lactuca sativa* L.

Tippecanoe, 1902 (Burrage).

On *Lactuca virosa* L. (*L. scariola* L.)

Jasper, 1910 (Kern & Billings).

III. On *Carex* sp.

Jasper, 1903 (Arthur).

80. DICAEOMA PECKII (DeT.) Arth.

Accidium Peckii DeToni.*Puccinia ludibunda* Ell. & Ev.

- I. On *Oenothera biennis* L. 1893:50. 1896:217. 1908:92.
 Jasper, 1910 (Kern & Billings); Laporte, 1883 (Arthur); Putnam,
 1896 (Wilson); Tippecanoe, 1896 (Snyder), 1902 (Arthur)
 Vigo, 1893 (Underwood).
- III. On *Carex lanuginosa* Michx.
 Lagrange, 1912 (Arthur); Tippecanoe, 1911 (Johnson).
 On *Carex sparganioides* Muhl.
 Lagrange, 1907 (Wilson).
 On *Carex stipata* Muhl. 1903:149.
 Tippecanoe, 1902 (Arthur), 1912 (Overholts & Orton).
 On *Carex trichocarpa* Muhl. 1903:149.
 Hamilton, 1909 (Kern & Johnson); Jasper, 1906 (Arthur & Kern);
 Madison, 1898 (Snyder); Tippecanoe, 1901 (Arthur).
- SI. DICAEOMA POCULIFORME (*Jacq.*) *Kuntze.*
Accidium Berberidis Pers.
Puccinia graminis Pers.
Puccinia phlei-pratensis Erikss. & Henn.
- I. On *Berberis vulgaris* L. 1893:49. 1908:92.
 Lagrange, 1889 (Arthur).
- III. On *Agrostis alba* L. 1893:53. 1903:150. 1905:182.
 Hamilton, 1905 (Wilson); Jasper, 1906 (Arthur); Jefferson, 1914
 (Demaree); Marshall, 1893 (Underwood, Ind. Biol. Sur. 14);
 Putnam, 1893 (Underwood); Steuben, 1903 (Kellerman);
 Tippecanoe, 1898 (Stuart); Wayne, 1910 (Johnson).
 On *Arrhenatherum elatium* (L.) Beauv.
 Tippecanoe, 1898 (Stuart).
 On *Avena sativa* L. 1893:53. 1896:220. 1905:182.
 Hamilton, 1905 (Wilson); Montgomery, 1893 (Olive); Putnam,
 1893 (Underwood); Steuben, 1903 (Kellerman); Tippecanoe,
 1888 (Bolley), 1896 (Snyder).
 On *Bromus scaliuus* L.
 Franklin, 1912 (Ludwig).
 On *Cinna arundinacea* L. 1903:150.
 Tippecanoe, 1899 (Stuart); 1901 (Arthur).
 On *Dactylis glomerata* L. 1896:220, 223.
 Franklin, 1912 (Ludwig); Tippecanoe, 1896 (Snyder).

On *Hordeum jubatum* L. 1896:220, 224.

Tippecanoe, 1896 (Snyder); 1898 (Arthur).

On *Hordeum vulgare* L.

Tippecanoe, 1898 (Stuart).

On *Phleum pratense* L. 1909:417. 1910:203.

Bartholomew, 1909 (Hunter); Cass, 1910 (Johnson); Delaware, 1915 (Jackson); Franklin, 1912 (Ludwig); Hamilton, 1910 (Wilson); Henry, 1915 (Jackson); Jefferson, 1910 (Johnson); Posey, 1910 (Johnson); Spencer, 1910 (Johnson); Tippecanoe, 1910 (Johnson); Tipton, 1915 (Pipal); Wayne, 1910 (Johnson); Wabash, 1910 (Johnson); Whitley, 1910 (Johnson):.

On *Secale cereale* L.

Clay, 1910 (Ringo).

On *Triticum vulgare* Vill. 1893:54. 1898:188. 1905:182.

Carroll, 1912 (Pipal); Decatur, 1912 (Moor); Franklin, 1912 (Ludwig); Hamilton, 1905 (Wilson); Johnson, 1890 (Fisher); Marion, 1914 (Hameisen); Noble, 1897 (King); Posey, 1912 (Pipal); Putnam, 1893 (Underwood); Tippecanoe, 1890 (Arthur); Wayne, 1910 (Johnson).

82. DICAEOMA POLYGONI-AMPHIBII (*Pers.*) *Arth.*

Puccinia Polygoni-amphibii Pers.

Aecidium sanguinolentum Lindr.

I. On *Geranium maculatum* L. 1893:40. 1896:217. 1898:188. 1908:92.

Laporte, 1915 (Cotton); Noble, 1893 (King); Tippecanoe, 1894 (Golden); Vigo, 1893 (Underwood, Arthur).

III. On *Persicaria amphibia* (L.) S. F. Gray (*Polygonum Hartwrightii* A. Gray). 1903:150.

Steuben, 1903 (Kellerman).

On *Persicaria hydropiperoides* (Michx.) Small (*Polygonum hydropiperoides* Macouni). 1898:184. 1898:189.

Noble, 1897 (King); Tippecanoe, 1898 (Stuart).

On *Persicaria lapathifolia* (L.) S. F. Gray (*Polygonum lapathifolium* L.) 1898:184.

Tippecanoe, 1898 (Arthur).

On *Persicaria Muhlenbergii* (S. Wats.) Small (*Polygonum Muhlenbergii* S. Wats., *P. emersum* Britt.) 1893:55. 1905:182.

- Fulton, 1893 (Underwood); Hamilton, 1905 (Wilson); Huntington, 1915 (Troop); Jasper, 1903 (Arthur); Lagrange, 1907 (Arthur); Tippecanoe, 1904 (Arthur); Wabash, 1890 (Miller).
 On *Persicaria pennsylvanica* (L.) Small (*Polygonum pennsylvanicum* L.) 1898:184.
 Henry, 1915 (Jackson); Putnam, 1893 (Underwood, Ind. Biol. Sur. 26); Tippecanoe, 1898 (Arthur); Tipton, 1915 (Pipal).
 On *Persicaria punctata* (Ell.) Small (*Polygonum punctatum* Ell., *P. arce* H. B. K.) 1893:55. 57.
 Johnson, 1890 (Fisher); Putnam, 1891 (Underwood).

83. DICAEOA POLYGOINI-CONVOLVULI (*Hedw.*) *Arth.*

Puccinia Polygoni-convolvuli Hedw.

- On *Tiniaria Convolvulus* (L.) Webb. & Moq. (*Polygonum convolvulus* L.) 1898:184. 1905:182.
 Delaware, 1915 (Jackson); Hamilton, 1905 (Wilson); Marion, 1905 (Wilson); Tippecanoe, 1898 (Arthur).
 On *Tiniaria scandens* (L.) Small (*Polygonum scandens* L.) 1896:223.
 Putnam, 1907 (Wilson); Tippecanoe, 1900 (Arthur).

84. DICAEOA PUNCTATUM (*Link*) *Kuntze.*

Puccinia punctata Link.

Dicaeoma Galiorum (Lk.) *Arth.*

- On *Galium asprellum* Michx. 1893:53.
 Johnson, 1890 (Fisher).
 On *Galium concinnum* Torr. & Gray. 1893:53. 1905:182.
 Delaware, 1915 (Jackson); Hamilton, 1905 (Wilson); Johnson, 1890 (Fisher); Montgomery, 1893 (Olive); Owen, 1893 (Underwood, Ind. Biol. Sur. 17); Steuben, 1903 (Kellerman); Tippecanoe, 1909 (Arthur).
 On *Galium tinctorum* L. 1905:182.
 Hamilton, 1905 (Wilson).
 On *Galium triflorum* Michx. 1893:53.
 Montgomery, 1893 (Underwood); Putnam, 1891 (Underwood).

85. DICAEOA PUSTULATUM (*Curtis*) *Arth.*

Accidium pustulatum Curtis.

Puccinia pustulata (Curtis) *Arth.*

I. On *Comandra umbellata* (L.) Nutt. 1893:50. 1908:90.
 St. Joseph, 1914 (Arthur); Montgomery, 1893 (Olive); Tippe-
 canoe, 1897 (Arthur); Vigo, 1893 (Underwood, Ind. Biol.
 Sur. 57).

III. On *Andropogon furcatus* Muhl. 1903:150.
 Jasper, 1903 (Arthur); Lagrange, 1907 (Arthur); Starke, 1905
 (Arthur); Tippecanoe, 1896 (Snyder in Arth. & Holw. Ured.
 et Icones 39h); Vigo, 1893 (Underwood, Ind. Biol. Sur. 33).

On *Schizachyrium scoparium* (Michx.) Nash (*Andropogon scoparius*
 Michx.) 1903:150.

Tippecanoe, 1902 (Arthur).

86. DICAEOOMA RHAMNI (*Gmel.*) *Kuntze.*

Accidium Rhamni Pers.

Puccinia coronata Corda.

Puccinia Lolii Niels.

I. On **Rhamnus caroliniana** Walt.

Tippecanoe, 1904 (Arthur).

On *Rhamnus lanceolata* Pursh. 1898:184. 1908:90.

Tippecanoe, 1897 (Arthur).

III. On *Avena sativa* L. 1893:55. 1896:219. 1898:188. 1905:182.

Clay, 1910 (Ringo); Delaware, 1915 (Jackson); Fayette, 1912
 (Ludwig); Hamilton, 1905 (Wilson); Johnson, 1890 (Fisher);
 Noble, 1897 (King); Tippecanoe, 1896 (Stuart); Wayne, 1910
 (Johnson).

On **Cinna arundinacea** L.

Tippecanoe, 1901 (Arthur).

On *Calamagrostis canadensis* (Mx.) Beauv. 1893:53.

Tippecanoe, 1888 (Bolley).

87. DICAEOOMA RUELLIAE (*B. & Br.*) *Kuntze.*

Uredo Ruelliae B. & Br.

Diorchidium lateripes (B. & Rav.) Magn.

Dicaeoma lateripes (B. & Rav.) Kuntze.

On **Ruellia ciliosa** Pursh.

Tippecanoe, 1904 (Marquis).

On *Ruellia strepens* L. 1893:54. 1896:218. 1905:181.

Delaware, 1915 (Jackson); Hamilton, 1905 (Wilson); Johnson,

1890 (Fisher); Owen, 1893 (Underwood, Ind. Biol. Sur. 31);
Tippecanoe, 1895 (Stuart), 1896 (Snyder); Wabash, 1887
(Miller).

88. DICAEOOMA SAMBUCI (Schw.) Arth.

Accidium Sambuci Schw.

Puccinia Bolleyana Sacc.

Puccinia Atkinsoniana Diet.

I. *Sambucus canadensis* L. 1895:50.

Brown, 1893 (Underwood); Fayette, 1913 (Ludwig); Franklin,
1914 (Ludwig); Johnson, 1890 (Fisher); Montgomery, 1893
(Olive); Putnam, 1892, 1893 (Underwood, Ind. Biol. Sur.
56); Tippecanoe, 1899 (Arthur); Vigo, 1893 (Underwood).

III. On *Carex Frankii* Kunth. 1893:55. 1898:187.

Boone, 1891 (Arthur); Franklin, 1912 (Ludwig); Fulton, 1893
(Underwood); Hamilton, 1909 (Kern & Johnson); Johnson,
1890 (Fisher); Madison, 1898 (Snyder); Orange, 1913 (Arthur
& Ludwig); Owen, 1911 (Pipal); Parke, 1900 (Snyder); Putnam,
1893 (Underwood).

On *Carex lupulina* Muhl.

Noble, 1904 (Whetzel).

On *Carex lurida* Wahl. 1893:52.

Lagrange, 1907 (Arthur); Marion, 1890 (Arthur); Orange, 1913
(Arthur & Ludwig); Tippecanoe, 1896 (Snyder).

On *Carex trichocarpa* Muhl. 1893:52. 1896:219.

Bartholomew, 1909 (Kern); Jasper, 1906 (Arthur & Kern); Tippe-
canoe, 1889 (Bolley).

89. DICAEOOMA SANICULAE (Grev.) Kuntze.

Puccinia Saniculae Grev.

On *Sanicula canadensis* L. 1893:55.

Montgomery (Rose).

*90. DICAEOOMA SMILACIS (Schw.) Kuntze.

Accidium Smilacis Schw.

Puccinia Smilacis Schw.

On *Smilax glauca* Walt.

Lawrence, 1915 (Hoffer); Orange, 1913 (Ludwig)

91. **DICAEOMA SORGHI** (Schw.) Kuntze.*Puccinia Sorghi* Schw.*Puccinia Maydis* Bereng.I. On **Xanthoxalis cymosa** Small (*Oxalis cymosa* Small).

Tippecanoe, 1904 (Arthur).

III. On **Zea Mays** L. 1893:54. 1898:188. 1905:182. 1908:90.

Dearborn, 1889 (Bolley); Delaware, 1915 (Jackson); Franklin, 1913 (Ludwig); Hamilton, 1905 (Wilson); Henry 1915 (Jackson); Marion, 1905 (Wilson); Montgomery, 1893 (Olive); Noble, 1897 (King); Putnam, 1893 (Underwood, Ind. Biol. Sur. 23); Tipton, 1912 (Ludwig); Tippecanoe, 1887 (Arthur).

92. **DICAEOMA TRITICINUM** (Erikss.) comb. nov.*Puccinia triticeina* Eriksson.On **Triticum vulgare** Vill.

Carroll, 1913 (Pipal); Decatur, 1912 (Moor); Franklin, 1912 (Ludwig); Jefferson, 1910 (Johnson); Laporte, 1910 (G. C. Cook); Orange, 1915 (Pipal); Posey, 1906 (Arthur & Kern); Pulaski, 1898 (Arthur); Putnam, 1896 (Wilson); Tippecanoe, 1890 (Arthur); Vigo, 1899 (Arthur); Wayne, 1906 (Hiatt).

93. **DICAEOMA (?) TROGLODYTES** (Lindr.) comb. nov.*Puccinia troglodytes* Lindr.On **Galium triflorum** Michx.

Hamilton, 1905 (Wilson).

94. **DICAEOMA URTICAE** (Schum.) Kuntze.*Aecidium Urticae* Schum.*Puccinia Caricis* Schröt. not Reb.I. On **Urtica gracilis** Ait. (*U. Lyallii* S. Wats.) 1898:185. 1908:92.

St. Joseph, 1904 (Cunningham); Lagrange, 1912 (Arthur); Tippecanoe, 1905 (Kern).

III. On **Carex lacustris** Willd. (*C. riparia* Muhl.) 1903:151.

Jasper, 1903 (Arthur); Steuben, 1903 (Kellerman).

On **Carex stipata** Muhl.

Tippecanoe, 1905 (Arthur);

On **Carex stricta** Lam. 1903:151.

Jasper, 1906 (Arthur & Kern); Steuben, 1903 (Kellerman);
Tippecanoe, 1896 (Snyder).

Many of the collections reported in previous lists of Indiana
rusts as belonging to this species are now included elsewhere.

95. DICAEOOMA VERBENICOLUM (*Ell. & Kell.*) *Arth.*

Accidium verbenicolum Ellis & Kellerman.

Puccinia Vilfae Arth. & Holw.

Dicaeoma Vilfae (A. & H.) Arth.

I. On *Verbena stricta* Vent. 1896:218. 1908:90.

Tippecanoe, 1896 (Snyder).

III. On *Sporobolus asper* (Michx.) Kunth. 1896:221.

Tippecanoe, 1896 (Snyder).

Erroneously reported in Proceedings for 1896:221 as *Puccinia*
Sporoboli Arth.

96. DICAEOOMA (?) VERNONIAE (*Scw.*) *Kuntze.*

Puccinia Vernoniae Schw.

On *Vernonia fasciculata* Michx. 1893:55.

Putnam, 1893 (Underwood).

This collection is on the stems and has been distributed in the
following exsiccati: Ind. Biol. Sur. 30; Barth. N. Am. Ured.
578; Ell. & Ev. N. Am. Fungi 2988; Seymour & Earle Economic
Fungi Supl. B20.

97. DICAEOOMA VEXANS (*Parl.*) *Kuntze.*

Puccinia vexans Parl.

On *Atheropogon curtispindulus* (Michx.) Fourn. (*Bouteloua curti-*
spindula (Michx.) Torr.) 1901:283.

Tippecanoe (Stuart).

No specimens of this collection are now available and the
determination is somewhat doubtful. Since the species is rep-
resented in the Arthur herbarium only from the western plains.

98. DICAEOOMA VIOLAE (*Schum.*) *Kuntze.*

Puccinia Violae (Schum.) DC.

On *Viola criocarpa* Schwein. 1903:152.

Decatur, 1889 (Arthur); Montgomery, 1906 (Olive).

On *Viola papilionacea* Pursh (*V. obliqua* Hill) 1893:56.

- Johnson, 1890 (Fisher); Montgomery, 1893 (Olive); Putnam, 1890 (Arthur); Tippecanoe, 1898 (Arthur); Vigo, 1893 (Arthur)
 On *Viola pubescens* Ait. 1903:152
 Fayette, 1915 (Ludwig); Tippecanoe, 1898 (Arthur).
 On *Viola sororia* Willd.
 Tippecanoe, 1906 (Kern).
 On *Viola striata* Ait. 1893:56.
 Montgomery, 1890 (Fisher); Owen, 1893 (Underwood, Ind. Biol. Sur. 18); Putnam, 1893 (Underwood); Tippecanoe, 1912 (Pipal).

99. DICAEOMA WINDSORIAE (*Schw.*) *Kuntze.*

Puccinia Windsoriae Schw.
Aecidium Pteleae Berk. & Curt.

- I. On *Ptelea trifoliata* L. 1893:50. 1896:217. 1908:90.
 Montgomery, 1893 (Olive); Tippecanoe, 1896 (Snyder).
 III. On *Tridens flava* (L.) Hitchc. (*Sieglingia seslerioides* (Mx.) Schrib. 1894:154, 1896:221.
 Harrison, 1915 (Kopp); Orange, 1915 (Jackson), Owen, 1911 (Pipal); Tippecanoe, 1896 (Snyder).

100. EARLEA SPECIOSA (*Fr.*) *Arth.*

Aegma speciosa Fr.
Phragmidium speciosum (Fr.) Cooke.

- On *Rosa carolina* L. 1896:219.
 Tippecanoe, 1895 (Arthur).
 On *Rosa virginiana* Mill. (*Rosa humilis* Marsh). 1898:179.
 Fulton, 1894 (Arthur); Putnam, 1900 (Wilson); Tippecanoe, 1898 (Arthur).

101. GYMNOCONIA INTERSTITIALIS (*Schlecht.*) *Lagerh.*

Aecidium nitens Schw.
Puccinia interstitialis (Schlecht.) Tranz.

- On *Rubus alleghaniensis* Porter. 1893:54.
 Jefferson, 1910 (Johnson); Marion, 1901 (Dickey); Putnam, 1893 (Underwood, Ind. Biol. Sur. 19); St. Joseph, 1909 (Cunningham); Tippecanoe, 1894 (Golden); 1896 (Snyder); Vigo, 1893 (Underwood).

On *Rubus occidentalis* L. 1893:54.

Montgomery, 1893 (Olive).

On *Rubus procumbens* Muhl. (*R. villosus* Ait.) 1893:54. 1896:220. 1898:188.

Montgomery, 1893 (Olive); Noble, 1897 (King); Tippecanoe, 1899 (Stuart); 1896 (Snyder).

On *Rubus strigosus* Michx. 1893:54.

Marshall, 1889 (Parks).

*102. GYMNOSPORANGIUM GERMINALE (*Schw.*) *Kern.*

On *Crataegus mollis* (T. & G.) Scheele.

Shelby (Brezze).

On *Cydonia vulgaris* L.

Perry, 1914 (Odell).

103. GYMNOSPORANGIUM GLOBOSUM *Farl.*

Roestelia lacerata (Sow.) Fr. (in part).

Puccinia globosa (Farl.) Kuntze.

Accidium globosum (Farl.) Arth.

I. On *Crataegus coccinea* L. 1893:56.

Montgomery, 1893 (Olive); Henry, 1909 (Gardner).

On *Crataegus Crus-galli* L. 1894:153.

Montgomery, 1894 (Olive).

On *Crataegus mollis* (T. & G.) Scheele (*C. subvillosa* T. & G.) 1898:186, 188.

Allen, 1911 (Orton); Clay, 1910 (Ringo); Marion, 1896 (B. M. Davis); Noble, 1897 (King); Tippecanoe, 1898 (Arthur).

On *Crataegus punctata* Jacq. 1893:56. 1896:222. 1905:182.

Hamilton, 1905 (Wilson); Montgomery, 1893 (Olive); Putnam, 1893 (Underwood, Ind. Biol. Sur. 60); Tippecanoe, 1896 (Snyder).

On *Crataegus Pringlei* Sarg.

Tippecanoe, 1898 (Arthur).

III. On *Juniperus virginiana* L. 1893:51. 1908:89.

Clinton, 1907 (Kern); Jefferson, 1903 (Arthur); Owen, 1893 (Underwood); Putnam, 1893 (Underwood Ind. Biol. Sur. 45); Tippecanoe, 1888 (Arthur).

104. GYMNOSPORANGIUM JUNIPERI-VIRGINIANAE Schw.

Roestelia pyrata Thax.*Gymnosporangium macropus* Lk.*Puccinia Juniperi-virginianae* (Schw.) Arth.*Aecidium Juniperi-virginianae* (Schw.) Arth.I. On *Malus coronaria* (L.) Mill. 1893:56. 1896:218.

Hamilton, 1907 (Wilson); Henry, 1909 (Gardner); Marion, 1907 (Shell); Putnam, 1907 (Wilson); Spencer, 1910 (Johnson); Tippecanoe, 1896 (Snyder); Wabash, 1891 (Miller).

On *Malus ionensis* (Wood) Britton.

Tippecanoe, 1892 (Arthur).

On *Malus Malus* (L.) Britt. 1898:186. 1901:255.

Carroll, 1913 (Kerlin); Clark, 1912 (Richards); Fayette, 1912 (Richards); Floyd, 1890 (Latta); Franklin, 1903 (Klein). Greene, 1912 (Richards); Howard, 1902 (Armstrong); Jasper, 1913 (Coe); Jackson, 1912 (Richards); Jefferson, 1914 (Demaree); Martin, 1912 (Richards); Montgomery, 1901 (Whetzell); Morgan, 1911 (Lewis); Newton, 1898 (Griggs); Orange, 1912 (Brown); Putnam, 1907 (Wilson); Ripley, 1902 (Ferris); Rush, 1911 (Smiley); Spencer, 1900 (Johnson); Wayne, 1904 (Helm); Wabash, 1911 (Fisher); Warrick, 1912 (Alltz); White, 1913 (Pipal); Whitley, 1911 (More).

III. On *Juniperus virginiana* L. 1893:51. 1896:218. 1901:255. 1908:89.

Clay, 1910 (Ringo); Franklin, 1912 (Ludwig); Henry, 1914 (Travelbee); Monroe, 1898 (Arthur); Montgomery, 1893 (Olive); Orange, 1915 (Jackson); Owen, 1893 (Underwood); Putnam, 1892, 1893 (Underwood Ind. Biol. Sur. 46); Tippecanoe, 1889 (Bolley), 1898 (Arthur); Warren, 1908 (Davis).

105. KUEHNEOLA OBTUSA (Strauss) Arth.

On *Potentilla canadensis* L. 1893-52. 1896:218. 1898:179.

Delaware, 1915 (Jackson); Fulton, 1893 (Underwood, Ind. Biol. Sur. 47); Jefferson, 1914 (Demaree); Johnson, 1890 (Fisher); Marshall, 1893 (Underwood); Orange, 1913 (Arthur); Owen, 1893 (Underwood); Tippecanoe, 1889 (Bolley), 1896 (Snyder);

1901 (Arth. in Barth. N. Am. Ured. 313); Vigo, 1893 (Arthur, Underwood).

Previously reported in the Proceedings as *Phragmidium Fragariae* (DC.) Wint. and *Aegma Fragariae* (DC.) Arth.

106. KUEHNEOLA UREDINIS (*Link*) *Arth.*

Chrysomyxa albida Kuhn.

Coleosporium Rubi E. & H.

On **Rubus allegheniensis** Porter.

Delaware, 1915 (Jackson); Hamilton, 1907 (Wilson); Montgomery, 1913 (Kern); Warrick, 1906 (Heim).

On *Rubus cuneifolius* Pursh. 1893:50.

Johnson, 1890 (Fisher).

On **Rubus hispidus** L.

Jasper, 1913 (Arthur & Fromme).

On *Rubus procumbens* Muhl. (*Rubus villosus* Ait.) 1893:50.

Johnson, 1890 (Fisher).

107. NIGREDO AMPHIDYMA (*Sydow*) *Arthur.*

Uromyces glyceriae Arth.

On *Panicularia septentrionalis* (Hitch.) Bicknell. 1893:57. 1898:180.

Johnson, 1890 (Fisher).

Previously reported as *Uromyces graminicola* Burr. on *Panicum virgatum* L.

108. NIGREDO APPENDICULATA (*Pers.*) *Arth.*

Uromyces appendiculata (Pers.) Lev.)

Caomurus Phaseoli (Pers.) Arth.

On *Phaseolus vulgaris* L. 1893:56 in part. 1905:180.

Hamilton, 1905 (Wilson); Henry, 1915 (Jackson); Putnam, 1892 (Underwood Ind. Biol. Sur. 40); Tippecanoe, 1905 (Wilson); Tipton, 1915 (Pipal).

On *Stropostyles helvolva* (L.) Britt. (*Phaseolus angulosus* Ell., *P. diversifolius* Pers.) 1893:56. 1896:172. 222. 1905:180.

Franklin, 1914 (Roy Allen); Laporte, 1915 (L. B. Cloro); Marion, 1905 (Wilson); Montgomery, 1893 (Olive); Putnam, 1907 (Wilson); Tippecanoe, 1895 (Arthur), 1896 (Snyder).

On *Strophostyles pauciflora* (Benth.) S. Wats.
Putnam, 1896 (Cook).

On *Strophostyles umbellata* (Muhl.) Britton.
Sullivan, 1915 (Hoffer).

On *Vigna sinensis* (L.) Endl. 1903:145.
Tippecanoe, 1902, 1903 (Arthur in Barth. N. Am. Ured. 381).

109. NIGREDO CALADII (Schw.) Arth.

Uromyces Caladii (Schw.) Farl.

Caecomurus Caladii (Schw.) Kuntze.

On *Arisaema Dracontium* (L.) Schott. 1893:56. 1896:222. 1905:
180.

Brown, 1893 (Underwood); Fayette, 1913 (Ludwig); Hamilton,
1905 (Wilson); Jasper, 1915 (Arthur); Kosciusko, 1915 (Hoffer);
Montgomery, 1893 (Olive); Putnam, 1897 (Cook); Tippe-
canoe, 1896 (Snyder); Vigo, 1893 (Underwood).

On *Arisaema triphyllum* (L.) Torr. 1893:56. 1896:222. 1898:
189. 1905:180.

Fayette, 1913 (Ludwig); Hamilton, 1905 (Wilson); Jasper, 1915
(Arthur); Johnson, 1890 (Fisher); Monroe, 1893 (Underwood);
Montgomery, 1893 (Olive); Noble, 1897 (King); Owen, 1893
(Underwood); Posey, 1906 (Arthur & Kern); Putnam, 1893
(Underwood); Tippecanoe, 1894 (Golden), 1896 (Snyder);
St. Joseph, 1904 (Cunningham); Vigo, 1893 (Underwood, Ar-
thur).

On *Peltandra virginica* (L.) Kunth.

Jasper, 1915 (Arthur); Lake, 1881 (A. B. Seymour).

110. NIGREDO CARYOPHYLLINA (Schrank.) Arth.

Uromyces Caryophyllinus (Schrank.) Wint.

Caecomurus Caryophyllinus (Schrank.) Kuntze.

On *Dianthus caryophyllus* L. 1893:56. 1898:180. 1912:99.

Marion, 1892 (Arthur); Monroe, 1912 (Von Hook); Tippecanoe,
1898 (Arthur).

111. NIGREDO FABAE (Pers.) Arth.

Uromyces Fabae (Pers.) DeBy.

On *Lathyrus venosus* Muhl. 1896:222. 1898:181. 1903:145.
Tippecanoe, 1896 (Snyder).

Previously reported in the Proceedings as on *Vicia americana* Muhl. and erroneously referred to *Uromyces Orobi* (Pers.) Wint., *Cacomurus Pisi* (Pers.) Gray, *Cacomurus Orobi* (Pers.) Arth., which refer to European species not yet recorded in America.

*112. NIGREDO FALLENS (*Desmaz.*) Arth.

Uromyces fallens (Desmaz.) Kern.

On *Trifolium pratense* L. 1893:58. 1896:223. 1898:187, 189.

Delaware, 1915 (Jackson); Franklin, 1912 (Ludwig); Hamilton, 1905 (Wilson); Johnson, 1890 (Fisher); Kosciusko, 1913 (Hoffer); Madison, 1898 (Snyder), Marion, 1905 (Wilson); Miami, 1915 (Ludwig); Montgomery, 1890 (Fisher), 1893 (Underwood Ind. Biol. Sur. 38); Noble, 1897 (King); Owen, 1911 (Pipal); Putnam, 1891 (Underwood); Steuben, 1903 (Kellerman); Tipton, 1912 (Ludwig); Tippecanoe, 1891 (Arthur), 1896 (Snyder); Wabash, 1891 (Miller);

113. NIGREDO HEDYSARI-PANICULATI (*Schw.*) Arth.

Uromyces Hedysari-paniculati (Schw.) Farl.

Cacomurus Hedysari-paniculati (Schw.) Arth.

On *Meibomia bracteosa* (Michx.) Kuntze.

Delaware, 1915 (Jackson).

On *Meibomia canescens* (L.) Kuntze. 1893:57. 1903:144.

Johnson, 1890 (Fisher); Montgomery, 1893 (Olive); Tippecanoe, 1907 (Dorner).

On *Meibomia Dillenii* (Darl.) Kuntze. 1893:57. 1896:222. 1903:144. 1905:180.

Hamilton, 1905 (Wilson, reported as on *M. sessilifolia* (Torr) Kuntze); Martin, 1915 (Hoffer); Montgomery, 1893 (Underwood Ind. Biol. Sur. 35); Tippecanoe, 1896 (Snyder), 1914 (Ludwig in Barth. Fungi Colmb. 4592).

On *Meibomia laevigata* (Nutt.) Kuntze. 1893:57.

Montgomery, 1890 (Fisher).

On *Meibomia paniculata* (L.) Kuntze. 1893:57. 1896:222.

Hamilton, 1905 (Wilson); Johnson, 1890 (Fisher); Jefferson, 1914 (Demaree); Tippecanoe, 1896 (Snyder, reported as on *Desmodium canadense* DC.)

On *Meibomia viridiflora* (L.) Kuntze. 1893:57. 1905:180.

Hamilton, 1905 (Wilson); Marion, 1905 (Wilson); Putnam, 1893 (Underwood); Tippecanoe, 1904 (J. C. Marquis).

114. NIGREDO HOWEI (*Pk.*) *Arth.*

Uromyces Howei Pk.

Cacomurus Howei (Pk.) Kuntze.

On *Aselepias incarnata* L. 1893:57. 1896:222.

Montgomery, 1893 (Olive); Tippecanoe, 1896 (Snyder).

On *Aselepias purpurascens* L. 1893:57.

Montgomery, 1890 (Fisher).

On *Aselepias Syriaca* L. (*A. cornuti* Dec.) 1893:57. 1896:222. 1898:187. 1905:180.

Dearborn, 1888 (Bolley); Delaware, 1890 (Arthur); Hamilton, 1905 (Wilson); Henry, 1915 (Jackson); Johnson, 1890 (Fisher); Madison, 1898 (Snyder); Marion, 1890 (S. M. Tracy), 1905 (Wilson); Montgomery, 1890 (Fisher), 1893 (Underwood Ind. Biol. Sur. 36); Putnam, 1891 (Underwood); Steuben, 1903 (Kellerman); Tippecanoe, 1887 (Arthur), 1896 (Snyder); Tipton, 1915 (Pipal); Wabash, 1891 (Miller).

On *Vincetoxicum Shortii* (A. Gray) Britton.

Crawford, 1915 (C. C. Deam).

115. NIGREDO HYPERICI-FRONDOSI (*Schw.*) *Arth.*

Uromyces Hyperici (Schw.) M. A. Curtis.

Cacomurus Hyperici-frondosi (Schw.) Arth.

On *Hypericum canadense* L. 1893:57.

Johnson, 1890 (Fisher).

On *Hypericum mutilum* L. 1893:57.

Marshall, 1893 (Underwood); Putnam, 1891, 1893 (Underwood Ind. Biol. Sur. 42); Spencer, 1910 (Johnson).

On *Triadenum virginicum* (L.) Raf. (*Elodea camoanulata* Pursh). 1893:57.

Marshall, 1893 (Underwood).

116. NIGREDO LESPEDEZAE-PROCUMBENTIS (*Schw.*) *Arth.*

Uromyces Lespedezae (Schw.) Pk.

Cacomurus Lespedezae-procumbentis (Schw.) Arth.

On *Lespedeza capitata* Michx. 1903:145.

Jasper, 1903 (Arthur); Tippecanoe, 1903 (Arthur).

- On *Lespedeza frutescens* (L.) Britton.
Lagrange, 1907 (Arthur).
- On *Lespedeza hirta* (L.) Hornem. 1903:145.
Jasper, 1913 (Arthur & Fromme); Marshall, 1893 (Underwood)
Ind. Biol. Sur. 39); Martin, 1915 (Hoffer); Orange, 1915
(Jackson).
- On *Lespedeza procumbens* Michx. 1893:57.
Montgomery, 1890 (Fisher).
- On *Lespedeza repens* (L.) Bart. 1896:222.
Tippecanoe, 1894 (Snyder).
- On *Lespedeza Stuevei* Nutt.
Harrison, 1915 (Fogal).
- On *Lespedeza virginica* (L.) Britton (*L. reticulata* S. Wats.) 1893:
57.
Lagrange, 1907 (Arthur); Montgomery, 1910 (Fisher).
- *117. NIGREDO MEDICAGINIS (*Pass.*) Arthur.
On *Medicago lupulina* L.
Grant, 1915 (Pipal); Tipton, 1915 (Pipal).
On *Medicago sativa* L.
Putnam, 1907 (Wilson).
- *118. NIGREDO MINUTA (*Diet.*) Arth.
On *Carex lanuginosa* Michx. 1903:144.
Jasper, 1903 (Arthur).
On *Carex virescens* Muhl. 1893:57.
Putnam, 1890 (Arthur).
The former collection erroneously reported as *Cacomurus*
Solidagini-caricis Arth. in Proceedings (1903:144) and the latter
(1893:57) as *Uromyces perigynius* Hals. on *C. virescens*.
119. NIGREDO PERIGYNIA (*Halst.*) Arth.
Uromyces perigynius Halsted.
Cacomurus perigynius (Halst.) Kuntze.
Cacomurus Solidagini-Caricis Arth.
On *Carex tribuloides* Wahl.
Newton, 1913 (Arthur & Fromme).
On *Carex varia* Muhl. 1903:144.
Jasper, 1903 (Arthur, type of *Uromyces Solidagini-Caricis* Arth.):
Lake, 1899 (Hill).

120. NIGREDO PLUMBARIA (Pk.) Arth.

Uromyces gaurina (Pk.) Snyder.*Cacomurus plumbarius* (Pk.) Kuntze.*Cacomurus gaurinus* (Pk.) Arth.On *Gaura biennis* L. 1896:222. 1898:180. 1903:145.

Hamilton, 1907 (Wilson); Tippecanoe, 1896 (Snyder).

On *Oenothera biennis* L.

Tippecanoe, 1912 (Orton).

121. NIGREDO POLYGONI (Pers.) Arth.

Uromyces polygoni (Pers.) Fuckel.*Cacomurus Polygoni* (Pers.) Kuntze.On *Polygonum aviculare* L. 1893:57. 1896:223. 1905:181.

Franklin, 1912, 1914 (Ludwig, in Barth. N. Am. Ured. 1196);

Hamilton, 1905 (Wilson); Kosciusko, 1909 (Funk); Montgomery, 1893 (Olive); Putnam, 1893 (Underwood); Tippecanoe,

1888 (Bolley); 1896 (Snyder).

On *Polygonum erectum* L. 1893:58.

Boone, 1911 (Miller); Henry, 1915 (Jackson); Johnson, 1890

(Fisher); Putnam, 1893 (Underwood Ind. Biol. Sur. 41);

Tippecanoe, 1888 (Bolley); 1895 (Snyder).

122. NIGREDO POLEMONII (Pk.) Arth.

Accidium Polemonii Pk.*Uromyces acuminatus* Arth.*Cacomurus acuminatus* (Arth.) Kuntze.I. On *Polemonium reptans* L.

Tippecanoe, 1901 (Arthur).

III. On *Spartina Michauxiana* Hitch. (*S. cynosuroides* (L.) Roth).

1903:144. 1908:89.

Jasper, 1903, 1915 (Arthur); Lake, 1913 (Arthur); Starke, 1905

(Arthur); Steuben, 1903 (Kellerman).

123. NIGREDO PROEMINENS (DC.) Arth.

Uromyces Euphorbiae (Schw.) C. & P.*Cacomurus Euphorbiae* (Schw.) Kuntze.On *Chamaesyce humistrata* (Engelm.) Small (*Euphorbia humistrata* Engelm.) 1903:144. 1905:180.

Hamilton, 1905 (Wilson); Montgomery, 1906 (Thomas); Putnam, 1911 (Banker); Tippecanoe, 1902 (Arthur).

On *Chamaesyce maculata* (L.) Small (*Euphorbia maculata* L.) 1893:49. 1896:217. 1905:180.

Hamilton, 1905 (Wilson); Marion, 1905 (Wilson); Montgomery, (Rose); Tippecanoe, 1887 (Arthur).

On *Chamaesyce Preslii* (Guss.) Arth. (*Euphorbia Preslii* Guss., *E. hypericifolia* A. Gray). 1893:57. 1896:222. 1898:187. 1905:180.

Franklin, 1913 (Ludwig); Fulton, 1909 (Kern); Hamilton, 1905 (Wilson); Henry, 1915 (Jackson); Jefferson, 1914 (Demaree); Johnson, 1890 (Fisher); Madison, 1898 (Snyder); Marion, 1905 (Wilson); Putnam, 1891 (Underwood); Tippecanoe, 1888 (Bolley), 1896 (Snyder), 1914 (Ludwig in Barth. Fungi Col. 4594, 4595).

On *Poinsettia dentata* (Michx.) Small (*Euphorbia dentata* Michx.) 1893:49, 57. 1896:217, 222. 1905:180.

Franklin, 1914 (Alley); Hamilton, 1905 (Wilson); Marion, 1905 (Wilson); Putnam, 1891, 1893 (Underwood, Ind. Biol. Sur. 43, 59); Tippecanoe, 1896 (Snyder).

On *Poinsettia heterophylla* (L.) Kl. & Garke (*Euphorbia heterophylla* L.)

Tippecanoe, 1904 (Arthur).

124. NIGREDO RHYNCOSPORAE (Ellis) Arth.

Uromyces Rhyncosporae Ellis.

Cacomurus Rhyncosporae (Ellis) Kuntze.

On *Rhyncospora alba* (L.) Vahl. 1903:145.

Tippecanoe, 1894 (King).

*125. NIGREDO SCIRPI (Cast.) Arth.

Uromyces Scirpi (Cast.) Burrill.

Accidium sii-latifolii Wint.

I. On *Cicuta maculata* L.

Tippecanoe, 1903 (Arthur).

III. On *Scirpus americanus* Pers.

Jasper, 1913 (Arthur & Fromme); Montgomery, 1895 (Olive).

On *Scirpus validus* Vahl.

Jasper, 1913 (Arthur & Fromme).

126. NIGREDO SILPHII (*Burr.*) *Arthur.**Aecidium compositarum Silphii* Burr.*Uromyces Junci-tenuis* Sydow.I. On *Silphium perfoliatum* L.

Vigo, 1899 (Arthur).

III. On *Juncus Dudleyi* Wieg.

Posey, 1910 (Johnson); Steuben, 1903 (Kellerman).

On *Juncus tenuis* Willd. 1896:222. 1898:187. 1905:180. 1908:
90.Fayette, 1914 (Ludwig); Franklin, 1912 (Ludwig); Hamilton,
1905 (Wilson); Jefferson, 1914 (Demaree); Madison, 1898
(Snyder); Marion, 1905 (Wilson); Marshall, 1893 (Underwood,
Ind. Biol. Sur. 37); Newton, 1913 (Arthur); Orange, 1913
(Arthur); Owen, 1911 (Pipal); Pulaski, 1912 (Ludwig); Starke,
1905 (Arthur); Tippecanoe, 1896 (Snyder).*127. NIGREDO SPERMACECES (*Schw.*) *Arth.**Uromyces Spermaceces* (Schw.) M. A. Curtis.On *Diodia teres* Walt.

Harrison, 1915 (Fogal).

128. NIGREDO TRIFOLII (*Hedw.f.*) *Arth.**Uromyces Trifolii* (Hedw.f.) Lev.*Cacomurus Trifolii* (Hedw.f.) Gray).On *Trifolium hybridum* L. 1893:58. 1905:181.

Hamilton, 1905 (Wilson); Wabash, 1886 (Miller).

On *Trifolium medium* L. 1893:58.

Johnson, 1890 (Fisher).

On *Trifolium repens* L. 1893:58.Montgomery, 1893 (Olive); Tippecanoe, 1888 (Bolley), 1893
(Golden).*129. NIGREDO VALENS (*Kern*) *Arth.**Uromyces valens* Kern.On *Carex lupulina* Muhl. 1893:58.

Johnson, 1890 (Fisher).

On *Carex rostrata* Stokes (*Carex utriculata* Boot.) 1905:180.

Hamilton, 1905 (Wilson, type collection of *Uromyces valens* Kern).

*130. PHRAGMIDIUM AMERICANUM *Diet.*

On *Rosa* sp. cult. 1893:52.

Putnam, 1892 (Underwood, Ind. Biol. Sur. 48).

On *Rosa virginiana* Mill. (*R. lucida* Ehrh.) 1893:52.

Johnson, 1890 (Fisher).

131. PHRAGMIDIUM DISCIFLORUM (*Tode*) *J. F. James.*

Aegma disciflora (Tode) Arth.

On *Rosa* sp. cult.

St. Joseph, 1915 (Emery).

*132. PHRAGMIDIUM ROSAE-SETIGERAE *Diet.*

On *Rosa carolina* L. (?) 1893:52.

Putnam, 1893 (Underwood).

On ***Rosa rubiginosa*** L.

Monroe, 1914 (Van Hook).

On *Rosa setigera* Michx. 1893:52.

Hamilton, 1907 (Wilson); Jefferson, 1914 (Demaree); Johnson, 1890 (Fisher); Madison, 1907 (Wilson); Tippecanoe, 1896 (Snyder).

133. PHRAGMIDIUM SUBCORTICIUM (*Schrank.*) *Wint.*

On *Rosa* sp. cult.

Tippecanoe, 1897 (Arthur).

134. PLEOLARIA TOXICODENDRI (*Berk. & Rav.*) *Arth.*

Pleolaria brevipes Berk. & Rav.

On *Toxicodendron radicans* (L.) Kuntze (*Rhus radicans* L.) 1893:58. 1896:223. 1898:181.

Laporte, 1883 (Arthur); Jefferson, 1915 (Demaree); Montgomery, 1890 (Fisher); Owen, 1893 (Underwood); Putnam, 1893 (Underwood, Ind. Biol. Sur. 34); Tippecanoe, 1893 (Golden); 1896 (Snyder).

Commonly but erroneously referred to *Uromyces Terebinthi* DC. by American authors.

135. POLYTHELIS FUSCA (*Pers.*) *Arth.*
Puccinia fusca (*Pers.*) *Wint.*
Dicaeoma fuscum (*Pers.*) *Kuntze.*
Dicaeoma Anemones (*Pers.*) *Arth.*
 On *Anemone quinquefolia* L. 1894:151. 1898:181.
 Fulton, 1894 (*Arthur*).
136. POLYTHELIS THALICTRI (*Chev.*) *Arth.*
Puccinia Thalictri *Chev.*
Dicaeoma Thalictri (*Chev.*) *Kuntze.*
 On *Thalictrum dioicum* L. 1893:55.
 Montgomery, 1893 (*Olive*); *Tippecanoe*, 1912 (*Hoffer*).
- *137. RAVENELIA EPIPHYLLA (*Schw.*) *Diet.*
 On *Cracca virginiana* L.
 Harrison, 1915 (*Kopp*); White, 1911 (*Bushnell*).
138. TELEOSPORA RUDBECKIAE (*A. & H.*) *Arth.*
Uromyces Rudbeckiae *Arth. & Holw.*
Caeomurus Rudbeckiae (*A. & H.*) *Kuntze.*
 On *Rudbeckia laciniata* L. 1894:152. 1898:187. 1903:145.
 Madison, 1898 (*Snyder*); Montgomery, 1894 (*Olive*).
139. TRANZSCHELIA PUNCTATA (*Pers.*) *Arth.*
Aecidium punctatum *Pers.*
Aecidium hepaticatum *Schw.*
Puccinia Pruni-spinosae *Pers.*
 On *Hepatica acutiloba* DC. 1893:50.
 Jennings, 1912 (*C. C. Deam*); Montgomery, 1892, 1893 (*Thomas*);
 Tippecanoe, 1898 (*Arthur*).
140. TRIPHAGMIUM ULMARIAE (*Schum.*) *Link.*
 On *Filipendula rubra* (*Hill*) *Robinson* (*Ulmaria rubra* *Hill*). 1903:
 43.
 Tippecanoe, 1899 (*Arthur*, in *Barth. N. Am. Ured.* 83).
141. UROPYXIS AMORPHAE (*M. A. Curtis*) *Schröt.*
 On *Amorpha canescens* *Pursh.* 1893:58.
 Marshall, 1893 (*Underwood*, *Ind. Biol. Sur.* 44).
- Purdue University,
 Agricultural Experiment Station,
 Lafayette, Ind.

