



UNIVERSITY OF WISCONSIN
STEVENS POINT

STEVENS POINT, WISCONSIN

THE MUSEUM OF NATURAL
HISTORY

ATLAS OF WISCONSIN BRYOPHYTES

Report No. 16

Reports on the Fauna and Flora
of Wisconsin

Part II

ATLAS OF WISCONSIN BRYOPHYTES

By

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Museum of Natural History

University of Wisconsin

Stevens Point, Wisconsin 54481 U. S. A.

November 21, 1979

THE MUSEUM OF NATURAL HISTORY
Stevens Point, Wisconsin

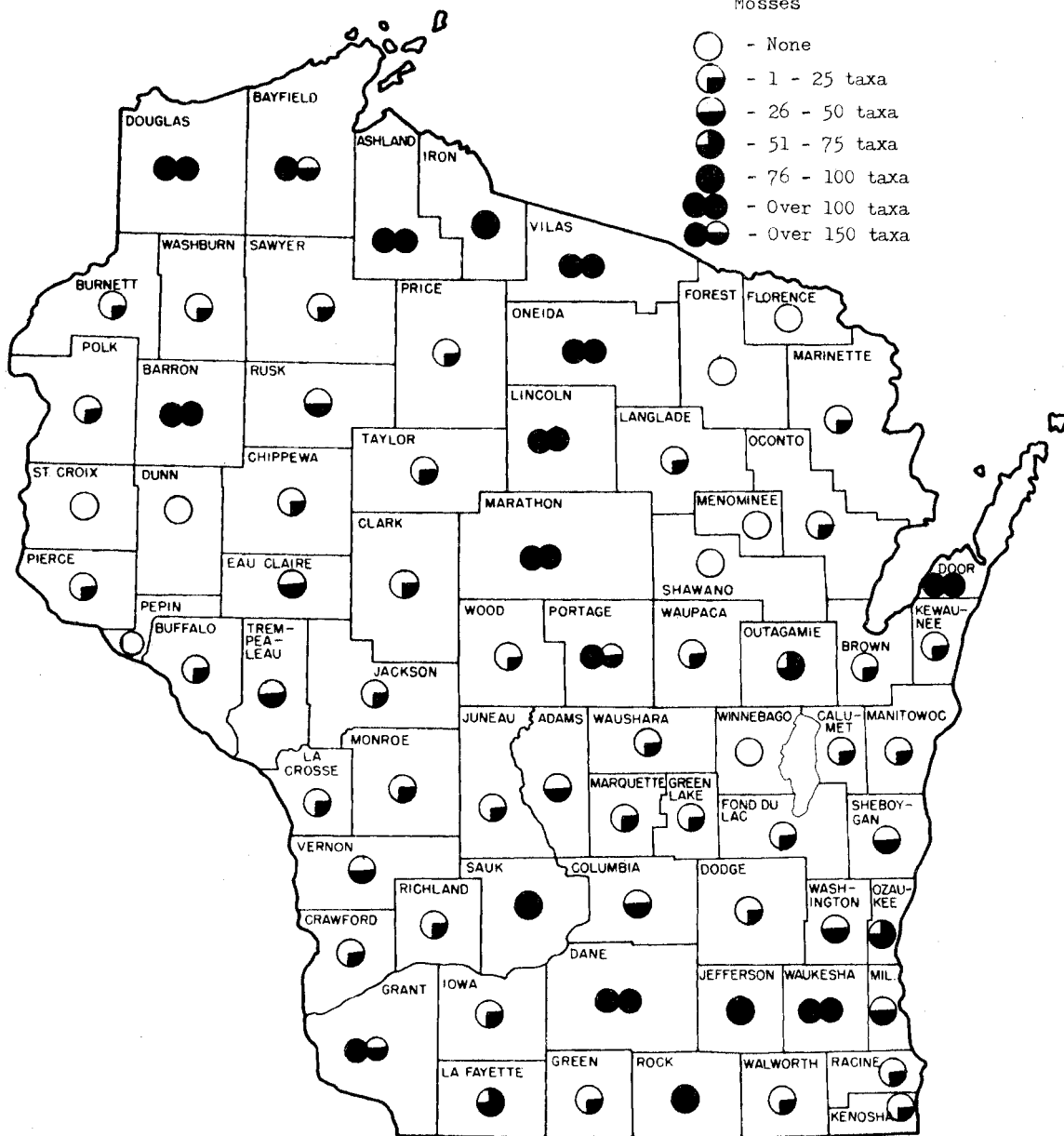
Reports on the Fauna and Flora of Wisconsin
No. 16

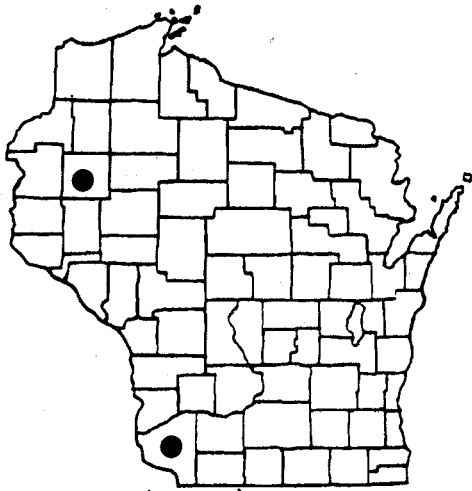
Part II

MUSCI

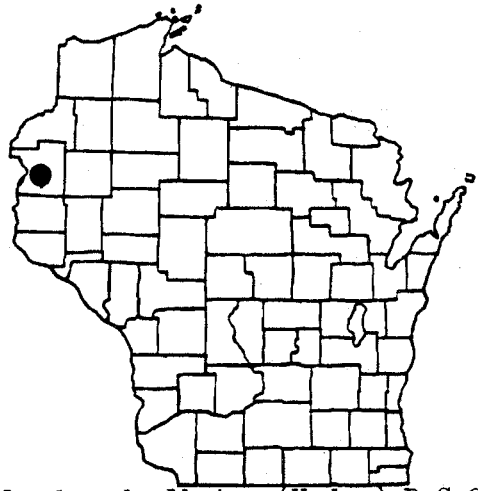
Mosses

- - None
- ◐ - 1 - 25 taxa
- ◑ - 26 - 50 taxa
- ◒ - 51 - 75 taxa
- ◓ - 76 - 100 taxa
- - Over 100 taxa
- ◐◑ - Over 150 taxa

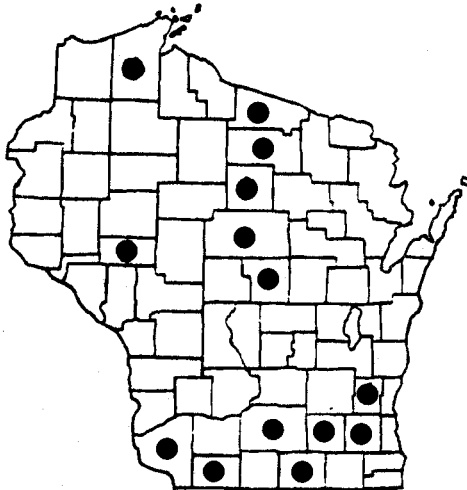




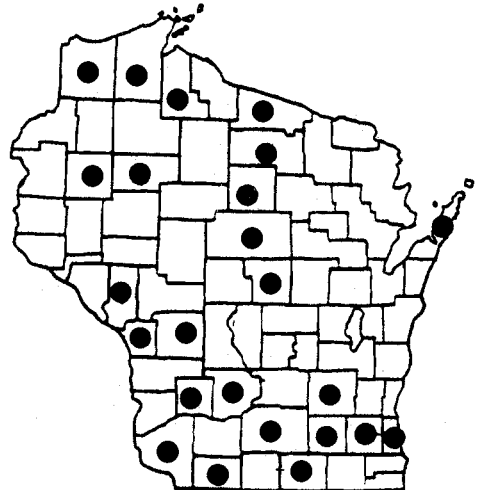
Acaulon muticum (Hedw.) C.Muell. var.
rufescens (Jaeg.) Crum 29, 32



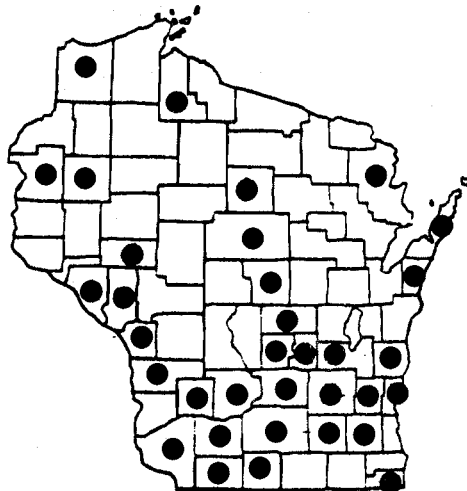
Amblyodon dealbatus (Hedw.) B.S.G.
32, (82), 96, (113)



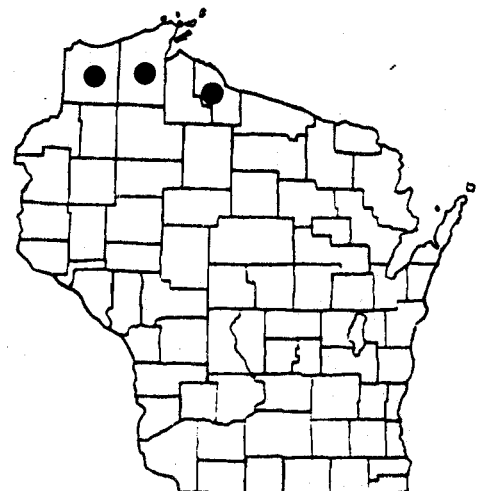
Amblystegium juratzkanum Schimp
32, 73, 75, 76



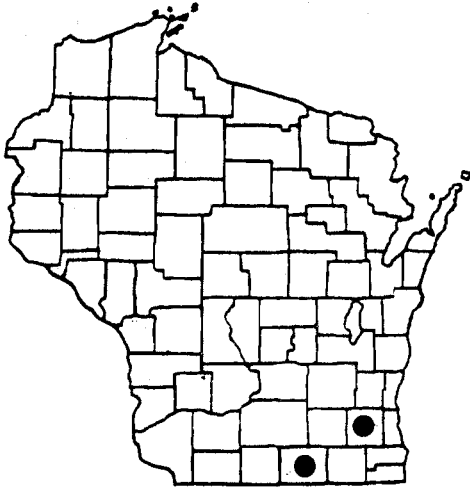
Amblystegium serpens (Hedw.) B.S.G.
13, 32, 70, (71), 73, 76, 108



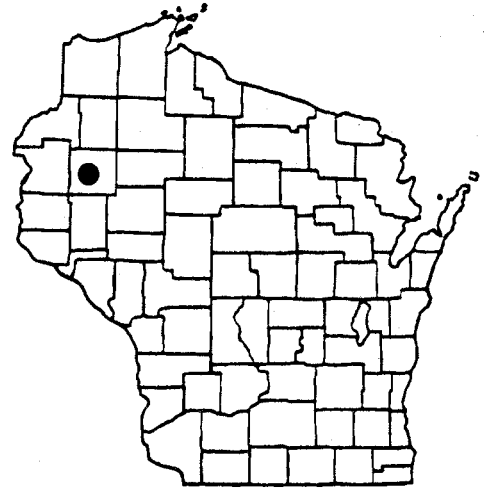
Amblystegium varium (Hedw.) Lindb.
13, 32, 34, (57), 75, 76, 93, 94, 96



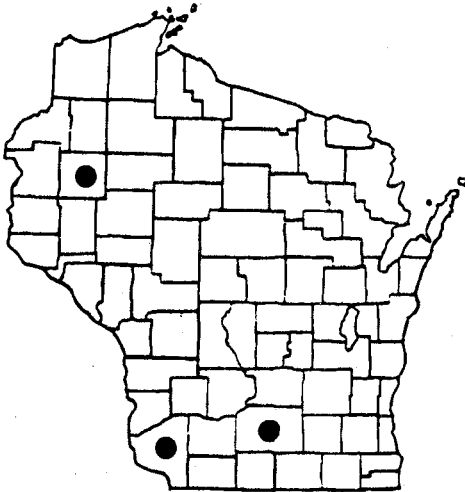
Amphidium lapponicum (Hedw.) Schimp.
74



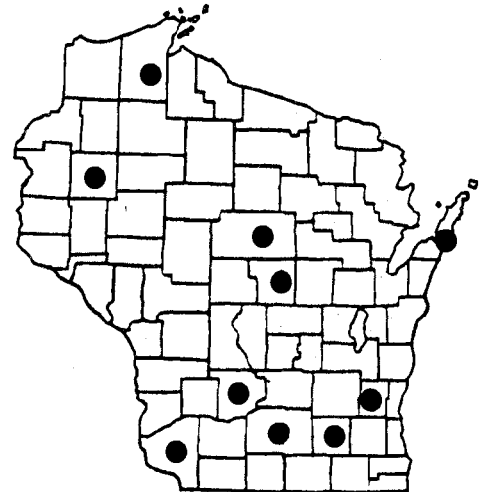
Anomodon viticulosus (Hedw.) Hook. & Tayl.
32, (115)



Aphanorregma serratum (J. Hook & Wils. ex
Drumm.) Sull. 32



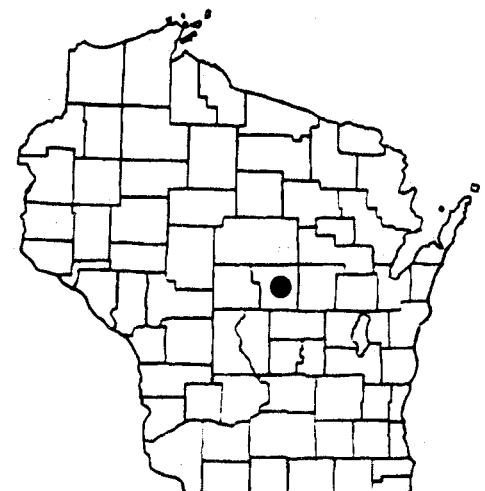
Astomum muhlenbergianum (Sw.) Grout
32



Atrichum angustatum (Brid.) B.S.G. 9,
13, 24, 32, 73, 76, (82), (111)



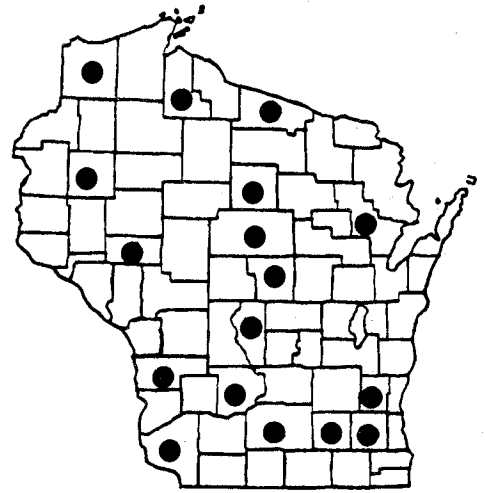
Atrichum crispum (James) Sull.
76, (144)



Atrichum oerstedianum (C. Muell.) Mitt.
76



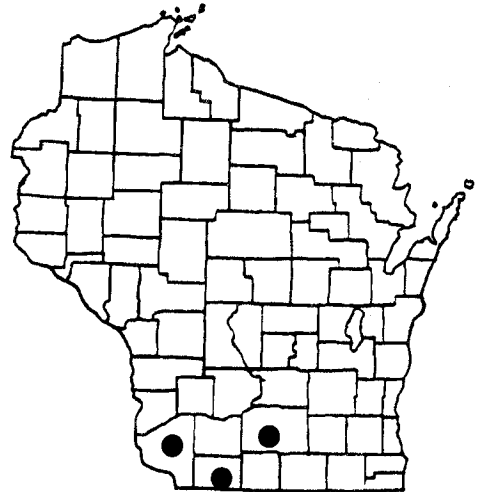
Atrichum tenellum (Roehl.) B.S.G.
32, (84)



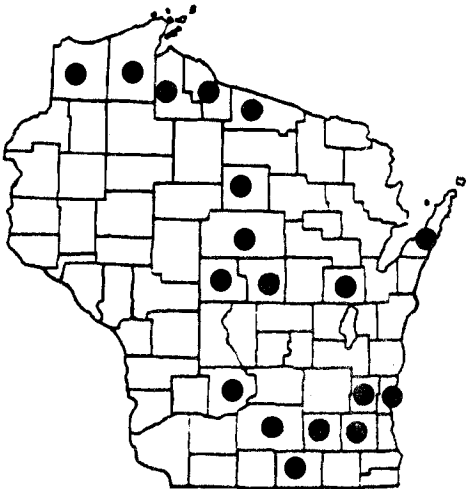
Atrichum undulatum (Hedw.) P.-Beauv.
6, 9, 32, 73, (75), (76), 108, 148



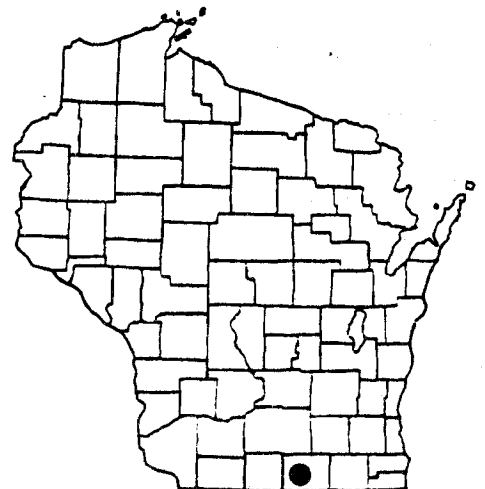
Aulacomnium androgynum (Hedw.) Schwaegr.
126



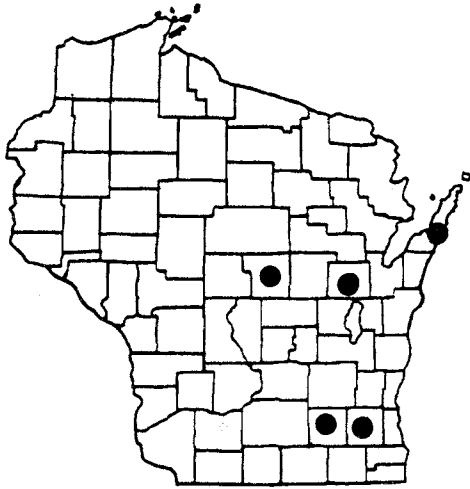
Aulacomnium heterostichum (Hedw.) B.S.G.
32, (65)



Aulacomnium palustre (Hedw.) Schwaegr.
13, 32, 73, 76, (119), 126

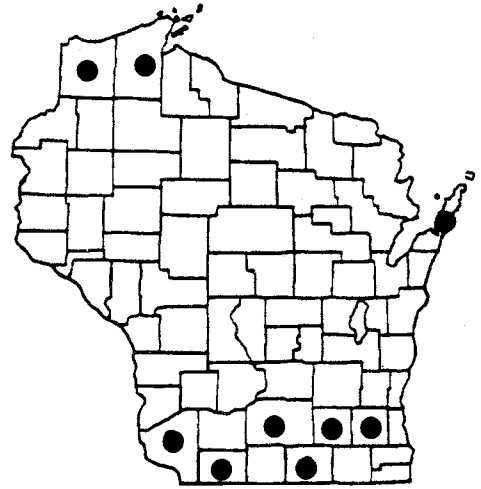


Barbula acuta (Brid.) Brid.
32



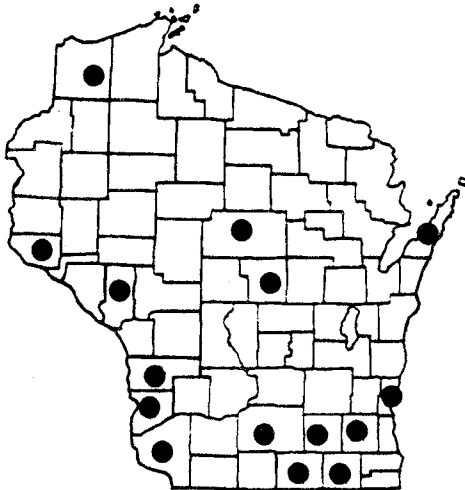
Barbula convoluta Hedw.

13 , 32, 76

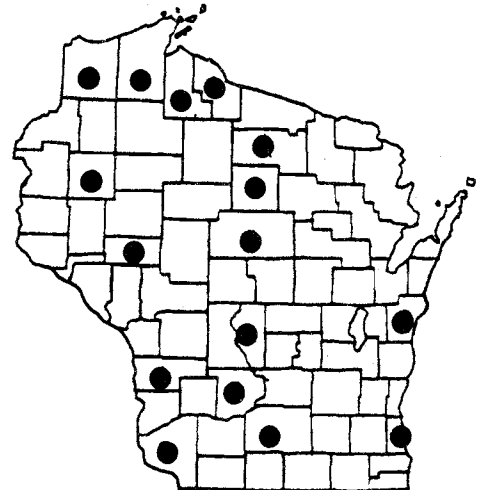


Barbula fallax Hedw.

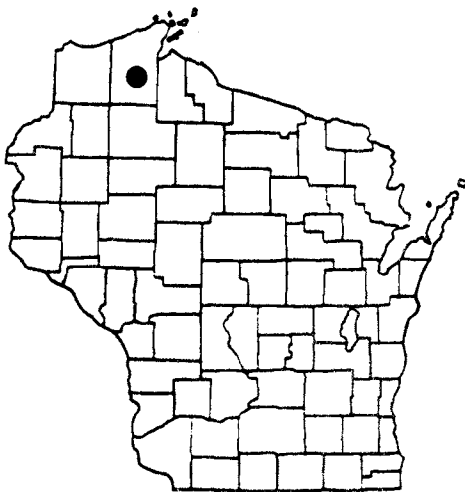
13 , 24, 32, (71)



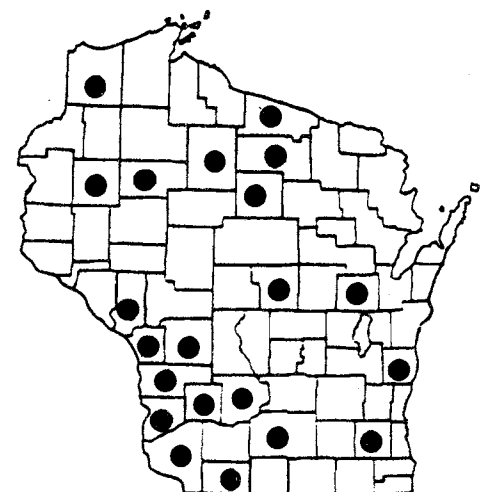
Barbula unguiculata Hedw. 13, (23),
32,(49) , 69, (71), 73, 76 , 108, 147



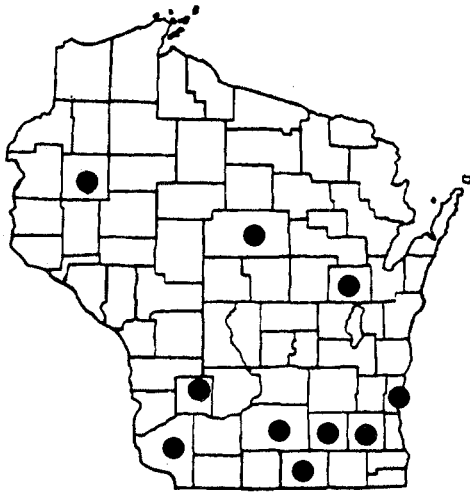
Bartramia pomiformis Hedw.
32, 73, 75, 108, (111), 148



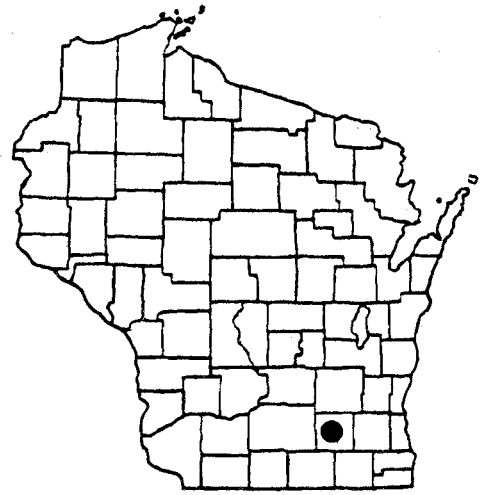
Blindia acuta (Hedw.) B.S.G.
32, 74, (113)



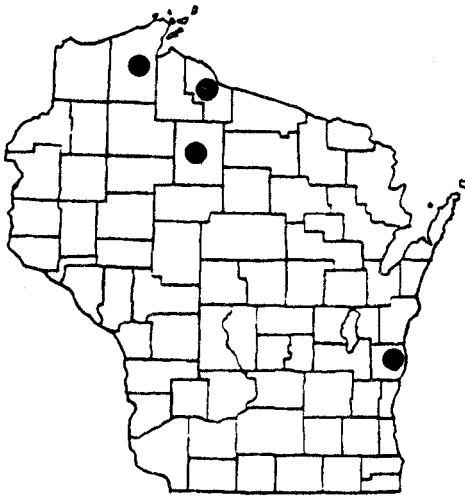
Brachythecium acuminatum (Hedw.) Auct.
9, 32, 34, (57), 69, 70, 76, (94), 108



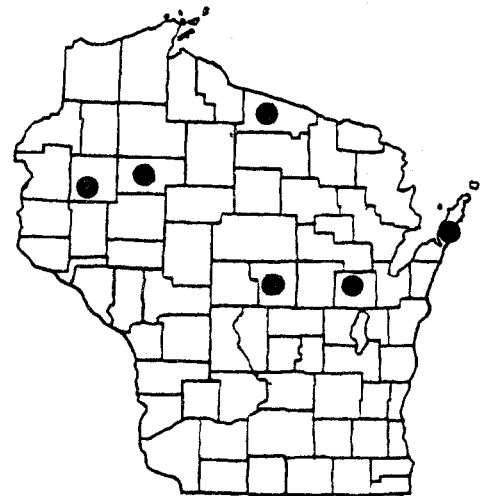
Brachythecium acutum (Mitt.) Sull.
32, 69, 73



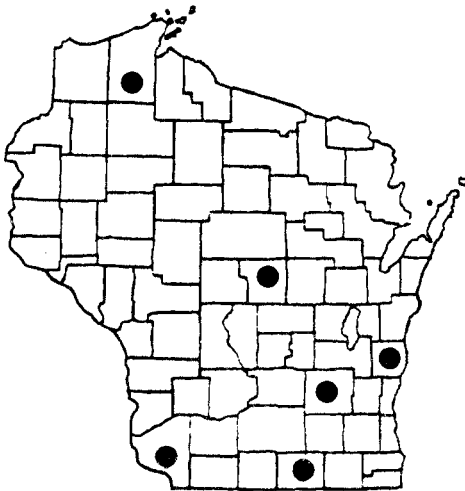
Brachythecium calcareum Kindb.
32



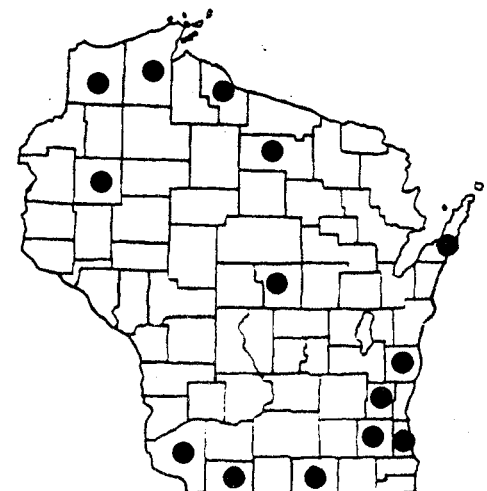
Brachythecium campestre (C.Muell.) B.S.G.
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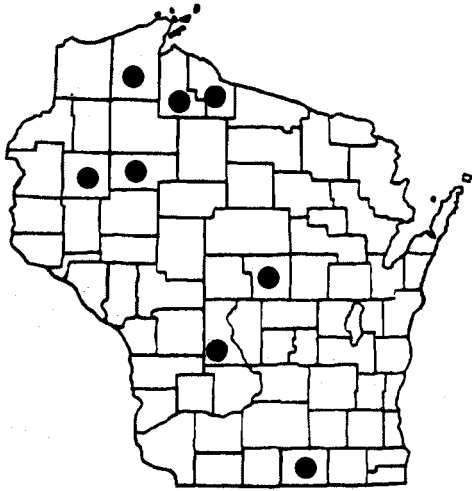
Brachythecium curtum (Lindb.) Limpr.
13, 32, 76, (119)



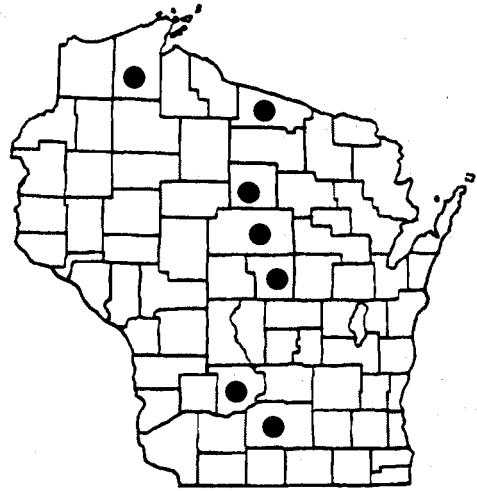
Brachythecium digastrum C. Muell. & Kindb.
32, 76



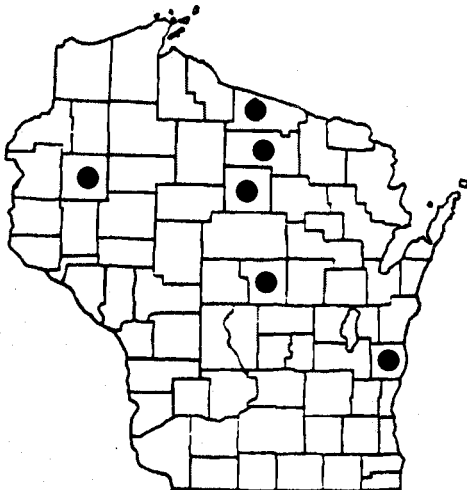
Brachythecium oxycladon (Brid.) Jaeg. & Sauerb.
13, 24, 32, 76, 108



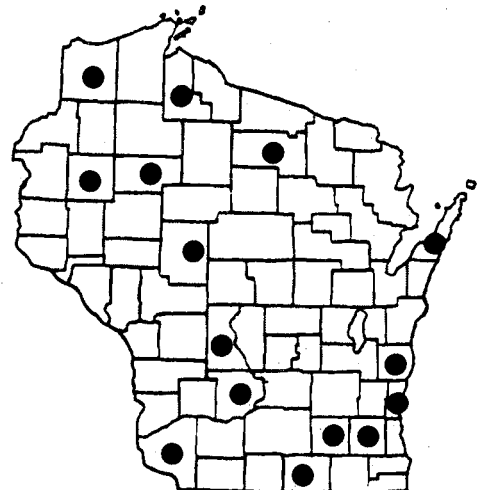
Brachythecium plumosum (Hedw.) B.S.G.
32, 76, 108, 113



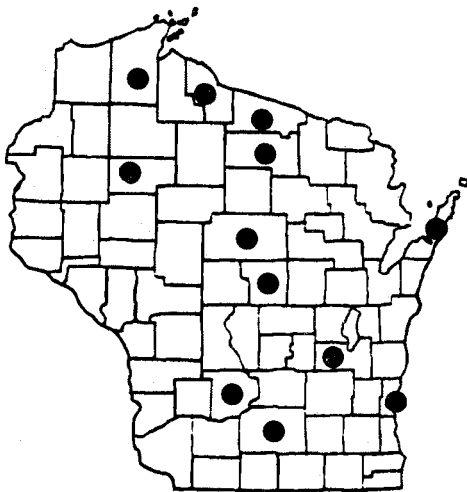
Brachythecium populeum (Hedw.) B.S.G.
9, 32, 73, 76, (111), (113), 147



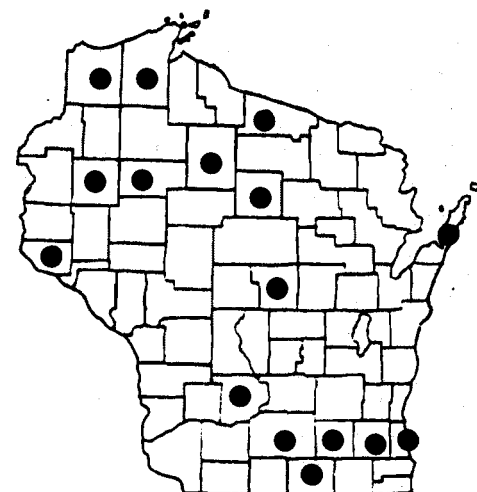
Brachythecium reflexum (Starke) B.S.G.
32, 76



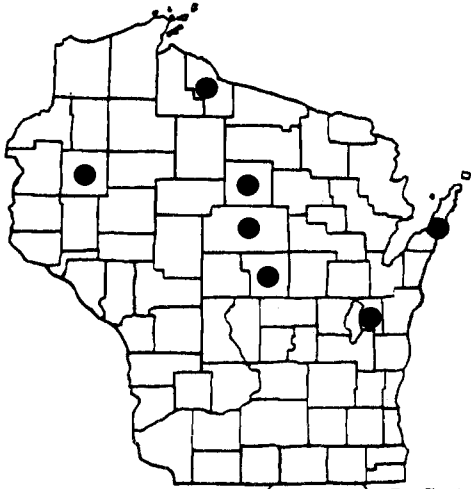
Brachythecium rivulare B.S.G.
13, 32, (49), 76, 108



Brachythecium rutabulum (Hedw.) B.S.G.
9, 13, 32, 73, 76, 126

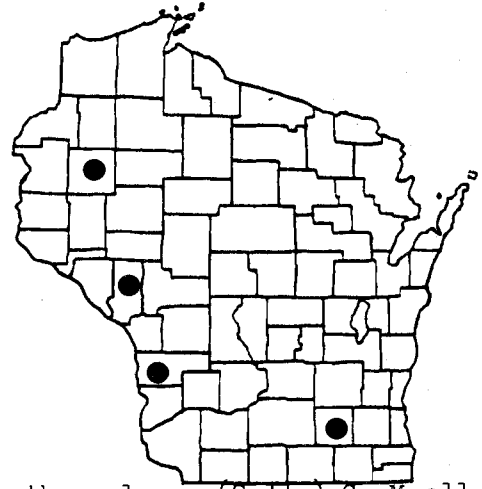


Brachythecium salebrosum (Web. & Mohr)
B.S.G. 13, 42, (32), 76, (92),
108, 147



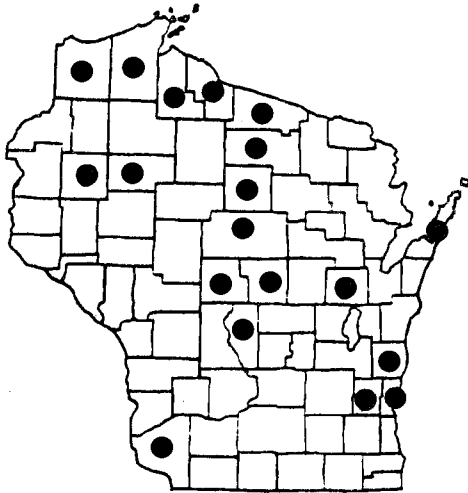
Brachythecium velutinum (Hedw.) B.S.G.

13 , 32, 73, 76



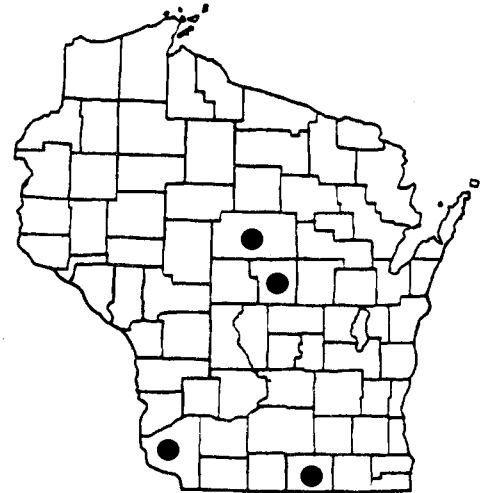
Brothera leana (Sull.) C. Muell.

32, 34



Brotherella recurvans (Michx.) Fleisch.

13 , 32, (57), 76, (84), (119)



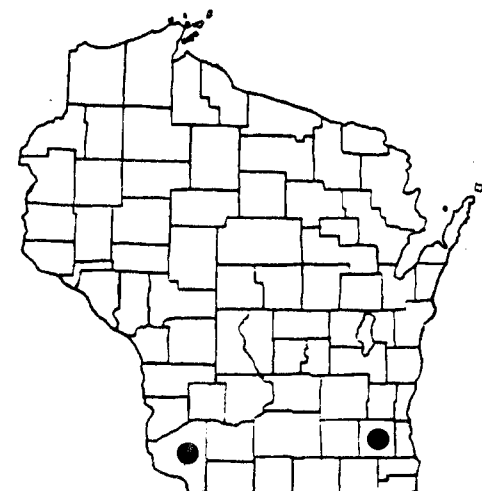
Brotherella tenuirostris (Bruch & Schimp.

Fleisch. 32, (52), 73, 76



Bruchia flexuosa (Sw. ex Schwaegr.) C. Muell.

32, 98

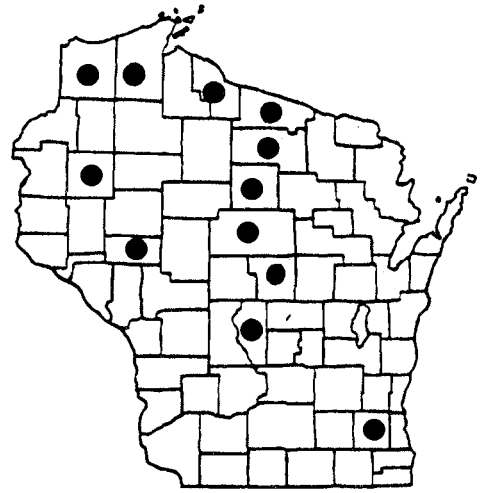


Bruchia sullivantii Aust.

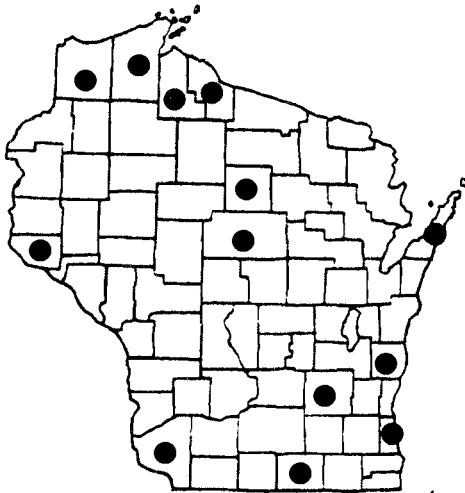
29, 32



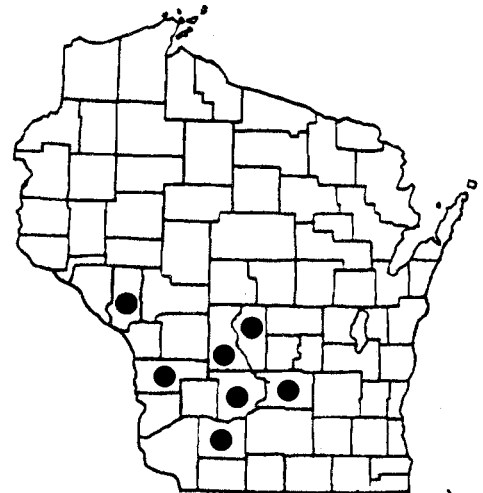
Bryhnia graminicolor (Brid.) Grout
13 , 32



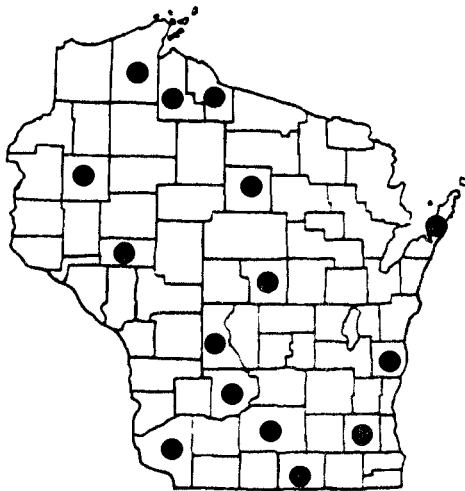
Bryhnia novae-angliae (Sull. & Lesq. ex
Sull.) Grout 32, 73, 75 , 76 , 108



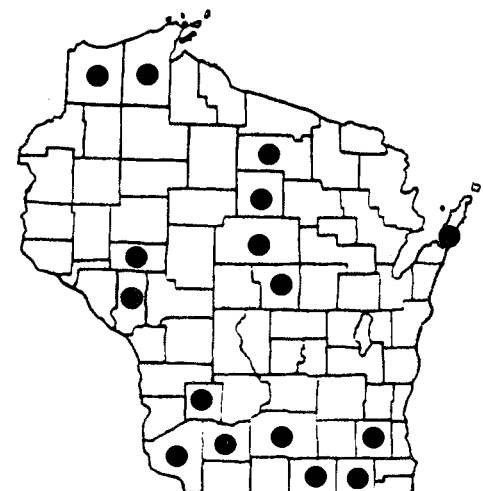
Bryoerythrophyllum recurvirostrum (Hedw.) Chen.
13 , 32, 147



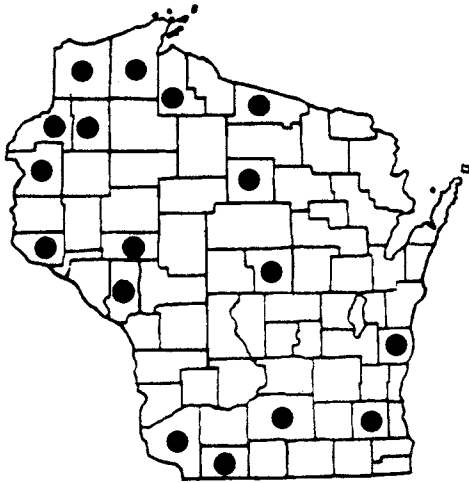
Bryoxiphium norvegicum (Brid.) Mitt.
8, 12, 15, (17), 25, 26, 53, 74, 84, 91,
96, 107, 113, 115, 117, 143, 148



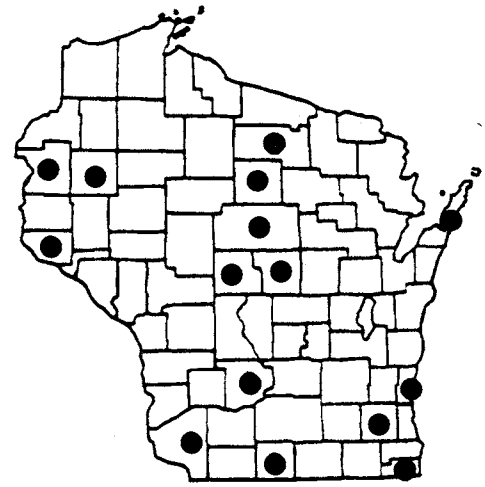
Bryum algovicum Sendtn. ex C. Muell.
13 , 32, 75, 76



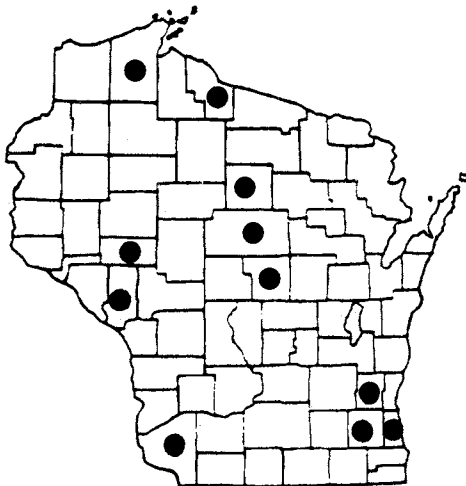
Bryum argenteum Hedw.
13 , 32, 69, (71), 73, 75 , 76 , 116



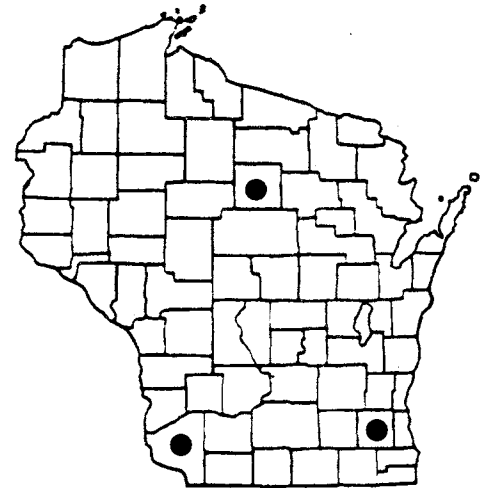
Bryum caespiticium Hedw. 32, (71),
75, 76, 108, 116, 147



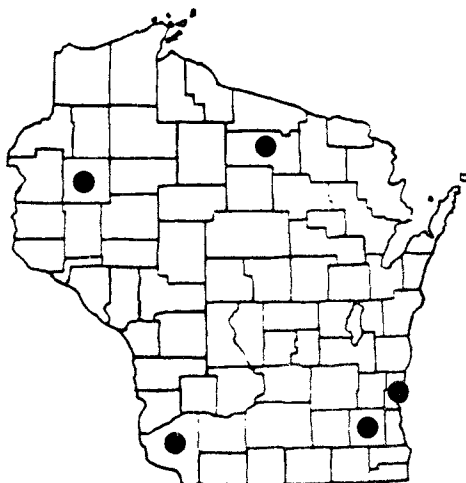
Bryum capillare Hedw. 9, 13, 32,
73, 76, (93), 147



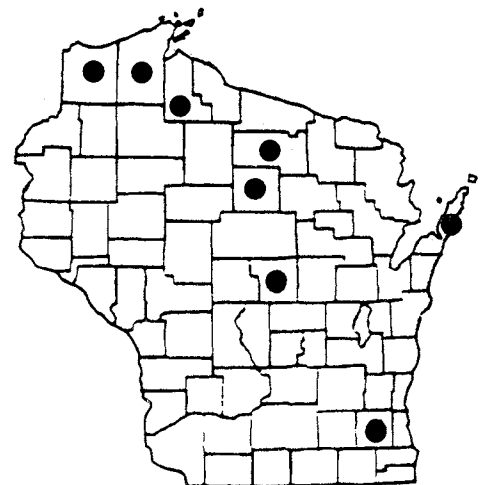
Bryum creberrimum Tayl.
32, 73, 75, 76, 96



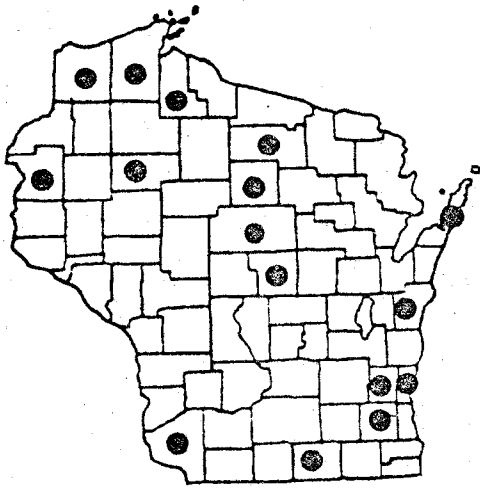
Bryum lonchocaulon C. Muell.
32



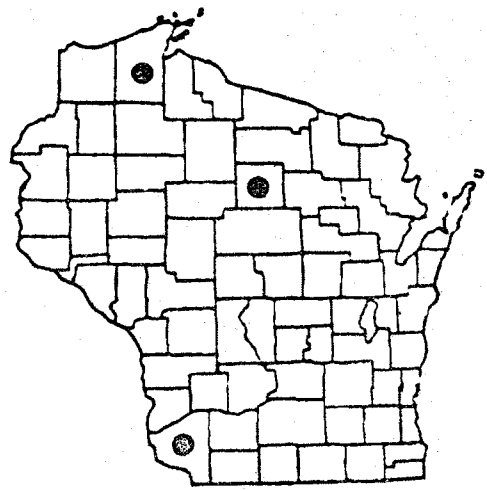
Bryum pallens (Brid.) Sw. ex Roehl.
32



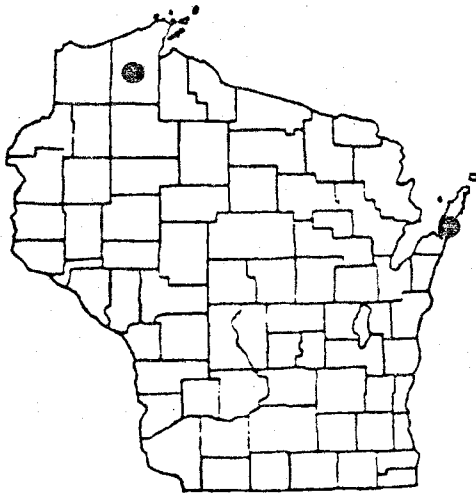
Bryum pseudotriquetrum (Hedw.)
Gaertn., Meyer & Scherb.
13, 32, 76, 108



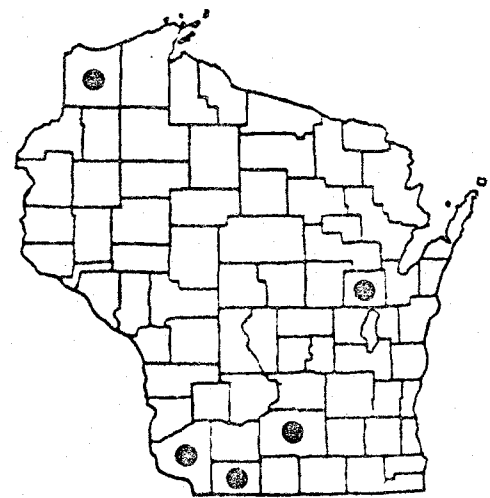
Bryum pseudotriquetrum var. bimum
(Schreb.) Lilj. 32, 73



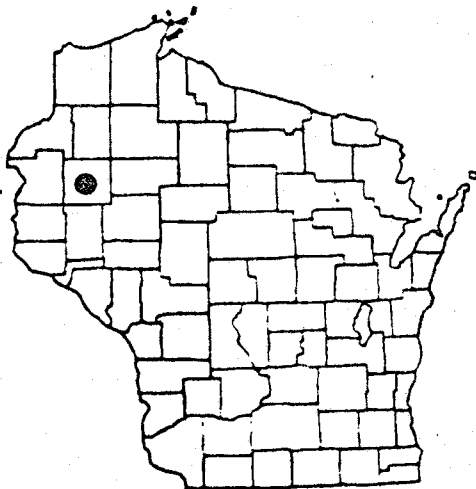
Bryum stenotrichum C. Muell.
32



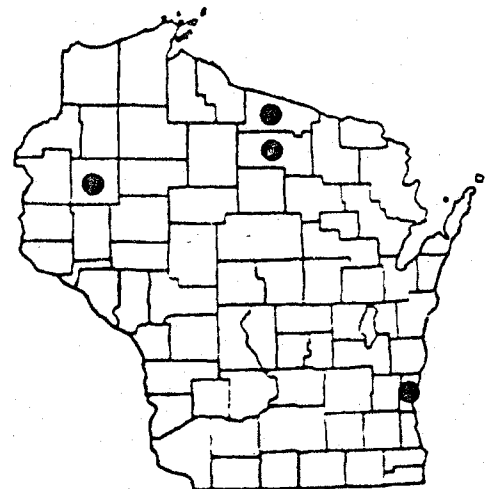
Bryum tortifolium Funck ex Brid.
13, 32, (84)



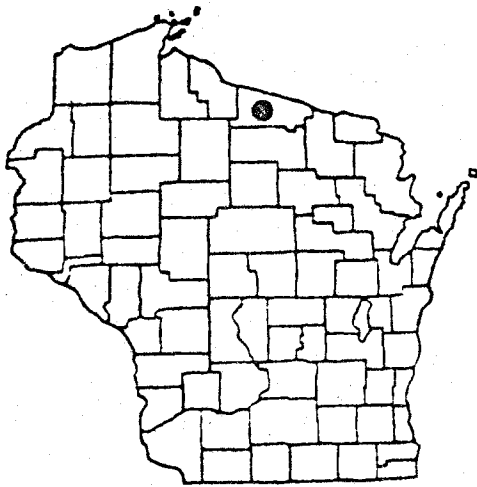
Bryum uliginosum (Brid.) B.S.G.
32, 108



Bryum violaceum Grundw. & Nyh.
55, (113)

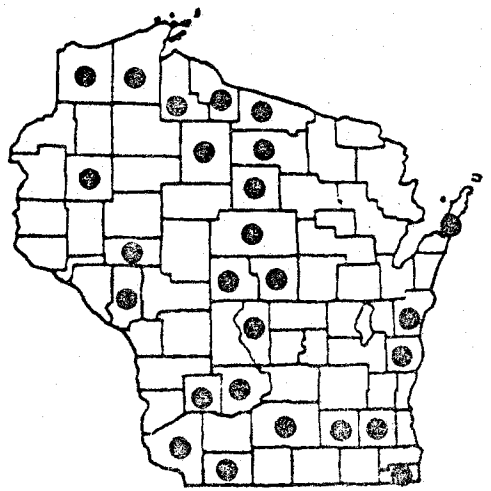


Bryum weigellii Spreng.
32, 44



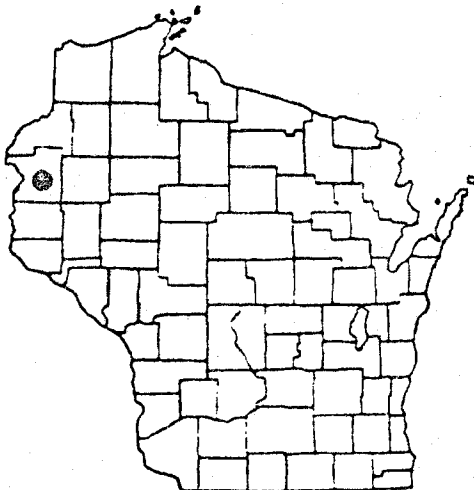
Ruxbaumia aphylla Hedw.

32



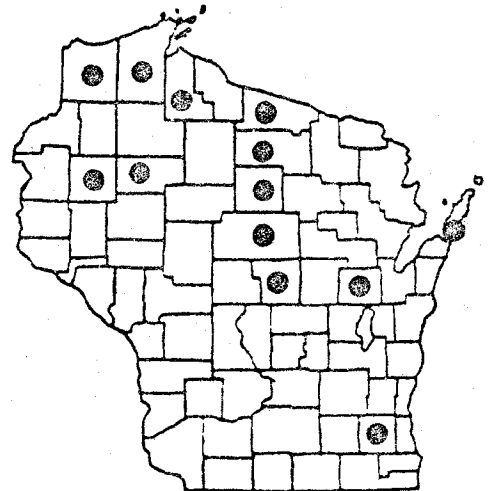
Callicladium haldanianum (Grev.) Crum

9, 13, 24, 32, (57), 70, 73,
75, 76, 108, (113), (119), 126



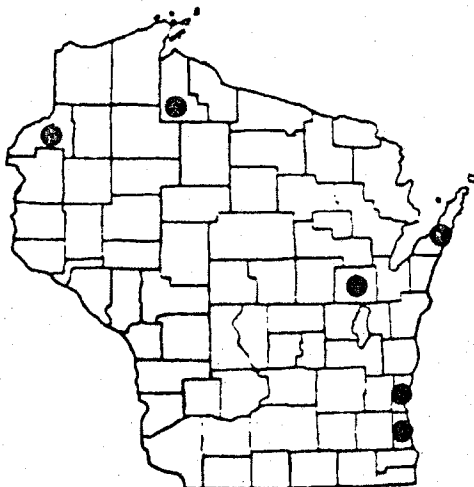
Calliergidium bakeri (Ren.) Grout

84, 127, 128



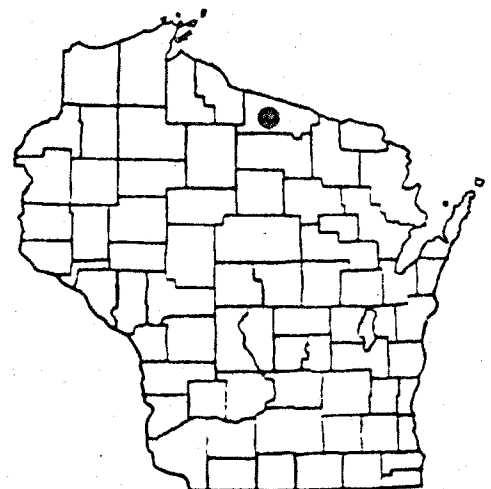
Calliergon cordifolium (Hedw.) Kindb.

13, 24, 32, 73, 76, (113), (156)



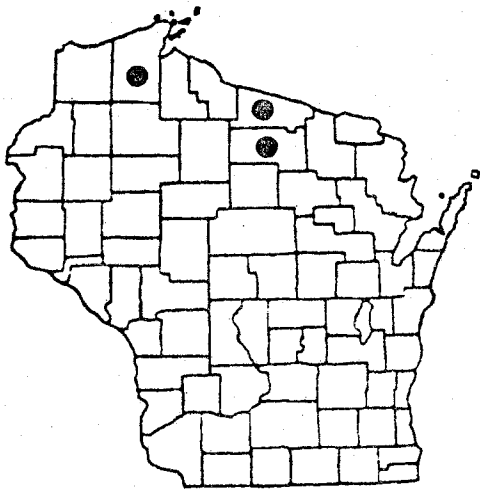
Calliergon giganteum (Schimp.) Kindb.

13, 32, (115)

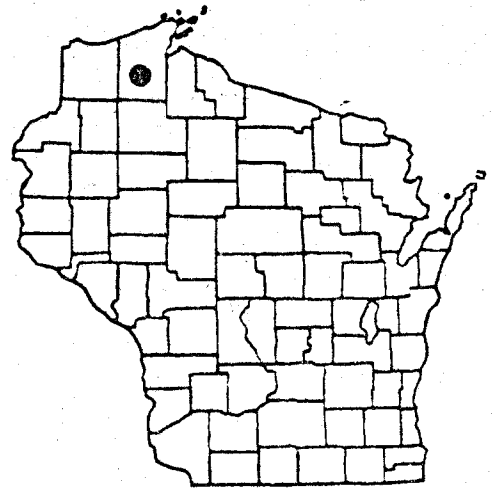


Calliergon richardsonii (Mitt.)

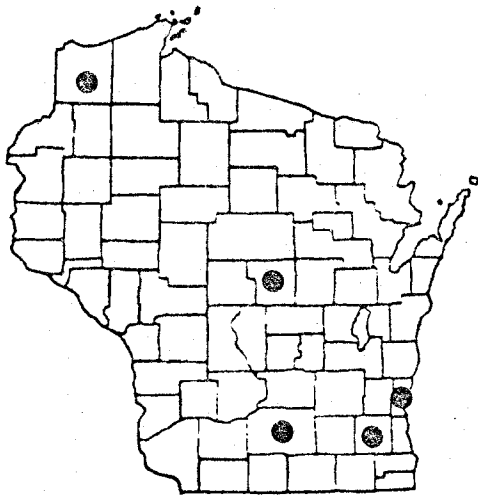
Kindb. ex Warnst. 32



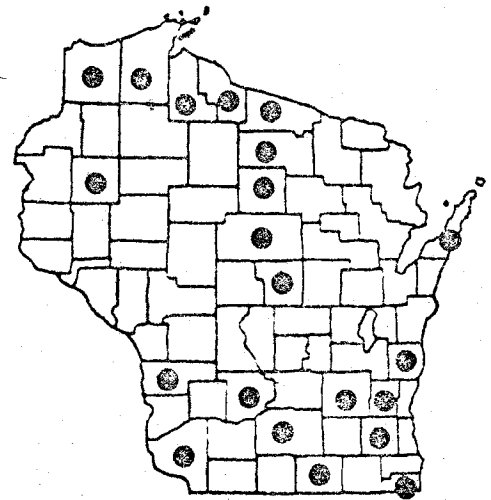
Calliergon stramineum (Brid.) Kindb.
32, (119)



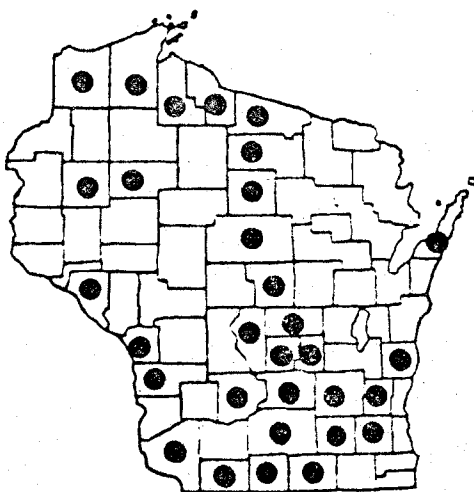
Calliergon trifarium (Web. & Mohr)
Kindb. 32



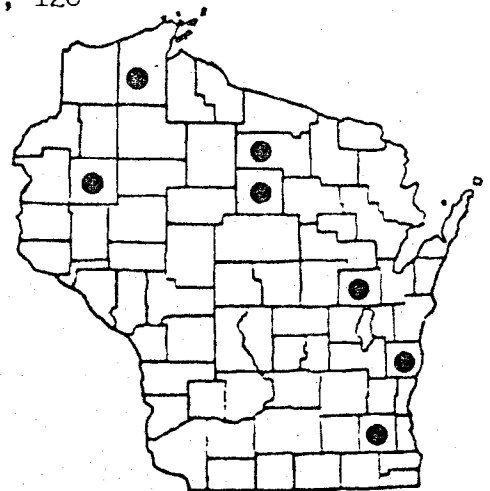
Callerigonella cuspidata (Hedw.)
Loeske 32, 76, 108, (113), (156)



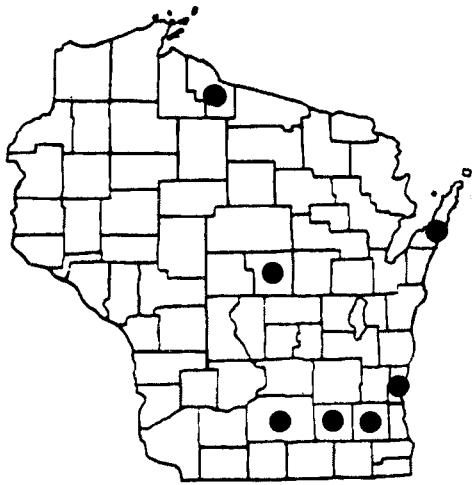
Campyllum chrysophyllum (Brid.)
J. Lange 13, 24, 32, 34, 73,
76, 126



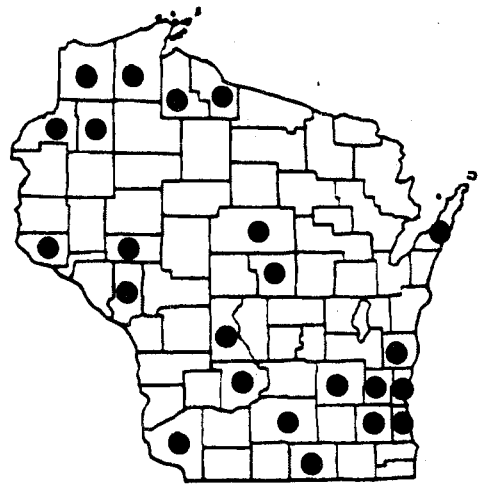
Campyllum hispidulum (Brid.) Mitt.
13, 24, 32, 34, (57), 73, 75, 76, 93



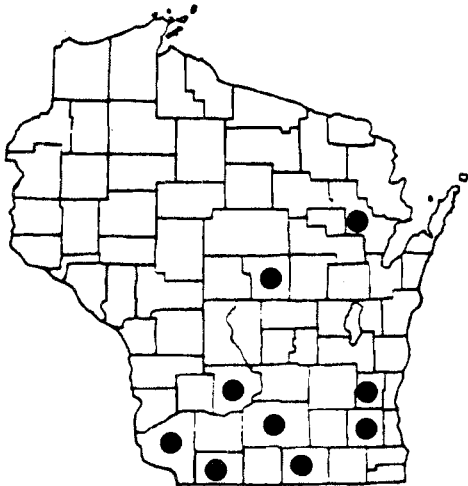
Campyllum polygamum (B.S.G.)
C. Jens. 32



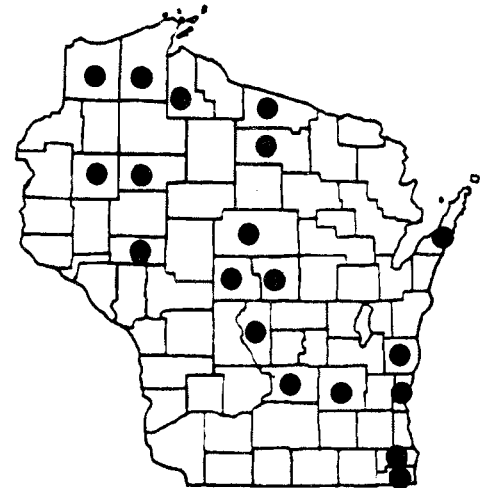
Campylium stellatum (Hedw.) C. Jens.
13, 29, 32, 76



Ceratodon purpureus (Hedw.) Brid.
9, 13, 32, 73, 76, (93), 96, 147



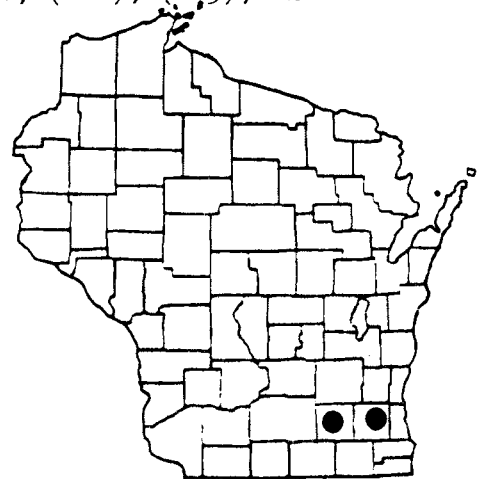
Climacium americanum Brid.
9, 32, 76



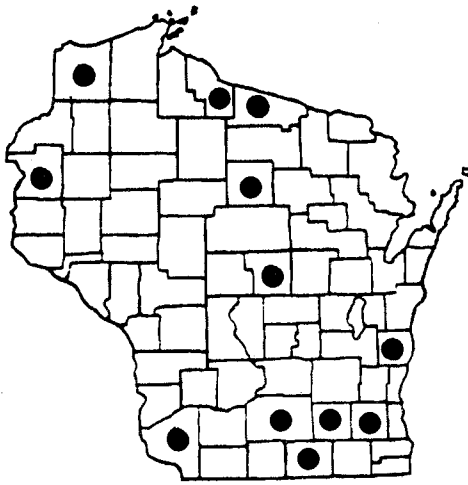
Climacium dendroides (Hedw.) Web.
& Mohr 13, 32, 53, 73, 75, 76,
108, (110), (113), 126



Cratoneuron commutatum (Hedw.) Roth.
77



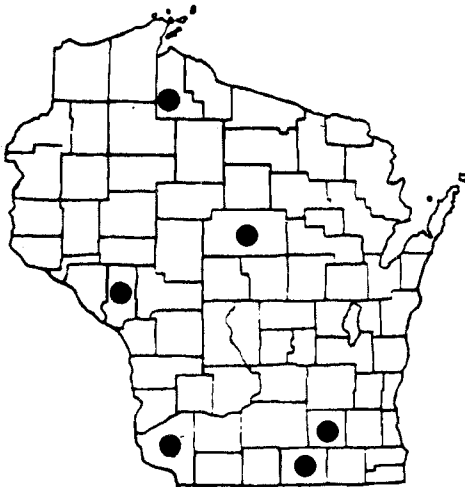
Cratoneuron commutatum var.
falcatum (Brid.) Moenk. 32



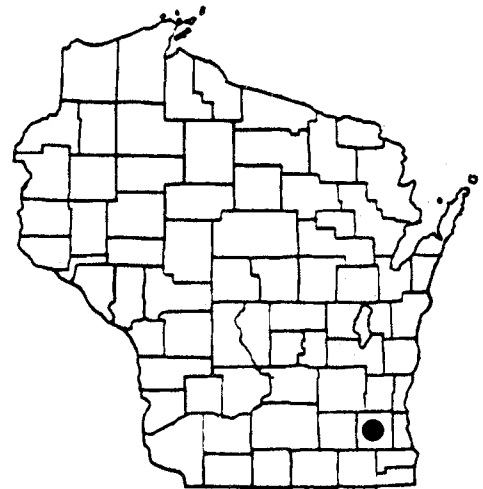
Cratoneuron filicinum (Hedw.) Spruce
24, 32, 76, 108



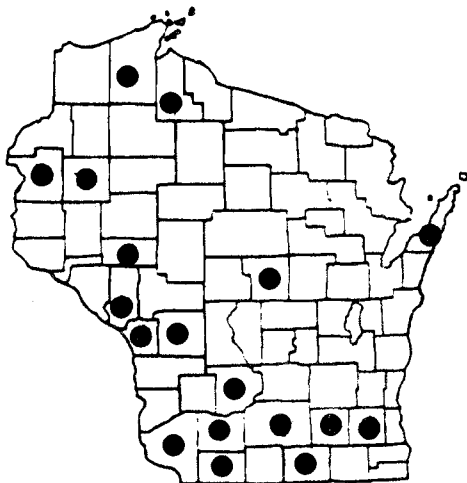
Cynodontium alpestre (Wahlenb.)
Milde 32



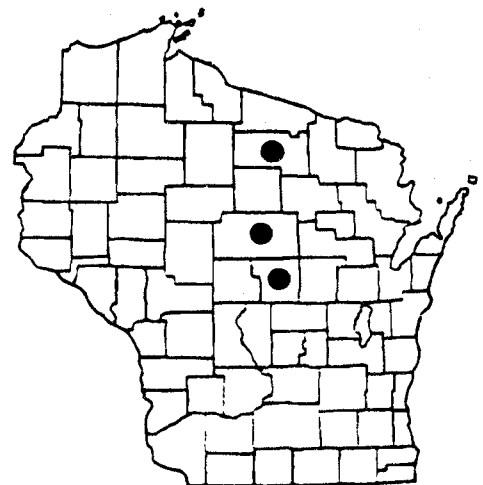
Cynodontium strumiferum (Hedw.) Lindb.
32, 73, 74



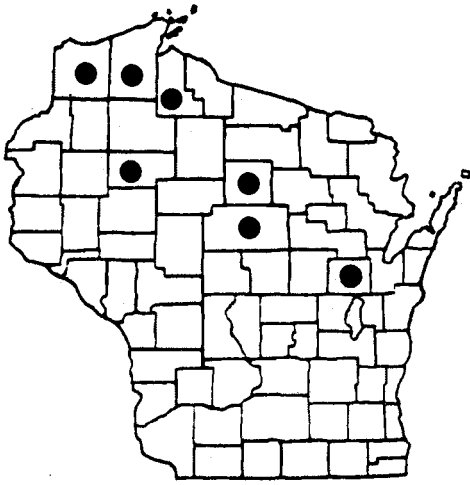
Desmatodon cernuus (Hueb.)
B.S.G. 29, 32, (84)



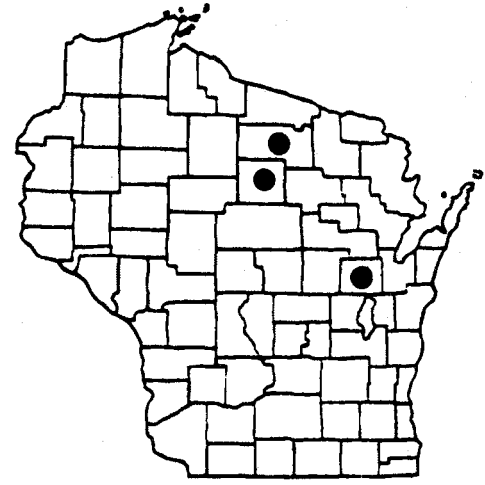
Desmatodon obtusifolius (Schwaegr.)
Schimp. 13, 32, 33, 69, 70, (71), 75,
76, 96, (113), 115



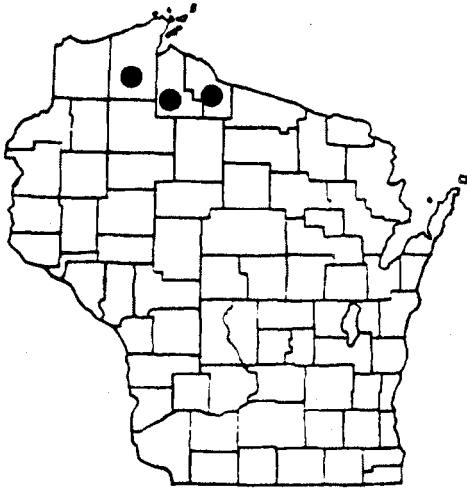
Dichelyma capillaceum (With.) Myr.
32, 76, 152



Dichelyma falcatum (Hedw.) Myr.
32, 73, 152



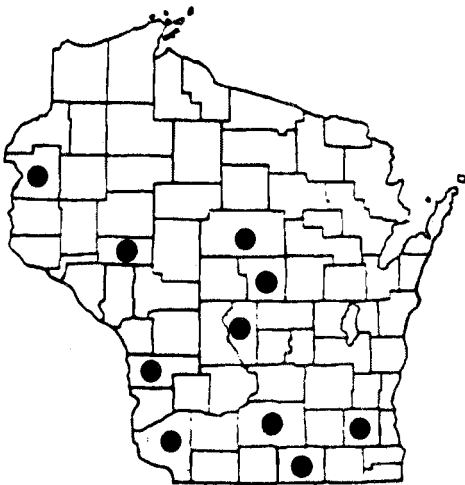
Dichelyma pallescens B.S.G.
32, 152



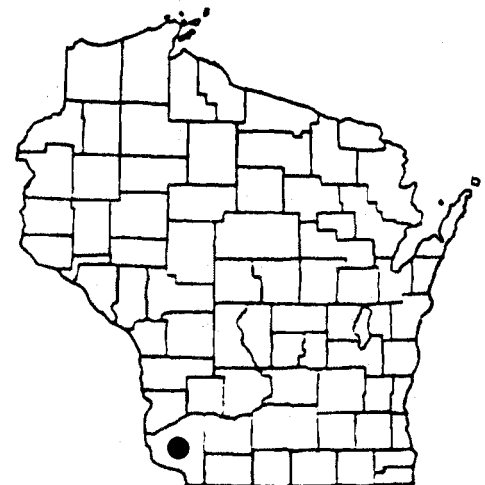
Dichodontium pellucidum (Hedw.) Schimp.
32



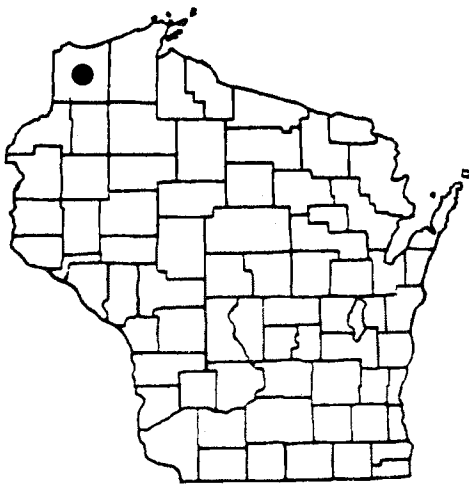
Dicranella cerviculata (Hedw.)
Schimp. 32



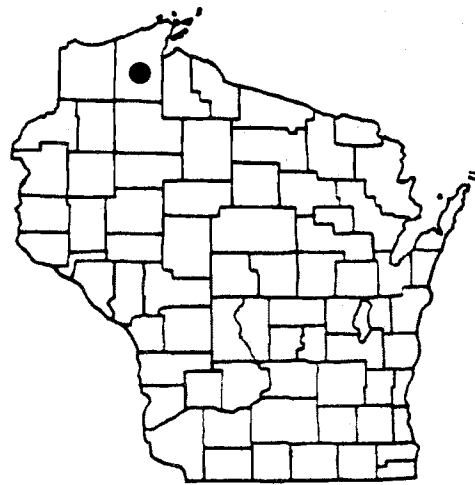
Dicranella heteromalla (Hedw.) Schimp.
32, 73, 75, 76, 148



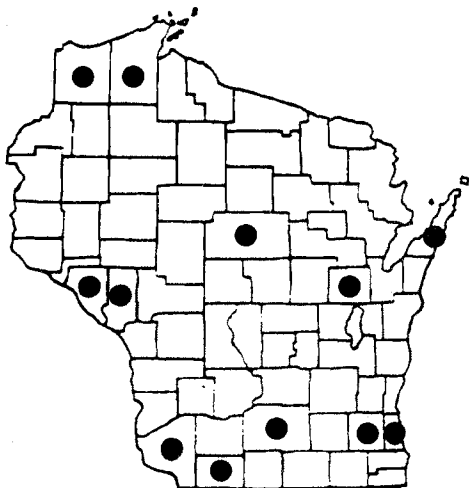
Dicranella rufescens (With.)
Schimp. 32



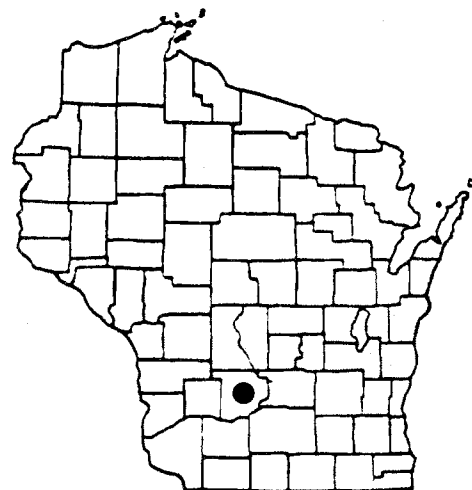
Dicranella schreberiana var. robusta
Schimp. ex Braithw. 108



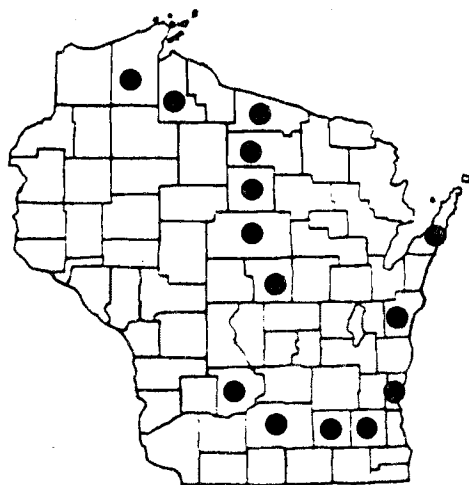
Dicranella subulata (Hedw.) Schimp.
32



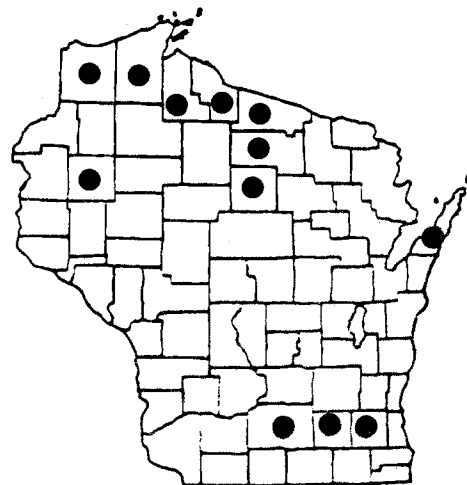
Dicranella varia (Hedw.) Schimp.
13, 32, 73, (84), 100, 108, (113)



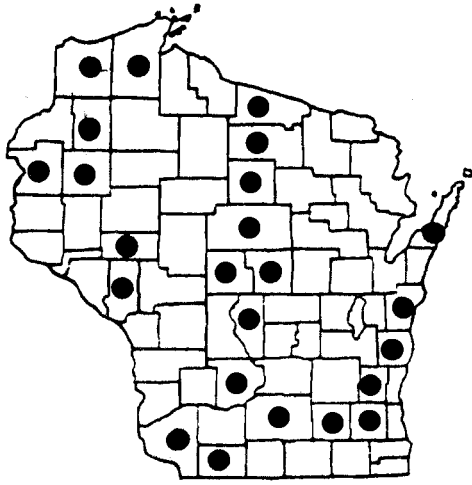
Dicranodontium denudatum (Brid.)
Britt. ex Williams 77, (153)



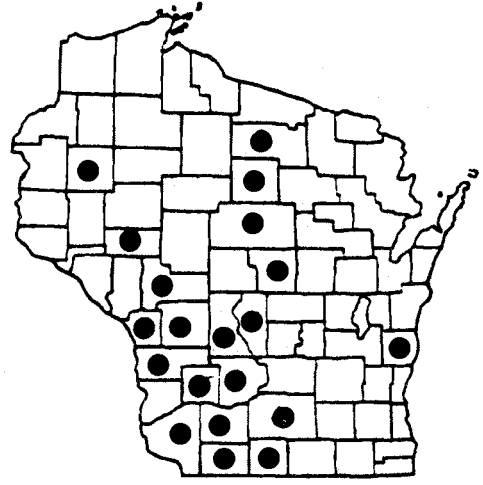
Dicranum bonjeanii De Not ex Lisa
24, 32, 75, 76, 149



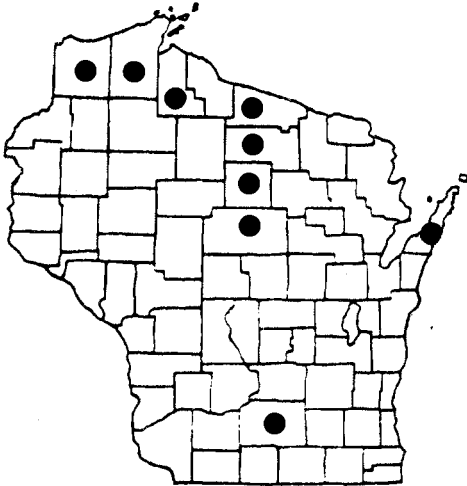
Dicranum drummondii C. Muell.
32, (53), 76, (119)



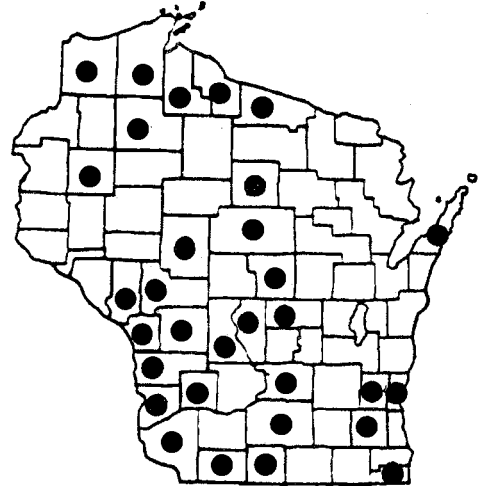
Dicranum flagellare Hedw.
13, 24, 32, (56), 73, 75, 76, 96,
108, (119)



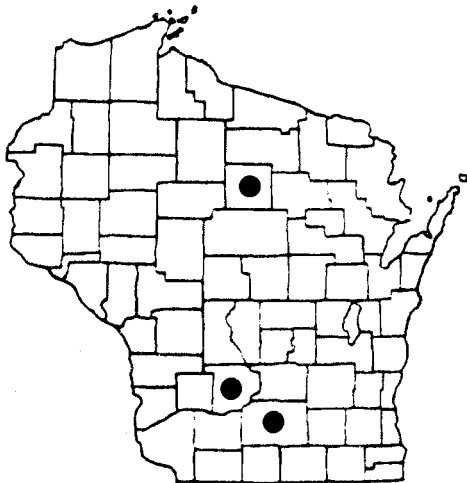
Dicranum fulvum Hook.
9, 32, (65), 70, 73, 75, 76



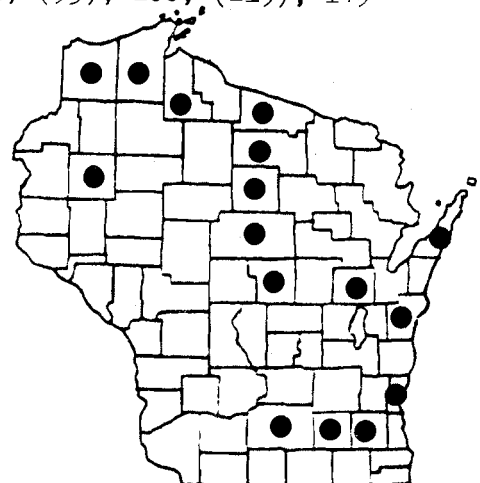
Dicranum fuscescens Turn.
13, 32, 73



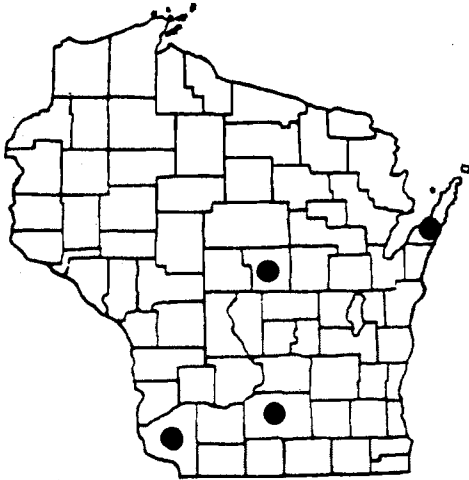
Dicranum montanum Hedw.
13, 32, 34, (54), (59), 70, 73, 76,
92, (93), 108, (119), 149



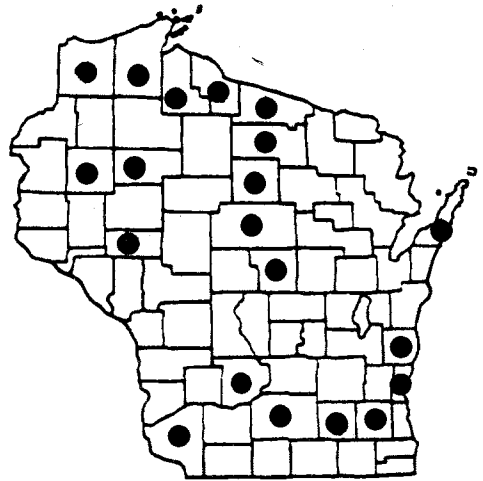
Dicranum muhlenbergii B.S.G.
32, (149)



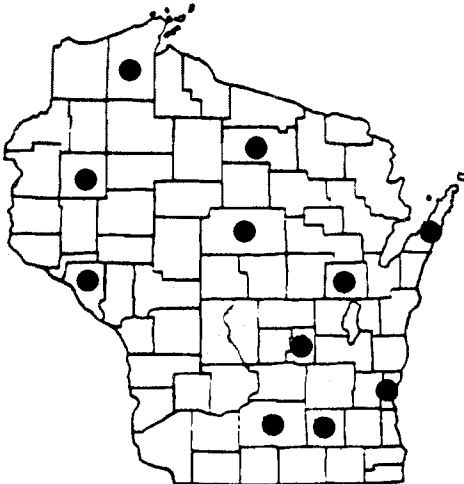
Dicranum polysetum Sw.
13, 32, 73, 76, 108, (119)



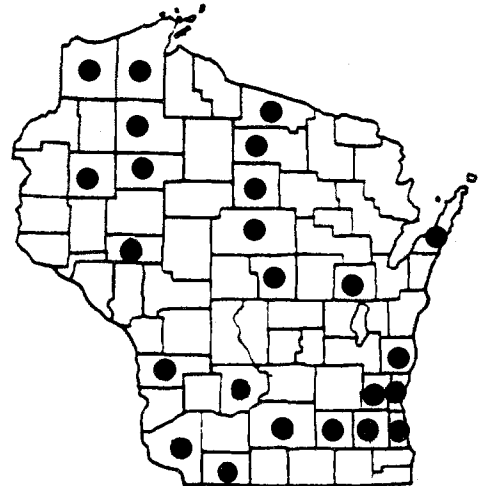
Dicranum sabuletorum Ren. & Card.
13, 30, 32, 76, (84)



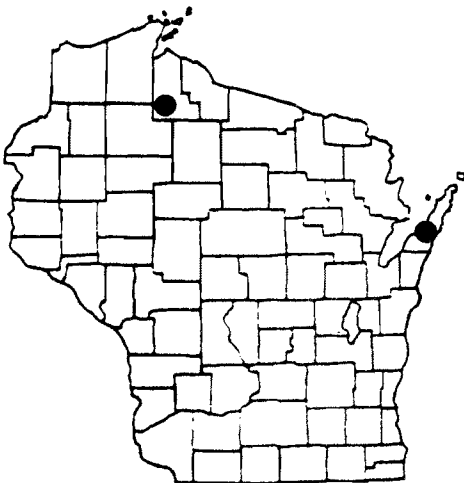
Dicranum scoparium Hedw.
9, 13, (20), (21), 24, 32, 73,
75, 76, 108, (110)



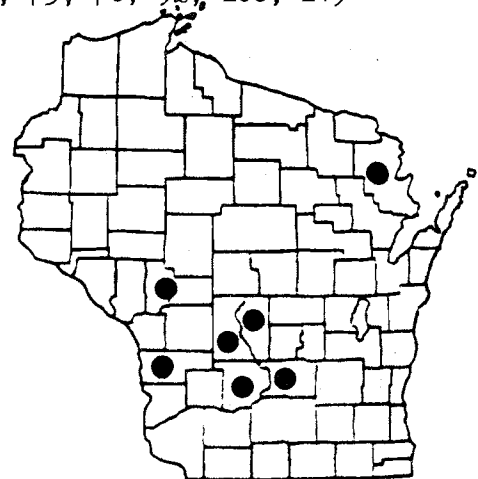
Dicranum undulatum Brid.
13, 32, 73, (119), (149)



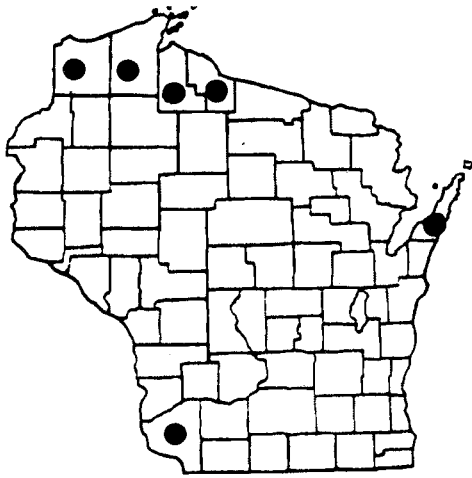
Dicranum viride (Sull. & Lesq. ex
Sull.) Lindb. 13, 24, 32, 34,
73, 75, 76, 92, 108, 149



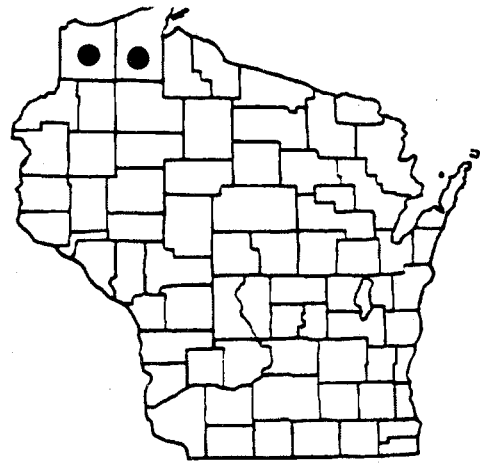
Didymodon rigidulus Hedw.
13, 77



Diphyscium foliosum (Hedw.) Mohr
9, (14), 32, 73, 140



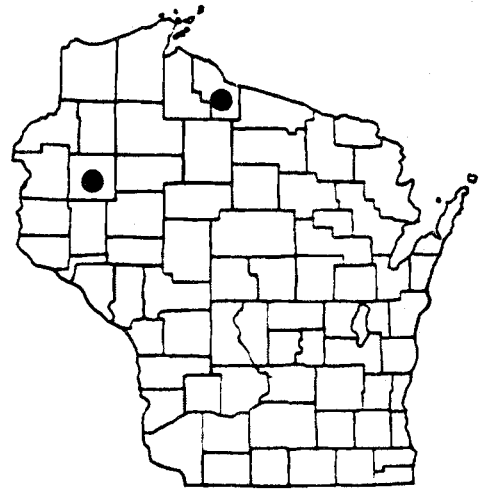
Distichium capillaceum (Hedw.) B.S.G.
13, 32, 73, 108



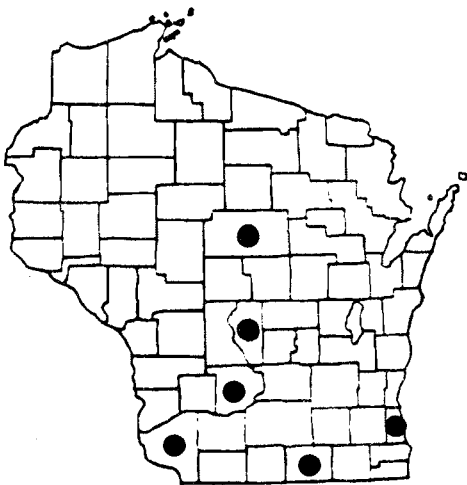
Distichium inclinatum (Hedw.)
B.S.G. 32, 108



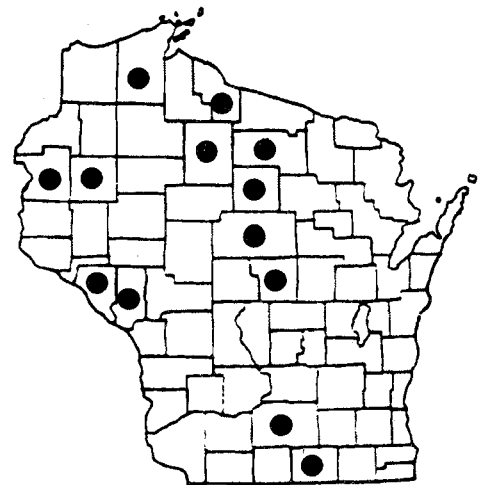
Ditrichum heteromallum (Hedw.)
Britt. 32



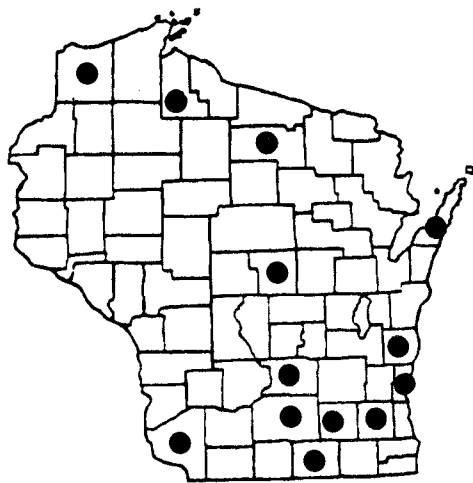
Ditrichum lineare (Sw.) Lindb.
32



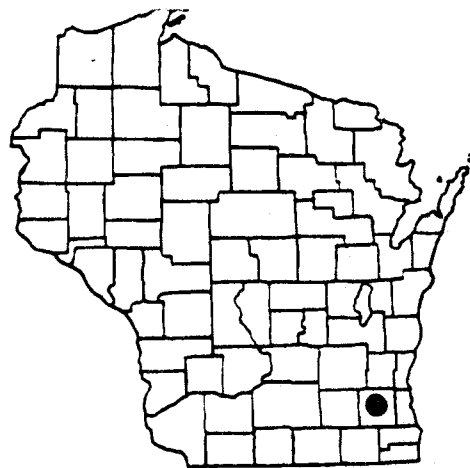
Ditrichum pallidum (Hedw.) Hampe
9, 32, 73, (149)



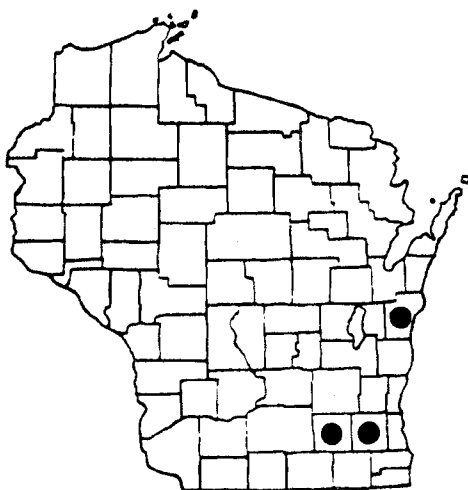
Ditrichum pusillum (Hedw.)
Hampe 32, 73, 76, 96



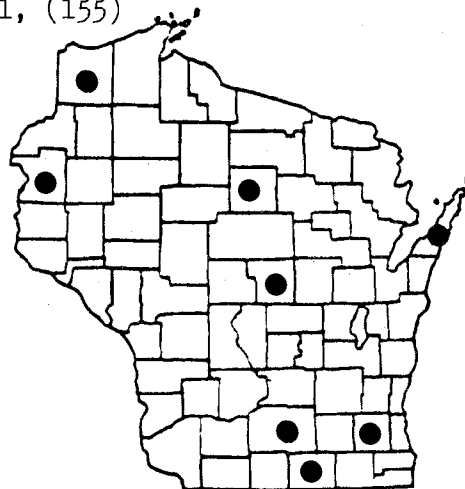
Drepanocladus aduncus (Hedw.) Warnst.
13, 32, (35), 49, 76, 126



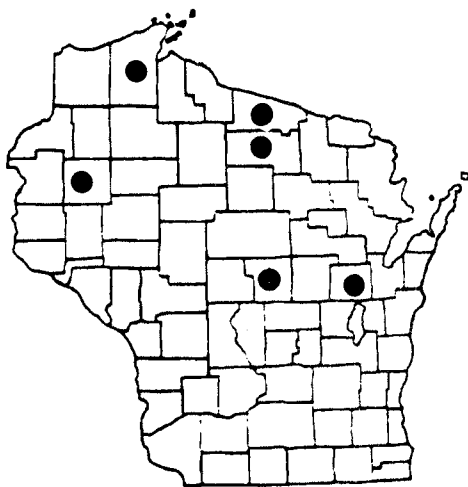
Drepanocladus aduncus var.
capillifolius (Warnst.) Riehm.
31, (155)



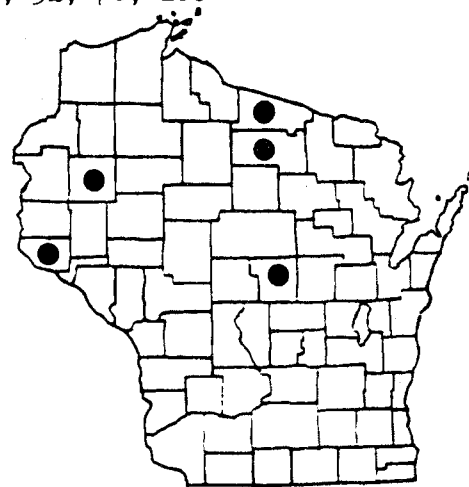
Drepanocladus aduncus var. kneiffii
(B.S.G.) Moenk.
32, (155)



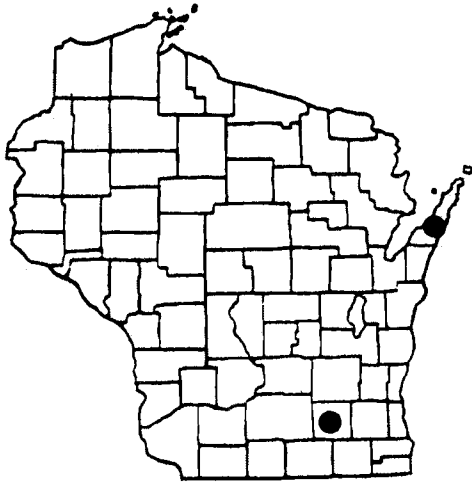
Drepanocladus aduncus var.
polycarpus (Bland. ex Voit) Roth
13, 32, 76, 108



Drepanocladus exannulatus (B.S.G.)
Warnst. 32, 76, (155)

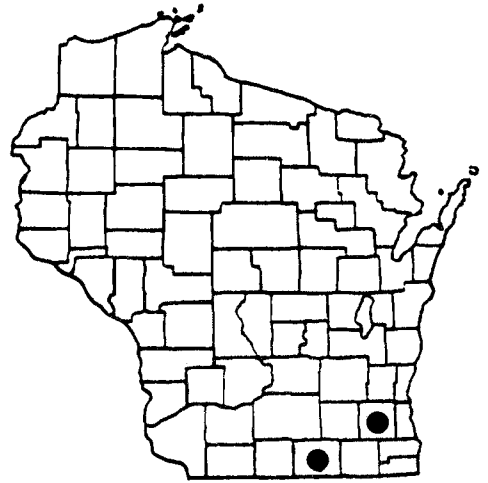


Drepanocladus fluitans (Hedw.)
Warnst. 32, 68, 76, 105, 147,
154, (155)



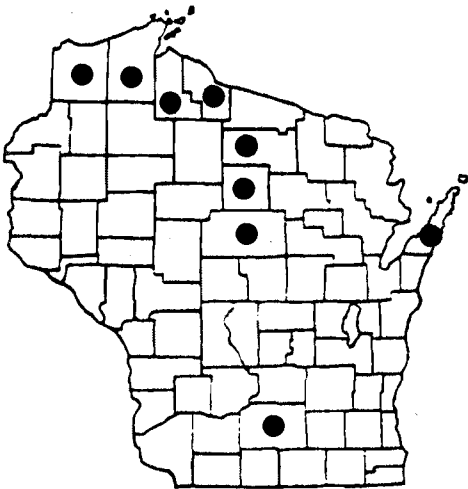
Drepanocladus revolvens (Sw.)

Warnst. 13, 32



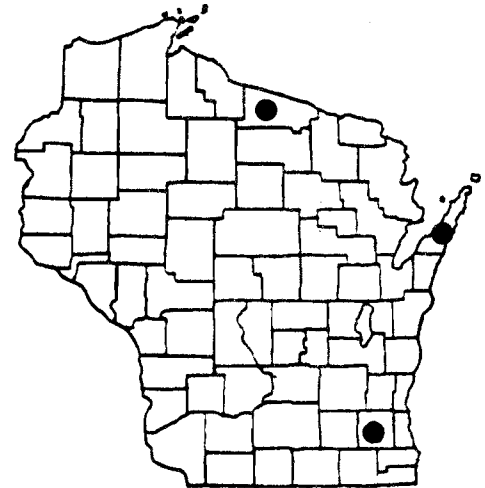
Drepanocladus sendtneri (Schimp.)

Warnst. 32



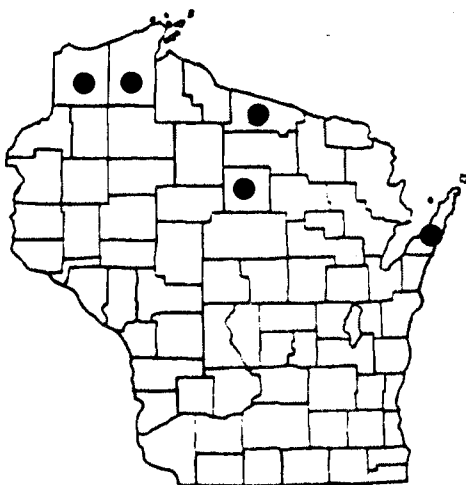
Drepanocladus uncinatus (Hedw.)

Warnst. 13, 32, 73, 108



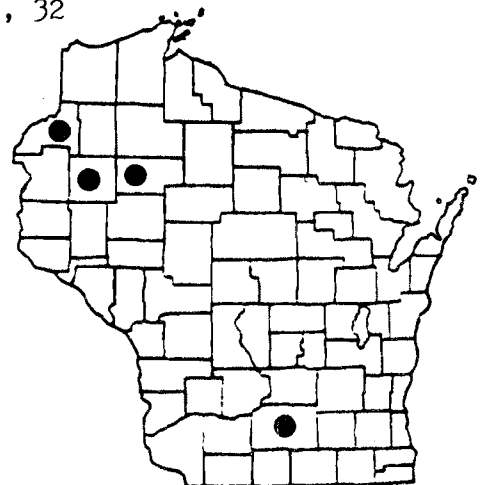
Drepanocladus uncinatus var.
plumulosus (B.S.G.) Warnst.

13, 32



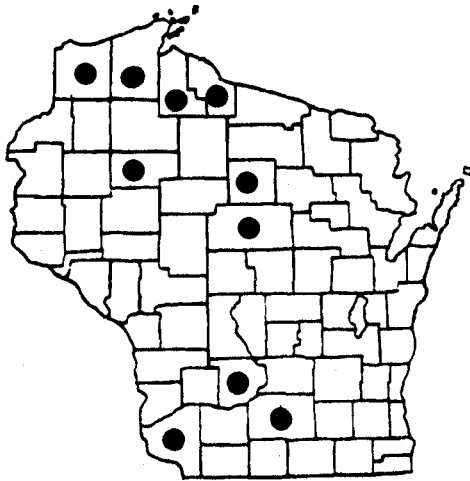
Drepanocladus vernicosus (Lindb.)

Warnst. 13, 32

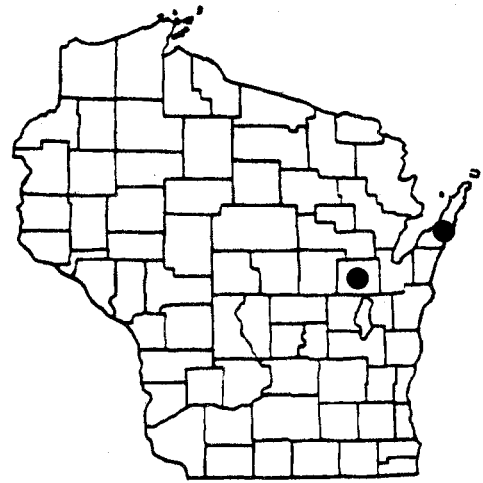


Drummondia prorepens (Hedw.)

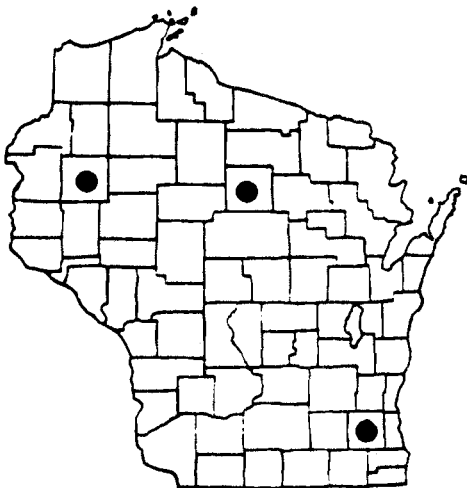
Britt. 32



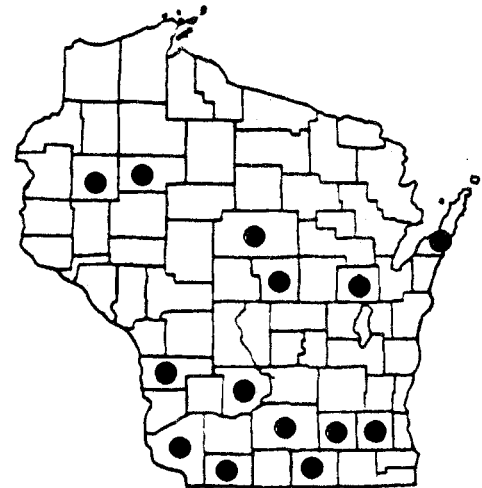
Encalyptra ciliata Hedw.
32, 108, (113)



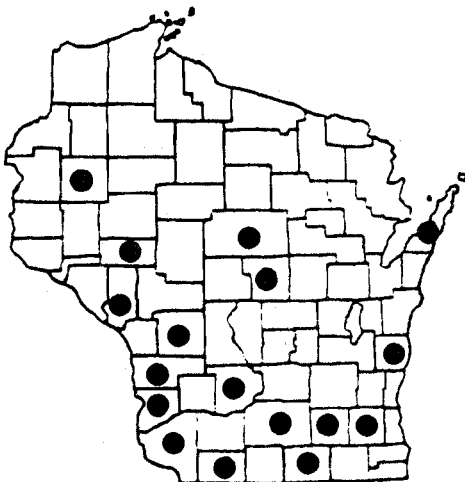
Encalyptra procera Bruch.
13, 32



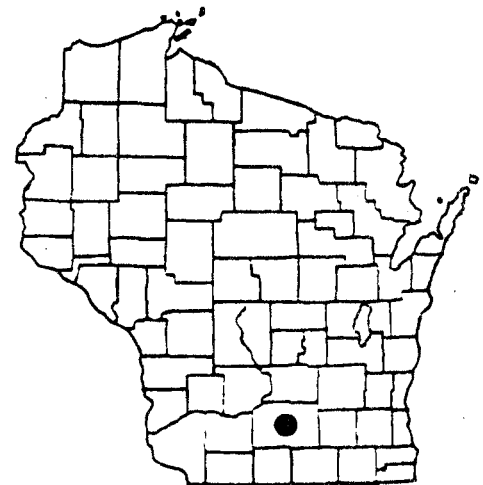
Entodon brevisetus (Hook. & Wils.
ex Wils.) Lindb. 32



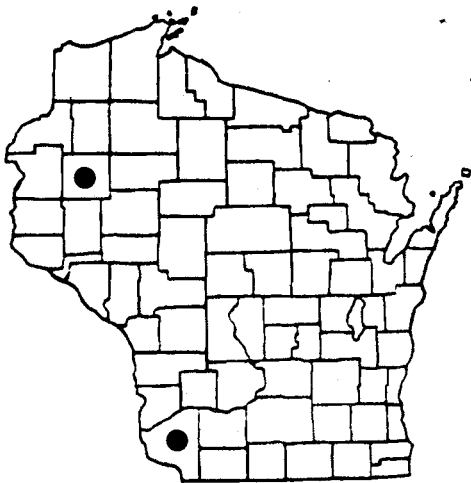
Entodon cladorrhizans (Hedw.)
C. Muell. 13, 32, 73, 76, 148



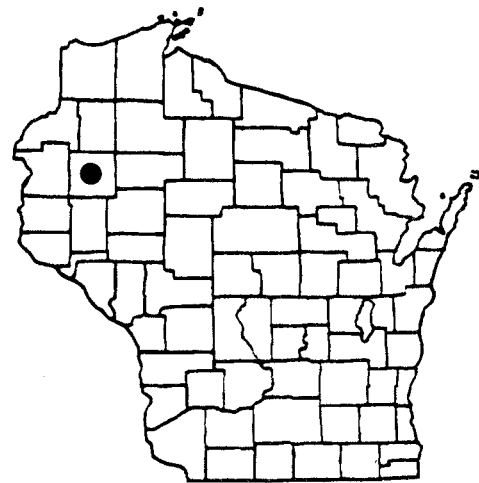
Entodon seductrix (Hedw.) C. Muell.
9, 13, 32, 34, 69, 70, (71), 73,
75, 76, 84, 96



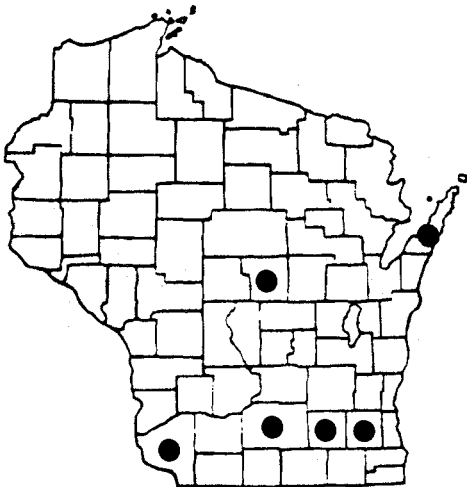
Ephemerum cohaerens (Hedw.)
Hampe 32



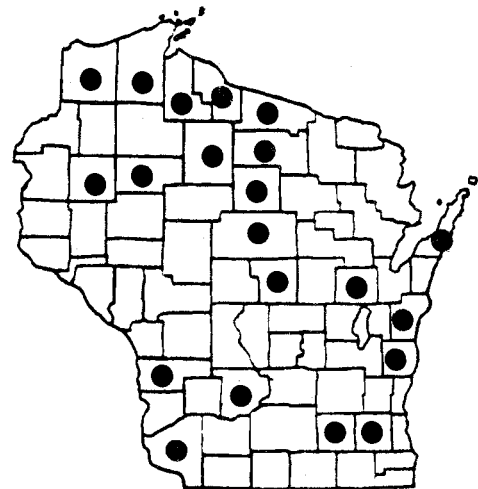
Ephemera crassinervium (Schwaegr.)
Hampe 29, 32, (84)



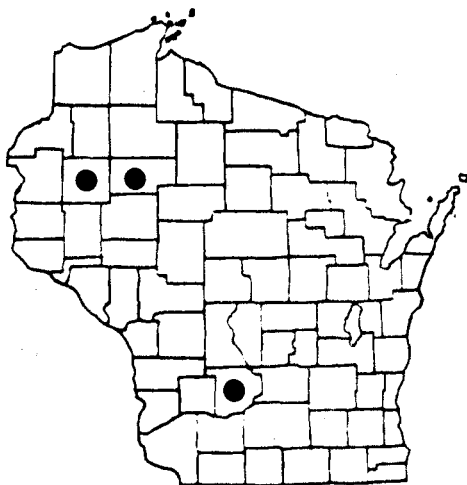
Ephemera spinulosum Bruch. &
Schimp. ex Schimp. 32



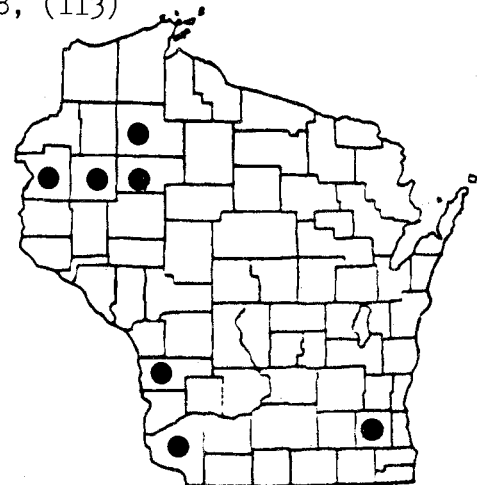
Eurhynchium hians (Hedw.) Sande Lac.
13, 32, 76



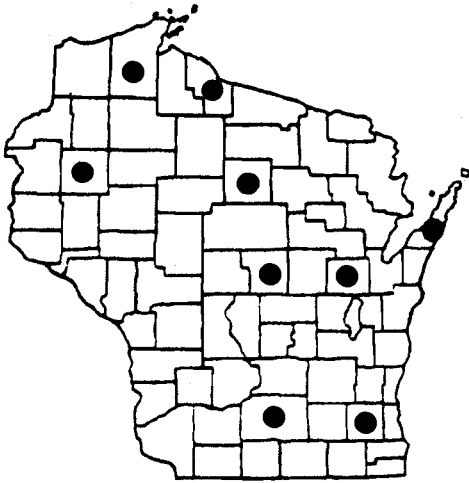
Eurhynchium pulchellum (Hedw.)
Jenn. 13, 32, 34, (57), 73, 76,
108, (113)



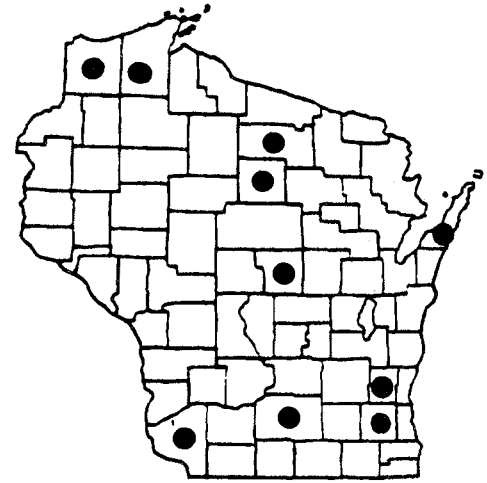
Eurhynchium riparioides (Hedw.)
Rich. 32, (113)



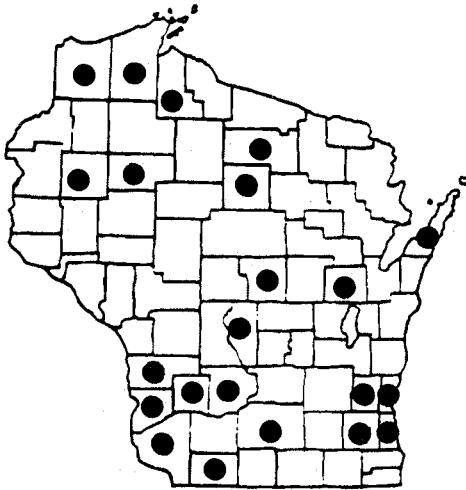
Fabronia ciliaris (Brid.) Brid.
32, 34, 92



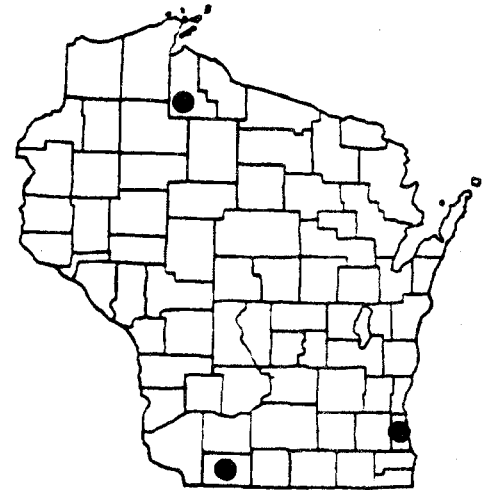
Fissidens adiantoides Hedw.
13, 32, 76



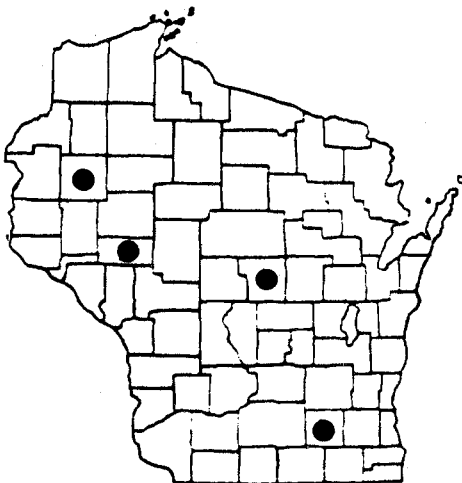
Fissidens bryoides Hedw.
13, 32, 76



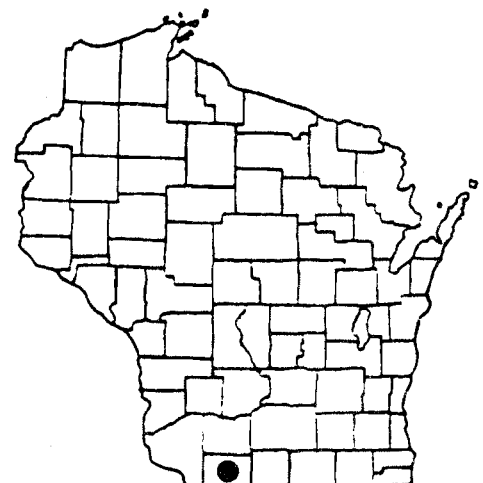
Fissidens cristatus Wils. ex Mitt.
13, 32, 34, 70, (71), 76, 108



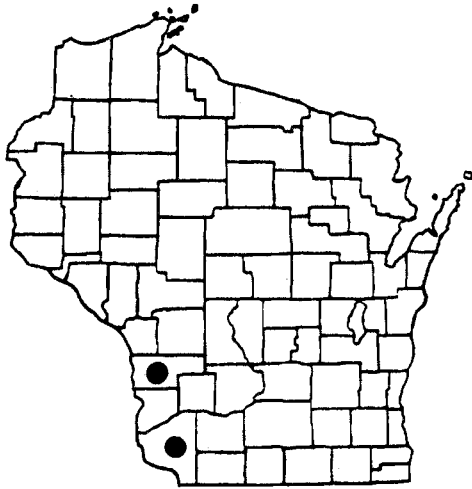
Fissidens exiguus Sull.
32



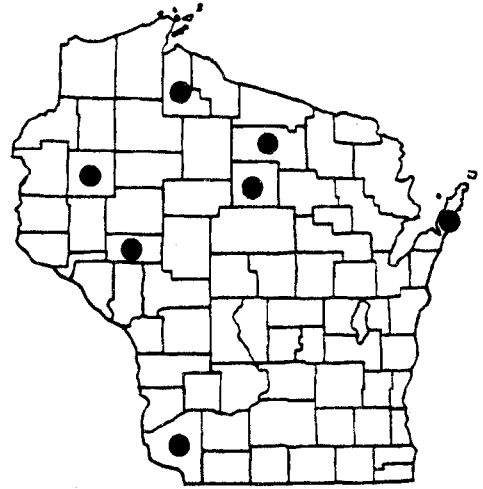
Fissidens fontanus (B.-Pyl.) Steud.
32, 75, 76



Fissidens garberi Lesq. & James
84, (86)



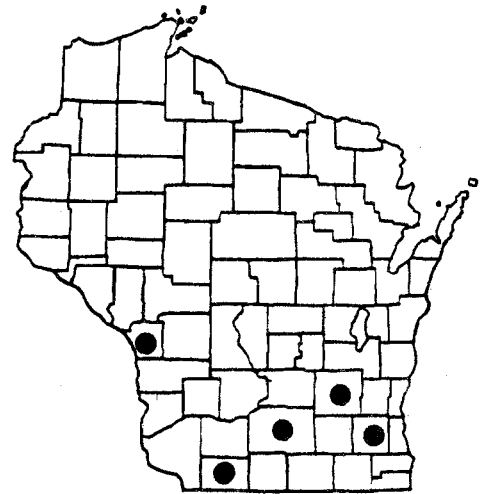
Fissidens obtusifolius Wils.
8, 30, 32



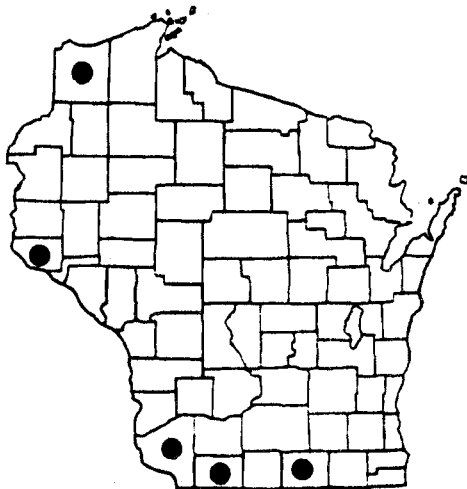
Fissidens osmundoides Hedw. 13, 32, 73



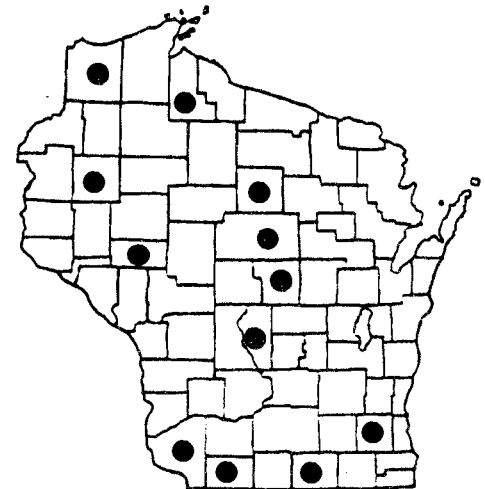
Fissidens ravenellii Sull.
30, 32, (85)



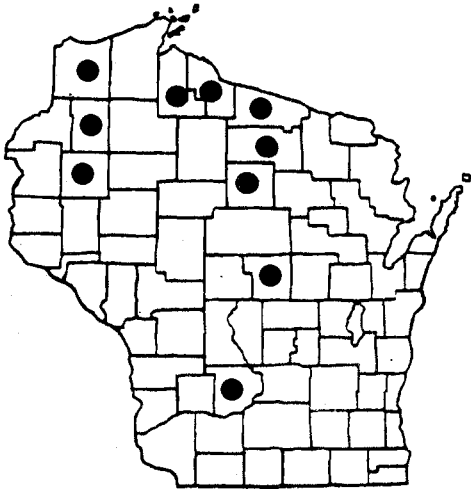
Fissidens subbasilaris Hedw.
32, 93



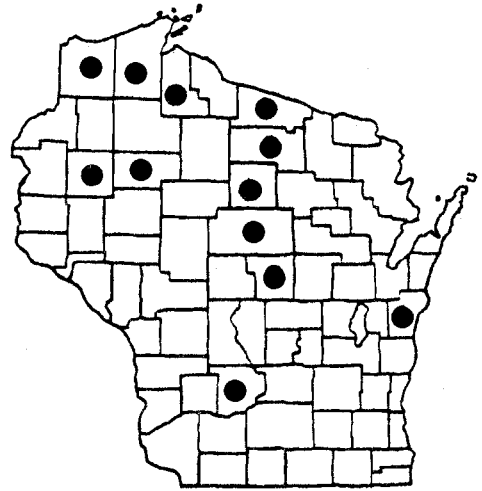
Fissidens taxifolius Hedw.
32, 108, 147



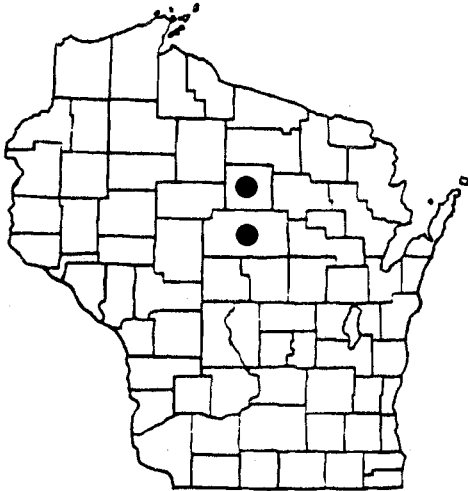
Fissidens viridulus (Sw.) Wahlenb.
32, 73, 75, 76, 96, 108



Fontinalis antipyretica Hedw.
32, 76, 105, 152, 154



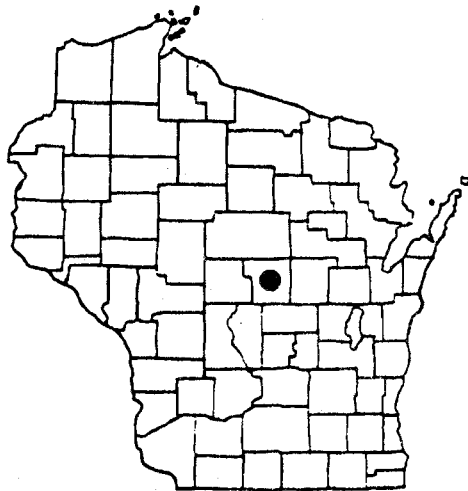
Fontinalis antipyretica forma robusta
(Card.) Card. 32, 73, 152



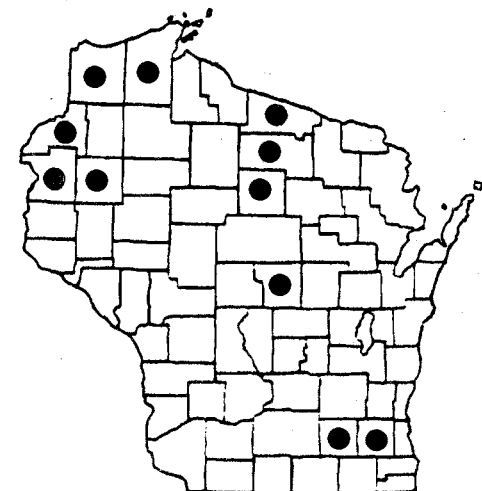
Fontinalis dalecarlica Schimp.
32, (35), (84), 152



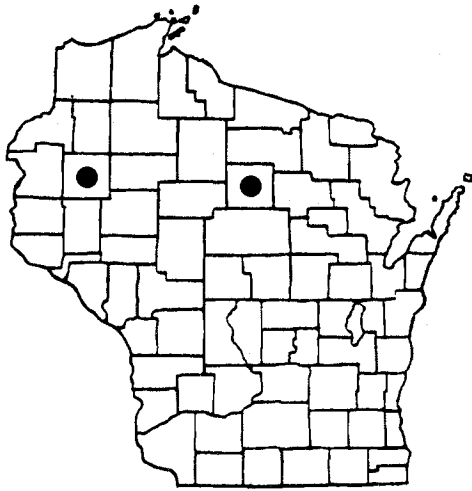
Fontinalis flaccida Ren. & Card. 32, 68



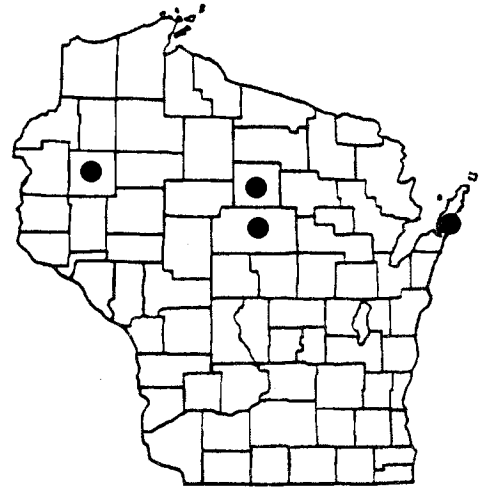
Fontinalis hypnoides C.J. Hartm. var.
hypnoides 77, (152)



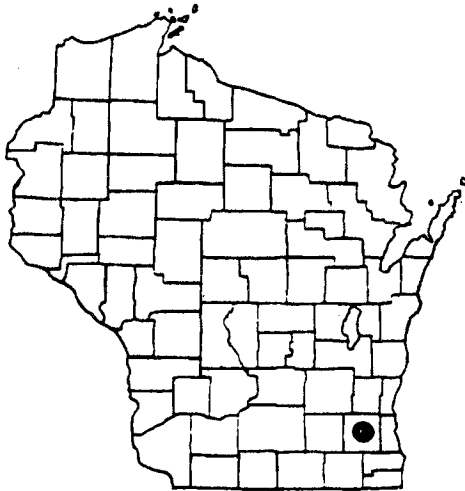
Fontinalis hypnoides var. duriaei (Schimp.)
Husn. 32, 108, 152



Fontinalis missourica Card. 32



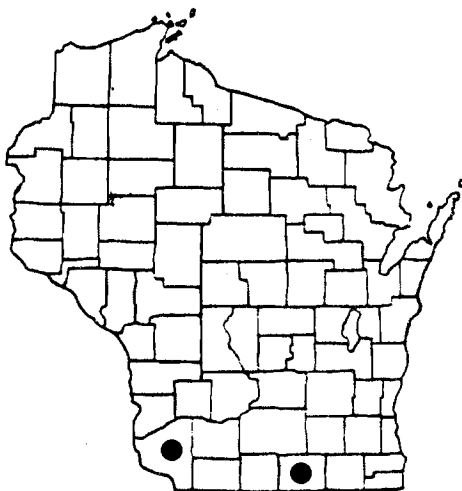
Fontinalis novae-angliae Sull.
13, 32, 152



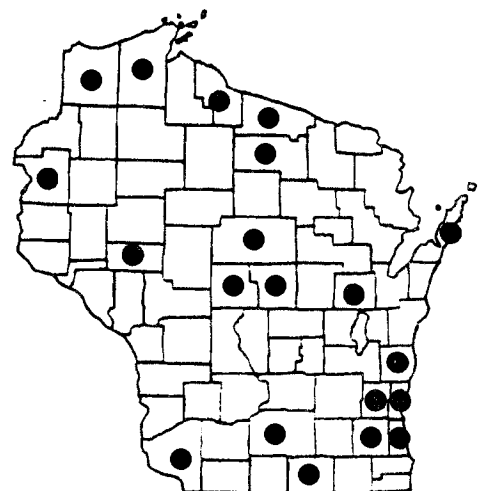
Fontinalis sphagnifolia (C. Muell.)
Wijk & Marg.(84), 151, 152



Forsstroemia ohioense (Sull.) Lindb.
32



Funaria americana Lindb.
30, 32



Funaria hygrometrica Hedw. 13,
32, 73, 76, 78, 108, (111), 146



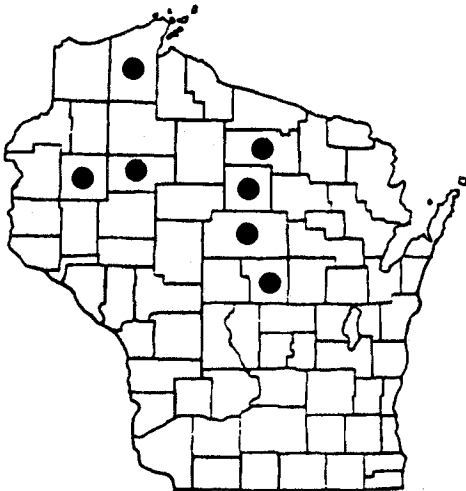
Grimmia alpicola Hedw.

13, 77



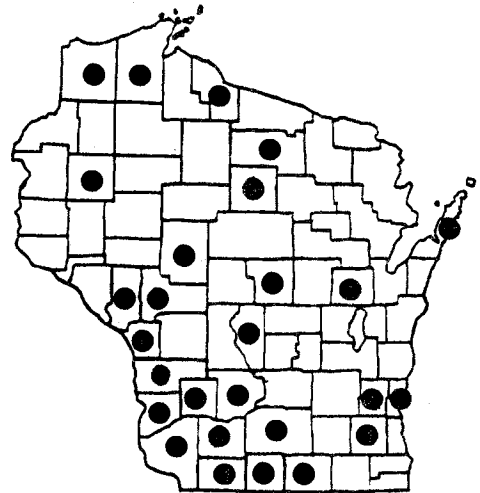
Grimmia alpicola var. dupretii (Ther.)

Crum 77

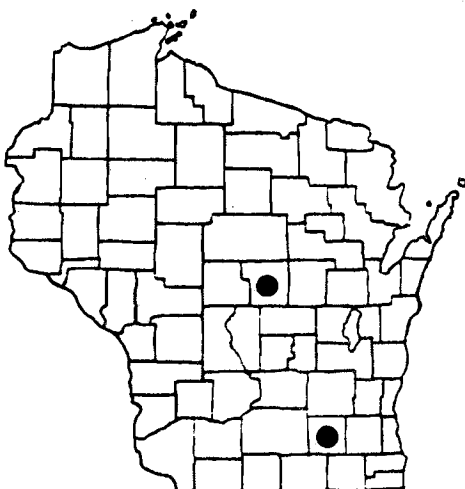


Grimmia alpicola var. rivularis (Brid.)

Wahlenb. 32, (113)

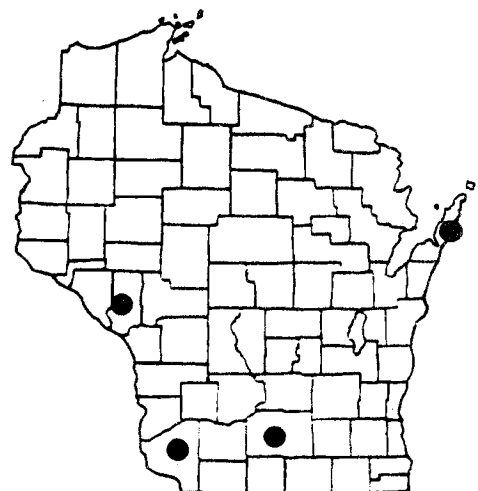


Grimmia apocarpa Hedw. 9, 13, 32,
69, 70, (71), 76, 108, 116, 148

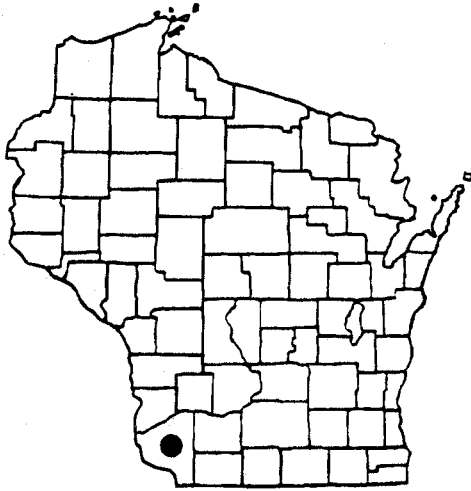


Grimmia apocarpa var. ambigua (Sull.) Jones

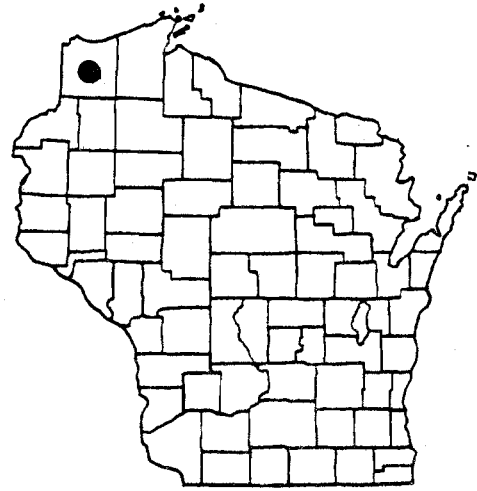
32, 76



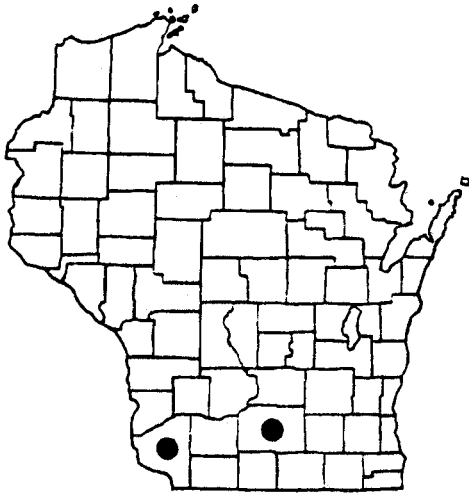
Grimmia apocarpa var. conferta
(Funck) Spreng. 13, 32



Grimmia apocarpa var. stricta (Turn.)
Hook. & Rayl. 32



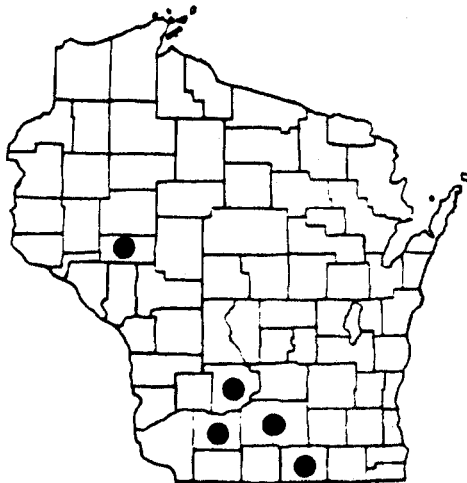
Grimmia calyptrata Hook. 32



Grimmia donniana Sm.
24, 32



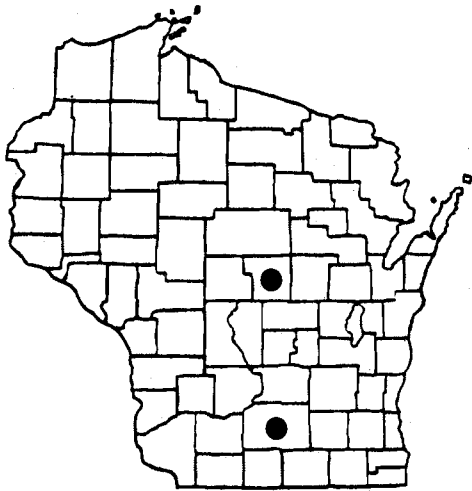
Grimmia hermannii Crum 76



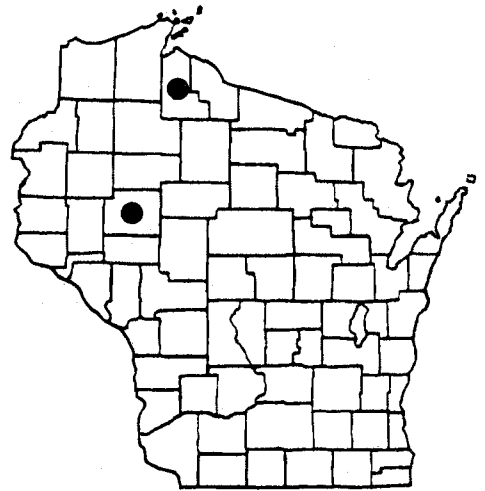
Grimmia laevigata (Brid.) Brid.
9, 32, 69, (70), 73, (84)



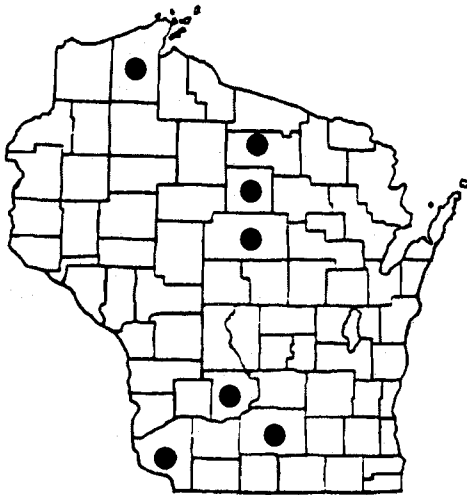
Grimmia montana B.S.G. 116



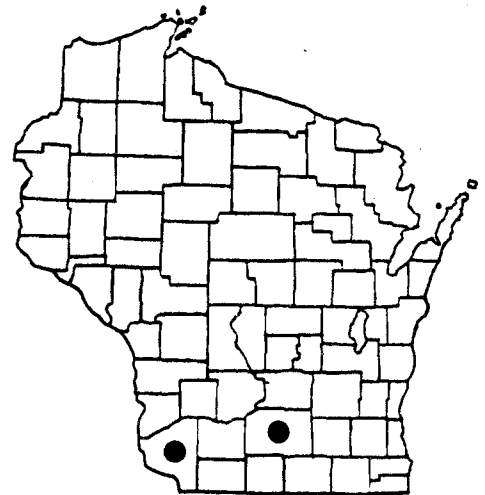
Grimmia olneyi Sull.
32, (71), 76



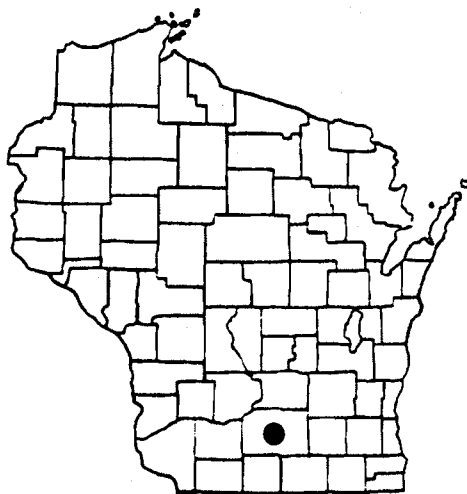
Grimmia ovalis (Hedw.) Lindb.
32, (84), 115, (134)



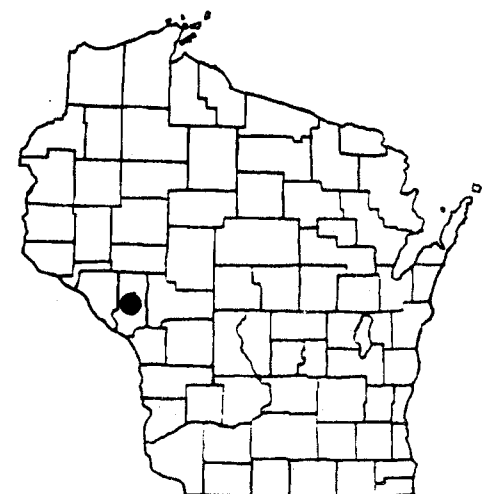
Grimmia pilifera P.-Beauv.
9, 32, 69, (71)



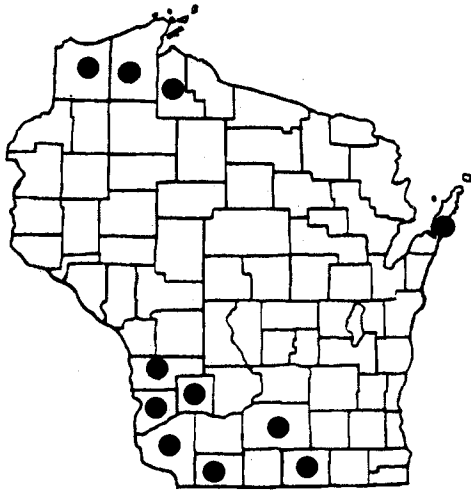
Grimmia plagiopodia Hedw.
24, 32



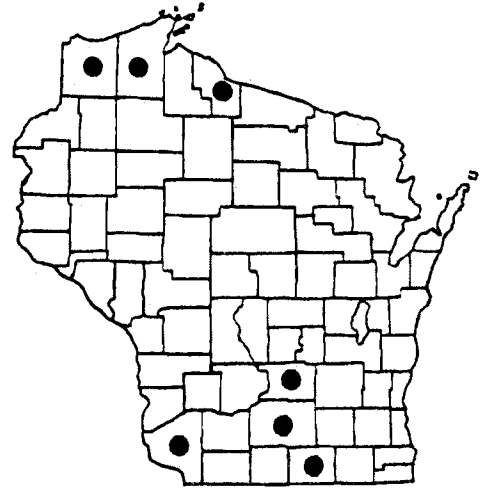
Grimmia pulvinata (Hedw.) Sm.
32



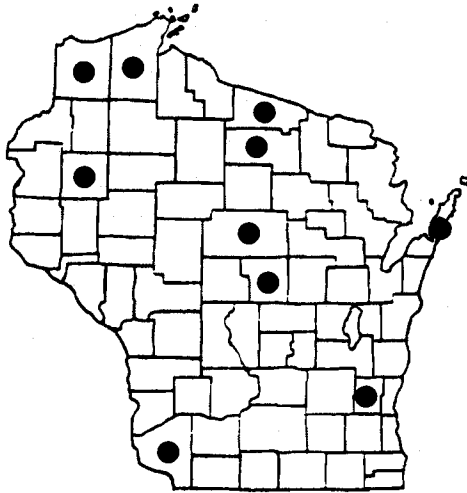
Grimmia teretinervis Limpr.
32, 109



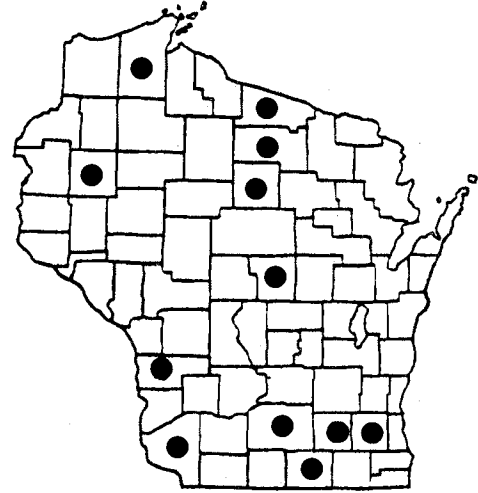
Gymnostomum aeruginosum Nees, Hornsch.
& Sturm 13, 24, 32, 70, 71



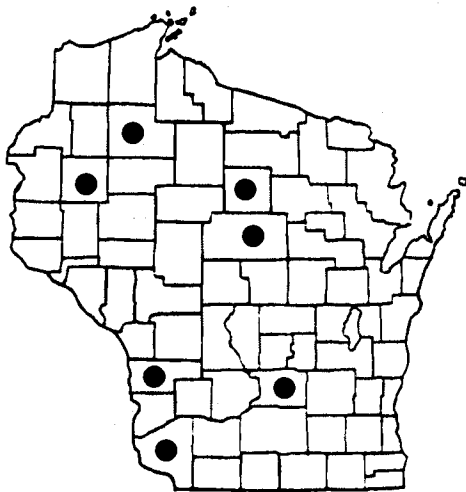
Gymnostomum recurvirostrum Hedw.
18, 32, (71), (84), 108



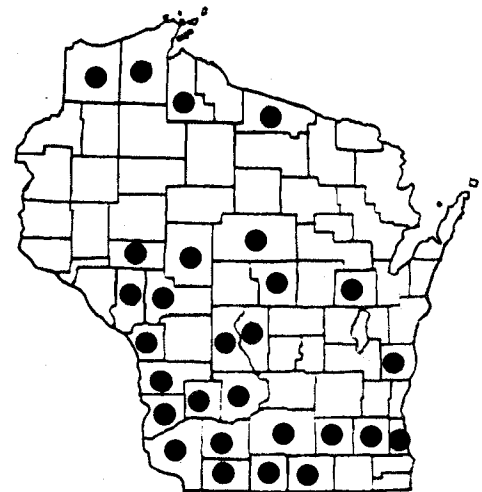
Haplocladium microphyllum (Hedw.) Broth.
6, 13, 24, 32, 75, 76, 108



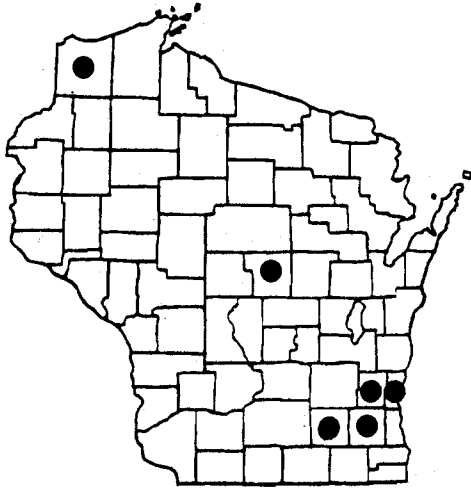
Haplocladium virginianum (Brid.)
Broth. 32, 34, (65), 76



Haplohymenium triste (Ces. ex De Not) Kindb.
32, 34, 73, 92



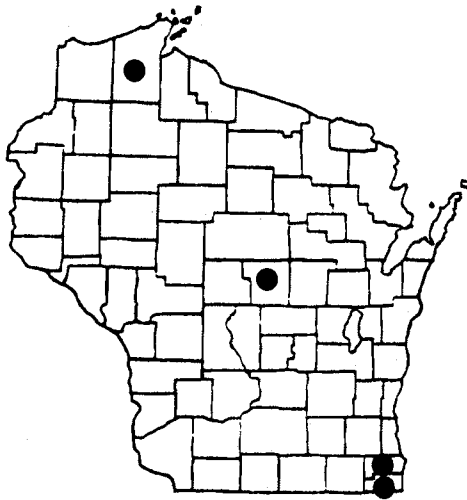
Hedwigia ciliata (Hedw.) P.-Beauv.
9, 32, 69, 70, (71), 73, 75, 76,
96, 108



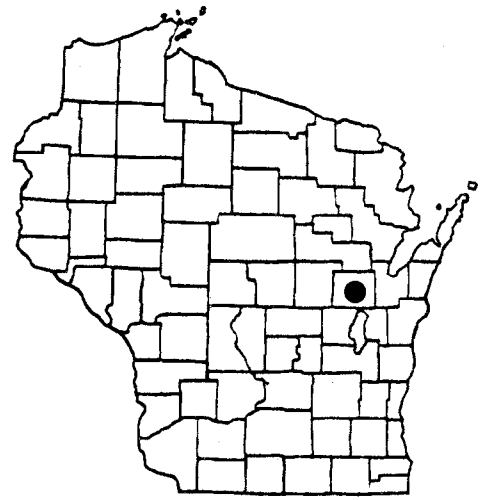
Helodium blandowii (Web. & Mohr)
Warnst. 32, 76, 108, (115)



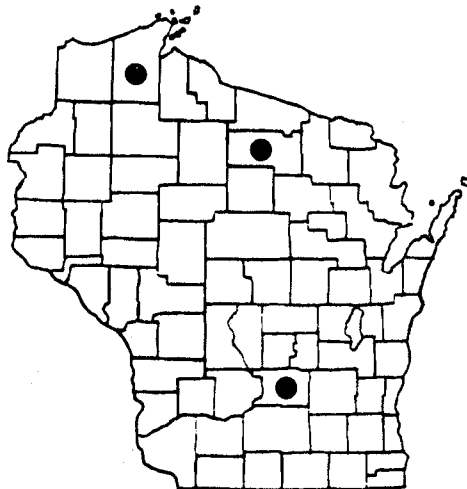
Helodium blandowii var. helodioides
(Ren. & Card. ex. Roell) Crum, Steere,
& Anderson 76



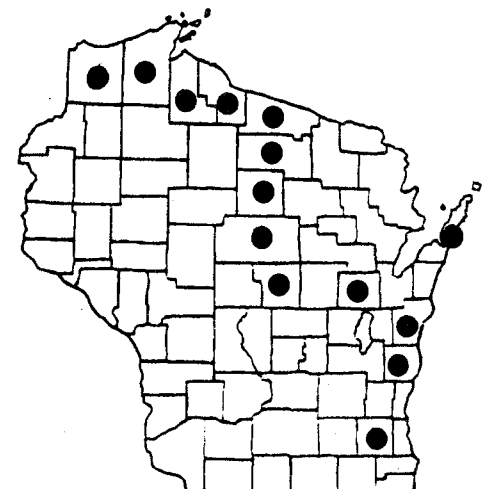
Helodium paludosum (Sull.) Aust.
74, 76, 126



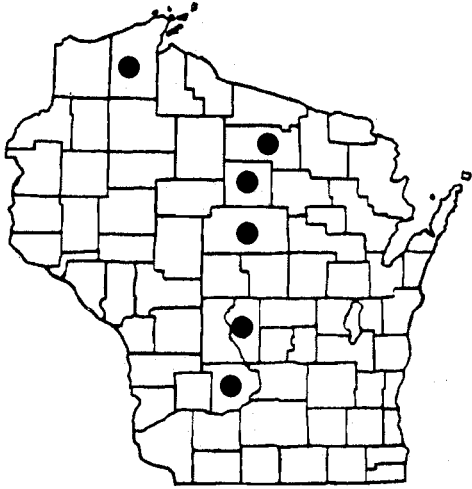
Herzogiella seligeri (Brid.) Iwats.
32



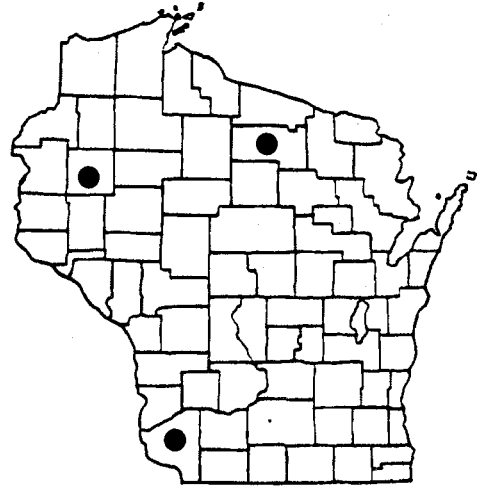
Herzogiella striatella (Brid.) Iwats.
32, 101, (113)



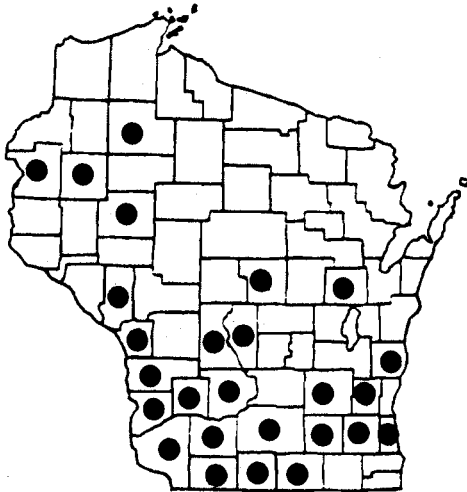
Herzogiella turfacea (Lindb.) Iwats.
13, 32, 76, (119)



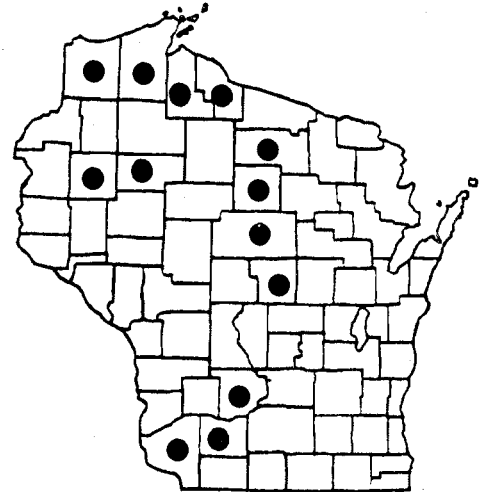
Homalia trichomanoides (Hedw.) B.S.G.
32, (53), (113)



Homalotheciella subcapillata (Hedw.)
Broth. 32



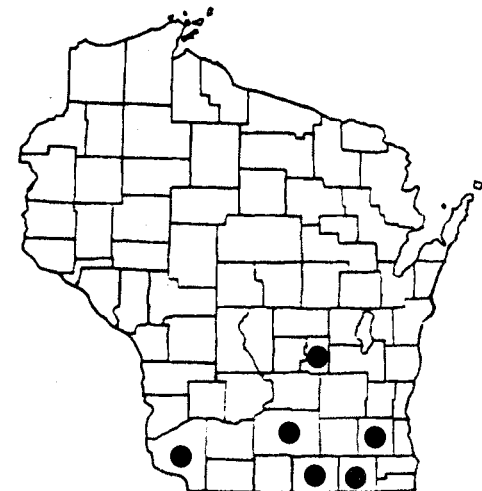
Homomallium adnatum (Hedw.) Broth. 6,
32, 69, 70, (71), 76, 92



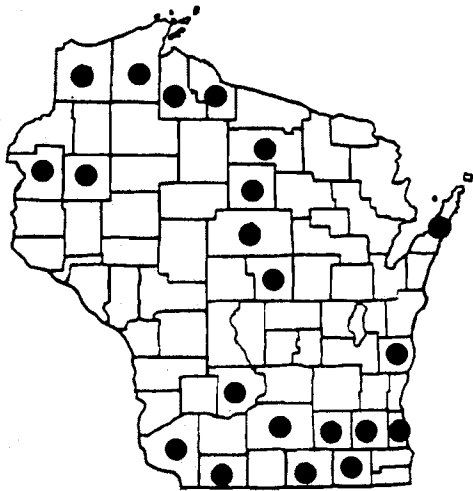
Hygroamblystegium fluviatile (Hedw.)
Loeske 32, (65), 76



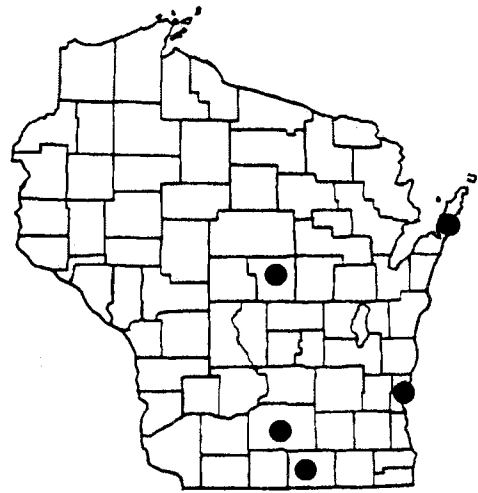
Hygroamblystegium fluviatile var. ovatum
Grout 32



Hygroamblystegium noterophilum
(Sull. & Lesq. ex Sull.) Warnst.
32, 142



Hygroamblystegium tenax (Hedw.) Jenn.
13, 32, 73, 76, 108



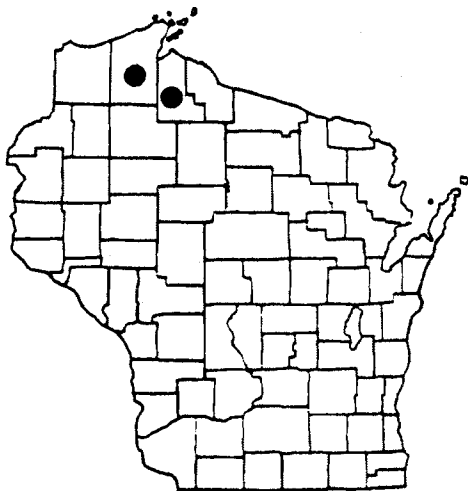
Hygroamblystegium tenax var.
spinifolium (Schimp.) Jenn.
13, 24, 32, 76



Hygrohypnum eugyrium (B.S.G.) Loeske
32



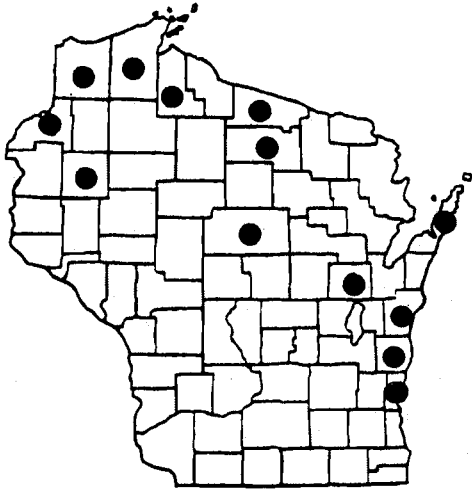
Hygrohypnum luridum (Hedw.) Jenn.
32



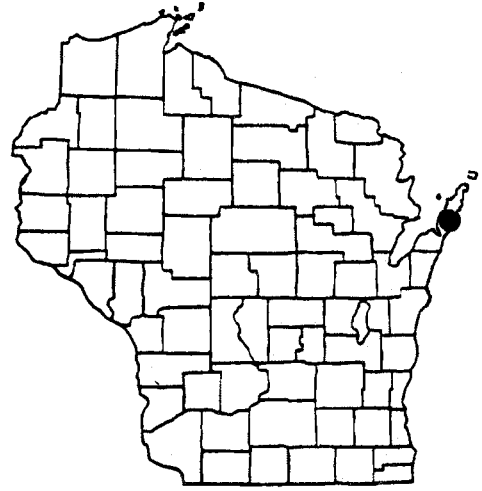
Hygrohypnum ochraceum (Turn. ex Wils.)
Loeske 32



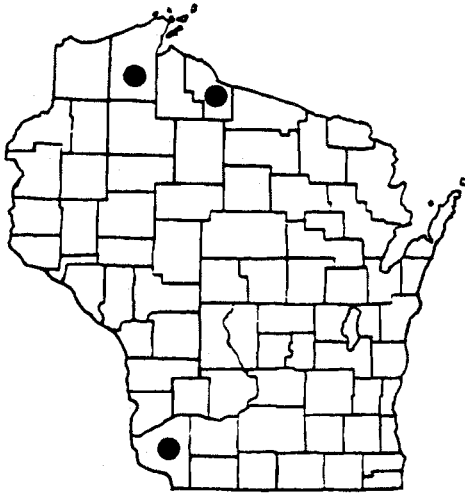
Hylocomium pyrenaicum (Spruce) Lindb.
74



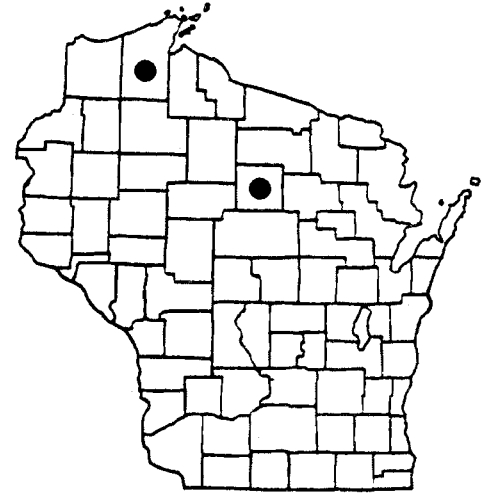
Hylocomium splendens (Hedw.) B.S.G.
13, 32, 73, 108



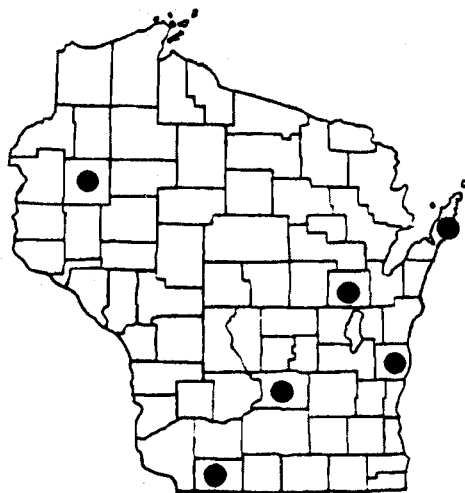
Hyophila involuta (Hook.) Jaeg & Sauerb.
13, 77



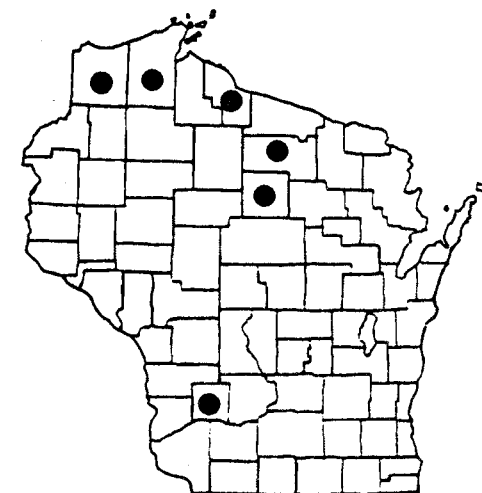
Hypnum cupressiforme Hedw. 32



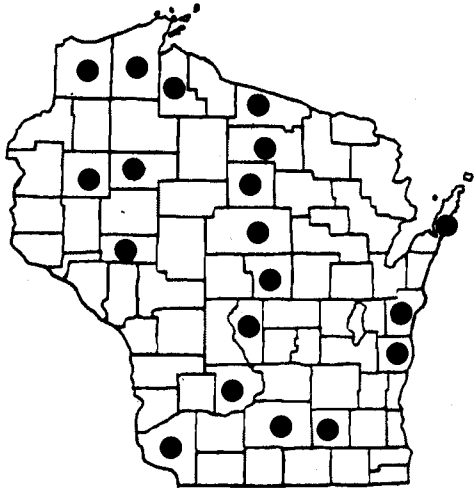
Hypnum cupressiforme var filiforme
Brid. 32



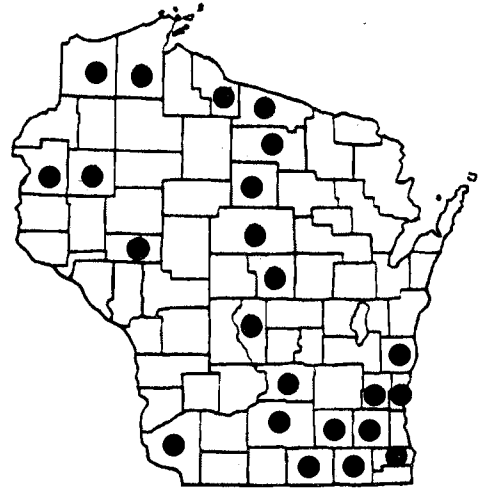
Hypnum curvifolium Hedw.
13, 32



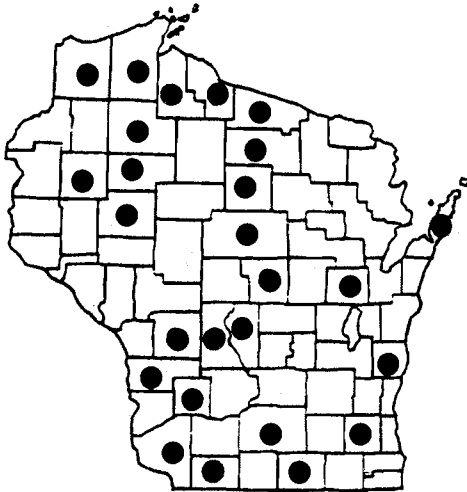
Hypnum fertile Sendtn.
32, 69, (71), 108



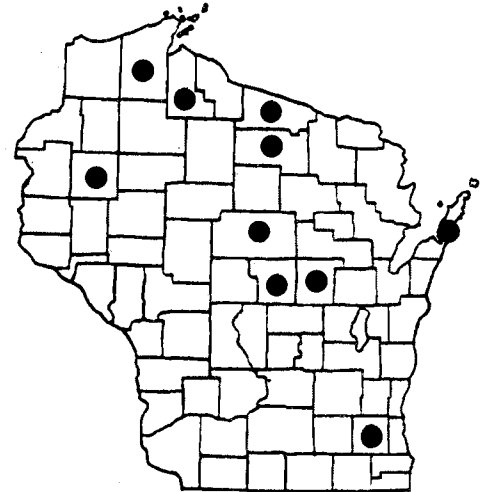
Hypnum imponens Hedw.
9, 13, 32, (53), (73), 75, 76, 108,
(119)



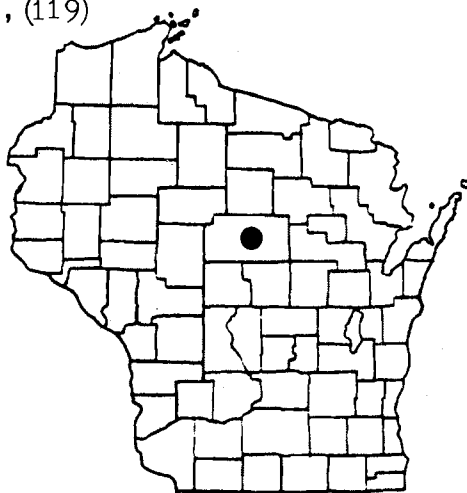
Hypnum lindbergii Mitt.
24, 32, (73), 75, 76, 108, 126



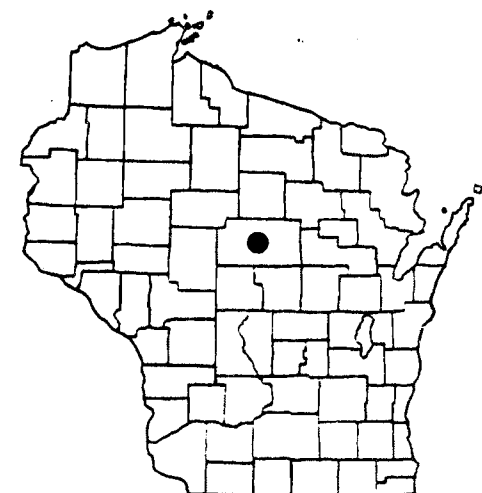
Hypnum pallescens (Hedw.) P-Beauv. 13,
32, 34, (57), 69, 70, (71), 73, 76,
96, 108, (119)



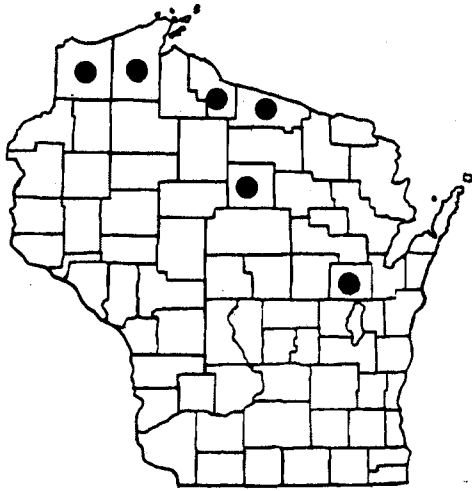
Hypnum pratense Koch.
13, 32, 73, 76



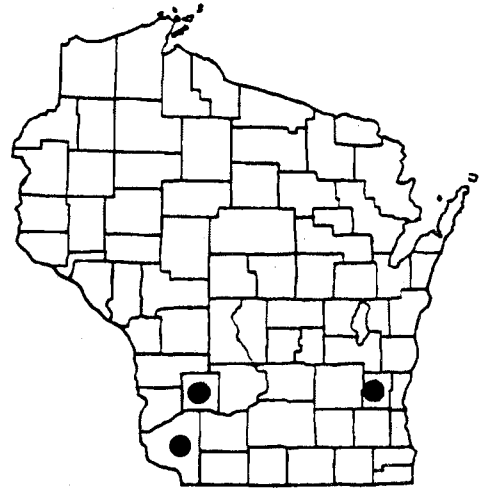
Isopterygiopsis muelleriana (Schimp.)
Iwats. 77



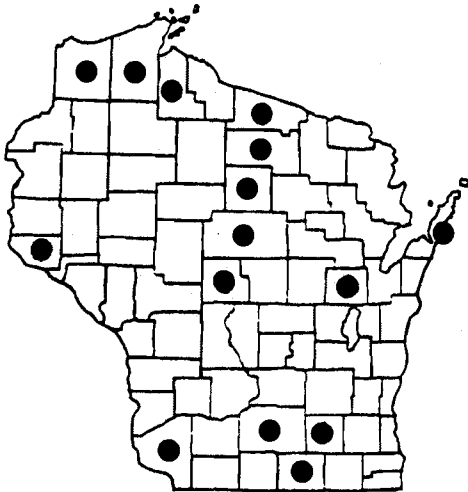
Isopterygium elegans (Brid.) Lindb.
74



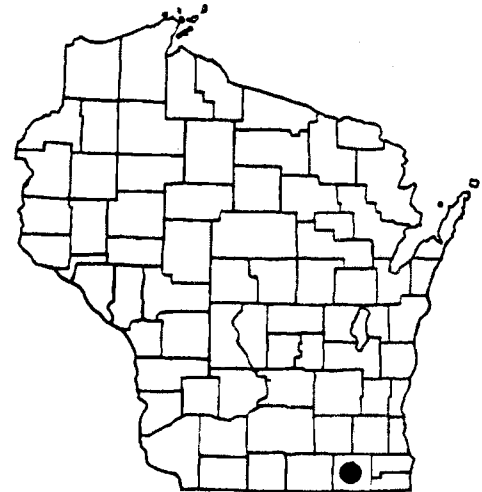
Isopterygium pulchellum (Hedw.) Jaeg. & Sauerb. 32, (53), (119)



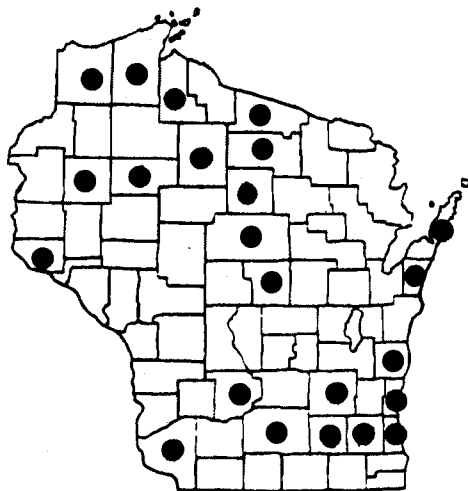
Isopterygium tenerum (Sw.) Mitt. 32, 69, (71)



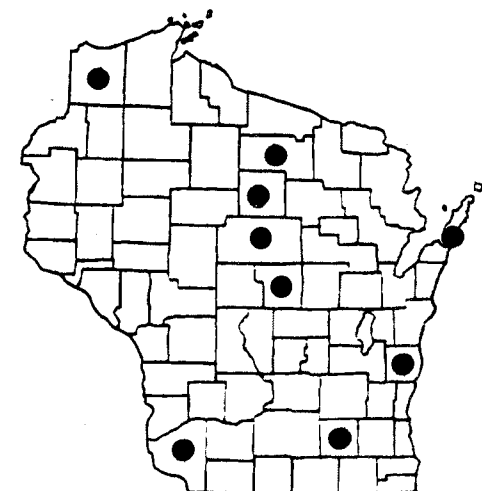
Leptobryum pyriforme (Hedw.) Wils. 13, 32, 73, 147



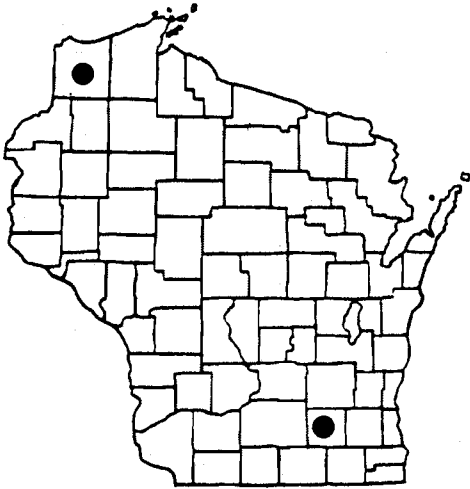
Leptodictyum laxierete (Card. & Ther.) Broth. 142



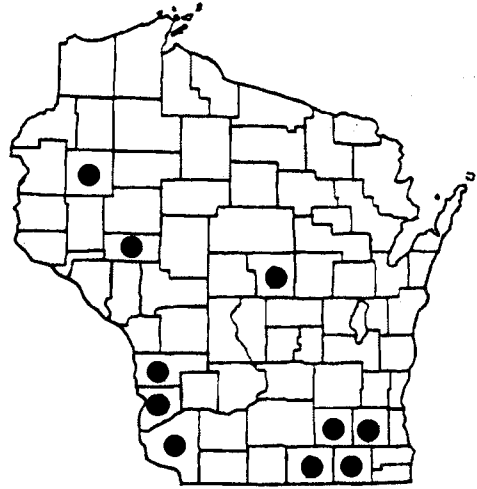
Leptodictyum riparium (Hedw.) Warnst. 13, 32, 71, 76, 147



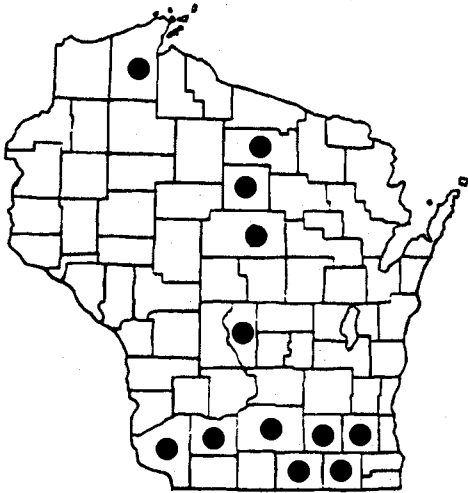
Leptodictyum trichopodium (Schultz) Warnst. 13, 32, 73, 76, 108, (113), 126



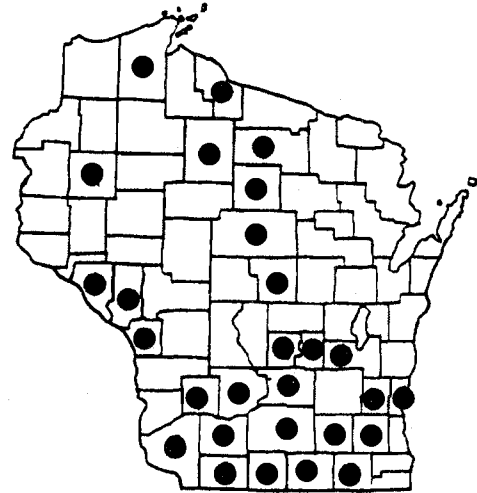
Leptodictyum vacillans (Sull.) Broth.
29, 32



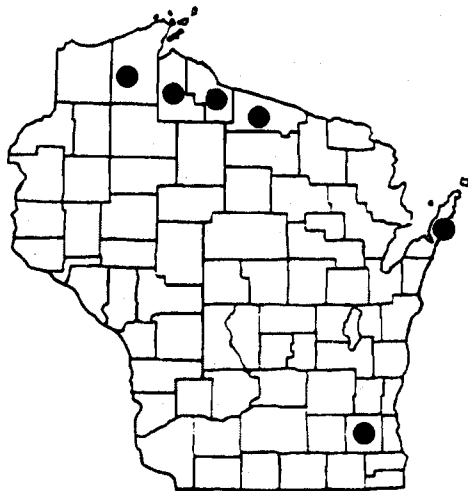
Leskea gracilescens Hedw. 32, 34,
69, (71), 76



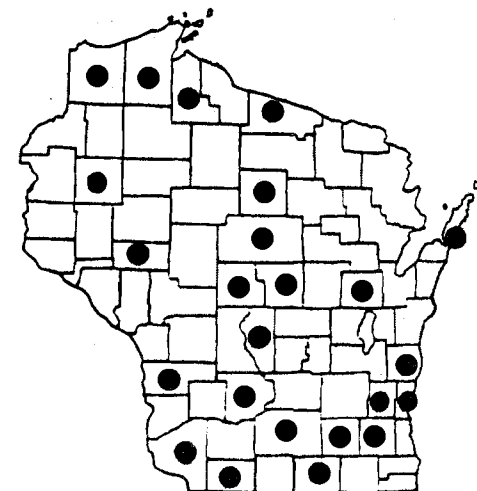
Leskea obscura Hedw. 32, 73



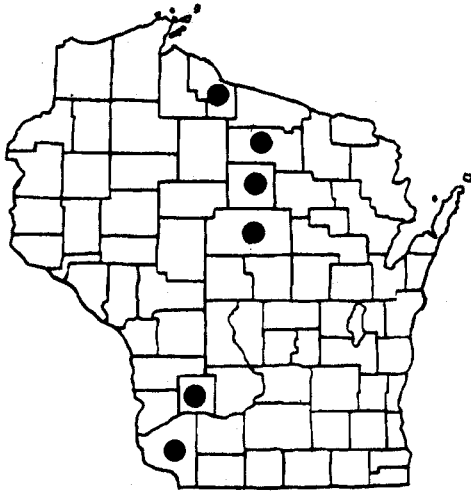
Leskea polycarpa Hedw. 32, 76
93, (94)



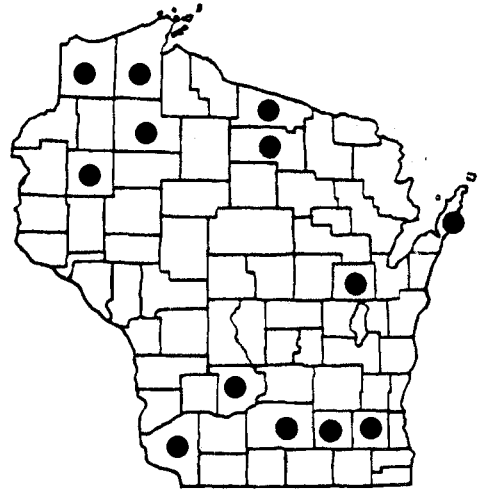
Leskeela nervosa (Brid.) Loeske
13, 32



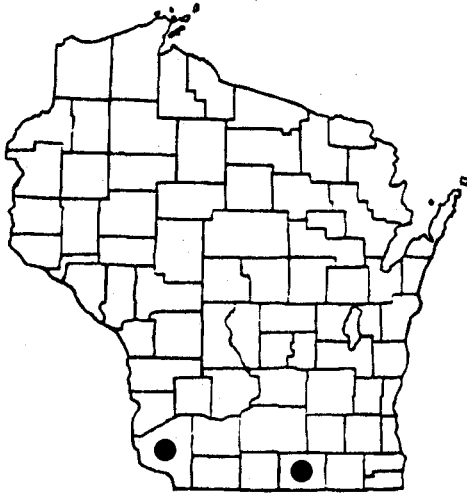
Leucobryum glaucum (Hedw.) Schimp.
9, 13, 32, 73, 75, 76, (111), 148



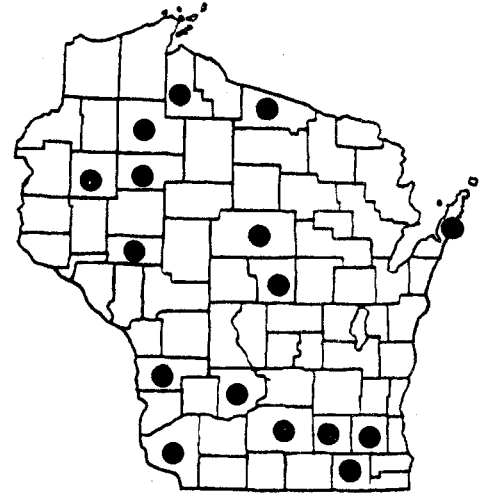
Leucodon brachypus Brid.
32, 69, (71)



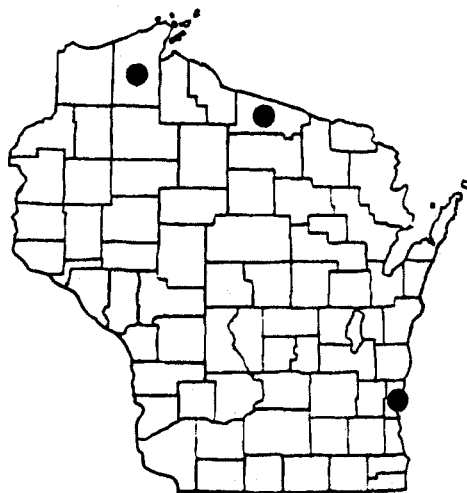
Leucodon brachypus var. andrewsianus
Crum & Anderson 13, 30, 32, 92



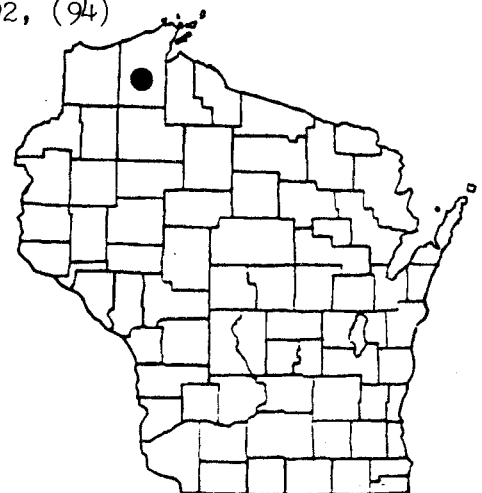
Leucodon julaceus (Hedw.) Sull.
30, 32



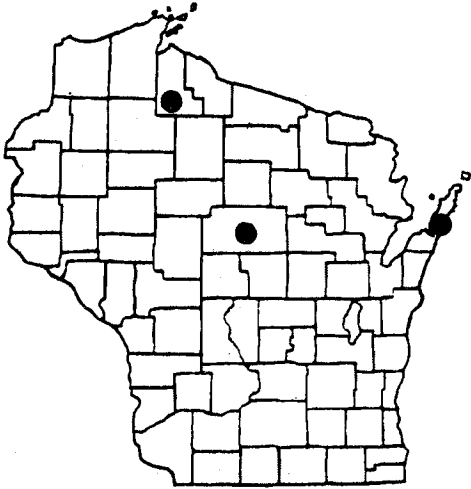
Lindbergia brachyptera (Mitt.)
Kindb. 13, (24), 32, 34, 50
51, (57), (59), 69, (71), 73, 76,
92, (94)



Meesia triquetra (Richt.) Angtr. 32



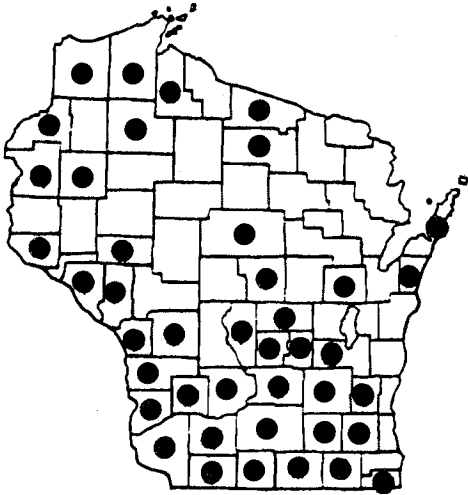
Meesia uliginosa Hedw. 32



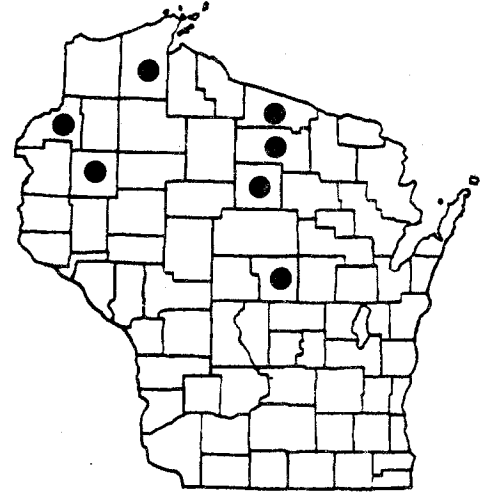
Mnium ciliare (C. Muell.) Schimp.
13, (16), 77



Mnium cinclidioides Hueb.
76



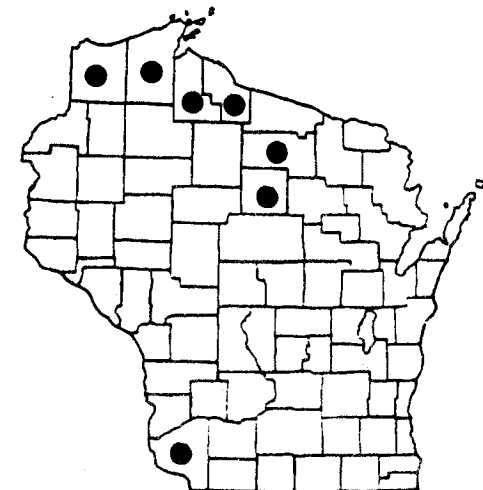
Mnium cuspidatum Hedw. 9, 13, 32,
34, (57), 70, 73, 75, 76, 92, (93),
(94), 108, 126, 147, 148



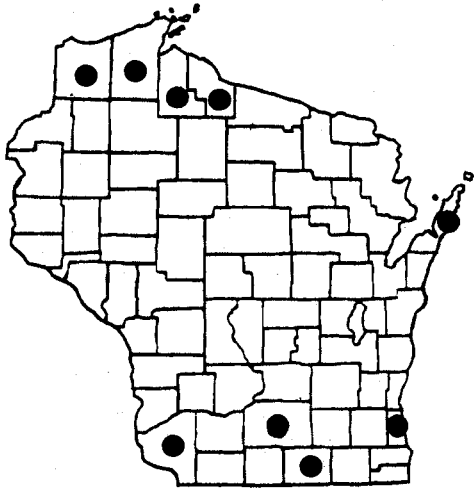
Mnium drummondii Bruch. & Schimp.
32, 76



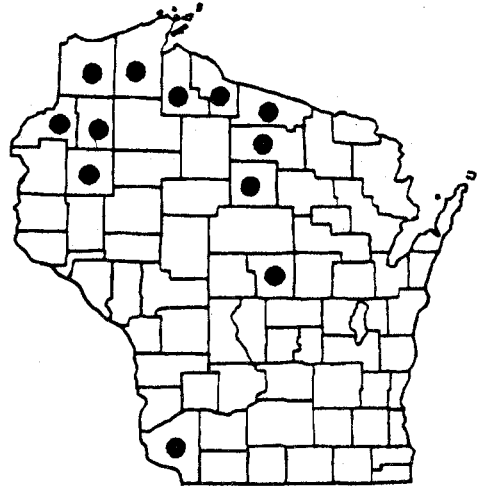
Mnium longirostrum Brid.
33



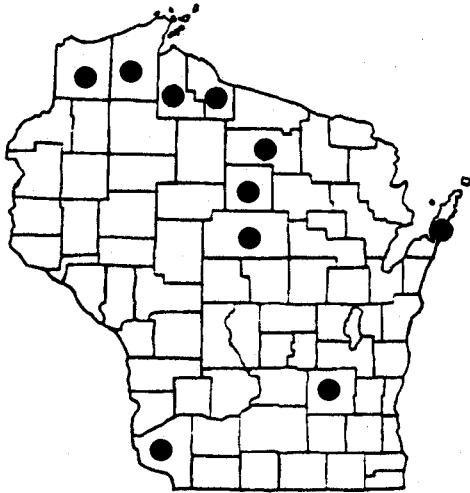
Mnium lycopodioides (Hook.)
Schwaegr. 32



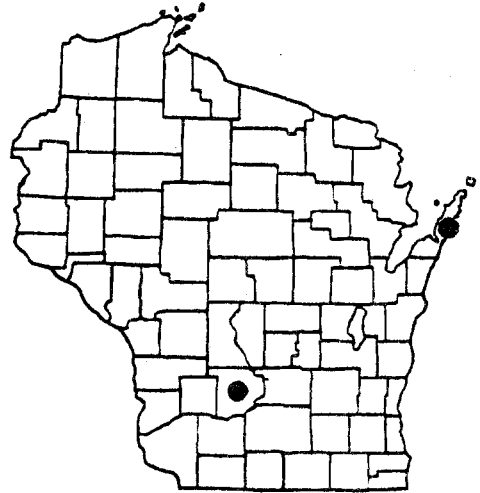
Mnium marginatum (With.) Brid. ex
P.-Beauv. 13, 24, 32



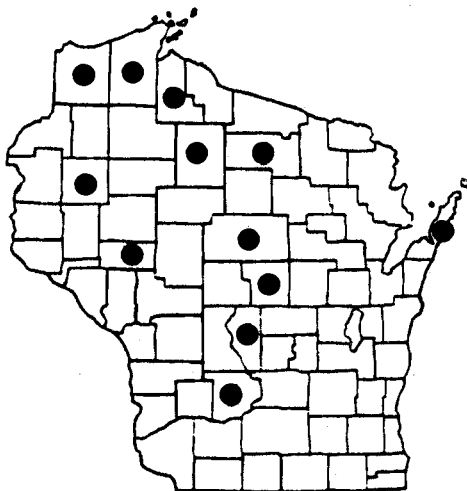
Mnium medium B.S.G.
32, 76, 108, (113)



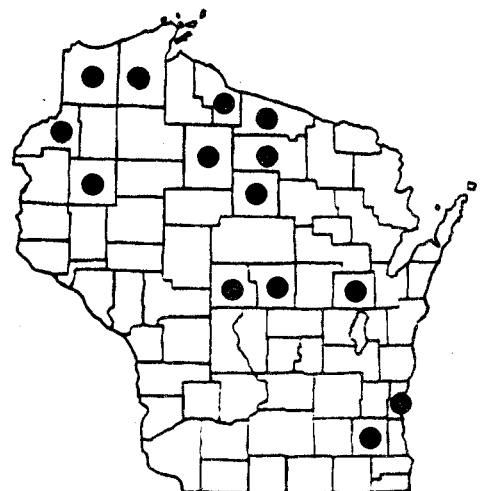
Mnium orthorrhynchum Brid.
13, 32, 73, 108



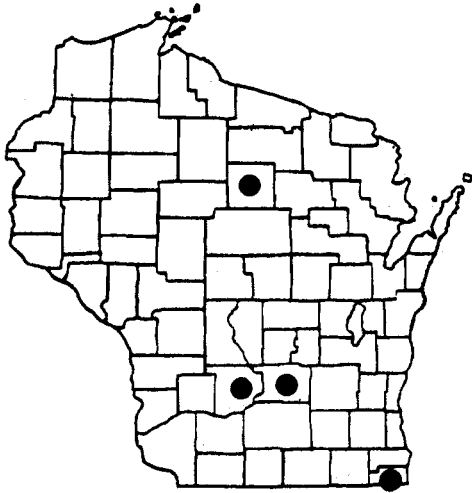
Mnium pseudopunctatum Bruch &
Schimp. 77



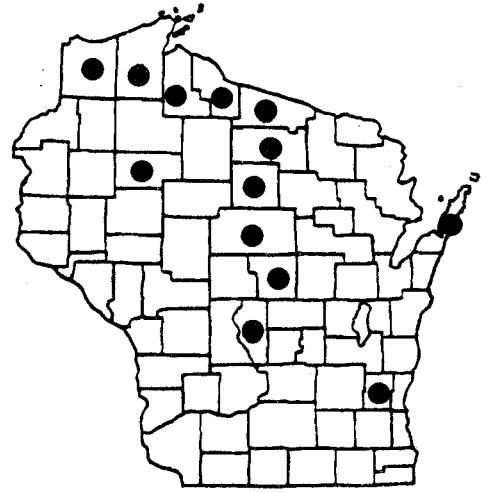
Mnium punctatum Hedw. 13, (16),
32, 73, 76, (84), 108



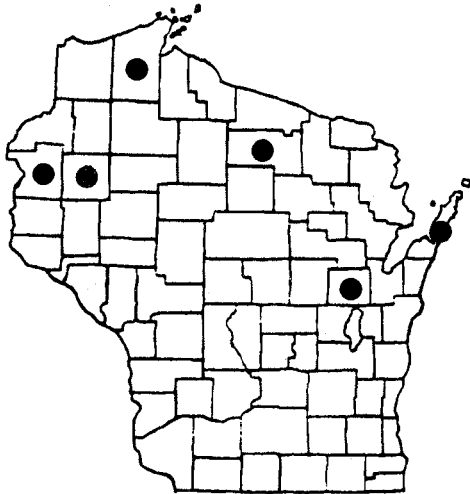
Mnium punctatum var. elatum
Schimp. 32, 73, 76, 108, (113)



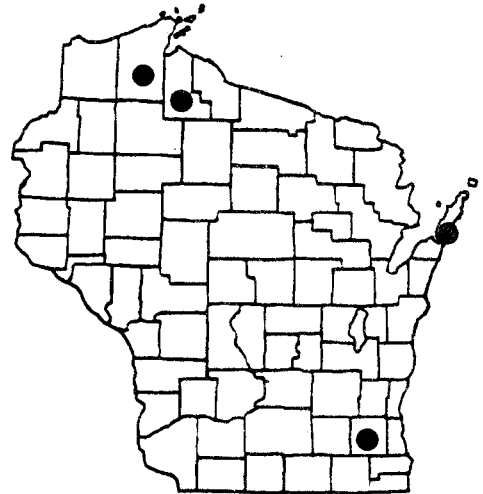
Mnium rugicum Laur.
77, 126



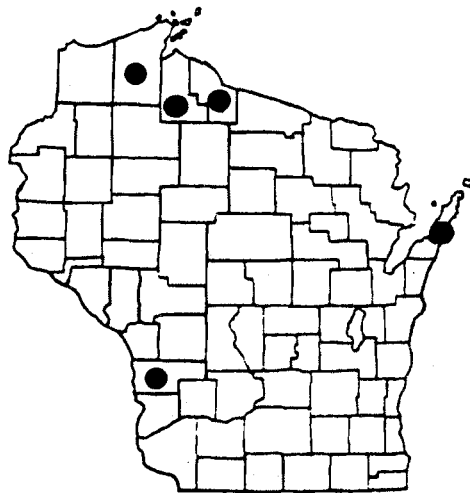
Mnium spinulosum B.S.G.
32, (57) 73, 76, 108



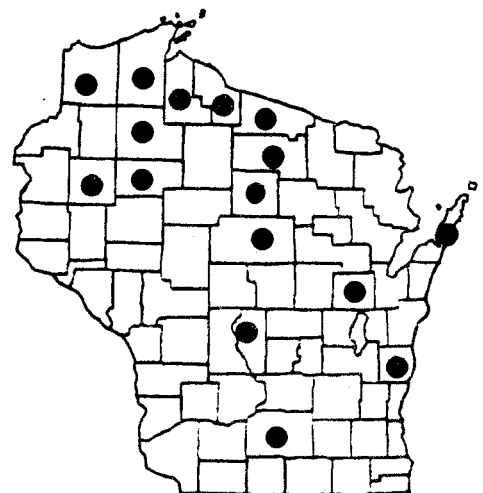
Mnium stellare Hedw. 13, 32



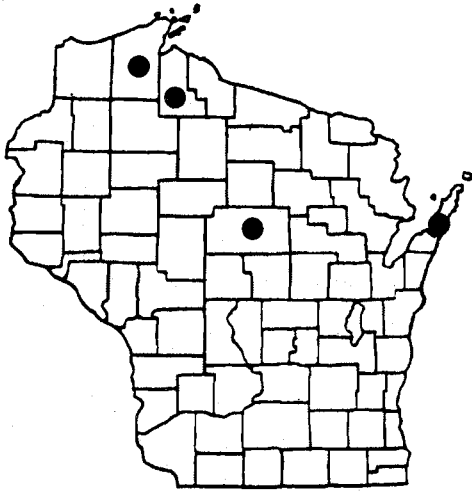
Myurella julacea (Schwaegr.)
B.S.G. 13, 31, 32, (53), (113)



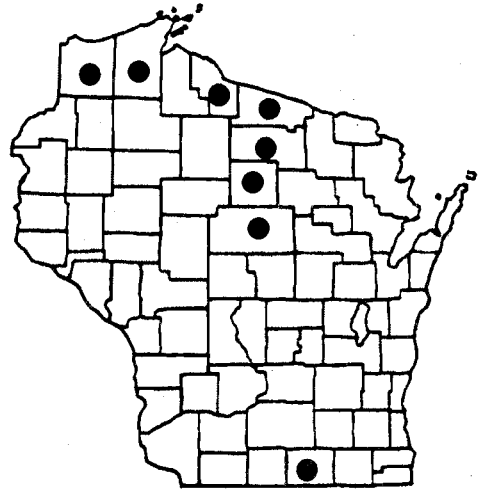
Myurella sibirica (C. Muell.) Reim.
13, 32, 34



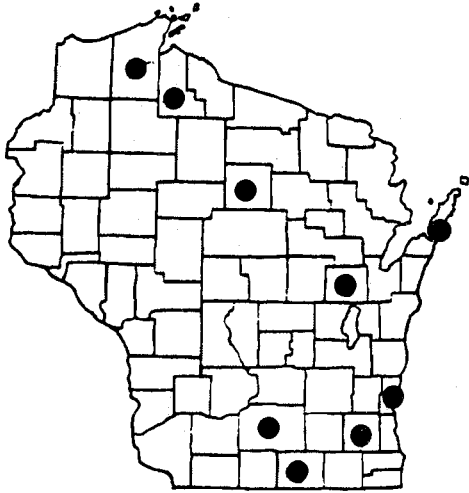
Neckera pennata Hedw. 13, 23,
24, (57), (59), 92, (113)



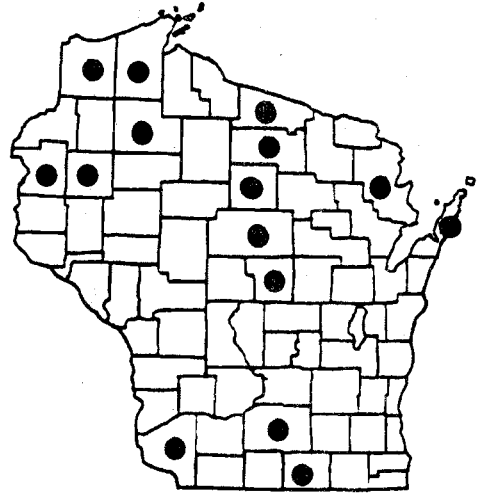
Oncophorus virens (Hedw.) Brid.
13, 32, 73, 74



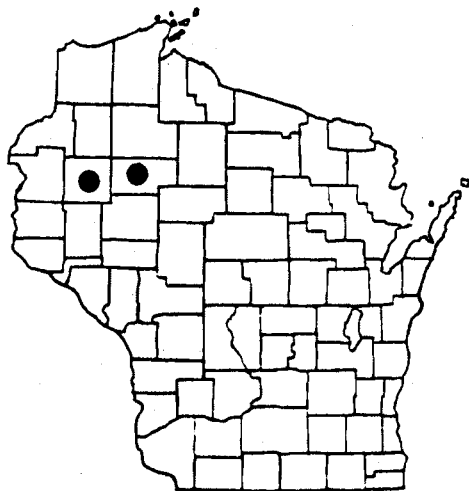
Oncophorus wahlenbergii Brid.
32, 108



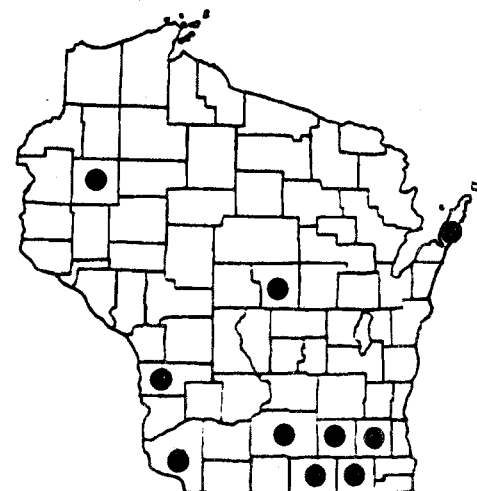
Orthotrichum anomalum Hedw.
13, 32, 150



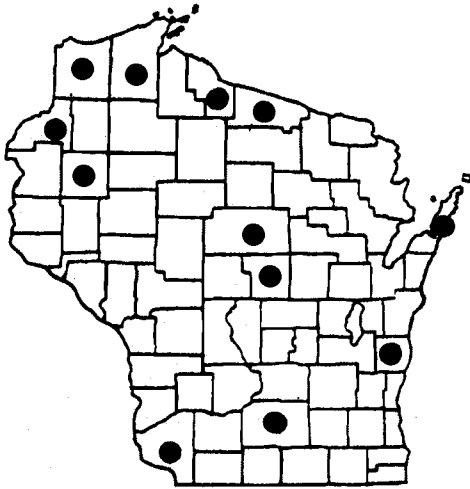
Orthotrichum obtusifolium Brid.
13, 32, 73, 76, 92, 108, 150



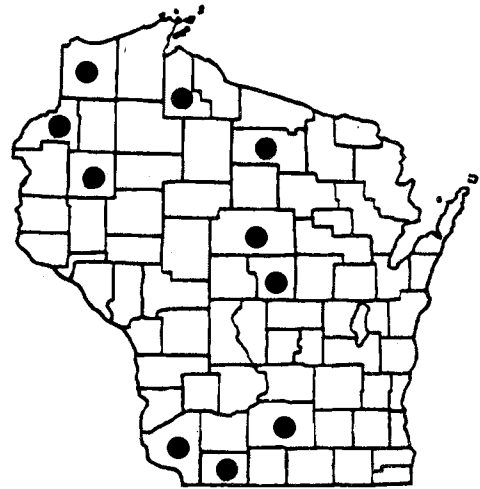
Orthotrichum ohioense Sull. & Lesq.
ex Aust. 32



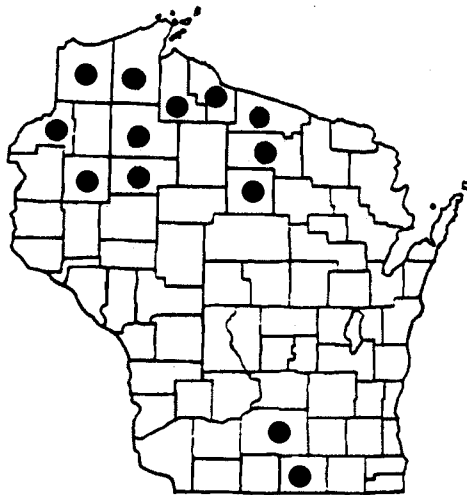
Orthotrichum pumilum Sw.
13, 32, 34, 76, (94), 150



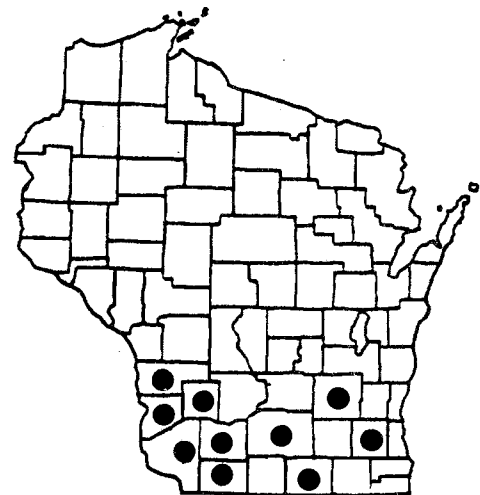
Orthotrichum sordidum Sull. & Lesq.
ex Aust. 13, 32, 76, 108, 150



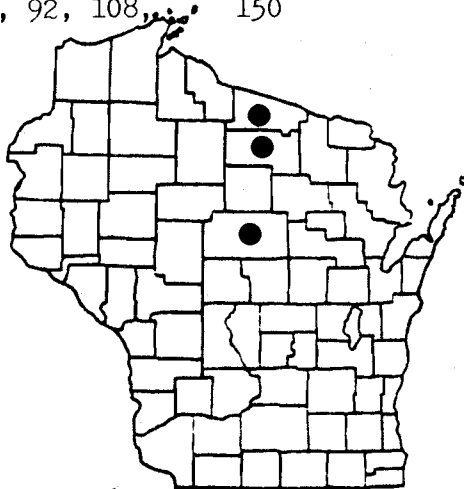
Orthotrichum stellatum Brid.
32, 76, 108



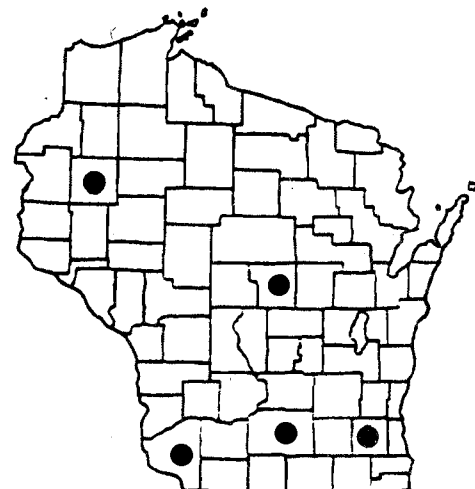
Orthotrichum speciosum var. elegans
(Schwaegr. ex Hook. & Grev.) Warnst.
32, 92, 108, 150



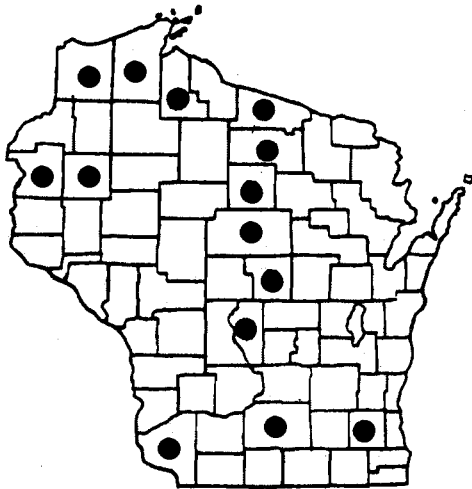
Orthotrichum strangulatum P.-Beauv.
32, 69, (71), 148



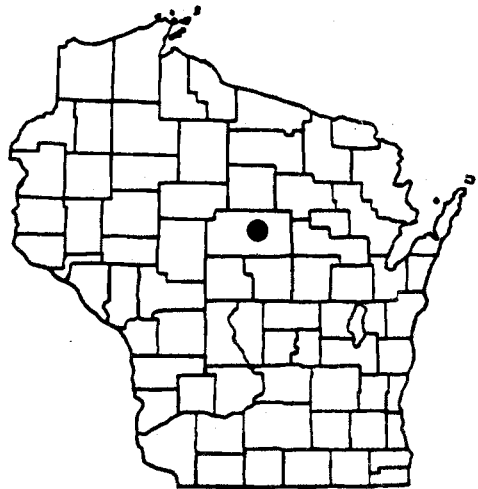
Paraleucobryum longifolium (Hedw.)
Loeske 32, 73



Phascum cuspidatum Hedw.
18, 19, 29, 32, 76



Philonotis fontana (Hedw.) Brid.
32, (61), 76, 96, 108



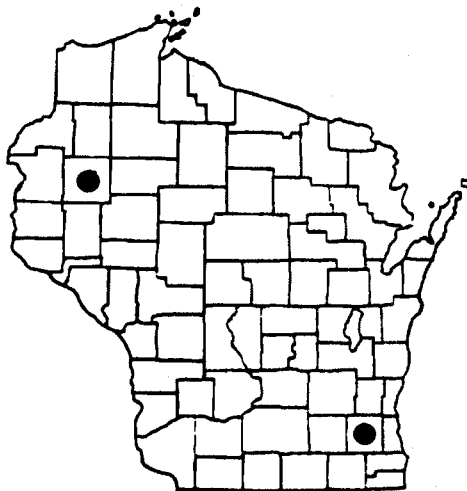
Philonotis marchica (Hedw.)
Brid. 77



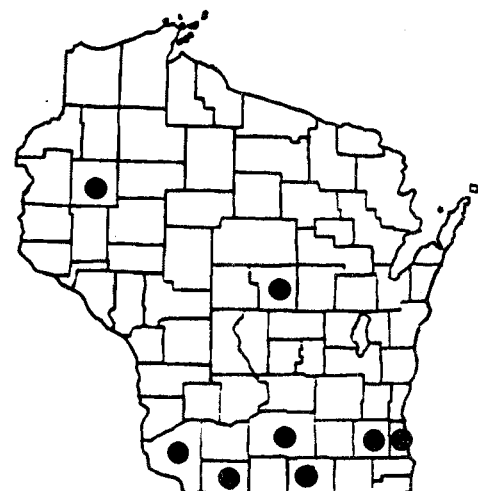
Philonotis longiseta (Michx.) Britt.
75



Physcomitrium hookeri Hampe
32, (113)



Physcomitrium immersum Sull.
31, 32, (113)



Physcomitrium pyriforme (Hedw.)
Hampe 32, 76



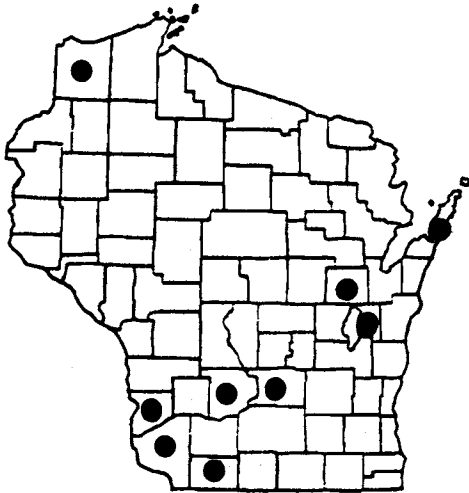
Plagiobryum demissum (Hook.) Lindb.

32 Excluded



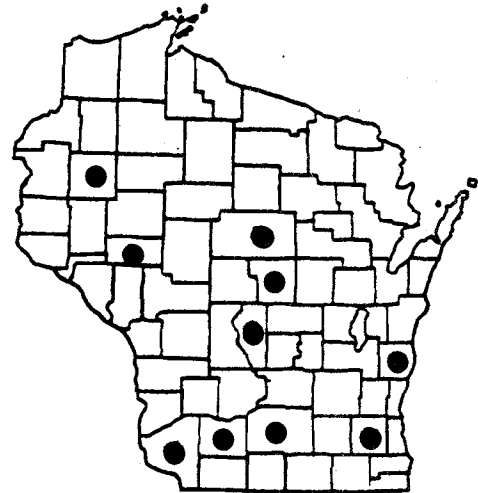
Plagiobryum zierii (Hedw.)

32 Excluded



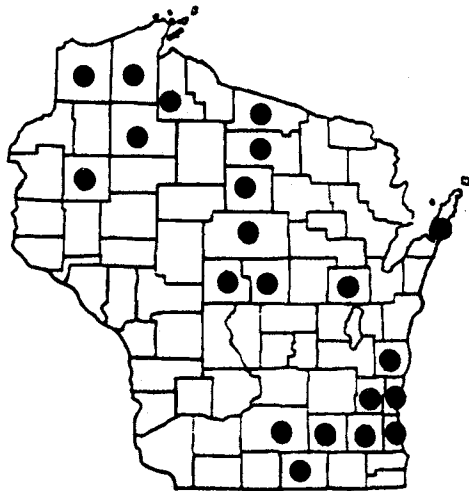
Plagiopus oederi (Sw.) Limpr.

13, 32



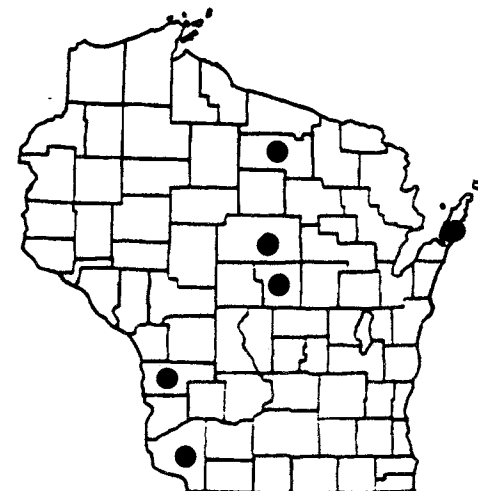
Plagiothecium cavifolium (Brid.)

Iwats. 32, 73, 75, 76, 101,
(113)



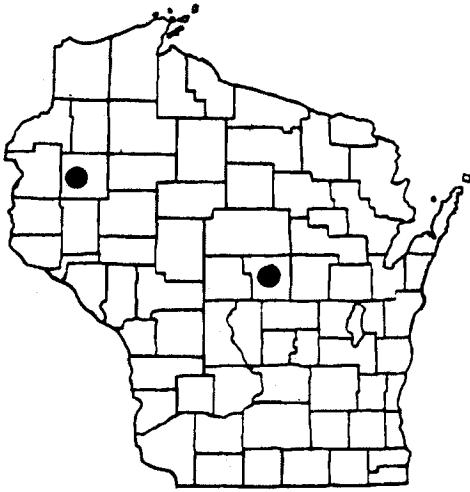
Plagiothecium denticulatum (Hedw.)

B.S.G. 13, 32, 73, 75, 76, 92, (119)

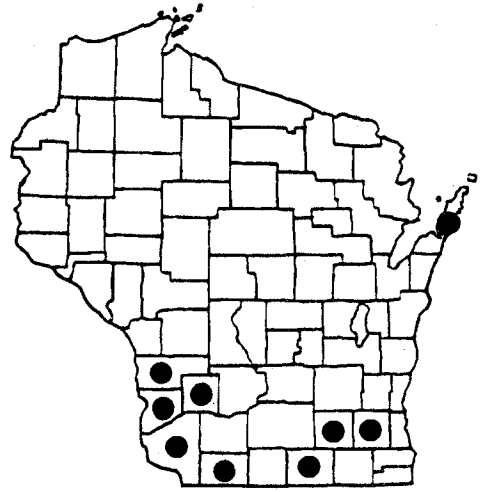


Plagiothecium laetum B.S.G.

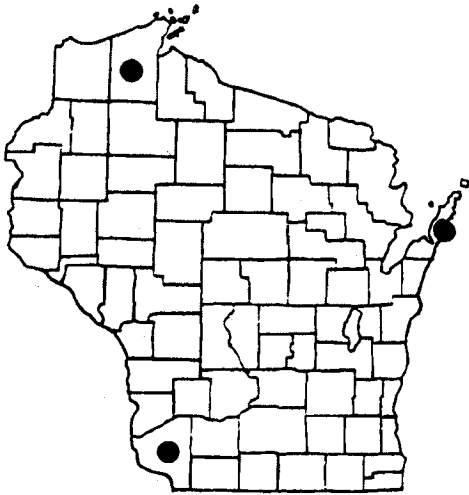
13, 32, 34, 73, 76, (119)



Plagiothecium latebricola B.S.G.
32, 76, (84), 101



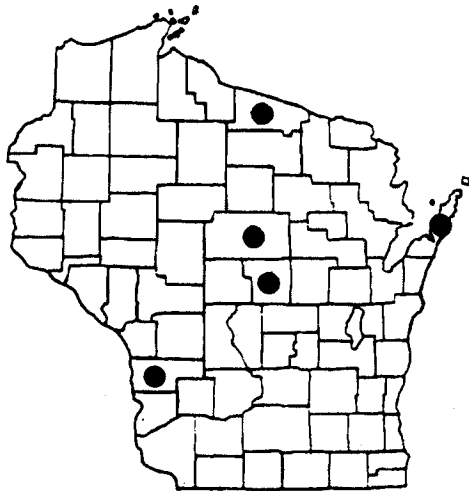
Platydictya confervoides (Brid.)
Crum 13, 32, 69, (71)



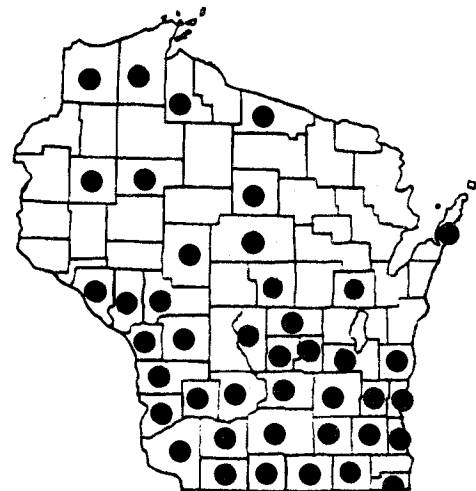
Platydictya jungermannioides (Brid.)
Crum 30, 32



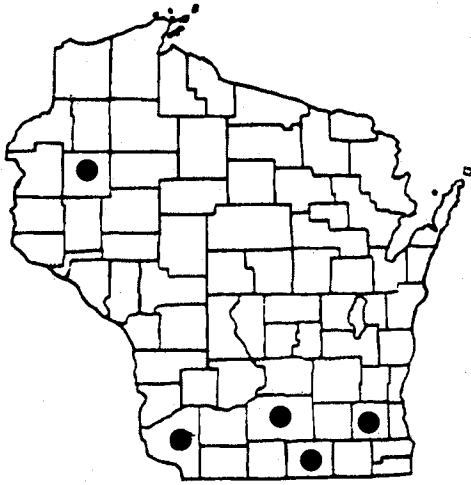
Platydictya minutissima (Sull. &
Lesq. ex Sull.) Crum 30, 32



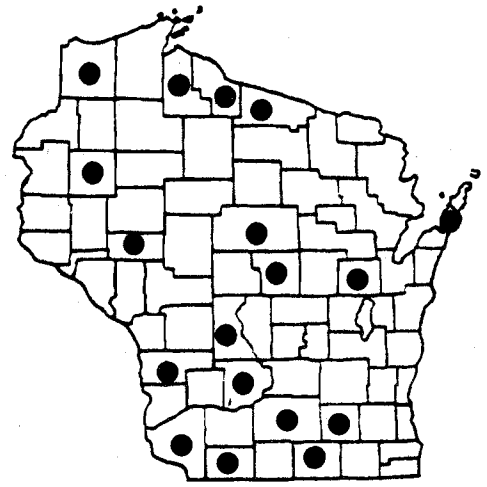
Platydictya subtile (Hedw.) Crum
13, 32, 34, 73, 76, (84)



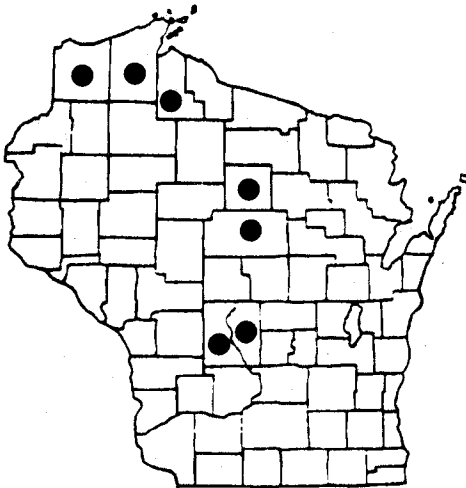
Platygyrium repens (Brid.) B.S.G.
9, 13, 32, 34, (57), (59), 70,
73, 76, 93, (94), 108, (119), 148



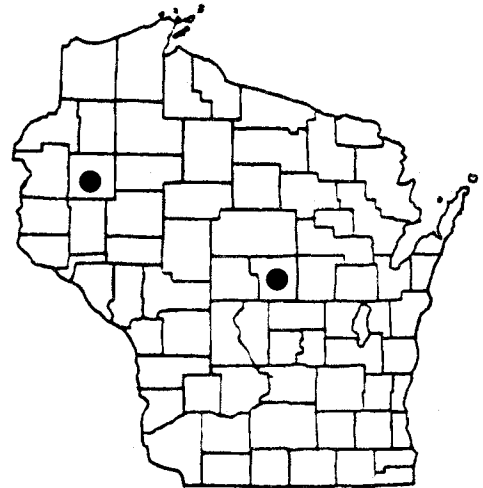
Pleuridium subulatum (Hedw.)
Rabenh. 29, 32, (65)



Pleurozium schreberi (Brid.) Mitt.
9, 13, 32, 73, 75, 76, 108, (111),
(113), 114, (119), 148



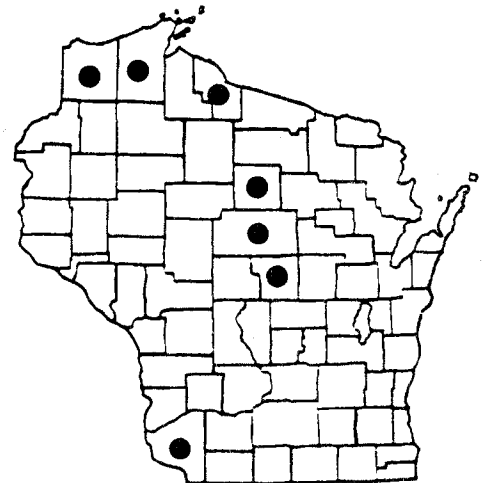
Pogonatum alpinum (Hedw.) Rehl.
32, 75, 101, 108, (113)



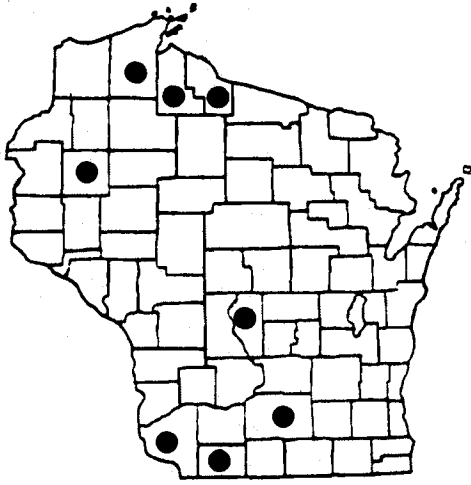
Pohlia annotina (Hedw.) Lindb.
32, 76



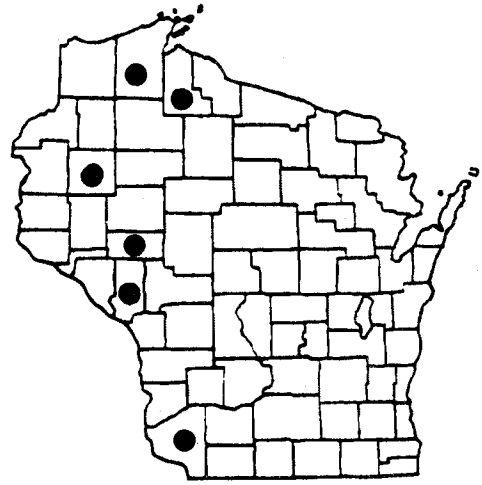
Pohlia carnea (Turn.) Lindb.
32



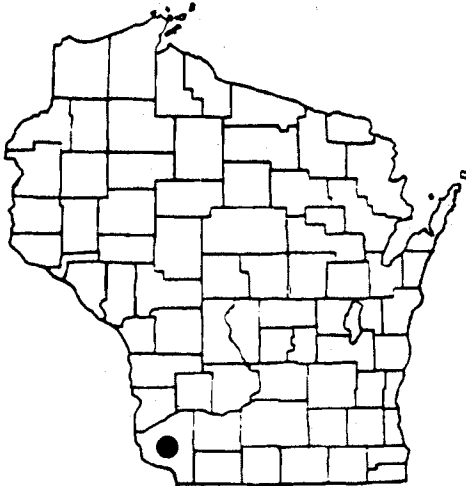
Pohlia cruda (Hedw.) Lindb.
32, 75, 76, 108



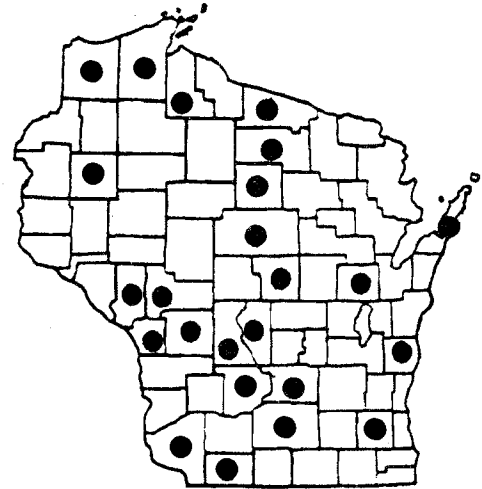
Pohlia elongata Hedw.
32, (84)



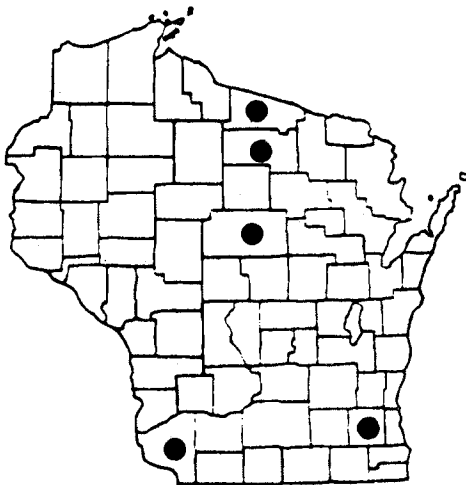
Pohlia filiformis (Dicks.) Andrews
30, 32, 75, (84), (113), 130,
131, 144



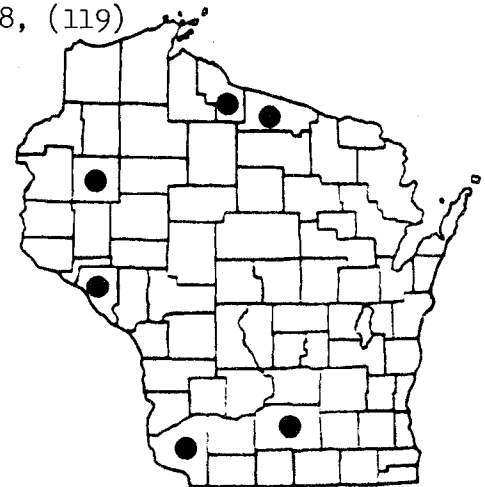
Pohlia lescuriana (Sull.) Grout
29, 32



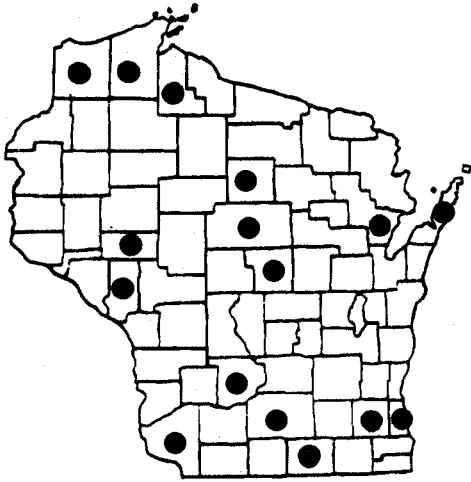
Pohlia nutans (Hedw.) Lindb.
9, 13, (23), 32, 70, 73, 76, 96,
108, (119)



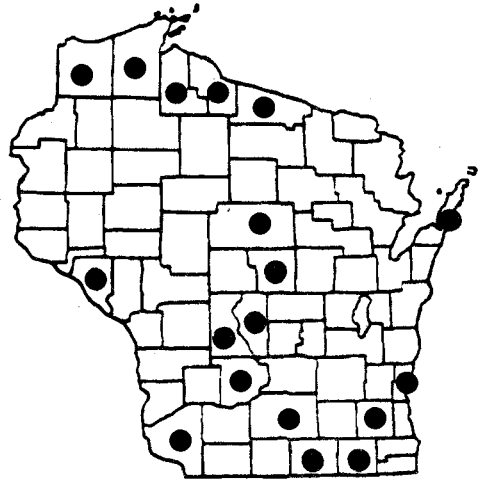
Pohlia obtusifolia (Brid.) L. Koch
32



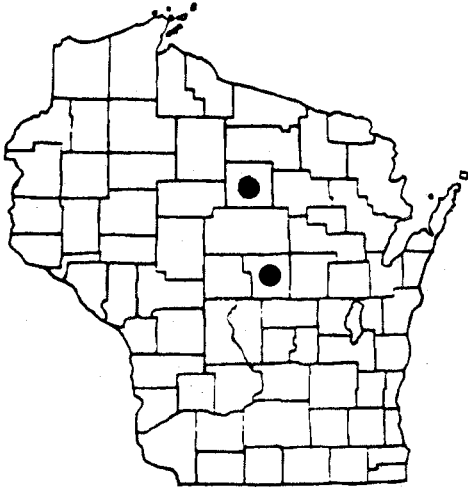
Pohlia proliger (Kindb. ex
Limpr.) Lindb. 32, (84)



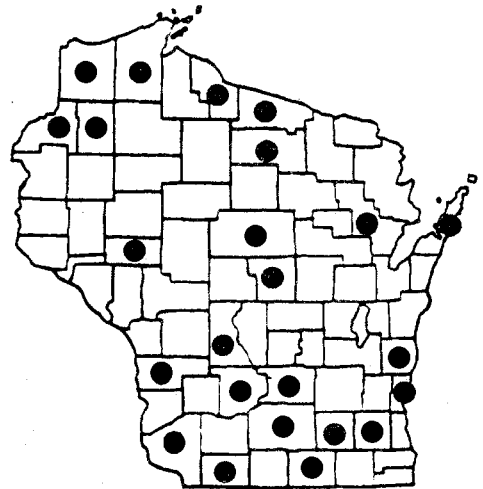
Pohlia wahlenbergii (Web. & Mohr)
 Andrews 13, 32, (71), 73, 75,
 76, 108



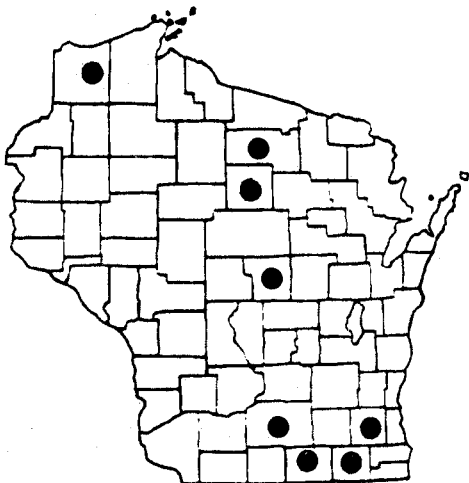
Polytrichum commune Hedw.
 9, 13, 32, 73, 76, 96, 108,
 (119), 126



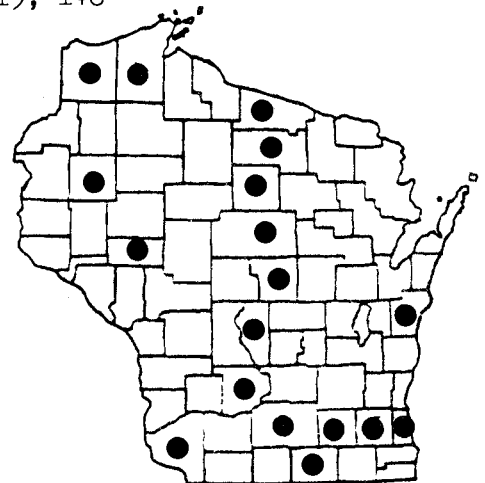
Polytrichum formosum Hedw.
 32, 76



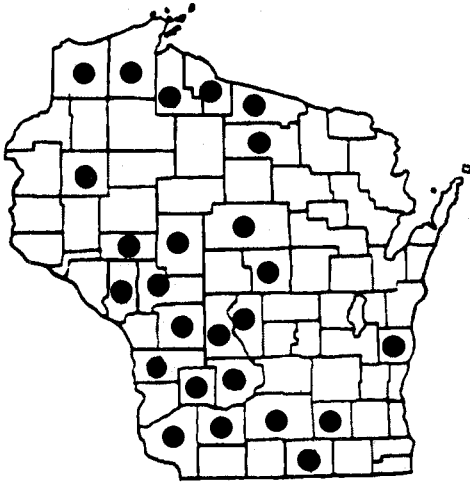
Polytrichum juniperinum Hedw.
 9, 13, 32, 73, 75, 76, 108, (114),
 119, 148



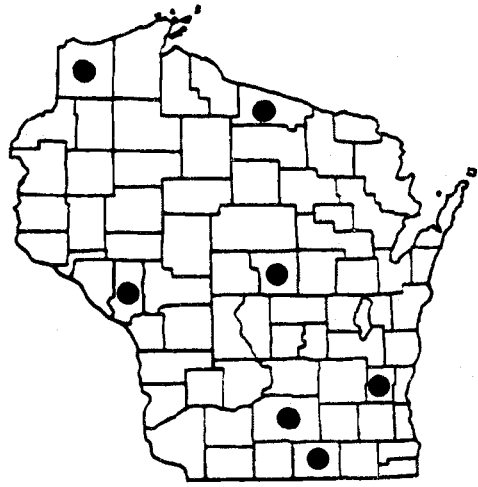
Polytrichum longisetum Brid.
 32, 76, (113), 126



Polytrichum ohioense Ren. & Card.
 9, 32, 73, 75, 76, 96, 126



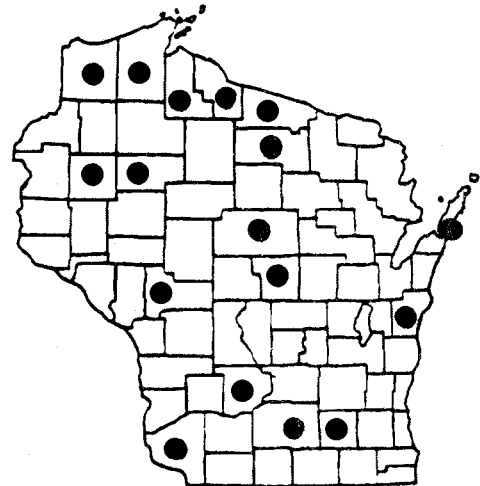
Polytrichum piliferum Hedw.
9, 32, 70, 73, 75, 76, 93, 96, 108,
(114), 148



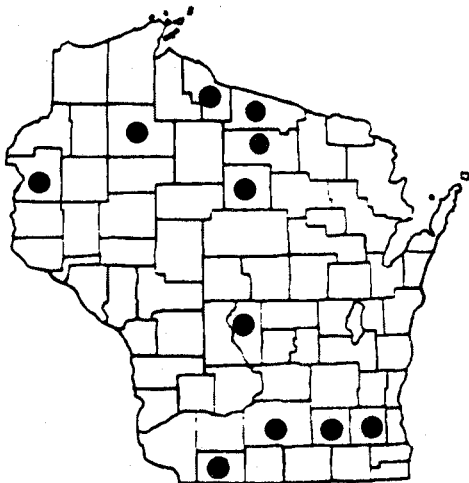
Polytrichum strictum Brid.
32, 76, 96



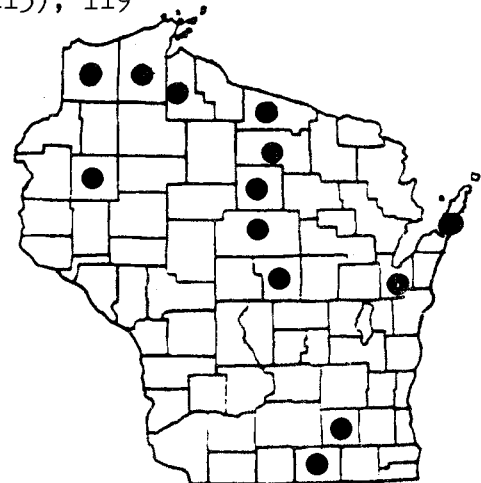
Pterigynandrum filiforme Hedw.
73, 74



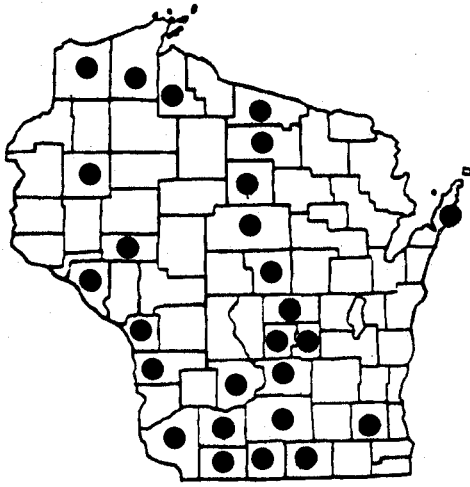
Ptilium crista-castrensis (Hedw.)
De Not 13, 32, 73, 76, 108,
(113), 119



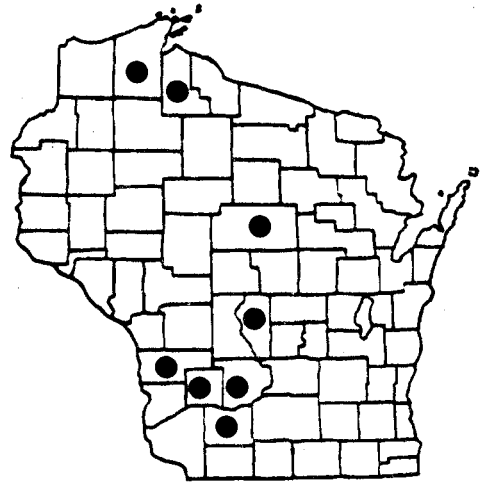
Pylaisiella intricata (Hedw.) Grout
32, 92, 96



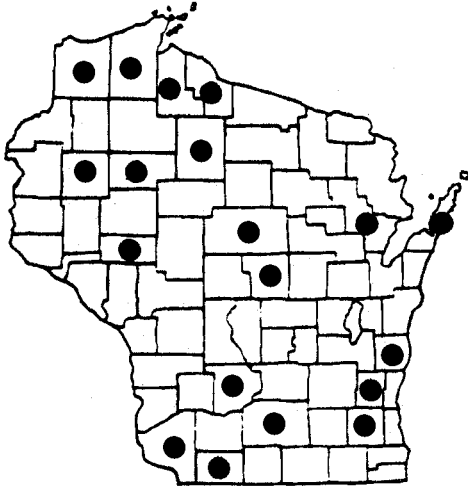
Pylaisiella polyantha (Hedw.) Grout
13, 24, 32, 73, 76, (84), 108,
(113)



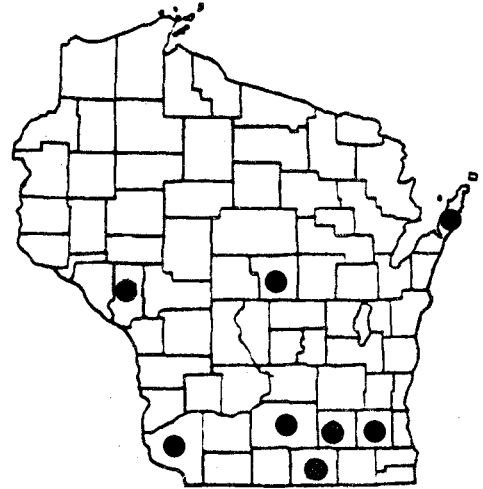
Pylaisiella selwynii (Kindb.) Crum, Steere & Anders.
13, 32, 34, 73, 75, 76, (93),
(94), 108



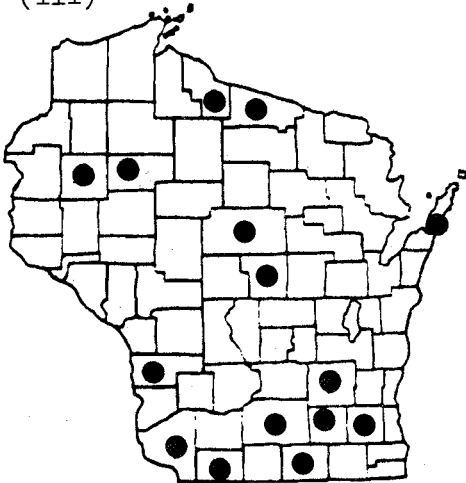
Rhabdoweisia crispata (With.)
Lindb. 30, 32, (65), 73, 74,
112, (153)



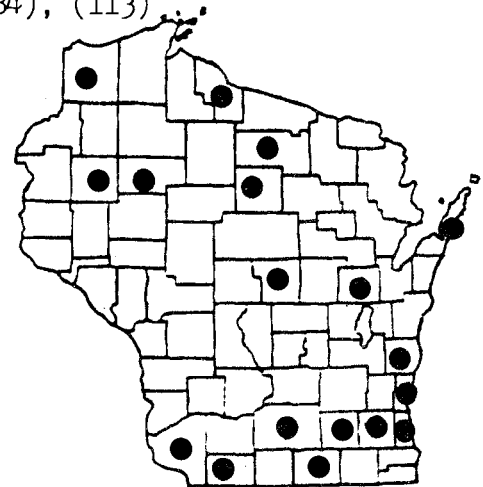
Rhodobryum roseum (Hedw.) Limpr.
9, 13, 24, 32, 73, 74, 76, (93),
108, (111)



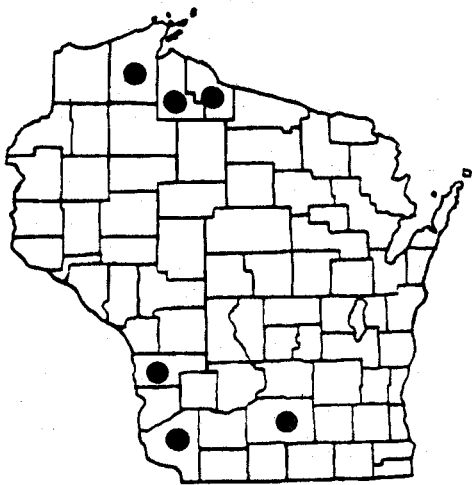
Rhynchostegiella compacta (C. Muell.)
Loeske 13, 24, 32, (35), 76, 83,
(84), (113)



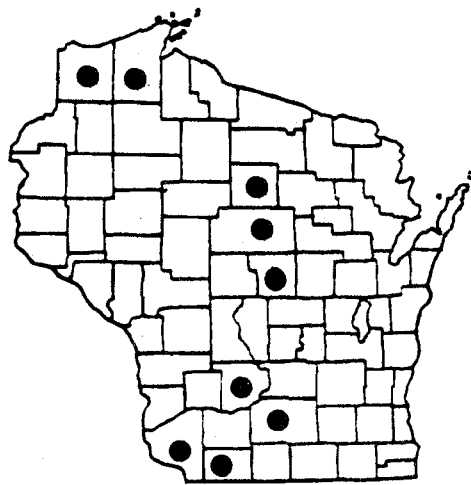
Rhynchostegium serrulatum (Hedw.)
Jaeg. & Sauerb. 13, 32, 34, (65),
73, 76



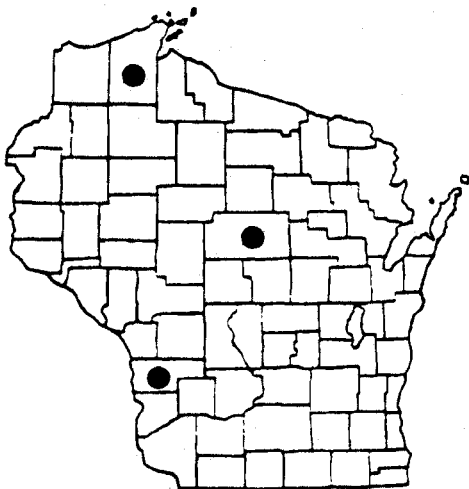
Rhytidiadelphus triquetrus (Hedw.)
Warnst. 13, 24, 32, 76, 108



Rhytidium rugosum (Hedw.) Kindb.
32, 148



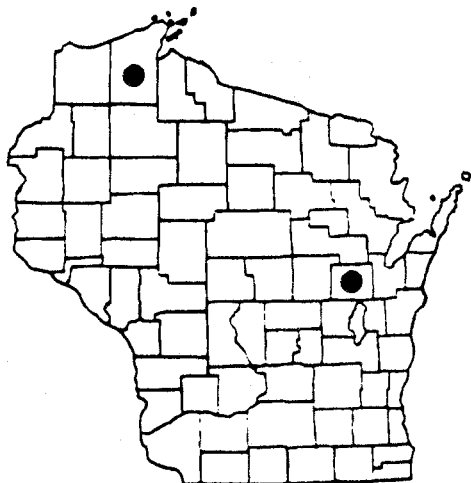
Saelania glaucescens (Hedw.)
Broth. 32, 76, 108



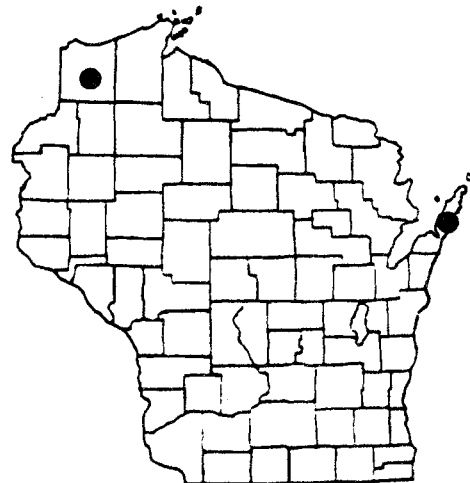
Schistostega pennata (Hedw.) Hook.
& Tayl. 8, (53), 73, 74, (113),
148



Schwetschkeopsis fabronia
(Schwaegr.) Broth. 32



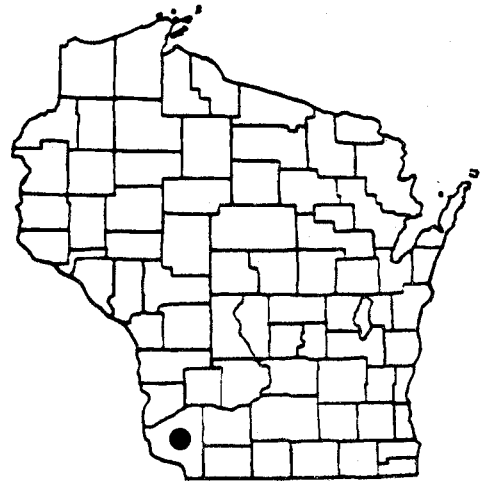
Scorpidium scorpioides (Hedw.) Limpr.
32, (53), 74



Seligeria campylopoda Kindb.
13, 74



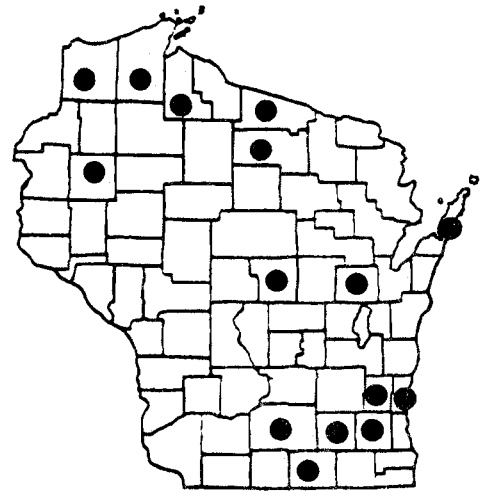
Seligeria pusilla (Hedw.) B.S.G.
29, 30, 32



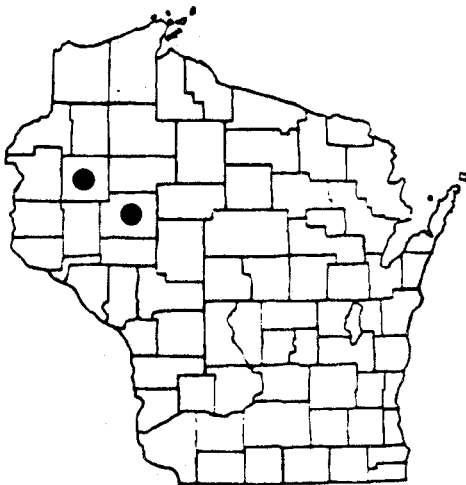
Seligeria recurvata (Hedw.) B.S.G.
30, 32



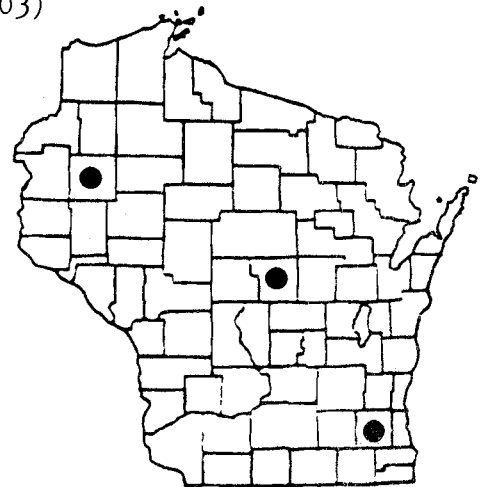
Sematophyllum demissum (Wils.) Mitt.
32



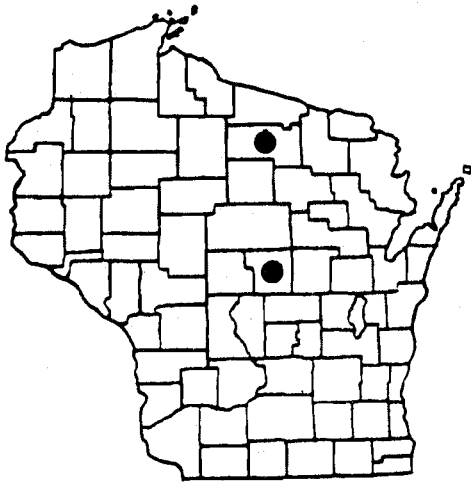
Sphagnum capillaceum (Weiss)
Schrank (2), 13, 25, 32, 76,
(103)



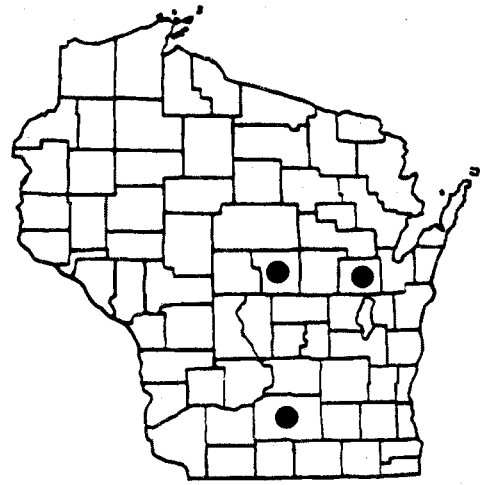
Sphagnum capillaceum var. tenellum
(Schimp.) Andrews 32



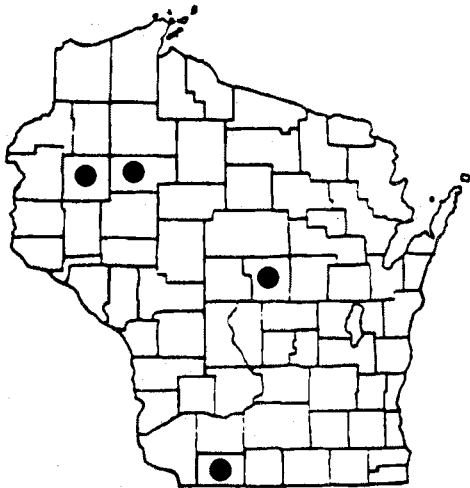
Sphagnum centrale C. Jens ex
Arnell & C. Jens (5), 32, 76



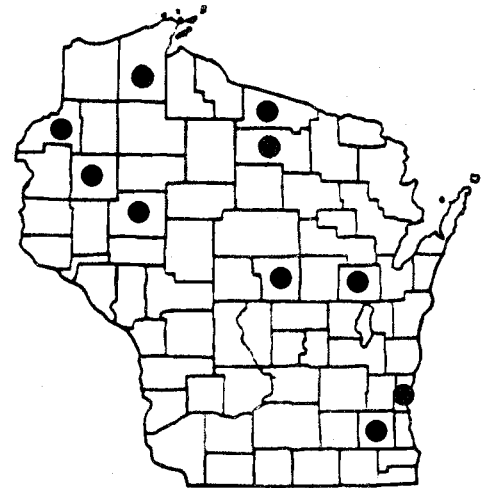
Sphagnum compactum DC. ex Lam. & DC.
27, 32, 76



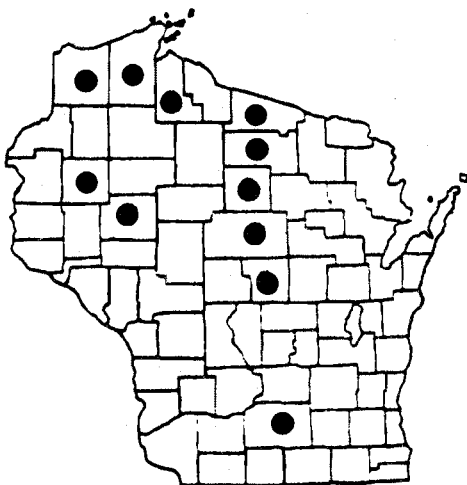
Sphagnum cuspidatum Ehrh.
31, 32, (53), 76



Sphagnum fimbriatum Wils. ex
J. Hook. 32, 76



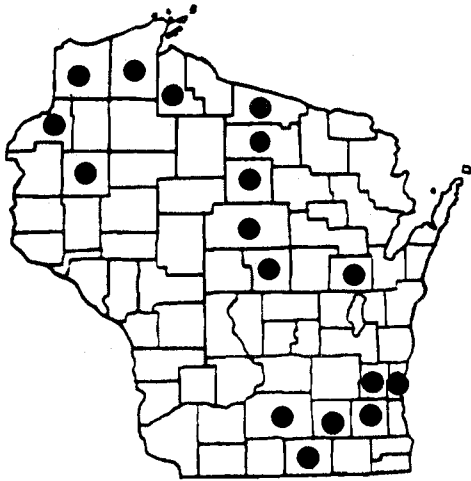
Sphagnum fuscum (Schimp.) Klinggr.
27, 32, 76



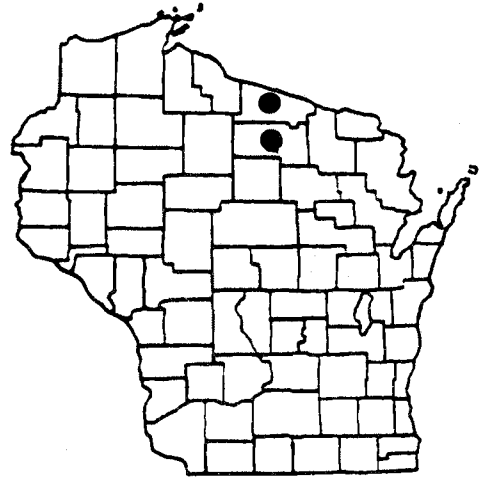
Sphagnum girgensohnii Russ.
27, 32, 73, 76



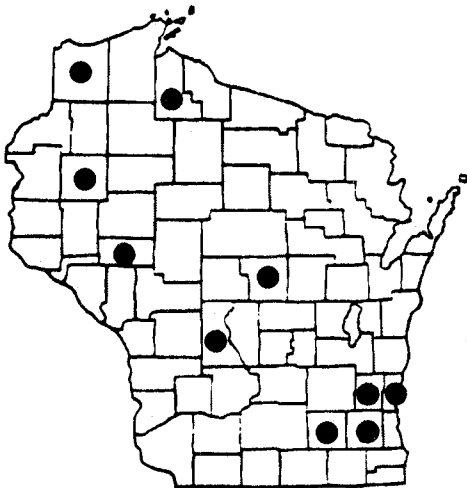
Sphagnum imbricatum Hornsch. ex
Russ. 32



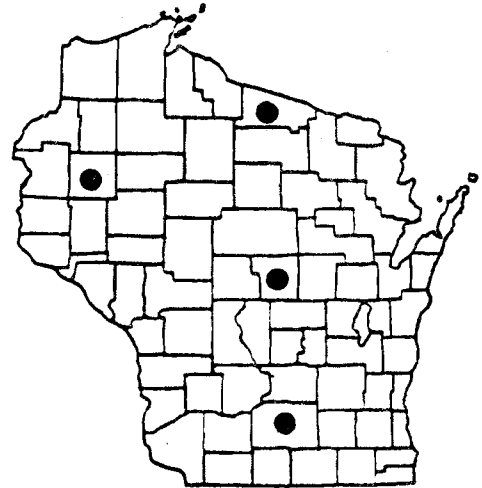
Sphagnum magellanicum Brid.
27, 32, 76



Sphagnum majus (Russ.) C. Jens.
(2), (3), (4), 27, 32, (60)



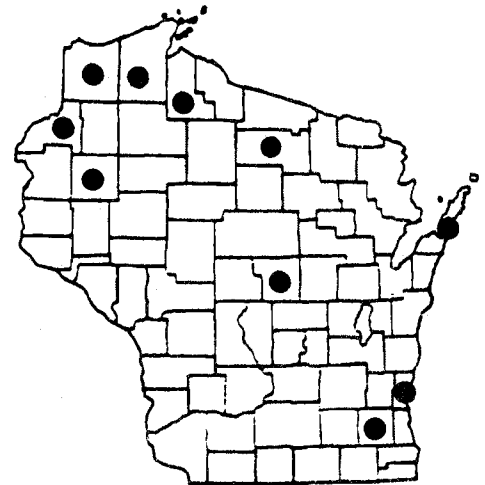
Sphagnum palustre L.
(2) 32, 76, 133



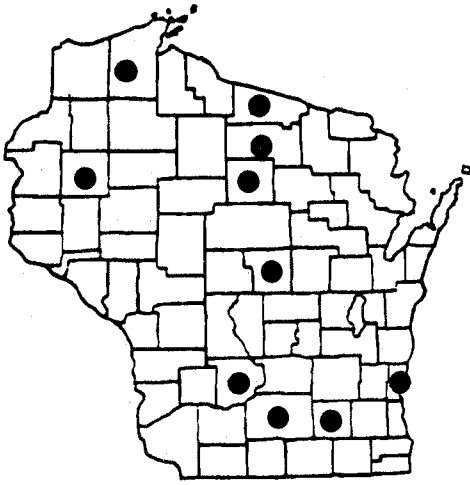
Sphagnum papillosum Lindb.
(2), 27, 32, 76



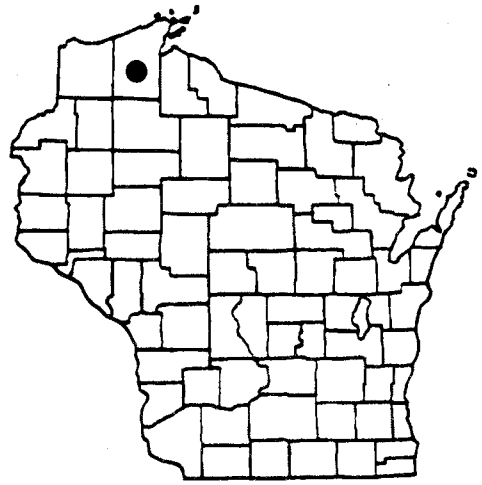
Sphagnum pulchrum (Lindb.) Warnst.
31, 32



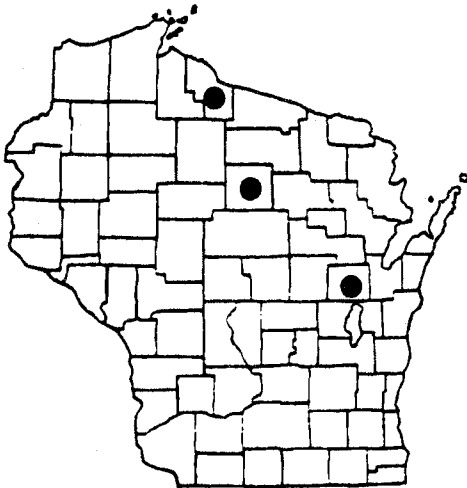
Sphagnum recurvum P.-Beauv.
13, 27, 32, 76



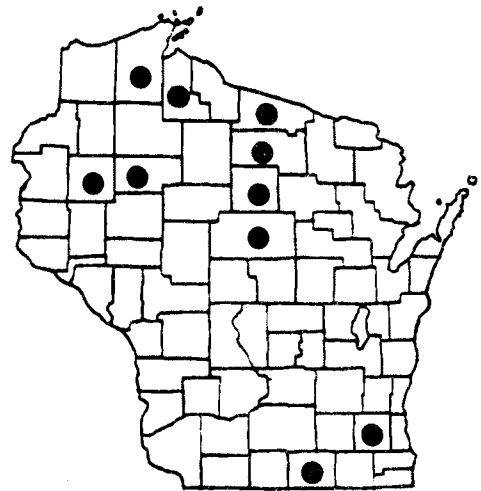
Sphagnum recurvum var. tenue
Klinggr. 27, 32, 76



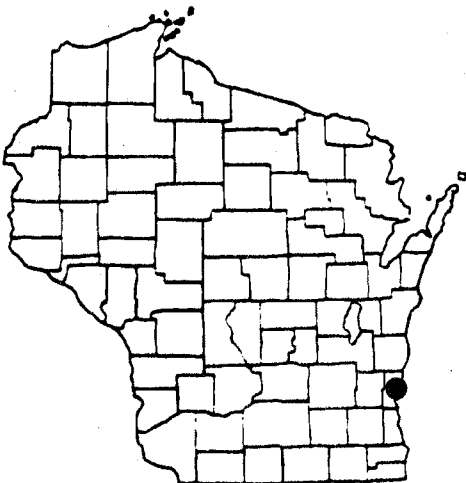
Sphagnum riparium Angstr.
32



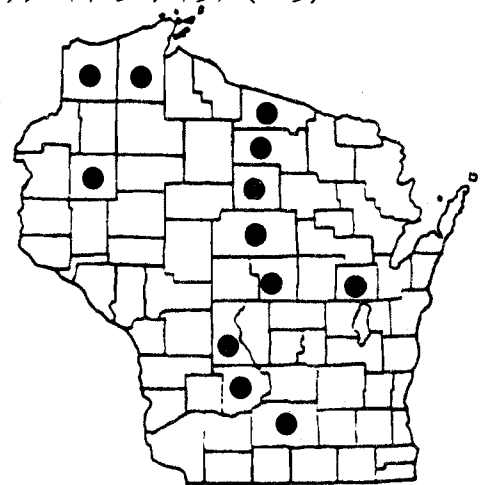
Sphagnum russowii Warnst.
27, 32



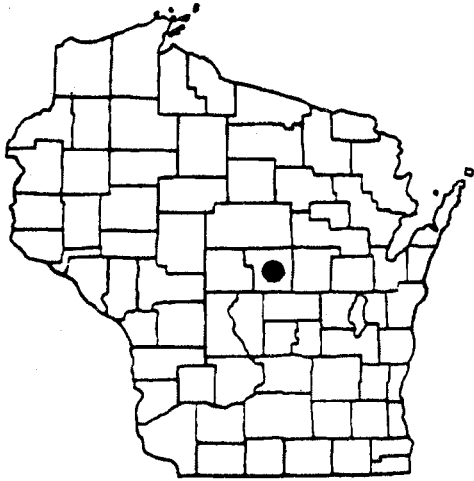
Sphagnum squarrosum Crome
(2), 27, 32, 73, (103)



Sphagnum subnitens Russ. & Warnst.
ex Warnst. 32



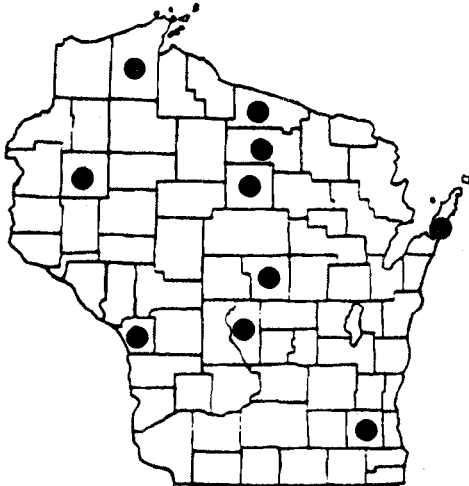
Sphagnum subsecundum Nees ex
Sturm 27, 32, 73, 76, 108



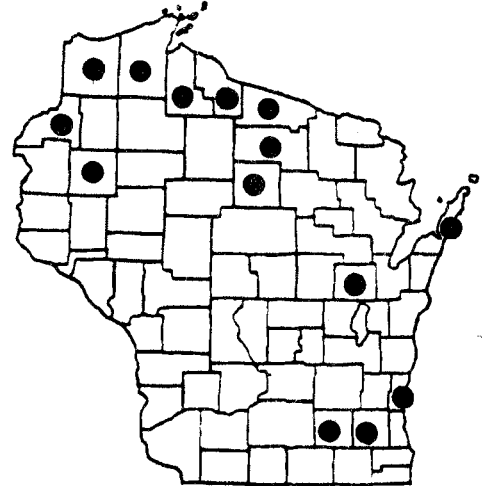
Sphagnum subsecundum var. rufescens
 (Nees, Horsch. & Sturm) Hueb.
 32



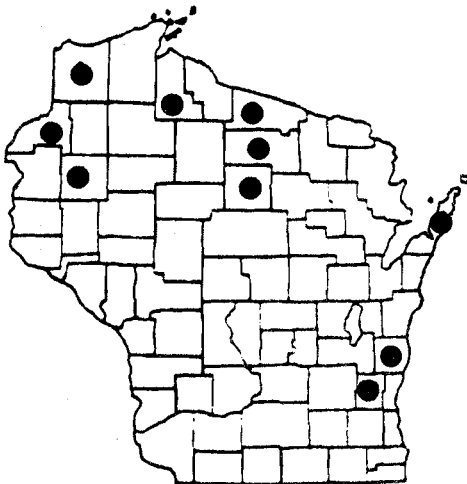
Sphagnum tenellum Ehrh. ex Hoffm.
 31, 32 Excluded



Sphagnum teres (Schimp.) Angstr.
 13, 27, 32, 76



Sphagnum warnstorffii Russ.
 13, 27, 32



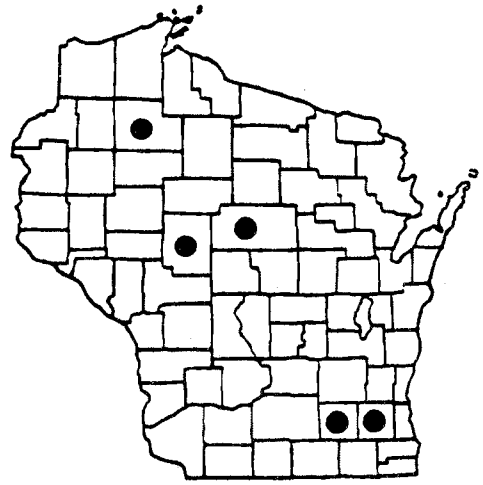
Sphagnum wulfianum Girg.
 13, 27, 32



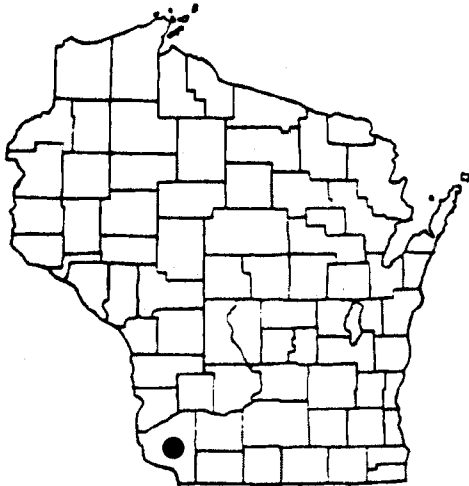
Splachnum ampullaceum Hedw.
 27, 32, (35), (84)



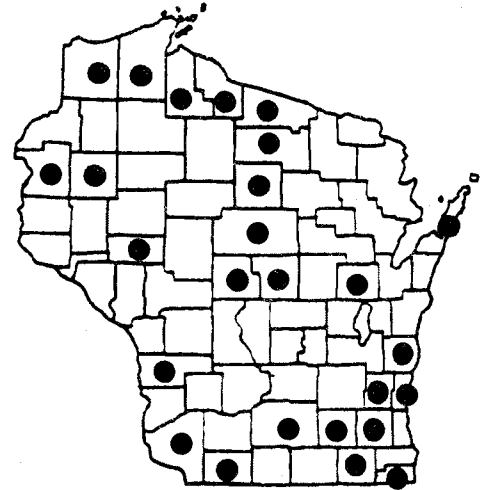
Stokesiella praelonga var. stokesii
(Turn.) Crum 32



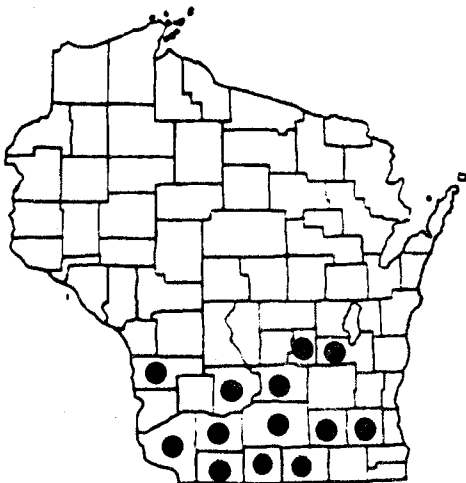
Taxiphyllum deplanatum (Bruch & Schimp. ex Sull.) Fleisch.
32, 76, 92, 102



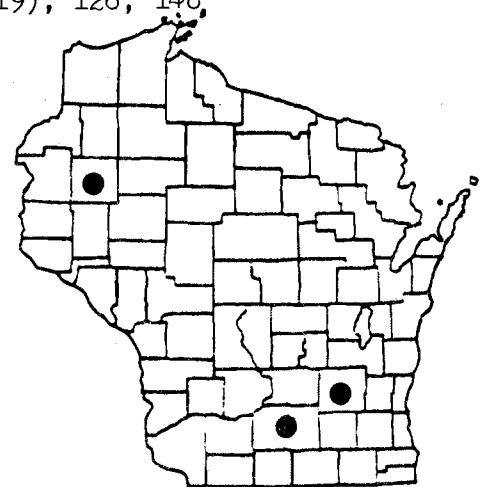
Taxiphyllum taxirameum (Mitt.) Fleisch.
32, (35), (84)



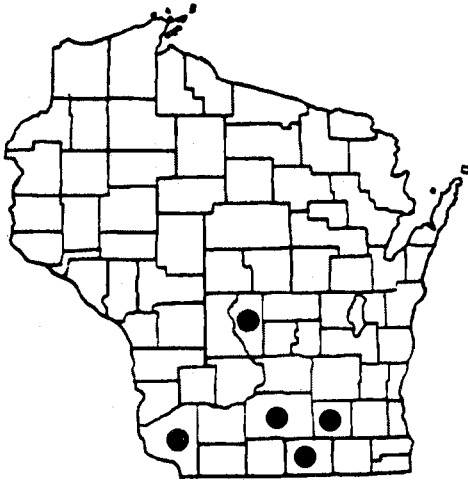
Tetraxis pellucida Hedw.
13, 32, (57), (72), 73, 75, 76, 96,
(119), 126, 148



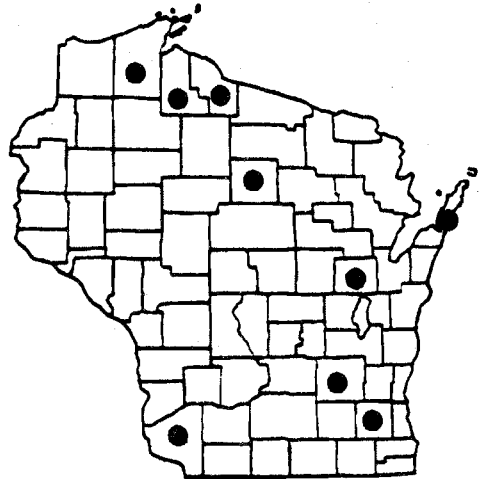
Thelia asprella Sull.
32, (52a), (56), (58), 93



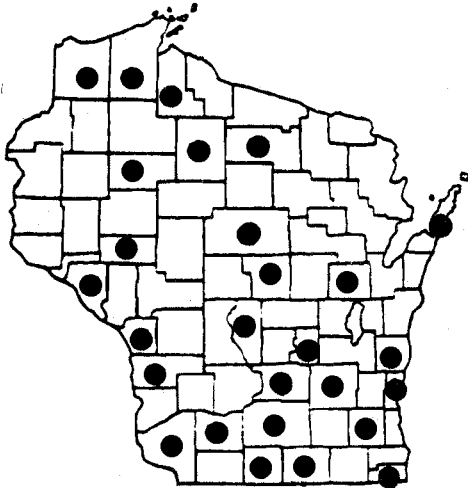
Thelia hirtella (Hedw.) Sull.
32, (52a)



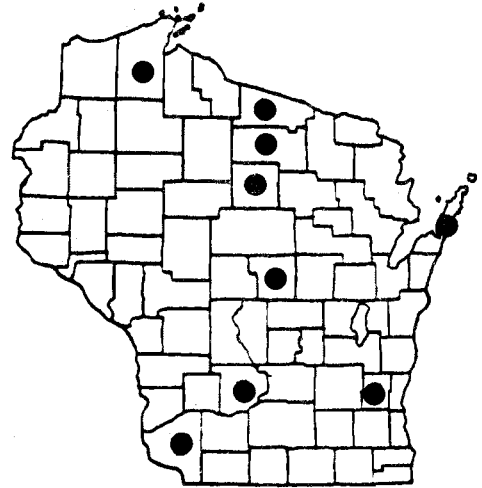
Thelia lescurii Sull.
(29), 32, (52a), (84)



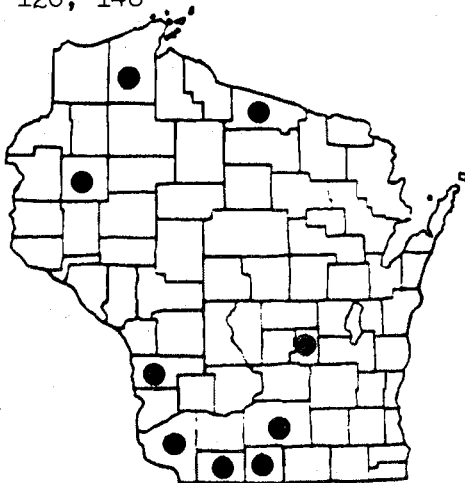
Thuidium abietinum (Brid.) B.S.G.
13, 32, (35)



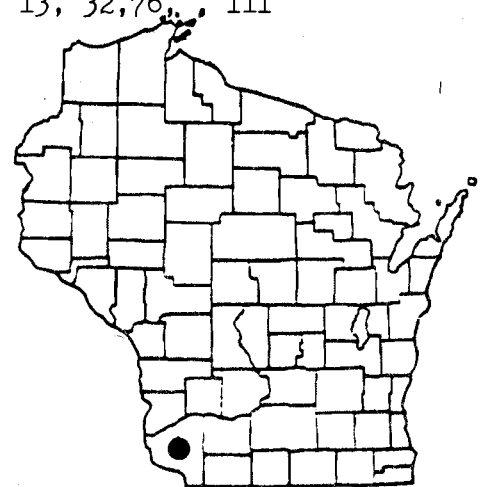
Thuidium delicatulum (Hedw.) B.S.G.
13, 32, 34, (57), 73, 75, 76, (93),
108, 126, 148



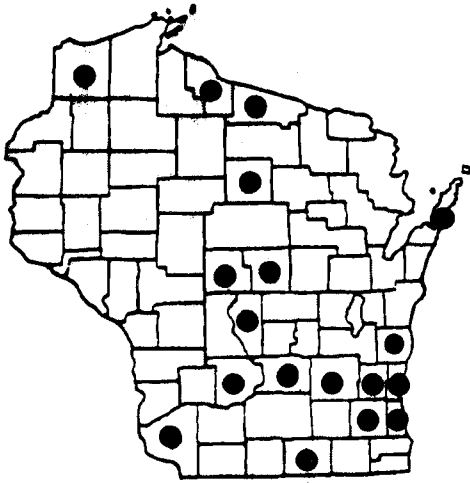
Thuidium delicatulum var. radicans
(Kindb.) Crum, Steere & Anderson
9, 13, 32, 76, 111



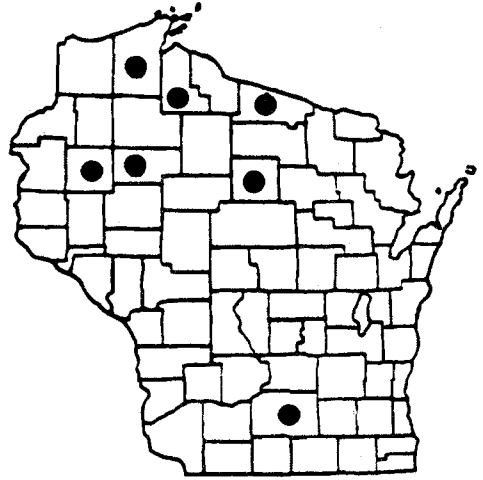
Thuidium minutulum (Hedw.) B.S.G.
32, 93



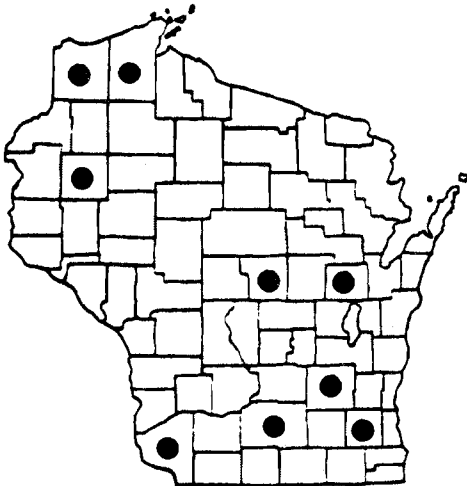
Thuidium pygmaeum B.S.G.
29, 32



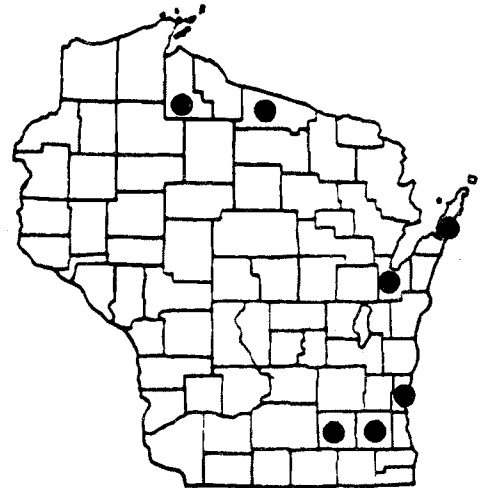
Thuidium recognitum (Hedw.) Lindb.
13, 32, 76, 126



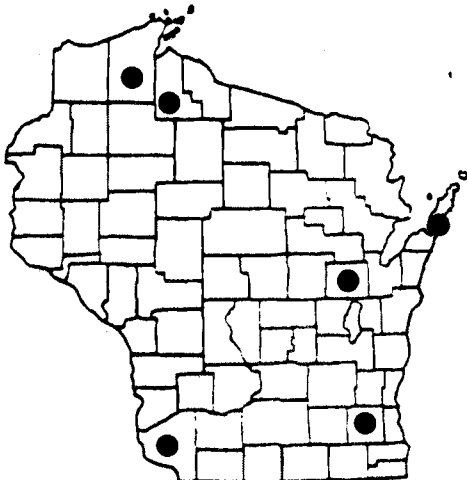
Thuidium scitum (P.-Beauv.) Aust.
(11), 32, (84)



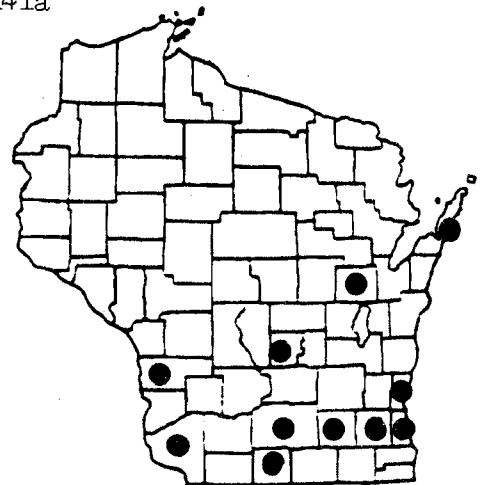
Timmia megapolitana Hedw.
32, 76, (113)



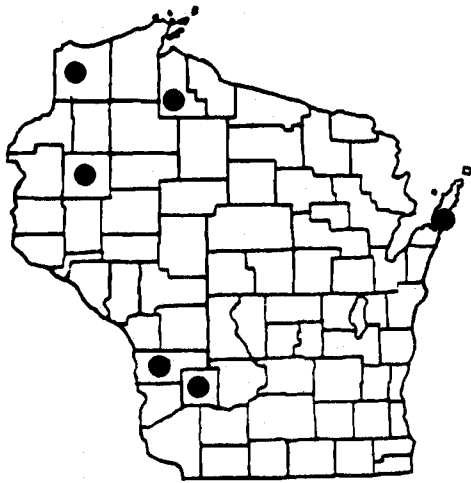
Tomenthypnum nitens (Hedw.)
Loeske 13, 29, 32, (53),
141a



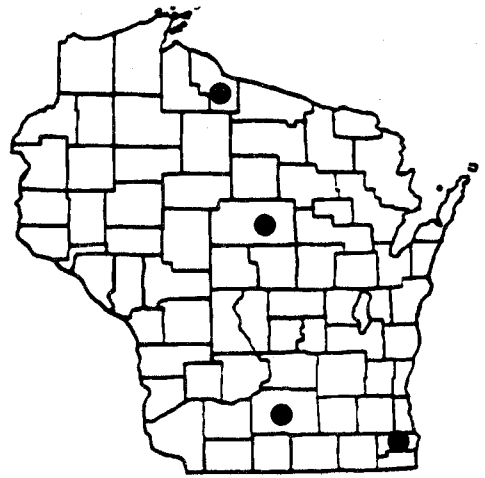
Tortella fragilis (Hook & Wils.) Limpr.
13, 31, 32



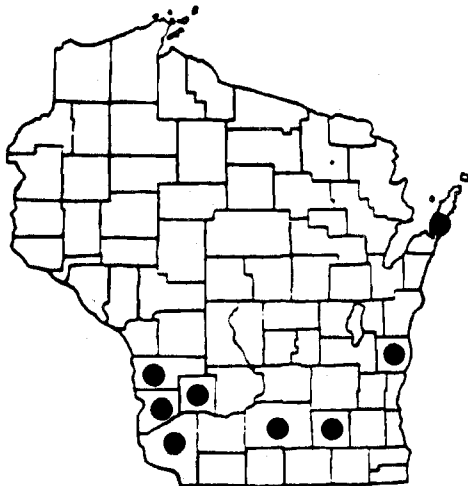
Tortella humilis (Hedw.) Jenn.
13, 32, 93



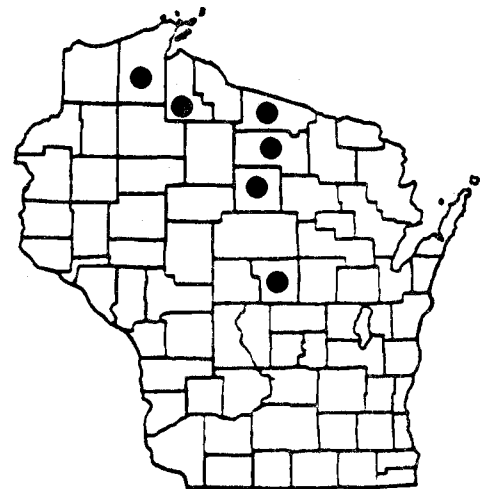
Tortella tortuosa (Turn.) Limpr.
13, 32, 69, (71), 108



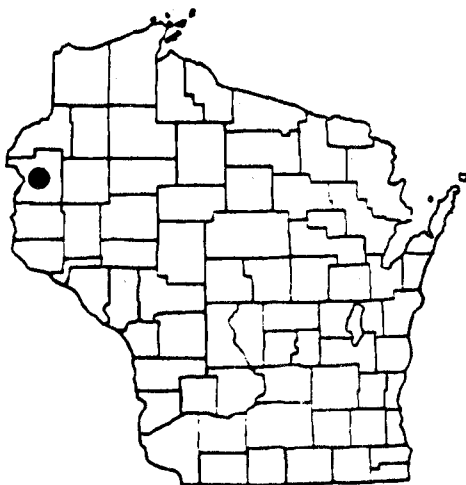
Tortula mucronifolia Schwaegr.
32



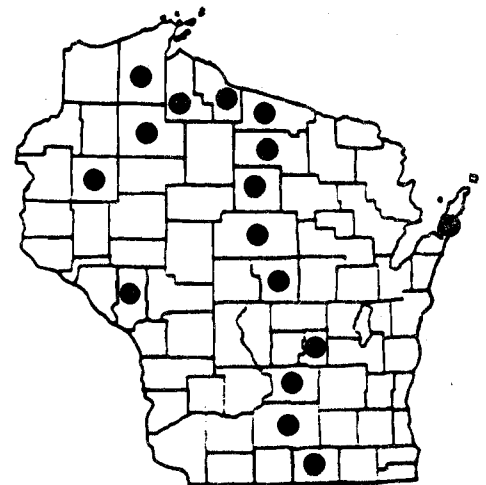
Tortula ruralis (Hedw.) Smith
13, 32, 69, (71)



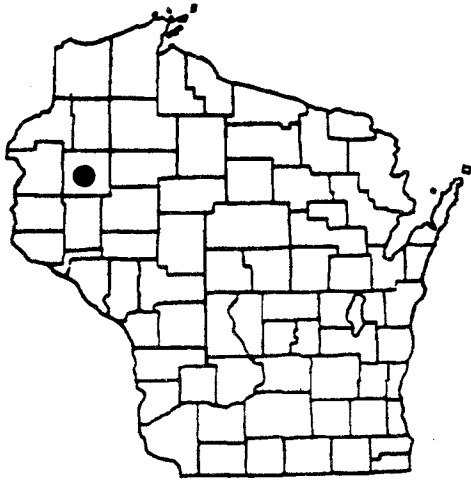
Trematodon ambiguus (Hedw.)
Hornsch. 32, 76, (113)



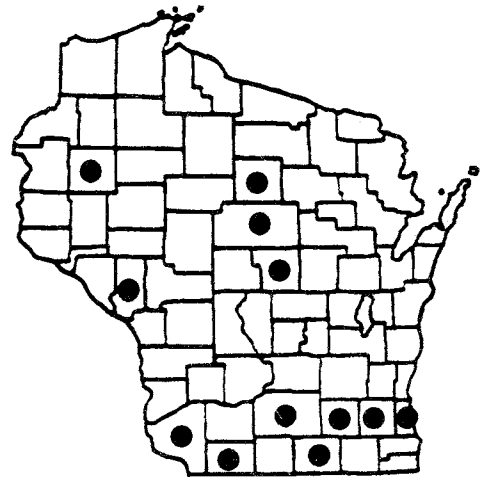
Trichostomum spirale Grout
84



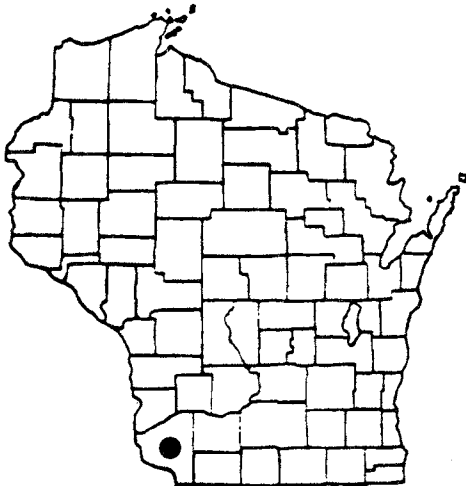
Ulota crispa (Hedw.) Brid.
13, 32, (57), (65), 76, 92, 93



Ulota coarctata (P.-Beauv.) Hamm.
29



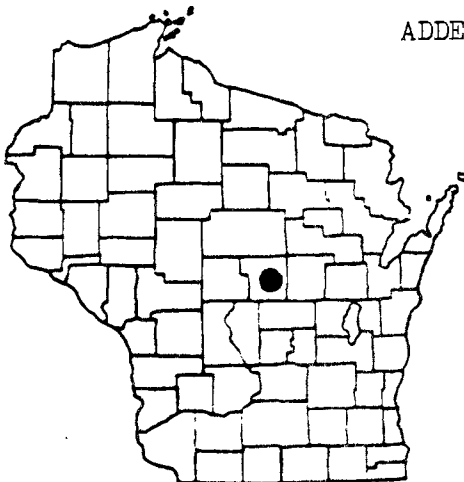
Weissia controversa Hedw.
32, 73, 76, 116



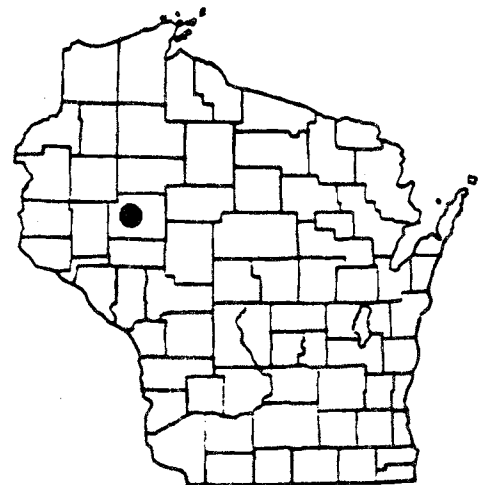
Zygodon viridissimus var. rupestris
Lindb. ex C.J. Hartm. 30,32,(113)



ADDENDUM



Brachythecium reflexum
var. pacificum Ren & Card. ex Roell
76



Pogonatum urnigerum (Hedw.) P.-Beauv.
32, 101

FOSSIL AND SUBFOSSIL MOSSES OF WISCONSIN

<i>Amblystegium serpens</i>	<i>D. vernicosus</i>
<i>Aulacomnium palustre</i>	<i>Encalypta procera</i>
<i>A. turgidum</i>	<i>Eurhynchium pulchellum</i>
<i>Brachythecium salebrosum</i>	<i>Hypnum bambergii</i>
<i>B. turgidum</i>	<i>H. pallescens</i>
<i>Bryoerythrophyllum recurvirostrum</i>	<i>Hylocomnium splendens</i>
<i>Bryum pseudotriquetrum</i>	<i>Mnium marginatum</i>
<i>B. pseudotriquetrum</i> var. <i>bimum</i>	<i>Myurella julacea</i>
<i>B. tortifolium</i>	<i>Orthotrichum obtusifolium</i>
<i>Calliergon cordifolium</i>	<i>Scorpidium scorpioides</i>
<i>C. stramineum</i>	<i>S. turgescens</i>
<i>Campylium polygamum</i>	<i>Sphagnum papillosum</i>
<i>C. stellatum</i>	<i>Tomenthypnum nitens</i>
<i>Dicranella heteromalla</i>	<i>Tortella fragilis</i>
<i>Dicranum</i> sp.	<i>T. tortuosa</i>
<i>Distichium capillaceum</i>	<i>T. inclinata</i>
<i>Ditrichum flexicaule</i>	<i>Tortula ruralis</i>
<i>Drepanocladus aduncus</i> var. <i>polycarpus</i>	<i>Thuidium</i> sp.
<i>D. revolvens</i>	<i>Thuidium abietinum</i>
<i>D. sendtneri</i>	<i>T. recognitum</i>
<i>D. uncinatus</i>	<i>Trichostomum tenuirostre</i>

PALEONTOLOGICAL REFERENCES

- Cheney, L.S. 1930. Wisconsin fossil mosses. *Bryologist* 33: 66-68.
- Cheney, L.S. 1931. More fossil mosses from Wisconsin. *Bryologist* 34: 93, 94.
- Culberson, W. L. 1955. The fossil mosses of the Two Creeks Forest Bed of Wisconsin. *Amer. Midl. Nat.* 54: 452-459.
- Miller, N. M. 1976. Studies of North American Quaternary bryophyte Subfossils. I. A new moss assemblage from the Two Creeks Forest Bed of Wisconsin. *Far. Herb. Harvard Univ. No. 9*: 21-42.
- Schweger, C.E. 1969. Pollen analysis of Iola bog and paleoecology of the Two Creeks Forest Bed, Wisconsin. *Ecol.* 50: 859-868.
- Wilson, L.R. 1932. The Two Creeks Forest Bed, Manitowoc County, Wisconsin. *Trans. Wisconsin Acad. Sci. Arts Let.* 27: 31-46.
- Wilson, L. R. 1936. Further fossil studies of the Two Creeks Forest Bed, Manitowoc County, Wisconsin. *Bull. Torrey Bot. Club* 63: 317-325.

SYNONYMS AND EXCLUDED TAXA

ANTHOCEROTAE (Hornworts)

Anthoceros laevis = *Phaeoceros laevis*

HEPATICAE (Liverworts)

Asterella hemisphaerica = *Reboulia hemisphaerica*
Calypogeja neesiana = *C. integristipula*
Cephalozia curvifolia = *Nowellia curvifolia*
Cephalozia media = *C. lunulifolia*
Cephalozia multiflora = *C. lunulifolia*
Cephalozia serriflora = *C. catenulata*
Cephaloziella bifida = *C. rubella* var. *bifida*
Cephaloziella byssacea = *C. divaricata*
Cephaloziella myriantha = *C. rubella*
Cephaloziella sullivantii = *C. rubella* var. *sullivantii*
Chiloscyphus fragilis = *C. pallescens* var. *fragilis*
Chiloscyphus rivularis = *C. polyanthos* var. *rivularis*
Diplophyllum gymnostomophilum = *Scapania gymnostophilia*
Frullania asagrayana = *F. tamarisci* subsp. *asagrayana*
Grimaldia fragrans = *Mannia fragrans*
Grimaldia pilosa = *Mannia pilosa*
Grimaldia rupestris = *Mannia triandra*
Jungermannia autumnalis = *Jamesoniella autumnalis*
Jungermannia barbata = *Barbilophozia barbata*
Jungermannia cordifolia = *J. exsertifolia* subsp. *cordifolia*
Jungermannia excisa = *Lophozia excisa*
Jungermannia exsecta = *Tritomaria exsecta*
Jungermannia incisa = *Lophozia incisa*
Jungermannia lanceolata = *J. leiantha*
Jungermannia pumila var. *rivularis* = *J. pumila*
Jungermannia schiffneri = *J. polaris*
Jungermannia schraderi = *Jamesoniella autumnalis*
Kantia trichomanis = *Calypogeia trichomanis*
Lejeunea serpyllifolia var. *americana* = *L. cavifolia*
Lophozia attenuata = *Barbilophozia attenuata*
Lophozia barbata = *Barbilophozia barbata*
Lophozia kaurini = *L. gillmani*
Lophozia longidens = *L. ascendens*
Lophozia longiflora = *L. ventricosa* var. *longiflora*
Lophozia lyoni = *Tritomaria quinquedentata*
Lophozia muelleri = *L. collaris*
Lophozia porphyroleaca = *L. guttulata*
Lophozia quinquedentata = *Tritomaria quinquedentata*
Mannia rupestris = *M. triandra*
Nicrolepidozia setacea = *Kurzia setacea*
Nardia crenulata = *Jungermannia gracillima*
Nardia hyalina = *Jungermannia hyalina*
Pallavicinia flotoniana = *Moerckia hibernica*

Pellia fabbronia = *P. endiviifolia*
Plectocolea crenuliformis = *Jungermannia crenuliformis*
Plectocolea hyalina = *Jungermannia hyalina*
Preissia commutata = *P. quadrata*
Riccardia pinquis = *Aneura pinquis*
Riccia arvensis = *R. bifurca*
Riccia crystallina = *R. cavernosa*
Scapania buchii = *S. lingulata*
Scapania dentata = *S. undulata*
Scapania lingulata = *S. curta*
Solenostoma cordifolium = *Jungermannia exsertifolia* subsp. *cordifolia*
Solenostoma crenuliformis = *Jungermannia crenuliformis*
Solenostoma gracillimum = *Jungermannia gracillima*
Solenostoma hyalinum = *Jungermannia hyalina*
Solenostoma levieri = *Jungermannia confertissima*
Solenostoma pumilum subsp. *polaris* = *Jungermannia polaris*
Solenostoma pumilum = *Jungermannia pumila*
Solenostoma schiffneri = *Jungermannia polaris*
Solenostoma sphaerocarpa = *Jungermannia sphaerocarpa*
Sphenolobus exsectiformis = *Tritomaria exsectiformia*
Sphenolobus exsectus = *Tritomaria exsecta*
Sphenolobus helleranus = *Anastrophyllum helleranum*
Sphenolobus michauxii = *Anastrophyllum michauxii*
Sphenolobus scitulus = *Tritomaria scitula*

MUSCI (Mosses)

Acaulon rufescens = *A. muticum* var. *rufescens*
Amblydon dealbatus var. *americanus* = *A. dealbatus*
Amblystegiella confervoides = *Platydictya confervoides*
Amblystegiella minutissima = *Platydictya minutissima*
Amblystegiella sprucei = *Platydictya jungermanniioides*
Amblystegiella subtilis = *Platydictya subtilis*
Amblystegium adnatum = *Homomallium adnatum*
Amblystegium americanum = *Rhynchostegiella compacta*
Amblystegium fluviatile = *Hygroamblystegium fluviatile*
Amblystegium holziveri = *Rhynchostegiella compacta*
Amblystegium trichopodium = *Leptodictyum trichopodium*
Anomobryum concinnatum = *Pohlia filiformis*
Anomobryum filiformis var. *americanum* = *Pohlia filiformis*
Anomodon tristis = *Haplomenium triste*
Atrichum crispum var. *molle* = *A. tenellum*
Atrichum undulatum var. *oerstedianum* = *A. oerstedianum*
Bartramia oederi = *Plagiopus oederi*
Brachythecium acuminatum var. *cyrtophyllum* = *B. acuminatum*
Brachythecium cyrtophyllum = *B. acuminatum*
Brachythecium flagellare = *B. plumosum*
Brachythecium flexicaule = *B. calcareum*
Brachythecium starkei = *B. curtum*
Brotherella delicatula = *B. recurvans*
Bryum bimum = *B. pseudotriquetrum* var. *bimum*
Bryum cirratum = *B. lonchocaulon*

Bryum cuspidatum = *B. creberrimum*
Bryum duvalii = *B. weigelii*
Bryum inclinatum = *B. stenotrichum*
Bryum intermedium = *B. creberrimum*
Bryum lisae var. *cuspidatum* = *B. creberrimum*
Bryum pendulum = *B. algovicum*
Bryum roseum = *Rhodobryum roseum*
Calliergonella schreberi = *Pleurozium schreberi*
Camptothecium nitens = *Tomenthypnum nitens*
Catherina = *Atrichum*
Catherina undulata = *Atrichum undulatum*
Chamberlainia acuminata = *Brachythecium acuminatum*
Chamberlainia acuminatum = *Brachythecium acuminatum*
Chamberlainia cyrtophylla = *Brachythecium acuminatum*
Cratoneuron falcatum = *C. commutatum* var. *falcatum*
 **Cylindrothecium compressum* - excluded
Cylindrothecium = *Entodon*
Cylindrothecium seductrix = *Entodon seductrix*
Desmatodon arenaceus = *D. obtusifolius*
Dichodontium pellucidum var. *fagimontanum* = *D. pellucidum*
 **Dicranella humilis* - excluded
Dicranum alatum = *D. bonjeanii*
Dicranum bergeri = *D. undulatum*
Dicranum bonjeanii var. *alatum* = *D. scoparium*
Dicranum bonjeanii var. *schlotthaurei* = *D. bonjeanii*
Dicranum condensatum = *D. sabuletorum*
Dicranum pallidum = *Ditrichum pallidum*
Dicranum rugosum = *D. polysetum*
Didymodon rescurvirostris = *Bryoerythrophyllum recurvirostris*
 **Didymodon trifarium* - excluded
Diphyscium sessile = *D. foliosum*
Ditrichum flexicaule var. *brevifolium* - excluded
Drepanocladus aduncus f. *aquaticus* = *D. aduncus*
Drepanocladus aduncus var. *kneiffii* f. *intermedius* = *D. aduncus*
Drepanocladus aduncus var. *kneiffii* f. *pseudofluitans* = *D. aduncus*
Drepanocladus aduncus var. *polycarpus* f. *gracilescens* = *D. aduncus* var. *polycarpus*
Drepanocladus aduncus var. *polycarpus* f. *uncus* = *D. aduncus* var. *polycarpus*
Drepanocladus aduncus var. *pseudofluitans* f. *paternus* = *D. aduncus*
Drepanocladus aduncus var. *pseudofluitans* = *D. aduncus*
Drepanocladus exannulatus var. *brachydictyus* = *D. exannulatus*
Drepanocladus exannulatus var. *rotae* = *D. exannulatus*
Drepanocladus exannulatus var. *rotae* f. *falcifolius* = *D. exannulatus*
Drepanocladus fluitans f. *jeanbernati* = *D. fluitans*
Drepanocladus fluitans f. *submersus* = *D. fluitans*
Drepanocladus fluitans var. *submersus* f. *filiformis* = *D. fluitans*
Drepanocladus intermedius = *D. revolvens*
Drepanocladus sendtneri f. *aristinervis* = *D. sendtneri*
Drepanocladus sendtneri f. *giganteum* = *D. sendtneri*
Drepanocladus wilsoni = *D. sendtneri*
Eurhynchium serrulatum = *Rhynchostegium serrulatum*
Eurhynchium serrulatum = *Stokesiella praelonga* var. *stokesii*
Eurhynchium stokesii = *Stokesiella praelonga* var. *stokesii*

Eurhynchium strigosum = *E. pulchellum*
Fissidens cristatus var. *winonensis* = *F. cristatus*
Fissidens julianus = *F. fontanus*
Fissidens minutulus = *F. viridulus*
Fontinalis biformis = *F. sphagnifolia*
Fontinalis antipyretica var. *gigantea* = *F. antipyretica* f. *robusta*
Fontinalis duriae = *F. hypnoides* var. *duriae*
 **Funaria microstoma* - excluded
Grimmia apocarpa var. *brunnescens* - excluded
Grimmia apocarpa var. *gracilis* = *G. apocarpa* var. *stricta*
Grimmia commutata = *G. ovalis*
Grimmia glauca = *G. laevigata*
 **Grimmia raui* - excluded
Gymnostomum calcareum = *G. aeruginosum*
Gymnostomum curvirostrum = *G. recurvirostrum*
Gymnostomum rupestre = *G. aeruginosum* \
Hedwigia ciliata f. *detorsa* = *H. ciliata*
Hedwigia ciliata f. *viridis* = *H. ciliata*
Heterophyllum haldanianum = *Callicladium haldanianum*
Homalia jamesii = *H. trichomanoides*
Hygroamblystegium orthocladon = *H. tenax*
Hygroamblystegium irriguum = *H. tenax*
Hygrophypnum palustre = *H. luridum*
Hypnum acutum = *Brachythecium salebrosum*
Hypnum arcuatum = *H. lindbergii*
Hypnum bakeri = *Calliergidium bakeri*
Hypnum chrysophyllum = *Campylium chrysophyllum*
Hypnum compactum = *Rhynchostegiella compacta*
Hypnum cordifolium = *Calliergon cordifolium*
Hypnum crista-castrensis = *Ptilium crista-castrensis*
Hypnum cupressiforme var. *ericetorum* = *H. cupressiforme*
Hypnum filicinum = *Cratoneuron filicinum*
Hypnum giganteum = *Calliergon giganteum*
Hypnum gracile = *Haplocladium microphyllum*
Hypnum hispidulum = *Campylium hispidulum*
Hypnum irriguum var. *spinifolium* = *Hygroamblystegium tenax* var. *spinifolium*
Hypnum laetum = *Brachythecium oxycladon*
Hypnum lindbergii var. *elatum* = *H. lindbergii*
Hypnum patientiae = *H. lindbergii*
Hypnum populeum = *Brachythecium populeum*
Hypnum reptile = *H. pallescens*
Hypnum schreberi = *Pleurozium schreberi*
Hypnum tamarasariscinum = *Thuidium delicatulum* var. *radicans*
Hypnum triquetrum = *Rhytidiadelphus triquetrum*
Isopterygium micans = *I. tenerum*
Leptodictyum riparium f. *flaccidum* = *L. riparium*
Leptodictyum riparium f. *fluitans* = *L. riparium*
Leptodictyum riparium f. *longifolium* = *L. riparium*
Leptodon ohioensis = *Forsstroemia ohioensis*
Leskea arenicola = *L. polycarpa*
Leskea austinii = *Lindbergia brachyptera*

Leskea nervosa = *Leskeella nervosa*
Leskea polycarpa var. *paludosa* = *L. polycarpa*
Leucobryum vulgare = *L. glaucum*
Leucodon sciuroides = *L. brachypus* var. *andrewsianus*
Lindbergia brachyptera var. *austinii* = *L. brachyptera*
Mnium affine var. *ciliare* = *M. ciliare*
Mnium affine var. *rugicum* = *M. rugicum*
Mnium rostratum = *M. longirostrum*
Mnium serratum = *M. marginatum*
Myurella careyana = *M. sibirica*
Oncophorus polycarpus = *Cynodontium strumiferum*
Oncophorus tenellus = *Cynodontium alpestre*
Oncophorus virens var. *serratus* = *O. virens*
Orthotrichum elegans = *O. speciosum* var. *elegans*
Orthotrichum lescurii = *O. strangulatum*
Phascum cuspidatum var. *americanum* = *P. cuspidatum*
 **Philonotis calcarea* - excluded
Physcomitrium kellermani = *P. pyriforme*
Physcomitrium turbinatum = *P. pyriforme*
 **Plagiobryum demissum* - excluded
 **Plagiobryum zierii* - excluded
Plagiomnium medium = *M. medium*
Plagiothecium deplantum = *Taxiphyllum deplantum*
Plagiothecium denticulatum f. *propaguliferum* = *P. denticulatum*
Plagiothecium denticulatum var. *tenellum* = *P. laetum*
Plagiothecium elegans = *Isopterygium elegans*
Plagiothecium geophilum = *Taxiphyllum taxirameum*
Plagiothecium micans = *Isopterygium tenerum*
Plagiothecium pulchellum = *Isopterygium pulchellum*
Plagiothecium roseanum = *P. cavifolium*
Plagiothecium ruthei = *P. denticulatum*
Plagiothecium seligeri = *Herzogiella seligeri*
Plagiothecium striatellum = *Herzogiella striatella*
Plagiothecium sylvaticum = *P. cavifolium*
Plagiothecium turfaceum = *Herzogiella turfacea*
 **Pogonatum alpinum* var. *septentrionale* = *P. urnigerum*
Pohlia acuminata = *P. elongata*
Pohlia albicans = *P. wahlenbergii*
 **Pohlia annotina* var. *decipiens* - excluded
Pohlia cucullata = *P. obtusifolia*
Pohlia delicatula = *P. carnea*
Pohlia pulchella = *P. lescuriana*
Polytrichum gracile = *P. longisetum*
Polytrichum juniperinum var. *offine* = *P. strictum*
Pseudocalliergon bakeri = *Calliergidium bakeri*
Pylaisia = *Pylaisiella*
Pylaisiella subdenticulata = *P. polyantha*
Rhabdoweisia denticulata = *R. crispata*
Rhabdoweisia denticulata var. *americana* = *R. crispata*
 **Rhizomnium appalachianum* -excluded
Rhizomnium perssonii = *Mnium punctatum* var. *elatum*
 **Rhizomnium punctatum* ssp. *chlorophyllosum* - excluded

Schwetschkeopsis denticulata = *S. fabronia*
Sematophyllum carolinianum = *S. demissum*
Sharpiella striatella = *Herzogiella striatella*
Sphagnum acutifolium = *S. capillaceum*
Sphagnum capillifolium = *S. capillaceum*
Sphagnum dusenii = *S. majus*
Sphagnum imbricatum var. *affine* = *S. imbricatum*
Sphagnum molle = *S. magellanian* var. *molle*
Sphagnum papillosum var. *laeve* = *S. papillosum*
Sphagnum plumulosum = *S. subnitens*
Sphagnum robustum = *S. russowii*
 **Sphagnum tenellum* - excluded
Swartzia montana = *Distichium capillaceum*
Thuidium blandowii = *Helodium blandowii*
Thuidium microphyllum = *Haplocladium microphyllum*
Thuidium philiberti = *T. delicatulum* var. *radicans*
Thuidium scitum var. *aestivale* = *T. scitum*
Thuidium virginianum = *Haplocladium virginianum*
Timmia megapolitana f. *cucullata* = *T. megapolitana*
Tortella caespitosa = *T. humilis*
Ulotia ludwigii = *U. coarctata*
Ulotia ulophylla = *U. crispa*
Webera albicans = *Pohlia wahlenbergii*
Webera carnea = *Pohlia carnea*
Webera nutans = *Pohlia nutans*
Webera sessilis = *Diphyscium foliosum*
Weisia viridula = *W. controversa*
 **Zygodon vulgaris* = *Z. viridissimus* var. *rupestris*

*These bryophytes are discussed specifically in the introduction.

PIONEER BRYOLOGISTS OF WISCONSIN

This atlas is dedicated to the pioneer bryologists of Wisconsin.

Although bryological research has been limited in Wisconsin prior to the present decade, the state has had pioneers in certain aspects of bryology. C. R. Barnes (1858-1910) wrote the first analytical keys for mosses used in North America. These keys probably stimulated bryological study for the classical manual by Lesquereux and James. J. M. Holzinger (1853-1929) and L. S. Cheney (1858-1938) were prolific collectors in the latter part of the last century, making many expeditions and canoe trips in northern Minnesota and Wisconsin. R. E. Evans (1902-1970), whose specialty was cytology and microtechniques, with an interest in the non-vascular plants, organized Cheney's "Catalogue of Wisconsin Mosses" which Cheney was preparing at the time of his death. C. E. Allen (1872-1954), a pioneer in genetics of lower plants, discovered sex chromosomes and carried on research on the numbers, behavior, and morphology of chromosomes, especially in *Sphaerocarpos* and to a lesser extent in *Polytrichum*. G. H. Conklin (1866-1940), a respected physician from Superior, worked as the Curator of the Hepatic Exchange of the Sullivant Moss Society from 1908-1932 when the herbarium grew from 1,896 packets to 10,475. R. H. True's (1866-1940) voluminous botanical articles began with the flora of the Madison area, and ranged from papers on mosses to many others in plant physiology, medicinal plants, and horticulture.

LITERATURE CITED

Numerals are to be used with the maps. Numerals such as 10a were seen late but included in alphabetical order.

1. Allen, C. E. 1904. Some hepaticae of the Apostle Islands. Trans. Wis. Acad. Sci., Arts & Let. 14 (2): 485-486.
2. Andrews, A. L. 1913. Sphagnaceae. North American Flora 15 (1): 3-31.
3. Andrews, A. L. 1916. Two extensions of range. The Bryologist 19: 37-38.
4. Andrews, A. L. 1921. Notes on North American *Sphagnum* IX. The Bryologist 24: 81-86.
5. Andrews, A. L. 1951. Studies in the Warnstorf *Sphagnum* herbarium. VI. The subgenus *Inophloea* in the western hemisphere. The Bryologist 54: 83-91.
6. Anonymous. 1908. Offerings. The Bryologist 11: 39-40.
7. Anonymous. 1909. Offerings. The Bryologist 12: 57-58, 94.
8. Anonymous. 1975. Rare plants threatened by the La Farge Dam. Botanical Club of Wis. Newsletter 7 (1): 10-16.
9. Armstrong, P. K. 1968. Cryptogam communities on quartzite of Devil's Lake, Wisconsin, M.S. thesis, Univ. of Chicago.
10. Barbour, W. C. 1903. Hepatics-*Lemanea*. The Bryologist 6: 27-32.
- 10a. Beals, E. W. 1965. Ordination of some corticolous cryptogamic communities in south-central Wisconsin. Oikos 16: 1-8.
11. Best, G. N. 1901. North American *Thuidiums*. The Bryologist 4: 70-74.
12. Black, I. H. 1941. Ecology of the Musci and Hepaticae on the quartzite and sandstone deposits in the Baraboo Hills, Sauk County, Wisconsin. B. S. thesis, Univ. of Wisconsin, Madison.
13. Bowers, F. D. 1977. Bryophytes of Door County, Wisconsin. Botanical Club of Wis. Newsletter 9 (3): 4-10.
14. Britton, E. G. 1896. The humpbacked elves. Observer 7: 105-113.
15. Britton, E. G. 1897. The sword moss. Plant World 1: 1-5.
16. Britton, E. G. 1900. Distribution of the eastern species of *Mnium*. The Bryologist 3: 4-6.
17. Britton, E. G. and R. S. Williams. 1913. Archidiaceae, Bruchiaceae, Ditrichaceae, Bryoxiphiaceae, Seligeriaceae. North American Flora 15 (1): 41-75.
18. Cardot, J. and I. Theriot. 1901. New or unrecorded mosses of North America. I. Bot. Gaz. 25: 12-24.

19. Cardot, J. and I. Theriot. 1901. New or unrecorded mosses of North America. *The Bryologist* 4: 75.
20. Cardot, J. and I. Theriot. 1904. New or unrecorded mosses of North America II. *Bot. Gaz.* 29: 363-382.
21. Cardot, J. and I. Theriot. 1905. New or unrecorded mosses of North America. *The Bryologist* 8: 8-11.
22. Castle, H. 1925. A revision of the species of *Radula* of the United States and Canada. *Bull. Torr. Bot. Club.* 52: 409-445.
23. Chamberlain, E. B. 1924. Prof. Holzinger's Musci-acrocarpi boreali Americani. *The Bryologist* 27: 20, 84.
24. Cheney, L. S. 1893. A contribution to the flora of the Lake Superior region. *Trans. Wis. Aca. Sci., Arts & Let.* 9 (1): 233-254.
25. Cheney, L. S. 1894-a. *Eustichia norvegica* in fruit. *Rev. Bryolog.* 21: 76-77.
26. Cheney, L. S. 1894-b. Fruiting *Eustichia norvegica* Brid. *Bot. Gaz.* 19: 384.
27. Cheney, L. S. 1895-a. Sphagna of the upper Wisconsin Valley. *Trans. Wis. Acad. Sci. Arts & Let.* 10: 66-68.
28. Cheney, L. S. 1895-b. Hepaticae of the Wisconsin Valley. *Trans. Wis. Acad. Sci., Arts & Let.* 10: 70-72.
29. Cheney, L. S. 1927. Notes on interesting Wisconsin mosses. *The Bryologist* 30: 104-105.
30. Cheney, L. S. 1929. Notes on interesting Wisconsin mosses, II. *The Bryologist* 32: 25-28.
31. Cheney, L. S. 1936. Notes on interesting Wisconsin mosses, III. *The Bryologist* 39: 17-18.
32. Cheney, L. S. and R. Evans. 1944. The mosses of Wisconsin. *Trans. Wisc. Acad. Sci., Arts & Let.* 36: 171-224.
33. Cheney, L. S. and R. H. True. 1893. On the flora of Madison and vicinity, a preliminary paper on the flora of Dane County, Wisconsin. *Trans. Wis. Acad. Sci., Arts & Let.* 9 (1): 45-135.
34. Cole, M. S. 1977. The ecology of lichens and bryophytes in the Kickapoo River Valley, southwestern Wisconsin. Ph. D. thesis Univ. of Wisconsin, Madison.
35. Conard, H. S. 1956. How to know the mosses and liverworts. W. C. Brown Co., Dubuque, Iowa.
36. Conklin, G. H. 1912. Brief notes on the distribution of hepaticae. *The Bryologist* 15: 11-12.
37. Conklin, G. H. 1914-a. Report of the curator of the hepatic herbarium. *The Bryologist* 17: 13-15.
38. Conklin, G. H. 1914-b. A list of hepaticae collected upon Isle Royale, Lake Superior. *The Bryologist* 17: 46-48.

39. Conklin, G. H. 1914-c. A preliminary report on a collection of hepaticae from the Duluth-Superior district. States of Minnesota and Wisconsin. Trans. Wis. Acad. Sci., Arts & Let. 17 (2): 985-1010.
40. Conklin, G. H. 1921. Report of the curator of the hepatic herbarium. The Bryologist 24: 15-16.
41. Conklin, G. H. 1922. Report of the curatory of the hepatic department (of Sullivant moss society) for 1921. The Bryologist 25:23.
42. Conklin, G. H. 1925. Report of the curator of the hepatic herbarium of the Sullivant moss society for 1924. The Bryologist 28: 13-14.
43. Conklin, G. H. 1926. Report of the curator of the hepatic department of the Sullivant moss society for 1925. The Bryologist 29: 15-16.
44. Conklin, G. H. 1927. Report of the curator of the hepatic department of the Sullivant moss society for the year 1926. The Bryologist 30: 13-14.
45. Conklin, G. H. 1929-a. Report of the curatory of the hepatic department of the Sullivant moss society for 1928. The Bryologist 32: 21-23.
46. Conklin, G. H. 1929-b. The hepaticae of Wisconsin. Trans. Wis. Acad. Sci., Arts & Let. 24: 197-247.
47. Conklin, G. H. 1942. The hepaticae of Minnesota. The Bryologist 45: 1-23.
48. Conklin, G. H. and C. C. Haynes. 1931. Report of the department of hepaticae for the years 1929 and 1930. The Bryologist 34: 10-11.
49. Costello, D. F. 1936. Tussock meadows in southeastern Wisconsin. Bot. Gaz. 97: 610-649.
50. Crum, H. A. 1956. *Lindbergia brachyptera* in North America. The Bryologist 59: 203-212.
51. Crum, H. A. 1958. *Anacamptodon* in North America. The Bryologist 61: 136-140.
- Crum, H. A., Editor. 1959. Index to the Bryologist. Vol. 1-60.
52. Crum, H. A. 1965. *Brotherella tenuirostris* in Canada. The Bryologist 68: 220-221.
- 52a. Crum, H.A. 1966. A taxonomic account of the genus *Thelia*. Nat. Mus. Can. Bull. No. 216: 123-127.
- Crum, H.A. 1975. Notes on the distribution of *Sphagnum tenellum*. Contr. Univ. Mich. Herb. 11: 85-87.
53. Crum, H.A. 1976. Mosses of the Great Lakes. Revised edition. Contr. from the Univ. of Michigan Herbarium. Vol. 10. Ann Arbor. 404 pp.
54. Crum, H.A., W. C. Steere and L. E. Anderson. 1973. A new list of mosses of North America north of Mexico. The Bryologist 76: 85-130.
55. Crundwell, A. C. and E. Nyholm. 1964. European species of *Bryum erythrocarpum* complex. Trans. Brit. Bryol. Soc. 4: 608-615.

56. Culberson, W. L. 1954. The corticolous lichen and bryophyte communities of the upland conifer hardwood forest of northern Wisconsin. Ph.D. thesis, Univ. of Wisconsin, Madison.
57. Culberson, W. L. 1955-a. The corticolous communities of lichens and bryophytes in the upland forest of northern Wisconsin. *Ecol. Mon.* 25: 215-231.
58. Culberson, W. L. 1955-b. Qualitative and quantitative studies on the distribution of corticolous lichens and bryophytes in Wisconsin. *Lloydia* 18: 25-36.
59. Curtis, J. T. 1959. The vegetation of Wisconsin. An ordination of plant communities. Univ. of Wisconsin Press, Madison. 657 pp.
60. Darlington, H. T. 1964. The mosses of Michigan. Cranbrook Institute of Science, Bloomfield Hills, Michigan. 212 pp.
61. Desmier, G. 1911. Revision of American species of *Philonotis*. *The Bryologist* 14: 44-52.
62. Evans, A. W. 1915. Notes on North American hepaticae. *The Bryologist* 18: 80-91.
63. Evans, A. W. 1917. Notes on North American hepaticae. *The Bryologist* 20: 17-28.
64. Evans, A. W. 1922. Notes on North American hepaticae. IX. *The Bryologist* 25: 25-33.
65. Evans, A. W. and G. E. Nichols. 1908. The bryophytes of Connecticut. *Conn. Geol. Nat. Hist. Surv. Bull.* 11: 1-203.
66. Evans, A. W. and G. E. Nichols. 1935. The liverwort flora of the upper Michigan Peninsula. *The Bryologist* 38: 81-91.
67. Evans, R. I. 1950. *Andreaea rupestris* in Wisconsin. *The Bryologist* 53: 232.
68. Fassett, N. C. 1930. The plants of some northeastern Wisconsin Lakes. *Trans Wis. Acad. Sci., Arts & let.* 25: 157-168.
69. Foote, K. G. 1962. Bryophyte and lichen vegetation of limestone outcrops in the driftless area of Wisconsin. M. S. thesis, Univ. of Wisconsin, Madison.
70. Foote, K. G. 1963. Bryophyte and lichen vegetation of rock outcrops in the driftless area of Wisconsin. Ph. D. thesis, Univ. of Wisconsin, Madison.
71. Foote, K. G. 1966. The vegetation of lichens and bryophytes on the limestone outcrops in the driftless area of Wisconsin. *The Bryologist* 69: 265-292.
72. Forman, R. T. T. 1962. The family Tetrarhizaceae in North America: Continental distribution and ecology. *The Bryologist* 65: 280-285.
73. Forman, R. T. T. 1965. A system for studying moss phenology. *The Bryologist* 68: 290-300.
74. Forman, R. T. T. 1967. New and uncommon Wisconsin mosses. *The Bryologist* 70: 115-117.
75. Forman, R. T. T. and J. Elliott. 1965. Mosses of Eau Claire County, Wisconsin. *The Bryologist* 68: 471-473.
76. Freckmann, S. K. 1977. Mosses of Portage County, Wisconsin. *The Bryologist* 80: 193-198.

77. Freckmann, S. K. and F. D. Bowers. 1977. New moss reports for Wisconsin. *The Bryologist* 80: 650-651.
78. Frolik, A. L. 1942. Vegetation on the peatlands of Dane County, Wisconsin. *Ecol. Mon.* 11: 650-651.
79. Frye, T. C. and L. Clark. 1937-1947. Hepaticae of North America. Univ. of Wash. Publ. Biol. 6: 1-1018.
80. Goder, H. A. 1955. A phytosociological study of *Tsuga canadensis* near the termination of its range in Wisconsin. Ph.D. thesis, Univ. of Wisconsin, Madison.
81. Gottsche, C. M., J. B. G. Lindenberg and C. G. Nees. 1844-1847. *Synopsis hepaticarum*. Hamburg. 834 pp.

Greene, H. C. and J. T. Curtis. 1955. A bibliography of Wisconsin vegetation. Mil. Public Museum, Publ. in Botany, No. 1. 42-43.
82. Grout, A. J. 1909. Notes on *Amblystegium*. *The Bryologist* 12: 95-100.
83. Grout, A. J. 1910. *Amblystegium holzingeri* - A correction. *The Bryologist* 13: 32.
84. Grout, A. J. 1928-1941. Moss flora of North America north of Mexico. Published by the author, Newfane, Vt. Vols. 1, 2, 3.
85. Grout, A. J. 1937. Some notable extensions of range of North American mosses. *The Bryologist* 40: 12.
86. Grout, A. J. 1943. North American Flora: Bryales, Fissidentaceae. *N. Y. Bot. Gard. Vol.* 15(3): 167-202.
87. Gunderson, G. O. 1970-a. The ecology of the hepatics of Brown County, Wisconsin. *The Bryologist* 73: 382-385.
88. Gunderson, G. O. 1970-b. Hepatics from eastern Wisconsin. *The Bryologist* 73: 718-719.
89. Gunderson, G. O. 1971. Hepatics from northeastern Wisconsin. *The Bryologist* 74: 204-206.
90. Gunderson, G. O. 1973. Hepatics from southeastern Wisconsin. *The Bryologist* 76: 571-572.
91. Hague, S. M. and W. H. Welch. 1951. Observations regarding scarcity of sporophytes in *Bryoxiphium norvegicum*. *The Bryologist* 54: 214-215.
92. Hale, M. E., Jr. 1952. Vertical distribution of cryptogams in a virgin forest in Wisconsin. *Ecology* 33: 398-406.
93. Hale, M. E., Jr. 1953. The role of bryophytes and lichens as community members in the upland forests of southern Wisconsin. Ph.D. thesis, Univ. of Wisconsin, Madison.
94. Hale, M. E., Jr. 1955. Phytosociology of corticolous cryptogams in the upland forests of southern Wisconsin. *Ecology* 36: 45-63.
95. Hale, T. J. 1860. Additions to the flora of Wisconsin. *Trans. Wisc. State Agri. Soc.* 1858-1859. p. 417.

96. Holzinger, J. M. 1895. A preliminary list of the mosses of Minnesota. Bull. Geol. Nat. Hist. Surv. Minn. 9: 280-294.
97. Holzinger, J. M. 1898. Some hepaticae of Minnesota. Minn. Bot. Studies 2: 460-461.
98. Holzinger, J. M. 1903. Some notes on collecting. The Bryologist 6: 37-38.
99. Holzinger, J. M. 1905. Some recently described North American Polytricha. The Bryologist 8: 29-31.
100. Holzinger, J. M. 1925. Some European mosses unrecorded from North America. The Bryologist 28: 34.
101. Ireland, R. R. 1960. Notes on *Pogonatum alpinum* in eastern United States & Canada. The Bryologist 63: 46-50.
102. Ireland, R. R. 1969. A taxonomic revision of the genus *Plagiothecium* for North America north of Mexico. Nat. Mus. Nat. Sci., Botany 1: 1-118.
103. Jennings, O. E. 1918. Notes on the mosses of northwestern Ontario I: *Sphagnum*. The Bryologist 21: 68-77.
104. Jennings, O. E. 1951. A manual of the mosses of western Pennsylvania and adjacent regions. 2nd. ed. American Midland Nat. Monograph. No. 6. Univ. of Notre Dame Press. Notre Dame, Indiana. 396 pp.
105. Juday, C. 1934. Notes and comment: The depth distribution of some aquatic plants. Ecology 15: 325.
106. Kauss, S. A. 1971. Preliminary survey of mosses of Portage County, Wisconsin. M.S.T. thesis, Univ. of Wisconsin, Stevens Point. (These are listed also in no. 76.)
107. Knight, E. G. 1883. On the fruit of *Eustichium norvegicum*, Br. Eu. The Bryologist 10: 99-100.
108. Koch, R. G. and G. J. Schroeder. 1973. The bryophytes of Amnicon Falls State Park, Douglas County, Wisconsin. Mich. Bot. 12: 212-216.
- Koponen, Timo. 1973. *Rhizomnium* (Mniaceae) in North America. Ann. Bot. Fennici 10: 1-26.
109. Kucyniak, J. 1952. The occurrence of *Grimmia teretinervis* in North America, with notes on its distribution. The Bryologist 55: 35-47.
110. Lapham, I. A. 1838. A catalogue of plants found in the vicinity of Milwaukee, Wisconsin territory. Milwaukee W. T.
111. Lapham, I. A. 1852. Fauna and Flora of Wisconsin. Trans. Wisc. State Agri. Soc. 418-419.
112. Lawton, E. 1961. A revision of the genus *Rhabdoweisia*. The Bryologist 64: 140-156.
113. Lawton, E. 1971. Moss flora of the Pacific Northwest. Hattori Bot. Lab., Nichinan, Japan.
114. Lechowicz, M. J. and J. S. Adams. 1973. Ecology of *Cladonia* lichens I. Preliminary assessment of terricolous lichen-moss communities in Ontario & Wisconsin. Can. J. Bot. 52: 55-64.

115. Lesquereux, L. and T. James. 1884. Manual of the mosses of North America. S. E. Cassino & Co., Boston. 447 pp.
116. Looman, J. 1962. Lichen and bryophyte communities in prairie grasslands, Ph.D. thesis, Univ. of Wisconsin, Madison.
117. Löve, A. and D. Löve. 1953. Studies on *Bryoxiphium*. The Bryologist 56: 183-203.
118. McLeod, D. 1846. History of Wisconsin. From its first discovery to the present time. Buffalo, N.Y.
- Miller, N., Editor. 1976. Index to the Bryologist. Vol. 61-75.
119. Newberry, G. 1976. Corticolous epiphytes in a north central Wisconsin bog. Ph.D. thesis, Univ. of Wisconsin, Madison.
120. O'Hanlon, Sr. M. E. 1920. The germination of the spores *Conocephalum conicum*. Amer. Jour. Bot. 7: 458-464.
121. O'Hanlon, Sr. M. E. 1923. The Marchantiaceae of Sinsinawa mound. Amer. Midl. Nat. 8: 222-224.
122. O'Hanlon, Sr. M. E. 1926. Germination of spores and early stages in development of gametophytes of *Marchantia polymorpha*. Bot. Gaz. 82: 215-222.
123. O'Hanlon, Sr. M. E. 1927. A study of *Preissia quadrata*. Bot. Gaz. 84: 208-218.
124. O'Hanlon, Sr. M. E. 1928. Notes on *Reboulia hemisphaerica*. The Bryologist 31: 47-51.
125. O'Hanlon, Sr. M. E. 1930. Gametophyte development in *Reboulia hemisphaerica*. Amer. Jour. Bot. 17: 765-769.
126. Reichle, D. E. and W. T. Doyle. 1965. Bryophyte succession in a northern Illinois bog. The Bryologist 68: 463-470.
127. Renauld, F. 1901. *Pseudocalliergon* Ren. A new subgenus of *Hypnum*. The Bryologist 4: 63-67.
128. Renauld, F. 1902. Note. The Bryologist 5: 64.
129. Renauld, F. and J. Cardot. 1888. New mosses of North America. I. Bot. Gaz. 13: 197-203.
130. Renauld, F. and J. Cardot. 1896. New mosses of North America. VI. Bot. Gaz. 21: 48-53.
131. Renauld, F. and J. Cardot. 1903. New mosses of North America. The Bryologist 6: 86-89.
132. Roell, J. 1893. Nordamerikanische Laubmoose, torfmoose und lebormoose. Hedwigia 32: 181-203, 260-309, 334-402.
133. Rhodes, J. W. 1933. An ecological comparison of two Wisconsin peat bogs. Bull. Pub. Mus. Milw. 7: 305-362.
134. Sayre, G. 1951. The identity of *Grimmia ovalis* and *G. commutata*. The Bryologist 54: 91-94.

135. Schoolcraft, H. R. 1834. Narrative of an expedition through the upper Mississippi to Itasca Lake, the actual source of that river in 1832. 160-165.
136. Schuster, R. M. 1952. Notes on Nearctic Hepaticae. V. The status of *Lophozia gracillima* Buch and its relationships to *Lophozia longidens*, *Lophozia porphyroleuca*, and *Sphenobolus ascendens*. The Bryologist 55: 173-185.
137. Schuster, R. M. 1953. Boreal hepaticae. A manual of the liverworts of Minnesota and adjacent regions. Amer. Midl. Nat. 49: 257-684.
138. Schuster, R. M. 1957. Boreal hepaticae. A manual of the liverworts of Minnesota and adjacent regions. II. Ecology. Amer. Midl. Nat. 57: 203-299.
139. Schuster, R. M. 1958-a. Boreal hepaticae. A manual of the liverworts of Minnesota and adjacent regions. III. Phytogeography. Amer. Midl. Nat. 59: 257-332.
140. Schuster, R. M. 1958-b. Notes on Nearctic hepaticae VI, VII. Phytogeographical relationships of critical species in Minnesota and adjacent areas of the Great Lakes. Rhodora 60: 209-234, 243-256.
141. Schuster, R. M. 1966, 1969, 1974. The Hepaticae and Anothocerotae of North America east of the hundredth meridian I: 1-802, II: 1-1062, III: 1-880. Columbia Press, N.Y.
142. Smith, G. S. 1973. Ecological studies of the surface waters of the Whitewater Creek watershed, Walworth, Rock and Jefferson Counties. Wisc. Water Res. Cen. Tech. Report Wis-WRC-73-05. 75 pp.
143. Steere, W. C. 1937. *Bryoxiphium norvegicum*, the sword moss, as a preglacial and interglacial relic. Ecology 18: 346-358.
144. Steere, W. C. 1942. Notes on Michigan bryophytes. IV. The Bryologist 45: 153-172.
145. Steil, W. N. 1923. The antherozoids of the genus *Riccardia*. Bull. Torr. Bot. Club 50: 197-201.

Stotler, R. and B. Crandall-Stotler. 1977. A checklist of the liverworts and hornworts of North America. The Bryologist 80: 405-428.
146. Taylor, A. M. 1921. Occurrence of *Funaria hygrometrica* (L.) Sibth. The Bryologist 24: 7-8.
147. Thatcher, E. P. 1949. Bryophytes of an artificially illuminated cave. The Bryologist 52: 212-214.
148. Thomson, O. and G. Foote. 1971. Field trip reports. Botanical Club of Wis. Newsletter 3(4): 7-8.
149. True, R. H. 1899. Geographical distribution of *Dicrana*. The Bryologist 2: 25-27.
150. Vitt, D. H. 1973. The family Orthotrichaceae (Musci) in North America, north of Mexico. Bryophyt. Bibliotheca I: 1-208.
151. Welch, W. H. 1948. Dimorphis in the leaves of *Fontinalis biformis* Sull. The Bryologist 51: 194-197.

152. Welch, W. H. 1960. A monograph of the Fontinalaceae. Martinus Nijhoff, The Hague. 357 pp.
- Wijk, R., W. D. Margadant, and P. A. Florschütz. 1959-1969. Index Muscorum. Vols. I-V. Utrecht.
153. Williams, R. S. 1913. North American Flora: Dicranaceae, Leucobryaceae. N. Y. Bot. Gard. Vol. 15(2): 77-166.
154. Williams, R. S. 1930. Some deep-water mosses. *The Bryologist* 33: 32.
155. Wynne, F. E. 1944. Studies in *Drepanocladus* IV. Taxonomy. *The Bryologist* 47: 147-189.
156. Wynne, F. E. 1945. Studies in *Calliergon* and related genera. *The Bryologist* 48: 131-155.