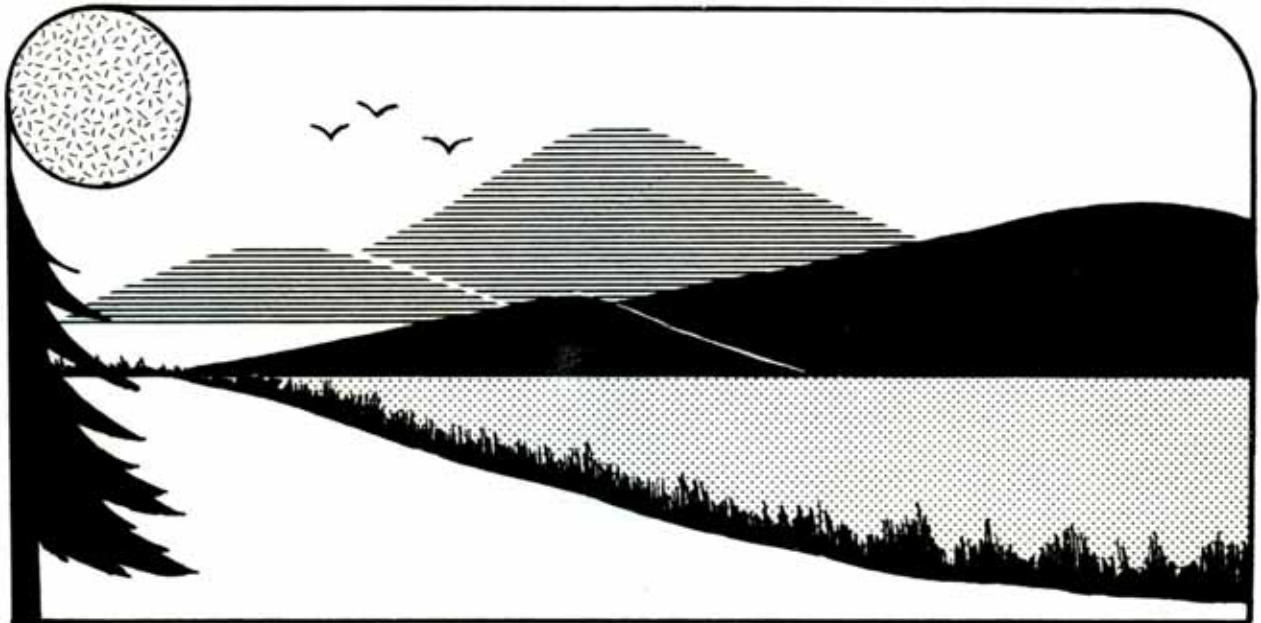


# LICHENS OF THE AIR QUALITY CLASS 1 NATIONAL PARKS

FINAL REPORT

Supported by National Park Service  
Contract CX 000 1-2-0034



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Final Report

National Park Service  
Contract CX 0001-2-0034

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## PREFACE

Under contract USDI CX 0001-2-0034 with the National Park Service, Division of Air Quality, one of the reports to be produced is a list of all known lichens from the park units with mandatory Class 1 air quality for the contiguous United States with indications of sulfur dioxide sensitivity for each species. This report includes this park lichen list with references and the appended list of North American lichens with known sulfur dioxide sensitivity. All work was done at the University of Minnesota with frequent consultation with Dr. James Bennett, NPS-AIR, Denver. Susan Miller assisted in the preparation of this report.

## INTRODUCTION

With the requirement that air quality standards must be maintained in the Class 1 units of the National Park System it is necessary to establish methods of monitoring air quality over large areas as economically as possible. Lichens have proven to be sensitive to sulfur dioxide at low levels and are useful as air quality monitoring organisms.

Lichens are composite plants composed of two different types of organisms. The lichen plant body (thallus) is made of fungi and algae living together in a symbiotic arrangement in which both partners are benefited and the composite plant body can grow in places where neither component could live alone. The thallus has no protective layer on the outside, such as the epidermis of a leaf, so the air in the thallus has free exchange with the atmosphere. Lichens are slow growing (a few millimeters per year) and remain alive for many years and so must have a habitat that is relatively undisturbed in order to survive. Lichens vary greatly in their ecological requirements but almost all of them can grow in places that only receive periodic moisture. When moisture is lacking they go dormant until the next rain or dewfall. Some species can grow in habitats with very infrequent occurrences of moisture while others need high humidity and frequent wetting in order to survive. This difference in moisture requirements is very important in the distribution of lichens.

Lichens are known to be very sensitive to low levels of many atmospheric pollutants. Some are damaged or killed by levels of sulfur

dioxide as low as 13 pg/cubic meter (annual average) or by nitrogen oxides at 3834-7668 ug/cubic meter or by other strongly oxidizing compounds such as ozone. Other lichens are less sensitive and a few can tolerate levels up to over 300 ~g/cubic meter. *The* algae of the thallus are the first to be damaged in areas with air pollution and the first indication of damage is discoloring and death of the algae, which quickly leads to the death of the lichen. Lichens are more sensitive to air pollution when they are wet and physiologically active and are least sensitive when dry. The nature of the substrate is also important in determining the sensitivity to sulfur dioxide since substrates with high pH seem to buffer the fallout and permit the persistence of more sensitive species than one would expect. After the lichen dies it disappears from the substrate within a few months to a year as it disintegrates and decomposes (Wetmore,1982).

Lichens are able to accumulate chemical elements in excess of their metabolic needs depending on the levels in the substrate and the air and, since lichens are slow growing and long living, they serve as good summarizers of the environmental conditions in which they are growing. Chemical analysis of the thallus of lichens growing in areas of high fallout of certain elements will show elevated levels in the thallus. Toxic substances (such as sulfur) are also accumulated and determination of the levels of these toxic elements can provide indications of the sub-lethal but elevated levels in the air.

By studying the lichens present in an area with reference to their sensitivities to sulfur dioxide a preliminary indication can be obtained for the air quality of the area. If many or all of the more sensitive species are absent from an area where they would be expected to occur there

is a high probability that the air quality has been degraded. If all of the expected sensitive species are present then one can assume that there is no adverse air quality impact.

In determining what lichens to expect one must refer to historical records of lichens from the area or, in the absence of any historical records, one must look at the species present in nearby areas which are ecologically similar with known clean air. Proving this ecological similarity at times can be difficult so the most accurate method is where historical records are available.

Almost none of the National Parks have lichen floras. The information that is available is scattered in regional studies and monographs but has never been brought together in one place. The specimens upon which these reports are based are scattered in any herbaria in North America and even Europe so it would be impractical to obtain park species lists by visiting all of the herbaria.

The following park lichen lists were prepared from the literature to remedy this need. Many of the names used in many of the older publications are no longer correct and many of the old species and genera have been more narrowly defined by recent workers.

This report includes the 44 park units in the conterminous United States. The lists are arranged alphabetically by park and each list includes all known reports for that park found in the literature. At the beginning of each park list the total number of known species of the lichen flora. The terms used are: Unknown-less than 5% of the potential flora; poorly known - 5%-30%; moderately known - 30%-60%; well known - 60%-90%; complete known - 90%-100%. There are only six parks in the complete category, one well-known, six moderately known, 13 poorly known and 18 unknown. Ten parks have no known lichens. Most of the available literature

has been searched including some unpublished scientific reports. The lists also include the lichens in the University of Minnesota Herbarium which has many lichens collected in the parks by the present author and exchange material received from other lichenologists. All the names in the lists have been brought up to present generally accepted nomenclature but the identifications of the publishing authors have been checked. In a few cases old nomenclaturally incorrect names have been included (enclosed in brackets) where it is impossible to determine what the correct name should be. In all cases the names reported need to be verified by study of the original collections since they may be based on misidentifications.

The references for the park records are cited after the species names. MIN HERB indicates a specimen is in the University of Minnesota herbarium.

In some of the park units no lichens have ever been reported but in Chiricahua National Monument an extensive list has been published for the surrounding area and these reports are included as potentially occurring parks. In all other parks only those species actually reported from the park are included. The extensive list of species from Isle Royale National Park probably includes a number of misidentifications.

Those species originally described from material collected in the park (type specimens) are preceded by an asterisk. The type specimens of a species is the original material used in describing a species new to science. A type locality is the place where the type specimen of a species was collected. Some of the parks are type localities of several species. These type specimens are very important to science because when there are questions about the application of a name to a plant the type specimen must



be studied. Sometimes when the type specimen has been destroyed or when the biological variation in a species needs to be studied the type locality is visited for more material of that species. For this reason type localities are very important and need to be preserved. The number of type specimens from each park, if any, is indicated at the top of the park list. Some of the parks that are especially rich in type localities are Great Smoky Mountains with 26, Mount Rainer with six, Rocky Mountains with six and Crater Lake with four. After each park are listed all of the cited references for that park, including a few that were not seen when compiling the species list.

Sulfur dioxide sensitivity categories have been indicated where this is known. The appendix lists all North American species with known sensitivities arranged by genus and species and by sensitivity categories. In the park lists "S" indicates a sensitive species, "I" indicates an intermediate species and "T" indicates a tolerant species. Sensitive species are those which are present below 50ug per cubic meter (average annual levels), intermediate species are present where levels are between 50ug per cubic meter and 100ug per cubic meter. S-I and I-T are intermediate between the three main categories. Refer to Appendix for methods of establishing these sensitivities.

LICHENS OF THE NATIONAL PARKS

ACAD - ACADIA NATIONAL PARK

Total number of species 136 : Moderately well known

- I Alectoria sarmentosa (Ach.) Ach.: Davis, 1964b, MIN HERB  
Anaptychia palmulati (Michx.) Vain.: HIN HERB  
Arthonia radiata (Pers.) Ach.: Plitt & Pessin, 1924  
Aspiciliab..ibbosa (Ach.) KClrb.: Plitt, 1927  
S Bryoria furcellata (Fr.) Brodo & Hawksw.: Davis, 1964b,  
MIN HERB  
I Bryoria fuscescens (Gyeln.) Brodo & Hawksw.: Brodo &  
Hawksworth, 1977  
Bryoria nadvornikiana (Gyeln.) Brodo & Hawksw.: Davis,  
1964b  
S Bryoria trichodes (Michx.) Brodo & Hawksw.: MIN HERB  
S Bryoria trichodes (Michx.) Brodo & Hawksw. subsp.  
trichodes: Brodo & Hawksworth, 1977  
Buellia disciformis (Fr.) Mudd: Plitt & Pessin, 1924,  
Imshaug, 1951  
I Buellia stillingiana J. Stein.: Imshaug, 1951  
S-1 Candelaria concolor (Dicks.) Stein: Plitt & Pessin, 1924,  
Plitt, 1927  
Catillaria sp.: Davis, 1964b  
S-1 Cetraria ciliaris Ach.: Davis, 1964b  
Cetraria halei W. Culb. & C. Culb.: MIN HERB  
Cetraria hepatizon (Ach.) Vain.: MIN HERB  
I Cetraria pinastri (Scop.) S. Gray: MIN HERB  
I Cetraria sepincola (Ehrh.) Ach.: MIN HERB  
Cetrelia cetrarioides (Del. ex Duby) W. Culb. & C. Culb.:  
MIN HERB  
Cetrelia chicitae (W. Culb.) W. Culb. & C. Culb.: MIN  
HERB  
Cetrelia olivetorum (Nyl.) W. Culb. & C. Culb.: MIN HERB  
Chaenotheca chrysocephala (Turn.) Th. Fr.: Davis, 1964b  
Cladonia arbuscula (Wallr.) Rabenh.: Davis, 1964a, MIN  
HERB  
Cladonia boryi Tuck.: MIN HERB  
Clactonia carassensis Vain.: MIN HERB  
Cladonia cariosa (Ach.) Spreng.: Riddle, 1909  
Cladonia caroliniana Schwein. ex Tuck.: Davis, 1964a  
Cladonia cenotea (Ach.) Schaer.: MIN HERB  
Cladonia chlorophaea (Florke ex Somm.) Spreng.: Davis,  
1964a  
I Cladonia coniocraea (Florke) Spreng.: Davis, 1964a, MIN  
HERB  
Cladonia crispata (Ach.) Flot.: MIN HERB  
I Cladonia cristatella Tuck.: Plitt, 1927, Davis, 1964a,  
MIN HERB  
Cladonia elongata (Jacq.) Hoffm.: MIN HERB  
Cladonia furcata (Huds.) Schrad.: Davis, 1964a, MIN HERB  
Cladonia gracilis (L.) Willd.: Davis, 1964a, MIN HERB  
Cla doni a grayi Herr. & Sandst.: MIN HERB  
Cladonia maxima (Asah.) Ahti: MIN HERB

- Cladonia ochrochlora Florke: MIN HERB  
Cladonia pyxidata (L.) Hoffm.: MIN HERB  
Cladonia rangiferina (L.) Wigg.: Plitt, 1927, Davis,  
1964a, HIN HERB  
Cladonia sguamosa (Scop.) Hoffm.: Davis, 1964a, MIN HERB  
Cladonia stellaris (Opiz) Pouz. & Vezda: MIN HERB  
Cladonia terrae-novae Ahti: MIN HERB  
Cladonia turgida (Ehrh.) Hoffm.: Davis, 1964a, MIN HERB  
Cladonia uncialis (L.) Wigg.: Davis, 1964a, MIN HERB  
Conotrema urceolatum (Ach.) Tuck.: Plitt & Pessin, 1924  
Dimerella diluta (Pers.) Trev.: Davis, 1964a  
I Evernia mesomorpha Nyl.: Davis, 1964b, MIN HERB  
Haematomma elatinum (Ach.) Mass.: Culberson, 1963, MIN  
HERB  
I Haematomma ochrophaeum (Tuck.) Mass.: Davis, 1964b, MIN  
HERB  
Hypogymnia enteromorpha (Ach.) Nyl.: Davis 1964b, MIN  
HERB  
Hypogymnia krogii Ohls.: MIN HERB  
I Hypogymnia physodes (L.) IV.\vats.: Plitt & Pessin, 1924,  
Berry, 1941, Davis, 1964a, MIN HERB  
S Hypogymnia tubulosa (Schaer.) Hav.: MIN HERB  
Lasallia papulosa (Ach.) Llano: Llano, 1950, MIN HERB  
Lasallia pensylvanica (Hoffm.) Llano: Llano, 1950, MIN  
HERB  
Lecanora caesiorubella subsp. caesiorubella Ach.: Imshaug  
& Brodo, 1966  
I Lecanora pallida (Schreb.) Rabenh.: Plitt & Pessin, 1924  
Lecanora Dulicaris (Pers.) Ach.: MIN HERB  
I Lecanora subfusca (L.) Ach.: Davis, 1964b  
I Lecanora symmictera Nyl.: MIN HERB  
Lecanora varia (Ehrh.) Ach.: Plitt & Pessin, 1924  
Lecidea sp.: Davis 1964a  
S Lecidea vernalis (L.) Ach.: Plitt & Pessin, 1924  
Lepraria finkii (B. de Lesd. in Hue) ined.: MIN HERB  
Lepraria membranacea (Dicks.) Vain.: Davis, 1964b  
[Leptogium tremelloides (L.) S. Gray: Plitt & Pessin, 1924  
misident.]  
Lopadium pezizoideum (Ach.) Korb. Davis, 1964b  
S Lobaria pulmonaria (L.) Hoffm.: Plitt & Pessin,  
1924, Davis, 1964b, MIN HERB  
Lobaria guercizans Michx.: Jordan, 1973  
Micarea nitschkeana (Lahm ex Rabenh.) Harm.: MIN HERB  
I Mycoblastus affinis (Schaer.) Schauer: MIN HERB  
I Mycoblastus sanguinarius (L.) Norm.: Davis, 1964b, MIN  
HERB  
I Nephroma laevigatum Ach.: Wetmore, 1960, MIN HERB  
Ochrolechia pallescens (L.) Hass.: Davis, 1964b  
I Parmelia caperata (L.) Ach.: Plitt & Pessin, 1924, Davis,  
1964b, MIN HERB  
Parmelia centrifuga (L.) Ach.: MIN HERB  
[Parmelia conspersa (Ehrh. ex Ach.) Ach.: Plitt, 1927,  
Berry, 1941 misident.]  
Parmelia crinita Ach.: Davis, 1964b, Hale, 1965  
Parmelia galbina Ach.: Plitt & Pessin, 1924

- I Parmelia rudecta Ach.: Plitt & Pessin, 1924, Davis,  
1964b, MIN HERB
- I Parmelia saxatilis (L.) Ach.: Plitt & Pessin, 1924,  
Berry, 1941, Davis, 1964b, MIN HERB
- I-T Parmelia subargentifera Nyl.: Plitt & Pessin, 1924
- I-T Parmelia sulcata Tayl.: Plitt & Pessin, 1924, Davis,  
1964b
- I Parmeliopsis aleurites (Ach.) Nyl.: MIN HERB
- I Parmeliopsis ambigua var. capitata Meyer ined.:  
Meyer, 1979, MIN HERB
- Peltigera apthosa (L.) Willd .: Thomson, 1950
- Peltigera canina (L.) Willd.: MIN HERB
- Peltigera canina var. rufescens (Weis) Mudd: Thomson,  
1950
- Peltigera polydactyla (Neck.) Hoffm.: Thomson, 1950,  
Davis, 1964a
- I Pertusaria amara(Ach.).Nyl.: Plitt & Pessin, 1924, Davis,  
1964b, Dibben, 1980, MIN HERB
- Pertusaria laevigata (Nyl.) Arn.: Davis, 1964b
- Pertusaria macounii (Lamb) Dibb.: Dibben, 1980
- Pertusaria multipunctoides Dibb.: Plitt & Pessin, 1924
- Pertusaria ophthalmiza (Nyl.) Nyl.: Dibben, 1980
- Pertusaria rubefacta Erichs.: Dibben, 1980
- Pertusaria trachythallina Erichs.: Dibben, 1980
- Pertusaria velata (Turn.) Nyl.: Dibben, 1980
- Phaeophyscia rubropulchra (Degel.) Essl.: Thomson, 1963
- I Physcia adscendens (Th. Fr.) Oliv.: Thomson, 1963, MIN  
HERB
- I Physcia aipolia (Ehrh.) Hampe: Thomson, 1963
- I Physcia stellaris (L.) Nyl.: Plitt & Pessin, 1924,  
Thomson, 1963
- Physcia subtilis Degel.: Thomson, 1963
- Pilophorus cereolus (Ach.) Th. Fr.: Yoshimura & Sharp,  
1968b
- I Platismatia glauca (L.) W. Culb. & C. Culb.: Davis,  
1964b, Culberson & Culberson, 1968, MIN HERB
- Platismatia tuckermanii (Oakes) W. Culb. & C. Culb.:  
Davis, 1964b, Culberson & Culberson, 1968, MIN HERB
- Pseudevernia cladonia (Tuck.) Hale & W. Culb.: Davis,  
1964b, MIN HERB
- Pseudevernia consocians (Vain.) Hale & W. Culb.: Davis,  
1964b
- Pseudocyphellaria crocata (L.) Vain.: MIN HERB
- Pycnothelia papillaria (Ehrh.) Duf.: MIN HERB
- I Pyrenula nitida (Weig.) Ach.: Plitt & Pessin, 1924
- S Ramalina calicaris var. canaliculata Fr.: Plitt & Pessin,  
1924
- S Ramalina farinacea (L.) Ach.: Plitt & Pessin, 1924, MIN  
HERB
- S Ramalina pollinaria (Westr.) Ach.: MIN HERB
- Ramalina roesleri (Hochst.) Nyl.: Davis, 1964b, MIN HERB
- Rhizocarpon petraeum (Wulf.) Nass.: Plitt, 1927
- Stereocaulon dactylophyllum FlHrke: Riddle, 1910
- Stereocaulon paschale (L.) Hoffm.: Riddle, 1910, MIN HERB
- Stereocaulon pileatum Ach.: Riddle, 1910

- Stereocaulon tomentosum Fr.: Riddle, 1910  
Umbilicaria deusta (L.) Baumg.: Llano, 1950  
Umbilicaria 1!18mmulata (Ach.) Tuck.: Llano, 1950, MIN HERB  
Umbilicaria muehlenbergii (Ach.) Tuck.: Llano, 1950, MIN  
 HERB  
Umbilicaria vellea (L.) Ach.: MIN HERB  
 S Usnea filipendula Stirt.: Davis, 1964b, MIN HERB  
 S Usnea florida (L.) Wigg.: Plitt & Pessin, 1924  
 S-1 Usnea hirta (L.) Higg.: Plitt & Pessin, 1924  
Usnea longissima Ach.: MIN HERB  
Usnea merrillii; Mot.: MIN HERB  
Usnea mutabilis Stirt.: Davis, 1964b  
Usnea rubicunda Stirt.: Davis, 1964b  
Usnea sp.: Davis, 1964b  
Usnea strigosa (Ach.) A. Eat.: Davis, 1964b  
Usnea subfloridana Stirt.: Davis, 1964b  
Usnea trichodea Ach.: Davis, 1964b  
 I Xanthoria parietina (L.) Th. Fr.: Plitt & Pessin, 1924

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ARCH - ARCHES NATIONAL PARK

Total number of species = 12 : Poorly known

- Acarosnora fuscata (Schrad.) ARN.: MIN HERB  
Acarosnora Fuscescens Magn.: MIN HERB  
Acarosnora Strigata (Nyl.) Jatta: MIN HERB  
Caloplaca arizonica Magn.: MIN HERB  
Caloplaca decipiens (Arn.) J. Stein.: MIN HERB  
Candelariella rosulans (Mull. Arg.) Zahlbr.: HIN HERB  
Dermatocarpon miniatum (L.) Mann: MIN HERB  
Diploschistes gvpsaceus (Ach.) Nyl.: MIN HERB  
I Phaeophyscia orbicularis (Neck.) Moberg: MIN HERB  
Staurothele clopima (Walenb. ex Ach.) Th. Fr.: MIN HERB  
Staurothele monicae (Zahlbr.) ined.: MIN HERB  
Staurothele sessilis Magn.: MIN HERB  
Toninia tristis (Th. Fr.) Th. Fr.: MIN HERB

ARCH REFERENCES

BADL - BADLANDS NATIONAL PARK

Total number of species = 4 : Unknown

Caloplaca decipiens (Arn.) J. Stein.: MIN HERB

Lecidella goniophila (Flörke) Krb.: MIN HERB

Staurothele clopima (Walenb. ex Ach.) Th. Fr.: MIN HERB

Rinodina violascens Magn.: Anderson, 1962.

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BAND - BANDELIER NATIONAL MONUMENT

No lichens reported : Unknown

BIBE - BIG BEND NATIONAL PARK

Total number of species = 201 : Completely known

1 species with type locality in the park

- Acarospora albida Magn.: MIN HERB  
Acarospora americana Magn.: MIN HERB  
Acarospora chlorophana (Wahlenb. ex Ach.) Mass.: MIN HERB  
Acarospora fuscata (Schrad.) Arn.: MIN HERB  
Acarospora radicata Magn.: MIN HERB  
Acarospora schleicheri (Ach.) Mass.: MIN HERB  
Acarospora strigata (Nyl.) Jatta: MIN HERB  
Aspicilia caesiocinerea (Nyl. ex Malbr.) Arn.: MIN HERB  
Aspicilia calcarea (L.) KHRb.: MIN HERB  
Aspicilia cinerea (L.) KHRb.: MIN HERB  
Bacidia umbrina (Ach.) Bausch: MIN HERB  
Buellia aethalea (Ach.) Th. Fr.: MIN HERB  
Buellia lacteoides B. de Lesd.: MIN HERB  
Buellia novomexicana B. de Lesd.: MIN HERB  
T Buellia punctata (Hoffm.) Mass.: MIN HERB  
Buellia spuria (Schaer.) Anzi: MIN HERB  
Buellia stellulata (Tayl.) Mudd: MIN HERB  
Buellia zahlbruckneri J. Stein.: MIN HERB  
Calicium abietinum Pers.: MIN HERB  
Calicium trabinellum (Ach.) Ach.: MIN HERB  
Caloplaca approximata (Lynge) Magn.: MIN HERB  
Caloplaca atroalba (Tuck.) Zahlbr.: MIN HERB  
Caloplaca chrysothalma Dege.: MIN HERB  
Caloplaca cinnabarina (Ach.) Zahlbr.: MIN HERB  
Caloplaca eugyra (Tuck.) Zahlbr.: MIN HERB  
S Caloplaca flavovirescens (Wulf.) Dalla Torre & Sarnth.:  
MIN HERB  
Caloplaca galactophylla (Tuck.) Zahlbr.: MIN HERB  
Caloplaca lobulata (Flörke) Hellb.: MIN HERB  
Caloplaca microphyllina (Tuck.) Hasse: MIN HERB  
Caloplaca rubelliana (Ach.) Lojka: MIN HERB  
Caloplaca saxicola (Hoffm.) Nordin: MIN HERB  
Caloplaca squamosa B. de Lesd.: MIN HERB  
S-I Candelaria concolor (Dicks.) B. Stein.: Wetmore, 1976,  
MIN HERB  
Candelaria fibrosa (Fr.) Müll. Arg.: Wetmore, 1976,  
MIN HERB  
Candelaria sp.: Wetmore, 1976  
Candelariella aurella (Hoffm.) Zahlbr.: MIN HERB  
Candelariella efflorescens Harris & Buck.: MIN HERB  
Candelariella rosulans (Müll. Arg.) Zahlbr.: MIN HERB  
Candelina submexicana (B. de Lesd.) Poelt: Wetmore, 1976,  
MIN HERB  
Cetraria coralligera (W. Web.) Hale: Esslinger, 1973, Wetmore,  
1976, MIN HERB  
Cetraria fendleri (Nyl.) Tuck.: Esslinger, 1973, Wetmore, 1976,  
MIN HERB  
Cladonia bacillaris (Ach.) Nyl.: Wetmore, 1976, MIN HERB

Cladonia balfourii Cromb.: Wetmore, 1976, MIN HERB  
Cladonia chlorophaea (Flörke ex Somm.) Spreng.: Wetmore,  
1976, MIN HERB.  
Cladonia pyxidata (L.) Hoffm.: Wetmore, 1976, MIN HERB  
Coccocarpia cronia (Tuck.) Vain.: Wetmore, 1976) MIN HERB  
Collema coccophorum Tuck.: Degelius, 1974, Wetmore, 1976,  
MIN HERB  
Collema conglomeratum Hoffm.: Wetmore, 1976, MIN HERB  
Collema furfuraceum (Arn.) Du Rietz.: Wetmore, 1976, MIN  
HERB  
Collema tenax (Sw.) Ach.: Wetmore, 1976, MIN HERB  
Collema tuniforme (Ach.) Ach.: Wetmore, 1976, MIN HERB  
I [Dermatocarpon hepaticum (Ach.) Th. Fr.: Wetmore, 1976 =  
Dermatocarpon lachneum]  
Dermatocarpon lachneum (Ach.) A. L. Sm.: MIN HERB  
Dermatocarpon miniatum (L.) Mann.: Wetmore, 1976, MIN  
HERB  
Dermatocarpon moulinsii (Mont.) Zahlbr.: Wetmore, 1976,  
MIN HERB  
Dermatocarpon tuckermanii (Rav.) Zahlbr.: Wetmore, 1976,  
MIN HERB  
Dimelaena oreina (Ach.) Norm.: Sheard, 1974, Sheard,  
1977, MIN HERB  
Diploschistes scruposus (Schreb.) Norm.: MIN HERB  
Dirinaria aspera (Magn.) Awasthi.: Wetmore, 1976, MIN  
HERB  
Dirinaria frostii (Tuck.) Hale & W. Culb.: Wetmore, 1976,  
MIN HERB  
Endocarpon pusillum Hedw.: MIN HERB  
Gonohymenia ~: Wetmore, 1976, MIN HERB  
Gonohymenia cribillifera (Nyl.) Henss.: Wetmore, 1976,  
MIN HERB  
Haematomma subpunicum (Müll. Arg.) B. de Lesd.: Culberson,  
1963, MIN HERB  
Heppia lutosa (Ach.) Nyl.: Wetmore, 1970, Wetmore, 1976,  
MIN HERB  
Heterodermia appalachensis (Kurok.) W. Culb.: Wetmore, 1976,  
Wetmore, 1981, MIN HERB  
Heterodermia diademata (Tayl.) Awas.: Wetmore, 1976, Wetmore,  
1981, MIN HERB  
Heterodermia domingensis (Ach.) Trev.: Wetmore, 1976, MIN  
HERB  
Heterodermia granulifera (Ach.) W. Culb.: Wetmore, 1976,  
MIN HERB  
Heterodermia leucomela (L.) Poelt.: Wetmore, 1976, MIN HERB  
Heterodermia rugulosa (Kurok.) Wetm.: Wetmore, 1976, Wetmore,  
1981, MIN HERB  
I Hyperphyscia adglutinata (Flörke) Mayrh. & Poelt: Wetmore,  
1976, MIN HERB  
Hyperphyscia syncolla (Tuck. ex Nyl.) ined.: Wetmore,  
1976, MIN HERB  
Lasallia papulosa (Ach.) Llano: Wetmore, 1976, MIN HERB  
Lecania erysibe (Ach.) Mudd: MIN HERB  
Lecanora atra (Huds.) Ach.: MIN HERB

- Lecanora caesiorubella Ach.: MIN HERB  
Lecanora cenisia Ach.: MIN HERB  
I Lecanora chlarotera Nyl.: MIN HERB  
Lecanora chlorolepro~a (Wain.) Magn.: MIN HERB  
Lecanora frustulosa (Dicks.) Ach.: MIN HERB  
Lecanora garovaglii (KBrb.) Zahlbr.: MIN HERB  
T Lecanora muralis (Schreb.) Rabenh.: MIN HERB  
Lecanora rupicola (L.) Zahlbr.: MIN HERB  
Lecidea anthracophila Nyl.: MIN HERB  
Lecidea crenata (Tayl.) Stizenb.: MIN HERB  
Lecidea elabens Fr.: MIN HERB  
Lecidea fusca (Schaer.) Th. Fr.: MIN HERB  
Lecidea icterica (Mont.) Tayl.: MIN HERB  
Lecidea rufonigra (Tuck.) Nyl.: MIN HERB  
Lecidea russellii Tuck.: MIN HERB  
Lecidea scalaris (Ach.) Ach.: MIN HERB  
Lecidea subaglaea B. de Lesd.: MIN HERB  
Lecidea turgidula Fr.: MIN HERB  
I Lecidella elaeochroma (Ach.) Haszl.: MIN HERB  
Lecidella euphorea (FIBrke) Hert.: MIN HERB  
Lecidella stigmatea (Ach.) Hert. & Leuck.: MIN HERB  
Leptogium arsenei Sierk.: Wetmore, 1976, MIN HERB  
Leptogium denticulatum Nyl.: Wetmore, 1976, MIN HERB  
Leptogium furfuraceum (Harm.) Sierk.: Wetmore, 1976, MIN  
HERB  
Leptogium lichenoides (L.) Zahlbr.: Wetmore, 1976, MIN  
HERB  
Leptogium milligranum Sierk.: Wetmore, 1976, MIN HERB  
Microthelia aterrima (Anzi) Zahlbr.: MIN HERB  
Mycocalicium parietinum (Ach. ex Schaer.) Hawksw.: MIN  
HERB  
\* Mycoglaena wetmorei R. Harris ined.: MIN HERB  
S-I Normandina pulchella (Borr.) Nyl.: Wetmore, 1976, MIN HERB  
Ochrolechia alboflavescens (Wulf.) Zahlbr.: MIN HERB  
S Ochrolechia arborea (Ljubitz.) Almb.: MIN HERB  
Ochrolechia parella (L.) Mass.: MIN HERB  
Pannaria pityrea (DC.) Degel.: Wetmore, 1976, MIN HERB  
Parmelia baltimorensis Gyeln.: MIN HERB  
Parmelia bolliana MÜll. Arg.: Wetmore, 1976, HIN HERB  
I Parmelia caperata (L.) Ach.: Berry, 1941, Wetmore, 1976,  
Wetmore, 1981, MIN HERB  
Parmelia congruens Ach.: Berry, 1941  
Parmelia conspersa (Ach.) Ach.: Berry, 1941, Wetmore, 1976,  
MIN HERB  
Parmelia coronata Fee: Wetmore, 1976, MIN HERB  
Parmelia crinita Ach.: Wetmore, 1976, Wetmore, 1981,  
MIN HERB  
Parmelia dierythra Hale: Wetmore, 1976, MIN HERB  
Parmelia flaventior Stirt.: Wetmore, 1976, Wetmore, 1981,  
MIN HERB  
Parmelia hababiana Gyeln.: Wetmore, 1976  
Parmelia hypoleucites Nyl.: Wetmore, 1976, MIN HERB  
Parmelia kurokawae Hale: Wetmore, 1976, MIN HERB  
Parmelia laevigata (Sm.) Ach.: Wetmore, 1976, MIN HERB

Parmelia lineola Berry: Wetmore, 1976, MIN HERB  
Parmelia margaritata Hue: Wetmore, 1976, MIN HERB  
Parmelia neotropicum Kurok. ex Hale: MIN HERB  
Parmelia novomexicana Gyeln.: Wetmore, 1976, MIN HERB  
Parmelia perreticulata (Rgs.) Hale: Wetmore, 1976, MIN  
 HERB  
Parmelia praesignis Nyl.: Moore, 1932, Berry, 1941, Culb-  
 erson, 1962, Wetmore, 1976, Wetmore, 1981, MIN HERB  
Parmelia psoromifera Kurok.: Wetmore, 1976, MIN HERB  
Parmelia pustulifera Hale: Wetmore, 1976, MIN HERB  
 S Parmelia reticulata Tayl.: Wetmore, 1976, Wetmore, 1981,  
 MIN HERB  
Parmelia rutidota Hook. f. & Tayl.: Wetmore, 1976, MIN  
 HERB  
Parmelia semansiana W. Culb. & C. Culb.: MIN HERB  
Parmelia soledica Nyl.: Wetmore, 1981, MIN HERB  
Parmelia subolivacea Nyl.: Wetmore, 1976, MIN HERB  
 I Parmelia subrudecta Nyl.: Wetmore, 1976, MIN HERB  
Parmelia subtinctoria Zahlbr.: Wetmore, 1976, Wetmore,  
 1981, MIN HERB  
Parmelia taractica Kremp.: Wetmore, 1976, MIN HERB  
Parmelia tasmanica Hook. f. & Tayl.: Wetmore, 1976,  
 MIN HERB  
Parmelia tinctoria Mah. & Gill.: MIN HERB  
 I Parmeliopsis aleurites (Ach.) Nyl.: Wetmore, 1976, MIN  
 HERB  
Peccania sp.: Wetmore, 1976, MIN HERB  
Peltigera canina (L.) Willd.: MIN HERB  
Peltigera canina var. rufescens (Weiss) Mudd: Wetmore,  
 1976  
Peltigera canina var. spuria (Ach.) Schaer.: Wetmore,  
 1976  
Peltigera collina (Ach.) Ach.: MIN HERB  
Peltula bolanderi (Tuck.) Wetm.: Wetmore, 1976, MIN HERB  
Peltula euploca (Ach.) Oz. & Clauz.: Wetmore, 1970,  
 Wetmore, 1976, MIN HERB  
Peltula michoacanensis (B. de Lesd.) Wetm.: Wetmore,  
 1976, MIN HERB  
Peltula obscurans (Nyl.) Gyeln. var. deserticola (Zahlbr.)  
 Wetm.: Wetmore, 1970, Wetmore, 1976, MIN HERB  
Peltula obscurans var. hassei (Zahlbr.) Wetm.: Wetmore,  
 1970, Wetmore, 1976  
Peltula obscurans var. obscurans: Wetmore, 1970, Wetmore,  
 1976  
Peltula omphaliza (Nyl. in Eckf.) Wetm.: Wetmore, 1970,  
 Wetmore, 1976, MIN HERB  
Peltula placodizans (Zahlbr.) Wetm.: Wetmore, 1970, Wetmore,  
 1976, MIN HERB  
Peltula polyspora (Tuck.) Wetm.: Wetmore, 1970, Wetmore,  
 1976, MIN HERB  
Peltula radicata (Ach.) Nyl.: Wetmore, 1976, MIN HERB  
Peltula richardsii (Herre) Wetm.: Wetmore, 1970, Wetmore,  
 1976, MIN HERB

- Phaeophyscia hispidula (Ach.) Essl.: Wetmore, 1978, MIN  
HERB
- I-T Phaeophyscia nigricans (FIBrke) Moberg: Wetmore, 1981,  
MIN HERB
- I Phaeophyscia orbicularis (Neck.) Moberg: Wetmore, 1976,  
MIN HERB
- I Physcia aipolia (Ehrh.) Hampe: Wetmore, 1976, MIN HERB  
Physcia albinea (Ach.) Nyl.: Wetmore, 1976, MIN HERB  
Physcia americana Herr. in Evans & Meyrow.: Wetmore, 1976,  
MIN HERB  
Physcia callosa Nyl.: Wetmore, 1976, HIN HERB  
Physcia convexa Mull. Arg.: Wetmore, 1976, MIN HERB
- T Physcia dubia (Hoffm.) Lett.: Wetmore, 1976, MIN HERB  
Physcia grisea (Lam.) Zahlbr.: Wetmore, 1976  
Physcia mexicana B. de Lesd.: Wetmore, 1976, MIN HERB
- I Physcia stellaris (L.) Nyl.: Wetmore, 1976, MIN HERB  
Physcia wainioi Rgs.: Wetmore, 1976, MIN HERB
- T Physconia detersa (Nyl.) Poelt: MIN HERB  
Pseudevernia intensa (Nyl.) Hale & H. Culb.: Berry, 1941,  
Wetmore, 1976, Wetmore, 1981, MIN HERB  
Ramalina complanata (Sw.) Ach.: Wetmore, 1976, Wetmore,  
1981, MIN HERB  
Ramalina eckloni (Spreng.) Mey. & Flot.: Wetmore, 1976,  
MIN HERB
- S Ramalina pollinaria (Hestr.) Ach.: Wetmore, 1976, MIN  
HERB  
Ramalina sinensis Jatta: Wetmore, 1976, Wetmore, 1981,  
MIN HERB
- [Rechingeria cribellifera (Nyl.) Serv.: Wetmore, 1976 =  
Gonohymenia cribellifera]  
Rhizocarpon disporum (Naeg. ex Hepp) Mull. Arg.: MIN  
HERB  
Rhizoplaca chrysoleuca (Smith) Zopf: MIN HERB  
Rinodina bischoffii (Hepp) Mass.: MIN HERB  
Rinodina iowensis Zahlbr.: MIN HERB  
Rinodina lignicola Sheard ined.: MIN HERB  
Rinodina milvina (Hahlenb. ex Ach.) Th. Fr.: MIN HERB
- S Rinodina papillata Magn.: MIN HERB  
Sarcogyne regularis KBrb.: MIN HERB  
Speerschneidera euploca (Tuck.) Trev.: Hafellmer & Egan,  
1981 MIN HERB  
Staurothele clopima (Wahlenb. ex Ach.) Th. Fr.: MIN HERB  
Sticta weigellii (Insert ex Ach.) Vain.: Wetmore, 1981,  
MIN HERB  
Synalissa symphorea (Ach.) Nyl.: Wetmore, 1976  
Teloschistes chrysophthalmus (L.) Th. Fr.: Wetmore, 1976,  
Wetmore, 1981, HIN HERB
- I Teloschistes flavicans (Sw.) Norm.: Wetmore, 1976,  
Wetmore, 1981, MIN HERB  
Thyrea nigritella Lett.: Wetmore, 1976  
Thyrea pulvinata (Schaer.) Hass.: Wetmore, 1976  
Umbilicaria vellea (L.) Ach.: Wetmore, 1976, HIN HERB  
Usnea arizonica Mot.: Wetmore, 1976, Wetmore, 1981, MIN  
HERB  
Usnea cirrosa Mot.: Wetmore, 1976, Wetmore, 1981, MIN HERB

- Usnea diplotypus Vain.: Wetmore, 1976, M1N HERB  
S-1 Usnea hirta (L.) Wigg.: Wetmore, 1976, Wetmore, 1981,  
M1N HERB  
S-1 Usnea subfloridana Stirt.: Wetmore, 1976, Wetmore,  
1981, M1N HERB  
Verrucaria vir ens Nyl.: M1N HERB  
I Xanthoria candelaria (L.) Th. Fr.: Wetmore, 1976, M1N  
HERB  
S-1 Xanthoria fallax (Hepp) Arn.: Wetmore, 1976, M1N HERB  
I Xanthoria polycarpa (Ehrh.) Oliv.: Wetmore, 1976, M1N  
HERB

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BLCA - BLACK CANYON OF THE GUNNISON NATIONAL MONUMENT

Total number of species 6 : Unknown

Phaeophyscia ciliata (Hoffm.) Essl.: Thomson, 1963

Phaeophyscia sciastra (Ach.) Moberg: Thomson, 1963

Physcia aipolia (Ehrh.) Hampe: Thomson, 1963

Physcia caesia (Hoffm.) Hampe: Thomson, 1963

Physcia stellaris (L.) Nyl.: Thomson, 1963

Physconia muscigena (Ach.) Poelt: Thomson, 1963

BLCA REFERENCES

Thomson, J. W. 1963. The Nova lichen genus *Physcia* in North America. *Hedwigia*, Beih. 7, viii +172.

BRCA - BRYCE CANYON NATIONAL PARK

No lichens reported : Unknown

CANY - CANYONLANDS NATIONAL PARK

Total number of species = 1 : Unknown

Caloplaca tominii Savicz: Thomson, 1982.

CANY REFERENCES

Thomson, J. W. 1982. A further note on Caloplaca tominii Savicz  
in the Americas. Bryologist 85:251.

see Kleinen, E.F + K.T. Harper. 1972. Ecology 53: 299-309

~~Collema tenax~~  
~~Fuortata punctata~~  
Buellis papillata  
Fulgeusia brackeata  
Leciden decipieru  
L. rub formis  
Toninia caereleury

CACA - CARLSBAD CAVERNS NATIONAL PARK

No lichens reported : Unknown

CARE - CAPITOL REEF NATIONAL PARK

No lichens reported : Unknown

CHIR - CHIRICAHUA NATIONAL MONUMENT

Total number of species = 192 : Monument - Unknown,  
Surrounding Area - Moderately known

Note: The lichens in this park list were not actually collected in the Chiricahua National Monument, but from the surrounding area.

- Acarospora badiofusca (Nyl.) Th. Fr.: Weber, 1963  
Acarospora chlorophana (Wahlenb. ex Ach.) Mass.: Weber, 1963  
Acarospora fuscata (Schrad.) Arn.: Weber, 1963  
Acarospora schleicheri (Ach.) Mass.: Weber, 1963  
Acarospora smaragdula (Walenb. ex Ach.) Mass.: Weber, 1963  
Arthonia radiata (Pers.) Ach.: Weber, 1963  
Aspicilia alphoplaca (Wahlenb. ex Ach.) Poelt & Leuck.: Weber, 1963  
Aspicilia caesiocinerea (Nyl. ex Malbr.) Arn.: Weber, 1963  
Aspicilia calcarea (L.) Korb.: Weber, 1963  
Buellia disciformis (Fr.) Mudd: Darrow, 1950, Imshaug, 1951  
Buellia glaziouana var. sensitiva (Zahlbr.) Imsh.: Weber, 1963  
Buellia novomexicana B. de Lesd.: Weber, 1963  
T Buellia punctata (Hoffm.) Mass.: Weber, 1963  
Buellia retrovertens Tuck.: Weber, 1963  
Buellia semitensis Tuck.: Weber, 1963  
Buellia spuria (Schaer.) Anzi: Weber, 1963  
Buellia zahlbruckneri J. Stein.: Weber, 1963  
Bryoria furcellata (Fr.) Brodo & Hawksw.: Weber, 1963  
Caloplaca arizonica Magn.: Darrow, 1950  
Caloplaca cerina (Ehrh.) Th. Fr.: Weber, 1963  
Caloplaca chrysophthalma Degel.: Weber, 1963  
Caloplaca cinnabarina (Ach.) Zahlbr.: Weber, 1963  
Caloplaca ferruginea (Huds.) Th. Fr.: Weber, 1963  
Caloplaca flavorubescens (Huds.) Laund.: Weber, 1963  
Caloplaca flavovirescens (Wulf.) Dalla Torre & Sarnth: Weber, 1963  
Caloplaca holocarpa (Hoffm.) Wade: Weber, 1963  
Caloplaca microphyllina (Tuck.) Hasse: Darrow, 1950, Weber, 1963  
Caloplaca sideritis (Tuck.) Zahlbr.: Weber, 1963  
Candelaria concolor (Dicks.) B. Stein.: Iveber, 1963  
Candelaria fibrosa (Fr.) Mull. Arg.: Heber, 1963  
Candelariella aurelia (Hoffm.) Zahlbr.: MIN HERB  
Candelariella mediana (Nyl.) Sm.: Weber, 1963  
Candelariella vitellina (Ehrh.) Mull. Arg.: Weber, 1963  
Candelariella xanthostigma (Ach.) Lett.: Weber, 1963  
Catillaria lenticularis (Ach.) Th. Fr.: Weber, 1963  
Cetraria coralligera (W. Web.) Hale: Weber, 1963, Hale 1976  
Cetraria fendleri (Nyl.) Tuck.: Weber, 1963

Cetraria pinastri (Scop.) S. Gray: Weber, 1963  
Cetraria weberi Essl.: MIN HERB  
Cladonia cariosa (Ach.) Spreng.: \-Jeber, 1963  
Cladonia chlorophaea (Flörke ex Somm.) Spreng.: Darrow,  
1950, Heber, 1963  
Cladonia coniocraea (Flörke) Spreng.: Heber, 1963  
Cladonia pycnidata (L.) Hoffm.: Weber, 1963  
Collema conolomeratum Hoffm.: Darrow, 1950, Heber, 1963  
Collema furluraceum (Arn.) Du Rutz: Heber, 1963  
Collema polycarpon Hoffm.: Heber, 1963  
Collema tenax (Sw.) Ach.: Heber, 1963  
Collema tuniforme (Ach.) Ach.: Heber, 1963  
[Collema verruciforme (Ach.) Nyl.: Darrow, 1950, Weber,  
1963 misident.]  
Coccocarpia cronia (Tuck.) Vain.: \-Jeber, 1963  
Cyphelium tigillare (Ach.) Ach.: Heber, 1963  
Dermatocarpon compactum (Mass.) Lett.: Weber, 1963  
Dermatocarpon lachneum (Ach.) A. L. Sm.: Weber, 1963  
Dermatocarpon miniatum (L.) Mann: Weber, 1963  
Dermatocarpon moulinii (Mont.) Zahlbr.: Weber, 1963  
Dermatocarpon tuckermanii (Rav.) Zahlbr.: Weber, 1963  
Dimelaena oriena (Ach.) Norm.: Weber, 1963  
Diploschistes actinostomus (Pers.) Zahlbr.: Heber, 1963  
Diploschistes scruposus (Schreb.) Norm.: Weber, 1963, MIN  
HERB  
Endocarpon pusillum Hedw.: Weber, 1963  
Haematomma subpunicum (Müll. Arg.) B. de Lesd.: Weber,  
1963  
Heppia lutosa (Ach.) Nyl.: Weber, 1963  
Heterodermia diademata (Tayl.) Awas.: Weber, 1963  
Heterodermia neoleucomelaena (Kurok.) ined.: Weber, 1963  
Heterodermia obscurata (Nyl.) Trev.: Weber, 1963  
Heterodermia speciosa (Degel.) W. Culb.: Weber, 1963  
Heterodermia squamulosa (Degel.) W. Culb.: Weber, 1963  
Heterodermia tremulans (Müll. Arg.) W. Culb.: Weber, 1963  
Koerberia biformis Mass.: Weber, 1963  
Lasallia papulosa (Ach.) Llano: Weber, 1963, MIN HERB  
Lasallia pensylvanica (Hoffm.) Llano: Weber, 1963  
Lecania erysibe (Ach.) Mudd; Weber, 1963, MIN HERB  
Lecanora atra (Huds.) Ach.: Weber, 1963  
Lecanora carpinea (L.) Vain.: Weber, 1963  
Lecanora cenisia Ach.: Weber, 1963  
Lecanora chlarona (Ach.) Nyl.: Weber, 1963  
Lecanora chlarotera Nyl.: Weber, 1963  
Lecanora chloropolia (Erichs.) Almb.: Weber, 1963  
Lecanora cinerea (L.) Somm.: Weber, 1963  
Lecanora dispersa (Pers.) Somm.: Weber, 1963  
Lecanora frustulosa (Dicks.) Ach.: Weber, 1963  
Lecanora novomexicana Magn. non (B. de Lesd.) B. de Lesd.  
: Heber, 1963 --  
Lecanora muralis (Schreb.) Rabenh.: Weber, 1963  
Lecanora mutabilis Somm.: Heber, 1963  
Lecanora pallida (Schreb.) Rabenh.: Darrow, 1950, Weber,  
1963  
Lecanora pulicaris (Pers.) Ach.: MIN HERB

- Lecanora rupicola (L.) Zahlbr.: Weber, 1963  
Lecanora varia (Ehrh.) Ach.: Weber, 1963  
Lecidea botryosa (Fr.) Th. Fr.: Weber, 1963  
Lecidea decipiens (Hedw.) Ach.: Weber, 1963  
Lecidea friesii Ach.: Weber, 1963  
Lecidea fuscoatra (L.) Ach.: Weber, 1963  
Lecidea granulosa (Ehrh.) Ach.: Weber, 1963, MIN HERB  
Lecidea latvpiza Nyl.: Weber, 1963  
Lecidea lurida (Dill.) Ach.: Weber, 1963  
Lecidea nipponica Zahlbr.: Weber, 1963  
Lecidea rubiformis (Wahlenb. ex Ach.) Wahlenb.: Weber,  
1963  
I Lecidea scalaris (Ach.) Ach.: Weber, 1963, MIN HERB  
Lecidea subaglaea B. de Lesd.: Weber, 1963  
Lecidea tessellata (Ach.) Florke: Weber, 1963  
Lecidea turgidula Fr.: Weber, 1963  
Lecidea vernalis (L.) Ach.: Weber, 1963  
Lecidella elaeochroma (Ach.) Haszl.: Weber, 1963  
Lecidella euphorea (FlBrke) Hert.: Weber, 1963  
Lecidella stigmatea (Ach.) Hert. & Leuck.: Weber,  
1963  
Lecidella viridans (Flot.) KBrb.: Weber, 1963  
Lepraria membranacea (Dicks.) Vain.: Weber, 1963  
Leprocaulon albicans (Th. Fr.) Nyl.: Weber, 1963  
Leptogium chloromelum (Sw. ex Ach.) Nyl.: Weber, 1963  
Leptogium denticulatum Nyl.: Weber, 1963  
Leptogium furfuraceum (Harm.) Sierk: Weber, 1963  
Leptogium lichenoides (L~) Zahlbr.: Weber, 1963  
Leptogium sp.: Weber, 1963  
Lichinella stipatula Nyl.: Weber, 1963  
Micarea viridescens (Schrad.) Brodo: Darrow, 1950, Weber,  
1963  
Microthelia aterrima (Anzi) Zahlbr.: Weber, 1963  
Microthelia micula KBrb.: Weber, 1963  
Mycoblastus tornoensis (Nyl.) R. Anders.: Weber, 1963  
Nephroma parile (Ach.) Ach.: Weber, 1963  
Normandina pulchella (Borr.) Nyl.: Weber, 1963  
Ochrolechia pallescens (L.) Mass.: Darrow, 1950, Weber,  
1963  
Pannaria microphylla (Sw.) Mass.: Weber, 1963  
Pannaria pityrea (DC.) Degel.: Weber, 1963, MIN HERB  
Parmelia atticoides Essl.: Esslinger, 1977  
Parmelia bolliana Mull. Arg.: Weber, 1963  
Parmelia borrieri (Sm.) Turn.: Darrow, 1950, Weber, 1963  
Parmelia brunella Essl.: Esslinger, 1977  
Parmelia caperata (L.) Ach.: Darrow, 1950, Weber, 1963  
Parmelia cetrata Ach.: Darrow, 1950, Weber, 1963  
Parmelia chiricahuensis R. Anderson & W. Web.: Weber,  
1963, Esslinger, 1977  
Parmelia conspersa (Ach.) Ach.: Weber, 1963  
Parmelia eurysaca Hue: Weber, 1963, Hale, 1965  
Parmelia flaventior Stirt.: Weber, 1963, MIN HERB  
Parmelia hababiana Gyeln.: Weber, 1963, Hale, 1965  
Parmelia leucochlora Tuck.: Darrow, 1950, Weber, 1963  
Parmelia occidentalis Essl.: Esslinger, 1977  
Parmelia olivacea (L.) Ach.: Darrow, 1950, Weber, 1963



Umbilicaria cinereorufescens (Schaer.) Frey: MIN HERB  
Umbilicaria torrefacta (Lightf.) Schrad.: Weber, 1963,  
 MIN HERB  
Umbilicaria vellea (L.) Ach.: Weber, 1963  
Usnea arizonica Mot.: Weber, 1963  
Usnea cavernosa Tuck.: Weber, 1963  
Usnea fulvorea (Ras.) Ras.: Darro\v, 1950, Heber, 1963  
 S-1 Usnea hirta (L.) Wigg.: \veber, 1963  
 S-1 Usnea subfloridana Stirt.: Weber, 1963  
Usnea sp.: Heber, 1963  
Verrucaria fuscella (Turn.) Ach.: Weber, 1963  
Verrucaria muralis Ach.: Weber, 1963  
Xanthoria elegans (Link) Th. Fr.: Heber, 1963  
 S-1 Xanthoria fallax (Hepp) Arn.: Darrow, 1950, Heber, 1963  
 I Xanthoria polycarpa (Ehrh.) Oliv.: Weber, 1963

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- Hale, M. E. 1965. A monograph of Parmelia subgenus  
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- Hale, M. E. 1967. New taxa in Cetraria, Parmelia, and Parmeliopsis.  
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- Imshaug, H. A. 1951. The lichen-forming species of the genus  
Buellia occuring in the United States and Canada. PhD.  
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- Weber, W. A. 1963. Lichens of the Chiricahua Mountains,  
Arizona. Univ. of Colo. Studies. Biol. Ser. 10: 1-27.

CRLA - CRATER LAKE NATIONAL PARK

Total number of species = 41 - Poorly Known

4 species with type localities in the Park

- Acarospora fuscata (Schrad.) Arn.: Sipe, 1943  
Acarospora oxytona (Ach.) Hass.: Sipe, 1943  
Acarospora rufescens (Ach.) Bausch: Sipe, 1943  
Aspicilia cinerea (L.) KClrb.: Sipe, 1943  
Aspicilia cinereorufescens (Ach.) Hass.: Sipe, 1943  
\*Aspicilia tenuis (Magn.) ined.: Magnusson, 1939  
Bryoria fremontii (Tuck.) Brodo & Hawksw.: Sipe, 1943  
S [Bryoria jubata (L.) Ach.: Magnusson, 1939, Sipe, 1943,  
ident. uncertain]  
Bryoria lanestris (Ach.) Brodo & Hawksw.: Brodo &  
Hawksworth, 1977  
Bryoria oregana (Tuck.) Brodo & Hawksw.: Sipe, 1943 S-I  
Cladonia fimbriata (L.) Fr.: Sipe, 1943  
Dermatocarpon miniatum (L.) Mann: Sipe, 1943  
[Haematomma ventosum (L.) Mass.: Sipe, 1943 misident.]  
Huilia macrocarpa (DC.) Hertel: Sipe, 1943  
\*Lecanora applegatei Herre: Herre, 1944  
I Lecanora coilocarpa (Ach.) Nyl.: Sipe, 1943  
Lecanora polytropa (Ehrh.) Rabenh.: Sipe, 1943  
Lecanora pringlei (Tuck.) Lamb: Sipe, 1943  
Lecanora rupir:ola (L.) Zahl br.: Sipe, 1943  
Lecanora sanguinea (Kremp.) Mig.: Magnusson, 1939  
Lecidea auriculata Th. Fr.: Sipe, 1943  
Lecidea cascadiensis Magn.: Sipe, 1943, Magnusson, 1939  
Lecidea contigua (Hoffm.) Fr.: Sipe, 1943  
Lecidea elabens Fr.: Sipe, 1943  
Lecidea fuscoatra (L.) Ach.: Sipe, 1943  
Lecidea granulosa (Ehrh.) Ach.: Sipe, 1943  
\* [Lecidea lacus-crateris Magn.: Magnusson, 1939, Sipe,  
1943 = Lecidella stigmatea]  
Lecidea leucothallina Arn.: Anderson, 1965  
Lecidea pumicola Magn.: Sipe, 1943  
Lecidea russula Ach.: Sipe, 1943  
Lecidella stigmatea (Ach.) Hertel & Leuck.: Magnusson,  
1939, Sipe, 1943, Hertel, 1971  
Letharia vulpina (L.) Hue: Sipe, 1943  
Omphalodiscus decussata (ViII.) Schol.: Sipe, 1943  
Omphalodiscus krascheninnikovii (Sav.) Schol.: Llano,  
1950, NIN HERB  
I-T Parmelia sulcata Tayl.: Sipe, 1943  
Pseudephebe pubescen~ (L.) Choisy: Sipe, 1943, Magnusson, 1939,  
Magnusson, 1946  
S Ramalina farinacea (L.) Ach.: Sipe, 1943  
Rhizocarpon geminatum KClrb.: Magnusson, 1939  
Rhizocarpon geographicum (L.) DC.: Magnusson, 1939, Sipe, 1943  
Rhizoplaca melanophthalma (Ram.) Leuck. & Poelt.:

- Magnusson, 1939  
Solorina crocea (L.) Ach.: Sipe, 1943  
Umbilicaria hyperborea (Ach.) Hoffm.: Sipe, 1943  
Umbilicaria phaea Tuck.: Llano, 1950  
Umbilicaria torrefacta (Lightf.) Schrad.: Sipe, 1943, Llano,  
 1950, HIN HERB  
 \*Umbilicaria torrefacta var. pachydermata Llano: Llano, 1950  
Umbilicaria vellea (L.) Ach. Sipe, 1943  
Xanthoria elegans (Link) Th. Fr.: Magnusson, 1939, Sipe, 1943  
Xylographa abietina (Pers.) Zahlbr.: Sipe, 1943

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 Bryologist 68:54-63.  
 Brodo, I. H. & D. L. Hawksworth. 1977. Alectoria and allied genera in  
 North America. Opera Botanica 42: 1-164.  
 Herre, A. W. 1944. A new Lecanora from Crater Lake National Park.  
 Bryologist 47:91-92.  
 Herre, A. IV. 1946. The Parmelias of California. Contrib.  
 Dudley Herb. 3:313-350.  
 Hertel, H. 1971. Uber Holarktische Krustflechten aus den  
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 Meddl. GBteborgs Bot. Tradg. 13:237-253.  
 Sipe, F. P. 1943. Lichens of Crater Lake National Park . . Bryologist  
 46:135-138.

CRMO - CRATERS OF THE MOON NATIONAL MONUMENT

No lichens reported: Unknown

EVER - EVERGLADES NATIONAL PARK

Total number of species = 35 : Poorly known

Anisomeridium leucochlorum (Mull. Arg.) Harris:

MIN HERB

Anthracotheceum ochraceoflavum (Nyl.) Mull. Arg.: MIN

HERB

Arthopyrenia cinchonae (Ach.) Mull. Arg.: MIN HERB

Cladonia chlorophaea (Florke ex Somm.) Spreng.: Moore,  
1968

Cladonia ravenelii Tuck.: Moore, 1968

Cladonia sandstedti Abb.: Moore, 1968

Coccocarpia crania (Tuck.) Vain.: Moore, 1968, MIN HERB

Coccocarpia parmelioides (Hook.) Tuck. ex Curt.: Moore,  
1968

Collema nigrescens (Huds.) DC: Moore, 1968

Glyphis favulosa Ach.: MIN HERB

Helminthocarpon leprevostii Fee: MIN HERB

Lecanora caesiorubella Ach.: MIN HERB

Leptogium austroamericanum (Malme) Dodge: Moore, 1968

Leptogium cyanescens (Ach.) Korb.: Moore, 1968

Leptogium floridanum Sierk: Moore, 1968

Leptogium fuisporum (Tuck.) Dodge: Moore, 1968

Leptogium marginellum (Sw.) S. Gray: Moore, 1968

Parathelium microcarpum Ridd.: MIN HERB

Parmelia amazonica Nyl.: MIN HERB

Parmelia caroliniana Nyl.: Moore, 1968

Parmelia cryptochlorophaea Hale: Moore, 1968

Parmelia endosulphurea (Hillm.) Hale: Hale, 1965, Moore,  
1968

Parmelia hypotropa Nyl.: Moore, 1968

Parmelia perforata (Jacq.) Ach.: MIN HERB

Parmelia rampoddensis Nyl.: Moore, 1968

Parmelia sulphurata Nees & Flat.: Moore, 1968

Parmelia tinctorum Del. ex Nyl.: MIN HERB

Physcia alba (Fee) Mull. Arg.: Moore, 1968

Pyrenula concatervans (Nyl.) Harris: MIN HERB

Pyrenula xyloides (Eschw.) Mull. Arg.: MIN HERB

Pyxine cocoes (Sw.) Nyl.: MIN HERB

Ramalina dendriscoides Nyl.: Moore, 1968

Ramalina paludosa B. Moore: Moore, 1967, Moore, 1968

Trypethelium annulare (Fee) Mont.: MIN HERB

Trypethelium eluteriae Spreng.: MIN HERB

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- Hale, M. E. 1965. A monograph of Parmelia subgenus Amphigymnia. Contrib. U. S. Nat. Herb. 36 (5):193-358.
- Moore, B. J. 1967. Ramalina paludosa, a new species from Florida. Bryologist 70:315-317.
- Moore, B. J. 1968. The macrolichen flora of Florida Bryologist 71:161-266.

Total number of species = 89 : Poorly known

- Alectoria imshaugii Brodo & Hawksw.: Brodo & Hawksworth,  
1977
- Alectoria nigricans (Ach.) Nyl.: Imshaug 1957
- Alectoria sarmentosa (Ach.) Ach.: Brodo & Hawksworth, 1977,  
MIN HERB
- Bryoria capillaris (Ach.) Brodo & Hawksw.: Brodo &  
Hawksworth, 1977
- Bryoria glabra (Mot.) Brodo & Hawksw.: Brodo &  
Hawksworth, 1977
- S Bryoria trichodes (Michx.) Brodo & Hawksw.: MIN HERB
- Bryoria vrangiana (Gyeln.) Brodo & Hawksw.: Brodo &  
Hawksworth, 1977
- I Buellia penichra (Tuck.) Hasse: Imshaug, 1951
- Candelariella vitellina (Ehrh.) Mull. Arg.: MIN HERB
- Cetraria commixta (Nyl.) Th. Fr.: Imshaug, 1957
- Cetraria ericetorum Opiz: Imshaug, 1957
- Cetraria hepatizon (Ach.) Vain.: Thomson, 1954, Imshaug,  
1957
- Cetraria islandica (L.) Ach. subsp. islandica: Imshaug,  
1957
- Cetraria nivalis (L.) Ach.: Imshaug, 1957
- Cetraria tilesii Ach.: Imshaug, 1957
- Cladonia bacillaris (Ach.) Nyl.: MIN HERB
- Cladonia cariosa (Ach.) Spreng.: Imshaug, 1957, MIN HERB
- Cladonia chlorophaea (FlHrke ex Somm.) Spreng.: Imshaug,  
1957
- Cladonia coccifera (L.) Willd.: Imshaug, 1957
- Cladonia ecmocyna (Ach.) Nyl.: Imshaug, 1957, MIN HERB
- Cladonia multiformis Merr.: MIN HERB
- Cladonia pyxidata (L.) Hoffm.: Imshaug, 1957
- Cornicularia aculeata (Schreb.) Ach.: Imshaug, 1957
- Cornicularia normoerica (Gunn.) Du Rietz: Imshaug, 1957
- Cyphelium karelicum (Vain.) Rgs.: Tibell, 1975
- Cyphelium pinicola Tibell: MIN HERB
- Dactylina ramulosa (Hook.) Tuck.: Imshaug, 1957
- Dermatocarpon intestiniforme (KHrb.) Hasse: Imshaug,  
1957, MIN HERB
- Dermatocarpon miniatum (L.) Mann: MIN HERB
- Hypogymnia intestiniformis (ViIII.) Rgs.: Imshaug, 1957
- I Hypogymnia physodes (L.) W. Wats.: Imshaug, 1957
- I Lecidea scalaris (Ach.) Ach.: MIN HERB
- Leprocaulon subalbicans (Lamb) Lamb & Ward: Imshaug, 1957,  
Lamb & Ward, 1974
- Leptogium californicum Tuck.: Sierk, 1964
- Letharia vulpina (L.) Hue: MIN HERB
- S Lobaria pulmonaria (L.) Hoffm.: MIN HERB
- Massalongia cariosa (Dicks.) KHrb.: Henssen, 1963a
- Nephroma bellum (Spreng.) Tuck.: Wetmore, 1960
- Nephroma helveticum Ach.: Wetmore, 1960
- Nephroma parile (Ach.) Ach.: Wetmore, 1960
- Nephroma resupinatum (L.) Ach.: Wetmore, 1960



Ochrolechia palleseens (L.) Mass .: MIN HERB  
Omphalodiscus krascheninnikovii (Sav.) Schol.: Llano,  
1950, Imshaug, 1957,  
Omphalodiscus virginis (Schaer.) Schol.: Imshaug, 1957,  
Llano, 1950  
Parmelia dis juncta Erichs.: Imshaug, 1957  
Parmelia infumata Nyl.: Esslinger, 1977  
Parmelia multispora Schneid.: Ahti, 1966  
Parmelia panniformis (Nyl.) Vain.: Imshaug, 1957  
Parmelia pulla (Schreb.) Ach.: Imshaug, 1957  
I Parmelia saxatilis (L.) Ach.: Imshaug, 1957  
Parmelia soledica Nyl.: Imshaug, 1957  
Parmelia stygia (L.) Ach.: Imshaug, 1957  
Parmelia subolivacea Nyl. in. Hasse: Ahti, 1966  
Parmeliopsis ambigua (Wulf.) Nyl.: MIN HERB  
I Parmeliopsis hyperopta (Ach.) Arn.: MIN HERB  
Peltigera aphthosa (L.) Willd.: Imshaug, 1957, MIN  
HERB  
Peltigera canina (L.) Hilld.: Thomson, 1950  
Peltigera canina var. rufescens (Weis) Mudd: Thomson,  
1950  
Peltigera leucophlebia (Nyl.) Gyeln.: MIN HERB  
Peltigera membranacea (Ach.) Nyl.: Thomson, 1950  
Peltigera polydactyla (Neck.) Hoffm.: Thomson, 1950, MIN  
HERB  
Phaeophyscia endococcina (Korb.) Essl.: Imshaug, 1957,  
Thomson, 1963  
Phaeophyscia sciastra (Ach.) Moberg: Imshaug 1957,  
Thomson, 1963  
Physcia aipolia (Ehrh.) Hampe: Thomson, 1963  
Physcia caesia (Hoffm.) Hampe: Thomson, 1963  
T Physcia dubia (Hoffm.) Lett.: Thomson, 1954, Thomson,  
1963  
Physcia semipinnata (Gmelin) Moberg: Imshaug, 1957,  
Thomson, 1963  
I Physconia detersa (Nyl.) Poelt: Thomson, 1963  
Physconia muscigena (Ach.) Poelt: Imshaug, 1957, Thomson,  
1963  
I Platismatia glauca (L.) W. Culb. & C. Culb.: Fink, 1919,  
Culberson & Culberson, 1968  
Pseudephebe minuscula (Nyl. ex Arn.) Brodo & Hawksw.:  
Imshaug, 1957  
Pseudephebe pubescens (L.) Choisy: Herre, 1946, Imshaug,  
1957  
Ramalina thrausta (Ach.) Nyl.: Bowler, 1977  
Rhizocarpon geographicum (L.) DC.: NIN HERB  
Rhizocarpon grande (Florke ex Flot.) Arn.: MIN HERB  
Rhizocarpon lecanorinum (Korb.) And.: MIN HERB  
Solorina bispora Nyl.: Imshaug, 1957  
Solorina crocea (L.) Ach.: Imshaug, 1957  
Stereocaulon alpinum Laur.: Imshaug, 1957  
Stereocaulon paschale (L.) Hoffm.: MIN HERB  
Thamnotia vermicularis (Sw.) Ach. ex Schaer.: Imshaug,  
1957, MIN HERB  
Umbilicaria hirsuta (Sw. ex Westr.) Ach.: Llano, 1950,  
MIN HERB

Umbilicaria hyperborea (Ach.) Hoffm.: Llano, 1950,  
 Imshaug, 1957  
Umbilicaria phaea Tuck.: Llano, 1950  
Umbilicaria polyphylla (L.) Baumg.: Llano, 1950  
Umbilicaria torrefacta (Lightf.) Schrad.: Imshaug, 1957  
Umbilicaria vellea (L.) Ach.: Llano, 1950  
Usnea laricina Vain. ex RMs.: MIN HERB  
Xanthoria elegans (Link) Th. Fr.: MIN HERB

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- Thomson, J. W. 1950. The species of *Peltigera* of North America north of Mexico. *Amer. Midl. Nat.* 44:1-68.
- Thomson, 1954. Lichens of the 1951 foray to the north shore of Lake Superior. *Bryologist* 57:278-291.
- Thomson, J. W. 1963. The lichen genus *Physcia* in North America. *Nova Hedwigia, Beih.* 7, viii +172.
- Tibell, L. 1975. The *Caliciales* of boreal North America. *Symb. Bot. Ups.* 21(2), 136pp.
- Wetmore, C. M. 1960. The lichen genus Nephroma in North and Middle America. *Publ. Museum, Michigan State Univ., BioI. Ser.* 1:369-452.

GRCA - GRAND CANYON NATIONAL PARK

Total number of species = 87 : Moderately known

3 species with type localities in the park

- Acarospora epilutescens Zahlbr.: McDougall, 1947  
Acarospora oligospora (Nyl.) Arn.: MIN HERB  
Acarospora strigata (Nyl.) Jatta: MIN HERB  
Acarospora subpeltata Hasse ined.: MIN HERB  
Acarospora sp.: McDougall, 1947  
Aspicilia alphoplaca (Wahlenb. ex Ach.) Ach.: MIN HERB  
Aspicilia calcarea (L.) KBrb.: MIN HERB  
Aspicilia cinerea (L.) KBrb.: McDougall, 1947  
Calonlaca approximata (Lynge) Magn.: MIN HERB  
\*Caloplaca arizonica Magn.: Rudolph, 1955, MIN HERB  
\*Caloplaca durietzii Magn.: Magnusson, 1953, Rudolph, 1955  
Caloplaca epithallina Lynge: Nash & Weber, 1974  
Caloplaca microphyllina (Tuck.) Hasse: MIN HERB  
\*Caloplaca pinicola Magn.: Magnusson, 1953, Rudolph, 1955  
Caloplaca saxicola (Hoffm.) Nordin: MIN HERB  
Caloplaca trachyphylla (Tuck.) Zahlbr.: MIN HERB  
Caloplaca variabilis (Pers.) Mull. Arg.: Rudolph, 1955  
S-I Candelaria concolor (Dicks.) B. Stein: MIN HERB  
Candelariella rosulans (Mull. Arg.) Zahlbr.: MIN HERB  
I Candelariella vitellina (Ehrh.) Mull. Arg.: McDougall,  
1947, MIN HERB  
Cetraria fendleri (Nyl.) Tuck.: MIN HERB  
Ciadonia capitata (Michx.) Spreng.: McDougall, 1947  
Cladonia chlorophaea (Florke ex Somm.) Spreng.:  
McDougall, 1947  
I Cladonia coniocraea (Florke) Spreng.: McDougall, 1947  
Cladonia pyxidata (L.) Hoffm.: McDougall, 1947  
Collema coccophorum Tuck.: MIN HERB  
Collema polycarpon Hoffm.: MIN HERB  
Collema tenax (Sw.) Ach.: MIN HERB  
Collema tuniforme (Ach.) Ach.: MIN HERB  
Dermatocarpon lachneum (Ach.) A. L. Sm.: MIN HERB  
Dermatocarpon miniatum (L.) Mann: McDougall, 1947, MIN  
HERB  
Dermatocarpon rufescens (Ach.) Th. Fr.: MIN HERB  
Dimelaena oreina (Ach.) Norm.: MIN HERB  
Diploschistes scruposus (Schreb.) Norm.: MIN HERB  
Heppia lutosa (Ach.) Nyl.: Wetmore, 1970, MIN HERB  
Huilia macrocarpa (DC.) Hertel: McDougall, 1947  
Lecanora cenisia Ach.: MIN HERB  
Lecanora frustulosa (Dicks.) Ach.: MIN HERB  
T Lecanora muralis (Schreb.) Rabenh.: MIN HERB  
Lecanora polytropa (Ehrh.) Rabenh.: MIN HERB  
Lecidea atrobrunnea (Ram.) Schaer.: McDougall, 1947  
Lecidea crenata (Tayl.) Stizenb.: McDougall, 1947, MIN  
HERB  
Lecidea decipiens (Hedw.) Ach.: McDougall, 1947, MIN HERB  
Lecidea friesii Ach.: MIN HERB

- Lecideia granulosa (Ehrh.) Ach.: MIN HERB  
Lecideia nipponica Zahlbr.: MIN HERB  
 [ Lecideia parasema Ach.: McDougall, 1947 ident. uncertain ]  
Lecideia rufonigra (Tuck.) Nyl.: MIN HERB  
Lecideia tuckermanii R. Anders.: MIN HERB  
Leptogium sinuatum (Huds.) Mass.: MIN HERB  
Lichinella stipatula Nyl.: Henssen, 1968  
Parmelia chlorochroa Tuck.: McDougall, 1947, MIN HERB  
Parmelia lineola Berry: MIN HERB  
 I Parmelia olivacea (L.) Ach.: McDougall, 1947  
Parmelia subolivacea Nyl. in Hasse: Ahti, 1966, MIN HERB  
Parmelia substygia Rgs.: MIN HERB  
Peltigera canina (L.) Willd.: McDougall, 1947, MIN HERB  
Peltigera horizontalis (Huds.) Baumg.: MIN HERB  
Peltula obscurans (Nyl.) Gyeln.: MIN HERB  
Peltula obscurans var. deserticola (Zahlbr.) Wetm.:  
 Wetmore, 1970  
Phaeophyscia ciliata (Hoffm.) Essl.: MIN HERB  
Phaeophyscia endococcinea (KBrb.) Essl.: MIN HERB  
 I Phaeophyscia orbicularis (Neck.) Moberg: MIN HERB  
Phaeophyscia sciastra (Ach.) Moberg: MIN HERB  
Physcia adscendens (Th. Fr.) Oliv.: MIN HERB  
Physcia ceasia (Hoffm.) Hampe: Thomson, 1963  
Physcia callosa Nyl.: MIN HERB  
 I Physcia stellaris (L.) Nyl.: Thomson, 1963, MIN HERB  
 I Physconia deterosa (Nyl.) Poelt: MIN HERB  
Physconia muscigena (Ach.) Poelt: MIN HERB  
 S Ramalina calicaris (L.) Fr.: McDougall, 1947  
 S-I Ramalina fastigiata (Pers.) Ach.: McDougall, 1947  
Rhizocarpon disporum (Naeg. ex Hepp) Mull. Arg.: MIN  
 HERB  
Rhizocarpon geographicum (L.) DC.: McDougall, 1947  
Rhizoplaca melanophthalma (Ram.) Leuck. & Poelt: MIN  
 HERB  
Sarcogyne regularis KBrb.: MIN HERB  
Staurothele clopima (Walenb. ex Ach.) Th. Fr.: McDougall,  
 1947  
Staurothele monicae (Zahlbr.) ined.: MIN HERB  
Staurothele sessilis Magn.: MIN HERB  
Toninia caeruleonigricans (Lightf.) Th. Fr.: MIN HERB  
Toninia candida (Web.) Th. Fr.: MIN HERB  
Umbilicaria hirsuta (Sw. ex Westr.) Ach.: McDougall,  
 1947  
Usnea cavernosa Tuck. McDougall, 1947, : MIN HERB  
 S Usnea florida (L.) Wigg.: McDougall, 1947  
Usnea fulvorenans (Rgs.) Rgs.: MIN HERB  
 S-I Usnea hirta (L.) Wigg.: MIN HERB  
Xanthoria elegans (Link) Th. Fr.: McDougall, 1947,  
 Rudolph, 1955, MIN HERB  
 S-I Xanthoria fallax (Hepp) Arn.: MIN HERB  
 I Xanthoria polycarpa (Ehrh.) Oliv.: McDougall, 1947, MIN  
 HERB

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- Rudolph, E. D. 1955. Revisionary studies in the lichen family *Blasteniaceae* in North America north of Mexico. Ph. D. Thesis, Washington, Univ.
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- Wetmore, C. M. 1970. The lichen family *Heppiaceae* in North America. *Ann. Missouri Bot. Gard.* 57:158-209.

GRSA - GREAT SAND DUNES NATIONAL MONUMENT

Total number of species = 8 : Poorly known

- Dimelaena oreina (Ach.) Norm.: Sheard, 1974  
Lecanora caesiorubella subsp. saximontana Imsh. & Brodo:  
Imshaug & Brodo, 1966  
Pertusaria saximontana Wetm.: Anderson & Carmer, 1974  
I Phaeophyscia orbicularis (Neck.) Moberg: Thomson, 1963  
I Physcia aipolia (Ehrh.) Hampe: Thomson, 1963  
Physcia phaea (Tuck.) Thoms.: Thomson, 1963  
I Physconia detersa (Nyl.) Poelt: Thomson, 1963  
Physconia muscigena (Ach.) Poelt: Thomson, 1963

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Imshaug, H. A. & I. M. Brodo. 1966. Biosystematic studies on Lecanora pallida and some related lichens in the Americas. Nova Hedwigia 12:1-59.  
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GRSM- GREAT SMOKY MOUNTAINS NATIONAL PARK

Total number of species = 301 : Completely known

26 species with type localities in the park

- Acarospora fuscata (Nyl.) Arn.: Degelius, 1941  
Alectoria fallacina Mot.: Brodo & Hawksworth, 1977, Dey, 1978  
I Alectoria sarmentosa Ach.: Degelius, 1941  
Anaptychia palmulata (Michx.) Vain.: Degelius, 1941, Dey, 1978  
Anzia americana Yoshim. & Sharp: Dey, 1978  
Anzia colpodes (Ach.) Stizenb.: Degelius, 1941, Yoshimura & Sharp, 1968b  
\*Arthonia biseptata Degel.: Degelius, 1941  
Arthonia caesia (Flot.) K! :hb.: Degelius, 1941  
Arthonia cinnabarina (DC.) Wallr.: Degelius, 1941  
Arthonia punctiformis Ach.: Degelius, 1941, MIN HERB  
Arthopyrenia fallax (Nyl.) Arn.: Degelius, 1941  
Arthopyrenia pinicola (Hepp) Mass.: Degelius, 1941  
Arthopyrenia subprostans (Nyl.) MULL. Arg.: Degelius, 1941  
Bacidia chlorantha (Tuck.) Fink.: Degelius, 1941  
Bacidia endocyanea (Tuck.) Zahlbr.: Degelius, 1941  
Bacidia fuscorubella (Hoffm.) Bausch.: Degelius, 1941  
Bacidia schweinitzii (Tuck.) Schneid.: Degelius, 1941  
Bacidia umbrina (Ach.) Bausch.: Degelius, 1941  
Baeomyces fungoides (Sm.) Ach.: Dey, ~978  
Baeomyces rufus (Huds.) Rebert.: Dey, 1978  
Bryoria bicolor (Ehrh.) Brodo & Hawksw.: Degelius, 1941, Brodo & Hawksworth, 1977, Dey, 1978  
S Bryoria furcellata (Fr.) Brodo & Hawksw.: Degelius, 1941, Dey, 1978  
Bryoria nadvornikiana (Gyeln.) Brodo & Hawksw.: ,Degelius, 1941, Dey, 1978  
Bryoria tenuis (Dahl.) Brodo & Hawksw.: Brodo & Hawksworth, 1977, Dey, 1978  
S Bryoria trichodes (Michx.) Brodo & Hawksw.: Brodo & Hawksworth, 1977  
S Bryoria trichodes subsp. americana (Mot.) Brodo & Hawksw.: Dey, 1978  
Buellia dialyta (Nyl.) Tuck.: Degelius, 1941, Imshaug, 1951  
Buelliadisciformis (Fr.) Mudd.: Degelius, 1941  
Buellia punctiformis (Hoffm.) Mass.: Degelius, 1941  
Caloplaca sp.: Degelius, 1941  
Catillaria albocincta Degel.: Degelius, 1941  
Catillaria laureri (Hepp) Degel.: Degelius, 1941  
Cornicularia aculeata (Schreb.) Ach.: Mozingo, 1954  
Cetraria atlantica (Tuck.) DR.: Degelius, 1941  
Cetraria aurescens Tuck.: Dey, 1978  
S-I Cetraria ciliaris Ach.: Degelius, 1941, Dey, 1978  
Cetraria glauca (L.) Ach.: Degelius, 1941

- Cetraria halei W. Culb. & C. Culb.: MIN HERB  
Cetraria hepatizon (Ach.) Vain.: Dey, 1978  
Cetraria islandica (L.) Ach.: Hozingo, 1954, Dey, 1978  
Cetraria oakesiana Tuck.: Degelius, 1941, Dey, 1978, MIN  
 HERB
- I Cetraria orbata (Nyl.) Fink: Dey, 1978  
Cetrelia cetrarioides (Del. ex Duby) W. Culb. & C. Culb.:  
 Berry, 1941, Degelius, 1941, Culberson, 1962,  
 Culberson, 1965, Dey, 1978  
Cetrelia chicitae (W. Culb.) W. Culb. & C. Culb.: Dey, 1978  
Cetrelia monachorum (Zahlbr.) W. Culb. & C. Culb.:  
 Culberson & Culberson, 1978  
Cetrelia olivetorum (Nyl.) W. Culb. & C. Culb.: Dey, 1978  
Chaenothecopsis subpusilla (Vain.) Tibell: MIN HERB
- I Chrysothrix candelaris (L.) Fr.: Degelius, 1941  
Cladonia arbuscula (Wallr.) Rabenh.: Dey, 1978 Cia  
doni a bacillaris (Ach.) Nyl.: Degelius, 1941  
Cladonia botrytes (Hag.) Hlld.: Degelius, 1941  
Cladonia caespiticia (Pers.) FIHrke: Degelius, 1941, Dey,  
 1978  
Cladonia capitata (Michx.) Spreng.: Dey, 1978  
Cladonia caroliniana Schwein. ex Tuck.: Degelius, 1941  
Cladonia chlorophaea (FIHrke ex Somm.) Spreng.: Degelius,  
 1941 Dey, 1978  
Cia doni a coccifera (L.) Willd.: Degelius, 1941
- I Cladonia coniocraea (FIHrke) Spreng.: Degelius, 1941,  
 Dey, 1978
- I Cladonia cristatella Tuck.: Degelius, 1941 Dey, 1978  
Cladonia didyma (Fee) Vain.: Degelius, 1941 Dey, 1978  
Cladonia digitata (L.) Hoffm.: Dey, 1978
- S-I Cladonia fimbriata (L.) Fr.: Degelius, 1941  
Cladonia floerkeana (Fr.) FIHrke: Degelius, 1941  
Cladonia furcata (Huds.) Schrad.: Degelius, 1941, Dey,  
 1978  
Cladonia gracilis (L.) Hlld.: Degelius, 1941 Dey, 1978  
Cladonia grayi Merr. ex Sandst.: Dey, 1978  
Cladonia portentosa (Duf.) Zahlbr.: Degelius, 1941  
Cladonia incrassata FIHrke: Degelius, 1941 Dey, 1978  
Cladonia macilenta Hoffm.: Degelius, 1941 Dey, 1978  
Cladonia mateocyatha Robb.: Dey, 1978  
Cladonia merochlorophaea Asah.: Dey, 1974b, Dey, 1978  
Cladonia mitis Sandst.: Degelius, 1941  
Cladonia ochrochlora FIHrke: Degelius, 1941  
Cladonia parasitica (Hoffm.) Hoffm.: Degelius, 1941  
Cladonia pityrea (FIHrke) Fr.: Dey, 1978  
Cladonia pleurota (FIHrke) Schaer.: Degelius, 1941  
Cladonia pyxidata (L.) Hoffm.: Degelius, 1941  
Cladonia rangiferina (L.) Wigg.: Degelius, 1941, Dey,  
 1978  
Cladonia rei Schaer.: Degelius, 1941  
Cladonia santensis Tuck.: Degelius, 1941  
Cladonia sguamosa (Scop.) Hoffm.: Degelius, 1941, Dey,  
 1978, NIN HERB  
Cladonia subtenuis (Abb.) Evans: Degelius, 1941



- Cladonia uncialis (L.) Wigg.: Degelius, 1941  
Cladonia verticillata (Hoffm.) Schaer.: Dey, 1978  
Cladonia vulcanica Zoll.: Dey, 1978  
Coccocarpia cronia (Tuck.) Vain.: Dey, 1978  
Coccocarpia pellita (Ach.) MULL. Arg.: Degelius, 1941  
Collema cristatum (L.) Wigg.: Degelius, 1974  
Collema furfuraceum (Arn.) DR.: Degelius, 1941  
Collema leptaleum Tuck.: Degelius, 1974  
Collerna nigrescens (Huds.) DC.: Dey, 1978  
Conotrema urceolatum (Ach.) Tuck.: Degelius, 1941  
Crocynia neglecta (Nyl.) Hue: Degelius, 1941  
Dendriscoaulon umhausense (Auersw.) Degel.: Degelius,  
1941  
Dermatocarpon miniatum (L.) Mann.: Degelius, 1941  
Dimelaena chrysomelaena (Tuck.) Hale & W. Culb.:  
Degelius, 1941  
Dimerella diluta (Pers.) Zahlbr.: Degelius, 1941  
Dimerella lutea (Dicks.) Trev.: Degelius, 1941  
Dirinaria frostii (Tuck.) Hale & W. Culb.: Thomson, 1963  
Dirinaria picta (Sw.) Nyl.: Degelius, 1941  
Eopyrenula leucoplaca (Wallr.) R. Harris: MIN HERB  
Ephebe americana Henss.: Dey, 1978  
Ephebe lanata (L.) Vain.: Degelius, 1941  
Ephebe solida Bornet.: Degelius, 1941  
Erioderma mollissimum (Samp.) DR.: Degelius, 1941  
I Graphis scripta (L.) Ach.: Degelius, 1941  
Graphis tenella Ach.: Degelius, 1941  
Gymnoderma liniare (Evans) Yoshim. & Sharp: Yoshimura & Sharp,  
1968a, Dey, 1978  
Haematomma cisonicum Beltram.: Degelius, 1941  
I Haematomma ochrophaeum (Tuck.) Mass.: Degelius, 1941,  
Culberson, 1963  
Heterodermia casarettiana (Mass.) Trev.: Dey, 1978  
Heterodermia corallophora (Tayl.) Lynge.: Degelius, 1941  
Heterodermia hypoleuca (MULL.) Vain., em. DR. et Lynge:  
Degelius, 1941  
Heterodermia leucomela Vain.: Degelius, 1941  
I [Heterodermia microphylla (Kurok.) ined.: Yoshimura & Sharp,  
1968b misident., see tremulans]  
Heterodermia obscurata (Nyl.) Trev.: Degelius, 1941, Dey, 1978  
Heterodermia propagulifera (Vainio) Dey: Dey, 1978  
Heterodermia speciosa (Wulf.) Mass., em. DR. et Lynge:  
Degelius, 1941  
\*Heterodermia squamulosa (Degel.) W. Culb.: Degelius, 1941, Dey,  
1978  
Heterodermia tremulans (MULL. Arg.) W. Culb.: Yoshimura  
& Sharp, 1968b, Dey, 1978  
Huillia albocaerulescens (Wulf.) Hertel: Degelius, 1941  
Huillia crustulata (Ach.) Hertel: Degelius, 1941, MIN HERB  
Huillia macrocarpa (DC.) Hertel: Degelius, 1941  
Hypogymnia krogii Ohls.: Degelius, 1941, Dey, 1978, MIN HERB  
I Hypogymnia physodes (L.) W. Wats.: Degelius, 1941, Berry,  
1941, HIN HERB

- S Hypogymnia tubulosa (Schaer.) Hav.: Degelius, 1941, Dey, 1978
- Hypogymnia vittata (Ach.) Gas.: Degelius, 1941, Dey, 1978
- Icmadophila ericetocum (L.) Zahlbr.: MIN HERB
- Lasalli3 papulosa (Ach.) Llano: Degelius, 1941, Llano, 1950
- Lasallia papulosa f. lacerata (Degel.) ined.: Degelius, 1941
- L~cania erysibe (Ach.) Mudd.: Degelius, 1941
- Lecanora strobilina (Spreng.) Kieff.: Degelius, 1941
- Lecanora hypoptoides Nyl.: Degelius, 1941
- \* Lecanora insignis Degel.: Degelius, 1941
- Lecanora lacustris (With.) Nyl.: Degelius, 1941
- \* Lecanora olivaceopallida Magn. in Degel.: Degelius, 1941
- Lecanora pinastri (Schaer.) Magn.: Degelius, 1941
- Lecanora piniperda (KBrb.) Hedl.: Degelius, 1941
- Lecanora polytropa (Ehrh.) Rabenh.: Degelius, 1941
- I Lecanora subfusca (L.) Ach.: Degelius, 1941
- Lecanora subfuscata Magn.: Degelius, 1941
- \* Lecidea degelii Magn. in Degel.: Degelius, 1941
- \* Lecidea deminutula Magn. in Degel.: Degelius, 1941
- Lecidea granulosa (Ehrh.) Ach.: Degelius, 1941
- \* Lecidea gyrodes Magn. in Degel.: Degelius, 1941
- Lecidea helvola (KBrb.) Th. Fr.: Degelius, 1941
- Lecidea helvola var. longispora Degel.: Degelius, 1941
- Lecidea humosa (Ehrh.) Nyl.: Degelius, 1941
- Lecidea latypea Ach.: Degelius, 1941
- Lecidea mollis (Wahlenb.) Nyl.: Degelius, 1941
- Lecidea subsimplex Magn.: Degelius, 1941
- \* Lecidea subtilis Degel.: Degelius, 1941
- Lecidea symmicta Ach.: Degelius, 1941
- I Lecidella elaeochroma (Ach.) Haszl.: Degelius, 1941
- I \* Lecidella elaeochroma var. inspersa (Degel.) ined.: Degelius, 1941
- Lepraria chlorina Ach.: Degelius, 1941
- Lepraria membranacea (Dicks.) Zahlbr.: Degelius, 1941
- Leprocaulon arbuscula (Nyl.) Nyl.: Lamb & Ward, 1974
- Leptogium americanum Degel.: Degelius, 1941, Sierk, 1964
- Leptogium burnetiae Dodge: Dey, 1978
- Leptogium chloromelum (Sw.) Nyl.: Degelius, 1941
- Leptogium corticola (Tayl.) Tuck.: Degelius, 1941, Dey, 1978
- Leptogium cyanescens (Ach.) KBrb.: Degelius, 1941, Dey, 1978, MIN HERB
- Leptogium hirsutum Sierk: Sierk, 1964
- Leptogium laceroides B. de Lesd.: Dey, 1978
- Leptogium lichenoides (L.) Zahlbr.: Degelius, 1941
- Leptogium saturninum (Dicks.) Nyl.: Degelius, 1941
- Leptorhaphis parameca (Mass.)KBrb.: Harris, 1973
- Leptorhaphis quercus (Beltr.) KBrb.: MIN HERB
- S Lobari3 pulmonaria (L.) Hoffm. Degelius,: 1941
- Lobaria quercizans Michx. Degelius, 1941,: MIN HERB
- Lobaria scrobiculata (Scop.) DC.: Degelius, 1941, Dey, 1978
- Melaspilea demissa (Tuck.) Zahlbr.: Degelius, 1941
- Menegazzia terebrata (Hoffm.) Mass.: Degelius, 1941, MIN

HERB

- \* Microthelia inops Degel.: Degelius, 1941
- I Mycoblastus sanguinarius (L.) Norm.: MIN HERB
- Nephroma helveticum Ach.: Degelius, 1941, Wetmore, 1960, Dey, 1978
- Nephroma parile (Ach.) Ach.: Degelius, 1941, Dey, 1978
- Nephroma resupinatum (L.) Ach.: Degelius, 1941, Dey, 1978
- S-I Normandina pulchella (Borr) Nyl.: Degelius, 1941
- Ocellularia subtilis (Tuck.) Riddle.: Degelius, 1941, MIN
- HERB
- Ochrolechia pallescens (L.) Mass.: Degelius, 1941
- Ochrolechia yasudae Vain.: Degelius, 1941
- Opegrapha cinerea Chev.: Degelius, 1941
- Pannaria leucosticta (Tuck.) Tuck. ex Nyl.: Degelius, 1941, Dey, 1978
- Pannaria microphylla (Sw.) Mass.: Degelius, 1941
- Pannaria pityrea (DC.) Degel.: Degelius, 1941, Dey, 1978
- Pannaria rubiginosa (Thunb. ex Ach.) Del.: Degelius, 1941, Dey, 1978
- Parmelia appalachensis W.Culb.: Dey, 1978, MIN HERB
- Parmelia arnoldii DuRoi.: Degelius, 1941, Dey, 1978, MIN
- HERB
- Parmelia aurulenta Tuck.: Degelius, 1941, Dey, 1978
- Parmelia bolliana Mull. Arg.: Degelius, 1941
- Parmelia caperata (L.) Ach.: Degelius, 1941, Dey, 1978
- I \*Parmelia catawbiensis (Degel.) Hale & Worth: Degelius, 1941, Hale, 1971a, Dey, 1978
- Parmelia conspersa (Ach.) Ach.: Degelius, 1941, Dey, 1978
- Parmelia crinita Ach.: Degelius, 1941, Hale, 1965, Dey, 1978
- Parmelia croceopustulata Kurok.: Dey, 1978
- Parmelia cumberlandia (Gyeln.) Hale: Dey, 1978
- Parmelia densirhizinata Kurok.: Kurokawa, 1969, Dey, 1974a, Dey, 1978, Kurokawa Lich. Rar. Crit. Exs. #73
- Parmelia digitata Lynge: Kurokawa, 1969
- Parmelia dissecta Nyl.: Degelius, 1941, Dey, 1978
- Parmelia ensifolia Kurok. in Hale & Kurok.: Degelius, 1941, Hale, 1975
- Parmelia galbina Ach.: Degelius, 1941, Dey, 1978
- \*Parmelia gondilyophora Hale: Dey, 1974
- Parmelia halei Ahti: Ahti, 1966, Dey, 1978
- Parmelia horrescens Tayl.: Dey, 1978
- Parmelia imbricatula Zahlbr.: Degelius, 1941, Hale, 1975, Dey, 1978
- Parmelia laevigata (Sm.) Ach.: Degelius, 1941, Dey, 1978 \*
- Parmelia lobulifera Degel.: Degelius, 1941
- Parmelia margaritata Hue: Dey, 1978
- \*[Parmelia margaritata var. luteoreagens Degel.: Degelius, 1941 = P. imbricatula Zahlbr.]
- \*[Parmelia margaritata var. insensitiva Degel.: Degelius, 1941 = P. ensifolia Kurok. in Hale & Kurok.]
- \*[Parmelia margaritata var. sanguineoreagens Degel.: Degelius, 1941 = ~ rachista Hale]
- Parmelia mellissii Dodge: MIN HERB
- \*[Parmelia nakanishii Hale: Hale, 1971 P. thysanota

- I Kurok. in Hale & Kurok.]
- I Parmelia olivacea (L.) Ach. em. Nyl.: Degelius, 1941
- I Parmelia oostingii Dey~ Dey, 1974, Dey, 1978
- S Parmelia perlata (Huds.) Ach.: Degelius, 1941, Dey, 1978
- I Parmelia plittii Gyeln.: Dey, 1978
- \* Parmelia producta (Hale) Dey: Hale, 1975, Dey, 1978
- \* Parmelia rachista Hale: Hale, 1971b, Hale, 1975, Dey, 1978
- I Parmelia reddenda Stirt.: Dey, 1978
- S Parmelia reticulata Tayl.: Degelius, 1941, Dey, 1978
- I Parmelia revoluta FIHrke: Degelius, 1941, Dey, 1978
- I Parmelia rockii Zahlbr.: Dey, 1978
- I Parmelia rudecta Ach.: Degelius, 1941, Dey, 1978
- I Parmelia saxatilis (L.) Ach.: Degelius, 1941, Dey, 1978
- S Parmelia sinuosa (Sm.) Ach.: Dey, 1978
- S Parmelia squarrosa Hale: Dey, 1978
- S Parmelia stuppea Tayl. . . : MIN HERB
- S Parmelia subaurifera Nyl.: Degelius, 1941, Dey, 1978
- S Parmelia subisidiosa (Mull. Arg.) Dodge: Dey, 1978
- I Parmelia subelegantula Essl.: Berry, 1941
- I Parmelia subrudecta Nyl.: Degelius, 1941, Dey, 1978
- I-T Parmelia sulcata Tayl.: Dey, 1978
- I Parmelia thysanota Kurok. in Hale & Kurok.: Dey, 1974b, Hale, 1975
- I Parmelia virginica Hale: Dey, 1978
- I Parmeliella corallinoides (Hoffm.) Zahlbr.: Degelius, 1941
- I Parmeliopsis aleurites (Ach.) Nyl.: Degelius, 1941, Dey, 1978, MIN HERB
- I Peltigera canina (L.) Willd.: Degelius, 1941
- I Peltigera canina var. rufescens (Weis.) Mudd: Degelius, 1941
- I Peltigera horizontalis (Huds.) Baumg.: Dey, 1978
- I Peltigera polydactyla (Neck.) Hoffm.: Degelius, 1941, Thomson, 1950
- I Pertusaria amara (Ach.) Nyl.: Degelius, 1941, Dibben, 1980, MIN HERB
- I Pertusaria leioterella Erichs.: Degelius, 1941
- I Pertusaria macounii (Lamb) Dibb.: Dibben, 1980
- I Pertusaria multipuncta (Turn.) Nyl.: Degelius, 1941
- I Pertusaria neoscotica Lamb: Dibben, 1980
- I Pertusaria ostiolata Dibb.: Dibben, 1980
- I Pertusaria paratuberculifera Dibb.: Dibben, 1980, MIN HERB
- I Pertusaria plittiana Erichs.: MIN HERB
- I Pertusaria texana Mull. Arg.: Dibben, 1980, MIN HERB
- I Pertusaria trachythallina Erichs.: Degelius, 1941, Dibben, 1980, MIN HERB
- I Pertusaria velata (Turn.) Nyl.: Degelius, 1941, Dibben, 1980, MIN HERB
- I Pertusaria waghornei Hult.: Dibben, 1980
- I Phaeophyscia ciliata (Hoffm.) Essl.: Degelius, 1941, Dey, 1978
- I Phaeophyscia erythrocardia (Tuck.) Essl.: Degelius, 1941, Thomson, 1963

- I Phaeophyscia orbicularis (Neck.) Moberg: Degelius, 1941  
Phaeophyscia rubropulchra (Degel.) Essl.: Degelius, 1941,  
Thomson, 1963
- I Physcia aipolia (Ehrh.) Hampe: Degelius, 1941  
Physcia halei Thoms.: Thomson, 1963  
Physcia phaea (Tuck.) Thoms.: Degelius, 1941, Thomson, 1963,  
Dey, 1978
- I \* Physcia stellaris (L.) Nyl.: Degelius, 1941  
Physcia subtilis Degel.: Degelius, 1941, Thomson, 1963  
Physcia wainioi RMS.: Degelius, 1941  
Pilophorus cereolus (Ach.) Th. Fr.: Yoshimura & Sharp,  
1968b
- I Platismatia glauca (L.) W. Culb. & C. Culb.: Dey, 1978  
Platismatia tuckermanii (Oakes) W. Culb. & C. Culb.:  
Culberson & Culberson, 1968 Dey, 1978, MIN HERB
- \* Pleurotrema solivagum Degel.: Degelius, 1941  
Polyblastia intercedens (Nyl.) LBnr.: Degelius, 1941  
Pseudevernia cladonia (Tuck.) Hale & W. Culb.: Degelius,  
1941, Berry, 1941, Dey, 1978, MIN HERB  
Pseudevernia consocians (Vain.) Hale & W. Culb.:  
Degelius, 1941, Dey, 1978, HIN HERB  
Pseudocyphellaria crocata (L.) Vain.: Degelius, 1941, Dey,  
1978  
Pseudocyphellaria mougeotiana (Del.) Vain.: Degelius,  
1941, MIN HERB  
Pyrenopsis sanguinea Anzi.: Degelius, 1941  
Pyrenopsis subfuliginea Nyl.: Degelius, 1941  
Pyrenula bahiana Malme: Degelius, 1941, MIN HERB  
Pyrenula brunnea Fee: Degelius, 1941  
Pyxine soredata (Ach.) Mont.: Degelius, 1941, Dey,  
1978, MIN HERB
- Ramalina sp.: Degelius, 1941
- S Ramalina americana Hale: Dey, 1978  
Ramalina intermedia (Del. ex Nyl.) Nyl.: Dey, 1978  
Rhizocarpon grande (FlBrke ex Flot.) Arn.: Degelius,  
1941
- \* Rhizocarpon intermedium Degel.: Degelius, 1941  
Rhizocarpon plicatile (Leight.) Sm.: Degelius, 1941  
Rhizocarpon reductum Th. Fr.: Degelius, 1941
- Rinodina ascociscana Tuck.: Degelius, 1941  
Rinodina confragosa (Ach.) KBrb.: Degelius, 1941
- I Rinodina exigua (Ach.) S. Gray: Degelius, 1941  
Rinodina laevigata (Ach.) Malme.: Degelius, 1941  
Rinodina tephraspis (Tuck.) Herre.: Degelius, 1941,  
MIN HERB
- \* Sarcogyne simplex (Dav.) Nyl.: Degelius, 1941  
Staurothele tenuissima Degel.: Degelius, 1941  
Stereocaulon dactylophyllum FlBrke: Dey, 1978  
Stereocaulon pileatum Ach.: Degelius, 1941, Dey, 1978
- \* Stereocaulon tennesseense Magn. in Degel.: Degelius,  
1941, Dey, 1978, MIN HERB  
Sticta fuliginosa (Dicks.) Ach.: Degelius, 1941, Dey, 1978  
Sticta limbata (Sm.) Ach.: Dey, 1974b, Dey, 1978  
Sticta weigeli (Insert ex Ach.) Vain.: Degelius, 1941,  
Dey, 1978, MIN HERB

- Thermutis velutina (Ach.) Flot.: Degelius, 1941, MIN HERB  
Trypethelium virens Tuck. ex Michen. in Darl.: Degelius,  
1941, HIN HERB  
Umbilicaria mammulata (Ach.) Tuck.: Sharp, 1930,  
Degelius, 1941, Llano, 1950, Dey, 1978, MIN HERB  
Umbilicaria muehlenbergii (Ach.) Tuck.: Llano, 1950,  
Dey, 1978  
Usnea cavernosa Tuck.: Degelius, 1941  
S Usnea ceratina Ach.: Dey, 1978  
Usnea eonflisa Asah.: Dey, 1978  
Usnea fulvoreaegens (RMs.) RMs.: Dey, 1978  
Usnea hesperina Mot.: Dey, 1978  
Usnea mollis Stirt.: Dey, 1978  
Usnea strigosa (Ach.) A. Eat.: Dey, 1978  
S-I Usnea subfloridana Stirt.: Dey, 1978  
Usnea subfusca Stirt.: Dey, 1978  
Usnea trichodea Ach.: Dey, 1978  
Verrucaria sp.: Degelius, 1941  
I Xanthoria polycarpa (Ehrh.) Oliv.: Dey, 1978

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GRTE - GRAND TETON NATIONAL PARK

Total number of species = 17 : Poorly known

- Aspicilia caesiocinerea (Nyl. ex Malbr.) Arn.: Spence,  
1981
- Cladonia chlorophaea (FlHrke ex Somm.) Spreng.: Imshaug,  
1957
- Collema glebulentum (Nyl. ex Cromb.) Degel.: Degelius,  
1974
- Lecanora polytropa (Ehrh.) Rabenh.: Spence, 1981
- Lecanora thomsonii Magn.: Spence, 1981
- Lecidea atrobrunnea (Ram.) Schaer.: Spence, 1981
- Omphalodiscus krascheninnikovii (Sav.) Schol.: Spence,  
1981, Imshaug, 1957
- Parmelia taractica Kremp.: Imshaug, 1957
- Peltigera canina (L.) Hilld.: Spence, 1981
- Peltigera canina var. rufescens (Heis) Mudd: Imshaug,  
1957
- T Physcia dubia (Hoffm.) Lett.: Thomson, 1954, Thomson,  
1963
- Physconia muscigena (Ach.) Poelt: Imshaug, 1957, Thomson,  
1963
- Pseudephebe minuscula (Nyl. ex Arn.) Brodo & Hawksw.:  
Imshaug, 1957
- Rhizocarpon geographicum (L.) DC.: Spence, 1981
- Rhizoplaca melanophthalma (Ram.) Leuck. & Poelt: Spence,  
1981
- Stereocaulon alpinum Laur.: Spence, 1981
- Xanthoria elegans (Link) Th. Fr.: Spence, 1981

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GUMO - GUADALUPE MOUNTAINS NATIONAL PARK

No lichens reported : Unknown

ISRO - ISLE ROYALE NATIONAL PARK

Total number of species = 489 : Completely known

- Abrothallus oxysporus Tul.: Hedrick & Lowe, 1936  
Acarospora americana Magn.: MIN HERB  
Acarospora badiofusca (Nyl.) Th. Fr.: Harris, 1978, MIN  
 HERB  
Acarospora fuscata (Schrad.) Arn.: MIN HERB  
Acarospora glaucocarpa (Wahlenb. ex Ach.) Kerb.:  
 Hedrick & Lowe, 1936  
Acrocordia cavata (Ach.) Harris in Vezda: Harris, 1973  
Acrocordia gemmata (Ach.) Mass.: Hedrick & Lowe, 1936  
 S-I Anaptychia setifera RMs.: Hedrick & Lowe, 1936, MIN HERB  
Arthonia caesia (Flot.) Kerb.: MIN HERB  
Arthonia convexella Nyl.: Hedrick & Lowe, 1936  
Arthonia didyma Kerb.: MIN HERB  
Arthonia diffusella Fink in Hedr.: Hedrick & Lowe, 1936,  
 Hedrick, 1933  
Arthonia dispersa (Schrad.) Nyl.: MIN HERB  
Arthonia lecideella Nyl.: Hedrick & Lowe, 1936  
Arthonia patellulata Nyl.: MIN HERB  
Arthonia lurida Ach.: Hedrick & Lowe, 1936, Thomson, 1951  
 I Arthonia radiata (Pers.) Ach.: Hedrick & Lowe, 1936  
Arthopyrenia faginea (Schaer.) Swinsc.: MIN HERB  
Arthopyrenia punctiformis Mass.: Hedrick & Lowe, 1936,  
 Harris, 1973  
Aspicilia alphoplaca Wahlenb. ex Ach.: Harris, 1978, MIN  
 HERB  
Aspicilia caesiocinerea (Nyl. ex Malbr.) Arn.: MIN HERB  
Aspicilia cinerea (L.) Kerb.: Hedrick & Lowe, 1936, MIN  
 HERB  
Aspicilia contorta (Hoffm.) Kremp.: MIN HERB  
Aspicilia gibbosa (Ach.) Kerb.: Hedrick & Lowe, 1936  
Aspicilia laevata (Ach.) Arn.: Hedrick & Lowe, 1936  
Bacidia acclinis (Mass.) Zahlbr.: Hedrick & Lowe, 1936  
Bacidia atrogrisea (Del.) Kerb.: Hedrick & Lowe, 1936  
Bacidia bagliettoana (Mass. & De Not.) Jatta: Hedrick &  
 Lowe, 1936, Thomson, 1951  
 I Bacidia chlorococca (Graewe ex Stitzenb.) Lett.: MIN HERB  
Bacidia epixanthoides (Nyl.) Lett.: MIN HERB  
Baeidia fuscorubella (Hoffm.) Bausch: Hedrick & Lowe, 1936  
Baeidia incompta (Borr. ex Hook.) Anzi: Hedrick & Lowe,  
 1936  
Bacidia inundata (Fr.) Kerb.: Hedrick & Lowe, 1936  
Baeidia lignaria (Ach.) Lett.: Hedrick & Lowe, 1936  
Baeidia naegelli (Hepp) Zahlbr.: Hedrick & Lowe, 1936  
Bacidia rosella (Pers.) De Not.: MIN HERB  
 I Bacidia rubella (Hoffm.) Mass.: Hedrick & Lowe, 1936, MIN  
 HERB  
Baeidia sabuletorum (Sehreb.) Lett.: Hedrick & Lowe, 1936  
Baeidia schweinitzii (Tuck.) Sehneid.: Hedrick & Lowe, 1936  
Bacidia sphaeroides (Dicks.) Zahlbr.: Hedrick & Lowe,

- 1936, MIN HERB  
Bacidia suffusa (Fr.) Schneid.: Hedrick & Lowe, 1936  
Bacidia umbrina (Ach.) Bausch: MI~ HERB  
Baeomyces rufus (Huds.) Rebent.: Hedrick & Lowe, 1936,  
MIN HERB  
Bryoria capillaris (Ach.) Brodo & Hawksw.: Brodo &  
Hawksworth, 1977, Harris, 1978, tEN HERB  
Bryoria chalybeiformis (L.) Brodo & Hawksw.: Brodo &  
Hawksworth, 1977, Harris, 1978, M1N HERB  
S Bryoria furcellata (Fr.) Broda & Hawksw.: Hedrick & Lowe,  
1936, MIN HERB  
I Bryoria fuscescens (Gyeln.) Brodo & Hawksw.: M1N HERB  
S Bryoria implexa (Hoffm.) Brodo & Hawksw.: Hedrick & Lowe,  
1936, MIN HERB  
Bryoria nadvornikiana, (GY.jln.) Brodo & Hawksw.: Harris,  
1978, M1N HERB  
S Bryoria trichodes (Michx.) Brodo & Hawksw.: Brodo &  
Hawksworth, 1977, MIN HERB  
S Bryoria trichodes subsp. americana (Mot.) Brodo &  
Hawksw.: Hedrick & Lowe, 1936  
I Buellia alboatra (Hoffm.) Branth & Rostr.: Imshaug, 1951,  
Harris, 1978  
Buellia arnoldii Servo & Nadv.: MIN HERB  
Buellia dialyta (Nyl.) Tuck.: Hedrick & Lowe, 1936  
Buellia disciformis (Fr.) Mudd: Hedrick & Lowe, 1936,  
Imshaug, 1951, MIN HERB  
Buellia epipolia (Ach.) Mong.: Hedrick & Lowe, 1936  
Buellia inguilina Tuck.: Hedrick & Lowe, 1936  
Buellia lauri-cassiae (Fee) Mull.: Arg. Hedrick & Lowe, 1936  
T Buellia punctata (Hoffm.) Mass.: Hedrick & Lowe, 1936,  
Imshaug, 1951  
Buellia schaereri De Not.: MIN HERB  
Buellia spuria (Schaer.) Anzi: Hedrick & Lowe, 1936  
I Buellia stillingiana J. Stein.: Imshaug, 1951, MIN HERB  
Buellia turgescens Tuck.: M1N HERB  
Calicium glaucellum Ach.: Tibell, 1975, Harris, 1978  
Calicium parvum Tibell: Tibell, 1975  
Calicium salicinum Pers.: Hedrick & Lowe, 1936, Tibell,  
1975, MIN HERB  
Calicium trabinellum (Ach.) Ach.: Tibell, 1975, MIN HERB  
Caloplaca arenaria (Pers.) Mull. Arg.: M1N HERB  
S-1 Caloplaca cerina (Ehrh.) Th. Fr.: Hedrick & Lowe, 1936,  
MIN HERB  
Caloplaca chrysophthalma Degel.: M1N HERB  
Caloplaca cinnabarina (Ach.) Zahlbr.: Hedrick & Lowe, 1936,  
MIN HERB  
Caloplaca citrina (Hoffm.) Th. Fr.: Hedrick & Lowe, 1936,  
MIN HERB  
Caloplaca epithallina Lynge: M1N HERB  
Caloplaca ferruginea (Huds.) Th. Fr.: Hedrick & Lowe, 1936  
Caloplaca flavovirescens (Hulf.) Dalla Torre & Sarnth.:  
MIN HERB  
I Caloplaca holocarpa (Hoffm.) Wade: Hedrick & Lowe, 1936,

MIN HERB

- Caloplaca obliterans (Nyl.) Jatta: Harris, 1978  
Caloplaca sideritis (Tuck.) Zahlbr.: Hedrick & Lowe, 1936,  
Harris, 1978  
Caloplaca ulmorum (Fink) Fink: Hedrick & Lowe, 1936, Rudolph,  
1955
- 1-T Caloplaca vitellinula (Nyl.) Oliv.: MIN HERB  
S-1 Candelaria concolor (Dicks.) B. Stein: Hedrick & Lowe, 1936  
Candelariella aurella (Hoffm.) Zahlbr.: Hedrick & Lowe, 1936  
Candelariella efflorescens Harris & Buck: Harris & Buck, 1978  
I Candelariella vitellina (Ehrh.) Mull. Arg.: Hedrick &  
Lowe, 1936, MIN HERB  
Catillaria atropurpurea (Schaer.) Th. Fr.: Hedrick & Lowe, 1936  
S Catillaria griffithii (Sm.) Malme: Harris, 1978  
Catillaria micrococca (Korb.) Th. Fr.: Hedrick & Lowe,  
1936  
Cetraria arenaria Karnef.: MIN HERB  
Cetraria aurescens Tuck.: Hedrick & Lowe, 1936, MIN HERB  
Cetraria ciliaris Ach.: Hedrick & Lowe, 1936  
Cetraria ericetorum Opiz.: Fink, 1919  
Cetraria ericetorum subsp. reticulata (Ras.) Karnef.:  
Karnefelt, 1979  
Cetraria halei W. Culb. & C. Culb.: MIN HERB  
Cetraria hepatizon (Ach.) Va in.: Hedrick & Lowe, 1936, Harris,  
1978, MIN HERB  
Cetraria islandica (L.) Ach.: Harris, 1978, MIN HERB  
Cetraria oakesiana Tuck.: MIN HERB  
I Cetraria orbata. (Nyl.) Fink: MIN HERB  
I Cetraria pinastri (Scop.) S. Gray: Hedrick & Lowe, 1936,  
MIN HERB  
I Cetraria sepincola (Ehrh.) Ach.: Hedrick & Lowe, 1936,  
MIN HERB  
Cetrelia cetrarioides (Del. ex Duby) W. Culb. & C. Culb.:  
Stuntz & Allen, 1933, Hedrick & Lowe, 1936, Berry,  
1941, Culberson, 1962, MIN HERB  
Cetrelia chicitae (W. Culb.) H. Culb. & C. Culb.:  
Culberson, 1965, MIN HERB  
Cetrelia olivetorum (Nyl.) W. Culb. & C. Culb.: Culberson &  
Culberson, 1968, MIN HERB  
Chaenotheca brunneola (Ach.) Mull. Arg.: Tibell, 1975, MIN  
HERB  
Chaenotheca chrysocephala (Turn.) Th. Fr.: Hedrick & Lowe,  
1936, Tibell, 1975, MIN HERB  
I Chaenotheca ferruginea (Turn. & Sm.) Mig.: Hedrick &  
Lowe, 1936, Tibell, 1975, MIN HERB  
Chaenotheca hispidula (Ach.) Zahlbr.: Tibell, 1975  
Chaenotheca laevigata Nadv.: Tibell, 1975  
Chaenotheca phaeocephala (Turn.) Th. Fr.: Hedrick & Lowe,  
1936, MIN HERB  
Chaenotheca schaeereri (De Not.) Zahlbr.: Tibell, 1975,  
Harris, 1978

- Chaenotheca stemonea (Ach.) HULL. Arg.: Tibell, 1975
- Chaenotheca trichialis (Ach.) Th. Fr.: Tibell, 1975
- Chaenotheca trichialis var. cinerea (Pers.) Blombg. & Forss.: Hedrick & Lowe, 1936
- Chaenotheca xyloxena Nadv.: Tibell, 1975
- Chaenothecopsis consociata (Nhdv.) A. Schmidt: Tibell, 1975, Harris, 1978
- Chaenothecopsis debilis (Turn. & Borr. in Schaer.) Tibell: Tibell, 1975, Harris, 1978, MIN HERB
- Chaenothecopsis lignicola (Nadv.) A. Schmidt: Tibell, 1975, Harris, 1978
- Chaenothecopsis rubescens Vain.: Tibell, 1975
- Chaenothecopsis subpusilla (Vain.) Tibell: Tibell, 1975
- Chaenothecopsis viridialba (Kremp.) A. Schmidt: Tibell, 1975
- Chaenothecopsis viridireagens (Nadv.) Schmidt: Tibell, 1975, Harris, 1978
- Cladonia amaurocraea (FlHrke) Schaer.: Holt, 1908, Hedrick & Lowe, 1936, MIN HERB
- Cladonia apodocarpa Robb.: MIN HERB
- Cladonia arbuscula (Wallr.) Rabenh.: Hedrick & Lowe, 1936
- Cladonia bacillaris (Ach.) Nyl.: Hedrick & Lowe, 1936, MIN HERB
- Cladonia botrytes (Hag.) Willd.: Hedrick & Lowe, 1936, MIN HERB
- Cladonia capitata (Michx.) Spreng.: Hedrick & Lowe, 1936
- Cladonia cariosa (Ach.) Spreng.: Harris, 1975, MIN HERB
- Cladonia cenotea (Ach.) Schaer.: Hedrick & Lowe, 1936, MIN HERB
- Cladonia chlorouhaea (FlUrke ex Somm.) Spreng.: Hedrick & Lowe, 1936, MIN HERB
- Cladonia coccifera (L.) Willd.: Hedrick & Lowe, 1936, Harris, 1978, MIN HERB
- I Cladonia coniocraea (FlHrke) Spreng.: Holt, 1908, Hedrick & Lowe, 1936, MIN HERB
- Cladonia cornuta (L.) Hoffm.: Hedrick & Lowe, 1936
- Cladonia crispata (Ach.) Flot.: Holt, 1908, Hedrick & Lowe, 1936, MIN HERB
- I Cladonia cristatella Tuck.: Holt, 1908, Hedrick & Lowe, 1936, MIN HERB
- Cladonia cryptochlorophaea Asah.: MIN HERB
- Cladonia cyanipes (Fr.) FlHrke: Harris, 1978
- Cladonia decorticata (FlHrke) Spreng.: Hedrick & Lowe, 1936, MIN HERB
- Cladonia deformis (L.) Hoffm.: Holt, 1908, Hedrick & Lowe, 1936, MIN HERB
- Cladonia digitata (L.) Hoffm.: Hedrick & Lowe, 1936, MIN HERB
- S-1 Cladonia fimbriata (L.) Fr.: Hedrick & Lowe, 1936, MIN HERB
- Cladonia floerkeana (Fr.) FlHrke: Hedrick & Lowe, 1936
- Cladonia furcata (Huds.) Schrad.: Hedrick & Lowe, 1936, MIN HERB
- Cladonia gracilis (L.) Willd.: Holt, 1908, Hedrick & Lowe, 1936, MIN HERB

Cladonia grayi Merr. & Sandst.: MIN HERB  
Cladonia macilenta Hoffm.: Hedrick & Lowe, 1936  
Cladonia merochlorophaea Asah.: MIN HERB  
Cladonia mitis Sandst.: MIN HERB  
Cladonia multififormis Merr.: Hedrick & Lowe, MIN HERB  
Cladonia parasitica (Hoffm.) Hoffm.: Hedrick & Lowe,  
1936 MIN HERB  
Cladonia phyllophora Hoffm.: Hedrick & Lowe, 1936, MIN  
HERB  
Cladonia pityrea (F.Hrke) Fr.: Hedrick & Lowe, 1936  
Cladonia pleurota (F.Hrke) Schaer.: Hedrick & Lowe,  
1936, MIN HERB  
Cladonia pocillum (Ach.) O. Rich.: Hedrick & Lowe, 1936  
Cladonia pseudorangiformis Asah.: Harris, 1978  
Cladonia pyxidata (L.) Hoffm.: Hedrick & Lowe, 1936, MIN  
HERB  
Cladonia rangiferina (L.) Wigg.: Holt, Lowe, 1908,  
Hedrick & Lowe, 1936, MIN HERB  
Cladonia rei Schaer.: Hedrick & Lowe, 1936, MIN HERB  
Cladonia scabriuscula (Del. ex Duby) Nyl.: Hedrick &  
Lowe, 1936, MIN HERB  
Cladonia squamosa (Scop.) Hoffm.: Hedrick & Lowe, 1936,  
MIN HERB  
Cladonia stellaris (Opiz) Pouz. & Vezda: Holt, 1908,  
Hedrick & Lowe, 1936, MIN HERB  
Cladonia subulata (L.) Wigg.: Hedrick & Lowe, 1936, MIN  
HERB  
Cladonia sulphurina (Michx.) Fr.: Harris, 1978, MIN HERB  
Cladonia symphylicarpa (Ach.) Fr.: MIN HERB  
Cladonia turgida (Ehrh.) Hoffm.: Holt, 1908, Hedrick &  
Lowe, 1936, MIN HERB  
Cladonia uncialis (L.) Wigg.: Hedrick & Lowe, 1936, MIN  
HERB  
Cladonia verticillata (Hoffm.) Schaer.: Holt, 1908,  
Hedrick & Lowe, 1936, MIN HERB  
Collema cyrtaspis Tuck.: Hedrick & Lowe, 1936  
Collema glebulentum (Nyl. ex Cromb.) Degel.: Degelius,  
1974  
Collema polycarpon Hoffm.: MIN HERB  
Collema tenax (Sw.) Ach.: Hedrick & Lowe, 1936  
Collema undulatum Laur. ex Flot.: MIN HERB  
Coniocybe furfuracea (L.) Ach.: Hedrick & Lowe, 1936,  
Tibell, 1975, MIN HERB  
Coniocybe sulphurea (Retz.) Pers.: Tibell, 1975, Harris,  
1978  
Conotrema urceolatum (Ach.) Tuck.: MIN HERB  
Cyphelium lucidum (Th. Fr.) Th. Fr.: Hedrick & Lowe,  
1936, Tibell, 1975  
Cyphelium tigillare (Ach.) Ach.: Hedrick & Lowe, 1936,  
Tibell, 1975, MIN HERB  
Dermatocarpon miniatum (L.) Mann: Holt, 1908, Hedrick &  
Lowe, 1936, MIN HERB  
Dermatocarpon moulinisii (Mont.) Zahlbr.: MIN HERB  
Dermatocarpon reticulatum Magn.: Harris, 1978, MIN HERB  
Dermatocarpon weberi (Ach.) Mann: Holt, 1908, MIN HERB

- Dimerella diluta (Pers.) Trev.: Hedrick & Lowe, 1936,  
MIN HERB
- Dimelaena oreina (Ach.) Norm.: Hedrick & Lowe, 1936
- S Dimerella lutea (Dicks.) Trev.: Hedrick & Lowe, 1936,  
MIN HERB
- Diploschistes scruposus (Schreh.) Norm.: Hedrick & Lowe,  
1936, MIN HERB
- Endocarpon pulvinatu~ Th. Fr.: Harris, 1978, MIN HERB
- Eopyrenula leucoplaca (Wallr.) R. Harris: MIN HERB
- Ephebe lanata (L.) Vain.: MIN HERB
- Ephebe ocellata Hess.: MIN HERB
- Ephebe solida Born.: MIN HERB
- I Evernia mesomorpha Nyl.: Hol t, 1908, Hedrick & Lowe,  
1936, MIN HERB
- I Graphis scripta (L.) Ach.: Hedrick & Lowe, 1936, MIN  
HERB
- Gyalecta jenensis (Batsch) Zahlbr.: Hedrick & Lowe, 1936,  
Harris 1978
- Haematomma elatinum (Ach.) Mass.: Hedrick & Lowe, 1936,  
MIN HERB
- Heterodermia hypoleuca (MUhl.) Trev.: Hedrick & Lowe,  
1936
- Heterodermia leucomela (L.) Poelt: Hedrick & Lowe, 1936
- Heterodermia speciosa (Wulf.) Trev.: Hedrick & Lowe,  
1936, MIN HERB
- Huilia albocaerulescens (Wulf.) Hertel: Hedrick & Lowe,  
1936
- Huilia macrocarpa (DC.) Hertel: MIN HERB
- I Hyperphyscia adglutinata (Florke.) Hayrh. & Poelt:  
Hedrick & Lowe, 1936
- I Hypogymnia physodes (L.) W. Wats.: Hedrick & Lowe, 1936,  
Berry, 1941, MIN HERB
- S Hypogymnia tubulosa (Schaer.) Hav.: MIN HERB
- Icmadophila ericetorum (L.) Zahlbr.: Holt, 1908, Hedrick  
& Lowe, 1936, HIN HERB
- [Lasallia pustulata (L.) Mer.: Hedrick & Lowe, 1936  
ident. uncertain]
- Lecania dimera (Nyl.) Th. Fr.: MIN HERB
- I Lecanora allophana Nyl.: Holt, 1908, Hedrick & Lowe,  
1936, HIN HERB
- Lecanora atra (Huds.) Ach.: Hedrick & Lowe, 1936, MIN  
HERB
- Lecanora badia (Hoffm.) Ach.: MIN HERB Lecanora  
caesiorubella Ach.: HIN HERB
- Lecanora caesiorubella subsp. caesiorubella Ach.: Imshaug  
& Brodo, 1966
- I Lecanora carpinea (L.) Vain.: Hedrick & Lowe, 1936,  
Imshaug & Brodo, 1966, Harris, 1978
- Lecanora cateilea (Ach.) Mass.: Imshaug & Brodo, 1966,  
Harris, 1978, MIN HERB
- Lecanora cenisia Ach.: Harris, 1978, MIN HERB
- I Lecanora coilocarpa (Ach.) Nyl.: Hedrick & Lowe, 1936,  
MIN HERB
- Lecanora frustulosa (Dicks.) Ach.: Holt, 1908, Hedrick &  
Lowe, 1936, Harris, 1978, MIN HERB
- Lecanora garovaglii (KBrb.) Zahlbr.: Hedrick & Lowe,  
1936



- T Lecanora hageni (Ach.) Ach. : Hedrick & Lowe, 1936,  
Harris, 1978  
Lecanora impudens Degel.: MIN HERB  
Lecanora meridionalis Magn.: MIN HERB
- T Lecanora muralis (Schreb.) Rabenh.: Holt, 1908, Hedrick  
& Lowe, 1936, Harris, 1978, MIN HERB
- I Lecanora pallida (Schreb.) Rabenh.: Hedrick & Lowe,  
1936, MIN HERB
- I Lecanora pallida (Schreb.) Rabenh. var. pallida: Imshaug  
& Broda, 1966, Harris, 1978
- I Lecanora pallida var. rubescens Imsh. & Broda: Imshaug &  
Broda, 1966  
Lecanora polytropa (Ehrh.) Rabenh.: MIN HERB  
Lecanora pulcaris (Pers.) Ach.: MIN HERB  
Lecanora rugosella Zahlbr.: Hedrick & Lowe, 1936, MIN  
HERB  
Lecanora rupicola (L.) Zahlbr.: Hedrick & Lowe, 1936,  
Harris, 1978, MIN HERB  
Lecanora sambuci (Pers.) Nyl.: Hedrick & Lowe, 1936  
Lecanora strobilina (Spreng.) Kieff.: MIN HERB
- I Lecanora subfucsa (L.) Ach.: Hedrick & Lowe, 1936
- I Lecanora subfucsa var. argentata Ach.: Hedrick & Lowe,  
1936
- I Lecanora symmictera Nyl.: MIN HERB  
Lecanora thysanophora Harris ined.: MIN HERB  
Lecanora varia (Ehrh.) Ach.: MIN HERB  
Lecanora versicolor (Pers.) Ach.: Hedrick & Lowe, 1936  
Lecidea aeruginosa Barr.: MIN HERB
- I Lecidea albofuscescens Nyl.: Harris, 1978, MIN HERB  
Lecidea anthracophila Nyl.: Hedrick & Lowe, 1936  
Lecidea atrobrunnea (Ram.) Schaer.: MIN HERB  
Lecidea berengeriana (Mass.) Nyl.: MIN HERB  
Lecidea carnulenta (Tuck.) Fink: Hedrick & Lowe, 1936  
Lecidea contigua (Hoffm.) Fr.: Hedrick & Lowe, 1936  
Lecidea cyrtidea Tuck.: Hedrick & Lowe, 1936  
Lecidea elabens Fr.: Hedrick & Lowe, 1936  
Lecidea epixanthoidiza Nyl.: MIN HERB  
Lecidea erythrophaea FlHrke: MIN HERB  
Lecidea friesii Ach.: MIN HERB  
Lecidea fusca (Schaer.) Th. Fr.: MIN HERB  
Lecidea fuscescens Somm.: Lowe, 1935, Hedrick & Lowe,  
1936  
Lecidea fuscoatra (L.) Ach.: Hedrick & Lowe, 1936,  
Harris, 1978  
Lecidea gelatinosa Florke: Harris, 1978  
Lecidea globifera Ach.: Fink, 1919, Hedrick & Lowe,  
1936, Harris, 1978, MIN HERB  
Lecidea granulosa (Ehrh.) Ach.: Hedrick & Lowe, 1936,  
MIN HERB  
Lecidea helvola (KHrb.) Oli~.: MIN HERB  
Lecidea insularis Nyl.: MIN HERB  
Lecidea lapicida (Ach.) Ach.: Hedrick & Lowe, 1936  
Lecidea lithophila (Ach.) Ach.: Harris, 1978  
Lecidea lurida (Dill.) Ach.: Fink, 1919, Hedrick & Lowe,  
1936

- Lecidea oligotropha Laund.: MIN HERB  
Lecidea pantherina (Hoffm.) Th. Fr.: Hedrick & Lowe,  
 1936  
 [Lecidea parasema Ach.: Hedrick & Lowe, 1936 ident.  
 uncertain]  
 [Lecidea parasema var. theioplaca (Tuck.) Zahlbr.:  
 Hedrick & Lowe, 1936 ident. uncertain]  
Lecidea paupercula Th. Fr.: MIN HERB  
Lecidea plana Lahm ex Korb.: MIN HERB  
Lecidea rubiformis (Wahlenb. ex Ach.) Wahlenb.: MIN HERB  
Lecidea sanguineoatra (Wulf.) Ach.: Hedrick & Lowe, 1936  
 [Lecidea sapinea (Fr.) Zahlbr.: Hedrick & Lowe, 1936  
 misident.]
- I Lecidea scalaris (Ach.) Ach.: MIN HERB  
Lecidea speirea (Ach.) Ach.: Harris, 1978, MIN HERB  
Lecidea tessellata (Ach.) Florke: Hedrick & Lowe, 1936,  
 Harris, 1978, MIN HERB  
Lecidea turgidula Fr.: Hedrick & Lowe, 1936  
Lecidea uliginosa (Schrad.) Ach.: Hedrick & Lowe, MIN  
 HERB  
Lecidea varians Ach.: Hedrick & Lowe, 1936
- S Lecidea vernalis (L.) Ach.: Hedrick & Lowe, 1936, MIN  
 HERB  
Lecidella carpathica Korb.: Harris, 1978, MIN HERB
- I Lecidella elaeochroma (Ach.) Haszl. var. hyalina (Mart.)  
 Zahlbr.: Hedrick & Lowe, 1936, Harris, 1978  
Lecidella euphorea (Flörke) Hertel: MIN HERB  
Lecidella stigmatea (Ach.) Hertel & Leuck.: Hedrick &  
 Lowe, 1936, MIN HERB  
Lepraria finkii (E. de Lesd. in Hue) ined.: MIN HERB  
Lepraria membranacea (Dicks.) Vain.: Hedrick & Lowe,  
 1936  
Lepraria neglecta (Nyl.) Lett.: MIN HERB  
Leptogium burnetiae Dodge: MIN HERB  
Leptogium corticola (Tayl.) Tuck.: Hedrick & Lowe, 1936  
Leptogium fyanescens (Ach.) Korb.: Hedrick & Lowe, 1936,  
 MIN HERB  
Leptogium lichenoides (L.) Zahlbr.: Hedrick & Lowe,  
 1936, MIN HERB  
Leptogium plicatile (Ach.) Leight.: Hedrick & Lowe, 1936  
Leptogium saturninum (Dicks.) Nyl.: Hedrick & Lowe,  
 1936, MIN HERB  
Leptogium sinuatum (Huds.) Mass.: Sierk, 1964, Harris,  
 1978  
 [Leptogium tremelloides: Hedrick & Lowe, 1936 misident.]  
Letorhaphis atomaria (Schaerer) Szat.: Harris, 1973  
Letorhaphis contorta Degel.: Harris, 1973  
Letorhaphis epidermidis (Ach.) Th. Fr.: Hedrick & Lowe,  
 1936, Harris, 1973, MIN HERB  
Letorhaphis parameca (Mass.) Korb.: Harris, 1973
- S Lobaria pulmonaria (L.) Hoffm.: Holt, 1908, Hedrick &  
 Lowe, 1936, MIN HERB  
Lobaria quercizans Michx.: 1973, MIN HERB  
Lobaria scrobiculata (Scop.) DC.: Harris, 1978, MIN HERB  
Lopadium pezizoideum (Ach.) Korb.: Lowe, 1935, Hedrick &  
 Lowe, 1936, MIN HERB



- Nenegazzia terebrata (Hoffm.) Nass.: Hedrick & Lowe, 1936,  
MIN HERB
- Micarea melaena (Nyl.) Hedl.: Hedrick & Lowe, 1936, MIN  
HERB
- Micarea violacea Hedl.: MIN HERB
- Micarea viridescens (Schrad.) Brodo: Hedrick & Lowe, 1936
- Microcalicium disseminatum (Ach.) Vain.: Tibell, 1975,  
Harris, 1978
- Hicrothelia micula Korb.: Harris, 1973
- I Mycoblastus affinis (Schaer.) Schauer.: Hedrick & Lowe,  
1936
- I Mycoblastus sanguinarius (L.) Norm.: Hedrick & Lowe,  
1936, MIN HERB
- Mycocalicium parietinum (Ach. ex Schaer.) Hawksw.:  
Hedrick & Lowe, 1936, Tibell, 1975, MIN HERB
- Mycoglaena myricae (Nyl.) Harris: Harris, 1973
- Nephroma bellum (Spreng.) Tuck.: Hedrick & Lowe, 1936,  
Wetmore, 1960, MIN HERB
- Nephroma helveticum Ach.: Hedrick & Lowe, 1936, Wetmore,  
1960, HIN HERB
- Nephroma pari Ie (Ach.) Ach.: Hedrick & Lowe, 1936,  
Wetmore, 1960, MIN HERB
- Nephroma resupinatum (L.) Ach.: Hedrick & Lowe, 1936,  
Wetmore, 1960, MIN HERB
- Ochrolechia arborea (Ljubitz.) Almb.: MIN HERB
- Opegrapha lichenoides Pers.: MIN HERB
- Opegrapha niveoatra (Borr.) Laund.: Harris, 1978
- S Opegrapha pulicaris (Hoffm.) Schrad.: Hedrick & Lowe,  
1936
- Opegrapha prosodea Ach.: Harris, 1978
- Opegrapha viridis (Pers. ex Ach.) Nyl.: Hedrick & Lowe,  
1936
- Pachyospora mutabilis (Ach.) Mass.: Harris, 1978, MIN  
HERB
- Pannaria ahlneri Jorg.: Harris, 1978
- Pannaria conoplea (Ach.) Bory: MIN HERB
- Pannaria leucophaea (Vahl.) JClrg.: Harris, 1978, MIN HERB
- Pannaria leucosticta (Tuck.) Tuck. ex Nyl.: MIN HERB
- Pannaria microphylla (Sw.) Mass.: Hedrick & Lowe, 1936
- Pannaria pezizoides (G. Web.) Trev.: Hedrick & Lowe,  
1936, Harris, 1978, MIN HERB
- Pannaria pityrea (DC.) Degel.: MIN HERB
- Pannaria praetermissa Nyl.in Chyd. & Furuhj.: Hedrick &  
Lowe, 1936, Harris, 1978, MIN HERB
- Pannaria rubiginosa (Thunb. ex Ach.) Del.: Hedrick & Lowe,  
1936
- Parmelia arnoldii Du Rietz: Hale, 1965, MIN HERB
- Parmelia borreri (Sm.) Turn.: Hedrick & Lowe, 1936
- I Parmelia caperata (L.) Ach.: Holt, 1908, Hedrick & Lowe,  
1936, Berry, 1941, MIN HERB
- Parmelia cetrata Ach.: Hedrick & Lowe, 1936
- Parmelia conspersa (Ach.) Ach.: Holt, 1908, Hedrick & Lowe,  
1936, Berry, 1941, MIN HERB
- Parmelia crinita Ach.: MIN HERB
- Parmelia cumberlandia (Gyeln.) Hale: MIN HERB

- Parmelia disjuncta Erichs.: MIN HERB
- I Parmelia exasperata De Not.: Hedrick & Lowe, 1936, MIN  
HERB
- Parmelia fraudans Nyl.: MIN HERB
- Parmelia hypopsila Mull. Arg.: Harris, 1978, MIN HERB
- Parmelia infumata Nyl.: Esslinger, 1977, MIN HERB
- Parmelia lineola Berry: MIN HERB
- Parmelia mexicana Gyeln.: MIN HERB
- I Parmelia olivacea (L.) Ach.: Hedrick & Lowe, 1936,  
Berry, 1941, Ahti, 1966, MIN HERB
- Parmelia omphalodes (L.) Ach.: Harris, 1978, MIN HERB
- Parmelia panniformis (Nyl.) Vain.: Hedrick & Lowe, 1936,  
MIN HERB
- S Parmelia perlata (Huds.) Ach.: Holt, 1908, Hedrick &  
Lowe, 1936, Berry, 1941, MIN HERB
- Parmelia guercina (Willd.) Vain.: Hedrick & Lowe, 1936
- I Parmelia revoluta Florke: Harris, 1978
- I Parmelia rudecta Ach.: Hedrick & Lowe, 1936, MIN HERB
- I Parmelia saxatilis (L.) Ach.: Hedrick & Lowe, 1936,  
Berry, 1941, MIN HERB
- I Parmelia septentrionalis (Lynge) Ahti: Ahti, 1966, MIN  
HERB
- Parmelia soledica Nyl.: MIN HERB
- Parmelia sguarrosa Hale: MIN HERB
- Parmelia stictica Hale: MIN HERB
- I-T Parmelia subargentifera Nyl.: Hedrick & Lowe, 1936
- S Parmelia subaurifera Nyl.: MIN HERB
- I Parmelia subrudecta Nyl.: MIN HERB
- Parmelia substygia RMs.: MIN HERB
- I-T Parmelia sulcata Tayl.: Holt, 1908, Hedrick & Lowe, 1936,  
Berry, 1941, MIN HERB
- Parmelia taractica Kremp.: MIN HERB
- Parmelia tasmanica Hook. f. & Tayl.: Harris, 1978
- I Parmelia trabeculata Ahti: Ahti, 1966, Esslinger, 1977,  
Harris, 1978, MIN HERB
- Parmeliella triptophylla (Ach.) Mull. Arg.: MIN HERB
- I Parmeliopsis aleurites (Cach.) Nyl.: Lowe, 1935, Hedrick  
& Lowe, 1936, MIN HERB
- I Parmeliopsis ambigua (Wulf.) Nyl.: Hedrick & Lowe, 1936,  
MIN HERB
- I Parmeliopsis hyperopta (Ach.) Arn.: Hedrick & Lowe,  
1936, MIN HERB
- Peltigera aphthosa (L.) Willd.: Holt, 1908, Hedrick &  
Lowe, 1936, Thomson, 1950, Harris, 1978, MIN HERB
- Peltigera canina (L.) Willd.: Thomson, 1950, MIN HERB
- Peltigera canina var. praetextata (Florke in Somm.) Hue:  
Hedrick & Lowe, 1936
- Peltigera canina var. rufescens (Weis) Mudd: Hedrick &  
Lowe, 1936, Thomson, 1950
- Peltigera canina var. spuria (Ach.) Schaer.: Hedrick &  
Lowe, 1936, Thomson, 1950
- Peltigera collina (Ach.) Ach.: Hedrick & Lowe, 1936
- Peltigera elisabethae Gyeln.: MIN HERB
- Peltigera evansiana Gyeln.: Thomson, 1950, MIN HERB
- I Peltigera horizontalis (Huds.) Baumg.: Hedrick & Lowe,

- 1936, Thomson, 1950, MIN HERB  
Peltigera lepidophora (Nyl. ex Vain.) Bitter: MIN HERB  
Peltigera leucophlebia (Nyl.) Gyeln.: MIN HERB  
Peltigera malacea (Ach.) Funck: Hedrick & Lowe, 1936,  
 Thomson, 1950, MIN HERB  
Peltigera polydactyla (Neck.) Hoffm.: Hedrick & Lowe,  
 1936, Thomson, 1950, MIN HERB  
Peltigera venosa (L.) Baumg.: Hedrick & Lowe, 1936,  
 Thomson, 1950, Harris, 1978, MIN HERB  
Pertusaria alpina Hepp ex Ahles.: Dibben, 1980  
 I Pertusaria amara (Ach.) Nyl.: Dibben, 1980, MIN HERB  
Pertusaria consocians Dibb.: Dibben, 1980, MIN HERB  
Pertusaria leioplaca (Ach.) DC.: Hedrick & Lowe, 1936  
Pertusaria macounii (Lamb) Dibb.: Dibben, 1980  
Pertusaria multipuncta (Turn.) Nyl.: Hedrick & Lowe,  
 1936  
 I Pertusaria multipunctoides Dibb.: Dibben, 1980  
Pertusaria neoscotica Lamb: Dibben 1980  
Pertusaria ophthalmiza (Nyl.) Nyl.: Dibben, 1980, MIN HERB  
Pertusaria pertusa (L.) Tuck.: Hedrick & Lowe, 1936  
Pertusaria pustulata (Ach.) Duby: Hedrick & Lowe, 1936,  
 Dibben, 1980  
Pertusaria sommerfeltii (Florke ex Somm.) Fr.: Dibben,  
 1980  
Pertusaria velata (Turn.) Nyl.: Hedrick & Lowe, 1936,  
 Dibben, 1980  
Phaeocalicium compressulum (Nyl. Ex Vain.) Schmidt:  
 Tibell, 1975, Harris, 1978, MIN HERB  
Phaeocalicium polyporaenum (Nyl.) Tibell: Hedrick & Lowe,  
 1936, MIN HERB  
Phaeophyscia adiastrata (Essl.) Essl.: MIN HERB  
Phaeophyscia chloantha (Ach.) Moberg: MIN HERB  
Phaeophyscia ciliata (Hoffm.) Essl.: Hedrick & Lowe,  
 1936, Thomson, 1963, MIN HERB  
Phaeophyscia decolor (Kashiw.) Essl.: Harris, 1978  
Phaeophyscia endococcinea (Korb.) Essl.: MIN HERB  
Phaeophyscia hispidula (Ach.) Essl.: Hedrick & Lowe,  
 1936, Thomson, 1963, MIN HERB  
 I Phaeophyscia orbicularis (Neck.) Moberg: Thomson, 1936,  
 MIN HERB  
Phaeophyscia pusilloides (Zahlbr.) Essl.: MIN HERB  
Phaeophyscia sciastra (Acn.) Moberg: Esslinger, 1978, MIN  
 HERB  
 I Phylctis argena (Ach.) Flot.: MIN HERB  
 I Physcia adscendens (Th. Fr.) Oliv.: Thomson, 1963, MIN  
 HERB  
 I Physcia aipolia (Ehrh.) Hampe: Hendrick & Lowe, 1936,  
 Thomson, 1963, MIN HERB  
Physcia caesia (Hoffm.) Hampe: Hedrick & Lowe, 1936, MIN  
 HERB  
 T Physcia dubia (Hoffm.) Lett.: MIN HERB  
Physcia phaea (Tuck.) Thoms.: MIN HERB  
 I Physcia stellaris (L.) Nyl.: Hedrick & Lowe, 1936,  
 Thomson, 1963, MIN HERB  
Physcia subtilis Degel.: MIN HERB

- I Physcia terrella (Scop.) DC. in Lam & DC.: Hedrick & Lowe,  
1936, Harris, 1978
- I Physconia detersa (Nyl.) Poelt: Hedrick & Lowe, 1936,  
Thomson, 1963, MIN HERB
- Physconia muscigena (Ach.) Poelt: Thomson, 1963, Harris,  
1978, MIN HERB
- I Physconia pulverulenta (Schreb.) Poelt: Holt, 1908,  
Hedrick & Lowe, 1936
- Placynthium aspratilis (Ach.) Henss.: MIN HERB
- Placynthium nigrum (Huds.) S. Gray: MIN HERB
- I Platismatia glauca (L.) W. Culb. & C. Culb.: Culberson &  
Culberson, 1968, Harris, 1978, MIN HERB
- Platismatia tuckermanii (Oakes) W. Culb. & C. Culb.:  
Holt, 1908, Hedrick & Lowe, 1936, Culberson &  
Culberson, 1968, MIN HERB
- Polyblastiopsis fallaciosa (Stizenb.) Zahlbr.: MIN HERB
- Protoblastenia rupestris (Scop.) J. Stein.: Hedrick &  
Lowe, 1936
- Pseudevernia consocians (Vain.) Hale & W. Culb.: Hedrick  
& Lowe, 1936, MIN HERB
- Pyrenula leucophaea (Wallr.) Korb.: Hedrick & Lowe, 1936
- S Ramalina americana Hale: MIN HERB
- S Ramalina calicaris (L.) Fr.: Hedrick & Lowe, 1936
- S Ramalina calicaris var. canaliculata Fr.: Hedrick &  
Lowe, 1936
- I Ramalina dilacerata (Hoffm.) Hoffm.: MIN HERB
- S Ramalina farinacea (L.) Ach.: Holt, 1908, Hedrick &  
Lowe, 1936, Bowler & Rundel, 1978, Harris, 1978
- Ramalina fraxinea (L.) Ach.: Hedrick & Lowe, 1936
- Ramalina geniculata Hook. f. & Tayl.: Hedrick & Lowe,  
1936
- Ramalina hypoprotocetrarica W. Culb.: Harris, 1978
- Ramalina intermedia (Del. ex Nyl.) Nyl.: MIN HERB
- S Ramalina obtusata (Arn.) Bitt.: MIN HERB
- S Ramalina pollinaria (Westr.) Ach.: Hedrick & Lowe,  
1936, MIN HERB
- [Ramalina pusilla Le Prev. in Duby: Hedrick & Lowe, 1936  
misident.]
- Ramalina roesleri (Hochst.) Nyl.: Harris, 1978, MIN HERB
- Ramalina sinensis Jatta: Harris, 1978, MIN HERB
- Ramalina thrausta (Ach.) Nyl.: Bowler, 1977, MIN HERB
- Rhizocarpon badioatrum (Florke ex Spreng.) Th. Fr.:  
Hedrick & Lowe, 1936
- Rhizocarpon cinereonigrum Vain.: MIN HERB
- Rhizocarpon disporum (Naeg. ex Hepp) Müll. Arg.: Hedrick  
& Lowe, 1936, MIN HERB
- Rhizocarpon eupetraeum (Nyl.) Arn.: Hedrick & Lowe, 1936
- Rhizocarpon geographicum (L.) DC.: Holt, 1908, Hedrick &  
Lowe, 1936, Harris, 1978, MIN HERB
- Rhizocarpon grande (Florke ex Flat.) Arn.: Hedrick &  
Lowe, 1936, MIN HERB
- Rhizocarpon lecanorinum (Korb.) And.: MIN HERB
- [Rhizocarpon massalongii f. colludens (Nyl.) Zahlbr.:  
Hedrick & Lowe, 1936 misident.]
- Rhizocarpon obscuratum (Ach.) Mass.: MIN HERB

Rhizocarpon riparium Ras.: MIN HERB  
Rhizocarpon subgeminatum Eitn.: MIN HERB  
Rhizoplaca chrysoleuca (Sm.) Zopf: Harris, 1978, MIN HERB  
Rhizoplaca melanophthalma (Ram.) Leuck. & Poelt: MIN HERB  
Rhizoplaca peltata (Ram.) Leuck. & Poelt: Hedrick & Lowe,  
1936  
Rinodina archaea (Ach.) Arn.: MIN HERB  
Rinodina colobina (Ach.) Th. Fr.: MIN HERB  
Rinodina confragosa (Ach.) Korb.: Hedrick & Lowe, 1936  
I Rinodina exigua (Ach.) S. Gray: Hedrick & Lowe, 1936  
[Rinodina sophodes (Ach.) Mass.: Hedrick & Lowe, 1936  
misident. ]  
Rinodina tephraspis (Tuck.) Herre: MIN HERB  
Rinodina turfacea (Wahlenb.) Korb.: MIN HERB  
Solorina saccata (L.) Ach.: Hedrick & Lowe, 1936, MIN HERB  
Sphinctrina turbinata (Pers. ex Fr.) De Not.: Hedrick &  
Lowe, 1936, Tibell, 1975  
Spilonema revertens Nyl.: MIN HERB  
Staurothele clopima (Walenb. ex Ach.) Th. Fr.: Hedrick &  
Lowe, 1936, MIN HERB  
Staurothele fissa (Tayl.) Zw.: Hedrick & Lowe, 1936, MIN  
HERB  
I Stenocybe major Nyl.: Lowe, 1935, Hedrick & Lowe, 1936,  
Tibell, 1975, MIN HERB  
Stenocybe pullatula (Ach. ex Somm.) B. Stein: Tibell, 1975,  
Harris, 1978  
Stereocaulon dactylophyllum Florke: Holt, 1908, Hedrick &  
Lowe, 1936, Harris, 1978, MIN HERB  
Stereocaulon depreaultii Del.: MIN HERB  
Stereocaulon paschale (L.) Hoffm.: Holt, 1908, Hedrick &  
Lowe, 1936, Harris, 1978, MIN HERB  
Stereocaulon saxatile Magn.: MIN HERB  
Stereocaulon tomentosum Fr.: Hedrick & Lowe, 1936, MIN  
HERB  
Sticta fuliginosa (Dicks.) Ach.: Hedrick & Lowe, 1936  
Thelocarpon epibolum Nyl.: Harris, 1978, MIN HERB  
Thelopsis melathelia Nyl.: Harris, 1978  
Thermutis velutina (Ach.) Flat.: MIN HERB  
Thyrea nigritella Lett.: MIN HERB  
Toninia caeruleonigricans (Leightf.) Th. Fr.: Hedrick &  
Lowe, 1936, Harris, 1978, MIN HERB  
Toninia squalida (Schleich. ex Ach.) Mass.: Hedrick & Lowe,  
1936, MIN HERB  
Trapelia involuta (Tayl. in Mack.) Hert.: MIN HERB  
Umbilicaria deusta (L.) Baumg.: Hedrick & Lowe, 1936,  
Llano, 1950, MIN HERB  
Umbilicaria hyperborea (Ach.) Hoffm.: Hedrick & Lowe, 1936,  
Harris, 1978, MIN HERB  
Umbilicaria mammulata (Ach.) Tuck.: Llano, 1950, MIN HERB  
Umbilicaria muehlenbergii (Ach.) Tuck.: Hedrick & Lowe,  
1936, Llano, 1950, Harris, 1978  
Umbilicaria polyphylla (L.) Baumg.: Harris, 1978  
Umbilicaria torrefacta (Lightf.) Schrad.: Harris, 1978,  
MIN HERB



- Umbilicaria vellea (L.) Ach.: Hedrick & Lowe, 1936, Llano,  
1950, MIN HERB
- Usnea cavernosa Tuck.: Hedrick & Lowe, 1936, MIN HERB
- S Usnea ceratina Ach.: Holt, 1908, Hedrick & Lowe, 1936
- S Usnea filipendula Stirt.: Hedrick & Lowe, 1936
- S [Usnea florida (L.) Wigg.: Hedrick & Lowe, 1936 misident.]
- Usnea fulvovirens (Rgs.) Rgs.: MIN HERB
- S-I Usnea hirta (L.) Wigg.: Hedrick & Lowe, 1936, MIN HERB
- Usnea longissima Ach.: Holt, 1908, Hedrick & Lowe, 1936,  
Harris, 1978, MIN HERB
- [Usnea plicata (L.) Wigg.: Hedrick & Lowe, 1936 misident.]
- S-I Usnea subfloridana Stirt.: MIN HERB
- Verrucaria elaeomelaena (Massal.) Arn.: Harris, 1978
- Verrucaria margacea Wahlenb.: MIN HERB
- Verrucaria muralis Ach.: Hedrick & Lowe, 1936
- Verrucaria nigrescens Pers.: Hedrick & Lowe, 1936
- Verrucaria viridula (~chrad.) Ach.: Hedrick & Lowe, 1936
- I Xanthoria candelaria (L.) Th. Fr.: Hedrick & Lowe, 1936,  
MIN HERB
- Xanthoria elegans (Link) Th. Fr.: Hedrick & Lowe, 1936, MIN  
HERB
- S-I Xanthoria fallax (Hepp) Arn.: MIN HERB
- I Xanthoria polycarpa (Ehrh.) Oliv.: Hedrick & Lowe, 1936,  
MIN HERB
- Xanthoria sorediata (Vain.) Poelt: MIN HERB
- Xylographa abietina (Pers.) Zahlbr.: MIN HERB

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America. Publ. Museum, Michigan State Univ., BioI. Ser. 1:369-452.

JOTR - JOSHUA TREE NATIONAL MONUMENT

Total number of species = 2 : Unknown

Heppia lutosa (Ach.) Nyl.: Wetmore, 1970

Peltula euploca (Ach.) Oz. & Claud.: Wetmore, 1970, MIN HERB

JOTR REFERENCES

Wetmore, C. M. 1970. The lichen family Heppiaceae in North America.  
Ann. Missouri Bot. Gard. 57:158-209.

KICA - KINGS CANYON NATIONAL PARK

Total number of species = 32 : Poorly known

- Bryoria abbreviata (Mull. Arg.) Brodo & Hawk.: Smith, 1980  
Cetraria merrillii DR.: Smith, 1980  
Collema nigrescens (Huds.) DC.: Smith, 1980  
Dermatocarpon miniatum (L.) Mann: Smith, 1980  
I Evernia prunastri (L.) Ach.: Smith, 1980  
Hypogymnia enteromorpha (Ach.) Nyl.: Smith, 1980  
Leptogium burnetiae Dodge: Smith, 1980  
Leptogium saturninum (Dicks.) Nyl.: Smith, 1980  
Letharia columbiana (Nutt.) Thoms.: Smith, 1980  
Letharia vulpina (L.) Hue: Smith, 1980  
Parmelia conspersa (Ach.) Ach.: Smith, 1980  
Parmelia cumberlandia (Gyeln.) Hale: Smith, 1980  
Parmelia elegantula (Zahlbr.) Szat.: Smith, 1980  
I. Parmelia exasperata De Not.: Smith, 1980  
J. Parmelia mexicana (Gyeln.) Hale: Smith, 1980  
I Parmelia saxatilis (L.) Ach.: Smith, 1980  
Parmelia subolivacea Nyl.: Smith, 1980  
I-T Parmelia sulcata Tayl.: Smith, 1980  
Peltigera canina (L.) Willd.: Smith, 1980  
I Physcia adscendens (Fr.) Oliv.: Smith, 1980  
I Physcia aipolia (Ehrh.) Hampe: Smith, 1980  
I Physcia stellaris (L.) Nyl.: Smith, 1980  
I Physcia tenella (Scop.) DC.: Smith, 1980  
I Physconia detersa (Nyl.) Poelt: Smith, 1980  
I Platismatia glauca (L.) W. Culb. & C. Culb.: Smith, 1980  
Polychidium albociliatum (Desm.) Zahlbr.: Smith, 1980  
S Ramalina farinacea (L.) Ach.: Smith, 1980  
Umbilicaria hyperborea (Ach.) Ach.: Smith, 1980  
Umbilicaria phaea Tuck.: Smith, 1980  
Umbilicaria vellea (L.) Ach.: Smith, 1980  
Xanthoria elegans (Link) Th. Fr.: Rudolph, 1955  
I Xanthoria polycarpa (Ehrh.) Oliv.: Smith, 1980

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Smith, D. W. 1980. A taxonomic survey of the macrolichens of Sequoia and Kings Canyon National Parks. Masters thesis, San Francisco State University.

LABE - LAVA BEDS NATIONAL MONUMENT

No lichens reported : Unknown

LAVO - LASSEN VOLCANIC NATIONAL PARK

Total number of species = 1 : Unknown

Omphalodiscus krascheninnikovii (Sav.) Schol.: Imshaug,  
1957

LAVO REFERENCES

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MACA - MAMMOTH CAVE NATIONAL PARK

No lichens reported : Unknown



NEVE - MESA VERDE NATIONAL PARK

Total number of species = 45 : Moderately known

- Acarospora strigata (Nyl.) Jatta: MIN HERB  
Acarospora utahensis Magn.: MIN HERB  
Aspicilia alphoplaca (Wahlenb. ex Ach.) Ach.: MIN HERB  
Aspicilia caesiocinerea (Nyl. ex Malbr.) Arn.: MIN HERB  
I Buellia alboatra (Hoffm.) Branth & Rostr.: MIN HERB  
T Buellia punctata (Hoffm.) Mass.: MIN HERB  
Caloplaca arizonica Magn.: MIN HERB  
Caloplaca trachyphylla (Tuck.) Zahlbr.: Rudolph, 1955  
I-T Candelariella vitellina (Ehrh.) Mull. Arg.: MIN HERB  
S-I Cladonia fimbriata (L.) Fr.: MIN HERB  
Cladonia pyxidata (L.) Hoffm.: MIN HERB  
Collema coccophorum Tuck.: MIN HERB  
Collema tuniforme (Ach.) Ach.: MIN HERB  
Dermatocarpon lachneum (Ach.) A. L. Sm.: MIN HERB  
Diploschistes actinostomus (Pers.) Zahlbr.: MIN HERB  
Lecanora cenisia Ach.: MIN HERB  
T Lecanora dispersa (Pers.) Somm.: MIN HERB  
Lecanora frustulosa (Dicks.) Ach.: MIN HERB  
T Lecanora muralis (Schreb.) Rabenh.: MIN HERB  
I Lecanora saligna (Schrad.) Zahlbr.: MIN HERB  
Lecidea crenata (Tayl.) Stizenb.: MIN HERB  
Lecidea globifera Ach.: MIN HERB  
Lecidella glomerulosa (DC.) Choisy: MIN HERB  
I-T Lepraria incan~ (L.) Ach.: MIN HERB  
Leptogium furfuraceum (Harm.) Sierk: MIN HERB  
Leptogium lichenoides (L.) Zahlbr.: MIN HERB  
Parmelia elegantula (Zahlbr.) Szat.: MIN HERB  
Parmelia mexicana Gyeln.: MIN HERB  
I Parmelia olivacea (L.) Ach.: Herre, 1946  
Parmelia subolivacea Nyl. in. Hasse: Ahti, 1966, MIN HERB  
Peltigera canina var. rufescens (Weiss) Mudd: MIN HERB  
Pertusaria saximontana Wetm.: Anderson & Carmer, 1974  
Physcia caesia (Hoffm.) Hampe: MIN HERB  
I Physcia stellaris (L.) Nyl.: MIN HERB  
I Physconia detersa (Nyl.) Poelt: Thomson, 1963, MIN HERB  
Physconia muscigena (Ach.) Poelt: Thomson, 1963  
Rhizoplaca melanophthalma (Ram.) Leuck. & Poelt: MIN HERB  
Rinodina pyrina (Ach.) Arn.: MIN HERB  
Toninia aromatica (Turn.) Mass.: MIN HERB  
Toninia candida (Web.) Th. Fr.: MIN HERB  
S-I Usnea hirta (L.) Wigg.: MIN HERB  
Verrucaria virens Nyl.: MIN HERB  
Xanthoria elegans (Link) Th. Fr.: Rudolph, 1955  
I Xanthoria polycarpa (Ehrh.) Oliv.: MIN HERB  
Zahlbrucknerella calcarea (Herre) Herre: Henssen, 1977

#### MEVE REFERENCES

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MORA - MOUNT RAINIER NATIONAL PARK

Total number of species = 132 : Moderately known

6 species with type localities in the park

- Agyrophora rigida (DR.) Llano: Imshaug, 1957  
Alectoria lata (Tayl.) Linds.: Brodo & Hawksworth, 1977  
Alectoria ~icans (Ach.) Nyl.: Imshaug, 1957  
I Alectoria sarmentosa (Ach.) Ach.: Howard, 1950, Imshaug, 1957  
I Alectoria sarmentosa subsp. vexillifera (Nyl.) Brodo & Hawksw.: Howard, 1937, Brodo & Hawksworth, 1977  
Aspicilia alpina (Somm.) Arn.: Howard, 1937, Howard, 1950  
Aspicilia cinerea (L.) Korb.: Howard, 1950  
Bacidia sabuletorum (Schreb.) Lett.: Howard, 1950  
Bryoria fremontii (Tuck.) Brodo & Hawksw.: Howard, 1937, Howard, 1950  
I Bryoria fuscescens (Gyeln.) Brodo & Hawksw.: Brodo & Hawksworth, 1977  
S [Bryoria "jubata" (L.) Ach.: Howard, 1937, Howard, 1950 ident. uncertain]  
Bryoria nadvornikiana (Gyein.) Brodo & Hawksw.: Imshaug, 1950a  
Bryoria oregana (Tuck.) Brodo & Hawksw.: Howard, 1937, Howard, 1950, MIN HERB  
Buellia moriopsis (Mass.) Th. Fr.: Imshaug, 1951  
Buellia wahienbergii (Ach.) Sheard: Imshaug, 1951  
Cetraria commixta (Nyl.) Th. Fr.: Howard, 1950, Imshaug, 1957  
Cetraria ericetorum Opiz.: Imshaug, 1957  
Cetraria hepatizon (Ach.) Vain.: Imshaug, 1957  
Cetraria herrei Imsh.: Howard, 1950  
Cetraria isilandica (L.) Ach. subsp. islandica: Howard, 1937, Imshaug, 1957  
Cetraria platyphyIIa Tuck.: Howard, 1937, Howard, 1950  
I \* Cetraria sepincoia (Ehrh.) Ach.: MIN HERB  
Cetraria subalpina Imsh.: Imshaug, 1950a, Thomson, 1969  
Cladonia amaurocraea (Florke) Schaer.: Howard, 1937  
Cladonia beIIidiflora (Ach.) Schaer.: Howard, 1950 MIN HERB  
Cladonia cariosa (Ach.) Spreng.: Imshaug, 1957  
Cladonia carneioia (Fr.) Fr.: MIN HERB  
Cladonia chiorophaea (Florke ex Somm.) Spreng.: Imshaug, 1957  
Cladonia coccifera (L.) Willd.: Imshaug, 1957  
I [Cladonia cristateIIa Tuck.: Howard, 1937 misident.]  
Cladonia deformis (L.) Hoffm.: Howard, 1950  
Cladonia ecmocyna (Ach.) Nyl.: Imshaug, 1957, MIN HERB  
S-I Cladonia fimbriata (L.) Fr.: Howard, 1950  
[Cladonia foliacea (Huds.) Schaer.: Howard, 1937, Howard, 1950 misident.]  
Cladonia gracilis (L.) Willd.: Howard, 1950, Imshaug, 1957

- Cladonia pyxidata (L.) Hoffm.: Howard, 1937, Howard, 1950, Imshaug, 1957
- Cladonia rangiferina (L.) Wigg.: MIN HERB
- Cladonia squamosa (Scop.) Hoffm.: MIN HERB
- Cladonia subcervicornis (Vain.) Kernst.: MIN HERB
- Cladonia subsquamosa (Nyl.) Vain.: MIN HERB
- Cornicularia aculeata (Schreb.) Ach.: Imshaug, 1957
- Cornicularia normoerica (Gunn.) Du Rietz: Imshaug, 1957
- Dactylina arctica (Hook.) Nyl.: Imshaug, 1957
- [Dermatocarpon muehlenbergii (Ach.) MULL. Arg.: Howard, 1950, misident.]
- Dermatocarpon reticulatum Magn.: MIN HERB
- Hydrothyria venosa Russ.: Howard, 1937, Howard, 1950
- Hymenelia lacustris (With.) Poelt & Vezda: Howard, 1950
- Hypogymnia austerodes (Nyl.) Ras.: Imshaug, 1957
- Hypogymnia enteromorpha (Ach.) Nyl.: Howard, 1950
- Hypogymnia intestiniformis (Vill.) Ras.: Imshaug, 1957
- Hypogymnia vittata (Ach.) Gas.: Howard, 1937
- \* Ionaspis lavata Magn.: Magnusson, 1932, Thomson, 1969
- Lecanora melaena (Hedl.) Fink: Eyerdam, 1960
- Lecanora polytropa (Ehrh.) Rabenh.: Howard, 1950
- [Lecidea contigua (Hoffm.) Fr.: Howard, 1937, Howard, 1950 ident. uncertain]
- Lecidea fuscoatra (L.) Ach.: Howard, 1937, Howard, 1950
- Lecidea granulosa (Ehrh.) Ach.: Howard, 1937, Howard, 1950
- Lecidea lapicida (Ach.) Ach.: Howard, 1937, Howard, 1950
- Leprocaulon albicans (Th. Fr.) Nyl.: Howard, 1950
- Leptogium minutissimum (Florke) Fr.: Sierk, 1964
- Leptogium palmatum (Huds.) Mont.: Sierk, 1964, MIN HERB
- Leptogium platynum (Tuck.) Herre: Sierk, 1964
- Letharia vulpina (L.) Hue: Howard, 1937, Howard, 1950, Imshaug, 1957, MIN HERB
- Lobaria linita (Ach.) Rabenh.: Imshaug, 1957
- Lobaria oregana (Tuck.) MULL. Arg. :Howard, 1950
- Lopadium ~ezizoideum (Ach.) Korb.: MIN HERB
- I Mycoblastus affinis (Schaer.) Schauer: Howard, 1937, Howard, 1950
- Nephroma bellum (Spreng.) Tuck.: Wetmore, 1960
- Nephroma helveticum Ach.: Howard, 1950
- I Nephroma laevigatum Ach.: Wetmore, 1960
- Nephroma resupinatum (L.) Ach.: Wetmore, 1960
- \* Neuropogon lambii Imsh.: Imshaug, 1954, Imshaug, 1957
- Ochrolechia pallescens (L.) Mass.: MIN HERB
- Ochrolechia tartarea (L.) Mass.: Howard, 1937, Howard, 1950
- Omphalodiscus decussata (Vill.) Schol.: Howard, 1950
- Omphalodiscus krascheninnikovii (Sav.) Schol.: Imshaug, 1957
- Omphalodiscus virginis (Schaer.) Schol.: Llano, 1950, Imshaug, 1957
- I Opegrapha atra Pers.: Howard, 1950
- Opegrapha lichenoides Pers.: Howard, 1950
- Pannaria pezizoides (G. Web.) Trev.: Howard, 1937, Howard, 1950

- Pannaria rubiginosa (Thunb. ex Ach.) Del.: Howard, 1950
- Parmelia alpicola Th. Fr.: MIN HERB
- Parmelia multispora Schneid.: Ahti, 1966, MIN HERB
- Parmelia omphalodes (L.) Ach.: lmsaug, 1957
- I Parmelia saxatilis (L.) Ach.: lmsaug, 1957
- Parmelia stygia (L.) Ach.: Howard, 1937, Howard, 1950
- Parmelia subelegantula Essl.: Esslinger, 1977
- I Parmeliopsis ambigu~ (Wulf.) Nyl.: Howard, 1937
- I Parmeliopsis hyperopta (Ach.) Arn.: Howard, 1937, Howard, 1950
- Peltigera aphthosa (L.) Willd.: Thomson, 1950, lmsaug, 1957
- Peltigera canina (L.) Willd.: Howard, 1937, Thomson, 1950
- Peltigera canina var. praetextata (FlBrke in Somm.) Hue: Howard, 1950
- Peltigera canina var. rufescens (Weis) Mudd: Howard, 1937, Howard, 1950, lmsaug, 1957
- Peltigera canina var. spuria (Ach.) Schaer.: Howard, 1950, Thomson, 1950, lmsaug, 1957
- Peltigera collina (Ach.) Ach.: Howard, 1950
- Peltigera lepidophora (Nyl.) Vain.: lmsaug, 1957
- Peltigera membranacea (Ach.) Nyl.: Howard, 1950, Thomson, 1950
- Peltigera venosa (L.) Baumg.: Thomson, 1950, lmsaug, 1957
- Physconia muscigena (Ach.) Poelt: lmsaug, 1957
- I Physconia pulverulenta (Schreb.) Poelt: Thomson, 1963
- Placopsis gelida (L.) Linds.: MIN HERB
- I Platismatia glauca (L.) W. Culb. & C. Culb.: Culberson & Culberson, 1968
- Platismatia herrei (lmsch.) W. Culb. & C. Culb.: Culberson & Culberson, 1968
- Platismatia norvegica (Lynge) W. Culb. & C. Culb.: Culberson & Culberson, 1968
- Platismatia stenophylla (Tuck.) W. Culb. & C. Culb.: Culberson & Culberson, 1968
- Plastimatia tuckermanii (Oakes) W. Culb. & C. Culb.: MIN HERB
- Pseudephebe minuscula (Nyl. ex Arn.) Brodo & Hawksw.: lmsaug, 1957
- Pseudephebe pubescens (L.) Choisy: Magnusson, 1932, Howard, 1937, Howard, 1950, lmsaug, 1957
- \* Pseudocyphellaria rainierensis lmsch.: lmsaug, 1950a, Thomson, 1969, MIN HERB
- Psoroma hypnorum (Vahl) S. Gray :Howard, 1950
- Rhizocarpon geographicum (L.) DC.: Howard, 1950
- Solorina crocea (L.) Ach.: Howard, 1950, lmsaug, 1957
- Sphaerophorus globosus (Huds.) Vain.: Howard, 1950, MIN HERB
- \* Staurothele glacialis Herre: Thomson, 1969
- Stereocaulon alpinum Laur.: Riddle, 1910, Howard, 1937, lmsaug, 1957
- Stereocaulon glareosum (Sab.) Magn: lmsaug, 1957
- \* Stereocaulon tomentosum var. simplex Riddle: Riddle, 1910, MIN HERB

Thamnotia vermicularis (Sw.) Ach. ex Schaer.: Howard, 1937,  
Howard, 1950, Imshaug, 1957, MIN HERB  
Tholurna dissimilis (Norm.) Norm.: Otto, 1970, Otto, 1972,  
Pike, 1972  
Umbilicaria angulata Tuck.: Imshaug, 1957  
Umbilicaria cylindrica (L.) Del.: Llano, 1950, Imshaug,  
1957  
Umbilicaria deusta (L.) Baumg.: Howard, 1937, Howard, 1950,  
Llano, 1950  
Umbilicaria havaasii Llano: Imshaug, 1957  
Umbilicaria hyperborea (Ach.) Hoffm.: Howard, 1937,  
Howard, 1950, Llano, 1950, Imshaug, 1957  
Umbilicaria lambii Imsh.: Imshaug, 1957  
Umbilicaria nylanderiana Zahlbr.: Llano, 1950  
Umbilicaria muehlenbergii (Ach.) Tuck.: Howard, 1937  
Umbilicaria phaea Tuck.: Howard, 1937  
Umbilicaria polyphylla (L.) Baumg.: Llano, 1950, MIN HERB  
Umbilicaria proboscidea (L.) Schrad.: Imshaug, 1957  
Umbilicaria torrefacta (Lightf.) Schrad.: Imshaug, 1957  
Umbilicaria vellea (L.) Ach.: Imshaug, 1957  
Xanthoria elegans (Link) Th. Fr.: Howard, 1950

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NOCA - NORTH CASCADES NATIONAL PARK

No lichens reported : Unknown

*-150 sp.*

*-Douglas – Bryologist – Lichen of NOCA*

OLYM - OLYMPIC NATIONAL PARK

Total number of species = 172 : Moderately known

1 species with type locality in the park

- Agyrophora rigida (DR.) Llano: Imshaug, 1957  
Alectoria nigricans (Ach.) Nyl.: Howard, 1950, Imshaug, 1957, Brodo & Hawksworth, 1977  
I Alectoria sarmentosa (Ach.) Ach.: Hedrick, 1941, Howard, 1950, Imshaug, 1957, Hoffman & Kazmierski, 1969, Brodo & Hawksworth, 1977  
Alectoria vancouverensis (Gyeln.) Gyeln ex Brodo & Hawksw.: Brodo & Hawksworth, 1977  
Anzia colpodes (Ach.) Stizenb.: Hedrick, 1941  
Arthrorhaphis citrinella (Ach.) Poelt.: Hedrick, 1941  
Aspicilia alpina (Somm.) Arn.: Howard, 1950, Hedrick, 1941  
Aspicilia cinerea (L.) Korb.: Howard, 1950, Hedrick, 1941  
Aspicilia cinereorufescens (Ach.) Mass.: Anderson & Carmer, 1974  
Aspicilia gibbosa (Ach.) Korb.: Hedrick, 1941, Howard, 1950  
Aspicilia laevata (Ach.) Arn.: Hedrick, 1941, Howard, 1950  
Biatorella resinae (Fr.) Th. Fr.: Hedrick, 1941  
Bryoria chalybeiformis (L.) Brodo & Hawksw.: Brodo & Hawksworth, 1977  
Bryoria fremontii (Tuck.) Brodo & Hawksw.: Hoffman & Kazmierski, 1969  
Bryoria friabilis Brodo & Hawksw.: Brodo & Hawksworth, 1977  
\* Bryoria glabra (Mot.) Brodo & Hawksw.: Brodo & Hawksworth, 1977  
S Bryoria implexa (Hoffm.) Brodo & Hawksw.: Hedrick, 1941  
S Bryoria trichodes subsp. americanum (Mot.) Brodo & Hawksw.: Brodo & Hawksworth, 1977  
S Bryoria trichades (Michx.) Brodo & Hawksw. subsp. trichades: Brodo & Hawksworth, 1977  
Buellia aidalea (Nyl.) Tuck.: Hedrick, 1941  
Buellia papillata (Samm.) Tuck.: Hedrick, 1941, Howard, 1950  
Buellia penichrum (Tuck.) Hasse: Hedrick, 1941  
Calicium salicinum Pers.: Hedrick, 1941  
Caloplaca cerina (Ehrh.) Th. Fr.: Hedrick, 1941  
Caloplaca ferruginea (Huds.) Th. Fr.: Hedrick, 1941  
I Candelariella vitellina (Ehrh.) MULL. Arg.: Howard, 1950, Hedrick, 1941  
Catillaria franciscana (Tuck.) Herre: Hedrick, 1941  
S Catillaria griffithii (Sm.) Malme: Hedrick, 1941  
Cetraria cucullata (Bell.) Ach.: Howard, 1950, Imshaug, 1957  
Cetraria ericetarum Opiz.: Imshaug, 1957  
Cetraria hepatizon (Ach.) Vain.: Imshaug, 1957

- Cetraria islandica (L.) Ach.: Hedrick, 1941, Howard, 1950  
Cetraria islandica (L.) Ach. subsp. islandica: Imshaug, 1957  
Cetraria nivalis (L.) Ach.: Howard, 1950, Imshaug, 1957  
Cetraria platyphylla Tuck.: Howard, 1950  
Cetraria subalpina Imsh.: Imshaug, 1957a  
Cetraria herrei Imsh.: Howard, 1950  
Cladonia arbuscula (Wallr.) Rabenh.: Hedrick, 1941, Ahti, 1961  
Cladonia bellidiflora (Ach.) Schaer.: Hedrick, 1941, Howard, 1950  
Cladonia bellidiflora var. coccocephala (Ach.) Vain.: Hedrick, 1941  
Cladonia cariosa (Ach.) Spreng.: Hedrick, 1941, Howard, 1950, Imshaug, 1957  
Cladonia carneola (Fr.) Fr.: Hedrick, 1941, Howard, 1950  
Cladonia carneola var. prolifera Flot.: Hedrick, 1941  
Cladonia cenotea (Ach.) Schaer.: Hedrick, 1941  
Cladonia chlorophaea (Florke ex Somm.) Spreng.: Hedrick, 1941, Imshaug, 1957  
Cladonia coccifera (L.) Willd.: Imshaug, 1957  
I Cladonia coniocraea (Florke) Spreng.: Hedrick, 1941  
Cladonia cyanipes (Somm.) Nyl.: Hedrick, 1941  
Cladonia ecmocyna (Ach.) Nyl.: Hedrick, 1941, Imshaug, 1957  
S-I Cladonia fimbriata var. simplex (Weis) Flot.: Hedrick, 1941  
Cladonia furcata (Huds.) Schrad.: Hedrick, 1941, Howard, 1950  
Cladonia gracilis (L.) Willd.: Hedrick, 1941, Howard, 1950  
Cladonia lepidota Nyl.: Hedrick, 1941  
Cladonia macilenta Hoffm.: Hedrick, 1941, Howard, 1950  
Cladonia mitis Sandst.: Imshaug, 1957  
Cladonia pyxidata (L.) Hoffm.: Hedrick, 1941, Howard, 1950, Imshaug, 1957  
Cladonia rangiferina (L.) Wigg.: Hedrick, 1941, Howard, 1950  
Cladonia scabriuscula (Del. ex Duby) Nyl.: Hedrick, 1941  
Cladonia squamosa (Scop.) Hoffm.: Hedrick, 1941, Howard, 1950  
Cladonia subsquamosa (Nyl.) Vain.: Hedrick, 1941, Howard, 1950  
Cladonia subulata (L.) Wigg.: Hedrick, 1941  
Cladonia turgida (Ehrh.) Hoffm.: Eyerdam, 1960  
Cladonia uncialis (L.) Wigg.: Hedrick, 1941, Howard, 1950  
Cladonia verticillata (Hoffm.) Schaer.: Hedrick, 1941, Howard, 1950  
Coniocybe furfuracea (L.) Ach.: Hedrick, 1941  
Cornicularia aculeata (Schreb.) Ach.: Imshaug, 1957  
Cornicularia divergens Ach.: Hedrick, 1941  
Cornicularia normoerica (Gunn.) Du Rietz: Hedrick, 1941, Howard, 1950, Imshaug, 1957  
Cyphelium inquinans (Sm.) Trev.: Hedrick, 1941  
Cyphelium pinicola Tibell: Tibell, 1975

- Cyphelium ventriculosum (Nüll. Arg.) Zahlbr.: Hedrick, 1941
- Dermatocarpon weberi (Ach.) Mann: Howard, 1950
- Dermatocarpon reticulatum Magn.: Imshaug, 1957
- Diploschistes scruposus (Schreb.) Norm.: Hedrick, 1941
- I Graphis scripta (L.) Ach.: Hedrick, 1941
- Huilia albocaerulescens (Wulf.) Hertel: Howard, 1950
- Huilia flavocaerulescens (Hornem.) Hertel: Hedrick, 1941
- Huilia macrocarpa (DC.) Hertel: Hedrick, 1941
- Hydrothyria venosa Russ.: Howard, 1950
- Hypogymnia enteromorpha (Ach.) Nyl.: Hedrick, 1941,  
Howard, 1950, Imshaug, 1957, Hoffman & Kazmierski, 1969
- Hypogymnia intestiniformis (Vill.) Ras.: Imshaug, 1957
- I Hypogymnia physodes (L.) W. Wats.: Hoffman & Kazmierski, 1969
- Hypogymnia vittata (Ach.) Gas.: Howard, 1937, Hedrick, 1941, Hoffman & Kazmierski, 1969
- Icmadophila ericetorum (L.) Zahlbr.: Hedrick, 1941
- Lecanora granatina Somm.: Hedrick, 1941
- Lecanora pacifica Tuck.: Hedrick, 1941
- Lecanora pallida (Schreb.) Rabenh.: Howard, 1950
- Lecanora polytropa (Ehrh.) Rabenh.: Hedrick, 1941,  
Howard, 1950
- Lecanora rupicola (L.) Zahlbr.: Hedrick, 1941, Howard, 1950
- Lecanora subfusca (L.) Ach.: Hedrick, 1941, Howard, 1950
- Lecanora umbrosa Degel.: Anderson, 1974
- Lecidea atrobrunnea (Ram.) Shaer.: Hedrick, 1941
- Lecidea carnulenta (Tuck.) Fink: Hedrick, 1941, Howard, 1950
- S Lecidea cinnabarina Somm.: Hedrick, 1941, Howard, 1950
- Lecidea elabens Fr.: Hedrick, 1941
- Lecidea enteroleuca Ach.: Hedrick, 1941
- Lecidea fuscescens Somm.: Hedrick, 1941
- Lecidea fuscoatra (L.) Ach.: Hedrick, 1941, Howard, 1950
- Lecidea granulosa (Ehrh.) Ach.: Hedrick, 1941, Howard, 1950
- Lecidea lapicida (Ach.) Ach.: Hedrick, 1941, Howard, 1950
- I Lecidea scalaris (Ach.) Ach.: Hedrick, 1941
- S Lecidea vernalis (L.) Ach.: Hedrick, 1941
- Lepraria membranacea (Dicks.) Vain.: Hoffman & Kazmierski, 1969, Hoffman, 1971
- Letharia vulpina (L.) Hue: Hoffman & Kazmierski, 1969
- Lobaria oregana (Tuck.) Müll. Arg.: Hedrick, 1941, Hoffman & Kazmierski, 1969
- S Lobaria pulmonaria (L.) Hoffm.: Hedrick, 1941, Howard, 1950,  
Hoffman & Kazmierski, 1969
- I Lopadium pezizoideum (Ach.) Korb.: Hedrick, 1941, Howard, 1950
- Massalongia carnosa (Dicks.) K8rb.: Howard, 1950
- Menegazzia terebrata (Hoffm.) Mass.: Hedrick, 1941
- I Mycoblastus affinis (Schaer.) Schauer: Hedrick, 1941
- I Mycoblastus sanguinarius (L.) Norm.: Hedrick, 1941,  
Hoffman & Kazmierski, 1969

- Nephroma resupinaturil (L.) Ach.: Hedrick, 1941
- Nesolechia vitellinaria (Nyl.) Rehm: Hedrick, 1941
- Ochrolechia laevigata (Ras.) Vers.: Thomson, 1969
- S Ochrolechia rosella (Tuck.) Vers.: Hedrick, 1941
- Ochrolechia tartarea (L.) Mass.: Hedrick, 1941, Hoffman & Kazmierski, 1969
- Ochrolechia upsaliensis (L.) Mass.: Hedrick, 1941, Howard, 1950
- Omphalodiscus krascheninnikovii (Sav.) Schol.: Llano, 1950
- Omphalodiscus virginis (Schaer.) Schol.: Howard, 1950, Llano, 1950, Imshaug, 1957
- I Opegrapha varia Pers.: Howard, 1950
- Pannaria leucosticta (Tuck.) Tuck. ex Nyl.: Hedrick, 1941
- Pannaria pezizoides (G. Web.) Trev.: Howard, 1937, Hedrick, 1941, Howard, 1950
- Pannaria praetermissa Nyl. in Chyd. & Furuhj.: Hedrick, 1941
- Parmelia disjuncta Erichs.: Imshaug, 1957
- S Parmelia perlata (Huds.) Ach.: Hedrick, 1941
- I Parmelia rnatTlis (L.) Ach.: Hedrick, 1941, Howard, 1950, Imshaug, 1957
- Parmelia soledica Nyl.: Imshaug, 1957
- Parmelia stygia (L.) Ach.: Imshaug, 1957
- I-T Parmelia sulcata Tayl.: Hedrick, 1941
- [Parmeliella corallinoides (Hoffm.) Zahlbr.: Hedrick, 1941 ident. uncertain]
- I Parmeliopsis ambigua (Wulf.) Nyl.: Meyer, 1979
- I Parmeliopsis hyperopta (Ach.) Arn.: Howard, 1950, Hoffman & Kazmierski, 1969, Hoffman, 1971, Heyer, 1979
- Peltigera aphthosa (L.) Willd.: Hedrick, 1941, Thomson, 1950, Imshaug, 1957, Hoffman & Kazmierski, 1969
- Peltigera canina (L.) Willd.: Hedrick, 1941, Hoffman & Kazmierski, 1969
- Peltigera canina var. rufescens (Weis) Mudd: Thomson, 1950, Imshaug, 1957
- Peltigera canina var. spuria (Ach.) Schaer.: Thomson, 1950, Imshaug, 1957
- Peltigera collina (Ach.) Ach.: Thomson, 1950
- Peltigera membranacea (Ach.) Nyl.: Thomson, 1950
- Peltigera polydactyla (Neck.) Hoffm.: Thomson, 1950, Hedrick, 1941
- Peltigera venosa (L.) Baumg.: Hedrick, 1941, Howard, 1950, Thomson, 1950
- Pertusaria glaucomela (Tuck.) Nyl.: Hedrick, 1941
- I Pertusaria multi puncta (Turn.) Nyl.: Hedrick, 1941, Howard, 1950
- Pertusaria ophthalmiza (Nyl.) Nyl.: Dibben, 1980
- Pertusaria subambigens Dibb.: Dibben, 1980
- Phaeocalicium curtisii (Tuck.) Tibell: Hedrick, 1941
- Physconia muscigena (Ach.) Poelt: Howard, 1950, Imshaug, 1957
- Pilophorus cereolus (Ach.) Th. Fr.: Hedrick, 1941, Howard, 1950
- Placopsis gelida (L.) Linds.: Hedrick, 1941, Howard, 1950

- I Platismatia glauca (L.) W. Culb. & C. Culb.: Hedrick, 1941,  
Hoffman & Kazmierski, 1969, Hoffman, 1971
- Platismatia herrei (Imsh.) W. Culb. & C. Culb.: Culberson &  
Culberson, 1968, Hoffman & Kazmierski, 1969
- Pseudephebe pubescens (L.) Choisy: Imshaug, 1957
- Psoroma hypnorum (Vahl) S. Gray: Hedrick, 1941, Howard, 1950
- Rhizocarpon badioatrum (Florke ex. Spreng.) Th. Fr.: Hedrick,  
1941
- Rhizocarpon geographicum (L.) DC.: Hedrick, 1941, Howard,  
1950
- Rhizocarpon grande (Florke ex Flat.) Arn.: Hedrick, 1941
- Rhizocarpon lecanorinum (KHrb.) And.: Hedrick, 1941
- Rhizocarpon oederi (G. Web.) KHrb.: Hedrick, 1941
- Solorina crocea (L.) Ach.: Hedrick, 1941, Howard, 1950,  
Imshaug, 1957
- Sphaerophorus globosus (Huds.) Vain.: Hedrick, 1941, Howard,  
1950, Hoffman & Kazmierski, 1969
- [Stereocaulon paschale var. conglomeratum Fr.: Hedrick, 1941  
misident.]
- Stereocaulon tomentosum Fr.: Hedrick, 1941
- Stereocaulon tomentosum var. simplex Riddle: Riddle, 1910  
Hedrick, 1941
- Thamnotia vermicularis (Sw.) Ach. ex Schaer.: Hedrick,  
1941, Howard, 1950, Imshaug, 1957
- Thelotrema lepadinum (Ach.) Ach.: Hedrick, 1941
- Tholurna dissimilis (Norm.) Norm.: Otto, 1970, Pike, 1972
- Umbilicaria angulata Tuck.: Howard, 1950, Llano, 1950
- Umbilicaria hyperborea (Ach.) Hoffm.: Hedrick, 1941, Llano,  
1950, Imshaug, 1957
- Umbilicaria nylanderiana Zahlbr.: Llano, 1950
- Umbilicaria proboscidea (L.) Schrad.: Hedrick, 1941, Llano,  
1950, Imshaug, 1957
- Umbilicaria torrefacta (Lightf.) Schrad.: Llano, 1950,  
Imshaug, 1957
- Usnea compacta Mot.: Eyerdam, 1960

OLYM REFERENCES

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Bot. Ups. 21(2):1-128.

by  
-Brodo & Thomsen  
From. Itinerary of 7<sup>th</sup> Int. Bot. Congen - Seattle  
CS, 1 from Thomsen.



PEFO - PETRIFIED FOREST NATIONAL PARK

No lichens reported: Unknown

PINN - PINNACLES NATIONAL MONUMENT

Total number Of species = 1 : Unknown

Parmelia conspersa (Ach.) Ach.: Herre, 1946

PINN REFERENCES

Herre, A. W. 1946. The Parmelias Of California. Contrib.  
Dudley Herb. 3:313-350.

PORE - POINT REYES NATIONAL SEASHORE

No lichens reported : unknown

REDW - REDWOOD NATIONAL PARK

Total number of species 32 : Poorly known

- I Alectoria sarmentosa (Ach.) Ach.: Sweet, 1983  
Bryoria abbreviata (Mull. Arg.) Brodo & Hawksw.: Sweet, 1983  
Bryoria fremontii (Tuck.) Brodo & Hawksw. :Sweet,1983  
Bryoria glabra (Mot.) Brodo & Hawksw.: Sweet, 1983  
Cavernularia lophyrea (Ach.) Degel.: Sweet, 1983  
Cetraria canadensis (Ras.) Ras.: Sweet, 1983  
S Cetraria chlorophylla (Willd.) Vain.: Sweet, 1983  
I Cetraria orbata (Nyl.) Fink: Sweet, 1983  
Cladonia chlorophaea (Florke ex Somm.) Spreng.: Sweet, 1983  
I Cladonia coniocraea (Florke) Spreng.: Sweet, 1983  
Cladonia deformis (L.) Hoffm.: Sweet, 1983  
S-I Cladonia fimbriata (L.) Fr.: Sweet, 1983  
Cladonia furcata (Huds.) Schrad.: Sweet, 1983  
Cladonia macilenta Hoffm.: Sweet, 1983  
Cladonia scabruiscula (Del. ex Duby) Nyl.: Sweet, 1983  
Cladonia sguamosa (Scop.) Hoffm.: Sweet, 1983  
Cladonia transcendens (Vain.) Vain.: Sweet, 1983  
Cladonia verticillata (Hoffm.) Schaer.: Sweet, 1983  
I Evernia prunastri (L.) Ach.: Sweet, 1983  
Hypogymnia enteromorpha (Ach.) Nyl.: Sweet, 1983  
Hypogymnia im~haugii Krog: Sweet, 1983  
Hypogymnia inactiva (Krog) Ohls.: Sweet, 1983  
I Hypogymnia physodes (L.) W. Wats.: Sweet, 1983  
Hypogymnia tubulosa (Schaer.) Hav.: Sweet, 1983  
Letharia vulpina (L.) Hue: Sweet, 1983  
Lobaria oregana (Tuck.) Mull. Arg.: Sweet, 1983  
S Lobaria pulmonaria (L.) Hoffm.: Sweet, 1983  
Lobaria scrobiculata (Scop.) DC.: Sweet, 1983  
Ochrolechia pallescens (L.) Mass.: Sweet, 1983  
Pannaria leucostictoides (Tuck.) Tuck. ex Nyl.: Sweet, 1983  
Parmelia arnoldii Du Reitz: Sweet, 1983  
I Parmelia saxatilis (L.) Ach.: Sweet, 1983  
I-T Parmelia sulcata Tayl.: Sweet, 1983  
Pertusaria sp.: Sweet, 1983  
I Platismatia glauca (L.) W. Culb. & C. Culb.: Sweet, 1983  
Platismatia herrei (Imsh.) W. Culb. & C. Culb.: Sweet, 1983  
Platismatia stenophylla (Tuck.) W. Culb. & C. Culb.: Sweet, 1983  
Physcia sp.: Sweet, 1983  
Sphaerophorus globosus (Huds.) Vain.: Sweet, 1983  
S-I Usnea hirta (L.) Wigg.: Sweet, 1983  
Usnea longissima Ach.: Sweet, 1983  
S-I Usnea subfloridana Stirt.: Sweet, 1983

REDW - REFERENCES

Sweet, S. 1983. Lichens of Little Bald Hills, Del Norte,  
Co., Redwood National Park. Mimeographed report.

Total number of species = 348 : Well known

5 species with type localities in the park

- Acarospora chlorophana (Wahlenb. ex Ach.) Mass.: MIN HERB
- Acarospora fuscata (Schrad.) Arn.: MIN HERB
- Acarospora molybdina (Wahlenb. ex Ach.) Trev.: MIN HERB
- Acarospora thamnina (Tuck.) Herre: MIN HERB
- Arthonia lapidicola (Tayl.) Branth. & Rostr.: Anderson & Carmer, 1974
- Aspicilia alphoplaca (Wahlenb. ex Ach.) Ach.: MIN HERB
- Aspicilia caesiocinerea (Nyl. ex Malbr.) Arn.: MIN HERB
- Aspicilia cinerea (L.) Korb.: MIN HERB
- Aspicilia cinereorufescens (Ach.) Mass.: Anderson & Carmer, 1974
- Aspicilia gibbosula (Magn.) ined.: MIN HERB
- Aspicilia laevata (Ach.) Arn.: MIN HERB
- Aspicilia melanaspis (Ach.) Poelt & Leuck.: MIN HERB
- Aspicilia submersa (Lamy) Hue: MIN HERB
- Bacidia incompta (Borr. ex Hook.) Anzi: MIN HERB
- Bacidia inundata (Fr.) Korb.: Anderson & Carmer, 1974
- Bacidia umbrina (Ach.) Bausch: MIN HERB
- Bryoria chalybeiformis (L.) Brodo & Hawksw.: Brodo & Hawksworth, 1977
- I Bryoria fuscescens (Gyeln.) Brodo & Hawksw.: Brodo & Hawksworth, 1977
- Bryoria lanestrus (Ach.) Brodo & Hawksw.: Brodo & Hawksworth, 1977
- Bryoria simplicior (Vain.) Brodo & Hawksw.: Brodo & Hawksworth, 1977
- Buellia dialyta (Nyl.) Tuck.: MIN HERB
- Buellia jugorum (Arn.) Arn.: Anderson, 1974
- Buellia lacteoidea B. de Lesd.: Anderson & Carmer, 1974
- Buellia pullata Tuck.: MIN HERB
- T Buellia punctata (Hoffm.) Mass.: Imshaug, 1951, MIN HERB
- Buellia triphragmioides Anzi: Anderson & Carmer, 1974
- Buellia vilis Th. Fr.: Imshaug, 1951
- Caloplaca arenaria (Pers.) Mull. Arg.: MIN HERB
- Caloplaca cirrochroa (Ach.) Th. Fr.: MIN HERB
- Caloplaca citrina (Hoffm.) Th. Fr.: MIN HERB
- Caloplaca diphyodes (Nyl.) Jatta: Anderson, 1967
- Caloplaca epithallina Lynge: MIN HERB
- Caloplaca ferruginea (Huds.) Th. Fr.: MIN HERB
- Caloplaca fraudans (Th. Fr.) Oliv.: Rudolph, 1955
- Caloplaca herbidella (Hue.) Magn.: Anderson, 1974, MIN HERB
- I Caloplaca holocarpa (Hoffm.) Wade: MIN HERB
- Caloplaca jungermanniae (Vahl) Th. Fr.: MIN HERB
- Caloplaca livida (Hepp) Jatta: Rudolph, 1955
- Caloplaca sideritis (Tuck.) Zahlbr.: Rudolph, 1955
- Caloplaca trachyphylla (Tuck.) Zahlbr.: MIN HERB
- Candelariella aurella (Hoffm.) Zahlbr.: MIN HERB
- Candelariella reflexa (Nyl.) Lett.: MIN HERB

I Candelariella vitellina (Ehrh.) Mull. Arg.: MIN HERB  
S-I Candelariella xanthostigma (Ach.) Lett.: Anderson & Carmer, 1974, MIN HERB  
Cetraria coralligera (W. Web.) Hale: MIN HERB  
Cetraria cucullata (Bell.) Ach.: MIN HERB  
Cetraria ericetorum Opiz: Imshaug, 1957, MIN HERB  
Cetraria islandica (L.) Ach.: Weber & Shushan, 1955, MIN HERB  
Cetraria islandica (L.) Ach. subsp. islandica: Imshaug, 1957  
Cetraria nivalis (L.) Ach.: Weber & Shushan, 1955, Imshaug, 1957, MIN HERB  
I Cetraria pinastri (Scop.) S. Gray: MIN HERB  
Cetraria tilesii Ach.: Imshaug, 1957, MIN HERB  
I Chaenotheca ferruginea (Turn. ex Sm.) Mig.: Anderson & Carmer, 1974  
Cladonia anomala (Ach.) Ahti: MIN HERB  
Cladonia cariosa (Ach.) Spreng.: Culberson, 1969, MIN HERB  
Cladonia car neola (Fr.) Fr.: MIN HERB  
Cladonia cenotea (Ach.) Schaer.: MIN HERB  
Cladonia chlorophaea (Fr.) Fr. ex Somm.: Spreng.: MIN HERB  
Cladonia coccifera (L.) Willd.: MIN HERB  
Cladonia deformis (L.) Hoffm.: MIN HERB  
Cladonia ecmocyna (Ach.) Nyl.: MIN HERB  
Cladonia gracilis (L.) Willd.: MIN HERB  
Cladonia mateocyatha Robb.: MIN HERB  
Cladonia phyllophora Hoffm.: MIN HERB  
Cladonia stricta (Nyl.) Nyl.: MIN HERB  
Cladonia sulphurina (Michx.) Fr.: MIN HERB  
Collema furfuraceum (Arn.) Du Reitz: MIN HERB  
Collema glebulentum (Nyl. ex Cromb.) Degel.: Degelius, 1974  
Collema tuniforme (Ach.) Ach.: MIN HERB  
Coniocybe furfuracea (L.) Ach.: Anderson & Carmer, 1974  
Cornicularia aculeata (Schreb.) Ach.: Weber & Shushan, 1955, Imshaug, 1957, MIN HERB  
Cyphelium lucidum (Th. Fr.) Th. Fr.: Anderson & Carmer, 1974  
Cyphelium notarisi (Tul.) Blomb. & Forss.: MIN HERB  
Cystocoleus ebeneus (Dill.) Thwaites: Anderson, 1967  
Dactylina madreporiformis (Wulf.) Tuck.: Weber & Shushan, 1955, Imshaug, 1957, MIN HERB  
Dermatocarpon cinereum (Pers.) Th. Fr.: MIN HERB  
Dermatocarpon lachneum (Ach.) A. L. Sm.: MIN HERB  
Dermatocarpon miniatum (L.) Mann: MIN HERB  
Dermatocarpon moulinii (Mont.) Zahlbr.: MIN HERB  
Dermatocarpon reticulatum Magn.: MIN HERB  
Dermatocarpon weberi (Ach.) Mann: MIN HERB  
Dimelaena oreina (Ach.) Norm.: Sheard, 1974  
Dimerella diluta (Pers.) Trev.: Anderson & Carmer, 1974  
Diploschistes scruposus (Schreb.) Norm.: MIN HERB  
Endocarpon pusillum Hedw.: MIN HERB  
Ephebe ocellata Henss.: MIN HERB  
Ephebe solida Born.: MIN HERB

- S Evernia divaricata (L.) Ach.: MIN HERB  
Heppia lutosa (Ach.) Nyl.: Wetmore, 1970, MIN HERB  
Heterodermia speciosa (Wulf.) Trev.: MIN HERB  
Huilia flavocaerulescens (Hornem.) Hertel: Anderson, 1964,  
MIN HERB  
Huilia macrocarpa (DC.) Hertel: Anderson, 1964  
Hypogymnia austerodes (Nyl.) Ras.: MIN HERB  
Hypogymnia bitteriana (Zahlbr.) Ras.: Anderson & Carmer,  
1974  
Hypogymnia intestiniformis (ViII.) Ras.: Imshaug, 1957,  
MIN HERB
- I Hypogymnia physodes (L.) W. Wats.: MIN HERB  
Hypogymnia subobscura (Vain.) Poelt: Imshaug, 1957, MIN  
HERB  
Hypogymnia tubulosa (Schaer.) Hav.: Anderson & Carmer,  
1974  
Ionaspis epulotica (Ach.) Th. Fr.: MIN HERB  
Koerberia sonomensis (Tuck.) Henss.: Anderson & Carmer,  
1974  
Lasallia papulosa (Ach.) Llano: Llano, 1950  
Lasallia pustulata (L.) Mer.: MIN HERB  
Lecanora aguatica Hepp: MIN HERB  
Lecanora atra (Huds.) Ach.: Anderson & Carmer, 1974, MIN  
HERB  
Lecanora badia (Hoffm.) Ach.: MIN HERB  
Lecanora cadubriae (Mass.) Hedl.: Anderson & Carmer,  
1974, MIN HERB
- I Lecanora carpinea (L.) Vain.: Imshaug & Brodo, 1966  
Lecanora chloropolia (Erichs.) Almb.: Anderson & Carmer,  
1974  
Lecanora effusa (Pers.) Ach.: MIN HERB  
Lecanora epibryon (Ach.) Ach.: MIN HERB  
Lecanora frustulosa (Dicks.) Ach.: MIN HERB  
Lecanora hypoptoides Nyl.: MIN HERB  
Lecanora polytropa (Ehrh.) Rabenh.: MIN HERB  
Lecanora rugosella Zahlbr.: MIN HERB  
Lecanora rupicola (L.) Zahlbr.: MIN HERB
- I Lecanora saligna (Schrad.) Zahlbr.: MIN HERB  
I Lecanora symmictera Nyl.: MIN HERB  
Lecanora umbrosa Degel.: Anderson, 1974  
Lecidea aenea (Duf.) Nyl.: Anderson, 1962, Anderson, 1964  
Lecidea alaiensis Vain.: Anderson, 1964  
Lecidea armeniaca (DC.) Fr.: Anderson, 1964  
Lecidea assimilata Nyl.: Anderson, 1964  
Lecidea atrobrunnea (Ram.) Schaer.: Anderson, 1964  
Lecidea auriculata Th. Fr.: Anderson, 1964, MIN HERB  
Lecidea bereDgeriana (Mass.) Nyl.: Anderson, 1964, MIN  
HERB  
Lecidea caesioalbescens (Magn.) Vain.: Anderson, 1964  
Lecidea cinereorufa Schaer.: Anderson, 1964  
Lecidea circumnigrata var. reagens Magn.: Anderson &  
Carmer, 1974
- \* Lecidea coloradensis R. Anders. ined.: Anderson, 1964  
Lecidea conferenda Nyl.: Anderson, 1964, MIN HERB  
Lecidea decipiens (Hedw.) Ach.: Anderson, 1964, MIN HERB



- Lecidea demissa (Rutstr.) Ach.: Anderson, 1964  
Lecidea dicksonii (Grnel.) Ach.: Anderson, 1964  
Lecidea elabens Fr.: Anderson, 1964  
Lecidea friesii Ach.: Anderson, 1964  
Lecidea geophana Nyl.: MIN HERB  
Lecidea globifera Ach.: Anderson, 1964  
Lecidea granulosa (Ehrh.) Ach.: Anderson, 1964, MIN HERB  
Lecidea instrata Nyl.: Anderson, 1964  
Lecidea insularis Nyl.: Anderson, 1964  
\* Lecidea kieneri R. Anders. ined.: Anderson, 1964  
Lecidea lopicida (Ach.) Ach.: Anderson, 1964  
Lecidea leucothallina Arn.: Anderson, 1964, Anderson, 1965  
Lecidea luridella Tuck.: Anderson, 1964, Schneider, 1979,  
MIN HERB  
Lecidea lyngei Degel.: Anderson, 1964  
Lecidea marginata Schaer.: Anderson, 1964  
Lecidea novomecicana (B. de Lesd.) W. Web.: Anderson, 1964  
Lecidea oligotropha Laund.: Anderson, 1964  
Lecidea pantherina (Hoffm.) Th. Fr.: Anderson, 1964  
Lecidea recessa Magn.: Anderson, 1964  
Lecidea rubiformis (Wahlenb. ex Ach.) Wahlenb.: Anderson,  
1964  
Lecidea rufofusca (Anzi) Th. Fr.: Anderson, 1964  
Lecidea rufonigra (Tuck.) Nyl.: Anderson, 1964  
Lecidea sanguineoatra (Wulf.) Ach.: Anderson, 1964, MIN  
HERB  
\* Lecidea saximontana R. Anders. ined.: Anderson, 1964  
\* Lecidea saxosa R. Anders. ined.: Anderson, 1964  
I Lecidea scalaris (Ach.) Ach.: Anderson, 1964  
Lecidea scholanderi Lynge: Anderson, 1976  
Lecidea tempeltonii Tayl.: Anderson, 1964  
Lecidea tenebrosa Flot.: Anderson, 1964  
Lecidea tessellata (Ach.) Florke: Anderson, 1964  
\* Lecidea tuckermanii R. Anders. ined.: Anderson, 1964  
Lecidea turgidula Fr.: Anderson, 1964  
Lecidea uliginosa (Schrud.) Ach.: Anderson, 1964  
S Lecidea vernalis (L.) Ach.: Anderson, 1964  
Lecidea vorticosa (Florke) KHrb.: Anderson, 1964  
Lecidella bullata Korb.: Anderson, 1974  
Lecidella carpathica KHrb.: Anderson, 1964  
I Lecidella elaeochroma (Ach.) Haszl.: MIN HERB  
Lecidella euphorea (FIHrke) Hertel: Anderson, 1964  
Lecidella incongruella (Vain.) Hertel & Leuck.: Anderson,  
1974  
Lecidella stigmatea (Ach.) Hertel & Leuck.: Anderson,  
1964  
Lecidella wulfenii (Hepp) Korb.: Anderson, 1964  
Leprocaulon albicans (Th. Fr.) Nyl.: MIN HERB  
Leprocaulon subalbicans (Lamb) Lamb & Ward: Lamb & Ward,  
1974  
Leptogium lichenoides (L.) Zahlbr.: Sierk, 1964, MIN HERB  
Leptogium riviale Tuck.: Sierk, 1964  
Leptogium saturnium (Dicks.) Nyl.: MIN HERB

- Leptogium tenuissimum (Dicks.) Fr.: Sierk, 1964  
Lopadium fecundu8 Th. Fr.: Anderson, 1967  
Massalongia carnosa (Dicks.) Korb.: Henssen, 1963a  
Micarea tuberculata (Somm.) R. Anders.: Anderson, 1974,  
MIN HERB  
Mocrothelia aterrима (Anzi) Zahlbr.: MIN HERB  
Mycoblastus tornoensis (Nyl.) R. Anders.: Anderson &  
Carmer, 1974, MIN HERB  
Nephroma helveticum Ach.: Wetmore, 1960  
Nephroma parile (Ach.) Ach.: Wetmore, 1960, MIN HERB  
Omphalodiscus decussata (ViII.) Schol.: Imshaug, 1957, MIN  
HERB  
Omohalodiscus krascheninnikovii (Sav.) Schol.: Llano,  
1950, Imshaug, 1957, MIN HERB  
Omphalodiscus virginis (Schaer.) Schol.: Llano, 1950,  
Imshaug, 1957, MIN HERB  
Pachyospora mutabilis (Ach.) Mass.: MIN HERB  
Pannaria pezizoides (G. Web.) Trev.: MIN HERB  
Pannaria pityrea (DC.) Degel.: MIN HERB  
Pannaria praetermissa Nyl.: MIN HERB  
I Parmelia caperata (L.) Ach.: MIN HERB  
Parmelia chlorochroa Tuck.: MIN HERB  
Parmelia congruens Ach.: MIN HERB  
Parmelia disjuncata Erichs.: MIN HERB  
Parmelia elegantula (Zahlbr.) Szat.: MIN HERB  
Parmelia mougeotii (Flot.) Schaer.: Anderson, 1967  
I Parmelia olivacea (L.) Ach.: MIN HERB  
I Parmelia saxatilis (L.) Ach.: MIN HERB  
Parnnelia soledica Nyl.: Imshaug, 1957  
farmelia solediosa Almb.: Anderson & Carmer, 1974  
Parmelia stygia (L.) Ach.: MIN HERB  
I-T Parmelia subargentifera Nyl.: MIN HERB  
Parmelia subcentrifuga Oxn.: Anderson, 1976, MIN HERB  
Parmelia subolivacea Nyl. in Hasse: MIN HERB  
Parmelia substygia Ras.: MIN HERB  
I-T Parmelia sulcata Tayl.: MIN HERB  
Parmelia taractica Kremp.: MIN HERB  
I Parmeliopsis ambigua (Wulf.) Nyl.: MIN HERB  
Peltigera aphthosa (L.) Willd.: Thomson, 1950, Imshaug,  
1957, MIN HERB  
Peltigera canina (L.) Willd.: Kiener, 1939, Thomson, 1950,  
MIN HERB  
Peltigera canina var. rufescens (Weis) Mudd: Kiener, 1939,  
Thomson, 1950  
Peltigera canina var. spuria (Ach.) Schaer.: Kiener, 1939,  
Thomson, 1950  
Peltigera collina (Ach.) Ach.: Thomson, 1950, MIN HERB  
Peltigera elisabethae Gyeln.: MIN HERB  
I Peltigera horizontalis (Huds.) Baumg.: Kiener, 1939, MIN  
HERB  
Peltigera lepidophora (Nyl.) Vain.: Kiener, 1939,  
Thomson, 1950  
Peltigera leucophlebia (Nyl.) Gyeln.: Kiener, 1939  
Peltigera malacea (Ach.) Funck: Kiener, 1939, Thomson,  
1950, MIN HERB

Peltigera membranacea (Ach.) Nyl.: Thomson, 1950  
Peltigera polydactyla (Neck.) Hoffm.: Thomson, 1950, MIN  
 HERB  
Peltigera venosa (L.) Baumg.: Kiener, 1939, Thomson, 1950  
Peltula euploca (Ach.) Oz. & Claud.: Wetmore, 1970, MIN  
 HERB  
Pertusaria octomela (Norm.) Erichs.: Anderson & Carmer,  
 1974, Dibben, 1980  
Pertusaria saximontana Wetm.: Anderson & Carmer, 1974  
Phaeophyscia ciliata (Hoffm.) Essl.: MIN HERB  
Phaeophyscia endococcinea (Korb.) Essl.: MIN HERB  
Physcia cascadiensis Magn.: MIN HERB  
Physcia clementi (Sm.) Maas G.: MIN HERB  
 T Physcia dubia (Hoffm.) Lett.: MIN HERB  
Physcia mexicana B. de Lesd.: MIN HERB  
 I Physcia stellaris (L.) Nyl.: Thomson, 1963, MIN HERB  
 I Physconia detersa (Nyl.) Poelt: Thomson, 1963  
Physconia enteroxantha (Nyl.) Poelt: Anderson & Carmer,  
 1974  
Physconia muscigena (Ach.) Poelt: Imshaug, 1975, Thomson,  
 1963, MIN HERB  
Placynthium nigrum (Huds.) S. Gray: Henssen, 1963c  
Polyblastia theleodes (Somm.) Th. Fr.: MIN HERB  
Polychidium albociliatum (Desm.) Zahlbr.: Anderson &  
 Carmer, 1974  
Porina mammilosa (Th. Fr.) Vain.: Anderson, 1967  
Pseudephebe minuscula (Nyl. ex Arn.) Brodo & Hawksw.:  
 Imshaug, 1957, MIN HERB  
Psoroma hypnorum (Vahl) S. Gray: MIN HERB  
Rhizocarpon anaperum (Vain.) Vain.: Anderson, 1965  
Rhizocarpon badioatrum (Florke ex Spreng.) Th. Fr.: MIN  
 HERB  
Rhizocarpon effiguratum (Anzi) Th. Fr.: Anderson, 1965,  
 MIN HERB  
Rhizocarpon geographicum (L.) DC.: MIN HERB  
Rhizocarpon grande (Florke ex Flot.) Arn.: MIN HERB  
Rhizocarpon intermediellum Ras.: Anderson, 1965  
Rhizocarpon intersitum Arn.: Anderson, 1965  
Rhizocarpon macrosporum Ras.: Anderson, 1965  
Rhizocarpon norvegicum Ras.: Anderson, 1965  
Rhizocarpon obscuratum (Ach.) Mass.: Anderson & Carmer,  
 1974  
Rhizocarpon permodestum Arn.: Anderson, 1974  
Rhizocarpon polycarpum (Hepp) Th. Fr.: Anderson, 1965  
Rhizocarpon sphaerosporum Ras.: Anderson, 1965  
Rhizocarpon superficiale (Schaer.) Vain.: MIN HERB  
Rhizocarpon tetramerum Vain.: Anderson & Carmer, 1974  
Rhizoplaca chrysoleuca (Smith) Zopf: MIN HERB  
Rhizoplaca melanophthalma (Ram.) Leuck. & Poelt: MIN HERB  
 I Rinodina exigua (Ach.) S. Gray: MIN HERB  
Rinodina hueana Wain.: MIN HERB  
Rinodina mniaraea (Ach.) Korb.: MIN HERB  
Rinodina nimbosea (Fr.) Th. Fr.: MIN HERB  
Rinodina turfacea (Wahlenb.) KBrb.: MIN HERB  
Solorina bispora Nyl.: MIN HERB

Solorina crocea (L.) Ach.: Imshaug, 1957, MIN HERB  
Spilonema revertens Nyl.: MIN HERB  
Sporastatia testudinea (Ach.) Mass.: MIN HERB  
Stereocaulon alpinum Laur.: Imshaug, 1957, MIN HERB  
Stereocaulon rivulorum Magn.: MIN HERB  
Stereocaulon tomentosum Fr.: MIN HERB  
Thamnotia subuliformis (Ehrh.) W. Culb.: MIN HERB  
Thamnotia vermicularis (Sw.) Ach. ex Schaer.: Weber &  
 Shushan, 1955, Imshaug, 1957  
Toninia conglomerata (Ach.) Boist.: MIN HERB  
Toninia squalida (Schleich. ex Ach.) Mass.: MIN HERB  
Umbilicaria arctica (Ach.) Nyl.: MIN HERB  
Umbilicaria deusta (L.) Baumg.: Llano, 1950, MIN HERB  
Umbilicaria torrefacta (Lightf.) Schrad.: MIN HERB  
Umbilicaria vellea (L.) Ach.: Llano, 1950, MIN HERB  
Usnea fulvovirens (Ras.) Ras.: MIN HERB  
 I Xanthoria candelaria (L.) Th. Fr.: MIN HERB  
Xanthoria elegans (Link) Th. Fr.: MIN HERB  
 I Xanthoria polycarpa (Ehrh.) Oliv.: MIN HERB  
Xylographa minutula Korb.: MIN HERB  
Xylographa vitiligo (Ach.) Laund.: Anderson, 1967  
Zahlbrucknerella calcarea (Herre) Herre: Henssen, 1977  
Zahlbrucknerella fabispora Henss.: Henssen, 1977

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SAGU - SAGUARO NATIONAL MONUMENT

Total number of species = 4 : Poorly known

Heppia lutosa (Ach.) Nyl.: Wetmore, 1970

Peltula obscurans var. deserticola (Zahlbr.) Wetm.: Wetmore, 1970

Peltula obscurans var. hassei (Zahlbr.) Wetm.: Wetmore, 1970

Peltula polyspora (Tuck.) Wetm.: Wetmore, 1970

SAGU REFERENCES

Wetmore C. M. 1970. The lichen family Heppiaceae in North America. Ann. Missouri Bot. Gard. 57:158-209.

SEKI - SEQUOIA NATIONAL PARK

Total number of species = 41 : Poorly known

1 species with type locality in the park

- Bryoria abbreviata (Mull. Arg.) Brodo & Hawks.: Brodo & Hawks., 1977, Smith, 1980
- Bryoria fremontii (Tuck.) Brodo & Hawks.: Smith, 1980
- I Bryoria fuscescens (Gyek.) Brodo & Hawks.: Smith, 1980
- S Cetraria chlorophylla (Willd.) Vain.: Smith, 1980
- Cetraria furfuraceum (Arn.) DR.: Smith, 1980
- Collema nigrescens (Huds) DC.: Smith, 1980
- Dermatocarpon miniatum (L.) Mann: Smith, 1980
- Heterodermia leucomela (L.) Poelt: Smith, 1980
- Hypogymnia enteromorpha (Ach.) Nyl.: Smith, 1980
- Hypogymnia imshaugii Krog: Smith, 1980
- Leptogium burnetiae Dodge: Smith, 1980
- Leptogium californicum Tuck.: Smith, 1980
- Leptogium lichenoides (L.) Zahlbr.: Smith, 1980
- Leptogium saturnium (Dicks) Nyl.: Smith, 1980
- Letharia columbiana (Nutt.) Thoms.: Smith, 1980, MIN HERB
- Letharia vulpina (L.) Hue: Smith, 1980, MIN HERB
- \* Mycocalicium sequoiae Bonar: Bonar, 1971
- S-I Normandina pulchella (Borr.) Nyl.: Rundel, 1968
- Parmelia conspersa (Ach.) Ach.: Smith, 1980
- Parmelia cumberlandia (Gyeln.) Hale: Smith, 1980
- Parmelia elegantula (Zahlbr.) Szat.: Smith, 1980
- I Parmelia exasperata De Not.: Smith, 1980
- Parmelia guercina (Willd.) Hale: Smith, 1980
- Parmelia sphaerosporella Mull. Arg.: Smith, 1980
- Parmelia subolivacea Nyl.: Smith, 1980
- I-T Parmelia sulcata Tayl.: Smith, 1980
- Peltigera canina (L.) Willd.: Smith, 1980
- Peltigera collina (Ach.) Ach.: Smith, 1980
- Peltigera membranacea (Ach.) Nyl.: Thomson, 1950
- I Physcia adscendens (Fr.) Oliv.: Smith, 1980
- I Physcia aipolia (Ehrh.) Hampe: Smith, 1980
- Physcia phaea (Tuck.) Thoms.: Smith, 1980
- I Physcia stellaris (L.) Nyl.: Smith, 1980
- I Physcia tenella (Scop.) DC.: Smith, 1980
- I Physconia detersa (Nyl.) Poelt: Smith, 1980
- I Platismatia glauca (L.) W. Culb. & C. Culb.: Smith, 1980
- Polychidium albociliatum (Desm.) Zahlbr.: Smith, 1980
- S Ramalina farinacea (L.) Ach.: Smith, 1980
- Umbilicaria phaea Tuck.: Smith, 1980
- S-I Xanthoria fallax (Hepp) Arn.: Smith, 1980
- I Xanthoria polycarpa (Ehrh.) Oliv.: Smith, 1980



#### SEKI REFERENCES

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- Thomson, J. W. 1950. The species of *Peltigera* of North America north of Mexico. *Amer. Midl. Nat.* 44:1-68.

SHEN - SHENANDOAH NATIONAL PARK

Total number of species = 189: Moderately known

1 species with type locality in the park

- Acarospora fuscata (Schrad.) Arn.: Forman & Sierk, 1970,  
Lawrey, 1980, MIN HERB
- Anaptychia palmulata (Michx.) Vain.: Forman & Sierk, 1970,  
MIN HERB
- Anisomeridium subprostans (Nyl.) R. Harris: Forman & Sierk,  
1970
- Anzia colpodes (Ach.) Stizenb.: Forman & Sierk, 1970, MIN  
HERB
- Arthopyrenia cinereopruinosa (Schaer.) Mass.: Forman & Sierk,  
1970
- Arthopyrenia willeyana R. Harris: MIN HERB
- Arthothelium albobivrescens (Nyl.) Fink: Forman & Sierk, 1970
- Arthothelium spectabile Flot. ex Mass.: Forman & Sierk, 1970,  
MIN HERB
- Aspicilia cinerea (L.) Korb.: Forman & Sierk, 1970, Lawrey,  
1980, MIN HERB
- Aspicilia gibbosa (Ach.) Korb.: Lawrey, 1980
- I Bacidia chlorococca (Graewe ex Stizenb.) Lett.: Forman &  
Sierk, 1970, MIN HERB
- I Bacidia rubella (Hoffm.) Bass.: Forman & Sierk, 1970, MIN  
HERB
- Bacidia schweinitzii (Tuck.) Schneid.: Forman & Sierk, 1970
- Bacidia umbrina (Ach.) Bausch: Forman & Sierk, 1970
- S Bryoria furcellata (Fr.) Broda & Hawksw.: Forman & Sierk,  
1970
- Buellia disciformis (Fr.) Mudd: Lawrey, 1980
- Buellia polyspora (Will.) Vain.: Forman & Sierk, 1970 I
- I Buellia stillingiana J. Stein.: Forman & Sierk, 1970
- S Caloplaca flavovirescens (Wulf.) Dalla Torre & Sarnth.:  
Forman & Sierk, 1970
- S-I Candelaria concolor (Dicks.) Stein: Forman & Sierk, 1970
- Candelariella efflorescens Harris & Buck: MIN HERB
- Cetraria arenaria Karnef.: MIN HERB
- S-1 Cetraria ciliaris Ach.: Forman & Sierk, 1970, MIN HERB
- Cetraria islandica (L.) Ach.: Forman & Sierk, 1970
- Cetraria Oakesiana Tuck.: Forman & Sierk, 1970, Lawrey,  
1980, MIN HERB
- Cetrelia cetrarioides (Del. ex Duby) W. Culb. & C. Culb.:  
Culberson, 1965, Forman & Sierk, 1970, MIN HERB
- Cetrelia chicitae (W. Culb.) W. Culb. & C. Culb.: Forman &  
Sierk, 1970, MIN HERB
- Cetrelia olivetorum (Nyl.) W. Culb. & C. Culb.: Culberson &  
Culberson, 1968, Forman & Sierk, 1970, MIN HERB
- Cladonia apodocarpa Robb.: Forman & Sierk, 1970
- Cladonia bacillaris (Ach.) Nyl.: Forman & Sierk, 1970, MIN  
HERB

- Cladonia caespiticia (Pers.) Florke: Forman & Sierk, 1970, MIN  
HERB
- Cladonia cariosa (Ach.) Spreng.: Forman & Sierk, 1970, MIN HERB
- Cladonia chlorophaea (Florke ex Somm.) Spreng.: Forman & Sierk,  
1970, MIN HERB
- I Cladonia coniocraea (Florke) Spreng.: Forman & Sierk, 1970, MIN  
HERB
- Cladonia conista (Ach.) Robb.: Forman & Sierk, 1970
- Cladonia furcata (Huds.) Schrad.: Forman & Sierk, 1970, Lawrey,  
1980, MIN HERB
- Cladonia pyxidata (L.) Hoffm.: Forman & Sierk, 1970, MIN HERB
- Cladonia rangiferina (L.) Wigg.: Forman & Sierk, 1970, HIN HERB
- Cladonia sguamosa (Scop.) Hoffm.: Forman & Sierk, 1970, MIN  
HERB
- Cladonia subapodocarpa Harris: Lawrey, 1980
- Cladonia subtenuis (Abb.) Evans: Lawrey & Hale, 1981, MIN HERB
- Cladonia uncialis (L.) Wigg.: Forman & Sierk, 1970, MIN HERB
- Cladonia verticillata (Hoffm.) Schaer.: Forman & Sierk, 1970,  
MIN HERB
- Collema conglomeratum yare crassiusculum (Malme) Degel.: Forman  
& Sierk, 1970, MIN HERB
- Collema flaccidum (Ach.) Ach.: Degelius, 1974
- Collema furfuraceum (Arn.) Du Reitz: Forman & Sierk, 1970, BIN  
HERB
- Collema nigrescens (Huds.) DC.: Forman & Sierk, 1970
- Collema subflaccidum Degel.: MIN HERB
- Collema subfurvum (Mull. Arg.) Degel.: Forman & Sierk, 1970
- Collema tenax (Sw.) Ach.: Forman & Sierk, 1970
- Conotrema urceolatum (Ach.) Tuck.: Forman & Sierk, 1970, MIN  
HERB
- Dermatocarpon miniatum (L.) Mann: Forman & Sierk, 1970
- Dermatocarpon tuckermanii (Rav.) Zahlbr.: Forman & Sierk, 1970
- Dermatocarpon weberi (Ach.) Mann: Forman & Sierk, 1970, MIN  
HERB
- Dimelaema oreina (Ach.) Norm.: Sheard, 1974
- Dimerella lutea (Dicks.) Trev.: Forman & Sierk, 1970
- Diploschistes actinostomus (Pers.) Zahlbr.: Forman & Sierk,  
1970, MIN HERB
- I Graphis scripta (L.) Ach.: Forman & Sierk, 1970, MIN HERB
- Heterodermia hypoleuca (Muhl.) Trev.: Forman & Sierk, 1970, MIN  
HERB
- Heterodermia obscurata (Nyl.) Trev.: Forman & Sierk, 1970, MIN  
HERB
- Heterodermia sguamulosa (Degel.) W. Culb.: Forman & Sierk, 1970
- Huilia albocaerulescens (Wulf.) Hertel: Forman & Sierk, 1970,  
Lawrey, 1980, MIN HERB
- Hydrothyria venosa Russ.: Forman & Sierk, 1970, MIN HERB

- I Hypogymnia phvsodes (L.) W. Wats.: Forman & Sierk, 1970,  
MIN HERB  
Lasallia papulosa (Ach.) Llano: Llano, 1950, Forman &  
Sierk, 1970, Lawrey, 1980, MIN HERB  
Lasallia pensylvanica (Hoffm.) Llano: Forman & Sierk,  
1970, MIN HERB  
Lecanora atra (Huds.) Ach.: Forman & Sierk, 1970  
Lecanora caesiorubella Ach. subsp. caesiorubella: Forman &  
Sierk, 1970  
Lecanora campestris (Schaer.) Hue: Forman & Sierk, 1970,  
Lawrey, 1980
- I Lecanora chlarotera Nyl.: Forman & Sierk, 1970, MIN HERB  
Lecanora cinereofusca Magn.: Forman & Sierk, 1970  
Lecanora conizaeoides Nyl. ex Cromb.: MIN HERB
- I Lecanora pallida (Schreb.) Rabenh.: Forman & Sierk, 1970  
Lecanora strobilina (Spreng.) Kieff.: Forman & Sierk,  
1970, MIN HERB  
Lecanora subfuscata Magn.: Forman & Sierk, 1970
- I Lecanora symmicta Ach.: Forman & Sierk, 1970, MIN HERB  
Lecidea berengeriana (Mass.) Nyl.: Forman & Sierk, 1970,  
MIN HERB  
Lecidea carnulenta (Tuck.) Fink: Forman & Sierk, 1970, MIN  
HERB  
Lecidea diminutula Magn.: Forman & Sierk, 1970  
Lecidea friesii Ach.: Forman & Sierk, 1970, MIN HERB  
Lecidea granulosa (Ehrh.) Ach.: Forman & Sierk, 1970, MIN  
HERB  
Lecidea helvola (KBrb.) Oliv.: Forman & Sierk, 1970, MIN  
HERB  
Lecidea tessellata (Ach.) FIBrke: Forman & Sierk, 1970,  
MIN HERB  
Lecidea uliginosa (Schrad.) Ach.: Forman & Sierk, 1970,  
MIN HERB  
Lecidea varians Ach.: Forman & Sierk, 1970
- S Lecidea vernalis (L.) Ach.: Forman & Sierk, 1970
- I-T Lepraria incana (L.) Ach.: Forman & Sierk, 1970  
Lepraria zonata Broda: Lawrey, 1980  
Leptogium chloromelum (Sw. ex Ach.) Nyl.: Forman & Sierk,  
1970  
Leptogium cyanescens (Ach.) KBrb.: Forman & Sierk, 1970,  
MIN HERB  
Leptogium lichenoides (L.) Zahlbr.: Forman & Sierk, 1970,  
NIN HERB
- S Lobaria pulmonaria (L.) Hoffm.: Forman & Sierk, 1970, MIN  
HERB  
Lobaria guercizans Michx.: Forman & Sierk, 1970, MIN HERB  
Micarea trisepta (Naeg.) Wetm.: Forman & Sierk, 1970  
Micarea violacea Hedl.: MIN HERB  
Nicarea viridesce~s (Schrad.) Broda: Forman & Sierk, 1970,  
MIN HERB  
Nephroma bellum (Spreng.) Tuck.: Forman & Sierk, 1970, MIN  
HERB  
Nephroma helveticum Ach.: Forman & Sierk, 1970, MIN HERB
- S Ochrolechia rosella (Mull. Arg.) Vers.: Forman & Sierk,  
1970, NIN HERB

- Ochrolechia tartarea (L.) Mass.: Forman & Sierk, 1970  
Ochrolechia tuckermanii Vers.: MIN HERB  
Ochrolechia yasudae Vain.: La\Hey, 1980
- \* Parmelia appalachnsis W. Culb.: Forman & Sierk, 1970 , MIN HERB  
Parmelia aurulenta Tuck.: Forman & Sierk, 1970, MIN HERB  
Parmelia baltimorensis Gyeln.: Lawrey, 1980, Lawrey & Hale,  
1981
- I Parmelia bolliana MULL. Arg.: Forman & Sierk, 1970  
Parmelia caperata (L.) Ach.: Forman & Sierk, 1970, MIN HERB  
Parmelia conspersa (Ach.) Ach.: Forman & Sierk, 1970, Lawrey &  
Hale, 1981, MIN HERB  
Parmelia crinita Ach.: Forman & Sierk, 1970, Lawrey, 1980, MIN  
HERB
- Parmelia cumberlancia (Gyeln.) Hale: Lawrey, 1980  
Parmelia dierythra Hale: Forman & Sierk, 1970  
Parmelia flaventior Stirt.: Forman & Sierk, 1970  
Parmelia galbina Ach.: Forman & Sierk, 1970, MIN HERB  
Parmelia hypoleucites Nyl.: Forman & Sierk, 1970  
Parmelia hypopsila MULL. Arg.: Forman & Sierk, 1970  
Parmelia margaritata Hue: Forman & Sierk, 1970  
Parmelia obsessa Ach.: MIN HERB  
Parmelia omphalodes (L.) Ach.: Forman & Sierk, 1970, Lawrey,  
1980, MIN HERB  
Parmelia plittii Gyeln.: MIN HERB
- S Parmelia reticulata Tayl.: Forman & Sierk, 1970  
I Parmelia rudecta Ach.: Forman & Sierk, 1970, Lawrey, 1980, MIN  
HERB
- I Parmelia saxatilis (L.) Ach.: Forman & Sierk, 1970  
S \* Parmelia squarrosa Hale: MIN HERB Parmelia stuppea Tayl.: MIN  
HERB
- Parmelia stygia (L.) Ach.: Forman & Sierk, 1970, MIN HERB  
S Parmelia subaurifera Nyl.: Forman & Sierk, 1970  
Parmelia subisidiosa (MULL. Arg.) Dodge: Forman & Sierk, 1970,  
MIN HERB
- I Parmelia subrudecta Nyl.: Forman & Sierk, 1970, MIN HERB  
I-T Parmelia sulcata Tayl.: Forman & Sierk, 1970, MIN HERB  
Parmelia taractica Kremp.: Forman & Sierk, 1970, MIN HERB  
Parmelia tasmanica Hook. f. & Tayl.: Forman & Sierk, 1970
- \* Parmelia virginica Hale in Hale & Kurok.: ale & kurokawa, 1964  
Parmeliella triptophylla (Ach.) MULL. Arg.: Forman & Sierk,  
1970
- I Parmeliopsis aleurites (Ach.) Nyl.: Forman & Sierk, 1970, MIN  
HERB
- Peltigera apthosa (L.) Willd.: Thomson, 1950  
Peltigera canina (L.) Willd.: Thomson, 1950, Forman & Sierk,  
1970, MIN HERB  
Peltigera canina yare spuria (Ach.) Schaer.: Forman & Sierk,  
1970  
Peltigera canina var. ulorrhiza (FlHerke) Schaer.: Forman &  
Sierk, 1970  
Peltigera evansiana Gyeln.: Forman & Sierk, 1970  
Peltigera polydactyla (Neck.) Hoffm.: Forman & Sierk,

1970

- I Pertusaria amara (Ach.) Nyl.: Forman & Sierk, 1970  
Pertusaria globularis (Ach.) Tuck.: Forman & Sierk, 1970  
Pertusaria hypothamnolica Dibb.: Dibben, 1980  
Pertusaria neoscotica Lamb: Dibben, 1980  
Pertusaria lilacounii (Lamb) Dibb.: Forman & Sierk, 1970
- I Pertusaria multipuncta (Turn.) Nyl.: Forman & Sierk, 1970  
Pertusaria plittiana Erichs.: Forman & Sierk, 1970  
Pertusaria pustulata (Ach.) Duby: Forman & Sierk, 1970,  
Dibben, 1980  
Pertusaria rubefacta Erichs.: Dibben, 1980  
\* Pertusaria rubescens Erichs.: Forman & Sierk, 1970  
Pertusaria shenandoensis Hale & Dibb.: Dibben, 1980  
Pertusaria subpertusa Brodo: Dibben, 1980  
Pertusaria trachythallina Erichs.: Forman & Sierk, 1970,  
Dibben, 1980  
Pertusaria velata (Turn.) Nyl.: Forman & Sierk, 1970  
Pertusaria xanthodes Mull. Arg.: Forman & Sierk, 1970
- I Phaeophyscia orbicularis (Neck.) Moberg: Thomson,  
1963, Forman & Sierk, 1970, MIN HERB  
Phaeophyscia rubropulchra (Degel.) Essl.: Forman & Sierk,  
1970
- I Physcia aipolia (Ehrh.) Hampe: Forman & Sierk, 1970, MIN  
HERB  
Physcia americana Merr. in Evans & Meyrow.: Thomson,  
1963, Forman & Sierk, 1970, MIN HERB  
Physcia callosa Nyl.: Forman & Sierk, 1970
- I Physcia milligrana Degel.: Forman & Sierk, 1970, MIN HERB
- I Physcia stellaris (L.) Nyl.: Thomson, 1963, Forman &  
Sierk, 1970, MIN HERB  
Physcia subtilis Degel.: Thomson, 1963, Forman & Sierk,  
1970, MIN HERB  
Placynthium nigrum (Huds.) S. Gray: Forman & Sierk, 1970  
Plagiocarpa hyalospora (Nyl.) R. Harris: MIN HERB  
Platismatia tuckermanii (Oakes) W. Culb. & C. Culb.:  
Culberson & Culberson, 1968, Forman & Sierk, 1970,  
MIN HERB  
Pseudevernia consocians (Vain.) Hale & W. Culb.: Forman &  
Sierk, 1970, MIN HERB
- I Pyrenula nitida (Weig.) Ach. Forman & Sierk, 1970  
Pyxine sorediata (Ach.) Mont. Forman & Sierk, 1970, MIN  
HERB
- S Ramalina americana Hale Forman & Sierk, 1970  
Ramalina intermedia (Del. ex Nyl.) Nyl. Forman & Sierk,  
1970, Lawrey, 1980, MIN HERB  
Ramalina sinensis Jatta Forman & Sierk, 1970  
Rhizocarpon cinereovirens (Mull. Arg.) Vain. Forman &  
Sierk, 1970  
Rhizocarpon concentricum (Dav.) Beltr.: Forman & Sierk,  
1970, MIN HERB  
Rhizocarpon geographicum (L.) DC.: Forman & Sierk, 1970,  
MIN HERB  
Rhizocarpon intermedium Degel.: Forman & Sierk, 1970, MIN  
HERB  
Rhizoplaca chrysoleuca (Smith) Zopf: Forman & Sierk,

1970, MIN HERB  
Rinodina ascociscana Tuck.: Forman & Sierk, 1970  
Stereocaulon saxatile Magn.: Forman & Sierk, 1970  
Sticta fuliginosa (Dicks.) Ach.: Forman & Sierk, 1970  
Sticta weigellii (Insert ex Ach.) Vain.: Forman & Sierk,  
1970, MIN HERB  
Trapelia coarctata (Turn. ex Sm.) Choisy: Forman & Sierk,  
1970, MIN HERB  
Umbilicaria caroliniana Tuck.: Forman & Sierk, 1970  
Umbilicaria mammulata (Ach.) Tuck.: Llano, 1950, Forman &  
Sierk, 1970, MIN HERB  
Umbilicaria muehlenbergii (Ach.) Tuck.: Llano, 1950,  
Forman & Sierk, 1970, MIN HERB  
Umbilicaria vellea (L.) Ach.: Forman & Sierk, 1970, MIN  
HERB  
Usnea herrei Hale: Forman & Sierk, 1970, Lawrey, 1980, MIN  
HERB  
S-I Usnea subfloridana Stirt.: Forman & Sierk, 1970  
Verrucaria aethiobola Wahlenb. ex Ach.: Forman & Sierk,  
1970, MIN HERB

SHEN REFERENCES

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THRB - THEODORE ROOSEVELT NATIONAL PARK

Total number of species = 208 : Completely known

- Acarospora americana Magn.: MIN HERB  
Acarospora cinereoalba (Fink) Magn.: MIN HERB  
Acarospora fuscata (Schrad.) Arn.: MIN HERB  
Acarospora reagens Zahlbr.: MIN HERB  
Acarospora schleicheri (Ach.) Mass.: MIN HERB  
Agrestia hispida (Meresch.) Hale & W. Culb.: MIN HERB  
Arthonia intexta Almqu.: MIN HERB  
Arthonia lapidicola (Tayl.) Branth & Rostr.: MIN HERB  
Aspicilia alphoplaca (Wahlenb. ex Ach.) Poelt & Leuck.: MIN HERB  
Aspicilia caesiocinerea (Nyl. ex Malbr.) Arn.: MIN HERB  
Aspicilia cinerea (L.) Kerb.: MIN HERB  
Aspicilia contorta (Hoffm.) Kremp.: MIN HERB  
Aspicilia reptans (Looman) ined.: MIN HERB  
Bacidia bacillifera (Nyl.) Fink: MIN HERB  
Bacidia bagliettoana (Mass. & De Not.) Jatta: MIN HERB  
Bacidia populorum (Mass.) Trev.: MIN HERB  
Bacidia sabuletorum (Schreb.) Lett.: MIN HERB  
Bryoria capillaris (Ach.) Brodo & Hawksw.: MIN HERB  
I Bryoria fuscescens (Gyeln.) Brodo & Hawksw.: MIN HERB  
Buellia elegans Poelt: MIN HERB  
T Buellia punctata (Hoffm.) Mass.: MIN HERB  
Buellia retrovertens Tuck.: MIN HERB  
Buellia venusta (Kerb.) Lett.: MIN HERB  
Buellia zahlbruckneri J. Stein.: MIN HERB  
Caloplaca atroalba (Tuck.) Zahlbr.: MIN HERB  
S-I Caloplaca cerina (Ehrh.) Th. Fr.: MIN HERB  
Caloplaca chrysophthalma Degel.: MIN HERB  
Caloplaca citrina (Hoffm.) Th. Fr.: MIN HERB  
Caloplaca decipiens (Arn.) J. Stein. MIN HERB  
Caloplaca feracissima Magn.: MIN HERB  
S Caloplaca flavorubescens (Huds.) Laund.: MIN HERB  
I Caloplaca holocarpa (Hoffm.) Wade: MIN HERB  
Caloplaca lobulata (Florke) Hellb.: MIN HERB  
Caloplaca microphyllina (Tuck.) Hasse: MIN HERB  
Caloplaca sarcopisoides (Korb.) Zahlbr.: MIN HERB  
Caloplaca saxicola (Hoffm.) Nordin: MIN HERB  
Caloplaca squamosa B. de Lesd.: MIN HERB  
Caloplaca stillicidiorum (Vahl) Lyngé: MIN HERB  
Caloplaca tominii Savicz: MIN HERB  
Caloplaca trachyphylla (Tuck.) Zahlbr.: MIN HERB  
Caloplaca ulmorum (Fink) Fink: MIN HERB  
S-I Candelaria concolor (Dicks.) B. Stein: MIN HERB  
Candelariella aurelia (Hoffm.) Zahlbr.: MIN HERB  
Candelariella deflexa (Nyl.) Zahlbr.: MIN HERB  
Candelariella efflorescens Harris & Buck: MIN HERB  
Candelariella subdeflexa (Nyl.) Lett.: MIN HERB  
I Candelariella vitellina (Ehrh.) Müll. Arg.: MIN HERB  
S-I Candelariella xanthostigma (Ach.) Lett.: MIN HERB  
Catillaria nigroclavata (Nyl.) Schul.: MIN HERB

Cetraria halei W. Culb. & C. Culb.: MIN HERB  
 I Cetraria pinastri (Scop.) S. Gray: MIN HERB  
Cladonia acuminata (Ach.) Norrl.: MIN HERB  
Cladonia bacillaris (Ach.) Nyl.: MIN HERB  
Cladonia chlorophaea (Florke ex Somm.) Spreng.: MIN HERB  
 I Cladonia coniocraca (Florke) Spreng.: MIN HERB  
Cladonia conista (Ach.) Robb.: MIN HERB.  
Cladonia cornuta (L.) Hoffm.: MIN HERB  
 I Cladonia cristatella Tuck.: MIN HERB  
Cladonia decorticata (Florke) Spreng.: MIN HERB  
 S-I Cladonia fimbriata (L.) Fr.: MIN HERB  
Cladonia gracilis (L.) Willd.: MIN HERB  
Cladonia mitis Sandst.: MIN HERB  
Cladonia pyxidata (L.) Hoffm.: MIN HERB  
Cladonia rangiferina Hoffm.: MIN HERB  
Cladonia robbinsii Evans: MIN HERB  
Cladonia subulata (L.) Wigg.: MIN HERB  
Cladonia symphycarpa (Ach.) Fr.: MIN HERB  
Collema coccophorum Tuck.: Sierk, 1964, MIN HERB  
Collema conglomeratum Hoffm.: MIN HERB  
Collema furfuraceum (Arn.) Du Reitz: MIN HERB  
Collema tenax (Sw.) Ach.: MIN HERB  
Collema tuniforme (Ach.) Ach.: MIN HERB  
Coniocybe pallida (Pers.) Fr.: MIN HERB  
Cyphelium notarisii (Tul.) Blomb. & Forss.: MIN HERB  
Dermatocarpon lachneum (Ach.) A. L. Sm.: MIN HERB  
Dermatocarpon miniatum (L.) Mann: MIN HERB  
Dermatocarpon moulinsii (Mont.) Zahlbr.: MIN HERB  
Dermatocarpon plumbeum (B. de Lesd.) Zahlbr.: MIN HERB  
Dermatocarpon tuckermanii (Rav.) Zahlbr.: MIN HERB  
Dimelaena oreina (Ach.) Norm.: Sheard, 1974, MIN HERB  
Diploschistes actinostomus (Pers.) Zahlbr.: MIN HERB  
Diploschistes scruposus (Schreb.) Norm.: MIN HERB  
Endocarpon pusillum Hedw.: MIN HERB  
 I Evernia mesomorpha Nyl.: MIN HERB  
Fulgensia bracteata (Hoffm.) RMs.: MIN HERB  
Fulgensia fulgens (Sw.) Elenk.: MIN HERB  
Heppia lutosa (Ach.) Nyl.: MIN HERB  
 I Hyperphyscia adglutinata (Florke) Mayrh. & Poelt: MIN  
 HERB  
 I Hypogymnia physodes (L.) W. Wats.: MIN HERB  
 S Hypogymnia tubulosa (Schaer.) Hav.: MIN HERB  
Lecania erysibe (Ach.) Mudd: MIN HERB  
Lecania fuscella (Schaer.) KBrb.: MIN HERB  
 I Lecanora chlarotera Nyl.: MIN HERB  
 T Lecanora dispersa (Pers.) Somm.: MIN HERB  
Lecanora frustulosa (Dicks.) Ach.: MIN HERB  
Lecanora garovaglii (Korb.) Zahlbr.: MIN HERB  
 T Lecanora hageni (Ach.) Ach.: MIN HERB  
Lecanora impudens Degel.: MIN HERB  
 T Lecanora muralis (Schreb.) Rabenh.: MIN HERB  
Lecanora piniperda Korb.: MIN HERB  
Lecanora rupicola (L.) Zahlbr.: MIN HERB  
 I Lecanora saligna (Schrad.) Zahlbr.: MIN HERB  
Lecidea atrobrunnea (Ram.) Schaer.: MIN HERB

Lecidea berengeriana (Mass.) Nyl.: NIN HERB  
Lecidea cerebriformis (W. Web.) ined.: MIN HERB  
Lecidea decipiens (Hedw.) Ach.: MIN HERB  
Lecidea globifera Ach.: MIN HERB  
Lecidea granulosa (Ehrh.) Ach.: MIN HERB  
Lecidea luridella Tuck.: MIN HERB  
Lecidea plana Lahm ex Korb.: MIN HERB  
Lecidea russellii Tuck.: NIN HERB  
Lecidea tessellata (Ach.) Florke: NIN HERB  
Lecidea uliginosa (Schrud.) Ach.: MIN HERB  
Lecidea xanthococca Somm.: MIN HERB  
Lecidella carpathica Korb.: NIN HERB  
Lecidella euphorea (Florke) Hert.: MIN HERB  
Lecidella inamoena (Mull. Arg.) Hert.: MIN HERB  
Lecidella spitsbergensis (Lynge) Hert. & Leuck.: MIN HERB  
Lecidella stigmathea (Ach.) Hert. & Leuck.: MIN HERB  
Lepraria finkii (B. de Lesd. in Hue) ined.: MIN HERB  
Leptogium amphineum Nyl.: Sierk, 1964  
Leptogium minutissimum (Florke) Fr.: MIN HERB  
Leptogium tenuissimum (Dicks.) Fr.: MIN HERB  
Micarea globularis (Nyl.) Hedl.: MIN HERB  
Nycocalicium parietinum (Ach. ex Schaer.) Hawksw.: MIN  
HERB  
Ochrolechia arborea (Ljubitz.) Almb.: MIN HERB  
Pachyospora mutabilis (Ach.) Mass.: MIN HERB  
Parmelia albertana Ahti: MIN HERB  
I Parmelia caperata (L.) Ach.: MIN HERB  
Parmelia chlorochroa Tuck.: MIN HERB  
Parmelia conspersa (Ach.) Ach.: MIN HERB  
Parmelia flaventior Stirt.: MIN HERB  
Parmelia lineola Berry: MIN HERB  
Parmelia mexicana Gyeln.: MIN HERB  
Parmelia plittii Gyelri.: MIN HERB  
Parmelia soledica Nyl.: MIN HERB  
Parmelia solediosa Almb.: MIN HERB  
I-T Parmelia subargentifera Nyl.: MIN HERB  
S Parmelia subaurifera Nyl.: MIN HERB  
Parmelia subolivacea Nyl. in Hasse: Ahti, 1966, MIN HERB  
Parmelia substygia Ras.: MIN HERB  
I-T Parmelia sulcata Tayl.: MIN HERB  
Parmelia taractica Kremp.: MIN HERB  
Peccania subnigrum (B. de Lesd.) ined.: MIN HERB  
Peltigera canina (L.) Willd.: MIN HERB  
Peltigera canina var. praetextata (Florke in Somm.) Hue:  
MIN HERB  
Peltigera canina var. rufescens (Weiss) Mudd: MIN HERB  
Peltigera neckeri Mull. Arg.: MIN HERB  
Peltula bolanderi (Ach.) Wetm.: MIN HERB  
Peltula polyspora (Tuck.) Wetm.: MIN HERB  
Pertusaria saximontana Wetm.: MIN HERB  
Phaeophyscia cernohorskyi (Nadv.) Essl.: MIN HERB  
Phaeophyscia chloantha (Ach.) Moberg: MIN HERB  
Phaeophyscia constipata (Norrl. et Nyl.) Moberg: MIN HERB  
Phaeophyscia hirsuta (Meresch.) Essl.: MIN HERB  
Phaeophyscia kairamoi (Vain.) Moberg: MIN HERB

Phaeophyscia melanchra (Hue) ined.: MIN HERB  
 I-T Phaeophyscia iligricans (Florke) Moberg: MIN HERB  
Phaeophyscia pusilloides (Zahlbr.) Essl.: MIN HERB  
Phaeorrhiza sareptana (Tomim) Mayrh. & Poelt: MIN HERB  
 I Physcia adscendens (Th. Fr.) Oliv.: MIN HERB  
 I Physcia aipolia (Ehrh.) Hampe: MIN HERB  
Physcia caesia (Hoffm.) Hampe: MIN HERB  
Physcia dimidiata (Arn.) Nyl.: Esslinger, 1979  
 T Physcia dubia (Hoffm.) Lett.: MIN HERB  
 I Physcia millegrana Degel.: MIN HERB  
 I Physcia stellaris (L.) Nyl.: MIN HERB  
Physcia subtilis Degel.: MIN HERB  
 I Physconia detersa (Nyl.) Poelt: MIN HERB  
Physconia muscigena (Ach.) Poelt: MIN HERB  
Placynthium nigrum (Huds.) S. Gray: MIN HERB  
Protoblastenia rupestris (Scop.) J. Stein.: MIN HERB  
Psorotichia minuta Magn.: MIN HERB  
Ramalina sinensis Jatta: MIN HERB  
Rhizocarpon disporum (Naeg. ex Hepp) Mull. Arg.: MIN HERB  
Rhizoplaca chrysoleuca (Smith) Zopf: MIN HERB  
Rhizoplaca melanophthalma (Ram.) Leuck. & Poelt: MIN HERB  
Rinodina bischoffii (Hepp) Mass.: MIN HERB  
Rinodina calcigena (Th. Fr.) Lynge: MIN HERB  
Rinodina colobina (Ach.) Th. Fr.: MIN HERB  
Rinodina lobulata Sheard ined.: MIN HERB  
Rinodina mucronatula Magn.: MIN HERB  
Rinodina pyrina (Ach.) Arn.: MIN HERB  
Rinodina riparia Sheard ined.: MIN HERB  
Rinodina rivula Sheard ined.: MIN HERB  
Rinodina zwachiana (Kremp.) KBrb.: MIN HERB  
Sarcogyne clavus (Ram.) Kremp.: MIN HERB  
Sarcogyne regularis Klorb.: MIN HERB  
Sarcogyne simplex Magn.: MIN HERB  
Sguamarina lentigera (G. Web.) Poelt: MIN HERB  
Staurothele clopima (Wahlenb. ex Ach.) Th. Fr.: MIN HERB  
Staurothele monicae (Zahlbr.) ined.: MIN HERB  
Staurothele rufa (Mass.) Zsch.: MIN HERB  
Thyrea nigritella Lett.: MIN HERB  
Toninia caeruleonigricans (Lightf.) Th. Fr.: MIN HERB  
Toninia tristis (Th. Fr.) Th. Fr.: MIN HERB  
Umbilicaria muehlenbergii (Ach.) Tuck.: MIN HERB  
Usnea fulvovirens (Ras.) Ras.: MIN HERB  
 S-I Usnea hirta (L.) Wigg.: MIN HERB  
 S-I Usnea subfloridana Stirt.: MIN HERB  
Verrucaria muralis Ach.: MIN HERB  
Verrucaria virens Nyl.: MIN HERB  
Xanthoria elegans (Link) Th. Fr.: MIN HERB  
 S-I Xanthoria fallax (Hepp) Arn.: MIN HERB  
 I Xanthoria polycarpa (Ehrh.) Oliv.: MIN HERB  
Xylographa abietina (Pers.) Zahlbr.: MIN HERB

THRB REFERENCES

- Ahti, T. 1966. *Parmelia olivacea* and the allied non-isidiate and non-sorediate corticolous lichens in the Northern Hemisphere. *Acta Bot. Fenn.* 70:1-68.
- Esslinger, T. L. 1979. Studies in the lichen family Physciaceae. V. Two species of *Physcia* new to North America. *Mycotaxon* 10:210-212.
- Sheard, J. W. 1974. The genus *Dimelaena* in North America north of Mexico. *Bryologist* 77:128-141 (including simplified locality list provided in mimeograph form as supplement).
- Sierk, H. A. 1964. The genus *Leptogium* in North America north of Mexico. *Bryologist* 67:245-317.

VOYA - VOYAGEURS NATIONAL PARK

Total number of species = 404 : Completely known

Note: Specimens of all accepted names are also in MIN HERB

- Acarospora americana Magn.: Wetmore, 1981  
Acarospora badiofusca (Nyl.) Th. Fr.: Wetmore, 1981  
Acarospora fuscata Arn.: Wetmore, 1981  
Anaptychia palmulata (Michx.) Vain.: Wetmore, 1981  
Arthonia caesia (Korb.) Korb.: Wetmore, 1981  
Arthonia didyma Korb.: Wetmore, 1981  
Arthonia dispersa (Schrad.) Nyl.: Fink, 1903, Wetmore, 1981  
Arthonia fuliginosa (Turn. & Borr.) Flot.: Wetmore, 1981  
Arthonia lurida Ach.: Wetmore, 1981  
Arthonia patellulata Nyl.: Wetmore, 1981  
I Arthonia radiata (Pers.) Ach.: Wetmore, 1981  
Arthopyrenia cinereopruinosa (Schaer.) Mass.: Wetmore, 1981  
Arthopyrenia faginea (Schaer.) Swinsc.: Wetmore, 1981  
Arthopyrenia padi Rabenh.: Wetmore, 1981  
Arthothelium ruanideum Rehm in Rabenh.: Wetmore, 1981  
Bacidia accedens (Arn.) Lett.: Wetmore, 1981  
Bacidia atrogrisea (Del. ex Hepp) Korb.: Wetmore, 1981  
I Bacidia chlorococca (Graewe ex Stenh.) Lett.: Wetmore, 1981  
Bacidia epixanthoides (Nyl.) Lett.: Wetmore, 1981  
Bacidia fuscorubella (Hoffm.) Bausch.: Wetmore, 1981  
Bacidia inundata (Fr.) Korb.: Wetmore, 1981  
I Bacidia rubella (Hoffm.) Mass.: Wetmore, 1981  
Bacidia sabuletorum (Schreb.) Lett.: Wetmore, 1981  
Bacidia schweinitzii (Fr. ex Michen. in Darl.) Schneid.: Wetmore, 1981  
Bacidia sphaeroides (Dicks.) Zahlbr.: Wetmore, 1981  
Bacidia suffusa (Fr.) Schneid.: Wetmore, 1981  
Bacidia umbrina (Ach.) Bausch.: Wetmore, 1981  
Baeomyces carneus (Retz.) Florke.: Wetmore, 1981  
Baeomyces rufus (Huds.) Rehent.: Wetmore, 1981  
Biatorella microhaema Norm. in Th. Fr.: Wetmore, 1981  
Biatorella moriformis (Ach.) Th. Fr.: Wetmore, 1981  
Biatorella resinae (Fr.) Th. Fr.: Wetmore, 1981  
S Bryoria furcellata (Fr.) Broda & Hawksw.: Wetmore, 1981  
S Bryoria trichodes (Michx.) Brodo & Hawksw.: Wetmore, 1981  
I Buellia alboatra (Hoffrn.) Branth & Rostr.: Fink, 1903, Wetmore, 1981  
Buellia arnoldii Servo & Nadv.: Wetmore, 1981  
Buellia dialyta (Nyl.) Tuck.: Fink, 1903, Wetmore, 1981  
Buellia disciformis (Fr.) Mudd.: Wetmore, 1981  
T Buellia punctata (Hoffm.) Mass.: Wetmore, 1981  
Buellia schaeereri De Not.: Imshaug, 1951, Wetmore, 1981  
I Buellia stillingiana J. Stein.: Wetmore, 1981  
Calicium abietinum Pers.: Wetmore, 1981  
Calicium glaucellum Ach.: Wetmore, 1981

- Calicium parvum Tibell: Wetmore, 1981  
Calicium salicinum Pers.: Wetmore, 1981  
Calicium trabinellum (Ach.) Ach.: Wetmore, 1981  
S-I Caloplaca arenaria (Pers.) MULL. Arg.: Wetmore, 1981  
Caloplaca cerina (Ehrh.) Th. Fr.: Wetmore, 1981  
Caloplaca chrysophthalma Degel.: Wetmore, 1981  
Caloplaca cinnabarina (Ach.) Zahlbr.: Wetmore, 1981  
Caloplaca citrina (Hoffm.) Th. Fr.: Wetmore, 1981  
Caloplaca feracissima Magn.: Wetmore, 1981  
Caloplaca flavovirescens (Wulf.) DT & Sarnth.: Wetmore, 1981  
I Caloplaca holocarpa (Hoffm.) Wade: Wetmore, 1981  
Caloplaca pollinii (Mass.) Jata: Wetmore, 1981  
Caloplaca saxicola (Hoffm.) Nordin: Fink, 1903, Wetmore, 1981  
Caloplaca sideritis (Tuck.) Zahlbr.: Wetmore, 1981  
Caloplaca ulmorum (Fink) Fink: Wetmore, 1981  
I-T Caloplaca vitellinula (Nyl.) Oliv.: Wetmore, 1981  
S-I Candelaria concolor (Dicks.) B. Stein: Wetmore, 1981  
Candelaria fibrosa (Fr.) MULL. Arg.: Wetmore, 1981  
Candelariella efflorescens Harris & Buck: Wetmore, 1981  
I Candelariella vitellina (Ehrh.) MULL. Arg.: Wetmore, 1981  
S-I Candelariella xanthostigma (Ach.) Lett.: Wetmore, 1981  
Catillaria atropurpurea (Schaer.) Th. Fr.: Wetmore, 1981  
Cetraria aurescens Tuck.: Wetmore, 1981  
Cetraria fendleri (Nyl.) Tuck.: Wetmore, 1981  
Cetraria halei W. Culb. & C. Culb.: Wetmore, 1981  
I Cetraria orbata (Nyl.) Fink: Wetmore, 1981  
I Cetraria pinastri (Scop.) S. Gray: Wetmore, 1981  
I Cetraria sepincola (Ehrh.) Ach.: Wetmore, 1981  
[Cetrelia cetrarioides (Del. ex Duby) W. Culb. & C. Culb.:  
Berry, 1941, misident.]  
Cetrelia chicitae (W. Culb.) W. Culb. & C. Culb.: Wet-  
more, 1981  
Cetrelia olivelorum (Nyl.) W. Culb. & C. Culb.: Wetmore,  
1981  
Chaenotheca brunneola (Ach.) MULL. Arg.: Wetmore, 1981  
Chaenotheca chrysocephala (Turn.) Th. Fr.: Wetmore, 1981  
I Chaenotheca ferruginea (Turn. & Borr.) Mig.: Wetmore,  
1981  
Chaenotheca hispidula (Ach.) Zahlbr.: Wetmore, 1981  
Chaenotheca laevigata Nadv.: Wetmore, 1981  
Chaenotheca stemonea (Ach.) MULL. Arg.: Wetmore, 1981  
Chaenotheca trichialis (Ach.) Th. Fr.: Wetmore, 1981  
Chaenotheca xyloxena Nadv.: Wetmore, 1981  
Chaenothecopsis consociata (Nadv.) Schmidt.: Wetmore, 1981  
Chaenothecopsis debilis (Turn. & Borr. in Schaer.)  
Tibell: Wetmore, 1981  
Chaenothecopsis lignicola (Nadv.) Schmidt.: Wetmore, 1981  
Chaenothecopsis rubescens Vain.: Fink, 1903, Wetmore, 1981  
Chaenothecopsis savonica (Ras.) Tibell: Wetmore, 1981  
Chaenothecopsis subpusilla (Vain.) Tibell: Wetmore, 1981  
Chaenothecopsis viridireagens (Nadv.) Schmidt: Wetmore,

1981

- Cladonia acuminata (Ach.) Norrl.: Wetmore, 1981  
Cladonia amaurocraea (Florke) Schaer.: Wetmore, 1981  
Cladonia bacillaris Nyl.: Wetmore, 1981  
Cladonia botrytes (Hag.) Willd.: Wetmore, 1981  
Cladonia caespiticia (Pers.) Florke: Wetmore, 1981  
Cladonia cariosa (Ach.) Spreng.: Wetmore, 1981  
Cladonia cenotea (Ach.) Schaer.: Wetmore, 1981  
Cladonia chlorophaea (Florke ex Somm.) Spreng.: Wetmore,  
1981
- I Cladonia coccifera (L.) Willd.: Wetmore, 1981  
Cladonia coniocraea (Florke) Spreng.: Wetmore, 1981  
Cladonia conista (Nyl.) Robb. in Allen: Wetmore, 1981  
Cladonia cornuta (L.) Hoffm.: Wetmore, 1981  
Cladonia crispata (Ach.) Flot.: Wetmore, 1981
- I Cladonia cristatella Tuck.: Wetmore, 1981  
Cladonia cryptochlorophaea Asah.: Wetmore, 1981  
Cladonia cyanipes (Fr.) Florke: Wetmore, 1981  
Cladonia cylindrica (Evans) Evans: Wetmore, 1981  
Cladonia decorticata (Florke) Spreng.: Wetmore, 1981  
Cladonia deformis (L.) Hoffm.: Wetmore, 1981  
Cladonia digitata (L.) Hoffm.: Wetmore, 1981
- S-1 Cladonia fimbriata (L.) Fr.: Wetmore, 1981  
Cladonia floerkeana (Fr.) Florke: Wetmore, 1981  
Cladonia furcata (Huds.) Schrad.: Wetmore, 1981  
Cladonia gracilis (L.) Willd.: Wetmore, 1981  
Cladonia grayi Merr. ex Sandst.: Wetmore, 1981  
Cladonia merochlorophaea Asah.: Wetmore, 1981  
Cladonia mitis Sandst.: Wetmore, 1981  
Cladonia multififormis Merr.: Wetmore, 1981  
Cladonia parasitica (Hoffm.) Hoffm.: Wetmore, 1981  
Cladonia phyllophora Hoffm.: Wetmore, 1981  
Cladonia pityrea (Florke) Fr.: Wetmore, 1981  
Cladonia pleurota (Florke) Schaer.: Wetmore, 1981  
Cladonia pseudorangiformis Asah.: Wetmore, 1981  
Cladonia pyxidata (L.) Hoffm.: Wetmore, 1981  
Cladonia rangiferina (L.) Wigg.: Wetmore, 1981  
Cladonia rei Schaer.: Wetmore, 1981  
Cladonia robbinsii Evans: Wetmore, 1981  
Cladonia scabriuscula (Del. ex Duby) Nyl.: Wetmore, 1981  
Cladonia sguamosa (Scop.) Hoffm.: Wetmore, 1981  
Cladonia stellaris (Opiz) Pouz. & Vezda: Wetmore, 1981  
Cladonia subulata (L.) Wigg.: Wetmore, 1981  
Cladonia sulphurina (Michx.) Fr.: Wetmore, 1981  
Cladonia symphycarpa (Ach.) Fr.: Wetmore, 1981  
Cladonia turgida (Ehrh.) Hoffm.: Wetmore, 1981  
Cladonia uncialis (L.) Wigg.: Wetmore, 1981  
Cladonia verticillata (Hoffm.) Schaer.: Wetmore, 1981  
Collema conglomeratum Hoffm.: Wetmore, 1981  
Collema flaccidum (Ach.) Ach.: Wetmore, 1981  
Collema nigrescens (Huds.) DC.: Wetmore, 1981  
Collema pulcellum Ach.: Wetmore, 1981  
Collema subflaccidum Degel.: Wetmore, 1981  
Collema tuniforme (Ach.) Ach.: Wetmore, 1981  
Coniocybe furfuracea (L.) Ach.: Wetmore, 1981



- Coniocybe pallida (Pers.) Fr.: Wetmore, 1981  
Cyphelium lucidum (Th. Fr.) Th. Fr.: Wetmore, 1981  
Cyphelium tigillare (Ach.) Ach.: \-Jetmore, 1981  
Dermatocarpon miniatum (L.) Mann: Wetmore, 1981  
Dermatocarpon tuckermanii (Rav.) Zahlbr.: Fink, 1903,  
Wetmore, 1981  
Dermatocarpon weberi (Ach.) Mann: Wetmore, 1981  
Dimelaena oreina (Ach.) Norm.: Wetmore, 1981  
Dimerella diluta (Pers.) Trev.: Wetmore, 1981  
S Dimerella lutea (Dicks.) Rev.: Wetmore, 1981  
Diploschistes scruposus (Schreb.) Norm.: Wetmore, 1981  
Eopyrenula leucoplaca (Wallr.) Harris: Wetmore, 1981  
Ephebe lanata (L.) Vain.: Wetmore, 1981  
Ephebe ocellata Henss.: Wetmore, 1981  
I Evernia mesomorpha Nyl.: Wetmore, 1981  
I Graphis scripta (L.) Ach.: Wetmore, 1981  
Gyalecta truncigena (Ach.) Hepp: Wetmore, 1981  
Haematomma elatinum (Ach.) Mass.: Wetmore, 1981  
Heterodermia hypoleuca (Muhl.) Trev.: Wetmore, 1981  
Heterodermia speciosa (Wulf.) Trev.: Wetmore, 1981  
Huilia macrocarpa (DC.) Hertel: Wetmore, 1981  
Hymenelia lacustris With.: Wetmore, 1981  
Hypogymnia physodes (L.) Nyl.: Berry, 1941, Wetmore, 1981  
Icmadophila ericetorum (L.) Zahlbr.: Wetmore, 1981  
Lasallia papulosa (Ach.) Llano: Wetmore, 1981  
Lecanactis chloroconia Tuck.: Wetmore, 1981  
Lecania dimera (Nyl.) Th. Fr.: Wetmore, 1981  
I Lecanora allophana Nyl.: Wetmore, 1981  
Lecanora caesiocinerea Nyl. ex Malbr.: Wetmore, 1981  
Lecanora caesiorubella Ach. var. saximontana Imsh. &  
Brodo: Wetmore, 1981  
Lecanora cenisia Ach.: Wetmore, 1981  
Lecanora cinerea (L.) Somm.: Wetmore, 1981  
I Lecanora coilocarpa auct.: Wetmore, 1981  
Lecanora frustulosa (Dicks.) Ach.: Wetmore, 1981  
Lecanora impudens Degel.: Wetmore, 1981  
Lecanora meridionalis Magn.: Wetmore, 1981  
T Lecanora muralis (Schreb.) Rabenh.: Wetmore, 1981  
Lecanora mutabilis Somm.: Wetmore, 1981  
I Lecanora pallida (Schreb.) Rabenh. var. rubescens Imsh. &  
Brodo: Wetmore, 1981  
Lecanora piniperda KBrb.: Wetmore, 1981  
Lecanora polytropa (Ehrh.) Rabenh.: Wetmore, 1981  
Lecanora pulicaris (Pers.) Ach.: Wetmore, 1981  
Lecanora rugosella Zahlbr.: Hetmore, 1981  
I Lecanora saligna (Schrad.) Zahlbr.: Wetmore, 1981  
Lecanora sp: Wetmore, 1981  
Lecanora strobilina (Spreng.) Kieff.: Wetmore, 1981  
I Lecanora symmictera Nyl.: Wetmore, 1981  
Lecanora varia (Ehrh.) Ach.: Wetmore, 1981  
Lecanora wisconsinensis Magn.: Wetmore, 1981  
Lecidea aeruginosa Borr.: Wetmore, 1981  
Lecidea albohyalina (Nyl.) Th. Fr.: Wetmore, 1981  
Lecidea anthracophila Nyl.: Wetmore, 1981  
Lecidea berengeriana (Mass.) Th. Fr.: Wetmore, 1981

- Lecidea caeca Lowe: Wetmore, 1981  
Lecidea elabens Fr.: Wetmore, 1981  
Lecidea epixanthoidi.za riyl.: Wetmore, 1981  
Lecidea erratica KBrb.: Wetmore, 1981  
Lecidea erythrophaea Florke ex Somm.: Wetmore, 1981  
Lecidea friesii Ach.: Wetmore, 1981  
Lecidea fusca (Schaer.) Th. Fr.: Wetmore, 1981  
Lecidea granulosa (Hoffm.) Ach.: Wetmore, 1981  
Lecidea helvola (KMrb.) Olivo Wetmore, 1981  
Lecidea lucida (Ach.) Ach.: Wetmore, 1981  
S Lecidea nylanderii (Anzi) Th. Fr.: Wetmore, 1981  
Lecidea oligotropha Laund.: Wetmore, 1981  
Lecidea plana Lahm ex Korb.: \oletmore, 1981  
Lecidea rufonigra (Tuck.) Nyl.: \oletmore, 1981  
I Lecidea scalaris (Ach.) Ach.: Wetmore, 1981  
Lecidea turgidula Fr.: Wetmore, 1981  
Lecidea uliginosa (Schrad.) Ach.: Wetmore, 1981  
S Lecidea vernalis (L.) Ach.: Wetmore, 1981  
Lecidella carpathica Korb.: Wetmore, 1981  
I Lecidella elaeochroma (Ach.) Hazsl.: Wetmore, 1981  
Lecidella glomerulosa (Florke) Korb.: Wetmore, 1981  
Lecidella stigmatea (Ach.) Hertel & Leuckert: Wetmore,  
1981  
Lepraria neglecta auct.: Wetmore, 1981  
Lepraria sp.: Wetmore, 1981  
Lepraria zonata Brodo: Wetmore, 1981  
Leptogium arsenei Sierk: Wetmore, 1981  
Leptogium burnetiae Dodge: Wetmore, 1981  
Leptogium cyanescens (Ach.) Korb.: Wetmore, 1981  
Leptogium lichenoides (L.) Zahlbr.: Wetmore, 1981  
Leptogium milligranum Sierk: Wetmore, 1981  
Leptogium minutissimum (FIMrke) Fr.: Wetmore, 1981  
Leptogium saturninum (Dicks.) Nyl.: Wetmore, 1981  
Leptogium tenuissimum (Dicks.) Fr.: Wetmore, 1981  
Leptorhaphis epidermidis (Ach.) Th. Fr.: Wetmore, 1981  
S Lobaria pulmonaria (L.) Hoffm.: Wetmore, 1981  
Lobaria guercizans Michx.: Wetmore, 1981  
Micarea denigrata (Fr.) Hedl.: Wetmore, 1981  
Micarea melaena (Nyl.) Hedl.: Wetmore, 1981  
Micarea prasina (Fr.) Korb.: Wetmore, 1981  
Micarea viridescens (Schrad.) Brodo: Wetmore, 1981  
Microthelia micula Korb.: Wetmore, 1981  
Microthelia wallrothii (Hepp) Grumm.: Wetmore, 1981  
I Mycoblastus sanguinarius (L.) Norm.: Wetmore, 1981  
Mycocalicium parietinum (Ach. ex Schaer.) Hawksw.: Wetmore, 1981  
Nephroma bellum (Spreng.) Tuck.: Wetmore, 1981  
Nephroma helveticum Ach.: Wetmore, 1981  
Nephroma parile (Ach.) Ach.: Wetmore, 1981  
Nephroma resupinatum (L.) Ach.: Wetmore, 1981  
S-I Normandina pulchella (Borr.) Nyl.: Wetmore, 1981  
Ochrolechia arborea (Ljubitz) Almb.: Wetmore, 1981  
S Ochrolechia rosella (Tuck.) Vers.: Wetmore, 1981  
Opegrapha lichenoides Pers.: Wetmore, 1981  
S Opegrapha pulicaris (Hoffm.) Schrad.: Wetmore, 1981

- Pachyphiale fagicola (Hepp in Arn.) Zw .: Wetmore, 1981  
Pachyospora verrucosa (Ach.) Mass.: Wetmore, 1981  
Pannaria conoplea (Ach.) Bory: Wetmore, 1981  
Pannaria leucophaea (Vahl) Jorg.: Wetmore, 1981  
Pannaria leucosticta (Michen. in Darl.) Tuck.: Wetmore,  
1981  
Pannaria praetermissa Nyl.: Wetmore, 1981  
Parmelia albertana Ahti: Wetmore, 1981  
Parmelia aurulenta Tuck.: Wetmore, 1981  
Parmelia baltimorensis Gyeln.: Wetmore, 1981  
Parmelia bolliana MULL. Arg.: Wetmore, 1981  
I Parmelia caperata (L.) Ach.: Wetmore, 1981  
Parmelia conspersa (Ehrh. ex Ach.) Ach.: Berry, 1941,  
Wetmore, 1981  
Parmelia crinita Ach.: Wetmore, 1981  
Parmelia cumberlandia (Gyeln.) Hale: Wetmore, 1981  
Parmelia disjuncta Erichs.: Wetmore, 1981  
Parmelia exasperata De Not.: Wetmore, 1981  
I Parmelia exasperatula Nyl.: Wetmore, 1981  
Parmelia flaventior Stirt.: Wetmore, 1981  
Parmelia fraudans Nyl.: Wetmore, 1981  
Parmelia galbina Ach.: Berry, 1941, Wetmore, 1981  
I Parmelia glabratula Lamy: Wetmore, 1981  
Parmelia hypopsila MULL. Arg.: Wetmore, 1981  
Parmelia infumata Nyl.: Wetmore, 1981  
Parmelia mexicana Gyeln.: Wetmore, 1981  
Parmelia obsessa Ach.: Wetmore, 1981  
I Parmelia olivacea (L.) Ach.: Berry, 1941, Ahti, 1966,  
Wetmore, 1981  
[Parmelia perforata (Jacq.) Ach.: Berry, 1941 misident.]  
S Parmelia plittii Gyeln.: Wetmore, 1981  
I Parmelia revoluta Florke: Wetmore, 1981  
I Parmelia rudecta Ach.: Berry, 1941, Wetmore, 1981  
I Parmelia septentrionalis (Lynge) Ahti: Wetmore, 1981  
Parmelia soledica Ahlmb.: Wetmore, 1981  
S Parmelia sguarrosa Hale: Wetmore, 1981  
I-T Parmelia subargetifera Nyl.: Wetmore, 1981  
S Parmelia subaurifera Nyl.: Wetmore, 1981  
Parmelia subolivacea Nyl. in Hasse: Wetmore, 1981  
I Parmelia subrudecta Nyl.: Wetmore, 1981  
Parmelia substygia Ras.: Wetmore, 1981  
I-T Parmelia sulcata Tayl.: Berry, 1941, Wetmore, 1981  
Parmelia taractica Kremp.: Wetmore, 1981  
I Parmelia trabeculata Ahti: Wetmore, 1981  
I Parmeliopsis aleurites (Ach.) Nyl.: Wetmore, 1981  
I Parmeliopsis ambigua (Wulf.) Nyl.: Wetmore, 1981  
I Parmeliopsis hyperopta (Ach.) Arn.: Wetmore, 1981  
Parmeliopsis placorodia (Ach.) Nyl.: Wetmore, 1981  
Peltigera aphthosa (L.) Willd.: Wetmore, 1981  
Peltigera canina (L.) Willd. var. canina: Wetmore, 1981  
Peltigera canina var. praetextata (Florke in Somm.) Hue:  
Wetmore, 1981  
Peltigera canina var. rufescens (Weis) Mudd: Wetmore, 1981  
Peltigera canina var. spuria (Ach.) Schaer.: Wetmore,

1981

- Peltigera elisabethae Gyeln.: Wetmore, 1981 Peltigera evansiana Gyeln.: Wetmore, 1981
- I Peltigera horizontalis (Huds.) Baumg.: Wetmore, 1981  
Peltigera lepidophora (Nyl.) Vain.: Wetmore, 1981  
Peltigera leucophlebia (Nyl.) Gyeln.: Wetmore, 1981  
Peltigera malacea (Ach.) Funck: Wetmore, 1981  
Peltigera neckeri MULL. Arg.: Wetmore, 1981  
Peltigera polydactyla (Neck.) Hoffm.: Wetmore, 1981  
Peltigera scabrosa Th. Fr.: Wetmore, 1981  
Pertusaria alpina Hepp ex Ahles: Wetmore, 1981
- I Pertusaria amara (Ach.) Nyl.: Wetmore, 1981  
Pertusaria consocians Dibb.: Wetmore, 1981  
Pertusaria leucostoma (Bernh.) Mass.: Wetmore, 1981
- I Per~usaria multipunctoides Dibb.: Wetmore, 1981  
Pertusaria ophthalmiza (Nyl.) Nyl.: Wetmore, 1981  
Pertusaria stenhammari Hellb.: Wetmore, 1981  
Pertusaria trachythallina Erichs.: Wetmore, 1981  
Pertusaria velata (Turn.) Nyl.: Wetmore, 1981  
Phaeocalicium compressulum (Nyl. ex Szat.) Schmidt: Wetmore, 1981  
Phaeocalicium polyporaeun (Nyl.) Tibell: Wetmore, 1981  
Phaeocalicium populneum (Brond ex Duby) Schmidt: Wetmore, 1981
- 1981  
Phaeophyscia adiaastola (Essl.) Essl.: Wetmore, 1981  
Phaeophyscia cernohorskyi (Nadv.) Essl.: Wetmore, 1981  
Phaeophyscia chloantha (Ach.) Moberg: Wetmore, 1981  
Phaeophyscia ciliata (Hoffm.) Essl.: Wetmore, 1981  
Phaeophyscia endococcinea (Kerb.) Essl.: Wetmore, 1981  
Phaeophyscia hispidula (Ach.) Essl.: Wetmore, 1981  
Phaeophyscia imbricata (Vain.) Essl.: Wetmore, 1981  
Phaeophyscia pusilloides (Zahlbr.) Essl.: Wetmore, 1981  
Phaeophyscia rubropulchra (Degel.) Essl.: Wetmore, 1981  
Phaeophyscia sciastra (Ach.) Horberg: Wetmore, 1981
- I Phlyctis argena (Spreng.) Flot.: Wetmore, 1981  
Phylliscum demangeonii (Moug. & Mont.) Nyl.: Wetmore, 1981
- 1981  
I Physcia adscendens (Th. Fr.) Oliv.: Wetmore, 1981  
I Physcia aipolia (Ehrh.) Hampe: Wetmore, 1981  
Physcia americana Merr.: Wetmore, 1981  
Physcia caesia (Hoffm.) Hampe: Wetmore, 1981  
I Physcia dubia (Hoffm.) Lett.: Wetmore, 1981  
I Physcia mille grana Degel.: Wetmore, 1981  
Physcia phaea (Tuck.) Thoms.: Wetmore, 1981  
I Physcia stellaris (L.) Nyl.: Wetmore, 1981  
Physcia subtilis Degel.: Wetmore, 1981  
I Physconia detersa (Nyl.) Poelt: Wetmore, 1981  
Placynthium nigrum (Huds.) S. Gray: Wetmore, 1981  
Platismatia tuckermanii (Oakes) W. Culb.: Wetmore, 1981  
Polyblastiopsis fallaciosa (Stizenb.) Zahlbr.: Wetmore, 1981  
Pseudevernia consocians (Vain.) Hale & Culb.: Wetmore, 1981  
Pseudocyphellaria crocata (L.) Vain.: Wetmore, 1981  
Pyxine solediatd (Ach.) Mont.: Wetmore, 1981

- S Ramalina americana Hale: Wetmore, 1981
- I Ramalina dilacerata (Hoffm.) Hoffm.: Wetmore, 1981
- Ramalina intermedia Nyl.: Wetmore, 1981
- Ramalina sinensis Jatta: Wetmore, 1981
- Rhizocarpon badioatrum (Florke ex Spreng.) Th. Fr.:  
Wetmore, 1981
- Rhizocarpon cinereovirens (Mull. Arg.) Vain.: Wetmore,  
1981
- Rhizocarpon concentricum (Dav.) Beltr.: Wetmore, 1981
- Rhizocarpon disporum (Naeg. ex Hepp) Mull. Arg.: Wetmore,  
1981
- Rhizocarpon geographicum (L.) DC.: Wetmore, 1981
- Rhizocarpon grande (Florke ex Flot.) Arn.: Wetmore, 1981
- Rhizocarpon hochstetteri (Korb.) Vain.: Wetmore, 1981
- Rhizocarpon obscuratum (Ach.) Mass.: Wetmore, 1981
- Rhizocarpon plicatile (Leight.) A. L. Sm.: Wetmore, 1981
- Rhizocarpon subgeminatum Eith.: Wetmore, 1981
- Rhizoplaca chrysoleuca (Sm.) Zopf.: Wetmore, 1981
- Rhizoplaca melanophthalma (Ram.) Leuck. & Poelt: Wetmore,  
1981
- Rinodina archaea (Ach.) Arn.: Wetmore, 1981
- Rinodina dakotensis Magn.: Wetmore, 1981
- I Rinodina exigua (Ach.) S. Gray: Wetmore, 1981
- Rinodina iowensis Zahlbr.: Wetmore, 1981
- Rinodina pachysperma Magn.: Wetmore, 1981
- Rinodina populicola Magn.: Wetmore, 1981
- Rinodina subminuta Magn.: Wetmore, 1981
- Rinodina tephraspis (Tuck.) Herre: Wetmore, 1981
- Rinodina turfacea (Wahlenb.) Korb.: Wetmore, 1981
- Sarcogyne simplex (Dav.) Nyl.: Wetmore, 1981
- Sphinctrina anglica Nyl.: Wetmore, 1981
- Sphinctrina turbinata (Pers. ex Fr.) De Not.: Wetmore,  
1981
- Spilonema revertens Nyl.: Wetmore, 1981
- Staurothele clopima (Wahlenb. ex Ach.) Th. Fr.: Wetmore,  
1981
- Staurothele fissa (Tayl.) Zw.: Wetmore, 1981
- I Stenocybe major Nyl. ex Korb.: Wetmore, 1981
- Stenocybe pullatula (Ach. ex Somm.) B. Stein: Wetmore,  
1981
- Stereocaulon dactylophyllum Florke: Wetmore, 1981
- Stereocaulon paschale (L.) Hoffm.: Wetmore, 1981
- Stereocaulon saxatile Magn.: Wetmore, 1981
- Stereocaulon tomentosum Fr.: Wetmore, 1981
- Sticta fuliginosa (Dicks.) Ach.: Wetmore, 1981
- Sticta weigeli (Ach.) Vain.: Fink, 1903, Wetmore, 1981
- Strigula affinis (Mass.) Harris in Hawksw. et al: Wetmore,  
1981
- Teloschistes chrysophthalmus (L.) Th. Fr.: Wetmore, 1981
- Thelocarpon laureri (Flot.) Nyl.: Wetmore, 1981
- Thrombium epigaeum (Pers.) Wallr.: Wetmore, 1981
- Umbilicaria deusta (L.) Baumg.: Wetmore, 1981
- Umbilicaria hyperborea (Ach.) Hoffm.: Wetmore, 1981
- Umbilicaria mammulata (Ach.) Tuck.: Wetmore, 1981
- Umbilicaria muehlenbergii Ach.: Wetmore, 1981

Umbilicaria vellea (L.) Ach.: Wetmore, 1981  
Usnea cavernosa Tuck.: Wetmore, 1981  
S Usnea filipendula Stirt.: Wetmore, 1981  
Usnea fulvoreaegens (Ras.) Ras.: Wetmore, 1981  
S-I Usnea hirta (L.) Wigg.: Wetmore, 1981  
Usnea longissima Ach.: Fink, 1903, Wetmore, 1981  
S-I Usnea subfloridana Stirt.: Wetmore, 1981  
Verrucaria margacea Wahlbenb.: Wetmore, 1981  
Verrucaria nigrescens Pers.: Wetmore, 1981  
Xanthoria elegans (Link) Th. Fr.: Wetmore, 1981  
S-I Xanthoria fallax (Hepp) Arn.: Wetmore, 1981  
I Xanthoria polycarpa (Ehrh.) Oliv.: Wetmore, 1981  
Xanthoria sorediata (Vain.) Poelt: Wetmore, 1981  
Xylographa abietina (Pers.) Zahlbr.: Wetmore, 1981  
Xylographa disseminata Will.: Wetmore, 1981  
Xylographa vitiligo (Ach.) Laund.: Wetmore, 1981

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WICA - WIND CAVE NATIONAL PARK

Total number of species = 35 : Poorly known

- Aspicilia cinerea (L.) Korb.: Wetmore, 1967  
 [Bryoria "jubata" (L.) Ach.: Wetmore, 1967 ident.  
 uncertain. ]
- Buellia zahlbruckneri J. Stein.: Wetmore, 1967
- S-I Caloplaca cerina (Ehrh) Th. Fr.: Wetmore, 1967  
Caloplaca saxicola (Hoffm.) Nordin: Wetmore, 1967  
Catillaria chalybeia (Borr.) Mass.: Wetmore, 1967  
Cetraria fendleri (Nyl.) Tuck.: Wetmore, 1967  
Cladonia caespiticia (Pers.) Florke: Wetmore, 1967  
Cladonia chlorophaea (Florke ex Somm.) Spreng.: Wetmore,  
 1967  
Cladonia robbinsii Evans: Wetmore, 1967  
Cyphelium tigillare (Ach.) Ach.: Wetmore, 1967  
Lecanora cenisia Ach.: Wetmore, 1967  
Lecanora frustulosa (Dicks.) Ach.: Wetmore, 1967
- I Parmelia caperata (L.) Ach.: Wetmore, 1967  
Parmelia flaventior Stirt.: Wetmore, 1967, MIN HERB  
Parmelia laevigata (Sm.) Ach.: Wetmore, 1967  
Parmelia soledica Nyl.: Wetmore, 1967  
Parmelia subolivacea Nyl. in. Hasse: Wetmore, 1967  
Parmelia substygia Ras.: Wetmore, 1967
- I-T Parmelia sulcata Tayl.: Wetmore, 1967  
Parmelia tasmanica Hook. f. & Tayl.: Wetmore, 1967  
Parmeliopsis placorodia (Ach.) Nyl.: Wetmore, 1967  
Peltigera elisabethae Gyeln.: Wetmore, 1967  
Peltigera lepidophora (Nyl. ex Vain.) Bitter: Wetmore,  
 1967  
Physcia caesia (Hoffm.) Hampe: Wetmore, 1967  
Physcia callosa Nyl.: Wetmore, 1967  
Physcia subtilis Degel.: Wetmore, 1967
- 1 Physconia deterosa (Nyl.) Poelt: Wetmore, 1967  
Rhizocarpon disporum (Naeg. ex Hepp) Müll. Arg.: Wetmore,  
 1967  
Rhizoplaca chrysoleuca (Smith) Zopf: Wetmore, 1967  
Rhizoplaca melanophthalma (Ram.) Leuck. & Poelt: Wetmore,  
 1967  
Staurothele clopima (Wahlenb. ex Ach.) Th. Fr.: Wetmore,  
 1967
- S-I Umbilicaria torrefacta (Lightf.) Schrad.: Wetmore, 1967  
Usnea hirta (L.) Wigg.: Wetmore, 1967  
Xanthoria elegans (Link) Th. Fr.: Wetmore, 1967 S-I  
Xanthoria fallax (Hepp) Arn.: Wetmore, 1967

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 Dakota and Wyoming. Publ. Museum, Mich. State Univ., Biol.  
 Ser. 3(4):209-494.



YELL - YELLOWSTONE NATIONAL PARK

Total number of species = 49 : Poorly known

2 species with type localities in the park

- Acarospora chlorophana (Wahlenb. ex Ach.) Mass.: Nelson, 1900
- Bryoria fremontii (Tuck.) Brodo & Hawksw.: MIN HERB
- S [Bryoria "jubata" (L.) Ach.: Nelson, 1900 ident. uncertain]
- S Bryoria trichodes (Michx.) Brodo & Hawksw.: MIN HERB
- Caloplaca saxicola (Hoffm.) Nordin: Muller, 1889
- Cetraria canadensis (RMs.) RMs.: MIN HERB
- Cetraria fendleri (Nyl.) Tuck.: Esslinger, 1973
- Cladonia arbuscula (Wallr.) Rabenh.: Muller, 1889, Nelson, 1900, Robbins, 1931
- Cladonia cariosa (Ach.) Spreng.: Robbins, 1931
- Cladonia carneola (Fr.) Fr.: Robbins, 1931
- Cladonia cenotea (Ach.) Schaer.: Robbins, 1931
- Cladonia chlorophaea (FIBrke ex Somm.) Spreng.: Robbins, 1931
- I Cladonia coniocraea (FIBrke) Spreng.: Nelson, 1900, Robbins, 1931
- Cladonia deformis (L.) Hoffm.: Nelson, 1900, Robbins, 1931
- Cladonia ecmocyna (Ach.) Nyl.: Robbins, 1931
- \* Cladonia elongata f. intermedia Robb.: Robbins, 1931
- Cladonia macrophyllodes Nyl. Nyl.: Robbins, 1931
- Cladonia phyllophora Hoffm.: Nelson, 1900, Robbins, 1931
- Cladonia rei Schaer.: Robbins, 1931
- Cladonia stellaris (Opiz) Pouz. & Vezda: Muller, 1889
- Cladonia tenuis (FIBrke) Harm.: Robbins, 1931
- Cladonia verticillata (Hoffm.) Schaer.: Nelson, 1900, Robbins, 1931
- \* Dermatocarpon vagans Imsh.: Imshaug, 1950b
- Hypogymnia enteromorpha (Ach.) Nyl.: Berry, 1941
- Lecanora hypoptoides Nyl.: Nelson, 1900
- Lecanora polytropa (Ehrh.) Rabenh.: Nelson, 1900
- Lecidea atrobrunnea (Ram.) Schaer.: Nelson, 1900
- Lecidea globifera Ach.: Muller, 1889
- Letharia vulpina (L.) Hue: Nelson, 1900, MIN HERB
- Omphalodiscus virginis (Schaer.) Schol.: Llano, 1950, Imshaug, 1957, MIN HERB
- [Parmelia conspersa (Ach.) Ach.: Nelson, 1900 misident.]
- Parmelia lineola Berry: Berry, 1941
- I Parmelia saxatilis (L.) Ach.: Berry, 1941
- Peltigera apthosa (L.) Willd.: Nelson, 1900, Thomson, 1950, MIN HERB
- Peltigera canina (L.) Hild.: Thomson, 1950
- Peltigera canina var. rufescens (Heis) Mudd: Nelson, 1900, Thomson, 1950, Imshaug, 1957
- Peltigera lepidophora (Nyl. ex Vain.) Bitter: Imshaug, 1957

- Peltigera malacea (Ach.) Funck: Thomson, 1950  
Peltigera polydactyla (Neck.) Hoffm.: Thomson, 1950  
Peltigera venosa (L.) Baumg.: Thomson, 1950, Imshaug, 1957  
Physconia muscigena (Ach.) Poelt: Thomson, 1963  
Pseudephebe pubescens (L.) Choisy: Muller, 1889  
Psoroma hypnorum (Vahl) S. Gray: Muller, 1889  
Rhizoplaca chrysoleuca (Smith) Zopf.: Nelson, 1900  
I Rinodina exigua (Ach.) S. Gray: Muller, 1889  
Trapelia coarctata (Turn. ex Sm.) Choisy: Nelson, 1900  
Umbilicaria mammulata (Ach.) Tuck.: Muller, 1889  
Umbilicaria polyphylla (L.) Baumg.: Nelson, 1900  
Umbilicaria vellea (L.) Ach.: Nelson, 1900, Llano, 1950:  
MIN HERB  
Xanthoria elegans (Link) Th. Fe: Rudolph, 1955  
S-I Xanthoria fallax (Hepp) Arn.: Muller, 1889

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- Thomson, J. W. 1950. The species of *Peltigera* of North America north of Mexico. *Amer. Midl. Nat.* 44:1-68.
- Thomson, J. W. 1963. The lichen genus *Physcia* in North America. *Nova Hedwigia, Beih.* 7, viii + 172.

YOSE - YOSEMITE NATIONAL PARK

Total number of species = 57 : Poorly known

- Acarospora chlorophana (Wahlenb. ex Ach.) Mass.: MIN HERB  
Acarospora thamnina (Tuck.) Herre: MIN HERB  
Aspicilia caesiocinerea (Nyl. ex Malbr.) Arn.: MIN HERB  
Buellia badia (Fr.) Mass.: Imshaug, 1951  
Buellia nichra (Tuck.) Hasse: Imshaug, 1951  
Buellia semitensis Tuck.: Imshaug, 1951  
Caloplaca epithallina Lynge: MIN HERB  
Caloplaca peliophylla (Tuck.) Zahlbr.: Rudolph, 1955  
Candelariella rosulans (Mull. Arg.) Zahlbr.: MIN HERB  
Cetraria platyphylla Tuck.: Esslinger, 1973  
Cladonia cariosa (Ach.) Spreng.: Robbins, 1931  
Cladonia chlorophaea (Florke ex Somm.) Spreng.: Robbins,  
 1931  
Cladonia major (Hag.) Sandst.: Robbins, 1931  
Dermatocarpon miniatum (L.) Mann: Imshaug, 1957, MIN HERB  
Dimelaena oreina (Ach.) Norm.: Sheard, 1974, MIN HERB  
Dimelaena thysanota (Tuck.) Hale & W. Culb.: Sheard,  
 1974, MIN HERB  
Koerberia sonomensis (Tuck.) Henss.: Henssen, 1963b  
Leptogium riviale Tuck. Tuck.: Sierk, 1964  
Leptogium sinuatum (Huds.) Mass.: Sierk, 1964  
Letharia vulpina (L.) Hue: MIN HERB  
Massalongia carnosa (Dicks.) Korb.: Henssen, 1963a  
Omphalodiscus krascheninnikovii (Sav.) Schol.: Imshaug,  
 1957, MIN HERB  
Omphalodiscus virginis (Schaer.) Schol.: Imshaug, 1957  
Parmelia elegantula (Zahlbr.) Szat.: MIN HERB  
Parmelia exasperata De Not.: Berry, 1941, Herre, 1946  
Parmelia glabra (Schaer.) Nyl.: Ahti, 1966  
Parmelia glabroides Essl.: Esslinger, 1977  
Parmelia mexicana Gyeln.: MIN HERB  
Parmelia multisporea Schneid.: Berry, 1941  
 I Parmelia olivacea (L.) Ach.: Berry, 1941, Herre, 1946  
 I Parmelia saxatilis (L.) Ach.: MIN HERB  
Parmelia sphaerosporella HULL. Arg.: Herre, 1946  
Parmelia stygia (L.) Ach.: Herre, 1946  
Parmelia subelegantula Essl.: Esslinger, 1977  
Parmelia subolivacea Nyl. in. Hasse: Ahti, 1966  
Parmelia substvgia Ras.: MIN HERB  
Peltigera canina var. rufescens (Weis) Mudd: Thomson, 1950  
Peltigera canina var. spuria (Ach.) Schaer.: Thomson,  
 1950, Imshaug, 1957  
Peltigera collina (Ach.) Ach.: Thomson, 1950, MIN HERB  
Phaeophyscia ciliata (Hoffm.) Essl.: Thomson, 1963,  
 Esslinger, 1978  
Phaeophyscia decolor (Kashiwadani) Essl.: Esslinger, 1978  
Phaeophyscia endococcinea (KHrb.) Essl.: MIN HERB  
 I Physcia aipolia (Ehrh.) Hampe: MIN HERB  
Physcia albinea (Ach.) Nyl.: Thomson, 1963

Physcia caesia (Hoffm.) Hampe: MIN HERB  
Physcia callosa Nyl.: Thomson, 1963  
T Physcia dubia (Hoffm.) Lett.: Thomson, 1963  
Physcia stellaris (L.) Nyl.: Thomson, 1963  
I Physconia deterosa (Nyl.) Poelt: Thomson, 1963  
Physconia muscigena (Ach.) Poelt: Thomson, 1963  
Placynthium flabellosum (Tuck.) Zahlbr.: Henssen, 1963c  
Polychidium muscicola (Sw.) S. Gray: MIN HERB  
Pseudephebe pubescens (L.) Choisy: Berry, 1941, Herre,  
1946  
Rinodina mniaraea (Ach.) Korb.: MIN HERB  
Umbilicaria deusta (L.) Baumg.: MIN HERB  
Umbilicaria hyperborea (Ach.) Hoffm.: MIN HERB  
Xanthoria ramulosa (Tuck.) Herre: Rudolph, 1955

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- Esslinger, T. H. 1973. Chemical and taxonomic studies on some corticolous members of the lichen genus *Cetraria* in western North America. *Mycologia* 65:602-613.
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- Robbins, C. A. 1931. *Cladonias* collected by S. F. Blake in the western United States. *Rhodora* 33:135-139.
- Rudolph, E. D. 1955. Revisionary studies in the lichen family *Blasteniaceae* in North America north of Mexico. Ph. D. Thesis, Washington, Univ.
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- Sierk, H. A. 1964. The genus *Leptogium* in North America north of Mexico. *Bryologist* 67:145-317.
- Thomson, J. W. 1950. The species of *Peltigera* of North America north of Mexico. *Amer. Midl. Nat.* 44:1-68.
- Thomson, J. W. 1963. The lichen genus *Physcia* in North America. *Nova Hedwigia, Beih.* 7, viii + 172.

ZION - ZION NATIONAL PARK

Total number of species = 168 : Completely known

- Acarospora chlorophana (Wahlenb. ex Ach.) Mass.: Nash & Sigal, 1981, Rushforth et al., 1980
- Acarospora fuscata (Schrud.) Arn.: Rushforth et al., 1980, Nash & Sigal, 1981, Rushforth et al., 1982, MIN HERB
- Acarospora schleicheri (Ach.) Mass.: Rushforth et al., 1980, Nash & Sigal, 1981, Rushforth et al., 1982, MIN HERB
- Acarospora smaragdula (Wahlenb. ex Ach.) Mass.: Nash & Sigal, 1981, Rushforth et al., 1980
- Acarospora strigata (Nyl.) Jatta: Nash & Sigal, 1981, Rushforth et al., 1980, Rushforth et al., 1982, MIN HERB
- Aspicilia alphoplaca (Wahlenb. ex Ach.) Poelt & Leuck.: Nash & Sigal, 1981, Rushforth et al., 1980, Rushforth et al., 1982, MIN HERB
- Aspicilia caesiocinerea (Nyl. ex Malbr.) Arn.: Nash & Sigal, 1981, Rushforth et al., 1980, Rushforth et al., 1982
- Aspicilia calcarea (L.) Korb.: Nash & Sigal, 1981, Rushforth et al., 1980, Rushforth et al., 1982
- Aspicilia cinerea (L.) Korb.: Nash & Sigal, 1981, Rushforth et al., 1980, Rushforth et al., 1982
- Bacidia inundata (Fr.) Korb.: Nash & Sigal, 1981, Rushforth et al., 1980
- Biatorella ochrophora Nyl.: Nash & Sigal, 1981, Rushforth et al., 1980
- I Buellia alboatra (Hoffm.) Branth & Rostr.: Nash & Sigal, 1981, Rushforth et al., 1980, Rushforth et al., 1982
- T Buellia punctata (Hoffm.) Mass.: Nash & Sigal, 1981, Rushforth et al., 1980
- Buellia retrovertens Tuck.: Nash & Sigal, 1981, Rushforth et al., 1980, Rushforth et al., 1982
- Buellia spuria (Schaer.) Anzi: Nash & Sigal, 1981, Rushforth et al., 1980
- Buellia turgescens Tuck.: Nash & Sigal, 1981, Rushforth et al., 1980
- Buellia vilis Th. Fr.: Nash & Sigal, 1981, Rushforth et al., 1980
- Caloplaca approximata (Lynge) Magn.: Nash & Sigal, 1981, Rushforth et al., 1980, MIN HERB
- Caloplaca arenaria (Pers.) Mull. Arg.: Nash & Sigal, 1981, Rushforth et al., 1980, MIN HERB
- Caloplaca arizonica Magn.: Nash & Sigal, 1981, Rushforth et al., 1980, Rushforth et al., 1982
- Caloplaca atroalba (Tuck.) Zahlbr.: Nash & Sigal, 1981, Rushforth et al., 1980
- S-I Caloplaca cerina (Ehrh.) Th. Fr.: Nash & Sigal, 1981, Rushforth et al., 1980
- Caloplaca cinnabarina (Ach.) Zahlbr.: Nash & Sigal, 1981,

- Rushforth et al., 1980, MIN HERB
- Caloplaca decipiens (Arn.) J. Stein.: Nash & Sigal, 1981,  
Rushforth et al., 1980, Rushforth et al., 1982,  
MIN HERB
- Caloplaca flavovirescens (Wulf.) Dalla Torre & Sarnth.:  
Nash & Sigal, 1981, Rushforth et al., 1980, Rushforth et  
al., 1982
- Caloplaca fraudans (Th. Fr.) Oliv.: Rushforth et al.,  
1980, Rushforth et al., 1982
- Caloplaca modesta (Zahlbr.) Fink: Nash & Sigal, 1981,  
Rushforth et al., 1980, MIN HERB
- Caloplaca saxicola (Hoffm.) Nordin: Nash & Sigal, 1981,  
Rushforth et al., 1980, Rushforth et al., 1982,  
MIN HERB
- Caloplaca tiroliensis Zahlbr.: Nash & Sigal, 1981,  
Rushforth et al., 1980
- Caloplaca urceolata B. de Lesd.: Nash & Sigal, 1981,  
Rushforth et al., 1980
- S-1 Candelaria concolor (Dicks.) B. Stein: Nash & Sigal,  
1981, Rushforth et al., 1980
- Candelariella aurella (Hoffm.) Zahlbr.: Nash & Sigal,  
1981, Rushforth et al., 1980, MIN HERB
- Candelariella deflexa (Nyl.) Zahlbr.: Nash & Sigal, 1981,  
Rushforth et al., 1980, Rushforth et al., 1982
- Candelariella rosulans (Müll. Arg.) Zahlbr.: Nash & Sigal,  
1981, Rushforth et al., 1980, Rushforth et al.,  
1982, MIN HERB
- I Candelariella vitellina (Ehrh.) Müll. Arg.: Nash & Sigal,  
1981, Rushforth et al., 1980, Rushforth et al.,  
1982
- S-1 Candelariella xanthostigma (Ach.) Lett.: Nash & Sigal,  
1981, Rushforth et al., 1980
- Cladonia balfourii Cromb.: Nash & Sigal, 1981, Rushforth  
et al., 1980
- Cladonia chlorophaea (Florke ex Somm.) Spreng.: Nash &  
Sigal, 1981, Rushforth et al., 1980
- Cladonia pyxidata (L.) Hoffm.: Nash & Sigal, 1981,  
Rushforth et al., 1980, MIN HERB
- Collema coccophorum Tuck.: Nash & Sigal, 1981, Rushforth  
et al., 1980, Rushforth et al., 1982, MIN HERB
- Collema furfuraceum (Arn.) Du Roi: Nash & Sigal, 1981,  
Rushforth et al., 1980, Rushforth et al., 1982,  
MIN HERB
- Collema polycarpon Hoffm.: Nash & Sigal, 1981, Rushforth  
et al., 1980
- Collema subflaccidum Degel.: Nash & Sigal, 1981, Rushforth  
et al., 1980
- Collema tenax (Sw.) Ach.: MIN HERB
- Collema tenax var. ceranoides (Borrer) Degel.: Nash &  
Sigal, 1981, Rushforth et al., 1980
- Collema tuniforme (Ach.) Ach.: MIN HERB
- Collema undulatum Laur. ex Flot.: Rushforth et al., 1982
- Collema undulatum var. granulosum Degel.: Nash & Sigal,  
1981, Rushforth et al., 1980
- Dermatocarpon lachneum (Ach.) A.L. Sm.: Nash & Sigal,  
1981, Rushforth et al., 1980, Rushforth et al.,  
1982, MIN HERB



- Dermatocarpon leptophyllum (Ach.) Vain.: Nash & Sigal,  
1981, Rushforth et al., 1980, Rushforth et al., 1982
- Dermatocarpon miniatum (L.) Mann: Nash & Sigal, 1981,  
Rushforth et al., 1980, Rushforth et al., 1982, MIN  
HERB
- Dermatocarpon reticulatum Magn.: Nash & Sigal, 1981,  
Rushforth et al., 1980
- Dimelaena oreina (Ach.) Norm.: Nash & Sigal, 1981,  
Rushforth et al., 1980
- Diploschistes actinostomus (Pers.) Zahlbr.: Nash & Sigal,  
1981, Rushforth et al., 1980, Rushforth et al., 1982
- Diploschistes scruposus (Schreb.) Norm.: Nash & Sigal,  
1981, Rushforth et al., 1980, MIN HERB
- Endocarpon pusillum HedH.: Nash & Sigal, 1981, Rushforth  
et al., 1980
- Glypholecia scabra (Pers.) MULL. Arg.: MIN HERB
- Gonohymenia cribellifera Stein: Nash & Sigal, 1981,  
Rushforth et al., 1980
- Heppia lutosa (Ach.) Nyl.: Nash & Sigal, 1981, Rushforth et  
al., 1980, MIN HERB
- Heterodermia neoleucomelaena Kurok.: Rushforth et al.,  
1980, Rushforth et al., 1982
- Lecania dimera (Nyl.) Th. Fr.: Nash & Sigal, 1981,  
Rushforth et al., 1980, Rushforth et al., 1982
- Lecania dudleyi Herre: Nash & Sigal, 1981, Rushforth et  
al., 1980
- Lecanora cenisia Ach.: Nash & Sigal, 1981, Rushforth et  
al., 1980
- I Lecanora chlarotera Nyl.: Nash & Sigal, 1981, Rushforth  
et al., 1980
- Lecanora christoi H. Heb.: Nash & Sigal, 1981, Rushforth  
et al., 1980
- Lecanora crenulata (Dicks.) Nyl.: Nash & Sigal, 1981,  
Rushforth et al., 1980, Rushforth et al., 1982
- T Lecanora dispersa (Pers.) Somm.: Nash & Sigal, 1981,  
Rushforth et al., 1980, Rushforth et al., 1982
- Lecanora frustulosa (Dicks.) Ach.: Nash & Sigal, 1981,  
Rushforth et al., 1980
- Lecanora garovaglii (Korb.) Zahlbr.: Nash & Sigal, 1981,  
Rushforth et al., 1980
- T Lecanora hageni (Ach.) Ach.: Nash & Sigal, 1981, Rushforth  
et al., 1980, Rushforth et al., 1982
- Lecanora impudens Degel.: Nash & Sigal, 1981, Rushforth et  
al., 1980
- T Lecanora muralis (Schreb.) Rabenh.: Nash & Sigal, 1981,  
Rushforth et al., 1980, Rushforth et al., 1982, MIN  
HERB
- Lecanora novomexicana (B. de Lesd.) B. de Lesd. non Magn.:  
Nash & Sigal, 1981, Rushforth et al., 1980
- Lecanora piniperda Korb.: Rushforth et al., 1980,  
Rushforth et al., 1982
- Lecanora polytropa (Ehrh.) Rabenh.: Rushforth et al.,  
1980, Rushforth et al., 1982
- Lecanora rupicola (L.) Zahlbr.: Nash & Sigal, 1981,  
Rushforth et al., 1980
- I Lecanora saligna (Schrad.) Zahlbr.: Nash & Sigal, 1981,

Rushforth et al., 1980  
Lecidea alaiensis Vain.: Nash & Sigal, 1981, Rushforth et al., 1980  
Lecidea atrobrunnea (Ram.) Shaer.: Nash & Sigal, 1981, Rushforth et al., 1980, Rushforth et al., 1982  
Lecidea decipiens (Hedw.) Ach.: Nash & Sigal, 1981, Rushforth et al., 1980  
Lecidea globifera Ach.: Nash & Sigal, 1981, Rushforth et al., 1980  
Lecidea novomexicana (B. de Lesd.) W. Web.: Nash & Sigal, --1981, Rushforth et al., 1980  
Lecidea russellii Tuck.: Nash & Sigal, 1981, Rushforth et al., 1980, Rushforth et al., 1982  
Lecidea tessellata (Ach.) Florke: Nash & Sigal, 1981, Rushforth et al., 1980, Rushforth et al., 1982  
Lecidella carpathica Korb.: Nash & Sigal, 1981, Rushforth et al., 1980  
Lecidella euphorea (Florke) Hert.: Nash & Sigal, 1981, Rushforth et al., 1980  
Lecidella stigmathea (Ach.) Hert. & Leuck.: Nash & Sigal, 1981, Rushforth et al., 1980  
Lepraria chlorina (Ach.) Ach. ex Sm.: Nash & Sigal, 1981, Rushforth et al., 1980  
Lepraria membranacea (Dicks.) Vain.: Nash & Sigal, 1981, Rushforth et al., 1980  
Leptogium californicum Tuck.: Nash & Sigal, 1981, Rushforth et al., 1980  
Leptogium cyanescens (Ach.) Korb.: Nash & Sigal, 1981, Rushforth et al., 1980  
Leptogium erectum Sierk: Nash & Sigal, 1981, Rushforth et al., 1980  
Leptogium lichenoides (L.) Zahlbr.: Nash & Sigal, 1981, Rushforth et al., 1980  
Leptogium plicatile (Ach.) Leight.: Nash & Sigal, 1981, Rushforth et al., 1980  
Leptogium sinuatum (Huds.) Mass.: Nash & Sigal, 1981, Rushforth et al., 1980  
Pachyospora mutabilis (Ach.) Mass.: Nash & Sigal, 1981, Rushforth et al., 1980  
Pannaria microphylla (Sw.) Mass.: Nash & Sigal, 1981, Rushforth et al., 1980  
Parmelia conspersa (Ach.) Ach.: Nash & Sigal, 1981, Rushforth et al., 1980  
Parmelia cumberlandia (Gyeln.) Hale: Nash & Sigal, 1981, Rushforth et al., 1980  
Parmelia dierythra Hale: Nash & Sigal, 1981, Rushforth et al., 1980  
Parmelia lineola Berry: Nash & Sigal, 1981, Rushforth et al., 1980, Rushforth et al., 1982, MIN HERB  
Parmelia mexicana Gyeln.: Nash & Sigal, 1981, Rushforth et al., 1980, Rushforth et al., 1982  
Parmelia soledica Nyl.: Nash & Sigal, 1981, Rushforth et al., 1980  
 I-T Parmelia subargentifera Nyl.: Nash & Sigal, 1981, Rushforth et al., 1980

- Parmelia subdecipiens Vain.: Nash & Sigal, 1981, Rushforth et al., 1980
- Parmelia subhosseana Essl.: Nash & Sigal, 1981, Rushforth et al., 1980
- Parmelia subolivacea Nyl. in. Hasse: Nash & Sigal, 1981, Rushforth et al., 1980, Rushforth et al., 1982
- Parmelia substygia Ras.: Nash & Sigal, 1981, Rushforth et al., 1980
- Parmelia taractica Kremp.: Nash & Sigal, 1981, Rushforth et al., 1980
- Peltigera canine (L.) Willd.: Nash & Sigal, 1981, Rushforth et al., 1980
- Peltigera canina var. rufescens (Weis) Mudd: Nash & Sigal, 1981, Rushforth et al., 1980
- Peltigera canina var. spuria (Ach.) Schaer.: Nash & Sigal, 1981, Rushforth et al., 1980
- Peltula euploca (Ach.) Oz. & Claud.: Nash & Sigal, 1981, Rushforth et al., 1980
- Phaeocalicium populneum (Brond ex Duby) Schmidt: Nash & Sigal, 1981, Rushforth et al., 1980
- Phaeophyscia ciliata (Hoffm.) Essl.: Nash & Sigal, 1981, Rushforth et al., 1980
- Phaeophyscia constipata (Norrl. et Nyl.) Moberg: Nash & Sigal, 1981, Rushforth et al., 1980
- Phaeophyscia endococcina (Korb.) Essl.: Nash & Sigal, 1981, Rushforth et al., 1980
- Phaeophyscia hispidula (Ach.) Essl.: Nash & Sigal, 1981, Rushforth et al., 1980
- Phaeophyscia leana (Tuck.) Essl.: Nash & Sigal, 1981, Rushforth et al., 1980
- I Phaeophyscia orbicularis (Neck.) Moberg: Nash & Sigal, 1981, Rushforth et al., 1980, Rushforth et al., 1982
- Phaeophyscia sciastra (Ach.) Moberg: Nash & Sigal, 1981, Rushforth et al., 1980, Rushforth et al., 1982, MIN HERB
- I Physcia adscendens (Th. Fr.) Oliv.: Nash & Sigal, 1981, Rushforth et al., 1980
- I Physcia aipolia (Ehrh.) Hampe: Nash & Sigal, 1981, Rushforth et al., 1980
- Physcia biziana Mass.: Nash & Sigal, 1981, Rushforth et al., 1980
- Physcia caesia (Hoffm.) Hampe: Nash & Sigal, 1981, Rushforth et al., 1980
- T Physcia dubia (Hoffm.) Lett.: Nash & Sigal, 1981, Rushforth et al., 1980
- Physcia phaea (Tuck.) Thoms.: Nash & Sigal, 1981, Rushforth et al., 1980
- I Physcia stellaris (L.) Nyl.: Nash & Sigal, 1981, Rushforth et al., 1980, Rushforth et al., 1982
- Physcia subtilis Degel.: Rushforth et al., 1980, Rushforth et al., 1982
- I Physcia tenella (Scop.) DC.: Nash & Sigal, 1981, Rushforth et al., 1980
- I Physconia detersa (Nyl.) Poelt: Nash & Sigal, 1981, Rushforth et al., 1980, MIN HERB
- I Physconia detersa f. isidigera (Zahlbr.) ined.: Nash &

- Sigal, 1981, Rushforth et al., 1980
- Physconia muscigena (Ach.) Poelt: Nash & Sigal, 1981,  
Rushforth et al., 1980, Rushforth et al., 1982, MIN  
HERB
- Physconia pulverulenta (Schreb.) Poelt: Rushforth et al.,  
1980, Rushforth et al., 1982
- Placynthium nigrum (Huds.) S. Gray: Nash & Sigal, 1981,  
Rushforth et al., 1980
- Polyblastia bryophila LHnnr.: Nash & Sigal, 1981,  
Rushforth et al., 1980
- Polychidium albociliatum (Desm.) Zahlbr.: Nash & Sigal,  
1981, Rushforth et al., 1980
- Protoblastenia rupestris (Scop.) J. Stein.: Nash & Sigal,  
1981, Rushforth et al., 1980
- Psorotichia schaeferi (Mass.) Arn.: Nash & Sigal, 1981,  
Rushforth et al., 1980
- Pyrenopsis polycocca (Nyl.) Tuck.: Nash & Sigal, 1981,  
Rushforth et al., 1980
- S Ramalina obtusata (Arn.) Bitt.: Nash & Sigal, 1981,  
Rushforth et al., 1980
- Rhizocarpon disporum (Naeg. ex Hepp) Müll. Arg.: Nash &  
Sigal, 1981, Rushforth et al., 1980, Rushforth et  
al., 1982
- Rhizocarpon geographicum (L.) DC.: Nash & Sigal, 1981,  
Rushforth et al., 1980
- Rhizocarpon riparium Ras.: Nash & Sigal, 1981, Rushforth  
et al., 1980
- Rhizoplaca chrysoleuca (Smith) Zopf: Nash & Sigal, 1981,  
Rushforth et al., 1980
- Rhizoplaca melanophthalma (Ram.) Leuck. & Poelt: Nash &  
Sigal, 1981, Rushforth et al., 1980
- Rinodina pyrina (Ach.) Arn.: Nash & Sigal, 1981, Rushforth  
et al., 1980, Rushforth et al., 1982
- Rinodina tephraspis (Tuck.) Herre: Nash & Sigal, 1981,  
Rushforth et al., 1980
- Rinodina violascens Magn.: Nash & Sigal, 1981, Rushforth  
et al., 1980
- Sarcogyne regularis KHrb.: Nash & Sigal, 1981, Rushforth  
et al., 1980
- Sarcogyne simplex (Dav.) Nyl.: Nash & Sigal, 1981,  
Rushforth et al., 1980, MIN HERB
- Staurothele clopima (Wahle nb. ex Ach.) Th. Fr.: Nash &  
Sigal, 1981, Rushforth et al., 1980, Rushforth et  
al., 1980, MIN HERB
- Staurothele monicae (Zahlbr.) ined.: MIN HERB
- Stereocaulon albicans Th. Fr.: Nash & Sigal, 1981,  
Rushforth et al., 1980
- Toninia caeruleonigricans (Lightf.) Th. Fr.: Nash & Sigal,  
1981, Rushforth et al., 1980, Rushforth et al.,  
1982, MIN HERB
- Toninia candida (Web.) Th. Fr.: Nash & Sigal, 1981,  
Rushforth et al., 1980
- Toninia massata (Tuck.) Herre: Nash & Sigal, 1981,  
Rushforth et al., 1980
- Toninia tristis (Th. Fr.) Th. Fr.: Nash & Sigal, 1981,  
Rushforth et al., 1980, MIN HERB

- Umbilicaria pliaea Tuck.: Nash & Sigal, 1981,  
Rushforth et al., 1980
- S-I Usnea subfloridana Stirt.: Nash & Sigal, 1981,  
Rushforth et al., 1980
- Verrucaria fuscella (Turn.) Arn.: Nash & Sigal,  
1981, Rushforth et al., 1980
- Verrucaria hydrella Ach.: Nash & Sigal, 1981,  
Rushforth et al., 1980
- Verrucaria margacea Wahlenb.: Nash & Sigal, 1981,  
Rushforth et al., 1980
- Verrucaria muralis Ach.: Nash & Sigal, 1981,  
Rushforth et al., 1980
- Verrucaria viridula (Schrad.) Ach.: Nash & Sigal,  
1981, Rushforth et al., 1980
- Xanthoria elegans (Link) Th. Fr.: Nash & Sigal,  
1981, Rushforth et al., 1980, MIN HERB
- S-I Xanthoria fallax (Hepp) Arn.: Nash & Sigal, 1981,  
Rushforth et al., 1980, Rushforth et al.,  
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- I Xanthoria polycarpa (Ehrh.) Oliv.: Nash & Sigal,  
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- Rushforth, S.R., L.L. St. Clair J.D. Brotherson & G.T. Nebeker. 1980. Ecology of the lichen communities in ZION National Park. Report to National Park Service. (Unpublished)
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## APPENDIX

### LICHENS SENSITIVE TO SULFUR DIOXIDE

#### Introduction

These lists are based on the literature and include only North American species. In compiling the lists most of the literature has been checked but only those references giving field sulfur dioxide values and presence or absence limits for the species are listed. References pertaining only to field and laboratory fumigation experiments have not been included when they are for short periods because the mechanism of damage for acute short-term damage is not the same as chronic long-term damage. Long-term chronic fumigation produces damage at a much lower level and is more useful in assessing field conditions. Some European references are included because they include European species also found in North America. With these requirements, only 21 references were found that provided the sensitivity values necessary for inclusion. Species of uncertain identification are enclosed in quotes. In the first column the letters indicate sensitivity categories: S = Sensitive, I = Intermediate, T = Tolerant. Sensitive species are those which are present below 50 ug per cubic meter (average annual levels), intermediate species are present where levels are between 50ug per cubic meter and 100 ug per cubic meter, tolerant species are found where levels are above 100ug per cubic meter. S-I and I-T are intermediate between the three categories. The columns of numbers after the species names are published limits of presence and absence in micrograms per cubic meter. Most values are based on average

for one or more years but some are partly based on average winter concentrations over several years. The numbers before the slash are for presence limits while the numbers after the slash indicate published limits of absence. In some cases different authors do not agree on the sensitivity and for these either a range has been given or some widely divergent records have not been included.

The list includes 157 species with known sensitivity to chronic field levels of sulfur dioxide. There are about 2800 lichens known from North America north of Mexico.

#### LICHENS BY SENSITIVITY CATEGORY

The species in this list have been arranged in order of decreasing sensitivity to sulfur dioxide according to the absence values except where personal observations or other information would indicate that the published numbers may not be characteristic. The numbers in the next to last column are the numbers for the references for that species. The last column indicates whether the thallus of the species is fruticose (FR), foliose (FO), or crustose (CR). A fruticose thallus is shrubby and stands up from the substrate or hangs down from trees and has algae all the way around the thallus. Foliose and crustose lichens have only one single layer of algae under the upper surface. Foliose lichens are leaf-like and are loosely attached to the substrate while crustose lichens are closely attached to the substrate and cannot be removed from it without destroying the thallus.



Cat.	Species	Presence/Absence	Ref.	Thallus
S	<i>Evernia divaricata</i>	10/-	1	FR
S	<i>Lecanactis abietina</i>	10/-	1	CR
S	<i>Ramalina americana</i>	13/13-26	1	FR
S	<i>Rinodina papillata</i>	13/13-26	1	CR
S	<i>Lecidea nylanderi</i>	13/13-26	1	CR
S	<i>Lecidea vernalis</i>	26/26-34	1	CR
S	<i>Lobaria pulmonaria</i>	26/26-34	3	FO
S	<i>Bryoria furcellata</i>	13-26/26-52	1	FR
S	<i>Bryoria trichodes</i>	13-26/26-52	1	FR
S	<i>Catillaria griffithii</i>	26/-	1	CR
S	<i>Usea variolosa</i>	26/-	1	FR
S	<i>Bryoria implexa</i>	10-30/-	1	FR
S	<i>Bryoria</i> "jubata"	10-30/-	1	FR
S	<i>Cetaria clorophylla</i>	10-30/-	1	FO
S	<i>Hypogymnia tubulosa</i>	10-30/-	1	FO
S	<i>Opegrapha diaphora</i>	10-30/-	1	CR
S	<i>Opegrapha pulicaris</i>	10-30/-	1	CR
S	<i>Parmelia subaurifera</i>	10-30/-	1	FO
S	<i>Usnea filipendula</i>	10-30/-	1	FR
S	<i>Dimerella lutea</i>	30/-	1	CR
S	<i>Usnea articulata</i>	30/-	1	FR
S	<i>Usnea florida</i>	30/-	1	FR
S	<i>Ochrolechia</i> "rosella"	26-34/34-52	1	CR
S	<i>Lecidea</i> "cinnabarina"	26-34/34/52	1	CR
S	<i>Ochrolechia androgyna</i>	26-34/34-52	2	CR
S	<i>Caloplaca flavorubescens</i>	30/35	2	CR
S	<i>Physcia leptalea</i>	30/35	1	FO
S	<i>Ramalina calicaris</i>	30/35	2	FR
S	<i>Ramalina fraxinea</i>	30/35	3	FR
S	<i>Ramalina subfarinacea</i>	30/35	1	FR
S	<i>Usnea ceratina</i>	35/-	2	FR
S	<i>Parmelia squarrosa</i>	26-39/40	1	FO
S	<i>Gyalecta flotowii</i>	35/40	1	CR
S	<i>Parmelia perlata</i>	35/40	5	FO
S	<i>Parmelia reticulata</i>	35/40	1	FO
S	<i>Ramalina evernioides</i>	35/40	1	FR
S	<i>Ramalina obtusata</i>	35/40	1	FO
S	<i>Ramalina pollinaria</i>	35/40	2	FR
S	<i>Usnea rubiginea</i>	35/40	1	FR
S-I	<i>Cladonia fimbriata</i>	13/13-26	1	FR
S-I	<i>Xanthoria fallax</i>	13/13-26	1	FO
S-I	<i>Arthonia impolita</i>	40/-	1	CR
S-I	<i>Rinodina roboris</i>	40/-	1	CR
S-I	<i>Usnea subfloridana</i>	40/-	2	FR
S-I	<i>Caloplaca cerina</i>	30/50	5	CR

S-I	<i>Normandina pulchella</i>	35/50	2	CR
S-I	<i>Candelaria concolor</i>	13-40/50	4	CR
S-I	<i>Anaptychia setifera</i>	40/50	8	FO
S-I	<i>Candelariella xanthostigma</i>	50/-	2	CR
S-I	<i>Cetraria ciliaris</i>	13-52/-	2	FO
S-I	<i>Usnea hirta</i>	30-80/-	1	FR
I	<i>Parmelia rudecta</i>	13-26/52	2	FO
I	<i>Buellia stillingiana</i>	13-52/52-78	3	CR
I	<i>Parmelia trabeculata</i>	13-52/52-78	3	FO
I	<i>Cladonia cristatella</i>	26-52/52-78	1	FR
I	<i>Rinodina halei</i>	26-52/52-78	2	CR
I	<i>Physconia detersa</i>	26-52/52-78	2	FO
I	<i>Parmelia olivacea</i>	30-52/52-78	2	FO
I	<i>Alectoia sarmentosa</i>	34-52/52-78	1	FR
I	<i>Cladonia coniocraea</i>	34-52/52-78	3	FR
I	<i>Haematomma ochrophaeum</i>	34-52/52-78	1	CR
I	<i>Lecanora coilocarpa</i>	34-52/52-78	2	CR
I	<i>Lecanora symmictera</i>	34-52/52-78	4	CR
I	<i>Lecidea albofuscescens</i>	34-52/52-78	1	CR
I	<i>Lopadium pezizoideum</i>	34-52/52-78	1	CR
I	<i>Mycoblastus affinis</i>	34-52/52-78	1	CR
I	<i>Parmelia glabratula</i>	34-52/52-78	3	FO
I	<i>Parmelia saxatilis</i>	34-52/52-78	3	FO
I	<i>Parmelia septentrionalis</i>	34-52/52-78	2	FO
I	<i>Pertusaria multipuctoides</i>	34-52/52-78	2	CR
I	<i>Ramalina dilacerata</i>	34-52/52-78	1	FR
I	<i>Stenocybe major</i>	34-52/52-78	1	CR
I	<i>Parmelia caperata</i>	40-50/55	7	FO
I	<i>Teloschistis flavicans</i>	-/60	1	FR
I	<i>Xanthoria polycarpa</i>	13-50/60	3	CR
I	<i>Parmelia exasperatula</i>	30-80/60	4	FO
I	<i>Arthropyrenia alba</i>	50/60	1	CR
I	<i>Graphis elegans</i>	50/60	2	CR
I	<i>Hyperphyscia adglutinata</i>	50/60	1	FO
I	<i>Lecania cyrtella</i>	50/60	3	CR
I	<i>Parmelia revoluta</i>	50/60	2	FO
I	<i>Pertusaria albescens</i>	50/60	2	CR
I	<i>Pertusaria hymenea</i>	50/60	1	CR
I	<i>Physconia pulveracea</i>	50/60	7	FO
I	<i>Calicium viride</i>	60/-	1	CR
I	<i>Pertusaria amara</i>	60/-	2	CR
I	<i>Lecanactis premnea</i>	-/65	1	CR
I	<i>Nephroma laevigatum</i>	-/65	1	FO
I	<i>Opegrapha atra</i>	-/65	1	CR
I	<i>Peltigera horizontalis</i>	-/65	1	FO

I	<i>Phaeographis dendritica</i>	-/65	1	CR
I	<i>Physcia millegrana</i>	-/65	1	FO
I	<i>Pyrenula nitida</i>	-/65	1	CR
I	<i>Parmeliopsis aleurites</i>	10/65	2	FO
I	<i>Graphis scripta</i>	10-30/65	2	CR
I	<i>Arthopyrenia biformis</i>	40/65	2	CR
I	<i>Bacidia rubella</i>	40/65	2	CR
I	<i>Physcia aipolia</i>	26-50/65	6	FO
I	<i>Physcia stellaris</i>	26-52/65	3	FO
I	<i>Chrysothrix candelaris</i>	60/65	2	CR
I	<i>Parmelia subrudecta</i>	60/65	3	FO
I	<i>Arthonia radiata</i>	30-80/65	2	CR
I	<i>Lecidella elaechroma</i>	30-80/65	2	CR
I	<i>Evernia prunastri</i>	50-65/-	4	FR
I	<i>Physconia farrea</i>	13-60/70	2	FO
I	<i>Bryoria fuscescens</i>	60/70	2	FR
I	<i>Buellia alboatra</i>	60/70	1	CR
I	<i>Haematomma porphyrium</i>	60/70	1	CR
I	<i>Opegrapha varia</i>	60/70	1	CR
I	<i>Opegrapha vulgate</i>	60/70	1	CR
I	<i>Physcia tenella</i>	60/70	2	FO
I	<i>Schismatomma decolorans</i>	60/70	1	CR
I	<i>Xanthoria candelaria</i>	60/70	2	FO
I	<i>Lecanora scalaris</i>	60-70/70	2	CR
I	<i>Chaenotheca ferruginea</i>	70/-	1	CR
I	<i>Lecidea scalaris</i>	70/-	2	CR
I	<i>Xanthoria parietina</i>	70/70-90	6	FO
I	<i>Physconia grisea</i>	60-80/70-90	5	FO
I	<i>Cetraria pinastri</i>	26-60/78	4	FO
I	<i>Evernia mesomorpha</i>	26-60/78	2	FR
I	<i>Parmeliopsis ambigua</i>	52-65/78	5	FO
I	<i>Hypogymnia physodes</i>	52-70/78	10	FO
I	<i>Cetraria sepincola</i>	52-78/78	2	FO
I	<i>Lecanora subintricata</i>	52-78/78	1	CR
I	<i>Alectoria capillaris</i>	52-78/-	1	FR
I	<i>Cetraria orbata</i>	52-78/-	1	FO
I	<i>Mycoblastus sanguinarius</i>	52-78/-	2	CR
I	<i>Parmeliopsis hyperopta</i>	52-78/-	1	FO
I	<i>Platismatia glauca</i>	52-78-	2	FO
I	<i>Bacidia chlorococca</i>	78/-	2	CR
I	<i>Lecanora saligna</i>	78/-	1	CR
I	<i>Lecanora subfusca</i>	26-78/80	4	CR
I	<i>Candelariella vitellina</i>	52-78/80	2	CR
I	<i>Caloplaca holocarpa</i>	30-80/-	1	CR
I	<i>Lecanora allophana</i>	30-80/-	1	CR

I	<i>Lecanora chlarona</i>	30-80/-	1	CR
I	<i>Lecanora pallida</i>	30-80/-	1	CR
I	<i>Lecanora subrugosa</i>	30-80/-	1	CR
I	<i>Rinodina exigua</i>	30-80/-	1	CR
I	<i>Lecanora carpinea</i>	30-80/80-90	2	CR
I	<i>Phlyctis argena</i>	50-80/90	1	CR
I	<i>Physcia adscendens</i>	50-80/90	7	FO
I	<i>Phaeophyscia orbicularis</i>	60-80/90	6	FO
I-T	<i>Buellia canescens</i>	60-70/90-125	1	CR
I-T	<i>Parmelia sulcata</i>	52-100/95	11	FO
I-T	<i>Caloplaca vitellinula</i>	80-100/-	1	CR
I-T	<i>Parmelia subargentifera</i>	80-100/-	1	FO
I-T	<i>Phaeophyscia nigricans</i>	80-100/-	1	FO
I-T	<i>Phlyctis agelaea</i>	80-100/-	1	CR
I-T	<i>Lepraria incana</i>	125/-	1	CR
T	<i>Lecanora expallens</i>	52-125/125	3	CR
T	<i>Buellia punctata</i>	90-110/125	3	CR
T	<i>Physcia dubia</i>	90-110/125	2	FO
T	<i>Lecanora muralis</i>	125-200/240	2	CR
T	<i>Lecanora hageni</i>	100-300/-	1	CR
T	<i>Lepraria aeruginosa</i>	100-300/-	2	CR
T	<i>Lecanora dispersa</i>	364-468/-	1	CR

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## Alphabetical List of Species

This list has been arranged alphabetically by genus and species. The first column indicates sensitivity category, the third column gives published limits of presence before the slash and absence after the slash. The last column gives the literature references.

Cat.	Species	Presence/Absence	References
I	<i>Alectoria capillaris</i>	52-78/-	(13)
I	<i>Alectoria sarmentosa</i>	34-52/52-78	(13)
S-I	<i>Anaptychia setifera</i>	40/50	(2,3,4,6,7,8,19,5)
S-I	<i>Arthonia impolita</i>	40/-	(4)
I	<i>Arthonia radiata</i>	30-80/65	(19,5)
I	<i>Arthpyrenia alba</i>	50/60	(4)
I	<i>Arthopyrenia biformis</i>	40/65	(4,5)
I	<i>Bacidia chlorococca</i>	78/-	(9,10)
I	<i>Bacidia rubella</i>	40/65	(4,5)
S	<i>Bryoria furcellata</i>	13-26/26-52	(10)
I	<i>Bryoria fuscescens</i>	60/70	(4,5)
S	<i>Bryoria implexa</i>	10-30/-	(19)
S	<i>Bryoria "jubata"</i>	10-30/-	(19)
S	<i>Bryoria trichodes</i>	13-26/26-52	(10)
I	<i>Buellia alboatra</i>	60/70	(4)
I-T	<i>Buellia canescens</i>	60-70/90-125	(2,4)
T	<i>Buellia punctata</i>	90-110/125	(3,4,7)
I	<i>Buella stillingiana</i>	13-52/52-78	(9,10,13)
I	<i>Calicium viride</i>	60/-	(4)
S-I	<i>Caloplaca cerina</i>	30-50	(4,9,10,19,5)
S	<i>Caloplaca flavorubescens</i>	30/35	(4,19)
I	<i>Caloplaca holocarpa</i>	30-80/-	(19)
I-T	<i>Caloplaca vitellinula</i>	80-100/-	(19)
S-I	<i>Candelaria concolor</i>	13-40/50	(4,10,19,5)
I	<i>Candelariella vitellina</i>	52-78/80	(10,19)
S-I	<i>Candelariella xanthostigma</i>	50/-	(9,19)
S	<i>Catillaria griffithii</i>	26/-	(9)
S	<i>Cetraria chlorophylla</i>	10-30/-	(19)
S-I	<i>Cetraria ciliaris</i>	13-52/-	(9,10)
I	<i>Cetraria orbata</i>	52-78/-	(13)

I	<i>Cetraria pitri</i>	26-60/78	(9,10,13,19)
I	<i>Cetraria sepincola</i>	52-78/78	(10,13)
I	<i>Chaenotheca ferruginea</i>	70/-	(4)
I	<i>Chrysothrix candelaris</i>	60/65	(4,5)
I	<i>Cladonia coniocraea</i>	34-52/52-78	(9,10,13)
I	<i>Cladonia cristatella</i>	26-52/52-78	(10)
S-I	<i>Cladonia fimbriata</i>	13/13-26	(10)
S	<i>Dimerella lutea</i>	30/-	(4)
S	<i>Evernia divaricata</i>	10/-	(19)
I	<i>Evernia mesomorpha</i>	26-60/78	(9,10)
I	<i>Evernia prunastri</i>	50-65/-	(6,16,19)
I	<i>Graphis elegans</i>	50/60	(4,5)
I	<i>Graphis scripta</i>	10-30/65	(19,5)
S	<i>Gyalaecta flotowii</i>	35/40	(4)
I	<i>Haematomma ochrophaeum</i>	34-52/52-78	(13)
I	<i>Haematomma porphyrium</i>	60/70	(4)
I	<i>Hyperphyscia adglutinata</i>	50/60	(4)
I	<i>Hypogymnia physodes</i>	52-70/78	(3,4,7,8,9,10,13,15,16,19)
S	<i>Hypogymnia tubulosa</i>	10-30/-	(19)
S	<i>Lecanactis abietina</i>	10/-	(19)
I	<i>Lacenactis premnea</i>	-/65	(5)
I	<i>Lecanis cyrtella</i>	50/60	(4,9,19)
I	<i>Lecanora allophana</i>	30-80/-	(19)
I	<i>Lecanora carpinea</i>	30-80/80-90	(3,7,19)
I	<i>Lecanora chlarona</i>	30-80/-	(19)
I	<i>Lecanora chlarotera</i>	60-70/70	(3,4,19)
I	<i>Lecanora coilocarpa</i>	34-52/52-78	(13,19) (16,19,20)
T	<i>Lecanora dispersa</i>	364-468/-	(11)
T	<i>Lecanora expallens</i>	52-78/125	(1,4,10)
T	<i>Lecanora hageni</i>	100-300/-	(19)
T	<i>Lecanora muralis</i>	125-200/240	(20,5)
I	<i>Lecanora pallida</i>	30-80/-	(19)
I	<i>Lecanora saligna</i>	78/-	(10)
I	<i>Lecanora subfusca</i>	26-78/80	(3,7,10,19)
I	<i>Lecanora subintricata</i>	52-78/78	(10)
I	<i>Lecanora subrugosa</i>	30-80/-	(19)
I	<i>Lecanora symmictera</i>	34-52/52-78	(9,10,13,19)
I	<i>Lecidea albofuscescens</i>	34-52/52-78	(13)
S	<i>Lecidea "cinnabarina"</i>	26-34/34-52	(13)
S	<i>Lecidea nylanderi</i>	13/13-26	(10)
I	<i>Lecidea scalaris</i>	70/-	(4,19)
S	<i>Lecidea vernalis</i>	26/26-34	(13)
I	<i>Lecidea elaeochroma</i>	30-80/65	(19,5)
T	<i>Lepraria aeruginosa</i>	100-300/-	(10,19)
I-T	<i>Lepraria incana</i>	125/-	(7)
S	<i>Lobaria pulmonaria</i>	26/26-34	(4,13,17,19)
I	<i>Lopadium pezizoideum</i>	34-52/52-78	(13)

I	<i>Mycoblastus affinis</i>	34-52/52-78	(13)
I	<i>Mycoblastus sanguinarius</i>	52-78/-	(13,19)
I	<i>Nephroma Laevigatum</i>	-/65	(5)
S-I	<i>Normandina pulchella</i>	35/50	(4,5)
S	<i>Ochrolechia androgyna</i>	26-34/34-52	(13,19)
S	<i>Ochrolechia "rosella"</i>	26-34/34-52	(13)
I	<i>Opegrapha atra</i>	-/65	(5)
S	<i>Opegrapha diaphora</i>	10-30/-	(19)
S	<i>Opegrapha pulicaris</i>	10-30/-	(19)
I	<i>Opegrapha varia</i>	60/70	(4)
I	<i>Opegrapha vulgata</i>	60/70	(4)
I	<i>Parmelia caperata</i>	40-50/55	(4,6,8,9,16,18,5)
I	<i>Parmelia exasperatula</i>	30-80/60	(4,8,10,19)
I	<i>Parmelia glabratula</i>	34-52/52-78	(4,13,16)
I	<i>Parmelia olivacea</i>	30-52/52-78	(10,19)
S	<i>Parmelia perlata</i>	35/40	(4,6,8,16,5)
S	<i>Parmelia reticulate</i>	35/40	(4)
I	<i>Parmelia revolute</i>	50/60	(4,5)
I	<i>Parmelia rudecta</i>	13-26/52	(10,18)
I	<i>Parmelia saxatilis</i>	34-52/52-78	(4,13,20)
I	<i>Parmelia septentrionalis</i>	34-52/52-78	(10,13)
S	<i>Parmelia squarrosa</i>	26-39/40	(14)
I-T	<i>Parmelia subargentifera</i>	80-100/-	(19)
S	<i>Parmelia subaurifera</i>	10-30/-	(19)
I	<i>Parmelia subrudecta</i>	60/65	(4,16,18)
I-T	<i>Parmelia sulcata</i>	52-100/95	(3,4,7,8,9,10,12,13,14,16,18,19)
I	<i>Parmelia trabeculata</i>	13-52/52-78	(9,10,13)
I	<i>Parmeliopsis aleurites</i>	10/65	(19,5)
I	<i>Parmeliopsis ambigua</i>	52-65/78	(4,6,10,13,19)
I	<i>Parmeliopsis hyperopta</i>	52-78/-	(13)
I	<i>Peltigera horizontalis</i>	-/65	(5)
I	<i>Pertusaria albescens</i>	50/60	(4,19)
I	<i>Pertusaria amara</i>	60/-	(4,19)
I	<i>Pertusaria hymenea</i>	50/60	(4)
I	<i>Pertusaria multipunctoides</i>	34-52/52-78	(10,13)
I	<i>Phaeographis dendritica</i>	-/65	(5)
I-T	<i>Phaeophyscia nigricans</i>	80-100/-	(19)
I	<i>Phaeophyscia orbicularis</i>	60-80/90	(3,4,7,8,10,19)
I-T	<i>Phlyctis agelaea</i>	80-100/-	(19)
I	<i>Phlyctis argena</i>	50-80/90	(19)
I	<i>Physcia adscendens</i>	50-80/90	(2,3,4,7,8,10,19)
I	<i>Physcia aipolia</i>	26-50/65	(4,8,9,10,19,5)
T	<i>Physcia dubia</i>	90-110/125	(3,7)
S	<i>Physcia leptalea</i>	30/35	(4)
I	<i>Physcia millegrana</i>	-/65	(18)

I	<i>Physcia stellaris</i>	26-52/65	(9,10,18)
I	<i>Physcia tenella</i>	60/70	(4,19)
I	<i>Physconia detersa</i>	26-52/52-78	(9,10)
I	<i>Physconia farrea</i>	13-60/70	(4,10)
I	<i>Physconia grisea</i>	60-80/70-90	(2,3,4,7,19)
I	<i>Physconia pulveracea</i>	50/60	(2,3,4,7,8,19,5)
I	<i>Platismatia glauca</i>	52-78/-	(13,19)
I	<i>Pyrenula nitida</i>	-/65	(5)
S	<i>Ramalina americana</i>	13/13-26	(10)
S	<i>Ramalina calicaris</i>	30/35	(4,5)
I	<i>Ramalina dilacerata</i>	34-52/52-78	(13)
S	<i>Ramalina evernioides</i>	35/40	(4)
S	<i>Ramalina farinacea</i>	60/70	(4,8,19)
S	<i>Ramalina fraxinea</i>	30/35	(4,19,5)
S	<i>Ramalina obtusata</i>	35/40	(4)
S	<i>Ramalina pollinaria</i>	35/40	(4,19)
I	<i>Rinodina exigua</i>	30-80/-	(19)
I	<i>Rinodina halei</i>	26-52/52-78	(9,10)
S	<i>Rinodina papillata</i>	13/13-26	(10)
S-I	<i>Rinodina roboris</i>	40/-	(4)
I	<i>Stenocybe major</i>	34-52/52-78	(13)
I	<i>Teloschistis flavicans</i>	-/65	(5)
S	<i>Usea articulate</i>	30/-	(6)
S	<i>Usnea ceratina</i>	35/-	(4,6)
S	<i>Usnea filipendula</i>	10-30/-	(19)
S	<i>Usnea florida</i>	30/-	(4)
S-I	<i>Usnea hirta</i>	30-80/-	(19)
S	<i>Usnea rubiginea</i>	35/40	(4)
S-I	<i>Usnea subfloridana</i>	40/-	(4,19)
S	<i>Usnea variolosa</i>	26/-	(9)
I	<i>Xanthoria candelaria</i>	60/70	(4,19)
S-I	<i>Xanthoria fallax</i>	13/13-26	(10)
I	<i>Xanthoria parietina</i>	70/70-90	(2,4,7,7B,8,19,20)
I	<i>Xanthoria polycarpa</i>	13-50/60	(4,10,19)

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