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Los Musci (musgos) del Departamento de Antioquia

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Palabras Clave: Musci, musgos, Antioquia, Lista de chequeo

El listado de los musgos de Antioquia, que aquí se presenta, es el resultado de investigaciones de muy diversa índole, de hecho y desde el siglo XIX se conocen trabajos briológicos en Suramérica que incluyen parcialmente al país (Colombia) y/o al departamento (Antioquia) o sus cercanías (Mitten 1869), o sólo a Colombia (Hampe 1865a,b, 1866, 1869; Müller 1874, 1875), o Centro y Sud América (Bescherelle 1894), como también trabajos para regiones más localizadas como Bogotá (Theriot 1906). Históricamente dichos trabajos tuvieron como prioridad la búsqueda de nuevas especies para la ciencia, realizadas en el marco de inventarios para las zonas geográficas en cuestión (Williams 1925, 1930; Imscher 1914, Theriot 1937, 1939; Herzog 1934). Al presente los trabajos más recientes y pertinentes a la lista de musgos de Antioquia, son aquellos específicamente enfocados en un listado de briofitos colombianos (Robinson 1967) y posteriormente en los musgos de Colombia (Flortschütz de Waard & Florschütz 1979, Churchill 1988a, 1989, Churchill & Linares 1995). Finalmente aquellos centrados en la flora de musgos de departamentos como Valle del Cauca (Churchill & Hollaender 1988) y Antioquia

(Churchill & Sastre de Jesus 1987; Sastre de Jesús *et al.* 1987; Churchill 1991a), e incluso aquellos referidos a inventarios de zonas más localizadas dentro del mismo departamento (Albert de Escobar 1989; Parra *et al.* 1999).

Se cita aquí la base de datos de musgos de Colombia propuesta por S. P. Churchill y desarrollada por la bióloga Angela Gómez quien recopiló información de los principales herbarios con especímenes colombianos (HUA, COL, PSO, MEDEL, NY, US, U) hasta 1996. Dicha base de datos conforma la matriz original de este listado, actualizado posteriormente con el listado de la página Web del Missouri Botanical Garden, W³MOST, y con colecciones diversas durante los últimos cuatro años más la adición de algunos reportes de colecciones con gran valor histórico del herbario del Museo Británico (BM) y Nueva York (NY) a ser reportados por Churchill & Ellis (com. pers.).

Todos los nombres se confrontaron con el listado de los musgos de los países andinos tropicales (Churchill, Griffin & Muñoz 2000) pero usando el sistema de clasificación propuesto por Crosby (Crosby *et al.* 2000).

The Musci (mosses) from Antioquia Department

Juan David Parra, Ricardo Callejas Posada y Steven P. Churchill

Key Words: *Musci, mosses, Antioquia, Check list*

The checklist of the mosses herein presented is the result of diverse investigations. In fact there are several available works on South American bryophytes since the XIX century that partially include the department of Antioquia (Mitten 1869), Colombia (Hampe 1865a,b, 1866, 1869; Müller 1874, 1875) and/or Central and South

America (Bescherelle 1894), as well as even more localized areas such as Bogotá (Theriot 1906). Historically, such works were envisioned with the main purpose of discovering new species for the science, and were framed within the inventory of those regions (Williams 1925, 1930; Imscher 1914, Theriot 1937, 1939; Herzog

1934). Currently, the most remarkable and pertinent works for the present list are those specifically focused in the bryophyte's checklist of Colombia (Robinson 1967) and thereafter the mosses of Colombia (Flortschütz de Waard & Florschütz 1979, Churchill 1988a, 1989, Churchill & Linares 1995). Finally, those works focused on the moss flora from Valle del Cauca (Churchill & Hollaender 1988) and Antioquia (Churchill & Sastre de Jesus 1987; Sastre de Jesús et al. 1987; Churchill 1991a), and those referred to the inventories in localized regions within the department (Albert de Escobar 1989; Parra et al. 1999), were also of significant importance.

Here we cite the database of mosses from Colombia made by S. P. Churchill and subsequently developed by Angela Gómez, who compiled information from the main herbaria

holding Colombian specimens (HUA, COL, PSO, MEDEL, NY, US, U) until 1996. Such database constitutes the original matrix implemented for this study and was subsequently completed by using the information in the web site of the Missouri Botanical Garden W³MOST and diverse collections during the past four years, plus some additions from the historically valuable collections of the British Museum (BM) and New York (NY), to be reported by Churchill & Ellis (pers. comm.).

All the scientific names were compared against the checklist of the mosses from the Andean tropical countries (Churchill, Griffin & Muñoz 2000) and the classification system by Crosby et al. (2000).

Cuadro 1. Se muestran los rangos altitudinales compartidos por varias especies. Así como las especies que sólo se reportan dentro de un rango altitudinal, representadas por los valores entre paréntesis ().

El análisis del número de especies presentes en diferentes rangos altitudinales, con intervalos de 500 metros, demuestra la tendencia en la distribución de la diversidad con relación al nivel altitudinal. Esta distribución ha sido ampliamente reportada en la literatura (Zander 1972, Van Reenen & Gradstein 1984; Churchill 1988a, 1988b; Allen 1990; Churchill 1991b; Wolf 1993; Churchill & Linares 1995; Muñoz & Pando 2000).

Box 1. The altitudinal ranges shared by several species are presented here, as well as those species that are only reported within a single altitudinal range which are shown in parenthesis ().

The analyses of the number of species present in different altitudinal ranges, in intervals of 500 meters, show the tendency of the diversity distribution in relation with altitude. This kind of distribution has been widely reported in the literature (Zander 1972; Van Reenen & Gradstein 1984; Churchill 1988a, 1988b; Allen 1990; Churchill 1991b; Wolf 1993; Churchill & Linares 1995; Muñoz & Pando 2000).

| | 0-500 m | 501-1000 m | 1001-1500 m | 1501-2000 m | 2001-2500 m | 2501-3000 m | 3001-3500 m | 3501-4000 m |
|--------------------|---------|------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 0-500 m | (23) 46 | | | | | | | |
| 501-1000 m | 47 | (9) 45 | | | | | | |
| 1001-1500 m | 43 | 45 | (15) 50 | | | | | |
| 1501-2000 m | 29 | 29 | 50 | (37) 50 | | | | |
| 2001-2500 m | 20 | 26 | 38 | 50 | (48) 53 | | | |
| 2501-3000 m | 14 | 19 | 30 | 42 | 53 | (25) 15 | | |
| 3001-3500 m | 2 | 9 | 18 | 23 | 29 | 16 | (23) 3 | |
| 3501-4000 m | 0 | 1 | 4 | 5 | 5 | 7 | 3 | (1) |

Cuadro 2. Sinopsis taxonómica de los Musci del departamento de Antioquia. Para cada taxón se indica el número de géneros y especies.

Box 2. Taxonomic synopsis of the Musci from the department of Antioquia. For each taxa the number of genera and species are indicated

| Taxón <i>Taxon</i> | Género <i>Genera</i> | Especies <i>Species</i> |
|------------------------------|--------------------------------|-----------------------------------|
| Adelotheciaaceae | 1 | 1 |
| <i>Adelothecium</i> | | 1 |
| Andreaeaceae | 1 | 2 |
| <i>Andreaea</i> | | 2 |
| Bartramiaceae | 4 | 23 |
| <i>Bartramia</i> | | 4 |
| <i>Breutelia</i> | | 12 |
| <i>Leiomela</i> | | 2 |
| <i>Philonotis</i> | | 5 |
| Brachytheciaceae | 11 | 19 |
| <i>Aerolindigia</i> | | 1 |
| <i>Brachythecium</i> | | 3 |
| <i>Eurhynchium</i> | | 1 |
| <i>Lindigia</i> | | 1 |
| <i>Meteoridium</i> | | 2 |
| <i>Meteorium</i> | | 1 |
| <i>Palamocladium</i> | | 1 |
| <i>Platyhypnidium</i> | | 1 |
| <i>Rhynchostegium</i> | | 2 |
| <i>Squamidium</i> | | 4 |
| <i>Zelometeorium</i> | | 2 |
| Bruchiaceae | 1 | 1 |
| <i>Trematodon</i> | | 1 |
| Bryaceae | 5 | 18 |
| <i>Acidodontium</i> | | 1 |
| <i>Anomobryum</i> | | 3 |
| <i>Brachymenium</i> | | 3 |
| <i>Bryum</i> | | 8 |
| <i>Rhodobryum</i> | | 3 |
| Calymperaceae | 3 | 20 |
| <i>Calymperes</i> | | 5 |
| <i>Octoblepharum</i> | | 4 |
| <i>Syrrhopodon</i> | | 11 |
| Campyliaceae | 3 | 3 |
| <i>Hygrohypnum</i> | | 1 |
| <i>Sanionia</i> | | 1 |
| <i>Warnstorfia</i> | | 1 |
| Catagoniaceae | 1 | 1 |
| <i>Catagonium</i> | | 1 |
| Cryphaeaceae | 2 | 2 |
| <i>Cryphaea</i> | | 2 |
| <i>Schoenobryum</i> | | 2 |
| Daltoniaceae | 4 | 8 |
| <i>Amblytropis</i> | | 1 |
| <i>Calyptrochaeta</i> | | 1 |
| <i>Daltonia</i> | | 3 |
| <i>Leskeodon</i> | | 3 |
| Dicranaceae | 15 | 44 |
| <i>Aongstroemia</i> | | 1 |
| <i>Atractylocarpus</i> | | 1 |

| Taxón <i>Taxon</i> | Género <i>Genera</i> | Especies <i>Species</i> |
|------------------------------|--------------------------------|-----------------------------------|
| <i>Bryohumbertia</i> | | 1 |
| <i>Campylopus</i> | | 22 |
| <i>Chorisodontium</i> | | 2 |
| <i>Dicranella</i> | | 3 |
| <i>Dicranodontium</i> | | 1 |
| <i>Dicranum</i> | | 1 |
| <i>Holomitrium</i> | | 4 |
| <i>Leucoloma</i> | | 2 |
| <i>Microcampylopus</i> | | 1 |
| <i>Microdus</i> | | 1 |
| <i>Pilopogon</i> | | 2 |
| <i>Schliephackea</i> | | 1 |
| <i>Symblypharis</i> | | 1 |
| Diphysciaceae | 1 | 1 |
| <i>Diphyscium</i> | | 1 |
| Ditrichaceae | 4 | 7 |
| <i>Ceratodon</i> | | 2 |
| <i>Chrysoblastella</i> | | 1 |
| <i>Ditrichum</i> | | 3 |
| <i>Pleuridium</i> | | 1 |
| Entodontaceae | 3 | 4 |
| <i>Entodon</i> | | 1 |
| <i>Erythrodonium</i> | | 2 |
| <i>Mesonodon</i> | | 1 |
| Erpodiaceae | 1 | 1 |
| <i>Erpodium</i> | | 1 |
| Eustichiaceae | 1 | 1 |
| <i>Eustichia</i> | | 1 |
| Fabroniaceae | 1 | 2 |
| <i>Fabronia</i> | | 2 |
| Fissidentaceae | 1 | 22 |
| <i>Fissidens</i> | | 22 |
| Fontinalaceae | 1 | 1 |
| <i>Fontinalis</i> | | 1 |
| Funariaceae | 2 | 6 |
| <i>Entosthodon</i> | | 4 |
| <i>Funaria</i> | | 2 |
| Grimmiaceae | 2 | 4 |
| <i>Grimmia</i> | | 2 |
| <i>Racomitrium</i> | | 2 |
| Hedwigiaceae | 3 | 3 |
| <i>Braunia</i> | | 1 |
| <i>Hedwigia</i> | | 1 |
| <i>Hedwigidium</i> | | 1 |
| Helycophyllaceae | 1 | 1 |
| <i>Helicophyllum</i> | | 1 |
| Hookericeae | 1 | 1 |
| <i>Hookeria</i> | | 1 |
| Hylocomiaceae | 1 | 1 |
| <i>Pleurozium</i> | | 1 |

| Taxón <i>Taxon</i> | Género <i>Genera</i> | Especies <i>Species</i> |
|------------------------------|--------------------------------|-----------------------------------|
| Hypnaceae | 12 | 13 |
| <i>Caribaeohypnum</i> | | 1 |
| <i>Chryso-hypnum</i> | | 1 |
| <i>Ctenidium</i> | | 1 |
| <i>Ectropothecium</i> | | 1 |
| <i>Hypnum</i> | | 1 |
| <i>Isopterygium</i> | | 1 |
| <i>Mittenothamnium</i> | | 2 |
| <i>Phyllodon</i> | | 1 |
| <i>Pylaisiella</i> | | 1 |
| <i>Syringothecium</i> | | 1 |
| <i>Taxiphyllum</i> | | 1 |
| <i>Vesicularia</i> | | 1 |
| Hypopterygiaceae | 1 | 1 |
| <i>Hypopterygium</i> | | 1 |
| Lembophyllaceae | 2 | 2 |
| <i>Orthostichella</i> | | 1 |
| <i>Pilotrichella</i> | | 1 |
| Lepyrodontaceae | 1 | 1 |
| <i>Lepyrodon</i> | | 1 |
| Leskeaceae | 2 | 2 |
| <i>Haplocladium</i> | | 1 |
| <i>Leskea</i> | | 1 |
| Leucobryaceae | 1 | 6 |
| <i>Leucobryum</i> | | 6 |
| Leucomiaceae | 2 | 2 |
| <i>Leucomium</i> | | 1 |
| <i>Rhynchostegiopsis</i> | | 1 |
| Meteoriaceae | 3 | 6 |
| <i>Barbella</i> | | 1 |
| <i>Floribundaria</i> | | 1 |
| <i>Papillaria</i> | | 4 |
| Mniaceae | 2 | 4 |
| <i>Plagiomnium</i> | | 1 |
| <i>Pohlia</i> | | 3 |
| Myriniaceae | 1 | 1 |
| <i>Helicodontium</i> | | 1 |
| Neckeraceae | 7 | 16 |
| <i>Isodrepanium</i> | | 1 |
| <i>Neckera</i> | | 3 |
| <i>Neckeropsis</i> | | 2 |
| <i>Porothamnium</i> | | 1 |
| <i>Porotrichodendron</i> | | 2 |
| <i>Porotrichum</i> | | 6 |
| <i>Thamnobryum</i> | | 1 |
| Orthodontiaceae | 1 | 1 |
| <i>Orthodontium</i> | | 1 |
| Orthotrichaceae | 5 | 26 |
| <i>Groutiella</i> | | 2 |
| <i>Macromitrium</i> | | 14 |

| Taxón <i>Taxon</i> | Género <i>Genera</i> | Especies <i>Species</i> |
|------------------------------|--------------------------------|-----------------------------------|
| <i>Orthotrichum</i> | | 3 |
| <i>Schlotheimia</i> | | 3 |
| <i>Zygodon</i> | | 3 |
| Phylloprepaniaceae | 2 | 2 |
| <i>Mniomalia</i> | | 1 |
| <i>Phylloprepanium</i> | | 1 |
| Phyllogoniaceae | 1 | 2 |
| <i>Phyllogonium</i> | | 2 |
| Pilotrichaceae | 13 | 47 |
| <i>Actinodontium</i> | | 2 |
| <i>Amblytropis</i> | | 1 |
| <i>Brymela</i> | | 1 |
| <i>Callicostella</i> | | 4 |
| <i>Crossomitrium</i> | | 3 |
| <i>Cyclodictyon</i> | | 5 |
| <i>Hypnella</i> | | 2 |
| <i>Lepidopilum</i> | | 12 |
| <i>Pilotrichidium</i> | | 1 |
| <i>Pilotrichum</i> | | 3 |
| <i>Stenodictyon</i> | | 1 |
| <i>Thamniopsis</i> | | 6 |
| <i>Trachyxiphium</i> | | 6 |
| Plagiotheciaceae | 1 | 3 |
| <i>Plagiothecium</i> | | 3 |
| Polytrichaceae | 5 | 12 |
| <i>Atrichum</i> | | 1 |
| <i>Pogonatum</i> | | 5 |
| <i>Polytrichadelphus</i> | | 4 |
| <i>Polytrichum</i> | | 1 |
| <i>Steeerobryon</i> | | 1 |
| Pottiaceae | 14 | 27 |
| <i>Barbula</i> | | 1 |
| <i>Bryoerythrophyllum</i> | | 2 |
| <i>Didymodon</i> | | 3 |
| <i>Dolotortula</i> | | 1 |
| <i>Hymenostylium</i> | | 1 |
| <i>Hyophila</i> | | 1 |
| <i>Leptodontium</i> | | 6 |
| <i>Pseudocrossidium</i> | | 1 |
| <i>Pseudosymblypharis</i> | | 1 |
| <i>Sagenotortula</i> | | 1 |
| <i>Streptopogon</i> | | 3 |
| <i>Syntrichia</i> | | 3 |
| <i>Trichostomum</i> | | 2 |
| <i>Weissia</i> | | 1 |
| Prinodontaceae | 1 | 2 |
| <i>Prionodon</i> | | 2 |
| Pterobryaceae | 7 | 10 |

| Taxón <i>Taxon</i> | Género <i>Genera</i> | Especies <i>Species</i> |
|------------------------------|--------------------------------|-----------------------------------|
| <i>Calypothecium</i> | | 2 |
| <i>Henicodium</i> | | 1 |
| <i>Hildebrandtiella</i> | | 1 |
| <i>Jaegerina</i> | | 1 |
| <i>Orthostichopsis</i> | | 2 |
| <i>Pireella</i> | | 1 |
| <i>Pterobryon</i> | | 2 |
| Racopilaceae | 1 | 2 |
| <i>Racopilum</i> | | 2 |
| Rhacocarpaceae | 1 | 1 |
| <i>Rhacocarpus</i> | | 1 |
| Rhizogoniaceae | 3 | 4 |
| <i>Leptotheca</i> | | 1 |
| <i>Pyrrhobryum</i> | | 2 |
| <i>Rhizogonium</i> | | 1 |
| Rutenbergiaceae | 1 | 1 |
| <i>Pseudocryphaea</i> | | 1 |
| Seligeriaceae | 1 | 1 |
| <i>Blindia</i> | | 1 |
| Sematophyllaceae | 8 | 21 |
| <i>Acroporium</i> | | 2 |
| <i>Aptychella</i> | | 1 |
| <i>Heterophyllum</i> | | 1 |
| <i>Meiothecium</i> | | 1 |
| <i>Pterogonidium</i> | | 1 |
| <i>Sematophyllum</i> | | 11 |
| <i>Taxithelium</i> | | 1 |
| <i>Trichosteleum</i> | | 3 |
| Sphagnaceae | 1 | 17 |
| <i>Sphagnum</i> | | 17 |
| Splachnaceae | 3 | 4 |
| <i>Brachymitrium</i> | | 2 |
| <i>Splachnum</i> | | 1 |
| <i>Tayloria</i> | | 1 |
| Splachnobryaceae | 1 | 1 |
| <i>Splachnobryum</i> | | 1 |
| Stereophyllaceae | 4 | 4 |
| <i>Entodontopsis</i> | | 1 |
| <i>Eulacophyllum</i> | | 1 |
| <i>Pilosium</i> | | 1 |
| <i>Stereophyllum</i> | | 1 |
| Symphyodontaceae | 1 | 1 |
| <i>Symphyodon</i> | | 1 |
| Thuidiaceae | 2 | 12 |
| <i>Cyrto-hypnum</i> | | 5 |
| <i>Thuidium</i> | | 7 |
| Trachypodaceae | 1 | 1 |
| <i>Trachypus</i> | | 1 |

Listado Taxonómico / *Taxonomic List*

El estado actual del inventario de musgos de Antioquia incluye 60 familias, 185 géneros y 455 especies y 24 variedades reportadas por la bibliografía y/o colección con determinación por especialista en herbario. El listado taxonómico está ordenado por familia y género alfabéticamente.

La columna “Calificación de Crosby”, es un indicador del grado de conocimiento al presente sobre las especies de musgos basado en literatura. Siendo 4 el máximo valor y 1 el mínimo (Crosby *et al.* 2000). Las especies marcadas con “?”, no están incluidas en dicho listado por que sus nombres son discutidos aún. Muchas de las especies están calificadas indirectamente basados en reportes de sinonimias. Para el caso se encuentran dos especies con calificación 1, dos especies con calificación 2, tres especies con calificación 3,38, cuatro especies con calificación 4 y solo ocho especies con nombre en discusión. Por lo que se puede asegurar un buen conocimiento de la mayoría de las especies mencionadas en el listado.

La columna “número de colecciones por especie”, se refiere al número de especímenes analizados para la especie en particular en este tratado. Es necesario tenerlo en cuenta para analizar el sustrato y la distribución altitudinal.

La columna “Sustrato”, se refiere a la superficie donde se ha colectado la especie. Se resume en las categorías Saxicola (sax), Acuatico (acu), Epifilo (epf), Epifito (ept), Lignicola (lig), Sin Datos (s.d.) y Terricola (ter). Los más comunes se citan primero o bien como consecutivos. Cuando son sustratos poco frecuentes se citan entre paréntesis.

En la columna “Herbarios”, se señala el acrónimo de (los) herbario(s), con duplicado(s) de la colección citada.

The actual stage of the inventory of the mosses of Antioquia includes 60 families, 185 genera and 455 species and 24 varieties reported in the literature and/or collections with specimens determined by herbaria specialists. The taxonomic list is organized in alphabetic order by family and genera.

The column “classification by Crosby” is an indicator of the actual stage of knowledge on the moss species based on the literature, being 4 the maximum of knowledge and 1 the minimum (Crosby et al. 2000). The species with “?” are not included in the list since the validity of the names are still under discussion. Many of the species are classified indirectly based on synonymy reports. In our list two species are classified under rank 2, three species under rank 3, 384 under rank 4 and only eight species still have the validity of their names under discussion. Therefore most of the species can be considered as well-known taxonomically.

The column “number of collections per species” refers to the number of specimens analyzed for that particular species in the present work. It is necessary to take it in account for the analyses of substrate and altitudinal distribution.

The column “substrate” refers to the surface on which the species has been collected. The ranks used for the classification are Saxicolous (sax), Aquatic (acu), Epiphyllous (epf), Epiphytes (ept), Lignicolous (lig), No data (s.d.) and Terrestrial (ter). The most common ones are cited at the beginning or consecutively. When the substrate is rather rare it is shown in parenthesis.

In the “Herbaria” the acronym is cited with duplicates of the referred collection(s)

| Taxón <i>Taxon</i> | Calificación de Crosby <i>Classification by Crosby</i> | Altitud <i>Altitude</i> | Número de colecciones por especie <i>Number of collections per species</i> | Substrato <i>Substrate</i> | Colector y número de colector <i>Collector and Collector's number</i> | Herbarios <i>Herbaria</i> | Referencia <i>Reference</i> |
|---|--|----------------------------|---|-------------------------------|--|------------------------------|---------------------------------|
| Adelotheciaceae | | | | | | | |
| <i>Adelothecium bogotense</i> (Hampe) Mitt. | 4 | 2000-2900 | 21 | Epi, Lig, (Terr) | Churchill 15616 | HUA, MO, NY | Churchill & Linares 1995 |
| Andreaeaceae | | | | | | | |
| <i>Andreaea brevipes</i> Spruce | 3 | 3150-3799 | 4 | Sax | Escobar 961 | HUA, NY | Churchill <i>et al.</i> 1987 |
| <i>Andreaea rupestris</i> Hedw. | 4 | 3500-3800 | 1 | Sax | MacDougal 4491 | HUA | Churchill <i>et al.</i> 2000 |
| Bartramiaceae | | | | | | | |
| <i>Bartramia angustifolia</i> Mitt. | 4 | 2190-3600 | 9 | Terr | Churchill 13367 | HUA, NY | Churchill <i>et al.</i> 1987 |
| <i>Bartramia longifolia</i> Hook. | 4 | 2420-2480 | 2 | Sax, Epi | Churchill 15715 | HUA, NY | Churchill 1988b |
| <i>Bartramia mathewsii</i> Mitt. | 4 | 1950 | 1 | Epi | Albert 3885 | HUA | Churchill 1990 |
| <i>Bartramia polytrichoides</i> . Müll. Hal | 4 | 3150-3500 | 2 | Sax, Terr | Churchill 13410 | NY, US, MO | Churchill <i>et al.</i> 1987 |
| <i>Breutelia brittoniae</i> Renauld & Cardot | 4 | 2660-3500 | 7 | Terr, Sax, (Epi) | Churchill 13413 | HUA, NY, U, US | Churchill <i>et al.</i> 1987 |
| <i>Breutelia chrysea</i> (Müll. Hal.) A. Jaeger | 4 | 2338-3000 | 6 | Terr, Sax | Churchill 14225 | HUA, MO, NY | Churchill <i>et al.</i> 1987 |
| <i>Breutelia inclinata</i> (Hampe & Lorentz) A. Jaeger | 4 | 2340-2940 | 4 | Sax, Terr | Churchill 17814 | HUA, MO, NY, US | Churchill 1988b |
| <i>Breutelia karsteniana</i> (Müll. Hal.) A. Jaeger | 3 | 2800-3000 | 1 | Terr | Churchill 14236 | COL, HUA, MO, NY, US | Churchill 1988b |
| <i>Breutelia polygastrica</i> (Müll. Hal.) Broth. | 3 | 1100-1165 | 1 | Lig | Churchill 14853 | HUA, NY | Churchill 1989 |
| <i>Breutelia rhythidioides</i> Herzog | 4 | 2800-3000 | 1 | Terr | Churchill 14234 | COL, HUA, MO | Churchill 1988b |
| <i>Breutelia scariosula</i> (Müll. Hal.) Broth. | 1 | 2100-2600 | 1 | Terr | Callejas 10227 | HUA, MO | Com. Pers. Churchill |
| <i>Breutelia squarrosa</i> A. Jaeger | 4 | 2340-2935 | 9 | Terr | Churchill 14142 | COL, HUA, MO, NY, US | Churchill 1989 |
| <i>Breutelia subarcuata</i> (Müll. Hal.) Schimp. | 4 | 2700 | 1 | Terr | Serna s.n. | HUA | Churchill 1989 |
| <i>Breutelia subdisticha</i> (Hampe) A. Jaeger | 4 | 2360-3000 | 2 | Terr | Churchill 15563 | COL, HUA, MO | Churchill 1988b |
| <i>Breutelia tomentosa</i> (Sw. ex Brid.) A. Jaeger | 4 | 2400-3320 | 2 | Epi | MacDougal 4308 | MO | Churchill <i>et al.</i> 2000 |
| <i>Breutelia trianae</i> (Hampe) A. Jaeger | 4 | 2030-3500 | 8 | Terr, Sax, (Epi) | Churchill 13033 | HUA, MO, NY | Churchill <i>et al.</i> 1987 |
| <i>Leiomela bartramioides</i> (Hook.) Paris | 4 | 1950-2420 | 2 | Terr, Epi | Churchill 12845 | HUA, NY | Churchill <i>et al.</i> 1987 |
| <i>Leiomela deciduifolia</i> Herzog | 3 | 2740-3500 | 5 | Epi, Lig, (Sax) | Churchill 13266 | HUA, MO, NY, U, US | Churchill <i>et al.</i> 1987 |
| <i>Philonotis elongata</i> (Dism.) H.A. Crum & Steere | 4 | 750-2660 | 4 | Terr, Sax, (Terr) | Churchill 12943 | HUA, MO, NY | Churchill <i>et al.</i> 1987 |
| <i>Philonotis glaucescens</i> (Hornsch.) Broth. | 4 | 310-1530 | 12 | Sax, Terr | Sastre 936 | HUA, MO, NY, US | Churchill 1989 |
| <i>Philonotis gracillima</i> Ångström | 4 | 700-2270 | 6 | Sax, Terr | Churchill 15674 | HUA, NY, US | Churchill 1989 |
| <i>Philonotis sphaerocarpa</i> (Hedw.) Brid. | 4 | 1100-2310 | 4 | Sax, (Terr) | Callejas 917 | HUA, NY | Churchill 1991 |
| <i>Philonotis uncinata</i> (Schwägr.) Brid. | 4 | 50-2700 | 12 | Terr, Sax, (Epi) | Sastre 1064 | HUA, MO, NY, US | Churchill <i>et al.</i> 1987 |

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|---|--|----------------------------|---|-------------------------------|--|------------------------------|--|
| Brachytheciaceae | | | | | | | |
| <i>Aerolindigia capillacea</i> (Hornsch.) M. Menzel | 4 | 1790-2400 | 5 | Epi | Churchill 15587 | HUA, MO, NY | Churchill & Linares 1995 |
| <i>Brachythecium plumosum</i> Schimp. | 4 | 2220-2440 | 2 | Sax | Fonnegra 3467 | NY | Albert de (Hedw.), Escobar 1989 |
| <i>Brachythecium rutabulum</i> (Hedw.) Schimp. | 4 | 2480-2935 | 2 | Epi, Sax | Churchill 17765 | HUA, NY | Churchill & Linares 1995 |
| <i>Brachythecium stereopoma</i> (Spruce ex Mitt.) A. Jaeger | ? | 2000-2780 | 2 | Terr, Sax | Zarucchi 5229 | MO | Churchill & Linares 1995 |
| <i>Eurhynchium praelongum</i> (Hedw.) Schimp. | 4 | 3150 | 1 | Sax | Churchill 13418 | HUA, MO, NY | Churchill 1989 |
| <i>Lindigia debilis</i> (Mitt.) A. Jaeger | 4 | 2800 | 1 | Epi | Palacio 51 | HUA | Churchill 1989 |
| <i>Meteoridium remotifolium</i> (Müll. Hal.) Manuel | 4 | 870-2900 | 48 | Epi, Lig, (Terr, Sax) | Daniel 351a | US | Churchill 1989 |
| <i>Meteoridium tenuissimum</i> (Hook. & Wilson) M.A. Lewis | 4 | 2600 | 2 | Epi | Callejas 10423 | HUA, NY | Churchill & Linares 1995 |
| <i>Meteorium sinuatum</i> (Müll. Hal.) Mitt. | 4 | 2000-3400 | 20 | Epi, Terr, (Lig, Sax) | Churchill 15783 | HUA, US | Churchill & Linares 1995 |
| <i>Palamocladium leskeoides</i> (Hook.) E. Britton | 4 | 2400-2600 | 1 | Sax | Churchill 13891 | HUA | Churchill 1991 |
| <i>Platyhypnidium aquaticum</i> (A. Jaeger) M. Fleisch. | 4 | 1500-2400 | 13 | Sax, (Terr, Epi) | Churchill 14215 | HUA, MO, NY | Churchill & Sastre de Jesus 1987 |
| <i>Rhynchostegium scariosum</i> (Taylor) A. Jaeger | 3 | 910-2740 | 13 | Terr, Epi, Sax, (Lig) | Churchill 15393 | HUA, NY | Churchill 1989 |
| <i>Rhynchostegium semiscabrum</i> (E.B. Bartram) H. Rob. | 4 | 2000 | 1 | Terr | Albert 5518 | HUA, NY | Churchill <i>et al.</i> 2000 |
| <i>Squamidium leucotrichum</i> (Taylor) Broth. | 4 | 1000-3110 | 16 | Epi, (Lig, Terr) | Sastre 759 | HUA, MO, NY, U | Churchill 1989 |
| <i>Squamidium livens</i> (Schwägr.) Broth. | 4 | 1440-2500 | 21 | Epi, (Lig, Terr) | Churchill 12885 | HUA, MO, NY | Churchill 1989 |
| <i>Squamidium macrocarpum</i> (Spruce ex Mitt.) Broth. | 4 | 1430-1830 | 2 | Epi | Churchill 14734 | HUA, MO | Churchill & Linares 1995 |
| <i>Squamidium nigricans</i> (Hook.) Broth. | 4 | 1600-2630 | 25 | Epi | Churchill 15532 | HUA, MO, NY | Churchill <i>et al.</i> 1987 |
| <i>Zelometeorium patulum</i> (Hedw.) Manuel | 4 | 80-2420 | 20 | Epi, (Lig, Sax, Terr) | Churchill 17105 | HUA, MO, NY | Churchill <i>et al.</i> 1987 |
| <i>Zelometeorium recurvifolium</i> (Hornsch.) Manuel | 4 | 1500-3380 | 6 | Epi | Sastre 819 | HUA, US | Churchill <i>et al.</i> 1987 |
| Bruchiaceae | | | | | | | |
| <i>Trematodon longicollis</i> Michx. | 4 | 2000 | 1 | Terr | Churchill 14182 | HUA, MO, NY | Churchill & Linares 1995 |
| Bryaceae | | | | | | | |
| <i>Acidodontium megalocarpum</i> (Hook.) Renauld & Cardot | 4 | 2310-3040 | 5 | Epi, (Lig) | Churchill 15697 | HUA, NY | Churchill <i>et al.</i> 1987 |
| <i>Anomobryum conicum</i> (Hornsch.) Broth. | 4 | 1100 | 1 | Sax | Churchill 14692 | HUA, MO | Churchill <i>et al.</i> 2000 |
| <i>Anomobryum julaceum</i> (Schrad. ex P. Gaertn., B. Mey. & Scherb.) Schimp. | 4 | 2500-3500 | 8 | Terr, (Sax) | Churchill 18712 | COL, HUA, MO, NY | Churchill & Linares 1995 |
| <i>Anomobryum prostratum</i> (Müll. Hal.) Besch. | 4 | 3150-3500 | 2 | Sax, Terr | Churchill 13425 | HUA, NY | Churchill & Linares 1995 |

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|---|--|----------------------------|---|-------------------------------|--|------------------------------|--|
| <i>Brachymenium consimile</i> (Mitt.) A. Jaeger | 4 | 2440-3100 | 4 | Epi, (Lig) | Churchill 15489 | COL, MO, HUA, U, US | Churchill 1988b |
| <i>Brachymenium globosum</i> A. Jaeger | 4 | 1000-2200 | 4 | Terr, (Lig, Epi) | Churchill 14031 | HUA, MO, NY | Churchill 1989 |
| <i>Brachymenium speciosum</i> (Hook. & Wilson) Steere | 4 | 1800-2000 | 1 | Epi | Callejas 6094 | HUA, NY | Churchill & Linares 1995 |
| <i>Bryum andicola</i> Hook. | 4 | 1150-3500 | 11 | Terr, Sax | Churchill 15377 | HUA, MO, NY, US | Churchill <i>et al.</i> 1987 |
| <i>Bryum apiculatum</i> Schwägr. | 4 | 110-850 | 2 | Sax | Churchill 14430 | HUA, NY | Churchill 1989 |
| <i>Bryum argenteum</i> Hedw. (Sax, Epi) | 4 | 110-3500 | 16 | Terr, | Churchill 13361 | COL, MO, HUA, NY | Churchill <i>et al.</i> 1987 |
| <i>Bryum capillare</i> Hedw. | 4 | Sin Datos | 1 | Sax | Charetier 151 | US | Churchill <i>et al.</i> 2000 |
| <i>Bryum coronatum</i> Schwägr. | 4 | 45-170 | 6 | Lig, (Epi) | Churchill 17075 | COL, HUA, MO, NY | Churchill 1989 |
| <i>Bryum dichotomum</i> Hedw. | 4 | 2300 | 1 | Terr | Churchill 16784 | HUA | Churchill <i>et al.</i> 1987 |
| <i>Bryum limbatum</i> Müll. Hal. | 4 | 210-2000 | 6 | Sax, (Terr, Epi) | Churchill 17127 | HUA, NY | Churchill & Linares 1995 |
| <i>Bryum renaudii</i> Roll ex Renauld & Cardot | 4 | 1695 | 1 | Sax | Churchill 18356 | HUA, MO, NY | Churchill & Linares 1995 |
| <i>Rhodobryum beyrichianum</i> (Hornsch.) Müll. Hal. | 4 | 1200-2600 | 5 | Terr | Churchill 14586 | HUA, NY | Churchill & Sastre de Jesus 1987 |
| <i>Rhodobryum grandifolium</i> (Taylor) Schimp. | 4 | 1000-3500 | 48 | Epi, Lig, (Sax) | Churchill 15605 | HUA, MO, NY, U, US | Churchill <i>et al.</i> 1987 |
| <i>Rhodobryum procerum</i> (Schimp.) Paris | 4 | 3500 | 1 | Terr | Churchill 13443 | HUA, MO, NY | Churchill 1989 |
| Calymperaceae | | | | | | | |
| <i>Calymperes afzelii</i> Sw. | 4 | 130-1500 | 9 | Sax, Epi, (Lig) | Sastre 1369 | COL, MO, HUA, NY | Churchill <i>et al.</i> 1987 |
| <i>Calymperes erosum</i> Müll. Hal. | 4 | 400-900 | 3 | Terr, Sax | Fonnegra 578 | NY | Churchill <i>et al.</i> 1987 |
| <i>Calymperes guildingii</i> Hook. & Grev. | 4 | 280 | 1 | Lig | Churchill 14890 | HUA, COL, MO, NY | Churchill & Sastre de Jesus 1987 |
| <i>Calymperes lonchophyllum</i> Schwägr. | 4 | 110-1850 | 7 | Epi, Lig, (Sax) | Sastre 955 | HUA, MO, NY | Churchill <i>et al.</i> 1987 |
| <i>Calymperes palisotii</i> Schwägr. | 4 | 50 | 1 | Epi | Churchill 17074 | COL, HUA, MO, NY | Churchill & Linares 1995 |
| <i>Octoblepharum albidum</i> Hedw. | 4 | 110-1165 | 12 | Epi, Lig, (Terr) | Fonnegra 395 | HUA | Churchill & Linares 1995 |
| <i>Octoblepharum cocuiense</i> Mitt. | 4 | 320 | 1 | Sax | Zarucchi 3384 | NY | Churchill & Linares 1995 |
| <i>Octoblepharum erectifolium</i> Mitt. ex R.S. Williams | 4 | 2580 | 1 | S.D. | Churchill 13000b | HUA | Churchill <i>et al.</i> 1987 |
| <i>Octoblepharum pulvinatum</i> (Dozy & Molck.) Mitt. | 4 | 110-1350 | 11 | Epi, Lig, Terr, Sax | Churchill 14379 | HUA, NY, PSO | Churchill 1991 |
| <i>Syrrhopodon circinatus</i> (Brid.) Mitt. | 4 | 110 | 1 | Epi | Callejas 5325 | NY | Churchill & Linares 1995 |
| <i>Syrrhopodon cryptocarpus</i> Dozy & Molck. | 4 | 280-1030 | 2 | Epi | Churchill 14805 | HUA | Churchill & Sastre de Jesus 1987 |
| <i>Syrrhopodon cymbifolius</i> Müll. Hal. | 4 | 1030 | 1 | Epi | Churchill 14805b | HUA, NY | Churchill & Linares 1995 |

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|--|--|----------------------------|---|-------------------------------|--|------------------------------|--|
| <i>Syrrhopodon gaudichaudii</i> Mont. | 4 | 1000-2900 | 12 | Epi, Lig, (Terr, Sax) | Churchill 17845 | HUA, MO, NY | Churchill <i>et al.</i> 1987 |
| <i>Syrrhopodon hornschurchii</i> Mart. | 4 | 820-1300 | 2 | Epi, Terr | Giraldo 317 | MO | Churchill & Sastre de Jesus 1987 |
| <i>Syrrhopodon incompletus</i> Schwägr. var. <i>Incompletus</i> | 4 | 280-1550 | 2 | Epi | Churchill 14895 | HUA, MO, NY | Churchill & Sastre de Jesus 1987 |
| <i>Syrrhopodon incompletus</i> var. <i>Perangustifolius</i> W.D. Reese | | 950-1100 | 1 | Epi | Callejas 9237 | MO | Com. Pers. Churchill |
| <i>Syrrhopodon leprieurii</i> Mont. | 4 | 1830-2000 | 5 | Epi, (Terr) | Luteyn 11870 | NY | Churchill <i>et al.</i> 1987 |
| <i>Syrrhopodon lycopodioides</i> (Sw. ex Brid.) Müll. Hal. | 4 | 1800-2440 | 9 | Epi | Churchill 16414 | HUA, NY | Churchill <i>et al.</i> 1987 |
| <i>Syrrhopodon parasiticus</i> (Sw. ex Brid.) Paris | 4 | 1100-1165 | 3 | Ef, Epi, Lig | Churchill 14714 | HUA, NY | Churchill & Sastre de Jesus 1987 |
| <i>Syrrhopodon prolifer</i> Schwägr <i>acanthoneuros</i> (Müll. Hal.) Müll. Hal. | S.D. | 1800 | 1 | S.D. | Archer 1650a | US | Churchill & var. Linares 1995 |
| <i>Syrrhopodon prolifer</i> Schwägr var. <i>cincinnatus</i> (Hampe) W. D. Reese | S.D. | 1810-1840 | 1 | Epi | Churchill 16413 | HUA, MO, NY | Churchill & Linares 1995 |
| <i>Syrrhopodon prolifer</i> Schwägr var. <i>prolifer</i> | S.D. | 1030-2800 | 14 | Terr, Epi, Lig | Churchill 13481 | HUA, MO, NY | Churchill 1991b |
| <i>Syrrhopodon prolifer</i> Schwägr var. <i>scaber</i> (Mitt.) W. D. Reese | S.D. | 780-2100 | 6 | Epi, Lig, Terr | Churchill 15017 | HUA, MO, NY | Churchill & Linares 1995 |
| <i>Syrrhopodon prolifer</i> Schwägr var. <i>tenuifolius</i> (Sull.) W. D. Reese | S.D. | 1030-2430 | 3 | Epi, Lig | Churchill 15395 | HUA, MO, NY | Churchill & Linares 1995 |
| <i>Syrrhopodon rigidus</i> Hook. & Grev. | 4 | 1350-1900 | 4 | Epi, Terr | Churchill 16383 | HUA, MO, NY | Churchill 1989 |
| Campyliaceae | | | | | | | |
| <i>Hygrohypnum reduncum</i> (Schimp. ex Mitt.) N. Nishim. | 4 | 1695 | 1 | Acu, Sax | Churchill 18349 | HUA, MO, NY | Churchill & Linares 1995 |
| <i>Sanionia uncinata</i> (Hedw.) Loeske | | 3450 | 1 | S.D. | Escobar 1039 | MO | |
| <i>Warnstorfia exannulata</i> (Schimp.) Loeske | 4 | 3500 | 1 | Acu | Churchill 13356 | NY, U | Churchill <i>et al.</i> 2000 |
| Catagoniaceae | | | | | | | |
| <i>Catagonium brevicaudatum</i> Müll. Hal. ex Broth. | 4 | 3150-3500 | 3 | Terr | Churchill 13292 | HUA, MO, NY | Churchill <i>et al.</i> 1987 |
| Cryphaeaceae | | | | | | | |
| <i>Cryphaea jamesonii</i> Taylor | 4 | 2400 | 1 | Epi | Churchill 13464 | HUA | Churchill <i>et al.</i> 1987 |
| <i>Cryphaea patens</i> Hornsch. ex Müll. Hal. | 4 | 1460-2420 | 6 | Epi, Lig, (Sax) | Sastre 906b | HUA | Churchill <i>et al.</i> 1987 |
| <i>Schoenobryum concavifolium</i> (Griff.) Gangulee | 4 | 1790-2500 | 8 | Epi | Churchill 14172 | HUA, NY, US | Churchill & Linares 1995 |
| <i>Schoenobryum rubicaule</i> (Mitt.) Manuel | 4 | 2100 | 1 | Epi | Churchill 15815b | HUA, NY | Churchill & Linares 1995 |

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|--|--|----------------------------|---|-------------------------------|--|------------------------------|--|
| Daltoniaceae | | | | | | | |
| <i>Amblytropis setosa</i> (Mitt.) Broth. | 4 | 1200-1540 | 1 | Epi | Callejas 3025 | HUA, MO, NY | Churchill <i>et al.</i> 2000 |
| <i>Calypstrochaeta deflexa</i> (Müll. Hal.) S.P. Churchill | 4 | 3000-3600 | 1 | | Wallis s.n. | BM | Churchill 1989 |
| <i>Daltonia gracilis</i> Mitt. | 4 | 2580-2660 | 2 | Epi, Lig | Churchill 12997 | HUA, NY | Churchill 1989 |
| <i>Daltonia longifolia</i> Taylor | 4 | 2030-2490 | 2 | Epi | Parra 37 | HUA, MO, NY | Churchill 1989 |
| <i>Daltonia stenophylla</i> Mitt. | 4 | 2800-3000 | 1 | Epi | Churchill 14242 | HUA, NY | Churchill 1991 |
| <i>Leskeodon andicola</i> (Spruce ex Mitt.) Broth. | 4 | 1430-1830 | 1 | Epi | Churchill 15032 | NY | Churchill & Sastre de Jesus 1987 |
| <i>Leskeodon elongatus</i> (Mitt.) S.P. Churchill & E. Linares | ? | 1750 | 1 | Lig | Callejas 2959 | HUA, NY | Churchill & Linares 1995 |
| <i>Leskeodon paisa</i> S.P. Churchill | 4 | 2660 | 2 | Sax, Terr | Churchill 12945 | HUA | Churchill <i>et al.</i> 1987 |
| Dicranaceae | | | | | | | |
| <i>Aongstroemia filiformis</i> (P. Beauv.) Wijk & Margad. | 4 | 2050-2935 | 12 | Terr, (Sax) | Churchill 12960 | COL, HUA, MO, NY, U | Churchill & Linares 1995 |
| <i>Atractylorcarpus longisetus</i> (Hook.) E.B. Bartram | 4 | 2060-3500 | 10 | Terr, Lig | Churchill 17851 | HUA, MO, NY | Churchill <i>et al.</i> 2000 |
| <i>Bryohumbertia filifolia</i> (Hornsch.) J.-P. Frahm | 4 | 2100-2440 | 23 | Lig, Terr, Epi | Uribe 2138 | COL, U | Churchill <i>et al.</i> 1987 |
| <i>Campylopus albidovirens</i> Herzog | | 3200-3600 | 1 | Epi | McPherson 13130E-1 | MO | |
| <i>Campylopus arctocarpus</i> (Hornsch.) Mitt. | 4 | 1850-2560 | 4 | Epi, Lig, Terr, Sax | Churchill 15675 | HUA, MO, NY, US | Churchill 1989 |
| <i>Campylopus argyrocaulon</i> (Müll. Hal.) Broth. | 4 | Sin Datos | 1 | S.D. | Charetier 141 | US | Churchill <i>et al.</i> 1987 |
| <i>Campylopus asperifolius</i> Mitt. | 4 | 2310 | 1 | Lig | Churchill 13104 | HUA, NY | Churchill & Linares 1995 |
| <i>Campylopus concolor</i> (Hook.) Brid. | 4 | 2000-2500 | 2 | Terr, Lig | Churchill 14120a | COL, HUA, MO, NY | Churchill & Sastre de Jesus 1987 |
| <i>Campylopus densicoma</i> (Müll. Hal.) Paris <i>var. densicoma</i> | 4 | 2400-3000 | 3 | Terr, Lig | Churchill 14261 | COL, HUA, MO, NY, US | Churchill & Sastre de Jesus 1987 |
| <i>Campylopus dicnemioides</i> (Müll. Hal.) Paris | 4 | 3150 | 1 | Terr | Churchill 18672 | MO, NY | Churchill 1991 |
| <i>Campylopus flexuosus</i> (Hedw.) Brid. | 4 | 2000-2580 | 3 | Terr, Lig | Churchill 13007 | HUA, MO, NY, U | Churchill <i>et al.</i> 1987 |
| <i>Campylopus fragilis</i> (Brid.) Bruch & Schimp. | 4 | 1850-3145 | 7 | Terr, Lig | Churchill 17816 | HUA, MO, NY | Churchill & Sastre de Jesus 1987 |
| <i>Campylopus heterostachys</i> (Hampe) A. Jaeger | 4 | 320-2450 | 2 | Sax, Epi | Callejas 7377 | HUA, NY | Churchill 1989 |
| <i>Campylopus huallagensis</i> Broth. | 4 | 1850 | 1 | Epi | Churchill 16392 | HUA, NY | Churchill & Linares 1995 |
| <i>Campylopus jamesonii</i> (Hook.) A. Jaeger | 4 | 1695-3500 | 4 | Terr, (Sax) | Churchill 12867 | COL, HUA | Churchill <i>et al.</i> 1987 |
| <i>Campylopus luteus</i> (Müll. Hal.) Paris | 4 | 2400-2520 | 3 | Sax, Lig | Churchill 13208 | HUA, MO, NY | Churchill & Linares 1995 |
| <i>Campylopus nivalis</i> (Brid.) Brid. <i>var. nivalis</i> | 4 | 3000-3380 | 2 | Epi | Churchill 15577 | COL, HUA, MO, NY | Churchill 1988b |
| <i>Campylopus oblongus</i> Thér. | 4 | 2000 | 1 | Epi | Churchill 14063b | NY | Churchill <i>et al.</i> 1987 |

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|--|--|----------------------------|---|-------------------------------|--|------------------------------|----------------------------------|
| <i>Campylopus pauper</i> (Hampe) Mitt. var <i>pauper</i> | 4 | 1450 | 2 | S.D. | Charetier 165 | NY, US | Churchill <i>et al.</i> 1987 |
| <i>Campylopus pilifer</i> Brid. | 4 | 1500-3100 | 24 | Terr, (Sax) | Churchill 13068 | HUA, NY, U | Churchill 1989 |
| <i>Campylopus pittieri</i> R.S. Williams | 4 | 1460-3500 | 8 | Terr, (Sax) | Churchill 15583 | COL, HUA, NY, US | Churchill <i>et al.</i> 1987 |
| <i>Campylopus reflexisetus</i> | 4 | 2300 | 1 | Terr | Albert 298 | COL, HUA, NY | Churchill <i>et al.</i> 1987 |
| <i>Campylopus richardii</i> Brid. (Müll. Hal.) Broth. | 4 | 1000-3500 | 31 | Terr, Sax | Churchill 13344 | COL, HUA, NY, U | Churchill <i>et al.</i> 1987 |
| <i>Campylopus tallulensis</i> Sull. & Lesq. | 4 | 880-1450 | 2 | Terr | Churchill 14384 | COL, HUA, NY | Churchill & Sastre de Jesus 1987 |
| <i>Campylopus weberbaueri</i> Broth. | 4 | 1900-2580 | 4 | Terr, Epi | Churchill 15401 | COL, HUA, MO, NY, U | Churchill 1988b |
| <i>Chorisodontium mittenii</i> (Müll. Hal.) Broth. | 4 | 1190-1550 | 8 | Terr, Epi, (Lig) | Churchill 15571 | COL, HUA, MO, NY, U | Churchill 1989 |
| <i>Chorisodontium wallisii</i> var. <i>speciosum</i> | S.D. | 3500 | 1 | Epifilo | Churchill 13399 | COL, HUA, NY, U | Churchill & Linares 1995 |
| <i>Chorisodontium wallisii</i> (Müll. Hal.) Broth var. <i>wallisii</i> | S.D. | S.D. | 1 | S.D. | Wallis s.n. | U | Churchill & Linares 1995 |
| <i>Dicranella campylophylla</i> (Taylor) A. Jaeger | 1 | 2180-3550 | 8 | Sax, (Terr) | Churchill 15525 | HUA, US | Churchill <i>et al.</i> 2000 |
| <i>Dicranella hilariana</i> (Mont.) Mitt. | 4 | 110-2430 | 10 | Terr, (Sax) | Churchill 14988 | COL, HUA, NY | Churchill 1989 |
| <i>Dicranella vaginata</i> (Hook.) Cardot | 4 | 1650-3500 | 5 | Sax, (Terr) | Churchill 15392 | COL, MO, U | Churchill 1989 |
| <i>Dicranodontium pulchroalare</i> Broth. | 4 | 2660 | 1 | Sax | Churchill 12922 | HUA, MO, NY | Churchill & Linares 1995 |
| <i>Dicranum frigidum</i> Müll. Hal. | 4 | 2000-3750 | 37 | Terr, (Epi) | Churchill 14070 | COL, HUA, MO, NY, US | Churchill <i>et al.</i> 1987 |
| <i>Holomitrium arboreum</i> Mitt. | 4 | 500-2935 | 6 | Epi, (Lig) | Churchill 14105 | HUA, MO, U, US | Churchill 1988b |
| <i>Holomitrium flexuosum</i> Mitt. | 4 | 2900-3550 | 4 | Epi, Lig, Terr | Churchill 13396 | H, HUA, MO, U | Churchill <i>et al.</i> 1987 |
| <i>Holomitrium moritzianum</i> Hampe | 4 | 1450-2500 | 2 | Lig, Epi | Callejas 2890 | HUA, MO, NY | Churchill & Linares 1995 |
| <i>Holomitrium sinuosum</i> B.H. Allen | 4 | 2940-3045 | 2 | Lig, Epi | Churchill 18698 | BM, H, HUA, MO, NY | Churchill & Linares 1995 |
| <i>Leucoloma cruegerianum</i> (Müll. Hal.) A. Jaeger | 1 | 1590-2440 | 2 | Epi | Betancur 873 | HUA, NY | Churchill 1991 |
| <i>Leucoloma tortellum</i> (Mitt.) Jaeger | 4 | 1800-1900 | 1 | Sax | Callejas 10179 | HUA, MO, NY | Churchill & A. Linares 1995 |
| <i>Microcampylopus curvisetus</i> (Hampe) Giese & J.-P. Frahm | 4 | 2100 | 2 | Terr | Churchill 14165 | HUA, MO, NY, US | Churchill & Sastre de Jesus 1987 |
| <i>Microdus lindigianus</i> (Hampe) Besch. | 4 | 2270 | 1 | Terr | Churchill 13221 | HUA, MO, NY | Churchill <i>et al.</i> 1987 |
| <i>Pilopogon guadalupensis</i> (Brid.) J.-P. Frahm | 4 | 1440-3520 | 46 | Terr, Sax | Churchill 12864 | HUA, MO, NY | Churchill & Linares 1995 |
| <i>Pilopogon laevis</i> (Taylor) Thér. | 4 | 3380 | 1 | Sax | Fitogeografía 7 | NY | Churchill <i>et al.</i> 2000 |
| <i>Schliephackea prostrata</i> Müll. Hal. | 4 | 2400 | 1 | | Wallis s.n. | BM, NY | Churchill & Ellis in prep. |
| <i>Symblypharis lindigii</i> Hampe (Terr) | 4 | 3300-3500 | 6 | Epi, Lig, | Churchill 13272 | HUA, MO, NY, U | Churchill 1989 |

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|---|--|-----------------------------------|--|--------------------------------------|---|-------------------------------------|---------------------------------------|
| Diphysciaceae <i>Diphyscium fendleri</i> Müll. Hal. | 4 | 775 | 1 | Sax | McPherson 13367a | MO | Com. Pers. Zacharia Magombo |
| Ditrichaceae <i>Ceratodon purpureus</i> (Hedw.) Brid. | 4 | 3500 | 1 | Sax | Churchill 13436 | NY | Churchill 1989 |
| <i>Ceratodon stenocarpus</i> Bruch & Schimp. ex Müll. Hal. | 4 | 2400-3320 | 5 | Sax, Terr | Albert 8707 | HUA, MO | Churchill 1989 |
| <i>Chrysoblastella chilensis</i> (Mont.) Reimers | 4 | 2500-3500 | 2 | Terr | Churchill 13415 | HUA, COL, NY | Churchill 1988b |
| <i>Ditrichum bogotense</i> (Hampe) Broth. | 4 | 3100-3600 | 1 | Sax | Churchill 13416 | HUA, MO | Churchill <i>et al.</i> 2000 |
| <i>Ditrichum difficile</i> (Duby) M. Fleisch. | 4 | 1520-3600 | 22 | Terr, Sax | Churchill 15765 | HUA, NY, MO, U, US | Churchill & Linares 1995 |
| <i>Ditrichum gracile</i> (Mitt.) Kuntze | 4 | 3500 | 1 | Sax | Escobar 1004 | MO | Churchill <i>et al.</i> 2000 |
| <i>Pleuridium lindigianum</i> (Hampe) S.P. Churchill | 4 | 2500 | 1 | Terr | Churchill 14136 | HUA, NY | Churchill & Linares 1995 |
| Entodontaceae <i>Entodon beyrichii</i> (Schwägr.) Müll. Hal. | 4 | 910-1100 | 4 | Sax | Churchill 14688 | HUA, MO, US | Churchill & Sastre de Jesus 1987 |
| <i>Erythrodontium longisetum</i> (Hook.) Paris | 4 | 1500-2550 | 5 | Sax, Epi | Archer 660a | US | Churchill 1989 |
| <i>Erythrodontium squarrosum</i> (Hampe) Paris | 4 | 700-1100 | 7 | Sax, (Lig) | Churchill 14648 | HUA, MO, NY | Churchill & Sastre de Jesus 1987 |
| <i>Mesonodon flavescens</i> (Hook.) W.R. Buck | 4 | 1430-1830 | 2 | Lig | Churchill 15016 | HUA, NY | Churchill 1989 |
| Erpodiaceae <i>Erpodium coronatum</i> (Hook. f. & Wilson) Mitt. | 4 | 500-2690 | 5 | Lig, Epi | Sastre 1447 | HUA, MO, NY, U, US | Churchill <i>et al.</i> 1987 |
| Eustichiaceae <i>Eustichia longirostris</i> (Brid.) Brid. | 4 | 2580-3500 | 2 | Sax | Churchill 13301b | HUA, MO, NY, U | Churchill <i>et al.</i> 1987 |
| Fabroniaceae <i>Fabronia ciliaris</i> var. <i>polycarpa</i> (Hook.) W.R. Buck | 4 | 500-3000 | 28 | Epi, Lig, (Terr, Sax) | Escobar 789 | HUA, NY | Churchill <i>et al.</i> 1987 |
| <i>Fabronia jamesonii</i> Taylor | 4 | 800 | 1 | Epi | Giraldo 209b | HUA, NY | Churchill 1989 |
| Fissidentaceae <i>Fissidens angustifolius</i> Sull. | 4 | 1530 | 2 | Sax, Terr | Churchill 14309 | NY | Churchill <i>et al.</i> 1987 |
| <i>Fissidens asplenioides</i> Hedw. | 4 | 1450-3500 | 26 | Sax, Terr | Sastre 821 | HUA, MO, NY, U, US | Churchill <i>et al.</i> 1987 |
| <i>Fissidens crispus</i> Mont. | 4 | 910-3000 | 6 | Sax, Terr, (Epi) | Churchill 13899 | HUA, MO, NY | Churchill & Linares 1995 |
| <i>Fissidens dissitifolius</i> Sull. | 4 | 460 | 1 | Sax | Churchill 17053 | HUA, MO | Churchill <i>et al.</i> 2000 |
| <i>Fissidens elegans</i> Brid. | 4 | 130 | 1 | Terr | Sastre 1392 | HUA | Churchill <i>et al.</i> 1987 |
| <i>Fissidens flaccidus</i> Mitt. 2000 | 4 | 130-1410 | 9 | Sax, Terr | Sastre 1427 | HUA, NY | Churchill <i>et al.</i> |
| <i>Fissidens guianensis</i> Mont. var. <i>guianensis</i> | 4 | 60-200 | 2 | Epi | Churchill 17085 | MO, NY | Churchill <i>et al.</i> 1987 |

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|--|--|----------------------------|---|-------------------------------|--|--------------------------------|--|
| <i>Fissidens inaequalis</i> Mitt. | 4 | 280-890 | 2 | Terr | Churchill 14341 | HUA, NY | Churchill <i>et al.</i> 2000 |
| <i>Fissidens intromarginatus</i> (Hampe) A. Jaeger | 4 | 2400-3000 | 3 | Terr, (Lig) | Sastre 881 | HUA | Churchill <i>et al.</i> 1987 |
| <i>Fissidens minutus</i> Thwaites & Mitt. | ? | 705-910 | 2 | Epi | Churchill 14615 | HUA, MO, NY | Churchill & Linares 1995 |
| <i>Fissidens neglectus</i> H.A. Crum | 4 | 200 | 1 | Sax | Sastre 1041 | HUA, NY | Churchill 1989 |
| <i>Fissidens ornatus</i> Herzog | 4 | 880-1030 | 5 | Terr | Churchill 14758 | HUA | Churchill & Linares 1995 |
| <i>Fissidens pellucidus</i> Homsch. var. <i>pellucidus</i> | 4 | 200 | 1 | Epi | Sastre 970 | HUA, NY | Churchill 1989 |
| <i>Fissidens perfalcatatus</i> Broth. | 4 | 700-890 | 1 | Terr | Churchill 14344 | MO, HUA | Churchill & Linares 1995 |
| <i>Fissidens polypodioides</i> Hedw. | 4 | 1200-2700 | 25 | Terr, Sax, (Lig, Acu) | Churchill 15388 | HUA, NY, US | Churchill <i>et al.</i> 1987 |
| * <i>Fissidens prionodes</i> Mont. | 4 | 200-1165 | 4 | Terr | Sastre 982 | HUA, NY, US | Churchill & Sastre de Jesus 1987 |
| <i>Fissidens serratus</i> Müll. Hal. | 4 | 2400 | 1 | Epi | Churchill 14086 | HUA, NY | Churchill & Linares 1995 |
| <i>Fissidens submarginatus</i> Bruch | 4 | 1470 | 1 | Terr | Escobar 610 | NY | Churchill & Linares 1995 |
| <i>Fissidens townsendianus</i> Pursell | 3 | 20-30 | 1 | Epi | Churchill 17064 | NY | Churchill <i>et al.</i> 2000 |
| <i>Fissidens wallisii</i> Müll. Hal. | 4 | 2650-2750 | 1 | Terr | Churchill 17858 | HUA, MO, NY | Churchill & Linares 1995 |
| <i>Fissidens weirii</i> var. <i>hemicraspedophyllus</i> (Cardot) Pursell | S.D. | 2000-2700 | 2 | Terr | Churchill 14183 | COL, HUA, NY | Churchill & Sastre de Jesus 1987 |
| <i>Fissidens weirii</i> var. <i>weirii</i> Mitt. | S.D. | 2400 | 3 | Terr | Churchill 14183 | HUA | Albert de Escobar 1989 |
| <i>Fissidens zollingeri</i> Mont. | 4 | 20-1530 | 2 | Terr | Churchill 17067 | COL, HUA, MO, NY | Churchill <i>et al.</i> 1987 |
| Fontinalaceae | | | | | | | |
| <i>Fontinalis bogotensis</i> Hampe | 4 | 2190-3500 | 7 | Acu, Sax | Atehortua 562 | HUA, JAUM, MO, NY, U, US | Churchill <i>et al.</i> 1987 |
| Funariaceae | | | | | | | |
| <i>Entosthodon bonplandii</i> (Hook.) Mitt. | 4 | 1790-3000 | 15 | Terr, (Lig) | Churchill 15463 | HUA, MO, NY | Churchill <i>et al.</i> 1987 |
| <i>Entosthodon jamesonii</i> (Taylor) Mitt. | 4 | 3000 | 1 | Terr | Londono 568 | HUA, MEDEL | Churchill & Linares 1995 |
| <i>Entosthodon lindigii</i> (Hampe) Mitt. | 4 | 2500 | 1 | Terr | Churchill 14145b | HUA, | Churchill 1988b |
| <i>Entosthodon radians</i> (Hedw.) Müll. Hal. | 4 | 2400 | 1 | Terr | Churchill 18529 | HUA, MO | Churchill <i>et al.</i> 2000 |
| <i>Funaria calvescens</i> Schwägr. | 4 | 1730-3550 | 10 | Terr, (Lig) | Zarucchi 4552 | HUA, MO, NY | Churchill 1989 |
| <i>Funaria hygrometrica</i> Hedw. | 4 | 910-3500 | 12 | Terr, (Sax, Lig) | Escobar 666 | HUA, NY | Churchill <i>et al.</i> 1987 |
| Grimmiaceae | | | | | | | |
| <i>Grimmia longirostris</i> Hook. | 4 | 3500 | 2 | Sax | Churchill 13335 | ALTA, COL, HUA, US, MO | Churchill <i>et al.</i> 1987 |
| <i>Grimmia trichophylla</i> Grev. | 4 | 3500 | 2 | Sax | Churchill 13329 | COL, HUA, MO | Muñoz & Pando 2000 |
| <i>Racomitrium crispipilum</i> (Taylor) A. Jaeger | 4 | 3000-3520 | 6 | Sax | Churchill 13332 | HUA, MO, U, US | Churchill <i>et al.</i> 1987 |

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|---|--|----------------------------|---|-------------------------------|--|------------------------------|--|
| <i>Racomitrium cucullatifolium</i> Hampe | 4 | 2160-3500 | 13 | Sax, (Terr) | Churchill 13326 | HUA, MO, NY | Churchill <i>et al.</i> 1987 |
| Hedwigiaceae | | | | | | | |
| <i>Braunia secunda</i> (Hook.) Bruch & Schimp. | 4 | 2200 | 1 | Terr | Daniel s.n. | MEDEL, G | Churchill & Linares 1995 |
| <i>Hedwigia ciliata</i> (Hedw.) P. Beauv. | 4 | 2400-2600 | 3 | Sax | Churchill 13894 | HUA, NY | Churchill <i>et al.</i> 1987 |
| <i>Hedwigidium integrifolium</i> (P. Beauv.) Dixon | 4 | 2500-3500 | 3 | Sax | Churchill 13342 | HUA, MO, NY, U, US | Churchill <i>et al.</i> 1987 |
| Helycophyllaceae | | | | | | | |
| <i>Helicophyllum torquatum</i> (Hook.) Brid. | 4 | 600-770 | 6 | Lig, Epi, (Sax, Acu) | Churchill 14410a | HUA, MO, NY, U | Churchill & Sastre de Jesus 1987 |
| Hookericeae | | | | | | | |
| <i>Hookeria acutifolia</i> Hook. & Grev. | 4 | 2400-2600 | 4 | Terr | Churchill 18523 | HUA, MO, NY | Churchill 1989 |
| Hylocomiaceae | | | | | | | |
| <i>Pleurozium schreberi</i> (Willd. ex Brid.) Mitt. | 4 | 2500-3500 | 7 | Terr, (Sax, Epi) | Churchill 15570 | HUA, MO, NY | Churchill <i>et al.</i> 1987 |
| Hypnaceae | | | | | | | |
| <i>Caribaeohypnum polypterum</i> (Mitt.) Ando & Higuchi | 4 | 3150-3500 | 3 | Lig, Epi | Escobar 1050 | HUA, MO | Churchill & Linares 1995 |
| <i>Chryso-hypnum diminutivum</i> (Hampe) W.R. Buck | 4 | 2340-2430 | 1 | Lig | Churchill 15446 | HUA | Churchill 1989 |
| <i>Ctenidium malacodes</i> Mitt. (Sax, Lig) | 4 | 1790-3500 | 28 | Terr, Epi, (Sax, Lig) | Churchill 12944 | COL, HUA, MO | Churchill <i>et al.</i> 1987 |
| <i>Ectropothecium leptochaeton</i> (Schwägr.) W.R. Buck | 4 | 1850-2100 | 8 | Epi, Lig | Churchill 15013 | HUA, NY | Churchill 1989 |
| <i>Hypnum amabile</i> (Mitt.) Hampe | 4 | 1850-3600 | 18 | Terr, (Sax, Lig, Epi) | Albert 8724 | HUA | Churchill <i>et al.</i> 1987 |
| <i>Isopterygium tenerum</i> (Sw.) Mitt. | 4 | 280-2600 | 8 | Epi, (Lig) | Giraldo 345 | HUA, NY | Churchill 1989 |
| <i>Mittenothamnium loriforme</i> (Hampe) Cardot | 4 | 2400 | 1 | Terr | MacDougal 4237 | HUA | Churchill & Linares 1995 |
| <i>Mittenothamnium reptans</i> (Hedw.) Cardot | 4 | 1100-3500 | 74 | Epi, Lig, Sax, Terr | Albert 8785 | HUA | Churchill <i>et al.</i> 1987 |
| <i>Phyllodon truncatulus</i> (Müll. Hal.) W.R. Buck | 4 | 1100 | 1 | Sax | Churchill 14851 | HUA, NY | Churchill 1991 |
| <i>Pylaisiella falcata</i> (Schimp.) Ando | 4 | 2680 | 1 | Terr | Churchill 13013 | NY | Churchill <i>et al.</i> 1987 |
| <i>Syringothecium sprucei</i> Mitt. | 4 | 1850 | 1 | Lig | Churchill 16405 | HUA, NY | Churchill & Linares 1995 |
| <i>Taxiphyllum taxirameum</i> (Mitt.) M. Fleisch. | 4 | 460-1030 | 2 | Sax | Churchill 17048 | HUA, MO, NY | Churchill 1988b |
| <i>Vesicularia vesicularis</i> (Schwägr.) Broth. | 4 | 50-1680 | 18 | Sax, Lig, Terr, (Epi) | Sastre 1424 | HUA, MO, NY, US | Churchill & Linares 1995 |
| Hypopterygiaceae | | | | | | | |
| <i>Hypopterygium tamarisci</i> (Sw.) Brid. ex Müll. Hal. | 4 | 1000-3120 | 36 | Sax, Lig, Terr, Epi | Churchill 13457 | HUA, NY, US | Churchill <i>et al.</i> 1987 |
| Lembophyllaceae | | | | | | | |
| <i>Orthostichella pentasticha</i> (Brid.) W.R. Buck | 4 | 1800-1900 | 2 | Epi | Callejas 10182 | HUA | Churchill & Linares 1995 |
| <i>Pilotrichella flexilis</i> (Hedw.) Ångström | 4 | 2000-3600 | 39 | Epi, (Lig, Terr, Sax) | Sastre 1448 | HUA, MO, NY, U, US | Churchill <i>et al.</i> 1987 |

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|---|--|----------------------------|---|-------------------------------|--|------------------------------|--|
| Lepyrodontaceae | | | | | | | |
| <i>Lepyrodon tomentosus</i> (Hook.) Mitt. | 4 | 3500 | 1 | Lig | Escobar 1011 | HUA, MO | Churchill 1989 |
| Leskeaceae | | | | | | | |
| <i>Haplocladium microphyllum</i> (Hedw.) Broth. | 4 | 1100-1850 | 2 | Sax | Churchill 14685 | COL, HUA, MO | Churchill & Linares 1995 |
| <i>Leskea angustata</i> Taylor | 4 | Sin Datos | 1 | Epi | Churchill 14035 | HUA, NY | Churchill 1988b |
| Leucobryaceae | | | | | | | |
| <i>Leucobryum albicans</i> (Schwägr.) Lindb. | 4 | Sin Datos | 2 | Epi | Daniel 4468 | US | Churchill <i>et al.</i> 2000 |
| <i>Leucobryum antillarum</i> Schimp. ex Besch. | 4 | 2338-2640 | 6 | Terr, Epi | Churchill 18729 | HUA, MO, NY | Churchill <i>et al.</i> 1987 |
| <i>Leucobryum crispum</i> Müll. Hal. | 4 | 1350-3110 | 18 | Terr, Epi | Fonnegra 4072 | HUA, NY | Churchill 1989 |
| <i>Leucobryum giganteum</i> Müll. Hal. | 4 | 800-2430 | 16 | Terr, Sax, Epi | Callejas 6565 | HUA, MO, NY, US | Churchill 1989 |
| <i>Leucobryum martianum</i> (Hornsch.) Hampe ex Müll. Hal. | 4 | 280-1750 | 12 (Terr) | Lig, Epi, | Churchill 14813 | HUA, MO, NY, US | Churchill 1989 |
| <i>Leucobryum polakowskyi</i> (Müll. Hal. ex Besch.) Cardot | 4 | 1940 | 1 | Lig | Sanchez 910 | NY | Churchill & Linares 1995 |
| Leucomiaceae | | | | | | | |
| <i>Leucomium strumosum</i> (Hornsch.) Mitt. | 4 | 80-2440 | 9 | Lig, Terr, Epi, (Sax) | Callejas 6775 | HUA, NY | Churchill 1989 |
| <i>Rhynchostegiopsis tunguraguana</i> (Mitt.) Broth. | 4 | 2500-3150 | 8 | Terr, Epi, (Lig) | Churchill 14255 | HUA, MO, US | Churchill & Sastre de Jesus 1987 |
| Meteoriaceae | | | | | | | |
| <i>Barbella trichophora</i> (Mont.) M. Fleisch. | ? | 2190-2400 | 4 | Epi | Escobar 74 | HUA, MO | Churchill & Linares 1995 |
| <i>Floribundaria flaccida</i> (Mitten) Brotherus | 1 | 1550 | 1 | Epi | Betancur 748 | HUA, MO | Churchill & Linares 1995 |
| <i>Papillaria deppei</i> (Hornsch. ex Müll. Hal.) A. Jaeger | 4 | 1620-3500 | 6 | Epi, Sax | Churchill 13280 | HUA | Churchill & Linares 1995 |
| <i>Papillaria imponderosa</i> (Taylor) Broth. | 4 | 1700-3300 | 39 | Epi,Sax, Terr, Lig | Churchill 15444 | HUA, MO, NY | Churchill & Linares 1995 |
| <i>Papillaria nigrescens</i> (Sw. ex Hedw.) A. Jaeger | 4 | 80-2600 | 34 | Epi, Lig, Sax, (Terr) | Churchill 15829 | HUA, NY, US | Churchill & Linares 1995 |
| <i>Papillaria penicillata</i> (Dozy & Molke.) Broth. | ? | 2100-2900 | 2 | Epi | Escobar 1082 | HUA | Churchill & Linares 1995 |
| Mniaceae | | | | | | | |
| <i>Plagiomnium rhynchophorum</i> (Hook.) T.J. Kop. | 4 | 890-2740 | 23 | Terr, Lig, (Sax, Epi) | Churchill 13041 | HUA, NY | Churchill <i>et al.</i> 1987 |
| <i>Pohlia elongata</i> Hedw. | 4 | 2650-2750 | 1 | Terr, Sax | Churchill 17842 | HUA, MO, NY | Churchill <i>et al.</i> 2000 |
| <i>Pohlia papillosa</i> (Müll. Hal. ex A. Jaeger) Broth. | 4 | 3500 | 1 | Terr | Churchill 15741 | HUA, MO, NY | Churchill 1989 |
| <i>Pohlia richardsii</i> A.J. Shaw | 4 | 2440 | 1 | Sax | Albert 5413 | NY | Churchill 1991 |
| Myriniaceae | | | | | | | |
| <i>Helicodontium capillare</i> (Hedw.) A. Jaeger | 4 | 1100-2410 | 5 | Epi, Lig, Terr | Fonnegra 2480 | NY | Churchill & Sastre de Jesus 1987 |
| Neckeraceae | | | | | | | |
| <i>Isodrepanium lentulum</i> (Wilson) E. Britton | 4 | 1850-1900 | 2 | Epi, Terr | Churchill 16421 | HUA, MO, NY, PSO | Churchill 1989 |

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|--|--|----------------------------|---|-------------------------------|--|------------------------------|---------------------------------|
| <i>Neckera chilensis</i> Schimp. ex Mont. | 4 | 2520-3500 | 12 | Epi, (Lig) | Churchill 13267 | NY, US | Churchill 1989 |
| <i>Neckera scabridens</i> Müll. Hal. | 4 | 2100-3000 | 19 | Epi, Lig, (Sax) | Sastre 859 | HUA, NY, US | Churchill 1989 |
| <i>Neckera urnigera</i> Müll. Hal. | 4 | 1500 | 1 | Epi | Archer 157a | NY | Churchill 1989 |
| <i>Neckeropsis disticha</i> (Hedw.) Kindb. | 4 | 50-1300 | 2 | Sax | Sastre 1416 | HUA, NY, U, US | Churchill <i>et al.</i> 1987 |
| <i>Neckeropsis undulata</i> (Hedw.) Reichardt | 4 | 100-1830 | 19 | Epi, Sax, (Lig) | Sastre 1400 | HUA, NY | Churchill <i>et al.</i> 1987 |
| <i>Porothamnium elatulum</i> (Müll. Hal.) M. Fleisch. | 1 | 3000-3600 | 1 | | Wallis s.n. | BM, NY | Churchill & Ellis in prep. |
| <i>Porotrichodendron lindigii</i> (Hampe) W. R. Buck | 4 | 130-2660 | 19 | Epi, Lig, (Sax) | Churchill 15720 | HUA, U, US | Churchill <i>et al.</i> 1987 |
| <i>Porotrichodendron superbum</i> (Taylor) Broth. | 4 | 3320-3500 | 6 | Terr, Sax, (Epi) | Churchill 13279a | HUA, MO, U | Churchill 1989 |
| <i>Porotrichum expansum</i> (Taylor) Mitt. | 4 | 2040-2400 | 2 | Sax | Callejas 3867 | NY | Churchill 1989 |
| <i>Porotrichum korthalsianum</i> (Dozy & Molk.) Mitt. | 4 | 1850 | 2 | Lig, Epi | Echeverri 353 | HUA, NY | Churchill 1989 |
| <i>Porotrichum lancifrons</i> (Hampe) Mitt. | 4 | 2400-3500 | 6 | Sax, Ef, Epi, Terr | Churchill 16386 | HUA, MO, NY | Churchill & Linares 1995 |
| <i>Porotrichum longirostre</i> (Hook.) Mitt. | 4 | 1100-3500 | 15 | Epi, Lig, Sax, Terr | Churchill 15624 | HUA, U | Churchill 1989 |
| <i>Porotrichum mutabile</i> Hampe | 4 | 1430-1690 | 17 | Epi, (Sax) | Churchill 15543 | HUA, US | Churchill 1989 |
| <i>Porotrichum substriatum</i> (Hampe) Mitt. | 4 | 1520-1680 | 1 | Epi | Callejas 3333 | NY | Churchill 1989 |
| <i>Thamnobryum fasciculatum</i> (Sw. ex Hedw.) I. Sastre | 4 | 800-1830 | 9 | Sax, Terr | Churchill 15046 | HUA, MO, NY, US | Churchill & Linares 1995 |
| Orthodontiaceae | | | | | | | |
| <i>Orthodontium pellucens</i> (Hook.) B.S.G. | 4 | 1980-2940 | 10 | Terr, Epi, | Churchill 15595 (Lig) | HUA, MO, NY, U | Churchill 1988b |
| Orthotrichaceae | | | | | | | |
| <i>Groutiella apiculata</i> (Hook.) H.A. Crum & Steere | 4 | 250-2030 | 8 | Epi, Sax, (Terr) | Churchill 14399 | HUA | Churchill & Linares 1995 |
| <i>Groutiella chimborazensis</i> (Spruce ex Mitt.) Florsch. | 4 | 1430-1830 | 1 | Lig | Sastre 931 | HUA | Churchill 1989 |
| <i>Macromitrium aureum</i> Müll. Hal. | 3 | 2300-2450 | 1 | Epi | Callejas 7374 | MO | Churchill & Linares 1995 |
| <i>Macromitrium cirrosum</i> (Hedw.) Brid. | 4 | 1160-3000 | 16 | Lig, Epi, Terr, (Sax) | Churchill 15011 | NY | Churchill & Linares 1995 |
| <i>Macromitrium contextum</i> Hampe | 4 | 1000-1300 | 1 | Epi | Churchill 17819 | HUA, NY | Churchill 1988b |
| <i>Macromitrium guatemalense</i> Müll. Hal. | 4 | 2400-2750 | 4 | Epi, Lig | Giraldo 318 | HUA, MO, NY | Churchill 1989 |
| <i>Macromitrium longifolium</i> (Hook.) Brid. | 4 | 1200-3100 | 26 | Epi, Terr, Lig, (Sax) | Churchill 17836 | HUA, NY | Churchill 1989 |
| <i>Macromitrium podocarpi</i> Müll. Hal. | 4 | 1000-3150 | 14 | Epi, Lig, (Sax) | Churchill 14224 | MO, HUA | Churchill 1989 |
| <i>Macromitrium punctatum</i> (Hook. & Grev.) Brid. | 4 | 2340-2750 | 2 | Lig, Epi | Churchill 14196 | HUA, MO, NY, U, US | Churchill 1989 |
| <i>Macromitrium scoparium</i> Mitt. | 4 | 1800-3338 | 4 | Epi, Lig | Churchill 17847 | HUA, NY | Churchill 1989 |
| <i>Macromitrium stellulatum</i> (Hornsch.) Brid. | 4 | 910-1030 | 1 | Lig | Sastre de Jesus 1101 | HUA, MO, NY | Churchill 1989 |
| <i>Macromitrium subcirrhosum</i> Müll. Hal. | 4 | 1850-3000 | 3 | Epi | Churchill 14657 | HUA, MO, NY, U, US | Churchill 1988b |

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|---|--|----------------------------|---|-------------------------------|--|------------------------------|---------------------------------|
| <i>Macromitrium tocaremae</i> Hampe | 4 | Sin Datos | 1 | S.D. | Churchill 16378 | ALTA, HUA | Churchill & Linares 1995 |
| <i>Macromitrium tonduzii</i> Renauld & Cardot | ? | 2338 | 1 | Epi | Churchill 13197d | HUA, NY | Com. Pers. Churchill |
| <i>Macromitrium trinitense</i> R.S. Williams | 4 | 2800-3000 | 1 | Lig | Charetier 155 | US | Churchill 1989 |
| <i>Macromitrium ulophyllum</i> Mitt. | 4 | 2460-3500 | 5 | Epi, Lig | Churchill 14221 | HUA, MO, NY | Churchill 1991 |
| <i>Orthotrichum aequatoreum</i> Mitt. | 4 | 2000 | 1 | Epi | Churchill 18717 | HUA, MO | Churchill <i>et al.</i> 1987 |
| <i>Orthotrichum elongatum</i> Taylor | 4 | 3600 | 1 | | Churchill 14184c | HUA, NY | Churchill 1991 |
| <i>Orthotrichum pycnophyllum</i> Schimp. | 4 | 2000 | 1 | Epi | Wallis s.n. | BM, NY, H | Churchill & Ellis in prep. |
| <i>Schlotheimia angustata</i> Mitt. | 4 | 1100-2120 | 4 | Epi, (Lig) | Churchill 14184a | HUA, NY | Churchill 1991 |
| <i>Schlotheimia rugifolia</i> (Hook.) Schwägr. | 4 | 1600-2240 | 2 | Epi | MacDougal 3662a | MO | Churchill <i>et al.</i> 2000 |
| <i>Floribundaria flaccida</i> (Mitten) Broth. | 4 | 1600 | 1 | Sax | Callejas 7975 | HUA, MO, NY, US | Churchill 1988b |
| <i>Schlotheimia torquata</i> (Sw. ex Hedw.) Brid. | 4 | 1850-2600 | 6 | Epi, Lig | Churchill 13997 | MO, HUA, NY | Churchill 1988b |
| <i>Zygodon obtusifolius</i> Hook. | 4 | 2000 | 1 | Epi | Churchill 14122 | HUA, NY | Churchill 1989 |
| <i>Zygodon peruvianus</i> Sull. | 3 | 3500 | 1 | Epi | Churchill 13270 | HUA, MO, NY | Churchill 1989 |
| <i>Zygodon reinwardtii</i> (Hornsch.) A. Braun | 4 | 2000-3500 | 24 | Epi, Lig, (Terr) | Churchill 14009 | HUA, NY, US | Churchill <i>et al.</i> 1987 |
| Phylloprepaniaceae | | | | | | | |
| <i>Mniomalia viridis</i> (Mitt.) Müll. Hal. | 4 | 200 | 1 | Lig | Sastre 1007 | HUA, NY | Churchill <i>et al.</i> 1987 |
| <i>Phylloprepanium falcifolium</i> (Schwägr.) Crosby | 4 | 110-200 | 4 | Lig, Epi | Sastre 952 | HUA, NY | Churchill <i>et al.</i> 1987 |
| Phyllogoniaceae | | | | | | | |
| <i>Phyllogonium fulgens</i> (Hedw.) Brid. | 4 | 1430-2900 | 25 | Epi, (Lig, Sax) | Churchill 13989 | HUA, MO, NY, US | Churchill <i>et al.</i> 1987 |
| <i>Phyllogonium viscosum</i> (P. Beauv.) Mitt. | 4 | 1440-3550 | 29 | Epi, Terr, (Lig) | Londono 744 | HUA, NY | Churchill <i>et al.</i> 1987 |
| Pilotrichaceae | | | | | | | |
| <i>Actinodontium integrifolium</i> (Broth.) S. P. Churchill | 4 | 2440 | 1 | Lig | Churchill 15485 | HUA | Churchill 1989 |
| <i>Actinodontium sprucei</i> (Mitt.) A. Jaeger | 4 | 2500 | 1 | Epi | Sastre 1914 | HUA, NY | Churchill 1989 |
| <i>Amblytropis hispidula</i> (Mitt.) Broth. | 3 | 2500 | 1 | Epi | Sanchez 580 | MEDEL, NY | Churchill 1989 |
| <i>Brymela websteri</i> (H.A. Crum & E.B. Bartram) W.R. Buck | 4 | 2660 | 1 | Sax | Churchill 12953a | MO | Com. Pers. Churchill |
| <i>Callicostella depressa</i> (Hedw.) A. Jaeger | 4 | 850-1000 | 1 | Epi | Giraldo 887 | HUA | Churchill & Linares 1995 |
| <i>Callicostella pallida</i> (Hornsch.) Ångström | 4 | 20-1165 | 12 | Lig, (Epi) | Churchill 17094 | HUA, MO, NY, US | Churchill 1989 |
| <i>Callicostella rivularis</i> (Mitt.) A. Jaeger | 4 | 280-820 | 2 | Sax, Epi | Churchill 14937 | HUA, NY | Churchill 1989 |
| <i>Callicostella tenerrima</i> E.B. Bartram | 4 | 280 | 1 | Lig | Churchill 14887 | MO, NY, US | Churchill & Linares 1995 |
| <i>Crossomitrium epiphyllum</i> (Mitt.) Müll. Hal. | 4 | 1100-1830 | 2 | Ef, Epi | Churchill 15027 | HUA, NY | Churchill 1991 |

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|--|--|---------------------|--|--------------------------|---|-----------------------|--|
| <i>Crossomitrium patrisiae</i> (Brid.) Müll. Hal. | 4 | 1130-2000 | 11 | Ef, Epi, | Churchill 14811 (Lig) | HUA, COL, NY, US | Churchill & Sastre de Jesus 1987 |
| <i>Crossomitrium sintenissii</i> Müll. Hal. | 4 | 1000-1650 | 4 | Ef, Epi, Terr | Churchill 14811 | HUA, MO, NY | Churchill & Linares 1995 |
| <i>Cyclodictyon albicans</i> (Hedw.) Kuntze | 4 | 840-2440 | 13 | Sax, Lig, (Terr, Epi) | Churchill 14425 | MO, HUA, NY | Churchill 1989 |
| <i>Cyclodictyon chimborazense</i> (Mitt.) Kuntze | 3 | 2000 | 1 | Lig | Sanchez 1576b | NY, MEDEL | Churchill 1991 |
| <i>Cyclodictyon roridum</i> (Hampe) Kuntze | 4 | 2500 | 1 | S.D. | Sastre 879 | HUA, NY | Churchill & Linares 1995 |
| <i>Cyclodictyon rubrisetum</i> (Mitt.) Kuntze | 4 | 2400-3500 | 2 | Terr, Lig | Churchill 13384 | HUA, MO, NY | Churchill 1989 |
| <i>Cyclodictyon subtortifolium</i> (E.B. Bartram) W.R. Buck | 4 | 2000 | 1 | Sax | Churchill 14206 | HUA | Churchill 1988b |
| <i>Hypnella diversifolia</i> (Mitt.) A. Jaeger | 4 | 1700-3000 | 22 | Epi, Lig, (Ef, Lig) | Sastre 1072 | HUA, MO, NY, U, US | Churchill 1989 |
| <i>Hypnella pilifera</i> (Hook. f. & Wilson) A. Jaeger | 4 | 820-3000 | 9 | Epi, Lig, Sax | Churchill 15615 | HUA, MO, NY, U | Churchill & Sastre de Jesus 1987 |
| <i>Lepidopilum arcuatum</i> Müll. Hal. | 4 | 2400 | 1 | | Wallis s.n. | BM | Churchill & Ellis in prep. |
| <i>Lepidopilum brevipes</i> Mitt. | 4 | 1430-3000 | 8 | Epi, (Lig) | Churchill 15026 | HUA | Churchill 1989 |
| <i>Lepidopilum cubense</i> (Sull.) Mitt. | 4 | 110-130 | 1 | Epi | Churchill 17098 | HUA | Churchill & Linares 1995 |
| <i>Lepidopilum erectiusculum</i> (Taylor) Mitt. | 4 | 1450-1500 | 1 | Epi | Pipoly 17306 | JAUM, MO | Com. Pers. Churchill |
| <i>Lepidopilum inflexum</i> Mitt. | 4 | 1850 | 1 | Epi | Churchill 16402 | HUA, NY | Churchill & Linares 1995 |
| <i>Lepidopilum longifolium</i> Hampe | 4 | 1790-3500 | 17 | Epi | Churchill 13941 | HUA, US | Churchill 1989 |
| <i>Lepidopilum muelleri</i> (Hampe) Spruce | 4 | 1710-2700 | 13 | Epi, (Lig) | Churchill 15483 | HUA, NY | Churchill 1989 |
| <i>Lepidopilum polytrichoides</i> (Hedw.) Brid. | 4 | 80-110 | 5 | Epi, Terr, (Sax) | Churchill 14950 | HUA, MO, NY | Churchill & Sastre de Jesus 1987 |
| <i>Lepidopilum scabrisetum</i> (Schwägr.) Steere | 4 | 80-2900 | 11 | Epi, Terr, (Sax) | Churchill 14588 | HUA, NY | Churchill & Sastre de Jesus 1987 |
| <i>Lepidopilum stillicidiorum</i> Mitt. | 4 | 2100-2400 | 5 | Sax, Terr | Churchill 15820 | HUA, MO, NY | Churchill & Ellis in prep. |
| <i>Lepidopilum surinamense</i> Müll. Hal. | 4 | 110-280 | 2 | Epi | Churchill 17093 | HUA, MO, NY | Churchill 1988b |
| <i>Lepidopilum tortifolium</i> Mitt. | 4 | 1710-2600 | 3 | Sax, Terr | Churchill 15042 | HUA, NY | Churchill & Sastre de Jesus 1987 |
| <i>Pilotrichidium callicostatum</i> (Müll. Hal.) A. Jaeger | 4 | 110 | 1 | Sax | Callejas 2799 | HUA, NY | Churchill 1989 |
| <i>Pilotrichum fendleri</i> Müll. Hal. | 4 | 280-300 | 1 | Epi | Churchill 14936 | HUA, NY | Churchill & Ellis in prep. |
| <i>Pilotrichum bipinnatum</i> (Schwägr.) Brid. | 4 | 280 | 1 | Lig | Churchill 14900 | HUA, NY | Churchill & Linares 1995 |
| <i>Pilotrichum ramosissimum</i> Mitt. | 4 | 1110 | 1 | Lig, Epi | Callejas 2788 | HUA, NY | Churchill & Linares 1995 |

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|--|--|----------------------------|---|-------------------------------|--|------------------------------|---------------------------------|
| <i>Stenodictyon wrightii</i> (Sull. & Lesq.) Crosby | 4 | 1610-3500 | 4 | Terr | Churchill 13093b | HUA, NY, MO | Churchill & Linares 1995 |
| <i>Thamniopsis incurva</i> (Hornsch.) W.R. Buck | 4 | 1150-1450 | 1 | Lig | Callejas 9072 | NY | Churchill & Linares 1995 |
| <i>Thamniopsis killipii</i> (R.S. Williams) E.B. Bartram | 4 | 1600-2030 | 5 | Sax, (Terr, Epi) | Churchill 18345 | HUA, MO, NY | Churchill 1988b |
| <i>Thamniopsis pendula</i> (Hook.) M. Fleisch. | 4 | 1200-2430 | 6 | Sax, (Terr) | Churchill 15399 | HUA, MO, NY | Churchill 1989 |
| <i>Thamniopsis purpureophylla</i> (Müll. Hal. ex E. Britton) W.R. Buck | 4 | 2310 | 2 | Terr | Churchill 13093 | HUA, NY | Churchill <i>et al.</i> 2000 |
| <i>Thamniopsis sinuata</i> (Mitt.) W.R. Buck | 4 | 1110-1920 | 2 | Sax, Epi | Callejas 2792 | HUA, NY | Churchill & Linares 1995 |
| <i>Thamniopsis undata</i> (Hedw.) W.R. Buck | 4 | 1110-2960 | 18 | Terr, Lig, (Epi, Sax) | Churchill 13059 | HUA, MO, NY | Churchill & Linares 1995 |
| <i>Trachyxiphium glanduliferum</i> (Hampe) S.P. Churchill & E. Linares | 4 | 1500-2580 | 2 | Epi, Sax | Churchill 12998b | NY | Churchill & Linares 1995 |
| <i>Trachyxiphium guadalupense</i> (Spreng.) W.R. Buck | 4 | 1910-2660 | 7 | Epi, Lig, Sax | Churchill 12919 | HUA, NY, US | Churchill 1989 |
| <i>Trachyxiphium heteroicum</i> (Cardot) W.R. Buck | ? | 1810-1840 | 1 | Sax | Churchill 16408 | MO | Com. Pers. Churchill |
| <i>Trachyxiphium steerei</i> (D.G. Griffin) S.P. Churchill | 4 | 3500 | 1 | Acu | Churchill 13356b | HUA, MO, NY, PSO | Churchill & Linares 1995 |
| <i>Trachyxiphium subfalcatum</i> (Hampe) W.R. Buck | 4 | 1020-2895 | 14 | Epi, Lig, (Terr) | Churchill 15548 | HUA, MO, NY | Churchill 1989 |
| <i>Trachyxiphium tenue</i> (Mitt.) W.R. Buck | 3 | 2480 | 1 | Terr | Churchill 15466 | MO, NY | Churchill & Linares 1995 |
| Plagiotheciaceae | | | | | | | |
| <i>Plagiothecium drepanophyllum</i> Renauld & Cardot | 4 | 2500 | 1 | Terr | Churchill 14101 | HUA, NY | Churchill 1989 |
| <i>Plagiothecium lucidum</i> (Hook. f. & Wilson) Paris | 4 | 2500-3000 | 3 | Epi, Terr | Churchill 17859 | HUA, MO, NY | Churchill 1989 |
| <i>Plagiothecium novogranatense</i> (Hampe) Mitt. | 4 | 2400-2600 | 4 | Sax, Terr | Churchill 15721 | HUA, NY, U, US | Churchill 1989 |
| Polytrichaceae | | | | | | | |
| <i>Atrichum polycarpum</i> (Müll. Hal.) Mitt. | 4 | 1000-2800 | 42 | Terr, (Sax, Lig, Epi) | Churchill 12869 | COL, HUA, MO, NY, U | Churchill <i>et al.</i> 1987 |
| <i>Pogonatum campylocarpon</i> (Müll. Hal.) Mitt. | 4 | 2800-3500 | 2 | Terr, Sax | Churchill 14291 | HUA, MO, NY | Churchill & Linares 1995 |
| <i>Pogonatum neglectum</i> (Hampe) A. Jaeger | 4 | 1900-3500 | 15 | Terr | Sastre 1328 | HUA, MO, U, US | Churchill 1989 |
| <i>Pogonatum pensilvanicum</i> Bartram ex Hedw.) P. Beauv. | 4 | 1790 | 1 | Terr | Churchill 14580 | HUA | Churchill & (W. Linares 1995 |
| <i>Pogonatum semipellucidum</i> (Hampe) Mitt. | 4 | 2150-2850 | 16 | Terr, (Epi, Lig) | Sastre 1478 | HUA, U, US | Churchill 1989 |
| <i>Pogonatum tortile</i> (Sw.) Brid. Linares 1995 | 4 | 1000-1300 | 2 | Terr | Churchill 14319 | HUA, NY | Churchill & |
| <i>Polytrichadelphus abriaquiae</i> (Müll. Hal.) A. Jaeger | 3 | 3000 | 2 | Terr | Churchill 18483 | HUA, HUA, NY | Churchill & Ellis in prep. |
| <i>Polytrichadelphus aristatus</i> (Hampe) Mitt. | 4 | 1500-3500 | 15 | Terr, (Sax) | Sastre 926 | HUA, NY, U | Churchill <i>et al.</i> 1987 |
| <i>Polytrichadelphus ciliatus</i> (Hook. & Wilson) Mitt. | 3 | 2445-3500 | 9 | Terr, (Sax) | Churchill 15738 | HUA, MO, NY, US | Churchill <i>et al.</i> 1987 |

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|---|--|----------------------------|---|-------------------------------|--|------------------------------|--|
| <i>Polytrichadelphus longisetus</i> (Brid.) Mitt. | 3 | 1300-3450 | 35 | Terr, (Sax, Lig) | Roldan 1293a | HUA, NY | Churchill <i>et al.</i> 1987 |
| <i>Polytrichum juniperinum</i> Hedw. | 4 | 870-3550 (Lig) | 65 | Terr, Sax, | Churchill 15530 | HUA, MO, NY, U | Churchill <i>et al.</i> 1987 |
| <i>Steereobryon subulirostrum</i> (Schimp. ex Besch.) G.L. Sm. | 4 | 1790 | 2 | Terr | Churchill 14546 | HUA, NY | Churchill & Sastre de Jesus 1987 |
| Pottiaceae | | | | | | | |
| <i>Barbula indica</i> (Hook.) Spreng. var <i>indica</i> | 4 | 1470-1650 | 2 | Terr | Betancur 847 | COL, MO, NY | Churchill 1989 |
| <i>Bryoerythrophyllum campylocarpum</i> (Müll. Hal.) H.A. Crum | 4 | 2400-3150 | 4 | Sax | Churchill 15703 | COL, HUA | Churchill & Linares 1995 |
| <i>Bryoerythrophyllum jamesonii</i> (Taylor) H.A. Crum | 4 | 2245-3550 | 8 | Terr | Churchill 12867 | HUA, MO, NY | Churchill <i>et al.</i> 1987 |
| <i>Didymodon icmadophila</i> (Schimp. ex Müll. Hal.) K. Saito | ? | 2900-3100 | 3 | Terr | Fonnegra 3797 | NY | Churchill & Linares 1995 |
| <i>Didymodon rigidulus</i> Hedw. var <i>rigidulus</i> | 4 | 1470 | 1 | Terr | Escobar 621 | NY | Churchill <i>et al.</i> 1987 |
| <i>Didymodon taylorii</i> R.H. Zander | 3 | 2530-2680 | 1 | Terr | Luteyn 7139 | NY | Churchill <i>et al.</i> 2000 |
| <i>Dolotortula mniifolia</i> (Sull.) R.H. Zander | 4 | 910-1030 | 1 | Terr | Churchill 14602 | NY | Churchill & Linares 1995 |
| <i>Hymenostylium recurvirostre</i> (Hedw.) Dixon | 4 | 910 | 1 | Sax | Churchill 14666 | HUA, NY | Churchill <i>et al.</i> 2000 |
| <i>Hyophila involuta</i> (Hook.) A. Jaeger | 4 | 45-2440 | 19 | Terr, Sax | Churchill 15670 | HUA, MO, NY | Churchill <i>et al.</i> 1987 |
| <i>Leptodontium filicola</i> Herzog Linares 1995 | 4 | 2400 | 1 | Terr | Albert 8740 | HUA, MO | Churchill & |
| <i>Leptodontium flexifolium</i> (Dicks.) Hampe | 4 | 2500-3500 | 3 | Terr | Churchill 14095 | HUA, NY | Churchill 1989 |
| <i>Leptodontium longicaule</i> Mitt. var. <i>microruncinatum</i> (Dusén) R. H. Zander | ? | 1850-1940 | 14 | Terr, (Epi) | Churchill 15740 | HUA, MO, NY | Churchill <i>et al.</i> 1989 |
| <i>Leptodontium longicaule</i> var. <i>microruncinatum</i> | ? | 1900 | 1 | S.D. | Daniel 3404b | US | Churchill & Linares 1995 |
| <i>Leptodontium luteum</i> (Taylor) Mitt. | 4 | 2350-3500 | 11 | Terr, (Epi) | Churchill 13330 | HUA, MO, NY | Churchill <i>et al.</i> 1987 |
| <i>Leptodontium syntrichioides</i> (Müll. Hal.) Paris | 4 | 3000-3600 | 1 | | Wallis s.n. | BM | Churchill & Ellis in prep. |
| <i>Leptodontium viticulosoides</i> var. <i>sulphureum</i> (Müll. Hal.) R.H. Zander | 4 | 2445-2500 | 22 | Epi, Terr, Sax, (Lig) | Charetier 145 | US | Churchill & Linares 1995 |
| <i>Pseudocrossidium replicatum</i> (Taylor) R.H. Zander | 4 | 910 | 1 | Sax | Churchill 14628 | HUA, MO | Churchill 1991 |
| <i>Pseudosymblypharis schimperiana</i> (Paris) H.A. Crum | 4 | 2200-2400 | 1 | Lig | Churchill 14079 | HUA, MO | Churchill & Linares 1995 |
| <i>Sagenotortula quitoensis</i> (Taylor) R.H. Zander | 4 | 3420 | 1 | Terr | Londoño 567 | MEDEL, MO | Churchill <i>et al.</i> 2000 |
| <i>Streptopogon calymperes</i> Müll. Hal. | 4 | 1410-2690 | 7 | Epi, (Lig, Sax) | Churchill 14577 | HUA, MO, NY, U | Churchill <i>et al.</i> 1987 |
| <i>Streptopogon cavifolius</i> Mitt. | 4 | 1790 | 1 | Lig | Churchill 14590b | NY | Churchill & Linares 1995 |

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|---|--|----------------------------|---|-------------------------------|--|------------------------------|--|
| <i>Streptopogon erythrodontus</i> (Taylor) Wilson | 4 | 2680 | 1 | Epi | Churchill 12025b | NY, NY | Churchill <i>et al.</i> 1987 |
| <i>Syntrichia amphidiacea</i> (Müll. Hal.) R.H. Zander | 4 | 2200 | 2 | Epi | Fonnegra 2480b | NY | Churchill & Linares 1995 |
| <i>Syntrichia fragilis</i> (Taylor) Ochyra | 4 | Sin Datos | 1 | S.D. | Charetier 152 | NY | Churchill <i>et al.</i> 2000 |
| <i>Syntrichia pagorum</i> (Milde) J.J. Amann | 4 | 1485 | 1 | Epi | Parra 29 | HUA, MO, NY | Churchill <i>et al.</i> 2000 |
| <i>Trichostomum brachydontium</i> Bruch | 4 | 770-3500 | 4 | Terr, Sax | Churchill 13333 | NY | Churchill <i>et al.</i> 1987 |
| <i>Trichostomum tenuirostre</i> (Hook. & Taylor) Lindb. | 4 | 180-3000 | 13 | Sax, Terr, (Lig) | Churchill 14179 | HUA, MO, NY | Churchill & Linares 1995 |
| <i>Weissia jamaicensis</i> (Mitt.) Grout | 4 | 910-1030 | 2 | Sax, Terr | Churchill 14616 | HUA, MO, NY | Churchill & Linares 1995 |
| Prinodontaceae | | | | | | | |
| <i>Prionodon densus</i> (Sw. ex Hedw.) Müll. Hal. | 4 | 1430-2870 | 30 | Epi, Lig, (Terr, Sax) | Sastre 1485 | HUA, MO, U, US | Churchill <i>et al.</i> 1987 |
| <i>Prionodon fuscolutescens</i> Hampe | 4 | 1780-3500 | 19 | Epi, (Lig, Sax) | Sastre 1473 | HUA, MO, NY | Churchill <i>et al.</i> 1987 |
| Pterobryaceae | | | | | | | |
| <i>Calypothecium duplicatum</i> (Schwägr.) Broth. | 4 | 910-1680 | 2 | Epi, Sax | Callejas 3345 | HUA | Churchill & Sastre de Jesus 1987 |
| <i>Calypothecium planifrons</i> (Renauld & Paris) Argent | ? | 1030 | 3 | Epi, Lig | Churchill 14781 | HUA, MO | Churchill & Linares 1995 |
| <i>Henicodium geniculatum</i> (Mitt.) W.R. Buck | 4 | 120-1165 | 3 | Epi | Churchill 17117 | HUA, MO, NY | Churchill <i>et al.</i> 2000 |
| <i>Hildebrandtiella guyanensis</i> (Mont.) W.R. Buck | 4 | 880-1030 | 2 | Lig | Churchill 14783 | HUA | Churchill & Linares 1995 |
| <i>Jaegerina scariosa</i> (Lorentz) Arzeni | 4 | 1000-1165 | 2 | Epi, Lig | Churchill 14743 | HUA | Churchill & Sastre de Jesus 1987 |
| <i>Orthostichopsis praetermissa</i> W.R. Buck | 4 | 1000-1300 | 2 | Epi | Giraldo 903 | HUA, MO | Churchill & Linares 1995 |
| <i>Orthostichopsis tetragona</i> (Sw. ex Hedw.) Broth. | 4 | 50-1300 | 6 | Epi | Callejas 5114 | HUA | Churchill 1991 |
| <i>Pireella pohlii</i> (Schwägr.) Cardot | 4 | 130 | 1 | Epi | Sastre 1370 | HUA | Churchill & Linares 1995 |
| <i>Pterobryon densum</i> Hornsch. | 4 | 1800-3070 | 16 | Epi, Lig | Churchill 15866 | HUA, US | Churchill <i>et al.</i> 1987 |
| <i>Pterobryon excelsum</i> Müll. Hal. | 1 | 2400 | 1 | | Wallis s.n. | BM, NY | Churchill & Ellis in prep. |
| Racopilaceae | | | | | | | |
| <i>Racopilum intermedium</i> Hampe | 3 | 1695-3300 | 3 | Epi, (Terr) | Churchill 15457 | HUA, MO, NY | Churchill <i>et al.</i> 2000 |
| <i>Racopilum tomentosum</i> (Hedw.) Brid. | 4 | 650-3200 | 32 | Epi, Sax, Terr, (Lig) | Churchill 15702 | HUA, NY, US | Churchill <i>et al.</i> 1987 |
| Rhacocarpaceae | | | | | | | |
| <i>Rhacocarpus purpurascens</i> (Brid.) Paris | 4 | 2170-3500 | 20 | Sax, Terr | Churchill 12926 | HUA, MO, NY, U, US | Churchill <i>et al.</i> 1987 |
| Rhizogoniaceae | | | | | | | |
| <i>Leptotheca boliviana</i> Herzog | 4 | 1850-3400 | 12 | Epi, Lig, (Terr) | Churchill 13115 | HUA, NY, U | Churchill <i>et al.</i> 1987 |
| <i>Pyrrhobryum mnioides</i> (Hook.) Manuel | 4 | 3000-3500 | 3 | Epi, Terr | MacDougal 4440 | HUA, NY | Churchill <i>et al.</i> 1987 |

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|--|--|----------------------------|---|-------------------------------|--|------------------------------|--|
| <i>Pyrrhobryum spiniforme</i> (Hedw.) Mitt. | 4 | 850-2900 | 46 | Epi, Lig, (Terr, Sax) | Betancur 1818 | HUA, NY, PSO | Churchill <i>et al.</i> 1987 |
| <i>Rhizogonium novaehollandiae</i> (Brid.) Brid. | 4 | 1850-3500 | 10 | Epi, Lig, Terr, Sax | Churchill 17810 | HUA, MO, NY | Churchill & Linares 1995 |
| Rutenbergiaceae | | | | | | | |
| <i>Pseudocryphaea domingensis</i> (Spreng.) W.R. Buck | 4 | 250-2165 | 9 | Epi, Lig, Sax | Churchill 14837 | HUA, MO, NY | Churchill & Sastre de Jesus 1987 |
| Seligeriaceae | | | | | | | |
| <i>Blindia magellanica</i> Schimp. | 4 | 3320-3500 | 2 | Sax, Terr | Churchill 13441 | COL, HUA, MO, NY | Churchill 1989 |
| Sematophyllaceae | | | | | | | |
| <i>Acroporium estrellae</i> (Müll. Hal.) W.R. Buck & Schaf.-Verw. | 4 | 2440-2880 | 3 | Epi, Lig | Callejas 3392b | NY | Churchill & Linares 1995 |
| <i>Acroporium pungens</i> (Hedw.) Broth. | 4 | 80-2530 | 55 | Epi, Lig, (Terr) | Giraldo 898 | HUA, NY | Churchill <i>et al.</i> 1987 |
| <i>Aptychella prolifera</i> (Broth.) Herzog | 4 | 2340-2750 | 13 | Epi, (Lig) | Churchill 17857 | HUA, NY | Churchill <i>et al.</i> 1987 |
| <i>Heterophyllum affine</i> (Hook.) M. Fleisch. | 4 | 2445-4000 | 12 | Epi, Lig, Terr | Churchill 15590 | HUA, MO, NY, U | Churchill & Sastre de Jesus 1987 |
| <i>Meiothecium revolubile</i> Mitt. | 4 | 1000-1200 | 1 | Epi | Giraldo 175 | NY | Churchill & Linares 1995 |
| <i>Pterogonidium pulchellum</i> (Hook.) Müll. Hal. | 4 | 280 | 1 | Epi | Churchill 14949 | HUA, NY | Churchill 1991 |
| <i>Sematophyllum adnatum</i> (Michx.) E. Britton | 4 | 280 | 1 | Lig | Churchill 14886 | HUA | Churchill & Sastre de Jesus 1987 |
| <i>Sematophyllum aureosulphureum</i> (Müll. Hal.) Broth. | 3 | 2340-3000 | 6 | Epi, (Lig) | Churchill 18669 | COL, HUA, MO, NY | Churchill 1989 |
| <i>Sematophyllum chlorocormum</i> (Müll. Hal.) W.R. Buck, S.P. Churchill & I. Sastre | 3 | 280 | 1 | Epi | Churchill 14923 | HUA, MO | Churchill & Sastre de Jesus 1987 |
| <i>Sematophyllum cuspidiferum</i> Mitt. | 4 | 1250-3000 | 7 | Terr, Sax, (Lig) | Fonnegra 4078 | HUA, NY | Churchill <i>et al.</i> 1987 |
| <i>Sematophyllum galipense</i> (Müll. Hal.) Mitt. | 4 | 400-1790 | 12 | Sax, Terr, (Epi) | Giraldo 281 | HUA, NY | Churchill 1991 |
| <i>Sematophyllum oedophysidium</i> W.R. Buck | 2 | 1800 | 1 | Terr | Callejas 9104 | HUA, NY | Churchill & Sastre de Jesus 1987 |
| <i>Sematophyllum subbrachycarpum</i> (Hampe) Mitt. | 3 | 1430-1525 | 3 | Lig | Churchill 18736 | HUA, MO, NY | Churchill 1991 |
| <i>Sematophyllum subpinnatum</i> (Brid.) E. Britton | 4 | 700-3000 | 13 | Epi, Sax, Lig | Giraldo 378 | HUA, NY | Churchill <i>et al.</i> 1987 |
| <i>Sematophyllum subsimplex</i> (Hedw.) Mitt. | 4 | 200-1440 | 9 | Epi, Lig | Churchill 14358a | HUA, NY, US | Churchill & Sastre de Jesus 1987 |
| <i>Sematophyllum swartzii</i> (Schwägr.) W.H. Welch & H.A. Crum | 4 | 2200-3500 | 11 | Lig, Epi | Churchill 13123 | HUA, NY | Churchill <i>et al.</i> 2000 |
| <i>Sematophyllum tequendamense</i> (Hampe) Mitt. | 4 | 2420-2660 | 2 | Epi | Churchill 12853 | HUA, MO, NY | Churchill & Sastre de Jesus 1987 |

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|--|--|----------------------------|---|-------------------------------|--|--------------------------------|--|
| <i>Taxithelium planum</i> (Brid.) Mitt. | 4 | 60-1165 (Terr) | 14 | Epi, Sax, | Sastre 995 | HUA, MO, NY, US | Churchill <i>et al.</i> 1987 |
| <i>Trichosteleum fluviatile</i> (Mitt.) A. Jaeger | ? | 200 | 2 | Lig | Sastre 1017 | HUA, NY | Churchill <i>et al.</i> 2000 |
| <i>Trichosteleum mastopomatoides</i> S.P. Churchill & I. Sastre | 2 | 2310 | 1 | Epi | Churchill 13106 | HUA, COL, FLAS, MICH, NY | Churchill 1989 |
| <i>Trichosteleum papillosum</i> (Hornsch.) A. Jaeger | 4 | 850-2300 | 5 | Lig, Epi | Giraldo 889 | HUA, NY | Churchill 1989 |
| Sphagnaceae | | | | | | | |
| * <i>Sphagnum austro-americanum</i> H.A. Crum | 2 | 3000 | 1 | | Churchill 18752 | COL, HUA, MICH, MO, NY | Churchill & Ellis in prep. |
| <i>Sphagnum aciphyllum</i> Müll. Hal. | 3 | 2775-3245 | 1 | Terr | Churchill 18687 | HUA, NY, MO, MICH, COL | Churchill & Linares 1995 |
| <i>Sphagnum antioquiense</i> H.A. Crum | 2 | S.D. | 1 | S.D. | Churchill 14877 | NY | Churchill & Ellis in prep. |
| <i>Sphagnum cuspidatum</i> Ehrh. ex Hoffm. | 4 | 2340-3500 | 15 | Terr, (Acu) | Escobar 186 | HUA, NY, MICH | Churchill & Linares 1995 |
| <i>Sphagnum derrumbense</i> Warnst. | ? | 1700 | 1 | Acu | Santa 428 | HUA | Churchill <i>et al.</i> 2000 |
| <i>Sphagnum flaccidum</i> Besch. | 4 | 1850 | 1 | Terr | Churchill 16393 | NY, MICH, MO | Churchill & Linares 1995 |
| <i>Sphagnum imperforatum</i> | 3 | 2400-2600 | 1 | S.D. | Luteyn 11798 | NY, MICH | Churchill & Ellis in prep. |
| <i>Sphagnum limbatum</i> Mitt. | 4 | 2000-3000 | 5 | Terr | Luteyn 11866 | HUA, MO, NY | Churchill 1988b |
| <i>Sphagnum magellanicum</i> Brid. | 4 | 1300-3800 | 14 | Terr, (Sax) | Sastre 1264 | HUA, NY, U | Churchill 1989 |
| <i>Sphagnum meridense</i> (Hampe) Müll. Hal. | 4 | 1150-3500 | 34 | Terr, (Epi) | Churchill 13435 | HUA, MO, NY, U | Churchill 1989 |
| <i>Sphagnum oxyphyllum</i> Warnst. | 4 | 2100 | 1 | Terr | Luteyn 11907 | HUA, NY | Churchill & Linares 1995 |
| <i>Sphagnum perichaetiale</i> Hampe | 4 | 1900-3500 | 8 | Terr | Churchill 14984 | HUA, MO, NY | Churchill 1989 |
| <i>Sphagnum recurvum</i> P. Beauv. | 4 | 1500-3150 | 2 | Acu | Cuatrecasas 24239 | US, U | Churchill <i>et al.</i> 2000 |
| <i>Sphagnum sancto-josephense</i> H.A. Crum & Crosby | 4 | 2445-3500 | 4 | Terr | Churchill 18684 | COL, HUA, NY | Churchill 1989 |
| <i>Sphagnum sonsonense</i> H.A. Crum | 2 | 2515-3000 | 1 | | Churchill 18703 | BM, COL, HUA, MICH, NY | Churchill & Ellis in prep. |
| <i>Sphagnum sparsum</i> Hampe | 4 | 2460-3500 | 9 | Terr, (Sax) | Churchill 18670 | BM, COL, HUA, MICH, NY | Churchill 1989 |
| <i>Sphagnum subsecundum</i> var. <i>rufescens</i> (Nees & Hornsch.) Huebener | 4 | 2310-2400 | 4 | Terr | Churchill 13086 | HUA, MO, NY | Churchill 1989 |
| Splachnaceae | | | | | | | |
| <i>Brachymitrium jamesonii</i> Taylor | 4 | 3150-3200 | 4 | Terr | Churchill 13412 | HUA, NY | Churchill & Linares 1995 |
| <i>Brachymitrium moritzianum</i> (Müll. Hal.) A.K. Kop. | 4 | 1780-2500 | 6 | Lig, Terr, Epi | Churchill 15471 | COL, HUA, NY | Churchill & Sastre de Jesus 1987 |

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|---|--|-----------------------------------|--|--------------------------------------|---|-------------------------------------|---------------------------------------|
| <i>Splachnum weberbaueri</i> Reimers | 4 | 2445-3110 | 3 | Terr | Callejas 10111 | HUA, NY | Churchill 1991 |
| <i>Tayloria scabriseta</i> (Hook.) Mitt. | 4 | 2445-2900 | 5 | Sax, Terr | Churchill 15606 | HUA, MO, NY | Churchill 1988b |
| Splachnobryaceae | | | | | | | |
| <i>Splachnobryum obtusum</i> (Brid.) Müll. Hal. | 4 | 210-1030 | 3 | Sax | Churchill 14608 | HUA, NY | Churchill 1991 |
| Stereophyllaceae | | | | | | | |
| <i>Entodontopsis leucostega</i> (Brid.) W.R. Buck & Ireland | 4 | 130-2690 | 8 | Lig, Epi, (Sax) | Sastre 1440a | HUA, MO, NY, US | Churchill 1989 |
| <i>Eulacophyllum cultelliforme</i> (Sull.) W.R. Buck & Ireland | 4 | 700-1030 | 2 | Sax | Churchill 14632 | HUA, NY | Churchill & Sastre de Jesus 1987 |
| <i>Pilosium chlorophyllum</i> (Hornsch.) Müll. Hal. | 4 | 70-1165 | 17 | Lig, (Epi) | Sastre 999 | HUA, MO, NY | Churchill <i>et al.</i> 1987 |
| <i>Stereophyllum radiculosum</i> (Hook.) Mitt. | 4 | 700-910 | 5 | Sax, Lig | Churchill 14641a | HUA, MO, NY, US | Churchill & Sastre de Jesus 1987 |
| Symphyodontaceae | | | | | | | |
| <i>Symphyodon imbricatifolius</i> (Mitt.) S.P. Churchill | 4 | 2680-3000 | 1 | Epi | Churchill 18734 | HUA, MO, NY | Churchill & Linares 1995 |
| Thuidiaceae | | | | | | | |
| <i>Cyrto-hypnum campanulatum</i> (Mitt.) S.P. Churchill | 4 | 2220-2240 | 1 | S.D. | Fonnegra 3471 | MO | Churchill & Linares 1995 |
| <i>Cyrto-hypnum involvens</i> (Hedw.) W.R. Buck & H.A. Crum | 4 | 20-310 | 3 | Epi, Lig | Churchill 17065 | HUA, NY | Churchill & Linares 1995 |
| <i>Cyrto-hypnum leptocladum</i> (Taylor) W.R. Buck & H.A. Crum | 4 | 2200-2400 | 1 | Epi | Churchill 14052 | HUA, NY | Churchill & Linares 1995 |
| <i>Cyrto-hypnum minutulum</i> (Hedw.) W.R. Buck & H.A. Crum | 4 | 910-1030 | 1 | Lig | Churchill 14665 | NY | Churchill & Linares 1995 |
| <i>Cyrto-hypnum schistocalyx</i> (Müll. Hal.) W.R. Buck & H.A. Crum | 4 | 1100 | 1 | Sax | Sanchez 1337 | NY | Churchill & Linares 1995 |
| <i>Thuidium carantae</i> (Müll. Hal.) A. Jaeger | 4 | 2400 | 1 | | Wallis s.n. | BM, NY | Churchill & Ellis in prep. |
| <i>Thuidium delicatulum</i> (Hedw.) Schimp. | 4 | 1850-2680 | 13 | Terr, (Epi, Lig) | Sastre 1340 | HUA, MO, NY, US | Churchill 1989 |
| <i>Thuidium peruvianum</i> Mitt. | 4 | 1850-3500 | 26 | S.D. | Churchill 14100 | HUA, NY, US | Churchill 1989 |
| <i>Thuidium frontinoae</i> (Müll. Hal.) A. Jaeger | ? | 2400 | | | Wallis s.n. | NY | Gier 1980 |
| <i>Thuidium pseudodelicatulum</i> A. Jaeger | 4 | 1200 | | | Wallis s.n. | | Gier 1980 |
| <i>Thuidium tomentosum</i> Schimp. | 4 | 960-3000 | 12 | Sax, Lig, Epi | Churchill 15835 | HUA, MO, NY | Churchill & Linares 1995 |
| <i>Thuidium urceolatum</i> Lorentz | 4 | 250-3440 | 6 | Epi, Terr, Sax, Lig | Churchill 15380 | HUA, MO, NY, U, US | Churchill 1988b |
| Trachypodaceae | | | | | | | |
| <i>Trachypus bicolor</i> var. <i>viridulus</i> (Mitt.) Zanten | 4 | 2400 | 1 | Epi | Albert de Escobar 5382 | HUA | Churchill <i>et al.</i> 1987 |

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Taxa Excluidos / Excluded Taxa

- Crossomitrium wallisii* Müller (1875: 545) [?]
Nova Granata, prov. Antioquia, Frontino, 8000 ped. altum in foliis repens: G. Wallis 1874.
Nota: Status desconocido, Allen (1990) no localizo la colección tipo de esta especie.
Note: Unknown status, Allen (1990) did not localized the type collection of this species
- Lepidopilum maculatum* Müller (1875: 546) [?]
Nova Granata, prov. Antioquia, Frontino, 8000 ped. altum, cum *L. excelso* associatum: G. Wallis 1874.
Nota: La localización del espécimen tipo es desconocida. El herbario de Müller en B fue destruido en 1943.
Note: Unknown location of the type specimen. The Müller herbarium in B was destroyed in 1943.
- Lepidopilum mniaceum* Müller (1875: 546) [?]
Nova Granata, prov. Antioquia, Frontino, 8000 ped. altum: G. Wallis 1874.
Nota: La localización del espécimen tipo es desconocida. El herbario de Müller en B fue destruido en 1943.
Note: Unknown location of the type specimen. The Müller herbarium in B was destroyed in 1943.
- Lepidopilum pergracile* Müller (1875: 548) [?]
Nova Granata, prov. Antioquia, Frontino, 8000 ped. altum in rhizomatis filicum: G. Wallis 1874.
Nota: El Estatus y la localización del espécimen tipo es desconocida. El herbario de Müller en B fue destruido en 1943.
Note: Unknown location of the type specimen. The Müller herbarium in B was destroyed in 1943.
- Dicranum deflexicaulon* Müller (1874: 589) [?]
Nova Granata, prov. Antioquia, Paramo de Sonson, 10-12,000 pedes altum, cum *Dicrano flaccidissimo* in locis paludosis associatum: G. Wallis 1872.
Nota: Aparentemente un tipo de *Chrisodontium*, fide Brotherus (1901: 328). El Estatus y la localización del espécimen tipo es desconocida. El tipo no está en BM, H-BR, o NY; Es posible que estuviera en B y hubiera sido destruido en 1943.
Note: Apparently a type of *Chrisodontium*, fide Brotherus (1901: 328). The status and the location of the specimen is unknown. The type is not located in BM, H-BR, or NY; is possible that was in B and that was destroyed in 1943

Hypnum subvolvatum Müller nom. nud. (1875: 552) [BM]
 Nota: Se cita en Müller como *Hypnum (Tamariscella) carantae*. Nova Granata, prov. Antioquia, Carauta, 8000 ped. alt. , cum *Hypno subvolvato* n. sp. rupes obtegens: G. Wallis 1874.”
 Note: Müller cites it as *Hypnum (Tamariscella) carantae*. Nova Granata, prov. Antioquia, Carauta, 8000 ped. alt. , cum *Hypno subvolvato* n. sp. rupes obtegens: G. Wallis 1874.”
 = *Microthamnium subvolvatum* A. Jaeger nom. nud.
Trichostomum orthotrichoides Müller (1874: 601) [?]
 Novo Granata, prov. Antioquia, Sonson, inter *Metzgeriam*: G. Wallis 1872.
 = *Leptodontium orthotrichoides* (Müll. Hal.) Paris, = posiblemente *Zygodon palmarum* Müll. Hal., cf. Zander (1972: 278).

Bartramia polytrichoides C. Müller (1874: 597) [?]
 Nova Granata, prov. Antioquia, Sonson, 9000 pedes altum, inter
Blindiam Sonsoniae mihi surculum unicum legit G. Wallis 1872.
Hypnum sticticola Müller (1874: 616) [?]
 Nova Granata, prov. Antioquia, Paramo de Sonson, 10,000 ped. altum in *Stictis* vivens: G. Wallis 1872.
 = *Sematophyllum sticticola* (Müll. Hal.) S. P. Churchill
 Nota: La localizacion del especimen tipo es desconocida. El herbario de Müller en B fue destruido en 1943.
 Note: Unknown location of the type specimen. The Müller herbarium in B was destroyed in 1943.
Bryum clavicaule Müller (1875: 532) [?]
 Nova Granata, prov. Antioquia, Sa. Isabel, inter Collemata, 10,000 ped. elevationis: G. Wallis 1874.
 = *Anomobryum clavicaule* (Müll. Hal.) Broth.

