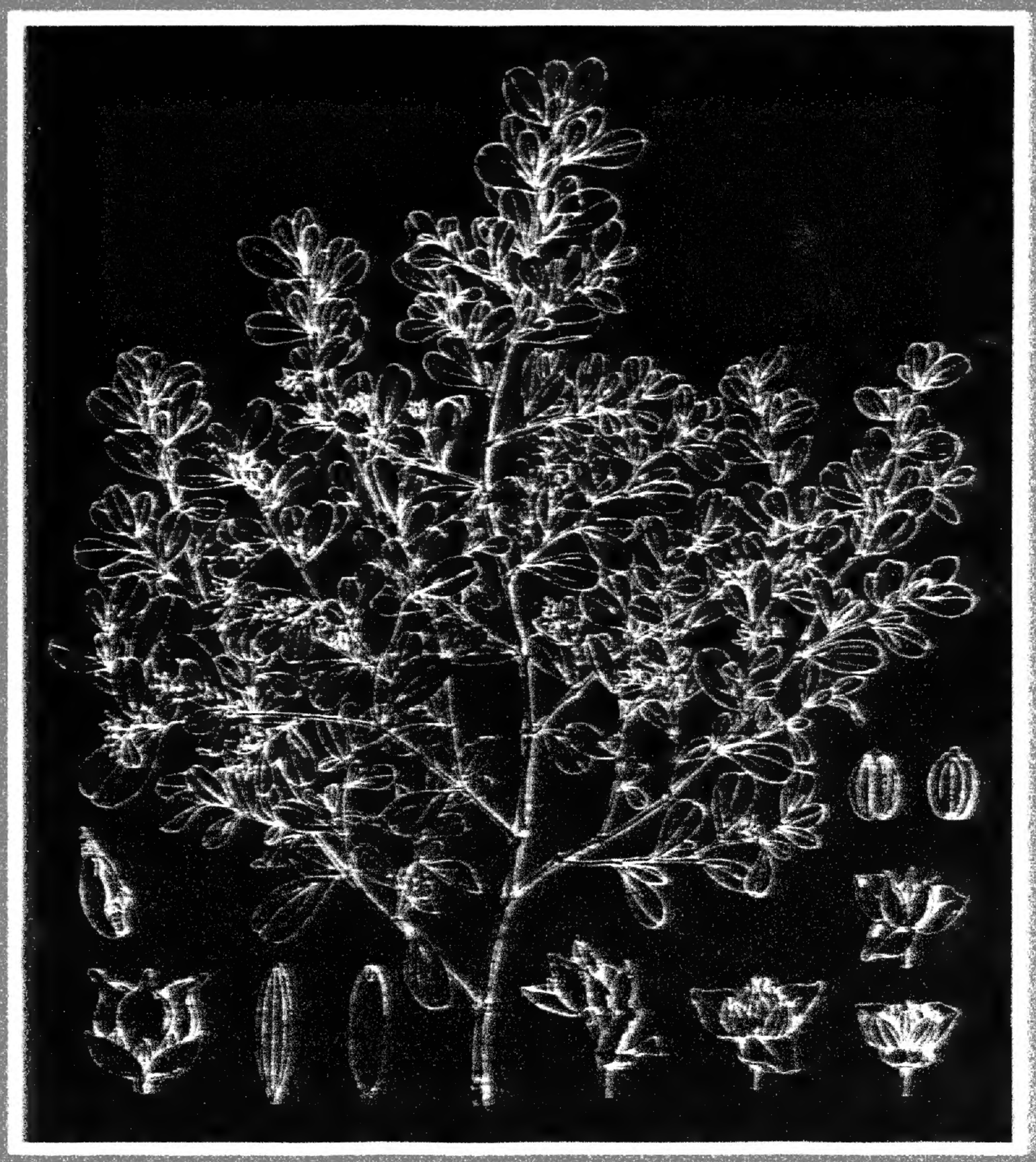
ISSN 0016-5301

GAYANA BOTANICA

VOLUMEN 55 NUMERO 2 1998

UNIVERSIDAD DE CONCEPCION-CHILE



FACULTAD DE CIENCIAS NATURALES
Y OCEANOGRAFICAS
UNIVERSIDAD DE CONCEPCION
CHILE

DIRECTOR DE LA REVISTA
Andrés O. Angulo

REEMPLAZANTE DEL DIRECTOR
Oscar Matthei J.

REPRESENTANTE LEGAL
Sergio Lavanchy Merino

PROPIETARIO
Universidad de Concepción

DOMICILIO LEGAL
Víctor Lamas 1290, Concepción, Chile

EDITOR EJECUTIVO GAYANA BOTANICA
Carlos M. Baeza

Para las instrucciones a los autores, ver reglamento en Gayana Botánica 54(1), 1997.

Accredited with the International Association for Plant Taxonomy for the purpose of registration of new names of vascular plants (excluding fossils), fungi and fossil fungi.

Indexada en: Kew Records (Kew Garden, London); Bulletin of the Torrey Botanical Club (USA); Biological Abstracts (BIOSIS); Ulrik's International Periodicals Directory: Botanico-Periodicum-Huntianum.

Diseño y diagramación
Débora Cartes S.

ISSN 0016-5301

GAYANA BOTANICA

VOLUMEN 55 NUMERO 2 1998

CONTENTS

UNIVERSIDAD DE CONCEPCION-CHILE

ISSN 0016-5301

GAYANA BOTANICA

VOLUMEN 55 NUMERO 2 1998

CONTENIDO

UNIVERSIDAD DE CONCEPCION-CHILE

"Los infinitos seres no podrán perfectamente conocerse sino luego que los sabios del país hagan un especial estudio de ellos".

Claudio Gay, Hist. de Chile (1847)

PORTADA: *Lactoris fernandeziana* Phi., único representante de la familia Lactoridaceae, endémica del archipielago de Juan Fernández, Chile (W. Hemsley, Report on the botany of Juan Fernández, the southeastern Moluccas, and the Admiralty Islands. Rep. Sci.Results Voyage H.M.S. Challenger. Botany 1(3): 1-275, lám. 59.

ESTA REVISTA SE TERMINO DE IMPRIMIR
EL 07 DE MAYO DE 1999
EN LOS TALLERES DE
IMPRESOS ANDALIEN.
ROZAS 1591, CONCEPCION. CHILE.
EL QUE SOLO ACTUA COMO IMPRESORA
PARA EDICIONES UNIVERSIDAD DE CONCEPCION

Gayana Bot. 55(2): 85-88, 1998. ISSN 0016-5301

NUEVAS COMBINACIONES EN EL GENERO *NASSELLA* E. DESV. *EMEND*. BARKWORTH (1990) (POACEAE, STIPEAE)

NEW COMBINATIONS IN GENUS NASSELLA *E. DESV.* EMEND. *BARKWORTH (1990) (POACEAE, STIPEAE)*

Patricio Peñailillo[1, 2]

RESUMEN

Después de revisar el 90% de las especies sudamericanas de la tribu Stipeae (Poaceae), se ha llegado a la conclusión que un concepto amplio del género *Nassella*, tal como aquel propuesto por Barkworth en 1990, es más natural que el propuesto por Parodi en 1947. En el presente trabajo se transfieren 14 especies tratadas como *Stipa* L. *s.l.* al género *Nassella* E. Desv. *emend.* Barkworth, realizándose las nuevas combinaciones.

PALABRAS CLAVES: Poaceae, Stipeae, *Nassella*, combinaciones nuevas, Sudamérica.

ABSTRACT

After reviewing about 90% of South American species of the tribe Stipeae (Poaceae), it has been concluded that Barkworth's concept of *Nassella s.l.* in 1990 is more consistent that proposed by Parodi in 1947. In this paper, 14 species of *Stipa s.l.* are transferred to genus *Nassella* E.Desv. *emend.* Barkworth, and the new combinations are proposed.

KEYWORDS: Poaceae, Stipeae, *Nassella*, new combinations, South America.

INTRODUCCION

Los recientes estudios en la tribu Stipeae han llevado a subdividir el género *Stipa* L. *s.l.* en varios géneros monofiléticos (Barkworth y Everett, 1988; Barkworth, 1990; Barkworth, 1993; Rojas, 1993; Jacobs *et al.*, 1995; Peñailillo, 1996; Torres, 1997; Jacobs y Everett, 1997; Rojas, 1998).

La interpretación de Parodi (1947) del género *Nassella s.str.* ha predominado en la literatura agrostológica (Hitchcock, 1927; Burkart, 1969; Roig, 1978; Nicora y Rúgolo, 1987; Muñoz Schick, 1990; Tovar, 1993; Torres, 1993). Parodi (*l.c.*) incluye en este taxón a aquellas gramíneas estipoídeas de antecios pequeños, lateralmente comprimidos, lema de márgenes sobrepuestos, pálea rudimentaria, arista fácilmente caediza, cañas plurinodes generalmente ramificadas, y vainas comúnmente menores que los entrenudos. En 1990, Barkworth publica una revisión del género *Nassella*, en donde se proporciona una detallada historia taxonómica y se realiza una enmienda de la diagnosis. El género enmendado por Barkworth incluye 79 especies del continente americano, pero principalmente de América del Sur, de las cuales 65 corresponden a nuevas combinaciones.

El presente trabajo tiene por objeto dar a conocer 14 nuevas combinaciones en el género *Nassella* para América del Sur.

MATERIALES Y METODOS

Se estudiaron 2.000 especímenes que incluyen 225 especies y 9 géneros (*Aciachne*, *Achnatherum*, *Lorenzochloa*, *Nassella*, *Ortachne*, *Oryzopsis*, *Piptatherum*, *Piptochaetium* y *Stipa*). Los especímenes estudiados provienen de los siguientes herbarios, BAA, CONC, LPB, MVFA, MO, SGO, SI, US y W.

Para los estudios morfológicos, las espigui-

[1]Instituto de Biología Vegetal y Biotecnología, Universidad de Talca, Casilla 747, Talca, Chile; e-mail: ppenaili@pehuenche.utalca.cl

[2]Trabajo realizado en el Departamento de Botánica, como alumno becado de la Escuela de Graduados en la Universidad de Concepción, PI Nº 9232.06-6.

llas se disectaron y montaron en líquido de Holler. Los embriones maduros se prepararon siguiendo la técnica propuesta por Barkworth (1982) y los preparados epidérmicos de la lema según el método de Thomasson (1978a). Las observaciones macroscópicas se realizaron en una lupa estereoscópica Zeiss y las microscópicas en un microscopio fotónico Zeiss y en un microscopio electrónico de barrido Etec modelo Autoscan de la Universidad de Concepción. El secado a punto crítico de los antecios se realizó en un secador Balzers Unions, los cuales previo a su observación, fueron sometidos a un sombreado con oro.

RESULTADOS Y DISCUSION

Al revisar una gran cantidad de material de herbario de las especies de la tribu ***Stipeae*** citadas para América del Sur sobre la base de caracteres de la morfología vegetativa y reproductiva, como asimismo del embrión maduro y de la epidermis de la lema, se ha llegado a la conclusión que el género *Nassella* E. Desv. *emend.* Barkworth (1990) es un grupo monofilético. En Sudamérica, este concepto es compartido por Torres (1997) en su revisión de la tribu Stipeae del noroeste de Argentina y por Rojas (1998) en su tratamiento de las especies de la tribu en Bolivia.

Nassella s.l. incluiría a todas las especies de la tribu Stipeae con las siguientes características: Lema coriácea, de márgenes convolutados a la madurez, ocultando la pálea y ápice fusionado formando una corona notoria o inconspicua. Pálea hialina, glabra, emarginada, generalmente enervia, de 1/3 de la longitud de la lema o menor. Embrión de epiblasto largo. Patrón epidérmico de la lema tipo "*Nassella pungens*" *sensu* Thomasson (1976, 1978b), es decir, formado por células largas acortadas en longitud cuyas paredes son gruesas y silificadas; ganchos presentes o ausentes.

Las nuevas combinaciones propuestas son las siguientes:

Nassella argentinensis (Speg.) Peñail., *comb. nov.*
BASIONIMO: *Stipa argentinensis* Speg., Revista Argent. Bot. 1: 45. 1925. Tipo: "Hab. en las praderas cerca de la Estación Gálvez, Prov. Sta. Fe, Ener. 1906".

Nassella brasiliensis (A. Zanin *et* Longhi-Wagner) Peñail., *comb. nov.*
BASIONIMO: *Stipa brasiliensis* A. Zanin *et* Longhi-Wagner, Bradea 5 (33): 342, fig. 1. 1990. Tipo: "BRASIL-Río Grande Do Sul: Cambará Do Sul, Itaimbezinho, 18 dez. 1987, A. Zanin 17". (Holotipo: CEN, Isotipo: MVFA).

Nassella coquimbensis (Matthei) Peñail., *comb. nov.*
BASIONIMO: *Stipa coquimbensis* Matthei, Gayana, Bot. 13: 35, f. 5A-G. 1965. Tipo: "CHILE. Prov. Coquimbo. Carretera Panamericana. 8 Km al Norte de la Quebrada del Teniente. Leg. Marticorena-Matthei 163. 13-X-1963". (Holotipo: CONC 29361!).

Nassella entrerriensis (Burkart) Peñail., *comb. nov.*
BASIONIMO: *Stipa entrerriensis* Burkart, Bol. Soc. Argent. Bot. 12: 285, f. 1. 1968. Tipo: ARGENTINA, prov. Entre Ríos, dep. La Paz, Bovril, J. M. Jozamí 8". (Holotipo: SI!).

Nassella ibarrensis (Kunth) Peñail., *comb. nov.*
BASIONIMO: *Stipa ibarrensis* Kunth, *in* Humb. Bonpl. et Kunth, Nov. Gen. Sp. 1: 125. 1816. Tipo: "Crescit ad muros urbis Quitensis, Villa Ibarra, in subfrigidis, alt. 1184 hexap, perennis, Floret Januario, Humboldt et Bonpland". (Holotipo: P. Clastotipo: US 866103).

Nassella karstenii (Hitchc.) Peñail., *comb. nov.*
BASIONIMO: *Stipa karstenii* Hitchc., Contr. U.S. Natl. Herb. 24(7): 274. 1925. Tipo: "Collected at Bogotá, Colombia, by H. Karsten". (Holotipo: US 1126745).

Nassella pittieri (Hitchc.) Peñail., *comb. nov.*
BASIONIMO: *Stipa pittieri* Hitchc., Contr. U.S. Natl. Herb. 24(7): 289. 1925. Tipo: "collected below Pitaió, Río Palo Basin, Tierra Adentro, State of Cauca, Colombia, altitude 2,400 meters, February, 1906, by H.Pittier (no.1438)". (Holotipo: US 531634).

Nassella psittacorum (Speg.) Peñail., *comb. nov.*
BASIONIMO: *Stipa psittacorum* Speg., Anales Mus. Nac. Montevideo 4(19): 165. 1901. Tipo: "Hab. Abunde in praeruptis collinis Arroyos de

los papagallos prope Mendoza, Febr. 1901 (C.S-pegazzini)". (Holotipo: LP ex LPS 2445. Isotipo: US 141663, 1721313).

Nassella planaltina (A. Zanin *et* Longhi-Wagner) Peñail., *comb. nov.*
BASIONIMO: *Stipa planaltina* A. Zanin et Longhi-Wagner, Bradea 5(33): 344, fig. 2. 1990. Tipo: "BRASIL-Río Grande do Sul: Cambará do Sul, Itaimbezinho, 18 nov. 1988, A. Zanin & F.A. Silva Filho 151a". (Holotipo: ICN, Isotipo: CEN).

Nassella rhizomata (A. Zanin *et* Longhi-Wagner) Peñail., *comb. nov.*
BASIONIMO: *Stipa rhizomata* A.Zanin et Longhi-Wagner, Bradea 5(33): 345, fig. 3. 1990. Tipo: "BRASIL-Santa Catarina: Irani, 28 nov. 1986, VALLS *et al.* 10561". (Holotipo: CEN, Isotipo: MVFA).

Nassella sellowiana (Nees *ex* Trin. *et* Rupr.) Peñail., *comb. nov.*
BASIONIMO: *Stipa sellowiana* Nees *ex* Trin. *et* Rupr., Sp. Gram. Stipac. 38. 1842. Tipo: "Brasilia merid. (SELLOW!)". (Holotipo: LE, TRIN. Clastotipo: US 157500).

Nassella tenuiculmis (Hackel) Peñail., *comb. nov.*
BASIONIMO: *Stipa tenuiculmis* Hackel, Verh. Zool.-Bot. Ges. Wien 65 (1-2): 75. 1915. Tipo: "BRAZIL, Río Grande do Sul: Mun. Soledade: in campis prope Lagao. Dec 1910, C.Juergens". (Holotipo: W, Hack. Herb.; Clastotipo: US 3168612).

Nassella vallsii (A.Zanin et Longhi-Wagner) Peñail. *comb. nov.*
BASIONIMO: *Stipa vallsii* A.Zanin et Longhi-Wagner, Bradea 5(33): 346, fig. 4. 1990. Tipo: "BRASIL-RIO GRANDE DO SUL: S.,o Francisco de Paula, 18 nov. 1988, A. Zanin & F.A.Silva Filho 148". (Holotipo: CEN, Isotipo: MVFA).

Nassella vargasii (Tovar) Peñail., *comb. nov.*
BASIONIMO: *Stipa vargasii* Tovar, Phytologia 47(6): 445. 1981. Tipo: "Collected at laderas de Tarpata, prov. Urubamba, depto. Cuzco, Perú, altitude 2860-3000, March 8, 1963, by César Vargas (n. 14127)". (Holotipo US 2474222!).

MATERIAL ADICIONAL ESTUDIADO

Nassella argentinensis (Speg.) Peñail. ARGENTINA: Prov. Chaco. Distrito General Donovan, La Escondida, 3-III-1958, Costany 5, (SI).

Nassella coquimbensis (Matthei) Peñail. CHILE: IV Región. Prov. Choapa. Illapel, Huentelauquén, Estancia La Cebada, 60 m, 22-X-1971, Jiles 5754, (CONC).

Nassella entrerriensis (Burkart) Peñail. ARGENTINA. Prov. Entre Ríos. Dep. Concordia, Arroyo Robledo a Redomom, 8-XI-1965, Burkart 25898, (SI).

Nassella ibarrensis (Kunth) Peñail. ECUADOR: Andes, SPRUCE 5819 (US s.n. Ex Herb Boissier). Prov. Cotoxapí. Ad basin Monte Cotoxapí, Sodiro s.n., 1890 (US). Prov. Pichincha. Pomarqui, dry slope, 2500 m, 6-III-1939, Asplund 6688, (US).

Nassella karstenii (Hitchc.) Peñail. COLOMBIA: Int. Putumayo-Corregimiento El Encano, Laguna de la Cocha, páramo El Tabón, 3300 m, 10/11-VIII-1939, García Barriga 7771, (US).

Nassella pittieri (Hitchc.) Peñail. COLOMBIA: Edo. Cauca. Las Escaleretas, Moras Valley, río Paez basin, tierra adentro, 2500-3000 m, II-1906, Pittier 1334, (US). Edo. Cundinamarca. Zipaquirá, 2700 m, 5-I-1851, Triana 3345, (US). Int. Putumayo-Corregimiento El Encano, Laguna de la Cocha, páramo "El Tábano", 3300 m, 10/11-VIII-1939, García Barriga 7762, (US).

Nassella planaltina (A. Zanin *et* Longhi-Wagner) Peñail. BRASIL: Edo. Paraná. General Carneiro, 2-XII-1987, Valls *et al.* 11474, (MVFA).

Nassella sellowiana (Nees *ex* Trin. *et* Rupr.) Peñail. BRASIL: Edo. Paraná. Faxinal dos Souza (Mun. Gal. Carneiro), 7-XII-1971, Hatschabach, Smith, Klein 28351, (MVFA). Ponte Grossa, Desvio Ribas in Campo, 29-XI-1910, Dusen 12102A, (SI). Campos de Palma (Mun. Agua Doce), 30 km SE of Horizonte (26°45'S, 51°24'W), 1000-1200 m,

Klein 28351, (MVFA). Ponte Grossa, Desvio Ribas in Campo, 29-XI-1910, Dusen 12102A, (SI). Campos de Palma (Mun. Agua Doce), 30 km SE of Horizonte (26°45'S, 51°24'W), 1000-1200 m, 3-XII-1964, Smith et Klein, ARGENTINA: Prov. Misiones, Apóstoles a San Javier, II-1922, Molfino s.n., (SI).

Nassella tenuiculmis (Hackel) Peñail. URUGUAY: Dep. Treinta y Tres. Quebrada de Las Cuevas, 8-X-1966, Rosengurtt *et al.* 10288, (MVFA). ARGENTINA: Prov. Buenos Aires. Pdo. Balcarce, Sierra la Brava, ladera SW a cumbre, 11-XI-1962, Boelcke, Matthei y Correa 9385, (BAA, CONC). Prov. La Pampa. La Pampa, Parque Luro, 29-XI/2-XII-1959, Rosengurtt B-7801, (CONC, MVFA). La Pampa, Utracan, entre General Acha y Los Caranchos, 16-XII-1952, Ragonese y Piccinini 8860, (BAB). Dep. Lihuel- Calel, 29-I/2-II-1959, Rosengurtt B-7856, (MVFA). Dep. Santa Rosa, 30-x-1972, Kaprovickas *et al.* 22299, (CONC). Entre Anguil y Santa Rosa, 22-XI-1955, Ragonese-Piccinini 9231, (BAB). Prov. Río Negro. Pichi Mahuida, puente sobre el río Colorado, 7-XI-1965, Correa y Nicora 3157, (BAB, CONC).

AGRADECIMIENTOS

El autor agradece a los directores y curadores de los herbarios consultados por las facilidades otorgadas, como asimismo a los profesores Clodomiro Marticorena, Marcelo Baeza y Roberto Rodríguez por sus sugerencias. También expreso mi reconocimiento por su asistencia técnica al personal del Laboratorio de Microscopía Electrónica de la Universidad de Concepción.

BIBLIOGRAFIA

BARKWORTH, M.E. 1982. Embryological characters and the taxonomy of the Stipeae (Gramineae). Taxon 31(2): 233-243.

BARKWORTH, M.E. 1990. *Nassella* (Gramineae, Stipeae): Revised interpretation and nomenclatural changes. Taxon 39(4): 597-614.

BARKWORTH, M.E. 1993. North American Stipeae (Gramineae): Taxonomic changes and other comments. Phytologia 74(1): 1-25.

BARKWORTH, M.E. AND EVERETT, J. 1988. Evolution in the Stipeae. Identification and relationships of its monophyletic taxa. *In* Soderstrom, T.R., Hilu, K.W., Campbell, C.S. y Barkworth, M.E. (eds.) Grass systematics and evolution. Washington D.C., Smithsonian Institution Press. pp. 251-264.

BURKART, A. 1969. Gramíneas. *In* Burkart A. Flora Ilustrada de Entre Ríos (Argentina). Colección Científica INTA, 6(2a): xv, 1-551, 6 lám., 2 mapas, ilustr.

HITCHCOCK, A.S. 1927. The grasses of Ecuador, Peru, and Bolivia. Contr. U.S. Natl. Herb. 24(8): 291-556.

JACOBS, S.W.L.; EVERETT, J. AND BARKWORTH, M.E. 1995. Clarification of morphological terms used in the Stipeae (Gramineae), and a reassessment of *Nassella* in Australia. Taxon 44: 33-41.

JACOBS, S.W.L. AND EVERETT, J. 1997. *Jarava plumosa* (Gramineae), a new combination for the species formerly known as *Stipa papposa.* Telopea 7(3): 301-302, 1997.

MUÑOZ SCHICK, M. 1990. Revisión del género *Nassella* (Trin.) E. Desv. (Gramineae) en Chile. Gayana, Bot. 47(1-2): 9-35.

NICORA, E.G. Y RUGOLO DE AGRASAR, Z.E. 1987. Los géneros de Gramíneas de América Austral. Argentina, Chile, Uruguay y áreas limítrofes de Bolivia, Paraguay y Brasil. Buenos Aires, Editorial Hemisferio Sur S.A. viii + 611 pp.

PARODI, L.R. 1947. Las especies de Gramíneas del género *Nassella* de la Argentina y Chile. Darwiniana 7(3): 369-395.

PEÑAILILLO, P. 1996. *Anatherostipa*, un nuevo género de Poaceae (Stipeae). Gayana Bot. 53(2): 277-284.

ROIG, F.A. 1978. Género *Nassella* (Trin. et Rupr.) Desv. *In* Correa, M.N. (ed.) Flora Patagónica. Colección Científica del INTA, 7(3):330-333.

ROJAS, F. 1993. Revisión de las especies de la tribu Stipeae (Poaceae) en Bolivia. Tesis para optar al grado de Magister en Ciencias con mención en Botánica, Universidad de Concepción, Concepción. 157pp.

ROJAS, F. 1998. Nuevas especies y nuevas combinaciones para la tribu Stipeae (Poaceae) en Bolivia, Gayana Bot. 54(2): 163-182.

THOMASSON, J.R. 1976. Tertiary grasses and other Angiosperms from Kansas, Nebraska, and Colorado. Doctoral dissertation, Iowa State University, Ames Iowa. 411 pp. 332 figures.

THOMASSON, J.R. 1978a. Clearing, cuticle removal, and staining for the fertile bracts (lemmas and paleas) of grass anthoecia. Stain Techn. 53(4): 233-236.

THOMASSON, J.R. 1978b. Epidermal patterns of the lemma in some fossil and living grasses and their phylogenetic significance. Science 199: 975-977.

TORRES, M.A. 1993. Revisión del género *Stipa* (Poaceae) en la provincia de Buenos Aires. Ministerio de la Producción provincia de Buenos Aires, Comis. Invest. Ci. (CIC), Monografía 12: 1-62, 4 figs.

TORRES. M.A. 1997. *Nassella* (Gramineae) en el no-

Fecha de publicación: 07 de mayo de 1999

Gayana Bot. 55(2): 89-92, 1998. ISSN 0016-5301

EULYCHNIA CASTANEA PHIL. (CACTACEAE): GEOGRAPHICAL DISTRIBUTION AND VARIATION

EULYCHNIA CASTANEA *PHIL. (CACTACEAE): DISTRIBUCION GEOGRAFICA Y VARIACION*

Urs Eggli[1] & Beat Ernst Leuenberger[2]

ABSTRACT

The geographical range of *Eulychnia castanea* (Cactaceae) has been investigated in the field and was found to be a rather restricted area along a small fraction of the central Chilean coast. Populations are scattered and sometimes reduced in number of individuals. The conservation status is interpreted as being out of danger, since a large and viable population occurs within Fray Jorge National Park. A case of suspected introgression from *Eulychnia acida* is also reported.

KEYWORDS: *Eulychnia*, conservation, Cactaceae.

RESUMEN

Se estudia la distribución geográfica de *Eulychnia castanea* (Cactaceae). Los resultados señalan que su distribución está restringida a un área limitada de la costa central de Chile. Las poblaciones son más o menos aisladas y frecuentemente poseen un número reducido de plantas. El estado de conservación se interpreta como "fuera de peligro" a base de una población extendida y viable dentro del Parque Nacional Fray Jorge. Se menciona un caso de posible introgresión de *Eulychnia acida*.

PALABRAS CLAVES: *Eulychnia*, conservación, Cactaceae.

INTRODUCTION

The genus *Eulychnia* is a small genus of shrubby to arborescent columnar cacti, and 4 of the presumably 5 species are restricted to Chile (the exception being *E. ritteri* from southern Peru). The two species *Eulychnia acida* and *E. iquiquensis* form a conspicuous element in the vegetation of the semi-arid and arid Norte Chico. The history and typification of *Eulychnia taxa*, as well as some preliminary notes on possible synonymies, have been the subject of a recent contribution (Leuenberger & Eggli, 1998).

Eulychnia castanea was described by R. A. Philippi in 1864, based on a collection by Landbeck from the coast near Los Molles (then in Aconcagua Province, today in Petorca Province). It was named for the diagnostic pungent thin spines produced from the areoles of the pericarpel, and the spiny fruits were compared with the fruits of the chestnut by Philippi (Lat. castaneus = chestnut). Although Philippi did not publish an illustration of *E. castanea*, and despite some problems associated with the type material, the identity of the taxon does not present any problems, and its typification was recently resolved (Leuenberger & Eggli, 1998).

GEOGRAPHICAL DISTRIBUTION: The type locality of *Eulychnia castanea* is at Los Molles (32°14'S, Región de Valparaiso, Prov. Petorca), where the taxon can still be observed today on the coastal rocks below the houses. The northern limit of the range of this strictly coastal taxon is given as "Talinay" in the literature (Ritter, 1980; Hoffmann, 1989), and this is taken to represent the region of the Quebrada Talinay and Cerro Talinay (c. 30°51'S, Región de Coquimbo, Prov. Limarí) (the "Altos de Talinay" further N cannot qualify since *E. castanea* has a strictly coastal distribution).

Our collecting activities in connection with a study of the *Cactaceae* for the "Proyecto Flora de Chile" have now considerably extended the

[1]Städtische Sukkulenten-Sammlung Zürich, Mythenquai 88, CH-8002 Zürich, Switzerland.
[2]Botanischer Garten und Botanisches Museum Berlin-Dahlem, Königin-Luise-Strasse 6-8, D-14191 Berlin, Germany.

known geographical range for *E. castanea* towards the North, just into Prov. Elqui. Together with several additional collections, we have established a more or less continuous distribution of *E. castanea* along the coast between Los Molles in the South and near Puerto Aldea on the Lengua de Vaca peninsula W of the Bahia Tongoy (30°18.51'S) in the North (Map 1).

Whether this represents the true geographical range of the taxon remains open to debate, and subsequent searches may well reveal additional localities. Our own observations indicate that *E. castanea* does neither occur to the north of the known range at Punta Teatinos N of La Serena, nor at Quintero to the south of the known range.

All our observations as well as remarks on the labels of the few available herbarium specimens indicate that *E. castanea* is a strictly coastal taxon, occupying but a narrow fringe along the coast. Its ecological amplitude appears to be considerable, and apparently well-established plants can be observed on coastal rocks, among coastal pebbles (e.g. near Pichidangui) or in coastal semi-stabilized dune sands (e.g. just N of Puente El Teniente). In only one place (near Huentelauquen) could we observe *E. castanea* planted as component of a "living fence" primarly made up by one of the numerous forms *Echinopsis chiloensis*.

CONSERVATION: Since the coast strip northwards from Papudo and Zapallar is of easy access from Santiago, the area is currently heavily "developed" for weekend and summer tourism. Considerable areas between the Panamerican Highway and the coast are already fenced off and divided into lots for sale and house construction. The remaining area suffers from grazing impact and there are also scattered plantations of *Eucalyptus* and/or *Pinus*. As a consequence, the already narrow distribution of *Eulychnia castanea* appears to be under severe pression from these developments. Its conservation status needs to be assessed, although Benoit (1989) classified it as out of danger without giving further details. Hoffmann (1989) does not comment on the conservation status of this species.

While the number of populations of *E. castanea* remains unknown, the distribution map implies a more or less continuous occurrence along the coast. Despite the threats posed by the increasing urbanization of the area and increasing grazing pressure, the species may have a good chance to survive, as we have observed the plant growing in moderately disturbed areas, e.g. at Los Molles, Pichidangui, in the Quebrada del Teniente, and also growing in hedges at Huentelauquen. Moreover, a very vigorous population consisting of a large number of indidivuals is located within Fray Jorge National Park, and *E. castanea* therefore enjoys a fair amount of protection. Its conservation status as "out of danger" seems to be a sound interpretation, and its survival does not seem to be immediately threatened as a whole. Populations in the southern part of the natural range are, however, under some pressure as outlined above, and it would be a good idea to suggest to landowners and communities to protect the natural populations as a local biodiversity treasure, and even to propagate the plant at appropriate sites, e.g. in hedgerows. A study of the biology of this species by a local biologist would seem very promising for a more detailed assessment of its conservation status.

HYBRIDIZATION INVOLVING *EULYCHNIA CASTANEA*: At the N-most limit, R. Kraus (pers. comm.) observed typical *Eulychnia castanea* as well as plants which appear intermediate between *E. castanea* and one of the larger growing species of the genus, judging from the woolly-bristly indumentum of the pericarpel and the larger stature of the plants (R. Kraus photos nos. 1988 and 1989, ZSS). Similar plants were also collected back in 1947 by B. Sparre (Sparre 1974). While *E. castanea* cannot be distinguished vegetatively from either *E. acida* or *E. breviflora* (the only other species of the genus likely to be present in the area), the pericarpel spination is denser and more bristly instead of pungent, as would be typical for *E. castanea* (Figs. 1, 2).

According to our observations, the range of *E. breviflora* does not extend significantly to the south of Coquimbo, while *E. acida* was found with a few individuals growing in the immediate vicinity of *E. castanea* on the coastal terrace in Fray Jorge National Park (near 30° 37.94' S / 71° 42.45' W). In the absence of better evidence, we interpret the occurrence of the densely bristly flowers in *E. castanea* as introgression from *E. acida*, whose flowers are characterised by a short softly woolly tomentum (Figs. 1, 2).

MATERIAL EXAMINED: CHILE: IV Región: Prov. Elqui: 2 km E of Puerto Aldea, 20 - 50 m, 31-X-1997, EGGLI & LEUENBERGER 3083 (B, CONC, SGO, ZSS); Prov. Limarí: Parque Nacional Fray Jorge, coastal plain, 20-100 m, 1-XI-1997,

EGGLI & LEUENBERGER 3086d (B, ZSS: photos only); Fray Jorge, boca del Río Limarí, 11-X-1947, SPARRE 2974 (SGO); first hill N of the mouth of the Quebrada San Pedro, 80 - 140 m, 18-X-1997, EGGLI & LEUENBERGER 2945 (B, CONC, SGO, ZSS); Prov. Choapa: Caleta Oscuro 3 km W of Puerto Oscuro (Panamericana), 20 - 100 m, 2-XI-1997, EGGLI & LEUENBERGER 3088 (B, CONC, SGO, ZSS); Fundo Corral de Julio, km 315 de la Carretera, 1 -2 km desde el mar, 6-XI-1976, *Muñoz* 921 (SGO); 7.3 km on Panamericana N of turnoff from Panamericana to Los Vilos, on top of coastal rocks, 40 m, 10-XI-1991, EGGLI & LEUENBERGER 1669 (B, SGO, ZSS); Los Vilos, s.a., *Ritter* 241 loc. 1 (SGO, ZSS); Pichidangui, extreme tip of peninsula, coastal rocks, 10 - 50 m, 17-X-1997, EGGLI & LEUENBERGER 2933 (CONC, B, SGO, ZSS); Pichidangui, s.a., Ritter 241 loc. (SGO); V Región: Prov. Petorca: c. 1 - 1.5 km S of Los Molles, N side of Puente El Chivato, 20 m, 10-XI-1991, EGGLI & LEUENBERGER 16561 (B, SGO, ZSS); Los Molles, coastal rocks below houses, 10 - 80 m, 17-X-1997, EGGLI & LEUENBERGER 2932a (B, ZSS: photos only).

ACKNOWLEDGMENTS

We are grateful to the authorities at the Botany Institute of the Universidad de Concepcion for providing infrastructure and a vehicle for our studies. The Swiss National Science Foundation (project no. 31-39176.93 "Study of Cactaceae for the Flora of Chile project") as well as the Swiss Academy of Natural Sciences are gratefully acknowledged for financial support to the first author for field work in Chile Likewise, the second author is grateful to the Research Committee of the Cactus and Succulent Society of America, Inc., for a grant towards travel costs in connection with the above project. B and ZSS have kindly provided support and infrastructure, and we are further grateful to the curators at SGO and CONC to allow us free access to their collections.

REFERENCES

BENOIT, I. L. (ED.) 1989. Red Book of Chilean terrestrial flora (Part One). Santiago. (vi), 151 pp., 22 lám. incl. en el texto, 1 mapa.

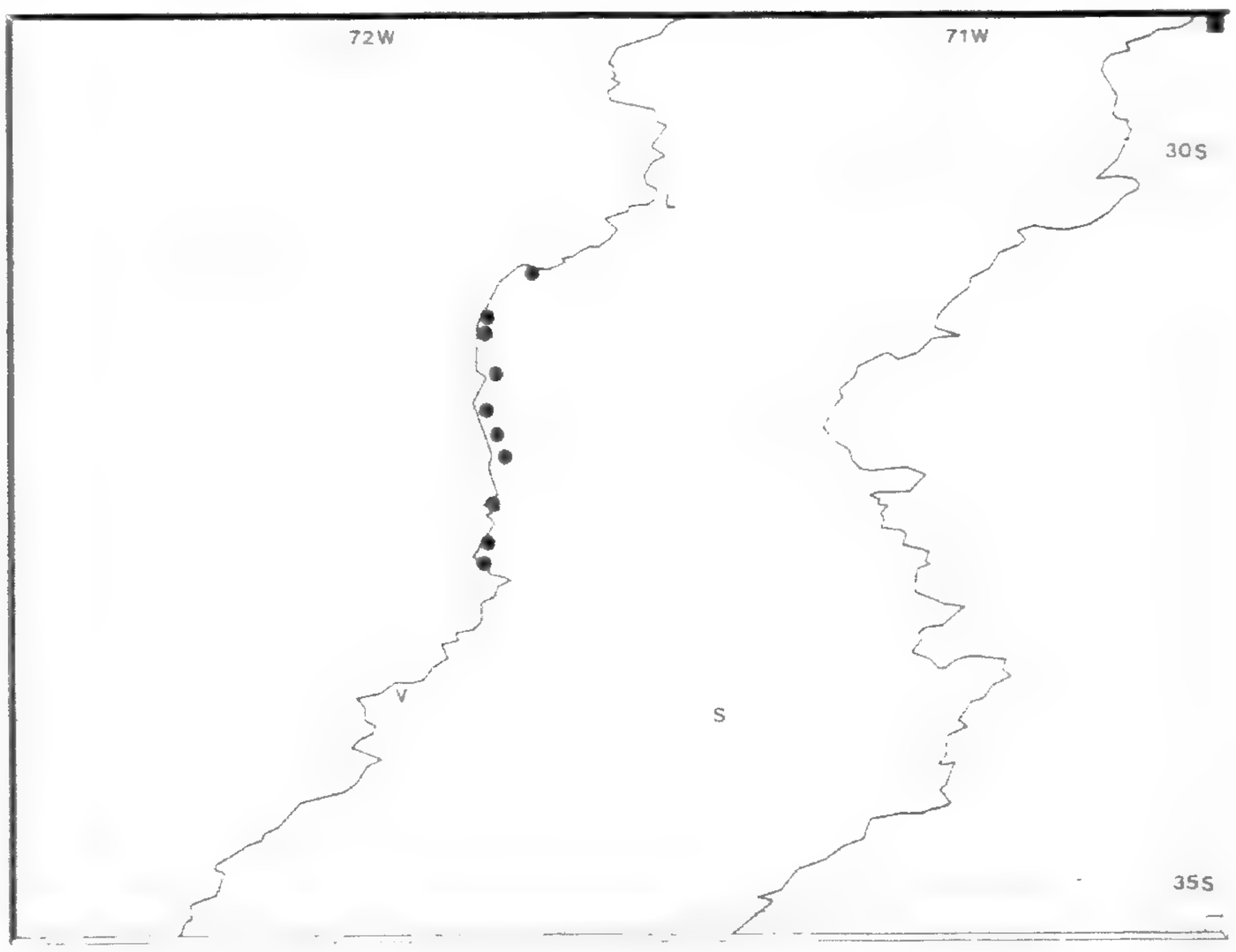
HOFFMANN, A. E. 1989. Cactáceas en la flora silvestre de Chile. Santiago. 272. i pp.(Cactaceae).

JACQUEZ. G. M. 1995. Geodat. a geographic database. Version 2.0. Ann Arbor (US: MI): BioMedware.

LEUENBERGER, B. E. & EGGLI, U. 1998. The genus *Eulychnia* (*Cactaceae*) in Chile: Notes on the taxonomy, types, and other old specimens. Haseltonia 5 (submitted).

PHILIPPI, R.A. 1864. *Plantarum novarum chilensium. Centuriae inclusis quibusdam Mendocinis et Patagonicis*. Tinnaea 33: 1-308.

RITTER, F. 1980. Kakteen in Sudamerika. Band 3. Chile. Spangenberg. Pp. 857-1238. (Cactaceae).



MAP 1. Known geographical range of *Eulychnia castanea*. Base map drawn with Geodat V2.0 (Jacquez, 1995), using a Lambert Azimuthal Projection. L = La Serena, S = Santiago, V = Valparaiso.

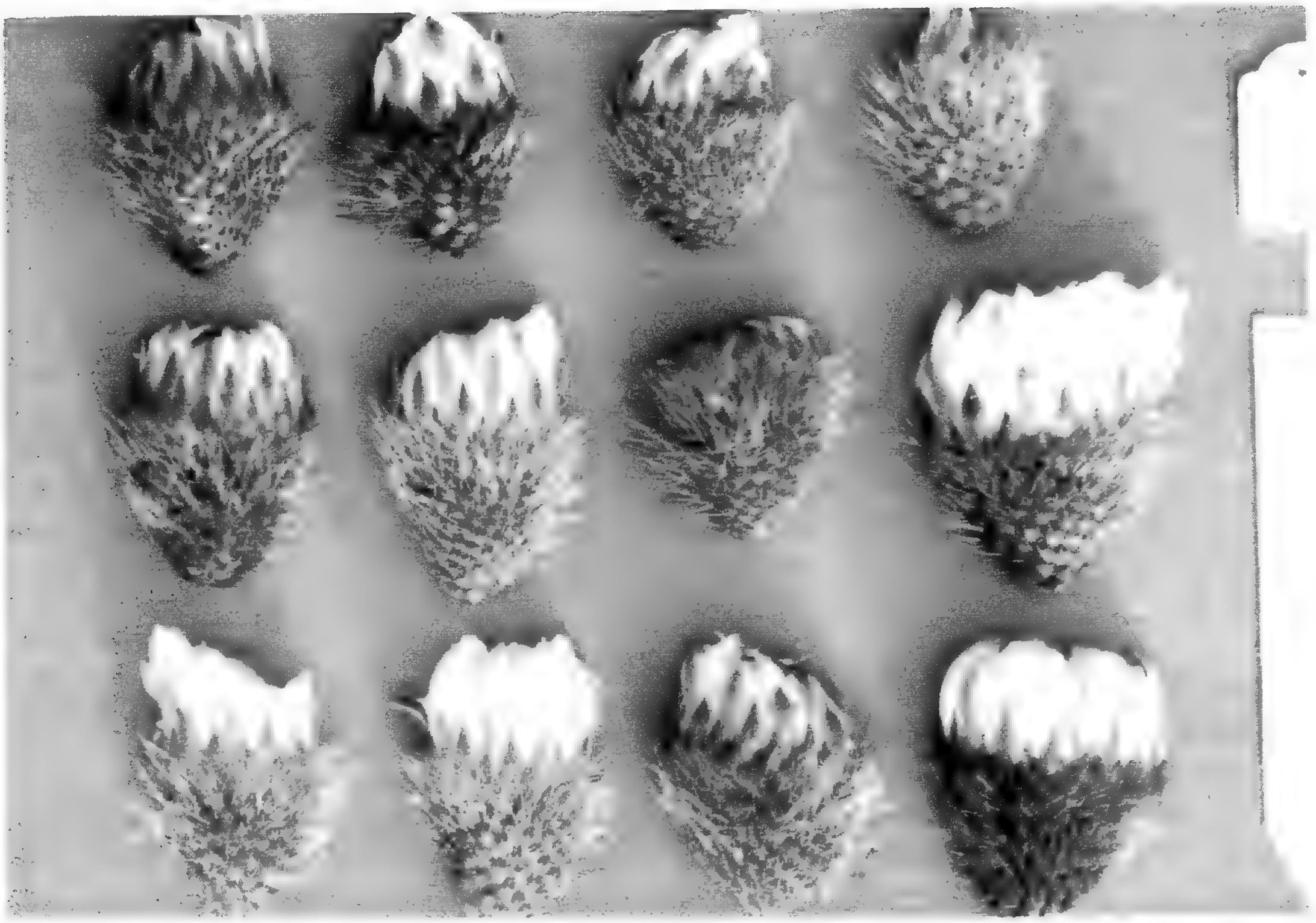


FIG. 1. Advanced buds and flowers of typical *Eulychnia castanea* (Eggli & Leuenberger 2945. N of mouth of Quebrada San Pedro)

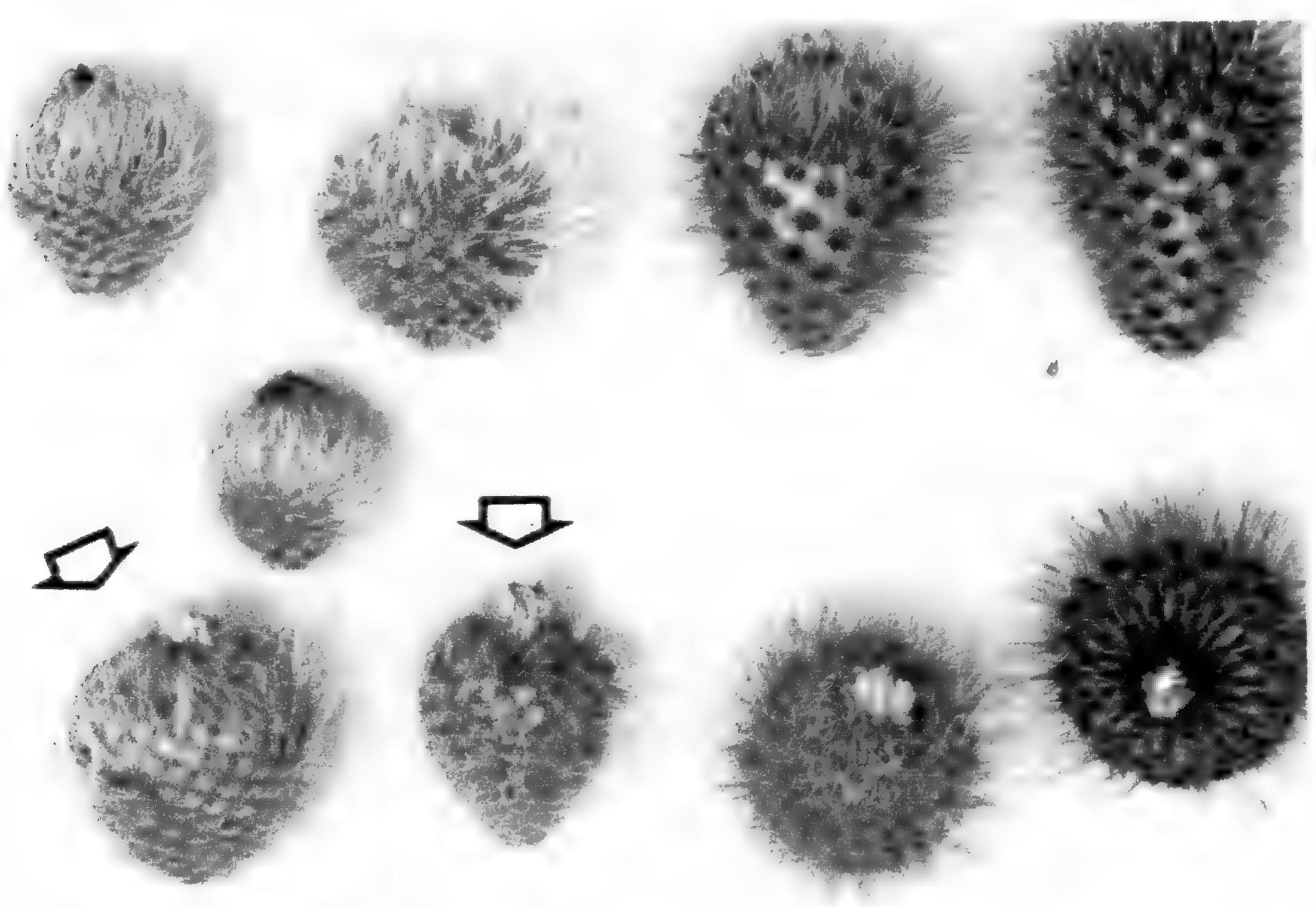


FIG. 2. Recently spent flowers and young fruits of *Eulychnia castanea* showing (arrow) introgression from *E. acida* (EGGLI & LEUENBERGER 3086d [photos only], coastal terrace of Fray Jorge National Park).

Fecha de publicación: 07 de mayo de 1999

Gayana Bot. 55(2): 93-110, 1998. ISSN 0016-5301

THE FLORA OF LLULLAILLACO NATIONAL PARK LOCATED IN THE TRANSITIONAL WINTER-SUMMER RAINFALL AREA OF THE NORTHERN CHILEAN ANDES

LA FLORA DEL PARQUE NACIONAL LLULLAILLACO UBICADO EN LA ZONA DE TRANSICION DE LAS LLUVIAS DE INVIERNO-VERANO EN LOS ANDES DEL NORTE DE CHILE

Mary T. Kalin Arroyo[1], Carmen Castor[1], Clodomiro Marticorena[2], Melica Muñoz[3], Lohengrin Cavieres[2], Oscar Matthei[2], Francisco A. Squeo[4], Martin Grosjean[5] y Roberto Rodríguez[2]

ABSTRACT

The vascular plant flora of Llullaillaco National Park, situated mostly above 3500 m elevation in the high Andes of the II Region of Chile (24°30'S - 25°10'S; 68°30'W - 69°15'W) in the transitional zone between the summer and winter rainfall regimes, is given, along with analysis of endemism, presence of distributional limits and species-accumulation tendencies. The known flora stands at 91 species and subspecies (90 species), in 58 genera and 26 families, with an additional 3 species likely to occur in the park. Thirteen (14%) of taxa are endemic to the Chilean Andes, with two entirely restricted to the park. Outstanding numbers of taxa (35 in total: 38%) reach their northern, southern or north-south distributional limits within or very close to the park boundary. Knowledge of the park's flora has accumulated steadily since R. A. Philippi's landmark expedition to the Atacama desert in 1860. By 1925 over half of the known taxa had been collected, and by 1975 over 2/3 of the species were known. The species-accumulation curve for the park predicts that a few more species are likely to be discovered. Llullaillaco National Park plays an important role in protecting marginal populations of many high Andean species of subtropical and mediterranean affinity. The composition and characteristics of the flora indicate that the park constitutes a critical area for understanding climatic evolution in the northern Chilean Andes.

[1]Departamento de Biología, Facultad de Ciencias, Universidad de Chile, Casilla 653, Santiago, Chile. E-mail: southern@abello.dic.uchile.cl.
[2]Departamento de Botánica, Facultad de Ciencias Naturales y Oceanográficas. Universidad de Concepción, Casilla 160-C, Concepción, Chile.
[3]Sección Botánica, Museo Nacional de Historia Natural, Casilla 787, Santiago, Chile.
[4]Departamento de Biología, Facultad de Ciencias, Universidad de La Serena, Casilla 599, La Serena, Chile.
[5]Department of Physical Geography, University of Berne, Switzerland.

KEYWORDS: Llullaillaco National Park, II Region of Chile, northern Chilean flora, summer rainfall, winter rainfall, Andean flora, endemics, north and south distributional limits, species accumulation analysis, catalog of flora.

RESUMEN

Se presenta la flora vascular del Parque Nacional Llullaillaco, situado principalmente por sobre los 3500 m en los Andes de la II Región de Chile (24°30'S-25°10'S; 68°30'W - 69°15'W), en la zona transicional de los regímenes de lluvia de invierno y verano. junto con datos de endemismo, límites de distribución y un análisis de curvas de acumulación de especies. La flora vascular consta de 91 especies y subespecies (90 especies) distribuidas en 58 géneros y 26 familias, con 3 especies adicionales que posiblemente se encuentran en el parque. Trece (14%) taxas son endémicos a los Andes chilenos, con dos restringidos en su distribución al parque mismo. Un número destacable de taxa (35 en total: 38%) alcanzan sus límites de distribución norte, sur o sur y norte dentro o muy cerca de los límites del parque. El conocimiento de la flora del parque se ha acumulado gradualmente a partir de la histórica expedición de R. A. Philippi al desierto de Atacama en 1860. En 1925, más de la mitad de la flora había sido colectada. y en 1975 se conocía más de 2/3 de la flora. La curva de acumulación de especies del parque predice que es probable el descubrimiento de algunas especies adicionales. El Parque Nacional Llullaillaco juega un papel importante en la protección de las poblaciones marginales de un número apreciable de especies andinas de afinidad subtropical y mediterránea. La composición y características de la flora del parque indican que constituye un área crítica para la comprensión de la evolución climática de los Andes del norte de Chile.

PALABRAS CLAVES: Parque Nacional Llullaillaco, II Región de Chile. flora del norte de Chile, lluvia de verano, lluvia de invierno. flora andina, endemismo, límites de distribución norte y sur, análisis de acumulación de especies, catálogo florístico.

INTRODUCTION

Continental Chile possesses 30 National Parks, 47 National Reserves and 13 Natural Monuments. These components of the National Protected Area System of Chile (SNASPE) cover an area of 14.4 million hectares (Muñoz *et al.* 1996), the equivalent of 19% of total land area (Arroyo & Cavieres, 1997). Over 99% of the area under protection pertains to national parks and reserves. Despite the high percentage of land area that is under protection in Chile in comparison with a world average of 6.3% (Heywood, 1995), published floristic lists and complete floras are available for relatively few protected areas. This situation is particularly evident for the northern Chilean Andes where there is no published floristic list for any protected area, other than the partial list provided by Arroyo *et al.* (1982) for Lauca National Park. The lack of floristic knowledge constitutes a serious handicap for evaluating the conservation value efficiency of the SNASPE as a whole, and for developing management plans for individual protected areas.

In this paper we provide a working checklist of the vascular plant flora of Llullaillaco National Park, II Región Chile, information on endemism and geographical ranges, and a quantitative analysis of the level of floristic knowledge of the park. The present publication was stimulated by the CONICYT-Chile Sectorial Program: "Biomas y Climas Terrestres y Marinos en el Norte de Chile" and a "Cátedra Presidencial en Ciencias" -1997 held by the first author. The "Biomas" program targeted at the regional level, enabled ample floristic exploration of poorly known areas of the II Región of Chile over the period 1996-97, development of a comprehensive data base of all vascular plant collections available for the Region, and establishment of a regional floristic list of close to 1000 taxa (Marticorena *et al.* 1998). The second initiative supports studies aimed at determining the conservation efficiency of protected areas in continental Chile situated within the area of mediterranean-type climate influence.

LLULLAILLLACO NATIONAL PARK: Llullaillaco NP, comprising 262,000 hectares, was incorporated into the National Protected Area System of Chile in 1995 (Muñoz *et al.*, 1996). The area comprises one of the "Sitios Prioritarios para la Conservación de la Diversidad Biológica de Chile" (Muñoz *et al.*, 1996). Located latitudinally between 24°30'S and 25°10'S, and longitudinally between 68°30'W and 69°15'W, with elevations mostly over 3500 m (Figure 1), this remote location is situated in the hyperarid transitional zone between the summer and winter rainfall regimes (Arroyo *et al.*, 1998, Messerli *et al.*, 1993; Fuenzalida & Rutllant, 1986, Table 1). The extremely dry climate characterizing the park, where annual precipitation is estimated to lie between 20-50 mm (Messerli *et al.*, 1993), results from the synergistic interaction between subsiding anticyclonic air masses of the southeast Pacific High Pressure Belt, the drying effect of the Humboldt current, and the rainshadow effect of the high Andes (Arroyo *et al.*, 1988; Messerli *et al.*; 1993). Winter cyclonic precipitation associated with the typical mediterranean climate in central Chile is normally blocked around 30°S, and the tropical convective summer precipitation of the "invierno boliviano" is restricted mainly to the eastern slopes of the Andes. Based on Fuenzalida & Rutllant (1986) and Aravena *et al.* (1989), both summer and winter rainfall in the transitional zone is of Amazonian origin. Winter precipitation results from the collision of wet and warm tropical and cold extra-tropical air masses. Summer precipitation is linked to an anticyclonic flow pattern in the upper troposhere over the eastern Altiplano. Vuille (1991) suggests that the amount of precipitation received during the winter in the transition zone is highly underestimated because of its solid form. The critical transition zone falls some where around 24°00'S -24°30'S, corresponding to the northern border of Llullaillaco NP. According to Vuille (1991), salt lakes north of this limit show increased water volume during the summer months; those south of 24°S show water increase as a response to winter precipitation. Based on Messerli *et al.* (1993), probably over 50% of annual precipitation received in Llullaillaco NP is of winter origin.

METHODS

The floristic information provided here is a product of botanical exploration by: a) early workers such as R.A. Philippi, C. Reiche, E. Werdemann and C. Muñoz; b) later workers such as M. T. Kalin Arroyo and G. Arancio visiting the park prior to the present study; c) the present resear-

chers during the 1997 summer season. All resultant collections were incorporated into the comprehensive data base of the Flora of the II Region of Chile where they are indexed according to precise latitude and longitude, and elevation where possible. Specimens are deposited at CONC and SGO.

Presence of a species in the park was determined by defining the rectangular area: latitudes 25°30'-25°15'S and longitudes: 68°15'- 69°15'W and eliminating all specimens from the rectangle not collected within the exact boundary of the park as per in Figure 1. Some collections made very early on in the botanical history of the area are not as precise with regard to location as would be desired. The important Philippi expedition to the Atacama desert (Philippi, 1860) which resulted in many new described species for Chile, is a typical case. Philippi (1860) explored localities on the western side of the park, a number of which are problematical. For example, the elevation reported for the locality Río Frío, the latter which is clearly entirely within the limits of the park, would appear to be out by some 500 m according to present cartographic values. Collections from this locality have been accepted as pertaining to the park boundaries. It would also appear that the quoted elevations of around 3000 m for many collections from Valle or Río Zorras are underestimated. Judging by the fact that most of the plants collected at this last locality pertain to Andean bogs developed at much higher elevations, it is probable that the correct elevation is around 3500-4000 m. With this adjustment, many of the plants collected at the locality Zorras by Philippi (1860) would fall within the park boundaries.

In several instances Philippi (1860) (see also Muñoz 1960) reports visual records of species at park localities. In other cases more localities than collection numbers are cited, making it impossible to determine the precise locations of the collections. Species falling into these last two categories, that could potentially exist in the park, have been included in an Addendum to the catalog. The presence of northern and southern distributional limits within the park boundaries or very close to the latter was determined through consultation of the Chilean flora data base and literature records. The category "very close" corresponds to distributional limits found within 5' of the park boundary.

To assess the present state of floristic knowledge of the park, a species accumulation curve was constructed using accumulation intervals of 25 records, beginning with R. A. Philippi's collections made in 1854. The clench model (Soberón & Llorente, 1993) was used to mathematically fit the accumulation curve and to determine the effects of further collecting efforts on the park's flora.

Short descriptions and exsiccatae are given for each species.

RESULTS

HISTORICAL DEVELOPMENT OF FLORISTIC KNOWLEDGE: Figure 3 shows that species registered for the park have accumulated gradually over time. The earliest botanical collections date back to the last century when the German naturalist R. A. Philippi, then Director of the Museo Nacional de Historia Natural was directed by the government of Chile to undertake a study of the Atacama Desert (Philippi, 1860). First records of species for the park represented with a fair amount of certainty in R. A. Philippi's collections are:

- *Adesmia erinacea* Phil.
- *A. frigida* Phil.
- *Carex maritima* Gunnerus
- *Chenopodium frigidum* Phil.
- *Deyeuxia robusta* Phil.
- *Menonvillea frigida* (Phil.) Rollins
- *Montiopsis glomerata* (Phil.) D.I.Ford
- *M. modesta* (Phil.) D.I.Ford
- *Nastanthus caespitosus* (Phil.) Reiche
- *Oxychloe andina* Phil.
- *Phacelia cumingii* (Benth.) A.Gray
- *Potamogeton strictus* Phil.
- *Puccinellia frigida* (Phil.) I.M.Johnst.
- *Ranunculus cymbalaria* Pursh f. *exilis* (Phil.) Lourteig
- *Senecio chrysolepis* Phil.
- *Viola frigida* Phil.

Over the period 1901-1903 the German botanist Karl Reiche, also associated with the Museo Nacional de Historia Natural, effected botanical expeditions in the north of the country, including the vicinity of Volcan Llullaillaco (Reiche, 1907), leading to the following new taxa reported for the first time within the area of park:

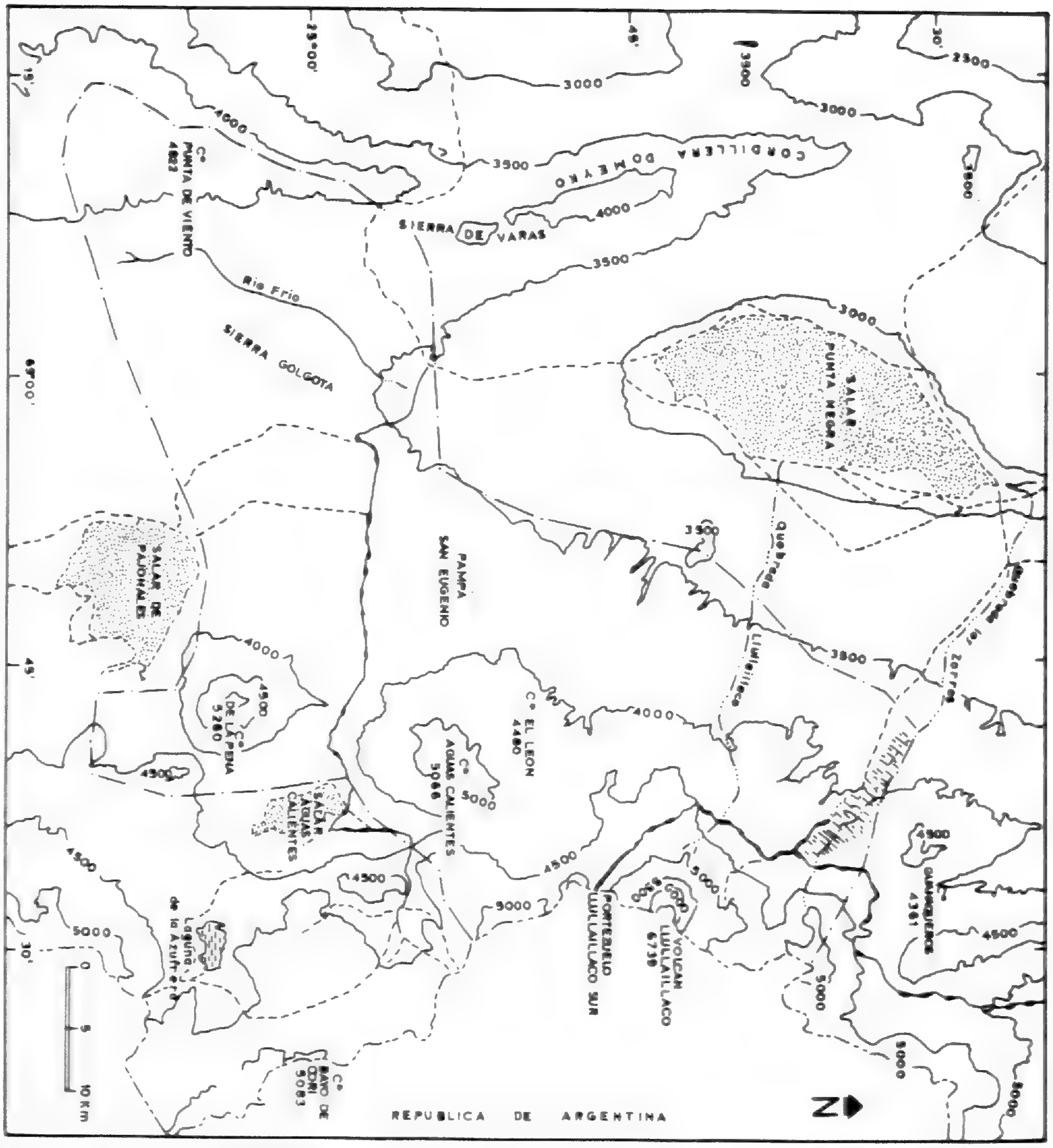


FIGURE 1. Details of Llullaillaco National Park and its location in the II Region of Chile (inset). Source CONAF - January, 1994.

- *Artemisia copa* Phil.
- *Atriplex imbricata* (Moq.) D.Dietr.
- *Descurainea stricta* (Phil.) Prantl ex Reiche var. *minutiflora* (Phil.) O.E. Schulze
- *Fabiana bryoides* Phil.
- *Fabiana denudata* Miers
- *Junellia digitata* (Phil.) Mold.
- *Moschopsis monocephala* (Phil.) Reiche
- *Phacelia pinnatifida* Griseb ex Wedd.
- *Senecio eriophyton* J.Remy
- *Senecio sundtii* Phil.
- *Senecio xerophilus* Phil. var. *xerophilus*
- *Triglochin concinnum* Burtt Davy
- *Urbania pappigera* Phil.

Between 1923 and 1927 Erich Werdermann (Werdermann 1927), later Director of Berlin Botanical Garden, undertook an expedition in the high Andes of Bolivia and northern Chile which resulted in 41 collections made in the present area of Llullaillaco NP (Looser, 1960). Species registered for the first time in the park by Werdermann include:

- *Acantholippia deserticola* (Phil.) Mold.
- *Adesmia caespitosa* Phil.
- *Arenaria serpens* Kunth
- *Astragalus cryptobotrys* I.M.Johnst.
- *Calandrinia compacta* Barnéoud
- *Catabrosa werdermannii* (Pilger) Nicora et Rúgolo
- *Cistanthe minuscula* (Añon) Peralta
- *Cistanthe picta* (Gillies ex Arn.) Carolin ex Hershk.
- *Colobanthus quitensis* (Kunth) Bartling
- *Chaetanthera revoluta* (Phil.) Cabrera
- *Cristaria andicola* Gay
- *Gilia crassifolia* Benth.
- *Hoffmannseggia eremophila* (Phil.) Burkart ex Ulib.
- *Ipomopsis gossypifera* (Gillies ex Benth.) V. Grant
- *Mancoa hispida* Wedd.
- *Montiopsis copiapina* (Phil.) D.I.Ford
- *Mulinum crassifolium* Phil.
- *Nicotiana petunioides* (Griseb.) Millan
- *Oxalis hypsophila* Phil.
- *Parastrephia quadrangularis* (Meyen) Cabrera
- *Phacelia setigera* Phil. var. *setigera*
- *Pycnophyllum bryoides* (Phil.) Rohrb.
- *Senecio hirtus* Cabrera
- *Senecio scorzoneraefolius* Meyen et Walp.
- *Sisymbrium philippianum* I.M.Johnst.
- *Stipa chrysophylla* E.Desv.
- *Viola llullaillacoensis* W.Becker

In 1944, Carlos Muñoz, then Director of the Museo Nacional de Historia Natural, explored several areas of the Atacama desert with the aim of visiting sites explored previously by R. A. Philippi (Muñoz & Pisano, 1950). Species collected within the park boundary for the first time from a total of 32 collections made, include:

- *Chaetanthera sphaeroidalis* (Reiche) Hicken
- *Deyeuxia eminens* J.Presl
- *Festuca deserticola* Phil.
- *Gentiana sedifolia* Kunth
- *Perezia atacamensis* (Phil.) Reiche
- *Nicotiana acuminata* (Graham) Hook.
- *Nototriche auricoma* (Phil.) A.W.Hill
- *Nototriche clandestina* (Phil.) A.W.Hill
- *Senecio puchii* Phil.

In 1992 G. Arancio, Universidad de La Serena, made 23 collections within the park boundary, discovering for the first time:

- *Adesmia melanthes* Phil.
- *Adesmia occulta* (R.E.Fries) Burkart
- *Baccharis tola* Phil. subsp. *altiplanicola* F.H. Hellwig
- *Deyeuxia crispa* Rugolo et Villav.
- *Festuca chrysophylla* Phil.
- *Stipa frigida* Phil.
- *Werneria pinnatifida* J.Remy

In 1994 M. T. Kalin Arroyo and collaborators, Universidad de Chile, made 82 collections within the park boundary over a period of 3 days, discovering the following species for the first time:

- *Adesmia spinosissima* Meyen
- *Astragalus bustillosii* Clos
- *Chaetanthera minuta* (Phil.) Cabrera
- *Deyeuxia deserticola* Phil.
- *Eleocharis albibracteata* Nees et Meyen ex Kunth
- *Festuca werdermannii* St.-Yves
- *Hypsela reniformis* (Kunth) K.Presl
- *Lycium humile* Phil.
- *Nicotiana longibracteata* Phil.
- *Opuntia atacamensis* Phil.
- *Ruppia filifolia* (Phil.) Skottsb.
- *Scirpus atacamensis* (Phil.) Boeckeler
- *Sisymbrium lanatum* (Walp.) O.E.Schulze

Finally, in 1997, G. Arancio and F. Squeo, Universidad de La Serena made 29 collections within the park boundary, revealing the following previously undiscovered species:

- *Anatherostipa venusta* (Phil.) Peñail.
- *Baccharis tola* Phil. subsp. *tola*
- *Ephedra breana* Phil.
- *Lenzia chamaepitys* Phil.
- *Opuntia camachoi* Espinosa

An undated specimen of *Haplopappus rigidus* Phil. was collected at Río Frío by an unknown collector. This specimen possibly was collected by R. A. Philippi who states that it was seen only several occasions in the Atacama (Muñoz, 1960).

SPECIES ACCUMULATION ANALYSIS: A good fit of the species accumulation data was obtained with the Clench model (Figure 3; number of taxa =((1.086887 number of collections)1+(0.007910272) number of collections), 99.5% explained variance). It may be seen that the species accumulation curve for Llullaillaco NP does not yet reach a clear asymptote, as would be expected if the flora were exhaustively known. Mathematical extrapolation of the curve in Figure 3 gives an expected increase in the total number of species to 110 with a doubling of the collection effort.

ENDEMISM: Endemic taxa, according to three categories of endemism are shown in Table II. The park possesses 2 local endemics: *Menonvillea frigida* (Phil.) Rollins and *Deyeuxia robusta* Phil. *Menonvilla frigida* is a very distinctive species of the genus. It was found by us growing abundantly at around 4700 m on the slopes of Volcan Llullaillaco, but would also appear to grow at lower elevations (see description). *Deyeuxia robusta* is a poorly known species, which perhaps, upon further study, will not prove different from one of the other species of *Deyeuxia* in the park. A total of 13 taxa (14.3%) of the flora is endemic to Chile.

DISTRIBUTIONAL LIMITS: Twelve species reach their northern limits in the park (Table III). Seventeen species reach their southern limits in the park. An additional 8 species reach their southern limits immediately outside the park boundary. In all 35 taxa (38.5% of the flora) are represented by their southern, northern or southern and northern limits in the park. Relatively more species found in the zonal vegetation reach their southern limits in the park than for azonal bog habitats (Figure 4).

ADDENDUM

The following species referred to in Philippi (1860) may prove to exist in the park.

Triglochin palustris L. "Lo vi en Aguas Profetas, después en Zorras y en otras localidades semejantes" Two specimens cited (SGO 37012; 45409) (Muñoz, 1960) but it is unclear as to which localities they pertain (Muñoz, 1960).

Triglochin striatum R et P. "Lo vi más arriba de Zorras" (Muñoz, 1960). Other localities are also cited in relation to the single specimen (SGO 45410) cited.

Juncus articus var. *andicola* - was observed by R.A. Philippi at 2900 m in Zorras, which would place on the border of the park on the basis of elevation. A single specimen (SGO 37866) is cited in Muñoz (1960) as representative of the latter and other localities.

DISCUSSION

Although botanists have visited the area of Llullaillaco National Park since 1860, prior to this study no comprehensive account of the flora of Llullaillaco NP has been available (Muñoz *et al.*, 1996). Richter (1995) citing 19 species observed in a vegetation transect on Volcán Llullaillaco, is the only published reference to the botany of the park. Interestingly, however, as early as 1925, over half of the species known to occur in the park had been collected, whereas as early as 1950, over 2/3 of the flora was known.

The 90 species (91 taxa) constitute a mixture of zonal and Andean bog elements. Zonal elements include high Andean elements (e.g. *Perezia atacamensis, Chaetanthera sphaeroidalis, Stipa frigida, Fabiana denudata, Baccharis tola, Nototriche* spp., *Senecio sundtii, S. eriophyton, S. puchii, S. xerophilus, Viola llullaillacoensis, Menonvillea frigida, Mulinum crassifolium, Pyanophyllum bryoides, Parastrephia quadrangularis, Lenzia chamaepitys*) and species representative of

the desert margin (*Acantholippia deserticola*, *Atriplex imbricata*, *Chenopodium frigidum*, *Cistanthe minuscula*, *Ephedra breana*, *Opuntia atacamensis*, *O. camochoi*, *Haplopappus rigidus*, *Gilia crassifolia*, *Hoffmannseggia eremophila*, *Ipomopsis gossypifera*). Most of the very depauperate high Andean bog flora known for this latitude is found in the park (e.g. *Calandrinia compacta*, *Colobanthus quitensis*, *Deyeuxia* spp., *Hypsela reniformis*, *Scirpus atacamensis*, *S. deserticola*, *Oxychloe andina*, *Potamogeton strictus*, *Ruppia filifolia*, *Gentiana sedifolia*). Regionally, nevertheless, the park lacks a reliable record for some of the more typical plant species associated with salt lakes (e.g. *Triglochin striatum*). Such species can be found in the Salar de Pajonales, immediately to the south of the park boundary. Inclusion of this salar in the park clearly would increase its conservation coverage.

Known species richness for the park clearly indicates an impoverished flora for a land area of 262.000 hectares in relation to other areas in the Chilean Andes. For comparison, the high Andean flora of the much smaller area of Laguna Grande and Laguna Chica in the III Región of Chile contains 281 species (Arroyo *et al.*, 1984). Monumento Nacional El Morado in the mediterranean-type climate Andes of central Chile supports 280 species in area of 3009 hectares (Tellier *et al.*, 1994). The alpine flora of Parque Nacional Torres del Paine (242,242 ha; Muñoz *et al.*, 1996) stands at 179 species in 94 genera (Arroyo *et al.*, 1992), with only a fraction of the park area supporting alpine vegetation. Nevertheless, the 90 species (91 taxa) recorded in Llullaillaco NP are within the range expected for the hyper-arid Andes. An intensive study of an altitudinal gradient slightly to the north at latitude 24°S where precipitation is slightly higher, revealed 77 species in 55 genera and 30 families over a similar elevational range (Arroyo *et al.*, 1988).

While Llullaillaco NP is not overly rich in species, it clearly plays a very important role in protecting the limiting distributions of a very large number of high Andean species. Anywhere in the Andes it is very unusual to find such a high proportion of species represented by their northern or southern distribution limits. This situation undoubtedly reflects the transitional climatic setting of Llullaillaco NP between the summer and winter rainfall regimes. Here, effectively, many northern subtropical elements adapted to a summer rainfall regime, and southern elements of mediterranean influence adapted to a winter rainfall regime reach their southern and northern limits, respectively. Interestingly, proportionally more species reach their southern distributional limits in the park than vice-versa. The significance of this trend can only be speculated upon at this time. Around twenty seven species in the park are considered to be northern Andean elements, while 23 are considered to be of mediterranean affinity (Arroyo *et al.*, unpublished data), with the remaining species distributed in both the mediterranean and subtropical sectors of the Andes. With a predominance of northern subtropical elements in the flora, relatively more southern limits could be expected. Alternatively, the trend may simply reflect the fact that Llullaillaco NP is located slightly south of the presumed 50-50% summer-winter rainfall zone. That there are relatively more northern summer rainfall than southern mediterranean elements in the flora, suggests the hypothesis of relictual distributions of summer rainfall species. This hypothesis finds strong support in the fact that summer rainfall elements tend to be more locally distributed in the park and found in specialized habitats, such as north-facing warm rocky slopes. This last pattern is consistent with the recent findings of Grosjean *et al.* (1995) who concluded, on the basis of lake level studies, that precipitation rates between 22°-24°S in the northern Andes of Chile were intensified during the late Glacial and Holocene. According this study, annual precipitation would have been 400-500 mm higher than at present.

Species accumulation analysis indicated that some new species records can indeed be expected for the park over the 91 given here. Indeed, including the species given in the Addendum would increase the number of taxa to 94. That few additional species have been revealed in several well collected areas immediately outside the boundary of the park (e.g. Cerro Guanaqueros to the north, Quebrada de Zorras, region of Salar de Punta Negra, Sierra de Varas to the east, Salar de Pajonales, south face of Cerro del León, and Laguna de Azufrera to the south-east, and Valle Sandon to the south-west) indicates that new records are likely to be relatively few. Future botanical exploration should concentrate on the still poorly explored areas of Cerro Aguas Calientes, the south-eastern sector of Sierra de Varas, the dry pampas in the north-west sector of the park, and the northern side of Cerro del León, any small patches of high Andean bog in the north-eastern sector of the park,

and any small patches of salar vegetation that might exist within the park boundaries.

ACKNOWLEDGMENTS

Research supported by CONICYT Grant No. Biomas-S960016 and carried out on a Endowed Presidential Science Appointment (Cátedra Presidencial de Ciencias -1997) (MTKA). Exploration by the first author in 1994 benefited from partial field support from the project "Climate Change in the Arid Andes" (Bruno Messerli-Martin Grosjean) financed by the Swiss National Science Foundation.

TABLE I. Precipitation data for the closest climatic stations to Llullaillaco National Park after Hajek & di Castri (1975). CIREN y Dirección General de Aguas (DGA).

Station	Lat.	Long.	Elevat. (m)	Yrs.	Source	Annual Precipitation (mm)	Summer Precipitation (mm)
Peine	23°41'S	68°04'W	2480	17	CIREN	21.5	49.3
Socaire	23°55'S	67°52'W	3251	18	CIREN	45.6	54.5
Monturaqui	24°02'S	68°26'W	3450	5	DGA	58.5	90.0
Socompa	24°26'S	68°18'S	3915	8	CIREN	20.7	78.7
Catalina	25°14'S	69°44'W	2180	8	CIREN	0	0
Refresco	25°19'S	69°52'W	1850	19	H&D	9.2	3.3

TABLE II. Endemic vascular plants in Llullaillaco National Park. A: entirely restricted in distribution to within the boundary of the park: B: endemic to the Andes of the II Región; C: endemic to the Andes of Chile in a broader sense.

Menonvillea frigida (Phil.) Rollins	A
Deyeuxia robusta Phil.	A
Descurainea stricta (Phil.) Prantl ex Reich var. *minutiflora* (Phil.) O.E.Schulz	B
Opuntia atacamensis Phil.	B
Adesmia frigida Phil.	C
Baccharis tola Phil. subsp. *altiplanicola* F.H. Hellwig	C
Festuca werdermannii St.-Yves	C
Nototriche auricoma (Phil.) A.W. Hill	C
Nototriche clandestina (Phil.) A.W. Hill	C
Opuntia camachoi Espinosa	C
Oxalis hypsophila Phil.	C
Senecio hirtus Cabrera	C
Viola llullaillacoensis W. Becker	C

TABLE III. Species with northern or southern distributional limits in, or immediately outside the border of Llullaillaco National Park. N: northern limit in park; S: southern limit in park; N and S: northern and southern limits in park; S-close: southern limit close to park boundary.

Adesmia frigida Phil.	N
Chaetanthera minuta (Phil.) Cabrera	N
Festuca werdermannii St.-Yves	N
Montiopsis copiapina (Phil.) D.I.Ford	N
Montiopsis glomerata (Phil.) D.I.For	N
Nastanthus caespitosus (Phil.) Reiche	N
Senecio eriophyton J.Remy	N
Senecio sundtii Phil.	N
Viola frigida Phil.	N
Viola llullaillacoensis W.Becker	N
Deyeuxia robusta Phil.	N and S
Menonvillea frigida (Phil.) Rollins	N and S
Adesmia caespitosa Phil.	S
Adesmia melanthes Phil.	S
Anatherostipa venusta (Phil.) Peñail.	S
Astragalus cryptobotrys I.M.Johnst.	S
Baccharis tola Phil. subsp. *altiplanicola* F.H.Hellwig	S
Chaetanthera revoluta (Phil.) Cabrera	S
Descurainea stricta (Phil.) Prantl ex Reich var. *minutiflora* (Phil.) O.E.Schulz	S
Fabiana denudata Miers	S
Junellia digitata (Phil.) Mold.	S
Mancoa hispida Wedd.	S
Moschopsis monocephala (Phil.) Reiche	S
Nototriche auricoma (Phil.) A.W.Hill	S
Senecio puchii Phil.	S
Sisymbrium lanatum (Walp.) O.E.Schulz	S
Urbania pappigera Phil.	S
Adesmia occulta (R.E.Fries) Burkart	S-close
Artemisia copa Phil.	S-close
Deyeuxia crispa Rúgolo et Villav.	S-close
Opuntia atacamensis Phil.	S-close
Parastrephia quadrangularis (Meyen) Cabrera	S-close
Phacelia setigera Phil. var. *Setigera*	S-close
Pycnophyllum bryoides (Phil.) Rohrb.	S-close
Senecio xerophilus Phil. var. *Xerophilus*	S-close

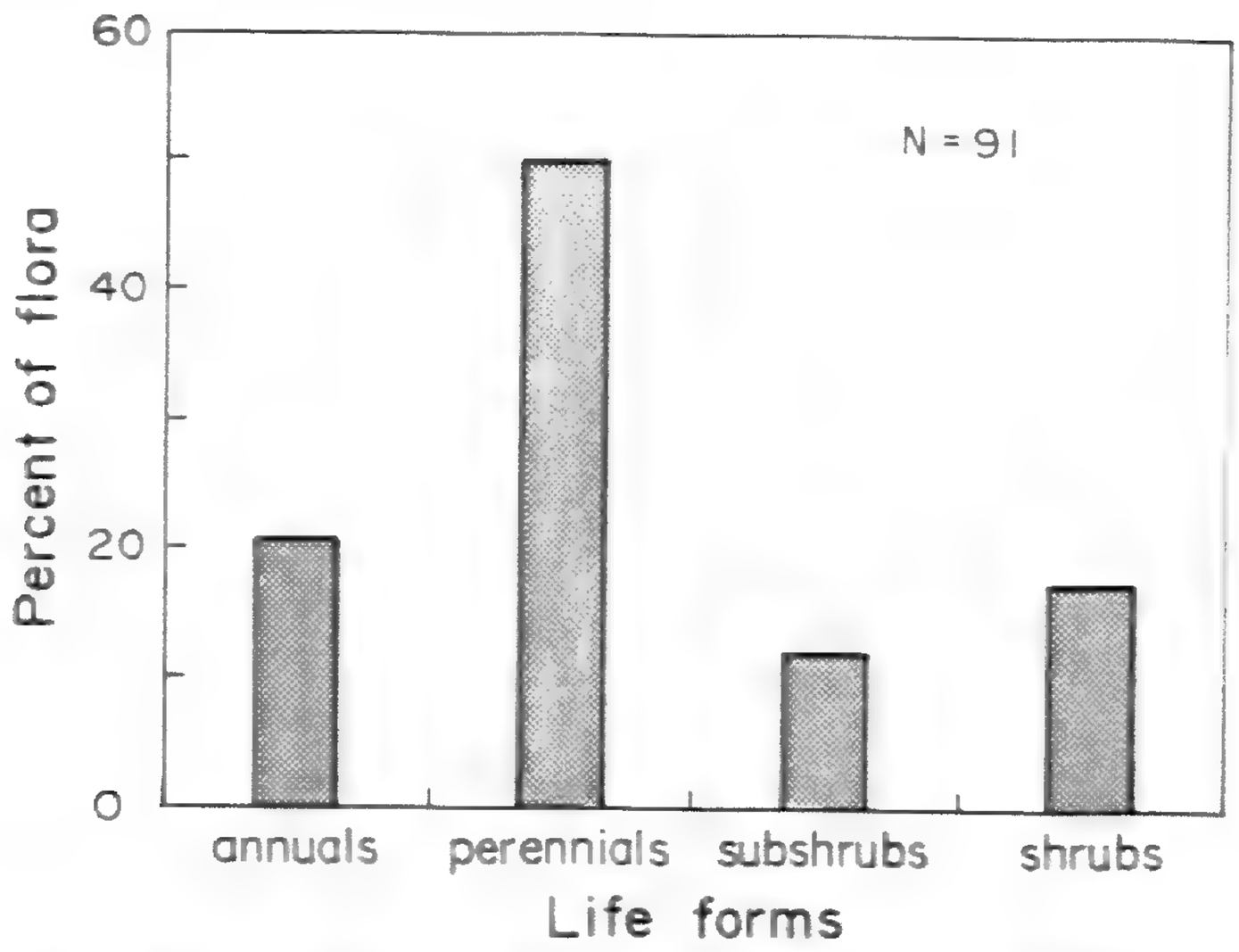


FIGURE 2. Life forms in the flora of Llullaillaco National Park. Perennials = perennial herbs. Facultatively annual species are included in the annual category.

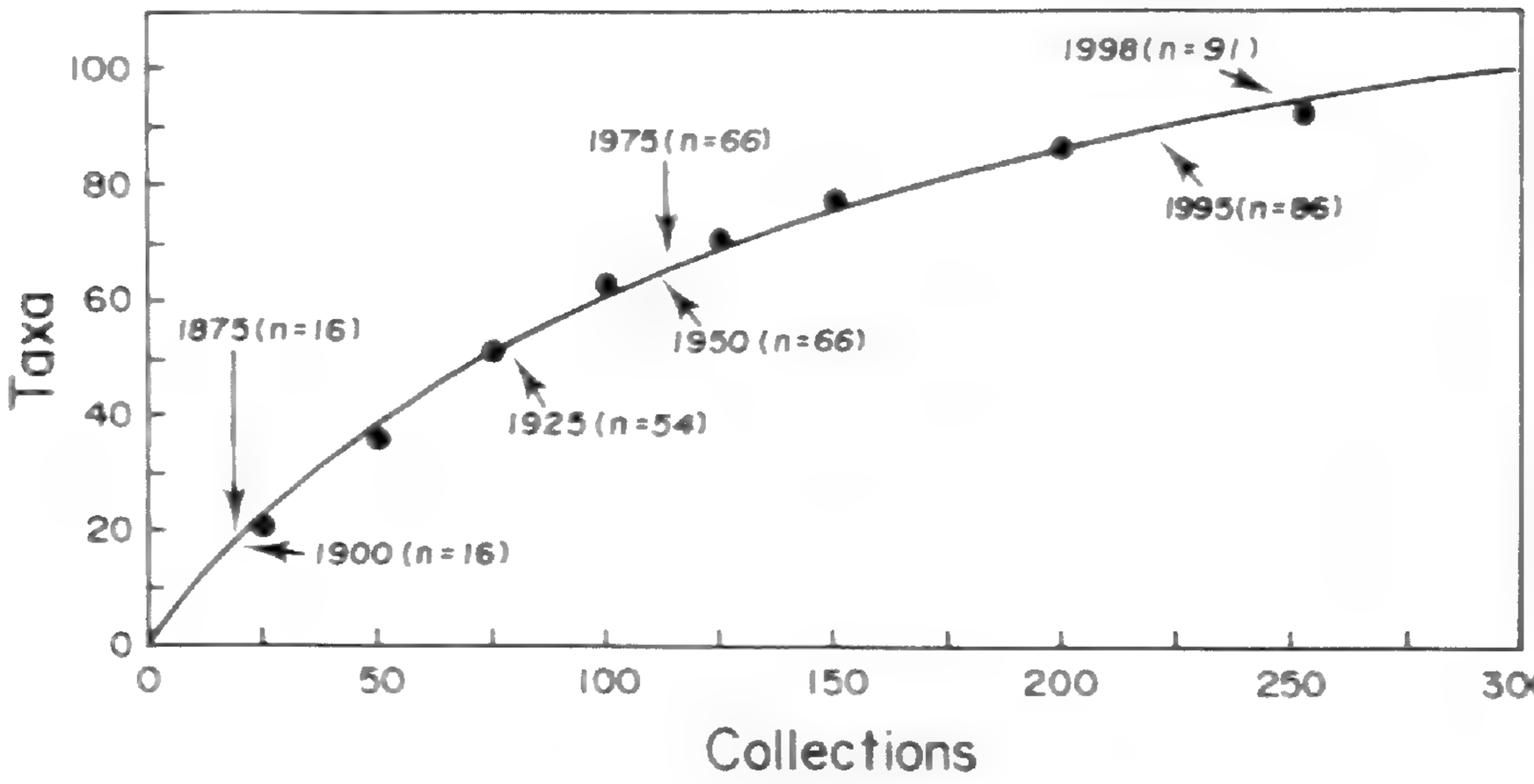


FIGURE 3. Species accumulation curve for Llullaillaco National Park, based on fitting of the Clench Model to collection data. Data points are at 25 collection intervals. The number of taxa (species and 1 subspecies) accumulated

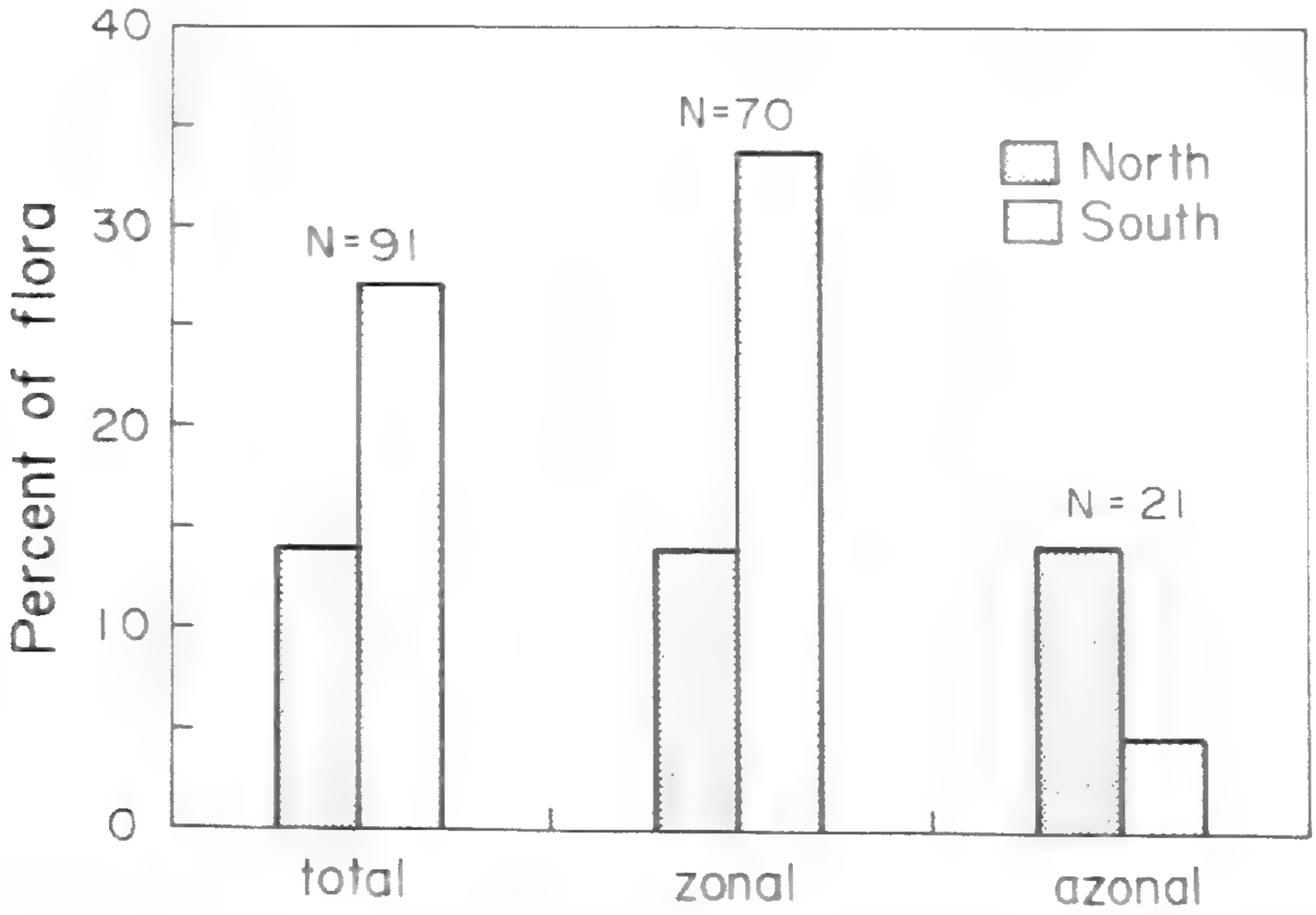


FIGURE 4. Taxa reaching their northern or southern distributional limits in the Chilean Andes within the boundaries of, or immediately outside (see methods) Llullaillaco National Park.

CATALOG OF VASCULAR PLANTS

GYMNOSPERMAE

EPHEDRACEAE

1. *Ephedra breana* Phil.
Xerophytic shrub to ca. 1.5 m with stiff, yellow-green stems; fruits fleshy, red. Exc.: Antofagasta: Llanos Cerro de la Pena, 3900 m, Arancio & Squeo 10494 (ULS).

ANGIOSPERMAE: DICOTYLEDONEAE

CACTACEAE

2. *Opuntia atacamensis* Phil.
Cushion forming species, composed of bright green ovoid or conical segments with reddish spines; flowers yellow to brownish-yellow. **Endemic** to the II Región of Chile where it is found only at mid to high elevations in the southern portion of the Región. Exs.:Antofagasta: Volcán Llullaillaco, 4100 m, Arroyo *et al.* 94025 (CONC).

3. *O. camachoi* Espinosa
Cushion forming species, closely related to *O. atacamensis*, but differing in its smaller size and grey-brown spines. **Endemic** to the high Andes of Chile (24°S-27°S). Exs.: Antofagasta: Pampa Las Carretas km 28.092, 3950 m, Arancio & Squeo 10436 (ULS).

CAESALPINIACEAE

4. *Hoffmannseggia eremophila* (Phil.) Burkart ex Ulib.
Subacaulescent herb to 5 cm high. Flowers orange-reddish. On sandy soils. Exs: Antofagasta: Cordillera Volcán Llullaillaco, 4000 m, Werdermann 1014 (CONC); Antofagasta: Volcán Llullaillaco, 4000 m, Arroyo *et al.* 94035 (CONC); Antofagasta: Quebrada de la Pena. 3800 m, Arancio & Squeo 10467 (ULS); Antofagasta: Llanos Cerro de la Pena, 3900 m, Arancio & Squeo 10499 (ULS); Antofagasta: Base Cerro de la Pena, 3680 m, Arancio & Squeo 10405 (ULS).

CALYCERACEAE

5. *Moschopsis monocephala* (Phil.) Reiche
Succulent, glaucous, rosette-forming perennial herb. Flowers whitish. Exs.: Río Frío, Reiche w/o no. (SGO 057228); Antofagasta: Vega Zorra, 3150 m, Arancio 92338 (ULS); Antofagasta: Llullaillaco, camino a Mina Esperanto, 3740 m, Muñoz C. 3806 (SGO); Antofagasta: Cordillera Volcán Llullaillaco, 4400 m, Werdermann 1016 (CONC); Antofagasta: Volcán Llullaillaco, 4500 m, Arroyo *et al.* 94009 (CONC).

6. *Nastanthus caespitosus* (Phil.) Reiche
Succulent, rosette-forming perennial herb. Flowers white. On edge of cushion bogs. Exs.: Río Frío, 3292 m, Philippi w/o no. (SGO 43609, 57221); Antofagasta: Valle de Río Frío, 3200 m, Muñoz C. 3891 (SGO); Antofagasta: Río Frío, 3500 m, Werdermann 1028 (CONC).

CAMPANULACEAE

7. *Hypsela reniformis* (Kunth) K.Presl
Interweaving perennial herb. Flowers white tinged blue-violet. In cushion bogs. Exs.: Antofagasta: Vega Las Zorritas, 4150 m, Arroyo *et al.* 94068 (CONC).

CARYOPHYLLACEAE

8. *Arenaria serpens* Kunth
Mat forming to interweaving perennial herb. Flowers white. Common in cushion bogs. Exs.: Antofagasta: Vega Las Zorritas, 4200 m, Arroyo *et al.* 94054 (CONC); Antofagasta: Cordillera Volcán Llullaillaco, 3800 m, Werdermann 1018 (CONC); Antofagasta: Volcán Llullaillaco, 3950 m, Arroyo *et al.* 94042 (CONC).

9. *Colobanthus quitensis* (Kunth) Bartling
Dwarf perennial herb. Flowers green. In cushion bogs. Exs.: Antofagasta: Volcán Llullaillaco, 3800 m, Johnston 6214 (S); Antofagasta: Volcán Llullaillaco, 3400 m, Werdermann 1452 (S).

10. *Pycnophyllum bryoides* (Phil.) Rohrb.
Common perennial herb forming loose cushions. Flowers inconspicuous, yellowish-green. Exs.: Antofagasta: Llanos en camino Quebrada de Las Zorritas, 4150 m, Arancio 248 (CONC); Antofagasta: Llullaillaco, camino a Mina Esperanto, 3740 m, Muñoz C. 3804 (SGO); Antofagasta: Cordillera Volcán Llullaillaco, 4300 m, Werdermann 1026 (CONC); Antofagasta: Volcán Llullaillaco, 4400 m, Arroyo *et al.* 94004 (CONC); Antofagasta: Cerro del León, 4150 m, Arancio & Squeo 10412 (ULS).

CHENOPODIACEAE

11. *Atriplex imbricata* (Moq.) D.Dietr.
White-stemmed shrub up to 75cm high; leaves with glaucous borders. At lower elevations on desert border. Exs.: Región del Llullaillaco, Reiche w/o no. (SGO 048299), (SGO 048301); Antofagasta: Cordillera Volcán Llullaillaco, 3800 m, Werdermann 1003 (CONC); Antofagasta: Faldeos S de la Quebrada Llullaillaco, 3500 m, Arroyo *et al.* 94081 (CONC).

12. *Chenopodium frigidum* Phil.
Spreading annual herb with glaucous foliage. On sandy sites. Rare. Exs.: Antofagasta: Volcán Llullaillaco, 4000 m, Arroyo *et al.* 94030 (CONC); Río Frío, Philippi w/o no. (SGO 48176); Antofagasta: Valle de Río Frío, 3200 m, Muñoz C. 3859 (SGO).

COMPOSITAE

13. *Artemisia copa* Phil.
Aromatic shrub up to 60 cm high with whitish foliage. Locally abundant on rocky north-facing slopes. Exs: Región del Llullaillaco, Reiche w/o no. (SGO 066433); Antofagasta: Vega Zorra, 3150 m, Arancio 92340 (ULS); Antofagasta: Volcán Llullaillaco, 4100 m, Arroyo *et al.* 94019 (CONC); Antofagasta: Volcán Llullaillaco, 4000 m, Werdermann 1007 (CONC); Antofagasta: Cerro del León, 4240 m, Arancio & Squeo 10423 (ULS).

14. *Baccharis tola* Phil. subsp. *altiplanicola* F.H.Hellwig
Yellow-stemmed, dioecious, resinous shrub usually >40 cm high. Leaves strongly dentate with 2 or more teeth on each side. Locally common on warmer north-facing rocky slopes and dry streamsides. **Endemic** to the altiplano of northern Chile. Exs.: Antofagasta: Quebrada de Las Zorritas, 3150 m, Arancio 243 (CONC); Antofagasta: Volcán Llullaillaco, 4100 m, Arroyo *et al.* 94024 (CONC); Antofagasta: Faldeos S de la Quebrada Llullaillaco, 3850 m, Arroyo *et al.* 94078 (CONC); Antofagasta: Llanos Cerro de la Pena, 3900 m, Arancio & Squeo 10493 (ULS).

15. *B. tola* Phil. subsp. *tola*
Differs from subsp. altiplanicola principally in its smaller stature (< 40 cm) and leaves that are entire or with 1, or exceptionally 2 teeth on each side of the lamina. Exs: Antofagasta: Base Cerro de la Pena, 3680 m, Arancio & Squeo 10402 (ULS).

16. *Chaetanthera minuta* (Phil.) Cabrera
Decumbent annual herb, covered with a white tomentum. Heads radiate, white. On sandy soils. Exs.: Antofagasta: Volcán Llullaillaco, 4000 m, Arroyo *et al.* 94033 (CONC).

17. *Ch. revoluta* (Phil.) Cabrera
Inconspicuous perennial herb growing at base of rocks. Heads radiate, white. Common. Exs: Antofagasta: Vega Zorra, 3150 m, Arancio 92337 (ULS); Antofagasta: Llullaillaco, camino a Mina Esperanto, 3740 m, Muñoz C. 3809 (SGO); Antofagasta: Cordillera Volcán Llullaillaco, 4200 m, Werdermann 1020 (CONC); Antofagasta: Volcán Llullaillaco, 4500 m, Arroyo *et al.* 94013 (CONC); Antofagasta: Faldeos S de la Quebrada Llullaillaco, 3850 m, Arroyo *et al.* 94079 (CONC); Antofagasta: Base Cerro de la Pena, 3680 m, Arancio & Squeo 10407 (ULS).

18. *Ch. sphaeroidalis* (Reiche) Hicken
Perennial herb forming small tight roundish rosettes covered with a whitish-pink tomentum. Heads radiate, pinkish-white. On high exposed sites, growing close to the upper vegetation limit. Exs: Antofagasta: Llullaillaco, camino a Mina Esperanto, 3740 m, Muñoz C. 3808 (SGO); Antofagasta: Volcán Llullaillaco, 4700 m, Arroyo *et al.* 94017 (CONC); Antofagasta: Volcán Llullaillaco, 4350 m, Arroyo *et al.* 94003 (CONC); Antofagasta: S de Llullaillaco, 4800 m, Baumann 220 (CONC).

19. *Haplopappus rigidus* Phil.
Resinous, yellow-stemmed shrub. Heads radiate, yellow. The collection data upon which inclusion of this species in the park is based are very limited. Its presence needs further verification. Exs.: Antofagasta: Río Frío, w/o collector and no. (BM).

20. *Parastrephia quadrangularis* (Meyen) Cabrera
Small shrub to 50 cm with tightly imbricate greenish-yellow leaves; heads discoid, yellow. Mostly restricted to warmer rocky slopes. Exs: Antofagasta: Valle de Zorritas, 3720 m, Muñoz C. 3830 (SGO); Antofagasta: Cordillera Volcán Llullaillaco, 4200 m, Werdermann 1012 (CONC); Antofagasta: Volcán Llullaillaco, 4150 m, Arroyo *et al.* 94026 (CONC).

21. *Perezia atacamensis* (Phil.) Reiche
Perennial herb to ca. 30 cm. Heads large, radiate, varying in color from pinkish to bluish. On rocky sites. Exs.: Antofagasta: Llullaillaco, camino Mina Esperanto, 3740 m, Muñoz C. 3805 (SGO); Antofagasta: Volcán Llullaillaco, 4500 m, Arroyo *et al.* 94014 (CONC).

22. *Senecio chrysolepis* Phil.
Erect, lightly tomentose subshrub with oblong leaves, to 20 cm. Heads discoid, yellow. Exs.: Antofagasta: Volcán Llullaillaco, 4500 m, Arroyo *et al.* 94007 (CONC); Antofagasta: Valle del Río Frío, 3200 m, Muñoz C. 3893 (SGO); Antofagasta: Río Frío, Philippi w/o no. (SGO 060675); Antofagasta: Sierra de Varas, Punta del Viento, 4200 m, Werdermann 1040 (CONC).

23. *S. eriophyton* J.Remy
Densely branched, lanose aromatic roundish dwarf shrub to 20 cm with conspicuously dentate-curled leaves. Heads radiate, yellow. Exs.: Antofagasta: Región del Llullaillaco, 4200 m, Reiche w/o no. (SI); Antofagasta: Región del Llullaillaco, 4700 m, Reiche w/o no. (SI).

24. *S. hirtus* Cabrera
Small densely branched shrub with sessile, clasping glandular-pubescent leaves, to 30 cm high. Heads radiate, yellow. **Endemic** to the high Andes of Chile (25°-28°S). Exs.: Antofagasta: Sierra de Varas, Punta del Viento, 4000 m, Werdermann 1036 (CONC).

25. *S. puchii* Phil.
Tightly branched low subshrub to 10 cm with succulent glabrous dentate leaves. Heads discoid, yellow. Exs.: Antofagasta: Faldeos Volcán Llullaillaco, Zorritas, 3800 m, Muñoz C. 3799 (SGO); Antofagasta: Volcán Llullaillaco, 4600 m, Arroyo *et al.* 94001 (CONC).

26. *S. scorzoneraefolius* Meyen et Walp.
Lax, rhizomatous perennial with conspicuously long-linear leaves. Heads discoid, dirty white. Exs.: Antofagasta: Cordillera Volcán Llullaillaco, 4200 m, Werdermann 1029 (CONC).

27. *S. sundtii* Phil.
Low, tomentose subshrub. Head discoid, yellow. Exs.: Región del Llullaillaco, Reiche w/o no. (SGO 062330);

Región del Llullaillaco, 4700 m, Reiche w/o no. (SI).

28. *S. xerophilus* Phil. var. *xerophilus*
Erect tomentose subdichotomously branched subshrub to 25 cm. Heads discoid, yellow. Exs.: Región del Llullaillaco, Reiche w/o no. (SGO 062354); Antofagasta: Vega Zorra, 3150 m, Arancio 92334 (ULS); Antofagasta: Faldeos Volcán Llullaillaco, Zorritas, 3800 m, Muñoz C. 3801 (SGO); Antofagasta: Cordillera del Volcán Llullaillaco, 4200 m, Werdermann 1037 (CONC); Antofagasta: Región del Llullaillaco, 4200 m, Reiche w/o no. (SI); Antofagasta: Volcán Llullaillaco, 4100 m, Arroyo *et al.* 94020 (CONC); Antofagasta: Volcán Llullaillaco, 4700 m, Zoellner (CONC 49070).

29. *Werneria pinnatifida* J.Remy
Rhizomatose perennial herb with fleshy pinnatisect rosette forming leaves. Heads discoid, white. Exs.: Antofagasta: Quebrada de las Zorritas, 4150 m, Arancio 335 (CONC).

CRUCIFERAE

30. *Descurainia stricta* (Phil.) Prantl ex Reiche var. *minutiflora* (Phil.) O.E. Schulz Annual to biannual, with pinnatisect leaves. Flowersminute, yellow. **Endemic** to Chile. Exs.: Región de Llullaillaco, Reiche w/o no.(SGO 071497).

31. *Mancoa hispida* Wedd.
Small, hispid perennial herb. Exs.: Antofagasta: Volcán Llullaillaco, 3800 m, Werdermann 1008 (CONC).

32. *Menonvillea frigida* (Phil.) Rollins
Perennial herb with conspicuously brown-reddish stems and leaves and showy white flowers. Grows in rock crevices. Locally common. A rare local **endemic**. thus far only known from high elevations in Parque Nacional Llullaillaco, and thus endemic to the II Región of Chile. Exs.: Antofagasta: Volcán Llullaillaco, 4700 m, Arroyo *et al.* 94006 (CONC); Antofagasta: Faldeos Volcán Llullaillaco, camino Mina Iris, 3920 m, Muñoz C. 3798 (SGO); Antofagasta: Río Frío, Philippi w/o no (SGO 063964).

33. *Sisymbrium lanatum* (Walp.) O.E.Schulz
Perennial herb, woody at the base, to ca. 30 cm, with glaucous tomentose to glabrous leaves. Flowers yellow. Exs.: Antofagasta: Vega Las Zorritas, 4150 m, Arroyo *et al.* 94076 (CONC); Antofagasta: Volcán Llullaillaco, 4000 m, Arroyo *et al.* 94031 (CONC).

34. *S. philippianum* I.M.Johnst.
Subshrub to 40 cm branched at the base with tomentose stems and tomentose to glabrous leaves. Flowers yellow to purplish. Exs.: Antofagasta: Cordillera del Volcán Llullaillaco, 3500 m, Werdermann 1457 (Photo: BAA ex B).

GENTIANACEAE

35. *Gentiana sedifolia* Kunth
Small, glabrous annual to probably biannual herb. Flowers blue, with yellow centers. Grows in cushion bogs. Exs.: Antofagasta: Valle de Río Frío, 3200 m, Muñoz C. 3862 (SGO).

HYDROPHYLLACEAE

36. *Phacelia cumingii* (Benth.) A.Gray
Small erect o prostrate glandular-viscid annual herb with reddish stems, pinnatisect leaves and cymose inflorescences. Flowers white. Common on sandy soils. Exs.: Antofagasta: Volcán Llullaillaco, 4000 m, Arroyo *et al.* 94029 (CONC); Antofagasta: Valle de Río Frío, 3200 m, Muñoz C. 3860 (SGO); Río Frío, Philippi w/o no. (SGO 42186, 42188, 54299) Antofagasta: Base Cerro de la Pena, 3680 m, Arancio & Squeo 10403 (ULS).

37. *Ph. pinnatifida* Griseb. ex Wedd.
Erect to decumbent robust perennial herb with strongly pinnatifid leaves. Flowers blue, in dense scorpioid cymes, with exerted styles and stamens. Exs.: Cajón de Llullaillaco, Reiche w/o no. (SGO 054313).

38. *Ph. setigera* Phil. var. *setigera*
Robust, annual to perennial glandular-viscid herb with lobulate leaves and bluish-purple flowers with included styles and stamens. Exs.: Antofagasta: Cordillera Volcán Llullaillaco, 4000 m, Werdermann 1006 (CONC).

MALVACEAE

39. *Cristaria andicola* Gay
Perennial herb with yellowish stems and bright green pubescent leaves. Flowers pink. Common, in sandy soils. Exs.: Antofagasta: Quebrada de Las Zorritas, 3150 m, Arancio 241 (CONC); Antofagasta: Cordillera de Llullaillaco, 4700 m, Werdermann w/o no. (CONC 23195); Antofagasta: Volcán Llullaillaco, 4000 m, Arroyo *et al.* 94028 (CONC); Antofagasta: Cerro del León, 4240 m, Arancio & Squeo 10418 (ULS); Antofagasta: Pampa Las Carretas, 3950 m, Arancio & Squeo 10440 (ULS); Antofagasta: Pampa Las Carretas km 28,092, 3950m, Arancio & Squeo 10435 (ULS); Antofagasta: Cuesta Casa de Lata, 3700 m, Arroyo *et al.* 94100 (CONC); Antofagasta: Llanos Cerro de la Pena, 3900 m, Arancio & Squeo 10498 (ULS); Antofagasta: Base Cerro de la Pena, 3680 m, Arancio & Squeo 10404 (ULS).

40. *Nototriche auricoma* (Phil.) A.W.Hill
Caespitose tomentose perennial herb to ca. 3 cm diameter, usually partially buried in sand. Flowers white. **Endemic** to the high Andes of Chile (17°-24°S). Exs.: Antofagasta: Región de Llullaillaco, Muñoz C. 3796 (SGO); Volcán Llullaillaco, 4500 m, Arroyo *et al.* 94008 (CONC).

41. *N. clandestina* (Phil.) A.W.Hill
Compact, cushion forming perennial herb, densely covered yellowish-white tomentum. Flowers white. Grows close to the upper vegetation limit. **Endemic** to the high Andes of Chile (24°S-26°S). Exs.: Región de Llullaillaco, Muñoz C. 3797 (SGO); Antofagasta: Volcán Llullaillaco, 4500 m, Arroyo *et al.* 94018 (CONC).

OXALIDACEAE

42. *Oxalis hypsophila* Phil.
Caespitose perennial herb. Flowers yellow. *Endemic* to the high Andes of Chile (23°-31°S) Exs.: Antofagasta: Cordillera Volcán Llullaillaco, 4000 m, Werdermann 1010 (CONC).

PAPILIONACEAE

43. *Adesmia caespitosa* Phil.
Woody, flat, cushion-forming species, with short thick reddish-yellow spines; cushions often immersed in sand; flowers yellow-orange, borne on short shoots. Exs.: Antofagasta: Faldeos Volcán Llullaillaco, Zorritas, 3800 m, Muñoz C. 3803 (SGO); Antofagasta: Cordillera Volcán Llullaillaco, 4000 m, Werdermann 1025 (SI, S).

44. *A. erinacea* Phil.
Small glandular shrub forming open cushions with greenish-white, densely interwoven 3-6 bifurcate spines. Flowers yellow, generally produced on spines. Exs.: Antofagasta: Zorras, Desierto de Atacama, 3500 m, Philippi w/o no. (SGO 040253, SGO 050210); Antofagasta: Quebrada de las Zorritas, 3150 m, Arancio 245 (CONC); Antofagasta: Valle de Zorritas, 3720 m, Muñoz C. 3828 (SGO); Antofagasta: Volcán Llullaillaco, 4400 m, Arroyo *et al.* 94015 (CONC); Antofagasta: Volcán Llullaillaco, 4150 m, Arroyo *et al.* 94027 (CONC); Antofagasta: Volcán Llullaillaco, 4200 m, Baumann 286 (CONC).

45. *A. frigida* Phil.
Small caespitose glutinose-villose subshrub with 1-2 branched spines. Flowers yellow. **Endemic** to the high Andes of Chile (25°-27°S). Exs.: Antofagasta: Taltal, Punta del Viento, 4200 m, Werdermann 1023 (CONC); Río Frío, Philippi w/o no. (SGO 40179, 50241).

46. *A. melanthes* Phil.
Erect shrub to 1m with thick reddish-brown branches and spines. Leaves very small, borne on distant short-shoots. Flowers yellow. Exs.: Antofagasta: Quebrada de las Zorritas, 4150 m, Arancio 251 (CONC).

47. *A. occulta* (R.E.Fries) Burkart
Flat, hard, woody, glandular-pilose cushion forming species, partially immersed in substrate, with brownish-black spines. Flowers yellow, on short shoots. Exs.: Antofagasta: Quebrada de las Zorras, 3150 m, Arancio 92242 (ULS); Antofagasta: Volcán Llullaillaco, 4400 m, Arroyo *et al.* 94005 (CONC); Antofagasta: Volcán Llullaillaco, 4300 m, Arroyo *et al.* 94023 (CONC).

48. *A. spinosissima* Meyen
Erect shrub to 1 m, with reddish brown stems and thick, yellowish brown to white spines. Leaves borne on short-shoots. Most abundant on sunny north-facing slopes and in dry water courses. Flowers yellow. Exs.: Antofagasta: Volcán Llullaillaco, 4000 m, Arroyo *et al.* 94022 (CONC); Antofagasta: Subida de Río Frío a Aguas Calientes, 3500 m, Arroyo *et al.* 94083 (CONC).

49. *Astragalus bustillosii* Clos
Slender, glabrous perennial herb with pale blue flowers. A cushion bog species. Exs.: Antofagasta: Vega Las Zorritas, 4150 m, Arroyo *et al.* 94067 (CONC).

50. *A. cryptobotrys* I.M.Johnst.
Perennial herb forming tightly knit cushions partially immersed in substrate, with brownish-grey pubescent foliage and pinnate leaves. Flowers bluish-white. Exs.: Antofagasta: Llanos en camino a Quebrada de las Zorritas, 4450 m, Arancio 635 (CONC); Antofagasta: Sierra de Varas, Punta del Viento, 4000 m, Werdermann 1034 (CONC).

POLEMONIACEAE

51. *Gilia crassifolia* Benth.
Robust viscid annual herb to ca. 20 cm. Flowers blue to purplish-white. Mostly on desert border of park. Exs.: Antofagasta: Taltal, Punta del Viento, 3900 m. Werdermann 1030 (CONC).

52. *Ipomopsis gossypifera* (Gillies ex Benth.) V.Grant
Robust puberulent-lanose annual herb with somewhat succulent entire to pinnatisect leaves. Flowers in heads separated from the leaves; corolla rose-violet. Exs.: Antofagasta: Cordillera Volcán Llullaillaco, 4000 m, Werdermann 1041 (CONC); Antofagasta: Volcán Llullaillaco, 4000 m, Arroyo *et al.* 94039 (CONC).

PORTULACACEAE

53. *Calandrinia compacta* Barnéoud
Rhizomatose perennial herb forming extensive mats, with succulent leaves and white flowers on reddish petioles hidden among leaves. Common on edge of cushion bogs. Philippi (1860) described *Calandrinia occulta*, which he considered to be similar to *C. compacta* and *C. caespitosa*, based on material collected from the upper area of Río Zorras. We explored the higher part of quebrada Zorras, finding only 1 species of *Calandrinia* in cushion bog. Philippi's *C. occulta* is very probably a depauperate form of *C. compacta*. Exs.: Antofagasta: Vega Las Zorritas, 4150 m, Arroyo *et al.* 94070 (CONC); Antofagasta: Sierra de Varas, Punta del Viento, 4000 m, Werdermann 1035 (CONC).

54. *Cistanthe minuscula* (Añon) Peralta
Diminutive annual herb with a few basal rosette long at-

tenuate, spathulate leaves. Flowers in simple or double spikes: petals white to lilac-purple. Exs.: Antofagasta. Cordillera Volcán Llullaillaco, 3800 m, Werdermann 1015 (CONC); Antofagasta: Río Frío, 3500 m, Werdermann 1033 (CONC).

55. *C. picta* (Gillies ex Arn.) Carolin ex Hershk.
Loosely branched, spreading perennial (sometimes annual?) herb with thick, glabrous, glaucous leaves, sometimes tinged red; sepals wide, with conspicuous red-black markings; petals white. Exs.: Antofagasta: Cordillera Volcán Llullaillaco, 3800 m, Werdermann 1038 (CONC); Antofagasta: Volcán Llullaillaco, 4000 m, Arroyo *et al.* 94038 (CONC).

56. *Lenzia chamaepitys* Phil.
Diminutive perennial herb to 4 cm with closely adpressed, semi-succulent leaves and slender roots. Flowers yellow-orange, sessile, borne at tips of stems. A rare species in park, typically found on gravelly substrates. Exs.: Antofagasta: Base Cerro de la Pena, 3680 m, Arancio & Squeo 10406 (ULS).

57. *Montiopsis copiapina* (Phil.) D.I.Ford
Spreading, densely sericeo-pubescent perennial herb with thick roots. Flowers conspicuous, magenta in cymose racemes. Exs.: Antofagasta: Llanos en camino a Quebrada de las Zorritas, 4150 m, Arancio 246 (CONC); Antofagasta: Vega Zorra, 3150 m, Arancio 92336 (ULS); Antofagasta: Cordillera Volcán Llullaillaco, 4200 m, Werdermann 1021 (CONC).

58. *M. glomerata* (Phil.) D.I. Ford
Small, prostrate annual herb with pubescent oblanceolate leaves. Inflorescence capitate, flowers with a densely white-pubescent calyx, petals small magenta to white. Exs.: Río Frío, 3353 m, Philippi w/o no. (SGO 48522).

59. *M. modesta* (Phil.) D.I.Ford
Prostrate annual with pubescent, linear leaves. Calyx with dentate-glandular trichomes; flowers inconspicuous, magenta, in capitate inflorescences. Exs.: Antofagasta: Volcán Llullaillaco, 4000 m, Arroyo *et al.* 94032 (CONC); Antofagasta: Valle de Río Frío, 3200 m, Muñoz C. 3861 (SGO); Antofagasta: Río Frío, Philippi w/o no. (SGO 048661).

RANUNCULACEAE

60. *Ranunculus cymbalaria* Pursh f. *exilis* (Phil.) Lourteig
Semi-aquatic, glabrous rhizomatous perennial herb with deeply lobed leaves. Flowers yellow with shiny, waxy petals. Grows only in cushion bogs, preferentially at the edge of water courses or standing pools. Exs.: Valle Zorras, 3351 m, Philippi w/o no. (SGO 48942); Antofagasta: Vega Las Zorritas, 4150 m, Arroyo *et al.* 94074 (CONC); Antofagasta: Vega Las Zorritas, 4200 m, Arroyo *et al.* 94053 (CONC).

SOLANACEAE

61. *Fabiana bryoides* Phil.
Stout shrub to ca. 50 cm, with twisted, dirty green, coral-like branches covered in scale-like leaves. Flowers white to lilac, very fragrant. Common in park on warm sunny slopes. Exs.: Región del Llullaillaco, Reiche w/o no. (SGO 055662); Antofagasta: Vega Zorra, 3150 m, Arancio 92250 (ULS); Antofagasta: Quebrada de las Zorritas, 4450 m, Arancio 639 (CONC); Antofagasta: Valle de Zorritas, 3720 m, Muñoz C. 3829 (SGO); Antofagasta: Volcán Llullaillaco, 4150 m, Arroyo *et al.* 94021 (CONC); Antofagasta: Cordillera Llullaillaco, 4000 m, Werdermann w/o no. (CONC 48527); Antofagasta: Cordillera de Llullaillaco, 4000 m, Werdermann w/o no. (CONC 22149); Antofagasta: Cerro del León, 4150 m, Arancio & Squeo 10410 (ULS); Antofagasta: Llanos Cerro de la Pena, 3900 m, Arancio & Squeo 10496 (ULS).

62. *Fabiana denudata* Miers
Strongly resinous shrub to ca. 1 m, with somewhat sinuous greenish-yellow branches and small, distant leaves. Flowers creamish-white. Locally distributed. Exs.: Región del Llullaillaco, Reiche w/o no. (SGO 055649); Antofagasta: Cerro Zorritas, 4450 m, Arancio 252 (CONC); Antofagasta: Cordillera Volcán Llullaillaco, 4000 m, Werdermann 1005 (CONC); Antofagasta: Faldeos S de la Quebrada Llullaillaco, 3850 m, Arroyo *et al.* 94077 (CONC); Antofagasta: Llullaillaco, 4000 m, w/o collector (SGO 55640).

63. *Lycium humile* Phil.
Prostrate glabrous subshrub with greyish branches, forming a dense cushion. Flowers white. Restricted to the drier edges of cushion bogs and saline soils. Exs.: Antofagasta: Volcán Llullaillaco, 3950 m, Arroyo *et al.* 94040 (CONC).

64. *Nicotiana acuminata* (Graham) Hook.
Stout, rapidly growing annual herb with viscid stems, and distant, ovate, acuminate leaves. Flower large (5-9 cm long) greenish with purplish lines on corolla; white within. Exs.: Antofagasta: Valle de Río Frío, 3200 m, Muñoz C. 3895 (SGO).

65. *Nicotiana longibracteata* Phil.
Stout, several-stemmed and densely leaved, pubescent to viscid annual herb with long-acuminate leaves. Flowers small (ca. less than 2 cm long) greenish. Philippi (1860) described *Nicotiana frigida* (SGO 55274) from Río Frío. Goodspeed (1954) suggests that this could be a depauperate form of *N. longibracteata*, but that further study is required to ascertain this possibility. This last possibility implies recognizing the name *N. frigida*, which was described before *N. longibracteata*. Further work on these species necessary. Exs.: Antofagasta: Volcán Llullaillaco, 4000 m, Arroyo *et al.* 94037 (CONC).

66. *Nicotiana petunioides* (Griseb.) Millán
Sparsely hispid to puberulent foetid annual herb to 40 cm, with conspicuously undulate, narrow leaves. Flowers greenish-white. Common in sandy soils. Exs.:

Antofagasta: Cordillera Volcán Llullaillaco, 3800 m, Werdermann 1039 (CONC); Antofagasta: Pampa Las Carretas km 28,090, 4030 m, Arancio & Squeo 10433 (ULS); Antofagasta: Cuesta Casa de Lata , 3700 m, Arroyo *et al.* 94084 (CONC); Antofagasta: Quebrada de la Pena, 3800 m, Arancio & Squeo 10466 (ULS); Antofagasta: Llanos Cerro la Pena, 3900 m, Arancio & Squeo 10500 (ULS).

UMBELLIFERAE

67. *Mulinum crassifolium* Phil.
Softly spinose, semi-hemispheric subshrub with bright yellow-green, somewhat succulent leaves and whitish older stems. Flowers inconspicuous, greenish-yellow. Exs.: Antofagasta: Quebrada de las Zorritas, 4450 m, Arancio 640 (CONC); Antofagasta: Vega Zorra, 3150 m, Arancio 92249 (ULS); Antofagasta: Faldeos Volcán Llullaillaco, Zorritas, 3800 m, Muñoz C. 3800 (SGO); Antofagasta: Llullaillaco, camino a Mina Esperanto, 3740 m, Muñoz C. 3807 (SGO); Antofagasta: Cordillera Volcán Llullaillaco, 4300 m, Werdermann 1009 (CONC); Antofagasta: Volcán Llullaillaco, 4500 m, Arroyo *et al.* 94010 (CONC).

VERBENACEAE

68. *Acantholippia deserticola* (Phil.) Mold.
Intricately branched, strongly aromatic, spiny, white-hispid shrub to ca. 1 m with small adpressed scale-like leaves. Flowers subsessile, lilac. Mostly at lower elevations in park on desert margin. Exs.: Antofagasta: Cordillera Volcán Llullaillaco, 3500 m, Werdermann 1024 (CONC); Antofagasta: Faldeos S de la Quebrada Llullaillaco, 3500 m, Arroyo *et al.* 94082 (CONC).

69. *Junellia digitata* (Phil.) Mold.
Prostrate hispid subshrub forming isolated patches to ca. 3-5 cm. with 3-partite leaves and rust-coloured, lose bark. Flowers abundant, sweetly fragrant, dark pink. Exs.: Región del Llullaillaco. Socompa. Reiche w/o no. (SGO 054781); Antofagasta: Faldeos Volcán Llullaillaco, Zorritas, 3800 m, Muñoz C. 3802 (SGO).

70. *Urbania pappigera* Phil.
Tightly and shortly branched subshrub forming flat, inconspicuous, brownish-grey cushions typically partially immersed in substrate. Flowers inconspicuous, pink. A common species at mid-high elevations in park. Exs.: Antofagasta: Llullaillaco, camino a Mina Esperanto, 3740 m, Muñoz C. 3810 (SGO); Antofagasta: Cordillera Volcán Llullaillaco, 4500 m, Werdermann 1019 (CONC); Antofagasta: Volcán Llullaillaco, 4600 m, Arroyo *et al.* 94012 (CONC); Antofagasta: Volcán Llullaillaco, 4500 m, Arroyo *et al.* 94016 (CONC); Antofagasta: Región del Llullaillaco. 4200 m. Reiche w/o no. (SGO 068365); Antofagasta: Pampa Las Carretas km 28.092. 3950 m, Arancio & Squeo 10437 (ULS).

VIOLACEAE

71. *Viola frigida* Phil.
Rosette-forming annual herb. Flowers bluish-white. Exs.: Río Frío, 3231 m, Philippi w/o col. (SGO 052337).

72. *Viola llullaillacoensis* W.Becker
Inconspicuous, rosette-forming annual herb, leaves brownish, elliptic with ciliate margens. Flowers light blue with darker lines. Typically occurrs in sandy soils. A rare species, endemic to the high Andes of Chile (24°-26°S). Exs.: Antofagasta: Vega Las Zorritas, 4150 m, Arroyo *et al.* 94075 (CONC); Antofagasta: Cordillera Volcán Llullaillaco, 4000 m, Werdermann 1017 (CONC); Antofagasta: Volcán Llullaillaco, 4000 m, Arroyo *et al.* 94034 (CONC); Antofagasta: Quebrada de las Zorritas, 4200 m, Baumann 289 (CONC).

ANGIOSPERMAE: MONOCOTYLEDONEAE

CYPERACEAE

73. *Carex maritima* Gunnerus
Rhizomatose perennial herb. Restricted to high elevation cushion bogs. Exs.: Valle Zorras, Philippi w/o no. (SGO 046175); Antofagasta: Vega Las Zorritas, 4200 m, Arroyo *et al.* 94052 (CONC); Antofagasta: Vega Las Zorritas, 4150 m, Arroyo *et al.* 94073 (CONC).

74. *Eleocharis albibracteata* Nees et Meyen ex Kunth
Caespitose, stoloniferous perennial herb. Restricted to cushion bogs. Exs.: Antofagasta: Vega Las Zorritas, 4150 m, Arroyo *et al.* 94069 (CONC); Antofagasta: Vega Las Zorritas, 4150 m, Arroyo *et al.* 94072 (CONC).

75. *Scirpus atacamensis* (Phil.) Boeckeler
Perennial herb forming large, tight cushions. Typically found at the drier edge of cushion bogs, where common. Exs.: Antofagasta: Vega Las Zorritas, 4200 m, Arroyo *et al.* 94065 (CONC); Antofagasta: Vega Las Zorritas, 4150 m, Arroyo *et al.* 94071 (CONC); Antofagasta: Vega Las Zorritas, 4200 m, Arroyo *et al.* 94064 (CONC); Antofagasta: Volcán Llullaillaco, 3950 m, Arroyo *et al.* 94041 (CONC), 94043 (CONC); 94045 (CONC).

GRAMINEAE

76. *Anatherostipa venusta* (Phil.) Peñail.
Perennial grass to 30 cm with rigid convolute glabrous yellow leaves; panicle open; aristas long, reddish and curved. Exs.: Antofagasta: Llanos Cerro de la Pena. 3900 m. Arancio & Squeo 10495 (ULS).

77. *Catabrosa werdermannii* (Pilger) Nicora et Rúgolo
Slender, inconspicuous perennial species forming lose mats. Restricted to alpine bogs. Exs.: Antofagasta: Valle de Río Frío, 3200 m, Muñoz C. 3868 (SGO); Antofagasta: Taltal, Río Frío, 3500 m, Werdermann 1027 (CONC).

78. *Deyeuxia crispa* Rúgolo et Villav.

Perennial grass forming isolated clumps to 15 cm, with strongly twisted yellow leaves. Uncommon. Typically growing in warm rocky sites. Exs.: Antofagasta: Cerro Zorritas, 4450 m, Arancio 244 (CONC); Antofagasta: Volcán Llullaillaco, 4400 m, Arroyo *et al*. 94002 (CONC).

79. *Deyeuxia deserticola* Phil.
Perennial grass forming isolated tufts to 30 cm growing on large cushions, with yellowish-grey, rigid leaves. Restricted to high alpine bogs. Exs.: Antofagasta: Vega Las Zorritas, 4200 m, Arroyo *et al*. 94056 (CONC), 94057 (CONC), 94058 (CONC).

80. *Deyeuxia eminens* J.Presl
Stout perennial species with junciforme leaves forming dense tussocks to 60 cm. Inflorescences large. golden-coloured. nutant. A dominant grass in high alpine cushion bogs. Exs.: Antofagasta: Valle de Zorras, 3500 m, Muñoz C. 3819 (SGO); Antofagasta: Quebrada de Zorritas, 4150 m, Baumann 299 (CONC); Antofagasta: Vega Las Zorritas, 4200 m, Arroyo *et al*. 94066 (CONC); Antofagasta: Volcán Llullaillaco, 3930 m, Arroyo *et al*. 94049 (CONC), 94050 (CONC).

81. *Deyeuxia robusta* Phil.
A poorly known species. Further study might show that this species is the same as the former. Perennial herb. **Endemic** to Chile.Exs.: Valle de las Zorras 2926-3048 m, Philippi w/o no. (SGO 068418).

82. *Festuca chrysophylla* Phil.
Glabrous perennial tussock species with rigid leaves and glabrous sheaths. Apparently not common in park. Exs.: Antofagasta: Llanos en Quebrada de las Zorritas, 4450 m, Arancio 636 (CONC).

83. *Festuca deserticola* Phil.
Caespitose perennial species to ca. 35 cm. Occasional toward the desert margin. Exs.: Antofagasta: Valle de Río Frío, 3200 m, Muñoz C. 3865 (SGO).

84. *Festuca werdermannii* St.-Yves
Perennial species with greyish foliage forming small tussocks. At edge of cushion bogs. Endemic to the high Andes of Chile (24°-29°S) Exs.: Antofagasta: Vega Las Zorritas, 4200 m, Arroyo *et al*. 94061 (CONC), 94062 (CONC).

85. *Puccinellia frigida* (Phil.) I.M.Johnst.
Small tussock-forming species growing at drier edge of cushion bogs. Exs.: Valle Río Frío 3292 m, Philippi w/o no. (SGO 037544, 63510,62606): Antofagasta: Vega Las Zorritas, 4200 m, Arroyo *et al*. 94060 (CONC), 94063 (CONC); Antofagasta: Taltal, Cordillera Volcán Llullaillaco, 3500 m, Werdermann 1004 (CONC); Antofagasta: Volcán Llullaillaco, 3540 m. Muñoz C. 3788 (SGO); Antofagasta: Volcán Llullaillaco, 3950 m, Arroyo *et al*. 94046 (CONC).

86. *Stipa chrysophylla* E.Desv.
Caespitose perennial species with erect yellow rigid leaves to ca. 45 cm. Panicle contracted, usually exserted above leaves. Exs.: Antofagasta: Cordillera Volcán Llullaillaco, 4500 m, Werdermann 1013 (CONC).

87. *Stipa frigida* Phil.
Perennial species with narrow rigid yellow leaves to ca. 30 cm. Panicle narrow. violet. not strongly exserted from the leaves. Very common species in the park. Exs.: Antofagasta: Llanos en camino a Quebrada de Las Zorritas, 4450 m, Arancio 637 (CONC), 638 (CONC); Antofagasta: Volcán Llullaillaco, 4500 m, Arroyo *et al*. 94011 (CONC); Antofagasta: Cerro del León, 4150 m, Arancio & Squeo 10411 (ULS): Antofagasta: Pampa Las Carretas km 28.092. 3950 m. Arancio & Squeo 10439 (ULS); Antofagasta: Cuesta Casa de Lata, 3700 m, Arroyo *et al*. 94099 (CONC); Antofagasta: Quebrada de la Pena, 3800 m, Arancio & Squeo 10464 (ULS); Antofagasta: Base Cerro de la Pena, 3680 m, Arancio & Squeo 10399 (ULS).

JUNCACEAE

88. *Oxychloe andina* Phil.
Dioecious perennial forming hard, elevated cushions with rigid, leaves. Fruits red at maturity. Dominant cushion species in alpine bogs. Exs.: Antofagasta: Valle de Zorras, Philippi w/o no. (SGO 063055); Valle de Zorritas, 3500 m, Muñoz C. 3821 (SGO); Antofagasta: Vega Las Zorritas, 4200 m, Arroyo *et al*. 94055 (CONC); Antofagasta: Valle de Río Frío, 3200 m, Muñoz C. 3867 (SGO).

JUNCAGINACEAE

89. *Triglochin concinnum* Burtt Davy
Slender perennial herb often forming extended mats, with short, carnose leaves, brownish stems, and erect, contracted inflorescences partially exserted above the leaves. Typically found in alpine cushion bogs. Exs.: Prov. de Antofagasta, Llullaillaco, Reiche w/o no. (SGO 045420); Antofagasta: Cordillera Volcán Llullaillaco, 3500 m, Werdermann 1011 (CONC); Antofagasta: Volcán Llullaillaco, 3950 m, Arroyo *et al*. 94044 (CONC).

POTAMOGETONACEAE

90. *Potamogeton strictus* Phil.
Aquatic perennial herb with submerged elongate cilindrical stems and filiform, membranous leaves; flowers disposed in small spikes. In pools in high alpine bogs. Exs.: Valle de Zorras, 3261 m, Philippi w/o no. (SGO 45443); Antofagasta: Valle de Río Frío, 3200 m, Muñoz C. 3863 (SGO).

RUPPIACEAE

91. *Ruppia filifolia* (Phil.) Skottsb.
Submerged, aquatic perennial herb. Growing in slow-flowing water courses in high alpine bogs. Exs.: Antofagasta: Vega Las Zorritas, 4200 m, Arroyo *et al*. 94051 (CONC); Antofagasta: Volcán Llullaillaco, 3950 m, Arroyo *et al*. 94047 (CONC).

REFERENCES

ARAVENA, R., H. PEÑA, A GRILLI, O SUSUKI & M. MORDECKAI. 1989. Evolución isotópica de las lluvias y origen de las masas de aire en el Altiplano chileno. IAEA-TECDOC-502. Isotope Hydrology Investigations in Latin America, pp. 129-142.

ARROYO, M. T. K. & L. CAVIERES. 1997. The mediterranean-type climate flora of central Chile - What do we know and how can we assure its protection. Noticiero de Biología 5(2):48-56.

ARROYO, M. T. K., C. MARTICORENA & C.VILLAGRAN. 1984. La flora de la Cordillera de los Andes en el área de Laguna Grande y Laguna Chica, III Región, Chile. Gayana Bot. 41(1-2): 3-46.

ARROYO, M. T. K., C. VILLAGRAN, C. MARTICORENA & J. J. ARMESTO. 1982. Flora y relaciones biogeográficas en los Andes del norte de Chile (18-19°S). *In*: Alberto Veloso & Eduardo Bustos (eds.): El Ambiente Natural y las Poblaciones Humanas de los Andes del Norte Grande de Chile (Arica, Lat. 18° 28' S), Volume 1, pages 7192. Rostlac, Montevideo.

ARROYO, M. T. K., F. A. SQUEO, J..J. ARMESTO & C.VILLAGRAN. 1988. Effects of aridity on plant diversity in the northern Chile Andes: results of a natural experiment. Ann. Miss. Bot. Gard. 75: 55-78.

ARROYO, MARY T. KALIN, C.P. VON BOHLEN, L. CAVIERES & C. MARTICORENA. 1992. Survey of the alpine flora of Torres del Paine National Park, Chile. Gayana Bot. 49(1-4):47-70.

FUENZALIDA, H. & J. RUTLLANT. 1986. Estudio sobre el origen del vapor de agua que precipita en el invierno altiplánico. Unpublished Informe Final, Universidad de Chile. 51 pages.

GOODSPEED, T.S. 1954. The genus *Nicotiana*. Cronica Botanica 16:1-536.

GROSJEAN, M., M. GEYBUS, B. MESSERLI & U-SCHOTTERER. 1995. Late-glacial and early Holocene lake sediments, ground water formation and climate in the Atacama Altiplano 22-24°S. J. of Paleolim.14:241-252.

HAJEK, E. & F. DI CASTRI. 1975. Bioclimatografía de Chile. Dirección de Investigación, Vicerrectoría Académica, Universidad Católica de Chile, Santiago.

HEYWOOD, V.H. (Ed.). 1995. Global Biodiversity Assessment. Camb. U. Press, Cambridge.

LOOSER, G. 1960. El botánico Dr. Erich Werdermann. Rev. Univ.(Stgo.) 44-45: 231-234, 1 retrato.

MARTICORENA, C., O. MATTHEI, R. RODRIGUEZ, MTK ARROYO, F. SQUEO & M. MUÑOZ. (1998). Catálogo de la flora vascular de la II Región de Chile. Gayana Bot. 55:23-93.

MESSERLI, B., M. GROSJEAN, G. BONANI, A. BURGI, M. GEYH, K. GRAF, K. RAMEYER, H. ROMERO, U. SCHOTTERER, H. SCHREIER & M. VUILLE. 1993. Climate change and natural resource dynamics of the Atacama Altiplano during the last 18,000 years: a preliminary synthesis. Mount. Res. Devel. 13:117-127.

MUÑOZ, C. & E. PISANO. 1950. Botánica. En Memoria de Siete años de Investigación Agrícola, Imprenta Stanley, Santiago. Pages 309-316.

MUÑOZ, M., H. NUÑEZ & J. YAÑEZ. (Eds.) 1996. Libro Rojo de los Sitios Prioritarios para la Conservación de la Diversidad Biológica en Chile. Ministerio de Agricultura. Corporación Nacional Forestal, Santiago.

MUÑOZ, C. 1960. Las especies de plantas descritas por R. A. Philippi en el siglo XIX. Ediciones de la Universidad de Chile, Santiago.

PHILIPPI, R.A. 1860. Viage al desierto de Atacama hecho de orden del gobierno de Chile en el verano 1853-54. Halle viii, 236 pp., 1 mapa, 27 lám.

REICHE, C. 1907. Grundzüge der Pflanzenverbreitung in Chile. (Traducido por G. Looser en 1934 como Geografía Botánica de Chile, Tomo I. Imp. Univ. 424 pp.)

RICHTER, M. 1995. Klimaokologie Atacama. Abschlubbericht DFG-Projekt.

SOBERON, J. & J. LLORENTE. 1993. The use of species accumulation functions for the prediction of species richness. Cons. Biol. 7: 480-488.

TEILLER, S.. A.J., HOFFMANN, F. SAAVEDRA & L. PALCHARD. 1994. Flora del Parque Nacional El Morado (Región Metropolitana, Chile). Gayana, Bot. 51:13-47.

VUILLE, M. 1991. Die Seen und Salare im nordchilenischen Altiplano. Eine hydrologische Untersuchung mit LANDSAT/TM- und LANDSAT/MSS-Daten. Geographisches Institut, Universitat Bern. 99 pages.

WERDERMANN, E. 1927. Beiträge zur Kenntnis der Flora von Chile. Notizbl. Bot.Gart. Berlin-Dahlem 10(92):135-155.

Fecha de publicación: 07 de mayo de 1999

Gayana Bot. 55(2): 111-185, 1998. ISSN 0016-5301

CHECKLIST OF CHILEAN LICHEN-FORMING AND LICHENICOLOUS FUNGI

LISTA PATRON DE LOS LIQUENES Y HONGOS LIQUENICOLAS DE CHILE

David J. Galloway[1] and Wanda Quilhot[2]

ABSTRACT

This checklist of the lichens and lichenicolous fungi of Chile (including the Antarctic territory, Juan Fernández and Easter island) includes 1415 taxa in 304 genera of which 1383 are lichens (in 281 genera), and 32 are lichenicolous fungi (in 23 genera). Full bibliographic citations are given for both accepted taxa and for synonyms and references to relevant literature are included for most genera. The following new combinations are proposed: *Caloplaca austroshetlandica* (Zahlbr.) D.J. Galloway & Quilhot, *Dendriscocaulon calithamnion* (Taylor) D.J. Galloway & Quilhot, *Neuropogon durietzii* (Motyka) D.J. Galloway & Quilhot, *Neuropogon patagonicus* (F.J. Walker) D.J. Galloway & Quilhot, and *Neuropogon subantarcticus* (F.J. Walker) D.J. Galloway & Quilhot.

KEYWORDS: Checklist, classification, lichens, lichenology, lichenicolous fungi, Chilean lichens, plant taxonomy.

RESUMEN

La lista patrón de los líquenes y hongos liquenícolas de Chile, incluídos el Territorio Antártico y las islas de Juan Fernández y Pascua, contiene 1415 taxa en 304 géneros, de los cuales 1383 son líquenes (en 281 géneros) y 32 son hongos liquenícolas (en 23 géneros). Incluye los taxa aceptados, los sinónimos y las referencias bibliográficas. Se proponen las siguientes combinaciones: *Caloplaca austroshetlandica* (Zahlbr.) D.J. Galloway & Quilhot, *Dendriscocaulon calithamnion* (Taylor) D.J. Galloway & Quilhot, *Neuropogon durietzii* (Motyka) D.J. Galloway & Quilhot, *Neuropogon patagonicus* (F.J. Walker) D.J. Galloway & Quilhot, y *Neuropogon subantarcticus* (F.J. Walker) D.J. Galloway & Quilhot.

PALABRAS CLAVES: Lista patrón, clasificación, líquenes, liquenología, hongos liquenícolas, líquenes chilenos, taxonomía.

INTRODUCTION

Chile, situated on the Pacific coast of South America, is a long, narrow country extending 4350 km southwards from latitude 17°30'S to Cape Horn at 56°S. It is bounded by Peru and Bolivia to the north, by Argentina for much of its long eastern border, and to the west by the Pacific Ocean. Chile has sovereignty over Easter Island and the Juan Fernández Archipelago and also has Antarctic Territory between 53° and 90°W. The country is dominated by the Andean Cordillera which forms its entire eastern margin, the highest point reaching to 6880 m (Ojos del Salado). Subject to the influence of winds, storms and ocean currents, as well as to violent tectonic activity related to the presence of active plate margins along the floor of the Pacific Ocean to the west, and to volcanic eruptions and earthquakes. Chile is a land of climatic and geographic extremes. Thus hot deserts in the north and cold deserts in Antarctica, coastal rocks and cliffs, alpine barrens, lava fields, grassland, scrub, temperate rainforest, Magellanic tundra, urban and agricultural landscapes, parks, gardens and plantations all provide a wealth of microclimates and microhabitats for lichens, making Chile in many ways, a lichenologist's paradise.

Not surprisingly, Chile has one of the most diverse and in places in terms of biomass, one of the best developed lichen mycobiotas of any region in the world, but one which is alas, still in-

[1]Department of Botany, The Natural History Museum, Cromwell Road, London SW7 5BD, United Kingdom. Present address: Landcare Research, Private Bag 1930, Dunedin, New Zealand
[2]Escuela de Química y Farmacia, Facultad de Medicina, Universidad de Valparaíso, Casilla 5001, Valparaíso, Chile.

completely known in many parts. The history of lichenological exploration and discovery in Chile is a long and varied one spanning over 200 years (Galloway & Marticorena, 1991; Quilhot, 1995). It is now over 30 years since Gerhard Follmann compiled his catalogues of the lichens of Chile (Follmann, 1962, 1963, 1965, 1967) from what was then known either in the earlier literature or from his own extensive field investigations. Since that time, lichen taxonomy has undergone great changes and many modern taxonomic revisions cite Chilean material, with a number of recent monographs dealing specifically with Chilean lichens (see Checklist Bibliography). The present Checklist includes 1416 taxa in 305 genera (comprising 1386 lichen taxa in 282 genera, and 30 taxa of lichenicolous fungi in 23 genera). This number compares with 1415 taxa in 308 genera known from New Zealand (Galloway, 1985; Malcolm & Galloway, 1997); 2602 taxa in 393 genera known from Sweden and Norway (Santesson, 1993); 1721 taxa in 267 genera from the United Kingdom and Ireland (Purvis *et al.*, 1993); 3799 taxa in 477 genera known from the continental United States and Canada (Esslinger & Egan, 1995); 2145 taxa in 305 genera from Italy (Nimis, 1993); 2657 taxa in 393 genera from Australia (Filson, 1996); and 745 taxa in 157 genera from the Venezuelan Andes (Marcano *et al.*, 1996). Since much of Chile is still "terra incognita" in lichenological terms, the number of genera and of infrageneric taxa will undoubtedly increase over the next few years as more studies are undertaken. In an excellent and refreshing discussion on lichen checklists and their value Nimis (1996: 15) states "...checklists can have different nature, scope and contents, and they should always be judged while considering the situation of floristic and taxonomic research that they reflect...They offer an indispensable basis for specimen revision, for the critical re-appraisal of poorly known taxa, and for the further exploration of under-investigated areas. In this sense, checklists may and should be catalysts for new, more intensive investigations. The best criterion for a checklist to have accomplished its task as a facility to the scientific community is the speed of its becoming outdated...". It is hoped that the publication of this Checklist will further stimulate a range of studies on Chile's lichens and lichenicolous fungi, all of which deserve to be far better known than they are at present.

In the Checklist taxa are arranged alphabetically by genus and species. Lichenicolous taxa are indicated by an asterisk (*). Accepted genera are printed in bold type followed by a bracketed systematic arrangement of order and family designation. Citation of genera and dates of publication follow the 8th edition of Anisworth & Bisby's Dictionary of the Fungi (Hawksworth *et al.*, 1995). Order and family affiliations of genera follow Eriksson & Hawksworth (1993) and Hawksworth *et al.* (1995), and author abbreviations accord with Kirk & Ansell (1992). Names based on material collected from Chile are indicated with a capital T (in bold) after the citation, indicating a Chilean type. Literature surveyed for this Checklist was that current until 31 January 1998.

Any errors and omissions are the authors' sole responsibility. The authors realise that this is in still a preliminary Checklist, but feel that in the absence of a modern Lichen Mycobiota of Chile, it is important to have available a list of modern lichen names for Chile to encourage lichenological investigations in this country. We would be grateful if errors and omissions could be pointed out to us for incorporation into a future, updated version. We agree with Nimis (1996), that future biodiversity inventories, of which this checklist is an example, be made available on-line via the World-Wide-Web, to be continuously updated as both exploration of unknown or poorly-known areas, and local and regional taxonomic studies are undertaken. It is hoped to follow this checklist shortly with a key to Chilean lichen genera, the bibliography (Galloway & Marticorena, 1991), checklist and keys bridging the gap until a modern Lichen Mycobiota of Chile is produced in the not too distant future.

ACKNOWLEDGMENTS

We are grateful to the following colleagues and friends who assisted us in locating literature, and in many other ways over the years: Prof. Teuvo Ahti (Helsinki); Prof. Braulio Araya (Viña del Mar); Prof. Mary T.K. Arroyo (Santiago); Prof. Dr. Gerhard Follmann (Köln); Sr. Gerardo Guzmán (Valparaíso); Prof. Dr. Hannes Hertel (München); Prof. Henry Imshaug (East Lansing); Prof. Per Magnus Jørgensen (Bergen); Izabella Kruger (Landcare Research, Lincoln); Prof. Clodomiro Marticorena (Concepción); Prof. Roland Moberg (Uppsala); Dra. Melica Muñoz (Santiago); the late Prof. Edmundo Pisano (Punta Arenas); Prof. Jorge

Redon (Viña del Mar); Dr. Soili Stenroos (Helsinki); Ngaire van der Velde (Landcare Research, Lincoln); and Dr. Mats Wedin (London). This work was begun in 1988 when the senior author was on the staff of the Natural History Museum in London, and the Keeper of Botany, Prof. Steve Blackmore, is thanked for his enthusiastic support of Chile-based research in the Department of Botany.This work was also supported in part by FONDECYT Proyecto N° 1960353, and we wish to thank FONDECYT for their help in publishing the Checklist.

REFERENCES

ERIKSSON, O.E. & HAWKSWORTH, D.L. 1993. Outline of the Ascomycetes-1993. Systema Ascomycetum 12: 51-217.

ESSLINGER, T.L. & EGAN, R.S. 1995. A sixth checklist of the lichen-forming, lichenicolous and allied fungi of the continental United States and Canada. Bryologist 98: 467-549.

FILSON, R.B. 1996. Checklist of Australian lichens and allied fungi. Flora of Australia Supplementary Series No.7. Canberra: Australian Biological Resources Study. 204 pp.

FOLLMANN, G. 1962. Catálogo de los líquenes de Chile. Parte I. Pyrenocarpae. Revista Univ. (Santiago) 46: 173-203.

FOLLMANN, G. 1963. Catálogo de los líquenes de Chile. Parte II. Coniocarpiidae y Graphidiidae. Revista Univ. (Santiago) 47: 63-97.

FOLLMANN, G. 1965. Catálogo de los líquenes de Chile. Parte III. Thelotrematales y Cyanophilales. Revista Univ. (Santiago) 49: 17-65.

FOLLMANN, G. 1967. Catálogo de los líquenes de Chile. Parte IV. Stictaceae y Peltigeraceae. Revista Univ. (Santiago) 50-51: 33-75.

GALLOWAY, D.J. 1985. Flora of New Zealand Lichens. Wellington: P.D. Hasselberg. New Zealand Government Printer. LXXIII + 662 pp.

GALLOWAY, D.J. & MARTICORENA, C. 1991. A bibliography of Chilean lichenology. Gayana Bot. 48: 17-66.

HAWKSWORTH, D.L., KIRK, P.M., SUTTON, B.C. & PEGLER, D.N. 1995. Ainsworth & Bisby's Dictionary of the Fungi (8th edition). Wallingford: CAB International. XII + 616 pp.

KIRK, P.M. & ANSELL, A.E. 1992. Authors of fungal names. A list of authors of scientific names of fungi, with recommended standard forms of their names, including abbreviations. Index of Fungi Supplement. Wallingford: CAB International. 95 pp.

MALCOLM, W.M. & GALLOWAY, D.J. 1997. New Zealand lichens. Checklist, key, and glossary. Wellington: Museum of New Zealand, Te Papa Tongarewa. VI + 192 pp.

MARCANO, V., MORALES MENDEZ, A., SIPMAN, H. & CALDERON, L. 1996. A first checklist of the lichen-forming fungi of the Venezuelan Andes. Tropical Bryol. 12: 193-235.

NIMIS, P.L. 1993. The lichens of Italy, an annotated catalogue. Monografia XII. Torino: Museo Regionale di Scienze Naturali. 897 pp.

NIMIS, P.L. 1996. Towards a checklist of Mediterranean lichens. Bocconea 6: 5-17.

PURVIS, O.W., COPPINS, B.J., & JAMES, P.W. 1993. Checklist of lichens of Great Britain and Ireland. Brit. Lichen Soc. Bull. 72 (Suppl.): 1-75.

QUILHOT, W. 1995. Liquenes. *In*: J.A. Simonetti, M.T.K. Arroyo, A.E. Spotorno & E. Lozada (ed) Diversidad biologica de Chile. Santiago: CONICYT. pp. 26-37.

SANTESSON, R. 1993. The lichens and lichenicolous fungi of Sweden and Norway. Lund: SBT-förlaget. 240 pp.

THE CHECKLIST

*__Abrothallus__ De Not. (1849)
[Ascomycota: incert, sed.]
granulatae Wedin, Lichenologist 26: 304 (1994).
parmeliarum (Sommerf.) Arnold, Flora 57: 102 (1874).
secedens Wedin & R. Sant., Lichenologist 26: 301 (1994).
Lit.: Zahlbruckner (1925); Hertel (1971); Wedin (1994).

1. __Acarospora__ A. Massal. (1852)
[Lecanorales: Acarosporaceae]
?altoandina H. Magn., K. Vet. O. Vitterh. Samh. Handl. f. 6. ser. B. 6 (17): 26 (1956).
badiofusca (Nyl.) Th. Fr., Nova Acta Regiae Soc. Sci. Upsal., ser. 3,3: 190 (1861).
Acarospora deceptionis C.W. Dodge, Publ. Inst. Antart. Chile 6: 6 (1965) T.
?catamarcae H. Magn., Acta Horti Gothob.17: 64 (1947).
convoluta Darb., Wiss. Ergebn. Schwed. Südpolarexp. 1901-1903, 4 (11): 16 (1912).
macrocyclos Vain., Résult. Voy. Belgica, Lich.: 34 (1903).
plumbeocaesia Zahlbr., Acta Horti Gothob. 2: 11 (1925) T.
?punae I.M. Lamb, Lilloa 14: 231 (1948).
sanguinascens Zahlbr., Acta Horti Gothob. 2: 12 (1925) T.
schleicheri (Ach.) A. Massal., Ric. Auton. Lic. Crost.: 27 (1852).
Acarospora bella (Nyl.) Jatta, Malpighia 20: 10 (1906).
Lecanora bella Nyl., Ann. Sci. Nat. Bot. sér. 4, 3: 156 (1855) T [non. Ach.]
Acarospora chilensis H. Magn., Kongl. Svenska Vetenskapsakad. Handl. III, 7 (4).: 367 (1929) T.
skottsbergii Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 4 (13): 453 (1926) T.
smaragdula (Wahlenb.) A. Massal., Ric. Auton. Lich. Crost.: 29 (1852).
socialis H. Magn., Mycologia 21 (5): 252 (1929).
sparsiuscula H. Magn., Acta Horti Gothob. 17: 65 (1947).
strigata (Nyl.) Jatta, Malpighia 20: 10 (1906).
Lecanora strigata Nyl., Ann. Sci. Nat. Bot. sér. 4, 3: 155 (1855) T.
Placodium strigatum (Nyl.) Müll. Arg., Flora 72: 510 (1889).
subcastanea (Nyl.) Hue, Nouv. Arch. Mus. Hist. Nat., sér. 5, 1: 162 (1909).
Lecanora subcatanea Nyl., Lich. Nov. Zel.: 145 (1888) T.
Lecanora cervina sensu Nyl., Ann. Sci. Nat. Bot. sér.4, 3: 155 (1855) [non Ach.]
?subglebosa (Müll. Arg.) Hue, Nouv. Arch. Mus. Hist. Nat., sér. 5, 1: 162 (1909).
Placodium subglebosum Müll. Arg., Flora 72: 510 (1889).
?theleomma I. M. Lamb, Lilloa 14: 233 (1948).
?trachyticola (Müll. Arg.) Hue, Nouv. Arch. Mus. Hist. Nat., sér.5,1: 163 (1909).
Placodium trachyticum Müll. Arg., Hedwigia 31: 279 (1892).
Lit.: Zahlbruckner (1924); Magnusson (1929, 1947, 1956); Weber (1962, 1968); Follmann (1965c); Redon (1985); Jacobsen & Kappen (1988); Hafellner (1993); Castello & Nimis (1994).

2. __Agyrium__ Fr. (1822)
[Lecanorales: Agyriaceae]
atrovirens Müll. Arg., Nuovo Giorn. Bot. Ital. 21: 50 (1889).
Lit.: Müller Argoviensis (1889).

3. __Alectoria__ Ach. (1810)
[Lecanorales: Alectoriaceae]
nigricans (Ach.) Nyl., Lich. Scand.: 71 (1861).
Alectoria nigricans var. *implexiformis* Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2(1): 12(1932) T.
ochroleuca (Hoffm.) A.Massal., Sched. Crit. Lich. Exs. Ital.: 47 (1855).
ochroleuca var. ***citrina*** (Räsänen) D. Hawksw., Bryologist 72: 249 (1969).
Alectoria ochroleuca f. *citrina* Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 121 (1932) T.
ochroleuca var. ***variegata*** (Samp.) Zahlbr., Cat. Lich. Univ. 6: 404 (1930).
sarmentosa (Ach.) Ach., Lich. Univ.: 595 (1810).
Lit.: Lamb (1964); Hawksworth & Moore (1969); Hawksworth (1972).

4. __Amandinea__ M. Choisy ex Scheid. & H. Mayrhofer (1993)
[Lecanorales: Physciaceae]
petermannii (Hue) Matzer, H. Mayrhofer & Scheid., Lichenologist 26: 39 (1994).

punctata (Hoffm.) Coppins & Scheid., Lichenologist 25: 343 (1993).
Lit.: Lamb (1968); Redon (1985); Jacobsen & Kappen (1988); Aptroot & van der Knapp (1993); Scheidegger (1993); Matzer *et al.* (1994).

5. **Anthracothecium** Hampe ex A. Massal. (1860)
[Pyrenulales: Pyrenulaceae]
pyrenuloides (Mont.) Müll. Arg., Linnaea 63: 44 (1880).
Lit.: Follmann (1961).

6. **Anzia** Stizenb. (1861) nom. cons.
[Lecanorales: Parmeliaceae]
afromontana R. Sant., Thunbergia 2: 1 (1986).
Lit.: Moberg (1986); Yoshimura (1995); Calvelo (1996).

7. **Arthonia** Ach. (1806) nom. cons.
[Arthoniales: Arthoniaceae]
atacamensis Follmann, Willdenowia 4: 365 (1968) T.
australis (Zahlbr.) C.W. Dodge, (1968)
Arthonia subdiffusa var. *australis* Zahlbr., Acta Horti Gothob. 2: 2 (1925) T.
austrolitoralis Follmann, Willdenowia 4: 368 (1968) T.
****badia*** Wedin & Hafellner, Lichenologist 30: 65 (1998) T.
berberina Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3 (11): 325 (1924) T.
catillaria Vain., étud. Lich. Brésil 2: 165 (1890).
chilensis Follmann, Willdenowia 4: 370 (1968) T.
cinnabarina (DC.) Wallr., Fl. Crypt. Germ. 3: 320 (1831).
complanata Fée, Essai Crypt. Ecorc.: 54 (1824).
coquimbensis Zahlbr., Acta Horti Gothob. 2: 2 (1925) T.
****coriifoliae*** Wedin & Hafellner, Lichenologist 30: 70 (1998) T.
cytisi A. Massal. var. ***meridionalis*** Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3 (11): 324 (1924) T.
dispersa (Schrad.) Nyl., Lich. Scand: 261 (1861).
****epiphyscia*** Nyl., Flora 58: 361 (1875).
****flavicantis*** Wedin & Hafellner, Lichenologist 30: 72 (1998) T.
follmannii C.W. Dodge, Nova Hedwigia 12: 310 (1967) ["1966"] T.
fuscescens Fée, Essai Crypt. Ecorc.: 56 (1824).
****fuscopurpurea*** (Tul.) R. Sant., Svensk Bot. Tidskr. 54 (4): 501 (1960).
hapaliza Nyl., Ann. Sci. Nat. Bot. sér. 4,3: 172 (1855) T.
ilicinoides Stein., Sitzungsber. Kaiserl. Akad. Wiss. Math.-Naturwiss. Cl., Abt. 1, 106 (1): 231 (1897).
****minuta*** Wedin & Hafellner, Lichenologist 30: 75 (1998).
miserula Nyl., Acta Soc. Sci. Fenn. 7: 484 (1863).
palmicola Ach., Syn. Meth. Lich.: 5 (1814).
****plectocarpoides*** (S. Kondr. & D.J. Galloway) Wedin & S. Kondr., Lichenologist 29: 97 (1997).
Dactylospora plectocarpoides S. Kondr. & D.J. Galloway, Acta Bot. Fenn. 150: 95 (1994) T.
****pseudocyphellariae*** Wedin, Lichenologist 25: 301 (1993).
pulveracea Müll. Arg., Nuovo Giorn. Bot. Ital. 21: 50 (1889).
radiata (Pers.) Ach., Kongl. Vetensk. Acad. Nya Handl.: 131 (1808).
ramulosa Nyl., Mém. Soc. Sci. Nat. Cherbourg 2: 335 (1854).
rufella Nyl., Ann. Sci. Nat. Bot. sér. 4, 3: 170 (1855) T.
?*santessoniana Wedin & Hafellner, Lichenologist 30: 81 (1998).
****subaggregata*** Wedin & Hafellner, Lichenologist 30: 84 (1998) T.
subantarctica Øvstedal, Norsk Polarinst. Skr. 185: 36 (1986).
subexcedens Nyl., Flora 62: 221 (1879).
subdiffusa Willey var. ***australis*** Zahlbr., Acta Horti Gothob. 2: 2 (1925) T.
subdispersula Nyl., Lich. Nov. Zel.: 148 (1888).
subnebulosa Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3 (11): 324 (1924) T.
trilocularis Müll. Arg., Flora 64: 233 (1881).
turbatula Nyl., Lich. Fueg. Patag.: 18 (1888).
**** sp.***
Lit.: Nylander (1855); Müller Argoviensis (1889); Zahlbruckner (1924, 1925, 1926); Santesson (1952); Follmann (1962, 1968a, 1968b); Dodge (1966); Øvstedal (1986); Aptroot & van der Knapp (1993); Egea & Torrente (1995); Kondratyuk & Galloway (1994); Wedin & Kondratyuk (1997); Wedin & Hafellner (1998).

8. **Arthoniactis** (Vain.) Clem. (1909) = **Lecanactis**
[Arthoniales: Roccellaceae]
chilena C.W. Dodge, Nova Hedwigia 12: 326 (1967) ["1966"] T.
Lit.: Dodge (1967).

9. **Arthopyrenia** A. Massal. (1852)
[Dothideales: Arthopyreniaceae]
adnexa var. ***leptosperma*** Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3 (11): 320 (1924) T.
australis Müll. Arg., Miss. Sci. Cap Horn, Lich.: 172 (1888) T.
brachyspora Müll. Arg., Nuovo Giorn. Bot. Ital. 21: 52 (1889).
cinchonae (Ach.) Müll. Arg., Flora 66: 289 (1883).
maritima Øvstedal, Norsk Polarinst. Skr. 185: 37 (1986).
planorbis (Ach.) Müll. Arg., Mém. Soc. Phys. Genève 30: 27 (1888).
punctiformis (Pers.) A. Massal., Ric. Auton. Lich. Crost.: 168 (1852).
subfallax (Nyl.) Müll. Arg., Nuovo Giorn. Bot. Ital. 21: 51 (1889).
Lit.: Müller Argoviensis (1888, 1889); Zahlbruckner (1924, 1925); Øvstedal (1986).

10. **Arthothelium** A. Massal. (1852)
[Arthoniales: Arthoniaceae]
chilense C.W. Dodge, Nova Hedwigia 12: 311 (1967) ["1966"] T.
cingulatum R. Sant., Symb. Bot. Upsal. 12: 93 (1952) T.
follmannii C.W. Dodge, Nova Hedwigia 12: 311 (1967) ["1966"] T.
halophilum Follmann, Willdenowia 4: 373 (1968) T.
pacificum Follmann, Willdenowia 4: 375 (1968) T.
spilomatoides (Nyl.) Zahlbr., Cat. Lich. Univ. 2: 135 (1922).
Arthonia spilomatoides Nyl., Ann. Sci. Nat. Bot. sér. 4, 3: 169 (1855) T.
tigrense C.W. Dodge, Nova Hedwigia 12: 312 (1967) ["1966"] T.
taediosum (Nyl.) Müll. Arg., Flora 63: 287 (1880).
Arthonia taediosa Nyl., Ann. Sci. Nat. Bot. sér.4, 3: 171 (1855) T.
Lit.: Zahlbruckner (1925); Santesson (1952); Dodge (1967); Follmann (1968c); Makhija & Patwardhan (1995); Grube & Giralt (1996).

11. **Arthrorhaphis** Th. Fr. (1860) nom. cons. prop.
[Patellariales: Arthrorhaphidaceae]
alpina (Schaer.) R. Sant. In D.L. Hawksworth *et al.*, Lichenologist 12: 106 (1980).
citrinella (Ach.) Poelt, Bestimmungs. Eur. Flecht.: 126 (1969).
Lit.: Hertel (1971); Galloway & Bartlett (1986); Jørgensen & Santesson (1993); Obermayer (1996); Ihlen (1998).

12. **Aspicilia** A. Massal. (1852) nom. cons.
[Lecanorales: Hymeneliaceae]
calcarea (L.) Mudd, Man. Br. Lich.: 161 (1861).
Note: It is likely that the taxon *Lecanora masafuerensis* Zahlbr. [In C. Skottsberg, Nat. Hist Juan Fernández Easter Isl. 2 (Bot.), 3 (11): 378 (1924) T.] is also referable to *Aspicilia*, but as we have not seen material of it we hesitate to name it in *Aspicilia*.
Lit.: Jatta (1906); Zahlbruckner (1924).

13. **Asterothyrium** Müll. Arg. em. Kalb & Vezda (1890)
[Ostropales: Thelotremataceae]
rotuliforme (Müll. Arg.) Sérus. In Sérusiaux & de Sloover, Veröff. Geobot. Inst. Zürich 91: 268 (1986).
Gyalectidium rotuliforme Müll. Arg., Rev. Mycol. 38: 65 (1888).
Lit.: Santesson (1952); Farkas & Sipman (1993).

14. **Austrolecia** Hertel (1984)
[Lecanorales: Catillariaceae]
antarctica Hertel, Beih. Nova Hedwigia 79: 453 (1984) T.
Lit.: Hertel (1984).

15. **Bacidia** De Not. (1846)
[Lecanorales: Bacidiaceae]
arceutina var. ***hyposcotina*** Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3 (11): 366 (1924) T.

delapsans Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3 (11): 366 (1924) T.
dodgei Follmann, Nova Hedwigia 14: 248 (1968) ["1967"] T.
filiformis Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 57 (1932) T.
laurocerasi (Delise) Vain., Acta Soc. Fauna. Fl. Fenn. 53 (1): 175 (1922).
pallida (Müll. Arg.) Darb., Wiss. Ergebn. Schwed. Südpolarexp. 1901-1903, 4 (11): 49 (1912).
Patellaria pallida, Miss. Sci. Cap Horn, Lich.: 167 (1888) T.
pallidocarnea (Müll. Arg.) Zahlbr., Cat. Lich. Univ. 4: 231 (1926).
****plumbina*** (Anzi) R. Sant., Svensk Bot. Tidskr. 54 (4): 513 (1960).
rhodochroa (Hue) Darb., Br. Antarct. ("Terra Nova") Exp. 1910, Nat. Hist. Rept. Bot. 3: 47 (1923).
stipata I.M. Lamb, Rhodora 56: 126 (1954).
subluteola (Nyl.) Zahlbr., Sitzungsber. Kaiserl. Akad. Wiss. Math.-Naturwiss. Cl., Abt. 1, 111 (1): 395 (1902).
tuberculata Darb., Wiss. Ergebn. Schwed. Südpolarexp. 1901-1903, 4 (11): 5 (1912).
Lit.: Zahlbruckner (1924); Santesson (1952); Follmann (1968a); Aptroot & van der Knapp (1993); Ekman (1996).

16. **Bacidina** Vezda (1991) nom. cons. prop.
[Lecanorales: Lecanoraceae]
apiahica (Müll. Arg.) Vezda, Folia Geobot. Phytotax. 25: 432 (1991) ["1990"].
Lit.: Vezda (1990); Ekman (1996).

17. **Bactrospora** A. Massal. (1852)
[Arthoniales: Roccellaceae]
acicularis (C.W. Dodge) Egea & Torrente, Lichenologist 25: 219 (1993).
Lecanactis acicularis C.W. Dodge, Nova Hedwigia 16: 488 (1969) ["1968"] T.
intermedia Egea & Torrente, Lichenologist 25: 235 (1993) T.
Lit.: Follmann & Huneck (1980); Egea & Torrente (1993, 1994).

18. **Baeomyces** Pers. (1794)
[Leotiales: Baeomycetaceae]
chilensis (Nyl.) Cromb., Bot. J. Linn. Soc. 16: 223 (1876).
Baeomyces rufus var. *chilensis* Nyl., Ann. Sci. Nat. Bot. sér. 4, 3: 177 (1855).
Biatora byssoides var. *chilensis* Mont. In C. Gay, Hist. Chile, Bot. 8: 173 (1854) T.
ramalinellus Nyl., Ann. Sci. Nat. Bot. sér. 4, 3: 146 (1855) T.
Lit.: Jahns (1971); Imshaug (1972); Gierl & Kalb (1993).

19. **Bellemerea** Hafellner & Cl. Roux (1984)
[Lecanoraceae: Porpidiaceae]
alpina (Sommerf.) Clauzade & Cl. Roux, Bull. Soc. Bot. Centre-Ouest, sér. 15: 129 (1984).
subsorediza (Lynge) R. Sant. In R. Moberg, Thunbergia 5: 2 (1987).
Lit.: Hertel (1989); Purvis *et al.*(1992).

20. **Biatora** Fr. (1817)
[Lecanorales: Lecanoraceae]
albopraetextata (C. Knight) Hellb., Bih. Kongl. Svenska Vetenskapsakad. Handl. 21 (3) 13: 105 (1896).
Lecidea albopraetexta C. Knight, Trans. N.Z. Inst. 12: 376 (1880).
glaucopa (Hook. f. & Taylor) Räsänen, Ann. Soc. Bot. Zool.-Bot. Fenn. "Vanamo" 2 (1): 58 (1932).
Lecidea glaucopa Hook. f. & Taylor, Lond. J. Bot. 3: 637 (1844) T.
Lecidea conflectens Nyl., Lich. Fueg. Patag.: 15 (1888).
Lecidea epichlorotica Müll. Arg., Miss. Sci. Cap Horn, Lich.: 164 (1889) T.
glaucopa var. ***oculans*** (Nyl.) Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 58 (1932).
Lecidea oculans Nyl., Lich. Fueg. Patag.: 13 (1888) T.
Lecidea epichlorotica var. *expallens* Müll. Arg., Miss. Sci. Cap Horn, Lich.: 165 (1889) T.
Lecidea conflectens var. *expallens* (Müll. Arg.) Müll. Arg., Nuovo Giorn. Bot. Ital. 21: 46 (1889).
Note: It is possible that the taxon *Lecidea lividula* Müll. Arg. [Miss. Sci. Cap Horn, Lich.: 164 (1888) T] should also be referred to *Biatora*.
Lit.: Printzen (1995).

21. **Biatorella** De Not. (1846)
[Lecanorales: Biatorellaceae]
austroshetlandica C.W. Dodge, Trans. Amer. Microscop. Soc. 84: 512 (1965) T.
Lit.: Dodge (1965a, 1965b); Hafellner & Casares-Porcel (1992); Aptroot & van der Knapp (1993); Hafellner (1994, 1995).

22. **Biatorina** A. Massal. (1852) nom. rej. prop. = **Catinaria**
[Lecanorales: Bacidiaceae]
chilena C.W. Dodge, Nova Hedwigia 16: 490 (1969) T.
coccinea C.W. Dodge, Nova Hediwgia 12: 333 (1967) ["1966"] T.
Lit.: Jørgensen & Santesson (1993).
***Biatoropsis** Räsänen (1934)
[Platygloeales: incert. sed.]
usnearum Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 5 (9): 8 (1934).
Lit.: Diederich & Christiansen (1994); Diederich (1996).
Blastenia A. Massal. (1852) = Caloplaca

23. **Brigantiaea** Trevis (1853)
[Lecanorales: Brigantiaceae]
chrysosticta (Hook. f. & Taylor) Hafellner & Bellem., Nova Hedwigia 35: 246 (1981).
Biatora berteroanum Mont., Ann. Sci. Nat. Bot. sér. 3, 18: 310 (1852) T.
Heterothecium berteroanum (Mont.) Mont. In C. Gay, Hist. Chile, Bot. 8: 176 (1852).
Brigantiaea berteroana (Mont.) Trevis., Spighe e Paglie: 9 (1853).
Lopadium leucoxantha var. *albidius* Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.). 3 (11): 368 (1924) T.
fuscolutea (Dicks.) R. Sant. In J. Poelt & A. Vezda, Bestimmungsschl. Eur. Flecht. Erg. II: 116 (1981).
phaeomma (Nyl.) Hafellner, Symb. Bot. Upsal. 32 (1): 61 (1997).
Lecidea phaeomma Nyl., Lich. Nov. Zel.: 90 (1888).
Sporopodium fuscoluteum var. *austroamericanum* Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 20 (3): 27 (1944).
Brigantiaea austroamericanum (Räsänen) Hafellner, Lichenologist 15: 265 (1983).
Lit.: Hafellner & Bellemère (1981); Hafellner (1983, 1997).

24. **Bryoria** Brodo & D. Hawksw. (1977)
[Lecanorales: Parmeliaceae]
chalybeiformis (L.) Brodo & D. Hawksw., Opera Bot. 42: 81 (1977).
Lit.: Hawksworth (1972); Brodo & Hawksworth (1977); Redon (1985); Jacobsen & Kappen (1988).

25. **Buellia** De Not. (1846)
[Lecanorales: Physciaceae]
agelaeoides Müll. Arg., Hedwigia 31: 283 (1892) T.
albula (Nyl.) Müll. Arg., Bull. Herb. Boissier 2. App. 1: 71 (1894).
andina Müll. Arg., Hedwigia 31: 282 (1892).
andicola Müll. Arg. In Zahlbr., Acta Horti. Gothob. 2: 25 (1925).
anisomera Vain., Résult. Voy. Belgica, Lich.: 26 (1903).
augustata Vain., Résult. Voy. Belgica, Lich.: 26 (1903).
Buellia brabantica Vain., Résult. Voy. Belgica, Lich.: 26 (1903).
babingtonii (Hook. f. & Taylor) I.M. Lamb ex Dodge, Rep. B.A.N.Z.A.R.E., ser. B, 7: 248 (1948).
Lecanora babingtoni [sic.] Hook. f. & Taylor. In Hook. f., Fl. Ant. 1 (II): 535 (1847).
barrilensis Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 4 (13): 459 (1926) T.
concinna Th.Fr. var. ***oceanica*** Zahlbr. In C. Skottsberg, Nat. Hist Juan Fernández Easter Isl. 2 (Bot.), 3(11): 400 (1924) T.
coniops (Wahlenb. ex Ach.) Th.Fr., Nova Acta Regiae Soc. Sci. Upsal. ser. 3, 3: 331 (1861).
coquimbensis C.W. Dodge, Nova Hedwigia 12: 349 (1967) ["1966"] T.
darbishirei I.M. Lamb, Br. Antarct. Surv. Sci. Rep. 61: 23 (1968).
Rinodina crassa Darb., Wiss. Ergebn. Schwed. Südpolarexp. 1901-1903, 4 (11): 13 (1912).
evanescens Darb., Br. Antarct. ("Terra Nova") Exp. 1910, Nat. Hist. Rep. Bot. 1 (3): 36 (1923).
fernandeziana Zahlbr., K. Sv. Vetensk.-Akad. Handl. 57(6): 53 (1917) T.
flavoareolata (Nyl.) Müll. Arg., Hedwigia 31: 283 (1892).
flavovirens Müll. Arg., Flora 71: 542 (1888).
follmannii C.W. Dodge, Nova Hedwigia 12: 350 (1967) ["1966"] T.
frigida Darb., Nat. Antarct. Exp. 1901-1904, Nat. Hist. 5: 7 (1910).
fulvonitescens I.M. Lamb, Br. Antarct. Surv. Sci. Rep. 61: 54 (1968).
fuscula (Nyl.) Zahlbr., Acta Horti Gothob. 2: 22 (1925).
glaziouana (Kremp.) Müll. Arg., Flora 63: 19 (1880).
granulosa (Darb.) C.W. Dodge, Rep. B.A.N.Z.A.R.E. ser. B, 7: 244 (1948).
halophila Müll. Arg., Bull. Herb. Boissier 1(2): 52 (1893).
halophiloides Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 4 (13): 459 (1926) T.

halophiloides var. ***pruinosula*** Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 4 (13): 455 (1926) T.
illaetabilis I.M. Lamb, Br. Antarct. Surv. Sci. Rep. 61: 29 (1968).
inordinata (Hue) Darb., Br. Antarct. ("Terra Nova") Exp. 1910, Nat. Hist. Rep. Bot. 1 (3): 63 (1923).
isabellina (Hue) Darb., Br. Antarct. ("Terra Nova") Exp. 1910, Nat. Hist. Rep. Bot. 1 (3): 63 (1923).
jattana Müll. Arg., Nuov. Giorn. Bot. Ital. 21: 48 (1889) T.
jorgensis Zahlbr., Acta Horti Gothob. 2: 23 (1925) T.
kitensis (Stirt.) Zahlbr., Cat. Lich. Univ. 7: 374 (1931).
Lecidea kitensis Stirt., Proc. Phil. Soc. Glasgow 11: 111 (1879) T.
latemarginata Darb., Wiss. Ergebn. Schwed. Südpolarexp. 1901-1903, 4 (11): 15 (1912).
melanostola (Hue) Darb., Br. Antarct. ("Terra Nova") Exp. 1910, Nat. Hist. Rep. Bot. 1 (3): 63 (1923).
nelsonii Darb., Wiss. Ergebn. Schwed. Südpolarexp. 1901-1903, 4 (11): 15 (1912).
olivacea Müll. Arg., Verhandl. Zool.-Bot. Ges. Wien 43: 298 (1893).
papillata (Sommerf.) Tuck., Lichens of California, Oregon & Rocky Mts: 26 (1866).
paschalis Zahlbr. In C. Skottsberg., Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 4 (13): 456 (1926) T.
perlata (Hue) Darb., Br. Antarct. ("Terra Nova") Exp. 1910, Nat. Hist. Rep. Bot. 1 (3): 64 (1923).
pirionii de Lesd., Bull. Soc. Bot. France 81: 767 (1934) T.
protothallina (Kremp.) Vain. var. ***pygmaea*** Räsänen, Ann. Soc. Bot. Zool.-Bot. Fenn. "Vanamo" 2 (1): 31 (1932) T.
pycnogonoides Darb., Br. Antarct. ("Terra Nova") Exp. 1910, Nat. Hist. Rep. Bot. 1 (3): 41 (1923).
russa Darb., Br. Antarct. ("Terra Nova") Exp. 1910, Nat. Hist. Rep. Bot. 1 (3): 64 (1923).
saxatilis (Schaer.) Körb., Syst. Lich. Germ.: 228 (1855).
siphoniatula Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3(11): 400 (1924) T.
sordidula Jatta, Malpighia 20: 12 (1906) T.
spuria (Schaer.) Anzi, Cat. Lich. Sondr.: 87 (1860).
stellulata (Taylor) Mudd, Man. Brit. Lich.: 216 (1861).
subdisciformis (Leight.) Vain. var. americana Jatta, Malpighia 20: 12 (1906) T.
subpedicellata (Hue) Darb., Br. Antarct. ("Terra Nova") Exp. 1910, Nat. Hist. Rep. Bot. 1 (3): 64 (1923).
subsquamescens Jatta, Malpighia 20: 11 (1906) T.
taltalensis C.W. Dodge, Nova Hedwigia 12: 351 (1967) ["1966"] T.
tristicolor Zahlbr., Acta Horti Gothob. 2: 21 (1925) T.

Lit.: Jatta (1906); Zahlbruckner (1917, 1924, 1925, 1926); Magnusson (1955); Dodge (1967); Follmann (1965c); Lamb (1968); Redon (1985); Jacobsen & Kappen (1988); Scheidegger (1993).

26. **Bunodophoron** A. Massal. (1861)
[Lecanorales: Sphaerophoraceae]
agnetae Wedin, Mycotaxon 53: 33 (1985).
australe (Laurer) A. Massal., Mem. Imp. Reale Ist. Veneto Sci. 10: 76 (1861).
dodgei (Ohlsson) Wedin, Pl. Syst. Evol. 187: 232 (1993).
Sphaerophorus dodgei Ohlsson. In Wedin, Lichenologist 24: 121 (1992) T.
imshaugii (Ohlsson) Wedin, Pl. Syst. Evol. 187: 233 (1993).
Sphaerophorus imshaugii Ohlsson. In D.J. Galloway, N.Z. J. Bot. 21: 197 (1983).
insigne (Laurer) Wedin, Pl. Syst. Evol. 187: 233 (1993).
Sphaerophorus insignis Laurer, Linnaea 2: 45 (1827).
macrocarpum (Ohlsson) Wedin, Pl. Syst. Evol. 187: 233 (1993).
Sphaerophorus macrocarpus Ohlsson. In D.J. Galloway, N.Z. J. Bot. 21: 197 (1983).
patagonicum (C.W. Dodge) Wedin, Pl. Syst. Evol. 187: 234 (1993).
Pleurocybe patagonica C.W. Dodge, Nova Hedwigia 16: 484 (1968) T.
Sphaerophorus patagonicus (C.W. Dodge) Ohlsson. In D.J. Galloway, N.Z. J. Bot. 21: 197 (1983).
ramuliferum (I.M. Lamb) Wedin, Pl. Syst. Evol. 187: 234 (1993).
Sphaerophorus ramulifer I.M. Lamb, Farlowia 4: 426 (1955).
scrobiculatum (C.Bab.) Wedin, Pl. Syst. Evol. 187: 234 (1993).
Sphaerophorus australis var. *scrobiculatus* C. Bab. In Hook. f., Fl. Nov. Zel. 2: 305 (1855).
Sphaerophorus scrobiculatus (C. Bab.) M. Satô, Misc. Bryol. Lichenol. (Nichinan) 4: 151 (1968).
tibelli (Wedin) Wedin, Pl. Syst. Evol. 187: 234 (1993).
Sphaerophorus tibellii Wedin, Lichenologist 24: 129 (1992).
whakapapense (Wedin) Wedin, Pl. Syst. Evol. 187: 234 (1993).
Sphaerophorus whakapapensis Wedin. In Wedin & Tibell, N.Z. J. Bot. 29: 287 (1991).
Lit.: Tibell (1987, 1994); Wedin (1993, 1994, 1995b).

27. **Bulbothrix** Hale (1974)
[Lecanorales: Parmeliaceae]

goebelii (Zenker)Hale, Smithsonian Contr. Bot. 32: 14 (1976).
imshaugii (Hale) Hale, Phytologia 28: 480 (1974).
isidiza (Nyl.) Hale, Phytologia 28: 480 (1974).
tabacina (Mont. & Bosch) Hale, Phytologia 28: 481 (1974).
Lit.: Hale (1976); Elix (1994a).

Byssocaulon Mont. (1835)
[Arthoniales: Chrysotrichaceae]
candidum Müll. Arg., Nuov. Giorn. Bot. Ital. 21: 49 (1889). = ***Sagenidium***
niveum Mont., Ann. Sci. Nat. Bot. sér. 2, 3: 355 (1835) = ***Sagenidium***.
Lit.: Montagne (1835); Follmann (1968a).

28. **Byssoloma** Trevis. (1853).
[Lecanorales: Pilocarpaceae]
leucoblepharum (Nyl.) Vain. em. R. Sant., Symb. Bot. Upsal. 12: 483 (1952).
Lit.: Santesson (1952); Vezda (1987); Kalb & Vezda (1990); Malcolm & Vezda (1995); Elix *et al.* (1995).

29. **Calicium** Pers. (1794)
[Caliciales: Caliciaceae]
abietinum Pers., Tent. Disp. Meth. Fung. (Suppl.): 59 (1797).
adspersum Pers. ssp. ***australe*** Tibell, Publ. Herb. Univ. Uppsal. 12: 1 (1984).
glaucellum Ach., Methodus: 97 (1803).
hyperelloides Nyl., Syn. Meth. Lich. 1: 153 (1860).
salacinum Pers., Usteri Ann. Bot. 7: 20 (1794).
trabinellum (Ach.) Ach., Methodus Suppl.: 14 (1803).
tricolor F.Wilson, Vict. Nat. 6: 64 (1889).
viride Pers., Usteri Ann. Bot. 7: 20 (1794).
Lit.: Follmann (1962); Tibell (1987).

30. **Calopadia** Vezda (1986)
[Lecanorales: Ectolechiaceae]
fusca (Müll. Arg.) Vezda, Folia Geobot. Phytotax. 21: 215 (1986).
Lit.: Vezda (1986).

31. **Caloplaca** Th.Fr. (1860) nom. cons.
[Teloschistales: Teloschistaceae]
ammiospila (Wahlenb. in Ach.) H. Olivier, Mém. Soc. Nat. Sci. Nat. Cherbourg 37: 136 (1909).
athallina Darb., Wiss. Ergebn. Schwed. Südpolarexp. 4(11): 9 (1912).
austroshetlandica (Zahlbr.) D.J. Galloway & Quilhot, comb.nov.
Basionym: *Blastenia austroshetlandica* Zahlbr., K. Sv. Vetensk.-Akad. Handl. 57 (6): 47 (1917) T.
buelliae Olech & Søchting, Lichenologist 25: 261 (1993) T.
carnella (Nyl.) Jatta, Bull. Bot. Soc. Ital.: 255 (1911).
Lecanora carnella Nyl., Lich. Fueg. Patag.: 7 (1888) T.
Blastenia carnella (Nyl.) Müll. Arg., Nuovo Giorn. Bot. Ital. 21: 48 (1889).
Lecidea carnella (Nyl.) Hue, Nouv. Arch. Mus. Hist. Nat., sér. 5, 4: 9 (1914).
cerina (Ehrh.) Th.Fr., Lich. Arctoi: 118 (1860).
cinericola (Hue) Darb., Br. Antarct. ("Terra Nova") Exp. 1910. Nat. Hist. Rep. Bot. 3: 54 (1923).
cirrochrooides (Vain.) Zahlbr., Cat. Lich. Univ. 7: 225 (1931).
citrina (Hoffm.) Th.Fr., Nov. Acta Regiae Soc. Sci. Upsal. ser. 3, 3: 218 (1861).
clandestina Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3(11): 394 (1924) T.
coralligera (Hue) Zahlbr., Cat. Lich. Univ. 7: 274 (1931).
Thamnoma coralligera (Hue) Gyeln., Acta F. Fl. Univ., ser. II, I. No 5-6: 9 (1933).
cribrosa (Hue) Zahlbr., Cat. Lich. Univ. 7: 274 (1931).
elegantissima (Nyl.) Zahlbr., Cat. Lich. Univ. 7: 238 (1931).
Follmannia rufa C.W. Dodge, Nova Hedwigia 12: 335 (1967) ["1966"] T.
fernandeziana (Zahlbr.) Follmann & Redon, Willdenowia 6: 448 (1972).
Blastenia fernandeziana Zahlbr., Kongl. Svenska Vetenskapsakad. Handl. 57 (6): 46 (1917) T.
Blastenia fernandeziana f. *validior* Zahlbr., Acta Horti Gothob. 2: 20 (1925) T.
ferruginea (Huds.) Th.Fr., Nova Acta Regiae Soc. Sci. Upsal. ser. 3, 3: 223 (1861).
fragillima Poelt, Pl. Syst. Evol. 148: 74 (1984) T.
haematites (Chaub.) Zwackh, Flora 45: 487 (1862).
holocarpa (Hoffm.) A.E. Wade, Lichenologist 3: 11 (1965).
iomma Olech & Søchting, Lichenologist 25: 263 (1993) T.

isidioclada Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.). 3 (11): 396 (1924) T.
jorgensis C.W. Dodge, Nova Hedwigia 12: 347 (1967) ["1966"] T.
lucens (Nyl.) Zahlbr., Deutsch. Südpolexp. 1901-1903. 7: 29 (1906).
Lecanora elegans f. *lucens* Cromb., Bot. J. Linn. Soc. 15: 184 (1876).
microphylla (Hue) Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.). 3 (11): 397 (1924).
Lecanora microphylla Hue, Ann. Mycol. 13: 77 (1915) T.
millegrana (Müll. Arg.) Zahlbr., Cat. Lich. Univ. 7: 247 (1931).
Amphiloma millegranum Müll. Arg., Flora 69: 12 (1886).
orthoclada Zahlbr. In C. Skottsberg. Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.). 3 (11): 398 (1924) T.
pergracilis Zahlbr., Acta Horti Gothob. 2: 20 (1925) T.
pergracilis f. ***compactior*** Zahlbr., Acta Horti Gothob. 2: 21 (1925) T.
psoromatis Olech & Søchting, Lichenologist 25: 265 (1993) T.
pulverulenta (Müll. Arg.) Zahlbr., Cat. Lich. Univ. 7: 168 (1931).
Callopisma pulverulentum Müll. Arg., Flora 72: 144 (1889).
regalis (Vain.) Zahlbr., Cat. Lich. Univ. 7: 274 (1931).
Placodium regale Vain., Résult. Voy. Belgica. Lich.: 23 (1903).
rubina Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.). 3 (11): 396 (1924) T.
rubina var ***evolutior*** Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.). 3 (11): 396 (1924) T.
rugulosa (Nyl.) Zahlbr., Cat. Lich. Univ. 7: 263 (1931).
Placodium rugulosum Nyl., Ann. Sci. Nat. Bot. sér. 4. 3: 153 (1855) T.
sanguinea (Müll.Arg.) Zahlbr., Cat. Lich. Univ. 7: (1931).
saxicola (Hoffm.) Nordin, Caloplaca, sect. Gasparrinia I Nordeuropa: 87 (1972).
selkirkii Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández East Isl. 2 (Bot.). 3 (11): 395 (1924) T.
siphonospora Olech & Søchting, Lichenologist 25: 267 (1993) T.
subcerina (Nyl.) Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.). 3 (11): 397 (1924).
subcerina var. ***aurantiaca*** (Müll. Arg.) Zahlbr. In C. Skottsberg. Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.). 3 (11): 397 (1924).
subdimorpha Zahlbr., Kongl. Svenska Vetenskapsakad. Handl. 57 (6): 47 (1917).
subdimorpha var. ***leprascens*** Zahlbr., Kongl. Svenska Vetenskapsakad. Handl. 57 (6): 48 (1917).
subherbidella (Räsänen) C.W. Dodge. In G. Follmann, Nova Hedwigia 14: 264 (1968) ["1967"].
sublobulata (Nyl.) Zahlbr., Cat. Lich. Univ. 7: 267 (1931).
Placodium sublobulatum Nyl., Lich. Fueg. Patag.: 7 (1888).
Callopisma harioti Müll. Arg., Miss. Sci. Cap Horn, Lich.: 162 (1888).
Caloplaca subdimorpha var. *leprascens* Zahlbr., Kongl. Svenska Vetenskapasakad. Handl. 57 (6): 48 (1917).
Caloplaca lucens var. *striolata* Zahlbr., Kongl. Svenska Vetenskapsakad. Handl. 57 (6): 49 (1917).
Callopisma lucens var. *leprascens* (Zahlbr.) Malme, Ark. Bot. 230A (9): 42 (1926).
tetraspora (Nyl.) H. Ollivier, Mém. Soc. Nat. Sci. Nat. Cherbourg 37: 140 (1909).
tiroliensis Zahlbr., Ann. Mycol. 1: 360 (1903).

Lit.: Jatta (1906); Zahlbruckner (1917, 1924, 1925); Santesson (1944); Follmann (1965c, 1968); Poelt & Pelleter (1984); Redon (1985); Jacobsen & Kappen (1988); Kärnefelt (1989, 1998); Søchting & Øvstedahl (1992); Ott & Sancho (1993); Aptroot & van der Knapp (1993); Poelt & Hinteregger (1993); Olech & Søchting (1993); Søchting & Olech (1995).

32. **Calycidium** Stirt. (1877)
[Caliciales: Calycidiaceae]
cuneatum Stirt., Proc. Phil. Soc. Glasgow 10: 292 (1877).
Lit.: Galloway (1985); Tibell (1987, 1994); Wedin (1993).

33. **Candelaria** A. Massal. (1852).
[Lecanorales: Candelariaceae]
concolor (Dickson) B. Stein. In F.J. Cohn, Kryptog.-Fl. Schlesien 2(2): 84 (1879).
crawfordii (Müll. Arg.) P.M. Jørg. & D.J. Galloway, Lichenologist 24: 407 (1992).
murrayi (C.W.Dodge) Poelt.
Lit.: Jacobsen & Kappen (1988); Jørgensen & Galloway (1992b); Filson (1992).

34. **Candelariella** Müll. Arg. (1894)
[Lecanorales: Candelariaceae]
andicola (Zahlbr.) Zahlbr., Cat. Lich. Univ. 5: 791 (1928).
antennaria Räsänen, Anales Soc. Ci. Argent. 128: 137 (1939).
aurella (Hoffm.) Zahlbr., Cat. Lich. Univ. 5: 790 (1928).
coralliza (Nyl.) H. Magn., Svensk Bot. Tidskr. 29: 122 (1939).

fuegiensis C.W. Dodge, Nova Hedwigia 12: 344 (1967) ["1966"] T.
lambii Hakul., Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 27: 36 (1954).
ossicola C.W. Dodge, Nova Hedwigia 12: 345 (1967) ["1966"] T.
reflexa (Nyl.) Lettau, Hedwigia 52: 196 (1912).
terrigena Räsänen, Anales Soc. Ci. Argent. 128: 137 (1939).
vainioana Hakul., Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 27: 100 (1954).
vitellina (Hoffm.) Müll. Arg., Bull. Herb. Boissier 2. App. 1: 47 (1894).
xanthostigma (Pers.) Lettau, Hedwigia 52: 196 (1912).
Lit.: Hakulinen (1954), Thomson (1973); Aptroot & van der Knapp (1993).

35. **Candelariopsis** (Sambo) Szatala (1959) comb. inval.
[Teloschistales: Teloschistaceae]
chilena C.W. Dodge, Nova Hedwigia 12: 348 (1967) ["1966"] T.
Lit.: Dodge (1967).

36. **Canomaculina** Elix & Hale (1987)
[Lecanorales: Parmeliaceae]
subtinctoria (Zahlbr.) Elix, Mycotaxon 65: 477 (1997).
Lit.: Elix & Hale (1987); Elix (1993; 1997).

37. **Canoparmelia** Elix & Hale (1987)
[Lecanorales: Parmeliaceae]
austroamericana Adler, Mycotaxon 28: 251 (1987).
texana (Tuck.) Elix & Hale, Mycotaxon 27: 279 (1986).
Lit.: Hale (1976); Elix & Hale (1986); Elix *et al.* (1986), Adler (1987); Elix (1993, 1994b).

***Capronia** Saccardo (1883)
[Chaetothyriales: Herpotrichiellaceae]
normandinae R. Sant. & D. Hawksw., Notes RBG Edinburgh 46 (3): 395 (1990).
Lit.: Hawksworth (1990).

38. **Carbonea** (Hertel) Hertel (1983)
[Lecanorales: Lecanoraceae]
assentiens (Nyl.) Hertel, Lecideac. Exs. No. 103 (1984).
cyanosarca (Zahlbr.) Knoph & Leuckert, Nova Hedwigia 59: 000 (1994).
Lecidea cyanosarca Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3 (11): 359 (1924) T.
Lecidella cyanosarca (Zahlbr.) Hertel, Herzogia 2: 254 (1971).
inactiva (Zahlbr.) Hertel, Beih. Nova Hedwigia 79: 443 (1984).
Lecidea inactiva Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3 (11): 358 (1924) T.
latypizoides (Nyl.) Knoph & Rambold,
Lecidea montevidensis Müll. Arg., Rev. Mycol. 37: 4 (1888).
vorticosa (Flörke) Hertel, Mitt. Bot. München 19: 442 (1983).
Lit.: Hertel (1984, 1989); Rambold (1989); Knoph & Leuckert (1994).

39. **Catapyrenium** Flotow (1850)
[Verrucariales: Verrucariaceae]
cinereum (Pers.) Körb., Syst. Lich. Germ.: 325 (1855).
daedaleum (Kremp.) B. Stein, In F.J. Cohn, Krypt.-Fl. Schlesien 2(2): 312 (1879).
Lit.: Breuss (1993, 1995, 1996b); Breuss & McCune (1994); Pérez (1997).

40. **Catillaria** A.Massal. (1852).
[Lecanorales: Catillariaceae]
aeruginascens (Müll. Arg.) Zahlbr., Cat. Lich. Univ. 4: 27 (1926).
Patellaria aeruginascens Müll. Arg., Nuovo Giorn. Bot. Ital. 21: 47 (1889).
Biatorina aeruginascens (Müll. Arg.) Darb., Wiss. Ergebn. Schwed. Südpolarexp. 1901-1903, 4 (11): 48 (1912).
coccinea (C.W. Dodge) Follmann & Redon, Willdenowia 6: 437 (1972).
Biatorina coccinea C.W. Dodge, Nova Hedwigia 12: 333 (1967) ["1966"] T.
coquimbensis Zahlbr., Acta Horti. Gothob. 2: 10 (1925) T.
corymbosa (Hue) I.M. Lamb, Rhodora, 56: 116 (1954).
endochroma (Fée) Zahlbr. In Engler-Prantl, Natürl. Pflanzenfam. 1 (1): 134 (1905).
intermixta (Nyl.) Arn., Verhandl. Zool.-Bot. Ges. Wien 20: 455 (1870).
Lecidea intermixta Nyl., Ann. Sci. Nat. Bot. sér. 4, 3: 161 (1855).

leucochlora (Mont.) Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3 (11): 363 (1924).
Parmelia varia Fr. var. *leucochlora* Mont., Ann. Sci. Nat. Bot. sér. 2, 4: 91 (1835) T.
Parmelia leucochlora (Mont.) Mont., Ann. Sci. Nat. Bot. sér. 3, 18: 310 (1852).
Berengeria leucochlora (Mont.) Trevis., Spighe e Paglie: 5 (1835).
Lecidea leucochlora (Mont.) Nyl., Ann. Sci. Nat. Bot. sér. 4, 3: 184 (1855).
Bayrhofferia leucochlora (Mont.) Trevis., Riv. Period. Lavori Accad. Padova 5: 69 (1857).
leucochlora f. ***laevigata*** Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3 (11): 364 (1924) T.
melastegia (Nyl.) Zahlbr. f. ***mesoleucodes*** Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3 (11): 362 (1924) T.
obludens (Nyl.) Zahlbr., Cat. Lich. Univ. 4: 21 (1926).
Lecidea obludens Nyl., Lich. Fueg. Patag.: 12 (1888) T.
praepallida (Müll. Arg.) Zahlbr., Cat. Lich. Univ. 4: 63 (1926).
Patellaria praepallida Müll. Arg., Miss. Sci. Cap Horn, Lich.: 166 (1888) T.
Biatorina praepallida (Müll. Arg.) Darb., Wiss. Ergebn. Schwed. Südpolarexp. 1901-1903, 4 (11): 48 (1912).
theobromina Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3 (11): 364 (1924) T.
tremellula (Müll. Arg.) Zahlbr., Cat. Lich. Univ. 4: 80 (1926).
Patellaria tremellula Müll. Arg., Nuovo Giorn. Bot. Ital. 21: 47 (1889).
violascens (Müll. Arg.) Zahlbr., Cat. Lich. Univ. 4: 84 (1926).
Patellaria violascens Müll. Arg., Nuovo Giorn. Bot. Ital. 21: 46 (1889).
Biatorina violascens (Müll. Arg.) Darb., Wiss. Ergebn. Schwed. Südpolarexp. 1901-1903, 4 (11): 48 (1912).
Lit.: Zahlbruckner (1925); Follmann (1968a); Follmann & Redon (1972c); Jacobsen & Kappen (1988); Quilhot *et al.* (1989).

41. **Cenozosia** A. Massal. (1854)
[Lecanorales: Ramalinaceae]
inanis (Mont.) A. Massal., Neagen. Lich.: 5 (1854).
Ramalina inanis Mont., Ann. Sci. Nat. Bot. sér. 2, 18: 266 (1842).
Dufourea inanis (Mont.) Nyl., Mém. Soc. Imp. Sci. Nat. Cherbourg 3: 171 (1855).
Desmaziera inanis (Mont.) Follmann & Huneck, Willdenowia 5: 208 (1969).
Lit.: Follmann & Huneck (1969); Bowler (1981); Spjut (1996).

42. **Cetraria** Ach. (1803) nom. cons.
[Lecanorales: Parmeliaceae]
aculeata (Schreb.) Fr., Nov. Sched. Crit.: 26 (1826)
ericetorum Opiz ssp. patagonica Kärnefelt, Opera Bot. 46: 82 (1979).
islandica (L.) Ach. ssp. ***antarctica*** Kärnefelt, Opera Bot. 46: 90 (1979) T.
Cetraria tenuifolia var. *pseudoislandica* Räsänen, Ann. Soc. Bot. Zool.-Bot. Fenn. "Vanamo" 2 (1): 15 (1932)T.
Cetraria tenuifolia var. *spinosa* Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 15 (1932) T.
muricata (Ach.) Eckf., Bull. Torrey Bot. Club 22: 240 (1895).
Lit.: Räsänen (1932); Kärnefelt (1979, 1986); Kärnefelt *et al.* (1993).

43. **Cetrariella** Kärnefelt & Thell (1993)
[Lecanorales: Parmeliaceae]
delisei (Bory ex Schaer.) Kärnefelt & Thell, Bryologist 96: 403 (1993).
Lit.: Kärnefelt *et al.* (1993b).

44. **Cetrelia** W.L.Culb. & C.F.Culb. (1968)
[Lecanorales: Parmeliaceae]
olivetorum (Nyl.) W.L. Culb. & C.F. Culb., Contr. U. S. Natl. Herb. 34: 515 (1968).
Lit.: Culberson & Culberson (1968); Elix (1993).

45. **Chaenotheca** (Th.Fr.) Th.Fr. (1860)
[Caliciales: Coniocybaceae]
brunneola (Ach.) Müll. Arg., Mém. Soc. Phys. Genève 16 (2): 360 (1862).
carthusiae (Harm.) Lettau, Festschr. Preuss. Bot. Ver.: 27 (1912).
chrysocephala (Turner ex Ach.) Th.Fr., Nova Acta Regiae Soc. Sci. Upsal. 3 (3): 250 (1860).
deludens Tibell, Symb. Bot. Upsal. 27: 95 (1987).
ferruginea (Turner ex Sm.) Migula, Krypt.-Fl. Deutschl., Flecht. 2: 479 (1931).
hispidula (Ach.) Zahlbr., Cat. Lich. Univ. 1: 567 (1922).
trichialis (Ach.) Th.Fr., Nova Acta Regiae Soc. Sci. Upsal. 3 (3): 351 (1860).
Lit.: Follmann (1962); Tibell (1987, 1994).

46. **Chaenothecopsis** Vain. (1927)
[Caliciales: Mycocaliciaceae]
haematopus Tibell, Symb. Bot. Upsal. 27: 126 (1987).
sanguinea Tibell, Symb. Bot. Upsal. 27: 151 (1987).
Lit.: Tibell (1987).

47. **Chiodecton** Ach. (1814)
[Arthoniales: Roccellaceae]
chilense Zahlbr., Acta Horti Gothob. 2: 8 (1925) T.
follmannii Riedl, Sydowia 17: 87 (1964) T.
hypoleucum Nyl., Ann. Sci. Nat. Bot. sér. 4, 3: 172 (1855).
klementii Follmann, Nova Hedwigia 14: 227 (1968) ["1967"]
leptothallum Malme, Ark. Bot. 29A (6): 12 (1937).
phaeosporellum (Nyl.) Zahlbr., Cat. Lich. Univ. 2: 481 (1923).
santiagense C.W. Dodge, Nova Hedwigia 16: 487 (1969) T.
stalactinum Nyl., Ann. Sci. Nat. Bot. sér. 4, 3: 173 (1855) T.
Lit.: Nylander (1855); Zahlbruckner (1925); Riedl & Schiman-Czeika (1964); Follmann (1962, 1968a); Follmann & Redon (1972c); Thor (1990).

48. **Chrysothrix** Mont. (1852) nom. cons.
[Lecanorales: Chrysotrichaceae]
candelaris (L.) J.R. Laundon, Lichenologist 13: 110 (1981).
granulosa G. Thor, Bryologist 91: 362 (1988).
pavonii (Fr.) J.R. Laundon, Lichenologist 13: 117 (1981).
Peribotryon pavonii Fr., Syst. Mycol. 3: 288 (1832).
Cilicia noli-tangere Mont., Ann. Sci. Nat. Bot. sér. 2, 2: 375 (1834) T. nom illeg.
Chrysothrix noli-tangere (Mont.) Mont., Ann. Sci. Nat. Bot. sér. 3, 18: 313 (1852) nom illeg.
Arthonia noli-tangere (Mont.) Nyl., Mém. Soc. Imp. Sci. Nat. Cherbourg 3: 189 (1855) nom. illeg.
Crocynia noli-tangere (Mont.) Kremp., Ges. Litt. Lich. 2: 247 (1869) nom. illeg.
Lit.: Laundon (1981); Thor (1988).

49. **Cladia** Nyl. (1870)
[Lecanorales: Cladiaceae]
aggregata (Sw.) Nyl., C.R. Hebd. Séances Acad. Sci. 83: 88 (1876).
schizopora (Nyl.) Nyl., Rev. Bot. Bull. Mens. 6: 161 (1888).
Lit.: Filson (1992); Stenroos (1995).

50. **Cladonia** P. Browne (1756) nom. cons.
[Lecanorales: Cladoniaceae]
anserina Ahti, Ann. Bot. Fenn. 29: 68 (1992).
arbuscula (Wallr.) Flot. In Wendt, Thermen Warmbrunn: 94 (1839).
Cladina arbuscula (Wallr.) Hale & W.L. Culb., Bryologist 73: 510 (1970).
asahinae J.W. Thomson, J. Jap. Bot. 51: 364 (1977) ["1966"].
bacilliformis (Ny.) Glück. Verhand. Naturhist.-Med. Vereins Heidelberg, N. F. 6: 97 (1899).
bellidiflora (Ach.) Schaer., Lich. Helv. Spicil.: 21 (1823).
borealis S. Stenroos, Ann. Bot. Fenn. 26: 160 (1989).
cariosa (Ach.) Spreng., Syst. Veg. 4: 272 (1827).
carneola (Fr.) Fr., Lich. Eur. Reform.: 233 (1831).
cenotea (Ach.) Schaer., Lich. Helv. Spicil.: 35 (1823).
cervicornis (Ach.) Flot. ssp. mawsonii (C.W. Dodge) S. Stenroos & Ahti. Ann. Bot. Fenn. 27: 320 (1990).
chlorophaea (Flörke ex Sommerf.) Spreng., Syst. Veg. 4: 273 (1827).
confragosa S.Stenroos, Mycotaxon 59: 270 (1996) T.
corniculata Ahti & Kashiw. In H. Inoue, Stud. Cryptog. S. Chile: 136 (1984).
cornuta (L.) Hoffm., Descr. Pl. Crypt. 1: tab. 25 (1791).
didyma (Fée) Vain., Acta Soc. Fauna Fl. Fenn. 4: 137 (1887).
farinacea (Vain.) A. Evans. Rhodora 52: 95 (1950).
Cladonia furcata var. *farinacea* Vain. In P. Hariot, J. Bot. (Morot) 1: 283 (1887) T.
fimbriata (L.) Fr., Lich. Eur. Reform.: 222 (1831).
furcata (Huds.) Schrad., Spic. Fl. Germ.: 107 (1794).
galindezii Øvstedal, Cyrptog. Bryol. Lichénol. 9 (2): 137 (1988).
gracilis (L.) Willd., Fl. Berol.: 363 (1787).
gracilis ssp. ***elongata*** (Wulfen) Vain., Acta Soc. Fauna Fl. Fenn. 53 (1): 92 (1922).

Lichen elongatus Wulfen. In Jacquin, Misc. Austriaca 2: 368 (1781) T.
gracilis ssp. ***vadiviensis*** Ahti, Ann. Bot. Fenn. 27: 322 (1990) T.
granulosa (Vain.) Ahti, Ann. Bot. Fenn. 23: 205 (1986).
humilis (With.) J.R. Laundon, Lichenologist 16: 220 (1984).
laevigata (Vain.) Gyeln., Lichenotheca Parva. No. 148 (1937).
Cladonia sylvatica var. *laevigata* Vain. In P. Hariot, J. Bot. (Morot) 1: 284 (1887) T.
Cladina laevigata (Vain.) C.W. Dodge, Lich. Fl. Antarct.: 97 (1974) ["1973"].
Cladonia rangiferina var. *patagonica* Kremp.. Verhandl. Zool.-Bot. Ges. Wien 26: 437 (1871).
lepidophora Ahti & Kashiwad. In H. Inoue, Stud. Cryptog. S. Chile: 140 (1984) T.
luteoalba Wheldon & A. Wilson, Fl. W. Lancashire: 450 (1907).
macilenta Hoffm., Deutsch. Fl. 2: 126 (1796).
macrophyllodes Nyl., Flora 58: 447 (1875).
merochlorophaea var. ***novochlorophaea*** Sipman, Acta Bot. Neerl. 22: 496 (1973).
mitis Sandst., Clad. Exs. No. 55 (1918).
Cladina mitis (Sandst.) Hustich, Acta Geogr. (Helsinki) 12 (1): 27 (1951).
Cladonia arbuscula ssp. *mitis* (Sandst.) Ruoss, Bot. Helv. 97: 260 (1987).
Cladina arbuscula ssp. *mitis* (Sandst.) Burgaz, Nova Hedwigia 59: 400 (1994).
norvegica Tønsberg & Holien, Nord. J. Bot. 4: 79 (1984).
ochrochlora Flörke, De. Cladon.: 75 (1828).
phyllophora Hoffm., Deutsch. Fl. 2: 126 (1796).
pleurota (Flörke) Schaer., Enum. Crit. Lich. Eur.: 186 (1850).
pocillum (Ach.) Grognot, Pl. Crypt. Sâone-et-Loire: 82 (1863).
pycnoclada (Pers.) Nyl., Bot. J. Linn. Soc. 9: 244 (1967) ["1866"].
Cenomyce pycnoclada Pers. In Gaudich., Voy. Uranie Bot.: 212 (1828) ["1826"].
Cladina pycnoclada (Pers.) Leight., Ann. Mag. Nat. Hist. Ser. 3, 19: 122 (1867).
pyxidata (L.) Hoffm., Deutsch. Fl. 2: 121 (1796).
ramulosa (With.) J.R. Laundon, Lichenologist 16: 225 (1984).
rangiferina (L.) F.H. Wigg., Prim. Fl. Holsat.: 90 (1780).
Cladina rangiferina (L.) Nyl., Not. Sällk. Fauna Fl. Fenn Förh. 5: 110 (1866).
rigida (Hook. f. & Taylor) Hampe, Linnaea 28: 216 (1856).
robbinsii A. Evans, Trans. Connecticut Acad. Arts 35: 611 (1944).
sarmentosa (Hook. f. & Taylor) C.W. Dodge, Rep. B.A.N.Z.A.R.E. n.s., 7: 129 (1948).
Cladonia gracilis f. *propagulifera* Vain., Résult. Voy. Belgica, Lich.: 30 (1903) T.
Cladonia aspera Ahti & Kashiw. In H. Inoue, Stud. Cryptog. S. Chile: 132 (1984) T.
scabriuscula (Delise) Nyl., Compt. Rend. Hebd. Séances Acad. Sci. 83: 88 (1876).
squamosa Hoffm., Deutsch. Fl.2: 125 (1796).
subchordalis A. Evans, Rec. Bryol. Lichénol. 24: 133 (1955).
subdelicatula Asah., J. Jap. Bot. 38: 1 (1963).
subradiata (Vain.) Sandst., Abh. Naturwiss. Vereine Bremen 25: 230 (1922).
subsquamosa Kremp., Vidensk. Meddel. Dansk. Naturhist. Foren, Kjøbenhavn 5: 366 (1874).
subsubulata Nyl., Compt. Rend. Hebd. Séances Acad. Sci.83: 88 (1876).
Cladonia auerii Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 53 (1932) T.
Cladonia auerii f. *crassa* Räsänen, Ann. Bot. Soc. Zool-Bot Fenn. "Vanamo" 2 (1): 53 (1932) T.
sulphurina (Michx) Fr., Lich. Eur. Reform.: 237 (1831).
symphycarpa (Flörke) Fr., Nov. Sched. Crit. Lich. 8-9: 20 (1826).
tessellata Ahti & Kashiw. In H. Inoue, Stud. Cryptog. S. Chile: 145 (1984) T.
umbricola Tønsberg & Ahti, Norw. J. Bot. 27: 307 (1980).
ustulata (Hook. f.& Taylor) Leight., Ann. Mag. Nat. Hist. Ser. 3, 19: 109 (1867).
weymouthii F. Wilson ex A.W. Archer, Muelleria 6: 94 (1985).
Cladonia pleurota var. *digitiformis* Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 51 (1932).
Lit.: Ahti (1961, 1993); Ahti & Kashiwadani (1984); Ahti *et al* (1990); Stenroos & Ahti (1990, 1992); Stenroos (1993, 1995, 1996); Stenroos *et al.* (1992, 1997); Hyvönen *et al.* (1995).

51. **Coccocarpia** Pers (1827)
[Lecanorales: Coccocarpiaceae]
domingensis Vain., An. Acad. Sci. Fenn. ser. 2, 6: 104 (1814).
erythroxyli (Spreng.) Swinscow & Krog, Norw. J. Bot. 23: 256 (1976).
palmicola (Spreng.) Arv. & D.J. Galloway, Bot. Notiser 132: 242 (1979).
Lit.: Arvidsson (1983).

52. **Coccotrema** Müll. Arg. (1889)
[Pertusariales: Coccotremataceae]

cucurbitula (Mont.) Müll. Arg., Nuovo Giorn. Bot. Ital. 21: 51 (1889).
Pertusaria cucurbitula Mont. In C. Gay, Hist. Chile, Bot. 8: 200 (1852) T.
Coccotrema antarcticum Müll. Arg., Miss. Sci. Cap Horn. Lich.: 171 (1889) T.
Porina granulata Hook. f. & Taylor. In Hook. f., Fl. Ant. 1: 200 (1844) non. Ach.
porinopsis (Nyl.) Imshaug ex Yoshim., Miscnea Cryol. Lichenol. 6: 135 (1974).
Lit.: Messuti (1996).

53. **Coelopogon** Brusse & Kärnefelt (1991)
[Lecanorales: Parmeliaceae]
epiphorellus (Nyl.) Brusse & Kärnefelt, Mycotaxon 42: 39 (1991).
Cetraria epiphorella Nyl. In J. Crombie, Bot. J. Linn. Soc. 15: 227 (1876) T.
Cornicularia epiphorella (Nyl.) DR., Ark. Bot. 20A (11): 34 (1926).
Coelocaulon epiphorellum (Nyl.) Kärnefelt, Opera Bot. 86: 64 (1986).
Cetraria aculeata var. *gracilenta* Krempelh., Verhandl Zool.-Bot. Ges. Wien 18: 315 (1868) T.
Cetraria gracilenta (Krempelh.) Vain., Résult. Voy. Belgica, Lich.: 13 (1903).
Lit.: Du Rietz (1926); Lamb (1964); Kärnefelt (1986); Brusse & Kärnefelt (1991).

54. **Coenogonium** Ehrenb. ex Nees (1820)
[Gyalectales: Gyalectaceae]
implexum Nyl., Ann. Sci. Nat. Bot. sér. 4, 16: 92 (1862).
interplexum Nyl., Ann. Sci. Nat. Bot. sér. 4, 16: 92 (1862).
linkii Ehrenb, Horae Phys. Berol.: 120 (1820).
velutinum Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3 (11): 332 (1924) T.
Lit.: Zahlbruckner (1924); Hosseus (1939).

55. **Collema** Wiggers (1780) nom. cons.
[Lecanorales: Collemataceae]
coccophorum Tuck., Proc. Am. Acad. Arts Sci. 5: 385 (1862).
crispum (Huds.) F.H. Wigg., Prim. Fl. Holsat.: 89 (1780).
fasciculare G.H.Web. var. ***colensoi*** C. Bab. In Hook. f., Fl. Nov. Zel. 2: 309 (1855).
glaucophthalmum Nyl., Flora 41: 377 (1858).
laeve Hook. f. & Taylor, Lond. J. Bot. 3: 656 (1844).
Collema chilensis Vain., Hedwigia 38: 189 (1899) T.
pycnocarpoides (Jatta) Zahlbr., Cat. Lich. Univ. 3: 45 (1924).
Synechoblstus pychnocarpoides Jatta, Malpighia 20: 13 (1906) T.
santessonii Degel., Symb. Bot. Upsal. 20: 84 (1974) T.
tenax var. ***substellatum*** (H. Magn.) Degel., Symb. Bot. Upsal. 20: 47 (1974).
Lit.: Degelius (1954, 1974, 1986).

56. **Cresponea** Egea & Torrente (1993)
[Arthoniales: Roccellaceae]
follmannii (C.W. Dodge) Egea & Torrente, Mycotaxon 48: 317 (1993).
Lecanactis follmannii C.W. Dodge, Nova Hedwigia 12: 327 (1967) ["1966"] T.
Lit.: Egea & Torrente (1993b, 1994).

57. **Cyphelium** Ach. (1815)
[Caliciales: Caliciaceae]
inquinans (Sm.) Trevis., Flora 45: 3 (1862).
Lit.: Tibell (1987).

58. **Cystocoleus** Thwaites (1849)
[Mitosporic fungi]
ebeneus (Dillw.) Thwaites,
Lit.: Follmann & Redon (1972a); Jacobsen & Kappen (1988).

***Dacampia** A. Massal. (1853)
[Dothideales: Dacampiaceae]
rufescentis (Vouaux) D. Hawksw., Notes Roy. Bot. Gard. Edinburgh 43 (3): 497 (1986).
Lit.: Hawksworth (1986); Alstrup & Hawksworth (1990); Wedin (1994).

***Dactylospora** Körb. (1855)
[Ascomycota - incert. sed.: Dactylosporaceae]

australis Triebel & Hertel, Biblioth. Lichenol. 35: 205 (1989).
frigida Hafellner, Herzogia 7: 116 (1985).
lobariella (Nyl.) Hafellner, Beih. Nova Hedwigia 62: 118 (1979).
orygmaea (Nyl.) S. Kondratyuk & D.J. Galloway, Biblioth. Lichenol. 57: 336 (1995).
Lit.: Hafellner (1979, 1985); Triebel (1989); Kondratyuk & Galloway (1995).

59. **Degelia** Arv. & D.J.Galloway (1981)
[Lecanorales: Pannariaceae]
duplomarginata (P. James & Henssen) Arv. & D.J. Galloway, Lichenologist 13: 39 (1981).
gayana (Mont.) Arv. & D.J. Galloway, Lichenologist 13: 44 (1981).
Parmelia gayana Mont., Ann. Sci. Nat. Bot. 3: 58 (1849) T.
Pannaria gayana (Mont.) A. Massal., Geneac. Lich.: 19 (1854).
Coccocarpia gayana (Mont.) Nyl., Syn. Meth. Lich. 2: 41 (1869).
Trachyderma gayanum (Mont.) Trevis., Lich. Veneta: 98 (1869).
Parmeliella gayana (Mont.) Müll. Arg., Flora 69: 286 (1886).
Pannaria chilensis Fée. In A. Massalongo, Ric. Auton. Lich. Crost.: 111 (1852) T.
Pannaria pycnophora var *continentalis* Räsänen. Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 46 (1832) T.
fluviatilis P.M. Jørg. & P. James, Biblioth. Lichenol. 38: 272 (1990) T.
Lit.: Arvidsson & Galloway (1981); Jørgensen & James (1990); Jørgensen & Galloway (1992a).

60. **Dendriscocaulon** Nyl. (1888)
[Peltigerales: Lobariaceae]
callithamnion (Taylor) D.J. Galloway & Quilhot, comb. nov.
Basionym: *Sticta calithamnia* Taylor, Lond. J. Bot. 6: 183 (1847) T.
Leptogium calithamnium (Taylor) Nyl., Syn. Meth. Lich. 1 (2): 126 (1860).
Stictina callithamnia (Taylor) Müll. Arg., Flora 71: 164 (1888).
Lit.: Taylor (1847); Zahlbruckner (1924); James & Henssen (1976).

61. **Dibaeis** Clem. (1909)
[Lecanorales: Icmadophilaceae]
absoluta (Tuck.) Kalb & Gierl, Herzogia 9: 613 (1993).
Lit.: Gierl & Kalb (1993); Rambold *et al.* (1993).

62. **Dictyonema** C.Ag. ex Kunth (1822)
[Aphyllophorales: Thelephoraceae]
glabratum (Spreng.) D. Hawksw., Lichenologist 20: 101 (1988)
Thelephora glabrata Spreng., Kongl. Vetensk. Acad. Handl. 1820: 51 (1820).
Thelephora pavonia Sw., Fl. Ind. Occid. 3: 1930 (1806).
Cora pavonia (Sw.) Fr., Syst. Orb. Veg.1: 300 (1825).
Ulva montana Sw., Nov. Gen. Spec. Pl.: 148 (1788) non. Lightf.
Dictyonema montanum (Sw.) Parmasto. In Follmann & Redon, Willdenowia 6: 456 (1972) nom. inval.
moorei (Nyl.) Henssen, Symb. Bot. Upsal. 18 (1): 109 (1963).
Lit.: Parmasto (1978); Hawksworth (1988); Brodo (1995); PioVano *et al.* (1995).

63. **Dimelaena** Norman (1853)
[Lecanorales: Physciaceae]
oreina (Ach.) Norman, Nyt. Mag. Naturvidensk. 7: 231 (1852).
Lit.: Mayrhofer *et al.* (1996).

64. **Dimerella** Trevis. (1880)
[Gyalectales: Gyalectaceae]
lutea (Dicks.) Trevis., Ric. Ist. Lomb. Sci. Lett. 13: 65 (1880).
Lit.: Vezda & Farkas (1988).

65. **Diploschistes** Norman (1853)
[Pertusariales: Thelotremataceae]
anactinus (Nyl.) Zahlbr., Hedwigia 31: 14 (1892).
actinostomus Pers. ex Ach. Zahlbr., Hedwigia 31: 34 (1892).
conceptionis Vain., Hedwigia 38: 189 (1899) T.
diacapsis (Ach.) Lumbsch, Lichenologist 20: 20 (1988).
euganeus (A. Massal.) Steiner, Verhandl. Zool. Bot. Ges. Wien 69: 96 (1919).
muscorum ssp. ***bartlettii*** Lumbsch, Herzogia 7: 602 (1987).

scruposus (Schreb.) Norman, Nyt. Mag. Naturvidensk. 7: 232 (1853).
Lit.: Zahlbruckner (1926); Follmann (1965b); Lumbsch (1987, 1989, 1993); Guderley & Lumbsch (1996).

66. **Diplotomma** Flot. (1849)
[Lecanorales: Physciaceae]
atacamae Follmann, Bol. Univ. Chile 7 (6): 60 (1965) T.
Lit.: Follmann (1965a, 1968a).

67. **Dirinaria** (Tuck.) Clem. (1909)
[Lecanorales: Physciaceae]
picta (Sw.) Clem. & Shear, Gen. Fung.: 323 (1931).
Lit.: Zahlbrukner (1926); Awasthi (1975); Aptroot (1987); Swinscow & Krog (1988).

68. **Dolichocarpus** R. Sant. (1949)
[Arthoniales: Roccellaceae]
chilensis R. Sant., Svensk Bot. Tidskrift 43: 552 (1949) T.
Lit.: Santesson (1949); Follmann (1968a).

69. **Echinoplaca** Fée (1824)
[Ostropales: Gomphillaceae]
heterella (Stirt.) R. Sant., Symb. Bot. Upsal. 12: 372 (1952).
Lit.: Santesson (1952); Follmann (1965b).

70. **Endocarpon** Hedwig (1789)
[Verrucariales: Verrucariaceae]
malmeanum Zahlbr., Cat. Lich. Univ. 8: 74 (1931).
Endocarpon adscendens Malme, Ark. Bot. 22A (1): 10 (1928) non Vain.
pallidulum Nyl., In Hue, Nouv. Arch. Mus. Hist. Nat., sér. 3, 4:106 (1892).
pallidum Ach., Lichenogr. Universalis: 301 (1810).
pusillum Hedw., Descr. Micr. Anal. Musc. Frond. 2: 56 (1789).
scottianum (Jatta) Zahlbr., Cat. Lich. Univ. 1: 249 (1921).
Dermatocarpon scottianum Jatta, Malpighia 20: 13 (1906) T.
Lit.: Jatta (1906); McCarthy (1991).

71. **Endocena** Cromb. (1876)
[Lecanorales: Acarosporaceae]
informis Cromb., Bot. J. Linn. Soc. 15: 226 (1876).
Lit.: Crombie (1876).

***Endococcus** Nyl. (1855)
[Dothideales: fam. incert. sed.]
propinquus (Körb.) D. Hawksw., Bot. Not. 132: 287 (1979).
Lit.: Hawksworth (1979); Triebel (1989).

72. **Enterographa** Fée (1825)
[Arthoniales: Roccellaceae]
albinea (Nyl.) C.W. Dodge, In G. Follmann, Nova Hedwigia 14: 230 (1968).
Stigmatidium albineum Nyl., Ann. Sci. Nat. Bot. sér. 4, 3: 169 (1855) T.
Chiodecton albineum (Nyl.) Zahlbr., Cat. Lich. Univ. 2: 473 (1924).
atacamensis C.W. Dodge, Nova Hedwigia 12: 323 (1967) ["1966"] T.
chilensis (Zahlbr.) C.W. Dodge, In G. Follmann, Nova Hedwigia 14: 230 (1968).
Chiodecton chilense Zahlbr., Acta Horti. Gothob. 2: 8 (1925) T.
follmannii C.W. Dodge, Nova Hedwigia 12: 324 (1967) ["1966"] T.
Lit.: Dodge (1967); Follmann (1968a); Follmann & Redon (1972c).

Enterostigma Müll. Arg. = **Thelotrema** (see Salisbury 1972).
cerei Schiman-Czeika, In Riedl & Schiman-Czeika, Sydowia 17: 89 (1964) T.
Melampydium cerei (Schiman-Czeika) Redon & Follmann, Philippia 1: 186 (1972).
Lit.: Salisbury (1972b).

73. **Ephebe** Fr. (1825)
[Lichinales: Lichinaceae]

?ocellata Henssen, Symb. Bot. Upsal. 18(1): 51 (1963).
Lit.: Henssen (1963c).

74. **Erioderma** Fée (1825)
[Lecanorales: Pannariaceae]
leylandi (Taylor) Müll. Arg., Flora 71: 24 (1888).
Sticta leylandi Taylor. Lond. J. Bot. 6: 179 (1847).
Erioderma chilense Mont., Ann. Sci. Nat. Bot. sér. 3, 18: 309 (1852) T.
sorediatum D.J. Galloway & P.M. Jørg., Lichenologist 7: 139 (1975).
Lit.: Quilhot *et al.* (1983); Jørgensen & Galloway (1992a).

75. **Everniastrum** Hale ex Sipman (1986)
[Lecanorales: Parmeliaceae]
americanum (Meyen & Flot.) Hale ex Sipman, Mycotaxon 26: 239 (1986).
cirrhatum (Fr.) Hale ex Sipman, Mycotaxon 26: 239 (1986)
sorocheilum (Vain.) Hale ex Sipman, Mycotaxon 26: 242 (1986).
Lit.: Culberson & Culberson (1981); Sipman (1980, 1986); Elix *et al.* (1994c).

76. **Everniopsis** Nyl. (1860)
[Lecanorales: Parmeliaceae]
trulla (Ach.) Nyl., Syn. Meth. Lich. 1 (2): 375 (1860).
Parmelia trulla Ach., Meth. Lich.: 256 (1803).
Sticta rugulosa Taylor, Lond. J. Bot. 7: 177 (1847).
Lit.: Nylander (1860).

77. **Farnoldia** Hertel (1983)
[Lecanorales: Porpidiaceae]
dissipabilis (Nyl.) Hertel, Mitt. Bot. München 19: 443 (1983).
Lecidea dissipabilis Nyl., Flora 57: 314 (1874).
Lecidea nelsonii C.W. Dodge, Publ. Inst. Antart. Chileno 6: 5 (1966).
cf. micropsis (A. Massal.) Hertel., Mitt. Bot. München 19: 443 (1983).
similigena (Nyl.) Hertel, Mitt. Bot. München 19: 433 (1989).
Lit.: Hertel (1981, 1984, 1989); Pietschmann (1990).

78. **Fellhanera** Vezda (1986)
[Lecanorales: Pilocarpaceae]
bouteillei (Desm.) Vezda, Folia Geobot. Phytotax. 21: 214 (1986).
Lit.: Vezda (1986); Farkas & Sipman (1993); Lücking *et al.* (1994); Ferraro & Vezda (1995); Sérusiaux (1996).

79. **Flavoparmelia** Hale (1986)
[Lecanorales: Parmeliaceae]
caperata (L.) Hale, Mycotaxon 25: 603 (1986).
ferax (Müll. Arg.) Hale, Mycotaxon 25: 604 (1986).
gerlachei (Zahlbr.) Hale, Mycotaxon 25: 604 (1986).
rutidota (Hook. f. & Taylor) Hale, Mycotaxon 25: 605 (1986).
Lit.: Hale (1976, 1986); Elix (1993, 1994d); Elix & Johnston (1988b).

80. **Flavopunctelia** (Krog) Hale (1984)
[Lecanorales: Parmeliaceae]
flaventior (Stirt.) Hale, Mycotaxon 20: 681 (1984)
Parmelia caperata f. *crispa* Meyen & Flot., Nov. Actorum Acad. Caes. Leop.- Carol. Nat. Cur. 19: 229 (1843) T.
Parmelia alutacea Zahlbr., Ann. Mycol. 29: 85 (1931) T.
Parmelia soredica var. *purata* Zahlbr., Ann. Mycol. 29: 85 (1931) T.
Parmelia looseri Räsänen, Revista Univ. (Santiago) 21: 141 (1936) T.
soredica (Nyl.) Hale, Mycotaxon 20: 682 (1984).
Lit.: Hale (1980, 1984).

81. **Follmanniella** Peine & B. Werner (1995)
[Arthoniales: Roccellaceae]
scutellata Peine & B. Werner, Flechten Follmann: 289 (1995) T.
Lit.: Peine & Werner (1995).

82. **Fuscidea** V. Wirth & Vezda (1972)
[Teloschistales: Fuscideaceae]
asbolodes (Nyl.) Hertel & V. Wirth, Beih. Nova Hedwigia 79: 454 (1984).
Lecidea asbolodes Nyl. In J. Crombie, J. Bot. 14: 21 (1876).
impolita (Müll. Arg.) Hertel, Beih. Nova Hedwigia 79: 454 (1984).
Lecidea impolita Müll. Arg., Miss. Sci. Cap Horn, Lich.: 165 (1888) T.
Lit.: Hertel (1984, 1987b, 1989).

83. **Graphina** Müll. Arg. (1880)
[Ostropales: Graphidaceae]
fissurinoidea (Vain.) Zahlbr., Cat. Lich. Univ. 2: 406 (1923).
?gracillima (Kremp.) Müll. Arg., Rev. Mycol. 10: 120 (1888).
Graphis gracillima Kremp., Flora 61: 520 (1878).
hololeuca (Mont.) Müll. Arg., Flora 65: 386 (1882).
insignis (Vain.) Zahlbr., Cat. Lich. Univ. 2: 410 (1923).
?lorentzii Müll. Arg., Flora 72: 67 (1889).
platycarpa (Eschw.) Zahlbr., Sitzungsber. Kaiserl. Akad. Wiss. Math.-Naturwiss. Cl., Abt. 1, 111 (1): 385 (1902).
saxiseda Zahlbr., Acta Horti Gothob. 2: 4 (1925) T.
Lit.: Follmann (1962).

84. **Graphis** Adans. (1763)
[Ostropales: Graphidaceae]
brevissima Fée, Bull. Soc. Bot. France 21: 27 (1874).
chilensis Zahlbr., Cat. Lich. Univ. 2: 297 (1923).
Graphis petraea Nyl. Ann. Sci. Nat. Bot. sér. 4, 3: 186 (1855) T. non Wallr.
dumastii (Fée) Spreng., Syst. Veg. 4 (1): 254 (1827).
duplicata Ach., Syn. Meth. Lich.: 81 (1814).
duplicata Ach. var. ***peruviana*** (Fée) Zahlbr., Cat. Lich. Univ. 2: 303 (1923).
elegans (Sm.) Ach., Syn. Meth. Lich.: 81 (1814).
follmannii C.W. Dodge, Nova Hedwigia 12: 320 (1967) ["1966"] T.
intricata Fée, Essai Crypt. Ecorc.: 42 (1834).
lineola Ach., Lich. Univ.: 264 (1810).
scripta (L.) Ach., Kongl. Vetensk. Acad. Nya Handl.: 145 (1809).
tenella Ach., Syn. Meth. Lich.: 81 (1814).
zapallarensis C.W. Dodge, Nova Hedwigia 12: 321 (1967) ["1966"] T.
Lit.: Zahlbruckner (1926, 1933); Dodge (1967); Follmann (1962, 1968a).

85. **Gyalecta** Ach. (1808)
[Gyalectales: Gyalectaceae]
skottsbergii Vezda, Annot. Zool. Bot. 13: 3 (1965) T.
Lit.: Vezda (1969).

86. **Gyalectidium** Müll. Arg. (1881)
[Ostropales: Gomphillaceae]
filicinum Müll. Arg., Flora 64: 101 (1881).
Lit.: Santesson (1952); Follmann (1965b); Farkas & Sipman (1993).

87. **Gyalectina** Vezda (1969)
[Gyalectales: Gyalectaceae]
saxatilis Vezda, Folia Geobot., Phytotax. 4: 445 (1969).
Lit.: Vezda (1969).

88. **Gymnographopsis** C.W. Dodge (1967)
[Ostropales: ?Graphidaceae]
cerei Follmann, Nova Hedwigia 14: 225 (1967) T.
chilena C.W. Dodge, Nova Hedwigia 12: 320 (1967) ["1966"] T.
follmannii C.W. Dodge, Nova Hedwigia 12: 320 (1967) ["1966"] T.
Lit.: Dodge (1967); Follmann (1968a); Follmann & Redon (1972c); Egea & Torrente (1996).

89. **Haematomma** A. Massal. (1852)
[Lecanorales: Haematommataceae]
chilenum C.W. Dodge, Nova Hedwigia 12: 343 (1967) ["1966"] T.

erythromma (Nyl.) Zahlbr., Kongl. Svenska Vetenskapsakad. Handl. 57 (6): 37 (1917).
fenzlianum A. Massal., Mem. I. R. Ist. Veneto 10: 58 (1861).
Haematomma campanaense Redon & Walk., Anales Mus. Hist. Nat. Valparaíso 11: 30 (1978) T.
hilare Zahlbr., Denkschr. Akad. Wiss. Wien, Math.-Naturwiss. Kl. 104: 350 (1941).
nothofagi Kalb & Staiger, Biblioth. Lichenol. 59: 139 (1995).
Haematomma puniceum ssp. *magellanicum* Asah., J. Jap. Bot. 39: 213 (1964).
Lit.: Jacobsen & Kappen (1988); Staiger & Kalb (1995); Vobis *et al.* (1995).

90. **Heppia** Nägeli ex A. Massal. (1854)
[Lecanorales: Heppiaceae]
chilensis Jatta, Malpighia 20: 8 (1906) T.
lutosa (Ach.) Nyl., Syn. Meth. Lich. 2: 45 (1869).
phylliscum (Nyl.) Hue, Mém. Soc. Nac. Sci. Nat. Cherbourg 36: 19 (1907).
Lecanora phylliscum Nyl., Ann. Sci. Nat. Bot. sér. 4, 3: 154 (1855) T.
subglebosa (Müll. Arg.) I.M. Lamb. Anales Parques Nac. 7: 48 (1959) ["1958"].
Lit.: Lamb (1959); Follmann (1965b); Wetmore (1970); Henssen (1994, 1995).

91. **Hertella** Henssen (1985)
[Peltigerales: Placynthiaceae]
chilensis Henssen, Mycotaxon 22: 393 (1985) T.
Lit.: Henssen (1984).

92. **Heterodermia** Trevis. (1868)
[Lecanorales: Physciaceae]
chilensis (Kurok.) Swinscow & Krog, Lichenologist 8: 115 (1976).
Anaptychia chilensis Kurok., Beih. Nova Hedwigia 6: 65(1962) T.
comosa (Eschw.) Follmann & Redon, Willdenowia 6: 446 (1972).
dactyliza (Nyl.) Swinscow & Krog, Lichenologist 8: 117 (1976).
Physcia speciosa Fr. var. *dactyliza* Nyl., Syn. Meth. Lich. 1(2): 417 (1860).
Anaptychia dactyliza (Nyl.) Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3 (11): 403 (1924).
follmannii Sipman, Flechten Follmann: 333 (1995) T.
galactophylla (Tuck.) W.L. Culb., Bryologist 69: 482 (1967).
lamelligera (Taylor) Follmann & Redon, Willdenowia 6: 446 (1972).
Parmelia lamelligera Taylor, Lond. J. Bot. 6: 169 (1847).
leucomelos (L.) Poelt ssp. ***boryi*** (Fée) Swinscow & Krog, Lichenologist 8: 124 (1976).
Heterodermia neoleucomelaena (Kurok.) Follmann & Redon, Willdenowia 6: 446 (1972).
Heterodermia neoleucomelaena f. *circinalis* (Zahlbr.) Follmann & Redon, Willdenowia 6: 446 (1972).
magellanica (Zahlbr.) Swinscow & Krog, Lichenologist 8: 130 (1976).
Anaptychia magellanica Zahlbr., Kongl. Svenska Vetenskapsakad. Handl. 57 (6): 54 (1917) T.
Anaptychia dactyliza f. *pectinata* Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3 (11): 403 (1924) T.
Anaptychia pectinata (Zahlbr.) R. Sant., Ark. Bot. 31A (7): 14 (1944).
Anaptychia magellanica var. *pectinata* (Zahlbr.) Kurok., Beih. Nova Hedwigia 6: 67 (1962).
multiciliata (Kurok.) Follmann & Redon, Willdenowia 6: 446 (1972).
Anaptychia multiciliata Kurok., Beih. Nova Hedwigia 6: 72 (1962) T.
pinnata Sipman, Flechten Follmann: 330 (1995) T.
vulgaris (Vain.) Follmann & Redon, Willdenowia 6: 447 (1972).
Lit.: Zahlbruckner (1924); Kurokawa (1962, 1973, 1998); Follmann & Redon (1972c); Swinscow & Krog (1976, 1988); Aptroot (1987); Sipman (1995).

93. **Heteroplacidium** Breuss (1996)
[Verrucariales: Verrucariaceae]
acarosporoides (Zahlbr.) Breuss, Ann. Naturhist. Mus. Wien 98 B Suppl.: 40 (1996).
podolepis (Breuss) Breuss, Ann. Naturhist. Mus. Wien 98 B Suppl.: 40 (1996).
Lit.: Breuss (1996b).

94. **Himantormia** I.M. Lamb (1964)
[Lecanorales: Parmeliaceae]
lugubris (Hue) I.M. Lamb, Br. Antarct. Surv. Sci. Rep. 38: 18 (1964).
Lit.: Lamb (1964); Redon (1985); Jacobsen & Kappen (1988).

95. **Homothecium** A. Massal. (1855)
[Lecanorales: Collemataceae]
chilense (Räsänen) Henssen, Lichenologist 3: 36 (1965).
Leciophysma chilense Räsänen, Revista Univ. (Santiago) 22: 206 (1937) T.
? intermedium Henssen, Bot. Notiser 132: 272 (1979).
opulentum (Mont.) A. Massal., Alc. Gen. Lich.: 8 (1853).
Collema opulentum Mont., Ann. Sci. Nat. Bot. sér. 3, 18: 313 (1852) T.
opulentum var. ***redonii*** Henssen, Bot. Notiser 132: 274 (1979) T.
patagonicum (Räsänen) Henssen, Lichenologist 3: 36 (1965).
Leciophysma patagonicum Räsänen, Anales Soc. Ci. Argent. 128: 145 (1939).
sorediosum Henssen, Bot. Notiser 132: 271 (1979) T.
Lit.: Henssen (1965, 1979).

96. **Hubbsia** W.A.Weber (1965)
[Arthoniales: Roccellaceae]
langei Follmann, Biblioth. Lichenol. 67: 17 (1997).
Lit.: Follmann (1997).

97. **Hyperphyscia** Müll. Arg. (1894)
[Lecanorales: Physciaceae]
adglutinata (Flörke) H. Mayrhofer & Poelt, Herzogia 5: 62 (1979).
Lit.: Scutari (1991, 1992).

98. **Hypogymnia** (Nyl.) Nyl. (1896)
[Lecanorales: Parmeliaceae]
lugubris (Pers.) Krog, Norsk Polarinst. Skr. 144: 99 (1968).
mundata (Nyl.) Rassad., Bot. Mater. Gerb. Bot. Inst. Kamarova Akad. Nauk SSSR 11: 11 (1956).
subphysodes (Kremp.) Filson, Vict. Nat. 87: 325 (1970).
turgidula (Bitter) Elix, Brunonia 2: 238 (1980).
Lit.: Elix (1980, 1992).

99. **Hypotrachyna** (Vain.) Hale (1974)
[Lecanorales: Parmeliaceae]
bogotensis (Vain.) Hale, Smithsonian Contr. Bot. 25: 23 (1975).
brevirhiza (Kurok.) Hale, Smithsonian Contr. Bot. 25: 26 (1975).
dactylifera (Vain.) Hale, Smithsonian Contr. Bot. 25: 30 (1975).
densirhizinata (Kurok.) Hale, Smithsonian Contr. Bot. 25: 31 (1975).
flavovirens (Kurok.) Hale, Smithsonian Contr. Bot. 25: 37 (1975).
Parmelia flavovirens Kurok. In Hale & Kurok, Contr. U.S. Natl. Herb. 36:176 (1964) T.
formosana (Zahlbr.) Hale, Smithsonian Contr. Bot. 25: 38 (1975).
imbricatula (Zahlbr.) Hale, Smithsonian Contr. Bot. 25: 41 (1975).
laevigata (Sm.) Hale, Smithsonian Contr. Bot. 25: 44 (1975).
Parmelia boliviana var. *cephalota* Zahlbr., Acta Horti Gothob. 2: 16 (1925) T.
oostingii (Dey) Hale, Smithsonian Contr. Bot. 25: 51 (1975).
psuedosinuosa (Asah.) Hale, Smithsonian Contr. Bot. 25: 58 (1975).
reducens (Nyl.) Hale, Smithsonian Contr. Bot. 25: 60 (1975).
revoluta (Flörke) Hale, Smithsonian Contr. Bot. 25: 60 (1975).
rockii (Zahlbr.) Hale, Smithsonian Contr. Bot. 25: 62 (1975).
sinuosa (Sm.) Hale, Smithsonian Contr. Bot. 25: 63 (1975).
sublaevigata (Nyl.) Hale, Smithsonian Contr. Bot. 25: 66 (1975).
Parmelia chilena Nyl., Flora, Jena 68: 612 (1885) T.
Parmelia canescens Kurok. In M. Hale & S.Kurokawa, Contr. U.S. Natl. Herb. 36: 167 (1964) T.
subphysodalica (Hale) Hale, Smithsonian Contr. Bot. 25: 66 (1975).
Parmelia subphysodalica Hale, Phytologia 28: 268 (1974) T.
Lit.: Hale (1975); Elix (1993, 1994e).

100. **Icmadophila** Trevis. (1852)
[Leotiales: Icmadophilaceae]
ericetorum (L.) Zahlbr., Wiss. Mitt. Bosnien & Herzegovina 3: 605 (1895).
Lit.: Rambold *et al.* (1993).

101. **Ingaderia** Darb. (1897)
[Arthoniales: Roccellaceae]
gracillima (Kremp.) Feige & Lumbsch, Mycotaxon 48: 386 (1993).
Roccella gracillima Kremp., Verhandl. Zool.-Bot. Ges. Wien 26: 442 (1877).
Dictyographa gracillima (Kremp.) Darb., Ber. Deutsch. Bot. Ges. 15: 6 (1897) nom. illeg.
Darbishirella gracillima (Kremp.) Zahlbr. ex Darb., Bibl. Bot. 9 (45): 13 (1898).
Lit.: Huneck & Follmann (1967b); Follmann (1968a); Follmann & Redon (1972c); Tehler (1990); Feige & Lumbsch (1993).

102. **Immersaria** Rambold & Pietschmann (1989)
[Lecanorales: Porpidiaceae]
athroocarpa (Ach.) Rambold & Pietschmann. In G. Rambold. Biblioth. Lichenol. 34: 239 (1989).
Lecidea athroocarpa Ach., Meth. Lich.: 41 (1803).
Lit.: Hertel (1989); Rambold (1989).

103. **Ingvariella** Guderley & Lumbsch (1997)
[Ostropales: Thelotremataceae]
bispora (Bagl.) Guderley & Lumbsch, Nova Hedwigia 64: 152 (1997).
Urceolaria bispora Bagl., Nuovo Giorn. Bot. Ital. 3: 246 (1871).
Diploschistes bisporus (Bagl.) Steiner. Sitzungsber. Kaiserl. Akad. Wiss. Math.-Naturwiss. Cl. 102: 155 (1893).
Lit.: Follmann (1965b); Lumbsch (1989); Guderley *et al.* (1997).

104. **Ionaspis** Th.Fr. (1871)
[Lecanorales: Hymeneliaceae]
fuegensis P.M. Jørg. & R. Sant., Nord. J. Bot. 9: 431 (1989).
Lit.: Jørgensen & Santesson (1989).

105. **Josefpoeltia** S. Kondr. & Kärnefelt (1997)
[Teloschistales: Teloschistaceae]
boliviensis Poelt. S. Kondratyuk & Kärnefelt. Biblioth. Lichenol. 68: 23 (1997).
sorediosa S. Kondratyuk & Kärnefelt. Biblioth. Lichenol. 68: 24 (1997) T.
Lit.: Kondratyuk & Kärnefelt (1997).

***Lauderlindsaya** J.C. David & D. Hawksw. (1989)
[Verrucariales: Verrucariaceae]
borreri (Tul.) J.C. David & D. Hawksw., Sydowia 41: 116 (1989).
Lit.: David & Hawksworth (1989); Diederich & Sérusiaux (1993).

106. **Lecanactis** Körb. (1855) nom. cons.
[Arthoniales: Roccellaceae]
?abietina (Ach.) Körb., Syst. Lich. Germ.: 275 (1855).
pseudamylacea Redon & Follmann, Philippia 1: 187 (1972) T.
Lit.: Redon & Follmann (1972b); Tehler (1992); Egea & Torrente (1994).

107. **Lecania** A. Massal. (1853)
[Lecanorales: Bacidiaceae]
andina C.W. Dodge, Nova Hedwigia 12: 341 (1967) ["1966"] T.
brialmonti (Vain.) Zahlbr. In Engler-Prantl, Natürl. Pflanzenfamil. (1): 205 (1907).
Lecanora brialmontii Vain., Résult. Voy. Belgica, Lich.: 17 (1903).
cariosa (Hue) Darb., Br. Antarct. ("Terra Nova") Exp. 1910, Nat. Hist. Rep., Bot. 3: 57 (1923).
chilena C.W. Dodge, Nova Hedwigia 12: 338 (1967) ["1966"] T.
gerlachei (Vain.) Darb., Br. Antarct. ("Terra Nova") Exped. 1910. Nat. Hist. Rep., Bot. 3: 57 (1923).
hookeri C.W. Dodge, Nova Hedwigia 12: 341 (1967) ["1966"].
leucochlora (Mont.) Zahlbr., Cat. Lich. Univ. 5: 735 (1928).
Parmelia varia var. *leucochlora* Mont., Ann. Sci. Nat. Bot sér. 2, 4: 91 (1835) T.
Lit.: Dodge (1967); Redon (1985); Øvstedal (1986); Jacobsen & Kappen (1988); Quilhot *et al.* (1989).

108. **Lecanographa** Egea & Torrente (1994)
[Arthoniales: Roccellaceae]
aff. farinosa (Hepp) Egea & Torrente. Biblioth. Lichenol. 54: 130 (1994).
Opegrapha farinosa Hepp. In Stizenb., Nov. Actorum Acad. Caes. Leop.-Carol. German. Nat. Cur. 32 (4): 6 (1865).

farinulenta (Müll. Arg.) Egea & Torrente, Biblioth. Lichenol. 54: 132 (1994).
Opegrapha farinulenta Müll. Arg., Nuovo Giorn. Bot. Ital. 21: 362 (1889).
Lecanactis farinulenta (Müll. Arg.) Zahlbr., Cat. Lich. Univ. 2: 537 (1924).
follmannii (C.W. Dodge) Egea & Torrente, Biblioth. Lichenol. 54: 133 (1994).
Opegrapha follmannii C.W. Dodge, Nova Hedwigia 12: 315 (1967) ["1966"] T.
lyncea (Sm.) Egea & Torrente, Biblioth. Lichenol. 54: 142 (1994).
aff. lyncea (Sm.) Egea & Torrente, Biblioth. Lichenol. 54:147 (1994).
occidentalis Egea & Torrente, Biblioth. Lichenol. 54: 152 (1994) T.
subhydrophila (Follmann & Vezda) Egea & Torrente, Biblioth. Lichenol. 54: 157 (1994).
Lecanactis subhydrophila Follmann & Vezda, Philippia 3: 271 (1977) T.
Lit.: Follman & Vezda (1977); Egea & Torrente (1994); Tehler & Egea (1997).

109. **Lecanora** Ach. (1810)
[Lecanorales: Lecnoraceae]
addubitata Kremp., Flora, Jena 56: 473 (1873) T.
Lecanora herteri Zahlbr., Revista Sudamer. Bot. 1: 56 (1934).
Lecanora homalea H. Magn., Acata Horti Gothob. 18: 217 (1950).
Lecanora subatra Räsänen, Revista Sudamer. Bot. 5: 66 (1938).
albellina Müll. Arg. var. ***validior*** Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3 (11): 380 (1924) T.
argentata (Ach.) Degel., Ark. Bot. 24A :78 (1931).
atrynea (Ach) Röhl., Dtsch. Fl. 3 (2): 82 (1813).
austroamericanum (Räsänen) Zahlbr., Cat. Lich. Univ. 10: 487 (1940).
Squamaria austroamericana Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 25 (1932) T.
austrolitoralis Zahlbr., Acta Horti Gothob. 2: 14 (1925) T.
avium (Zahlbr.) Hertel, Beih. Nova Hedwigia 79: 447 (1984).
Lecidea avium Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández East Isl. 2 (Bot.), 3(11): 357 (1924) T.
Lecidea aeruginosa Nyl., Ann. Sci. Nat. Bot. sér. 4, 3: 164 (1955) T.
Lecidea areuginosa Borrer.
Lecidea chilena Zahlbr., Cat. Lich. Univ. 3: 533 (1925).
Lecidea chilensis G. Follmann. Nova Hedwigia 14: 250 (1967) nom. nov. illegit.
caesiorubella Ach., Lich. Univ.: 366 (1810)
Lecanora espinosae Zahlbr., Ann. Mycol. 29: 83 (1931)T.
carpinea (L.) Vain., Medd. Soc. Fauna Fl. Fenn. 14: 23 (1888).
cenisea Ach., Lichenogr. Universalis: 361 (1810).
chlarona var. ***fuegiensis*** Räsänen. Ann. Soc. Bot. Zool.-Bot. Fenn. "Vanamo" 2 (1): 27 (1932) T.
coquimbensis Zahlbr., Acta Horti Gothob. 2: 13 (1925) T.
dancoënsis Vain., Résult. Voy. Belgica, Lich.: 20 (1903).
dispersa (Pers.) Sommerf., Suppl. Fl. Lappon.: 96 (1826).
epibryon ssp. ***broccha*** (Nyl.) Lumbsch. In Lumbsch *et al.*, Pl. Syst. Evol. 191: 229 (1994).
Lecanora broccha Nyl. In J. Cromb., J. Bot. 14: 21 (1876).
epibryon ssp. ***xanthophora*** Lumbsch. In Lumbsch *et al.*, Pl. Syst. Evol. 191: 231 (1994).
espinosae Zahlbr., Ann. Mycol. 29: 83 (1931) T.
farinacea Fée, Essai Crypt. Ecorc.: 117 (1825).
Lecanora blanda Nyl., Ann. Sci. Nat. Bot. sér. 4, 11: 219 (1859).
flavovirens Fée, Essai Crypt. Ecorc.: 115 (1825).
Lecanora subfusca var. *pelidnocarpa* Mont. In C. Gay, Hist. Chile, Bot. 8: 150 (1852) T.
Lecanora aeruginosa Nyl., Ann. Sci. Nat. Bot. sér. 4, 3: 157 (1855) T.
follmannii Klem., Rev. Bryol. Lichénol. 31: 256 (1963) T.
frazieri C.W. Dodge, Nova Hedwigia 12: 339 (1967) ["1966"] T.
garovaglii (Körb.) Zahlbr., Ann. Naturhist. Hofmus. Wien 15: 208 (1900).
hagenii (Ach.) Ach., Lichenogr. Universalis: 367 (1810).
hiulca (Nyl.) Hue, Nouv. Arch. Mus. Hist. Nat. Paris, sér. 3, 3: 59 (1891).
Squamaria hiulca Nyl., Ann. Sci. Nat. Bot. sér. 4, 3: 153 (1855) T.
Placopsis hiulca (Nyl.) Nyl., Bot. J. Linn. Soc. 9: 25 (1865). Non est Placopsis (Lamb 1948).
ingae Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3 (11): 379 (1984) T.
leprosa Fée, Essai Crypt. Ecorc.: 118 (1825).
masafuerensis Zahlb. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3 (11): 378 (1924) T.
melanophaea Jatta, Malpighia 20: 10 (1906) T.
microphthalma Hook. f. & Taylor, Lond. J. Bot. 3: 642 (1844) T.
Lecanora dentilabra Tuck., Proc. Amer. Acad. Arts. Sci. 12: 173 (1877) T.
Lecanora praedolosa Nyl., Lich. Fueg. Patag.: 9 (1888) T.

Lecanora albellina Müll. Arg., Miss. Sci. Cap Horn, Lich.: 162 (1889) T.
muralis (Schreb.) Rabenh., Deutschl. Krypt.-Fl. 2: 42 (1845).
orosteoides Vain. var. ***persorediosa*** Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 27 (1932) T.
ossicola C.W. Dodge, Nova Hedwigia 12: 340 (1967) ["1966"] T.
?parmelinoides Lumbsch. In Lumbsch *et al.*, Bot. Acta 107: 34 (1993).
peculiaris Zahlbr., Acta Horti Gothob. 2: 15 (1925) T.
polytropa (Hoffm.) Rabenh., Dtsch. Kryptfl. 2: 37 (1845).
skottsbergii Darb., Wiss. Ergebn. Schwed. Südpolarexp. 1901-1903, 4 (11): 9 (1912).
spegazzini Müll. Arg., Nuovo Giorn. Bot. Ital. 21: 41 (1889).
subcoarctata (Knight) Hertel, Beih. Nova Hedwigia 79: 448 (1984).
thelephora Stirt., Proc. Phil. Soc. Glasgow 11: 110 (1878) T.
xantholeuca (Müll. Arg.) Hertel, Beih. Nova Hedwigia 79: 448 (1984).
Lecidea xantholeuca Müll. Arg., Nuovo Giorn. Bot. Ital. 21: 45 (1889).
Lecidea interrupta Darb., Wiss. Ergebn. Schwed. Südpolarexp. 1901-1903, 4 (11): 3 (1912).
Lit.: Hooker & Taylor (1844); Nylander (1855); Zahlbruckner (1933); Klement (1963); Dodge (1967); Hertel (1971, 1984); Brodo (1984); Jacobsen & Kappen (1988); Aptroot & Van der Knapp (1993); Lumbsch (1994); Ryan & Nash (1997); Lumbsch *et al.* (1997).

110. **Lecidea** Ach. (1803)
[Lecanorales: Lecideaceae]
atrobunnea (Ramond ex Lam. & DC.) Schaer., Lich. Helv. Spicil. 3: 134 (1828).
auriculata Th.Fr., Lich. Arct.: 213 (1860).
aurella Müll.Arg., Miss. Sci. Cap Horn. Lich.: 165 (1888) T.
declinanda Nyl., Lich. Nov. Zel.: 146 (1888).
Lecanora declinis Nyl., Lich. Fueg. Patag.: 12 (1888) non Tuck.
diducens Nyl., Flora. Jena 48: 148 (1865).
fuscoatrula Nyl., Lich. Nov. Zel.: 196 (1888).
haerjedalica H. Magn., Bot. Notiser 1948: 403 (1948).
laboriosa Müll. Arg., Flora, Jena 57: 187 (1874).
lapicida Ach., Methodus: 37 (1803).
Lecidea austropatagonica Müll. Arg. In Zahlbr., Kongl. Svenska Vetenskapsakad. Handl. 57 (2): 21 (1917).
lapicida var. ***pantherina*** Ach., Kongl. Vetensk. Acad. Nya Handl.: 232 (1808).
lygomma Nyl. In J.Cromb., J. Bot. 13: 334 (1875).
lygomma var. ***crassilabra*** (Müll. Arg.) Hertel & Rambold, Symb. Bot. Upsal 32 (1): 104 (1997).
Lecidea crassilabra Müll. Arg., Hedwigia 32: 127 (1893).
mannii Tuck., Syn. N. Amer. Lich. 2: 75 (1888).
Lecidea kalbii Hertel, Beih. Nova Hedwigia 79: 418 (1984) T.
paschalis Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 4 (13): 452 (1926) T.
philippii Zahlbr., Ann. Mycol. 29: 82 (1931) T.
promiscens Nyl., Flora 55: 358 (1872).
santessonii Hertel, Symb. Bot. Upsal. 32 (1): 107 (1997) T.
sarcogynoides Körb., Syst. Lich. Germ.: 252 (1855).
sciatropha Hue, Deux. Expédit. Antarct. Fr., Lich.: 110 (1915).
tessellata Flörke, Deutsche Lich. No. 64 (1819).
Lecidea andina Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 20: 25 (1944) nom. inval.
Lecidea caretteana Räsänen, Anales. Soc. Ci. Argent. 146: 383 (1948).
umbonata (Hepp) Mudd, Man. Br. Lich.: 204 (1861) nomen sed non planta.
variegatula Nyl., Flora, Jena 48: 6 (1865).
verruca Poelt, Mitt. Bot. München 4: 187 (1961).
Lit.: Cengia Sambo (1926, 1930); Zahlbruckner (1933); Hertel (1971, 1984, 1987a, 1987b, 1989, 1995, 1997); Jacobsen & Kappen (1988); Rambold (1989); Aptroot & Van der Knapp (1993).

111. **Lecidella** Körb. (1855)
[Lecanorales: Lecanoraceae]
carpathica Körb., Parerga Lich.: 212 (1861).
chodati (Samp.) Knoph & Leuckert, Biblioth. Lichenol. 36: 88 (1990).
effugiens (B. Nils.) Knoph & Hertel, Biblioth. Lichenol. 36: 96 (1990).
latypiza (Nyl.) M. Choisy, Bull. Mens. Soc. Linn. Lyon 19: 18 (1950).
stigmatea (Ach.) Hertel & Leuckert, Willdenowia 5 (3): 375 (1969).
subdeclinans (Müll. Arg.) Hertel, Beih. Nova Hedwigia 79: 451 (1984).
Lecidea subdeclinans Müll. Arg., Nuovo Giorn. Bot. Ital. 21: 45 (1889).
sublapicida (C. Knight) Hertel, Mitt. Bot. München 19: 444 (1983).

viridans (Flot.) Körb., Syst. Lich. Germ.: 242 (1855).
wulfenii (Hepp) Körb., Parerg. Lich.: 216 (1861).
Lit.: Hertel (1984); Rambold (1989); Knoph (1990); Leuckert & Knoph (1993, 1997); Knoph & Leuckert (1994, 1997); Knoph & Mies (1995); Knoph *et al.* (1995).

112. **Lecidoma** G. Schneider & Hertel (1981)
[Lecanorales: ?Psoraceae]
demissum (Rutström) Gott. Schneid. & Hertel, Herzogia 5: 460 (1981).
Lit.: Hertel (1981); Pietschmann (1990).

113. **Leifidium** Wedin (1993)
[Lecanorales: Sphaerophoraceae]
tenerum (Lauurer) Wedin, Pl. Syst. Evol. 187: 235 (1993).
Sphaerophorus tener Laurer, Linnaea 2: 45 (1827).
Sphaerophorus tener f. *compactus* Cromb., Bot. J. Linn. Soc. 15: 223 (1876) T.
Sphaerophoron globiferum var. *polycladum* Müll. Arg., Bot. Jahrb. Syst. 4: 53 (1883) T.
Sphaerophoron polycladum (Müll. Arg.) Müll. Arg., Flora 71: 17 (1888).
Sphaerophoron polycladum var. *depauperatum* Müll. Arg., Miss. Sci. Cap Horn, Lich.: 145 (1888).
Sphaerophorus tener f. *depauperatum* (Müll. Arg.) Follmann, Revista Univ. (Santiago) 47: 71 (1962).
Lit.: Wedin (1993, 1995b).

114. **Leioderma** Nyl. (1888)
[Lecanorales: Pannariaceae]
pycnophorum Nyl., Lich. Nov. Zel.: 47 (1888).
Coccocarpia gayana var. *suvdivisa* Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl, 2 (Bot.). 3 (11): 343 (1924) T.
Parmeliella pycnophora var. *subdivisa* (Zahlbr.) R. Sant., Ark. Bot. 31A (7): 15 (1944).
Lit.: Galloway & Jørgensen (1987); Jørgensen & Galloway (1992a).

115. **Lempholemma** Körb. (1855)
[Lichinales: Lichinaceae]
polyanthes (Bernh.) Malme. Lich. Suec. Exs. No. 883 (1924).
Lit.: Follmann (1965b); Schiman-Czeika (1988).

116. **Lepolichen** Trevis. (1853)
[Pertusariales: Coccotremataceae]
coccophorus (Mont.) Trevis., Spighe e Paglie: 5 (1853).
Parmelia coccophora Mont., Ann. Sci. Nat. Bot. sér. 3, 18: 309 (1852) T.
Lecanora coccophora (Mont.) Nyl., Flora 38: 674 (1855).
Thelocarpon coccophoron (Mont.) Nyl. Mém. Soc. Imp. Sci. Nat. Cherbourg 5: 135 (1858) ["1857"].
Pertusaria coccophorum (Mont.) Nyl. In Cromb., Bot. J. Linn. Soc. 15: 233 (1876).
Pertusaria thamnoplaca Tuck., Proc. Amer. Acad. Arts Sci. 12: 175 (1877) T.
Lit.: Montagne (1852); David & Hawksworth (1991); Galloway & Watson-Gandy (1992); Castillo *et al.* (1995).

117. **Lepraria** Ach. (1803) nom. cons.
[Ascomycota: inc.sed.]
incana (L.) Ach., Meth. Lich.: 4 (1803).
lobificans Nyl., Flora, Jena 56: 196 (1873).
Lit.: Laundon (1989, 1992).

118. **Leprocaulon** Nyl. (1878)
[Mitosporic fungi]
albicans (Th.Fr.) Nyl., ex Hue, Lichenes Exotici a Professore W. Nylander descripti vel recogniti. Nouv. Arch. Mus. His. Nat. Paris, sér. 3, 2: 248 (1890).
arbuscula (Nyl.) Nyl., Lich. Ins Guineensium: 8 (1889).
congestum (Nyl.) I.M. Lamb & Ward, J. Hattori Bot. Lab. 38: 519 (1974).
gracilescens (Nyl.) I.M. Lamb & Ward, J. Hattori Bot. Lab. 38: 523 (1974).
subalbicans (I.M. Lamb) I.M. Lamb & Ward, J. Hattori Bot. Lab. 38: 534 (1974).
Stereocaulon subalbicans I.M. Lamb ex Imshaug, Bryologist 60: 220 (1957) T.
tenellum (Tuck.) Nyl., Lich. Japoniae: 19 (1890).
Lit.: Lamb & Ward (1974).

119. **Leproloma** Nyl. ex Cromb. (1894)
[Lecanorales: ? Pannariaceae]
angardianum (Øvstedal) J.R. Laundon, Lichenologist 21: 19 (1989).
membranaceum (Dicks.) Vain., Természetr. Füz. 22: 293 (1899).
?vouauxii (Hue) J.R. Laundon, Lichenologist 21: 13 (1989).
Lit.: Laundon (1989); Leuckert & Kümmerling (1991).

120. **Leptogium** (Ach.) S.F. Gray (1821)
[Lecanorales: Collemataceae]
australe (Hook.f. & Taylor) Müll. Arg., Flora 70: 268 (1887).
Collema australe Hook.f. & Taylor, Lond. J. Bot. 3: 656 (1844) T.
Collema saturninum var. *australe* (Hook. f. & Taylor) Hook. f., Fl. Antarct. 2: 541 (1847).
azureum (Sw.) Mont. In Webb & Berth., Hist. Nat. Iles Canar. 3 (2): 129 (1840).
brebissonii Mont. In Webb & Berth., Hist. Nat. Iles Canar. 3 (2): 130 (1840).
britannicum P.M. Jørg. & P. James, Lichenologist 15: 110 (1983).
cochleatum (Dicks.) P.M. Jørg. & P. James, Lichenologist 15: 113 (1983).
coralloideum (Meyen & Flot.) Vain., Ann. Acad. Sci. Fenn., Ser.A 6 (7): 110 (1915).
cyanescens (Rabenh.) Körb., Syst. Lich. Germ.: 420 (1855).
decipiens P.M. Jørg., Flechten Follmann: 237 (1995) T.
hibernicum M.E. Mitch. & P.M. Jørg., Herzogia 2: 462 (1973).
juressianum Tav., Portugalia Acta Biol. Ser. B, Sist. 3: 68 (1950).
laceroides de Lesd., Ann. Crypt. Exot. 6: 112 (1933).
malmei P.M. Jørg., Herzogia 3: 442 (1975) T.
menziesii (Ach.) Mont., Ann. Sci. Nat. Bot. sér. 3, 18: 313 (1852).
Parmelia menziesii Ach., Meth. Lich.: 221 (1803).
Lichen menziesii Sm. In Ach., Meth. Lich.: 212 (1803) nom. inval.
Collema menziesii (Ach.) Ach., Lich. Univ.: 645 (1810).
Leptogium granuligerum Hue. Lichens Deux. Exp. Antarct. Fr.: 16 (1915).
Leptogium menziesii var. *subcaesia* Räsänen. Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 47 (1932) T.
phyllocarpum (Pers.) Mont., Ann. Sci. Nat. Bot. sér. 3, 10: 134 (1848).
puberulum Hue, Deux. Expédit. Antarct. Fr., Lich.: 15 (1915).
valdivianum M. Lindström, Lichenologist 28: 91 (1996) T.
Lit.: Jacobsen & Kappen (1988); Galloway & Jørgensen (1995); Lindström (1996); Jørgensen (1997).

***Lichenoconium** Petr. & Syd. (1927)
[Mitosporic fungi]
lecanorae (Jaap) D. Hawksw., Bull. Br. Mus. (Nat. Hist.) Bot. 6: 183 (1979).
Lit.: Hawksworth (1981); Aptroot & Van der Knapp (1993).

121. **Lichenothelia** D. Hawksw. (1981).
[Dothideales: Lichenotheliaceae]
minor Henssen, Biblioth. Lichenol. 25: 261 (1987).
patagonica Henssen, Biblioth. Lichenol. 25: 261 (1987).
Lit.: Henssen (1987).

122. **Lichina** Agardh (1817) nom. cons.
[Lichinales: Lichinaceae]
confinis (O.F. Müll.) Agardh. Spec. Alg. 1: 105 (1821).
rosulans Henssen, Lichenologist 4: 95 (1969).
Lit.: Henssen (1969).

123. **Lithothelium** Müll. Arg. (1885)
[Pyrenulales: Pyrenulaceae]
cubanum Müll. Arg., Bot. Jahrb. Syst. 6: 386 (1885).
Lit.: Zahlbruckner (1917); Aptroot (1991a).

124. **Lopadium** Körb. (1855) nom. cons.
[Lecanorales: Ectolechiaceae]
diffluens (Nyl.) Darb., Wiss. Ergebn. Schwed. Südpolarexp. 1901-1903. 4 (11): 49 (1912).
Lecidea diffluens Nyl., Lich. Fueg. Patag.: 17 (1888).
Heterothecium diffluens (Nyl.) Müll. Arg., Nuovo Giorn. Bot. Ital. 21: 48 (1889).

minutum C.W. Dodge, Nova Hedwigia 12: 336 (1967) ["1966"] T.
Lit.: Santesson (1952).

125. **Loxospora** A. Massal. (1852)
[Lecanorales: Haematommataceae]
?elatina (Ach.) A. Massal., Ric. Auton. Lich. Crost.: 138 (1852).
Lit.: Rogers & Hafellner (1988); Tönsberg (1992); Brodo & Henssen (1995); Ekman (1996).

126. **Maronea** A. Massal. (1856)
[Lecanorales: ? Fuscideaceae]
colbindensis C.W. Dodge, Nova Hedwigia 16: 491 (1969) T.
siplei C.W. Dodge, Nova Hedwigia 12: 336 (1967) ["1966"] T.
Lit.: Magnusson (1934).

127. **Massalongia** Körb. (1855)
[Ascomycota: incert. sed.]
carnosa (Dicks.) Körb., Syst. Lich. Germ.: 109 (1855).
Lit.: Zahlbruckner (1924); Henssen (1963a); Redon (1985); Jacobsen & Kappen (1988).

128. **Mazosia** A. Massal. (1854)
[Dothideales: Phragmopelthecaceae]
phyllosema (Nyl.) Zahlbr., Cat. Lich. Univ. 2: 503 (1923).
Lit.: Santesson (1952); Kalb & Vezda (1988); Lücking & Matzer (1996).

129. **Megalaria** Hafellner (1984)
[Lecanorales: Megalariaceae]
grossa (Pers. ex. Nyl.) Hafellner, Beih. Nova Hedwigia 79: 302 (1984).
pulverea (Borrer) Hafellner & Schreiner, Biblioth. Lichenol. 45: 146 (1992).
Lit.: Hafellner (1984).

130. **Megaloblastenia** Sipman (1983)
[Lecanorales: Megalosporaceae]
marginiflexa (Hook. f.& Taylor) Sipman, Biblioth. Lichenol. 18: 87 (1983).
Lit.: Sipman (1983).

131. **Megaspora** (Clauzade & Cl. Roux) Hafellner & V. Wirth (1987)
[Pertusariales: Megasporaceae]
verrucosa (Ach.) Hafellner & V. Wirth, Flecht. Baden-Württembergs 1: (1987).
Lit.: Wirth (1987); Jacobsen & Kappen (1988).

132. **Melanaria** Erichsen (1936)
[Pertusariales: Pertusariaceae]
atacamae C.W. Dodge, Nova Hedwigia 12: 337 (1967) ["1966"] T.
Lit.: Dodge (1967); Follmann (1968a).

133. **Melanelia** Esslinger (1978)
[Lecanorales: Parmeliaceae]
elegantula (Zahlbr.) Essl., Mycotaxon 7: (1978).
inactiva D.J. Galloway & P.M. Jørg., New Zealand J. Bot. 28: 10 (1990).
subglabra (Räsänen) Essl., Mycotaxon 7: 48 (1978).
Parmelia subaurifera var. *subglabra* Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 19 (1932).
ushuaiensis (Zahlbr.) Essl., Mycotaxon 7: 49 (1978).
Parmelia ushuaiensis Zahlbr., Kongl. Svenska Vetenskapsakad. Handl. 57 (6): 42 (1917).
Parmelia roivainenii Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 19 (1932) T.
zopheroa (Essl.) Essl., Mycotaxon 7: 49 (1978).
Parmelia zopheroa Essl., J. Hattori Bot. Lab. 42: 96 (1977) T.
Lit.: Zahlbruckner (1917); Santesson (1944); Esslinger (1977, 1978); Galloway & Jørgensen (1990); Elix (1993, 1994f).

134. **Melanothecopsis** C.W. Dodge (1967)
[Pyrenulales: incert. sed.]
coactella (Stirt.) C.W. Dodge, Nova Hedwigia 12: 310 (1967) ["1966"].

follmannii C.W. Dodge, Nova Hedwigia 12: 309 (1967) ["1966"] T.
Lit.: Dodge (1967).

135. **Melaspilea** Nyl. (1858)
[Ascomycota, incert. sed.: Melaspilaceae]
atacamensis C.W. Dodge, Nova Hedwigia 12: 318 (1967) ["1966"] T.
chilena C.W. Dodge. Nova Hedwigia 16: 485 (1969) T.
coquimbensis C.W. Dodge. Nova Hedwigia 12: 319 (1967) ["1966"] T.
santiagensis C.W. Dodge. Nova Hedwigia 16: 486 (1969) T.
saxicola C.W. Dodge, Nova Hedwigia 16: 486 (1969) T.
stenocarpa Müll. Arg., Miss. Sci. Cap Horn, Lich.: 168 (1889) T.
Lit.: Dodge (1967, 1969).

136. **Menegazzia** A. Massal. (1854)
[Lecanorales: Parmeliaceae]
albida (Zahlbr.) R. Sant., Ark. Bot. 30A (11): 12 (1942).
Parmelia cincinnata var. *albida* Zahlbr.. Kongl. Svenska Vetenskapsakad. Handl. 57 (6): 38 (1917) T.
Parmelia wilsonii Vain., In V. Räsänen. Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 17 (1932) T.
cincinnata (Ach.) Bitter, Hedwigia 40: 172 (1901).
Parmelia cincinnata Ach., Meth. Lich.: 252 (1803)
Lichen cincinnatus Sm. In Ach., Meth. Lich.: 252 (1803) nom. inval.
Lichen bullatus Menzies. In Ach.. Lich. Univ.: 495 (1810) nom. inval.
dispora (Nyl.) R. Sant., Ark. Bot. 30A (11): 13 (1942).
Parmelia dispora Nyl., In J. Crombie, Bot. J. Linn. Soc. 15: 228 (1876) T.
fumarprotocetrarica Calvelo & Adler, Mycotaxon 59: 369 (1966).
globulifera R. Sant., Ark. Bot. 30A (11): 30 (1942) T.
hollermayeri (Räsänen) R. Sant., Ark. Bot. 30A (11): 22 (1942).
Parmelia hollermayeri Räsänen. Revista Univ. (Santiago) 22: 196 (1937) T.
magellanica R. Sant., Ark. Bot. 30A (11) 23 (1942) T.
megalospora (Räsänen) R. Sant., Ark. Bot. 30A (11): 21 (1942).
Parmelia megalospora Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2(1): 18 (1932) T.
neozelandica (Zahlbr.) P. James. Fl. Australia 54: 313 (1992).
Parmelia nigrescens Stirt.. Scott. Naturalist (Perth) 4: 253 (1878) non. Ach.
Parmelia neozelandica Zahlbr.. Cat. Lich. Univ. 6: 53 (1930).
Menegazzia circumsorediata R. Sant.. Ark. Bot. 30A (11): 14 (1942).
norsorediata Adler & Calvelo. Mycotaxon 59: 368 (1996).
opuntioides (Müll.Arg.) R. Sant.. Ark. Bot. 30A (11): 25 (1942).
Parmelia opuntioides Müll. Arg.. Miss. Sci. Cap Horn. Lich.: 158 (1888) T.
sanguinascens (Räsänen) R. Sant., Ark. Bot. 30A (11): 28 (1942).
Parmelia sanguinascens Räsänen. Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2(1): 18 (1932) T.
Parmelia opuntioides var. *vulgaris* Räsänen. Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2(1): 18 (1932) T.
Parmelia opuntioides var. *violascens* Räsänen. Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2(1): 18 (1932) T.
Parmelia dispora var. *alboffi* Zahlbr., Kongl. Svenska Vetenskapsakad. Handl. 57 (6): 39 (1917) T.
Parmelia alboffi (Zahlbr.) DR. In R. Sant., Ark. Bot. 30A (11): 28 (1942).
tenuis R. Sant., Ark. Bot. 30A (11): 27 (1942) T.
valdiviensis (Räsänen) R. Sant., Ark. Bot. 30A (11): 26 (1942).
Parmelia valdiviensis Räsänen, Revista Univ. (Santiago) 22: 197 (1937) T.
Lit.: Santesson (1942c); Quilhot *et al.* (1975); James & Galloway (1992); Calvelo & Adler (1994); Adler & Calvelo (1996).

137. **Metus** D.J. Galloway & P. James (1987)
[Lecanorales: Cladoniaceae]
efflorescens D.J. Galloway & P. James. Notes RBG Edinburgh 44 (3): 569 (1987) T.
pileatum (Mont.) D.J. Galloway & P. James, Notes Roy. Bot. Gard. Edinburgh 44 (3): 571 (1987).
Cladonia pileata Mont., Ann. Sci. Nat. Bot. sér. 3, 18: 3210 (1852) T.
Pilophoron pileatum (Mont.) Zahlbr.. Cat. Lich. Univ. 10: 381 (1939).
Lit.: Galloway & James (1987); Stenroos (1996).

138. **Micarea** Fr. (1825)
[Lecanorales: Micareaceae]
austroternaria Coppins & Kantvilas, Lichenologist 22: 277 (1990).
erratica (Körb.) Hertel. Rambold & Pietschm.. In G. Rambold. Biblioth. Lichenol. 34: 227 (1989).

isabellina Coppins & Kantvilas, Lichenologist 22: 284 (1990).
prasina Fr., Syst. Orb. Veg.: 256 (1825).
turfosa (A. Massal.) Du Rietz., Svensk Bot. Tidskr. 17: 94 (1923).
Lit.: Coppins (1983); Coppins & Kantvilas (1990); Aptroot & Van der Knapp (1993).

139. **Microcalicium** Vain. (1927)
[Caliciales: Microcaliciaceae]
conversum Tibell, Bot. Not. 131: 237 (1978).
Lit.: Tibell (1987, 1994).

Microglaena Körb. (1855) = Thelenella Nyl.

140. **Miltidea** Stirt. (1877)
[Lecanoraceae: Miltideaceae]
ceroplasta (C. Bab.) D.J. Galloway & Hafellner, Beih. Nova Hedwigia 79: 308 (1984).
Biatora ceroplasta C. Bab. In J.D. Hook., Fl. Nov. Zel. 2: 300 (1855).
Lit.: Hafellner (1984); Galloway (1985).

141. **Minksia** Müll. Arg. (1882)
[Arthoniales: Roccellaceae]
chilena (C.W. Dodge) Redon & Follmann, Philippia 1: 133 (1972).
Medusulina chilena Dodge, Nova Hedwigia 12: 322 (1967) ["1966"] T.
saxicola J. Hedrick, Hancock Pacific Exped. 3 (9): 184 (1942) .
Lit.: Müller Argoviensis (1882); Follmann (1968a); Redon & Follmann (1972a); Mies & Printzen (1997).

142. **Multiclavula** R.H. Petersen (1967)
[Cantharellales: Clavariaceae]
mucida (Fr.) R.H. Petersen, Amer. Midl. Naturalist 77: 212 (1967).
Lit.: Petersen & Kantvilas (1986); Poelt & Obermayer (1990).

143. **Mycoblastus** Norman (1853)
[Lecanorales: Mycoblastaceae]
dissimulans (Nyl.) Zahlbr., Cat. Lich. Univ. 4: 3 (1926).
Lecidea dissimulans Nyl., Ann. Sci. Nat. Bot. sér. 4, 3: 167 (1855) T.
Lit.: Zahlbruckner (1926).

144. **Mycobilimbia** Rehm (1890)
[Lecanorales: Porpidiaceae]
Note: It is possible that the taxon *Lecidea dolichospora* Nyl., [Ann. Sci. Nat. Bot. sér. 4, 3: 162 (1855) T] should be transferred to **Mycobilimbia.** Its realted synonyms are listed below:
Bacidia dolichospora (Nyl.) Trevis., Linnaea 28: 293 (1856).
Bombyliospora dolichospora (Nyl.) Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.). 3 (11): 394 (1924).
Lit.: Nylander (1855); Zahlbruckner (1924); Sipman (1983); Hafellner (1984); Timdal (1991).

145. **Mycomicrothelia** Keissl. (1936)
[Dothideales: Arthopyreniaceae]
thelena (Ach.) D. Hawksw., Bull. Br. Mus. Nat. Hist. (Bot.) 14 (2): 112 (1985).
Verrucaria cinerella Nyl., Ann. Sci. Nat. Bot. sér. 4, 3: 174 (1855) T.
Lit.: Hawksworth (1985).

146. **Myxodictyon** A. Massal. (1860) = Brigantiaea
[Lecanorales: Brigantiaceae]
chilenum C.W. Dodge, Nova Hedwigia 16: 492 (1969) ["1968"] T.
Lit.: Dodge (1969); Hafellner & Bellemère (1981).

147. **Neofuscelia** Essl. (1978)
[Lecanorales: Parmeliaceae]
delisei (Duby) Essl., Mycotaxon 7: 50 (1978).
Parmelia olivacea var. *delisei* Duby, Bot. Gall. 2: 602 (1830).
glabrans (Nyl.) Essl., Mycotaxon 7:50 (1978).
Parmelia glabrans Nyl., Flora 58: 15 (1875).

imitatrix (Taylor) Essl., Mycotaxon 7: 50 (1978).
Parmelia imitatrix Taylor, Lond. J. Bot. 6: 161 (1847).
squamans (Stizenb.) Essl., Mycotaxon 7: 52 (1978).
Parmelia squamans Stizenb., Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1887-88: 164 (1889).
Parmelia degasperii (Sambo) C.W. Dodge, Trans. Amer. Microscop. Soc. 84: 507 (1965).
Parmelia acetabulum var. *degasperii* Sambo. Boll. Soc. Bot. Ital. 1926: 90 (1926).
stygiodes (Nyl. ex Cromb.) Essl., Mycotaxon 7: 52 (1978).
Parmelia stygiodes Nyl. ex Cromb., J. Bot. 13: 333 (1875).
subhosseana (Essl.) Essl., Mycotaxon 7: 52: (1978).
Parmelia subhosseana Essl., J. Hattori Bot. Lab. 42: 148 (1977).
tatimirix (Essl.) Essl., Mycotaxon 7: 53 (1978).
Parmelia tatimirix Essl., J. Hattori Bot. Lab. 42: 151 (1977) T.
Lit.: Esslinger (1977, 1978); Elix (1993,1994g).

148. **Nephroma** Ach. (1810)
(Peltigerales: Nephromataceae]
analogicum Nyl., In J. Crombie, Bot. J. Linn. Soc. 15: 231 (1876) T.
Opisteria analogica (Nyl.) Vain., Ark. Bot. 8 (4): 93 (1909).
Nephroma patagonicum Krempelh., Verhandl. Zool.-Bot. Ges. Wien 26: 439 (1876) T.
Opisteria patagonica var. *macrospora* Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 33 (1932) T.
Nephroma analogicum var. *macrospora* (Räsänen) Follmann, Revista Univ. (Santiago) 50-51: 62 (1966).
Opisteria patagonica var. *squamosa* Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 34 (1932) T.
Nephroma patagonicum var. *squamosum* (Räsänen) Zahlbr., Cat. Lich. Univ. 10: 284 (1939).
?Nephroma sublaevigatum f. *subcoloratum* Gyeln., Ann. Cryptog. Exot. 4: 136 (1931) T.
antarcticum (Jacq.) Nyl., Syn. Meth. Lich. 1 (2): 317 (1860).
Lichen antarcticus Jacq., Miscell. Austriac. 2: 370 (1781) T.
antarcticum var. ***lobuligerum*** Müll. Arg., Miss. Sci. Cap Horn, Lich.: 154 (1888) T.
Nephroma lobuligerum (Müll. Arg.) Gyeln., Magy Bot. Lap. 29: 24 (1930).
Opisteria antarctica var. *lobuligera* (Müll. Arg.) Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 33 (1932).
Nephroma antarcticum f. *minus* Cromb., Bot. J. Linn. Soc. 15: 231 (1876) T.
australe A. Rich., Voy. Astrolabe. Bot. 1: 31 (1832).
Peltigera australis (A. Rich.) Mont., Ann. Sci. Nat. Bot. sér. 2, 4: 86 (1835).
Opisteria australis (A. Rich.) Vain., Ark. Bot. 8 (4): 93 (1909).
Nephroma homanii Gyeln., Ann. Cryptog. Exot. 4: 129 (1931) T.
Opisteria homanii (Gyeln.) Räsänen, Revista Univ. (Santiago) 22 (1): 202 (1937).
cellulosum (Ach.) Ach., Lich. Univ.: 523 (1810).
Peltidea cellulosa Ach., Meth. Lich.: 289 (1803).
Opisteria cellulosa (Ach.) Vain., Ark. Bot. 8 (43): 93 (1909).
cellulosum var. ***isidioferum*** J. S. Murray, Trans. R. Soc. N.Z. 88: 385 (1960).
Nephroma lepidophyllum Räsänen ex Gyeln., Ann. Cryptog. Exot. 4: 147 (1931) T.
Nephromium lepidophyllum (Räsänen ex Gyeln.) Räsänen, Ann. Soc. Bot. Zool.-Bot. Fenn. "Vanamo" 2 (1): 34 (1932).
Nephroma lepidophyllum f. *hypomelaena* Räsänen ex I.M. Lamb, Farlowia 4: 439 (1955).
chubutense I.M. Lamb, Farlowia 4: 438 (1955).
kuehnemannii I.M. Lamb, Farlowia 4: 437 (1955).
microphyllum Henssen, Mycotaxon 7: 358 (1978).
papillosum F.J. White & P. James, Lichenologist 20: 146 (1988) T.
parile (Ach.) Ach., Lich. Univ.: 522 (1810).
Lichen parilis Ach., Lich. Suec. Prodr.: 164 (1799).
plumbeum (Mont.) Mont., in Gay, Hist. Chile, Bot. 8: 100 (1852).
Peltigera plumbea Mont., Ann. Sci. Nat. Bot. sér. 2, 4: 87 (1835) T.
Nephromium plumbeum (Mont.) Nyl., Mém. Soc. Sci. Nat. Cherbourg 5: 101 (1857).
Opisteria plumbea (Mont.) Vain., Ark. Bot. 8 (4): 93 (1909).
Nephroma lyallii C. Bab. In J.D. Hook., Fl. Nov. Zel. 2: 272 (1855).
Nephromium lyallii (C. Bab.) Nyl., Syn. Meth. Lich. 1 (2): 322 (1860).
Opisteria lyallii (C. Bab.) Vain., Ark. Bot. 8 (4): 93 (1909).
Nephroma chilensis Gyeln., Ann. Cryptog. Exot. 4: 132 (1931) T.
?Nephroma pubescens var. *minutiphyllinum* Gylen., Ann. Cryptog. Exot. 4: 136 (1931).
plumbeum var. ***isidiatum*** (J.S. Murray) F.J. White & P. James, Lichenologist 20: 154 (1988).

Nephroma lyallii f. *isidiatum* J.S. Murray, Trans. Roy. Soc. New Zealand 88: 387 (1960).
pseudoparile (Räsänen) Zahlbr., Cat. Lich. Univ. 10: 285 (1939).
Nephromium pseudoparile Räsänen, Revista Univ.(Santiago) 21: 143 (1936) T.
Opisteria homanii var. *gyelnikii* Räsänen, Revista Univ. (Santiago) 22: 202 (1937) T.
Nephroma gyelnikii (Räsänen) I.M. Lamb, Anales Parques Nac. 7: 81 (1959) ["1958"].
skottsbergii F.J. White & P. James, Lichenologist 20: 162 (1988) T.
Lit.: White & James (1988).

149. **Nimisia** Kärnefelt & Thell (1993)
[Lecanorales: Parmeliaceae]
fuegiae Kärnefelt & Thell, Lichenologist 25: 370 (1993).
Lit.: Kärnefelt & Thell (1993a).

150. **Neuropogon** Nees & Flotow (1835)
[Lecanorales: Parmeliaceae]
acromelanus (Stirt.) I.M. Lamb, Bot. J. Linn. Soc. 52: 218 (1939).
antarcticus (Du Rietz) I.M. Lamb, Bot. J. Linn. Soc. 52: 210 (1939).
aurantiaco-ater (Jacq.) I.M. Lamb, Bot. J. Linn. Soc. 52: 221 (1939).
Lichen aurantiaco-ater Jacq., Miscell. Austriac. 2: 369 (1781) T.
Usnea fasciata Torrey, Am. J. Sci. 6: 106 (1823) T.
Neuropogon antennarius Nees & Flot., Linnaea 9: 497 (1835) T.
Usnea taylori var. *kranckii* Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 10 (1932) T.
Usnea trachycarpa var. *eciliata* Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 10 (1932) T.
durietzii (Mot.) D.J. Galloway & Quilhot, comb. nov.
Basionym: *Usnea durietzii* Mot., Lich. Gen. Usnea Stud. Monogr. 2: 503 (1937) T.
patagonicus (F.J. Walker) D.J. Galloway & Quilhot, comb. nov.
Basionym: *Usnea patagonica* F.J. Walker, Bull. Brit. Mus. (Nat. Hist.) Bot. 13: 82 (1985).
perpusillis I.M. Lamb, Bot. J. Linn. Soc. 52: 234 (1939) T.
subantarcticus (F.J. Walker) D.J. Galloway & Quilhot, comb. nov.
Basionym: *Usnea subantarctica* F.J. Walker, Bull. Brit. Mus. (Nat. Hist.) Bot. 13: 99 (1985).
trachycarpus Stirt., Scott. Nat. (Perth) 6: 105 (1881).
Usnea taylori var. *subciliata* Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 11 (1932) T.
Lit.: Lamb (1964); Walker (1985); Jacobsen & Kappen (1988); Quilhot *et al.* (1991a, 1996).

151. **Normandina** Nyl. (1855)
[Ascomycota: incert. sed.]
pulchella (Borrer) Nyl., Ann. Sci. Nat. Bot. sér. 4, 15: 382 (1861).
Lit.: Aptroot (1991b).

152. **Ocellularia** G.Meyer (1825) nom. cons.
[Ostropales: Thelotremataceae]
Note: No Chilean material seen was referable to this genus, but the taxon *Leptotrema schizoloma* Müll. Arg.[Nuovo Giorn. Bot. Ital. 21: 49 (1889)] may be referable to **Ocellularia.**
Lit.: Müller Argoviensis (1889); Follmann (1964); Hale (1981).

153. **Ochrolechia** A. Massal. (1852)
[Pertusariales: Pertusariaceae]
antarctica (Müll. Arg.) Darb., Wiss. Ergebn. Schwed. Südpolarexp. 1901-1903, 4, 11: 50 (1912).
Pertrusaria antarctica Müll. Arg., Flora 69: 125 (1886).
Lecanora antarctica (Müll. Arg.) Müll. Arg., Rev. Mycol. 9: 135 (1887).
Lecanora hypotartarea Nyl., Lich. Fueg. Patagon.: 9 (1888).
Ochrolechia hypertartarea (Nyl.) Darb., Wiss. Ergebn. Schwed. Südpolarexp. 1901-1903, 4 (11): 50 (1912).
chilensis Verseghy, Beih. Nova Hedwigia 1: 53 (1962) T.
frigida (Sw.) Lynge, Lich. Nov. Zemlya: 182 (1928).
jucunda (Hue) Zahlbr., Cat. Lich. Univ. 5: 681 (1928).
Lecanora +jucunda Hue., Ann. Mycol. 12: 527 (1914) T.
malmei Räsänen, Ann. Soc. Bot. Zool.-Bot. Fenn. "Vanamo" 2 (1): 28 (1932) T.
ocelliformis (Vain.) Verseghy, Beih. Nova Hedwigia 1: 54 (1962).
Ochrolechia pallescens var. *occelliformis* Vain., Résult. Voy. Belgica, Lich.: 21 (1903) T.
pallescens (L.) A. Massal., Nuovi Ann. Sci. Nat. Bologna 7: 212 (1853).
Ochrolechia blandior (Nyl.) Darb., Wiss. Ergebn. Schwed. Südpolarexp. 1901-1903, 4, 11: 50 (1912).

Lecanora parella * *blandior* Nyl., Lich. Fueg. Patagon.: 8 (1888).
parella (L.) A. Massal., Ric. Auton. Lich. Crost.: 30 (1852).
pseudotartarea (Vain.) Verseghy, Beih. Nova Hedwigia 1: 77 (1962).
Ochrolechia pallescens var. *pseudotartarea* Vain., Résult. Voy. Belgica. Lich.: 21 (1903) T.
Lit.: Verseghy (1962); Huneck & Follmann (1971); Brodo (1991).

154. **Omphalodiella** Henssen (1991)
[Lecanorales: Parmeliaceae]
patagonica Henssen, Lichenologist 23: 335 (1991).
Lit.: Henssen (1991).

155. ***Omphalodium*** Meyen & Flot. (1843)
[Lecanorales: Parmeliaceae]
arboricolum Räsänen, Anales Soc. Ci. Argent. 131: 98 (1941).
pisacomense Meyen & Flot., Nov. Actorum Acad. Caes. Leop.-Carol. Nat. Curr. Suppl. 19: 223 (1843).
Lit.: Follmann & Redon (1972b, 1973); Henssen (1992a); Nash *et al.* (1990); Elix (1993).

156. **Opegrapha** Ach. (1810) nom. cons.
[Arthoniales: Roccellaceae]
atra Pers., Usteri's N. Ann. Bot. 1: 30 (1794).
atacamensis C.W. Dodge, Nova Hedwigia 12: 313 (1967) ["1966"] T.
atratula. Müll. Arg., Flora 63: 41 (1880).
betulina Sm. In Sm. & Sowerby, Bot. Jahrb. Syst. 32: tab. 2281 (1811).
bonplandii Fée, Essai Crypt. Ecorc. 1: 25 (1825).
cactacearum Riedl, Sydowia 17: 85 (1964) T.
decussata C.W. Dodge, Nova Hedwigia 12: 313 (1967) ["1966"] T.
dirinoides Nyl., Ann. Sci. Nat. Bot. sér. 4, 3: 168 (1855) T.
eulychniae C.W. Dodge, Nova Hedwigia 12: 314 (1967) ["1966"] T.
euphorbiae C.W. Dodge, Nova Hedwigia 12: 315 (1967) ["1966"] T.
****leuckertii*** S. Kondratyuk & D.J. Galloway, Biblioth. Lichenol. 57: 332 (1995) T.
medusuliza Nyl., Lich. Fueg. Patag.: 17 (1888).
oxalidis C.W. Dodge, Nova Hedwigia 12: 316 (1967) ["1966"] T.
paschalis Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.). 4 (13): 450 (1926) T.
robustula Nyl., Lich. Nov. Zel.: 147 (1888) T.
tigrensis C.W. Dodge, Nova Hedwigia 12: 317 (1967) ["1966"] T.
zapallarensis C. W. Dodge, Nova Hedwigia 12: 317 (1967) ["1966"] T.
Lit.: Zahlbruckner (1926); Follmann (1962); Dodge (1967); Riedl & Schiman-Czeika (1964); Tehler (1983); Kondratyuk & Galloway (1995).

157. **Ophioparma** Norman (1853)
[Lecanorales: Ophioparmaceae]
araucariae (Follmann) Kalb & Staiger, Biblioth. Lichenol. 58: 193 (1995).
Haematomma araucariae Follmann, Bol. Univ. Chile 7: 44 (1965) T.
Lit.: Follmann (1965d); Rogers & Hafellner (1988); Kalb *et al.* (1995).

158. **Oropogon** Th.Fr. (1861)
[Lecanorales: Alectoriaceae]
lorolobic Essl., Syst. Bot. Monogr. 28: 81 (1989).
Lit.: Esslinger (1989).

159. **Pachyphiale** Lönnr. (1858)
[Gyalectales: Gyalectaceae]
? carneola (Ach.) Arn., Flora 54: 50 (1871).
Lit.: Nimis (1993).

160. **Pannaria** Delise (1828)
[Lecanorales: Pannariaceae]
? crustata Stirt., Rep. Trans. Glasgow Soc. Field. Naturalists. 1: 22 (1873).
dichroa (Hook. f. & Taylor) Cromb., Bot. J. Linn. Soc. 16: 220 (1877).
fuegiensis Zahlbr., Kongl. Svenska Vetenskapsakad. Handl. 57 (6): 13 (1917) T.
hilaris Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.). 3 (11): 337 (1924) T.
hookeri (Borrer ex Sm.) Nyl., Mém. Soc. Nat. Sci. Nat. Cherbourg 5: 109 (1857).

immixta Nyl., Bot. J. Linn. Soc. 9: 249 (1866).
microphylloides Nyl., Ann. Sci. Nat. Bot. sér 4, 3: 150 (1855) T.
rubiginosa var. ***vulcanica*** Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3(11): 338 (1924) T.
subcincinnata Nyl. In J. Crombie, Bot. J. Linn. Soc. 15: 231 (1876) T.
Lit: Nylander (1855); Zahlbruckner (1917, 1924); Jørgensen (1994); Jørgensen & Galloway (1992a).

161. **Pannoparmelia** (Müll. Arg.) Darb. (1912)
[Lecanorales: Parmeliaceae]
angustata (Pers.) Zahlbr. In H. Handel-Mazzetti, Symb. Sin. 3: 195 (1930).
Parmelia angustata Pers. In C. Gaudichaud-Beaupré, Voy. Uranie Bot.: 195 (1827).
Anzia angustata (Pers.) Müll. Arg., Flora 72: 507 (1889).
Pannoparmelia anzioides Darb., Wiss. Ergebn. Schwed. Südpolarexp 1901-1903, 4 (11): 11 (1912).
Anzia anzioides (Darb.) I.M. Lamb, Anales Parques. Nac. 7: 141 (1959) ["1958"].
Anzia darbishireana Zahlbr., Cat. Lich. Univ. 6: 276 (1929).
Lit.: Calvelo & Adler (1992); Elix (1993); Galloway & Sammy (1994).

162. **Parmelia** Ach. (1803) nom. cons.
[Lecanorales: Parmeliaceae]
cunninghamii Cromb., Bot. J. Linn. Soc. 15: 228 (1876) T.
protosulcata Hale, Mycotaxon 16: 162 (1982).
saxatilis (L.) Ach., Meth. Lich. 204 (1803).
sulcata Taylor In J.T. Mackay, Fl. Hibern. 2: 145 (1836).
Parmelia cruenta Darb., Wiss. Ergebn. Schwed, Südpolarexp. 1901-1903, 4 (11): 13 (1912) T.
Parmelia sulcata f. *aberrans* Zahlbr., Ann. Mycol. 29: 84 (1931) T.
Lit.: Hale (1987); Stenroos (1991); Elix (1993, 1994i).

163. **Parmeliella** Müll. Arg. (1862)
[Lecanorales: Pannariaceae]
concinna I.M. Lamb, Farlowia 4: 431 (1955).
granulata I.M. Lamb, Farlowia 4: 429 (1955).
nigrocincta (Mont.) Müll. Arg., Flora 44: 86 (1881).
Parmelia nigrocincta Mont., Ann. Sci. Nat. Bot. sér. 2, 4: 91 (1835) T.
thysanota (Stirt.) Zahlbr., Cat. Lich. Univ. 3: 225 (1925).
Parmeliella major Darb., Wiss. Ergebn. Schwed. Südpolarexp. 1901-1903, 4 (11): 17 (1912).
Lit.: Lamb (1955, 1959); Jørgensen & Galloway (1992a); Jørgensen (1998).

164. **Parmelina** Hale (1974)
[Lecanorales: Parmeliaceae]
labrosa (Zahlbr.) Elix & J. Johnst., Brunonia 9: 160 (1987) ["1986"].
Lit.: Elix & Johnston (1987b); Elix & Hale (1987); Elix (1993, 1994j).

165. **Parmeliopsis** Nyl. (1866)
[Lecanorales: Parmeliaceae]
hyperopta (Ach.) Vain., Meddeland. Soc. Fauna Fl. Fenn. 6: 127 (1881).
Lit.: Elix (1993, 1994k).

166. **Parmentaria** Fée (1824)
[Pyrenulales: Pyrenulaceae]
astroidea Fée, Essai Crypt. Ecorc.: 70 (1825).
Lit.: Follmann (1961); Galloway (1985).

167. **Parmotrema** A. Massal. (1860)
[Lecanorales: Parmeliacea]
arnoldii (Du Rietz) Hale, Phytologia 28: 335 (1974).
chinense (Osbeck) Hale & Ahti, Taxon 35: 133 (1986).
crinitum (Ach.) M. Choisy, Bull. Mens. Soc. Linn. Soc. Bot. Lyon 21: 175 (1952).
cristiferum (Taylor) Hale, Phytologia 28: 335 (1974).
dilatatum (Vain.) Hale, Phytologia 28: 335 (1974).
gardneri (C.W. Dodge) Sérus. Bryologist 87: 5 (1984).
mellissii (C.W. Dodge) Hale, Phytologia 28: 337 (1974).
praesorediosum (Nyl.) Hale, Phytologia 28: 338 (1974).

rampoddense (Nyl.) Hale, Phytologia 28: 338 (1974).
sancti-angelii (Lynge) Hale, Phytologia 28: 339 (1974).
subarnoldii (Abbayes) Hale, Phytologia 28: 339 (1974).
sulphuratum (Nees & Flot.) Hale, Phytologia 28: 339 (1974).
tinctorum (Despr. ex Nyl.) Hale, Phytologia 28: 339 (1974).
zollingeri (Hepp) Hale, Phytologia 339 (1974).
Lit.: Hale (1965); Krog & Swinscow (1981); Swinscow & Krog (1988); Elix (1993, 1994m).

168. **Peltigera** Willd. (1787) nom. cons.
[Peltigerales: Peltigeraceae]
andensis Vitik., Flechten Follmann: 372 (1995).
austroamericana Zahlbr., Cat. Lich. Univ. 3: 456 (1925).
canina (L.) Willd., Fl. Berol. Prodr.: 347 (1787).
collina (Ach.) Schrad., J. Bot 1801: 78 (1803).
didactyla (With.) J.R. Laundon, Lichenologist 16: 217 (1984).
dolichorhiza Nyl., Lich. Nov. Zel.: 43 (1888).
frigida R. Sant., Ark. Bot. 31A (7): 11 (1944) T.
laciniata (G. Merr. ex Riddle) Gyeln., Nyt. Mag. Naturvidensk. 68: 270 (1930).
lepidophora (Vain.) Bitter, Ber. Deutsch. Bot. Ges. 22: 251 (1904).
neckeri Hepp ex Müll. Arg., Mém. Soc. Phys. Hist. Nat. Genève 16: 370 (1862).
? patagonica Räsänen, Anales Soc. Ci. Argent. 128: 142 (1939).
polydactylon (Neck.) Hoffm., Descr. Adumbr. Lich. 1: 19 (1790).
pulverulenta Taylor, Lond. J. Bot. 6: 184 (1847).
rufescens (Weiss) Humb., Fl. Friberg: 2 (1793).
scabrosa Th. Fr., Lich. Arct.: 45 (1860).
?spuriella Vain., étud. Lich. Brésil 1: 180 (1890).
?truculenta De Not., Mem. R. Accad. Soc. Torino, ser. 2, 12: 134 (1851).
Lit.: Santesson (1944); Thomson (1955); Lindahl (1962), Holtan-Hartwig (1993); Goffinet & Hastings (1994); Vitikainen (1992, 1994, 1995).

169. **Peltula** Nyl. (1853)
[Lecanorales: Lecanoraceae]
euploca (Ach.) Poelt ex Ozenda & Clauzade, Les Lichens: 324 (1970).
Note: It is possible that the taxon *Heppia chilensis* Jatta [Malpighia 20: 8 (1906) T] is referable to **Peltula**, but not having seen Jatta's material we hesitate to name it in **Peltula**.
Lit.: Büdel (1987); Filson (1988).

170. **Peltularia** R.Sant. (1944)
[Lecanorales: Coccocarpiaceae]
gyrophoroides (Räsänen) R. Sant., Ark. Bot. 31A (7): 4 (1944).
Coccocarpia gyrophoroides Räsänen, Anales Soc. Ci. Arg. E. III. T. 78: 143 (1939).
Lit.: Santesson (1944); Jørgensen & Galloway (1984).

171. **Pentagenella** Darb. (1897)
[Arthoniales: Roccellaceae]
fragillima Darb., Ber. Deutsch. Bot. Ges. 15: 5 (1897).
Lit.: Darbishire (1897, 1898a, 1898b); Follmann & Schultz (1993); Follmann (1997).

172. **Pertusaria** DC. (1805) nom. cons.
[Pertusariales: Pertusariaceae]
arthoniaria Nyl., Lich. Fueg. Patag.: 10 (1888).
chilena Zahlbr., Ann. Mycol. 29: 83 (1931) T.
cumulata Tuck. ex Dodge, Nova Hedwigia 16: 491 (1969) ["1968"] T.
columnaris Malme, Ark. Bot. 28A (9): 16 (1936).
corallophora Vain., Résult. Voy. Belgica, Lich.: 22 (1903).
derogata Nyl., Lich. Fueg. Patag.: 10 (1888) T.
erubescens (Taylor) Nyl., Mém. Soc. Sci. Nat. Cherbourg 5: 117 (1858).
hadrocarpa Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3 (11): 376 (1924) T.
jamesii Kantvilas, Lichenologist 22: 296 (1990).
lecanorina Nyl., Ann. Sci. Nat. Bot. sér. 4, 3: 160 (1855) T.
leioplaca var. ***turgida*** Müll. Arg. (1884).
mammata Nyl., Lich. Fueg. Patag.: 10 (1888).

melanospora Nyl., Ann. Sci. Nat. Bot. sér 4, 3: 159 (1855) T.
papillulata Nyl., Ann. Sci. Nat. Bot. sér. 4, 3: 159 (1855) T.
phlyctaenula Nyl., Ann. Sci. Nat. Bot. sér. 4, 3: 160 (1855) T.
polycarpa Krempelh. var. ***monospora*** Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3 (11): 375 (1924) T.
rugifera Müll. Arg., Miss. Sci. Cap Horn, Lich.: 163 (1888) T.
velata (Turner) Nyl., Lich. Scand.: 179 (1861).
Pertusaria skottsbergii Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3 (11): 377 (1924) T.
Lit.: Nylander (1855); Zahlbruckner (1924, 1933); Kantvilas (1990b); Archer (1993, 1997); Archer & Elix (1993); Archer & Messuti (1997).

***Phacopsis** Tul. (1852)
[Lecanorales: Lecanoraceae]
oxyspora (Tul.) Triebel & Rambold, Nova Hedwigia 47: 300 (1988).
Lit.: Hertel (1971); Triebel *et al.* (1995).

173. **Phaeographina** Müll. Arg. (1882)
[Ostropales : Graphidaceae]
chilena Zahlbr., Ann. Mycol. 29: 75 (1931).
scalpturata (Ach.) Müll. Arg., Flora 65: 399 (1882).
Lit.: Follmann (1962).

174. **Phaeographis** Müll. Arg. (1882)
[Ostropales: Graphidaceae]
patagonica Zahlbr., Ann. Mycol. 5: 129 (1908).
patagonica var. ***holoplaca*** Zahlbr., Revista Chilena Hist. Nat. 37: 166 (1933) nom. nud.
Lit.: Zahlbruckner (1933); Follmann (1962).

175. **Phaeophyscia** Moberg (1977)
[Lecanorales: Physciaceae]
endococcinodes (Poelt) Essl., Mycotaxon 7: 301 (1978).
hirsuta (Mereschk.) Essl., Mycotaxon 7: 302 (1978).
hispidula (Ach.) Essl., Mycotaxon 7: 305 (1978).
sciastra (Ach.) Moberg, Symb. Bot. Upsal. 22: 47 (1977).
Lit.: Moberg (1977, 1993, 1994, 1995); Scutari (1992).

***Phaeosporobolus** D. Hawksw. & Hafellner (1986)
[*Mitosporic fungi*]
alpinus R. Sant., Alstrup & D. Hawksw., Medd. om Grönl., Biosience 31: 15 (1990).
Lit.: Alstrup & Hawksworth (1990); Wedin (1994).

176. **Phlyctis** Wallr. (1850) nom. cons.
[Ascomycota, incert.sed.: Phlyctidaceae]
chilensis D.J. Galloway & Guzmán, Lichenologist 20 (4): 393 (1988) T.
Lit.: Galloway & Guzmán Grimaldi (1988).

177. **Phyllopsora** Müll. Arg. (1894)
[Lecanorales: Bacidiaceae]
bibula (Taylor) Swinscow & Krog, Lichenologist 13: 239 (1981).
Lecanora bibula Taylor, Lond. J. Bot. 6: 160 (1847) T.
confusa Swinscow & Krog, Lichenologist 13: 229 (1981).
Lit.: Swinscow & Krog (1981, 1988); Brako (1989).

178. **Phyllisciella** Henssen (1984)
[Lichinales: Lichinaceae]
polymorpha Henssen, Beih. Nova Hedwigia 79: 387 (1984).
Lit.: Henssen & Büdel (1984).

179. **Physcia** (Schreber) Michaux (1803)
[Lecanorales: Physciaceae]
adscendens (Fr.) H. Olivier, Flore Lich. L'Orne 1: 79 (1882).

alba (Fée) Müll. Arg., Rev. Mycol. 9: 136 (1887).
albata (F. Wils.) Hale, Bryologist 66 : 72 (1963).
biziana (A. Massal.) Zahlbr., Österr. Bot. Zeitschr. 51: 348 (1901).
caesia (Hoffm.) Fürnr., Naturhist. Topogr. Regensburg 2: 250 (1839).
callosa Nyl., Flora, Jena 52: 119 (1869).
convexa Müll. Arg., Rev. Mycol 10: 57 (1888).
dimidiata (Arn.) Nyl., var. ***ornata*** (Nádv.) Moberg, Symb. Bot. Upsal. 22: 74 (1977).
dubia (Hoffm.) Lettau, Hedwigia 52: 254 (1912).
erumpens Moberg, Nord. J. Bot. 6: 856 (1986).
lobulata Moberg, Nord. J. Bot. 10: 333 (1990).
lopezii Moberg, Nord. J. Bot. 10: 333 (1990).
poncinsii Hue, Bull. Soc. Bot. Fr. 63, Mém. 28: 10 (1917).
stellaris (L.) Nyl., Acta Soc. Linn. Bordeaux 21: 307 (1856).
tribacia (Ach.) Nyl., Flora 57: 307 (1874).
undulata Moberg, Nord. J. Bot. 6: 861 (1986).
aff. vainioi Räsänen, Medded. Soc. Fauna Fl. Fenn. 47: 166 (1921).
Lit.: Moberg (1977, 1986, 1990, 1994, 1996); Swinscow & Krog (1988); Scutari (1992).

180. **Physconia** Poelt (1965)
[Lecanorales: Physciaceae]
muscigena (Ach.) Poelt, Nova Hedwigia 9: 30 (1965).
Lit.: Moberg (1977); Swinscow & Krog (1988); Jacobsen & Kappen (1988).

181. **Physma** A. Massal. (1854)
[Lecanorales: Collemataceae]
chilense Hue, Bull. Soc. Linn. Normandie sér. 9, 5: 126 (1906) T.
Physma tricolor Zahlbr., Ann. Mycol. 6: 132 (1908) T.
Lit.: Hue (1906); Dughi (1946); Verdon (1992); Verdon & Elix (1994).

182. **Placidiopsis** Beltr. (1858)
[Verrucariales: Verrucariaceae]
hosseusiana Gyeln., Ann. Mus. Nat. Hungar. 32, Pars Bot.: 62 (1939).
Lit.: Breuss (1996a).

183. **Placidium** A. Massal. (1855)
[Verrucariales: Verrucariaceae]
analogicum (Breuss) Breuss, Ann. Naturhist. Mus. Wien 98B (Suppl.): 38 (1996).
Catapyrenium analogicum, Breuss, Pl. Syst. Evol. 185: 20 (1993).
andicola (Breuss) Breuss, Ann. Naturhist. Mus. Wien 98B (Suppl.): 38 (1996).
Catapyrenium andicolum Breuss, Pl. Syst. Evol. 185: 20 (1993).
chilense (Räsänen) Breuss, Ann. Naturhist. Mus. Wien 98B (Suppl.): 38 (1996).
Dermatocarpon chilense Räsänen, Revista Sudamer. Bot. 5: 71 (1938) T.
Catapyrenium chilense (Räsänen) Breuss, Pl. Syst. Evol. 198: 22 (1993).
lachneoides (Breuss) Breuss, Ann. Naturhist. Mus. Wien 98B (Suppl.): 39 (1996).
Catapyrenium lachneoides Breuss, Pl. Syst. Evol. 185: 26 (1993).
ruiz-lealii (Räsänen) Breuss, Ann. Naturhist. Mus. Wien 98B (Suppl.): 39 (1996).
Dermatocarpon ruiz-lealii Räsänen, Anales Soc. Ci. Argent. 128: 147 (1939).
squamulosum (Ach.) Breuss, Ann. Naturhist. Mus. Wien 98B (Suppl.): 39 (1996).
Catapyrenium squamulosum (Ach.) Breuss, Ber. Deutsch. Bot. Ges. 98: 389 (1985).
Lit.: Breuss (1993, 1995, 1996b).

184. **Placomaronea** Räsänen (1944)
[Lecanorales: Candelariaceae]
candelarioides Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 20 (3): 29 (1944).
candelarioides var. ***lacinulata*** R. Sant., Ark. Bot. 31A (7): 9 (1944).
Lit.: Räsänen (1944); Santesson (1944); Hakulinen (1954); Osorio (1974).

185. **Placoparmelia** Henssen (1992)
[Lecanorales: Parmeliaceae]
patagonica Henssen, Lichenologist 24: 134 (1992).
Lit.: Henssen (1992b).

186. **Placopsis** (Nyl.) Linds. (1866)
[Lecanorales: Trapeliaceae]
baculigera I.M. Lamb, Lilloa 13: 220 (1947) T.
bicolor (Tuck.) de Lesd., Ann. Cryptog. Exot. 4: 100 (1931).
brevilobata (Zahlbr.) I.M. Lamb, Lilloa 13: 276 (1947).
chilena I.M. Lamb, Lilloa 13: 213 (1947) T.
contortuplicata I.M. Lamb, Lilloa 13: 273 (1947) T.
contortuplicata f. ***fuegiensis*** I.M. Lamb, Lilloa 13: 276 (1947) T.
cribellans (Nyl.) Räsänen, J. Jap. Bot. 16: 90 (1940).
dusenii I.M. Lamb, Lilloa 13: 215 (1947) T.
effusa I.M. Lamb, Lilloa 13: 216 (1947) T.
fuscidula I.M. Lamb ex Räsänen, Anales Soc. Ci. Argent. 128: 138 (1939).
Lecanora gelida f. *leprosula* Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3 (11): 382 (1924) T.
gelida (L.) Linds., Trans. Linn. Soc. 25: 536 (1866).
gelida var. ***subreagens*** I.M. Lamb, Lilloa 13: 206 (1947) T.
Lecanora patagonica f. *sorediosula* Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3 (11): 382 (1924) T.
Lecanora sorediosula (Zahlbr.) Gyeln., Acta Fauna Fl. Univ. 2 (1): 10 (1933).
parellina I.M. Lamb, Res. Norweg. Sci. Exp. Tristan da Cunha 1937-38, I (3): 3 (1940) T.
parellina var. ***carnea*** (Räsänen) I.M. Lamb, Lilloa 13: 253 (1947).
Placopsis gelida var. *carnea* Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2(1): 25 (1932) T.
parellina var. ***carnea*** f. ***subcribellans*** I.M. Lamb, Lilloa 13: 254 (1947) T.
patagonica (Zahlbr.) I.M. Lamb, Lilloa 13: 261 (1947).
Lecanora patagonica Zhalbr., Kongl. Svenska Vetenskapsakad. Handl. 57 (6): 35 (1917) T.
perrugosa (Nyl.) Nyl., Lich. Nov. Zel.: 57 (1888).
perrugosa f. ***activa*** I.M. Lamb, Lilloa 13: 272 (1947) T.
pycnotheca I.M. Lamb ex Räsänen, Anales Soc. Ci. Argent. 128: 139 (1939) T.
rhodophthalma (Müll. Arg.) Räsänen, Ann .Soc. Bot. Zool.-Bot. Fenn. "Vanamo" 2 (1): 25 (1932).
stenophylla (Hue) I.M. Lamb, Lilloa 13: 257 (1947).
Lecanora stenophylla Hue, Ann. Mycol. 12: 523 (1914) T.
terricola (Cromb.) I.M. Lamb, Lilloa 13: 263 (1947).
Lecanora gelida f. *terricola* Cromb., Bot. J. Linn. Soc. 15: 232 (1876) T.
tuberculifera (I.M. Lamb) Follmann. In Follman *et al.*, Crypt. Bot. 2 (3): 303 (1991).
Placopsis cribellans f. *tuberculifera* I.M. Lamb, Lilloa 13: 228 (1947) T.
Lit.: Lamb (1947); Redon (1985); Jacobsen & Kappen (1988); Follmann *et al.* (1991); Ott *et al.* (1997).

187. **Placynthiella** Gyelnik (1939)
[Lecanorales: Trapeliaceae]
uliginosa (Schrad.) Coppins & P. James, Lichenologist 16: 244 (1984).
Lit.: Coppins & James (1984); Nimis (1997).

188. **Placynthium** (Ach.) S.F. Gray (1821)
[Peltigerales: Placynthiaceae]
?arachnoideum Henssen, Lichenologist 16: 265 (1984).
? asperellum (Ach.) Trevis., Lich. Veneta. No. 98 (1869).
nigrum (Huds.) S.F. Gray, Nat. Arr. Brit. Pl.: 395 (1821).
Lit.: Henssen (1963b, 1984).

189. **Placynthiopsis** Zahlbr. (1932)
[Peltigerales: Placynthiaceae]
follmannii C.W. Dodge, Nova Hedwigia 15: 306 (1968) T.
Lit.: Dodge (1968).

190. **Platismatia** W.L. Culb. & C.F. Culb. (1968)
[Lecanorales: Parmeliaceae]
glauca (L.) W.L. Culb. & C.F. Culb., Contr. U. S. Natl. Herb. 34: 530 (1968).
Lit.: Culberson & Culberson (1968); Elix (1993).

Plectocarpon Fée (1825)
[Arthoniales: Roccellaceae]
lichenum (Sommerf.) D. Hawksw., Lichenologist 16: 86 (1984).

pseudosticta (Fée) Fée, Essai Crypt. Ecorc., Suppl.: 147 (1837).
Lit.: Hawksworth & Galloway (1984); Diederich & Etayo (1994); Kondratyuk & Galloway (1995).

191. **Pleopsidium** Körb. (1855)
[Lecanorales: Lecanoraceae]
chlorophanum (Wahlenb.) Zopf., Ann. Chem. 284: 117 (1895).
Biatorella antarctica J.S. Murray, Trans. Roy. Soc. New Zealand Bot. 2: 60 (1963).
Lit.: Redon (1985); Hafellner (1993a, 1995); Castello & Nimis (1994).

192. **Pleurotrema** Müll. Arg. (1885)
[Pyrenulales: Pleureotremataceae]
leptosporum Müll. Arg., Miss. Sci. Cap Horn, Lich.: 170 (1888) T.
Lit.: Müller Argoviensis (1888).
B

193. **Poeltiaria** Hertel (1984)
[Lecanorales: Porpidiaceae]
corralensis (Räsänen) Hertel, Beih. Nova Hedwigia 79: 431 (1984).
Lecidea corralensis Räsänen, Revista Univ. (Santiago) 22: 211 (1937) T.
Lecidea patagonica I.M. Lamb, Farlowia 4: 440 (1955).
Lit.: Hertel (1984); Rambold (1989).

194. **Poeltidia** Hertel & Hafellner (1984)
[Lecanorales: Porpidiaceae]
perusta (Nyl.) Hertel & Hafellner, Beih. Nova Hedwigia 79: 463 (1984).
Lecidea perusta Nyl. In J. Crombie, J. Bot. 13: 334 (1874).
Lit.: Hertel (1984, 1987b, 1989); Rambold (1989).

***Polycoccum** Sauter ex Körber (1865)
[Dothideales: Dacampiaceae]
pulvinatum (Eitner) R. Sant., Lich. Sweden, Norway: 175 (1993).
rugulosarium (Linds.) D. Hawksw. In Pegler *et al.*, Kew Bull. 35: 513 (1980)
Lit.: Hawksworth & Diederich (1988); Triebel (1989); Aptroot & Van der Knapp (1993); Santesson (1993); Wedin (1994).

195. **Porina** Müll.Arg. (1883) nom. cons.
[Trichotheliales: Trichotheliaceae]
depressula Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.). 3 (11): 322 (1924) T.
epiphylla (Fée) Fée, Essai Crypt. Ecorc.: 76 (1825).
fernandeziana Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.). 3 (11): 320 (1924) T.
fulvella Müll. Arg., Flora, Jena 66: 335 (1883).
leptalea (Durieu & Mont.) A.L. Sm., Monogr. Brit. Lich. 2: 333 (1911).
Porina rufocarpella Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.). 3 (11): 321 (1924) T.
limbulata (Kremp.) Vain., Ann. Acad. Sci. Fenn. Ser. A, 15: 363 (1921).
micromma (Mont.) A. Massal., Framment. Lich.: 26 (1855).
nitidula Müll. Arg., Flora 66: 336 (1883).
rubrosphaera R. Sant., Symb. Bot. Upsal. 12: 261 (1952) T.
macroverrucosa P.M. McCarthy, Biblioth. Lichenol. 52: 67 (1993).
Porina depressula Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.). 3 (11): 322 (1924) T - nom. illeg. non *P. depressula* Müll. Arg [Bot. Jahrb. 6: 399 (1885)].
tetracerae, (Ach.) Müll. Arg., Bot. Jahrb. Syst. 6: 401 (1885).
weberi P.M. McCarthy, Biblioth. Lichenol. 52: 116 (1993) T.
Lit.: Santesson (1952); Follmann (1961); McCarthy (1993).

196. **Porocyphus** Körb. (1855)
[Lichinales: Lichinaceae]
?dispersus Å. E.Dahl, Meddel. Grønland, Biosci. 150 (2): 51 (1950).
Lit.: Henssen (1963c, 1977).

197. **Porpidia** Körb. (1855)
[Lecanorales: Porpidiaceae]

albocaerulescens (Wulfen) Hertel & Knoph, Beih. Nova Hedwigia 79: 433 (1984).
austroshetlandica Hertel. Beih. Nova Hedwigia 79: 434 (1894) T.
crustulata (Ach.) Hertel & Knoph, Beih. Nova Hedwigia 79: 435 (1984).
Lecidea oblonga Riedl, Sydowia 20: 343 (1968) T.
Lecidea follmannii Riedl, Sydowia 20: 345 (1968) T.
Lecidea magellanica Riedl, Sydowia 20: 346 (1968) T.
Lit.: Hertel (1971, 1984, 1987a).

198. **Protoparmelia** M. Choisy (1929)
[Lecanorales: Lecanoraceae]
badia (Hoffm.) Hafellner, Beih. Nova Hedwigia 79: 292 (1984).
Lecanora badia var. *fuscobrunnea* Nyl., Ann. Sci. Nat. Bot. sér. 4, 3: 156 (1855) T.
Lit.: Hafellner (1984); Nimis (1993).

199. **Protoroccella** Follmann (1995)
[Arthoniales: Roccellaceae]
follmannii Sanchez-Pinto & Schulz, Flechten Follmann: 319 (1995) T.
minima (R. Sant.) Follmann, Crypt. Bot. 5: 230 (1995).
Roccella minima R. Sant., Ark. Bot. 31A (7): 6 (1944) T.
Lit.: Santesson (1944); Follmann (1995); Sánchez-Pinto & Schulz (1995).

200. **Protousnea** (Mot.) Krog (1976)
[Lecanorales: Parmeliaceae]
alectoroides (Mot.) Krog, Norw. J. Bot. 23: 99 (1976).
Usnea alectoroides Mot., Usnea 1: 13 (1936) T.
dusenii (DR.) Krog, Norw. J. Bot. 23: 99 (1976).
Usnea dusenii DR., Svensk Bot. Tidskr. 20: 93 (1926).
Usnea barbata var. *oxygona* Müll. Arg., Hedwigia 34: 139 (1895) T.
Usnea oxygona (Müll. Arg.) Zahlbr., Cat. Lich. Univ. 6: 588 (1930).
Usnea santessonii Räsänen, Arch. Soc. Zool.-Bot. Fenn. "Vanamo" 2: 45 (1949).
magellanica (Mont.) Krog, Norw. J. Bot. 23: 100 (1976).
Evernia magellanica Mont., Ann. Sci. Nat. Bot. sér. 2, 20: 356 (1843) T.
Usnea magellanica (Mont.) Mot., Usnea 1: 9 (1936).
Letharia divaricata var. *tonellii* Sambo, Contr. Sci. Miss. Sales. Ven. Don Bosco: 40 (1926) T.
malacea (Stirt.) Krog, Norw J. Bot. 23: 101 (1976).
Chlorea malacea Stirt., Scott. Naturalist (Perth) 7: 74 (1883).
Usnea malacea (Stirt.) Zahlbr., Cat. Lich. Univ. 6: 600 (1930).
Usnea campestris R. Sant., Ark. Bot. 30A (6): 9 (1942).
poeppigii (Nees & Flot.) Krog., Norweg. J. Bot. 23: 102 (1976).
Neuropogon poepiggii Nees & Flot., Linnaea 9: 497 (1835) ?T.
Chlorea poeppigii (Nees & Flot.) Nyl., Syn. Meth. Lich. 1(2): 275 (1860).
Usnea poeppigii (Nees & Flot.) Vain., Résult. Voy. Belgica, Lich.: 12 (1903).
Letharia poeppigii (Nees & Flot.) Darb., Wiss. Ergebn. Schwed. Südpolarexp. 1901-1903, 3 (11): 33 (1912).
Rhytidocaulon poeppigii (Nees & Flot) Elenkin, Izv. Imp. Bot. Sada Petra Velikago 16: 266 (1916) nom. inval.
scrobiculata (Sambo) Krog, Norweg. J. Bot. 23: 102 (1976).
Letharia divaricata var. *scrobiculata* Sambo, Contr. Sci. Miss. Sales. Ven. Don Bosco: 40 (1926) T.
teretiuscula Krog, Norweg. J. Bot. 23: 103 (1976) T.
sp. in Krog, Norw. J. Bot. 23: 105 (1976).
Lit.: Santesson (1942a); Krog (1976); Chamy *et al.* (1985); Garbarino *et al.* (1987); Quilhot *et al.* (1987).

201. **Pseudephebe** M. Choisy (1930)
[Lecanorales: Parmeliaceae]
minuscula (Nyl. ex Arn.) Brodo & D. Hawksw., Opera Bot. 42: 140 (1977).
pubescens (L.) M. Choisy, Icon. Lich. Univ. ser. 2: sine pag. (1930).
Lit.: Brodo & Hawksworth (1977); Redon (1985); Garbarino *et al.* (1993).

202. **Pseudocyphellaria** Vain. (1890) nom. cons.
[Peltigerales: Lobariaceae]
argyracea (Delise) Vain., Hedwigia 37: 35 (1898).
Sticta agyracea Delise, Mém. Soc. Linn. Calvados 2: 91 (1825).

aurata (Ach.) Vain., Acta Soc. Fauna Fl. Fenn. 7: 183 (1890).
bartlettii D.J. Galloway, Lichenologist 17: 303 (1985).
Stictina mougeotiana f. *isidiosa* Müll. Arg., Bull. Herb. Boissier 4: 89 (1896).
berberina (G. Forster) D.J. Galloway & P. James, Lichenologist 9: 95 (1977).
Lichen berberinus G. Forster, Comment. Soc. Sci. Gotting. 9: 44 (1787).
Sticta orygmaea Ach., Methodus: 278 (1803).
Lobaria orygmaea (Ach.) Hellbom, Bih. Kongl. Svenska Vetensk.-Akad. Handl. 21 (3/13): 36 (1896).
Pseudocyphellaria orygmaea (Ach.) Malme, Bih. Kongl. Svenska Vetensk.-Akad. Handl. 25 (3/6): 28 (1899).
Sticta durvillei Delise, Mém. Soc. Linn. Calvados 2: 599 (1825).
Lobaria urvillei (Delise) Trevis, Lich. Veneta Exs. 75 (1869).
Sticta endochrysa var. *urvillei* (Delise) Müll. Arg., Miss. Sci. Cap Horn, Lich.: 157 (1889).
Pseudocyphellaria durvillei (Delise) Vain., Hedwigia 38: 187 (1899).
Pseudocyphellaria orymaea var. *urvillei* (Delise) Malme, Bih. Kongl. Svenska Vetensk.-Akad. Handl. 25 (3/6): 28 (1899).
Sticta endochrysa sense Hook. f., Fl. Antarct. 2: 525 (1847) non Delise
Sticta endochrysa var. *angustiloba* Mont. In C. Gay, Hist. Chile, Bot. 8: 105 (1854) T.
Sticta urvillei var. *orygmaeoides* Nyl., Syn. Meth. Lich. 1 (2): 360 (1860) T.
Sticta endochrysa var. *orygmaeoides* (Nyl.) Müll. Arg., Miss. Sci. Cap Horn, Lich.: 157 (1889).
Pseudocyphellaria endochrysa var. *orygmaeoides* (Nyl.) Follmann, Revista Univ. (Santiago) 51: 42 (1966) nom. inval.
Sticta endochrysa var. *compacta* Müll. Arg., Miss. Sci. Cap Horn, Lich.: 157 (1889) T.
Sticta urvillei var. *orygmaeoides* f. *compacta* (Müll. Arg.) Stizenb., Flora 81: 117 (1895).
Pseudocyphellaria durvillei var. *laciniatula* Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 36 (1932) T.
Pseudocyphellaria durvillei var. *normalis* Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 36 (1932) T.
Pseudocyphellaria durvillei var. *canescens* Räsänen, Revista Univ. (Santiago) 22: 204 (1937) T.
bereteroana (Mont.) Redon, Anales Mus. Hist. Nat. Valparaíso 10: 21 (1977).
Sticta berteroana Mont., Ann. Sci. Nat. Bot. sér. 2,4: 90 (1835) T.
Ricasolia berteroana (Mont.) Nyl. In Hue, Nouv. Arch. Mus. Hist. Nat. sér. 3, 11: 309 (1890).
Stictina berteroana (Mont.) Nyl. In Stizenb., Flora 81: 128 (1895).
coerulescens (Mont.) H. Magn., Acta Horti Gothob. 14: 8 (1940).
Sticta coerulescens Mont., Ann. Sci. Nat. Bot. sér. 3, 18: 306 (1852) T.
Pseudocyphellaria coerulescens (Mont.) D.J. Galloway & P. James, Lichenologist 12: 294 (1980) nom. superfl.
Pseudocyphellaria nitida var. *curta* Räsänen In Gyeln., Lich. Parva No. 5 (1937).
compar (Nyl.) H. Magn., Acta Horti Gothob. 14: 8 (1940).
Stictina compar Nyl., Flora 49: 135 (1866) T.
Sticta compar (Nyl.) Zahlbr., Cat. Lih. Univ. 3: 375 (1925).
Stictina otwayensis Jatta, Nuovo Giorn. Bot. Ital. 22 (1): 49 (1890) T.
Pseudocyphellaria otwayensis (Jatta) H. Magn., Acta Horti Gothob. 14: 7 (1940).
Cyanisticta otwayensis (Jatta) C.W. Dodge, Trans. Amer. Microscop. Soc. 84: 506 (1965).
Stictina endochrysoides Müll. Arg., Flora 74: 111 (1891) T.
Pseudocyphellaria endochrysoides (Müll. Arg.) Malme, Bih. Kongl. Svenska Vetensk.-Akad. Handl. 25 (3/6): 27 (1899).
Sticta endochrysoides (Müll. Arg.) Hue, Nouv. Arch. Mus. Hist. Nat. sér. 4, 3: 87 (1901).
Podostictina endsochrysoides (Müll. Arg.) Clem., Gen. Fung.: 175 (1909).
Cyanisticta endochrysoides (Müll.Arg.) Räsänen, Revista. Univ. (Santiago) 22: 204 (1937).
Sticta granulifera Hue, Nouv. Arch. Mus. Hist. Nat. sér. 4, 3: 86 (1901) T.
Pseudocyphellaria granulifera (Hue) H. Magn., Acta Horti Gothob. 14: 8 (1940).
Pseudocyphellaria compar var. *granulifera* (Hue) R. Sant. In S. Huneck *et al.*, J. Hattori Bot. Lab. 37: 545 (1973).
coppinsii D.J. Galloway, Biblioth. Lichenol. 46: 85 (1992) T.
coriifolia (Müll. Arg.) Malme, Bih. Kongl. Svenska Vetensk.-Akad. Handl. 25 (3/6): 25 (1899).
Stictina coriifolia Müll. Arg., Bot. Jahrb. Syst. 4: 55 (1883) T.
Sticta coriifolia (Müll. Arg.) Zahlbr., Cat. Lich. Univ. 3: 375 (1925).
Cyanisticta coriifolia (Müll. Arg.) Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 40 (1932).
Stictina coriifolia var. *hypomelaena* Müll. Arg., Miss. Sci. Cap Horn, Lich.: 155 (1888) T.
Pseudocyphellaria coriifolia var. *hypomelaena* (Müll. Arg.) Malme, Bih. K. Sv. Vetensk.-Akad. Handl. 25 (3/6): 25 (1899).
Sticta coriifolia var. *hypomelaena* (Müll. Arg.) Zahlbr., Cat. Lich. Univ. 3: 376 (1925).

Cyanisticta coriifolia var. *hypomelaena* (Müll. Arg.) Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 40 (1932).
crocata (L.) Vain., Hedwigia 37: 343 (1898).
dissimilis (Nyl.) D.J. Galloway & P. James, Lichenologist 12: 297 (1980).
divulsa (Taylor) Imshaug, Adapt. Antarct. Ecosystems: 964 (1977).
Sticta divulsa Taylor, Lond. J. Bot. 6: 182 (1847) T.
Sticta billardierei var. *divulsa* (Taylor) Hook. f., Fl. Antarct. 2: 527 (1847).
Sticta fossulata f. *divulsa* (Taylor) Stizenb., Flora 81: 114 (1895).
Sticta richardi f. *divulsa* (Taylor) Hue, Nouv. Arch. Mus. Hist. Nat. sér. 4, 3: 56 (1901).
Pseudocyphellaria richardi var. *divulsa* (Taylor) Follmann, Revista Univ. (Santiago) 51: 53 (1966).
dubia Du Rietz, Ark. Bot. 20 B (1): 2 (1926) T.
Cyanisticta dubia (Du Rietz) Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 42 (1932).
Sticta (Stictina) *dubia* (Du Rietz) Zahlbr., Cat. Lich. Univ. 8: 309 (1932).
Cyanisticta dubia var. *arrhiza* Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 42 (1932) T.
Sticta dubia var. arrhiza (Räsänen) Zahlbr., Cat. Lich. Univ. 10: 274 (1939).
Pseudocyphellaria dubia var. *arrhiza* (Räsänen) Follmann, Revista Univ. (Santiago) 51: 42 (1966).
encoensis R. Sant. In D.J. Galloway, Lichenologist 21: 88 (1989) T.
endochrysa (Delise) Vain., Résult. Voy. Belgica, Lich.: 28 (1903).
Sticta endochrysa Delise, Mém. Soc. Linn. Calvados 2: 43 (1825).
Ricasolia endochrysa (Delise) Trevis., Lich. Veneta Exs. 75 (1869).
Lobaria endochrysa (Delise) Kuntze, Rev. Gen. Pl. 2: 876 (1891).
Sticta orygmaea var. *endochrysa* (Delise) Zahlbr., Cat. Lich. Univ. 8: 312 (1932).
Sticta feei Delise, Mém. Soc. Linn. Calvados 2: 44 (1825).
Sticta endochrysa var. *feei* (Delise) Zahlbr., Cat. Lich. Univ. 3: 343 (1925).
Parmelia pubescens Pers. In M. Gaudichaud-Beaupré, Voy. Uranie Bot. 1: 199 (1827).
Sticta endochrysa var. *pubescens* (Pers.) Nyl., Syn. Meth. Lich. 1 (2): 359 (1860).
Sticta lechleri Flot. In W. Lechler, Berberides Amer. Austral.: 49 (1857) nom. nud.
Pseudocyphellaria leptospora Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 37 (1932) T.
Pseudocyphellaria latiloba C.W. Dodge, Trans. Amer. Microscop. Soc. 84: 503 (1965).
exanthematica I.M. Lamb, Farlowia 4: 435 (1955).
faveolata (Delise) Malme, Bih. Kongl. Svenska Vetensk.-Akad. Handl. 25 (3/6): 23 (1899).
Sticta faveolata Delise, Mém. Soc. Linn. Calvados 2: 102 (1825) T.
Stictina faveolata (Delise) Nyl., Syn. Meth. Lich. 1 (2): 337 (1860).
Cyanisticta faveolata (Delise) Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 42 (1932).
flavicans (J.D. Hook. & Taylor) Vain., Philipp. J. Sci. 8: 115 (1913).
Sticta flavicans Hook. f. & Taylor, Lond. J. Bot. 3: 648 (1844) T.
Sticta endochrysa sensu Hook. f., Fl. Antarct. 1: 525 (1847) non Delise.
Sticta urvillei var. *flavicans* (Hook. F. & Taylor) Nyl. Syn. Meth. Lich. 1 (2): 360 (1860).
Sticta endochrysea [sic] var. *flavicans* (Hook. F. & Taylor) Müll. Arg., Flora 71: 136 (1888).
Pseudocyphellaria durvillei var. *flavicans* (Hook. F. & Taylor) Vain., Hedwigia 38: 187 (1899).
Pseudocyphellaria orygmaea var. *flavicans* (Hook. F. & Taylor) Malme, Bih. Kongl. Svenska Vetensk.-Akad. Handl. 25 (3/6): 28 (1899).
Sticta desfontainii .
Stictina mallota (Tuck.) Stizenb, Flora, Jena 81: 131 (1895).
Stictbð stauromatica Flot. In W. Lechler, Pl. Chilensem 562a (?1854) T.
freycinetii (Delise) Malme, Bih. Kongl. Svenska Vetensk.-Akad. Handl. 25 (3/6): 34 (1899).
Sticta freycinetii Delise, Mém. Soc. Linn. Calvados 2: 124 (1825).
Lobaria freycinetii (Delise) Trevis., Lich. Veneta Exs. 75 (1869).
Phanosticta freycinetii (Delise) Clem., Gen. Fung.: 175 (1909).
Parmelia lactucaefolia Pers. In M. Gaudichaud-Beaupré, Voy. Uranie Bot.: 199 (1827).
Sticta lactucaefolia (Pes.) Nyl., Lich. Nov. Zel.: 39 (1888).
Sticta freycinetii var. *lactucaefolia* (Pers.) Müll. Arg., Miss. Sci. Cap Horn, Lich.: 157 (1888).
Pseudocyphellaria freycinetii var. *lactucaefolia* (Pers.) Mame, Bih. Kongl. Svenska Vetensk.-Akad. Handl. 25 (3/6): 34 (1899).
Sticta fulvocinerea Mont., Voy. Pole Sud Bot.1: 184 (1845) T.
Sticta freycinetii var. *fulvocinerea* (Mont.) Nyl., Mém. Soc. Sci. Nat. Cherbourg 5: 103 (1859).
Lobaria fulvocinerea (Mont.) Trevis., Lich. Veneta Exs. 75 (1869).
Sticta freycinetii var. *fimbriata* Mont. In C. Gay, Hist. Chile, Bot. 8: 121 (1854) T.
Pseudocyphellria freyinetii var. *fimbriata* (Mont.) Follmann, Revista Univ. (Santiago) 51: 44 (1966).
Sticta patagonica Müll. Arg., Hedwigia 34: 140 (1895).
Pseudocyphellaria patagonica (Müll. Arg.) I.M. Lamb, Anales Parques Nac. 7: 66 (1959) ["1958"].
Cyanisticta antarctica Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 39 (1932) T.

Sticta (Stictina) *antarctica* (Räsänen) Zahlbr., Cat. Lich. Univ. 10: 272 (1939).
gilva (Ach.) Malme, Bih. Kongl. Svenska Vetensk.-Akad. Handl. 25 (3/6): 32 (1899).
Sticta erythroscypha Taylor, Lond. J. Bot. 6: 181 (1847) T.
Stictina subfaveolata Nyl. In E. Stizenberger, Flora 81: 129 (1895) T.
glabra (Hook. f. & Taylor) C.W. Dodge, B.A.N.Z.A.R.E. Rep. B, 7: 79 (1948).
Sticta glabra Hook. f. & Taylor, Lond. J. Bot. 3: 647 (1844).
Sticta freycinetii var. *glabra* (Hook. f. & Taylor) Zahlbr. Cat. Lich. Univ. 3: 347 (1925).
Pseudocyphellaria freycinetii var. *glabra* (Hook. f. & Taylor) Räsänen. Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 35 (1932).
Cetraria (sect. *Platysma*) *antarctica* Zahlbr.. Kongl. Svenska Vetenskapsakad. Handl. 57 (6): 43 (1917).
Pseudocyphellaria burkholderi C.W. Dodge. Trans. Amer. Microscop. Soc. 84: 502 (1965).
granulata (C. Bab.) Malme, Bih. Kongl. Svenska Vetensk.-Akad. Handl. 25 (3/6): 21 (1899).
guillemini (Mont.) D.J. Galloway, Lichenologist 18: 127 (1986).
Sticta guillemini Mont. Ann. Sci. Nat. Bot. sér. 2, 4: 87 (1835) T.
Sticta hirsuta var. *guillemini* (Mont.) Mont. In C. Gay, Hist. Chile, Bot. 8: 107 (1854).
Sticta obvoluta var. *guillemini* (Mont.) Nyl., Mém. Soc. Sci. Nat. Cherbourg 5: 103 (1857).
Crocodia guillemini (Mont.) Nyl. In Hue, Nouv. Arch. Mus. Hist. Nat. sér. 3, 2: 297 (1890).
Cyanisticta guillemini (Mont.) Räsänen, Revista Univ. (Santiago) 22: 203 (1937).
Sticta guillemini var. *stictica* Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.). 3 (11): 248 (1924) T.
guzmanii D.J. Galloway, Biblioth. Lichenol. 46: 145 (1992) T.
hillii (C.W. Dodge) D.J. Galloway, Biblioth. Lichenol. 46: 149 (1992).
Cyanisticta hillii C.W. Dodge, Nova Hedwigia 19: 492 (1971) T.
hirsuta (Mont.) Malme, Bih. Kongl. Svenska Vetensk.-Akad. Handl. 25 (3/6): 18 (1899).
Sticta hirsuta Mont., Ann. Sci. Nat. Bot. sér. 2, 4: 88 (1835) T.
Stictina hirsuta (Mont.) Nyl., Ann. Sci. Nat. Bot. sér. 4, 15: 41 (1861).
Cyanisticta hirsuta (Mont.) Räsänen, Revista Univ. (Santiago) 21: 144 (1936).
Pseudocyphellaria hirsuta f. *leucosticta* I.M. Lamb, Farlowia 4: 436 (1955).
Stictina scholanderi C.W. Dodge, Nova Hedwigia 19: 493 (1971) T.
imbricatula (Taylor) D.J. Galloway, Lichenologist 17: 305 (1985).
Sticta imbricatula Taylor, Lond. J. Bot. 6: 180 (1847) T.
Sticta endochrysa f. *imbricatula* (Taylor) Nyl., Syn. Meth. Lich. 1 (2): 359 (1860).
imshaugii D.J. Galloway & Redon. In D.J. Galloway, Biblioth. Lichenol. 46: 158 (1992) T.
intricata (Delise) Vain., Hedwigia 37: 35 (1898).
lechleri (Müll. Arg.) Du Rietz. In H. Magnusson, Acta Horti Gothob. 14: 27 (1940).
Stictina lechleri Müll. Arg., Flora 66: 354 (1883) T.
Cyanisticta lechleri (Müll. Arg.) C.W. Dodge, Trans. Amer. Microscop. Soc. 84: 505 (1965).
Sticta carpoloma f. *latifolia* Kremp., Verhandl. Zool.-Bot. Ges. Wien 18: 316 (1868) nom. nud.
Stictina latifolia Stizenb., Flora 81: 130 (1895) T.
Pseudocyphellaria carpoloma var. *latifolia* (Stizenb.) Malme, Bih. Kongl. Svenska Vetensk.-Akad. Handl. 25 (3/6): 33 (1899).
Sticta latifolia (Stizenb.) Zahlbr., Cat. Lich. Univ. 3: 39 (1925).
Pseudocyphellaria latifolia (Stizenb.) Follmann, Revista Univ. (Santiago) 51: 48 (1966).
Sticta (*Stictina*) *carpoloma* var. *benovei* Sambo, Lich. Terr. D. Fuoco: 31 (1926).
Cyanisticta wilkseii C.W. Dodge, Nova Hedwigia 19: 472 (1971).
mallota (Tuck.) H. Magn., Acta Horti Gothob. 14: 7 (1940).
Sticta crocata var. *mallota* Tuck.. Syn. N. Amer. Lich. 1: 101 (1882) T.
Stictina mallota (Tuck.) Stizenb, Flora 81: 131 (1895).
Sticta mallota (Tuck.) Zahlbr., Cat. Lich. Univ. 3: 394 (1925).
Cyanisticta mallota (Tuck.) C.W. Dodge. Trans. Amer. Microscop. Soc. 84: 506 (1965).
Cyanisticta hirsuta var. *sorediifera* Räsänen. Revista Univ. (Santiago) 22: 203 (1937) T.
Pseudocyphellaria hirsuta var. *sorediifera* (Räsänen) Follmann. Revista. Univ. (Santiago) 51: 46 (1966).
malmeana D.J. Galloway, Biblioth. Lichenol. 46: 172 (1992) T.
meyenii (Trevis.) D.J. Galloway, Lichenologist 21: 89 (1989).
Stictina meyenii Trevis. Lich. Veneta Exs. 75 (1869).
Stictina faveolata var. *cervicornis* Nyl., Syn. Meth. Lich. 1 (2): 337 (1860) T.
Pseudocyphellaria faveolata var. *cervicornis* (Nyl.) Malme. Bih. Kongl. Svenska Vetensk.-Akad. Handl. 25 (3/6): 23 (1899).
Sticta faveolata var. *cervicornis* (Nyl.) Zahlbr., Cat. Lich. Univ. 3: 380 (1925).
mooreana (Zahlbr.) Imshaug, Adapt. Antarct. Ecosystems: 964 (1977).
neglecta (Müll. Arg.) H. Magn., Acta Horti Gothob. 14: 30 (1940).
Cyanisticta gilva var. *isidiifera* Räsänen. Revista Univ. (Santiago) 22: 204 (1937) T.

Pseudocyphellaria gilva var. *isidiifera* (Räsänen) Follmann. Revista Univ. (Santiago) 51: 45 (1966).
nitida (Taylor) Malme, Bih. Kongl. Svenska Vetensk.-Akad. Handl. 25 (3/6): 26 (1899).
Sticta nitida Taylor, Lond. J. Bot. 6: 178 (1847) T.
Lobaria nitida (Taylor) Trevis, Lich. Veneta Exs. 75 (1869).
Sticta flabellata Mont., Ann. Sci. Nat. Bot. sér. 3, 18: 306 (1852) T.
Sticta horrida Hue, Nouv. Arch. Mus. Hist. Nat. sér. 4, 3: 50 (1901) T.
Pseudocyphellaria horrida (Hue) I.M. Lamb, Anales Parques Nac. 7: 62 (1959) ["1958"].
Sticta carpoloma f. *ornata* Zahlbr. In C.Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3 (11): 349 (1924) T.
Pseudocyphellaria carpoloma f. *ornata* (Zahlbr.) Follmann, Revista Univ. (Santiago) 51: 36 (1966).
Pseudocyphellaria nitida var. *subglauca* Räsänen, Revista Univ. (Santiago) 22: 205 (1937) T.
Pseudocyphellaria nitida var. *substraminea* Räsänen, Revista Univ. (Santiago) 22: 205 (1937) T.
norvegica (Gyeln.) P. James. In B.J. Coppins & P.W. James, Lichenologist 11: 172 (1979).
nudata (Zahlbr.) D.J. Galloway, Lichenologist 21: 89 (1989).
Sticta coriifolia var. *nudata* Zahlbr., Ann. Mycol. 29: 81 (1931).
Pseudocyphellaria coriifolia var. *nudata* (Zahlbr.) Follmann, Revista Univ. (Santiago) 51: 38 (1966).
obvoluta (Ach.) Malme, Bih. Kongl. Svenska Vetensk.-Akad. Handl. 25 (3/6): 17 (1899).
Parmelia obvoluta Ach., Methodus: 218 (1803).
Sticta obvoluta (Ach.) Ach., Lichenogr. Universalis: 452 (1810).
Crocodia obvoluta (Ach.) Trevis, Lich. Veneta Exs. 75 (1869).
Cyanisticta obvoluta (Ach.) C.W. Dodge, Trans. Amer. Microscop. Soc. 84: 506 (1965).
physciospora (Nyl.) Malme, Bih. Kongl. Svenska Vetensk.-Akad. Handl. 25 (3/6): 20 (1899).
pilosella Malme, Bih. Kongl. Svenska Vetensk.-Akad. Handl. 25 (3/6): 30 (1899).
Sticta pilosella (Malme) Darb., Wiss. Ergebn. Schwed. Südpolarexp. 1901-1903, 4 (2): 54 (1912).
piloselloides (Räsänen) H. Magn., Acta Horti Gothob. 14: 7 (1940).
Cyanisticta piloselloides Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 39 (1932) T.
Sticta piloselloides (Räsänen) Zahlbr., Cat. Lich. Univ. 10: 278 (1939).
pluvialis R. Sant. In D.J. Galloway, Lichenologist 18: 150 (1986) T.
Pseudocyphellaria nitida var. *mollis* Räsänen, Revista Univ. (Santiago) 22: 205 (1937) T.
redonii D.J. Galloway, Biblioth. Lichenol. 46: 212 (1992) T.
richardi (Mont.) Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 39 (1932).
Pseudocyphellaria richardi (Mont.) Imshaug, Adapt. Antarct. Ecosystems: 964 (1977) nom. superfl.
Sticta richardi Mont., Ann. Sci. Nat. Bot. Sér. 2, 4: 89 (1835) T.
Sticta faveolata var. *richardi* (Mont.) Linds., Trans. Roy. Soc. Edinburgh 22: 197 (1859).
Sticta fossulata var. *richardi* (Mont.) Nyl., Syn. Meth. Lich. 1 (2): 364 (1860).
Crocodia richardi (Mont.) Trevis., Lich. Veneta Exs. 75 (1869).
Lobaria fossulata var. *richardi* (Mont.) Hellbom, Bih. Kongl. Svenska Vetensk.-Akad. Handl. 21 (3/13): 38 (1896).
santessonii D.J. Galloway, Lichenologist 18: 152 (1986) T.
scabrosa R. Sant. In D.J. Galloway, Lichenologist 18: 155 (1986) T.
skottsbergii D.J. Galloway, Biblioth. Lichenol. 46: 224 (1992) T.
subrubella Räsänen, Anales Soc. Ci. Argent. 128: 142 (1939).
vaccina (Mont.) Malme, Bih. Kongl. Svenska Vetensk.-Akad. Handl. 25 (3/6): 27 (1899).
Sticta vaccina Mont., Ann. Sci. Nat. Bot. Sér. 3, 18: 307 (1852) T.
Sticta endochrysea [sic.] var. *vaccina* (Mont.) Cromb., Bot. J. Linn. Soc. 15: 230 (1876).
Pseudocyphellaria albidopallens Vain., Résult. Voy. Belgica, Lich.: 28 (1903) T.
Sticta albidopallens (Vain.) Zahlbr., Cat. Lich. Univ. 3: 330 (1925).
Pseudocyphellaria vaccina var. *albosticta* Räsänen, Anales Soc. Ci. Argent. 128: 142 (1939).
Pseudocyphellaria albidopallens f. *albosticta* (Räsänen) I.M. Lamb, Anales Parques Nac. 7: 64 (1959) ["1958"].
valdiviana (Nyl.) Follmann, Revista Univ. (Santiago) 51: 54 (1966).
Sticta valdiviana Nyl. In E. Stizenberger, Flora 81: 115 (1895) T.
verrucosa (Mont.) D.J. Galloway, Lichenologist 21: 89 (1989).
Sticta argyracea var. *verrucosa* Mont. In C. Gay, Hist. Chile, Bot. 8: 116 (1854) T.
Stictina argyracea var. *verrucosa* (Mont.) Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3 (11): 346 (1924).
Pseudocyphellaria argyracea var. *verrucosa* (Mont.) Follmann, Revista Univ. (Santiago) 51: 35 (1966).
wandae D.J. Galloway, Biblioth. Lichenol. 46: 238 (1992) T.
Lit.: Galloway (1986, 1988, 1989, 1992).

203. **Pseudoparmelia** Lynge (1914)
[Lecanorales: Parmeliaceae]

subambigua Hale, Smithsonian Contr. Bot. 31: 50 (1976) T.
Lit.: Hale (1976, 1986); Elix (1993); Elix & Nash (1998).

204. **Pseudopyrenula** Müll. Arg. (1883)
[Pyrenulales: ?Trypetheliaceae]
diluta (Fée) Müll. Arg., Flora 66: 249 (1883).
Lit.: Follmann (1961).

205. **Psilolechia** A. Massal. (1860)
[Lecanorales: Micareaceae]
lucida (Ach.) M. Choisy, Bull. Mens. Soc. Linn. Lyon 18: 142 (1949).
Lit.: Coppins & Purvis (1987).

206. **Psiloparmelia** Hale (1989)
[Lecanorales: Parmeliaceae]
distincta (Nyl.) Hale, Mycotaxon 35: 42 (1989).
flavobrunnea (Müll. Arg.) Elix & Nash, Bryologist 95: 386 (1992).
salazinica Elix & Nash, Bryologist 95: 388 (1992).
Lit.: Hale (1989); Elix & Nash (1992).

207. **Psora** Hoffm. (1796) nom. cons
[Lecanorales: Psoraceae]
icterica (Mont.) Müll. Arg., Flora 71: 45 (1888).
Biatora icterica Mont., Ann. Sci. Nat. Bot. 2: 373 (1834) T.
Lecidea icterica (Mont.) Taylor, Lond. J. Bot. 6: 150 (1847).
Schaereria argentina Gyeln.. Repert. Spec. Nov. Regni Veg. 33: 304 (1934).
Lecidea argentina (Gyeln.) Zahlbr., Cat. Lich. Univ. 10: 346 (1939).
placodiiformis (Hue) Darb., Br. Antarct. ("Terra Nova") Exp. 1910. Nat. Hist. Rep. Bot. 3: 48 (1923).
Lit.: Schneider (1979); Timdal (1984, 1987).

208. **Psoroma** Ach. ex Michaux (1803)
[Lecanorales: Pannariaceae]
angustisectum Zahlbr. In C. Skottsberg. Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3 (11): 342 (1924) T.
aphthosum Vain., Hedwigia 38: 188 (1899) T.
caliginosum Stirt.. Proc. Phil. Soc. Glasgow 10: 295 (1877).
calophyllum Müll. Arg., Hedwigia 31: 278 (1892) T.
cephalodinum Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3 (11): 339 (1924) T.
cinnamomeum Malme, Ark. Bot. 20A (3): 11 (1925) T.
contortum Müll. Arg., Miss. Sci. Cap Horn, Lich.: 160 (1889) T.
cristatulum Müll. Arg., Hedwigia 31: 278 (1892) T.
dasycladum Zahlbr. In C. Skottsberg. Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3 (11): 341 (1924) T.
dimorphum Malme, Ark. Bot. 20A (3): 11 (1925).
durietzii P. James & Henssen, Lichenologist 7: 143 (1975).
fruticulosum P. James & Henssen, Mycotaxon 18: 31 (1983).
hirsutulum Nyl. ex Cromb., J. Bot. Lond. 13: 333 (1875).
hispidulum Nyl., Flora, Jena 38: 674 (1855) T.
Pannaria hispidula (Nyl.) Hue. Bull. Soc. Bot. France 48: LVII (1902).
hypnorum (Vahl) S.F. Gray, Nat. Arr. Br. Pl. 1: 445 (1821).
Psoroma follmannii C.W. Dodge, Trans. Amer. Microscop. Soc. 84: 510 (1965) T.
hypnorum var. ***paleaceum*** (Fr.) Rostr.. Bot. Tidsskr. 4: 96 (1871).
implexum Stirt., Trans. & Proc. New Zealand Inst. 6: 236 (1874).
incisum Vain., Hedwigia 38: 188 (1899) T.
internectens I.M. Lamb. Farlowia 4: 427 (1955).
isabellinum Vain., Hedwigia 38: 188 (1899) T.
isidiosum C.W. Dodge, Nova Hedwigia 12 : 332 (1967) ["1966"].
leprolomum (Nyl.) Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 45 (1932).
microlepideum Malme. Ark.Bot. 230A (3): 17 (1925) T.
microlepideum var. ***pallida*** Räsänen. Ann. Soc. Bot. Zool.-Bot. Fenn. "Vanamo" 2 (1): 45 (1932) T.
microphyllizans (Nyl.) D.J. Galloway. New Zealand J. Bot. 21: 196 (1983).
pallidum Nyl., Syn. Meth. Lich. 2: 25 (1863) T.
Pannaria pallida (Nyl.) Hue. Bull. Bot. Soc. France 48: LVI (1902).
pannaroides Henssen, Mycotaxon 18: 98 (1983).

patagonicum Malme, Ark. Bot. 20A (3): 13 (1925) T.
Pannaria sphictrina var. *dilatata* Hue, Nouv. Arch. Mus. Hist. Nat. sér. 4, 8: 267 (1906) T.
Psoroma sphictrinum var. *dilatatum* (Hue) Zahlbr., Cat. Lich. Univ. 8: 303 (1932).
pholidotoides (Nyl.) Trevis. Lich. Veneta: 98 (1869).
Pannaria reticulata Hue, Nouv. Arch. Mus. Hist. Nat. sér. 4, 8: 261 (1906) T.
Psoroma reticulatum (Hue) Zahlbr., Cat. Lich. Univ. 3: 274 (1925).
pholidotum (Mont.) Müll. Arg., Flora 71: 45 (1888).
Parmelia pholidota Mont.. Ann. Sci. Nat. Bot. sér. 2, 4: 91 (1835) T.
Pannaria pholidota (Mont.) Nyl., Ann. Sci. Nat. Bot. sér. 4, 3: 182 (1855).
pulchrum Malme, Ark. Bot. 20A (3): 12 (1925).
rubromarginatum P. James & J.S. Murray, Mycotaxon 18: 40 (1983).
sphinctrinum (Mont.) Nyl., Ann. Sci. Nat. Bot. sér. 4, 3: 181 (1855).
Parmelia sphinctrina Mont., Ann. Sci. Nat. Bot. sér. 2, 4: 90 (1835) T.
Parmelia rubiginosa var. *sphinctrina* (Mont.) Hook. f. & Taylor, Fl. Ant. 2: 533 (1847).
Lecanora sphinctrina (Mont.) Nyl., Bull. Soc. Linn. Normandie, sér. 2, 2: 62 (1868).
Pannaria sphinctrina (Mont.) Hue, Bull. Soc. Bot. France 48: LVI (1902).
tenue Henssen, Mycotaxon 13: 437 (1981).
vulcanicum Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.). 3 (11): 339 (1924) T.
Lit.: Zahlbruckner (1924); Malme (1925); Lamb (1959); Follmann & Huneck (1976); Henssen & Renner (1981); Henssen *et al.* (1983); Henssen (1983); Galloway (1985); Quilhot *et al.* (1989); Calvelo (1992).

209. **Psoromidium** Stirt. (1877)
[Lecanorales: Pannariaceae]
versicolor (Hook. f. & Taylor) D.J. Galloway, New Zealand J. Bot. 21: 196 (1983).
Lecanora versicolor Hook. f. & Taylor, London J. Bot. 3: 642 (1844).
Psoroma versicolor (Hook. f. & Taylor) Müll. Arg., Flora 71: 534 (1888).
Psoroma subdescendens Nyl., Lich. Fueg. Patag.: 7 (1888).
Psoromaria subdescendens (Nyl.) Nyl. In Hue, Nouv, Arch. Mus. Hist. Nat. Paris sér. 3, 3: 45 (1891).
Pannaria subdescendens (Nyl.) Hue, Mém. Soc. Nat. Hist. Nat. Math. Cherbourg 38: 49 (1911).
Lit.: Galloway & James (1985).

210. **Psorotichia** A. Masal. (1855)
[Lichinales: Lichinaceae]
argentinica Müll. Arg., Flora 72: 142 (1889).
Lit.: Lamb (1959); Follmann (1965b).

211. **Psorula** Gotth. Schneid. (1979)
[Lecanorales: Psoraceae]
rufonigra (Tuck.) Gotth. Schneid., Biblioth. Lichenol. 13: 136 (1979).
Lit.: Huneck & Follmann (1976); Schneider (1979).

212. **Pterygiopsis** Vain. (1890)
[Lichinales: Lichinaceae]
foliacea Henssen, Symb. Bot. Upsal. 18: 76 (1963) T.
Lit.: Henssen (1963c); Jørgensen (1990).

213. **Punctelia** Krog (1982)
[Lecanorales: Parmeliaceae]
borreri (Sm.) Krog, Nordic J. Bot. 2: 291 (1982).
reddenda (Stirt.) Krog, Nordic J. Bot. 2: 291 (1982).
stictica (Delise in Duby) Krog, Nordic J. Bot. 2: 291 (1982).
subrudecta (Nyl.) Krog, Nordic J. Bot. 2: 291 (1982).
Lit.: Krog (1982); Swinscow & Krog (1988); Stenroos (1991); Elix (1993, 1994n); Adler (1996).

***Pyrenidium** Nyl. (1865)
[Dothideales: Dacampiaceae]
actinellum Nyl., Flora 48: 210 (1865).
Lit.: Alstrup & Hawksworth (1990); Santesson (1993); Wedin (1994); Ihlen (1998).

214. **Pyrenocollema** Reinke (1895)
[Dothideales: Arthopyreniaceae]

halodytes (Nyl.) R.C. Harris. In R. Egan, Bryologist 90: 164 (1987).
Lit.: Santesson (1939).

215. **Pyrenula** Ach. (1810) nom. cons.
[Pyrenulales: Pyrenulaceae]
apistea (Afzel.) Ach., Ges. Naturf. Freunde Berlin Mag. Neuesten Entdeck. *Gesammten* Naturk.. 6: 17 (1814).
cereina Eschw., Syst. Lich.: 25 (1824).
coryli (Nyl.) A. Massal., Ric. Auton. Lich. Crost.: 164 (1852).
kunthii Fée, Suppl. Essai Crypt. Ecorc.: 80 (1837).
mamillana (Ach.) Trevis., Conspect. Verruc.: 13 (1860).
nitida (Weigel) Ach., Syn. Meth. Lich.: 125 (1814).
nitidella (Schaer.) Müll. Arg., Bot. Jahrb. Syst. 6: 414 (1885).
occulta var. ***leucomma*** (Nyl.) Zahlbr., Cat. Lich. Univ. 1: 448 (1922).
Verrucaria micromma var. *leucomma* Nyl., Ann. Sci. Nat. Bot. sér. 4, 3: 176 (1855) T.
Pyrenula micromma var. *leucomma* (Nyl.) Trevis., Conspect. Verruc.: 13 (1860).
vernicosa (Kremp.) Müll. Arg., Flora 72: 68 (1889).
Lit.: Zahlbruckner (1924); Follmann (1961); Follmann & Huneck (1976)..

216. **Pyrrhospora** Körb. (1855)
[Lecanorales: Lecanoraceae]
?russula (Ach.) Hafellner. In Kalb & Hafellner, Herzogia 9: 86 (1992).
Lit.: Hafellner (1993b).

217. **Pyxine** Fr. (1825)
[Lecanorales: Physciaceae]
curvatula Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3 (11): 402 (1924) T.
Lit.: Aptroot (1987).

218. **Raciborskiella** Höhn. (1909)
[Fam. incert. sed.: Strigulaceae]
prasina (Müll.Arg.) R. Sant., Symb. Bot. Upsal. 12: 197 (1952).
Lit.: Santesson (1952).

219. **Racodium** Fr. (1829) nom. cons.
[*Mitosporic fungi*]
rupestre Pers, Tent. Disp. Meth. Fung.: 76 (1797).
Lit.: Hawksworth (1970); Hawksworth & Riedl (1977).

220. **Ramalina** Ach. (1810) nom. cons.
[Lecanorales: Ramalinaceae]
cactacearum Follmann, Nova Hedwigia 14: 256 (1968) ["1967"] T. = Niebla
Desmazieria cactacearum (Follmann) Follmann, Philippia 3: 86 (1976).
Ramalina follmannii C.W. Dodge, Nova Hedwigia 16: 493 (1969) ["1968"] T.
canariensis Steiner Öst. Bot. Z. 9: 8 (1904).
celastri (Spreng.) Krog & Swinscow, Norweg. J. Bot. 23: 159 (1976).
Ramalina striatula Nees & Flot., Linnaea 9: 501 (1835) T.
Ramalina ecklonii var. *ambigua* Mont. In C. Gay, Hist. Chile. Bot. 8: 79 (1852) T.
ceruchoides H. Magn. In Bendz, Santesson & Wachtmeister, Acta Chem. Scand. 19: 1185 (1965) T.
chilena (Nyl.) Kashiw., Bull. Natn. Sci. Mus. Tokyo ser. B, 16 (1): 2 (1990).
Ramalina pollinaria f. *chilena* Nyl., Bull. Soc. Linn. Normandie 4: 150 (1870) T.
chilensis Bertero ex Nyl., Bull. Soc. Linn. Normandie sér. 2, 4: 124 (1870) T.
Desmazieria chilensis (Bertero) Follmann & Huneck, Willdenowia 5: 208 (1969).
dissecta Kashiw., Bull. Natl. Sci. Mus. N. S. 14: 125 (1988).
farinacea (L.) Ach., Lich. Univ.: 606 (1810).
peruviana Ach. Lich. Univ.: 599 (1810).
pilulifera Taylor, London J. Bot. 6: 190 (1847) T.
Ramalina scopulorum var. *linearis* (Sw.) Mont., Ann. Sci. Nat. Bot. sér. 2, 4: 86 (1835).
Ramalina subulata Mont., Ann. Sci. Nat. Bot. sér. 3, 18: 304 (1852) T.
terebrata Hook. f. & Taylor, London J. Bot. 3: 654 (1844).
unilateralis F. Wils., Vict. Nat. 6: 69 (1889).
usnea (L.) Howe, Bryologist 17: 81 (1914).

Lit.: Huneck & Follmann (1967a); Follmann & Huneck (1969); Follmann (1976); Stevens (1987); Kashiwadani (1989); Kashiwadani & Kalb (1993); Blanchon *et al.* (1996); Quilhot *et al.* (1996).

221. **Redonia** C.W. Dodge (1973)
[Lecanoraceae: Physciaceae]
chilena C.W. Dodge, Lich. Fl. Antarct. Continent & Adj. Ids: 353 (1973) T.
cladocarpiza (I.M. Lamb) C.W. Dodge, Lich. Fl. Antarct Continent: 354 (1973).
Buellia cladocarpiza I.M. Lamb, Br. Antarct. Surv. Sci. Rep. 61: 24 (1968).
Lit.: Dodge (1973), Redon (1982).

222. **Reinkella** Darb. (1897)
[Arthoniales: Roccellaceae]
lirellina Darb., Bull. Herb. Boissier 5: 764 (1897).
Lit.: Darbishire (1897, 1898a); Tehler *et al.* (1997).

223. **Rhizocarpon** Ram. ex DC. (1805)
[Lecanorales: Rhizocarpaceae]
disporum (Hepp) Müll. Arg., Rev. Mycol. 1: 170 (1879).
distinctum Th. Fr., Lich. Scand.1: 625 (1874).
geographicum (L.) DC. In Lam. & DC., Fl. Fr. 3 ed., 2: 365 (1805).
lindsayanum Räsänen, Revista Sudamer. Bot. 7: 87 (1942).
obscuratum (Ach.) A. Massal., Ric. Auton. Lich. Crost.: 103 (1852).
Rhizocarpon microspermum Zahkbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3 (11): 368 (1924) T.
superficiale (Schaer.) Malme, Sv. Bot. Tidskr. 8, 3: 282 (1914).
Rhizocarpon barilochense Räsänen, Arch. Soc. Zool.-Bot. Fenn. "Vanamo" 5 (1): 85 (1952).
viridiatrum (Wulfen) Körb., Syst. Lich. Germ.: 262 (1855).
Lit. Runemark (1956a, 1956b); Hertel (1971); Henssen (1977); Timdal & Holtan-Hartwig (1988); Feuerer (1991).

224. **Rhizoplaca** Zopf (1905).
[Lecanorales: Parmeliaceae]
aspidophora (Vain.) Redon, Líquenes Antárticos: 81 (1985).
Lecanora aspidophora Vain., Résult. Voy. Belgica, Lich.: 19 (1903).
Omphalodina aspidophora (Vain.) Follmann & Redon, Willdenowia 6: 422 (1972).
chrysoleuca (Sm.) Zopf, Ann. Chemie 340: 291 (1905).
johowii (Follmann & Redon) Follmann, Philippia 4 (1): 35 (1979).
Omphalodina johowii Follmann & Redon, Willdenowia 6: 419 (1972) T.
melanophthalma (Ramond) Leuckert & Poelt, Nova Hedwigia 28: 72 (1977).
Omphalodina melanophthalma var. *obscura* (J. Steiner) Follmann & Redon, Willdenowia 6: 422 (1972).
Lit.: Follmann & Redon (1972b); Leuckert *et al.* (1977); Follmann (1979); Redon (1985); Jacobsen & Kappen (1988).

***Rhymbocarpus** Zopf (1896)
[Ostropales: Odontotremataceae]
elachistophorus (Nyl.) Triebel, Biblioth. Lichenol. 35: 145 (1989).
Lit.: Triebel (1989).

225. **Rimelia** Hale & Fletcher (1990)
[Lecanorales: Parmeliaceae]
cetrata (Ach.) Hale & Fletcher, Bryologist 93: 26 (1990).
reticulata (Taylor) Hale & Fletcher, Bryologist 93: 28 (1990).
Lit.: Hale & Fletcher (1990); Elix (1993, 1994o).

226. **Rimularia** Nyl. (1868)
[Lecanorales: Rimulariaceae]
hensseniae Hertel & Rambold, Biblioth. Lichenol. 38: 176 (1990).
insularis (Nyl.) Rambold & Hertel, In H. Hertel, Lecideae. Exs. Fasc. 8, No. 159 (1985).
psephota (Tuck.) Hertel & Rambold, In H. Hertel, Mitt. Bot. München 23: 334 (1987).
Lecidea psephota Tuck. Proc. Amer. Acad. Arts Sci. 12: 181 (1877) T.
Lambiella psephota (Tuck.) Hertel, Beih. Nova Hedwigia 79: 460 (1984).
Lit.: (Hertel 1985, 1987b); Rambold (1989); Hertel & Rambold (1990).

227. **Rinodina** (Ach.) S.F. Gray (1821)
[Lecanorales: Physciaceae]
conradii Körb., Syst. Lich. Germ.: 123 (1855).
endochrysodes (Nyl.) Müll. Arg., Nuovo Giorn. Bot. Ital. 21: 43 (1889).
Lecanora endochrysodes Nyl. In J. Cromb., Bot. J. Linn. Soc. 15: 232 (1876).
deceptionis I.M. Lamb., Br. Antarct. Surv. Sci. Rep. 61: 65 (1968) T.
endophragmia I.M. Lamb, Br. Antarct. Surv. Sci. Rep. 61: 71 (1968).
gennarii Bagl., Comment. Soc. Crittogam. Ital. 1: 17 (1861).
infuscata (Nyl.) Zahlbr., Cat. Lich. Univ. 7: 522 (1931).
Lecanora infuscata Nyl., Ann. Sci. Nat. Bot. sér. 4, 3: 156 (1855) T.
nimbosa (Fr.) Th.Fr., Lichenogr. Scand.1: 193 (1871).
occulta (Körb.) Sheard, Lichenologist 3: 349 (1967).
olivaceobrunnea C.W. Dodge & G.E. Baker, Ann. Missouri Bot. Gard. 25: 659 (1938).
peloleuca (Nyl.) Müll. Arg., Nuovo Giorn. Bot. Ital. 23: 125 (1891).
Lecanora peloleuca Nyl., Flora 48: 338 (1865).
Lecanora endochrysodes Nyl. In J. Crombie, Bot. J. Linn. Soc. 15: 232 (1876) T.
Rinodina endochrysodes (Nyl.) Müll. Arg., Nuovo Giorn. Bot. Ital. 21: 43 (1889).
Rinodina antarctica Müll. Arg., Miss. Sci. Cap Horn, Lich.: 163 (1888) T.
Rinodina deceptionis I.M. Lamb, Br. Antarct. Surv. Sci. Rep. 61: 65 (1968) T.
aff. ***subcrustacea*** (Müll. Arg.) Zahlbr., Cat. Lich. Univ. 7: 567 (1931).
thiomela (Nyl.) Müll. Arg., Flora 64: 515 (1881).
turfacea (Wahlenb.) Körb., Syst. Lich. Germ.: 123 (1855).
Lit.: Lamb (1968); Mayrhofer (1983, 1985); Redon (1985); Matzer *et al.* (1998); Jacobsen & Kappen (1988); Aptroot & Van der Knapp (1993).

228. **Roccella** DC. (1805)
[Arthoniales: Roccellaceae]
arboricola Follman, Nova Hedwigia 15: 334 (1968) T.
atacamensis Follmann, Herzogia 9: 658 (1993) T.
babingtonii Mont., Ann. Sci. Nat. Bot. sér. 3, 18: 305 (1852).
Roccella montagnei var. *peruensis* Kremp., Verhandl. Zool.-Bot. Ges. Wien 26: 442 (1876).
Roccella peruensis (Kremp.) Darb., Biblioth. Bot. 45: 47 (1898).
gayana Mont. In C. Gay, Hist. Chile, Bot. 8: 88 (1852) T.
portentosa (Mont.) Darb., Biblioth. Bot. 45: 29 (1898).
Roccella tinctoria var. *portentosa* Mont. In C. Gay, Hist. Chile, Bot. 8: 84 (1852) T.
Lit.: Darbishire (1897, 1898b); Huneck & Follmann (1967b); Follmann (1962, 1968a); Follmann *et al.* (1993).

229. **Roccellaria** Darb. (1897)
[Arthoniales: Roccellaceae]
mollis (Hampe) Zahlbr., Cat. Lich. Univ. 2: 511 (1923).
Roccella mollis Hampe, Linnaea 17: 122 (1843) T.
Roccella intricata Mont., Ann. Sci. Nat. Bot. sér. 3, 11: 57 (1849) T.
Roccellaria intricata (Mont.) Darb., Ber. Deutsch. Bot. Ges. 15: 6 (1897).
Lit.: Follmann (1962); Follmann *et al.* (1993).

230. **Roccellina** Darb. em. Tehler (1983)
[Arthoniales: Roccellaceae]
Lobodirina Follm. (1967)
accedens (Nyl.) Tehler, Opera Bot 70: 76 (1983).
Lecidea accedens Nyl., Ann. Sci. Nat. Bot. sér 4, 3: 163 (1855) T.
Toninia accedens (Nyl.) Zahlbr., Beih. Bot. Centralbl. 19 (2): 77 (1905).
Schismatomma accedens (Nyl.) Zahlbr. In C. Skottsberg. Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.). 3 (11): 327 (1924).
Roccellina olivacea Follmann. Philippia 4 (2) :111 (1979) T.
cerebriformis (Mont.) Tehler. Opera Bot. 70: 51 (1983).
Chiodecton cerebriforme Mont., Ann. Sci. Nat. Bot. sér. 3, 18: 311 (1852) T.
Lobodirina cerebriformis (Mont.) Follmann, Nova Hedwigia 14: 234 (1968) ["1967"].
Roccellina condensata Darb., Ber. Deutsch. Bot. Ges. 16: 11 (1898) T.
Dirina condensata (Darb.) Zahlbr., Acta Horti Gothob. 2: 6 (1925). nomen sed non planta.
cerebriformis (Mont.) Tehler f. ***sorediata*** Tehler, Opera Bot. 70: 53 (1983) T.
chalybea Tehler, Opera Bot. 70: 57 (1983).
chilena (C.W. Dodge) Tehler, Opera Bot. 70: 59 (1983).

Dirinastrum chilenum C.W. Dodge, Nova Hedwigia 12: 324 (1967) ["1966"] T.
Dirinastrum chilense (C.W. Dodge) Follmann, Nova Hedwigia 14: 233 (1968) ["1967"].
flavida Tehler, Opera Bot. 70: 54 (1983) T.
inaequabilis Tehler, Opera Bot. 70: 63 (1983) T.
limitata (Nyl.) Tehler, Opera Bot. 70: 59 (1983).
Dirina limitata Nyl., Ann. Sci. Nat. Bot. sér 4, 3: 158 (1855) T.
luteola Follmann, Nova Hedwigia 12: 239 (1968) ["1967"] T.
lutosa (Zahlbr.) Tehler, Opera Bot. 70: 65 (1983).
Dirina lutosa Zahlbr., Acta Hoti Gothob. 2: 5 (1925) T.
mahuiana (Follmann) Tehler, Opera Bot. 70: 55 (1983),
Lobodirina mahuiana Follmann, Nova Hedwigia 14: 234 (1968) ["1967"] T.
Dirina condensata sensu Zahlb., Acta Horti Gothob. 2: 6 (1925).
nigricans Tehler, Opera Bot. 70: 72 (1983) T.
nigrocincta Tehler, Opera Bot. 70: 61 (1983).
obscura Tehler, Opera Bot. 70: 69 (1983) T.
suffruticosa Tehler, Opera Bot. 70: 75 (1983) T.
terrestris Tehler, Opera Bot. 70: 71 (1983) T.
Lit.: Tehler (1983); Quilhot *et al.* (1983); Follmann *et al.* (1993).

231. **Roccellinastrum** Follmann (1967)
[Lecanorales: ?Micareaceae]
candidum (Müll. Arg.) Henssen, Nordic J. Bot. 2: 592 (1982).
Byssocaulon candidum Müll.-Arg., Nuovo Giorn. Bot. Ital. 21: 49 (1889).
Sagenidium candidum (Müll. Arg.) Follmann, Philippia 2: 284 (1975)
epiphyllum Henssen & Vobis, Nordic J. Bot. 2: 592 (1982) T.
spongioideum Follmann, Nova Hedwigia 14: 244 (1968) ["1967"] T.
Lit.: Follmann (1968a); Follmann & Crespo (1975); Henssen *et al.* (1982); Kantvilas (1990a); Follmann & Schulz (1993).

* **Roselliniella** Vain. (1921).
[Sordariales: incert sed.]
coccocarpiae (Pat.) Matzer & R.Sant. In M. Matzer & J. Hafellner, Biblioth. Lichenol. 37: 66 (1990).
Lit.: Matzer & Hafellner (1990).

232. **Sagenidium** Stirt. (1877)
[Arthoniales: Roccellaceae]
niveum (Mont.) Follmann, Bot. Jahrb. Syst. 96: 49 (1975).
Byssocaulon niveum Mont., Ann. Sci. Nat. Bot. 2,3: 355 (1835) T.
patagonicum Henssen, Lichenologist 11: 264 (1979).
Lit.: Follmann (1975); Follmann & Huneck (1976); Henssen *et al.* (1979).

233. **Santessonia** Hale & Vobis (1978)
[Lecanorales: Physciaceae]
cervicornis (Follmann) Follmann, Crypt. Bot. 5: (1995).
Roccella cervicornis Follmann, Ber. Deutsch. Bot. Ges. 79: 453 (1967) T.
Lit.: Follmann (1967, 1995).

234. **Santessoniella** Henssen (1997)
[Lecanorales: Pannariaceae ad. int.]
chilensis (Hue) Henssen, Symb. Bot. Upsal. 32 (1): 83 (1997).
Placynthium chilensis Hue, Bull. Soc. Linn. Normandie sér. 5, 9: 158 (1906) T.
elongata Henssen, Symb. Bot. Upsal. 32 (1): 83 (1997).
polychidioides (Zahlbr.) Henssen, Symb. Bot. Upsal. 32 (1): 77 (1997).
Lemmopsis polychidioides Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3 (11): 333 (1924) T.
Polychidium polychidioides (Zahlbr.) Henssen, Symb. Bot. Upsal. 18 (1): 105 (1963).
Lit.: Henssen (1997); Jørgensen (1998).

235. **Schaereria** Th.Fr. (1860)
[Ascomycota incert sed.: Schaereriaceae]
fuscocinerea (Nyl.) Clauzade & Cl. Roux, Bull. Soc. Bot. Centre Ouest, sér., No. spéc. 7: 829 (1985).
Lit.: Rambold (1989); Lunke *et al.* (1996).

236. **Schismatomma** Flot. & Körb. ex A. Massal. (1852)
[Arthoniales: Roccellaceae]
accedens (Nyl.) Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.). 3 (11): 327 (1924).
Lecidea accedens Nyl., Ann. Sci. Nat. Bot. sér. 4, 3: 163 (1855) T.
atacamensis C.W. Dodge, Nova Hedwigia 12: 327 (1967) ["1966"] T.
chilense C.W. Dodge, Nova Hedwigia 16: 489 (1969) ["1968"] T.
epileucum (Nyl.) Zahlbr., Cat. Lich. Univ. 2: 556 (1923).
fuegiensis C.W. Dodge, Nova Hedwigia 12: 328 (1967) ["1966"] T.
graphidioides (Leight.) Zahlbr., Cat. Lich. Univ. 2: 557 (1923).
gymnophorum (Nyl.) Zahlbr., Cat. Lich. Univ. 2: 558 (1923).
Lit.: Zahlbruckner (1924); Follmann (1965); Dodge (1967, 1969).

***Scutula** Tul. (1852) nom. cons. prop.
[Lecanorales : Micareaceae]
miliaris (Wallr.) Trevis., Spighe e Paglie: 10 (1853).
Peziza miliaris Wallr., Fl. Crypt. Germ. 2: 499 (1833).
Lit.: Rambold & Triebel (1992); Triebel *et al*. (1997).

237. **Siphula** Fr. (1831) nom. cons.
[Lecanorales: incert. sed.]
comata (Nyl. ex Cromb.) R. Sant. & Kantvilas, Herzogia 12: 14 (1996).
Siphula ramalinoides var. *comata* Nyl. In J. Crombie., Bot. J. Linn. Soc. 15: 226 (1876) T.
complanata (Hook. f. & Taylor) R. Sant. In D.J. Galloway. New Zealand J. Bot. 21: 197 (1983).
Sphaerophoron complantum Hook. f. & Taylor, London J. Bot. 3: 654 (1844) T.
Siphula subcoriacea Müll. Arg., Miss. Sci. Cap Horn, Lich.: 151 (1888) T.
Siphula patagonica Vain., Résult. Voy. Belgica, Lich.: 39 (1903) T.
decumbens Nyl., Lich. Nov. Zel.: 14 (1888).
ramalinoides Nyl. In J. Crombie, Bot. J. Linn. Soc. 15: 226 (1876) T.
Lit.: Räsänen (1937); Galloway (1985); Kantvilas (1987, 1994, 1996).

238. **Siphulastrum** Müll. Arg. (1889)
[Lecanorales: Pannariaceae]
mamillatum (Hook. f. & Taylor) D.J. Galloway, New Zealand J. Bot. 21: 197 (1983).
Lecidea mamillata Hook. f. & Taylor, London J. Bot. 3: 637 (1844).
Parmeliella mamillata (Hook. f. & Taylor) Zahlbr., Cat. Lich. Univ. 3: 212 (1925).
Lecidea adumbrans Nyl., Lich. Fueg. Patag.: 14 (1888).
Parmeliella adumbrans (Nyl.) Müll. Arg., Flora 71: 539 (1888).
Parmeliella adumbrans f. *nigrata* Müll. Arg., Nuovo Giorn. Bot. Ital. 21: 40 (1889).
squamosum P.M. Jørg., Lichenologist 00: 000 (1998) T.
triste Müll. Arg., Flora 72: 143 (1889).
Lit.: Galloway (1985); Jørgensen & Galloway (1992a); Jørgensen (1998).

***Skyttea** Sherwood, D.Hawksw. & Coppins (1981)
[Ostropales: Odontotremataceae]
nitschkei (Körb.) Sherwood, D. Hawksw. & Coppins, Trans. Brit. Mycol. Soc. 75: 488 (1981).
Lit.: Sherwood *et al*. (1981); Triebel (1989); Kondratyuk & Galloway (1995).

* **Skyttella** D. Hawksw. & R. Sant. (1988)
[Leotiales: incert sed.]
mulleri (Willey) D. Hawksw. & R. Sant., Graphis Scripta 2 (2): 34 (1988).
Lit.: Hawksworth & Santesson (1988).

239. **Solorina** Ach. (1808)
[Peltigerales: Peltigeraceae]
spongiosa (Sm.) Anzi, Comment. Soc. Crittogam. Ital. 1: 136 (1862).
Lit.: Galloway (1998).

***Sphaerellothecium** Zopf (1897)
[Dothideales: Mycosphaerellaceae]

minutum Hafellner, Herzogia 9: 760 (1993).
Lit.: Hafellner (1993c); Wedin (1994).

240. **Sphaerophorus** Pers (1794) nom. cons.
[Lecanorales: Sphaerophoraceae]
globosus (Huds.) Vain., Résult. Voy. Belgica, Lich.: 35 (1903).
Sphaerophorus globiferus var. *lacunosus* Tuck., U.S. Expl. Exped. 1838-1842, 17. Bot. 1: 116 (1874) ["1862"] T.
Sphaerophorus globosus var. *lacunosus* (Tuck.) Vain., Résult. Voy. Belgica, Lich.: 35 (1903).
Sphaerophoron globiferum var. *versicolor* Müll. Arg., Bot. Jahrb. Syst. 4: 145 (1888) T.
Sphaerophorus globosus var. *versicolor* (Müll. Arg.) Zahlbr., Cat. Lich. Univ. 1: 693 (1922).
Lit.: Wedin (1993, 1995).

241. **Spilonema** Bornet (1856)
[Lecanorales: Coccocarpiaceae]
?paradoxum Bornet, Mém. Soc. Imp. Sci. Nat. Cherbourg 4: 226 (1856).
?revertens Nyl., Flora 48: 601 (1865).
Lit.: Henssen (1963c, 1977).

***Spirographa** Zahlbr. (1903)
[Ostropales: Odontotremataceae]
fusisporella (Nyl.) Zahlbr., Cat. Lich. Univ. 2: 285 (1923).
Lit.: Santesson (1993).

242. **Squamarina** Poelt (1958)
[Lecanorales: Bacidiaceae]
squamulosa (Nyl.) Follmann, Philippia 2: 74 (1974).
Squamaria squamulosa Nyl., Ann. Sci. Nat. Bot. sér. 4, 3: 152 (1855) T.
Lit.: Follmann (1974); Timdal (1983); Feige *et al.* (1997).

243. **Staurothele** Norman (1853) nom. cons.
[Verrucariales: Verrucariaceae]
diffractella Tuck. var. ***flavicans*** Müll. Arg., Flora 71: 548 (1888).
?frustulenta Vain., Acta Soc. Fauna Fl. Fenn. 49: (2): 93 (1921).
gelida (Hok.f. & Taylor) I.M. Lamb. Discovery Rep. 25: 23 (1948).
monospora (Nyl.) Malme, Ark. Bot. 22 (1): 9 (1928).
Verrucaria umbrina var. *monospora* Nyl., Ann. Sci. Nat. Bot. sér. 4, 3: 175 (1855) T.
monosporoides R. Sant., Ark. Bot. 31A (7): 8 (1944).
Lit.: Santesson (1944); Follmann (1961); Henssen (1977); Jacobsen & Kappen (1988); Thomson (1991).

244. **Stephanocyclos** Hertel (1983)
[Lecanorales: Lecideaceae]
henssenianus Hertel., Lecid. Exs. Fasc. 5, No. 96 (1983).
Lit.: Hertel (1984, 1987b).

245. **Stereocaulon** Hoffm. (1796) nom. cons.
[Lecanorales: Stereocaulaceae]
antarcticum Vain., Résult. Voy. Belgica, Lich.: 16 (1903) T.
corticatulum Nyl., Flora, Jena 41: 117 (1858).
corticatulum Nyl. var. ***humile*** (Müll. Arg.) I.M. Lamb ex Frey, Bot. Jahrb. Syst. 86: 244 (1967).
corticatulum Nyl. var. ***subcorticatum*** (Räsänen) I.M. Lamb. Canad. J. Bot. 29: 581 (1951).
Stereocaulon subcorticatum Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 24 (1932) T.
crambidiocephalum I.M. Lamb., J. Hattori Bot. Lab. 43: 290 (1977).
curtum (Räsänen) I.M. Lamb, Can. J. Bot. 29 : 565 (1951).
Stereocaulon macrocarpum var. *curta* Räsänen, Revista Univ. (Santiago) 22: 200 (1937) T.
dusenii I.M. Lamb., J. Hattori Bot. Lab. 43: 292 (1977) T.
glabrum (Müll. Arg.) Vain., Rés. Voy. Belgica Lich.: 16 (1903).
Stereocaulon alpinum var. *glabrum* Müll. Arg., Miss. Sci. Cap Horn, Lich.: 151 (1889) T.
Stereocaulon patagonicum I.M. Lamb. Farlowia 4: 454 (1955).
Stereocaulon colensoi var. *reagens* Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2(1): 24 (1932).
Pilophoron colensoi var. *reagens* (Räsänen) Zahlbr., Cat. Lich. Univ. 10: 381 (1939).
Stereocaulon patagonicum f. *reagens* (Räsänen) I.M. Lamb. Anales Parques Nac. 7: 99 (1959) ["1958"].

Stereocaulon patagonicum f. *subirregulare* I.M. Lamb, Farlowia 4: 456 (1955).
glabrum (Müll. Arg.) Vain. f. ***flabellans*** (I.M. Lamb) I.M. Lamb, J. Hattori Bot. Lab. 43: 218 (1977).
Stereocaulon paschale var. *alpinum* f. *flabellans*, I.M. Lamb, Farlowia 4: 457 (1955).
implexum Th.Fr., Stereoc. Piloph. Comm.: 23 (1857) T.
Stereocaulon ramulosum var. *implexum* (Th.Fr.) Nyl., Syn. Meth. Lich. 1 (2): 236 (1860).
Stereocaulon proximum var. *compactius* Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.) 3 (11): 373 (1924) T.
melanopotamicum I.M. Lamb., J. Hattori Bot. Lab. 43: 296 (1977).
Stereocaulon corticatulum var. *procerum* I.M. Lamb, Farlowia 4 : 462 (1955).
meyeri B. Stein, Jahrsb. Schles. Ges. Vaterl. Cult. 66: 134 (1888).
meyeri B. Stein var. ***farinosum*** (Th.Fr.) I.M. Lamb, Canad. J. Bot. 29: 582 (1951).
?microcarpum, Müll. Arg., Flora 62: 162 (1879).
?obesum Th.Fr., Stereoc. Piloph. Comm.: 28 (1857).
ramulosum (Sw.) Räuschel., Nomenclat. Bot. Ed. 3: 328 (1797).
ramulosum (Sw.) Räuschel, f. ***elegans*** Th.Fr., Stereoc. Piloph. Comm.: 11 (1857).
ramulosum f. ***subcompressum*** I.M. Lamb, J. Hattori Bot. Lab. 43: 282 (1977).
ramulosum (Sw.) Räuschel var. ***macrocarpum*** (A. Rich.) C. Bab. In Hook. f., Fl. Nov. Zel. 2: 294 (1855).
ramulosum (Sw.) Räuschel var. ***pulvinare*** (C.W. Dodge) I.M. Lamb, J. Hattori Bot. Lab. 43: 283 (1977).
Stereocaulon pulvinare C.W. Dodge, B.A.N.Z.A.R.E. Rep. 7: 139 (1948).
ramulosum (Sw.) Räuschel var. ***pulvinare*** (C.W. Dodge) I.M. Lamb f. crebratum I.M. Lamb, J. Hattori Bot. Lab. 43: 283 (1977).
stenospermum (I.M. Lamb) I.M. Lamb., J. Hattori Bot. Lab. 43: 304 (1977).
Stereocaulon argus var. *stenospermum* I.M. Lamb, Farlowia 4: 460 (1955).
? strictum Th.Fr., Stereoc. Piloph. Comm.: 24 (1857).
tomentosum Fr., Sched. Crit. Lich. Exs. III: 20 (1825).
Stereocaulon tomentosum ssp. *magellanicum* Th.Fr., Stereoc. Piloph. Comm.: 31 (1857).
Stereocaulon paschale var. *magellanicum* (Th.Fr.) Nyl., Mém. Soc. Sci. Nat. Cherbourg 5: 96 (1857).
Stereocaulon magellanicum (Th.Fr.) Zahlbr., Cat. Lich. Univ. 4: 651 (1927).
verruciferum Nyl., Syn. Meth. Lich. 1 (2): 248 (1860).
Stereocaulon speciosum I.M. Lamb, Farlowia 4: 458 (1955).
verruciferum Nyl. var. ***surreptans*** (I.M. Lamb) I.M. Lamb, J. Hattori Bot. Lab. 43: 256 (1977).
Stereocaulon speciosum Nyl. var. *surreptans* I.M. Lamb, Farlowia 4: 459 (1955).
vesuvianum Pers., Ann. Wetterauischen. Ges. Gesammte Naturk. 2: 19 (1810).
vesuvianum Pers. var. ***kilimandscharoense*** B. Stein., Jahrber. Schles. Ges. Vaterl. Cult. 66: 134 (1888).
vesuvianum var. ***efflorescens*** (Räsänen) I.M. Lamb. Anales Parques Nac. 7: 100 (1959) ["1958"].
Stereocaulon obesum var. *efflorescens* Räsänen, Anales. Soc. Ci. Argent. 128: 136 (1939).
Stereocaulon violascens Müll. Arg., Rev. Mycol. 1: 164 (1879).
Stereocaulon vesuvianum var. *violascens* (Müll. Arg.) I.M. Lamb, Anales Parques Nac. 7: 101 (1959) ["1958"].

Lit.: Lamb (1977, 1978).

246. **Sticta** (Shreb.) Ach. (1803)
[Peltigerales: Stictaceae]
ainoae D.J. Galloway & J. Pickering, Biblioth. Lichenol. 38: 92 (1990) T.
caulescens De Not., Osserv. Sticta: 12 (1851) T.
Stictina caulescens (De Not.) Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 43 (1932).
Sticta biatora De Not., Osserv. Sticta: 13 (1851) T.
Stictina filicina f. *latissima* Nyl. In J. Cromb., Bot. J. Linn. Soc. 15: 229 (1876) T.
Stictina caulescens f. *pallidoglauca* Räsänen, Revista Univ. (Santiago) 22: 202 (1937) T.
Stictina caulescens f. *brunnea* Räsänen, Revista Univ. (Santiago) 22: 303 (1937) T.
fuliginosa (Hoffm.) Ach., Methodus: 280 (1803).
gaudichaldia Delise, Mém. Soc. Linn. Normandie 2: 80, Tab. VII. fig. 23 (1825).
Sticta gaudichaldiana [sic.] Pers. In C. Gaudichaud-Beaupré, Voy. Uranie Bot.: 200 (1827).
Sticta filicina var. *gaudichaudii* (Delise) Mont., Ann. Sci. Nat. Bot. sér. 3. 18: 308 (1852).
Sticta freycinetii var *gaudichaudii* (Delise) Linds., Trans. Roy. Soc. Edinburgh 22: 197 (1859).
Stictina gaudichaudii (Delise) Nyl., Syn. Meth. Lich. 1 (2): 345 (1860).
Stictina quercizans var. *gaudichaudii* (Delise) Nyl., Flora 48: 297 (1865).
Sticta malovina Fr., Syst. Orb. Veg. 1: 283 (1825).
Sticta negeri Vain., Hedwigia 38: 187 (1899) T.
Stictina negeri (Vain.) Darb., Wiss. Ergebn. Schwed. Südpolarexp. 1901-1903. 4 (11): 55 (1912).
hypochra Vain., Résult. Voy. Belgica, Lich.: 29 (1903).
Stictina fuliginosa f. *firmior* Cromb., Bot. J. Linn. Soc. 15: 229 (1876) T.

Stictina quercizans var. *glaucovirens* Jatta, Malpighia 20: 6 (1906) T.
Stictina filicinella var. *ochraceofusca* Räsänen, Anales Soc. Ci. Argent. 128: 143 (1939).
hypopsila (Mont.) Cromb., Bot. J. Linn. Soc. 16: 223 (1877).
Sticta filicina var. *lineariloba* f. *hypopsila* Mont., Ann. Sci. Nat. Bot. sér.3. 18: 308 (1852) T.
Sticta damaecornis var. *hypopsila* (Mont.) Nyl., Ann. Sci. Nat. Bot. sér. 4, 11: 213 (1859).
Sticta lineariloba var. *hypopsila* (Mont.) Nyl., Syn. Meth. Lich. 1 (2): 355 (1860).
Sticta laciniata var. *denudata* sensu Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3 (11): 353 (1924) non. Nyl. [Syn. Meth. Lich. 1 (2): 354 (1860)].
limbata (Sm.) Ach., Methodus: 280 (1803).
lineariloba (Mont.) Nyl., Syn. Meth. Lich. 1 (2): 355 (1860).
Sticta filicina var *lineariloba* Mont., Ann. Sci. Nat. Bot. sér. 3, 18: 308 (1852) T.
Lobaria lineariloba (Mont.) Trevis., Lich. Veneta Exs. No. 75 (1869).
longipes (Müll. Arg.) Malme, Bih. Kongl. Svenska Vetensk.-Akad. Handl. 25 (3/6): 11 (1899).
Stictina longipes Müll. Arg., Flora, Jena 65: 303 (1882) T.
Stictina filicinella var. *pallescens* Räsänen, Revista Univ. (Santiago) 22: 303 (1937) T.
Stictina filicinella var. *roseola* Räsänen, Revista Univ. (Santiago) 22: 303 (1937) T.
santessonii D.J. Galloway, Lichenologist 26: 268 (1994) T.
sublimbata (Steiner) Swinscow & Krog. In D.J. Galloway, New Zealand. J. Bot. 21: 198 (1983).
weigelii (Ach.) Vain., Acta Soc. Fauna Fl. Fenn. 7: 189 (1890).
Lit.: Galloway (1994, 1995, 1997).

***Stigmidium** Trevis (1860)
[Dothideales: Mycosphaerellaceae]
peltideae (Vain.) R. Sant., Svensk Bot. Tidskr. 54 (4): 510 (1960).
pumilum (Lettau) Matzer & Hafellner, Biblioth. Lichenol. 37: 115 (1990).
Lit.: Santesson (1960, 1993); Hawksworth (1975); Matzer & Hafellner (1990).

247. **Strigula** Fr. (1823)
[Ascomycota incert. sed: Strigulaceae]
smaragdula Fr., Linnaea 5: 550 (1830).
Strigula elegans (Fée) Müll. Arg., Flora 63: 41 (1880).
Lit.: Santesson (1952).

248. **Tapellaria** Müll. Arg. (1890)
[Lecanorales: Ectolechiaceae]
epiphylla (Müll. Arg.) R. Sant. In C.A. Thorold, J. Ecol.: 129 (1952).
Lit.: Santesson (1952).

249. **Teloschistes** Norman (1853)
[Teloschistales: Teloschistaceae]
chrysophthalmus (L.) Th.Fr., Gen. Heterolich. Eur.: 51 (1861).
Physcia chrysophthalma f. *flavoalbida* Kremp., Verhandl. Zool.-Bot. Ges. Wien 18: 322 (1868) T.
Teloschistes chrysophthalmus f. *flavoalbida* (Kremp.) Malme, Ark. Bot. 20A (3): 46 (1926).
flavicans (Sw.) Norman, Nyt Mag. Naturvid. 7: 16 (1852).
Teloschistes flavicans var. *crocea* f. *maxima* Meyen & Flotow, Nov. Actorum Acad. Caes. Leop.-Carol. Nat. Cur. 19 Suppl.: 210 (1843) T [nom. nud.].
Teloschistes flavicans var. *maximus* (Meyen & Flotow) Zahlbr., Cat. Lich. Univ. 7: 323 (1931).
hosseusianis Gyeln., Borbásia Nova 9: 1 (1942).
nodulifer (Nyl.) Hillm., Hedwigia 69: 326 (1930).
Physcia nodulifera Nyl., Syn. Meth. Lich. 1 (2): 407 (1860).
Borrera nodulifera (Nyl.) Trevis., Flora 44: 52 (1861).
peruensis (Ach.) J.W. Thomson, In Thomson & Iltis, Bryologist 71: 32 (1968).
Borrera pubera var. *peruensis* Ach., Syn. Meth. Lich.: 224 (1814).
Physcia peruensis (Ach.) Nyl., Syn., Meth. Lich. 1 (2): 407 (1860).
stellatus (Meyen & Flotow) Müll. Arg., Jahrb. Königl. Bot. Gart. Berlin 2: 309 (1883).
Evernia stellata Meyen & Flotow, Nov. Actorum Acad. Caes. Leop.-Carol. Nat. Cur. 19 Suppl.: 210 (1843).
velifer F. Wils., Vict. Nat. 6: 69 (1889).
Teloschistes hollermayeri Räsänen, Revista Univ. (Santiago) 22: 201 (1937) T.
villosus (Ach.) Norman, Nyt Mag. Naturvidensk. 7: 17 (1852).
Lit.: Hillmann (1930); Zahlbruckner (1931); Follmann (1968a); Thomson & Iltis (1968); Almborn (1989, 1992).

250. **Tephromela** M. Choisy (1929)
[Lecanorales: Bacidiaceae]
atra (Huds.) Hafellner. In K. Kalb, Lich. Neotrop. Exs. Fasc. 7: 15 No. 297 (1983).
Lit.: Rambold (1989); Poelt (1993); Poelt & Grube (1993); Ekman (1996).

251. **Thamnolecania** (Vain.) Gyeln. (1933)
[Lecanorales: Bacidiaceae]
fuegensis C.W. Dodge, Nova Hedwigia 12: 342 (1967) ["1966"] T.
Lit.: Dodge (1967); Ekman (1996).

252. **Thamnolia** Ach. ex Schaer. (1850) nom. cons.
[Lecanorales: incert sed.]
vermicularis (Sw.) Ach ex Schaer., Enum. Crit. Lich. Europ.: 243 (1850).
Thamnolia subuliformis (Ehrh.) W.L. Culb., Brittonia 15: 144 (1963).
Thamnolia subvermicularis Asah., J. Jap. Bot. 13: 317 (1937).
Lit.: Kärnefelt & Thell (1995).

253. **Thelenella** Nyl. (1855)
[Ascomycota incert. sed: Thelenellaceae]
antarctica (I.M. Lamb) O.E. Erikss., Opera Bot. 60: 96 (1981).
Microglaena antarctica I.M. Lamb, Disc. Rep. 25: 24 (1948) T.
fernandeziana (Zahlbr.) H. Mayrhofer, Biblioth. Lichenol. 26: 33 (1987).
Microglaena fernandeziana Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.). 3 (11): 318 (1924) T.
kerguelena (Nyl.) H. Mayrhofer, Biblioth. Lichenol. 26: 43 (1987).
Lit.: Lamb (1948); Mayrhofer (1987); Aptroot & van der Knapp (1993).

254. **Thelidium** A. Massal. (1855)
[Verrucariales: Verrucariaceae]
inaequale C.W. Dodge & G.E. Baker, Ann. Missouri Bot. Gard. 25: 524 (1938).
Note: It is possible that the taxa; *Porina* (*Segestria*) *chilena* C.W. Dodge [Nova Hedwigia 12: 307 (1967) ["1966"] T]; and *Porina* (*Segestria*) *mahuana* C.W. Dodge [Nova Hedwigia 16: 483 (1969) ["1968"] T]: are both referable to *Thelidium*, but not having seen the material we hesitate to namew them in *Thelidium*.
Lit.: Dodge & Baker (1938); Dodge (1967, 1969).

255. **Thelocarpon** Nyl. (1853).
[Lecanorales: Acarosporaceae]
?laureri (Flotow) Nyl., Mém. Soc. Nat. Sci. Cherbourg 3: 191 (1855).
Lit.: Salisbury (1966).

256. **Thelopsis** Nyl. (1855) nom. cons.
[Ostropales: ?Stictidaceae]
cf. ***isiaca*** Stizenb., Ber. St. Gallischen Naturw. Ges.: 262 (1895).
Lit.: Egea & Torrente (1996).

257. **Thelotrema** Ach. (1803)
[Ostropales: Thelotremataceae]
lepadinum (Ach.) Ach., Meth. Lich.: 132 (1803).
osornense C.W. Dodge, Nova Hedwigia 12: 331 (1967) ["1966"] T.
subdenticulatum (Zahlbr.) G. Salisb., Lichenologist 5: 267 (1972).
Ocellularia subdenticulata Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Is. 2 (11): 329 (1924) T.
Lit.: Zahlbruckner (1924); Salisbury (1972a, 1975, 1978), Galloway (1985).

258. **Thyrea** A. Massal. (1856)
[Lichinales: Lichinaceae]
pulvinata (Schaer.) A. Massal., Flora 39: 211 (1856).
Lit.: Lamb (1959); Follmann (1965b); Henssen (1986), Moreno & Egea (1991, 1992).

259. **Toninia** A. Massal. (1852) nom. cons. prop.
[Lecanorales: Lecanoraceae]
Lobiona Kilias & Gotth. Schneid., Lichenologist 10: 27 (1978).
auriculata Timdal, Opera Bot. 110: 44 (1991).

Lobiona albomarginata Kilias & Gott. Schneid., Lichenologist 10: 27 (1978), non *Toninia albomarginata* de Lesd.
australis Timdal, Opera Bot. 110: 45 (1991).
bullata (Meyen & Flot) Zahlbr., Beih. Bot. Zentralbl. 19, 2: 76 (1905).
Lecidea bullata Meyen & Flot., Nov. Actorum Acad. Caes. Leop.-Carol. Nat. Cur. 17, Suppl. 2: 227 (1843).
Toninia badia Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 20, 3: 21 (1944) T.
?cinereovirens (Schaer.) A. Massal., Ric. Auton. Lich. Crost.: 107 (1852).
?hosseusiana Gyeln., Ann. Hist.-Nat. Mus. Natl. Hung. 35 Bot.: 98 (1942).
sedifolia (Scop.) Timdal, Opera Bot. 110 (93 (1991).
thiospora (Nyl.) H. Olivier, Bull. Géogr. Bot. 21: 197 (1911).
Lit.: Timdal (1991); Jørgensen (1996).

260. Tornabea Østh. (1980)
[Lecanorales: Physciaceae]
scutellifera (With.) J.R. Laundon, Lichenologist 16: 226 (1984).
Lichen scutelliferus With., A Botanical Arrangement of all the Vegetables naturally growing in Great Britain: 728 (1776).
Tornabea ephebea (Ach.) Kurok., J. Jap. Bot. 37: 293 (1962).
Lit.: Santesson (1942d); Kurokawa (1962); Huneck & Follmann (1966); Østhagen & Sunding (1980); Nimis & Tretiach (1997).

261. **Trapelia** M. Choisy (1929)
[Lecanorales: Trapeliaceae]
coarctata (Sm.) M. Choisy. In R.G. Werner, Bull. Soc. Sci. Nat. Maroc 12: 160(1932).
Lit.: Hertel (1984); Aptroot & van der Knapp (1993).

***Tremella** Pers (1794) nom. cons.
[Tremellales: Tremellaceae]
parmeliarum Diederich, Biblioth. Lichenol. 61: 125 (1996).
psoromicola Diederich, Biblioth. Lichenol. 61: 150 (1996).
Lit.: Diederich (1996).

262. **Tremolecia** M. Choisy (1953)
[Lecanorales: ?Hymeneliaceae]
atrata (Ach.) Hertel, Ergebn. Forsch. Unternehmens Nepal Himal. 6 (3): 351 (1977).
Lit.: Schwab (1986); Hertel (1984, 1987b, 1989); Jacobsen & Kappen (1988).

263. **Tricharia** Fée (1825)
[Ostropales: Gomphillaceae]
vulgaris (Müll. Arg.) R. Sant., Symb. Bot. Upsal. 12: 389 (1952).
Lopadium vulgare Müll. Arg., Flora 64: 109 (1881).
Lit.: Santesson (1952).

264. **Trichothelium** Müll. Arg. (1885)
[Pyrenulaceae: Trichotheliaceae]
epiphyllum Müll. Arg., Bot. Jahrb. Syst. 6: 418 (1885).
Lit.: Santesson (1852).

***Trichothyrina** (Petr.) Petr. (1950) = **Lichenopeltella** Höhn. (1919)

265. **Trimmatothelopsis** Zschacke (1934)
[Verrucariales: ? Verrucariaceae]
antarctica C.W. Dodge, Nova Hedwigia 15: 302 (1969) ["1968"] T.
Lit.: Dodge (1969); Aptroot & van der Knapp (1993).

266. **Trypethelium** Spreng. (1804) nom. cons.
[Pyrenulales: Trypetheliaceae]
aenum (Eschw.) Zahlbr. In Engler-Prantl, Natürl. Pflanzenfamil. 1 (1): 70 (1903).
Lit.: Follmann (1961).

267. **Tuckermannopsis** Gyeln. (1933)
[Lecanorales: Parmeliaceae]
chlorophylla (Willd.) Hale. Bryologist 90: 164 (1987).
Cetraria chlorophylla (Willd.) Vain., Meddel. Soc. Fauna Fl. Fenn. 6: 121 (1881).
Cetraria scutata var. *pallida* Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 16 (1932) T.
Lit.: Kärnefelt *et al.* (1992, 1993).

268. **Turgidosculum** Kohlm. & E. Kohlm. (1972)
[Ascomycyota, incert. sed.: Mastodiaceae]
complicatulum (Nyl.) Kohlm. & E. Kohlm., Marine Mycology. The higher fungi: 361 (1979).
Mastodia tessellata auct.
Lit.: Galloway (1985); Aptroot & van der Knapp (1993).

269. **Umbilicaria** Hoffm. (1798)
[Lecanorales: Umbilicariaceae]
africana (Jatta) Krog & Swinscow, Nordic J. Bot. 6: 79 (1986).
aprina Nyl., Syn. Meth. Lich. 2: 12 (1863).
cristata C.W. Dodge & Baker, Ann. Missouri. Bot. Gard. 25: 565 (1938).
decussata (Vill.) Zahlbr., Cat. Lich. Univ. 8: 490 (1942).
Umbilicaria eximia Hue, Deux. Exp. Antarct. Fr. 1908-1910, Sci. Nat. Doc. Sci.: 55 (1915) T.
Umbilicaria parvula Hue, Deux. Exp. Antarct. Fr. 1908-1910, Sci. Nat. Doc. Sci.: 56 (1915) T.
Umbilicaria leiocarpa var. *nana* Vain., Résult. Voy. Belgica, Lich.: 9 (1903) T.
Agyrophora leiocarpa var. *nana* (Vain.) Llano, Monogr. Umbil.: 56 (1950).
diffissa (Nyl.) Llano, Monogr. Umbil.: 196 (1950).
Umbilicaria mühlenbergii (Ach.) var. *diffissa* Nyl., Ann. Sci. Nat. Bot. sér. 4,3: 149 (1855) T.
Umbilicaria dillenii Tuck. var. *diffissa* (Nyl.) Nyl., Syn. Meth. Lich. 2: 10 (1869).
Gyrophora diffissa (Nyl.) Nyl., Lich. Fueg. Patag.: 23 (1888).
haplocarpa Nyl., Ann. Sci. Nat. Bot. sér. 4, 9: 217 (1859).
hyperborea (Ach.) Hoffm., Dtsch. Fl. 2: 110 (1796).
krascheninnikovii (Savicz) Zahlbr., Cat. Lich. Univ. 10: 405 (1939).
krempelhuberi Müll. Arg., Flora 72: 64 (1889)
nylanderiana (Zahlbr.) H. Magn., Lich. Sel. Scand. Exs. No. 252 (1937).
polyphylla (L.) Baumg., Fl. Lips.: 571 (1790).
polyrrhiza (L.) Fr., Sched. Crit., Fasc. 5-6: 3 (1825).
propagulifera (Vain.) Llano, Monogr. Umbil.: 162 (1950).
Gyrophora cylindrica f. *propagulifera* Vain., Résult. Voy. Belgica, Lich.: 10 (1903) T.
Gyrophora propagulifera (Vain.) Räsänen, Revist. Univ. (Santiago) 23: 195 (1937).
rufidula (Hue) Filson, Muelleria 6: 343 (1987).
Charcotia rufidula Hue, Bull. Soc. Bot. Fr. sér. 4, 15: 17 (1915).
Umbilicaria antarctica Frey & I.M. Lamb, Trans. Br. Mycol. Soc. 22: 270 (1939).
Umbilicaria dillenii var. *solida* Frey, Ber. Schweiz. Bot. Ges. 45: 217 (1936).
umbilicarioides (B.Stein) Krog & Swinscow, Nordic J. Bot. 6: 83 (1986).
zahlbruckneri Frey, Ber. Schweiz. Bot. Ges. 45: 221 (1936).
Lit.: Llano (1950); Krog & Swinscow (1986); Filson (1975, 1987); Swinscow & Krog (1988); Quilhot *et al.* (1991a); Sancho *et al.* (1992).

270. **Usnea** Dill. ex Adans. (1763)
[Lecanorales: Usneaceae]
andina Motyka, Usnea 2 (1): 531 (1937).
aureola Motyka, Usnea 2 (1): 542 (1937) T.
chilensis Motyka, Usnea 2 (2): 578 (1938) T.
cladoblephara (Müll. Arg.) Motyka, Usnea 2 (2): (1938).
Usnea dasypogoides var. *cladoblephara* Müll. Arg., Flora 69: 254 (1886) T.
Usnea dasypoga var *cladoblephara* (Müll. Arg.) Zahlbr., Cat. Lich. Univ. 6: 556 (1930).
cladocarpa Fée, Essai Crypt. Ecorc.: XCVII (1824).
coccinea Dix, Bryologist 56: 277 (1953).
columbiana Mont. In Räsänen, Revista Univ. (Santiago) 21: 138 (1936).
comosa (Ach.) Röhl. var. ***chilensis*** Räsänen, Revista Univ. (Santiago) 21: 138 (1936) T.
comosa f. ***fuegica*** Räsänen, Ann. Bot .Soc. Zool.- Bot. Fenn. "Vanamo" 2 (1): 9 (1932) T.
comosa f. ***isidiella*** Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 9 (1932) T.
comosella Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 9 (1932) T.

concreta Mont., Ann. Sci. Nat. Bot. sér.3, 18: 302 (1852) T.
condensata Mont. In Räsänen, Revista Univ. (Santiago) 21: 138 (1936) T.
costata Motyka, Usnea 2 (1): 402 (1937) T.
crassula Motyka, Usnea 2(2): 590 (1938).
dasycera (Nyl.) Motyka, Usnea 2(1) 552 (1937).
Usnea florida var. *dascyera* Nyl. In Cromb., Bot. J. Linn. Soc. 15: 226 (1876) T.
denudata (Vain.) Räsänen f. ***sorediella*** Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 9 (1932) T.
durietzii Motyka, Usnea 2 (1): 503 (1937) T.
elongata Motyka, Usnea 2 (1): 411 (1937) T.
eulychniae Follmann, Nova Hedwigia 14: 261 (1968) ["1967"] T.
eyerdami Herre, Rev. Bryol. Lichénol. 29: 274 (1961) T.
eyerdami var. ***nigro-rubra*** Herre, Rev. Bryol. Lichénol. 29: 274 (1961) T.
fastigiata Motyka, Usnea 2(2): 580 (1938) T.
flavocardia Räsänen, Revista Univ. (Santiago) 21: 139 (1936) T.
fuegiana Motyka, Usnea 2 (1): 453 (1937) T.
flexuosa Taylor, London J. Bot. 6: 192 (1847).
gaudichaudii Motyka, Usnea 2 (2): 600 (1938) T.
gigantea Vain. In Räsänen, Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 7 (1932) T.
igniaria Motyka, Usnea 1: 108 (1936).
jamaicensis Ach., Lich. Univ.: 619 (1810).
jelskii Motyka, Usnea 2 (2): 595 (1938) T.
? kuehnemannii Motyka. In Lamb, Farlowia 4: 467 (1955).
lacerata Motyka, Usnea 1: 76 (1936) T.
maculosa Stirt, Scott. Nat. 7: 75 (1883) T.
meridionalis Zahlbr., Denkschr. Kaiserl. Akad. Wiss., Math.-Naturwiss. Kl. 83: 183 (1909).
miliaria Taylor, London J. Bot. 6: 192 (1847) T.
mirabilis Motyka, Usnea 2 (1): 345 (1937).
?muelleriana Zahlbr., Cat. Lich. Univ. 6: 588 (1930).
Usnea barbata var. *subcornuta* Müll. Arg., Flora 72: 509 (1889).
neuropogonoides Motyka, Usnea 1: 73 (1936) T.
nidulans Motyka, Usnea 2 (2): 577 (1938) T.
nidulifera Motyka, Usnea 2 (1): 551 (1937) T.
nobilis Motyka, Usnea 2 (1): 553 (1937).
pallida Motyka, Usnea 2 (1): 435 (1937).
peruviana Motyka, Usnea 2 (1): 512 (1937).
pusilla (Räsänen) Räsänen, Revista Univ. (Santiago) 22: 199 (1937).
Usnea florida var. *pusilla* Räsänen, Revista Univ. (Santiago) 21: 139 (1936) T.
radiata Stirt., Scott. Nat. 6: 103 (1881).
rubicunda Stirt., Scott. Nat. 6: 102 (1881).
scaberrima (Mont.) Motyka, Usnea 2 (2): 607 (1938).
Usnea ceratina var. *scaberrima* Mont. In C. Gay, Hist. Chile, Bot. 8: 63 (1852) T.
simplex Motyka, Usnea 2 (2): 582 (1938) T.
spinulifera (Vain.) Motyka in de Lesd., Ann. Cryptog. Exot. 6: 121 (1933).
steineri Zahlbr. var. ***tincta*** Zahlbr., Denkschr. Kaiserl. Akad. Wiss., Math.-Naturwiss. Kl. 83: 183 (1909).
subcomosa (Vain.) Vain., Kongel. Danske Vidensk. Selsk. Naturvidensk. Math. Afh. 8(6): 392 (1924).
subtorulosa (Zahlbr.) Motyka, Usnea 2 (2): 603 (1938).
Usnea steineri var. *subtorulosa* Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3 (11): 392 (1924) T.
sulcata Motyka, Usnea 2 (1): 478 (1937).
wirthii P. Clerc, Saussurea 15: 33 (1984).
Lit.: Zahlbruckner (1924, 1926); Motyka (1936-1938); Herre (1960); Clerc (1997).

271. **Vainionora** Kalb (1991)
[Lecanorales: Lecanoraceae]
flavovirens (Fée) Kalb, Lich. Neotrop. Fasc. 12: 3 (1991).
Lecanora flavovirens Fée, Essai Crypt. Ecorc.: 115 (1825).
Lecanora aeruginosa Nyl., Ann. Sci. Nat. Bot. sér. 4, 3: 157 (1855) T.
Lit.: Kalb (1991); Lumbsch *et al.* (1996).

272. **Vermilacinia** Spjut (1995)
[Lecanorales: Ramalinaceae]
cephalota (Tuck.) Spjut & Hale, Flechten Follmann: 347 (1995).

Ramalina ceruchis f. *cephalota* Tuck., Syn. N. Am. Lich.: 21 (1882).
Desmazieria cephalota (Tuck.) Follmann & Huneck, Willdenowia 5: 208 (1969).
Niebla cephalota (Tuck.) Rundel & Bowler, Mycotaxon 6: 498 (1978).
ceruchis (Ach.) Spjut & Hale, Flechten Follmann : 347 (1995).
Parmelia ceruchis Ach, Meth. Lich.: 260 (1803).
Borrera ceruchis (Ach.) Ach., Lich. Univ.: 504 (1810).
Usnea ceruchis (Ach.) Mont., Ann. Sci. Nat. Bot. sér.2,: 368 (1834).
Desmazieria ceruchis (Ach.) Trevis., Flora 4: 52 (1861).
Niebla ceruchis (Ach.) Rundel & Bowler, Mycotaxon 6: 498 (1978).
flaccescens (Nyl.) Spjut & Hale, Flechten Follmann: 348 (1995).
Ramalina flaccescens Nyl., Bull. Soc. Linn. Normandie, sér. 2, 4: 109 (1870).
Desmazieria flaccescens (Nyl.) Follmann & Huneck, Willdenowia 5: 208 (1969).
Niebla flaccescens (Nyl.) Rundel & Bowler, Mycotaxon 6: 499 (1978).
tigrina (Follmann) Spjut & Hale, Flechten Follmann: 348 (1995).
Ramalina tigrina Follmann, Willdenowia 4: 227 (1966) T.
Desmazieria tigrina (Follmann) Follmann & Huneck, Willdenowia 5: 208 (1969).
Niebla tigrina (Follmann) Rundel & Bowler, Mycotaxon 6: 498 (1978).
Lit.: Follmann (1966b); Follmann & Huneck (1969); Spjut (1995, 1996).

273. **Verrucaria** Schrad. (1795) nom. cons.
[Verrucariales: Verrucariaceae]
aethiobola Wahlenb. In Ach., Methodus Suppl.: 17 (1803).
brasiliensis Müll. Arg., Flora 67: 467 (1884).
ceuthocarpa Wahlenb. In Ach., Methodus: 22 (1803).
ceuthocarpa var. ***deformata*** Vain., Ark. Bot. 8 (4): 164 (1909).
chiloënsis Zahlbr., Kongl. Svenska. Vetenskapsakakad. Handl. 57 (6): 4 (1917) T.
confinis Nyl., Ann. Sci. Nat. Bot. sér. 4, 3: 173 (1855) T.
cylindrophora Vain., Résult. Voy. Belgica Lich.: 38 (1903).
dispartita Vain., Résult. Voy. Belgica, Lich.: 38 (1903).
durietzii I.M. Lamb, Lilloa 14: 205 (1948).
durietzii I.M. Lamb f. ***rhabdota*** I.M. Lamb, Lilloa 14: 206 (1948).
elaeoplaca Vain., Résult. Voy. Belgica, Lich.: 37 (1903).
famelica Darb., Wiss. Ergebn. Schwed. Südpolarexp. 1901-1903, 4 (11): 18 (1912) T.
glaucoplaca Vain., Résult. Voy. Belgica, Lich.: 37 (1903).
? glaucoplacoides Darb., Wiss. Ergebn. Schweds. Südpolarexp. 1901-1903, 4 (11): 18 (1912).
lacustris I.M. Lamb, Farlowia 4: 424 (1955).
macrostoma Dufour Ex DC. In Lam. & DC., Fl. Fr. ed.3: 319 (1805).
margacea (Wahlenb.) Wahlenb. Fl. Lappon.: 465 (1812).
maura Wahlenb. In Ach., Methodus: 19 (1803).
microspora var. ***ecrustacea*** Nyl., Ann. Sci. Nat. Bot. sér. 4,3: 175 (1855) T.
microspora f. ***halophila*** Nyl., Ann. Sci. Nat. Bot. sér. 4, 3: 175 (1855) T.
mucosa Wahlenb. In Ach., Methodus: 23 (1803).
muralis Ach., Methodus: 115 (1803).
nigrescens Pers., Usteri Ann. Bot. 14: 36 (1795).
psychrophila I.M. Lamb, Discovery Rep. 18 (1948) T.
racovitzae Vain., Résult. Voy. Belgica. Lich.: 38 (1903).
serpuloides I.M. Lamb, Discovery Rep. 25: 20 (1948) T.
sphinctrina Ach., Syn. Meth. Lich.: 91 (1814).
striatula ssp. ***australis*** R. Sant., Ark. Bot. 29A (10): 29 (1939).
tessellatula Nyl. In J. Cromb., J. Bot. 13: 335 (1875).
tristis (A. Massal.) Kremp., Flora 40: 376 (1857).
umbrina var. ***monospora*** Nyl., Ann. Sci. Nat. Bot. sér. 4, 3: 175 (1855) T.
Lit.: Nylander (1855); Lamb (1948, 1959 1973); Follmann (1961); Redon (1985); Jacobsen & Kappen (1988); Aptroot & van der Knapp (1993).

***Vouauxiomyces** Dyko & D. Hawksw. (1979)
[Anamorphic Dothideales]
granulatae Wedin, Lichenologist 26: 306 (1994).
Lit.: Wedin (1994).

274. **Wawea** Henssen & Kantvilas (1985)
[Lecanorales: Arctomiaceae]

*? **fruticulosa*** Henssen & Kantvilas, Lichenologist 17: 86 (1985).
Lit.: Henssen & Kantvilas (1985).

275. **Xanthomendoza** S. Kondr. & Kärnefelt (1997)
[Teloschistales: Teloschistaceae]
mendozae (Räsänen) S. Kondr. & Kärnefelt, Biblioth. Lichenol. 68: 26 (1997)
Xanthoria mendozae Räsänen, Anales Soc. Ci. Argent. 128: 140 (1939).
Lit.: Kondratyuk & Kärnefelt (1997).

276. **Xanthoparmelia** (Vain.) Hale (1974)
[Lecanorales: Parmeliaceae]
australasica D.J. Galloway, N.Z. J. Bot. 18: 531 (1981).
conspersa (Ach.) Hale, Phytologia 28: 485 (1974).
cordillerana (Gyeln.) Hale, Phytologia 28: 487 (1974).
cotopaxiensis Nash, Elix & J. Johnst., Mycotaxon 28: 288 (1987).
farinosa (Vain.) Nash, Elix & J. Johnst., Mycotaxon 28: 286 (1987).
hypopsila (Müll. Arg.) Hale, Phytologia 28: 488 (1974).
mexicana (Gyeln.) Hale, Phytologia 28: 488 (1974).
microspora (Müll. Arg.) Hale, Phytologia 28: 488 (1974).
mougeotii (Schaer.) Hale, Phytologia 28: 488 (1974).
scabroas (Taylor) Hale, Phytologia 28: 488 (1974).
skottsbergiana Nash & Elix, Biblioth. Lichenol. 56: 98 (1995).
standaertii (Gyeln.) Hale, Phytologia 28: 489 (1974).
subramigera (Gyeln.) Hale, Phytologia 28: 489 (1974).
subsorediata Hale, Mycotaxon 30: 332 (1987).
taractica (Kremp.) Hale, Phytologia 28: 489 (1974).
tasmanica (Hook. f. & Taylor) Hale, Phytologia 28: 489 (1974).
ulcerosa (Zahlbr.) Hale, Phytologia 28: 490 (1974).
Parmelia ulcerosa Zahlbr., Ann. Mycol. 29: 84 (1931) T.
Parmelia tegulicola Zahlbr., Ann. Mycol. 29: 85 (1931) T.
Parmelia conspersa var. *obtecta* Zahlbr. In C. Skottsberg, Nat. Hist. Juan Fernández Easter Isl. 2 (Bot.), 3 (11): 386 (1924) T.
vagans (Nyl.) Hale, Phytologia 28: 490 (1974).
wildeae (C.W. Dodge) Hale, Phytologia 28: 490 (1974).
xanthomeleana (Müll. Arg.) Hale, Mycotaxon 30: 334 (1987).
Lit.: Hale (1990); Elix (1993, 1994p); Nash *et al.* (1995).

277. **Xanthopeltis** R. Sant. (1949)
[Teloschistales: Teloschistaceae]
rupicola R. Sant., Sv. Bot. Tidsk. 43: 560 (1949) T.
Lit.: Santesson (1949); Huneck & Follmann (1971); Follmann (1973).

278. **Xanthoria** (Fr.) Th.Fr. (1860) nom. cons.
[Teloschistales: Teloschistaceae]
ascendens S. Kondratyuk, Lichenologist 29: 431 (1997).
candelaria (L.) Th.Fr., Gen. Heterol. Eur. Recog.: 61 (1861).
elegans (Link) Th.Fr., Lich. Arct.: 69 (1860).
?gallowayii S. Kondr. & Kärnefelt, Biblioth. Lichenol. 68: 28 (1997).
parietina (L.) Th.Fr. Lich. Arct.: 69 (1860).
polycarpa (Hoffm.) Th.Fr. ex Rieber, Jahresh. Vereins Vaterl. Naturk. Württemberg 42: 252 (1891).
Xanthoria polycarpa f. *santiagoënsis* Räsänen, Revista Univ. (Santiago) 21: 143 (1936) T.
Xanthoria santiagoënsis (Räsänen) C.W. Dodge, In Follmann, Nova Hedwigia 14: 267 (1969) ["1968"].
Lit.: Jatta (1906); Follmann & Redon (1972c); Redon (1985); Jacobsen & Kappen (1988); Kärnefelt (1989); Poelt & Petutschnig (1992a, 1992b); Aptroot & Van der Knapp (1993); Kondratyuk (1997); Kondratyuk & Poelt (1997); Lindblom (1997); Kondratyuk & Kärnefelt (1997).

279. **Xenolecia** Hertel (1984)
[Lecanorales: Porpidiaceae]
spadicomma (Nyl.) Hertel, Beih. Nova Hedwigia 79: 440 (1984).
Lecidea spadicomma Nyl. In Cromb., Bot. J. Linn. Soc. 15: 233 (1876) T.
Biatora spadicomma (Nyl.) Darb., Wiss. Ergebn. Schwed. Südpolarexped. 1901-1903, 4(11): 49 (1912).
Lit.: Hertel (1984).

280. **Xylographa** (Fr.) Fr. (1836)
[Lecanorales: Agyriaceae]
perangusta (Stirt.) Müll. Arg., Bull. Herb. Boissier 2, App. 1: 76 (1894).
Lit.: Follmann (1962); Galloway (1985).

281. **Zahlbrucknerella** Herre (1912)
[Lichinales: Lichinaceae]
maritima Henssen, Symb. Bot. Upsal 18: 80 (1963) T.
patagonica Henssen, Lichenologist 9: 41 (1977).
Lit.: Henssen (1963c, 1977).

REFERENCES

ADLER, M. 1987. A new species of the genus *Canoparmelia* from Argentina. Mycotaxon 28: 251-254.

ADLER, M. 1990. An artifical key to the genera of the Parmeliaceae (Lichenes, Ascomycotina). Mycotaxon 38: 331-347.

ADLER, M. 1992. Claves de los géneros y las especies de Parmeliaceae (Lichenes, Ascomycotina) de la Provincia de Buenos Aires (Argentina). Bol. Soc. Argent. Bot. 28: 11-17.

ADLER, M. 1996. A comparative study on *Punctelia colombiana* and *Punctelia stictica* (Parmeliaceae, lichenized Ascomycotina). Mycotaxon 58: 77-92.

ADLER, M. & Calvelo, S. 1996. Two new species of the genus *Menegazzia* (Parmeliaceae sensu lato, lichenized Ascomycotina) from southern South America. Mycotaxon 59: 367-372.

AHTI, T. 1961. Taxonomic studies on reindeer lichens (*Cladonia*, subgenus *Cladina*). Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 32: 1-160.

AHTI, T. 1993. Names in current use in *Cladonia*ceae (lichen-forming Ascomycetes) in the ranks of genus to variety. In: W.Greuter (ed.) Names in current use in the families Trichocomaceae, *Cladonia*ceae, Pinaceae and Lemnaceae. Regnum Vegetabile 128: 56-106.

AHTI, T. & KASHIWADANI, H. 1984. The lichen genera *Cladia*, *Cladina* and *Cladonia* in southern Chile. In: H. Inoue (ed.), Studies on cryptogams in southern Chile: 125-151. Tokyo: Kenseisha Ltd.

AHTI, T., STENROOS, S. & ARCHER, A.W. 1990. Some species of *Cladonia*, published by J.D. Hooker and T. Taylor from the Southern Hemisphere. Muelleria 7: 173-177.

ALMBORN, O. 1989. Revision of the lichen genus *Teloschistes* in central and southern Africa. Nord. J. Bot. 8: 521-537.

ALMBORN, O. 1992. Some overlooked or misidentified species of *Teloschistes* from South America and a key to the South-American species. Nordic J. Bot. 12: 361-364.

ALSTRUP, V. & HAWKSWORTH, D.L. 1990. The lichenicolous fungi of Greenland. Meddel. Grønland Biosci. 31: 1-90.

APTROOT, A. 1987. Pyxinaceae (Lichens). Flora of the Guianas, Series E: Fungi and Lichens. 1: 1-59.

APTROOT, A. 1991a. A monograph of the Pyrenulaceae (excluding *Anthracothecium* and *Pyrenula*) and the Requienellaceae, with notes on the Pleomassariaceae, the Trypetheliaceae and *Mycomicrothelia* (lichenized and non-lichenized Ascomycetes). Biblioth. Lichenol. 44: 1-178.

APTROOT, A. 1991b. A conspectus of *Normandina* (Verrucariaceae, lichenized Ascomycetes). Willdenowia 21: 263-267.

APTROOT, A. & VAN DER KNAPP, O. 1993. The lichen flora of Deception Island, South Shetland Islands. Nova Hedwigia 56: 183-192.

ARCHER, A.W. 1993. A chemical and morphological arrangement of the lichen genus *Pertusaria*. Biblioth. Lichenol. 53: 1-17.

ARCHER, A.W. 1997. The lichen genus *Pertusaria* in Australia. Biblioth. Lichenol. 69: 1-249.

ARCHER, A.W. & ELIX, J.A. 1993. Saxicolous species of *Pertusaria* (Lichenes) common to New Zealand and Australia. New Zealand J. Bot. 31: 111-116.

ARCHER, A.W. & MESUTI, M.I. 1997. *Pertusaria velata* (Turner) Nyl., and its synonyms. Mycotaxon 61: 375-379.

ARVIDSSON, L. 1983. A monograph of the genus *Coccocarpia*. Opera Bot. 67: 1-96.

ARVIDSSON, L. 1992. Coccocarpiaceae. Flora of Australia 54: 152-159.

ARVIDSSON, L. & GALLOWAY, D.J. 1981. *Degelia*, a new lichen genus in the Pannariaceae. Lichenologist 13: 27-50.

AWASTHI, D.D. 1975. A monograph of the lichen genus *Dirinaria*. Biblioth. Lichenol. 2: 1-108.

BLANCHON, D.J., BRAGGINS, J.E. & STEWART, A. 1996. The lichen genus *Ramalina* in New Zealand. J. Hattori Bot. Lab. 79: 43-98.

BOWLER, P.A. 1981. Cortical diversity in the Ramalinaceae. Canad. J. Bot. 59: 437-453.

BRAKO, L. 1989. Re-evaluation of the genus Phyllosphora with taxonomic notes and introduction of *Squamacidia* gen.nov. Mycotaxon 35: 1-19.

BREUSS, O. 1993. *Catapyrenium* (Verrucariaceae) species from South America. Pl. Syst. Evol. 185: 17-33.

BREUSS, O. 1995. The genus *Catapyrenium* (Verrucariales) in the Southern Hemisphere. Cryptog. Bot. 5: 177-183.

BREUSS, O. 1996a. Revision der Flechtengattung *Placidiopsis* (Verrucariaceae). Österr. Z. Pilzk. 5: 65-94.

BREUSS, O. 1996b. Ein verfeinertes Gliederungskonzept für *Catapyrenium* (lichenisierte Ascomyceten, Verrucariaceae 98B (Supplement): 35-50.). Ann. Naturhist. Mus. Wien.

BREUSS, O. & MCCUNE, B. 1994. Additions to the pyrenolichen flora of North America. Bryologist 97: 365-370.

BRODO, I.M. 1984. The North American species of the *Lecanora subfusca* group. Beih. Nova Hedwigia 79: 63-185.

BRODO. I.M. 1991. Studies in the lichen genus *Ochrolechia*. 2. Corticolous species of North America. Canad. J. Bot. 69: 733-772.

BRODO, I.M. 1995. Lichens and lichenicolous fungi of the Queen Charlotte Islands, British Columbia, Canada. 1. Introduction and new records for B.C., Canada and North America. Mycotaxon 56: 135-173.

BRODO, I.M. & HAWKSWORTH, D.L. 1977. *Alectoria* and allied genera in North America. Opera Bot. 42: 1-164.

BRODO, I.M. & HENSSEN, A. 1995. A new isidiate crustose lichen in northwestern North America. Biblioth. Lichenol. 58: 27-41.

BRUSSE, F.A. & KÄRNEFELT, I. 1991. The new Southern Hemsiphere lichen genus *Coelopogon* (Lecanorales, Ascomycotina), with a new species from southern Africa. Mycotaxon 42: 35-41.

BÜDEL, B. 1987. Zur Biologie und Systematik der Flechtengattungen *Heppia* und *Peltula* im südlichen Akrika. Biblioth. Lichenol. 23: 1-105.

CASTILLO, P. PIOVANO, M., CHAMY, M.C., GARBARINO, J.A. & QUILHOT, W.1995. Studies on Chilean lichens. XXVI. Secondary products from *Lepolichen coccophorus*. Bol. Soc. Chilena Quím. 40: 465-467.

CALVELO, S. 1992. Novedades para la flora liquénica del Parque Nahuel Huapi y sus alrededores (Argentina). Bol. Soc. Argent. Bot. 28: 47-54.

CALVELO, S. 1996. Noteworthy reports on *Anzia* (lichenized Ascomycotina) from southern South America. Mycotaxon 58: 147-156.

CALVELO, S. & ADLER, M. 1992. *Pannoparmelia anzioides*, a taxonomic synonym of *Pannoparmelia angustata* (Parmeliaceae, Lichenes). Mycotaxon 43: 487-498.

CALVELO, S. & ADLER, M. 1994. *Menegazzia* (Ascomycotina, liquenizado) en la Argentina. Bol. Soc. Argent. Bot. 30: 119-125.

CASTELLO, M. & NIMIS, P.L. 1994. Critical notes on Antarctic yellow Acarosporaceae. Lichenologist 26: 283-294.

CENGIA SAMBO, M. 1926. I licheni della Terra del Fuoco raccolti dai missionari Salesiani. Contr. Sci. Miss. Sales. Vener. Don Bosco 4: 1-53.

CENGIA SAMBO, M. 1930. Licheni della Patagonica e di altre regioni dell'Argentina raccolti dai missionari Salesiani. Contr. Sci. Miss. Sales. Vener. Don Bosco 6: 1-73.

CHAMY, M.C., GAMBARO, V., GARBARINO, J.A. & QUILHOT, W. 1985. Studies on Chilean lichens. VII. The phenolic constituents of *Protousnea malacea*. J. Nat. Prod. 48: 307-309.

CLERC, P. 1997. Notes on the genus *Usnea* Dill. ex Adanson. Lichenologist 29: 209-215.

COPPINS, B.J. 1983. A taxonomic study of the lichen genus Micarea in Europe. Bull. Brit. Mus. (Nat. Hist.), Bot. 11 (2): 17-214.

COPPINS, B.J. & JAMES, P.W. 1984. New or interesting British lichens. Lichenologist 16: 241-264.

COPPINS, B.J. & PURVIS, O.W. 1987. A review of *Psilolechia*. Lichenologist 19: 29-42.

COPPINS, B.J. & KANTVILAS, G. 1990. Studies in *Micarea* in Australia I. Four new species from Tasmania. Lichenologist 2: 277-288.

CROMBIE, J.M. 1876. On the lichens collected by Professor R.O. Cunningham in the Falkland Islands, Fuegia, Patagonia, and the island of Chile during the voyage of H.M.S. "Nassau", 1867-69. J. Linn. Soc. Bot. 15: 222-234.

CULBERSON, W.L. & CULBERSON, C.F. 1968. The lichen genera *Cetrelia* and *Platismatia* (Parmeliaceae). Contr. U.S. Natl. Herb. 34: 449-558.

CULBERSON, W.L. & CULBERSON, C.F. 1981. The genera *Cetrariastrum* and *Concamerella* (Parmeliaceae): A chemosystematic synopsis. Bryologist 84: 273-314.

DARBISHIRE, O.V. 1897. Über die Flechtentribus Roccellei. Ber. Deutsch. Bot. Ges. 15: 2-10.

DARBISHIRE, O.V. 1898a. Weiteres über die Flechtentribus der Roccellei. Ber. Deutsch. Bot. Ges. 16: 6-16.

DARBISHIRE, O.V. 1898b. Monographia Roccelleorum. Ein Beitrag zur Flechtensystematik. Biblioth. Bot. 45: 1-102.

DARBISHIRE, O.V. 1912.: The lichens of the Swedish Antarctic Expedition. Wissenschaftliche Ergebnisse der schwedischen Südpolar-expedition 1901-1903, 4 (11): 1-73.

DARBISHIRE, O.V. 1923. Lichens. British Antarctic ("Terra Nova") Expedition, 1910. Natural History Report. Botany 3: 29-76.

DAVID, J.C. & HAWKSWORTH, D.L. 1989. *Lauderlindsaya*, a new genus in the Verrucariales, for *Sphaerulina chlorococca* (Leighton) R. Sant. Sydowia 41: 108-121.

DAVID, J.C. & HAWKSWORTH, D.L. 1991. Validation of six family names of lichenized ascomycetes. Systema Ascomycetum 10: 13-18.

DEGELIUS, G. 1954. The lichen genus *Collema* in Europe. Morphology, taxonomy, ecology. Symb. Bot. Upsal. 13 (2): 1-499.

DEGELIUS, G. 1974. The lichen genus *Collema* with special reference to the extra-European species. Symb. Bot. Upsal. 20 (2): 1-215.

DEGELIUS, G. 1986. Studies in the lichen family Collemataceae V. Notes on some interesting *Collema* species. Nord. J. Bot. 6: 345-349.

DODGE, C.W. 1965a. Lichenological notes on the flora of the Antarctic Continent and the Subantarctic Islands - V. Tierra del Fuego and the Falkland Islands. Trans. Amer. Microscop. Soc. 84: 502-507.

DODGE, C.W. 1965b. Lichenological notes on the flora of the Antarctic Continent and the Subantarctic Islands: VI. New taxa from the Antarctic Continent and adjacent islands. Trans. Amer. Microscop. Soc.

84: 507-529.
DODGE, C.W. 1967 ["1966"]. New lichens from Chile. Nova Hedwigia 12: 307-352.
DODGE, C.W. 1968: Lichenological notes on the flora of the Antarctic Continent and the Subantarctic Islands. VII and VIII. Nova Hedwigia 15: 285-332.
DODGE, C.W. 1969 ["1968"]. New lichens from Chile - II. Nova Hedwigia 16: 483-494.
DODGE, C.W. 1971 ["1970"]. Lichenological notes on the flora of the Antarctic Continent and the Subantarctic Islands IX-XI. Nova Hedwigia 19: 439-502.
DODGE, C.W. 1973. Lichen Flora of the Antarctic Continent and Adjacent Islands. Phoenix Publishing: Canaan. 399 pp.
DODGE, C.W. & BAKER, G.E. 1938. Botany of Second Byrd Antarctic Expedition.II. Lichens and lichen parasites. Ann. Missouri Bot. Gard. 25: 515-718.
DIEDERICH, P. 1996. The lichenicolous Heterobasidiomycetes. Biblioth. Lichenol. 61: 1-198.
DRIEDERICH, P. & SÉRUSIAUX, E. 1993. A nomenclatural note on *Lauderlindsaya* (Ascomycotina, Verrucariales). Lichenologist 25: 97-100
DIEDEREICH, P. & CHRISTIANSEN, M.S. 1994. Biatoropsis usnearum Räsänen, and other heterobasidiomycetes on *Usnea*. Lichenologist 26: 47-66.
DIEDERICH, P. & ETAYO, J. 1994. Taxonomic notes on the genus *Plectocarpon* (lichenicolous Ascomycotina). Nordic J. Bot. 14: 589-600.
DUGHI, R. 1946. Sur la définition et les affinités du genre "*Physma*" (Phycolichens). Bull. Soc. Bot. France. 93: 112-114.
DU RIETZ, G.E. 1926. Vorarbeiten zu einer "Synopsis Lichenum". I. Die Gattungen Alectoria, *Oropogon* und *Cornicularia*. Ark. Bot. 20A (11): 1-43.
EGEA, J.M. & TORRENTE, P. 1993a. The lichen genus *Bactrospora*. Lichenologist 25: 211-255.
EGEA, J.M. & TORRENTE, P. 1993b. *Cresponea*, a new genus of lichenized fungi in the order Arthoniales (Ascomycotina). Mycotaxon 48: 301-331.
EGEA, J.M. & TORRENTE, P. 1994. El género de hongos liquenizados *Lecanactis* (Ascomycotina). Biblioth. Lichenol. 54: 1-205.
EGEA, J.M. & TORRENTE, P. 1995. Especies saxicolas del genero *Arthonia* (Arthoniaceae) en areas costeras de California y Baja California (Estados Unidos y Mexico). In: F.J.A. Daniels, M. Schulz, & J. Peine (eds). Flechten Follmann. Contributions to lichenology in honour of Gerhard Follmann. Geobotanical and Phytotaxonomical Study Group. Botanical Institute, University of Cologne, Cologne. pp. 193-204.
EGEA, J.M. & TORRENTE, P. 1996. Tres nuevas especies de hongos liquenizados de la Provincia del Cabo (Sudafrica). Cryptog., Bryol. Lichénol. 17: 305-312.
EKMAN, S. 1996. The corticolous and lignicolous species of *Bacidia* and *Bacidina* in North America. Opera Bot. 127: 1-148.
ELIX, J.A. 1980. A taxonomic revision of the lichen genus *Hypogymnia* in Australia. Brunonia 2: 175-245.
ELIX, J.A. 1992. *Hypogymnia*. Flora of Australia 54: 201-213.
ELIX, J.A. 1993. Progress in the generic delimitation of *Parmelia* sensu lato lichens (Ascomycotina: Parmeliaceae). Bryologist 96: 359-383.
ELIX, J.A. 1994a. *Bulbothrix*. Flora of Australia 55: 13-19.
ELIX, J.A. 1994b. *Canoparmelia*. Flora of Australia 55: 21-31.
ELIX, J.A. 1994c. *Everniastrum*. Flora of Australia 55: 37-38.
ELIX, J.A. 1994d. *Flavoparmelia*. Flora of Australia 55: 39-49.
ELIX, J,.A. 1994e. *Hypotrachyna*. Flora of Australia 55: 49-59.
ELIX, J.A. 1994f. *Melanelia*. Flora of Australia 55: 63-65.
ELIX, J.A. 1994g. *Neofuscelia*. Flora of Australia 55: 68-85.
ELIX. J.A. 1994h. *Paraparmelia*. Flora of Australia 55: 88-113.
ELIX, J.A. 1994i. *Parmelia*. Flora of Australia 55: 114-124.
ELIX, J.A. 1994j. *Parmelina*. Flora of Australia 55: 124-130.
ELIX, J.A. 1994k. *Parmelinopsis*. Flora of Australia 55: 131-138.
ELIX, J.A. 1994m. *Parmotrema*. Flora of Australia 55: 140-161.
ELIX, J.A.1994n. *Punctelia*. Flora of Australia 55: 163-168.
ELIX, J.A. 1994o. *Rimelia*. Flora of Australia 55: 186-188.
ELIX, J.A. 1994p. *Xanthoparmelia*. Flora of Australia 55: 201-308.
ELIX, J.A. 1997. The lichen genera *Canomaculina* and *Rimeliella* (Ascomycotina, Parmeliaceae). Mycotaxon 65: 475-479.
ELIX, J.A. & HALE, M.E. 1987. *Canomaculina*, *Myelochroa*, *Parmelinella*, *Parmelinopsis* and *Parmotremopsis*, five new genera in the Parmeliaceae (lichenized Ascomycotina). Mycotaxon 29: 233-244.
ELIX, J.A. & JOHNSTON, J. 1987a ["1986"]. New species of *Paraparmelia* (lichenized Ascomycotina) from Australia and New Zealand. Brunonia 9: 139-153.
ELIX, J.A. & JOHNSTON, J. 1987b ["1986"]. New species of *Parmelina* (Lichenized Ascomycotina) from Australia and New Zealand. Brunonia 9: 155-161.
ELIX, J.A. & JOHNSTON, J. 1988a. New species in the lichen genus *Paraparmelia* (Ascomycotina) from the Southern Hemisphere. Mycotaxon 32: 399-510.
ELIX, J.A. & JOHNSTON, J. 1988b. New species and reports of Flavoparmelia (lichenized Ascomycotina) from the Southern Hemisphere. Mycotaxon 33: 391-400.
ELIX, J.A., JOHNSTON, J. & VERDON, D. 1986. *Canoparmelia*, *Paraparmelia* and *Relicinopsis*, three new genera in the Parmeliaceae (lichenized Ascomycotina). Mycotaxon 27: 372-383.
ELIX. J.A. & NASH III. T.H. 1992. A synopsis of the lichen genus *Psiloparmelia* (Ascomycotina, Parmeliaceae). Bryologist 95: 377-391.
ELIX, J.A. & NASH III. T.H. 1998 ["1997"]. A monograph of the lichen genus *Pseudoparmelia* (As-

comycotina, Parmeliaceae). Bryologist 100 (4): 482-498.

ELIX, J.A., MALCOLM, W.H. & ARCHER, A.W. 1995. New species of *Pertusaria* (lichenized Ascomycotina) from New Zealand, Australia and Venezuela. Mycotaxon 53: 273-281.

ESSLINGER. T.L. 1977: A chemosystematic revision of the brown *Parmeliae*. J. Hattori Bot. Lab. 42: 1-211.

ESSLINGER. T.L. 1978: A new status for the brown *Parmeliae*. Mycotaxon 7: 45-54.

ESSLINGER, T.L. 1989: Systematics of *Oropogon* (Alectoriaceae) in the New World. Syst. Bot. Monogr. 28: 1-111.

FARKAS, E.E. & SIPMAN, H.J.M. 1993: Bibliography and checklist of foliicolous lichenized fungi up to 1992. Tropical Bryol. 7: 93-148.

FEIGE, G.B. & LUMBSCH, H.T. 1993. European species of the lichen genus *Ingaderia* and comments on the relationship of the genera *Darbishirella* and *Ingaderia* (Roccellaceae). Mycotaxon 48: 381-387.

FEIGE, G.B., RÖSER, G. & LUMBSCH, H.T. 1997: Chemotaxonomic studies on European *Squamarina* species (Ascomycotina, Lecanorales). Biblioth. Lichenol. 67: 25-31.

FERRARO. L. & VEZDA, A. 1995: *Fellhanera follmannii* sp. nov. (Pilocarpaceae, Lecanorales), un nuevo liquen foliicola del nordeste de Argentina, America del Sur. In: F.J.A. Daniels, M. Schulz & J. Peine (eds). Flechten Follmann. Contributions to lichenology in honour of Gerard Follmann. Geobotanical and Phytotaxonomical Study Group, Botanical Institute, University of Cologne, Cologne. Pp. 223-226.

FEUERER, T. 1991. Revision der europaischen Arten der Flechtengattung *Rhizocarpon* mit nichtgelben Lager und veilzelligen Sporen. Bibliotheca Lichenologica 39. J. Cramer, Berlin-Stuttgart. 210 pp.

FILSON, R.B. 1975 Studies on Antarctic lichens IV: Notes on *Umbilicaria aprina* Nyl. Muelleria 3: 130-140.

FILSON, R.B. 1987: Studies on Antarctic lichens 6: Further notes on *Umbilicaria*. Muelleria 6: 335-347.

FILSON, R.B. 1988: The genera *Heppia* and *Peltula* in Australia. Muelleria 6: 495-517.

FILSON, R.B. 1992. *Cladia*ceae. Flora of Australia 54: 101-107.

FOLLMANN, G. 1961. Eine dornbewohnende Flechtengesellschaft der zentralchilenischen Sukkulentenformationen mit kennzeichnender *Chrysotrix noli-tangere* Mont. Ber. Deustch. Bot. Ges. 73: 449-462.

FOLLMANN, G. 1962: Catálogo de los líquenes de Chile. Parte I. Pyrenocarpae. Revista Univ. (Santiago) 46: 173-203.

FOLLMANN, G. 1963: Catálogo de los líquenes de Chile. Parte II. Coniocarpiidae y Graphidiidae. Revista Univ. (Santiago) 47: 63-97.

FOLLMANN, G. 1964. Nebelflechten als Futterpflanzen des Küstenguanacos. Naturwissenschaften 51: 19-20.

FOLLMANN, G. 1965a: Una nueva bueliácea chilena. Bol. Univ. Chile 7 (59-60): 60-63.

FOLLMANN, G. 1965b: Catálogo de los líquenes de Chile. Parte III. Thelotrematales y Cyanophilales. Revista Univ. (Santiago) 49: 17-65.

FOLLMANN, G. 1965c: Eine gesteinsbewohnende Flechtengesellschaft der nordchilenischen Wüstformationen mit kennziechnender *Buellia albula* (Ny.) Muell. Arg. Nova Hedwigia 10: 243-256.

FOLLMANN, G. 1965d. Una nueva especie chilena de ascolíquenes cidocarpíneos del círculo de formas de *Haemmatoma puniceum* (Swans.) Mass. Bol. Univ. Chile 56: 44-47.

FOLLMANN, G. 1966a: Catálogo de los líquenes de Chile. Parte IV. Stictaceae y Peltigeraceae. Revista Univ. (Santiago) 50-51: 33-74.

FOLLMANN, G. 1996b: Eine neue *Ramalina*-Art aus der Ceruchis-Gruppe. Willdenowia 4: 227.

FOLLMANN, G. 1968a ["1967"]: Die Flechtenflora der nordchilenischen Nebeloase Cerro Moreno. Nova Hedwigia 14: 215-281.

FOLLMANN, G. 1968b: Beobachtungen zur Verbreitung chilenischer Flechten II. Der Formenkreis von *Roccella portentosa* (Mont.) Darb. Nova Hedwigia 15: 333-343.

FOLLMANN, G. 1968c: Felsbewohnende Arthoniaceen der chilenischen Pazifikküste. Willdenowia 4: 365-382.

FOLLMANN, G. 1973: Schedae ad Lichenes Exsiccati Selecti a Museo Historiae Naturalis Casselensis editi. V. Fasciculus. Philippia 2: 13-21.

FOLLMANN, G. 1974: Zur Nomanclatur der Lichenen. I. Ergänzungen und Neukombinationen. Philippia 2: 73-74.

FOLLMANN, G. 1975: Vorarbeiten zu einer Monographie der Flechtenfamilie Roccellaceae Chev. I. Die Gattung *Sagenidium* Stirt. Bot. Jahrb. Syst. 96: 42-52.

FOLLMANN, G. 1976: Zur Nomenklatur der Lichenen III. Über *Desmazieria* Mont. (Ramalinaceae) und andere kritische Verwandtschaftskreise. Philippia 3: 85-89.

FOLLMANN, G. 1979: Zur Nomenklatur der Lichenen. IV. Über einige Arten der Gattungen *Byssocaulon* Mont. (Roccellaceae), *Cladina* Nyl. (*Cladonia*ceae) und *Rhizoplaca* Zopf (Lecanoraceae). Philippia 4: 34-37.

FOLLMANN, G. 1995: On the impoverishment of the lichen flora and the retrogression of the lichen vegetation in coastal central and northern Chile during the last decades. Cryptog. Bot. 5: 224-231.

FOLLMANN, G. 1997: *Hubbsia langei*, a new Roccellaceae from the Atacama Desert, North Chile, and the identity of two *Reinkella* species. Biblioth. Lichenol. 67: 11-24.

FOLLMANN, G. & CRESPO, A. 1975: Zur Nomenklatur der Lichenen II. Buellia rivas-martinezii Barr. et Crespo, *Psora saviczii* (Tom.) Follm. et Crespo und *Sagenidium candidum* (Muell.-Arg.) Follm. Philippia 2: 283-285.

FOLLMANN, G. & HUNECK, S. 1969: Mitteilungen über Flechteninhaltsstoffe LXI. Zur Chemotaxonomie der Flechtenfamilie Ramalinaceae. Willdenowia 5: 181-216.

FOLLMANN, G. & HUNECK, S. 1976: Mitteilungen über Flechteninhaltsstoffe CXII. Neue Flechtenanalysen. 5. Philippia 3: 9-19.

FOLLMANN, G. & HUNECK, S. 1980: Mitteilungen über

Flechteninhaltsstoffe CXXV. Neue Flechtenanalysen 7. Nova Hedwigia 32: 445-471.

FOLLMANN, G., HUNECK, S., SCHULZ, M. & SANCHEZ-PINTO, L. 1993. Neue Untersuchungen zur Ausstattung der Roccellaceen mit sekundären Inhaltsstoffen. Herzogia 9: 653-668.

FOLLMANN, G. & REDON, J. 1972a: Beobachtungen zur Verbreitung chilenischer Flechten. IV. *Cystocoleus niger* (Huds.) Hariot. Philippia 1: 129-131.

FOLLMANN, G. & REDON, J. 1972b: Eine neue Schildflechte aus dem Verwandtschaftkreis von *Omphalodina melanophthalma* (Ram.) Follmann & Redon (Lecanoraceae). Willdenowia 6: 419-426.

FOLLMANN, G. & REDON, J. 1972c: Ergänzungen zur Flechtenflora der nordchilenischen Nebeloasen Fray Jorge und Talinay. Willdenowia 6: 431-460.

FOLLMANN, G. & REDON, J. 1973. Beobachtungen zur Verbreitung Chilenischer Flechten VII. Die Gattung *Omphalodina* (Parmeliaceae). Philippia 1: 258-261.

FOLLMANN, G. & SCHULZ, M. 1993: Comparative studies on two Chilean populations of *Roccellinastrum epiphyllum* (Ascolichenes). A contribution to the knowledge of foliicolous lichens. J. Hattori Bot. Lab. 73: 221-230.

FOLLMANN, G., SCHULZ, M. & HUNECK, S. 1991. Chemical, ecological and morphological studies on the pioneer lichen *Placopsis cribellans* f. *tuberculifera* (Trapeliaceae, Lecanorales). Cryptog. Bot. 2: 298-304.

FOLLMANN, G. & VEZDA, A. 1977: Beobachtungen zur Verbreitung chilenischer Flechten VIII. Eine neue Lecanactidacee aus dem mittelchilenischen Hartlaubgürtel. Philippia 3: 271-277.

GALLOWAY, D.J. 1985: Flora of New Zealand Lichens. P.D. Hasselberg, N.Z. Government Printer, Wellington. lxxiii + 662 pp.

GALLOWAY, D.J. 1986: Non-glabrous species of *Pseudocyphellaria* from southern South America. Lichenologist 18: 105-168.

GALLOWAY, D.J. 1988: Studies in *Pseudocyphellaria* (lichens) I. The New Zealand species. Bull. Brit. Mus.(Nat. Hist.) Bot. 17: 1-267.

GALLOWAY, D.J. 1989: Nomenclatural Notes on *Pseudocyphellaria* IV: some South American taxa. Lichenologist 18: 88-89.

GALLOWAY, D.J. 1992: Studies in *Pseudocyphellaria* (lichens) III. The South American species. Biblioth. Lichenol. 46: 1-275.

GALLOWAY, D.J. 1994: Studies on the lichen genus *Sticta* (Schreber) Ach.: I. Southern South American species. Lichenologist 26: 223-282.

GALLOWAY, D.J. 1995: Studies on the lichen genus *Sticta* (Schreber) Ach.: III. Notes on species described by Bory de St-Vincent, William Hooker and Delise between 1804 and 1825. Nova Hedwigia 61: 147-188.

GALLOWAY, D.J. 1997: Studies on the lichen genus *Sticta* (Schreber) Ach.: IV. New Zealand species. Lichenologist 29: 105-168.

GALLOWAY, D.J. 1998: The lichen genus *Solorina* Ach. (Peltigeraceae, lichenized Ascomycotina) in New Zealand. Cryptog., Bryol. Lichénol. .

GALLOWAY, D.J. & JAMES, P.W. 1985. The lichen genus *Psoromidium* Stirton. Lichenologist 17: 173-188.

GALLOWAY, D.J. & BARTLETT, J.K. 1986. *Arthrorhaphis* Th. Fr. (lichenized Ascomycotina) in New Zealand. New Zealand J. Bot. 24: 393-402.

GALLOWAY, D.J. & JAMES, P.W. 1987. *Metus*, a new austral lichen genus and notes on an Australasian species of *Pycnothelia*. Notes Roy. Bot. Gard. Edinburgh 44: 561-579.

GALLOWAY, D.J. & GUZMAN GRIMALDI, G. 1988: A new species of *Phlyctis* from Chile Lichenologist 20: 393-397.

GALLOWAY, D.J. & JØRGENSEN, P.M. 1987: Studies in the family Pannariaceae II. The genus *Leioderma* Nyl. Lichenologist 19: 345-400.

GALLOWAY, D.J. & JØRGENSEN, P.M. 1990: *Bartlettiella*, a new lichen genus from New Zealand, with notes on a new species of *Melanelia* and a new chemodeme of *Bryoria indonesica*. New Zealand J. Bot. 28: 5-12.

GALLOWAY, D.J. & JØRGENSEN, P.M. 1995: The lichen genus *Leptogium* (Collemataceae) in southern Chile, South America. In: F.J.A. Daniels, M. Schulz & J. Peine (eds). Flechten Follmann. Contributions to lichenology in honour of Gerhard Follmann. Geobotanical and Phytotaxonomical Study Group. Botanical Institute, University of Cologne, Cologne. Pp. 227-247.

GALLOWAY, D.J. & WATSON-GANDY, L.A. 1992. *Lepolichen coccophorus* (lichenized Ascomycotina, Coccotremataceae) in South America. Bryologist 95: 227-232.

GALLOWAY, D.J. & SAMMY, N. 1994: *Pannoparmelia*. Flora of Australia 55: 86-87.

GARBARINO, J.A., CHAMY, C., GAMBARO, V., QUILHOT, W., NARANJO, O. & BOLT, E. 1987: Studies on Chilean lichens, X. The phenolic constituents of *Protousnea magellanica*. J. Nat. Prod. 50: 745-747.

GARBARINO, J.A., PIOVANO, M., CHAMY, M.C., FIEDLER, P. & QUILHOT, W. 1993. Chemical studies on Chilean lichens. XX. Haematommic acid and barbatolic acid isolated from *Pseudephebe pubescens*. Biblioth. Lichenol. 53: 97-100.

GIERL, C. & KALB, K. 1993: Die Flechtengattung *Dibaeis*. Eine Übersicht über die rosafrüchtigen Arten von *Baeomyces* sens. lat. nebst Anmerkungen zu *Phyllobaeis* gen. nov. Herzogia 9: 593-645.

GOFFINET, B. & HASTINGS, R.I. 1994: The lichen genus *Peltigera* (lichenized Ascomycetes) in Alberta. Provincial Mus. Alberta Nat. Hist. Occas. Pap. 21: 1-54.

GRUBE, M. & GIRALT, M. 1996: Studies on some species of *Arthothelium* occurring in the western Mediterranean. Lichenologist 28: 15-36.

GUDERLEY, R. & LUMBSCH, H.T. 1996: The lichen genus *Diploschistes* in South Africa (Thelotremataceae). Mycotaxon 58: 269-292.

GUDERLEY, R, LUMBSCH, H.T. & FEIGE, G.B. 1997: *Ingvariella*, a new genus in the Thelotremataceae (lichenized Ascomycotina). Nova Hedwigia 64: 147-154.

HAFELLNER, J. 1979: *Karschia.* Revision einer Sammelgattung an der Grenze von lichenisierten und nichtlichenisierten Ascomyceten. Beih. Nova Hedwigia 62: 1-248.

HAFELLNER, J. 1984. Studien in Richtung einer natürlichen Gliederung der Sammelfamilien Lecanoraceae und Lecideaceae. Beih. Nova Hedwigia 79: 241-371.

HAFELLNER, J. 1985: Studien über lichenicole Pilze und Flechten IV. Die auf *Brigantiaea*-Arten beobachteten Ascomyceten. Herzogia 7: 163-180.

HAFELLNER, J. 1993a: *Acarospora* und *Pleopsidium*-zwei lichenisierte Ascomycetengattungen (Lecanorales) mit zahleichen Konvergenzen. Nova Hedwigia 56: 281-305.

HAFELLNER, J. 1993b: Die Gattung *Pyrrhospora* in Europa. Eine erste Übersicht mit einem Bestimmungsschlüssel der Arten nebst Bemerkungen zy einigen aussereuropäischen Taxa (lichenisierte Ascomycotina, Lecanorales). Herzogia 9: 725-747.

HAFELLNER, J. 1993c: Über funde von lichenicoler Pilzen und Flechten im südlichen Norwegen. Herzogia 9: 749-768.

HAFELLNER, J. 1994: On *Biatoridium*, a resurrected genus of lichenized fungi (Ascomycotina, Lecanorales). Acta Bot. Fenn. 150: 39-46.

HAFELLNER, J. 1995: Towards a better circumscription of the Acarosporaceae (Lichenized Ascomycotina, Lecanorales). Cryptog. Bot. 5: 99-104.

HAFELLNER, J. 1997: A world monograph of *Brigantiaea* (lichenized Ascomycotina, Lecanorales). Symb. Bot. Upsal. 32 (1): 35- 74 (1997).

HAFELLNER, J. & BELLMERE, A. 1981. Elektronenoptische Untersuchungen an Arten der Flechtengattung *Brigantiaea*. Nova Hedwigia 35: 237-261.

HAFELLNER, J. & CASARES-PORCEL, M. 1992: Untersuchungen an den Typusarten der lichenisierten Ascomycetengattungen *Acarospora* und *Biatorella* und die daraus entstehenden Konsequenzen. Nova Hedwigia 55: 309-323.

HALE, M.E. 1965: A monograph of *Parmelia* subgenus *Amphigymnia*. Contr.U.S. Natl. Herb. 36: 193-358.

HALE, M.E. 1974: *Bulbothrix, Parmelina, Relicina* and *Xanthoparmelia*, four new genera in the Parmeliaceae. Phytologia 28: 479-490.

HALE, M.E. 1975: A revision of the lichen genus *Hypotrachyna* (Parmeliaceae) in tropical America. Smithsonian Contr. Bot. 25: 1-73.

HALE, M.E. 1976: A monograph of the lichen genus Pseudoparmelia Lynge (Parmeliaceae). Smithsonian Contr. Bot. 31: 1-62.

HALE, M.E. 1980: Taxonomy and distribution of the *Parmelia flaventior* group (Lichens: Parmeliaceae). J. Hattori Bot. Lab. 47: 75-84.

HALE, M.E. 1981. A revision of the lichen family Thelotremataceae in Sri Lanka. Bull. Brit. Mus. (Nat. Hist.), Bot. 8 (3): 227-332.

HALE, M.E. 1984: *Flavopunctelia*, a new genus in the Parmeliaceae (Ascomycotina). Mycotaxon 20: 681-682.

HALE, M.E. 1986: *Flavoparmelia*, a new genus in the lichen family Parmeliaceae (Ascomycotina). Mycotaxon 25: 603-605.

HALE, M.E. 1987: A monograph of the lichen genus *Parmelia* Acharius sensu stricto (Ascomycotina: Parmeliaceae). Smithsonian Contr. Bot. 66: 1-55.

HALE, M.E. 1989: A new lichen genus *Psiloparmelia* Hale (Ascomycotina: Parmeliaceae). Mycotaxon 35: 177-198.

HALE, M.E. 1990: A synopsis of the lichen genus *Xanthoparmelia* (Vainio) Hale (Ascomycotina: Parmeliaceae). Smithsonian Contr. Bot. 74: 1-250.

HALE, M.E. & FLETCHER, A. 1990: *Rimelia* Hale & Fletcher, a new lichen genus (Ascomycotina: Parmeliaceae). Bryologist 93: 23-29.

HAKULINEN, R. 1954: Die Flechtengattung *Candelariella* Müller Argoviensis, mit besonderer Berücksichtigung.ihres Auftretens und ihrer Verbreitung in Fennoskandien. Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 27 (3):1-127.

HAWKSWORTH, D.L. 1970: A nomenclatural note on *Racodium* Pers. Trans. Brit. Mycol. Soc. 54: 323-325.

HAWKSWORTH, D.L. 1972: Regional studies in *Alectoria* (Lichenes) II. The British species. Lichenologist 5: 181-261.

HAWKSWORTH, D.L. 1975: Notes on British lichenicolous fungi, I. Kew Bull. 30 (1): 183-203.

HAWKSWORTH, D.L. 1979: Studies in the genus *Endococcus* (Ascomycotina, Dothideales). Bot. Not. 132: 283-290.

HAWKSWORTH, D.L. 1981. The lichenicolous Coelomycetes. Bull. Brit. Mus. (Nat. Hist.) Bot. 9: 1-98.

HAWKSWORTH, D.L. 1985: A redisposition of the species referred to the ascomycete genus *Microthelia*. Bull. Brit. Mus. (Nat. Hist.) Bot. 14 (2): 43-181.

HAWKSWORTH, D.L. 1986: Notes on British lichenicolous fungi: V. Notes Roy. Bot. Gard. Edinburgh 43 (3): 497-519.

HAWKSWORTH, D.L. 1988: A new name for *Dictyonema pavonium* (Swartz) Parmasto. Lichenologist 20: 101.

HAWKSWORTH, D.L. 1990: Notes on British lichenicolous fungi: VI. Notes Roy. Bot. Gard. Edinburgh 46 (3): 391-403.

HAWKSWORTH, D.L. & MOORE, D.M. 1969. Some lichens from Tierra del Fuego with notes on their chemical constituents. Bryologist 72: 247-251.

HAWKSWORTH, D.L. & DIEDEREICH, P. 1988: A synopsis of the genus *Polycoccum* (Dothideales), with a key to accepted species. Trans. Brit. Mycol. Soc. 90: 293-312.

HAWKSWORTH, D.L. & GALLOWAY, D.J. 1984: The identity of *Plectocarpon* Fée, and its implications for *Lichenomyces pseudocyphellaria* and rhe typification of *Sticta delisea*. Lichenologist 16: 85-89.

HAWKSWORTH, D.L. & RIEDL, H. 1977. Proposal to conserve the generic name *Racodium* Fr. Taxon 26: 208.

HAWKSWORTH, D.L. & SANTESSON, R. 1988: Skytella, a new genus for *Phacopsis mulleri* Willey (Syn. *Agyrium flavescens* Rehm). Graphis Scripta 2: 33-37.

HAWKSWORTH, D.L. & SANTESSON, R. 1990: A revision of the lichenicolous fungi previously referred to *Phragmonaevia*. Biblioth. Lichenol. 38: 121-143.

HENSSEN, A. 1963a: The North American species of *Massalongia* and generic relationships. Canad. J. Bot. 41 : 1331-1364.

HENSSEN, A. 1963b: The North American species of *Placynthium*. Canad. J. Bot. 41: 1687-1724.

HENSSEN, A. 1963c: Eine Revision der Flechten-familien Lichinaceae und Ephebaceae. Symb. Bot. Upsal. 18 (1): 1-123.

HENSSEN, A. 1965: A review of the genera of the Collemataceae with simple spores (excluding *Physma*). Lichenologist 3: 29-41.

HENSSEN, A. 1969: Three non-marine species of the genus *Lichina*. Lichenologist 4: 88-98.

HENSSEN, A. 1977: The genus *Zahlbrucknerella*. Lichenologist 9: 17-46 (1977).

HENSSEN, A. 1979: New species of *Homothecium* and *Ramalodium* from South America. Bot. Not. 132: 257-282.

HENSSEN, A. 1983: Studies in the genus *Psoroma* 3. *Psoroma pannaroides* and *Psoroma internectens*. Mycotaxon 18: 97-111.

HENSSEN, A. 1984: *Placynthium arachnoideum,* a new lichen from Patagonia, ands notes on other species of the genus from the Southern Hemisphere. Lichenologist 16: 265-271.

HENSSEN, A. 1986: *Thyrea polyglossa* and *Thyrea divergens* sp. nov. Mycotaxon 25: 493-503.

HENSSEN, A. 1987: *Lichenothelia,* a genus of microfungi on rocks. Biblioth. Lichenol. 25: 257-293.

HENSSEN, A. 1991. *Omphalodiella patagonica*, a new peltate lichen genus and species from South America. Lichenologist 23: 333-342.

HENSSEN, A. 1992a: Thallus morphology and apothecial development in *Omphalodium pisacomense* and *Omphalora arizonica* (Parmeliaceae). Lichenologist 24: 27-41.

HENSSEN, A. 1992b: *Placoparmelia patagonica,* a new lichen genus and species from Argentina (Parmeliaceae). Lichenologist 24: 133-142.

HENSSEN, A. 1994: Contribution to the morphology and species delimitation in *Heppia sensu stricto* (lichenized Ascomycotina). Acta Bot. Fenn. 150: 57-73.

HENSSEN, A. 1995: The new lichen family Gloeoheppiaceae and its genera *Gloeoheppia, Pseudopeltula* and *Gudelia* (Lichinales). Lichenologist 27: 261-290.

HENSSEN, A. 1997: *Santessoniella,* a new cyanophilic genus of lichenized ascomycetes. Symb. Bot. Upsal. 32 (1): 75-93.

HENSSEN, A. & RENNER, B. 1981. Studies in the lichen genus *Psoroma* 1: *Psoroma* tenue and *Psoroma* cinnamomeum. Mycotaxon 13: 433-449.

HENSSEN, A., RENNER, B. & VOBIS, G. 1979: *Sagenidium patagonicum.* A new South American lichen. Lichenologist 11: 263-270.

HENSSEN, A. & BÜDEL, B. 1984: *Phylisciella*, a new genus of the Lichinaceae. Beih. Nova Hedwigia 79: 381-389.

HENSSEN, A. & KANTVILAS, G. 1985: *Wawea fruticulosa*, a new genus and species from the Southern Hemisphere. Lichenologist 17: 85-97.

HENSSEN, A. VOBIS, G. & RENNER, B. 1982. New species of *Roccellinastrum* with an emendation of the genus. Nordic J. Bot. 23: 587-599.

HENSSEN, A., RENNER, B., MARTON, K., JAMES, P.W. & GALLOWAY, D.J. 1983: Studies in the lichen genus *Psoroma* 2. *Psoroma fruticulosum* and *Psoroma rubromarginatum*. Mycotaxon 18: 29-48.

HERRE, A.W.C.T. 1960: Notes on Chilean *Usneas* with description of one new species. Rev. Bryol. Lichénol. 29: 274-276.

HERTEL, H. 1971. Über holarktische Krustenflechten aus den venezuelanischen Anden. Willdenowia 6: 225-272.

HERTEL, H. 1981. Beiträge zur Kenntnis der Flechtenfamilie Lecideaceae VIII. Herzogia 5: 449-463.

HERTEL, H. 1984: Uber saxicole, lecideoide Flechten der Subantarktis. Beih. Nova Hedwigia 79: 399-499.

HERTEL, H. 1985. Lecidea sect. Armeniaceae: lecideoide Arten der Flechtengattungen *Lecanora* und *Tephromela* (Lecanorales). Bot. Jahrb. Syst. 107-: 469-501.

HERTEL, H. 1987a: Progress and problems in taxonomy of antarctic saxicolous lecideoid lichens. Biblioth. Lichenol. 25: 219-242.

HERTEL, H. 1987b: Bemerkenswerte Funde sudhemisphärischer, saxicoler Arten der sammelgattung *Lecidea*. Mitt. Bot. Staatssamml. München 23: 321-340.

HERTEL. H. 1989: New records of lecideoid lichens from the Southern Hemisphere. Mitt. Bot. Staatssamml. München 28: 211-238.

HERTEL, H. 1995: Schlüssel für die Arten der Flechtenfamilie Lecideaceae in Europa. Biblioth. Lichenol. 58: 137-180.

HERTEL, H. 1997: On the genus *Lecidea* (Lecanorales) in southern Chile and Argentina. Symb. Bot. Upsal. 32 (1): 95-111.

HERTEL, H. & RAMBOLD, G. 1990: Zur Kenntnis der Familie Rimulariaceae (Lecanorales). Biblioth. Lichenol. 38: 145-189.

HILLMANN, J. 1930: Studien über die Flechtengattung *Teloschistes* Norm. Nova Hedwigia 69: 303-343.

HOLTAN-HARTWIG, J. 1993: The lichen genus *Peltigera*, exclusive of the *P. canina* group, in Norway. Sommerfeltia 15: 1-77.

HOOKER, J.D. & TAYLOR, T. 1844: Lichens Antarctici; being characters and brief descriptions of the new lichens discovered in the southern circumpolar regions, Van Diemen's Land and New Zealand, during the voyage of H.M. Discovery Ships Erebus and Terror. London. J. Bot. 3: 634-658.

HOSSEUS, C.C. 1939: Ein neues *Coenogonium* von Uruguay. Borbasia 1: 35-38.

HUE, A.M. 1906: *Physma* unum e familiae Collemaceaarum generibus morphologice e anatomice descripsit. Bull. Soc. Linn. Normandie, sér. 5, 9: 119-138.

HUNECK, S. & FOLLMANN, G. 1966: Zur Chemie chilensicher Flechten XII. Über die Inhaltsstoffe von *Stereocaulon antarcticum* Wain., *Anaptychia neoleucomelaena* Kur., und *Tornabenia ephebea* (Ach.) Kur. Z. Naturf. 21: 714-715.

HUNECK. S. & FOLLMANN, G. 1967a: Zur Chemie chilenischer Flechten XV. Über die Inhaltsstoffe von *Ramalina cactacearum* Follm., *Ramalina ecklonii*

(Spreng.) Mey et Flot. var *ambigua* Mont. und *Medusulina chilena* Dodge. Z. Naturf. 22b (1): 110-111.

HUNECK, S. & FOLLMANN, G. 1967b: Zurt Chemie der chilenischer Flechten XVI. Über die Inhaltsstoffe einiger Roccellaceen. Z. Naturf. 22b (3): 362-363.

HUNECK, S. & FOLLMANN, G. 1971. Mitteilungen über Flechteninhaltsstoffe LXXXVII. Neue Flechtenanalysen. Willdenowia 6: 273-282.

HUNECK, S. & FOLLMANN, G. 1976: Mitteilungen über Flechteninhaltsstoffe CXIV. Zur Sekundärstoffchemie und Chemotaxonomie der Formgattung *Psora* Hoffm. (Lecideaceae Chev.) Philippia 3: 73-84.

HYVÖNEN, AHTI, T., STENROOS, S. & GOWAN, S. 1995: Genus *Cladina* and the section Unciales of the genus *Cladonia* (Cladoniaceae, lichenized Ascomycotina), a preliminary phylogenetic analysis. J. Hattori Bot. Lab. 78: 243-253.

IHLEN, P.G. 1998: The lichenicolous fungi on species of the genera *Baeomyces*, *Dibaeis*, and *Icmadophila* in Norway. Lichenologist 30: 27-57.

IMSHAUG, H.A. (1972): Typification of *Lichen ericetorum* L. and *Baeomyces* Pers. J. Hattori Bot. Lab. 35: 299-302

IMSHAUG, H.A. & BRODO, I.M. 1966: Biosystematic studies on *Lecanora pallida* and some related lichens in the Americas. Nova Hedwigia 12: 1-60.

JACOBSEN, P. & KAPPEN, L. 1988: Lichens from the Admiralty Bay region, King George Island (South Shetland Islands, Antarctica). Nova Hedwigia 46: 503-510.

JAHNS, H.M. (1971): Untersuchungen zur Taxonomie der Gattung *Baeomyces*. Herzogia 2: 133-148.

JAHNS, H.M., SENSEN, M. & OTT, S. 1995: Significance of developmental structures in lichens, especially in the genus *Cladonia*. Acta Bot. Fenn. 32: 35-48.

JAMES, P.W. & HENSSEN, A. 1976: The morphological and taxonomic significance of cephalodia. In: D.H. Brown, D.L. Hawksworth & R.H. Bailey (eds) Lichenology: Progress and Problems. Academic Press: London & New York. Pp. 27-77.

JAMES, P.W. & GALLOWAY, D.J. 1992. *Menegazzia*. Flora of Australia 54: 213-246.

JATTA, A. 1906: Lichenes lecti in Chili a cl. G.I. Scott-Elliott. Malpighia 20: 3-13.

JØRGENSEN, P.M. 1990: The lichen genus *Pterygiopsis* in northern Europe. Lichenologist 22: 213-217.

JØRGENSEN, P.M. 1994. Studies in the lichen family Pannariaceae.VI. The taxonomy and phytogeography of *Pannaria* Del. s. lat. J. Hattori Bot. Lab. 76: 197-206.

JØRGENSEN, P.M. 1996: The oceanic element in the Scandinavian lichen flora revisited. Symb. Bot. Upsal. 31 (3): 297-317.

JØRGENSEN, P.M. 1997: Further notes on hairy *Leptogium* species. Symb. Bot. Upsal. 32 (1): 113-130.

JØRGENSEN, P.M. 1998: On some misunderstood "*Parmeliella*" species from the Southern Hemisphere. Lichenologist.. In Press.

JØRGENSEN, P.M. & GALLOWAY, D.J. 1984: A new subantarctic species of the lichen genus *Peltularia*. Lichenologist 16: 189-196.

JØRGENSEN, P.M. & GALLOWAY, D.J. 1992a: Pannariaceae. Flora of Australia 54: 246-293.

JØRGENSEN, P.M. & GALLOWAY, D.J. 1992b: Notes on *Candelaria crawfordii*. Lichenologist 24: 407-410.

JØRGENSEN, P.M. & JAMES, P.W. 1990: Studies in the lichen family Pannariaceae IV: The genus *Degelia*. Biblioth. Lichenol. 38: 253-276.

JØRGENSEN, P.M. & SANTESSON, R. 1989: Three new species in the lichen genus *Ionaspis*. Nord. J. Bot. 9: 431-434.

JØRGENSEN, P.M. & SANTESSON, R. 1993: Nine proposals to conserve generic names of lichenized fungi. Taxon 42: 881-887.

KALB, K. 1991. *Lichenes neotropici*. Fascikel XII (No. 476-525) gewidmet Herrn Dr. Jack Elix. Neumarkt/OPf. 16 pp.

KALB, K., HAFELLNER, J. & STAIGER, B. 1995: *Haematomma*-Studien. II. Lichenicole Pilze auf Arten der Flechtengattung *Haematomma*. Biblioth. Lichenol. 59: 199-222.

KALB, K. & VEZDA, A. 1988: Die Flechtengattung *Mazosia* in der Neotropis (eine taxonomisch-phytogeographische Studie). Folia Geobot. Phytotax. Praha 23: 199-210.

KALB, K & VEZDA, A. 1990. Die Flechtengattung *Byssoloma* in der Neotropis (eine taxonomisch-phytogeographische Studie). Nova Hedwigia 51: 435-451.

KÄRNEFELT, I. 1979: The brown fruticose species of *Cetraria*. Opera Bot. 46: 1-150.

KÄRNEFELT, I. 1986: The genera *Bryocaulon*, *Coelocaulon* and *Cornicularia* and formerly associated taxa. Opera Bot. 86: 1-90.

KÄRNEFELT, I. 1989: Morphology and phylogeny in the Teloschistales. Cryptog. Bot. 1: 147-203.

KÄRNEFELT, I. 1998. Problems related to the marine lobate and subfruticose species of *Caloplaca*. Folia Cryptog. Eston. 32. 27-35.

KÄRNEFELT, I., MATTSSON, J.E. & TELL, A. 1992. Evolution and phylogeny of cetraroid lichens. Pl. Syst. Evol. 183: 113-160.

KÄRNEFELT, I. & THELL, A. 1993a: *Nimisia fuegiae*, a new lichen genus and species from Argentina (Parmeliaceae). Lichenologist 25: 369-377.

KÄRNEFELT, I. & THELL, A. 1993b: Chemical evolution in cetrarioid lichens. Biblioth. Lichenol. 53: 115-127.

KÄRNEFELT, I. & THELL, A. 1995: Genotypical variation and reproduction in natural populations of *Thamnolia*. Biblioth. Lichenol. 58: 213-234.

KÄRNEFELT, I., MATTSON, J.-E. & THELL, A. 1993: The lichen genera *Arctocetraria*, *Cetraria* and *Cetrariella* (Parmeliaceae) and their presumed evolutionary affinities. Bryologist 96: 394-404.

KANTVILAS, G. 1987: *Siphula jamesii*, a new lichen from south-western Tasmania. Nordic J. Bot. 7: 585-588.

KANTVILAS, J. 1990a: The genus *Roccellinastrum* in Tasmania. Lichenologist 22: 79-86.

KANTVILAS, G. 1990b: The genus *Pertusaria* in Tasmanian rainforests. Lichenologist 22: 289-300.

KANTVILAS, G. 1994: *Siphula elixii*, a new lichen from

Tasmania and New Zealand. New Zealand J. Bot. 32: 17-20.

KANTVILAS, G. 1996: Studies on the lichen genus *Siphula* in Tasmania I. *S. complanata* and its allies. Herzogia 12: 7-22.

KASHIWADANI, H. 1989: Some Chilean species of the genus *Ramalina* (Lichens). Bull. Nat. Sci. Mus. Tokyo, ser. B, 16: 1-12.

KASHIWADANI, H. & KALB, K. 1993: The genus *Ramalina* in Brazil. Lichenologist 25: 1-31.

KLEMENT, O. 1963: *Lecanora follmannii*, nov. spec. aus dem Formenkreis von *Lecanora subfusca* spec. coll. Rev. Bryol. Lichénol. 31: 256-257.

KNOPH, J.-G. 1990: Untersuchungen an gesteinbewohnenden xanthonhaltigen Sippen der Flechtengattung *Lecidella* (Lecanoraceae, Lecanorales) unter besonderer Berücksichtigung von aussereuropäisxchere Proben exklusive America. Biblioth. Lichenol. 36: 1-183.

KNOPH, J.-G. & LEUCKERT, C. 1994: Chemotaxonomic studies in the saxicolous species of the lichen genus *Lecidella* (Lecanoraceae, Lecanorales) in America. Nova Hedwigia 59: 455-508.

KNOPH, J.-G. & LEUCKERT, C. 1997: Chemotypes and distribution patterns of the non-saxicolous species of *Lecidella* (Lecnoraceae, Lecanorales). Biblioth. Lichenol. 68: 129-134.

KNOPH, J.-G., LEUCKERT, C. & HERTEL, H. 1995: Chemotypes and distribution patterns of saxicolous species of *Lecidella* (Lecanoraceae, Lecanorales). Cryptog. Bot. 5: 45-54.

KNOPH, J.-G. & MIES, B. 1995: Beiträge zur Flechtenflora der Kapverdischen Inseln III. Die saxicolen Arten der Gattung *Lecidella*. Biblioth. Lichenol. 57: 297-305.

KONDRATYUK, S. 1997: Notes on *Xanthoria* Th. Fr. III. Two new species of the *Xanthoria candelaria* group. Lichenologist 29: 431-440.

KONDRATYUK, S.Y. & GALLOWAY, D.J. 1994. Additional lichen records from New Zealand 10. Australas. Lichenol. Newslett. 34: 26-29.

KONDRATYUK, S.Y. & GALLOWAY, D.J. 1995: Lichenicolous fungi and chemical patterns in *Pseudocyphellaria*. Biblioth. Lichenol. 57: 327-345.

KONDRATYUK, S.Y. & KÄRNEFELT, I. 1997: *Josefpoeltia* and *Xanthomendoza*, two new genera in the Teloschistaceae (Lichenized Ascomycotina). Biblioth. Lichenol. 68: 19-44.

KONDRATYUK, S.Y. & POELT, J. 1997: Two new Asian *Xanthoria* species (Teloschistaceae, lichenized Ascomycotina). Lichenologist 29: 173-190.

KROG, H. 1976: *Lethariella* and *Protousnea*, two new lichen genera in Parmeliaceae. Norweg. J. Bot. 23: 83-106.

KROG, H. 1982: *Punctelia*, a new lichen genus in the Parmeliaceae. Nordic J. Bot. 2: 287-292.

KROG, H. & SWINSCOW, T.D.V. 1981: *Parmelia* subgenus *Amphigymnia* (lichens) in East Africa. Bull. Brit. Mus. (Nat. Hist.) Bot. 9: 143-231.

KROG, H. & SWINSCOW, T.D.V. 1986: The lichen genera *Lasallia* and *Umbilicaria* in East Africa. Nordic J. Bot. 6: 75-85.

KUROKAWA, S. 1962: A note on the lichen genus *Tornabenia* Trev. J. Jap. Bot. 37: 289-294.

KUROKAWA, S. 1973. Supplementary notes on the genus *Anaptychia*. J. Hattori Bot. Lab. 37: 563-607.

KUROKAWA, S. 1991: *Rimeliella*, a new lichen genus related to *Rimelia* of the Parmeliaceae. Ann. Tsukuba Bot. Gard. 10: 1-14.

KUROKAWA, S. 1998. A catalogue of *Heterodermia* (Physciaceae). Folia Cryptog. Eston. 32: 21-25.

LAMB, I.M. 1947: A monograph of the lichen genus *Placopsis* Nyl. Lilloa 13: 151-288.

LAMB, I.M. 1948: Antarctic pyrenocarp lichens. Discovery Rep. 25: 1-30.

LAMB. I.M. 1955. New lichens from northern Patagonia, with notes on some related species. Farlowia 4: 423-471.

LAMB, I.M. 1959 ["1958"]: La vegetación liquénica de los Parques Nacionales Patagónicos. Anales Parques Nac. 7: 1-188.

LAMB, I.M. 1964: Antarctic Lichens I. The genera *Usnea*, *Ramalina*, *Himantormia*, *Alectoria*, *Cornicularia*. Brit. Antarct. Surv. Sci. Rep.. 38: 1-34.

LAMB, I.M. 1968: Antarctic Lichens II. The genera *Buellia* and *Rinodina*. Brit. Antarct. Surv. Sci. Rep. 61: 1-129.

LAMB, I.M. 1973: Further observations on *Verrucaria serpuloides* M. Lamb, the only known permanently submerged marine lichen. Occas. Pap. Farlow Herb. Cryptog. Bot. 6: 1-5.

LAMB, I.M. 1977: A conspectus of the lichen genus *Stereocaulon* (Schreb.) Hoffm. J. Hattori Bot. Lab. 43: 191-355.

LAMB, I.M. 1978: Keys to the species of the lichen genus *Stereocaulon* (Schreb.) Hoffm. J. Hattori Bot. Lab. 44: 209-250.

LAMB, I.M. & WARD, A. 1974. A preliminary conspectus of the species attributed to the imperfect lichen genus *Leprocaulon* Nyl. J. Hattori Bot. Lab. 8: 499-553.

LAUNDON, J.R. 1981: The species of *Chrysothrix*. Lichenologist 13: 101-121.

LAUNDON, J.R. 1984: The typification of Withering's neglected lichens. Lichenologist 16: 211-239.

LAUNDON, J.R. 1989. The species of *Leproloma*, the name for the *Lepraria membranacea* group. Lichenologist 21: 1-22.

LAUNDON, J.R. 1992. *Lepraria* in the British Isles. Lichenologist 24: 315-350.

LEUCKERT, C. & KÜMMERLING, H. 1991: Chemotaxonomische Studien in der Gattung *Leproloma* Nyl. ex Cromb. (Lichenes). Nova Hedwigia 52: 17-32.

LEUCKERT, C. & KNOPH, J.-G. 1993: Secondary compounds as taxonomic characters in the genus *Lecidella* (Lecanoraceae, Lecanorales). Biblioth. Lichenol. 53: 161-171.

LEUCKERT, C., POELT, J. & HÄHNEL, G. 1977: Zur Chemotaxonomie der Eurasischen Arten der Flechtengattung *Rhizoplaca*. Nova Hedwigia 28: 71-129.

LINDAHL, P.O. 1962: Taxonomical aspects of some *Peltigera* species. *P. scutata* (Dicks.) Duby, *P. scabrosa* Th.Fr., and *P. pulverulenta* (Tayl.) Nyl. Svensk Bot. Tidskr. 56: 471-476.

LINDBLOM, L. 1997: The genus *Xanthoria* (Fr.) Th.Fr. in North America. J. Hattori Bot. Lab. 83: 75-172.

LINDSTRÖM, M. 1996: *Leptogium valdivianum*, a new species from cool temperate South America. Lichenologist 28: 91-94.

LLANO, G.A. 1950: A monograph of the lichen family Umbilicariaceae in the Western Hemisphere. Office of Naval Research. Navexos P-831: Washington. 1-129.

LÜCKING, R. & MATZER, M. 1996: Ergänzungen und Verbesserungen zur Kenntnis der foliikolen Flechtenflora Costa Rica. Die Familie Opegraphaceae (einschlisslich der Gattung *Mazosia*). Nova Hedwigia 63: 109-144.

LÜCKING, R., LUMBSCH, H.T. & ELIX, J.A. 1994: Chemistry, anatomy, and morphology of foliicolous species of *Fellhanera* and *Badimia* (lichenized Ascomycotina: Lecanorales). Bot. Acta 107: 393-401.

LUMBSCH, H.T. 1987: Eine neue Subspecies in der Flechtengattung *Diploschistes* aus dere Südhemisphäre. Herzogia 7: 601-608.

LUMBSCH, H.T. 1989: Die holarktischen Vertreter der Flechtengattung *Diploschistes* (Thelotremataceae). J. Hattori Bot. Lab. 66: 133-196.

LUMBSCH, H.T. 1993: Studien über die Flechtengattung *Diploschistes* I. Nova Hedwigia 56: 227-236.

LUMBSCH, H.T. 1994: Die *Lecanora subfusca* - Gruppe in Australasien. J. Hattori Bot. Lab. 77: 1-175.

LUMBSCH, H.T., GUDERLEY, R. & ELIX, J.A. 1996: A revision of some species in *Lecanora sensu stricto* with a dark hypothecium (Lecanorales, Ascomycotina). Bryologist 99: 269-291.

LUMBSCH, H.T., PLÜMPER, M., GUDERLY, R. & FEIGE, G.B. 1997. The corticolous species of *Lecanora sensu stricto* with pruinose apothecial discs. Symb. Bot. Upsal. 32: 131-162.

LUNKE, T., LUMBSCH, H.T. & FEIGE, G.B. 1996: Anatomical and ontogenetic studies on the lichen family Schaereriaceae (Agyriineae, Lecanorales). Bryologist 99: 53-63.

MAGNUSSON, A.H. 1929: A monograph of the genus *Acarospora*. Kongl. Svenska Vetenskapsacad. Hand., 3rd series, 7 (4): 1-400.

MAGNUSSON, A.H. 1934: Die Flechtengattung *Maronea* Mass. Acta Horti. Gothob. 9: 42-66.

MAGNUSSON, A.H. 1947: Some lichens from Argentina. Acta Horti Gothob. 17: 59-75.

MAGNUSSON, A.H. 1955. Key to saxicolous *Buellia* species, mainly from South America. Ark. Bot. 3: 205-207.

MAGNUSSON, A.H. 1956: A second Supplement to the Monograph of *Acarospora* with keys. Göteborgs Kungliga Vetenskaps-och Vitterhets-Sanhälles Handlingar. Sjätte Följden. ser. B. 6(17): 1-34.

MAKHIJA, U. & PATWARDHAN, P.G. 1995: The lichen genus *Arthothelium* (family Arthoniaceae) in India. J. Hattori Bot. Lab. 78: 189-235.

MALCOLM, W.N. & VEZDA, A. 1995. To new saxicolous species of the lichen genus *Byssoloma* from New Zealand. Mycotaxon 55: 357-362.

MALME, G.O.A. 1925. Die Pannariazeen des Regnellschen Herbars. Ark. Bot. 20: 1-23.

MARCANO, V., MORALES MENDEZ, A., SIPMAN, H, & CALDERON, L. 1996: A first Checklist of the lichen-forming fungi of the Venezuelan Andes. Tropical Bryol. 12: 193-235.

MATZER, M. & HAFELLNER, J. 1990: Eine Revision der lichenicolen Arten der Sammelgattung *Rosellinia* (Ascomycetes). Biblioth. Lichenol. 37: 1-138.

MATZER, M., MAYRHOFER, H. & ELIX, J.A. 1998: *Rinodina peloleuca* (Physciaceae), a maritime lichen with a distinctive austral distribution. New Zealand J. Bot. In Press.

MATZER, M., MAYRHOFER, H. & SCHEIDEGGER, C. 1994: Notes on *Amandinea petermannii* comb. nov. (Physciaceae) from Antarctica. Lichenologist 26: 39-46.

MAYRHOFER, H. 1983: The saxicolous species of *Rinodina* in New Zealand. Lichenologist 15: 267-282.

MAYRHOFER, H. 1985: Rinodina (Ach.) S.F. Gray (1821). In: D.J. Galloway, Flora of New Zealand Lichens. P.D. Hasselberg, N.Z. Government Printer: Wellington. Pp. 507-516.

MAYRHOFER, H. 1987: Monographie der Flechtengattung *Thelenella*. Biblioth. Lichenol. 26: 1-106.

MAYRHOFER, H., MATZER, M., WIPPEL, A. & ELIX, J.A. 1996: The genus *Dimelaena* (lichenized Ascomycetes, Physciaceae) in the Southern Hemisphere. Mycotaxon 58: 293-311.

MCCARTHY, P.M. 1991: The lichen genus *Endocarpon* Hedwig in Australia. Lichenologist 23: 27-52.

MCCARTHY, P.M. 1993: Saxicolous species of *Porina* Müll. Arg. (Trichotheliaceae) in the Southern Hemisphere. Biblioth. Lichenol. 52: 1-134.

MESSUTI, M.I. 1996: Notes on the lichen genus *Coccotrema* in southern South America. N.Z. J. Bot. 34: 57-64.

MIES, B. & PRINTZEN, C. 1997: Notes on the lichens of Socotra (Yemen, Indian Ocean). Biblioth. Lichenol. 68: 223-239.

MOBERG, R. 1977: The lichen genus *Physcia* and allied genera in Fennoscandia. Symb. Bot. Upsal. 22: 1-108.

MOBERG, R. 1986: The genus *Physcia* in East Africa. Nord. J. Bot. 6: 843-864.

MOBERG, R. 1990: The lichen genus *Physcia* in Central and South America. Nord.ic J. Bot. 10: 319-342.

MOBERG, R. 1993: The lichen genus *Phaeophyscia* in South America wirh special reference to Andean species. Opera Bot. 121: 281-284.

MOBERG, R. 1994: Is the Pacific an area of speciation for some foliose genera of the lichen family Physciaceae? J. Hattori Bot. Lab. 76: 173-181.

MOBERG, R. 1995: The lichen genus *Phaeophyscia* in China and Russian Far East. Nord. J. Bot. 15: 319-335.

MOBERG, R. 1996. Lichens Selecti Exsiccati Upsalienses. Fasc. 1 (N° 1-25). Thunbergia 2: 1-10.

MONTAGNE,J.P.C.F. 1835. Prodomus Florae fernandezianae. Pars prima, sistens enumerationen plantarum cellularum quas in Insula Juan Fernández á cl. Bertero collectas describi edique curaviy. Ann. Sci. Nat. Bot. sér. 2,4. 86-89.

MONTAGNE, J.P.F.C. 1852: Diagnoses Phycologiae.

Ann. Sci. Nat. Bot. sér. 3, 18: 302-319.

MORENO, P.P. & EGEA, J.M. 1991: Biología y Taxonomía de la familia Lichinaceae, con especial referencia a las especies del S.E. español y Norte de Africa. Universidad de Murcia Colección Blanca 19: 1-87.

MORENO, P.P. & EGEA, J.M. 1992: Estudios sobre el complejo *Anema-Thyrea-Peccania* en el Sureste de la Península Ibérica y Norte de Africa. Acta Bot. Barcinon. 41: 1-66.

MOTYKA, J. 1936-38: Lichenum Generis *Usnea* studium monographicum. Pars Systematicum. Leopoli. 1: 1-304 (1936); 2 (1): 305-560 (1937); 2 (2): 561-651.

MÜLLER ARGOVIENSIS, J. 1882: Diagnoses lichenum Socotrensium novorum a particibus expeditionem Prof. Bayley Balfour et Dr. Schweinfurth lectorum. Proc. Roy. Soc. Edinburgh 11: 457-572.

MÜLLER, ARGOVIENSIS, J. 1888: Lichens. Mission Scientifique du Cap Horn, 1882-1883. Tome 5. Botanique. Pp. 141-172. Gauthier-Villars: Paris.

MÜLLER ARGOVIENSIS, J. 1889. Lichenologische Beiträge 31. Flora 72: 142-147.

NASH, T.H.III, GRIES, C. & ELIX, J.A. 1995: A revision of the lichen genus *Xanthoparmelia* in South America. Biblioth. Lichenol. 56: 1-158.

NASH, T.H.III, HAFELLNER, J. & COMMON, R.S. 1990: *Omphalora,* a new genus in the Parmeliaceae. Lichenologist 22: 355-365.

NIMIS, P.L. 1993. The lichens of Italy. An annotated catalogue. Museo Regionale di Scienze Naturali (Torino). Monografie XII: 1-897.

NIMIS, P.L. (ed.) 1997: Forum: Topic 3: *Placynthiella* or *Saccomorpha*? This is the problem... Int. Lichenol. Newslett. 30 (2): 51-53.

NIMIS, P.L. & TRETIACH, M. 1997: A revision of *Tornabea*, a genus of fruticose lichens new to North America. Bryologist 100: 217-225.

NYLANDER, W. 1855: Additamentum in floram cryptogamicam chilensem quo lichenes praecipue saxicolas exponit. Ann. Sci. Nat., Bot. sér. 4, 3: 145-187.

NYLANDER, W. 1860. De *Stictis* et *Stictinis* adnotatio. Flora 43: 65-66.

OBERMAYER, W. 1996: The genus *Arthorhaphis* in the Himalaya, the Karakorum and the subalpine and alpine regions of south-eastern Tibet. J. Hattori Bot. Lab. 80: 331-342.

OLECH, M. & SØCHTING, U. 1993: Four new species of *Caloplaca* from Antarctica. Lichenologist 25: 261-269.

OSORIO, H.S. 1974: *Placomaronea candelarioides*: Ampliación de su área de distribución geográfica. Bryologist 77 (3): 463-464.

ØSTHAGEN, H. & SUNDING, P. 1980: *Tornabea*, nom. nov. for *Tornabenia* Trevisan [sic.] (Lichenes), non *Tornabenea* Parlatore (Umbelliferae). Taxon 29: 687-689.

OTT, S. & SANCHO, L.G. 1993: Morphology and anatomy of *Caloplaca coralligera* (Teloschistaceae) as adaptation to extreme environmental conditions in the maritime Antarctic. Pl. Syst. Evol. 185: 123-132.

OTT, S., PRZEWOSNIK, R., SOJO, F. & JAHNS, H.M. 1997: The nature of cephalodia in *Placopsis contortuplicata* and other species of the genus. Biblioth. Lichenol. 67: 69-84.

ØVSTEDAL, D.O. 1986: Crustose lichens of Bouveyøya. Norsk Polarinstitutt Skrifter 185: 35-56.

PARMASTO, E. 1978: The genus *Dictyonema* (Thelephorolichenes'). Nova Hedwigia 29: 99-144.

PEINE, J. & WERNER, B. 1995: *Follmanniella scutellata* gen. et sp.nov., a new genus and species of Roccellaceae from the Atacama Desert, north Chile. In: F.J.A. Daniels, M. Schulz & J. Peine (eds). Flechten Follmann. Contributions to lichenology in honour of Gerard Follmann. Geobotanical and Phytotaxonomical Study Group. Botanical Institute, University of Cologne: Cologne. Pp. 287-299.

PEREZ, F.L. 1997: Geoecology of erratic globular lichens of *Catapyrenium lachneum* in a high Andean paramo. Flora 192: 241-259.

PETERSEN, R.H. & KANTVILAS, G. 1986: Three lichen-forming clavarioid fungi from Tasmania. Austral. J. Bot. 34: 217-222.

PIETSCHMANN, M. 1990: Morphometrics of tubiform apical apparatus in Lecideaceae, Micareaceae, Porpidiaceae and allied families (lichenized Ascomycetes, Lecanorales): limitations and perspectives of statistical inference. Nova Hedwigia 51: 521-549.

PIOVANO, M., CHAMY, M.C., GARBARINO, J.A. & QUILHOT, W. 1995: Studies on Chilean lichens XXIV. Secondary products from *Dictyonema glabratum* (Basidiomycotina). Bol. Soc. Chilena Quím. 40: 163-165.

POELT, J. & PELLETER, U. 1984: Zwerstrauchige Arten der Flechtengattung *Caloplaca*. Pl. Syst. Evol. 148: 51-88.

POELT, J. & OBERMAYER, W. 1990: Lichenisierte Bulbillen als Diasporen bei der Basidiolichene *Multiclavula vernalis* spec. coll. Herzogia 8: 298-294.

POELT, J. & PETUTSCHNIG, W. 1992a: Beiträge zur Kenntnis der Flechtenflora des Himalaya IV. Die Gattungen *Xanthoria* und *Teloschistes* zugleich einer Revision der *Xanthoria candelaria*- Gruppe. Nova Hedwigia 54: 1-36.

POELT, J. & PETUTSCHNIG, W. 1992b: *Xanthoria candelaria* und ähnliche Arten in Europa. Herzogia 9: 103-114.

POELT, J. & GRUBE, M. 1993. Beiträge zur Kenntnis der Flechtenflora des Himalaya VI. Die Gattung *Tephromela* (mit Bemerkungen zum Genus *Heppsora*. Nowa Hedwigia 57: 1-17.

POELT, J. & HINTEREGGER, E. 1993: Beiträge zur Kenntnis der Flechtenflora des Himalaya VII. Die Gattungen *Caloplaca*, *Fulgensia* und *Ioplaca* (mit englischem Bestimmungsschlüssel). Biblioth. Lichenol. 30: 1-247.

PRINTZEN, C. 1995. Some notes on the determination of the genus *Biatora* Fr. (Lecanorales, lichenized ascomycetes). Cryptog. Bot. 5: 105-110.

PURVIS, O.W., COPPINS, B.J., HAWKSWORTH, D.L., JAMES, P.W., MOORE, D.M. (EDS.) 1992. the Lichen Flora of Great Britain and Ireland. Natural History Museum Publications & British Lichen Society, London. 710 pp.

QUILHOT, W., REDON, J. & ZUÑIGA, E. 1975: Estudios fitoquímicos en el género *Menegazzia* Mass. emend. Sant (Parmeliaceae). An. Mus. Hist. Nat. Valparaíso (Chile) 8: 108-113.

QUILHOT, W., GARBARINO, J.A.& GAMBARO, V. 1983. Studies on Chilean lichens. IV. Additions to the chemistry of *Lobodirina cerebriformes*. J. Nat. Prod. 46: 594-595.

QUILHOT, W., DIDYK, B., GAMBARO, V. & GARBARINO, J.A. 1983: Studies on Chilean lichens, VI: Depsidones from *Erioderma chilense*. J. Nat. Prod. 46 (6): 942.

QUILHOT, W., LEIGHTON, G., FLORES, E., FERNANDEZ, E., PEÑA, W. & GUZMAN, G. 1987: Factores exógenos determinantes de la acumulación de ácido úsnico en líquenes. Acta Farm. Bonaerense 6 (1): 15-22.

QUILHOT, W., PIOVANO, M., ARANCIBIA, H., GARBARINO, J.A. & GAMBARO, V. 1989: Studies on Chilean lichens, XII. Chemotaxonomy of the genus *Psoroma*. J. Nat. Prod. 52 (1): 191-192.

QUILHOT, W., GARBARINO, J.A., PIOVANO, M., CHAMY, M.C., GAMBARO, V., OYARZUN, M.L., VINET, C., HORMACHEA, V. & FIEDLER, P. 1989: Studies on Chilean lichens. XI Secondary metabolites from Antarctic lichens. Serie Científica. Inst. Antárt. Chileno 39: 75-89.

QUILHOT, W., PIOVANO, M., CHAMY, M.C. & GARBARINO, J.A. 1995: Studies on Chilean lichens, XXIII. Secondary products from *Degelia gayana*. Lichenologist 27: 405-407.

QUILHOT, W., PEÑA, W., FLORES, E., HIDALGO, M.E., FERNANDEZ, E. & LEIGHTON, G. 1991a: Temporal variation in usnic acid concentration in *Usnea aurantiaco-atra* (Jaq.) Bory. Serie Científica Inst. Antárt. Chileno 41: 99-106.

QUILHOT, W., SAGREDO, M.G., CAMPALANS, E., HIDALGO, M.E., PEÑA, W., FERNANDEZ, E. & PIOVANO, M. 1991b: Quantitative variations of phenolic compounds related to thallus age in *Umbilicaria antarctica*. Serie Científica Inst. Antárt. Chileno 41: 91-97.

QUILHOT, W., FERNANDEZ, E., RUBIO, C., CAVIERES, M.F., HIDALGO, M.E., GODDARD, M. & GALLOWAY D.J. 1996: Preliminary data on the accumulation of usnic acid related to ozone depletion in two Antarctic lichens. Serie Científica Inst. Antárt. Chileno 46: 105-111.

RAMBOLD, G. 1989: A monograph of the saxicolous lecideoid lichens of Australia (excl. Tasmania). Biblioth. Lichenol. 34: 1-345.

RAMBOLD, G. & TRIEBEL, D. 1992: Inter-lecanoralean associations. Biblioth. Lichenol. 48: 1-201.

RAMBOLD, G., TRIEBEL, D. & HERTEL, H. 1993: Icmadophilaceae, a new family in the Leotiales. Biblioth. Lichenol. 53: 217-240.

RÄSÄNEN, V. 1932: Zur Kenntnis der Flechtenflora Feuerlands sowie der Prov. Magallanes. Prov. de Chiloë und Prov. de Ñuble in Chile. Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 2 (1): 1-65.

RÄSÄNEN, V. (1937) Das Rätsel der Flechtengattung *Siphula* Fr. gelöst. *Siphula patagonica* Vain. mit Apothecien und Sporen gefunden. Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 8 (7): 3-8.

RÄSÄNEN, V. 1944: Lichenes Novi I. Ann. Bot. Soc. Zool.-Bot. Fenn. "Vanamo" 20 (3): 1-34.

REDON, J. 1982: Lichens of arid South America. J. Hattori Bot. Lab. 53: 337-339.

REDON, J. 1985: Liquenes Antarcticos. Instituto Antártico Chileno, INACH: Santiago. i-x, 123 pp., 21 plates.

REDON, J. & FOLLMANN, G. 1972a. Beobachtungen zur Verbreitung chilenischer Flechten. V. *Minksia chilensis* (Dodge) Redon & Follm. Philippia 1: 132-136.

REDON, J. & FOLLMANN, G. 1972b: Beobachtungen zur Verbreitung chilenischer Flechten. VI. Revision einiger Arten der Krustenfamilie Lecanactidaceae. Philippia 1: 186-193.

RIEDL, H. & SCHIMAN-CZEIKA, H. 1964: Diagnosen und Neukombinationen chilenischer Flechten. Sydowia 17: 82-92.

ROGERS, R.W. & HAFELLNER, J. 1988: *Haematomma* and *Ophioparma*: two superficially similar genera of lichenized fungi. Lichenologist 20: 167-174.

RUNEMARK, H. 1956a: Studies in Rhizocarpon I. Taxonomy of the yellow species in Europe. Opera Bot. 2 (1): 1-152.

RUNEMARK, H. 1956b: Studies in *Rhizocarpon* II. Distribution and ecology of the yellow species in Europe. Opera Bot. 2 (2): 1-150.

RYAN, B.D. & NASH III, T.H. 1997: Systematics of *Lecanora* subgenus *Placodium* (lichenized Ascomycotina) in North America: An overview, with keys. Nova Hedwigia 64: 111-127.

SALISBURY G. 1966: A monograph of the lichen genus *Thelocarpon* Nyl. Lichenologist 3 : 175-196.

SALISBURY, G. 1972a: *Thelotrema* Ach. sect. *Thelotrema*. 1. The *T. lepadinum* group. Lichenologist 5: 262-274.

SALISBURY, G. 1972b: Typification of *Enterostigma* Müll. Arg. Lichenologist 5: 319-320.

SALISBURY, G. 1975: *Thelotrema monosporum* Nyl. in Britain. Lichenologist 7: 59-61.

SALISBURY, G. 1978: Thelotremata Achariana et Feeana. Nova Hedwigia 29: 405-427.

SANCHEZ-PINTO & SCHULZ, M. 1995: *Protoroccella follmannii* sp. nov. (Roccellaceae, Opegraphales), eine neue Halbstrauchflechte aus der Artacamawüste (Nordchile). In: F.J.A. Daniels, M. Schulz & J. Peine (eds). Flechten Follmann. Contributions to lichenology in honour of Gerhard Follmann. Geobotanical and Phtotaxonomical Study Group. Botanical Institute, University of Cologne: Cologne. Pp. 317-328.

SANCHO, L.G., KAPPEN, L. & SCHROETER, B. 1992: The lichen genus *Umbilicaria* on Livingston Island. South Shetland Islands, Antarctica. Antarct. Sci. 4: 189-196.

SANTESSON, R. 1939: Amphibious pyrenolichens I. Ark. Bot. 29A (10): 1-67.

SANTESSON, R. 1942a: Lichens from the Nahuel Huapi National Park in Argentina. Ark. Bot. 30A (6): 1-12.

SANTESSON, R. 1942b: The South American *Cladinae*. Ark. Bot. 30A (10): 1-27.

SANTESSON, R. 1942c: The South American *Menegazziae*. Ark. Bot. 30A (11): 1-35.

SANTESSON, R. 1942d: Some lichens from Palestyne and Syria. Ark. Bot. 30B (5): 1-5.

SANTESSON, R. 1943: South American *Calicia* collected during the First Regnellian Expedition in 1892-1894. Ark. Bot. 30A (14): 1-12.

SANTESSON, R. 1944: Contributions to the lichen flora of South America. Ark. Bot. 31A (7): 1-28.

SANTESSON, R. 1949. *Dolichocarpus* and *Xanthopeltis*, to new lichen genera from Chile. Svensk. Bot. Tidskr. 43: 547-567.

SANTESSON , R. 1952. Foliicolous lichens I. A revision of the taxonomy of the obligately foliicolous, lichenized fungi. Symb. Bot. Upsal. 12: 1-590.

SANTESSON, R. 1960: Lichenicolous fungi from northern Spain. Svensk Bot. Tidskr. 54 (4): 501-522.

SANTESSON, R. 1993: The lichens and lichenicolous fungi of Sweden and Norway. SBT-förlaget, Lund. 240 pp.

SCHEIDEGER, C. 1993. A revision of European saxicolous species of the genus *Buellia* de Not. and formerly included genera. Lichenologist 35: 315-364.

SCHENEIDER, G. 1979. Die Flechtengattung *Psora* sensu Zahlbr. Biblioth. Lichenol. 13. J. Cramer, Vaduz. 291 pp.

SCHIMAN-CZEIKA, H. 1988: Beobachtungen an *Lempholemma*-Arten aus dem Ostalpenraum (Lichenes, Lichinaceae). Pl. Syst. Evol. 158: 283-288

SCHWAB, A.J. 1986: Rostfarbene Arten der Sammelgattung *Lecidea* (Lecanorales). Revision der Arten Mittel- und Nordeuropas. Mitt. Bot. Staatssamml. München 22: 221-476.

SCUTARI, N. 1990: Studies on foliose Pyxinaceae (Lecnorales, Ascomycotina) from Argentina, III: new records in the genus *Heterodermia*. Mycotaxon 39: 17-26.

SCUTARI, N.C. 1991: *Hyperphyscia variabilis*, a new foliose species of Physciaceae with 3-septate spores. Lichenologist 23: 21-26.

SCUTARI, N.C. 1992: Estudios sobre Pyxinaceae foliosas (Lecanorales, Ascomycotina) de la Argentina, IV: Claves de los generos y las especies de la Provincia de Buenos Aires. Bol. Soc. Argent. Bot. 28: 169-173.

SÉRUSIAUX, E. 1996: Foliicolous lichens from Madeira, with the description of a new genus and two new species and a wordlwide key of foliicolous Fellhanera. Lichenologist 28: 197-227.

SHERWOOD, M.A., HAWKSWORTH, D.L. & COPPINS, B.J. 1980: *Skyttea*, a new genus of odontotremoid lichenicolous fungi. Trans. Brit. Mycol. Soc. 75 (3): 479-490

SIPMAN, H.J.M. 1980: Studies on Colombian cryptogams. X. The genus *Everniastrum* Hale, and related taxa (Lichenes). Proc. Koninklijke Nederlandse Akademie van Wetenschappen Sr. c, 83: 333-354.

SIPMAN, H.J.M. 1983: A monograph of the lichen family Megalosporaceae. Biblioth. Lichenol. 18:1-241.

SIPMAN, H.J.M. 1986: Notes on the lichen genus *Everniastrum* (Parmeliaceae). Mycotaxon 26: 235-251.

SIPMAN, H.J.M. 1995: *Heterodermia pinnata* sp.nov. and *Heteroderema follmannii* sp.nov. (Physciaceae, Lecanorales), two new lichen species from north Chile. In: F.J.A. Daniels, M. Schulz & J. Peine (eds). Flechten Follmann. Contributions to lichenology in honour of Gerhard Follmann. Geobotanical and Phytotaxonomical Study Group. Botanical Institute, University of Cologne: Cologne. Pp. 329-336.

SØCHTING, U. & OLECH, M. 1995: The lichen genus *Caloplaca* in polar regions. Lichenologist 27: 463-471.

SØCHTING, U. & ØVSTEDAL, D.O. 1992: Contributions to the *Caloplaca* flora of the western Antarctic region. Nordic J. Bot. 12: 121-134.

SPJUT, R.W. 1995: *Vermilacinia* (Ramalinaceae, Lecanorales), a new genus of lichens. In: F.J.A.Daniels, M.Schulz & J. Peine (eds). Flechten Follmann. Contributions to lichenology in honour of Gerard Follmann. Geobotanical and Phytotaxonomical Study Group, Botanical Institute, University of Cologne: Cologne. Pp. 337-351.

SPJUT, R.W. 1996: Niebla and *Vermilacinia* (Ramalinacxeae) from California and Baja California. Sida 14: 1-208.

STAIGER, B. & KALB, K. 1995: *Haematomma*-studien. I. Die Flechtengattung *Haematomma*. Biblioth. Lichenol. 59: 1-198.

STENROOS, S. 1991: The lichen genera *Parmelia* and *Punctelia* in Tierra del Fuego. Ann. Bot. Fenn. 28: 241-245.

STENROOS, S. 1993: Taxonomy and distribution of the lichen family *Cladonia*ceae in the antarctic and peri-antarctic regions. Cryptog. Bot. 3: 310-344.

STENROOS, S. 1995: *Cladonia*ceae (Lecanorales, lichewnized Ascomycotina) in the flora of Chile. Gayana Bot. 52 (2): 89-131.

STENROOS, S. 1996: Novelties of the lichen family *Cladonia*ceae in Chile and Argentina. Mycotaxon 59: 269-275.

STENROOS, S. & AHTI, T. 1990: The lichen family Cladoniaceae in Tierra del Fuego: problematic or otherwise noteworthy taxa. Ann. Bot. Fenn. 27: 317-327.

STENROOS, S. & AHTI, T. 1992: The lichen family Cladoniaceae in the Falkland Islands. Ann. Bot. Fenn. 29: 67-73.

STENROOS, S. , AHTI, T. & FERRARI, L.I. 1992: Lichenes Lecanorales: Cladoniaceae. Flora Criptogámica de Tierra del Fuego 13 (7): 1-111.

STENROOS. S., AHTI, T. & HYVÖNEN, J. 1997: Phylogenetic analysis of the genera *Cladonia* and *Cladina* (Cladoniaceae, lichenized Ascomycota). Pl. Syst. Evol. 207: 43-58.

STEVENS, G.N. 1987: The lichen genus *Ramalina* in Australia. Bull. Brit. Mus. (Nat. Hist.) Bot. 16 (2): 107-223.

STEVENS, G.N. 1991: The tropical Pacific species of *Usnea* and *Ramalina* and their relationship to species in other parts of the world. In: D.J. Galloway (ed.). Tropical Lichens: Their Systematics, Conservation, and Ecology. Syst. Assoc. Special Vol. 43: 47-67.

SWINSCOW, Y.D.V. & KROG, H. 1976. The genera *Anaptychia* and *Heterodermia* in east Africa. Lichenologist 8: 103-138.

SWINSCOW, T.D.V. & KROG, H. 1981: The genus *Phyllopsora*, wirh a report on East African species. Lichenologist 13: 203-247.

SWINSCOW. T.D.V. & KROG, H. 1988 Macrolichens of East Africa. Brit. Mus. (Nat. Hist.): London.

TAYLOR. T. 1847: New lichens. principally from the herbarium of Sir William J. Hooker. London. J. Bot. 6: 148-197.

TEHLER, A. 1983: The genera *Dirina* and *Roccellina* (Roccellaceae). Opera Bot. 70: 1-86.

TEHLER, A. 1990: A new approach to the phylogeny of euascomycetes with a cladistic outline of Arthoniales focussing on Roccellaceae. Canad. J. Bot. 68: 2458-2492.

TEHLER, A. 1992: On the monophyly of *Lecanactis* (Arthoniales) and the transfer of eight species from *Schismatomma*. Willdenowia 22: 201-214.

TEHLER, A. & EGEA, J.M. 1997: The phylogeny of *Lecanactis* (Opegraphaceae). Lichenologist 29: 397-414.

TEHLER, A., LOHTANDER, K., MYLLYS, L. & SUNDIN, R. 1997: On the identity of the genera *Hubbsai* and *Reinkella* (Roccellaceae). Symb. Bot. Upsal. 32 (1): 255-266.

THOMSON. J.W. 1955: *Peltigera pulverulenta* (Tayl.) Nyl, takes precedence over *P. scabrosa* Th.Fr. and becomes of considerable phytogeographical interest. Bryologist 58: 45-49.

THOMSON, J.W. 1973: Notes on American Arctic species of *Candelariella*. Revista Fac. Ci. Lisboa ser. 2, C. 17: 747-759.

THOMSON, J.W. 1991: The lichen genus *Staurothele* in North America. Bryologist 94: 351-367.

THOMSON, J.W. & ILTIS, H.H. 1968: A fog-induced lichen community in the coastal desert of southern Peru. Bryologist 71: 31-34.

THOR, G. 1988: Two new species of *Chrysothrix* from South America. Bryologist 91: 360-363.

THOR, G. 1990: The lichen genus *Chiodecton* and five allied genera. Opera Bot. 103: 1-92.

TIBELL, L. 1987: Australasian Caliciales. Symb. Bot. Upsal. 27 (1): 1- 279.

TIBELL, L. 1994: Distribution patterns and dispersal strategies of Caliciales. Bot. J. Linn. Soc. 116: 159-202.

TIMDAL, E. 1983: The genus *Squamarina* in Scandinavia. Lichenologist 15: 169-179.

TIMDAL, E. 1984. The genus *Hypocenomyce* (Lecanorales. Lecideaceae) with special emphasis on the Norwegian and Sweedish species. Nord. J. Bot. 4: 83-108.

TIMDAL, E. 1987. Problems of genetic delimitation among squamiform members of the Lecideaceae. Biblioth. Lichenol. 25: 243-247.

TIMDAL, E. 1991: A monograph of the genus *Toninia* (Lecideaceae, Ascomycetes). Opera Bot. 110: 1-137.

TIMDAL. E. & HOLTAN-HARTWIG. J. 1988: A preliminary key to *Rhizocarpon* in Scandinavia. Graphis Scripta 2: 41-54.

TØNSBERG, T. 1992: The sorediate and isidiate, corticolous, crustose lichens in Norway. Sommerfeltia 14: 1-331.

TRIEBEL, D. 1989: Lecideicole Ascomyceten. Eine Revision der obligat lichenicolen Ascomyceten auf lecideoiden Flechten. Biblioth. Lichenol. 35: 1-278.

TRIEBEL, D., RAMBOLD, G. & ELIX, J.A. 1995. A conspectus of the genus *Phacopsis* (Lecanorales). Bryologist 98: 71-83.

TRIEBEL, D., WEDIN, M. & RAMBOLD, G. 1997: The genus *Scutula* (lichenicolous ascomycetes, lecanorales): species on the *Peltigera canina* and *P. horizontalis* groups. Symb. Bot. Upsal. 32 (1): 323-336.

VAINIO, E.A. 1903: Résultats du voyage du S.Y. BELGICA en 1897-1898-1899 sous le commandement de A. de Gerlache de Gomery. Rapports Scientifiques. Botanique. Lichens. Anvers: J.-E. Buschmann. Pp. 1-46.

VERDON, D. 1992: *Physma*. Flora of Australia 54: 193-196.

VERDON, D. & ELIX, J.A. 1994: A new species and new records of *Physma* from Australia. Acta Bot. Fenn. 150: 209-215.

VERSEGHY, K. 1962. Die Gattung *Ochrolechia*. Beihefte zur Nova Hedwigia, Heft 1. J. Cramer,Weinheim/ Bergstrasse. 146 pp.

VEZDA, A. 1969: Neue Taxa und Kombinationen in der Familie Gyalectaceae (Lichenisierte Fungi). Folia Geobot. Phytotax. Praha 4: 443-446.

VEZDA, A. 1986: Neue Gattungen der Familie Lecideaceae s. lat. (Lichenes). Folia Geobot. Phytotax. Praha 21: 199-219.

VEZDA, A. 1987. Foliicole Flecten aus Zaire (III). Die Gattung *Byssoloma* Trevisan. Nova Hedwigia 51: 435-451.

VEZDA, A. 1990: *Bacidina* genus novum familie Lecideaceae s.lat. (Ascomycetes lichenisati). Folia Geobot. Phytotax. Bohemoslovaka 25: 435-436.

VEZDA, A. & FARKAS E. 1988: Neue foliicole Arten der Flechtengattung *Dimerella* Trevisan (Gyalectaceae) aus Tansania. Folia Geobot. Phytotax. 23: 187-197.

VITIKAINEN, O. 1992: Total distribution of some *Peltigera* species. The Second International Lichenological Symposium IAL 2, Hemmeslöv, Båstad, Sweden. Abstracts: 97-98.

VITIKAINEN, O. 1994: Taxonomic revision of *Peltigera* (lichenized Ascomycotina) in Europe. Acta Bot. Fenn.152: 1-96.

VITIKAINEN, O. 1995: *Peltigera andensis* sp. nov. (Peltigeraceae, lichenized Ascomycetes), a new species from South America. In: F.J.A. Daniels, M. Schulz & J. Peine (eds). Flechten Follmann. Contributions to lichenology in honour of Gerhard Follmann. Geobotanical and Phytotaxonomical Study Group, Botanical Institute. University of Cologne: Cologne. Pp. 371-375.

VOBIS, G., CALVELO, S. & MESSUTI, M.I. 1995: Novedades para la flora liquénica de los bosques Andino-Patagonicos (Argentina, Sudamérica). In: F.J.A. Daniels, M. Schulz & J. Peine (eds). Flechten Follmann. Contributions to lichenology in honour of Gerhard Follmann. Geobotanical and Phytotaxonomical Study Group. Botanical Institute. University of Cologne: Cologne. Pp. 483-492.

WALKER, F.J. 1985: The lichen genus *Usnea* subgenus

Neuropogon. Bull. Brit. Mus. (Nat. Hist.), Bot. 13: 1-130.

WEBER, W.A. 1962: Environmental modification and the taxonomy of the crustose lichens. Svensk Bot. Tidskr. 56: 293-333.

WEBER, W.A. 1968: A taxonomic revision of *Acarospora*. subgenus *Xanthothallia*. Lichenologist 4: 16-31.

WEDIN, M. 1993: A phylogenetic analysis of the lichen family Sphaerophoraceae (Caliciales); a new generic classification and notes on character evolution. Pl. Syst. Evol. 187: 213-241.

WEDIN, M. 1994: New and noteworthy lichenicolous fungi from southernmost South America. Lichenologist 26: 301-310.

WEDIN. M. 1995a: Additional species of *Bunodophoron* (Sphaerophoraceae, Caliciales s.lat., lichenized Ascomycetes) from the Southern Hemisphere. Mycotaxon 53: 33-36.

WEDIN, M. 1995b: The lichen family Sphaerophoraceae (Caliciales, Ascomycotina) in temperate areas of the Southern Hemisphere. Symb. Bot. Upsal. 31: 1-102.

WEDIN. M. & KONDRATYUK, S.Y. 1997: *Dactylospora plectocarpoides,* a gall-forming species of *Arthonia* on *Pseudocyphellaria*. Lichenologist 29: 97-99.

WEDIN, M. & HAFELLNER, J. 1998: Lichenicolous species of *Arthonia* on Lobariaceae with notes on excluded taxa. Lichenologist 30: 59-91.

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

WHITE, F.J. & JAMES, P.W. 1988: Studies on the genus *Nephroma* II. The southern temperate species. Lichenologist 20: 103-166.

WIRTH, V. 1987: Die Flechten Baden-Württembergs Verbreitungsatlas. Verlag Eugen Ulmeer: Stuttgart.

YOSHIMURA, I. 1987: Taxonomy and speciation of *Anzia* and *Pannoparmelia*. Biblioth. Lichenol. 25: 185-195

YOSHIMURA, I. 1995: The lichen genus *Anzia* (Parmeliaceae, Lecanorales) in Central and South America. In: F.J.A. Daniels, M. Schulz & J. Peine (eds). Flechten Follmann. Contributions to lichenology in honour of Gerhard Follmann. Geobotanical and Phytotaxonomical Study Group, Botanical Institute. University of Cologne: Cologne. Pp. 377-387.

ZAHLBRUCKNER, A. 1917: Botanisch Ergebnisse der Schwedischen Expedition nach Patagonien un dem Feuerlande 1907-1909. Vi. Die Flechten. Kongl. Svenska Vetenskapsakad. Hand. 57 (6): 1-62.

ZAHLBRUCKNER, A. 1924: Die Flechten der Juan Fernández-Inseln. In C. Skottsberg (ed.), The Natural History of Juan Fernández and Easter Island 2 (11): 315-408.

ZAHLBRUCKNER, A. 1925: Chilenische Flechten gesammelt von C. Skottsberg. Acta Horti Gothob. 2: 1-26.

ZAHLBRUCKNER, A. 1926: Die Flechten der Osterinsel, nebst einem Nachtrag zu der Flechtenflora von Juan Fernández. In C. Skottsberg (ed.). The Natural History of Juan Fernández and Easter Island 2(13): 449-460.

ZAHLBRUCKNER, A. 1931: Catalogus lichenum universalis. Vol. 7. Verlag von Gebrüder Borntraeger, Leipzig.

ZAHLBRUCKNER, A. 1933: Líquenes del herbario del Museo Nacional de Santiago de Chile. Revista Chilena Hist. Nat. 37: 165-170.

Fecha de publicación: 07 de mayo de 1999

Gayana Bot. 55(2): 187-211, 1998. ISSN 0016-5301

CATALOGUE OF THE VASCULAR FLORA OF THE ROBINSON CRUSOE OR JUAN FERNANDEZ ISLANDS, CHILE

CATALOGO DE LA FLORA VASCULAR DE LAS ISLAS ROBINSON CRUSOE O JUAN FERNANDEZ, CHILE

Clodomiro Marticorena[1], Tod F. Stuessy[2], and Carlos M. Baeza[1]

ABSTRACT

The Róbinson Crusoe (=Juan Fernández) Islands are a Chilean National Park and a World Biosphere Reserve. Located 667 kms W of continental Chile at 33°S latitude, the archipelago consist of three principal islands: Masatierra (=Isla Róbinson Crusoe; 48 km^2), Masafuera (=Isla Alejandro Selkirk; 50 km^2), and Santa Clara (2 km^2). Botanical inventories of the archipelago began in 1823 and have extended to the present time. Numerous investigations have been completed in recent decades that have revealed processes and patterns of evolutionary divergence among endemic taxa of vascular plants of the archipelago. Interest in conservation of these endemic taxa is also increasing. It is timely, therefore, for the production of a new flora of vascular plants of the islands, and this catalogue is a necessary step towards that goal. Herein are documented 423 species of vascular plants, including 55 Pteridophyta, 289 Dicotyledoneae, and 79 Monocotyledoneae. Of these, 31.2% are endemic, 18.7% native, and 50.1% introduced. Of adventive taxa, the highest level if found on Santa Clara (71.4%), followed by Masatierra (55.7%), and lastly by Masafuera (50%).

KEYWORDS: Juan Fernández/Róbinson Crusoe Islands, flora, endemism, conservation.

RESUMEN

Las Islas Róbinson Crusoe (=Juan Fernández). Chile, constituyen actualmente un parque nacional y una reserva mundial de la biosfera. Situado a 667 km al oeste de Chile continental, el archipiélago consta de tres islas: Masatierra (=Róbinson Crusoe), de 48 km^2, Masafuera (=Alejandro Selkirk), de 50 km^2, y Santa Clara, de 2 km^2. Los inventarios botánicos del archipiélago empezaron en 1823 y han continuado hasta el presente. Durante las recientes décadas se han hecho numerosas investigaciones que han revelado procesos y patrones de divergencia evolutiva entre los taxa endémicos de plantas vasculares del archipiélago. También se ha acrecentado el interés en la conservación de estos taxa endémicos. Es tiempo, entonces, de producir una nueva flora de las plantas vasculares de las islas, y este catálogo es un paso necesario hacia esa meta. En él están documentadas 423 especies de plantas vasculares, incluyendo 55 Pteridophyta, 289 Dicotyledoneae y 79 Monocotyledoneae. Del total de especies, 31,2% son endémicas, 18,7% nativas y 50,1% adventicias. De estos últimos taxa el mayor porcentaje se encuentra en Santa Clara (71,4%), seguido por Masatierra (55,7%), y finalmente por Masafuera (50%).

PALABRAS CLAVES:Juan Fernández/Róbinson Crusoe, flora, endemismo, conservación.

INTRODUCCION

The Róbinson Crusoe (=Juan Fernández) Islands are located in the Pacific Ocean at 33° S latitude 667 kms W of continental Chile. There are two principal islands, Isla Róbinson Crusoe (=Masatierra) and 181 kms further west Isla Alejandro Selkirk (=Masafuera). The former names have been officially adopted by the Chilean government, but the latter have been used historically and still continue to be used in much scientific literature (e.g., Stuessy and Ono, 1998). There is also a third smaller island, Isla Santa Clara, that lies 1.8 km SW off the western end of Masatierra. These three islands together measure only 102 km^2, with Masafuera being the largest at 50 km^2, Masatierra nearly the same size at 48 km^2, and Santa Clara with 2 km^2 (Stuessy, 1995).

In this small Pacific archipelago is contained one of the world's most interesting endemic vascular floras. The distinctiveness of the vascular

[1]Departamento de Botánica, Universidad de Concepción, Casilla 160-C, Concepción, Chile.
[2]Department of Higher Plant Systematics and Evolution, Institute of Botany, University of Vienna, Vienna, Austria.

plants is the main reason for designation of the three islands as a Chilean National Park in 1935 and more recently as a World Biosphere Reserve. There are many endemic species, several endemic genera, and an endemic family, Lactoridaceae, the only case known of a entire family of vascular plants being restricted to an oceanic island (Stuessy *et al.*, 1998a, 1998d).

During the past 20 years, studies on the evolution of the vascular flora of the Róbinson Crusoe Islands have been carried out by collaborators at the University of Concepcion, The Ohio State University, and now at the University of Vienna. These investigations have resulted in more than 50 publications on different aspects of the endemic taxa, including cytology, phylogeny, modes of speciation, phytochemistry, biogeography, molecular divergence, and genetic variation within and between populations (for recent summaries see Stuessy *et al.* 1998b, 1998c; Crawford *et al.*, 1998). Studies have also focused on the introduced flora and impacts on conservation of the native taxa (Matthei *et al.*, 1993; Stuessy *et al.*, 1997, 1998d; Swenson *et al.*, 1997).

These previous collaborative investigations on the vascular taxa have led to the initiation of a synthesis of all available information to be published as a book entitled "Flora of the Róbinson Crusoe Islands". Previous descriptive inventories include those of Hemsley (1884), Johow (1896), Christensen and Skottsberg (1920), and Skottsberg (1921, 1951). Additional information has been added by others, such as Ricci (1996), Macaya and Faúndez (1997) and Barrera (1997). The only comprehensive flora is that of Johow (1896), now more than a century old, and lacking keys to taxa. For improved perspectives on conservation of the native and endemic species, plus management of the introduced taxa, a new comprehensive flora is urgently needed.

The present catalogue of the vascular flora is the first step toward publication of the new flora of the archipelago. Contents of the catalogue derive from previous literature reports, our own collections made during eight expeditions to the islands during 1980-1997, and additional collections in the herbarium of the University of Concepcion (CONC). We harbor no illusion that this list is complete nor fully accurate in all respects. It is a stage in preparation of the flora that should stimulate preparation of individual generic treatments and serve as an impetus for completion of the entire volume. In fact, at this time manuscripts for the ferns (R. Rodríguez), grasses (M. Baeza), and miscellaneous other genera have already been prepared.

We list all known species of vascular plants that have at one time or another been reported to occur in at least one of the three islands. We include also distribution on the three principal islands (T=Masatierra; F=Masafuera; S=Santa Clara), and biogeographic status (E=endemic; N=native; A= adventive). This list builds, obviously, on the catalogue of vascular plants for the entire country (Marticorena and Quezada, 1985), which includes the island floras of Róbinson Crusoe, Islas Desventuradas, and Isla de Pascua.

The catalogue does not include cultivated plants. Swenson *et al.* (1997) listed species that eventually may escape from cultivation and have the potential to become aggressive weeds, but we have not included these here. Previous information regarding cultivated plants in the archipelago also can be found in Johow (1893).

The catalogue also provides the opportunity to summarize new statistics on the vascular flora of the Róbinson Crusoe Islands. In our own studies we have found it difficult to maintain agreement on numbers of taxa of different biogeographic categories, due largely to numerous publications using different sets of data. For the first time, this new catalogue sets baseline data for any additional evolutionary or biogeographic investigations.

New statistics of the vascular flora

All manner of statistics on the composition of the vascular flora have been published previously in Johow (1896), Skottsberg (1956), Marticorena (1991), Stuessy *et al.* (1992), etc. This paper is not the place to compare all different previous estimates, but rather the intent is to provide a new baseline of the total size and general categorization of the vascular flora. Statistics for the entire archipelago and for each of the three islands separately are given in the following tables.

MASATIERRA

	PTERI	DICOT	MONOC	Total	%
E	21	64	10	95	27.5
N	21	16	21	58	16.8
A	0	155	37	192	55.7
Total	42	235	68	345	
%	12.2	68.1	19.7		

345 taxa, of which 177 (51.3%) are restricted to the island.

MASAFUERA

	PTERI	DICOT	MONOC	Total	%
E	19	37	8	64	27.1
N	27	15	12	54	22.9
A	0	95	23	118	50.0
Total	46	147	43	236	
%	19.5	62.3	18.2		

236 taxa, of which 78 (33%) are restricted to the island.

SANTA CLARA

	PTERI	DICOT	MONOC	Total	%
E	0	4	0	4	11.4
N	3	2	1	6	17.1
A	0	22	3	25	71.4
Total	3	28	4	35	
%	8.6	80	11.4		

35 taxa, of which 1 (2.9%) is restricted to the island.

FLORA OF THE ARCHIPELAGO

	PTER	DICOT	MONOC	Total	%
E	26	92	14	132	31.2
N	29	25	25	79	18.7
A	0	172	40	212	50.1
Total	55	289	79	423	
%	13	68.3	18.7		

ACKNOWLEDGMENTS

Partially supported by Oesterreichische Nationalbank Jubiläumsfondsprojekt Nr. 6880. Special thanks go to Gerhard Jakubowsky, Vienna, for locating and copying needed literature and protologues. We also give thanks to the CONAF guides of the Robinson Crusoe National Park, who have always accompanied and helped us in the field, and who have alerted us to interesting variations in the native and introduced flora.

LITERATURE CITED

BARRERA, E. 1997. Helechos de Juan Fernández. Publ. Ocas. Mus. Nac. Hist. Nat. Chile 51: 1-104

CHRISTENSEN, C. AND C. SKOTTSBERG. 1920. The Pteridophyta of the Juan Fernández Islands, pp. 1-46. *In* C. Skottsberg (ed.), The Natural History of Juan Fernández and Easter Islands, vol. 2, Botany. Almqvist & Wiksells: Uppsala.

CRAWFORD, D.J., T. SANG, T.F. STUESSY, S.-C. KIM AND M. SILVA. 1998. *Dendroseris* (Asteraceae: Lactuceae) and *Robinsonia* (Asteraceae: Senecioneae) on the Juan Fernández Islands: similarities and differences in biology and phylogeny, pp. 97-119. *In* T. F. Stuessy and M. Ono (eds.), Evolution and Speciation of Island Plants. Cambridge Univ. Press: Cambridge.

HEMSLEY, W.B. 1884. Report on the botany of Juan Fernández, the south-eastern Moluccas and the Admiralty Islands, pp. 1-96. *In* C.W. Thomson and J. Murray (eds.), Report on the Scientific Results of the Voyage of HMS Challenger During the Years 1873-76, vol. 1, part 3, Botany. HMSO: London.

JOHOW, F. 1893. Las plantas de cultivo en Juan Fernández. Anales Univ. Chile 84: 939-970.

JOHOW, F. 1896. Estudios sobre la Flora de las Islas de Juan Fernández. Imprenta Cervantes. Santiago.

MACAYA, J. AND L. FAUNDEZ 1997. Nuevos registros de Poaceae para el archipiélago de Juan Fernández y nuevas localidades para cuatro especies adventicias. Notic. Mens. Mus. Nac. Hist. Nat. 327: 13-15.

MARTICORENA, C. 1991. Contribución a la estadística de la flora vascular de Chile. Gayana, Bot. 47: 85-113.

MARTICORENA, C. AND M. QUEZADA. 1985. Catálogo de la flora vascular de Chile. Gayana, Bot. 42: 1-157.

MATTHEI, O., C. MARTICORENA AND T.F. STUESSY. 1993. La flora adventicia del archipiélago de Juan Fernández. Gayana Bot. 50: 69-102.

RICCI, M. 1996. Variation in distribution and abundance of the endemic flora of Juan Fernández Islands, Chile. Pteridophyta. Biodivers. Conserv. 5: 1521-1532.

SKOTTSBERG, C. 1921. The phanerogams of the Juan Fernández Islands, pp. 95-240. *In* C. Skottsberg (ed.), The Natural History of Juan Fernández and Easter Island, vol. 2, Botany. Almqvist & Wiksells: Uppsala.

SKOTTSBERG, C. 1951. A supplement to the pteridophytes and phanerogams of the Juan Fernández an Easter Islands, pp. 763-792. *In* C. Skottsberg (ed.), The Natural History of Juan Fernández and Easter Island, vol.2., Botany. Almqvist & Wiksells: Uppsala.

SKOTTSBERG, C. 1956. Derivation of the flora and fauna of Juan Fernández and Easter Island, pp. 193-439.

In C. Skottsberg (ed.), The Natural History of Juan Fernández and Easter Island, vol. 1. Almqvist & Wiksells: Uppsala.

STUESSY, T. F. 1995. Juan Fernández Islands-Chile, pp. 565-568. *In* S.D. Davis, V.H. Heywood and A.C. Hamilton (eds.), Centres of Plant Diversity: A Guide and Strategy for Their Conservation. WWF, IUCN. Cambridge.

STUESSY, T.F., D.J. CRAWFORD, G. ANDERSON AND R. JENSEN. 1998a. Systematics, biogeography and conservation of Lactoridaceae. Perspectives in Pl. Ecol. Evol. Syst. 1(2): 267-290.

STUESSY, T.F., D.J. CRAWFORD, C. MARTICORENA AND R. RODRIGUEZ 1998b. Island biogeography of angiosperms of the Juan Fernández archipelago, pp. 121-138. *In* T. F. Stuessy and M. Ono (eds.), Evolution and Speciation of Island Plants. Cambridge Univ. Press, Cambridge.

STUESSY, T. F., D. J. CRAWFORD, C. MARTICORENA AND M. SILVA 1998c. Isolating mechanisms and modes of speciation in endemic angiosperms of the Juan Fernández Islands, pp. 79-96. *In* T. F. Stuessy and M. Ono (eds.), Evolution and Speciation of Island Plants. Cambridge Univ. Press, Cambridge.

STUESSY, T.F., C. MARTICORENA, R. RODRIGUEZ, D.J. CRAWFORD, AND M. SILVA. 1992. Endemism in the vascular flora of the Juan Fernández Islands. Aliso 13: 297-307.

STUESSY, T.F. AND M. ONO (eds.). 1998. Evolution and Speciation of Island Plants. Cambridge Univ. Press: Cambridge.

STUESSY, T. F., U. SWENSON, D.J. CRAWFORD, G. ANDERSON AND M. SILVA O. 1997. Plant conservation in the Juan Fernández archipelago, Chile. Aliso 16: 89-102.

STUESSY, T. F., U. SWENSON, C. MARTICORENA, O. MATTHEI, AND D. J. CRAWFORD. 1998d. Loss of plant diversity and extinction on Robinson Crusoe Islands, Chile, pp. 243-257. *In* C.-I. Peng and P. P. Lowry II (eds.), Rare, Threatened, and Endangered Floras of Asia and the Pacific Rim. Institute of Botany, Academia Sinica Monograph Series No. 16. Taipei.

SWENSON, U., T.F. STUESSY, M. BAEZA AND D.J. CRAWFORD. 1997. New and historical plant introductions, and potential pests in the Juan Fernández Islands, Chile. Pacific Sci. 51: 233-253.

FLORA OF JUAN FERNANDEZ ISLANDS

Col. 1, Status: E = endemic, e = endemic to JF and continental Chile, N = native, A = adventive/naturalized.
Col. 2, Life form: A = annual, B = biennial, H = perennial herb, S = undershrub, F = shrub, T = tree, R = rosette shrub/tree
Col. 3, Distribution: T = Masatierra, S = Santa Clara, F = Masafuera

PTERIDOPHYTA

ADIANTACEAE

ADIANTUM
N H TSF chilense Kaulf., Enum. Filic. 207. 1824.

NOTHOLAENA
E H TF chilensis (Fée ex J.Remy) Sturm, Abh. Naturhist. Ges. Nürnberg 1(2): 166. 1858. ("Nothochlaena")

ASPLENIACEAE

ASPLENIUM
N H TF dareoides Desv., Ges. Naturf. Freunde Berlin Mag. Neuesten Entdeck. Gesammten Naturk. 5(2): 322. 1811.
E H TF macrosorum Bertero ex Colla, Herb. Pedem. 6: 205. 1836.
N H TSF obtusatum G.Forst. var. sphenoides (Kunze) C.Chr. ex Skottsb., Kongl. Svenska Vetenskapsakad. Handl. 56(5): 167. 1916.
E H TF stellatum Colla, Herb. Pedem. 6: 206. 1836.

BLECHNACEAE

BLECHNUM
N H TF cordatum (Desv.) Hieron., Hedwigia 47: 239. 1908.
E H TF cycadifolium (Colla) Sturm, Abh. Naturhist. Ges. Nurnberg 1(2): 173. 1858.
N H TSF hastatum Kaulf., Enum. Filic. 161. 1824.
E H F longicauda C.Chr., Ark. Bot. 10(2): 10, t. 1. 1910.
E H TF mochaenum G.Kunkel var. fernandezianum (Looser) De la Sota, Bol. Soc. Argent. Bot. 14(3): 196. 1972.
E H TF schottii (Colla) C.Chr., Ark. Bot. 10(2): 7. 1910.

DENNSTAEDTIACEAE

HISTIOPTERIS
N H TF incisa (Thunb.) J.Sm., Hist. Fil. 295. 1875.

HYPOLEPIS
N H TF poeppigii (Kunze) R.A.Rodr., Gayana, Bot. 46(3-4): 202. 1990. ("1989")

DICKSONIACEAE

DICKSONIA
E T T berteroana (Colla) Hook., Sp. Fil. 1: 67, t. 23 A. 1844.
E T F externa Skottsb., Nat. Hist. Juan Fernandez 2: 763. 1951.

LOPHOSORIA
N HF TF quadripinnata (J.F.Gmel.) C.Chr., in Skottsb., Nat. Hist. Juan Fernandez 2: 16. 1920.

THYRSOPTERIS (E)

E F TF elegans Kunze, Linnaea 9: 507. 1835.

DRYOPTERIDACEAE

MEGALASTRUM

E H F inaequalifolium (Colla) A.R.Sm. et R.C.Moran var. glabrior (C.Chr. et Skottsb.) R.A.Rodr., Gayana, Bot. 46(3-4): 206. 1990. ("1989")

E H T inaequalifolium (Colla) A.R.Sm. et R.C.Moran var. inaequalifolium, Amer. Fern J. 77(4): 128. 1987.

POLYSTICHUM

E H TF tetragonum Fee, Mém. Foug. 8: 99. 1857.

RUMOHRA

E H TF berteroana (Colla) R.A.Rodr., Bol. Soc. Biol. Concepción 45: 150. 1972.

GLEICHENIACEAE

GLEICHENIA

E H F lepidota R.A.Rodr., Gayana, Bot. 47(1-2): 40, f. 1-5. 1990.

N H F quadripartita (Poir.) T.Moore, Index Fil. 382. 1862.

N H T squamulosa (Desv.) T.Moore var. squamulosa, Index Fil. 383. 1862.

GRAMMITIDACEAE

GRAMMITIS

N H TF magellanica Desv., Ges. Naturf. Freunde Berlin Mag. Neuesten Entdeck. Gesammten Naturk. 5(2): 313. 1811.

HYMENOPHYLLACEAE

HYMENOGLOSSUM (e)

e H TF cruentum (Cav.) K.Presl, Hymenophyllaceae 35. 1843.

HYMENOPHYLLUM

N H TF caudiculatum Mart. var. productum (K.Presl) C.Chr., Index Filic. 623. 1906.

N H TF cuneatum Kunze var. cuneatum, Analecta Pteridogr. 50. 1837.

E H T cuneatum Kunze var. rariforme C.Chr. et Skottsb., in Skottsb., Nat. Hist. Juan Fernandez 2: 8, f. 3 e-g. 1920.

N H F falklandicum Baker var. falklandicum, in Hook. et Baker, Syn. Fil. ed. 2, 68. 1874.

N H TF ferrugineum Colla var. ferrugineum, Herb. Pedem. 6: 190. 1836.

N H TF fuciforme Sw., Syn. Fil. 148. 1806.

N H TF pectinatum Cav., Descr. Pl. 275. 1801.

N H TF plicatum Kaulf., Enum. Filic. 268. 1824.

E H TF rugosum C.Chr. et Skottsb., in Skottsb., Nat. Hist. Juan Fernandez 2: 12, f. 4 a-f. 1920.

N H F secundum Hook. et Grev., Icon. Filic. 2: t. 133. 1829.

N H F tortuosum Hook. et Grev. var. tortuosum, Icon. Filic. 2: t. 129. 1829.

SERPYLLOPSIS

E H TF caespitosa (Gaudich.) C.Chr. var. fernandeziana C.Chr. et Skottsb., in Skottsb., Nat. Hist. Juan Fernandez 2: 5. 1920.

TRICHOMANES

N H TF exsectum Kunze, Analecta Pteridogr. 47, t. 29, f. 2. 1837.
E H T ingae C.Chr. et Skottsb., in Skottsb., Nat. Hist. Juan Fernandez 2: 3, f. 2. 1920.
E H T philippianum Sturm, Abh. Naturhist. Ges. Nürnberg 1(2): 188. 1858.

LOMARIOPSIDACEAE

ELAPHOGLOSSUM

N H T squamatum (Sw.) T.Moore, Index Fil. 15, 367. 1857.

LYCOPODIACEAE

LYCOPODIUM

N H F gayanum J.Remy, in Gay, Hist. Chile, Bot. 6: 545. 1854.
N H F magellanicum (P.Beauv.) Sw. var. magellanicum, Syn. Fil. 180. 1806.

OLEANDRACEAE

ARTHROPTERIS

E H TF altescandens (Colla) J.Sm., Hist. Fil. 225. 1875.

OPHIOGLOSSACEAE

OPHIOGLOSSUM

E H T fernandezianum C.Chr., in Skottsb., Nat. Hist. Juan Fernandez 2: 44, f. 7. 1920.

POLYPODIACEAE

PLEOPELTIS

N H TF macrocarpa (Bory ex Willd.) Kaulf., Berlin. Jahrb. Pharm. Verbundenen Wiss. 21: 41. 1820.

POLYPODIUM

E H T intermedium Colla subsp. intermedium, Herb. Pedem. 6: 229. 1836.
E H F intermedium Colla subsp. masafueranum C.Chr. et Skottsb., in Skottsb., Nat. Hist. Juan Fernandez 2: 38, f. 6. 1920.
N H F masafuerae Phil., Linnaea 29: 107. 1858.

PTERIDACEAE

PTERIS

E H TF berteroana J.Agardh, Recens. Spec. Pter. 66. 1839.
N H TF chilensis Desv., Ges. Naturf. Freunde Berlin Mag. Neuesten Entdeck. Gesammten Naturk. 5(2): 325. 1811.
N H TF semiadnata Phil., Linnaea 29: 106. 1858.

WOODSIACEAE

CYSTOPTERIS

N H F fragilis (L.) Bernh. var. apiiformis (Gand.) C.Chr., Index Filic. Suppl. Prelim. 11. 1917.

DICOTYLEDONEAE

AIZOACEAE

TETRAGONIA
A A TSF tetragonoides (Pall.) Kuntze, Revis. Gen. Pl. 1: 264. 1891.

AMARANTHACEAE

AMARANTHUS
A AH TF deflexus L., Mant. Pl. 295. 1771.
A A T hybridus L., Sp. Pl. 990. 1753.

APOCYNACEAE

VINCA
A H T major L., Sp. Pl. 209. 1753.

BERBERIDACEAE

BERBERIS
E FT T corymbosa Hook. et Arn., Bot. Misc. 3: 135. 1832.
E FT F masafuerana Skottsb., Nat. Hist. Juan Fernandez 2: 125, f. 9 a-b. 1921.

BORAGINACEAE

CYNOGLOSSUM
A B T creticum Mill., Gard. Dict., ed. 8, Cynoglossum 3. 1768.

MYOSOTIS
A AH T laxa Lehm., Pl. Asperif. Nucif. 83. 1818.
A H T sylvatica Hoffm., Deutschl. Fl. 61. 1791.

SELKIRKIA (E)
E F T berteroi (Colla) Hemsl., Rep. Challenger, Bot. 1(3): 48, t. 57. 1884.

CALLITRICHACEAE

CALLITRICHE
A A T lechleri (Hegelm.) Fassett, Rhodora 53(632): 191, t. 1174, f. 18 a-m. 1951.

CAMPANULACEAE

LOBELIA
N A TF alata Labill. var. alata, Nov. Holl. Pl. 1: 51, t. 72. 1805.
A H T tupa L., Sp. Pl., ed. 2, 1318. 1763.

WAHLENBERGIA
E S TS berteroi Hook. et Arn., J. Bot. (Hooker) 1: 279, t. 137. 1834.
E SF T fernandeziana A.DC., Monogr. Campan. 160. 1830.
E S T grahamiae Hemsl., Rep. Challenger, Bot. 1(3): 46, t. 56, f. 5-10. 1884.
E S F masafuerae (Phil.) Skottsb., Kongl. Svenska Vetenskapsakad. Handl. 51(9): 6. 1914.
E S F tuberosa Hook.f., Bot. Mag. 101: 6155. 1875.

CARYOPHYLLACEAE

CERASTIUM

A H F fontanum Baumg. subsp. vulgare (Hartm.) Greuter et Burdet, Willdenowia 12(1): 37. 1982.

A A TF glomeratum Thuill., Fl. Env. Paris, ed. 2, 2: 226. 1799.

PARONYCHIA

A H T franciscana Eastw., Bull. Torrey Bot. Club 28: 288. 1901.

POLYCARPON

A A TF tetraphyllum (L.) L., Syst. Nat., ed. 10, 881. 1759.

SAGINA

A A F chilensis Naudin, in Gay, Hist. Chile, Bot. 1: 282. 1846.

SILENE

A A TSF gallica L., Sp. Pl. 417. 1753.

SPERGULARIA

E H TF confertiflora Steud. var. confertiflora, Flora 39: 425. 1856.

E H TF confertiflora Steud. var. polyphylla (Phil.) Skottsb., Nat. Hist. Juan Fernandez 2: 123. 1921.

E H F masafuerana Skottsb., Nat. Hist. Juan Fernandez 2: 778, t. 57, f. 34. 1951.

A AH T rubra J.Presl et K.Presl, Fl. Cech. 94. 1819.

STELLARIA

A H T chilensis Pedersen, Bonplandia (Corrientes) 5(22): 204, f. 1 A-E. 1983.

A A TF media (L.) Cirillo, Essent. Pl. Char. Comment. 36, t. 2, f. 9. 1784.

CHENOPODIACEAE

BETA

A H T vulgaris L. subsp. maritima (L.) Arcang., Comp. Fl. Ital. 593. 1882.

CHENOPODIUM

A H TF ambrosioides L., Sp. Pl. 219. 1753.

E S T crusoeanum Skottsb., Nat. Hist. Juan Fernandez 2: 119, f. 6 b, 7 f-k; t. 11. 1921.

A H TF multifidum L., Sp. Pl. 220. 1753.

A A TSF murale L., Sp. Pl. 219. 1753.

E F F nesodendron Skottsb., Nat. Hist. Juan Fernandez 2: 119, f. 6 c, 7 l-o. 1921.

E F TS sanctae-clarae Johow, Estud. Fl. Juan Fernandez 119. 1896. (Introduced in Masatierra).

SARCOCORNIA

N H TSF fruticosa (L.) A.J.Scott, Bot. J. Linn. Soc. 75(4): 367. 1978.

COMPOSITAE

ABROTANELLA

N H F linearifolia A.Gray, Proc. Amer. Acad. Arts 5: 137. 1861. ("1862")

AMBLYOPAPPUS

A A TS pusillus Hook. et Arn., J. Bot. (Hooker) 3: 321. 1841.

			ANTHEMIS
A	A	T	cotula L., Sp. Pl. 894. 1753.
			ARTEMISIA
A	H	T	absinthium L., Sp. Pl. 848. 1753.
			BAHIA
A	F	F	ambrosioides Lag., Gen. Sp. Pl. 30. 1816.
			BIDENS
A	A	TF	pilosa L., Sp. Pl. 832. 1753.
			CALENDULA
A	A	T	officinalis L., Sp. Pl. 921. 1753.
			CARTHAMUS
A	A	TF	lanatus L., Sp. Pl. 830. 1753.
			CENTAUREA
A	A	TSF	melitensis L., Sp. Pl. 917. 1753.
			CENTAURODENDRON (E)
E	TR	T	dracaenoides Johow, Estud. Fl. Juan Fernandez 63. 1896.
E	TR	T	palmiforme Skottsb., Bull. Jard. Bot. Belg. 27(4): 587, f. 59-61. 1957.
			CHRYSANTHEMUM
A	A	T	coronarium L., Sp. Pl. 890. 1753.
			CICHORIUM
A	AB	TF	intybus L., Sp. Pl. 813. 1753.
			CIRSIUM
A	A	F	vulgare (Savi) Ten., Fl. Nap. 5: 209. 1835-38.
			CONYZA
A	A	TSF	bonariensis (L.) Cronquist, Bull. Torrey Bot. Club 70: 632. 1943.
			COTULA
A	A	TF	australis (Sieber ex Spreng.) Hook.f., Fl. Nov.-Zel. 1: 128. 1852.
A	H	T	coronopifolia L., Sp. Pl. 892. 1753.
			CREPIS
A	A	T	capillaris (L.) Wallr., Erst. Beitr. Fl. Hercyn. 287. 1840.
			CYNARA
A	H	TF	cardunculus L., Sp. Pl. 827. 1753.
			DENDROSERIS (E)
E	FTR	T	berteroana (Decne.) Hook. et Arn., Companion Bot. Mag. 1: 32. 1835.
E	TR	F	gigantea Johow, Estud. Fl. Juan Fernandez 69. 1896.
E	FTR	TS	litoralis Skottsb., Nat. Hist. Juan Fernandez 2: 204, f. 37 k-l, p; t. 19, t. 20, f. 12. 1921.
E	TR	T	macrantha (Bertero ex Decne.) Skottsb., Nat. Hist. Juan Fernandez 2: 202, f. 37 b-d, n. 1921.
E	FTR	F	macrophylla D.Don, Philos. Mag. Ann. Chem. 11: 388. 1832.

E	FTR	T	marginata (Bertero ex Decne.) Hook. et Arn., Companion Bot. Mag. 1: 32. 1835.
E	FTR	T	micrantha (Bertero ex Decne.) Hook. et Arn., Companion Bot. Mag. 1: 32. 1835.
E	TR	T	neriifolia (Decne.) Hook. et Arn., Companion Bot. Mag. 1: 32. 1835.
E	TR	T	pinnata (Bertero ex Decne.) Hook. et Arn., Companion Bot. Mag. 1: 32. 1835.
E	TR	TS	pruinata (Johow) Skottsb., Nat. Hist. Juan Fernandez 2: 207, f. 39 d-f. 1921.
E	TR	F	regia Skottsb., Nat. Hist. Juan Fernandez 2: 205, f. 38; t. 17, 2. 1921.
			ERIGERON
E	HS	TF	fernandezianus (Colla) Solbrig, Contr. Gray Herb. 191: 30, f. 24. 1962.
E	S	F	ingae Skottsb., Nat. Hist. Juan Fernandez 2: 184, f. 30 a-d; t. 16, 1. 1921.
E	S	F	luteoviridis Skottsb., Nat. Hist. Juan Fernandez 2: 183, f. 29 f-i. 1921.
E	S	F	rupicola Phil., Anales Univ. Chile 13: 165. 1856.
			GALINSOGA
A	A	TF	parviflora Cav., Icon. 3: 41, t. 281. 1795.
			GAMOCHAETA
A	H	TF	coarctata (Willd.) Kerguélen, Lejeunia, n.s. 120: 104. 1987.
E	H	T	fernandeziana (Phil.) Anderb., Opera Bot. 104: 157. 1991.
A	A	TSF	stachydifolia (Lam.) Cabrera, Bol. Soc. Argent. Bot. 9: 382. 1961.
			GNAPHALIUM
A	A	F	aldunateoides J.Remy, in Gay, Hist. Chile, Bot. 4: 232. 1849.
A	H	TSF	cheiranthifolium Lam., Encycl. 2: 752. 1788. ("cheranthifolium")
			HYPOCHAERIS
A	AH	TSF	glabra L., Sp. Pl. 811. 1753.
A	H	TF	radicata L., Sp. Pl. 811. 1753.
			LAGENOPHORA
N	H	F	hariotii Franchet, Miss. Sci. Cap Horn 5, Bot.: 344. 1889.
			LAPSANA
A	ABH	TF	communis L., Sp. Pl. 811. 1753.
			MADIA
A	A	F	sativa Molina, Sag. Stor. Nat. Chili 136, 354. 1782.
			MATRICARIA
A	A	T	recutita L., Sp. Pl. 9: 255. 1974.
			MICROPSIS
A	A	T	nana DC., Prodr. 5: 460. 1836.
			ROBINSONIA (E)
E	FR	T	berteroi (DC.) Sanders, Stuessy et Martic., Gayana, Bot. 47(3-4): 79. 1990.
E	FR	T	evenia Phil., Anales Univ. Chile 13: 166. 1856.
E	FR	T	gayana Decne., Ann. Sci. Nat., Bot., sér. 2, 1: 28, t. 1 C. 1834.
E	FR	T	gracilis Decne., Ann. Sci. Nat., Bot., sér. 2, 1: 29. 1834.
E	FTR	T	macrocephala Decne., Ann. Sci. Nat., Bot., sér. 2, 1: 28, t. 1 B. 1834.
E	FR	F	masafuerae Skottsb., Nat. Hist. Juan Fernandez 2: 195, f. 33 p-s, 34 a, 35 c, i, k; t. 17, f. 1. 1921.
E	FR	T	thurifera Decne., Ann. Sci. Nat., Bot., sér. 2, 1: 28. 1834.
			SENECIO
A	H	T	mikanioides Otto ex Walp., Allg. Gartenzeitung 13: 42. 1845.

A A TF vulgaris L., Sp. Pl. 867. 1753.

SILYBUM
A A TSF marianum (L.) Gaertn., Fruct. Sem. Pl. 2: 378, t. 162, f. (2). 1791.

SOLIDAGO
A H T chilensis Meyen, Reise 1: 311. 1834.

SONCHUS
A A TSF oleraceus L., Sp. Pl. 794. 1753.
A AB TSF tenerrimus L., Sp. Pl. 794. 1753.

TARAXACUM
N H TF fernandezianum Dahlst., in Skottsb., Nat. Hist. Juan Fernandez 2: 226. 1922.
N H T subspathulatum A.J.Richards, Rhodora 78(816): 692. 1976.

XANTHIUM
A A TF spinosum L., Sp. Pl. 987. 1753.

YUNQUEA (E)
E TR T tenzii Skottsb., Acta Horti Gothob. 4: 163, f. 14-15. 1929.

CONVOLVULACEAE

CALYSTEGIA
N H F tuguriorum (G.Forst.) R.Br. ex Hook.f., Fl. Nov.-Zel. 1: 183, t. 47. 1853.

CONVOLVULUS
A H TF arvensis L., Sp. Pl. 153. 1753.

DICHONDRA
N H TF sericea Sw., Prodr. 54. 1788.

IPOMOEA
A H T indica (Burm.) Merr., Interpr. Herb. Amboin. 445. 1917.

CRUCIFERAE

BRASSICA
A AB TSF napus L., Sp. Pl. 666. 1753.
A A T nigra (L.) W.D.J.Koch, in Röhling, Deutschl. Fl., ed. 3, 4: 713. 1833.
A A T rapa L., Sp. Pl. 666. 1753.

CARDAMINE
N A T chenopodiifolia Pers., Syn. Pl. 2: 195. 1806. ("chenopodifolia")
N H T flaccida Cham. et Schltdl., Linnaea 1: 21. 1826.
E H F kruesselii Johow ex Reiche, Anales Univ. Chile 90: 126. 1895.

HIRSCHFELDIA
A AB T incana (L.) Lagr.-Foss., Fl. Tarn Garonne 19. 1847.

LEPIDIUM
A A T bonariense L., Sp. Pl. 645. 1753.

MATTHIOLA
A H TSF incana (L.) R.Br., in W.T. Aiton, Hortus Kew. 4: 119. 1812.

RAPHANUS
A AB TF sativus L., Sp. Pl. 669. 1753.

RORIPPA
A H TF nasturtium-aquaticum (L.) Hayek, Sched. Fl. Stiriac. 3-4: 22. 1905.

SISYMBRIUM
A AB T officinale (L.) Scop., Fl. Carniol., ed. 2, 2: 26. 1772.

DIPSACACEAE

DIPSACUS
A B T sativus (L.) Honck., Verz. Gew. Teutschl. 374. 1782.

SCABIOSA
A H T atropurpurea L., Sp. Pl. 100. 1753.

ELAEOCARPACEAE

ARISTOTELIA
A T TF chilensis (Molina) Stuntz, U.S.D.A. Bur. Pl. Industr. Invent. Seeds 31: 85. 1914.

EMPETRACEAE

EMPETRUM
N S F rubrum Vahl ex Willd., Sp. Pl. 4: 713. 1806.

ERICACEAE

PERNETTYA
E F T rigida (Bertero ex Colla) DC., Prodr. 7: 587. 1839.

EUPHORBIACEAE

DYSOPSIS
E H T hirsuta (Müll.Arg.) Skottsb., Nat. Hist. Juan Fernandez 2: 781. 1951.

EUPHORBIA
A H T lathyris L., Sp. Pl. 457. 1753. ("lathyrus")
A A TF peplus L., Sp. Pl. 456. 1753.

RICINUS
A F TF communis L., Sp. Pl. 1007. 1753.

FLACOURTIACEAE

AZARA
E T T serrata Ruiz et Pavón var. fernandeziana (Gay) Reiche, Anales Univ. Chile 90: 884. 1895.

FUMARIACEAE

FUMARIA
A A T capreolata L., Sp. Pl. 701. 1753.

GENTIANACEAE

CENTAURIUM

A A T cachanlahuen (Molina) B.L.Rob., Proc. Amer. Acad. Arts 45(17): 396. 1910.

GERANIACEAE

ERODIUM

A A TSF cicutarium (L.) L'Hér. ex Aiton, Hort. Kew. 2: 414. 1789.

GERANIUM

A H TF core-core Steud., Flora 39: 438. 1856.
A A T dissectum L., Cent. Pl. I, 21. 1755.
A A T robertianum L., Sp. Pl. 681. 1753.

GUNNERACEAE

GUNNERA

E H T bracteata Steud. ex Bennett, Pl. Jav. Rar. 75. 1838.
E H T bracteata x peltata, Nat. Hist. Juan Fernandez 2: 148, f. 16 c-i; t. 13, 2. 1922.
E H T glabra Phil., Anales Univ. Chile 13: 164. 1856. (= bracteata)
E H F masafuerae Skottsb., Kongl. Svenska Vetenskapsakad. Handl. 51(9): 14, f. 3; t. 3 et 6. 1914.
E H T peltata Phil., Anales Univ. Chile 13: 165. 1856.

GUTTIFERAE

HYPERICUM

A H TF perforatum L., Sp. Pl. 785. 1753.

HALORAGACEAE

HALORAGIS

E H F masafuerana Skottsb. var. asperrima (Skottsb.) Orchard, Bull. Auckland Inst. Mus. 10: 81. 1975.
E H F masafuerana Skottsb. var. masafuerana, Nat. Hist. Juan Fernandez 2: 156, f. 20. 1921.
E H T masatierrana Skottsb., Nat. Hist. Juan Fernandez 2: 155, f. 19. 1921.

LABIATAE

CUMINIA (E)

E F T eriantha (Benth.) Benth. var. eriantha, in DC., Prodr. 12: 258. 1848.
E F T eriantha (Benth.) Benth. var. fernandezia (Colla) Harley, Kew Mag. 3(4): 155, f. B. 1986.

MARRUBIUM

A H TF vulgare L., Sp. Pl. 583. 1753.

MELISSA

A H TF officinalis L., Sp. Pl. 592. 1753.

MENTHA

A H T aquatica L., Sp. Pl. 576. 1753.
A H TF pulegium L., Sp. Pl. 577. 1753.

ORIGANUM
A H F majorana L., Sp. Pl. 590. 1753.

PRUNELLA
A H T vulgaris L., Sp. Pl. 600. 1753.

STACHYS
A A T arvensis (L.) L., Sp. Pl., ed. 2, 814. 1763.

LACTORIDACEAE (E)

LACTORIS (E)
E F T fernandeziana Phil., Anales Univ. Chile 26: 642. 1865.

LARDIZABALACEAE

LARDIZABALA
A F T biternata Ruiz et Pavón, Syst. Veg. Fl. Peruv. Chil. 286. 1798.

LINACEAE

LINUM
A A T usitatissimum L., Sp. Pl. 277. 1753.

LORANTHACEAE

NOTANTHERA
N F T heterophylla (Ruiz et Pavón) G.Don, Gen. Hist. 3: 429. 1834.

TRISTERIX
A F T corymbosus (L.) Kuijt, Syst. Bot. Monogr. 19: 20, f. 6. 1988.

LYTHRACEAE

LYTHRUM
A A TF hyssopifolia L., Sp. Pl. 447. 1753.

MALVACEAE

ANODA
A A T cristata (L.) Schltdl., Linnaea 11: 210. 1837.

MALVA
A H T nicaeensis All., Fl. Pedem. 2: 40. 1785.
A H TS parviflora L., Demonstr. Pl. 18. 1753.

MODIOLA
A H TF caroliniana (L.) G.Don, Gen. Hist. 1: 466. 1831.

MIMOSACEAE

ACACIA
A T T dealbata Link, Enum. Pl. Hort. Berol. Alt. 2: 445. 1822.
A T TF melanoxylon R.Br., in W.T. Aiton, Hortus Kew. 5: 462. 1813.

ALBIZIA

A T T lophantha (Willd.) Benth., London J. Bot. 3: 86. 1844.

MORACEAE

FICUS

A T TF carica L., Sp. Pl. 1059. 1753.

MYRTACEAE

MYRCEUGENIA

E T T fernandeziana (Hook. et Arn.) Johow, Estud. Fl. Juan Fernandez 94, t. 9. 1896.

E T F schulzei Johow, Estud. Fl. Juan Fernandez 96. 1896. ("schulzii")

MYRTEOLA

N SF F nummularia (Poir.) O.Berg, Linnaea 27: 396. 1856.

UGNI

A F T molinae Turcz., Bull. Soc. Imp. Naturalistes Moscou 21(1): 579. 1848.

E F T selkirkii (Hook. et Arn.) O.Berg, Linnaea 27: 392. 1856.

ONAGRACEAE

FUCHSIA

A F T magellanica Lam., Encycl. 2: 565. 1788.

OENOTHERA

A A TF affinis Cambess., in A.St.-Hil., Fl. Bras. Merid. 2: 269. 1830.

A A TF picensis Phil., Verz. Antofagasta Pfl. 22. 1891.

A H TF rosea L'Hér. ex Aiton, Hort. Kew. 2: 3. 1789.

OXALIDACEAE

OXALIS

A H TF corniculata L., Sp. Pl. 435. 1753.

A A TF micrantha Bertero ex Colla, Nuovo Giorn. Lett., Sci. 24: 145. 1832.

PAPAVERACEAE

PAPAVER

A A T somniferum L., Sp. Pl. 508. 1753.

PAPILIONACEAE

MEDICAGO

A A TF arabica (L.) Huds., Fl. Angl. 288. 1762.

A AH T lupulina L., Sp. Pl. 779. 1753.

A A TSF polymorpha L., Sp. Pl. 779. 1753.

A H TF sativa L., Sp. Pl. 778. 1753.

MELILOTUS

A A TSF indicus (L.) All., Fl. Pedem. 1: 308. 1785.

SOPHORA

E - T fernandeziana (Phil.) Skottsb. var. fernandeziana, Nat. Hist. Juan Fernandez 2: 140,

f. 12 a. 1921.

E T T fernandeziana (Phil.) Skottsb. var. reedeana (Phil.) Skottsb., Nat. Hist. Juan Fernandez 2: 140, f. 11 c, 12 b, 13 b; t 20, f. 1. 1921.

E T F masafuerana (Phil.) Skottsb., Nat. Hist. Juan Fernandez 2: 142, f. 11 d-g; t. 20, f. 2. 1921.

TELINE

A F T monspessulana (L.) K.Koch, Dendrologie 1: 30. 1869.

TRIFOLIUM

A A F campestre Schreber, in Sturm, Deutschl. Fl., Abt. 1(4) Heft 16, t. 253. 1804.

A A F dubium Sibth., Fl. Oxon. 231. 1794.

A H T pratense L., Sp. Pl. 768. 1753.

A H TF repens L., Sp. Pl. 767. 1753.

PIPERACEAE

PEPEROMIA

E H TF berteroana Miq. subsp. berteroana, Syst. Piperac. 114. 1843.

N H TF fernandeziana Miq. f. fernandeziana, Syst. Piperac. 139. 1843.

E H TF fernandeziana Miq. f. oblongifolia Skottsb., Acta Horti Gothob. 17: 27, f. 49. 1947.

E H T margaritifera Bertero ex Hook. var. margaritifera, Icon. Pl. 1: t. 91. 1837.

E H T margaritifera Bertero ex Hook. var. umbraticola Skottsb. ex Yunck., sine desc. lat., Lilloa 27: 282, t. 163. 1955. ("1953")

E H F skottsbergii C.DC., Kongl. Svenska Vetenskapsakad. Handl. 51(9): 20. 1914.

PLANTAGINACEAE

PLANTAGO

N H T australis Lam., Tabl. Encycl. 1: 339. 1792.

E TR T fernandezia Bertero ex Barnéoud, Monogr. Plantag. 47. 1845.

N A TS firma Kunze ex Walp., Nov. Actorum Acad. Caes. Leop.-Carol. Nat. Cur. 19, Suppl. 1: 402. 1843.

A H TF lanceolata L., Sp. Pl. 113. 1753.

A H T major L., Sp. Pl. 112. 1753.

POLEMONIACEAE

GILIA

A A F valdiviensis Griseb., Syst. Bemerk. 43. 1854.

MICROSTERIS

A A T gracilis (Douglas ex Hook.) Greene, Pittonia 3: 300. 1898.

POLYGONACEAE

POLYGONUM

A A TF aviculare L., Sp. Pl. 362. 1753.

A H T hydropiperoides Michx., Fl. Bor.-Amer. 1: 239. 1803.

A A T lapathifolium L., Sp. Pl. 360. 1753.

RUMEX

A H TF acetosella L., Sp. Pl. 338. 1753.

A H TF conglomeratus Murray, Prodr. Stirp. Gott. 52. 1770.

A H TSF crispus L., Sp. Pl. 335. 1753.

A H F foliosus Rech.f., Ark. Bot. 26A(3): 42, t. 6. 1933.

A H TSF pulcher L., Sp. Pl. 336. 1753.

PORTULACACEAE

CALANDRINIA

A A F monandra (Ruiz et Pavón) DC., Prodr. 3: 359. 1828.

PORTULACA

A A F oleracea L., Sp. Pl. 445. 1753.

PRIMULACEAE

ANAGALLIS

A A TF arvensis L., Sp. Pl. 148. 1753.

A A F minima (L.) E.H.L.Krause, in Sturm, Deutschl. Fl., ed. 2, 9: 251. 1901.

RANUNCULACEAE

ANEMONE

A H T decapetala Ard., Animadv. Bot. Spec. Alt. 27, t. 12. 1764.

RANUNCULUS

E H F caprarum Skottsb., Nat. Hist. Juan Fernandez 2: 123, f. 8a-e. 1921.

A H T muricatus L., Sp. Pl. 555. 1753.

RHAMNACEAE

COLLETIA

E F T spartioides Bertero ex Colla, Nuovo Giorn. Lett., Sci. 24: 146. 1832.

ROSACEAE

ACAENA

A H TF argentea Ruiz et Pavón, Fl. Peruv. Chil. 1: 67, t. 103, f. b. 1798.

E H F masafuerana Bitter, Biblioth. Bot. 17(74): 45, t. 2. 1911.

A H TF ovalifolia Ruiz et Pavón, Fl. Peruv. Chil. 1: 67, t. 103, f. c. 1798.

FRAGARIA

A H TF chiloensis (L.) Duchesne, Hist. Nat. Frais. 165. 1766.

MARGYRACAENA

E H T skottsbergii Bitter, Repert. Spec. Nov. Regni Veg. 17: 239. 1921.

MARGYRICARPUS

E H T digynus (Bitter) Skottsb., Nat. Hist. Juan Fernandez 2: 779. 1951.

RUBUS

N H F geoides Sm., Pl. Icon. Ined. 1: t. 19. 1789.

A F TF ulmifolius Schott, Isis (Oken) 2(5): 821. 1818.

RUBIACEAE

COPROSMA

E T T oliveri Fosberg, Brittonia 20(4): 292. 1968.

E T TF pyrifolia (Hook. et Arn.) Skottsb., Nat. Hist. Juan Fernandez 2: 173, f. 24 d. 1921.

GALIUM

A A TF aparine L., Sp. Pl. 108. 1753.
E H F masafueranum Skottsb., Nat. Hist. Juan Fernandez 2: 174, f. 25. 1921.

HEDYOTIS

N H T salzmannii (DC.) Steud., Nomencl. Bot:, ed. 2, 1: 728. 1840.

NERTERA

N H F granadensis (Mutis ex L.f.) Druce, Bot. Soc. Exch. Club Brit. Isles 4: 637. 1917.

RUTACEAE

FAGARA

E T F externa Skottsb., Nat. Hist. Juan Fernandez 2: 143, f. 14 e. 1921.
E T T mayu (Bertero ex Colla) Engler, Nat. Pflanzenfam. 3(4): 118. 1896.

RUTA

A F TF chalepensis L., Mant. Pl. 69. 1767.

SANTALACEAE

SANTALUM

E T TF fernandezianum F.Phil., Anales Mus. Nac. Chile, Secc. 2, Bot. 5, t. 1. 1892. (Extinct)

SAXIFRAGACEAE

ESCALLONIA

E FT T callcottiae Hook. et Arn., Bot. Misc. 3: 342. 1833.

SCROPHULARIACEAE

CYMBALARIA

A H T muralis P.Gaertn., B.Mey. et Scherb., Oekon. Fl. Wetterau 2: 397. 1800.

DIGITALIS

A H F purpurea L., Sp. Pl. 621. 1753.

EUPHRASIA

E HS F formosissima Skottsb., Nat. Hist. Juan Fernandez 2: 169, f. 23; t. 15, 1, t. 20, f. 6-7. 1921.

KICKXIA

A A F elatine (L.) Dumort., Fl. Belg. 35. 1827.

MIMULUS

N A F glabratus Kunth, in Humb., Bonpl. et Kunth, Nov. Gen. Sp. (ed. qu.) 2: 370. 1818.

VERBASCUM

A B F thapsus L., Sp. Pl. 177. 1753.
A B TF virgatum Stokes, in With., Bot. Arr. Brit. Pl., ed. 2, 1: 227. 1787.

VERONICA

A A T anagallis-aquatica L., Sp. Pl. 12. 1753.
A A T arvensis L., Sp. Pl. 13. 1753.

A A T persica Poir., in Lam., Encycl. 8: 542. 1808.

SOLANACEAE

CESTRUM

A F TF parqui L'Hér., Stirp. Nov. 73, t. 36. 1788.

DATURA

A A T stramonium L., Sp. Pl. 179. 1753.

NICOTIANA

E F F cordifolia Phil., Anales Univ. Chile 13: 167. 1856.

A AH T tabacum L., Sp. Pl. 180. 1753.

PHYSALIS

A H TF peruviana L., Sp. Pl., ed. 2, 1670. 1763.

SOLANUM

A TF argenteum Dunal ex Poir., in Lam., Encycl., Suppl. 3: 755. 1814.

E H T fernandezianum Phil., Linnaea 29: 23. 1858.

A A TSF furcatum Dunal ex Poir. var. furcatum, in Lam., Encycl., Suppl. 3: 750. 1814.

A F T marginatum L.f., Suppl. Pl. 147. 1782.

N H F pentlandii Dunal subsp. interandinum (Bitter) Edmonds, Kew Bull. 27(1): 110. 1972.

A H T tuberosum L., Sp. Pl. 185. 1753.

TROPAEOLACEAE

TROPAEOLUM

A H T majus L., Sp. Pl. 345. 1753.

UMBELLIFERAE

AMMI

A AB T visnaga (L.) Lam., Fl. Franç. 3: 462. 1779.

ANETHUM

A A F graveolens L., Sp. Pl. 263. 1753.

APIUM

N H T australe Thouars, Esquisse Fl. Tristan d'Acugna 43. 1808.

E H T fernandezianum Johow, Estud. Fl. Juan Fernandez 101. 1896.

A H T graveolens L., Sp. Pl. 264. 1753.

CENTELLA

N H T asiatica (L.) Urb., in Mart., Fl. Bras. 11(1): 287, t. 78, f. 1. 1879.

CONIUM

A AB TF maculatum L., Sp. Pl. 243. 1753.

CORIANDRUM

A A T sativum L., Sp. Pl. 256. 1753.

CYCLOSPERMUM

A A T leptophyllum (Pers.) Sprague var. leptophyllum, J. Bot. 61: 131. 1923.

DAUCUS

A AH T montanus Humb. et Bonpl. ex Spreng., in Schult., Syst. Veg. 6: 482. 1820.

ERYNGIUM

E FT T bupleuroides Hook. et Arn., Bot. Misc. 3: 352. 1833.
E F T inaccessum Skottsb., Nat. Hist. Juan Fernandez 2: 158, 21 h-p, t. 12, 2. 1921.
E FT F sarcophyllum Hook. et Arn., Bot. Misc. 3: 352. 1833.
E F T x fernandezianum Skottsb., Kongl. Svenska Vetenskapsakad. Handl. 51(9): 17, f. 5. 1914.

FOENICULUM

A H T vulgare Mill., Gard. Dict., ed. 8, Foeniculum 1. 1768.

PETROSELINUM

A H TF crispum (Mill.) A.W.Hill, Hand-list Herb. Pl. Kew, ed. 3, 122. 1925.

SANICULA

A H T crassicaulis Poepp. ex DC., Prodr. 4: 84. 1830.

TORILIS

A A T nodosa (L.) Gaertn., Fruct. Sem. Pl. 1: 82, t. 20, f. 6. 1788.

URTICACEAE

BOEHMERIA

E T T excelsa (Bertero ex Steud.) Wedd., Ann. Sci. Nat., Bot., sér. 4, 1: 202. 1854.

PARIETARIA

N A TF debilis G.Forst. var. debilis, Fl. Ins. Austr. 73. 1786.

URTICA

N A T berteroana Phil., Linnaea 33: 235. 1864.
E H TF glomeruliflora Steud., Flora 33: 257. 1850. ("glomerulaeflora")
E A F masafuerae Phil., Anales Univ. Chile 13: 167. 1856.
A A TS urens L., Sp. Pl. 984. 1753.

VALERIANACEAE

CENTRANTHUS

A H T ruber (L.) DC., in DC. et Lam., Fl. Franç., ed. 3, 4: 239. 1805.

VERBENACEAE

RHAPHITHAMNUS

E T TF venustus (Phil.) B.L.Rob., Proc. Amer. Acad. Arts 51(10): 531. 1916.

VERBENA

A H TF litoralis Kunth, in Humb., Bonpl. et Kunth, Nov. Gen. Sp. (ed. qu.) 2: 276, t. 137. 1818.

WINTERACEAE

DRIMYS

E T TF confertifolia Phil., Anales Univ. Chile 13: 163. 1856.

MONOCOTYLEDONEAE

ARACEAE

ZANTEDESCHIA

A H TF aethiopica (L.) Spreng., Syst. Veg. 3: 765. 1826.

BROMELIACEAE

GREIGIA

E H T berteroi Skottsb., Nat. Hist. Juan Fernandez 2: 109. 1921.

OCHAGAVIA (e)

e H T elegans Phil., Anales Univ. Chile 13: 168. 1856.

CYPERACEAE

CAREX

N H F banksii Boott, Trans. Linn. Soc. London 20: 119. 1846.
E H TF berteroniana Steud., Flora 25: 604. 1842.

CYPERUS

N H TF eragrostis Lam., Tabl. Encycl. 1: 146. 1791.
N H T reflexus Vahl, Enum. Pl. 2: 299. 1805.

ELEOCHARIS

N H T fuscopurpurea (Steud.) H.Pfeiff., Repert. Spec. Nov. Regni Veg. 28: 19. 1930.

MACHAERINA

E H T scirpoidea (Steud.) Koyama ex M.T.Strong, Novon 7(3): 318. 1997.

OREOBOLUS

N H F obtusangulus Gaudich. subsp. obtusangulus, Ann. Sci. Nat. (Paris) 5: 99, t. 2, f. 1. 1825.

SCIRPUS

N A TF cernuus Vahl, Enum. Pl. 2: 245. 1805.
N H TF nodosus Rottb., Descr. Icon. Rar. Pl. 52. 1773.

UNCINIA

N H F brevicaulis Thouars, Esquisse Fl. Tristan d'Acugna 35, t. 6. 1808.
E H F costata Kuk., Repert. Spec. Nov. Regni Veg. 16: 433. 1920.
E H TF douglasii Boott, in Hook.f., Fl. Antarct. 369. 1846.
N H F tenuis Poepp. ex Kunth, Enum. Pl. 2: 525. 1837.

GRAMINEAE

AGROSTIS

E H F masafuerana Pilger, Repert. Spec. Nov. Regni Veg. 16: 388. 1920.
A H TF stolonifera L., Sp. Pl. 62. 1753.

AIRA

A A TF caryophyllea L., Sp. Pl. 66. 1753.
A TF praecox L., Sp. Pl. 65. 1753.

ANTHOXANTHUM

A H TF odoratum L., Sp. Pl. 28. 1753.

AVENA

A A TSF barbata Pott ex Link, J. Bot. (Schrader) 1799(2): 315. 1800.

BRACHYPODIUM

A H F distachyon (L.) P.Beauv., Essai Agrostogr. 101, 156. 1812.

BRIZA

A A T maxima L., Sp. Pl. 70. 1753.
A A TF minor L., Sp. Pl. 70. 1753.

BROMUS

N A TS berteroanus Colla, Herb. Pedem. 6: 68. 1836. ("berterianus")
A ABH TF catharticus Vahl, Symb. Bot. 2: 22. 1791.
A A F diandrus Roth, Bot. Abh. Beobacht. 44. 1787.
A A TSF hordeaceus L., Sp. Pl. 77. 1753.
A H TF lithobius Trin., Linnaea 10: 303. 1836.
A H TF stamineus E.Desv., in Gay, Hist. Chile, Bot. 6: 440. 1854.

CHAETOTROPIS

N A T chilensis Kunth, Révis. Gramin. 271, t. 47. 1830.
N H TF imberbis (Phil.) Bjorkman, Symb. Bot. Upsal. 17(1): 14. 1960.

CHASCOLYTRUM

A H T subaristatum (Lam.) Desv., Nouv. Bull. Sci. Soc. Philom. Paris 2: 190. 1810.

CHUSQUEA

E F T fernandeziana Phil., Anales Univ. Chile 43: 577. 1873.

CYNOSURUS

A A TF echinatus L., Sp. Pl. 72. 1753.

DACTYLIS

A H T glomerata L., Sp. Pl. 71. 1753.

DANTHONIA

N H T chilensis E.Desv. var. chilensis, in Gay, Hist. Chile, Bot. 6: 360, t. 80, f. 3. 1854.
N H T malacantha (Steud.) Pilger, Notizbl. Bot. Gart. Berlin-Dahlem 10(97): 759. 1929.

DIGITARIA

A A T sanguinalis (L.) Scop., Fl. Carniol., ed. 2, 1: 52. 1772.

ELEUSINE

A H T tristachya (Lam.) Lam., Tabl. Encycl. 1: 203. 1792.

FESTUCA

A H T arundinacea Schreb., Spic. Fl. Lips. 57. 1771.

GASTRIDIUM

A A T ventricosum (Gouan) Schinz et Thell., Vierteljahrsschr. Naturf. Ges. Zürich 58: 39. 1914.

HORDEUM

A H T chilense Roem. et Schult., Syst. Veg. 2: 796. 1817.
A H TSF murinum L. subsp. murinum, Sp. Pl. 85. 1753.
A H T secalinum Schreber, Spic. Fl. Lips. 148. 1771.

LEPTOPHYLLOCHLOA

N H T micrathera (E.Desv.) C.E.Calderón ex Nicora, in M.N.Correa, Fl. Patag. 3: 70, f. 32. 1978.

LOLIUM

A A TF multiflorum Lam., Fl. Franç. 3: 621. 1779.
A H T perenne L., Sp. Pl. 83. 1753.

MEGALACHNE (E)

E H TF berteroniana Steud., Syn. Pl. Glumac. 1: 237. 1854.
E H TF masafuerana (Skottsb. et Pilger ex Pilger) Matthei, Bol. Soc. Biol. Concepción 48: 171, f. 1 A, C-E. 1974.

NASSELLA

N H TF laevissima (Phil.) Barkworth, Taxon 39(4): 610. 1990.
N H TF neesiana (Trin. et Rupr.) Barkworth, Taxon 39(4): 611. 1990.

PASPALUM

A H T dasypleurum Kunze ex E.Desv., in Gay, Hist. Chile, Bot. 6: 242. 1854.
A H T distichum L., Syst. Nat., ed. 10, 855. 1759.

PHALARIS

A A T amethystina Trin., Mém. Acad. Imp. Sci. Saint-Pétersbourg, Sér. 6, Sci. Math., Seconde Pt. Sci. Nat. 5(2): 56. 1839.
A A T angusta Nees ex Trin., Sp. Gram. 1: t. 78. 1827.

PIPTOCHAETIUM

N H T bicolor (Vahl) E.Desv., in Gay, Hist. Chile, Bot. 6: 273. 1854.

POA

A A TF annua L., Sp. Pl. 68. 1753.
A H TF pratensis L., Sp. Pl. 67. 1753.

PODOPHORUS (E)

E H T bromoides Phil., Anales Univ. Chile 13: 169. 1856. (Extinct?)

POLYPOGON

A H TF australis Brongn., in Duperrey, Voy. Monde Phan. 21. 1829.

SETARIA

A H TF parviflora (Poir.) Kerguélen, Lejeunia, n.s. 120: 161. 1987.
A A T viridis (L.) P.Beauv., Essai Agrostogr. 51, 171, 178, t. 13, f. 3. 1812.

TRISETUM

N H T caudulatum Trin., Linnaea 10: 300. 1836.

VULPIA

A A TF bromoides (L.) Gray, Nat. Arr. Brit. Pl. 2: 124. 1821.
A A TF myuros (L.) C.C.Gmel. var. hirsuta Hackel, Cat. Rais. Gramin. Portugal 24. 1880.
A A T myuros (L.) C.C.Gmel. var. myuros, Fl. Bad. 1: 8. 1805. ("myurus")

IRIDACEAE

CROCOSMIA

A H T x crocosmiiflora (Lemoine ex Burb. et Dean) N.E.Br., Trans. Roy. Soc. South Africa 20: 264. 1932.

LIBERTIA

N H TF chilensis (Molina) Gunckel, Revista Chilena Hist. Nat. 31: 87. 1928. ("1927")

JUNCACEAE

JUNCUS

A A F bufonius L., Sp. Pl. 328. 1753.
N H TF capillaceus Lam., Encycl. 3: 266. 1789.
N H T imbricatus Laharpe, Essai Monogr. Jonc. 61. 1825.
N H T pallescens Lam., Encycl. 3: 268. 1789.
N H T planifolius R.Br., Prodr. Fl. Nov. Holl. 259. 1810.
N H T procerus E.Mey., Linnaea 3: 367. 1828.

LUZULA

E H F masafuerana Skottsb., Nat. Hist. Juan Fernandez 2: 775. 1951.

ORCHIDACEAE

GAVILEA

E H F insularis M.N.Correa, Revista Mus. La Plata, Secc. Bot. 11: 75, f. A-E. 1968.

PALMAE

JUANIA (E)

E T T australis (Mart.) Drude ex Hook.f., Rep. Prog. Condition Roy. Bot. Gard. Kew 1882: 57. 1884.

Fecha de publicación: 07 de mayo de 1999

NUEVOS TAXA Y COMBINACIONES PUBLICADOS EN ESTE VOLUMEN

LICHENES

Caloplaca austroshetlandica (Zahlbr.) D.J.Galloway & Quilhot, com. nov. 120
Dendriscocaulon calithamnion (Taylor) D.J.Galloway & Quilhot, com. nov. 127
Neuropogon durietzii (Motyka) D.J.Galloway & Quilhot, com. nov. 142
Neuropogon patagonicus (F.J. Walker) D.J.Galloway & Quilhot, com. nov. 142
Neuropogon subantarcticus (F.J. Walker) D.J.Galloway & Quilhot, com. nov. 142

ANGIOSPERMAE

Poaceae

Nassella argentinensis (Speg.) Peñail., com. nov. 86
Nassella brasiliensis (A. Zanin et Longhi-Wagner) Peñail., com. nov. 86
Nassella coquimbensis (Matthei) Peñail., com. nov. 86
Nassella entrerriensis (Burkart) Peñail., com. nov. 86
Nassella ibarrensis (Kunth) Peñail., com. nov. 86
Nassella karstenii (Hitchc.) Peñail., com. nov. 86
Nassella pittieri (Hitchc.) Peñail., com. nov. 86
Nassella psittacorum (Speg.) Peñail., com. nov. 86
Nassella planaltina (A. Zanin et Longhi-Wagner) Peñail., com. nov. 87
Nassella rhizomata (A. Zanin et Longhi-Wagner) Peñail., com. nov. 87
Nassella sellowiana (Nees ex Trin. et Rupr.) Peñail., com. nov. 87
Nassella tenuiculmis (Hackel) Peñail., com. nov. 87
Nassella vallsii (A. Zanin et Longhi-Wagner) Peñail., com. nov. 87
Nassella vargasii (Tobar) Peñail., com. nov. 87