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CONTRIBUTION TO THE LICHEN FLORA OF URUGUAY. XXXVIII. SOME COLLECTIONS FROM EASTERN URUGUAY

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ABSTRACT: *Contribution to the lichen flora of Uruguay. XXXVIII. Some collections from Eastern Uruguay.*-Fifty lichens gathered in Eastern Uruguay are listed. *Cladonia anaemica* and *Lobaria erosa* f. *laevis* are added to the flora of the country. Twenty six new Departmental records are pointed out.

RESUMEN: *Contribución a la flora líquénica del Uruguay. XXXVIII. Algunas colecciones del Este de Uruguay.*- Se enumeran cincuenta líquenes colectados en el Este del Uruguay. *Cladonia anaemica* y *Lobaria erosa* f. *laevis* se incorporan a la flora del país. Se citan veintiséis nuevos registros departamentales.

Key words: Lichens - Eastern Uruguay - Taxonomy - Distribution.

Palabras clave: Líquenes - Este de Uruguay - Taxonomía - Distribución.

Introduction

In a recent date the author received several small lichen collections from Uruguay for identification. In this paper the species which occur in East Uruguay have been chosen as part of the long-term planned lichen flora of this region.

In this list the author includes some gatherings made during a week-long field trip to Quebrada de los Cuervos in Treinta y Tres Department in the year 1970. A small number of samples gathered in different localities from East Uruguay are also included. They are noteworthy additions to the known flora or significant enlargements of their distributional area.

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With the aim to save space the collections sites are very shortly quoted in the list of species. A more detailed description of these localities is given below. If the coordinates of a locality are not registered by the collector this place is referred to Towns or Cities with known coordinates.

The names of the two most prolific collectors are abbreviated in the list of species: the Uruguayan biologist FABRIZIO SCARABINO (FS) and the author (HO). The lack of collectors' numbers obliged the author to identify the samples listed with the accession number of his private herbarium.

The following abbreviations are used for the five Departments sampled: CL: Cerro Largo, L: Lavalleja, M: Maldonado, RO.: Rocha, and TT: Treinta y Tres.

Among the below listed species the new Departamental records are identified with an asterisk (*), the additions to the flora of Eastern Uruguay with a paragraph (§) and a cross (†) for the new records for the country.

Acknowledgements: The following specialists are thanked for lichens' identifications: T. AHTI, S. KUROKAWA, (†) A. H. MAGNUSSON, G. STEVENS and I. YOSHIMURA. Thanks are also given to the several collectors for providing the samples listed below. The author extends deep gratitude to Prof. A. MONES, Director of the Museos Nacionales de Historia Natural y Antropología, Montevideo, Uruguay, for his comments and revision of the manuscript.

List of the collection sites

Cerro Largo Department:

Paso Centurión: is a pass across the Yaguaron River in the frontier with Brazil. Its geographic coordinates are: 32°07'S/53°44'W.

Cañada del Vichadero: is the mouth of Vichadero stream in the Yaguarón River, a few kilometers up stream of the Paso Centurión.

Cañada El Barón: small stream located 35 km NNE from Melo City: 32°22'S/54°11'W.

Gruta de los Vampiros: this collection site is a meadow with several rocky outcrops 7.5 km W from Paso Centurión.

Lavalleja Department:

Ruta 8 and Arroyo La Calera: is the crossing of the Route 8 and the La Calera stream in close proximity of Mariscal Town: 34°03'S/54°47'W.

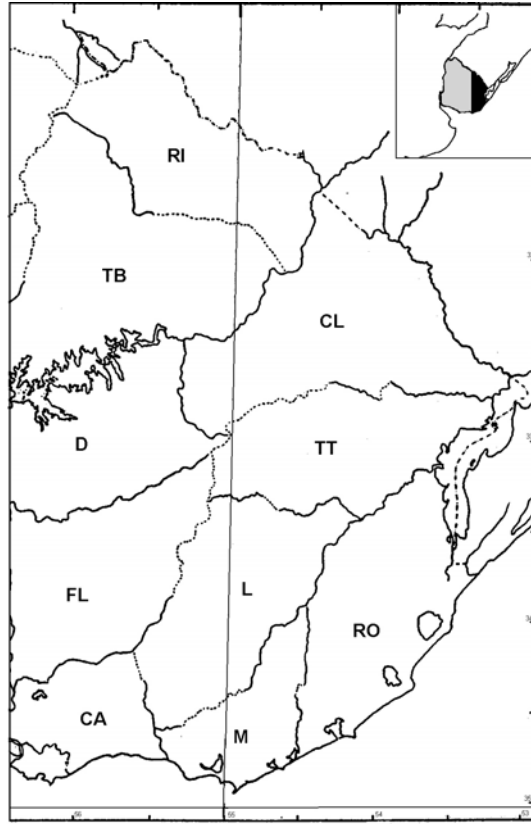


Fig. 1. Map showing the departments East of meridian 55° W. CL: Cerro Largo; L: Lavalleja; M: Maldonado; RO: Rocha; TT: Treinta y Tres.

Maldonado Department:

Cerro del Aguila: a small hill located near Aigua Town:
34°12'S/54°45'W.

Rocha Department:

Cerro de los Rocha: a hill situated 2.5 km N from Castillos City:
34°12'S/53°50'W.

Barra del Arroyo Chuy: is the mouth of the Chuy brook in the Atlantic
Ocean: 33°41'S/53°27'W.

Ruta 9 and Arroyo Chafalote: is the crossing of the Chafalote brook
with the route 9 in the close proximity of 19 de Abril Town:
34°22'S/54°04'W.

Treinta y Tres Department:

Quebrada de los Cuervos: is a very large extent of ravines encircled by two hill ranges: Cuchilla de Dionisio and Cuchilla de los Ladrones. Its coordinates are: 32°54'S/54°25'W. During the visit made by the author in 1970 no evidence of antropogenic disturbance could be noted.

Estancia La Quebrada and Estancia La Teja: two cattle ranch situated four or five kms E from Quebrada de los Cuervos with several small ravines which exhibit pristine environments during the author's visit in 1970.

List of species

Caloplaca crocea (KREMPELHUBER) HAFELLNER & POELT

*TT: Quebrada de los Cuervos, 1970. On *Opuntia ficus-indica*, HO 5976, on trunk of *Ficus carica*, HO 5994, on bark of *Eucalyptus*, HO 6021. All the samples were gathered in an *Eucalyptus* plantation 1 km E from the ravine.

Estancia La Quebrada, 1970. On *Scutia buxifolia* inside the forest, HO 6112.

Caloplaca felipponei ZAHLBRUCKNER

RO: Punta del Diablo de la Coronilla (33°55'S/53°31'W), 1989. On rocks on the beach, higrohaline zone, locally common, HO 8851, 8852.

Caloplaca granularis (MÜLLER ARGOVIENSIS) CENGIA SAMBO

*TT: Estancia La Quebrada, 1970. On bark of *Melia azedarach* (cult.), HO 6099.

Canomaculina conferenda (HALE) ELIX

*CL: Gruta de los Vampiros, 2002. On rocks, FS.s.n. (9580).

M: Cerro del Aguila, 2002. On bark, FS. s.n. (9609).

Canomaculina pilosa (STIZENBERGER) ELIX & HALE

CL: Gruta de los Vampiros, 2002. On rocks, FS.s.n. (9577).

Cladia aggregata (SWARTZ) NYLANDER

M: Cerro del Aguila, 2002. On soil, FS.s.n. (9612).

Duplicates of this number will be distributed in "Dupla Graecensia Lichenum".

† *Cladonia anaemica* (NYLANDER) AHTI

RO: Castillos, Cerro de los Rocha, 2001. On rocks. det. T. AHTI 2003,

G. GEYMONAT s.n. (9511). This collection was recently published as *Cladonia salmonea* (OSORIO 2002:2). New report for Uruguay.

Cladonia ceratophylla (SWARTZ) SPRENGEL

M: Cerro del Aguila, 2002. On rotten trunk. FS.s.n. (9606).

TT: Estancia La Teja, 1970. On soil, N slope of a ravine, HO 6082.

Dictyonema glabratum (SPRENGEL) D. HAWKSWORTH

*TT: Estancia La Teja, 1970. On rocks, N slope of a ravine, HO 6083, on rocks in a meadow, HO 6086.

§ *Heterodermia albicans* (PERSOON) SWINSCOW & KROG

TT: Estancia La Quebrada, 1970. On *Scutia buxifolia*, in the forest, HO 6116.

CL: Cañada El Barón, 2002. On tree trunk, FS.s.n. (9601).

§ *Heterodermia cassarettiana* (MASSALONGO) TREVISAN

CL: Cañada El Barón, 2002. On tree trunk, confirm. S. KUROKAWA 2003. FS.s.n. (9598).

Heterodermia hypochraea (VAINIO) SWINSCOW & KROG

RO: Ruta 9 and Arroyo Chafalote, 1967. On trunk of Myrtaceae, marginal forest of the brook, HO 5523.

§ *Heterodermia leucomela* (LINNAEUS) POELT

TT: Estancia La Quebrada, 1970. On *Erythrina crista-galli*, in the forest, HO 6103.

M.: Cerro del Aguila, 2002. On bark. FS.s.n. (9614 pr.p.).

§ *Heterodermia lutescens* (KUROKAWA) FOLLMANN

TT: Quebrada de los Cuervos, 1970. On trunk of *Eucalyptus*, not common, HO 6003.

Heterodermia obscurata (NYLANDER) TREVISAN

TT: Quebrada de los Cuervos, 1970, on trunk of *Eucalyptus* in an *Eucalyptus* plantation 1 km E from the ravine, HO 6002, 6005, 6008, 6009, on *Ficus carica*, in an *Eucalyptus* plantation 1 km E from the ravine, HO 5986, on rocks, HO 5933, on *Arecastrum romanzoffianum*, N slope of a ravine, HO 5917.

Estancia La Quebrada, 1970. On *Citharexylon montevidense*, HO 6138.

L: Ruta 8 and Arroyo La Calera, 1956. On *Salix*, banks of the brook, HO 3634. This collection was identified as *Anaptychia obscurata* (NYLANDER) VAINIO in 1961 by S. KUROKAWA.

§ *Heterodermia vulgaris* (VAINIO) FOLLMANN & REDON

TT: Quebrada de los Cuervos, 2003. On trunk of *Eucalyptus* in an *Eucalyptus* plantation 1 km E from the ravine, FS. s.n.(9621).

Hypotrachyna osorioi (HALE)HALE

*CL: Paso Centurión, 2002. On *Ficus*, FS. s.n. (9586).

Lobaria cuprea (MÜLLER ARGOVIENSIS) ZAHLBRUCKNER

*M: Cerro del Aguila, 2002. On mossy bark, FS.s.n. (9607).

Lobaria erosa (ESCHWEILER) TREVISAN.

TT: Quebrada de los Cuervos, 1970. On *Arecastrum romanzoffianum*, bottom of a ravine, HO 5895, on mossy rocks, HO 5897.

Estancia La Teja, 1970. On branches of *Ilex paraguariensis*, bottom of a ravine HO 5906. These three collections were identified by I.YOSHIMURA in 1972.

*CL: Cañada del Vichadero, 2002. On shrubs. FS. s.n. (9569).

† *Lobaria erosa* (ESCHWEILER) TREVISAN. fa. *laevis* MÜLLER ARGOVIENSIS

TT: Quebrada de los Cuervos, 1970. On rocks, bottom of a ravine, det. I. YOSHIMURA 1972, HO 5894. New report for Uruguay.

Lobaria patinifera (TAYLOR) HUE

*TT: Quebrada de los Cuervos, 1970. On trunks, HO 5896.

Estancia La Quebrada, 1970. On *Scutia buxifolia* HO 5898, on *Sebastiania*, HO 5899, 5900. These three collections were identified in 1972 as *Lobaria conformis* by I. YOSHIMURA.

Ochrolechia osorioana VERSEGHY

*TT: Estancia La Teja, 1970. On rocks in a meadow, HO 6063.

§ *Ochrolechia subpallescens* VERSEGHY fa. *uruguayensis* VERSEGHY

TT: Quebrada de los Cuervos, 1970. On *Opuntia* in an *Eucalyptus* plantation 1 km E from the ravine, HO 5975.

Parmotrema austrosinense (ZAHLBRUCKNER) HALE

RO: Barra del Arroyo Chuy, 2002. On rocks, banks of the brook, FS. s.n. (9591).

Parmotrema delicatulum (VAINIO) HALE

*CL: Poblado Centurión, 2002. On rocks, FS. s.n. (9560),

Duplicates of this number will be distributed in “Dupla Graecensia Lichenum”.

Parmotrema eciliatum (NYLANDER) HALE

*CL: Cañada del Vichadero, 2002. On shrubs, FS s.n. (9571).

Parmotrema rigidum (LYNGE) HALE

*CL: Cañada del Vichadero, 2002. On shrubs, FS. s.n. (9572, 9575).
Cañada El Barón, 2002. On shrubs, FS. s.n. (9603).

Pertusaria superans MÜLLER ARGOVIENSIS.

*M: Cerro del Aguila, 2002. On shrubs, FS. s.n. (9605).
*TT: Quebrada de los Cuervos, 1970. On bark of *Eucalyptus*, in an
Eucalyptus plantation 1 km E from the ravine, HO 6024.

Pertusaria velata (TURNER) NYLANDER

*CL: Cañada del Vichadero, 2002. On shrubs, FS. s.n. (9564).

Pseudocyphellaria aurata (ACHARIUS) VAINIO

CL: Cañada El Barón, 2002. On tree trunk, FS. s.n. (9597).
Cañada del Vichadero, 2002. On tree trunk, FS. s.n.(9565).
Paso Centurión, 2002. On a tree, FS. s.n.(9581).
M: Cerro del Aguila, 2002. On bark, FS. s.n. (9611, 9614 pr.p.).
TT: Estancia La Quebrada, 1970. On *Sebastiania*, HO 6122, 6143, on
Allophylus edulis, HO 6140.
Estancia La Teja, 1970. On rocks, bottom of a ravine, HO 6095.
Quebrada de los Cuervos, 1970. On bark of tree, bottom of a ravine,
HO 5938, on trunk of *Eucalyptus* in an *Eucalyptus* plantation 1 km E
from the ravine, HO 6001.
Duplicates of the number 9611 will be distributed in "Dupla
Graecensia Lichenum."

Pseudocyphellaria clathrata (DE NOTARIS) MALME

* CL: Cañada El Barón, 2002. On tree trunk, FS. s.n. (9596).

Punctelia constantimontium SERUSIAUX

*CL: Gruta de los Vampiros, 2002. On rocks, FS. s.n. (9579).

Punctelia canaliculata (LYNGE) KROG

*CL: Cañada del Vichadero, 2002. On shrubs and trees, FS. s.n.
(9562).
Paso Centurión, 2002. On trees, marginal forest, FS. s.n. (9582).
Duplicates of the number 9562 will be distributed in "Dupla
Graecensia Lichenum."

Ramalina aspera RÄSÄNEN

RO: Barra del arroyo Chuy, 2002. On rocks, banks of the brook, FS.
s.n.(9590).

Ramalina celastri (SPRENGEL) KROG & SWINSCOW

CL: Cañada del Vichadero, 2002. On shrubs, FS. s.n. (9566).

TT: Quebrada de los Cuervos, 2003. On trunk of *Eucalyptus* in an *Eucalyptus* plantation 1 km E from the ravine, FS. s.n. (9626).

Ramalina peruviana ACHARIUS

CL: Cañada del Vichadero, 2002. On shrubs, FS. s.n. (9574).

Cañada El Barón, 2002. On branches of trees, FS. s.n. (9600).

Paso Centurión, 2002. On trees, FS. s.n. (9583).

Ramalina sprengelii KROG & SWINSCOW

CL: Cañada El Barón, 2002. On branches of shrubs, FS. s.n. (9594).

Cañada del Vichadero, 2002. On shrubs and trees, FS. s.n. (9559).

TT: Quebrada de los Cuervos, 1988. On *Eucalyptus*, F. ACHAVAL s.n. (MVM 16.571), 2003. On trunk of *Eucalyptus* in an *Eucalyptus* plantation, FS. s.n. (9618).

Duplicates of the numbers 9594 and 9618 will be distributed in "Dupla Graecensia Lichenum."

Ramalina usnea (LINNAEUS) HOWE

RO: Fortaleza de Santa Teresa (33°59'S/53°32'W), 1946. On trees, A. LOMBARDO s.n. (870) confirm. A. H. MAGNUSSON 1956 and G.N. STEVENS 1984.

TT: Estancia La Teja, 1970. On branches of Myrtaceae, N slope of a ravine, HO 6084.

Rimelia cetrata (ACHARIUS) HALE & FLECHER

*CL: Cañada El Barón, 2002. On tree trunk, FS. s.n. (9602).

Paso Centurión, 2002. On *Ficus*, FS. s.n. (9584).

M.: Cerro del Aguila, 2002. On mossy bark, FS. s.n. (9608).

RO: Barra del arroyo Chuy, 2002. On rocks, banks of the brook, FS. s.n. (9592).

Sticta fuliginosa (DICKSON) ARNOLD

TT: Quebrada de los Cuervos, 2003. On trunk of *Eucalyptus* in an *Eucalyptus* plantation 1 km E from the ravine, FS. s.n. (9627).

Sticta variabilis (BORY) ACHARIUS

*CL: Cañada del Vichadero, 2002. On trunk, FS. s.n. (9563).

Sticta weigelii (ACHARIUS) VAINIO

M: Cerro del Aguila, 2002. On mossy trunk, FS. s.n. (9615).

Teloschistes exilis (MICHAUX) VAINIO

CL: Cañada del Vichadero, 2002. On shrubs, FS. s.n. (9568).

Cañada El Barón, 2002. On branches of trees, FS. s.n. (9599).
RO: Barra del arroyo Chuy, 2002. On rocks, banks of the brook, FS. s.n. (9587).
TT: Quebrada de los Cuervos, 2002. On trunk of *Eucalyptus* in an *Eucalyptus* plantation 1 km E from the ravine, FS. s.n. (9624).

Teloschistes flavicans (SWARTZ) VAINIO

*CL: Paso Centurión, 2002. On *Ficus*, FS. s.n. (9585).
Cañada del Vichadero, 2002. On shrubs, FS. s.n. (9576).
RO: Barra del arroyo Chuy, 2002. On rocks, banks of the brook, FS. s.n. (9588).
TT: Quebrada de los Cuervos, 2003. On trunk of *Eucalyptus* in an *Eucalyptus* plantation 1 km E from the ravine, FS. s.n. (9620).
Duplicates of the number 9620 will be distributed in "Dupla Graecensia Lichenum."

Usnea angulata ACHARIUS

*CL: Cañada El Barón, 2002. On branches of trees, FS. s.n. (9595).
Paso Centurión, 2002. On trees and shrubs, FS. s.n. (9561).
Duplicates of the number 9561 will be distributed in "Dupla Graecensia Lichenum."

Usnea dasaea STIRTON

*RO: Ruta 9 and Arroyo Chafalote, 1967. On trunk of Myrtaceae, marginal forest, HO 5527, on *Schinus longifolius*, marginal forest, HO 5474.

Usnea densirostra TAYLOR

RO: Barra del arroyo Chuy, 2002. On rocks, banks of the brook, FS. s.n. (9589).

Usnea rubicunda STIRTON

*CL: Cañada del Vichadero, 2002. On shrubs, FS. s.n. (9573).

Usnea subelegans (VAINIO) MOTYKA

*CL: Cañada del Vichadero, 2002. On trees and shrubs, FS. s.n. (9657).
RO: Castillos, Cerro de los Rocha, 1967. On *Blepharocalyx*, S slope of the hill, HO 5660, 5663.

Usnea subflorida (ZAHLEBRUCKNER) MOTYKA

*CL: Cañada del Vichadero, 2002. On shrubs, FS. s.n. (9570).

Results

The results of the study of the fifty taxa above enumerated can be summarized as follows:

a) *Cladonia anaemica* and *Lobaria erosa* fa. *laevis* are added to the known flora of the country.

b) Six new records from Eastern Uruguay are listed.

c) Twenty six new Departamental records are pointed out.

d) For the following species the gatherings here reported are the southernmost records known in South America: *Cladonia anaemica*, *Heterodermia cassarettiana*, *Lobaria cuprea*, *Ochrolechia subpallens* fa. *uruguayensis*, *Usnea dasaea* and *U. subelegans*.

e) The *Ramalina usnea* complex is a very remarkable component of the epiphyte pending lichen flora from Eastern Uruguay. With one exception the author could make a revision of all the samples reported from this region, arriving to the following conclusions:

Ramalina usnea (LINNAEUS) HOWE

RO: Valizas, OSORIO (1998:7).

San Miguel, OSORIO (1967:8). This collection could not be restudied by the author. Sierra de San Miguel, Cerro de la Guardia Perdida, OSORIO (1992:39).

Ramalina sprengelii KROG & SWINSCOW

CL: Estancia Santa Ines, two collections, OSORIO (1998:7).

L: Estancia Madeiros, two collections, OSORIO 3664 (OSORIO, 2000:5) identified by A. MAGNUSSON in 1957 as *R. usnea* var. *capensis* and OSORIO 3693 (KASHIWADANI & KALB, 1993:27) already published as *R. usnea* by RUNDEL (1978:151).

RO: Cabo Polonio, Cerro Buena Vista, OSORIO (1998:7).

Lascano, Estancia La Doma, OSORIO (2001:5).

Ruta 16, Cerro Aspero, three collections, KASHIWADANI & KALB (1993:28) and OSORIO (1995:9). Sierra de San Miguel, Cerro Picudo, two collections, already published as *R. usnea* (OSORIO, 1992:39).

TT: Vergara, HERTER 90810 (H) published by RÄSÄNEN (1938:65) as *Ramalina gracilis* and as *R. usnea* (race III) by RUNDEL (1978:151).

Quebrada de los Cuervos: two collections, OSORIO 6043 (KASHIWADANI & KALB, 1993:27) and GARCÍA ZORRÓN 3263 published as *R. usnea* var. *capensis* (OSORIO, 1967:8).

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