

COMUNICACIONES BOTANICAS

MUSEO NACIONAL DE HISTORIA NATURAL Y ANTROPOLOGIA

Número 136

2009

Volumen VI

CONTRIBUTION TO THE LICHEN FLORA OF URUGUAY XLIII. NEW OR ADDITIONAL RECORDS.

HECTOR S. OSORIO *

ABSTRACT: Twenty-three uruguayan lichens are listed including 17 new departmental records. *Usnea densirostra* is rediscovered in the Department of Montevideo.

RESUMEN: Se enumeran 23 líquenes uruguayos incluyendo 17 nuevos registros departamentales. *Usnea densirostra* es redescubierta en el Departamento de Montevideo.

KEY WORDS: Uruguay - Lichens - Taxonomy - Distribution.

PALABRAS CLAVE: Uruguay - Líquenes - Taxonomía - Distribución.

Introduction

The present contribution of the lichen flora from Uruguay is based in the study of 23 species. The specimens listed are housed in the Herbarium of the Departamento de Botánica, Museo Nacional de Historia Natural y Antropología (MVM) and in the private herbarium of the author.

The results of this study are summarized in a chapter at the end of the species list.

* Instituto Felix de Azara, Casilla de Correo 168, 11.000 Montevideo, Uruguay.
E-mail: hsosorio@adinet.com.uy

Among the below listed species the new Departamental records are identified with an asterisk (*). The following abbreviations are used for the Departaments sampled:

AR: Artigas, CA: Canelones, DU: Durazno, FS: Flores, LS: Lavalleja, MA: Maldonado, MO: Montevideo, PA: Paysandu, RI: Rivera, RN: Rio Negro, RO: Rocha, SJ: San Jose, TT: Treinta y Tres.

Acknowledgements: the following specialists are thanked for lichen identifications: T. Ahti, P. Clerc, J.M. Rodriguez, C. Wetmore.

Thanks are also given to the several collectors for providing the samples listed.

The author extends deep gratitude to the Lic. Arturo Toscano, Director of the Museo Nacional de Historia Natural y Antropología, Montevideo, Uruguay for providing working possibilities.

List of species

Bulbothrix viridescens (LYNGE) HALE.

CA: Parque Nacional "F. D. Roosevelt", 34°51'S/56°15'W, 1995, on *Eucalyptus*, dunes on Rio de la Plata coast, aerohalin zone, HO 9315.

The collection in this Park is the southernmost locality of this taxon in South America.

During the last 10 years we have not found more specimens of this species and we suppose it has become extinct due to environmental factors.

The evident impoverishment of the lichen flora of the F. D. Roosevelt Park (34°51'S/56°01'W) observed during the last years can be attributed to the following environmental changes: the Park during the last 15 years was encircled by a large number of urbanizations with the logic consequence of the increasing traffic of vehicles across the Park. Moreover some swamps existing in the close proximity of the Park were drained and desiccated.

Caloplaca cinnabarina (ACH.) ZAHLBR.

This taxon was reported from Uruguay for the first time by MÜLLER ARG. (1888:2)

Misunderstandings and nomenclatural problems relating to this species were clarified by WETMORE (1999:683-691)

Following 26 unpublished collections mostly arisen from South Uruguay are listed.

CA: Balneario Las Tunas, 34°48'S/55°30'W, 1947, LEGRAND s.n. (HO 1624), Parador Tajés, El Cerrito (5 km W from Los Cerrillos Town: 34°37'S/56°22'W), 1950, HO 136.

DU: Arroyo El Cordobes, 32°30'S/55°19'W, 1953, HO 2796 & 2967.

LA: Abra de Cotto (17 km N from Cerro de las Animas: 34°46'S/55°19'W), 1969, HO 6427, rev. C. WETMORE 2000. Cerro Arequita, 34°10'S/55°05'W, 1956, HO 3876. Cerro Penitente, 34°20'S/55°07'W, 1953, HO 3322. Parque de la U.T.E. (10 km SE from Minas City: 34°23'S/55°14'W), 1967, HO 4935 & 4937. Ventorillo de la Buena Vista, 34°17'S/54°59'W, 1949, HO 2055. Villa Serrana, 34°17'S/54°59'W, 1956, HO 3950.

MA: Abra de Castellanos (14 km N from Cerro de las Animas: 34°46'S/55°19'W), 1969, HO 6546. Abra de Perdomo, 34°44'S/54°59'W, 1949, HO 1905 & 1919. Balneario Punta Colorada, 34°55'S/55°16'W, 1949, HO 1873. Cerro Pan de Azucar, 34°50'S/55°16'W, 1946, HO 861.a, 1951, HO 4652. Paso Real, 34°48'S/55°14'S, 1950, HO 2340. Piriapolis, 34°54'S/55°17'W, 1950, HO 2322, 1951, HO 2721, 1961, HO 4597. Sierra de las Animas, 34°46'S/55°19'W, 1948, HO 1551, 1950, HO 2299, 1963, HO 6258, 1976, HO 7372, rev. C. WETMORE 2000, 1979, HO 7651.

MO: Cerro de Montevideo, 34°54'S/56°14'W, 1981, HO 5192.

Cladonia ahtii STENROOS.

RO: Hwy. 16: km 18, 34°05'S/53°51'W, 2003, on trunk of *Butia capitata*, locally common, HO 9645 & G. GEYMONAT.

Cladonia ceratophylla (SWARTZ) SPRENGEL.

RO: Castillos, Cerro Lechiguana, 34°06'S/53°50'W, 2003, on termites nest, rev. T. AHTI 2003, HO 9652 & G. GEYMONAT.

Cladonia crispatula (NYL.) AHTI.

RO: Cerro de los Rocha, 34°09'S/53°35'W, 2003, on soil, N slope of a hill, rev. T. AHTI 2003, HO 9657, 9659 & G. GEYMONAT.

Cladonia furcata (HUDSON) SCHRADER.

RO: Castillos, Cerro Lechiguana, 34°06'S/53°50'W, 2003, on termites nest, HO 9653 & G. GEYMONAT.

Cladonia palmicola AHTI & FLEIG.

RO: Hwy. 16: km 18, 34°05'S/53°51'W, 2003, on trunk of *Butia capitata*, rev. T. AHTI 2003, HO 9646, 9647 & G. GEYMONAT.

Cladonia strepsilis (ACH.) GROGNOT.

RO: Cerro de los Rocha, 34°09'S/53°51'W, 2003, on soil among rocks, rev. T. AHTI 2003, HO 9660 & G. GEYMONAT.

Haematomma fenizianum MASSAL.

TT:*/ Quebrada de los Cuervos, 32°54'S/54°25'W, 1970, on rocks, 1 km E from the ravine, HO 5968

Parmotrema tinctorum (NYL.) HALE.

CA: Parque Nacional "F.D.ROOSEVELT", between De las Americas Ave. and Carrasco road, 34°51'S/56°02'W, 1986, on *Eucalyptus*, HO 8620, 8627.

With this taxon we are in front of the same situation as with *Bulbothrix viridescens*. It is the southernmost collection in South America and we have been unable to observe specimens in the Park during the last 15 years. This extinction is without doubt due the same environmental changes listed with *Bulbothrix viridescens*.

Ramalina aspera RÄS.

PA:*/ Rio Uruguay, Isla Almiron, 32°25'S/58°09'W, 1985, on shrubs, E.ALONSO s.n. (MVM 1158)

Ramalina celastri (SPRENG.) KROG & SWINSC.

MO: Camino Los Pirinchos, 34°52'S/56°22'S, 1983, J.FEMENIAS s.n (MVM 2430)

PA:*/ Rio Uruguay, Isla Almiron, 32°25'S/58°09'W, 1985, on shrubs, E. ALONSO s.n. (MVM 1159).

Ramalina prolifera TAYLOR.

AR:*/ Rio Uruguay, Isla Zapallo, 30°31'S/57°53'W, 1979, on trunks, L. CASTIGLIONI s.n (MVM 17.906, Herb. OSORIO 9632)

Teloschistes cymbalifer (MEY.) MÜLL.ARG.

FS:*/ Arroyo Porongos, Paso de las Muchas (16 km NE fom Trinidad City:33°32'S/56°54'W), 1988, on shrubs, C. PRIGIONI s.n. (MVM 16.516 & 16.641)

Teloschistes flavicans (SW.) NORMAN.

RO: Route 16: km 18, 34°05'S/53°51'W, 2003, on shrubs in a palm grove of *Butia capitata*, locally very abundant, HO 9641 & G. GEYMONAT.

Usnea angulata ACH.

FS:*/7 ARROYO GRANDE, PASO DE LOS LOROS, 33°58'S/57°06'W, 1986, ON TREES, R. PRADERI S.N., det. J. M. RODRIGUEZ 2009, (MVM 1628).

SJ:*/SIERRA MAHOMA, 34°05'S/56°56'W, 1974, ON SHRUBS, J.C.GONZALEZ S.N., det. J. M. RODRIGUEZ 2009, (MVM 17.644)

Usnea ceratina ACH.

LA:*/ Villa Serrana, 34°17'S/54°59'W, 1956, on trunk, HO 3846, det. J. M. RODRIGUEZ 2009.

RO:*/ Route 16: km 18, 34°05'S/ 53°51'W, 2003, on trunk of *Butia capitata*, swampy soil, rev. P. CLERC 2007, HO 9650.a. & G. GEYMONAT.

RO:*/ Castillos, 34°12'S/53°59'W, 1962, on trunk of *Butia capitata*, P.SAN MARTIN s.n., det. J. M. RODRIGUEZ 2009, (MVM 17.316).

TT:*/ Quebrada de los Cuervos, 32°54'S/54°25'W, 1970, on trunk of palm tree, det. J. M. RODRIGUEZ 2009, HO 5914.

TT:*/ Arroyo Parao and Route 18, 33°01'S/54°48'W, 1997, on *Xylosma pubescens*, E. ALONSO & M BASSAGODA s.n. det. J. M. RODRIGUEZ 2009 (MVM 2451)

Usnea densirostra TAYLOR.

MO: Punta Espinillo, 34°50'S/56°23'W, 2009, on rocks, small slope, Rio de la Plata shore, aerohaline zone, alt. 1-5 m, HO 9730, MVM 17.366.

RI: Gruta de Piria, Establecimiento Los Abuelos, 31°19'S/54°58'W, 2008, on rocks, D. ARRIETA s.n. (MVM 17.035). The second record in this Department.

RO: Route 16: km 18, 34°05'S/53°51'W, 2003, on stone post of a fence, only specimen seen, HO 9649 & G. GEYMONAT.

Usnea dichroa MOTYKA var. *spinulosa* MOTYKA.

RO: Route 16: km 18, 34°05'S/53°51'W, 2003, on trunk of *Butia capitata*, swampy soil, HO 9648 & G. GEYMONAT.

Usnea parvula MOTYKA.

MA:*/ Aigua, Gruta de Salamanca, 34°12'S/54°45'W, 1967, on shrubs, LAGE DE XIMENEZ s.n., det. J. M. RODRIGUEZ 2009 (MVM 17.225).

RN:*/ Rio Negro river, Estancia Besozzi, 33°16'S/58°01'W, 1973, on trees, R. BORETTO s.n., det. J. M. RODRIGUEZ 2009 (MVM 17.652)

Usnea Steineri MOTYKA.

FS:*/ Arroyo Marincho, 33°15'S/57°07'W, 1956, on *Celtis tala*, HO 3512, 3516.b, 3433, det. J. M. RODRIGUEZ 2009.

SJ:*/ Sierra Mal Abrigo, Cerro Calero, 34°05'S/57°02'W, 1983, on bark, R. PRADERI s.n., det. J. M. RODRIGUEZ 2009 (MVM 18.576)

MOTYKA (1938:597) quoted 3 collections of this species from Uruguay but 2 are mistaken: Concepcion del Uruguay is a locality in Argentina and Irazu is a volcano in Costa Rica, Central America.

Usnea subelegans (VAIN.) B. DE LESD.

RI:*/ Gruta de Piria, Establecimiento Los Abuelos, 31°19'S/54°58'W, 2008, on trunk of trees, D. ARRIETA s.n., det P. CLERC 2008 (G, MVM 17.036, Herb. OSORIO 9729)

Usnea subscabrosa MOTYKA.

RO: Route 16: km 18, 34° 05' S/53° 51' W, 2003, on trunk of *Butia capitata*, swampy soil, det. P. CLERC 2007, HO 9650.b. & G. GEYMONAT. First record for Uruguay.

Results

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

- Twenty three lichens are listed with 17 new Departmental records.

- Two species: *Bulbothrix viridescens* and *Parmotrema tinctorum* collected in the Parque Nacional "F. D. Roosevelt" (the southernmost locality in South America for both species) have become extinct in this locality due to the negative environmental changes.

- *Caloplaca cinnabarina*: this species is the saxicolous *Caloplaca* more abundant in Uruguay according to the 26 records in the literature: OSORIO 1972:6, 1992:46, 1992a:37, 1996:2, 2000:3, 2005:2.

The 52 records are gathered in 13 of the 19 Departments that constitute Uruguay.

It is interesting to compare the distribution of this species in neighboring regions: Buenos Aires Province in Argentina and the Rio Grande do Sul State in Brazil. In Buenos Aires Province are reported 2 collections from Sierra de la Ventana (38°09' S/61°48' W) (OSORIO 1987:3) and 1 collection from Sierra del Tandil (37°24' S/59°06' W) (OSORIO 1980:1). The 2 samples from Sierra de la Ventana were gathered by the author during a 5 days long collection trip.

In Rio Grande do Sul State (SPIELMAN 2006:18) *Caloplaca cinnabarina* is reported from 3 localities in the S and E of the State.

It is surprising that MALME (1926:28) who collected during 8 months in this State reported only 1 collection from Porto Alegre.

- *Cladonia ahtii*, *Cl. palmicola*, *Usnea ceratina*, *U. dichroa* var. *spinulosa* and *U. subscabrosa* are added to the lichens growing on the palm *Butia capitata* as a continuation of the study of this epiphytic flora planned by the Departamento de Botanica del Museo Nacional de Historia Natural y Antropología, Montevideo y La Casa Ambiental de Castillos, Rocha Department.

- *Cladonia ceratophylla* and *Cl. furcata* are collected growing on termites nest being the first occasion that this substratum is reported in Uruguay.

- *Cladonia subscabrosa* is added to the known flora of Uruguay.

- *Usnea densirostra*: Two phanerogamists of the Museo Nacional de Historia Natural y Antropología, Montevideo: Lic. E. ALONSO and M. GARCIA DE LA PEÑA notified the author of the existence of a population of *Usnea densirostra* in the locality named Punta Espinillo in the westernmost region of the Montevideo Department near the conjunction of the Rio de la Plata and the Santa Lucia River. In a former paper (OSORIO 1995:446) this species was considered extinct in this Department due to the lack of collections during the last 60 years. Duplicates of this collection will be distributed in "Lichenotheca Graecensis"

LITERATURE CITED

- MALME, G. O. 1926 Lichenes blastospori Herbarii Regnelliani. Arkiv for Botanik 20A no.9:1-51. Stockholm.
- MOTYKA, J. 1938. Lichenum generis Usnea studium monographicum. Pars systematica, volumen secundum, p.305-651. Leopoli.
- MÜLLER ARGOVIANENSIS, J. 1888. Lichenes montevidenses. Revue Mycologique, 10 (no.37): 1-5. Toulouse.
- OSORIO, H. S. 1972. Contribution to the lichen flora of Uruguay. VII. A preliminary Catalogue. Comunicaciones Botánicas del Museo de Historia Natural de Montevideo, IV(56):1-42.
- OSORIO, H. S. 1992. Contribucion a la flora liquènica del Uruguay. XXV. Líquenes publicados entre 1972 a 1991. Anales del Museo Nacional de Historia Natural de Montevideo, 2ª. Serie, Vol.VIII:43-66.
- OSORIO, H. S. 1992a. Contribution to the lichen flora of Uruguay. XXIV. Lichens from Sierra San Miguel, Rocha Department. Boletín Sociedad Argentina de Botánica, 28(1-4):37-40.
- OSORIO, H. S. 1995. Contribution to the lichen flora of Uruguay. XXVII. Taxonomic notes. FLECHTEN FOLLMANN (F. DANIELS, M.SCHULTZ & J. PEINE eds.): 441-449. Geobotanical and Phytotaxonomical Group, Botanical Institute, University of Cologne, Cologne, Germany.

- OSORIO, H. S. 1996. Contribution to the lichen flora of Uruguay. XXIX. Lichens from Rivera Department. *Comunicaciones Botánicas del Museo de Historia Natural de Montevideo*, V (105):1-6.
- OSORIO, H. S. 2000. Contribution to the lichen flora of Uruguay. XXXII. Lichens from Madeiros Ranch, Lavalleja Department. *Comunicaciones Botánicas del Museo de Historia Natural de Montevideo*, VI(114): 1-8.
- OSORIO, H. S. 2005. Contribution to the lichen flora of Uruguay. XL. New or additional records. *Comunicaciones Botánicas del Museo Nacional de Historia Natural y Antropología*, VI(130): 1-8. Montevideo.
- SPIELMANN, A. A. 2006. Checklist of lichens and lichenicolous fungi of Rio Grande do Sul (Brazil). *Caderno de Pesquisa. Serie Biologia, Santa Cruz do Sul*, 18(2): 7-125.
- WETMORE, C.M. & KARNEFELT, E. 1999. What is *Caloplaca cinnabarina*? *The Bryologist*, 102(4):683-691, figs. 1-8. USA.

MUSEO NACIONAL DE HISTORIA NATURAL Y ANTROPOLOGÍA
CASILLA DE CORREO 399
11.000 MONTEVIDEO, URUGUAY
FAX: (005982) 917-0213
E-MAIL: MNHN@INTERNET.COM.UY
HTTP://WWW.MEC.GUB.UY/MUNHINA

Impreso en *Papelería Copygraf S.R. L.*
Ituzaingó 1478 - papeleriacopygraf@gmail.com
Tel.: 917 0414 - Fax: 915 9728
Montevideo / Uruguay
Dep. Legal: 344142
Edición de 600 ejemplares
- Julio de 2009 -