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CONTRIBUTION TO THE LICHEN FLORA OF URUGUAY. XXXV. NEW OR ADDITIONAL RECORDS FROM EASTERN URUGUAY.

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ABSTRACT: *Contribution to the lichen flora of Uruguay. XXXV. New or additional records from Eastern Uruguay.*— 40 lichen species are reported from Eastern Uruguay and 5 taxa are added to the known flora of the country. Several additional records are also listed.

RESUMEN: *Contribución a la flora líquénica de Uruguay. XXXV. Citas nuevas o adicionales para el este de Uruguay.*— Se citan 40 especies de líquenes colectados en el Este de Uruguay y 5 especies se incorporan a la flora del país. Se enumeran numerosos registros adicionales.

Key words: Uruguay - Lichens - Taxonomy - Distribution.

Palabras clave: Uruguay - Líquenes - Taxonomía - Distribución.

Introduction

The present paper is the third contribution to the long-term planned study of the lichen flora from Eastern Uruguay. This is the region of the country situated E from the meridian 55°W (OSORIO 1999:1).

A large amount of the taxa below listed were gathered in a very recent date and they enlarge the regional distribution or are additions to the known flora of the country. Due to the fact that a very important amount of the species listed were not gathered by lichenologist the crustose lichens flora is very poorly represented.

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The lack of collector's numbers obliged the author to identify the samples listed with the accession numbers of his private herbarium.

In the species list we have pointed out the Herbaria where duplicata are deposited: G, H, TUR. Moreover five species will be distributed in "Dupla Graecencia Lichenum". An asterisk (*) preceding a name indicates a new record for the Department, two (**) a new record from East Uruguay, and a cross (†) a new record for Uruguay.

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List of species

Cladia aggregata (SWARTZ) NYLANDER

Maldonado: Sierra de la Coronilla, Posada La Laguna near Cerro Catedral (20 km SE from Aiguá city and 35 km NW from Rocha city, I.2001, on rocks, F. SCARABINO (9465,H). Gruta de Salamanca near Aiguá city, among rocks, IV.2001, G. GEYMONAT (9561). Pozo del Buey near Cerro Catedral (30 km SE from Aiguá city and 25 km NW from Rocha city), I.2001, on rocks, G. GEYMONAT (9438,H).

Cladina confusa (R. SANTESSON) FOLLMANN & AHTI fa. *confusa*

Maldonado: Pozo del Buey near Cerro Catedral (30 km SE from Aiguá city and 25 km NE from Rocha city), I.2001, on rocks, G. GEYMONAT (9439, H, TUR).

Cladonia ahtii S. STENROOS

Rocha: Cerro Lechiguana (9 km N from Castillos city), IV.2001, on root of palm tree, G. GEYMONAT (9455). Cerro de los Rocha, Palmar de Tiburcio (2.5 km N from Castillos city), V.2001, on trunk of *Butia capitata*, G. GEYMONAT (9477, H). Castillos, Camino Real, V.2001, on stump of *Eucalyptus robusta* at roadside, G. GEYMONAT (9474).

Cladonia ceratophylla (SWARTZ) SPRENGEL

Rocha: Castillos. Cerro Lechiguana (9 km N from Castillos city), IV.2001, on rocks, G. GEYMONAT (9456). Duplicata of this collection will be distributed in "Dupla Graecencia Lichenum"

Cladonia didyma (FÉE) VAINIO

Maldonado: Pozo del Buey near Cerro Catedral (30 km SE from Aiguá

city and 25 km NW from Rocha city), I.2001, on soil, G. GEYMONAT (9440, H).

Cladonia furcata (HUDSON) SCHRADER

Rocha: Castillos, Camino Real, V.2001, on soil at roadside, G. GEYMONAT (9473, H).

Cladonia palmicola AHTI & FLEIG

Rocha: Castillos, Cerro Lechiguana (9 km N from Castillos city), IV.2001, on root of palm tree, G. GEYMONAT (9454, H, TUR) det. T. AHTI, V.2001. Cerro de los Rocha, Palmar de Tiburcio (2.5 km N from Castillos city), V.2001, on trunk of *Butia capitata*, G. GEYMONAT (9479, H). The first record of this taxon for Uruguay is based in a collection from Rocha: Castillos, published as *C. subdelicatula* (OSORIO 1983:83) and renamed as *C. palmicola* by AHTI (2000:293).

***Cladonia strepsilis* (ACHARIUS) GROGNOT

Maldonado: Pozo del Buey near Cerro Catedral (30 km SE from Aiguá city and 25 km NW from Rocha city), I.2001, on rocks, G. GEYMONAT (9431, H). Duplicata of this collection will be distributed in "Dupla Graecensia Lichenum".

Cladonia subdelicatula VAINIO ex ASAHINA

Treinta y Tres: Cuchilla de Dionisio, Estancia La Teja, OSORIO 6098, identified by AHTI (2000:313). This collection was already published as *C. chondrotypa* VAINIO (OSORIO & ARBELO MARTINS 1980:230, HUOVINEN & AHTI 1988:374). HERTER (1933:48) recorded *Cladonia chondrotypa* from Artigas Department, however he did not quote any collection. In the HERTER Herbarium (which was transitorily housed in MVM) we have not found any gathering of this species. Therefore we consider that this species must be deleted from the Uruguayan flora.

Cladonia subsquamosa KREMPELHUBER

Rocha: Cerro de los Rocha, Palmar de Tiburcio (2.5 km N from Castillos city), V.2001, on mossy rocks, G. GEYMONAT (9478). Castillos, Cerro Lechiguana (9 km N from Castillos city), IV.2001, on earth (termites mounds), G. GEYMONAT (9453, H) confirm. T. AHTI, V.2001.

**Concamerella fistulata* (TAYLOR) W. CULBERSON & C. CULBERSON

Maldonado: Pozo del Buey near Cerro Catedral (30 km SE from Aiguá city and 25 km NW from Rocha city), I.2001, on rocks, G. GEYMONAT (9423).

Concamerella pachyderma (HUE) W. CULBERSON & C. CULBERSON

Maldonado: Sierra de la Coronilla, Posada La Laguna near Cerro Catedral (20 km SE from Aiguá city and 35 km NW from Rocha city), I.2001, on rocks, F. SCARABINO (9465).

Collema glaucophthalmum NYLANDER var. *implicatum* (NYLANDER) DEGELIUS

Maldonado: Sierra de la Coronilla, Posada La Laguna near Cerro Catedral (20 km SE from Aiguá city and 35 km NW from Rocha city), I.2001, on bark, F. SCARABINO (9470).

***Diploschistes conceptionis* VAINIO

Rocha: Castillos, Camino Real, V.2001, on soil, embankment at roadside, G. GEYMONAT (9476).

Dictyonema glabratum (SPRENGEL) D. HAWKSWORTH

Maldonado: Pozo del Buey near Cerro Catedral (30 km SE from Aiguá city and 25 km NW from Rocha city), I.2001, on mossy rocks, wooded ravine, G. GEYMONAT (9437).

Graphis pavoniana FÉE

Rocha: Lascano, Laguna de los Ajos, Estancia La Doma, 53°57'W/33°41'S, I.2001, on *Celtis spinosa*, E. ALONSO (9445.a).

Hypotrachyna livida (TAYLOR) HALE

Maldonado: Sierra de la Coronilla, Posada La Laguna near Cerro Catedral (20 km SE from Aiguá city and 35 km NW from Rocha city), I.2001, on rocks, F. SCARABINO (9468).

Hypotrachyna osorioi (HALE) HALE

Maldonado: Sierra de la Coronilla, Posada La Laguna near Cerro Catedral (20 km SE from Aiguá city and 35 km NW from Rocha city), I.2001, on mossy rocks, F. SCARABINO (9467).

Lecanora fusca MÜLLER ARGOVIENSIS

Rocha: Castillos, Cerro de los Rocha (2.5 km N from Castillos city), II.1967, on rocks, southern slope, OSORIO 5665.

**Lobaria erosa* (ESCHWEILER) TREVISAN

Maldonado: Sierra de la Coronilla, Posada La Laguna near Cerro Catedral (20 km SE from Aiguá city and 35 km NW from Rocha city), I.2001, on tree trunk, F. SCARABINO (9471).

***Mycocomrothelia thelena* (ACHARIUS) D. HAWKSWORTH

Rocha: Lascano, Laguna de los Ajos, Estancia La Doma 53°57'W/33°41'S, I.2001, on *Celtis spinosa*, E. ALONSO (9445.b.)

Parmotrema eciliatum (NYLANDER) HALE

Maldonado: Sierra de la Coronilla, Posada La Laguna near Cerro Catedral (20 km SE from Aiguá city and 35 km NW from Rocha city), I.2001, on branches of shrubs, F. SCARABINO (9485).

Peltigera austroamericana ZAHLBRUCKNER

Maldonado: Pozo del Buey, near Cerro Catedral (30 km SE from Aiguá city and 25 km NW from Rocha city), I.2001, on rocks, G. GEYMONAT (9430, H) confirm. O. VITIKAINEN, III.2001.

†*Peltigera ulcerata* MÜLLER ARGOVIENSIS

Cerro Largo: Cuchilla del Yaguarón, (45 km NE from Melo city and 28 km SE from Aceguá town), IV.2000, on soil, small ravine near the Brazilian frontier, G. GEYMONAT (9387, H), det. O. VITIKAINEN, III.2001. New to Uruguay.

**Phlyctis pulveracea* M. LAMB

Maldonado: Sierra de la Coronilla, Posada La Laguna near Cerro Catedral (20 km SE from Aiguá city and 35 km NW from Rocha city), I.2001, on bark, F. SCARABINO (9428).

Pseudocyphellaria aurata (ACHARIUS) VAINIO

Maldonado: Sierra de la Coronilla, Posada La Laguna near Cerro Catedral (20 km SE from Aiguá city and 35 km NW from Rocha city), I.2001, on bark, F. SCARABINO (9466).

Ramalina aspera RÄSÄNEN

Rocha: Lascano, Laguna de los Ajos, Estancia La Doma, 53°57'W/33°41'S, I.2001, on *Celtis spinosa*, E. ALONSO (9444).

Ramalina laevigata FRIES

Maldonado: Sierra de la Coronilla, Posada La Laguna near Cerro Catedral (20 km SE from Aiguá city and 35 km NW from Rocha city), I.2001, on rocks, F. SCARABINO (9472).

Ramalina sprengelii KROG & SWINSCOW

Rocha: Lascano, Laguna de los Ajos, Estancia La Doma, 53°52'W/33°42'S, XI.2000, on *Sapium*, E. ALONSO (9429). Duplicata of this collection will be distributed in "Dupla Graecensia Lichenum".

Rimelia cetrata (ACHARIUS) HALE & FLETCHER

Maldonado: Sierra de la Coronilla, Posada La Laguna near Cerro Catedral (20 km SE from Aiguá city and 35 km NW from Rocha city), I.2001, on bark, F. SCARABINO (9424, 9425, 9483).

†*Rimeliella conferenda* (HALE) KUROKAWA

Maldonado: Sierra de la Coronilla, Posada La Laguna near Cerro Catedral (20 km SE from Aiguá city and 35 km NW from Rocha city), I.2001, on bark, F. SCARABINO (9484). New to Uruguay.

Sticta variabilis (BORY) ACHARIUS

Maldonado: Sierra de la Coronilla, Posada La Laguna near Cerro Catedral (20 km SE from Aiguá city and 35 km NW from Rocha city), I.2001, on bark, F. SCARABINO (9482).

Teloschistes flavicans (SWARTZ) NORMAN

Rocha: Castillos, Cerro Lechiguana (9 km N from Castillos city), IV.2001, on branches of shrubs, G. GEYMONAT (9457, 9458). Duplicata of this collection will be distributed in “Dupla Graecensia Lichenum”.

†*Usnea alata* MOTYKA

Treinta y Tres: Santa Clara de Olimar, XII.1960, on bark, N. BRUM & L. C. DE ZOLESSI (9486). New to Uruguay.

Usnea amblyoclada (MÜLLER ARGOVIENSIS) ZAHLBRUCKNER

Maldonado: Sierra de la Coronilla, Posada La Laguna near Cerro Catedral (20 km SE from Aiguá city and 35 km NW from Rocha city), on rocks, F. SCARABINO (9426). Duplicata of this collection will be distributed in “Dupla Graecensia Lichenum”.

Usnea angulata ACHARIUS

Maldonado: Sierra de la Coronilla, Posada La Laguna near Cerro Catedral (20 km SE from Aiguá city and 35 km NW from Rocha city), I.2001, on branches of shrubs, F. SCARABINO (9487).

Rocha: Castillos, Cerro Lechiguana (9 km N from Castillos city), VI.2001, on branches of shrubs, G. GEYMONAT (9460). *Usnea sulcata* was considered as a synonym of *U. angulata* by G. AWASTHI (1986:355). *Usnea neutra* based on *Usnea sulcata* var *neutra* (RIZZINI, 1952:340), is a chemotype of *U. angulata* in P. CLERC’S opinion (in litt.). Therefore the following taxa already reported in the literature from Eastern Uruguay should be renamed as *U. angulata*:

Usnea sulcata var. *sulcata*: OSORIO, 1995:10.

Usnea sulcata var. *neutra*: OSORIO, 1992:39, 1998:8.

Usnea neutra: OSORIO, 2000:6.

†*Usnea dasaea* STIRTON

Lavalleja: route 8: km 209, Estancia Madeiros, II.1956, on small branches, marginal forest of the Cebollatí River, OSORIO 3712. New to Uruguay. This collection was already published as *U. furfurosula* (OSORIO, 2000:6). P. CLERC (1997:295) consider that *U. furfurosula* is

probably synonym of *U. dasaea*.

Usnea densirostra TAYLOR

Maldonado: Sierra de la Coronilla, Posada La Laguna near Cerro Catedral (20 km Se from Aiguá city and 35 km NW from Rocha city), I.2001, on rocks, F. SCARABINO (9427). Duplicata of this collection will be distributed in "Dupla Graecensia Lichenum"

†*Usnea malmei* MOTYKA

Rocha; route 16, Cerro Aspero, II.1967, on branches of trees, marginal forest of Tranqueras brook, OSORIO 5746 (G) det. P. CLERC, VI.2001. New to Uruguay.

***Usnea mutabilis* STIRTON

Maldonado: Sierra de la Coronilla, Posada la Laguna near Cerro Catedral (20 km SE from Aiguá city and 35 km NW from Rocha city), I.2001, on branches of shrubs, F. SCARABINO (9488).

Results

The 40 species above listed enlarge their distributional area in East Uruguay, mostly in the Departments of Maldonado and Rocha.

The following species are new records for the Uruguayan lichen flora: *Peltigera ulcerata*, *Rimeliella conferenda*, *Usnea alata*, *U. dasaea*, *U. malmei*.

Cladonia strepsilis, *Diploschistes conceptionis*, *Mycomicrothelia thelena* and *Usnea mutabilis* are additions to the flora from Eastern Uruguay.

As we have already stated (OSORIO 1998:9, 2000:7) East Uruguay is the southernmost limit for many species in South America. To the species list published in the former papers we are able to add the following ones: *Cladonia palmicola*, *Cl. strepsilis*, *Cl. subdelicatula*, *Usnea alata* and *U. malmei*.

Cladonia chondrotypa must be deleted from the Uruguayan lichen flora.

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