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CONTRIBUTION TO THE LICHEN FLORA OF URUGUAY.

XXVIII. LICHENS FROM SOUTHERN ROCHA.

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ABSTRACT: *Contribution to the lichen flora of Uruguay. XXVIII. Lichens from Southern Rocha.*- One hundred and six lichens gathered in the Department of Rocha, Uruguay, are listed. Fifty-six taxa are added to the known flora of the Department. *Opegrapha atratula*, *O. pulicaris*, *Porina nucula* and *Xanthoria fallax* are reported for Uruguay for the first time.

RESUMEN: *Contribución a la flora líquénica del Uruguay. XXVIII. Líquenes del sur de Rocha.* Se enumeran ciento seis líquenes colectados en el Departamento de Rocha. Cincuenta y seis taxa se citan por primera vez para ese Departamento. *Opegrapha atratula*, *O. pulicaris*, *Porina nucula* y *Xanthoria fallax* se incorporan a la flora del Uruguay.

Introduction

The present paper is based on specimens gathered by the author in the southern region of the Department of Rocha, Uruguay.

Lately several environmental changes have been occurring in this area. An important number of the large swamps are being desiccated or substituted by rice plantations. Along the oceanic coast and the bordering areas many new settlements are being established and varied touristic activities are developing in this region. Due to the conjunction of the above mentioned activities,

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among others, all the ecosystems have been severely damaged so that an impoverishment in the number of species is to be expected. Mostly of the collection-sites visited by us can be included in this group of threatened ecosystems.

With exception of La Paloma City (visited during October 1981) all the collections were gathered in February 1967. New field trips are planned to verify the changes that may have occurred over the past 28 years.

The collection sites are placed between La Paloma City (LP: 34°40'S - 54°09'W) and Santa Teresa National Park (PST: 33°59'S - 53°32'W) as follows:

- ACH: cross of the Chafalote Brook and the Highway 9 (in close proximity to 19 de Abril Village): 34°22'S - 54°04'W.
AV: Valizas Brook and Castillos Lake: 34°20'S - 53°54'W.
ASC: cross of the Sarandí del Consejo Brook and the Highway 9, 14 km NE from 19 de Abril Village.
CA: Cerro Aspero, a small hill located 3.5 km N from the cross of the range of hills named Sierra La Blanqueada and Highway 16: 33°59'S - 54°45'W.
CR: Cerro de los Rocha, hill located 2.5 km N from Castillos City: 34°12'S - 53°50'W.
LN: northern part of the lake named Laguna Negra: 34°03'S - 53°40'W.

The numbers belong to the author's numbering system and are deposited in his private herbarium. An asterisk preceding a name indicates that this taxon is added to the known flora of Rocha Department.

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List of species

- Anthracotheceium goniostomum* MÜLL. ARG.
LN: on *Scutia buxifolia*, 5683.
- Bacidia millegrana* (TAYLOR) ZAHLBR.
ACH: OSORIO 1995 (in press).
- Brigantiaea leucoxantha* (SPRENGEL) R. SANT. & HAF.
ACH: HAFELLNER 1985: 178, on trunk of Myrtaceae, 5503, confirm.
HAFELLNER 1981, on *Eugenia uruguayensis*, 5514, confirm.
HAFELLNER 1981.
CA: HAFELLNER 1985: 178.
LN: on *Scutia buxifolia*, 5685, confirm. HAFELLNER 1981, on *Ficus*,
5691, confirm. HAFELLNER 1981.
- **Buellia megapotamica* MALME ap. STEINER
LP: SOLARI Ave., on *Pinus*, 5226.
- Buellia modesta* (KREMPELH.) MÜLL. ARG.
LN: OSORIO 1983:82.
- Caloplaca crocea* (KREMPELH.) HAF. & POELT
ACH: on trunk of Myrtaceae, 5540, 5544, on *Erythrina crista-galli*,
5558.
AV: HAFELLNER & POELT 1979:24, on *Scutia buxifolia*, 5594.
CA: on shrubs, 5719.
CR: on *Salix*, 5646.
- **Caloplaca erythrantha* (TUCK.) ZAHLBR.
ACH: on *Erythrina crista-galli*, 5480, 5560.
AV: on *Scutia buxifolia*, 5595, on *Myoporum laetum*, 5607.
- **Caloplaca felipponei* ZAHLBR.
PST: Punta del Barco, on rocks on the seashore, 5692.
- **Caloplaca granularis* (MÜLL. ARG.) CENGIA-SAMBO
ASC: on wooden fence post, 5575, 5577 pr.p.
- **Caloplaca holocarpa* (HOFFM.) WADE
AV: on wooden fence post, 5605.
- Caloplaca ochraceofulva* (MÜLL. ARG.) JATTA
LN: OSORIO 1989:2.
PST: OSORIO 1989:2.
- Calicium salicinum* PERS.
ASC: OSORIO 1983:82, TIBELL & KALB 1992:34.
- Candelaria concolor* (DICKSON) STEINER
ACH: on *Erythrina crista-galli*, 5559.

- AV: on *Scutia buxifolia*, 5612, on *Phytolacca dioica*, 5618.
- **Candelaria fibrosa* (FR.) MÜLL. ARG.
ASC: on *Populus* at road side, 5587.
- Carbonea montevidensis* (MÜLL. ARG.) RAMBOLD & KNOPH
CA: on rocks, S slope, 5764.
- Cladia aggregata* (SWARTZ) NYL.
CA: on soil, with apothecia, 5711.
CR: on soil, S slope, 5658.
LN: on soil, 5673.
- **Cladonia crispatula* (NYL.) AHTI
CA: on soil, det. T. AHTI 1987, 5748.
- **Cladonia didyma* (FÉE) VAINIO
CA: on soil, 5739.
CR: on soil, S slope, 5635.
- Cladonia furcata* (HUDS.) SCHRADER
CR: on soil, S slope, 5664.
CA: on soil, confirm. T. AHTI 1986, 5738.
- Cladonia pityrophylla* NYL.
CR: OSORIO 1995 (in press).
- **Cladonia subsquamosa* KREMPELH.
CA: on soil, 5751.
CR: on soil, S slope, 5644.
- Cladonia substellata* VAINIO
CA: OSORIO 1995 (in press).
- Collema glaucophthalmum* NYL. var. *glaucophthalmum*
ACH: on *Rapanea laetevirens*, 5502, on *Salix humboldtiana*, 5505,
on trunk of Myrtaceae, 5530.
CR: OSORIO 1979: 317.
- Collema glaucophthalmum* NYL. var. *implicatum* (NYL.) DEGEL.
CA: on *Blepharocalyx*, 5724.
- Concamerella fistulata* (TAYLOR) W. CULB & CH. CULB.
LN: CULBERSON & CULBERSON 1981: 308.
- Concamerella pachyderma* (HUE) W. CULB. & CH. CULB.
CA: CULBERSON & CULBERSON 1981:309.
- Cryptothecia rubrocincta* (EHRENB.) THOR
ACH: on *Rapanea laetevirens*, 5482.
CR: on perpendicular rocks, 5669.
- **Dimerella bacillifera* MALME
ACH: on *Scutia buxifolia*, 5512.
- **Dirinaria applanata* (FÉE) AWASTHI

- ACH: on trunk of Myrtaceae, 5486.
AV: on *Scutia buxifolia*, 5601, on *Myoporum*, 5604.
LN: on *Scutia buxifolia*, 5685.
LP: Parque Andresito, on *Pinus*, 5231.
- **Dictyonema glabratum* (SPRENGEL) D. HAWKS.
CA: on soil among rocks, 5731.
CR: on soil, S slope, 5634.
- **Glyphis cicatricosa* (ACH.) VAIN. f. *confluens* (ZENK.) ZAHLBR.
ACH: on Myrtaceae, 5500, 5533, 5551, on *Eugenia uruguayensis*, 5536.
AV: on *Scutia buxifolia*, 5620.
CA: on *Blepharocalyx*, 5763.
- Graphis pavoniana* FÉE
ACH: on *Salix*, 5506, on Myrtaceae, 5539.
CR: on *Salix*, 5643.
- **Graphis rimulosa* (MONT.) TREVISAN
CA: on *Blepharocalyx*, 5718.
- **Graphis scripta* (L.) ACH.
ACH: on *Eugenia uruguayensis*, 5534.
ASC: on *Populus* at road side, 5587.
AV: on *Myoporum*, 5606.
CA: on *Blepharocalyx*, 5758.
CR: on *Daphnopsis racemosa*, 5659.
LP: Parque Andresito, on *Pinus*, 5229, 5230.
- **Haematomma similis* BAGL.
ASC: on wooden fence post at road side, 5579.
LN: on *Scutia buxifolia*, 5688, on *Ficus*, 5689.
- **Heterodermia diademata* (TAYLOR) AWASTHI
ACH: on *Erythrina crista-galli*, 5507.
AV: on *Myoporum*, 5602, on *Scutia buxifolia*, 5781.
- Heterodermia hypochraea* (VAINIO) SWINSCOW & KROG
ACH: OSORIO 1975:2.
AV: on *Scutia buxifolia*, 5608, on *Cereus*, 5616.
CA: OSORIO 1975:2, on *Blepharocalyx*, 5716, 5779, on *Daphnopsis racemosa*, 5768.
CR: OSORIO 1975:2, on *Salix*, 5648, on *Daphnopsis racemosa*, 5650.
LN: OSORIO 1975:2.
- Heterodermia obscurata* (NYL.) TREVISAN
ACH: on *Rapanea laetevirens*, 5481, on Myrtaceae, 5524.
AV: on *Phytolacca dioica*, 5611.

- LN: on *Scutia buxifolia*, 5682, 5684.
LP: Parque Andresito, on *Pinus*, 5228.
- **Hyperphyscia carassensis* (VAINIO) OSORIO
ACH: on *Eugenia uruguayensis*, 5535.
- **Hyperphyscia syncolla* (TUCK.) KALB
ACH: on *Celtis tala*, 5496.
AV: on *Myoporum*, 5592 pr.p., 5597, 5614.
- Hypotrachyna livida* (TAYLOR) HALE
CA: on rocks, 5737.
- Hypotrachyna osorioi* (HALE) HALE
CA: on rocks, 5715.
- **Lecanora caesiorubella* ACH. subsp. *glaucomodes* (NYL.) IMSHAUG
ASC: on wooden fence post, 5578.
CA: on wooden fence post, 5572.
- Lecanora farinacea* FÉE
CA: on rocks, S slope, 5778.
- **Lecidea fuscella* MÜLL. ARG.
ACH: on Myrtaceae, 5489.
- **Leptogium austroamericanum* (MALME) DODGE
ACH: on Myrtaceae, 5545, on *Erythrina crista-galli*, 5555.
AV: on *Phytolacca dioica*, 5627.
CR: on *Salix*, 5656.
LN: on *Scutia buxifolia*, 5680.
- Leptogium cyanescens* (RABENH.) KÖRBER
ACH: on *Salix*, 5533.
- **Leptogium phyllocarpum* (PERS.) MONT.
ACH: on Myrtaceae, 5554.
CA: on *Celtis tala*, 5720, on *Blepharocalyx*, 5725.
CR: on *Salix*, 5632.
LN: on *Rapanea laetevirens*, 5687.
- **Leptogium tuckermani* DODGE
ACH: on Myrtaceae, 5529.
- **Lobaria conformis* VAINIO
CA: on rocks, 5727.
- Lobaria erosa* (ESCHW.) TREVISAN
ACH: on *Celtis tala*, 5494, on *Scutia buxifolia*, 5542, on Myrtaceae,
5552, 5556.
CA: on *Blepharocalyx*, 5728.
- Normandina pulchella* (BORRER) NYL.
ACH: on *Erythrina crista-galli*, 5479.

- LN: on *Scutia buxifolia*, 5682, 5684.
LP: Parque Andresito, on *Pinus*, 5228.
- **Hyperphyscia carassensis* (VAINIO) OSORIO
ACH: on *Eugenia uruguayensis*, 5535.
- **Hyperphyscia syncolla* (TUCK.) KALB
ACH: on *Celtis tala*, 5496.
AV: on *Myoporum*, 5592 pr.p., 5597, 5614.
- Hypotrachyna livida* (TAYLOR) HALE
CA: on rocks, 5737.
- Hypotrachyna osorioi* (HALE) HALE
CA: on rocks, 5715.
- **Lecanora caesiorubella* ACH. subsp. *glaucomodes* (NYL.) IMSHAUG
ASC: on wooden fence post, 5578.
CA: on wooden fence post, 5572.
- Lecanora farinacea* FÉE
CA: on rocks, S slope, 5778.
- **Lecidea fuscella* MÜLL. ARG.
ACH: on Myrtaceae, 5489.
- **Leptogium austroamericanum* (MALME) DODGE
ACH: on Myrtaceae, 5545, on *Erythrina crista-galli*, 5555.
AV: on *Phytolacca dioica*, 5627.
CR: on *Salix*, 5656.
LN: on *Scutia buxifolia*, 5680.
- Leptogium cyanescens* (RABENH.) KÖRBER
ACH: on *Salix*, 5533.
- **Leptogium phyllocarpum* (PERS.) MONT.
ACH: on Myrtaceae, 5554.
CA: on *Celtis tala*, 5720, on *Blepharocalyx*, 5725.
CR: on *Salix*, 5632.
LN: on *Rapanea laetevirens*, 5687.
- **Leptogium tuckermani* DODGE
ACH: on Myrtaceae, 5529.
- **Lobaria conformis* VAINIO
CA: on rocks, 5727.
- Lobaria erosa* (ESCHW.) TREVISAN
ACH: on *Celtis tala*, 5494, on *Scutia buxifolia*, 5542, on Myrtaceae,
5552, 5556.
CA: on *Blepharocalyx*, 5728.
- Normandina pulchella* (BORRER) NYL.
ACH: on *Erythrina crista-galli*, 5479.

- **Ochrolechia osorioana* VERS.
CA: on rocks, S slope, 5767.
- **Ochrolechia pallescens* (L.) MASSAL.
ASC: on wooden post, 5584.
- **Ochrolechia subpallescens* VERS.
ASC: on wooden post, 5580.
- Opegrapha atratula* MÜLL. ARG.
AV: on *Scutia buxifolia*, 5589.
- **Opegrapha diaphora* ACH.
ACH: on *Scutia buxifolia*, 5513.
- Opegrapha pulicaris* (HOFFM.) SCHRADER
ACH: on *Erythrina crista-galli*, 5498, on *Celtis tala*, 5509.
- **Parmelina pilosa* (STIZENB.) HALE
ACH: on Myrtaceae, 5492, 5525.
ASC: on *Populus* at road side, 5567.
AV: on *Myoporum*, 5603, on *Phytolacca dioica*, 5619.
CA: on rocks, 5752.
- **Parmelina lindmanii* (LYNGE) HALE
AV: on trunk of a tree, 5596.
- **Parmotrema austrosinense* (ZAHLEBR.) HALE
LP: Parque Andresito, on *Pinus*, 5239.
- Parmotrema delicatulum* (VAINIO) HALE
CA: on rocks, E slope, 5699.
CR: on rocks, S slope, 5637.
- **Parmotrema eciliatum* (NYL.) HALE
LP: Parque Andresito, on *Pinus*, 5235.
- Parmotrema rigidum* (LYNGE) HALE
CA: OSORIO 1975:6.
- **Parmotrema subrugatum* (KREMPELH.) HALE
CR: on *Daphnopsis racemosa*, 5661.
- **Parmotrema tinctorum* (NYL.) HALE
LP: Parque Andresito, on *Pinus*, 5234.
- **Pertusaria flavens* NYL.
ASC: on wooden fence post, 5574.
- **Pertusaria pulchella* MALME
ACH: on Myrtaceae, 5537, 5549.
CA: on *Blepharocalyx*, 5757, on shrubs, 5759.
CR: on *Daphnopsis racemosa*, 5639, on Myrtaceae, 5662.
- Phaeographis lobata* (ESCHW.) MÜLL. ARG.
CA: OSORIO 1983:84.

- Phaeographina caesiopruinosa* (FÉE) MÜLL. ARG.
CA: OSORIO 1975:8.
- Phaeographina lecanographa* (NYL.) MÜLL. ARG.
CR: OSORIO 1975:8.
- Phyllopsora parvifolia* (PERS.) MÜLL. ARG. var. *parvifolia*
ACH: BRAKO 1991:56.
- Physcia alba* (FÉE) MÜLL. ARG.
ACH: on Myrtaceae, 5504.
AV: MOBERG 1990:324.
- Physcia crispa* NYL.
AV: on *Phytolacca dioica*, confirm. R. MOBERG 1988, 5617.
- **Physcia erumpens* MOBERG
ACH: on *Celtis tala*, 5493, on Myrtaceae, 5511, on *Scutia buxifolia*,
5531.
AV: on *Myoporum*, 5621.
- Porina nucula* ACH.
ACH: on *Celtis tala*, 5508.
- Pseudocyphellaria aurata* (ACH.) VAINIO
ACH: on *Celtis tala*, 5495, on Myrtaceae, 5517.
CA: on *Ficus*, 5713.
- Pseudocyphellaria clathrata* (DE NOT.) MALME
CA: OSORIO 1975:9.
- **Pseudoparmelia exornata* (ZAHLEBR.) HALE
CR: on *Blepharocalyx*, 5640.
- Pseudoparmelia rupicola* (LYNGE) HALE
CR: on rocks, S slope, 5666.
- **Pseudoparmelia texana* (TUCK.) HALE
LP: Parque Andresito, on *Pinus*, 5240.
- **Punctelia constantimontium* SÉRUS.
ACH: on *Scutia buxifolia*, 5522.
AV: on *Phytolacca dioica*, 5588.
- **Pyrrhospora russula* (ACH.) HAF.
ASC: on wooden fence post, 5577 pr.p.
CA: on rocks, S slope, 5774.
- **Pyxine petricola* NYL. in CROMBIE
AV: on *Myoporum*, 5610.
- **Ramalina celastri* (SPRENGEL) KROG & SWINSCOW
ACH: on *Erythrina crista-galli*, 5488, on Myrtaceae, 5491, on *Salix*,
5518.
ASC: on wooden fence post, 5561, 5569, 5571, on *Eugenia*

- uruguayensis*, 5572, on *Eugenia*, 5573.
AV: on *Scutia buxifolia*, det. H. KASHIWADANI 1990, 5625, 5626.
- **Ramalina complanata* (SWARTZ) ACH.
ASC: on wooden post, 5562.
- Ramalina laevigata* FR.
CA: OSORIO 1995 (in press).
PST: OSORIO 1995 (in press).
- Ramalina peruviana* ACH.
ACH: on *Schinus longifolius*, 5483, on Myrtaceae, 5548.
ASC: on *Eugenia uruguayensis*, 5568.
AV: STEVENS & KASHIWADANI 1987:375.
CA: on *Scutia buxifolia*, 5701, on *Celtis tala*, confirm. N. STEVENS 1984, 5707.
LN: on *Scutia buxifolia*, 5676, 5679.
LP: KASHIWADANI 1987:137.
- Ramalina sprengelii* KROG & SWINSCOW
CA: KASHIWADANI & KALB 1993:28, on shrubs, 5722, 5729.
- Rimelia cetrata* (ACH.) HALE & FLETCHER
ACH: on Myrtaceae, 5528.
AV: on trunk of a tree, 5590.
CA: on rocks, S slope, 5755.
CR: on rocks, S slope, 5638.
LP: Solari Ave., on *Pinus*. 5227, Parque Andresito, on *Pinus*, 5237.
- **Rimelia reticulata* (TAYLOR) HALE & FLETCHER
LP: Parque Andresito, on *Pinus*, 5232.
- **Rimeliella subtinctoria* (ZAHLEBR.) KUROK.
AV: on *Phytolacca dioica*, 5622.
- **Rinodina dissa* (STIRTON) MAYRHOFER
ASC: on wooden fence post, 5576.
- **Rinodina insperata* (NYL.) MALME
ACH: on *Erythrina crista-galli*, 5477.
- **Rinodina intrusa* (KREMPELH. ap. NYL.) MALME
ACH: on *Erythrina crista-galli*, 5478.
- Teloschistes chrysophthalmus* (L.) TH. FR.
ACH: on *Erythrina crista-galli*, 5521.
ASC: on *Populus* at road side, 5564, on shrubs, 5581.
AV: on *Scutia buxifolia*, 5623.
CR: on *Blepharocalyx*, 5641.
- **Teloschistes cymbalifer* (ESCHW.) MÜLL. ARG.
ACH: on *Erythrina crista-galli*, 5520, on *Salix*, 5546.

- Teloschistes exilis* (MICHAUX) VAINIO
 ACH: on *Erythrina crista-galli*, 5516, 5526, on Myrtaceae, 5543, on *Salix*, 5547.
 ASC: on *Populus*, at road side, 5563.
 AV: on *Scutia buxifolia*, 5613.
 CA: on shrubs, 5750.
- Teloschistes flavicans* (SWARTZ) NORMAN
 AV: on *Scutia buxifolia*, 5593 a & b.
 CA: on *Blepharocalyx*, 5726.
 CR: on rocks, E slope, 5645, on Cactaceae, 5657.
 LN: on *Scutia buxifolia*, 5675, 5678, on rocks, 5681.
 LP: Parque Andresito, on *Pinus*, 5238.
- **Trypethelium ochroleucum* (ESCHW.) NYL.
 CA: on *Ficus*, confirm. R. HARRIS 1987, 5734, on shrubs, confirm. R. HARRIS 1987, 5749.
 PST: on *Arecastrum romanzoffianum*, confirm. R. HARRIS 1987, 5694.
- Usnea densirostra* TAYL.
 CA: OSORIO 1982:219.
 CR: OSORIO 1982:219.
 LN: on rocks, not common, 5674.
- **Usnea dichroa* MOT. var. *spinulosa* MOT.
 CA: on *Scutia buxifolia*, 5702, on *Celtis tala*, 5714.
- Usnea rubicunda* STIRTON
 ACH: on *Schinus longifolius*, 5484.
 CA: OSORIO 1983:84, on branches of a tree, 5741, on *Ficus*, 5744, on *Blepharocalyx*, 5754.
- **Usnea subelegans* (VAINIO) MOT.
 CA: on *Syagrus*, 5743.
- **Usnea sulcata* MOT. var. *sulcata*
 CA: on trees, 5742.
- Xanthoria fallax* (HEPP) ARNOLD
 AV: on *Phytolacca dioica*, 5598.

Results

The results of the study of the lichens treated above can be summarized as follows:

- a) Fifty-six taxa are added to the known flora of the Department of Rocha.
- b) The following species are reported from Uruguay for the first time: *Opegrapha atratula*, *O. pulicaris*, *Porina nucula* and *Xanthoria fallax*.
- c) Five gatherings proved to represent at present the southernmost stations in South America: *Cladonia crispatula*, *C. substellata*, *Lobaria conformis*, *Pseudocyphellaria clathrata* and *Phyllopsora parvifolia* var. *parvifolia*.

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