

CONTRIBUTION TO THE LICHEN FLORA OF URUGUAY. XXIV. LICHENS FROM SIERRA SAN MIGUEL, ROCHA DEPARTMENT*

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Summary Contribution to the lichen flora of Uruguay. XXIV. Lichens from Sierra San Miguel, Rocha Department. Forty five lichens collected in Sierra San Miguel, Rocha Department, Uruguay are listed. *Cladonia crispata* (Nyl.) Ahti and *Usnea baileyi* (Stirt.) Zahlbr. are added to the known flora of Uruguay, this last species is also recorded for Argentina for the first time. The occurrence of a group of isolated populations of *Concamerella fistulata* (Tayl.) W. Culb. et Ch. Culb. is pointed out.

INTRODUCTION

During July 1989 together with Drs. Th. H. Nash III and C. Gries (Arizona, USA) the author gathered lichens in Sierra San Miguel, Rocha Department (33° 42' S - 53° 34' W). This range of hills situated on the boundary with the Brazilian State of Rio Grande do Sul was practically unknown from the lichenological point of view. In the literature at our disposal we have only found the following records: *Ramalina usnea* and *Teloschistes exilis* (Osorio 1967: 8), *Teloschistes flavicans* f. *uruguayensis* (Osorio 1967: 9), *Concamerella fistulata* (Czeczuga & Osorio 1989: 115) and *Relicina abstrusa* (Osorio 1989: 4).

The very scarce materials from this region housed in the Museo Nacional de Historia Natural, Montevideo, Uruguay (MVM) let us presume the existence of a very interesting lichen flora. The main objective of the field trip was to sample *Xanthoparmeliae* to be studied by Dr. Th. Nash III, but a representative collection of the local lichen flora was also made.

The collection site visited, during a few hours, was a small hill named "Cerro de la Guardia Perdida" (CGP). Large boulders, scattered shrubs and low trees on the hill slopes show a rich lichen wrapper.

Besides the collections made by the author (HO) and preserved in his private herbarium, specimens housed in MVM are also included in the present list. In some of these gatherings no precise collection site is given and they are only listed under the name of the hills range: Sierra San Miguel (SSM).

The *Xanthoparmeliae* are excluded from this paper because they will be published in further works by Dr. Th. Nash III.

LIST OF SPECIES

Brigantiaea leucoxantha (Spreng.) R. Sant. & Haf.

CGP: on branches of shrubs, HO/9178.

Caloplaca cinnabarina (Ach.) Zahlbr.

CGP: rocks in a meadow, very scarce, HO/9155.

Caloplaca crocea (Krempfh.) Haf. & Poelt

SSM: on bark, Prigioni 18-VII-1986 (MVM).

Caloplaca erythrantha (Tuck.) Zahlbr.

SSM: on bark, Prigioni 18-VII-1986 (MVM).

Caloplaca granularis (Müll. Arg.) C. Sambo

SSM: on bark, Prigioni 18-VII-1986 (MVM).

Caloplaca ochraceofulva (Müll. Arg.) Jatta

Fuerte San Miguel, on rocks of the outer wall of the Fort, very common, HO/9148.

This species recently incorporated to the uruguayan flora (Osorio 1989: 2) covers all the wall-stones of this Fort in an area of several hundreds of square meters. Our collection consists of a small but typical specimen although sterile. Many fertile individuals were observed on the walls but we were unable to detach them due to the fact that the Fort is a historic monument. During the field trip

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we could not to find any samples of this species on the rocks which surround the Fort or in the Cerro de la Guardia Perdida. The enormous abundance of this species in a man-made substratum and its absence in natural ones is a remarkable observation. No explanation of this fact could be found by us.

Cladia aggregata (Sw.) Nyl.

CGP: on rock's fences, HO/9147.

Cladonia ceratophylla (Sw.) Spreng.

Road Cerro Picudo to Cerro Vigía, on rocks, confirm. T. Ahti 1986, Marchesi 10-V-1986 (MVM, Herb. Osorio).

Cerro Picudo, on rocks, Praderi 4-VII-1990 (MVM).

Cladonia crispatula (Nyl.) Ahti

Cerro Picudo, on rocks, confirm. T. Ahti 1989, Prigioni 6-XII-1987 (MVM, Herb. Osorio). New to Uruguay.

Cladonia furcata (Huds.) Schrad.

SSM: on ground, San Martín 10-V-1964 (MVM).

CGP: between rocks in a meadow, HO/9149.

Cladonia grayi G.K. Merrill ex Sandst.

CGP: top of a boulder, HO/9153.

Concamerella fistulata (Tayl.) W. Culb. & Ch. Culb.

Cerro Picudo: on rocks, Praderi 4-VII-1990, (MVM), Prigioni 18-VII-1986 (MVM).

The genus *Concamerella* is at present known from the southern region of the Brazilian State of Rio Grande do Sul, Uruguay and the range of hills from the SE of Buenos Aires Province, Argentina (Culb. & Culb. 1981: 307-309). Every one of the two species possesses a well delimited distributional area:

C. pachyderma: Uruguay (the whole country, about 30 collections seen by the author) and the southern Rio Grande do Sul State, Brazil (Culb. & Culb. 1981: 309, Fleig 1985: 85).

C. fistulata: SE of Buenos Aires Province (Culb. & Culb. 1981: 308, Adler 1988: 135) and in Uruguay it is confined to the easternmost region of Rocha Department not occurring in the rest of Uruguay and in the neighbouring Rio Grande do Sul. It is necessary to emphasize the occurrence of this group of populations of *C. fistulata* isolated in the

SE of Rocha Department surrounded in Uruguay by the other species of this genus.

Chiodecton sanguineum (Sw.) Vain.

Cerro Picudo: on rocks, Praderi 21-X-1982 (MVM), on bark, Prigioni 18-VII-1986 (MVM).

Dirinaria applanata (Fée) Awasthi

SSM: on bark, Prigioni 18-VII-1986 (MVM).

Heterodermia hypochraea (Vai.) Swinsc. & Krog.

CGP: on shrubs, rocky slope, HO/9180.

Heterodermia obscurata (Nyl.) Trevis.

CGP: on trunk of shrubs, HO/9176.

SSM: on bark, Prigioni 18-VII-1986 (MVM).

Lecanora farinacea Fée

CGP: on rocks in a meadow, HO/9161.

Lecanora fusca Müll. Arg.

CGP: on rocks in a meadow, HO/9160.

Lecidea oreinodes (Körb.) Weber & Hert.

CGP: on rocks in a meadow, HO/9158, 9166.

Lecidea russula Ach.

CGP: on rocks in a meadow, HO/9156; on branches of shrubs, HO/9172.

Lobaria erosa (Eschw.) Trevis.

Cerro Picudo: on bark, Praderi 4-VII-1990 (MVM); on rocks, Praderi 4-VII-1990 (MVM).

Ochrolechia osorioana Vers.

CGP: on rocks in a meadow, HO/9168.

Parmotrema delicatulum (Vain.) Hale

CGP: on rocks, locally common, HO/9152.

Parmotrema eciliatum (Nyl.) Hale

CGP: on thorns of *Scutia buxifolia*, HO/9184.

Parmotrema tinctorum (Nyl.) Hale

Cerro Picudo, on rocks, Mayúa 27-I-1991 (MVM).

Pertusaria colorans Malme var. **rochae** (Räs) H. Magn.

CGP: on rocks in a meadow, HO/9165.

Pertusaria pulchella Malme

CGP: on branches of shrubs, HO/9175.

Phaeographina ceasiopruinosa (Fée) Müll. Arg.

CGP: on branches of shrubs, HO/9174.

Phaeographis lobata (Eschw.) Müll. Arg.

CGP: on branches of shrubs, HO/9171, 9173.

Pseudoparmelia crozalsiana (B. de Lesd.) Hale

CGP: on trunk of shrubs, HO/9192.

Pseudoparmelia exornata (Zahlbr.) Hale

CGP: on branches of *Daphnopsis racemosa*, HO/9179.

Pseudoparmelia rupicola (Lynge) Hale

CGP: on rocks in a meadow, HO/9159, 9167.

Pseudoparmelia texana (Tuck.) Hale

Cerro Picudo, on bark, Praderi 4-VII-1990 (MVM).

Ramalina celastri (Spreng.) Krog & Swinsc.

CGP: on shrubs, HO/9177, 9188.

Ramalina peruviana Ach.

CGP: on branches of shrubs, locally common, HO/9186.

Ramalina usnea (L.) Howe

CGP: on branches of shrubs, HO/9182.

Cerro Picudo: on rocks, Prigioni 18-VII-1986 (MVM), on branches, Gortari 29-IV-1972 (MVM).

Rimelia cetrata (Ach.) Hale & Fletcher

CGP: on perpendicular rocks, locally common, HO/9151, 9154, on branches, HO/9190.

Cerro Picudo: on bark, Praderi 4-VII-1990 (MVM), on rocks, Praderi 4-VII-1990, Maytía 27-I-1991 (MVM).

Teloschistes chrysophthalmus (L.) Th. Fr.

Parque Nacional San Miguel: on *Salix*, San Martín 21-XII-1964 (MVM).

Teloschistes exilis (Michx.) Vain.

CGP: on thorns of *Scutia buxifolia*, HO/9170.

Cerro Picudo: on branches, Prigioni 6-XII-1987 (MVM)
Parque Nacional San Miguel: on *Salix*, San Martín 21-XII-1964 (MVM).

Teloschistes flavicans (Sw.) Norm.

CGP: on *Daphnopsis racemosa*, HO/9185, on rocks, HO/9169.

Cerro Picudo: on rocks, Gortari 29-IV-1972 (MVM), Maytía 27-I-1991 (MVM), Praderi 4-VII-1990 (MVM), Prigioni 18-VII-1986 (MVM).

Trypethelium ochroleucum (Eschw.) Nyl.

CGP: on *Daphnopsis racemosa*, HO/9187.

Usnea baileyi (Stirt.) Zahlbr.

CGP: on branches of shrubs, only specimen seen, HO/9183.

New to Uruguay. This species is scarcely found in the South American literature: Kalb (1982: 12) reported recently this taxon from Brazil: Sao Paulo. The southernmost collection previously known by the author in South America was localized in:

ARGENTINA. Corrientes Prov., San Cayetano, Capital, 1976, Ferraro 1062, 1069 (Herb. Osorio). First record for Argentina.

Usnea densirostra Tayl.

CGP: on rocks in a meadow, locally common, HO/9146, 9150.

Cerro Picudo: on rocks, Gortari 29-IV-1972 (MVM).

Usnea rubicunda Stirt.

CGP: on branches of shrubs, HO/9189, 9191.

Usnea sulcata Mot. var. **neutra** Mot.

CGP: on branches of shrubs, HO/9181.

CONCLUSIONS

The study of collections here listed allows us to emphasize the following results:

-- *Cladonia crispatula* and *Usnea baileyi* are added to the known flora of Uruguay. Furthermore both records are the southernmost ones in South America. *Usnea baileyi* is also recorded for Argentina for the first time.

-- An outstanding group within this collection is integrated by species with a large distribution in the Amazonic Dominion of the Neotropical Region

of South America (Cabrera et Willink 1973) and reaches the southernmost limit of its distributional range in the SE of Uruguay (mostly Rocha Department).

The following species, listed in this paper, are included in this group: *Brigantiaea leucoxantha*, *Cladonia ceratophylla*, *Heterodermia hypochraea*, *Lobaria erosa*, *Phaeographis lobata*, *Trypethelium ochroleucum* and *Usnea rubicunda*.

-- It is necessary to point out the occurrence of a group of populations of *Concamerella fistulata* that is of common occurrence in this region. The remaining territories of Uruguay and Rio Grande do Sul, Brazil are occupied by *C. pachyderma*. Furthermore these populations of *C. fistulata* are very distant from their main distribution center located in the SE of the Argentinian Province of Buenos Aires.

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