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New species and additional records of *Coenogonium* (*Ostropales*: *Coenogoniaceae*) from southern South America

Lidia I. FERRARO and Andrea MICHLIG

Abstract: Four new species of lichenized fungi from northern Argentina are described and illustrated: *Coenogonium albomarginatum* Michlig & L. I. Ferraro, *C. brasiliense* L. I. Ferraro & Michlig, *C. flavovirens* L. I. Ferraro & Michlig, and *C. verrucosum* Michlig & L. I. Ferraro. In addition, *C. isidiatum* (G. Thor & Vězda) Lücking *et al*., *C. magdalenae* Rivas Plata, Lücking & Lizano, *C. persistens* (Malme) Lücking *et al*., *C. pusillum* (Mont.) Lücking *et al*., and *C. weberi* (Vězda) Lücking *et al*. are recorded for the first time from South America. The known distribution of 24 species of this lichen genus is extended. A revision of the genus in Argentina and Paraguay is also presented.

Key words: Argentina, lichenized fungi, Paraguay, taxonomy

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Introduction

Coenogonium Ehrenb. is characterized by the formation of biatorine apothecia with a yellow to orange or brown disc, a paraplectenchymatous excipulum, unitunicate asci with entirely thin walls, uniseptate (rarely simple), colourless ascospores, and a trentepohlioid photobiont (Rivas Plata *et al.* 2006; Lücking 2008). According to its current circumscription, it comprises *c*. 130 species of mainly tropical to subtropical lichens, with a filamentous or crustose thallus, previously divided into the genera *Coenogonium* s. str. and *Dimerella* (Lücking & Kalb 2000; Rivas Plata *et al.* 2006; Lücking 2008). This transfer has not been accepted by all workers (Vězda 2004; Lackovičoca & Guttová 2005). Molecular studies, however, based on DNA sequences from the nuclear small and large subunit ribosomal RNA genes, support the synonymy of *Coenogonium* and *Dimerella* (Kauff & Lutzoni 2002). Recent evidence based on ontogenetic, anatomical and morphological studies also shows that the genus belongs in its own family *Coenogoniaceae* (Kauff & Büdel 2005; Baloch *et al.* 2010).

In South America, *c*. 55 species of *Coenogonium* have been recorded so far (Lücking 2008; Feuerer 2011), but there are some countries where the genus is still poorly known. In Argentina, 14 species of this genus have been recorded, and in Paraguay, only eight (Ferraro 1978; Calvelo & Liberatore 2002; Lücking 2008; Feuerer 2011; Lumbsch *et al.* 2011).

As a result of the study of collections from Argentina and Paraguay 27 species of *Coenogonoium* (six filamentous and 21 crustose) have been studied; four new species are described and illustrated, five species are recorded for the first time for South America, and the distribution of the existing 24 species is extended, substantially increasing the knowledge of this genus in southern South America. A revision of the species of this genus from both countries is also presented.

Material and Methods

Most of the specimens studied were collected by the authors in Argentina and Paraguay. They are deposited in the herbaria CTES, FCQ, LG, PY, and Czeczuga-Bialistok. The morphological characters were examined

L. I. Ferraro and A. Michlig: Instituto de Botánica del Nordeste, Sargento Cabral 2131, CC 209, CP 3400, Corrientes, Argentina. Email: itati_liq@yahoo.com.ar

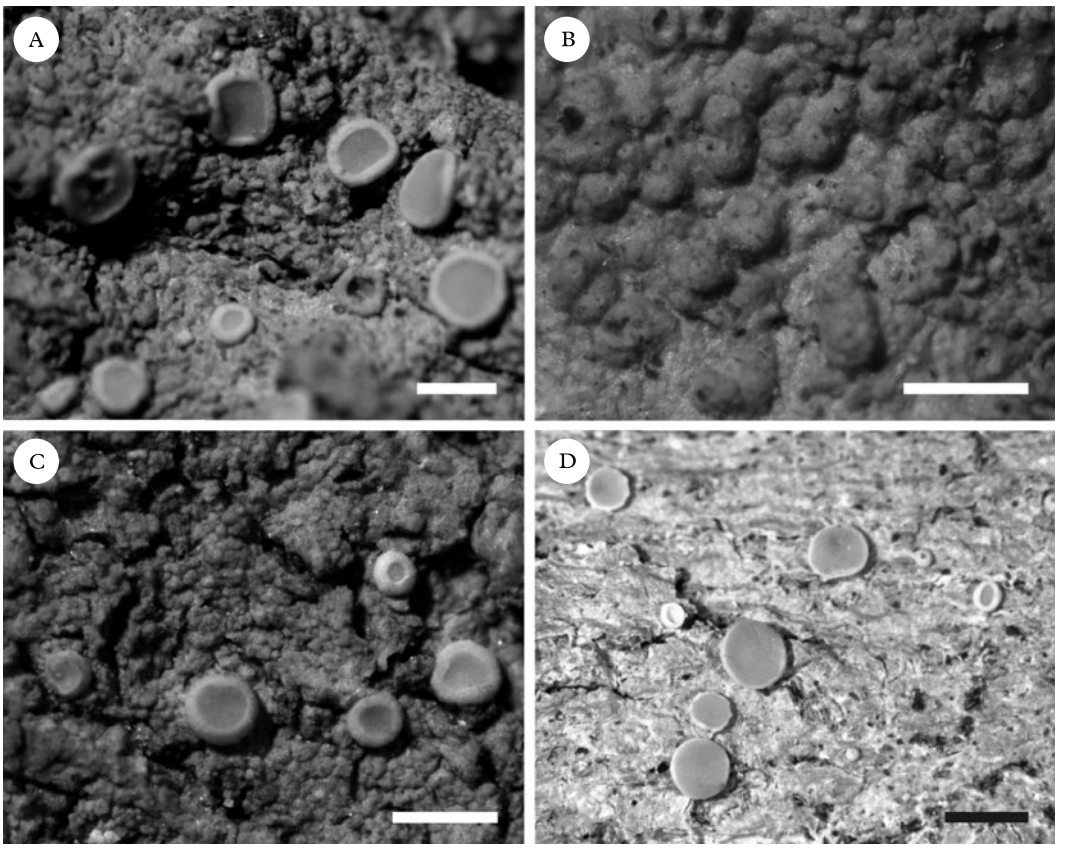

FIG. 1. New species of *Coenogonium* from southern South America. A & B, *C. verrucosum* (type); A, thallus with apothecia; B, wart-shaped pycnidia. C, *C. albomarginatum* (type), thallus with apothecia. D, *C. flavovirens* (type), thallus with apothecia. Scale = 0·5 mm.

using stereoscopic and light microscopes (Leica MZ6 and Leica CME respectively). Apothecia and pycnidia, when present, were sectioned by hand with a razor blade and then mounted in 5% KOH and Lugol's solution for examination.

The New Species

Coenogonium albomarginatum Michlig & L. I. Ferraro sp. nov.

MycoBank No.: MB563945

Differing from *Coenogonium pyrophthalmum* by its smaller apothecia.

Type: Argentina, Prov. Corrientes, Dept. San Cosme, 3 km from crossing to Paso de la Patria, on the way to Puerto González, 21 May 1979, *L. I. Ferraro et al.* 1928 (CTES—holotype).

(Fig. 1A)

Thallus crustose, corticolous, verrucose, yellowish greyish green, 25–45 mm diam.; prothallus white, shiny, conspicuous.

Apothecia sessile, rounded, rarely slightly irregular in outline, 0·2–0·6 mm diam., 200–215 µm high; *disc* pale orange, flat to slightly concave first, then flat to rarely convex; *margin* thick, prominent, cream-coloured, paler than the disc. *Excipulum* paraplectenchymatous with radiating cell rows, I−. *Hypothecium* 26 µm high, colourless, I+ yellow. *Hymenium*

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65 μm high, colourless, I+ blue turning greenish. *Ascospores* uniseriate, oblong-elongated, 1-septate, 8–11 × 2·5–3·0 μm.

Pycnidia absent.

Notes. The specific epithet of this new species refers to the whitish and shiny prothallus. It is close to *Coenogonium pyrophthalmum* (Mont.) Lücking *et al.*, but differs in having smaller apothecia (0·2–0·6 mm diameter).

Coenogonium brasiliense L. I. Ferraro & Michlig sp. nov.

MycoBank No.: MB803411

Differing from *Coenogonium dilucidum* by the paler thallus and the larger and oblong ascospores.

Type: Argentina, Prov. Corrientes, Dept. Santo Tomé, Ea. Timbó, coast of Uruguay River, 26 km SE of Garabí colony, in lowland, on *Styrax leprosum* leaves, 18 November 1980, *A. Schinini* 20984 (CTES—holotype).

Thallus crustose, foliicolous, smooth, greyish to whitish green, extended, 3–13 mm, distributed into confluent patches, generally with a sinuous margin, somewhat raised above the substratum in some regions.

Apothecia with a constricted base, rounded, 1·0–1·5 mm diam.; *disc* pale brown to reddish yellow, flat, transparent; *margin* inconspicuous. *Excipulum* paraplectenchymatous, irregular cells, colourless, *c.* 3–5 μm diam. *Hypothecium* 24 μm high. *Hymenium* 42–50 μm high, I+ yellow, paraphysis with widened apices. *Asci* clavate, 45–50 μm long, 3–4 μm wide. *Ascospores* uniseriate, oblong, slightly wider in the central region, 1-septate, 9–11 × 2–3 μm.

Notes. Coenogonium brasiliense is based on *Dimerella brasiliensis* Vězda & Kalb, *nomen nudum*. This name, used for a long time, was never formerly described. It was mentioned in a checklist of lichens from Paraguay (Ferraro 1990). This species is close to *Coenogonium dilucidum* (Kremp.) Kalb & Lücking in the colour and transparent aspect of the apothecia, especially the younger ones which are also shiny. Both species differ in the shape and size of the ascospores and the colour of the thallus. The ascospores in *C. brasiliense* are larger, oblong, and widened in the central region.

Additional material examined. **Argentina:** *Corrientes*: Ituzaingó, mouth of Garapé stream on Paraná River, 45 km E of Ituzaingó, on orange leaves, on a grown wild orange, inside forest, 1975, *Ferraro et al.* 710 (CTES).— **Paraguay:** *Amambay*: Cerro Guazú, 26°5′S; 56°W, over *Thelypteris* sp. leaves (Pteridophyta), 1980, *Schinini et al.* 20730 (CTES). *Guairá*: Ybituruzú mountain range, over ferns, 1979, *Schinini* & *Bordas* 19798 (CTES).

Coenogonium flavovirens L. I. Ferraro & Michlig sp. nov.

MycoBank No.: MB563946

Differing from *Coenogonium aciculatum* by the yellowish green thallus and smaller ascospores.

Type: Argentina, Prov. Salta, Dept. Santa Victoria, Los Toldos, El Nogalar de Los Toldos Reserve, 24 April 2009, *L. I. Ferraro et al.* 9079 (CTES—holotype).

(Fig. 1B)

Thallus crustose, corticolous, continuous, thin, smooth, yellowish green, 30 mm diam; prothallus absent. *Photobiont Trentepohlia*, cells angular to rounded, densely grouped in some areas of the thallus.

Apothecia sessile, rounded, 1·5–3·0 mm diam., 100–220 μm high; *disc* plane, intense yellow to yellow-orange; *margin* thin, not prominent, cream-coloured, paler than the disc. *Excipulum* paraplectenchymatous with radiating cell rows. *Hypothecium* 20–30 μm high, pale yellow, I+ yellow. *Hymenium* 50–60 μm high, colourless, I+ pale blue then red. *Ascospores* biseriate, oblong, 1-septate, 15–17 × 2·0–2·5 μm.

Pycnidia absent.

Notes. The specific epithet of this new species refers to the yellow greenish colour of its thallus. Most species of *Coenogonium* are characterized by the presence of a green to greyish green or brownish thallus. The species is otherwise characterized by its large, bright yellow apothecia and long, narrow ascospores, which resemble *C. aciculatum* Lücking & Aptroot. The latter differs in its greenish grey thallus and narrower ascospores (1·5–2·0 μm wide). Most similar are *C. subsquamosum* (Aptroot & Seaward) Lücking *et al.* from the Seychelles and

C. pertenue (Stirt.) Kalb & Lücking from Australia, but both have broader ascospores (*c.* 3–4 μm broad).

Coenogonium verrucosum Michlig & L. I. Ferraro sp. nov.

MycoBank No.: MB563947

Differing from other species of *Coenogonium* by the verrucose thallus, yellow prothallus, medium sized apothecia, wart-shaped pycnidia, and non-septate, ellipsoid-bacillar conidia.

Type: Argentina, Prov. Corrientes, Dept. Ituzaingó, Apipé Grande island, Punta Arazá, in marginal forest, on bark of *Ocotea* sp., 26 November 1988, *Ferraro et al.* 3606 (CTES—holotype).

(Fig. 1C & D)

Thallus crustose, corticolous, verrucose, thin, brownish green; prothallus yellow.

Apothecia sessile, rounded to slightly irregular in outline, (0·2)0·3–0·8(1·0) mm diam., 40–50 μm high; *disc* slightly concave first then flat, orange; *margin* thick and prominent first, then thin and not prominent, cream-coloured to pale orange. *Excipulum* paraplectenchymatous with radiating cell rows, 40–50 μm high, colourless, I+ pale yellow. *Hypothecium* 25 μm high, colourless, I+ pale yellow. *Hymenium* 40–50 μm high, colourless, I+ blue then quickly sordid green. *Ascospores* irregularly biseriate, ellipsoid, 1-septate, 8–9 × 2·5–3·0 μm.

Pycnidia present, wart-shaped; *conidia* broadly ellipsoid-bacillar, non-septate, 3–5 × 1–2 μm.

Notes. This new species is characterized by the presence of a yellow prothallus, medium-sized apothecia, wart-shaped pycnidia, non-septate ellipsoid-bacillar conidia, and a verrucose thallus. These verrucae are formed by calcium oxalate crystals. Other species with a verrucose thallus are *Coenogonium degeneri* (Kalb & Vězda) Kalb & Lücking and *C. tavaresianum* (Vězda) Lücking *et al.* & Sipman, but these differ in the lack of a prothallus and larger ascospores. A yellow prothallus is also found in *C. atroluteum* (Vain.) Lücking *et al.*, but it differs in its pale yellow-brown apothecia with dark margin and a smooth thallus. Other similar species are *C. zonatum* (Müll. Arg.) Kalb & Lücking and *C. subluteum* (Rehm) Kalb & Lücking, but both differ in the presence of uniseptate conidia. The former is also distinguished by its white prothallus. *Coenogonium roumeguerianum* (Müll. Arg.) Kalb also has apothecia with a concave orange disc but differs in the presence of a white prothallus and broader ascospores (4–6 μm broad).

New records for Argentina and Paraguay

The species listed below represent 14 species recorded here for the first time from Argentina, and five from Paraguay. The new records for Argentina and Paraguay are indicated with a circle (●) and a square (■), respectively. The known species of *Coenogonium* in both countries are shown in Table 1.

Coenogonium atroluteum (Vain.) Lücking et al.

Fungal Diversity **23:** 312 (2006).

This species has been previously recorded from Argentina (Calvelo & Liberatore 2002) and Paraguay (Feuerer 2011).

Selected specimes examined. **Paraguay:** *Misiones*: West of Yacyretá island, in forest, 1988, *Ferraro* 3576 (CTES).

Coenogonium confervoides Nyl. (●)

Flora **41:** 380 (1858).

In South America, this species has previously been reported only from Colombia (Sipman *et al.* 2008).

Selected specimen examined. **Argentina:** *Misiones*: San Pedro, Yaboty Biosphere Reserve, Moconá Provincial Park, Chachi trail, over a fallen branch on the side of the trail, 2009, *Michlig & Niveiro* 1886 (CTES).

Coenogonium eximium (Nyl.) Kalb & Lücking (●)

Fungal Diversity **23:** 297 (2006).

In South America, this species has previously been reported only from Colombia (Sipman *et al.* 2008).

TABLE 1. *List of reported* Coenogonium *species from Argentina (ARG) and Paraguay (PAR). The contributions of this paper are in bold.*

Species	ARG	PAR
C. albomarginatum	+	–
C. atroluteum	+	+
C. bacilliferum	+	–
C. brasiliense	+	–
C. confervoides	+	–
C. epiphyllum	+	+
C. eximium	+	–
C. flammeum	+	–
C. flavovirens	+	–
C. implexum	+	–
C. interplexum	+	+
C. interpositum	+	+
C. isidiatum	+	–
C. isidiiferum	+	–
C. isidiigerum	+	–
C. linkii	+	+
C. luteocitrinum	+	–
C. luteum	+	+
C. magdalenae	+	–
C. minimum	+	–
C. moniliforme	+	+
C. nepalense	+	–
C. patagonicum	+	–
C. persistens	+	–
C. pineti	–	+
C. pusillum	–	+
C. pyrophthalmum	+	–
C. roumeguerianum	+	+
C. siquirrense	+	–
C. strigosum	+	+
C. subdentatum	+	–
C. subdilutum	–	+
C. subluteum	+	+
C. verrucosum	+	–
C. weberi	+	–
C. zonatum	+	+
Total	33	14

Selected specimen examined. **Argentina:** *Corrientes*: San Cosme, Paso de la Patria, San Juan stream and Paraná River, in marginal forest, 1979, *Ferraro* 1688 (CTES).

Coenogonium implexum Nyl. (●)

Ann. Sci. Nat. Bot. Ser. 4, **16:** 92 (1862).

In South America, this species has been reported only from Colombia (Sipman *et al.* 2008).

Selected specimen examined. **Argentina:** *Corrientes*: Mburucuyá, Potrero 1 grande, over a fallen tree on the edge of the swamp, 2006, *Ferraro et al.* 8126 (CTES).

Coenogonium interplexum Nyl. (■)

Ann. Sci. Nat. Bot. Ser. 4, **16:** 92 (1862).

This is the first record of this species for north-western Argentina; it was previously recorded from Buenos Aires, Corrientes, and Misiones Provinces (Calvelo & Liberatore 2002).

Selected specimens examined. **Argentina:** *Salta*: Santa Victoria, Los Toldos, El Nogalar de Los Toldos Reserve, 2009, *Ferraro* 9076 (CTES).—**Paraguay:** *Paraguarí*: Ybicuí National Park, 1990, *Pérez* 841 (CTES, PY).

Coenogonium interpositum Nyl.

Ann. Sci. Nat. Bot. Ser. 4, **16:** 91 (1862).

This is the first record of this species for northern Argentina; it was previously recorded from Buenos Aires province (Calvelo & Liberatore 2002). In Paraguay, it has been recorded by Malme (1937).

Selected specimens examined. **Argentina:** *Misiones*: San Pedro, Yaboty Biosphere Reserve, Moconá Provincial Park, Piedra Bugre wharf, 2008, *Michlig et al.* 897 (CTES).—**Paraguay:** *Misiones*: West of Yacyretá island, in scrubland, near a sandy area, 1988, *Ferraro & Popoff* 3575 (CTES, FCQ, LG).

Coenogonium isidiatum (G. Thor & Vězda) Lücking et al. (●)

Fungal Diversity **23:** 297 (2006).

This species is recorded here for the first time from South America.

Selected specimen examined. **Argentina:** *Corrientes*: Empedrado, 12 road and Pehuajó stream, in an islet of scrubland degraded by grazing, 2007, *Michlig et al.* 265 (CTES).

Coenogonium isidiigerum (Vězda & Osorio) Lücking et al.

Fungal Diversity **23:** 297 (2006).

This is the first record of this species for northern Argentina; it has been previously reported from Buenos Aires province (Vězda 1989).

Selected specimen examined. **Argentina:** *Misiones*: San Ignacio, 1 km from Quiroga's home, on way to the river, 1981, *Ferraro et al.* 2240 (CTES).

Coenogonium linkii Ehrenb. (■)

Horae Phys. Berol.: 120 (1820).

This is the first record of this species for north-western Argentina; it was previously recorded from Misiones province (Calvelo & Liberatore 2002).

Selected specimens examined. **Argentina:** *Salta*: entrance to the El Rey National Park, over branches with moss, 2007, *Ferraro* 8317 (CTES).—**Paraguay:** *Guairá*: Independencia Colony, alt. 250 m, on bark of *Sebastiania* sp., 1986, *Schinini* 25356 (CTES, LG). *Caazapá*: Yute District, 15 km S of Capitindy, clearing in the forest, edge of the stream, flooded grassland, 1987, *Arbo* 2920 (CTES, LG). *Alto Paraná*: Ytabó Biological Reserve, Tangará trail, *Krapovickas* 43411 (CTES, hb. Czeczuga-Bialistok, LG). *Amambay*: 7 km N of 5 road, western boundary of Cerro Corá National Park, 1988, *Ferraro et al.* 3480 (CTES, LG).

Coenogonium luteocitrinum Rivas Plata et al. (●)

Fungal Diversity **23:** 283 (2006).

In South America, this species has previously been recorded only from Bolivia (Flakus 2008).

Selected specimens examined. **Argentina:** *Corrientes*: Mburucuyá, Mburucuyá National Park, Maizal paddock, in the palm grove of *Butia yatay*, 2006, *Ferraro & Popoff* 8183 (CTES). *Salta*: El Rey National Park, at the entrance of the trail to the cascade 'Los Lobitos', 2005, *Ferraro et al.* 7934 (CTES).

Coenogonium luteum (Dicks.) Kalb & Lücking (■)

Bot. Jahrb. Syst. **122:** 32 (2000).

This is the first record of this species for north-western Argentina; it was previously recorded from the Corrientes, Misiones, and Río Negro provinces (Calvelo & Liberatore 2002).

Selected specimens examined. **Argentina:** *Jujuy*: Calilegua National Park, Aguas negras Camping, over bark, 2005, *Ferraro et al.* 7584 (CTES). *Salta*: Santa Victoria, Los Toldos, El Nogalar Reserve, 2009, *Ferraro* 9074 (CTES). *Neuquén*: Nahuel Huapí National Park, trail from de Blest to Los Cántaros, 2001, *Ferraro & Giaiotti* 6510 (CTES).—**Paraguay:** *Guairá*: Independencia Colony, 250 m, over leaves of *Trichilia catigua*, in forest, 1986, *Schinini* 25324 (CTES). *Itapúa*: Yacyretá Island, over leaves of *Chrisophyllum gonocarpum*, 1988, *Ferraro* 3654 (CTES).

Coenogonium magdalenae Rivas Plata et al. (●)

Fungal Diversity **23:** 286 (2006).

This species is recorded here for the first time from South America.

Selected specimens examined. **Argentina:** *Corrientes*: Santo Tomé, Santo Tomé, first section of chakras, in shrubland, 1978, *Ferraro* 1368 (CTES).

Coenogonium moniliforme Tuck. (●)

Proc. Amer. Acad. Sci. **5:** 416 (1862).

This species has been recently recorded from Paraguay (Lücking 2008).

Selected specimens examined. **Argentina:** *Misiones*: General Manuel Belgrano, San Antonio Strict Nature Reserve, trail that marks the beginning of the protected area, over a tree in the forest, 2009, *Michlig & Niveiro* 1955 (CTES).

Coenogonium nepalense (G. Thor & Vězda) Lücking et al. (●)

Fungal Diversity **23:** 297 (2006).

In South America, this species has previously been recorded only from Brazil (Cáceres 2007).

Selected specimens examined. **Argentina:** *Corrientes*: Mburucuyá, Mburucuyá National Park, Tung paddock, 2006, *Ferraro* 8166 (CTES). *Misiones*: San Pedro, Yaboty Biosphere Reserve, Esmeralda Provincial Park, on the way to pine forest, over a tree on the side of the trail, 2008, *Michlig et al.* 757 (CTES).

Coenogonium persistens (Malme) Lücking et al. (●)

Fungal Diversity **23:** 297 (2006).

This species is here recorded for the first time from South America.

Selected specimens examined. **Argentina:** *Corrientes*: Mburucuyá, Mburucuyá National Park, Yatay trail, 2006, *Ferraro* 8042 (CTES); Concepción, 118 route, 13 km from Florida, Paraje PUCE, 2008, *Ferraro* 8492 (CTES). *Misiones*: Iguazú, Iguazú National Park, Macuco trail from the CIES to the Arrechea Falls, over bark, 2003, *Ferraro & Popoff* 6901 (CTES).

Coenogonium pusillum (Mont.) Lücking et al. (■)

Fungal Diversity **23:** 298 (2006).

This species is recorded here for the first time from South America. It has been previously reported from Costa Rica (Rivas Plata *et al.* 2006) and Cuba (Montagne 1842).

Selected specimen examined. **Paraguay:** *Misiones*: W of the Yacyretá island, in the forest, 1988, *Ferraro* 3567 (CTES).

Coenogonium pyrophthalmum (Mont.) Lücking et al.

Fungal Diversity **23:** 314 (2006).

This species has been previously recorded in Argentina from the Corrientes and Buenos Aires provinces (Calvelo & Liberatore 2002).

Selected specimen examined. **Argentina:** *Misiones*: Iguazú, Apepú Reserve, 15 km from the entrance, 1982, *Ferraro* 2497 (CTES).

Coenogonium roumeguerianum (Müll. Arg.) Kalb

Sched. Lich. Neotrop. **13:** 3 (2001).

This species has been previously recorded in Argentina from Misiones province (Calvelo & Liberatore 2002), and Paraguay (Feuerer 2011).

Selected specimens examined. **Argentina:** *Corrientes*: Empedrado, Las Tres Marías Ranch, in marginal forest of the Paraná River, 1979, *Ferraro* 1742b (CTES); San Martín, Drews rice paddy, Cambá Trapo swamp, in scrubland over *Scutia* sp. (*Mirtaceae*), 1976, *Ferraro & Tressens* 947 (CTES).

Coenogonium siquirrense (Lücking) Lücking (●)

Flora Neotropica **103:** 580 (2008).

In South America, this species has been recorded from Ecuador, Peru (Lücking 2008), and Venezuela (Feuerer 2011).

Selected specimens examined. **Argentina:** *Misiones*: Iguazú, Iguazú National Park, Ñandú Camping, over mosses, 2004, *Ferraro & Popoff* 7401 (CTES).

Coenogonium strigosum Rivas Plata et al. (●) (■)

Fungal Diversity **23:** 290 (2006).

In South America, this species has previously been recorded from Brazil (Cáceres 2007).

Selected specimens examined. **Argentina:** *Corrientes*: General Paz, 26 km W of Caá Catí, over *Celtis* sp., 1978, *Ahumada* 2483 (CTES); Capital, Molina Punta, in scrubland on bank of the river, 1978, *Ferraro* 1327 (CTES); Santo Tomé, Bertrán (Infrán Cué) Ranch, 23 km SW of Virasoro, in an islet of forest, 1992, *Tressens et al.* 4155 (CTES). *Misiones*: Iguazú, Iguazú National Park, 101 road, near Garganta del Diablo, over bark, 2003, *Ferraro & Popoff* 7083 (CTES); San Ignacio, Teyú Cuaré, 1981, *Ferraro* 2362 (CTES). *Salta*: Santa Victoria, Los Toldos, El Nogalar Reserve, 2009, *Ferraro et al.* 9075 (CTES).—**Paraguay:** *Misiones*: W of Yacyretá island, in open path in forest, 1988, *Ferraro* 3568 (CTES).

Coenogonium subdentatum (Vězda & G. Thor) Rivas Plata et al. (●)

Fungal Diversity **23:** 298 (2006).

Selected specimen examined. **Argentina:** *Misiones*: General Manuel Belgrano, San Antonio Strict Nature Reserve, trail that marks the beginning of the protected area, over a tree in the forest, 2009, *Michlig & Niveiro* 1947 (CTES).

Coenogonium subluteum (Rehm) Kalb & Lücking

Bot. Jahrb. Syst. **122:** 34 (2000).

This is the first record of this species for north-western Argentina; it was previously recorded from the Corrientes and Misiones provinces (Calvelo & Liberatore 2002). In Paraguay, it has been previously recorded by Ferraro (1997) and Lücking (2008).

Selected specimens examined. **Argentina:** *Jujuy*: Ledesma, Calilegua National Park, La Lagunita Trail, 2005, *Ferraro et al.* 7820 (CTES).—**Paraguay:** *Cordillera*: Valenzuela, Yhacá stream, in marginal forest, foliicolous, over *Myrtaceae*, 1989, *Ferraro et al.* 3917 (CTES).

Coenogonium weberi (Vězda) Lücking et al. (●)

Fungal Diversity **23:** 298 (2006).

This species is recorded here for the first time from South America.

Selected specimens examined. **Argentina:** *Corrientes*: Mburucuyá, Mburucuyá National Park, Santa Teresa Ranch, 2006, *Ferraro* 8093 (CTES). *Jujuy*: Ledesma, Calilegua National Park, Tataupa trail, over bark in forest, 2005, *Ferraro et al.* 7747 (CTES).

Coenogonium zonatum (Müll. Arg.) Kalb & Lücking (●)

Bot. Jahrb. Syst. **122:** 34 (2000).

In South America, this species has been recorded from Paraguay (Lücking 2008; Feuerer 2011) and Colombia (Sipman *et al.* 2008).

Selected specimens examined. **Argentina:** *Corrientes*: Mburucuyá, Mburucuyá National Park, 10, at the edge of Santa Lucia swamp, 2006, *Ferraro* 8215 (CTES).—**Paraguay:** *Itapúa*: Tirol Hotel, foliicolous, over leaves of *Monstera*, 1985, *Krapovickas & Cristóbal* 40084a (CTES).

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