

SOME CLAVARIACEAE FROM CHILE

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SUMMARY

Eight Clavariaceae are reported for Chile, six of them for the first time in this country, of these one species and one variety are new to science, they are *Clavaria pumanquensis* Lazo and *Ramaria flaccida* (Fr.) Ricken var. *chilensis* Lazo.

The Clavariaceae from Chile have been studied mainly by Montagne (1850), Spegazzini (1887, 1921), Singer (1969) and others. Corner (1950, 1957, 1970) published his studies on Clavariaceae from certain places of Argentina that are known to have about the same mycoflora as the neighboring Chilean regions.

During the last few years I have collected some Clavariaceae in the "Quebrada del agua" located at La Viñita, Pumanque, Prov. Colchagua, a place which is covered by native plants and trees; at the Jardín Botánico Nacional, Viña del Mar, Prov. Valparaíso, a locality which is covered by native and exotic plants and trees; and in the *Nothofagus* forest close to Puerto FAO, Prov. Valdivia and Prov. Osorno. The collections are deposited in the Herbarium of the University of Cambridge (CGE), in the Estación Experimental Agronómica of the University of Chile, Santiago (EEA), and in the New York Botanical Garden (NY).

Of the species here mentioned four (marked with an asterisk) are new for Chile, according to the lists published by Mujica and Vergara (1945, 1961) and Mujica and Oehrens (1967), one species and one variety are new to science.

*CLAVARIA ACUTA Fr., Syst. Myc. I: 485. 1821.

Carpophores 35-43 × 2 mm, shining white, solitary or gregarious, cylindrical to compressed. Context fragile. No odor. Spores 9 × 6 μ, hyaline, smooth, broadly ellipsoid, with an apiculus. Basidia 40-45 ×

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9–10 μ , hyaline, 4-spored, looped at the base due to a clamp connection. Hyphae 3–14 μ wide without clamps and with cells 20–30 μ long.

Habitat: on dead wood in the forest.

Distribution: widespread (Europe, U. S. A., Japan, S. Australia).

Material examined: PU-115, CGE. La Viñita, Pumanque, July 27, 1967.

*CLAVARIA ZOLLINGERII Lev., Ann. Sci. Nat. Bot. Sér. 3, 5: 155. 1846.

Carpophores 30–70 mm high, amethyst to whitish amethyst or lilac, branched, caespitose. Context rather fragile. No odor. Spore print white. Spores 4.5–7 \times 4–5 μ , subglobose or ellipsoid. Basidia 40–50 μ , hyaline, clavate, 4-spored. Sterigmata 4 μ long. Hyphae without clamps.

Habitat: on the soil in the forest.

Distribution: widespread (Europe, N. America, S. America, S. Australia, Java).

Material examined: PU-160, CGE, EEA. La Viñita, Pumanque, September and October, 1968.

Clavaria pumanquensis Lazo, sp. nov.

FIG. 1

Receptaculis 70 mm altis, repetite ramosis, ramis validis cremeo albis usque leviter flavo-roseis, trunco brevi crassoque. Sporis in cumulo albidulis. Sporis 5.5–8.5 \times 3.5–4 μ , hyalinis, levibus, ellipsoideis, subtiliter, multiguttulatis, apiculatis, apiculis 0.7 μ longis. Basidiis 2-sporigeris, 45–50 \times 7 μ , basi defibulatis. Sterigmatibus 3–4 \times 2 μ . Hymenio 100 μ crasso. Hyphis defibulatis, 3–29 μ crassis, tenuitunicatis, plus minusve elongatis (cellulis 30–140 μ longis). Habitatio ad terram inter folia dejecta. Affinis *C. zollingerii* Lev., sed differt colore multo pallidiore, numquam violaceo et hyphis longicellularibus. Holotypus PU-155, legit W. Lazo, prope La Viñita, Pumanque, provincia Colchagua, X, 1968, in herbarium NY conservatur.

Carpophores 70 mm high, cream white to very slightly yellowish pink, branched several times, branches stout. Stipe short and thick. Spore print whitish. Spores 5.5–8.5 \times 3.5–5 μ , hyaline, smooth, ellipsoid, finely multiguttulate, apiculate. Apiculus 0.7 μ long. Basidia 45–50 \times 7 μ , 2-spored, no clamp at the base. Sterigmata 3–4 \times 2 μ . Hymenium 100 μ thick. Hyphae 3–29 μ wide, no clamps, thin-walled, rather long-celled. Cells 30–140 μ .

Habitat: on soil among dead leaves.

This species is related to *C. zollingerii* Lev. but has much paler color not at all violet and rather long-celled hyphae.

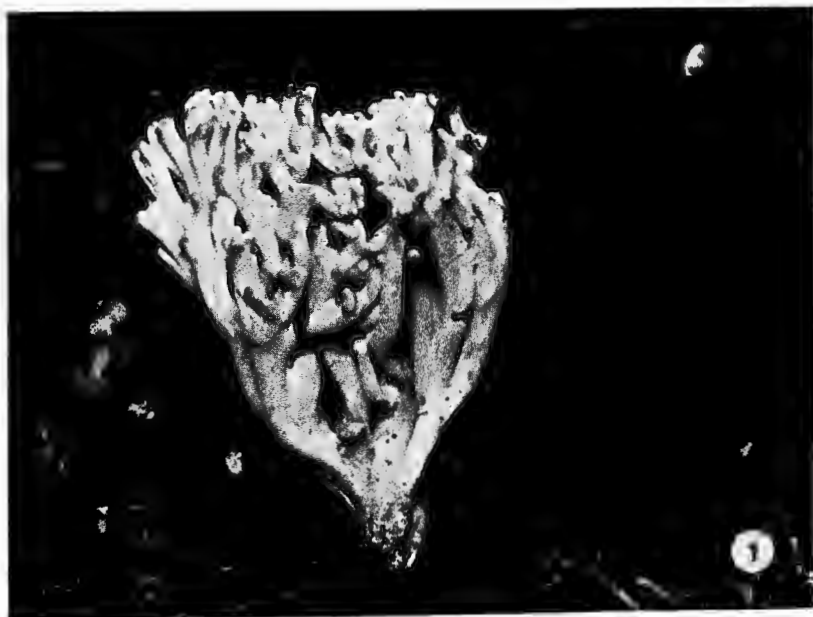


FIG. 1. *Clavaria pumanquensis*, $\times 6/7$
FIG. 2. *Clavicornora turgida*, $\times 2$

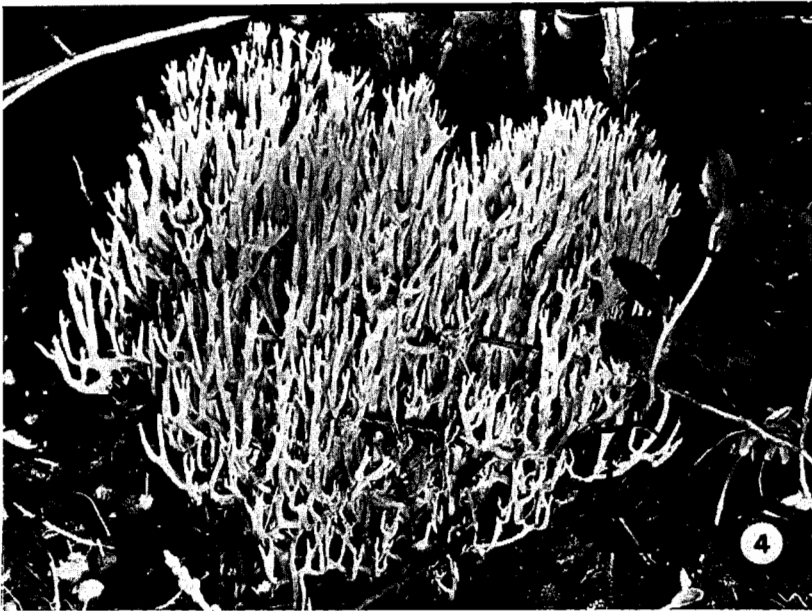


FIG. 3. *Ramaria flaccida*, $\times 1$

FIG. 4. *Ramaria flaccida* var. *chilensis*, $\times 3/4$

Spores $4-6 \times 2.5-4 \mu$, ochraceous, verrucose, ellipsoid, apiculate, with a large gutta. Sterigmata $2-4 \mu$ long. Basidia $35-45 \times 5-6 \mu$, hyaline, 4-spored.

Habitat: on soil among plant debris in the forest. Abundant.

This is the most commonly found species of Clavariaceae from central Chile. It may be collected from May to September.

*RAMARIA MOELLERIANA (Bres. et Roum.) Corner, Ann. Bot., Mem. 1, p. 606. 1950. FIG. 5

Lachnocladium moellerianum Bres. et Roum., Rev. Mycol. 92: 36. 1890.

Carpophores 32-53 mm high, yellow, branched. Stipe short, white yellowish, white tomentose at the base. Branches dichotomous, apices sub-cristate. Spore print brownish. Spores $7-8 \times 4 \mu$, ochraceous, rugulose. Basidia $27.6-38.8 \times 6-6.5 \mu$, claviform, hyaline, 4-spored. Sterigmata $4.3-5 \mu$ long, thin. Hyphae with clamp connections.

Habitat: on decaying wood.

Distribution: widespread (Congo, Chile, Argentina).

Material examined: PU-14, EEA. La Vifita, Pumanque, May, 1966.

RAMARIA SUBAURANTIACA Corner, Bull. Brit. Mus. (Nat. Hist.) Bot. 1: 200. 1955. FIG. 6

Carpophores up to 120 mm high, orange colored, branched, caespitose, whitish at the base. Spore print brownish. Spores $9.5-12.5 \times 4-4.7(-5) \mu$, rugulose-rough. Basidia $60-70 \times 10 \mu$, without clamp connections, some of them with subgelatinous walls.

Habitat: on the soil and the roots of the trees in the forest.

Distribution: cosmopolitan.

Material examined: LLAN-3, CGE, close to Puerto FAO, May, 1968.

Very close to the specimens described above there were growing many yellow specimens (LLAN-4, CGE, EEA) having carpophores 150 mm high, spores $10-15 \times 5-6 \mu$ and more coarsely marked than LLAN-3, and hyphae 16μ wide and without clamps. Since this might be a distinct variety of *R. subaurantiaca* or perhaps a new species it will be necessary to obtain more information from further collections.



FIG. 5. *Ramaria moelleriana*, $\times 1$

FIG. 6. *Ramaria subaurantiaca*, $\times 1/4$

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