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Fungi austroamericani III*)

Rhodogaster gen. nov. - a new link from Chile towards the Rhododyllaceae

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With 1 Textfig.

Whilst studying the agaric flora in the *Nothofagus*-zone of South America, I collected a species with pinkish spores similar to those of *Rhodophyllus* during a visit to the Pacific Coast rain-forests. The fungus was remarkable because of its habit and occurred on the leaf-mould of a bamboo-like Gramineae (*Chusquea* sp.) and various trees characteristic of the Valdivian forest near the coast (*Gevuina, Lomatia, Eucryphia, Aextoxicon).*

As I had already seen many secotiaceous fungi from the genus *Thaxterogaster* Sing., it was quite clear that I had a species intermediate between the Gasteromycetes and the Agaricales. The systematic position of this new genus will be discussed in a later paper after I have studied my numerous collections. However, as far as I am aware, there is only one intermediate genus (*Richoniella,* with the species *R. leptoniaespora* (Rich.) Cost. & D.) connecting *Rhodophyllus* s. l. with the angiocarpous Gasteromycetes and, from this point of view alone, I consider the new genus *Rhodogaster* to be of considerable importance in the present controversy over the phylogeny of the Agaricales.

Rhodogaster chilensis, gen. nov., spec. nov.

Peridium globosum vel subglobosum, secotiaeforme, angiocarpum, clausum, pileo conjuncto stipitem, indehiscens in iuventute; siccum vel subsiccum; ad apicem carnosulum subumbonatulumque, ad marginem tenuiter tunicatum; radialiter subrimostriatum, in centro brunneolum, ad marginem alboroseum. Velo nullo. Gleba (lamellae) carneorosea, irregulariter loculiformis, haud lamelliformis. Stipes (columella) aequaliter cylindraceus, siccus, fragilis, plenus; brunneolus, dense squamulis longitudinalibus albis obtectus. Sporae

*) Fungi austroamericani. I. Tricholoma Fr. (Sydowia, in print) II. *Pluteus* Fr. (Nova Hedwigia, in print).

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quadrangulari-stellatae, cruciformes, leves, haud amyloideae, roseo-pigmentatae, guttulatae. Basidia clavata, 4-sporigera, hyalina. Cystidia nulla. Hyphae pilei radialiter constitutae, filamentoso-cylindraceae, septatae sed afibulatae, pigmento epimembranaceo-incrustatae. — Ad terram udam in silvaticis uliginosis (silva valdiviana), Fucatrihue, Chile, 24. IV. 1963 (Typo F 39, in herbario et Museo Natur. Paris).

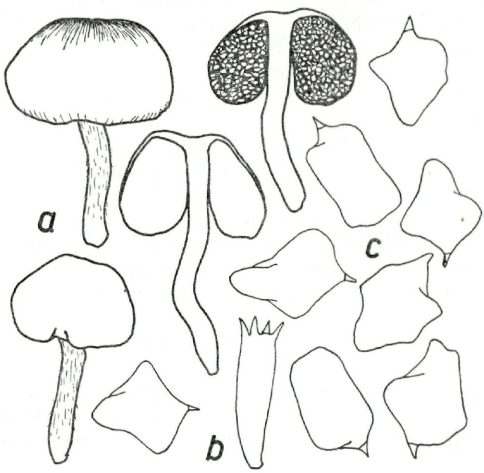

Fig. 1. *Rhodogaster chilensis* Horak. n. gen. et spec. a. Carpophore, nat. size. — b. Basidia × 1000. — c. Spores × 2000.

Rhodogaster chilensis, gen. nov. et sp. nov.

Gasterocarp 2—3 × 1.2—2 cm, globose to subglobose, mostly slightly broader than tall, slightly depressed in the centre, where the flesh is thick but becomes thinner as it approaches the margin, which completely encloses the stipe (although sometimes separating in old specimens, when the gleba is exposed), surface dry to slightly viscid, glabrous or radially rimose at the incurved margin, without trace of veil; brownish in the centre but becoming pinkish towards the margin with fresh and young specimens somewhat whitish, weakly hygrophanous.

Gleba either with or without indistinct radially differentiated lamellae and containing irregularly shaped lacunae up to 2 mm. diam., pinkish in all stages.

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Stipe (columella) equal, solid, usually flexuose, very fragile, brittle, dry; brownish with dense, concolorous fibrils or withish, free from the membranous margin of the closed or partly opened peridium (pileus).

Chemical reactions on the surface of the gasterocarp were negative with KOH, NH_3, HCl and formol.

Context greyish, aqueous-hygrophanous in the stipe, inodorous. Taste not observed. Spores 9.5—11.5 × 6.5 — 7.5 µ ellipsoidnodular (cross-shaped as in *Rhodophyllus staurosporus)*, with rounded projections, otherwise smooth, with a thin, simple wall, a distinct apiculus, germ pore or callus absent, inamyloid, guttulate.

Basidia 24—32 × 6—8 µ, clavate, 4-spored with 3 µ long sterigmata, hyaline, thin-walled, without clamp connections at the base. Cystidia absent.

Hyphae not regularly arranged, polymorphous, filamentous or swollen, concolorous, smooth, without clamp connections at the septa, 5—12 µ diam.

Cortical layer of the peridium (pileus) forming a trichoderm of more or less radially oriented, cylindrical hyphae (hypoderm), constricted at the septa, without clamp connections, 5—20 µ diam., in KOH locally encrusted with brownish pigment and thin-walled, filamentous hyphae, encrusted with a conspicuous, yellowish-brown material varying in form from spots to warts, without clamp connections, forming the veil-like margin.

Hyphae of the stipe mainly parallel, smooth to rough, thin-walled, filled with an indistinct to almost hyaline plasmatic pigment but also coated with an epimembranaceous pigment, septate, inamyloid, 3—12 µ diam.

On the soil amongst decayed leaves of *Chusquea* sp. Gramineae) and various trees belonging to the Laureaceae and the Myrtaceae, Pacific Rain-forest, Fucatrihue, Prov. Osorno, Chile; altitude 50 m., 24. IX. 1963.

The holotype is preserved in my personal herbarium (Herb. E. Horak F 39) [together with a natural size water colours] and isotype has been deposited in the herbarium of the Laboratoire de Cryptogamie, Museum d' Histoire Naturelle, Paris, (PC).

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