Pseudocolus grandis a new species for the Clathraceae

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(Received for publication November 18, 1981)

Resumen: Se describe a *Pseudocolus grandis* como una nueva especie de Clathraceae hallada en granza de arroz parcialmente descompuesta. El receptáculo está formado por 7-9 brazos o columnas, con cámaras en la cara abaxial y liso o algo arrugado adaxialmente. Cada brazo es portador de la gleba en la cara adaxial, en lo que podría considerarse un tejido glebífero. En la etapa adulta la gleba se dividió en un número de unidades igual al de los brazos. Las fases gimnocárpicas poseen rizomorfos y un olor faloideo.

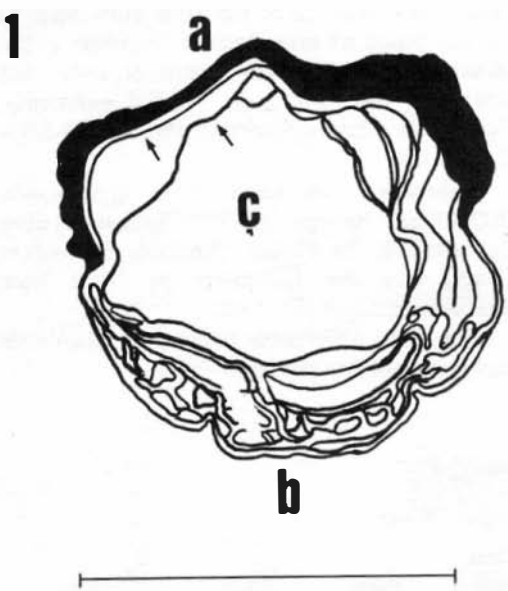
The genus *Pseudocolus* was erected by Lloyd (1907) based on *Colus fusiformis* (Fischer, 1890). Blanton (1976) and Burk (1978) gave a detailed summary on the origin of the genus and the synonymy of *P. fusiformis*. According to Dring (1973) the genus is represented "...perhaps by three species but not well known..." with *P. fusiformis* the most widely distributed. Blanton & Burk (1980), based on a collection of 940 basidiocarps with 250 angiocarpic stages from the North Carolina Botanical Garden, made a complete and very useful comparison on the measurements reported in the literature.

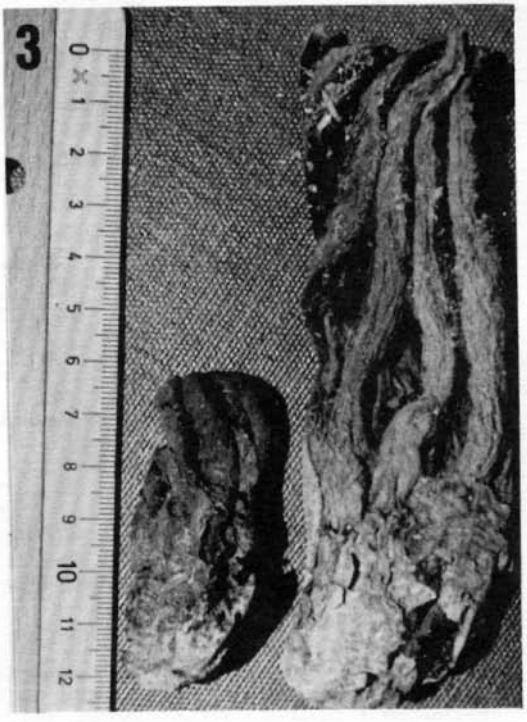
In August 1978 Rawla and Sharma collected in Lohara Khuda, Chandigarh, India (300 m), what appeared to be a new *Pseudocolus* species. It was collected in an open shady place growing on a partially rotten rice husk, full of white mycelial strands or rhizomorphs (temperature 30-36 C). Hand cross-sections of the arms show the abaxial face composed of several longitudinal chambers, while the adaxial face is wider and formed by only one large longitudinal chamber on which the gleba is located (Fig. 1). This part could be considered as glebiferous tissue. Specimens were delivered to one of the authors (JAS) who after a complete revision of the literature at hand concluded that it is a new species and as such it is described here.

Pseudocolus grandis Sáenz, Rawla & Sharma sp. nov.

Angiocarpia inmatura globosa (5-6 cm diameter) vel oblonga (7 x 5 cm), armeniaca, laevigata, rhizomorphae ad extremitates irregulariter segmentata. Volva irregulariter scissa, sicco papyracea, eborina vel flava. Receptaculum stipitatum, fusiformis, 7-16 x 4-6 cm. Stipes cavus, spongiosus, cylindricus, tamen aliquando ad basis conjunctus, 3-6 x 3-6 cm, volva inclusum, cavernulae irregulariter, usque 2 mm latae, apicem 7-9 columnaris, columnis 4-10 x 1,5 cm, porphyreis, basalis latis, versus apicis angustatis, ubicumque excentricae conjunctae. Columnis externis retifoveatis, internis verrucosis vel corrugatis, gleba portata, hic atra, mucilagina, aroma certes phalloidea. Columnis (sect. transv.) externis logistrorsis parvis cavernosis, internis unica magna caverna glebifera. Sporae ellipso-cylindricae, 2,8,-5,6 x 1,4-2,8, um laevis.

Angiocarpic stages spheroid 5-6 cm, or oblong 7x5 cm, smooth. Rhizomorphs white and irregularly segmented at their ends. Volva cream to yellowish irregularly rugged,





Figs. 1-4. *Pseudocolus grandis*. 1. Cross section of an arm of the receptacle showing: a. adaxial face with gleba. b. Abaxial face with several small chambers c. Large chamber with the glebiferous tissue (arrows). 2. Dry specimen showing volva and receptacle isolated, the latter with conical shape stipe (arrow). 3. Small and large specimens in dry state. 4. Fresh gymnocarpic fruit body showing rugged volva; upper end of stipe with arms united somewhat excentrically at their apex, and gleba dark between the arms.

papyrus-like when dry. Receptacle stipitate, fusiform, 7-16 x 4-6 cm. Stipe included in the volva, hollow, cylindric, sometimes fused at the base, conical-shaped (Fig. 2), 3-6 x 3-6 cm. with irregular chambers up to 2 mm wide. At the anterior end it splits into 7-9 arms (Figs. 3,4) or columns 4-10 x 1,5 cm, yellowish-red to reddish-brown (buff), wider at the base and acute at their apex where they unite somewhat excentrically (Fig. 4). Arms externally chambered and internally smooth or with slight depressions where the mucilaginous gleba is located; it is dark and with a typical phalloid odor. Cross sections of the arms show them to be composed of several small chambers at the abaxial face. Adaxially there is only one chamber, with the gleba located externally. Spores are eliptic-cylindrical, smooth 2,8-5,6 x 1,4-2,8 µm.

Holotype: Chandigarh, India, G.S. Rawla 200108 and Isotype JAS 2227 Specimens were deposited in the Panjab University Herbarium (PAN) and the University of Costa Rica Herbarium.

The main differences between *P. fusiformis* and *P. grandis* are shown in Table 1.

TABLE 1

	No. of arms	Stipe length mm	Arm length mm	Total length mm	Volva mm	Spores µm	Substrate
*P. fusiformis**	3-4	6-56	20-68	18-70	14-28 x 7-20	3-5 x 1,2-2,5	Soil Leaf litter Humus rotten log saw dust bamboo wood
P. grandis	7-9	3-60	40-100	70-160	55-65	2,8-5,6 x 1,4-2,8	Rice husk

* Measurements indicated represent minimum and maximum of all collection species reported (Blanton & Burk, 1980).
P. grandis differs from *P. fusiformis* in the size, number and color of the arms and other parts of the fruiting body.

ACKNOWLEDGMENTS

We thank Dr. Hanns Kreisel, Ernst-Moritz-Arndt-Universitat Greifswald, Berlín, for comments on the above species; Manuel Chavarría for reviewing the English manuscript and Jorge Gómez for the Latin description.

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