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Identifications of Myxomycetes (Order Liceales) from Bendel State, Nigeria-II

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ABSTRACT: Four species of the Myxomycetes (Order Liceales) collected from Bendel State, Nigeria, and newly described; *Licea kleistobolus, L. pusilla, Cribraria lepida* and *Dictydium cancellatum.* All of them are new records for Nigeria.

KEYWORDS: *Licea kleistobolus, L. pusilla, Cribraria lepida, Dictydium cancellatum.*

Identification of Myxomycetes of Bendel State (Let. 5°N and 8°S; Long 5°E and 7°E), Nigeria, was undertaken by Prof. L. S. Gill and his students in 1987. The first paper (Ejale and Gill, 1992) described one known species and six new ones of order *Liceales.* The present paper presented an illustrated account of four species of the order Liceales. All the four species were new records for Nigeria. The classification of Martin and Alexopoulos (1969) has been followed, although the monographs of Lakhanpal and Mukerjee (1981) and Martin *et al.* (1983) were also regularly consulted. This type collections have been deposited in the Herbarium of the University of Benin, Benin City, Nigeria.

Family *Liceaceae*

Genus *Licea* Schrad

Earlier, Ing & McHugh (1968) recorded only *Licea biforis* from Nigeria.

Key to the species of *Licea*

1. Fructifications sessile, dirty white, 0.33 mm in diameter; spores 8.3 μm in diameter, hollowed, greenish white···*L. kleistobolus*
2. Fructifications stalked; sporangium gregarious, 3.8 mm×1.5 mm; spores brown, 17.0 μm in diameter; stipe white, 0.3 mm long···*L. pusilla.*

***Licea kleistobolus* Martin (Fig. 1a and b)**

Sporangia gregarious, sessile, discoid, circular 0.33 mm in diameter or ellipsoid in outline, dirty white; operculum with a convex centre; no capillitium, spores light brown under the light microscope, almost smooth, carrying granular deposite,

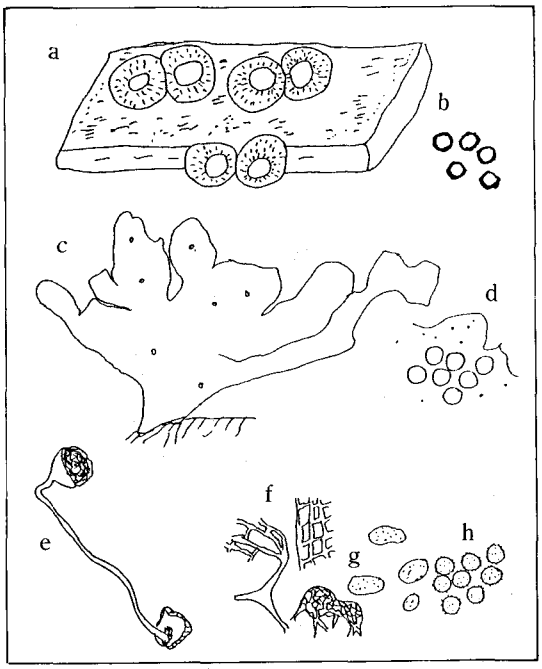

Fig. 1. Fructifications of *Licea kleistobolus*; a) On the substrate habitat (x 25), b) Spores of *Licea kleistobolus* Martin (x 260), c) Fructification of *Licea pusilla* Schrad (x 25), d) Spores of *Licea pusilla* (x 260) and parts of peridium with granules, e) Fructification of *Cribraria lepida* (x 25), f) Parts of capillitium (x 260) of *Cribraria lepida,* g) Lime granules on the fructification of *Cribraria lepida* (x 260), h) Spores of *Cribraria lepida* (x 260).

8.25 μm in diameter.

Type locality: Opoji.

Habitat: Bark of fallen trees, Nigeria

Collection number: E-89035.

Distribution: Scotland, Austria, Poland, Greece, New York to Florida, Colorado, Texas, and Nigeria.

The specimen of *Licea* is characterised by having fructifications in pairs and being dirty white in colour at the initial stage turning to bright copper with age. It is 0.33 mm in diameter. The spores are 8.0 μm in diameter. This is the first record of this species from Nigeria.

***Licea pusilla* Schrad. (Fi.g 1c and d)**

Fructification sporangiate, white, almost sessile, gregarious, globose pulvinate on a somewhat restricted base, 0.3 mm long; sporangia 3.8 μm×1.5 mm, dehiscent from above into lobes; spores brown, globose, 17 μm in diameter, minutely warted, granules around spores.

Type locality: Nigerian Institute for Oil palm Research (NIFOR) near Benin City, Nigeria

Habitat: Bark of dead trees.

Distribution: Great Britain, Germany, Switzerland, Poland, Vermont, Pennsylvania, Ontario, North Carolina, Iowa, and Nigeria.

This specimen varies from typical *L. pusilla* in having white fructification, which becomes yellowish with age, and spore size (17.0 μm in diameter). Nannenga-Bremekamp (1965) has described *Licea pusilla* as a very variable species in spore size (15.0 μm - 17.0 μm) as she recorded a specimen with spore-size of 17.0 μm in diameter and raised it to a variety of *Licea pusilla.* She also stated that, as the spore size increases, the warts become minute and this variation in the past has made many authors to split the taxon into various species.

Family Cribrariaceae

***Cribraria lepida* Meylan (Fig. 1e-h)**

Hypothalus thin, delicate, fructification sporangiate, globose, stalked. Sporangial wall thickened above and below in net-like fashion, fugacious at maturity between the meshes of the net, leaving

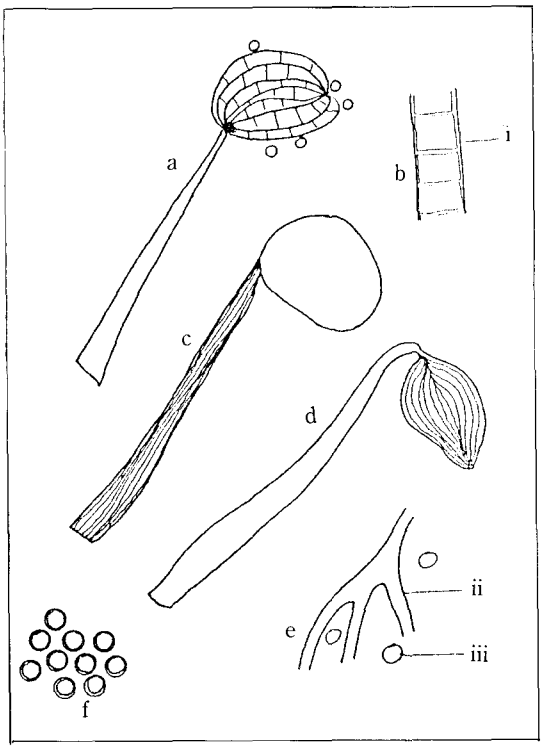

Fig. 2. *Dictydium cancellatum*; a) Fructifications and spores, x 25, b) Part of netted capillitium, x 260, c) Fructification showing striate stipe, x 25 (appr.), d) Fructification with unnetted capillitium, e) Part of capillitium and some granules x 25, and f) Spores, x 300 (appr.), i) part of capillitium x 260 (appr.), ii) part of capillitium x 300, iii) Spore x 250.

only the netted portion and a cup-like base, the calyculus net has short veins, meeting at nodes, dictydine granules present on cup; fructification purple; stipe 6.0 mm×0.1 mm; sporangium 0.7 mm diameter; spores light brown, 8.4 μm in diameter.

Type locality: Opoji, Ekpoma, Iyanomo.

Habitat: Dead twigs of angiosperms, Nigeria.

Collection number: E 89047.

Distribution: Switzerland, Indiana, Lousiana and Nigeria.

This Nigerian collection of *Cribraria lepida* agrees with type description in spore colour and size except in fructification size (6.7 mm, tall). This could be a climatic factor because the type specimen was known from Switzerland.

***Dictydium cancellatum* (Batsch.) Macbr.**

Sporangia stipitate, depressed globose, umbilicate below and twisted, 2.43 mm×0.17 mm, peridium largely fugacious leaving thickenings in the form of stout longitudinal ribs connected by delicate transverse bands, so that the meshes are almost rectangular on the sides; dictydine granules large; dark; spores smooth, globose, 6.7 μm inddiameter, purle in colour (Fig. 2a-f).

Type locality: Ekpoma.

Habitat: Dead spadix of oil palm (*Eleais guineensis* Jacq.).

Collection number: E 88011.

Distribution: Cosmopolitan.

This Nigerian collection of *Dictydium cancellatum* fits very well with the Macbride type-description. It is the first record of its occurrence in Nigeria.

摘 要

나이제리아 Bendel state에서 채취된 변형균류 즉 Liciales에 속하는 4종에 관하여 새로히 서술함.

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