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Myxomycetes of Nigeria [Genera: *Schenella* Macbr. and *Comatricha* Preuss]

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Abstract

Five species viz. *Schenella microspora* Martin, *Comatricha aequalis* Peck. *C. nigra* (Pers.) Schroet, *C. surksdorpii* Ell. Ev., and *C. typhoides* (Bull.) Rost are described. *Comatricha nigra* and *C. typhoides* have previously been recorded from Nigeria.

Resumé

Cinq espèces, c'est-à-dire *Schenella microspora* Martin, *Comatricha aequalis* Peck. *C. nigra* (Pers.) Schroet; *C. Surksdorpii* Ell. et *C. typhoides* (Bull.). Rost sont décrits. *Comatricha nigra* et *C. typhoides* ont été identifiés au Nigeria.

Introduction

Information on the systematics of the Nigerian Myxomycetes is rather scanty. The few available reports include those of Farquharson & Lister (1916); Ing (1964); and Ing & McHugh (1968). Recently the authors started a systematic survey of the Nigerian myxomycetes and three papers have been published. These are Ejale & Gill (1991, 1992 and 1995). The current paper is a continuation of the project and reports on the taxonomy of the genera *Schenella* and *Comatricha*.

The genus *Schenella* is composed of two species (Martin & Alexopoulos, 1969). During this study only one of the two species is described. A perusal of the literature reveals that this is the first record of its occurrence in Africa. For *Comatricha*, only *C. nigra* and *C. typhoides* were previously recorded from Nigeria (Ing, 1964).

Materials and Methods

Collections were made during the rainy season from dead and decaying plant materials. Identification, and preservation procedures were according to Martin and Alexopoulos (1969), Lakhanpal and Mukerji (1981), and Martin *et*

al. (1983). Vouchers are deposited in the herbarium of the Department of Botany, University of Benin, Nigeria.

Results and Discussion

Schenella microspora Martin

Sporangia, stipitate, stipe yellowish white or brown, 0.3 mm × 0.1 mm, striate, erect or nodding; sporangium globose to discoid, white to grey, 0.4 mm × 0.2 mm; peridium fugacious above; columella conic; capillitium, winding treads with teeth-like structures, extending from base to apex, and united into columnar strands, the capillitium threads, brown under the microscopic lens, distinctly roughened, 2.0 µm in diameter, spores globose, minutely verrucose, bright yellowish brown by transmitted light, 3.0–3.5 µm in diameter.

Type Locality: Nigerian Institute for Oil Palm Research (NIFOR) near Benin City.

Habitat: Unidentified dead twigs of angiosperm

Collection Date: 1989.

Collection No. E.89011

This Nigerian collection of *Schenella microspora* has a white to yellowish fructification, with distinct basal cup, a broad and distinct hypothallus. It is readily recognised by its unique, roughened capillitium and the small-sized, almost smooth, spores (3.5 µm in diameter). Previously, this species was known only from California (Martin & Alexopoulos, 1969). The present report is the first of its occurrence from the Old World.

Comatricha aequalis Peck

Sporangia gregarious, stipitate, nodding, cylindric, 0.3 mm in diameter; total height of fructification 11.2 mm; stalk black; polished, between one third to half of the total height; hypothallus well developed, brown, columella black, attaining the summit of sporangium; capillitium dense, intricate, anastomosing, purplish brown, with numerous short, pale free ends; spore blackish in mass, purplish brown by transmitted light, minutely spinulose, 6.7 µm in diameter.

Type Locality: Opoji in Esan Central Local Government Area, Edo State.

Habitat: Dead bark of Rubber trees (*Hevea brasiliensis* Willd-ex-Andr. de Juss Muell. Arg.)

Collection Date: 1990.

Collection No. E.90004.

This present collection of *C. aequalis* resembles the type description in all characters of columella, capillitium and spores, except the total height (11.2 mm) which is much (higher) than that of the type description

Fig. 1

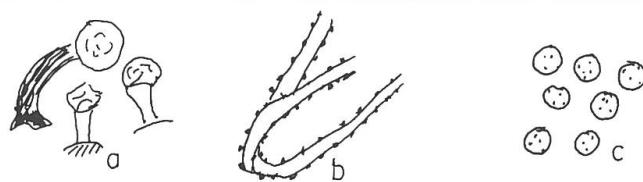


Fig. 2

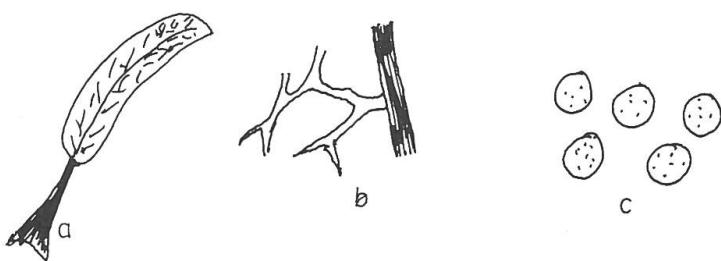


Fig. 3

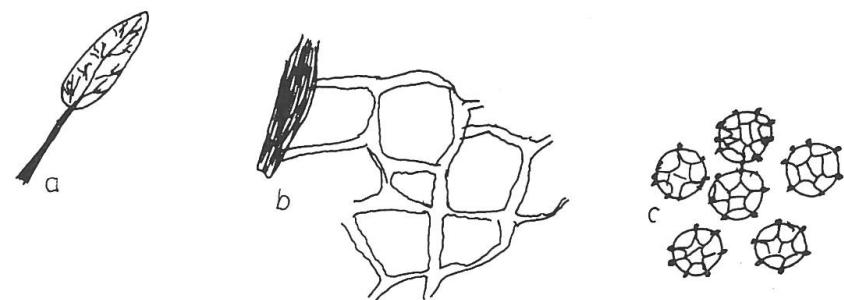


Fig. 4

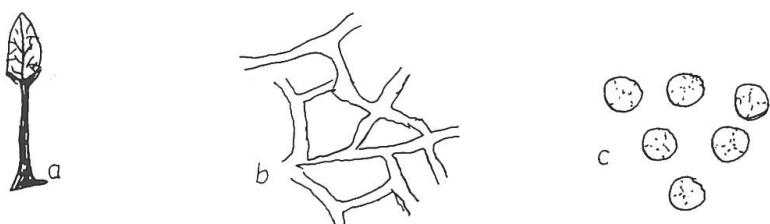
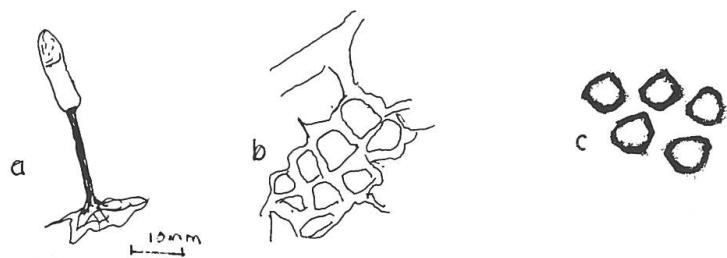


Fig. 5



(2.0 mm–6.0 mm tall). This species was previously recorded from Liberia and the Canary Islands (Farr, 1959). This report is new for Nigeria.

Comatricha nigra (Pers.) Schroet

Sporangia, scattered, stipitate, short cylindric, erect, black, total height of fructification 6.0 mm; stalk black; hair-like, relatively long, about two times the length of sporangium; hypothallus scanty, reddish; columella reaching to the summit of sporangium; capillitium intricate, the threads slender, flexuous, branching and anastomosing freely and forming a dense net; spores, dark brown in transmitted light, verrucose-reticulate, 10.0 μm in diameter.

Type Locality: Benin City.

Habitat: Bark of oil palm tree (*Eleasis guineensis* Jacq.).

Collection Date: 1988.

Collection No. E. 88042

The present Nigerian collection of *C. nigra* agrees with type description in general characteristics of fructification, and spore dimension, but differs in having verrucose-reticulate spores. In spore characteristics, it resembles *C. mirabilis* but differs in fructification character. This species has been reported before from Nigeria by Ing & McHugh (1968).

Comatricha suksdorpii Ellis & Ev.

Sporangia, densely aggregated or gregarious on dark brown hypothallus; black, ovate, stalked; total height of fructification 2.7 mm; stalk 1.7 mm long; peridium silvery, usually evanescent, sporangia bluntly obovate; columella black, reaching tip of sporangium or nearly so, giving rise to a dense, dark capillitium, with frequent anastomoses and numerous, often pallid, free ends; spores black in mass, dark brown by transmitted light, distinctly warted, 6.7 μm in diameter.

Type Locality: Benin City.

Collection Date: 1988.

Habitat: Bark of oil palm tree (*Eleasis guineensis* Jacq.).

Collection No. E. 88097.

The present collection of *C. suksdorpii* resembles the type description in the character of the fructification, but it differs in spore size. The spores of the present collection are 6.7 μm in diameter. Lakhapal & Mukerji (1981) have reported this character to be very variable (8.0 μm –12.0 μm). Even the stipe is also quite variable, from short to half or more than half of the total height of fructification. In this Nigerian collection, the stipe is more than half the total height of fructification. It is a new report for West Africa.

Comatricha typhoides (Bull.) Rost

Sporangia, gregarious or scattered, stipitate, cylindric, obtuse above, erect, brown, 0.4 mm in diameter; total height of fructification 2.4 mm; peridium silvery, tardily fugacious, sometimes persisting in patches or rarely entire, frequently as a shallow cup at base of spore chamber; stalk black, often covered with a silvery film, about half the total height, continuing into the sporangium as the tapering columella; capillitium as a dense network of pale brown threads, with numerous anastomoses, the free ultimate branchlets short, delicate; hypothallus distinct. Spores, rich lilac-brown in mass; pale by transmitted light; faintly punctate with a few scattered clusters of dark warts, 7.0 μ m in diameter.

Type Locality: Nigerian Institute for Oil Palm Research (NIFOR) near Benin City.

Habitat: Dead log of unidentified angiosperm

Collection Date: 1989.

Collection No. E. 89024

C. typhoides is a common species and the description of the present collection is typical, with a slightly longer stipe. This species has previously been reported from W. Africa by Farr (1959) and Ing (1964).

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