

Some Gasteromycetes from Northern Thailand

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SUMMARY

Eleven species of gasteromycetes are recorded from Thailand. Eight are new to the area, viz *Arcangeliella rosea* (Harkn.) Zeller & Dodge, *Cyathus berkeleyanus* (Tul.) Lloyd, *Hymenogaster* cf. *abellus* Massee & Rodw., *Morganella compacta* (Cunn.) Kreisel & Dring, *Mutinus bambusinus* (Zoll.) Fischer, *Nidula niveo-tomentosa* (Henn.) Lloyd, *Phallus rubicundus* (Bosc) Fr., *Scleroderma sinnamariense* Mont. A further compiled check-list of the gasteromycetes known from Thailand is provided.

INTRODUCTION

The gasteromycetes treated in this paper are collected in the year 1979 from Chiang Mai, Northern Thailand. Species new to Thailand are marked with an asterisk.

PHALLACEAE

**Phallus rubicundus* (Bosc) Fr.

Along road, beneath *Cassia siamea*.

**Mutinus bambusinus* (Zoll.) Fischer

On soil in bamboo-shrub, alt. 800 m. As the name indicates, often associated with bamboo, and has a tropical-subtropical distribution.

LYCOPERDACEAE

Lycoperdon pyriforme Schaeff. ex Pers.

On rotten wood in moist hill evergreen forest. Several specimens

**The Forest Herbarium, Royal Forest Department, Bangkok 10900, Thailand.

showing a caespitose growth, and with the typically almost smooth spores of *L. pyriforme*.

****Morganella compacta* (Cunn.) Kreisel & Dring**

Two collections on rotten wood in moist hill evergreen forest. The specimens have chambered subgleba, and an exoperidium with scattered elongated spines, distinguishing it from other species of the genus.

ASTRAEACEAE

***Astraeus hygrometricus* (Pers.) Morg.**

The collection from the mountainous area, on old fire bed or underground, in dry deciduous *Dipterocarpus* forest.

NIDULARIACEAE

****Nidula niveo-tomentosa* (Henn.) Lloyd**

Two collections from a *Sphagnum*-bog on decaying twigs. Its usual habitat is decaying wood among mosses.

****Cyathus berkeleyanus* (Tul.) Lloyd**

On decaying twig. *C. berkeleyanus* is recognized by its plicate, tomentose peridium, the black peridioles with a grey to buff tunica, and the relatively small, subglobose to ovoid spores, 4-5 x 6-8 micron.

ASTROGASTRACEAE

****Arcangeliella rosea* (Harkn.) Zeller & Dodge**

On soil at foothill in deciduous *Dipterocarpus*-*Quercus* forest. This partly hypogaeal species recognized by its white latex, distinct columella, and the globose, echinulate spores, 10-14 micron diam.

HYMENOGASTRACEAE

****Hymenogaster* cf. *abellus* Masee & Rodw.**

One specimen in river bed. The spores are light brown to yellow, ovoid, 10-12 x 8-10 micron, including apiculus and warts. They greatly resemble the spores of *Hymenogaster* sp. described by DISSING (1963).

SCLERODERMATACEAE

****Scleroderma sinnamariense* Mont.**

On soil in pine forest, evergreen forest. The material has reticulate spores and hyphae with clamp connections. The peridium is obviously

two-layered with a light yellow to yellow or light brown outer layer, and lemon chrome inner layer.

***Pisolithus arrhizus* (Pers.) Rauchert**

On sandy soil in Dipterocarpus forest mixed with *Quercus*. Recorded from Thailand by DISSING (1963) and CHANSRIKUL (1977).

Check-list of Gasteromycetes from Thailand

The total number of species from Thailand at present are 30. References to all previously published records are given. Species new to Thailand are marked with an asterisk.

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| * <i>Arcangeliella rosea</i> (Harkn.) Zeller & Dodge | <i>Linderia columnata</i> (Bosc) Cunn. (CHANSRIKUL 1977 as <i>Clathrus cancellatus</i> L.). |
| <i>Astraeus hygrometricus</i> (Pers.) Morg. (DISSING 1963, CHANSRIKUL 1977). | <i>Lycoperdon molle</i> Pers. (DISSING 1963). |
| <i>Calvatia craniiformis</i> (Schw.) Fr. (CHANSRIKUL 1977). | <i>L. perlatum</i> Pers. (DISSING 1963, CHANSRIKUL 1977 as <i>L. gemmatum</i> Fr.). |
| <i>C. expuliformis</i> (Pers.) Perd. (DISSING 1963). | <i>L. pyriforme</i> Pers. (PHANICHAPOL 1968). |
| * <i>Cyathus berkeleyanus</i> (Tul.) Lloyd | * <i>Morganella compacta</i> (Cunn.) Kreisel & Dring |
| <i>C. intermedius</i> (Mont.) Tul. (PHANICHAPOL 1968). | * <i>Mutinus bambusinus</i> (Zoll.) Fischer |
| <i>C. limbatus</i> (Tul.) (DISSING 1963, PHANICHAPOL 1968). | * <i>Nidula niveo-tomentosa</i> (Henn.) Lloyd |
| <i>C. pallidus</i> Berk. & Curt. (DISSING 1963). | <i>Phallus indusiatus</i> Vent. ex Pers. (PHANICHAPOL (1968) as <i>Dictyophora phalloides</i> Desv., CHANSRIKUL (1977) as <i>Dictyophora indusiata</i> (Pers.) Fischer). |
| <i>Cyathus striatus</i> (Huds.) ex Pers. (CHANSRIKUL 1977). | <i>P. rubicundus</i> (Bosc) Fr. |
| <i>C. triplex</i> Lloyd (DISSING 1963). | <i>Pisolithus arrhizus</i> (Pers.) Rauschert (DISSING 1963) as <i>P. tinctorius</i> (Mich. ex Pers.) Coker & Couch; CHANSRIKUL (1977) as <i>P. tinctorius</i> Pers.). |
| <i>Geastrum lageniforme</i> Vitt. (DISSING 1963). | <i>Scleroderma cepa</i> Pers. (DISSING 1963). |
| <i>G. mirabile</i> Mont. (DISSING 1963). | <i>S. citrinum</i> Pers. (DISSING 1963 as <i>S. aurantium</i> L. ex Pers.) |
| <i>G. triplex</i> Jungh. (DISSING 1963). | <i>S. areolatum</i> Ehrenb. (DISSING 1963 as <i>S. lycoperdoides</i> Schw.). |
| * <i>Hymenogaster</i> cf. <i>abellus</i> Masee & Rodw. | * <i>S. sinnamariense</i> Mont. |
| <i>Langermannia gigantea</i> (Batsch & Pers.) Rostk. (PHANICHAPOL 1968) as <i>Calvatia gigantea</i> (Batsch ex Pers.) Lloyd). | <i>Tulostoma berkeleyi</i> Lloyd (CHANSRIKUL 1977). |

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