Myxomycetes of North-Western Himalayas

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Introduction

Up to 1973 the number of species of Myxomycetes recorded from this rich floristic region of India was only 152 (Thind et al. 1955—73; for 1—22 papers see Thind & Khara 1969 under references; Lister 1924, Lodhi 1934 and Lakhanpal 1971, 1973).

During my collecting trips to this region (from 1955—74) fifteen additional species from this area have been recorded (including *Cribraria meylanii* Brandza, which is a new record for India). These are listed below. The differences, if any, are noted and compared with the species described by Martin & Alexopoulos (1969). Full descriptions and illustrations are purposely ommitted for the sake of brevity and to avoid unnecessary repetition.

For most of the species the classification followed Martin & Alexopoulos (1969) whereas for *Pleiomorpha biforis* the concept of Nannenga-Bremekamp (1965a) is accepted. *Cribraria meylanii* is recognised as a distinct species.

The material of all species is deposited in the Herbarium of the Botany Department, Panjab University, Chandigarh — 160014, India. Duplicate material is also kept at The National Fungus Collections, Beltsville, Maryland, U.S.A.

Enumeration of species

1. *Pleiomorpha biforis* (Morgan) Dhillon comb. nov.

Basionym: *Licea biforis* Morgan, Jour. Cinc. soc. Nat. His. 15: 131. 1893.

Matured in the moist chamber from bark of *Populus* sp.; Jagat Sukh (Manali, Himachal Pradesh), June 28, 1971, Dhillon 1833 PAN/BPI.

Typical.

2. *Cribraria meylanii* Brandza

Bull. Soc. Myc. France 44: 274. 1929.

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Collected on dead wood; Gulaba (Manali, Himachal Pradesh), September 25, 1971. DHILLON 1735 PAN/BPI. — A portion is in the private herbarium of Mrs. NANNENGA-BREMEKAMP (NE 8369).

New record for India. The present collection differs from typical species by the dark brown colour, the deeper calyculus and the more prominent marking on the calyculus to give it a definite reticulate pattern. These characters put it close to *Cribraria rubiginosa* FRIES var. *longipes* MEYLAN.

3. *Oligonema flavidum* (PECK) PECK

Ann. Rep. N. Y. State Mus. 31: 42. 1879.

Collected on dead wood; "Park" (Mussoorie, Uttar Pradesh), September 7, 1955, MANOCHA 498 PAN.

Typical. Earlier reported by THIND & SEHGAL (1963) from Darjeeling in the Eastern Himalayas.

4. *Arcyria oerstedtii* ROST.

Mon. 278. 1875.

Collected on dead wood; Hatto Peak (Narkanda, Himachal Pradesh), August 19, 1971, DHILLON 1649 PAN/BPI. — Pulga (Kulu, Himachal Pradesh), September 20, 1971, DHILLON 1719 PAN/BPI [portion of this collection in the private herbarium of NANNENGA-BREMEKAMP (NE 8865)].

Both collections differ from typical material of this species, in having a capillitium with half rings and spines respectively. Deviates from *A. magna* due to the many spines on the capillitium. The bulbous enlargements reported for the species on the capillitium are absent in the above two collections.

The species was earlier reported from New Delhi by SINGH & PUSHPAVATHY (1965).

5. *Trichia floriformis* (SCHW.) G. LISTER

Jour. Bot. 57: 110. 1919.

Collected on dead and decaying wood; Narkanda (Himachal Pradesh), April 28, 1971, DHILLON 1517 PAN/BPI. — Manali (Himachal Pradesh), September 28, 1971, DHILLON 1749 PAN/BPI.

Typical. Chiefly confined to coniferous wood.

6. *Stemonitis smithii* MACBR.

Bull. Nat. Hist. Univ. Iowa 2: 381. 1893.

Collected on dead wood; Narkanda (Himachal Pradesh), August 14, 1971, DHILLON 1606 PAN/BPI. — Dhanaulti (Mussoorie, Uttar Pradesh), September 1, 1973, DHILLON 1939 PAN/BPI.

Typical. Earlier reported by GOSH & DUTTA (1961) from Orissa,

India. THIND & SEHGAL (1963) and INDIRA (1968) also reported the species from Darjeeling, in the Eastern Himalayas and from South India respectively.

7. *Stemonitis virginiensis* REX

Proc. Acad. Phila. 43: 391. 1891

Collected on dead wood; Sanasar (Batote, Jammu & Kashmir), September 6, 1972, DHILLON 1776 PAN/BPI.

Typical. AGNIHOTHRUDU (1959) had recorded the species from Assam in North-East India.

8. *Comatricha subcaespitosa* PECK

Ann. Rep. N. Y. State Mus. 43: 71. 1890.

Collected on dead wood; Khadrala (Baghi, Himachal Pradesh), October 10, 1967, KHARA 1347 PAN/BPI (filed under *Stemonitis flavogenita* JAHN and lying at bpi under this name).

Typical. KALYANASUNDARAM (1975) had earlier described the species from Madras, India, which differs from the Khadrala collection in being taller (upto 2.5 mm instead of 2.0 mm.)

9. *Badhamia capsulifera* (BULL.) BERK.

Trans. Linn. Soc. 21: 153. 1853

Collected on dead wood; Narkanda (Himachal Pradesh), July 12, 1971, DHILLON 1587 PAN/BPI. — Baghi (Himachal Pradesh), August 28, 1971, DHILLON 1684 PAN/BPI.

Typical. THIND & SEHGAL (1960) had earlier recorded the species from Darjeeling in the Eastern Himalayas.

10. *Physarum auriscalpium* COOKE

Ann. Lyc. N. Y. II. 384. 1877.

Developed in the moist chamber from bark of *Abies* sp.; collected near Dehra Dun (Uttar Pradesh), August 29, 1973, DHILLON 1919 PAN/BPI.

The present collection differs in having larger spores (upto 13.6 μm) as usually observed (upto 12 μm). FARR (1961, 67) has discussed in detail the species complex formed by *P. decipiens*, *P. serpula* and *P. auriscalpium*. Plasmodium light orange.

11. *Physarum contextum* (PERS.) PERS.

Syn. Fung. 168. 1801.

Collected on dead twigs of conifers; Narkanda (Himachal Pradesh), April 29, 1971, DHILLON 1543 pan/bpi. — Hatoo Peak (Narkanda, Himachal Pradesh), August 16, 1971, DHILLON 1620 PAN/BPI.

THIND & SEHGAL (1963) had recorded the species from Darjeeling

(Eastern Himalayas) which differs, however, in having less warted and small (10—11 μm) spores compared with the stronger warted and larger spores (10—13.6 μm) of the present material (collected in the North-Western Himalayas).

12. *Physarum leucopus* LINK

Ges. Nat. Freunde Berlin Mag. 3: 27. 1809.

Collected on dead wood; Kilburry (Nainital, Uttar Pradesh), September 26, 1968, KHARA 1448 PAN/BPI.

Differs in having larger spores (9.5—12 μm) than reported for the species (8—10 μm).

AGNIHOTHRUDU (1959) earlier recorded the fungus from Assam in North-East India.

13. *Physarum nutans* PERS.

Am. Bot. Usteri, 15: 6. 1795.

Collected on dead wood; Hatoo Peak (Narkanda, Himachal Pradesh), June 20, 1971, DHILLON 1576 PAN/BPI. — Kausani (Uttar Pradesh), August 19, 1973, DHILLON 1898 PAN/BPI.

Typical. AGNIHOTHRUDU (1954) earlier described the fungus from Madras, India. Doubtful record since the morphology of the capillitium, as figured in this paper, is not typical for the species.

14. *Physarum serpula* MORGAN

Jour. Cinc. Soc. Nat. Hist. 19: 29. 1896.

Collected on d ad wood; Dhanaulti (Mussoorie, Uttar Prad sh), September 7, 1973, DHILLON 1959 PAN/BPI.

The present collection differs both in lacking the paler areas on the spore wall and smaller spores (8—9.5 μm) instead of 10—13 μm as reported for the species.

AGNIHOTHRUDU (1954) recorded the fungus from Madras, (South India) with larger spores (12.8 μm) than the collection cited above.

15. *Diderma indicum* THIND & SEHGAL

Mycologia 56: 564. 1964.

Collected on decaying wood and mosses; Rampur Road (Narkanda, Himachal Pradesh), April 29, 1971, DHILLON 1546 PAN/BPI.

The present collection forms scattered or small colonies and differs therefore from the type collection (K. S. THIND 377, pan) having heaped fruitingbodies. The dark circular areas on the peridium of the present is lacking in the type collection.

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References

AGNIHOTHRUDU, V. (1954). Some slime-moulds from Southern India. I. — Jour. India Bot. Soc. 33: 177—181.

— (1959). Notes on fungi from North-East India. IV & V. — Journ. Indian Bot. Soc. 38: 418—451; 453—491.

FARR, M. L. (1961). Mycological notes II. New taxa, synonyms, and records. — Am. Midl. Nat. 66: 355—361.

— (1967). Notes on Myxomycetes. — Mycopathologia 31: 305—315.

GOSH, G. R. & DUTTA, B. G. (1961). Myxomycetes from Orissa (India). I. — Mycopathol. et Mycol. appl. 16: 165—176.

INDIRA, P. U. (1968). Some slime-moulds from Southern India. VIII. — Journ. Indian Bot. Soc. 47: 155—186.

KALYANASUNDARAM, I. (1975). Some slime-moulds from Southern India. XI. — Kavaka 3: 41—54.

LAKHANPAL, T. N. (1971). Myxomycetes of Himachal Pradesh I. — Sydowia Annales Mycologici Ser II. 25: 232—239.

— (1973). Myxomycetes of Himachal Pradesh II. — Indian Phytopath. 26: 691—697.

LISTER, G. (1924). Myxomycetes from North India. — Jour. Bot. 62: 16—20.

LODHI, S. A. (1934). Indian slime-moulds (Myxomycetes). — Panjab University Pub. Lahore.

MARTIN, G. W. & ALEXOPOULOS, C. J. (1969). The Myxomycetes. — Univ. Iowa Press. Iowa City. USA.

NANNENGA-BREMEKAMP, N. E. (1965). Notes on Myxomycetes IX. The genus *Licea* in the Netherlands. — Acta. Bot. Neerl. 14: 131—147.

SINGH, H. & PUSHPAVATHY, K. K. (1965). The slime-moulds of Delhi I. — Mycopathol. et Mycol. appl. 27: 33—40.

THIND, K. S. & KHARA, H. S. (1969). The Myxomycetes of India XXIII. — Proc. Indian Acad. Sci. 69: 284—294.

THIND, K. S. & SEHGAL, H. S. (1963). The Myxomycetes of India. XIV. — Ind. Phytopath. 16: 34—43.