

## MYCOFLORA OF BARGI FOREST RANGE-I SOME NEW HOST RECORDS

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### ABSTRACT

In the present paper authors list thirty six hosts/substrates for fifteen deuteromycetous and twelve ascomycetous fungi which are new records for India.

Key Words : Fungi, Bargi, Host Records.

### INTRODUCTION

Bargi range is one of the important regions of Madhya Pradesh, which presents florestically one of the most interesting spectra of the country. It is geographically located at 23-10 North and 79-5 East. It is situated at a height of about 400 m above the sea level and nurtured by river Narmada and its tributaries. The forests are tropical and deciduous which provided favourable condition for establishment, growth and colonisation for different fungi.

During periodical mycoforensic survey of different forests of Bargi range, several interesting fungi were collected. After detailed microscopic examination and thorough survey of literature it was found that twenty seven fungi constitute thirty six new host/substrate record for India. The specimens have been deposited in the herbarium of Department of Biological Sciences, Rani Durgavati University, Jabalpur (HDBJ).

### MATERIAL AND METHODS

Specimens were collected from different parts of the forests of Bargi range and taken to the laboratory. Standard techniques were used to collect and maintain specimens (Savil, 1962; Agarwal & Hasija, 1986). Microscopic slides were prepared in distilled water and cotton blue lactophenol after taking free hand sections with the help of a sharp razor blade. The slides were examined under microscope in 10X, 45X, and 100X. The taxonomic determinations and host range were studied with the help of relevant literature (Bilgrami *et al.*, 1979, 1981, 1991., Sarbhoy *et al.*, 1986).

### RESULTS AND DISCUSSION

Fungi collected during the survey are as follows :-

1. *Alternaria alternata* (Fr.) Keissler, *Beih Bot. zbl.*, 29: 434, 1912. On dead leaves of *Pongamia glabra* Vent, (Leguminosae), Bargi, Jan. 1994, HDBJ RDS/31, Decaying leaves of *Ficus rumphii* Blume (=E. *Cordifolia* Roxb.), (Moraceae), Kaladehi forest, Jan. 1994, HDBJ RDS/79.
2. *Camarosporium berberidicolum* Delacna., *Mycologia* 56(1) : 33 1964. On dead twigs of *Butea monosperma* (Lam.) Taubert, (Leguminosae), Kaladehi forest, Sept. 1993, HDBJ RDS/14d.
3. *Ciliochorella mangifera* Syd. apud Syd. & Mitter, *Annls. mycol.* 33: 63, '1935. On dead leaves of *Diospyros melanoxylon* Roxb. (Ebenaceae) Bargi road, Jan. 1994, HDBJ RDS/40a; *Cassia fistula* L. (Leguminosae), Bargi forest Dec., 1993, HDBJ RDS/26b; *Terminalia tomentosa* W. et. Arn. (Combretaceae), Chargawa forest, Jan. 1994, HDBJ RDS/80a.
4. *Coniella granati* (Sacc.) Petrak & Sydow, *Beih. rep. spec. nov. regni. veg.* 42: 461, 1927. On dead leaves of *Diospyros melanoxylon* Roxb. (Ebenaceae), Chargawa forest, Feb. 1994, HDBJ RDS/85.
5. *Cytospora abutili* Rajak, Rai & Pandey, *J. Econ. Tax. 10 Bot.* 12 (1): 1988. On dead leaves of *Butea monosperma* (Lam.) Taubert (Leguminosae), Bargi forest, Oct. 1993, HDBJ RDS/14c.
6. *Diplodia neri* Speg., *Michelia* 1: 486, 1879. On dead leaves of *Butea monosperma* (Lam.)

Self  
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- Taubert (Papilionaceae), Bargi road, Sept 1993, HDBJ RDS/14b.
7. *Discosia artocreas* (Tode ex Fr.) Fries, *Sum. Veg. Scand.* 423, 1849. On dead leaves of *Terminalia tomentosa* W. et. Arn. (Combretaceae), Chargawa forest, Feb. 1994, HDBJ RDS/89b.
  8. *Haplosporella acaciae* Tilak & Rao, *Mycopath. Mycol. appl.* 24: 262-268, 1964. On dead twigs of *Cassia tora* L. (Leguminosae), Saliwara, March 1994, HDBJ RDS/94b.
  9. *Lasiodiplodia theobromae* (Pat.) Griff. & Mauble, *Bull. trimest. Soc. Mycol. Fr.* 25: 57, 1909. On dead wood of *Albizia procera* Benth. (Leguminosae), Dec. 1993, HDBJ RDS/18.
  10. *Leptoxyphium axillatum* (Cooke) Hughes, *Mycologia* 68: 693-820, 1976. On living leaves of *Berrya ammonilla* Roxb., (Tiliaceae), Bargi tank, Jan. 1994, HDBJ RDS/24b. *Butea monosperma* (Lam) Taubert (= *B. frondosa* Roxb.), (leguminosae), Jan. 1994, HDBJ RDST/95a. First disease appears as minute brownish patches on upper surface of lamina, later these increase in size and cover the whole surface giving black hairy appearance, in advanced stage lower surface also get infected.
  11. *Pestalotiopsis disseminata* (Thuem.) Stey., *Bull. Jard. bot Bruk.* 19: 319, 1949. On living leaves of *Albizia lebbeck* Benth. (Leguminosae), Bargi road, Jan. 1994, HDBJ RDS/42.  
Leafspots circular, grey to light brown, bordered by a dark brown line, amphigeneous, 2-7 mm in diam.
  12. *Pestalozziella artocarpus* Nag Raj & Kendrick, *Can. J. Bot.* 50: 609, 1992. On dead twigs of *Tectona grandis* L. (Verbenaceae), Bargi tank, Feb. 1994, HDBJ RDS/60
  13. *Phoma glomerata* (Cda) Wollen W. & Hochapf., *Z. parasit kde* 8: 592, 1936. On living leaves of *Randia dumetorum* Lamk., (Rubiaceae), Bargi tank, Jan. 1994, HDBJ RDS/45.  
Leaf spots circular, brown, bordered by a dark brown line, separate, amphigeneous, usually epigeneous, later coalesce, 1-4 mm in diam.
  14. *Phoma herbarum* Wested., *Bull. Acad. Belg. Cl. Sci.* 19: 118, 1852. On living leaves of *Pongamia glabra* Vent. (Leguminosae), Bargi, Feb. 1994, HDBJ RDS/67b; *Artocarpus hirsuta* Lamk, (Moraceae) Feb. 1994, HDBJ RDS/69; *Bassia latifolia* Roxb. (Sapotaceae), Chargawa forest, Feb. 1994, HDBJ RDS/71; *Kigelia pinnata* DC. (Bignoniaceae), Bargi, Feb. 1994, HDBJ RDS/78.  
Leaf spots small, sub-circular to irregular, grey brown, bordered by a black line, epigeneous, 2-10 mm in diam.
  15. *Suttoniella eriobotryae* (Ahmad) Ahmad, *Biologia Lahore* 6: 258, 1960. On dead leaves of *Cassia fistula* L. (Leguminosae), Bargi road, Feb. 1994, HDBJ RDS/76.
  16. *Bagnisiella leucadis* Patil & Patil, *Indian. J. Mycol. Pl. Pathol.* 13: 169, 1983. On bark of *Terminalia tomentosa* W. et Aon, (Combretaceae) Tamerfall (Bargi forest), Jan. 1992, HDBJ RDS/92a.
  17. *Glomerella cingulata* (Stoneman) Spaul & Sch., *V.S. Dept. Agric. Bureau of Plant Industry Bull.* 44: 751, 1903. On dead twigs of *Lantana camera* L. (Verbenaceae), Chargawa forest, Jan. 1994, HDBJ, RDS/87a.
  18. *Leptosphaeria doliolum* (Fr.) de Not., *Comm. Soc. Crittogam. Haliana* 1, 234, 1863. On dead twigs of *Lantana camera* L. (Verbenaceae), Bargi tank, Dec. 1993, HDBJ RDS/50f.
  19. *Leptosphaeria eustoma* (Fuckel) Saccardo, *Fungi Italit.* 497, 1879. On dead twigs of *Phoenix humulis* Royle, (Palmae), Bargi, Nov. 1993, HDBJ RDS/44a.
  20. *Nectria cinnabarina* (Tode ex Fries) Fries, *Summa. Veg. Scand. Sect. Post:* 388, 1849. On dead twigs of *Lantana camera* L. (Verbenaceae), Bargi tank, Dec. 1993, HDBJ RDS/50e.
  21. *Nectria peziza* (Tode ex Fries) Fries. *Summa Veg. Scand. Sect. Post.:* 388, 1849. On dead twigs of *Lantana camera* L. (Verbenaceae), Tamerfall, Jan. 1994, HDBJ RDS/100a.
  22. *Patellaria atrata* Fries, *Systema Mycologium* 2: 158, 1822. On dead twigs of *Jatropha curcas* Linn. (Euphorbiaceae), Chargawa Road, March 1994, HDBJ RDS/118.
  23. *Peroneutypa heteracantha* (Sacc.) Berlese, *Icones Fungorum* 3: 80, 1902. On dead twigs of *Zizyphus oenoplia* Mill, (Rhamnaceae), Bargi road, Jan. 1994, HDBJ RDS/112.



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24. *Phyllachora acaciae* P. Hennings, *Hedwigia*, 233, 1894. On living leaflets of *Acacia catechu* Willd. (= *A. sandra* Bedd.) (Leguminosae), Tamerfall, March 1993, HDBJ RDS/72.

The disease starts as minute brown dots on leaflets, later become stromatic, stroma amphigeneous, circular, shiny black, separate, aggregated, later coalesce, carbonaceous, 400-500 mm in diam.

25. *Phyllactinia guttata* (Wall. ex Fr.) Lev. *Ann. Sci. Nat. Bot. III, Ser. 15*: 144, 1844, 1851. On living leaves of *Pongamia glabra* Vent. (Leguminosae), Bargi, Jan. 1993, HDBJ RDS/31.

The disease first appear as small white patches on lower surface of leaf which later increase in size and coalesce covering the whole lower surface with powdery appearance, in the advanced stage innumerable black dot like fruiting bodies appear on white surface giving it blackish appearance, leaves fall down prematurely.

26. *Rhopalostroma indicum* D. Hawksw T & Muthappa., *kew Bulletin* 31 (3): 426-427, 1977. On Bark of *Ficus bengalensis* Linn. (Moraceae), Kaladehi forest, Oct. 1993, HDBJ RDS/34c.

27. *Theaxteriellopsis lignicola* Sivanesan, Panwar & Kaur., *Kavaka* 4: 39, 1976. On dead twigs of *Carrisa spinarum* A. DC. (Apocynaceae), Bargi tank, Jan. 1994, HDBJ RDS/52; On dead wood of *Berrya ammonilla* Roxb. (Tiliaceae), Tamerfall, Jan. 1994, HDBJ RDS/110a, leg R.D.S. Thakur.

Out of twenty seven fungi reported six viz., *Leptoxyphium axillatum*, *Pestalotiopsis disseminata*,

*Phoma glomerata*. P. Herbarum, *Phyllachora acaciae* and *Phyllactinia guttata* are parasitic, causing serious diseases in forest plants viz., *Berrya ammonilla* (Sooty mold); *Albizzia lebeck* (leaf spot); *Randia dumetorum* (leaf spot); *Pongamia glabra*, *Artocarpus hirsuta*, *Bassia latifolia* and *Kigelia pinnata* (leaf spot); *Acacia catechu* (tar spot) and *Pongamia glabra* (Powdery mildew) respectively, need urgent investigation to formulate effective control measures. Rest of twenty one are saprophytes colonising abundantly on various substrates at humid conditions.

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