

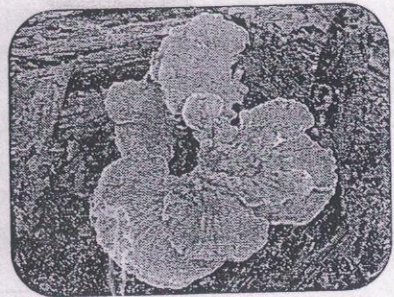
TAXONOMY AND DIVERSITY OF TRAMETES FROM THE MARATHWADA,
(MAHARASHTRA INDIA)

U. K. Raibhole

Head Department of Botany, Shivneri College Shirur Anantpal,
Latur, Marathwada, India.

ABSTRACT

Trametes is the genus under order *Aphylophorales* with about 45 species through out the globe where as India represents 10 species under the genus. Present study reports 3 species from Nanded & Parbhani District, Marathwada region of Maharashtra. The details of each species are describe & the microstructure are illustrated.



KEY WORDS: *Aphylophorales* - *Polyporaceae*- Marathwada-
Maharashtra.

INTRODUCTION:

Trametes is considered one of the largest genera in family *Polyporaceae* with about 45 species world wide.

1. Responsible for the brown rot of the hard deciduous & coniferous trees. In the air 1972 Ryvardeen who established many present days standing genera erected this genus with type species *Polyporus Dochmius* to accommodate those species similar with *fomes* in consistency but contains regular pores and sessile or effused reflexed basidiocarps.

Different taxonomic characters were used for identification purpose of the genus *Trametes* time to time various workers. Some of them are who worked extensively on this genus after examining the specimen nearly from each contain of the world. Ryvardeen erected many news species by transferring many names to this genus and also rejected several synonymas. His view of judging species under this genus includes 2. following macro & microscopic parameters.

- a. Size and shape of the basidiocarps of collection should be examined.
- b. Colour of pileus changes with age & should be carefully observed.
- c. pore size is a valuable taxonomic characters' as it is constant.
- d. colour of pore surface & context changes overtime specimen of different age should be examined.
- e. Hyphal system is timitic in measurarity of the species. That why width and colours shoul be carefully observed.
- f. Basidiocarps may vary in size and shape & hence should be carefully observed .

Gilbertson and Ryvardeen concluded that 1-3 collection are insufficient to describe a species hence as many specimen are possible to examined should be examined and wide range of characters will narrow the errors while delimiting a species. In India Bakshi, Bose & Banerjee contributed to the study of this genus.

MATERIAL AND METHODS.

Collection of the samples was collect from various Location Marathwada & surrounding location like Nanded & Parbhani District. morphological details, thin hard sections were taken from cutis, context & from the tube layer of each sample respectively. Spores were isolated from a black of tube layer Technical describe by Steyert (1972) to loosen the hyphae, the sectioned material was treated with 10% KOH, washed with water & stained with 1% Phloxine. These sections were again washed with water & finally stained with cotton blue lactoglycerine (50%) was used as mounting media. All the preparation were semi permanent. The slides were observed under compound microscope having a combination of 10X eyepiece & 10X, 45X, & oil immersion i.e.=100X

OBJECTIVES

The spores were observed under water Olympus BX 40 at 100X objective with phase contrast & dermis sections at 40X objective of the same. Photography were taken using Olympus BX-40 attached with photomicrography unit.

Result :- An artificial key where prepared to differentiate the collected species, key of different authors viz, Bakshi, (6), Ryvardeen & Johansen (10) Gilbertson & Ryverden (5), & Ryverden (11) were also followed understand their views to separate the species within genus.

KEY TO THE SPECIES OF FOMITOPSIS -

1. Pore surface, context & tubes rose pink to pinkish brown _____ 2.
1. Pore surface, context and tubes white to yellowish brown not rose pink _____ 3.
2. Tropical species, known only on hard wood _____ T. Mariana
2. Basidiocarp usually up to 2.5 cm long & wide, Pilear surface, white, becoming. black with age _____ T. Pubescens.
3. Crust not radially cracked _____ T. Maxima.

Species Description-

Trametes Mariana .: (Pers.) Ryv.

Basodocarps :- Annual, to perennial, sessile , solitary or imbricate cluster, dimidiate , upto 15 cm broad & 10 cm wide & 1-2 cm thick

Hyphal System- Trimitic, contextual generative hyphae thin walled, with clamps, hyaline 2.5-3.5µm wide, difficult to find in mature specimen, skeletal hyphae thick walled , hyline to pale brownish, non septate, with rare branching, 2-4 µm wide. Binding hypohae- Thick walled, non septate, hyaline, branched, 1.5-3 µm wide , cystidia or other sterile elements absent, Basidia - clavate , narrowed at the base, 4-sterigmate, 15-20 x 5-7.5 µm , with a basal clam. Basidio spores- short cylindrical, to oblong, hyaline, smooth, 5-6.5 µm

Specimens examined:- (mu-108) E. Citriodora (mu-13). Tamarindum indica.

GEOGRAPHICAL DISTRIBUTION-

Philippines, India, Ceylon, Austrelia, New zeland, Cuba, Brazil, Java, Jamaica, Costarica, Islands, Colombia, Canada, & India.

TRAMETES PUBESCENS .:(SCHUM.FR.) PIL.

Basidiocarps:- Annual to biennial small solitary or fused into horizontal rows, up to 10 cm long semipileate, effused- reflexed to distinctly pileate individual fruit bodies brodly to narrowly attached 5 to 2 cm long , broad, up to 1 cm thick near the base, but usually smaller, consistency corky to woody hard when dry, pileus. Dimidiate to scutellate, or unguulate, upper surface first fawn coloured & finely tomentose becoming chestnut to black & glabrous, concentrically sulkate & wrinkled in zones about 2 mm wide, partly radiately rugulose, with black crust

Margin:. Round often lighter than the rest of the pileus, entire or slightly lobed,

Pore Surface:. Becoming grey, woody coloured.

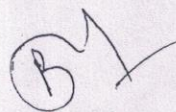
- Pores** :- Small , 4-5 per mm, dissepiments thick & entire, velutinate to farinose,
Hyphal System :- Trimitic, generative hyphae clamped, hyaline & thick walled, sometimes more yellow & thick walled 2-4 μm wide. Skeletal hyphae yellow to bay, thick walled to solid 3-4 μm wide binding hyphae very much like skeletal , but slightly thicker and moderately branched, Cystidia -- none Basidia - clavate, 4-sterigmate, 15-22x 4-5.5 μm with basal clamp, Basidiospores - cylindrical, hyaline smooth & thin walled, 7.5-9.5 x 3-3.5 μm
Specimens examined- Growing on hard woods & boswelia serata (mu-69)
Geographical distribution- Cuba, East Indies , Phillippines, Austrelia, Cellon, North America, Brazil, Africa & India, China , Japan , Mexico , Brazil , Java, Cuba, U.K., USSR, Europe.

Trametes Maxima-(Mont.) David

- Basidiocarps**- Annual ,Pilleate, broadly to narrow attached, , often fused into lateral rows or imbricate up to 6 m broad, 3 cm wide and 1 cm thick near the base , thinning out towards the margin, consistency coriaceous to hard when dry ; pileus dimidiate to flabelliform or semicircular, attached with a disc or completely sessile, with or without slightly decurrent pore layer, surface first white to pale ochraceous buff with a pink tint, finely adpressed tomentose to velutinate & concentrically faintly zoned, with age becoming glabrous; margin acute, even or lobed; pore surface cork , wood colored to buff, very variable, first poride with few split pores to sinuate; context ochraceous with the piles or paler, upto 3mm thick , near the attachment.
Hyphal System- trimitic, gerrative hayphae hyaline, clamped , thin to thick walled , strongly branched, near the hymenium, 2-3 μm wide , skeletal hyphae thick walled to solid, hyaline, 3-6 μm wide , binding hyphae moderately branched, hyaline, upto 5 mm wide, Tapering towards the ends; cystidia proper none , but both binding hyphae & predominantly the skeletal hyphae project into the hymenium as cystidial organs, smooth to finely encrusted , most conspicuous in hymenia, basidia clavate , 4- streigmate , 15-30*4.5 μm with 2 basal clamp at base; basidiospores broadly ellipsoid , 4.5-6*2-2.5 μm
Speciman Examined- on dead woods of albizia lebbek (mu-70).
Geographical Distribution- Wide speread in southern Asia , East Africa . Thailand, Indonesia, New-guinea, Japan Phillippines, India.

Literature-

1. Ames A. 1913 A consideration of structure in relation to genera of the polyporaceae. Ann.mycol.11:211-253
2. Bakshi, B.k. 1971 Indian Polyporaceae. Ind. Council Agr. Res 246pp.
3. Berkely, m.j. 1866 polyporus and the lminticus. Gard. Chron.8:753
4. Bernicchia, A.1991 Polyporaceae S.L. in India Bolongna
5. Bose, s.r. 1925. A new species of polyporaceae from Bengal. Ann. Mycol.23:179-181
6. Bose,s.r. 1927 polyporaceae of Bengal -viii. J.dept. sci. cal. Univ. 9;27-34
7. Bose, s.r. 1934. Polyporaceae of Bengal- x j. dept. sci. cal. Univ. 1:1-18
8. Bose, s.r. 1937 Polyporaceae from lokar hills , Asam . Ann. Mycol. 35:119-137
9. Bose, s.r. 1944 Importance of Anatomy in Systematics of polyporaceae. J. Ind.Bot. soc. 23:153-157
10. Bakshi, B.K. 1956 occurance of polyporus squamosus (hud.) fr.In India. Ind. Phytopath . 9:1991-194



Asstt. Professor
 Shivneri Mahavidyalaya
 Shirur Anantpal