

Taxonomy and diversity of Lenzites from the Parbhani and Nanded district of Marathwada, Maharashtra (India)

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Abstract:-Lenzites of Aphyllophorales (Basidiomycota) form the Parbhani & Nanded District (Marathwada).Lenzites is the genus from the Aphyllophorales with 50 species in world. Only 5 species have been reported from India. But the present study reports 3 species. The species are each describe

Keywords- Aphyllophorales – Polyporaceae- Marathwada- Maharashtra

Introduction:- Studies on Aphyllophorales (Lenzites) were initiated with the Launch of studies in Indian fungi. The first Indian record of a member of the Lenzites Aphyllophorales could be traced back to the work of Klotzsch 1832 in his paper on Indian polyporaceae. Later Berkeley (1939) who described few Indian Polypores. After a period over century, several Indian Aphyllophorales were reported by Lloyd (1937), Sydow et al (1906,1907,1911,1912,1916). Bose was the first Indian mycologist to provide a comprehensive account on Aphyllophorales from Bengal (1919,1923,1924,1925&1927). Vaidya & Bhor (1990), Vaidya et al 1991, Sharma (1975) & Nanda (1996). Special efforts were taken to publish the book entitled “ Genera of Indian Polypores” by Sharma (2000), who gave an idea about the diversity of Polypores (under Aphyllophorales) from India contributed to the study of this genus

Material and Methods.

Collection of the samples was collected from various locations from Parbhani & Nanded districts (Marathwada) for the morphological details, thin hard sections were taken from cutis, context & from the tube layer of each sample respectively. Spores were isolated from a block of tube layer. Technical description 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 preparations were semipermanent. 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 was taken using Olympus BX-40 attached with photomicrography unit.

Result :- During the period of present investigation, around 3 types of species like *L. beutlina*, *L. Flaccidus*, & *L. Palisoti* are recorded in the surveyed areas, Like Parbhani & Nanded district Marathwada. The genera belonging to polyporaceae family.

Key to the species of Lenzites-

1. Basidiocarps Yellowish to Tan coloured, soft velutinate and glabrous _____ *L. beutlina*.
1. Spores 6-8 μ m Long _____ 2
2. Basidiocarps upto 5 cm Long & wide; whitish to wood coloured with a pinkish tint _____ *L. Flaccidus*.
2. Hymenophore splittings into spines of flattened teeth _____ 3.

3. Basidiocarps very Large & upto 15 cm long & wide; white to ochraceous with a greyishtint _____ L. Palisoti.
3. Hymenophore poroid, daedaleoid or Lamellate, not splitting _____ 4.

Species Description-

Lenzites beutilina (L.)fr.:

Basodopcarps :- Annual, rarely perennial, pileate, broadly attached or dimidiate with a contracted base, In some cases almost stipitate with a sterile base, arising laterally & where part of the pileus covers the base, so the fruit body supercicially may appear centrally stipitate, pileus commonly semicircular to flabelliform, upto 15 cm wide and 25 cm long & upto 2cm thick at base in large & broadly attached fruit bodies; Morgins sharp, flat or bent downwords in thin specimenas, entire or lobed; pore serface in warm buff to tan colours, upper surface has become white & dirty gray; pore surface extremely variable, in some specimens poried with 1-4 mm wide; pores mostly angular, but frequently zone wise poroid; context cream to tan coloured or distinctly yellowish, upto 8mm thick.

Hyphal System- Trimitic, gerative hyphae hyaline & with clamps, 1.5-3 μm wide; skeletal hyphe straight, thin walled & pale yellowish, upto 6 μm wide at the main trunk; cystidia proper not present but binding hyphae project into the hymenium & sinulate sublate to rounded cystidia; Basidiospraes, cylindrical 6-7.5(8) into 2-3 μm , smooth, thin waled

Specimens examined:- on all dead heard woods of vitex negundo (mu-50), moringa Pterygosperma (mu-92), citrus Leman (mu-350), Terminalia cattapa (mu-120).

Geographical distribution-

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

Lenzites Flaccidus-(Bull.)fr.

Basidiocarps:- Annual to perennial, sessile or with a short stipe like base, attached laterally; Pileus upto 30 cm wide & long, & 1-3 cm thick, corcy & flexible when fresh, more rigid when dry, pileus flabiliform or circular, upper surface whit to gray or almost pale ochraceous in older specimens, surface very finely tomentose, soon glabrous, smooth or concentrically sulcate; margin thin & often deflaxed, even or lobed; stipe absent or up to 3 cm long, 1.5 cm wide; pore surface very variable, parly poride, round or angular, 1-2 per mm. partly sinuous daedaleoid & radial split, up to 2 mm wide, partly purely lamellate, with straight to sinuous, lamellae, 20-25 per c.m. measured tangentially, this may occur in a single specimen; pores; pores or lamellae up to 6 mm deep; context whit to pale cream, up to 15 mm thick near the base, woody hard when dry.

Hyphal System :- Trimitic, generative hyphae hyaline, thin walled, clamped, 2-4 μm wide, not always easy to find in dried specimens; skeletal hyphae dominating, yellow to golden & thick walled to solid, 3-6 μm wide, binding hyphae hyaline to pale yellow, thick walled, upto 3.5 μm wide, irregular branched; cystiedia none but binding hyphae project into the hymenium & may easily be interpreted acute cystidiauntil aseccion is squeezed & their true nature is revealed; basidia clavate, 4 sterigmate, 15-20 * 4-5, with a basal clamp; Basidiospores cylineric to oblongs ellipsoid, hyaline, smooth & thin walled, 5-6.5(7) * 2-2.5 μm

Specimens examined- on many hard wood & rearely on coniferious woods of pongamia glabra (mu-34), sesbania aculeta (mu-96), seshbania aculea (mu-70), sesbania aculeta (mu-4)

Geographical distribution- Cuba, East Indies, Phillippines, Austrelia, Cellon, North America, Brazil, Africa & India, China, Japan, Mexico, Brazil, Java, Cuba, U.K., USSR, Europe.

Lenzites Palisoti fr.:

Basidiocarps- Annual, Pileate, 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 poroid with few split pores to sinuate; context ochraceous with the piles or paler, upto 3mm thick, near the attachment.

Hyphal System- trimitic, gerrative hyphae hyaline, clamped, thin to thick walled, strongly branched, near the hymenium, 2-3 μ m wide, skeletal hyphae thick walled to solid, hyaline, 3-6 μ m 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 μ m with 2 basal clamp at base; basidiospores broadly ellipsoid, 4.5-6*2-2.5 μ m

Speciman Examined- on dead woods of delonix regia (mu-435).

Geographical Distribution- Wide spread in southern Asia, East Africa. Thailand, Indonesia, New-guinea, Japan, Phillippines, India.

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