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**TAXONOMY AND DIVERSITY OF PERENNIPORIA FROM THE  
PARBHANI (AUNDHANAGNATH), MARATHWADA,  
MAHARASHTRA (INDIA)**

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**Abstract:**

*Perennipora of Aphyllophorales (Basidiomycota) from ..... Marathwada.*

*Perenniporia is the genus from the Aphyllophorales with 120 species in world only 08 species have been reported from India. But the present study reports 03 species. The species are each describe.*

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**Keywords:** *Aphyllophorales polyporaceae Marathwada, Maharashtra.*

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**Introduction:**

During the revision of some Terrestrial poroid fungi from various Tropical areas left unnamed collections proved to belongs to perenniporia medulla – panis. However, They both showed particular combinations of macro and microscopic features described species (corner 1987), Decock 2001, Decock and Ryvardeen 2002, Ryvardeen and Johansen 1980). They are described below as. The polypores genus perenniporia Medulla – panis (Polyporales, Basidiomycetes is distributed in almost all the forest of the earth and very rich in species diversity. It has been extensively studied during last

recent 20 years, because it includes some forest pathogens and medicinal Fungi (Dal et al 2007, 2009) and it is characterized by distinctly truncate, thick walled cyanophilous and variably dextrinoid basidiospores and a dimitic structure with Cyanophilous and variably dextrinoid skeletal hyphae. Until now, nearly 100 species are included in the genus (Gilbertson and Ryvardeen 1987, Hattori and Lec 199 Decock et al. 2000, 2001, 2011 Dal et al. 2002 choeyklin et al 2009, Cui and Zhao 2012, Zhao et al. 2013, Decock and Ryvardeen 2013, 2015, Ryvardeen and Melo 2014, Viacheslav and Ryvardeen 2016)

During investigation on wood inhibitory fungi in East Asia, three specimens marathwada parbhani and Nanded specimens were collected from Parbhani and Nanded and they match the Characteristics of perenniporia. To confirm their taxonomic affinity and the evolutionary relationships among representative species of perenniporia, phylogenetic analysis was carried out based on morphological data represents a new species and it is described and illustrated in this paper.

#### Material and Methods:

Collections of the samples was done from various location from the parbhani (Aundhanagnath) for the morphological details, thin, hard sections were taken from the cutis context and from the tube layer of each sample respectively. Spores were isolated from a block of tube layer. Technical described by stevert (1972) to loosen the hyphae, the section materials was treated with 10% Koh washed with water and stained with 01% phloxine. These sections were again washed with water and finally stained with blue cotton lactoglycene (50%) was used as mounting media. All the preparations were semi permanent, the slides were observed under Bausch and Lomb compound microscope having a

combination of 10 x eye piece and 10x 145 oil immersion (i.e. 100x) objectives.

The spores were observed under Olympus Bx – 40 at 100 x objective with same photographs were taken using Olympus Bx 40 attached with photo micrography unit.

#### Key to species of stereurm:

1. Basidiocarp pileate - .....2
1. Basidiocarps resupinate .....4
2. Basidio carps small, upto 5 cm wide and broad; spores 12-18 cm long..... p. ochroleuca.
2. Basidio carps large, 10-20 cm wide and broad; spores 5-9.5 cm long.....3
3. Apically encrusted Cystidia present; spores pipshaped or truncate..... P. martius.
3. Apically encrusted Cystidia absent; spore subglobose to drop – shaped..... P. Medulla-panis.

#### Specimens Described:

##### Perenniporia martius (Berk.) Ryv.

Norw, J. Bot. 19 : 143, 1972; polyporus martius; Hook. J. Bot, 8 :198, 1856; polyporus hornodermus Mont; Ann. Sci. Nat. Ser. 4 Vol. 5 : 368, 1987; fames sulcatus cke; Grevillea 14: 17, 1885.

**Basidiocarps:** perennial, solitary; pileate, semicircular to dimidiate; mostly broadly attached, upto 15 cm long, 8 cm wide and 5-6 cm thick, Consistency very hard and heavy when dry; pileus applanate to

ungulate, glabrous, usually irregularly concentrically sulcate, dark bay, dirty brown to black; margin obtuse, usually cream to dirty white; pore surface cream to dirty, ochraceous, pores round, 4-5 per mm, dissepiments thick and entire, almost as thick as the pore openings; tubes totally upto 4 cm deep, distinctly to indistinctly stratified, each layer up to 6 mm deep, the younger layers often cream to cork coloured, the upper layer pale ochraceous, snuff brown to dark brown, sterile margin 1-2 mm broad; context cream, wood coloured, dark ochraceous to pale greyish black in older parts, upto 1.5 cm thick.

**Hyphal system:** Trimitic, generative hyphae hyaline, clamped and thin walled 1.5 - 2.5 cm wide; collapsed and difficult to find; skeletal hyphae abundant, dominating in the whole fruit body, strongly dextrinoid, 2-6.5 cm wide; Binding hyphae few, thick walled, dextrinoid, 2.4 cm wide; Cystidia common to apparently rare, ventricosa to clavate, thick walled nondextrinoid dextrinoid, with an apical encrusted crown; Basidia clavate, 4 sterigmate, 12-18 × 4-5 cm, with a basal clamp; basidiospores pipshaped to weakly truncate with a distinct tapering end, thick walled variably dextrinoid, smooth, often of considerably variable size within the same collection 6.9 (10) x 3.6 cm.

**Habitat:** On dead hard wood stumps causing a white rot.

**Remarks:** Japan, Indonesia, Mexico, West Bengal, South Africa, Australia, America, China, Pakistan, India.

**Perenniporia Ochroleuca (Berk) Ryv.**

Norw, J, Bot. 19 : 233, 1972; polyporus ochroleucus Berk, Hook land J. Bot. 21:53; 1845; Fomitopsis ochroleuca (Berk) cunn., N.Z. D.S.I.R. Pl. Dis. Div. Bull. 76; 5, 1949; polyporus unguates Berk., Var. Hobsoni Sacc., Syll. Fung. 6 : 137, 1888; Trancospora ochroleuca (Berk) pilat, Atl. Champ. Europ., III3 : 365, 1941.

Basidiocarp Perennial, solitary or Imbricate, sessile or attached with narrow base rather small up to 5 cm broad, 1-3 cm, wide and 3-12 mm thick, corky when fresh, but woody hard when dry; pileus glabrous, applanate, dimidiate to unguate, cream ochraceous, with age discoloured often ochraceous, with age discoloured, often zone wise from pale yellowish brown to pale purplish brown, dull to weakly shiny at maturity; margin thick and round, entire or slightly lobed, usually light coloured, pale brownish in other specimens; pores round, 2-4 per mm, dissepiments thick and entire; tubes single layered, sterile, margin very narrow, context 1-2 mm thick, upper surface as a distinct horny cuticle, the flesh itself white to ochraceous weakly zones.

**Hyphal system:** Trimitic, generative hyphae thin walled, hyaline, with irregular and few clamps 1.5-3 cm wide, often collapsed distorted; skeletal hyphae hyaline, thick walled, with a distinct lumen, diameter rather variable, 2-4 cm wide, often with secondary simple septa, straight to slightly tortuous, Binding hyphae or branched skeletal, hyaline thick walled with distinct lumen, irregularly and branched 2-4 cm wide, not forming dense complexes, but appearing as individuals scattered elongated hyphae; Cystidia none, but sometimes Cystidioles are present; Basidia clavate, 4-5 sterigmate, 12-22 × 5-6 mm, with a basal clamp; Basidiospores abundant, ellipsoid and truncate at the apex, hyaline to golden thick walled, smooth 12-17 (18) 7.5 – 11 cm, weakly or strongly dextrinoid.

**Habitat:** On dead thin branches of hardwood.

**Remarks:** South America, Africa, Afganistan, Brazil, Europe, Japan, Austria, Phillipine, Mexico, Shrilanka, Pakistan, India.

**Perenniporia Medulla – Panis** (Jacq : Fr) Donk *persoonia* 5 : 76, 1967; *Boletus Medulla – panis* (Jacq; *miscle. Austr* 1 : 141, 1778; *polyporus medulla panis* Jacq : Fr; *FYST. Mycol.* 1 : 3 80, 1821; *poria medulla panis* (Jacq : Fr) *Atti. Agiati*, III 3 : 84, 1897.

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Basidiocarps annual to perennial, becoming widely effuse, usually, resupinate but sometimes narrowly reflexed on vertical surfaces, tough, corky, pore surface highly variable in colour, cinereous, cream coloured to cream buff or bright yellow; pores circular 5-7 per mm with thick dissepiments, subiculum, thin cream coloured to yellowish; Tube layers concoloured with subiculum, distinctly stratified, each layer up to 1 mm thick; hyphal system trimitic; subicular generative hyphae thin walled, with clamps, 2-4 mm wide; subicular skeletal hyphae thick walled, aseptate 2-4 cm wide. Binding hyphae dextrinoid in Melzer's reagent, Tramal hyphae similar; Cystidia none Fusoid Cystidioles present, not projecting 15-20 x 7-8 cm, with a basal clamp, hyphal pegs present; Basidia broadly clavate with narrow base, 4 sterigmate, 15-25 x 5-8 cm, with a basal clamp; Basidiospores broadly ellipsoid to ovoid. Usually truncate, thick walled, smooth, hyaline, weakly to strongly dextrinoid in Melzer's reagent, 5-6.5 x 3-4 cm.

**Habitat:** on dead hard wood stumps.

**Specimens examined:**

**Remarks:** Java, Indonesia, Japan, Austria, Brazil, China, Mexico, Europe Cuba, South, Africa, Phillipines, West Indies, Pakistan, India.

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