Synopsis Fungorum 32

Fungiflora

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New Species:

New varieties

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Taxa validly published, but here given Mycobank no.

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Aleurodiscus himalaicus (*Agaricomycetes*) sp. nov. from India

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Abstract
Aleurodiscus himalaicus from Himachal Pradesh, India ia described.

Introduction
During the fungal forays conducted during August, 2013 in the Kufri area, district Shimla of Himachal Pradesh, India, Maninder, Avneet Pal Singh and G.S. Dhingra made few collections on fallen sticks and bark of young trees of *Quercus leucotrichophora* A. Camus, in a mixed forest. On the basis of comparison of macroscopic and microscopic characters (Eriksson & Ryvarden 1973, Rattan 1977, Ginns & Bandoni 1991, Nunez & Ryvarden 1997, Robert et al. 2005, Bernicchia & Gorjón 2010) it has been concluded to be different from the existing taxa in *Aleurodiscus*, but in particular from the closely related *A. gigasporus* in the type of basidiospores, acanthophyses, and substrate and described below as a new species.

Aleurodiscus himalaicus Maninder K., Avneet P. Singh, Dhingra & Ryvarden sp. nov. Diagnostic features of this species are two types of hyphae in the basal zone, ovoid to subfusiform, thick-walled, echinulate, amyloid basidiospores (spines visible only in Melzer's reagent), and its association with an angiospermous host *Q. leucotrichophora.*
Holotype: India, Himachal Pradesh: Kufri, on bark of *Q. leucotrichophora*, 1 August 2013, Maninder 5200 in PUN; paratype in O.
Isotypes: India, Himachal Pradesh: Kufri, on fallen stick of *Q. leucotrichophora*, 1 August 2013, Avneet Pal Singh 5985 in PUN; Kufri, on fallen stick of *Q. leucotrichophora*, 1 August 2013, G.S. Dhingra 5986 in PUN.
Mycobank No. MB 805637
Etymology: The epithet refers to the Himalayan area from where the collections have been made.
Basidiocarps resupinate, effused, adnate, up to 700 µm thick in section, hymenial surface smooth, orange red to grayish red when fresh, becoming brownish orange to light brown on drying; margins thinning, paler concolorous, generally reflexed; abhymenial surface yellowish white, velvety due to projecting basal hyphae.

Hyphal system monomitic; generative hyphae branched, septate; basal hyphae next to substrate up to 4.3 µm wide, thick-walled, horizontal, dense, with or without clamps, somewhat projecting out in the reflexed region; followed by another zone of parallel hyphae with clamps and oily contents; subhymenial hyphae up to 3.1 µm wide, thin-walled, vertical, loosely interwoven, with clamps and oily contents.
Gloeocystidia 48.0–83.0 × 6.0–10.0 µm, subfusiform, moniliform towards apical region.
Dendrohyphidia scattered in the hymenium, irregularly branched.
Acanthophyses 32.0–50.0 × 8.0–10.0 µm, abundant in the hymenium, with oily contents and protuberances at the tip, with basal clamp, non-amyloid.
Basidia up to 140 × 30 µm, clavate, 4–sterigmate, with basal clamp, filled with oily contents; sterigmata up to 25.0 µm long.
Basidiospores 25– 42 × 16 –24 µm, ovoid to subfusiform, thick-walled, echinulate (spines visible only in Melzer's reagent), amyloid, apiculate with prominent apiculus, acyanophilous.
Remarks. It resembles *A. gigasporus* Ginns & Bandoni, known only from China, in having large sized basidiospores, basidia, gloeocystidia and dendrohyphidia, however, it is different from the same in the color of the hymenial surface (orange red to grayish red in comparison to ochraceous), ovoid to subfusiform basidiospores in comparison to broadly ellipsoid, spines visible only in Melzer's reagent, different looking acanthophyses with protuberances only at the tip and its association with an angiospermous host (*Q. leucotrichophora*) in comparison to gymnospermous host (*Keteleeria davidiana*).

References

Ginns J., Bandoni R. J. 1991. *Aleurodiscus gigasporus* sp. nov. from China and *A. subglobosporus* sp. nov. from Japan. Mycologia, 83: 548-552.
Eriksson J, Ryvarden L. 1973. The *Corticiaceae* of North Europe–II. Fungiflora, Oslo. 62–261 pp.
Rattan SS. 1977. The resupinate *Aphyllophorales* of the North Western Himalayas. Bibliotheca Mycologica 60: 1–427.
Núñez M., Ryvarden L. 1997. The genus *Aleurodiscus(Basidiomycotina)*. Synopsis Fungorum 12: 1–164.
Bernicchia A. & Gorjón SP. 2010. *Corticiaceae* s.l. Fungi Europaei 12. Edizioni Candusso. Alassio. Italia. 1008 p.
Robert V., Stegehuis G. & Stalpers J. 2005. The MycoBank engine and related databases. http://www.mycobank.org

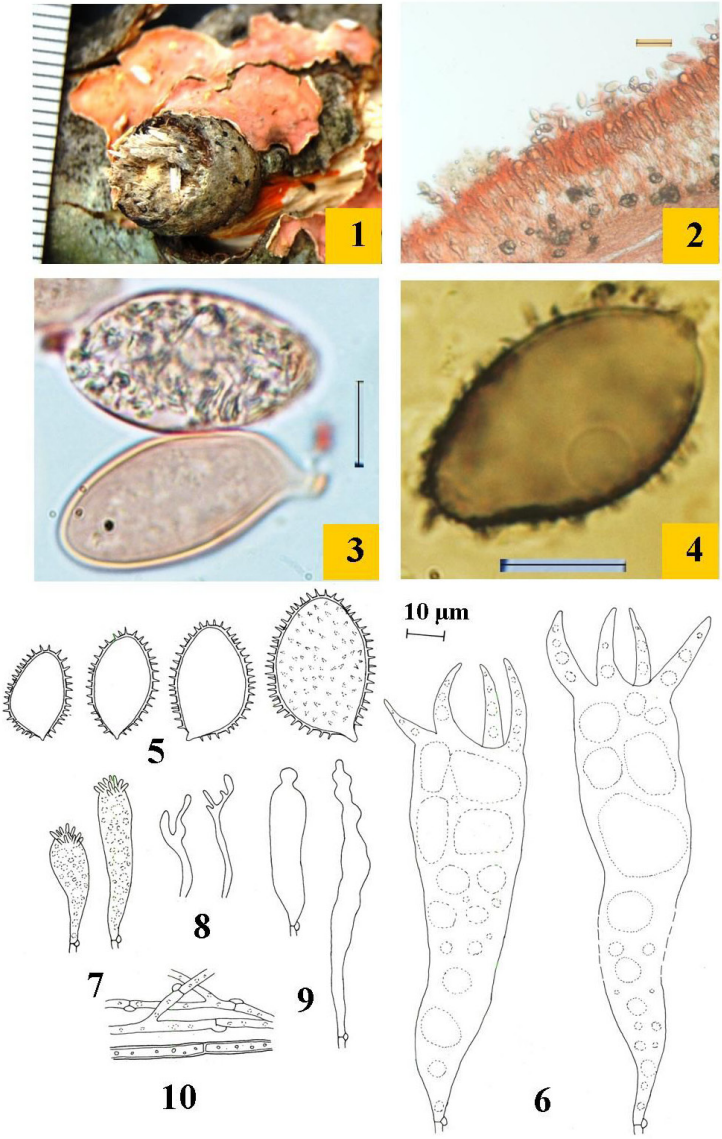

Fig. 1 1) Basidiocarp, 2) Verticial section of basidiocarp, 3) Basidiospores, 4) Same in Melzers reagent, 5) Basidiospores, 6) Basidia, 7) Acanthophyses, 8) Dendrohyphidia, 9) Gloeocystidia, 10) Hyphae. From the holotype.

A checklist of resupinate, non–poroid agaricomycetous fungi from himachal pradesh, india

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Abstract
This is the first checklist of resupinate, non–poroid Agaricomycetous fungi from Himachal Pradesh, India. In total 295 taxa belonging to 89 genera have been reported. As many as 10 corticioid taxa based on Indian holotypes are described, which include 6 new taxa (*Amphinema byssoides* var. *macrospores***,** *Ceraceomyces sublaevis* var. *grandisporus***,** *Conohypha albocremea* var. *angustisporum***,** *Hyphoderma roseocremeum* var. *minutisporum***,** *Sistotremastrum roseum***,** *Tubulicium vermiferum* var. *hexasterigmatum***)** and 4 taxa (*Hyphoderma setigerum* var. *bicystidium***,** *Tomentella cladii* var. *grandii***,** *T. kalatopii***,** *T. unicusa***)** published earlier in Indian journals without mycobank numbers. It is pertinent to mention here that 108 taxa are being reported for the first time from India, 128 (100+20) taxa first reports from the North Western Himalaya and 139 (100+20+11) new reports from Himachal Pradesh.
Key words: Corticioid fungi, Himachal Pradesh, North Western Himalaya.

Introduction
The present study is based on the collections made from Himachal Pradesh, India. Popularly known as the land of Gods, it is the 18th state of India and came into existence on November 1, 1966, but got the full status on 25th January, 1971. The word 'Hima' actually means ‘snow’ in Sanskrit and Himachal literally means 'Land of snowy mountains'. Five mountain ranges cut the state of Himachal Pradesh across – the Shiwalik, uprising from the plains of Punjab, the Dhauladhar, the Pir Panjal, the Great Himalayan and Zanskar ranges. The waters of Chandrabhaga, Ravi, Beas, Sutlej and Yamuna have given greenery and verdure to its soil (http://www.himachaltourism.gov.in). It is situated between 30^{o} 22' 40" North to 33^{o} 12' 40" North latitude and 75^{o} 45' 55" East to 79^{o} 04' 20" East longitude with altitudes ranging from 350 to 6975 meters above mean sea level. It is spread in the area of 55,673 square km. The State is bordered by the states of Jammu & Kashmir on North, Haryana on South, Punjab on West, Uttar Pradesh on South–East and Tibet/China on the East. It is divided into twelve districts i.e. Shimla (Capital), Solan, Sirmaur, Kullu, Bilaspur, Hamirpur, Kangra, Una, Mandi, Chamba, Kinnaur, Lahaul–Spiti.

The climatic conditions of Himachal Pradesh vary from hot and sub–humid tropical (350–900 m) in the southern low tracts, warm and temperate (900–1800 m), cool and temperate (1900–2400 m) and cold glacial and alpine (2400 m and above) in the northern and eastern high elevated mountain ranges. The state generally experiences three seasons. The winter season spans from October to February, summer from March to June and rainy season from July to September. The higher altitudinal areas experience heavy snow fall during the months of December to March. Temperature vary from region to region touching 40° C in valley in the summer and dropping to below –20° C in winter on the heights . The average annual rainfall is between 152cm and 172 cm, and the alpine zone remains under snow for five to six months. The forests of Himachal Pradesh are rich in vascular flora, which forms the conspicuous vegetation cover with more than 3,158 species of flowering plants, 13 species of conifers and 124 species of pteridophytes (http://hpforest.nic.in).

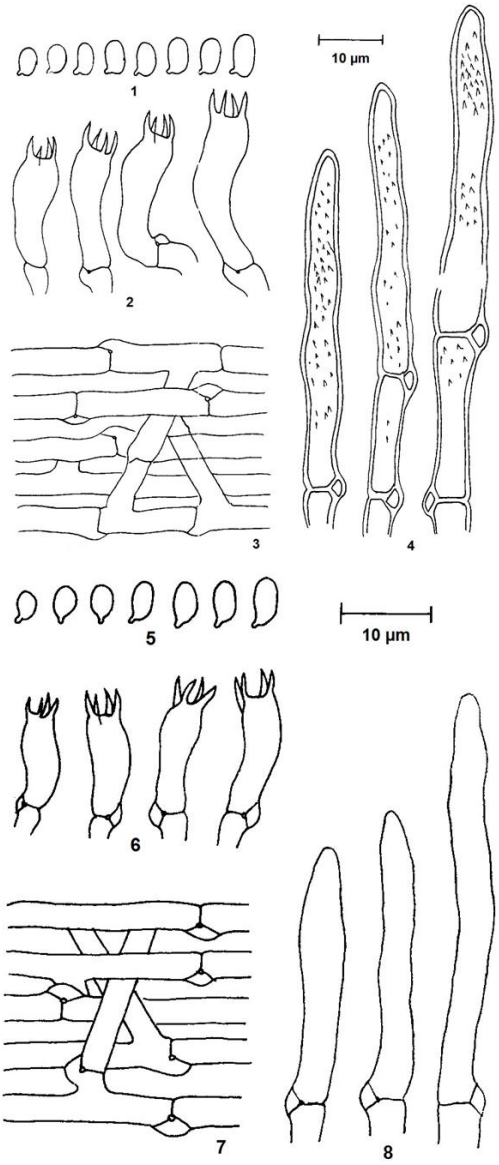
Material and Methods

Fungi have been collected from the various localities of Himachal Pradesh from 1990 to 2012. Microscopic details related to hyphae, cystidia, basidia and basidiospores of the specimens and their arrangement were studied by making crush mounts and hand cut sections respectively in water, 3–5% KOH solution and staining them in Congo red, Phloxine, Cotton Blue, Melzer's Reagent and Sulphovanillin using compound microscope and line diagrams were made by using camera lucida. Specimens are kept in Herbarium of Department of Botany, Punjabi University, Patiala, India (PUN), and some duplicates in herbaria of University of Gothenburg, Gothenburg, Sweden (GH) and Biology Institute, University of Oslo, Blindern, Oslo, Norway (O). Nomenclature follows the recent publication *Corticiaceae* s.l. (Bernicchia & Gorjon, 2010) as far as possible.

The corticioid taxa are listed alphabetically. The name of each taxon is given in bold italic followed by recent citation reference and then district wise distribution in Himachal Pradesh with herbarium numbers within bracts for the taxa worked out during the course of present study and only district wise distribution with first alphabet of the previous worker within bracts for the taxa reported by earlier workers i.e. (R) for Rattan (1977) and (B) for Bakshi (1958). An asterisk **(*)** indicates new taxon, a white circle **(**○**)** new taxon published earlier with Mycobank No., a triangle (Δ) new taxon published earlier in indian journal without Mycobank No., a black triangle(▲) for new combination, a black square **(**■**)** new specific record for India, a white square **(**□**)** new record for H.P and a diamond **(**◊**)** new record for the North Western Himalaya.

■***Acanthophysellum lividocoeruleum*** (Karst.) Parmasto, Eesti NSV Tead. Toim., Biol, seer 16: 377, 1967.
Distribution – Shimla (5007, 5008)
■***Aleurodiscus amorphus*** (Pers.) J. Schröt., in Cohn, Krypt. Fl. Schlesien 3-1(4): 429, 1888.
Distribution – Shimla (5003)
■***Aleurodiscus lapponicus*** Litsch**.**, Annls mycol. 42: 11, 1944**.**
Distribution – Kinnaur (5005, 5006)
□***Aleurodiscus oakesii*** (Berk. & M. A. Curtis) Cooke, Grevillea 3: 172, 1875.

Distribution – Shimla (5009)
Aleurodiscus taxicola K.S. Thind & S.S. Rattan, Mycologia 65: 1255, 1973.
Distribution – Shimla (R)
■***Alutaceodontia alutacea*** (Fr.) Hjortstam & Ryvarden, Syn. Fung. (Oslo) 15: 8, 2002.
Distribution – Shimla (4924)
Amaurodon viridis (Alb. & Schwein.) J. Schröt., Krypt. Fl. Schlesien 3.1: 461, 1888.
Distribution – Chamba (1738, 1739, 1740, 5035, 5036), Shimla (3482, 3483, 3484, 3485, 5031, 5032, 5033, 5034), Solan (4206), Chamba (R), Kullu (R), Shimla (R)
Amphinema byssoides (Fr.) J. Erikss., Symb. bot. upsal. 16(1): 112, 1958.
Distribution – Chamba (1626, 1627, 1853, 1854, 3681, 4851, 4855, 4857), Kinnaur (4853, 4854), Kullu (4852, 4856), Shimla (3374, 3643, 3801, 3802), Sirmaur (3628, 3629, 3630, 3631), Kullu (R), Shimla (R), Chamba (R)
****Amphinema byssoides*** **var.** ***macrospores*** Dhingra & Avneet P. Singh **var. nov.**
Mycobank 803472 Plate I, Figs 1–4
The new variety differs from *Amphinema byssoides* (Fr.) J. Erikss., in having bigger basidiospores i.e. 4.6 – 6.6 × 3.1 – 3.5 µm in comparison to 3.5 – 4.2 × 2.3 – 2.7 µm
Holotypus: Himachal Pradesh: Chamba, Dalhousie, Lakkar Mandi Kalatop road, on a stump of *Cedrus deodara*, Avneet 3528 (PUN), September 19, 2003.
Etymology: Large sized basidiospores.
Basidiocarp resupinate, loosely adnate, effused upto 200 µm thick in section, almost athelioid; hymenial surface creamish to pastle yellow to greyish yellow, almost smooth to velvety due to projecting cystidia, rhizomorphs present; margins thinning, fibrillose, paler concolorous. **Hyphal system** monomitic; generative hyphae upto 3.1 wide, branched, septate, clamped, thin – to somewhat thick–walled, impregnated with minute crystals. **Cystidia** 50.0 – 92.0 × 5.5 – 6.2 µm, hyphoid, cylindrical, septate, clamped, somewhat thick–walled, having subhyaline crystals, projecting up to 57 µm out of the hymenium. **Basidia** 15.0 – 25.0 × 4.6 – 7.0 µm, clavate, somewhat constricted, 4–sterigmate, with a basal clamp; sterigmata up to 3.1 µm long. **Basidiospores** 4.6 – 6.6 × 3.1 – 3.5 µm, ellipsoid, smooth, slightly thick–walled, inamyloid, cyanophilous.
Remarks: *A. byssoides* is different in having smaller basidiospores (3.5 – 4.2 × 2.3 – 2.7 µm).
Distribution – Chamba (3528)
■***Amyloathelia crassiuscula*** Hjortstam & Ryvarden, Mycotaxon 10(1): 204, 1979.
Distribution – Solan (4841)
Amylocorticium indicum K.S. Thind & S.S. Rattan, Trans. Brit. Mycol. Soc. 59: 125, 1972.
Distribution – Chamba (R), Kullu (R), Shimla (R)
Amylostereum chailletii (Pers.) Boidin, Revue Mycol., Paris 23: 345, 1958.
Distribution – Chamba (R), Kullu (R), Shimla (R)
Aphanobasidium subnitens (Bourdot & Galzin) Jülich, Persoonia 10(3): 326, 1979.
Distribution – Shimla (R)
Asterostroma cervicolor (Berk. & M.A. Curtis) Massee, Botanical Journal of the Linean Society 25: 155, 1889.
Distribution – Chamba (R), Shimla (R), Solan (3835, 4967)

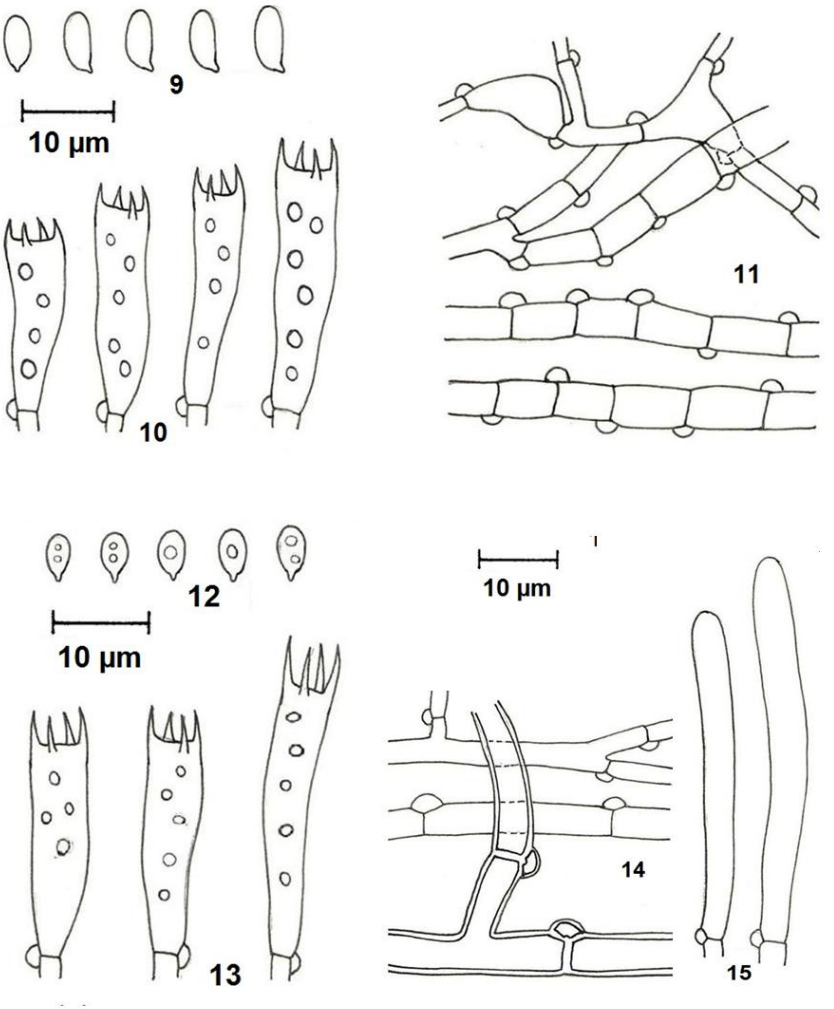


Amphinema byssoides var. *macrospores* Figs 1-4:
1. Basidiospores; 2. Basidia; 3. Generative hyphae; 4. Cystidia.
Ceraceomyces sublaevis var. *grandisporus* Figs 5-8:
5. Basidiospores; 6. Basidia; 7. Generative hyphae; 8. Cystidia.

Asterostroma musicola (Berk. & M.A. Curtis) Massee, Botanical Journal of the Linean Society 25(170): 155, 1889.
Distribution – Mandi (4968), Chamba (R), Shimla (R), Kullu (R)
■***Athelia bombacina*** Pers., Mycol. Eurpo. 1: 85, 1822.
Distribution – Chamba (1851), Kullu (3415, 3568, 3569)
□***Athelia decipiens*** (Höhn. & Litsch.) J. Erikss., Symb. bot. upsal. 16(1): 86, 1958.
Distribution – Chamba (4858), Solan (3803)
Athelia teutoburgensis (Brinkm.) Jülich, Persoonia 7(3): 383, 1973.
Distribution – Kullu (R)
○***Athelopsis parvispora*** Avneet P. Singh, Dhingra & J. Kaur, Mycotaxon 113: 327, 2010.
Distribution – Kullu (4860)
■***Athelopsis subinconspicua*** (Litsch.) Jülich, Persoonia 8(3): 292, 1975.
Distribution – Kullu (4863)
■***Boidinia furfuracea*** (Bres.) Stalpers & Hjortstam, in Hjortstam & Stalpers, Mycotaxon 14: 77, 1982.
Distribution – Solan (4199, 5001)
■***Boidinia lacticolor*** (Bres.) Hjortstam & Ryvarden, in Hjortstam, Mycotaxon 28: 19, 1987.
Distribution – Chamba (5000)
◊***Brevicellicium olivascens*** (Bres.) K.H. Larss. & Hjortstam, Mycotaxon 7(1): 119, 1978.
Distribution – Kullu (5055, 5056)
◊***Botryobasidium botryosum*** (Bres.) J. Erikss., Symb. bot. upsal. 16(1): 53, 1958.
Distribution – Chamba (4886), Sirmaur (3633, 3634)
Botryobasidium candicans J. Erikss., Svensk bot Tidskr. 52 (1): 6, 1958.
Distribution – Chamba (1838), Kangra (R), Mandi (4887), Solan (4164, 4173)
Botryobasidium isabellinum (Fr.) D.P. Rogers, Univ. Iowa Stud. Nat. Hist. 17(1): 11, 1935.
Distribution – Chamba (1609, 1610, 1611, 1612), Kullu (3543, 3544, 3545), Shimla (3375), Sirmaur (4003), Solan (3806, 4188, 4893, 4894, 4895, 4896), Chamba (R)
■***Botryobasidium obtusisporum*** J. Erikss., Symb. bot. upsal. 16(1): 57, 1958.
Distribution – Kullu (3429, 3430, 3588, 3611, 3615, 3616, 3617), Shimla (3364), Solan (4889, 4890)
■***Botryobasidium pruinatum*** (Bres.) J. Erikss., Svensk bot Tidskr. 52(1): 9, 1958.
Distribution – Kullu (3603, 3604)
Botryobasidium subbotryosum S.S. Rattan, Biblthca Mycol. 60: 210, 1977.
Distribution – Kullu (R)
Botryobasidium subcoronatum (Hoehn. & Litsch.) Donk, Meded. Nederl. Mycol. Ver. 18–20: 117, 1931.
Distribution – Kangra (R)
◊***Botryobasidium subcoronatum* var. *crassispora*** Dhingra, The Fungi – Diversity and Conservation in India: 138, 2005.
Distribution – Shimla (4891)
○***Ceraceomyces bizonatus*** Dhingra & Avneet P. Singh, Mycotaxon 106: 399, 2009.
Distribution – Kullu (3612, 3613)

■***Ceraceomyces cystidiatus*** (J. Erikss. & Hjortstam) Hjortstam, Sv. Bot. Tidskr. 67: 105, 1973.
Distribution – Solan (4842)
Ceraceomyces fibuligera (K.S. Thind & S.S. Rattan) Hjortstam, Mycotaxon 54: 190, 1995.
Distribution – Shimla (R), Kullu (R)
Ceraceomyces reidii (K.S. Thind & S.S. Rattan) S.S. Rattan, Biblthca Mycol. 60: 252, 1977.
Distribution – Kullu (R)
■***Ceraceomyces sublaevis*** (Bres.) Jülich, Willd. Beh. 7: 147, 1972.
Distribution – Chamba (1849), Kullu (3416, 3548, 3549), Sirmaur (4007, 4844)
****Ceraceomyces sublaevis*** **var.** ***grandisporus*** Dhingra & Avneet P. Singh **var. nov.**
Mycobank 803473 Plate I, Figs 5–8
It differs from *C. sublaevis* (Bres.) Julich in having shorter cystidia i.e. 28.0 – 47.0 × 2.3 – 4.6 µm in comparison to 40 – 60(100) × 4 – 5 µm and larger basidiospores i.e. 3.9 – 5.8 × 2.3 – 3.1 µm in comparison to 3 – 3.5 × 2 – 2.5 µm.
Holotypus: Himachal Pradesh: Kullu, on way to Jalori Pass, on a log of *Quercus incana*, Avneet 3560 (PUN), September 10, 2003.
Etymology: Large sized basidiospores.
Basidiocarps resupinate, loosely adnate, effused, up to 215 µm thick in section, cracks develop on drying; hymenial surface smooth to somewhat tuberculate, orange white; margins thinning out. **Hyphal system** monomitic; generative hyphae up to 3 µm wide, branched at wide angles, septate, clamped, thin–walled. **Cystidia** 28.0 – 47.0 × 2.3 – 4.6 µm, cylindrical, hyphoid, thin– to somewhat thick–walled, without encrustation, with basal clamp, embedded in the hymenium. **Basidia** 10.0 – 14.8 × 3.1 – 3.9 µm, clavate, 4–sterigmate, with basal clamp; sterigmata up to 4.7 µm long. **Basidiospores** 3.9 – 5.8 × 2.3 – 3.1 µm, ellipsoid to somewhat subcylindrical, smooth, thin–walled, inamyloid, acyanophilous.
Remarks – *C. sublaevis* is different in having bigger cystidia i.e. 40 – 60(100) × 4 – 5 µm and smaller basidiospores 3 – 3.5 × 2 – 2.5 µm.
Distribution – Kullu (3560, 3561)
Ceraceomyces tessulatus (Cooke) Jülich, Willd. Beh. 7: 154, 1972.
Distribution – Kullu (3570, 3571, 3577), Kullu (R)
Chaetoderma luna (Romell ex D.P. Rogers & H.S. Jacks.) Parmasto, Consp. System. Corticiac.: 86, 1968.
Distribution – Chamba (1617, 1618, 1619, 1863, 1864), Kullu (R), Shimla (R), Sirmaur (3988, 3993, 3997, 4001, 4005), Solan (5010, 5011, 5012, 5013, 5014)
Chondrostereum himalaicum (K.S. Thind & S.S. Rattan) S.S. Rattan, Biblthca Mycol. 60: 274, 1977.
Distribution – Kinnaur (R)
Chondrostereum purpureum (Pers.) Pouzar, Česká Mykol. 13(1): 17, 1959.
Distribution – Chamba (1615, 4846), Kullu (3431, 4845), Shimla (R), Sirmaur (4009)
○***Clavulicium hallenbergii*** Avneet P. Singh, J. Kaur & Dhingra, Mycotaxon 120: 353, 2012.
Distribution – Chamba (3683, 4898)

■***Conferticium ochraceum*** (Fr.) Hallenb., Mycotaxon 11(2): 448, 1980.
Distribution – Chamba (1399, 1400, 1401), Shimla (5016), Solan (5015)
Coniophora arida (Fr.) P. Karst., Not. Sällsk. Fauna et Fl. Fenn. Förh. 9: 370, 1868.
Distribution – Shimla (4868, 4869), Chamba (R), Kullu (R), Shimla (R)
Coniophora cordensis S.S. Rattan, Biblthca Mycol. 60: 78, 1977.
Distribution – Shimla (3486, 3487, 3504, 3512, 3515, 3516, 4870), Shimla (R)
■***Coniophora fusispora*** (Cooke & Ell.) Cooke, in Sacc. Bull. Fung. 6: 650, 1888.
Distribution – Shimla (3459, 3460, 3461, 3462)
■ ***Coniophora olivacea*** (Fr.) P. Karst., Hattsvampar 2: 162, 1879.
Distribution – Shimla (3501, 3502, 3503, 4871, 4872, 4874, 4875), Solan (4165, 4873, 4876, 4877, 4878)
Coniophora puteana (Schum. ex Fr.) Karst., Fl. Fenn. Not. 6: 370, 1868.
Distribution – Kullu (3581, 3582, 3583), Chamba (R), Shimla (R)
******Conohypha albocremea* **var.** ***angustisporum*** Priyanka & Dhingra **var. nov.**
MycoBank 803480
Plate II, Figs 9–11
The new variety is different from *C. albocremea* (Höhn. & Litsch.) Jülich in having smaller size (5.9–7.5 × 2.5–3.1 µm in comparison to 7.0–10.0 × 5.0–6.5 µm) and different shape (ellipsoid to suballantoid in comparison to ellipsoid) of basidiospores.
Holotype – India, Himachal Pradesh: Shimla, Summer Hill, on decaying gymnospermous wood, Priyanka 4453 (PUN), October 8, 2011.
Basidiocarp resupinate, effused, adnate, up to 225 µm thick in section; hymenial surface smooth, yellowish white to pale yellow to grayish yellow when fresh, cracking and becoming yellowish white to pale yellow to grayish orange on drying; margins thinning out, paler concolorous to abrupt. **Hyphal system** monomitic. Generative hyphae up to 5.0 µm wide, branched, septate, clamped, short–celled, thin–walled; basal hyphae parallel to the substratum; subhymenial hyphae almost vertical. **Cystidia** absent. **Basidia** 18.0–27.0 × 5–6.9 µm, clavate to subcylindrical, 4–sterigmate, with basal clamp and oily contents; sterigmata up to 3.3 µm long. **Basidiospores** 5.9–7.5 × 2.5–3.1 µm, ellipsoid to suballantoid, smooth, thin–walled, inamyloid, acyanophilous.
Remarks – The new variety is similar to *C. albocremea* in having short–celled hyphae and similar basidia, from which it differs in having smaller size (5.9–7.5 × 2.5–3.1 µm in comparison to 7.0–10.0 × 5.0–6.5 µm) and different shape (ellipsoid to suballantoid in comparison to ellipsoid) of basidiospores.
Distribution – Shimla (4453)
■ ***Conohypha terricola*** (Burt) Jülich, Persoonia 8(4): 442, 1976.
Distribution – Kangra (4504)
■***Corticium roseum*** Pers., Neues Mag. Bot. 1: 111, 1794.
Distribution – Manali (3419, 3579, 3580)
Cristinia helvetica (Pers.) Parmasto, Consp. System. Corticiac. (Tartu): 48, 1968.
Distribution – Kullu (R), Shimla (R)
■***Crustoderma corneum*** (Bourdot & Galzin) Nakasone, Mycologia 76(1): 45, 1984.
Distribution – Solan (4444, 4445, 4446, 4447)



Conohypha albocremea var. *angustisporum* Figs 9-11: 9. Basidiospores; 10. Basidia; 11. Generative hyphae. *H. roseocremeum* var. *minutisporum* Figs 12-15: 12. Basidiospores; 13. Basidia; 14. Generative hyphae; 15. Cystidia.

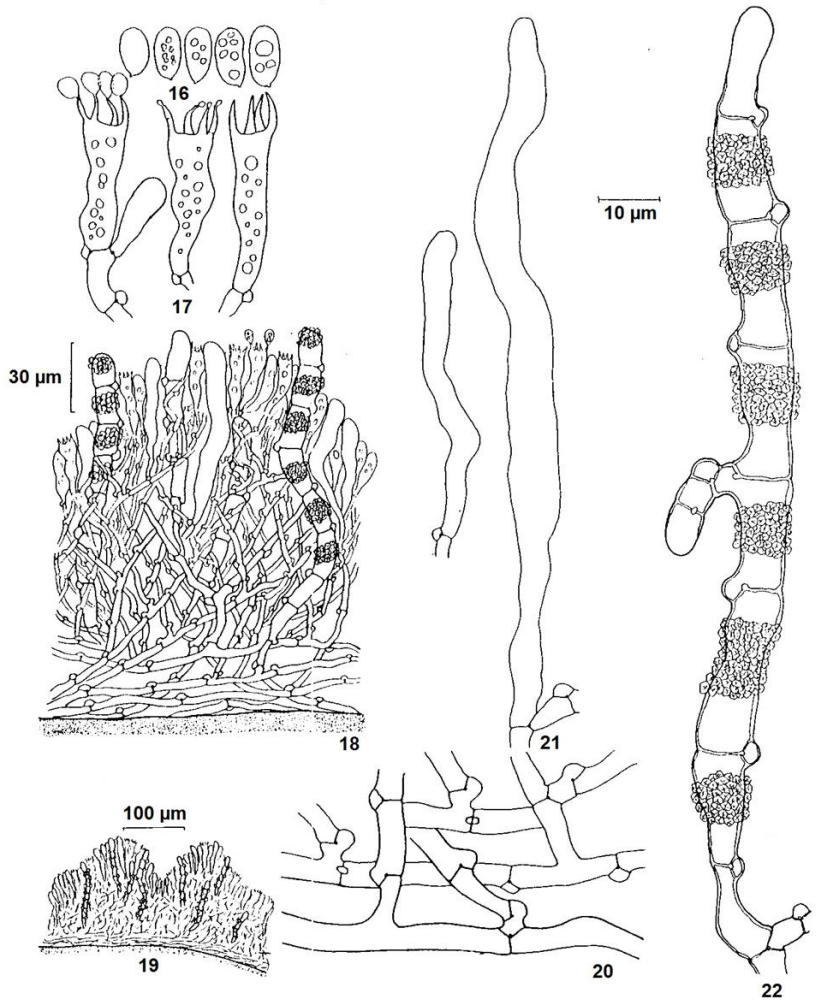
◊***Crustoderma dryinum*** (Berk. & M.A. Curtis) Parmasto, Consp. System. Corticiac. (Tartu): 88, 1968.
Distribution – Chamba (4450), Shimla (3491, 3492), Solan (4204, 4448, 4449)
■***Crustoderma testatum*** (H.S. Jacks. & Dearden) Nakasone, Mycotaxon 22(2): 416, 1985.
Distribution – Shimla (4451), Solan (3816, 3817)
Cylindrobasidium evolvens (Fr.) Jülich, Persoonia 8(1): 72, 1974.
Distribution – Chamba (3697), Kinnaur (4847, 4848), Kullu (R), Shimla (3423, 3638, 3639, 3640, 3641, 3642), Sirmaur (3636), Solan (4202)
Cystostereum murrayi (Berk. & M.A. Curtis) Pouzar, Česká Mykol. 13(1): 18, 1959.
Distribution – Shimla (R), Kullu (R)
Dacryobolus karstenii (Bres.) Oberw. ex Parmasto, Consp. System. Corticiac. (Tartu): 98, 1968.
Distribution – Kangra (4439), Kullu (R), Shimla (R), Solan (3814, 3815, 4438)
Dacryobolus sudans (Alb. & Schwein.) Fr., Summa. veg. Scand.: 404, 1849.
Distribution – Shimla (R)
■***Dendrothele alliacea*** (Quél.) P.A. Lemke, Persoonia 3(3): 366, 1965.
Distribution – Solan (4902)
◊ ***Dendrothele incrustans*** (P.A. Lemke) P.A. Lemke, Persoonia 3(3): 366, 1965.
Distribution – Chamba (4903, 4905), Solan (4904)
■ ***Dendrothele seriata*** (Berk. & M.A. Curtis) P.A. Lemke, Persoonia 3(3): 367, 1965.
Distribution – Chamba (4906)
Dentipellis subseparans Khara & S.S. Rattan, Biblthca Mycol. 60: 100, 1977.
Distribution – Shimla (R)
Dichostereum brevisporum (S.S. Rattan) Boidin & Lanq., Mycotaxon 6 (2): 284, 1977.
Distribution – Kullu (R)
□***Dichostereum effuscatum*** (Cooke & Ellis) Boidin & Lanq., Mycotaxon 6(2): 284, 1977.
Distribution – Solan (3836, 4969, 4970)
Dichostereum pallescens (Schwein.) Boidin & Lanq., Mycotaxon 6(2): 284, 1977.
Distribution – Chamba (3655, 3656, 3657), Shimla (R), Solan (4972, 4973)
Dichostereum rhodosporum (Wakef.) Boidin & Lanq., Mycotaxon 6 (2): 284, 1977.
Distribution – Chamba (4974, 4975, 4977, 4978), Kullu (R), Shimla (R)
■***Dichostereum kenyense*** Boidin & Lanq., Bull. trimest. Soc. mycol. Fr. 96: 394, 1981.
Distribution – Kinnaur (4971)
Echinodontium japonicum Imazeki, J. Jap. Bot. 11: 520, 1935.
Distribution – Shimla (R)
Epithele fulva G. Cunn., Trans. Roy. Soc. N.Z. 83: 631, 1956.
Distribution – Shimla (R)
■***Fibriciellum silvae–ryae*** J. Erikss. & Ryvarden, Cortic. N. Eur. (Oslo) 3: 375, 1975.
Distribution – Chamba (1408, 1834)
■***Fibricium rude*** (Karst.) Jülich, Persoonia 8(1): 81, 1974.
Distribution – Chamba (1835, 1836, 1837)
■***Fibulomyces mutabilis*** (Bres.) Jülich, Willd. Beih. 7: 182, 1973.
Distribution – Chamba (1468, 1841), Shimla (3368, 3510, 3511)
Galzinia ellipsospora S.S. Rattan, Biblthca Mycol. 60: 212, 1977.
Distribution – Shimla (R)

■***Galzinia incrustans*** (Höhn. & Litsch.) Parmasto, Eesti NSV Tead. Akad. Toim., Biol. 14: 225, 1965.
Distribution – Chamba (4907)
■***Gloeocystidiellum clavuligerum*** (Höhn. & Litsch.) Nakasone, Mycotaxon 14(1): 320, 1982.
Distribution – Chamba (5002)
Gloeocystidiellum luteocystidium* var. *brevisporum S. S. Rattan, Biblthca Mycol. 60: 103, 1977.
Distribution – Chamba (R)
Gloeodontia subasperispora (Litsch.)E. Larss. & K.H. Larss., Mycologia 95(6): 1062, 2003.
Distribution – Chamba (R)
Gloiothele citrina (Pers.) Ginns & G.W. Freeman, Biblthca Mycol. 157: 55, 1994.
Distribution – Kullu (R), Shimla (4998, 4999)
Gloiothele lactescens (Berk.) Boidin, C. R. Acad. Sci. Paris 233: 1668, 1951.
Distribution – Chamba (R), Kullu (R)
Gyrophanopsis polonensis (Bres.) Stalpers & P.K. Buchanan, N.Z. Jl Bot. 29(3): 333, 1991.
Distribution – Chamba (1620, 1865, 4511), Kullu (3537, 3538, 3539, 3540, 3572, 3586, 4512), Shimla (3777, 3376, 4513), Sirmaur (3977, 4514), Chamba (R), Kullu (R), Shimla (R)
■***Hastodontia hastata*** (Litsch.) Hjortstam & Ryvarden, Syn. Fung. (Oslo) 26: 49. 2009.
Distribution – Solan (3811, 4950)
Hymenochaete leonina Berk. & M.A. Curtis, J. Linn. Soc., Bot. 10(46): 334, 1868**.**
Distribution – Chamba (4914), Shimla (R)
Hymenochaete luteobadia (Fr.) Höhn. & Litsch., Sber. Akad. Wiss. Wein, Math.–naturw. Kl., Abt. 1 116: 750, 1907.
Distribution – Chamba (R), Kullu (R)
Hymenochaete mougeotii (Fr.) Massee, J. Linn. Soc., Bot. 27: 111, 1890.
Distribution – Chamba (R), Shimla (R)
Hymenochaete semistuposa Petch, Ann. R. bot. Gdns Peradeniya 9: 278, 1925.
Distribution – Chamba (R), Sirmaur (4913), Shimla (R)
Hyphoderma argillaceum (Bres.) Donk, Fungus, Wageningen 27: 14, 1957.
Distribution – Chamba (1882), Kangra (4452, 4454), Kullu (R), Shimla (3378, 3488, 3489, 3490, 4456, 4457), Solan (4455)
○***Hyphoderma bicystidiatum*** Priyanka & Dhingra, Mycotaxon 119: 255, 2012.
Distribution – Kangra (4298)
■***Hyphoderma cremeoalbum*** (Höhn. & Litsch.) Jülich, Persoonia 8(1): 80, 1974.
Distribution – Solan (4221)
■***Hyphoderma deviatum*** (S. Lundell) Parmasto, Consp. System. Corticiac. (Tartu): 113, 1968.
Distribution – Kullu (3353, 3354, 3355)
■***Hyphoderma luridum*** (Bourdot & Galzin) J. Erikss. & Hjortstam, in J. Erikss. & Ryvarden, Cortic. N. Eur. (Oslo) 4: 677, 1976.
Distribution – Sirmaur (4462)

■***Hyphoderma macedonicum*** (Litsch.) Donk, Fungus, Wageningen 27: 15, 1957.
Distribution – Kullu (4463), Shimla (4464)
■***Hyphoderma medioburiense*** (Burt) Donk, Fungus, Wageningen 27: 15, 1957.
Distribution – Chamba (1883), Shimla (3752, 3818)
■***Hyphoderma obtusum*** J. Erikss., Symb. bot. upsal. 16(1): 97, 1958.
Distribution – Shimla (4465)
■***Hyphoderma occidentale*** (D.P. Rogers) Boidin & Gilles, Cryptog. Mycol. 15(2): 138, 1994.
Distribution – Sirmaur (4051)
■***Hyphoderma orphanellum*** (Bourdot & Galzin) Donk, Fungus, Wageningen 27: 15, 1957.
Distribution – Kullu (4619)
○***Hyphoderma parvisporum*** Avneet P. Singh, Priyanka, Dhingra & Singla, Mycotaxon 111: 71, 2010.
Distribution – Chamba (1623)
****Hyphoderma roseocremeum*** **var.** ***minutisporum*** Priyanka & Dhingra **var. nov.**
Mycobank 803481 Plate II, Figs 12–15
The new taxon is characterized by dull rose colour of the basidiocarp, 4.3–5.6 × 2.5–2.8 µm, ellipsoid basidiospores and 49.0–58.0 × 3.0–4.3 µm, tubular, smooth, thin–walled, cystidia.
Holotype – India, Himachal Pradesh: Chamba, about 1 km from Lakkar Mandi towards Kalatop, on decaying stump of *C. deodara*, Priyanka 4470 (PUN), August 16, 2010.
Basidiocarp resupinate, effused, adnate, up to 450 µm thick in section; hymenial surface odontoid; orange white to grayish orange to pale orange when fresh, becoming pale orange to grayish orange to light brown on drying; margins thinning out, paler concolorous to abrupt at places. **Hyphal system** monomitic. Generative hyphae up to 6.3 µm wide, branched, septate, clamped, thin– to somewhat thick–walled, with oily contents; basal hyphae parallel to the substratum; subhymenial hyphae vertical and densely packed. **Cystidia** 49.0–58.0 × 3.0–4.3 µm, tubular, smooth, thin–walled, with basal clamp; arising from basal hyphae, enclosed to slightly projecting. **Basidia** 22.0–27.0 × 5.0–6.6 µm, clavate to subclavate,4–sterigmate, with basal clamp, rich in oily contents; sterigmata up to 5.6 µm long. **Basidiospores** 4.3–5.6 × 2.5–2.8 µm, ellipsoid, smooth, thin–walled, inamyloid, acyanophilous, with oil drops.
Remarks – It resembles and placed in *Hyphoderma roseocremeum* (Bres.) Donk on the basis of dull rose colour of the basidiocarp, but is being described as a new variety due to smaller sized basidiospores (4.3–5.6 × 2.5–2.8 µm in comparison to 9.0–12.0 × 3.0–4.0 µm) and cystidia (49.0–58.0 × 3.0–4.3 µm in comparison to 50.0–130.0 × 6.0–8.0 µm).
Distribution – Chamba (4470)
Hyphoderma setigerum (Fr.) Donk, Fungus, Wageningen 27: 15, 1957.
Distribution – Chamba (1474, 1476, 4499), Kangra (4479, 4488, 4489, 4490, 4491, 4492, 4493, 4494, 4495, 4496, 4497, 4498), Kinnaur (4500), Kullu (3434, 3518, 3556, 3557, 3558, 3559, 3587), Shimla (4487),Sirmaur (3632, 4010, 4014, 4017, 4019), Solan (3822, 3823, 4159, 4158, 4162, 4172, 4179, 4478, 4480, 4481, 4482, 4483, 4484, 4485, 4486)
Δ***Hyphoderma setigerum*** **var.** ***bicystidium*** Dhingra & Singla, J. Indian Bot. Soc. 72: 31, 1993. Mycobank 803482

Plate III, Figs 16–22
The new variety is marked by the presence of cylindrical, thin–walled leptocystidia along with septate, clamped, thick–walled septocystidia.
Holotype: Himachal Pradesh, Chamba, Banikhet, on branches of *Xanthoxylum,* Nishi 1469(PUN), September 23, 1989.
Basidiocarp resupinate, effused, adnate, up to 160 µm thick in section; hymenial surface smooth, fibrous, or porous when young, becoming odontioid (with small teeth on a smooth surface) or irregularly tuberculate with age, cracking on drying (some cracks due to cracks in the substratum); grayish white to pale yellow; margins thinning out, somewhat fibrous under lens, paler concolorous. **Hyphal system** monomitic. Generative hyphae up to 5.6 µm wide, septate, clamped; basal hyphae sparsely branched, thin– to somewhat thick–walled, loosely arranged, parallel to the substrate; subhymenial hyphae much branched, closely united, thin–walled, closely united, at right angles to the subicular hyphae. **Cystidia** of two kinds: i) **Septocystidia** up to 230 µm long, cylindrical to hyphoid, thick–walled except at the apical part, septate, clamped, encrusted, encrustation dissolves in 3% KOH, enclosed or projecting up to 16 µm out of the hymenium; ii) **Leptocystidia** 51.0–120.0 × 4.5–8.5 µm, tubular or fusiform, thin–walled, smooth, with basal clamp. **Basidia** 17.0–32.0 × 5.0–7.5 µm, clavate to subclavate, 4–sterigmate, with basal clamp; sterigmata up to 6.2 µm long. **Basidiospores** 7.9–12.5 × 3.7–5.1µm, narrowly ellipsoid to suballantoid, smooth, thin–walled, apiculate, inamyloid, acyanophilous.
Remarks – *Hyphoderma setigerum* (Fr.) Donk differs from the new taxon in lacking leptocystidia.
Distribution – Chamba (1469), Kangra (4502), Kinnaur (4503), Solan (4501)
■***Hyphoderma sibiricum*** (Parmasto) J. Erikss. & Å. Strid, in J. Erikss. & Ryvarden, Cortic. N. Eur., (Oslo) 3: 535, 1975.
Distribution – Kullu (3417, 3593, 3594, 3595), Solan (4203, 4615)
○***Hyphoderma subglobosum*** Priyanka & Dhingra, Mycotaxon 119: 257, 2012.
Distribution – Kangra (4299)
Hyphodontia alutaria (Burt) J. Erikss., Symb. bot. upsal. 16 (1): 104, 1958.
Distribution – Chamba (1621, 3379), Kullu (3574, 3575, 3589, 3600), Shimla (4940, 4942, 4941, 4943), Solan (4193, 4937, 4938, 4939, 4944), Chamba (R), Shimla (R)
Hyphodontia arguta (Fr.) J. Erikss., Symb. bot. upsal. 16 (1): 104, 1958.
Distribution – Chamba (3669, 3670), Kullu (3550, 3551, 3552, 3605), Shimla (3380, 4945), Sirmaur (4011), Chamba (R), Kullu (R), Shimla (R)
Hyphodontia pallidula (Bres.) J. Erikss., Symb. bot. upsal. 16 (1): 104, 1958.
Distribution – Chamba (1622, 1871, 1872, 1873, 3661, 3662, 3691), Kullu (3533, 3534, 3590, 3591, 3592), Shimla (3384, 4953, 4954, 4955, 4958, Sirmaur (3653, 3980, 3998), Solan (3812, 4185, 4956, 4957), Chamba (R), Kullu (R)
◊***Hyphodontia propinqua*** Hjortstam, Mycotaxon 17: 553, 1983.
Distribution – Chamba (1628, 1471, 1473)
Hypochnicium cremicolor (Bres.) H. Nilsson & Hallenb., Mycologia 95(1): 57, 2003.
Distribution – Chamba (4519), Kullu (R), Kangra (4517, 4518), Shimla (4516), Solan (4161, 4515)
Hypochnicium cystidiatum Boid. & Gill., Cah. de La Maboké 9(2): 90, 1971.

PLATE III



Hyphoderma setigerum var. *bicystidium* Figs. 16-22: 16. Basidiospores; 17. Basidia; 18: V.S. through basidocarp; 19: Sectional view of basidocarp 20. Generative hyphae 21. Leptocystidia; 22. Septatecystidia

Distribution – Shimla (R)
Hypochnicium erikssonii Hallenb. & Hjortstam, Windahlia 18: 44, 1990.
Distribution – Chamba (4508, 1866), Kulu (R), Shimla (3425, 3500, 3825)
◊***Hypochnicium geogenium*** (Bres.) J. Erikss., Symb. bot. upsal. 16 (1): 101, 1958.
Distribution – Simaur (4000), Solan (4509)
Hypochnicium longicystidiosum (S.S. Rattan) Hjortstam & Ryvarden, Mycotaxon 20 (1): 135, 1984.
Distribution – Kullu (R)
Hypochnicium lundellii (Bourdot) J. Erikss., Symb. bot. upsal. 16 (1): 101, 1958.
Distribution – Shimla (R)
■***Hypochnicium punctulatum*** (Cooke) J. Erikss., Symb. bot. upsal. 16 (1): 101, 1958.
Distribution – Solan (3824, 4507)
■***Hypochnicium subrigescens*** Boidin, Cahiers de la Maboké 9(2): 90, 1971.
Distribution – Chamba (4520)
Kavinia alboviridis (Morgan) Gilb. & Budington, J. Ariz. Acad. Sci. 6(2): 95, 1970.
Distribution – Kullu (R), Shimla (R)
■***Kneiffiella abieticola*** (Bourdot & Galzin) Jülich & Stalpers, Verh. K. ned. Akad. Wet., 2 Sectie 74: 130, 1980.
Distribution – Shimla (4925)
◊***Kneiffiella alienata*** (S. Lundell) Jülich & Stalpers, Verh. K. ned. Akad. Wet., 2 Sectie 74: 130, 1980.
Distribution – Chamba (4926, 4927, 4936, 4927, 4936), Shimla (3810)
Kneiffiella altaica **(**Parmasto) Hjortstam & Ryvarden, Syn. Fung. (Oslo) 26: 42, 2009.
Distribution – Kullu (R), Shimla (R)
■***Kneiffiella barba–jovis*** (Bull.) P. Karst. [as 'barba–jobi'], Bidr. Kann. Finl. Nat. Folk 48: 371, 1889.
Distribution – Shimla (4948)
Kneiffiella efibulata (J. Erikss. & Hjortstam) Jülich & Stalpers, Verh. K. ned. Akad. Wet., 2 Sectie 74: 130, 1980.
Distribution – Kullu (R)
▲***Lagarobasidium subdetritica*** (S.S. Rattan) Jaspreet & Dhingra comb. nov - *Hyphodontia subdetritica* S.S. Rattan, Biblthca Mycol. 60: 343, 1977.
MB 807076
Distribution – Shimla (R)
Laxitextum bicolor (Pers.) Lentz, U.S. Dept. Agric. Monogr. 24: 19, 1956.
Distribution – Chamba (R), Kullu (R), Shimla (R), Solan (4163, 4964, 4965)
■***Laxitextum incrustatum*** Hjortstam & Ryvarden, Mycotaxon 13: 35, 1981.
Distribution – Solan (4174, 4966)
Leptosporomyces fuscostratus (Burt.) Hjortstam, Windahlia 17: 58, 1987.
Distribution – Kullu (R)
Leptosporomyces globosus S.S. Rattan, Biblthca Mycol. 60: 269, 1977.
Distribution – Kullu (R)
■***Leptosporomyces galzinii*** (Bourdot) Jülich, Willd. Beih. 7: 192, 1972.
Distribution – Solan (4864)
Leptosporomyces ovoideus Jülich, Willd. Beih. 7: 203, 1972.

Distribution – Shimla (R), Kullu (R)
■***Leptosporomyces roseus*** Jülich, Willd. Beih. 7: 208, 1972.
Distribution – Chamba (3524, 3526, 3527, 4865, 4866, 4867), Sirmaur (3999)
Leucogyrophana mollusca (Fr.) Pouzar, Česká Mykol. 12: 33, 1958.
Distribution – Kullu (R), Solan (4155, 4879, 4880, 4881)
Leucogyrophana olivascens (Berk. & M. A. Curtis) Ginns & Weresub, Mem. N. Y. bot. Gdn. 28: 96, 1976.
Distribution – Kullu (R), Shimla (3508, 3509), Solan (4882)
◊***Licrostroma subgiganteum*** (Berk.) P.A. Lemke, Can. J. Bot. 42: 763, 1964.
Distribution – Chamba (4909)
Lopharia cinerascens (Schwein.) G. Cunn., Trans. Roy. Soc. N.Z. 83(4): 622, 1956.
Distribution – Kinnaur (R)
◊ ***Lyomyces sambuci*** (Pers.) P. Karst., Bidr. Känn. Finl. Nat. Folk 37: 153, 1882.
Distribution – Chamba (4472), Kangra (4473, 4476), Kullu (3366, 3466), Shimla (3463, 3464, 3465, 3820, 3821, 4477), Solan (3530, 4194, 4196, 4474, 4475), Shimla (R)
■***Megalocystidium luridum*** (Bres.) Jülich, Persoonia 10: 140, 1978.
Distribution – Chamba (3663, 3664, 3665)
Metulodontia nivea (P. Karst.) Parmasto, Consp. System. Corticiac. (Tartu): 118, 1968.
Distribution – Chamba (4993, 4994, 4995), Kullu (R), Shimla (3381, 3405, 3406, 3407), Solan (4186, 4187), Chamba (R)
■***Odonticium septocystidia*** (Burt) Zmitr. & Spirin [as 'septocystidiatum'], in Zmitrovich, Malysheva & Spirin, Mycena 6: 40, 2006.
Distribution – Solan (4552)
■***Paullicorticium delicatissimum*** (Jacks.) Liberta, Brittonia 14: 222, 1962.
Distribution – Solan (4899)
Peniophora cinerea (Pers.) Cooke, Grevillea 8: 20, 1879.
Distribution – Chamba (1616), Kullu (R), Sirmaur (3976, 4996)
◊***Peniophora pithya*** (Pers.) J. Erikss., Symb. bot. upsal. 10: 45, 1950.
Distribution – Chamba (1862), Shimla (3839, 4997)
Peniophora quercina (Pers.) Cooke, Grevillea 8: 20, 1879.
Distribution – Kullu (R)
◊***Peniophora suecica*** Litsch., Ann. Mycol. 39: 131, 1941.
Distribution – Chamba (3687, 3688, 3689)
■ ***Peniophorella clavigera*** (Bres.) K.H. Larss., Mycol. Res. 111(2): 191, 2007.
Distribution – Chamba (1881, 4458)
■ ***Peniophorella guttulifera*** (P. Karst.) K.H. Larss., Mycol. Res. 111(2): 192, 2007.
Distribution – Chamba (4459, 4460)
Peniophorella pallida (Bres.) K.H. Larss., Mycol. Res. 111(2): 192, 2007.
Distribution – Kullu (3424, 3562, 3563, 3564, 3565), Chamba (R)
■ ***Peniophorella praetermissa*** (P. Karst.) K.H. Larss., Mycol. Res. 111(2): 192, 2007.
Distribution – Chamba (1880), Kullu (3432, 3576), Shimla (R), Sirmaur (3433, 3624, 3990, 3991, 4013, 4466), Solan (3818, 4180, 4469)
Peniophorella pubera (Fr.) P. Karst., Bidr. Känn. Finl. Nat. Folk 48: 427, 1889.
Distribution – Chamba (1624, 1625, 1874, 1875, 1876, 1877, 1878, 3654, 3658), Kullu (3514, 3585, 3619) Shimla (3369, 3370, 3371, 3495, 3496, 3497, 3513, 3514, 3646),

Solan (4284, 4468), Sirmaur (4006, 4008, 4012, 4015, 4166, 4169, 4171, 4177, 4467), Shimla (R), Chamba (R)

◊ ***Peniophorella odontiaeformis*** (Boidin & Berthier) K.H. Larss., Mycol. Res. 111(2):192, 2007.

Distribution – Solan (4471)

■ ***Peniophorella tsugae*** (Burt) K.H. Larss., Mycol. Res. 111(2): 192, 2007.

Distribution – Chamba (1470), Kullu (3712, 3713), Sirmaur (4505)

Phanerochaete affinis (Burt.) Parmasto, Consp. System. Corticiac. (Tartu): 84, 1968.

Distribution – Chamba (R)

■***Phanerochaete calotricha*** (P. Karst.) J. Erikss. & Ryvarden, Corticiac. N. Eur. (Oslo) 5: 997, 1978.

Distribution – Sirmaur (3986, 4546), Solan (3828, 4200)

■***Phanerochaete deflectens*** (P. Karst.) Hjortstam, Windahlia 17: 58, 1987.

Distribution – Shimla (4548), Solan (3829)

□***Phanerochaete galactites*** (Bourdot and Galzin) J. Erikss. & Ryvarden, Cortic. N. Eur. (Oslo) 5: 1005, 1978.

Distribution – Shimla (4550)

◊***Phanerochaete jose–ferreirae*** (D.A. Reid) D.A. Reid, Acta bot. croat. 34: 135, 1975.

Distribution – Sirmaur (3975, 4551)

◊***Phanerochaete sordida*** (P. Karst.) J. Erikss. & Ryvarden, Cortic. N. Eur. (Oslo) 5: 1023, 1978.

Distribution – Chamba (1850, 3684, 3685, 3686), Kangra (4554), Kinnaur (4555), Solan (4553)

■***Phanerochaete tropica*** (Sheng H. Wu) Hjortstam, Mycotaxon 54: 189, 1995.

Distribution – Solan (4222)

Phanerochaete tuberculata (P. Karst.) Parmasto, Consp. System. Corticiac. (Tartu): 83, 1968.

Distribution – Kullu (R), Shimla (3426, 3517, 4556), Solan (3831, 3832, 4191)

■***Phanerochaete velutina*** (DC.) Parmasto, Consp. System. Corticiac. (Tartu): 82, 1968.

Distribution – Chamba (4558), Kangra (4557), Kullu (3711), Shimla (4559, 4560, 4561)

Phlebia albida Post. ex Fr. emend. Bres., Ann. Mycol. 1: 90, 1903.

Distribution – Shimla (R)

○***Phlebia crassisubiculata*** Avneet. P. Singh, Priyanka, Dhingra & Singla, Mycotaxon 112: 21, 2010.

Distribution – Chamba (1405)

■ ***Phlebia expallens*** (Bres.) Parmasto, Eesti NSV Tead. Akad. Toim. 16: 390, 1967.

Distribution – Shimla (4908)

■***Phlebia griseoflavescens*** (Litsch.) J. Erikss. & Hjortstam, in Eriksson, Hjortstam & Ryvarden, Cortic. N. Eur. (Oslo) 6: 1121, 1981.

Distribution – Chamba (3682)

Phlebia livida (Fr.) Bres., Atti. Accad. Sci. Ltt. Arti Ag. Ser. III Vol. III: 105, 1897.

Distribution – Chamba (R), Kullu (R), Shimla (R), Solan (4178)

■***Phlebia ochraceofulva*** (Bourdot & Galzin) Donk, Fungus, Wageningen 27: 12, 1957.

Distribution – Kangra (4529)

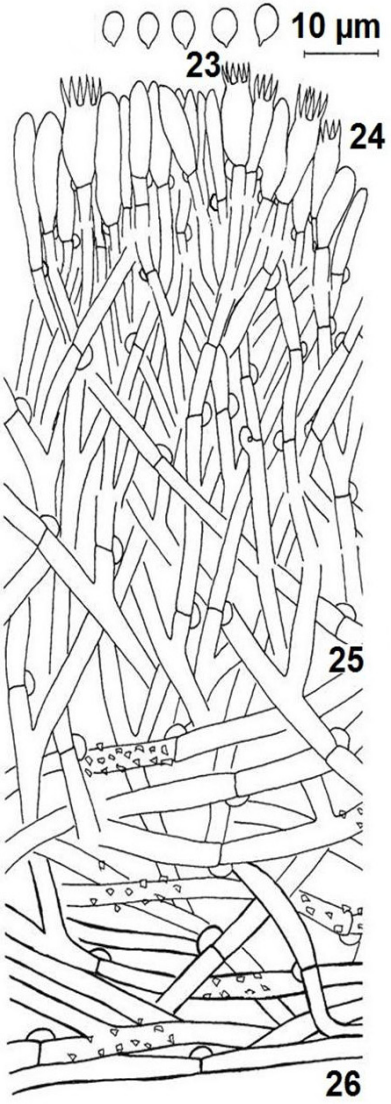
Phlebia queletii (Bourdot & Galzin) M.P. Christ., Dansk bot. Ark. 19(2): 176, 1960.

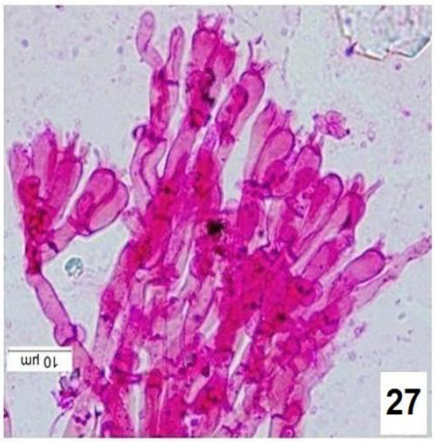
Distribution – Shimla (3365, 3478, 3479, 3480, 3481), Solan (3826, 3827, 4530), Sirmaur (4621, 3992), Chamba (R), Shimla (R)
Phlebia radiata Fr., Syst. Mycol. 1: 427, 1821.
Distribution – Shimla (R)
□***Phlebia rufa*** (Fr.) M.P. Christ., Dansk. Bot. ark. 19 (2): 164, 1960.
Distribution – Solan (4156)
■***Phlebia segregata*** (Bourdot & Galzin) Parmasto, Eesti NSV Tead. Akad. Toim., Biol. seer 16(4): 393, 1967.
Distribution – Chamba (4531), Sirmaur (3995)
■***Phlebia singularis*** Dhingra, J. Indian Bot. Soc. 84: 114, 2005.
Distribution – Chamba (4532)
Phlebia subcretacea (Litsch.) M.P. Christ., Dansk bot. Ark. 19(2): 165, 1960.
Distribution – Shimla (R)
Phlebia subserialis (Bourdot & Galzin) Donk, Fungus, Wageningen 27: 12, 1957.
Distribution – Shimla (3753), Shimla (R)
■ ***Phlebia unica*** (H.S. Jacks. & Dearden) Ginns, Mycotaxon 21: 329, 1984.
Distribution – Chamba (3671, 3672), Shimla (4527), Sirmaur (4018), Solan (4198)
■***Phlebiella gaspesica*** (Liberta) K.H. Larss. & Hjortstam, in Hjortstam & Larsson, Mycoatxon 29: 317, 1987.
Distribution – Solan (4624)
Phlebiopsis gigantea (Fr.) Jülich, Persoonia 10(1): 137, 1978.
Distribution – Chamba (1403, 1857, 1858, 1859, 1860, 4565), Kinnaur (R), Kullu (4567), Shimla (3382, 3383, 3385, 3468, 3469, 3470, 4562, 4563, 4564), Solan (4157, 4192), Chamba (R), Kullu (R), Shimla (R)
□***Phlebiopsis mussooriensis*** Priyanka, Dhingra & N. Kaur, Mycotaxon 115: 255, 2011.
Distribution – Chamba (4568), Mandi (4570), Shimla (4569)
Phlebiopsis ravenelii (Cooke) Hjortstam, Windahlia 17: 58, 1987.
Distribution – Chamba (R), Kullu (R), Shimla (3472, 3473, 3474, 3475), Sirmaur (4020, 4571)
Porostereum spadiceum (Pers.) Hjortstam & Ryvarden, Syn. Fung. (Oslo) 4: 51, 1990.
Distribution – Kinnaur (R)
■***Pseudotomentella atrofusca*** M.J. Larsen, Bulletin of the Torrey Botanical Club, 98: 39, 1971.
Distribution – Chamba (1766)
Pseudotomentella mucidula (P. Karst.) Svrcek, Česká Mykol. 12: 68, 1958.
Distribution – Shimla (R)
■***Pseudotomentella tristis*** (P. Karst.) M.J. Larsen, Nova Hedwigia 22: 613, 1971.
Distribution – Chamba (1767, 5037)
Radulodon americanus Ryvarden, Can. J. Bot. 50(10): 2074, 1972.
Distribution – Chamba (R)
Radulodon erikssonii Ryvarden, Can. J. Bot. 50(10): 2075, 1972.
Distribution – Chamba (R), Shimla (R)
◊***Radulomyces confluens*** (Fr.) M.P. Christ., Dansk. bot. Ark. 19 (2): 230, 1960.
Distribution – Kullu (3420, 3566, 3567), Shimla (4362, 4849, 4850)

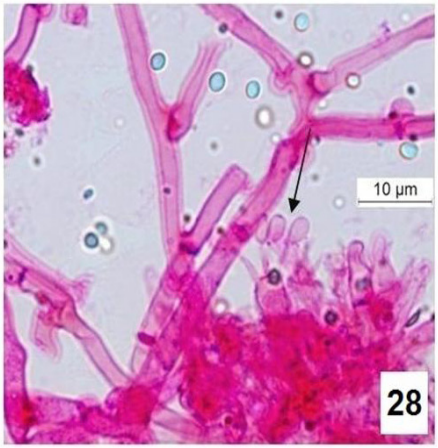
Radulomyces molaris (Chaillet ex Fr.) M.P. Christ., Dansk. bot. Ark. 19(2): 232, 1960.
Distribution – Kullu (R)
Resinicium bicolor (Alb. & Schwein.) Parmasto, Consp. System. Corticiac. (Tartu): 98, 1968.
Distribution – Chamba (1856, 1855, 4918, 4928, 4915, 4916, 4934, 4917, 4921, 4929, 4920, 4932, 4935), Shimla (3467, 3471, 4919), Kullu (3584, 3435, 3606, 3607, 3608, 4930), Solan (4931, 4933), Chamba (R), Kullu (R), Shimla (R)
■***Resinicium friabile*** Hjortstam & Melo, Mycotaxon 65: 324, 1997.
Distribution – Chamba (4922)
Rhizochaete filamentosa (Berk. & M.A. Curtis) Gresl., Nakasone & Rajchenb., Mycologia 96(2): 267, 2004.
Distribution – Chamba (1613, 1614, 1629, 4549), Kullu (R), Shimla (R)
Scopuloides hydnoides (Cooke & Massee) Hjortstam & Ryvarden, Mycotaxon 9(2): 509, 1979.
Distribution – Chamba (R), Kullu (R)
■***Scotoderma viride*** (Sacc.) Jülich, Proc. K. Ned. Akad. Wet., Ser. C, Biol. Med. Sci. 77(2): 151, 1974.
Distribution – Shimla (3493, 3494)
Scotomyces subviolaceus (Peck) Jülich, Persoonia 10(3): 334, 1979.
Distribution – Kullu (R)
■***Scytinostroma albocinctum*** (Berk. & Broome) Boidin & Lanq., Kew Bull. 31: 621, 1976.
Distribution – Kangra (4979)
■***Scytinostroma alutum*** Lanq., Bull. mens. Soc. linn. Lyon, Num. Spéc. 53: 187, 1984.
Distribution – Chamba (4980)
□***Scytinostroma cystidiatum*** Boidin, Bulletin du Jardin Botanique de l'État, Bruxelles 30: 285, 1960.
Distribution – Chamba (R), Kangra (4981)
Scytinostroma duriusculum (Berk. & Br.) Donk, Fungus, Wageningen 26: 20, 1956.
Distribution – Chamba (R), Kullu (R), Shimla (R)
Scytinostroma ochroleucum Donk, Fungus, Wageningen 26: 20, 1956.
Distribution – Chamba (1608), Kullu (R), Shimla (4983, 4984, 4988, 4986), Solan (4982, 4985)
Scytinostroma crassum (S. S. Rattan) Hjortstam, Mycotaxon 54: 192, 1995.
Distribution – Chamba (R), Kullu (R), Shimla (R)
Scytinostroma portentosum (Berk. & M. A. Curtis) Donk, Fungus, Wageningen 26: 20, 1956.
Distribution – Chamba (R), Kullu (R), Shimla (R)
Scytinostromella heterogenea (Bourdot & Galzin) Parmasto, Consp. System. Corticiac. (Tartu): 171, 1968.
Distribution – Chamba (5028, 5029, 5030), Kullu (R)
Serpula himantioides (Fr.) P. Karst., Meddn Soc. Fauna Flora fenn. 11: 21, 1885.
Distribution – Chamba (3525, 4884, 4885), Kullu (R), Sirmaur (3620, 3625), Shimla (R)
Serpula lacrymans (Wulfen) J. Schröt., Meddn Soc. Fauna Flora fenn. 11: 21, 1885.
Distribution – Chamba (R)

■ ***Sidera lunata*** (Romell ex Bourd. & Galz.) Miettinen & K.H.Larss., Mycol. Progress, 10 (2): 136, 2011.
Distribution – Solan (3804, 4859)
■***Sistotrema binucleosporum*** Hallenb., Mycotaxon 21: 409, 1984.
Distribution – Chamba (1404)
Sistotrema lachrymisporum S.S. Rattan, Biblthca Mycol. 60: 213, 1977.
Distribution – Kullu (R)
■ ***Sistotrema porulosum*** Hallenb., Mycotaxon 21: 407, 1984.
Distribution – Chamba (1406)
■ ***Sistotrema subtrigonospermum*** D.P. Rogers, Iowa St. Coll. J. Sci. 17: 22, 1935.
Distribution – Chamba (4900, 4901), Kullu (3596, 3597, 3598), Shimla (3644)
Sistotremastrum niveocremeum (Höhn. & Litsch.) J. Erikss., Symb. bot. upsal. 16: 62, 1958.
Distribution – Chamba (1407, 5058), Kullu (R)
****Sistotremastrum roseum*** Jaspreet and Dhingra **sp. nov.**
Mycobank 803483 Plate IV, Figs 23–28
This species is characterized by peculiar color of the basidiocarp, pale orange to orange when fresh, becoming pale orange to grayish orange to brownish orange on drying, 4–6 sterigmate basidia, and broadly ellipsoid basidiospores.
Holotype – India: Himachal Pradesh, Chamba, Dalhousie, Ahla, on fallen gymnospermous log, Jaspreet 5057 (PUN), August 16, 2010.
Basidiocarp resupinate, loosely adnate, effused, up to 160 µm thick in section; hymenial surface smooth to tuberculate, pale orange to orange when fresh, pale orange to grayish orange to brownish orange on drying; margins thinning out, byssoid, whitish to paler concolorous to indeterminate. **Hyphal system** monomitic. Generative hyphae up to 3.5 µm wide, septate, clamped; basal hyphae loosely interwoven, parallel to the substrate, less branched, thick–walled with crystalline encrustation; subhymenial hyphae vertical, richly branched, thin–walled. **Cystidia** none. **Basidia** 8.8–10.5 × 3.8–4.4 µm, small, subclavate, somewhat constricted, 4–6 sterigmate, with basal clamp; sterigmata up to 3.8 µm long. **Basidiospores** 4.6–5.2 × 2.5–3.6 µm, broadly ellipsoid, apiculate, thin–walled, smooth, acyanophilous, inamyloid.
Remarks – It is close to *S. suecicum* Litsch. : Erikss. in having 4–6 sterigmate basidia, from which it differs on the basis of color of basidiocarp and broadly ellipsoid basidiospores (4.6–5.2 × 2.5–3.6 µm) in comparison to narrowly ellipsoid basidiospores (4.5–6.0 × 1.5–2.0 µm).
Distribution – Chamba (5057)
Steccherinum ciliolatum (Berk. & M.A. Curtis) Gilb. & Budington, J. Ariz. Acad. Sci. 6(2): 97, 1970.
Distribution – Chamba (R), Shimla (R)
Steccherinum fimbriatum (Pers.) J. Erikss., Symb. bot. upsal. 16(1): 134, 1958.
Distribution – Chamba (R)
Steccherinum laeticolor (Berk. & M.A. Curtis) Banker, Mycologia 4(6): 316, 1912.
Distribution – Kullu (R)
Steccherinum ochraceum (Pers.) Gray, Nat. Arr. Brit. Pl. (London) 1: 651, 1821.
Distribution – Chamba (R), Kullu (R), Shimla (R)

PLATE IV

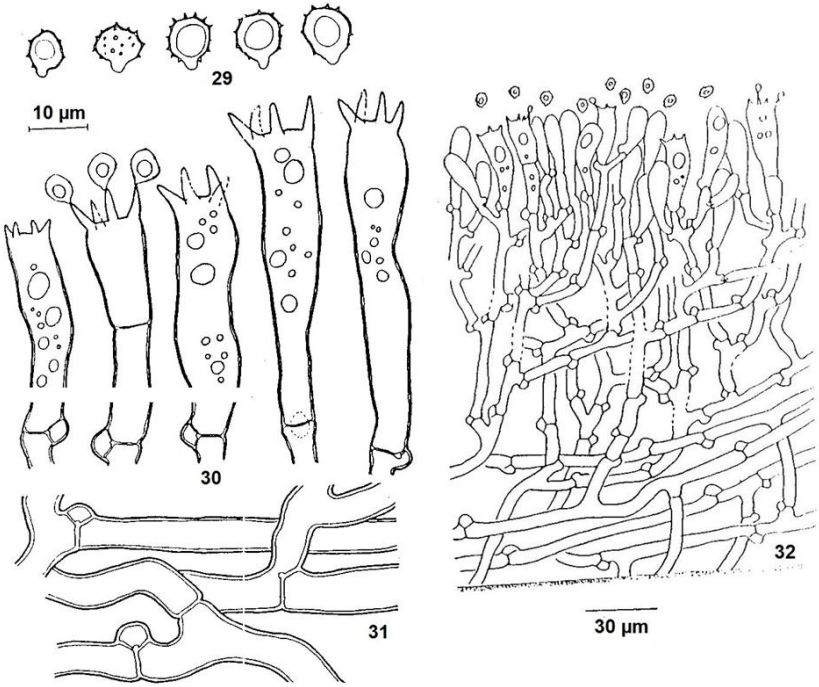






Sistotremastrum roseum Figs 23-28: 23. Basidiospores; 24. Basidia; 25. Generative hyphae; 26. V.S. through basidiocarp; 27 & 28. Photomicrographs (27.Basidia; 28. Basidiospores & generative hyphae)

□***Stereum acanthophysatum*** Rehill & Bakshi, Indian For. Bull. Dehradun 250: 6, 1966.
Distribution – Shimla (5017)
Stereum gausapatum (Fr.) Fr., Hymenomyc. Eur.: 638, 1874.
Distribution – Chamba (R), Kangra (R), Shimla (5018, 5019, 5020)
Stereum hirsutum (Willd.) Pers., Observ. Mycol. 2: 90, 1800.
Distribution – Chamba (R), Shimla (5021, 5022, 5023)
Stereum ostrea (Blume & T. Nees) Fr., Epicr. syst. mycol. Upsal: 547, 1838.
Distribution – Chamba (R), Shimla (R)
Stereum rugosum Pers., Neues Mag. Bot. 1: 110 (1794) Distribution – Shimla (B)
Stereum sanguinolentum (Alb. & Schwein.) Fr., Epicr. syst. mycol. Upsal: 549, 1838.
Distribution – Chamba (R), Kangra (R), Shimla (5024, 5025)
■***Stereum subtomentosum*** Pouzar, Česká Mykol. 18: 147, 1964.
Distribution – Shimla (5026, 5027)
■***Suillosporium cystidiatum*** (D.P. Rogers) Pouzar, Česká Mykol. 12(1): 31, 1958.
Distribution – Chamba (1845)
Subulicystidium longisporum (Pat.) Parmasto, Consp. System. Corticiac. (Tartu): 121, 1968. Distribution – Chamba (1477, 1478, 1479, 1480, 3666, 3667, 3668), Kinnaur (5059, 5060), Kullu (R)
Terana coerulea (Lam.) Kuntze, Revis. gen. pl. (Leipzig) 2: 872, 1891.
Distribution – Chamba (R), Shimla (R)
■***Thanatephorus obscurus*** (D.P. Rogers) P. Roberts, Mycol. Res. 102(9): 1074, 1998.
Distribution – Chamba (4897, 4923)
■***Thanatephorus ochraceus*** (Massee) P. Roberts, Sydowia 50(2): 252, 1998.
Distribution – Chamba (1839, 1840)
■***Thelephora atra*** Weinm., Hym. à Gast. Imp. Ross. Obs.: 636, 1836.
Distribution – Chamba (1747), Kullu (3709, 3710), Shimla (5039)
Tomentella badia (Link) Stalpers, Revue Mycol., Paris 39: 98, 1975.
Distribution – Chamba (R), Shimla (3518, 3519, 3520)
■***Tomentella bicolor*** (Atk. & Burt) Bourdot & Galzin, Bull. Soc. Mycol. France 40: 132, 1924. Distribution – Chamba (1755), Solan (5040)
■***Tomentella brevispina*** (Bourdot & Galzin) M.J. Larsen, Mycologia 62(1): 136, 1970.
Distribution – Solan (5041)
Tomentella bryophila (Pers.) M.J. Larsen, Mycol. Mem. 4: 51, 1974.
Distribution – Chamba (R), Shimla (R)
Tomentella calcicola (Bourd. & Galzin) M.J.Larsen, Taxon 16: 511, 1967.
Distribution – Shimla (R)
Tomentella cinerascens (P. Karst.) Höhn. & Litsch., Sber. Akad. Wiss. Wien, Math.–naturw. Kl., Abt. 1 115: 1570, 1906.
Distribution – Shimla (R)
■***Tomentella cladii*** Wakef., Trans. Brit. Mycol. Soc., 53: 179, 1969.
Distribution – Chamba (1750), Solan (5048)
Δ***Tomentella cladii* var. *grandii*** Dhingra and Malka, Current Researches in Plant Sciences: 48, 1994. Mycobank 803655 Plate V, Figs 29–32
The new variety is different from *Tomentella cladii* Wakef. in having thicker basidiocarps, wider basal hyphae and bigger basidia.



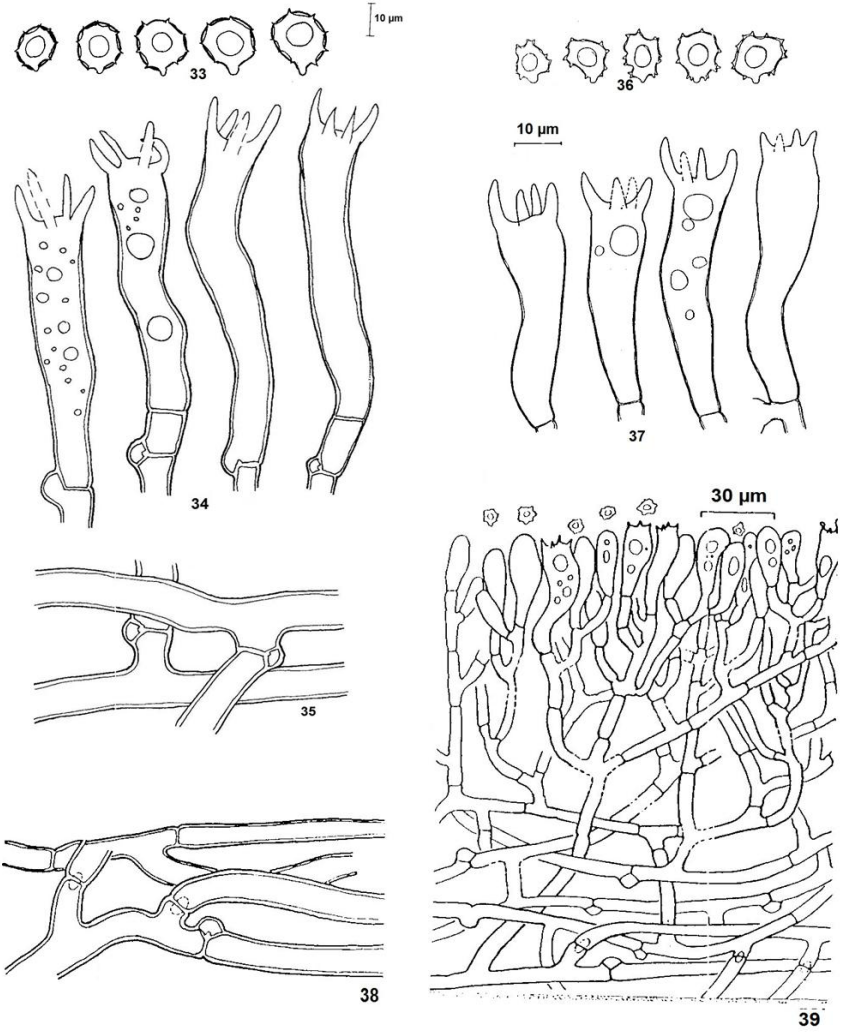
Tomentella kalatopii Figs. 29-32: 29. Basidiospores; 30. Basidia; 31. Generative hyphae; 32. V.S. through basidiocarp

Holotype: Himachal Pradesh: Chamba about 1.5 km on way to Lakkar mandi from Kalatop, on gymnospermous stump, Malka 1749 (PUN), Aug. 13, 1990.
Basidiocarp resupinate, loosely adnate, effused, submembranous to membranous, up to 800 µm thick in section; hymenial surface dark brown; margins thinning, concolorous with hymenial surface or indeterminate. **Hyphal system** monomitic; basal hyphae up to 9.0 µm wide, loosely arranged, almost parallel to the substrate, sparsely branched, distantly septate, clamped, greyish yellow to light brown to brown, thick walled; subhymenial hyphae up to 7.4 µm wide, compactly packed, vertically arranged, profusely branched, closely septate, clamped, thin to somewhat thick walled, greyish yellow. **Hyphal cordons** absent. **Cystidia** absent. **Basidia** 60.0–71.0 × 9.0–11.5 µm, clavate–cylindrical, 4–spored, with a basal clamp, with or without oily contents, with transverse septa, greyish yellow; sterigmata up to 12.0 µm long. **Basidiospores** 7.0–10.0 µm across, mostly subglobose to rarely globose, frequently elongated along one side, thin to moderately thick walled, aculeolate to echinulate, yellowish grey in water, uniguttulate.

Remarks – *T. cladii* differs in having thin basidiocarps (up to 280 µm), narrow subicular hyphae (up to 5 µm) and smaller basidia (27–55 × 9–11 µm).
Distribution – Chamba (1749)
■***Tomentella clavigera*** Litsch., Sydowia 14: 192, 1960.
Distribution – Solan (5042)
Tomentella coerulea (Bres.) Höhn. & Litsch., Wiesner Festschrift (Wien): 77, 1908.
Distribution – Kullu (R)
Tomentella crinalis (Fr.) M.J. Larsen, Taxon 16: 511, 1967.
Distribution – Kullu (R), Shimla (R)
Tomentella ellisii (Sacc.) Jülich & Stalpers, Verh. K. ned. Akad. Wet., tweede sect. 74: 236, 1980.
Distribution – Shimla (R)
Tomentella ferruginella (Bourdot & Galzin) Svrček, Česká Mykol. 12: 75, 1958.
Distribution – Chamba (R), Shimla (R)
■***Tomentella galzinii*** Bourdot, in Bourdot & Galzin, Bull. trimest. Soc. mycol. Fr. 40(2): 143, 1924.
Distribution – Chamba (1736), Solan (5043)
Tomentella griseoumbrina Litsch., Fungi Exsiccati Suecici: 24, 1936.
Distribution – Shimla (R)
■***Tomentella griseoviolacea*** Litsch., Annls mycol. 39: 375, 1941.
Distribution – Solan (5044)
Tomentella himalayana S.S. Rattan, Biblthca Mycol. 60: 54, 1977.
Distribution – Shimla (R)
Tomentella indica S.S. Rattan, Biblthca Mycol. 60: 62, 1977.
Distribution – Chamba (1751, 1752), Shimla (R)
Δ***Tomentella kalatopii*** Dhingra & Malka, Current Researches in Plant Sciences: 47, 1994. Mycobank 803484 Plate VI, Figs 33–35

It is different from *T. asperula* (Karst.) Höhn. & Litsch. in having light yellow to almost white subiculum and margins, subglobose to rarely globose, regular, usually elongate along one axis, aculeolate, light greenish basidiospores and in lacking hyphal cordons.
Holotype: India, Himachal Pradesh: Chamba, Kalatop, on decaying gymnospermic stump, Malka 1748 (PUN), August 12, 1990.
Fruitbodies resupinate, adnate, effused, submembranaous to membranous, up to 200 µm thick in section; hymenial surface brownish orange to greyish brown, smooth, greyish brown in KOH; subiculum light yellow to almost white; margins thinning, fibrillose, concolorous with subiculum or indeterminate. **Hyphal system** monomitic; basal hyphae up to 7.4 µm wide, loosely arranged, almost parallel to the substrate, branched, distantly septate, clamped, subhyaline, thick–walled; subhymenial hyphae up to 6.2 µm wide, compactly packed, vertically arranged, branched, closely septate, clamped, subhyaline to hyaline, thin–walled. **Hyphal cordons** absent. **Cystidia** absent. **Basidia** 35.0–58.0 × 6.5–12.0 µm, clavate to subclavate, 4–spored, with basal clamp, with or without oily contents, usually with transverse septa, subhyaline; sterigmata up to 10.2 µm long. **Basidiospores** 6.0–8.5 µm across, subglobose to rarely globose, regular in outline, usually elongate along one axis, thin– to somewhat thick–walled, aculeolate, light green, uniguttulate.

PLATE VI



Tomentella cladii var. *grandii* Figs. 33-35: 33. Basidiodpores; 34. Basidia; 35. Generative hyphae. *T. unicusa* Figs. 36-39: 36. Basidiospores; 37. Basidia; 38. Generative hyphae 39. V.S. through basidiocarp.

Remarks – *Tomentella asperula* (Karst.) Höhn. & Litsch., is different in having hyphal cordons and yellowish brown basidiospores not elongate along one axis.
Distribution – Chamba (1748)
■***Tomentella lapida*** (Pers.) Stalpers, Stud. Mycol. 24: 65, 1984.
Distribution – Chamba (1741, 1742, 5045)
Tomentella lateritia Pat., Cat. Rais. Pl. Cellul. Tunisie (Paris): 63, 1897.
Distribution – Chamba (1758), Shimla (R)
■***Tomentella muricata*** (Ellis & Everh.) Wakef., Mycologia 52: 924, 1962.
Distribution – Chamba (1737)
■***Tomentella olivascens*** (Berk. & M.A. Curtis) Bourdot & Galzin, Hyménomyc. de France (Sceaux): 477, 1928.
Distribution – Chamba (1764, 1765)
Tomentella pilosa (Burt) Bourdot & Galzin, Bul. trimest. Soc. mycol. Fr. 40: 160, 1924.
Distribution – Chamba (R), Solan (5047), Shimla (R)
■***Tomentella puberula*** Bourdot & Galzin, Bull. trimest. Soc. mycol. Fr. 40: 150, 1924.
Distribution – Chamba (1754)
Tomentella punicea (Alb. & Schwein.) J. Schröt., in Cohn, Krypt.–Fl. Schlesien (Breslau) 3. 1: 420, 1888.
Distribution – Chamba (1759, 1760, 1761, 1762, 1763), Chamba (R)
■***Tomentella pyrolae*** (Ellis & Halst.) M.J. Larsen, Tech. Publ. N.Y. St. Univ. Coll. For. 93: 105, 1968.
Distribution – Chamba (5046)
◊***Tomentella scobinella*** G. Cunn., Trans. Roy. Soc. N.Z. 84: 485 1957.
Distribution – Chamba (1757)
Tomentella stuposa (Link) Stalpers, Stud. Mycol. 24: 86, 1984.
Distribution –Chamba (1743, 1744, 1745, 1746, 5049), Shimla (R), Solan (5050)
■***Tomentella subclavigera*** Litsch., Bull. trimest. Soc. mycol. Fr. 49: 57, 1933**.**
Distribution – Solan (5051)
Tomentella subcorticioides S. S. Rattan, Biblthca Mycol. 60: 53, 1977.
Distribution – Chamba (1753), Kullu (3573), Shimla (R)
■***Tomentella sublilacina*** (Ellis & Holw.) Wakef., Mycologia 52: 931, 1962.
Distribution – Shimla (5038)
◊***Tomentella terrestris*** (Berk. & Broome) M.J. Larsen, Mycol. Mem. 4: 105, 1974.
Distribution – Solan (5052)
■***Tomentella testaceogilva*** Bourdot & Galzin, Bull. trimmest. Soc. mycol. Fr. 40: 149, 1924.
Distribution – Solan (5053)
Tomentella umbrinospora M.J. Larsen, Adapt. Antarct. Ecosys. 93: 61, 1963.
Distribution – Shimla (R)
Δ***Tomentella unicusa*** Dhingra & Malka, Current Researches in Plant Sciences: 50, 1994. Mycobank 803486 Plate VI, Figs 36–39.

T. unicusa is unique in having mucedinoid to submembranous fruitbodies, brownish orange hymenial surface, up to 7.4 µm wide, usually clamped subicular hyphae, rarely

clamped subhymenial hyphae, absence of hyphal cordons, clavate to subclavate basidia and irregular to lobed, warted basidiospores with warts usually becoming bifurcate.
Holotype: Himachal Pradesh: Chamba, Panjpula, on gymnospermous sticks, G.S Dhingra 1756 (PUN), Sep. 24, 1990.

Basidiocarp resupinate, loosely adnate, effused, mucedinoid to submembranaous, up to 220 µm thick in section; hymenial surface brownish orange, smooth black in KOH; subiculum concolorous with fertile area, margins thinning, arachnoid, concolorous, or indeterminate. **Hyphal system** monomitic; basal hyphae up to 7.4 µm wide, loosely arranged, parallel to the substrate, branched, septate, usually clamped, greyish yellow to dull yellow, thin to thick walled; subhymenial hyphae up to 5.7 µm wide, compactly packed, vertically arranged, branched, septate, clamped at few septa, subhyaline, thin walled. **Hyphal cordons** absent. **Basidia** 45.0–58.0 × 9.0–13.3 µm, clavate to subclavate, 4–spored, with or without oily contents, subhyaline, sterigmata up to 9.7 µm long. **Basidiospores** 6.8–9.4 µm across, irregular in outline to lobed, thick walled, subhyaline to yellowish grey with brown wall, uniguttulate, warted; warts usually becoming bifurcate.
Remarks – *T. unicusa* can be placed in section *Atrocynaceae* of Larsen (1974) on the basis of similar hymenial surface, hyphae and basidiospores.
Distribution – Chamba (1756)

■***Tomentella variecolor*** Malençon, Bull. Soc. Bot. France 99: 51, 1992.
Distribution – Chamba (5054)

Trechispora alnicola (Bourdot & Galzin) Liberta, Taxon 15: 318, 1966.
Distribution – Chamba (5062), Mandi (5061), Sirmaur (3427, 3428, 3978), Shimla (R)

■***Trechispora coharens*** (Schw.) Julich & Stalpers, Verh. Kon. Ned. Akad. Wet. Nat. II, 74: 257, 1980.
Distribution – Chamba (1841), Sirmaur (3623), Solan (3842)

Trechispora confinis (Bourd. & Galzin) Liberta, Taxon 15: 318, 1966.
Distribution – Shimla (R)

Trechispora farinacea (Pers.) Liberta, Taxon 15: 318, 1966.
Distribution – Chamba (1844), Shimla (R), Solan (5063)

◊***Trechispora fastidiosa*** (Pers.) Liberta, Taxon 15: 318, 1966.
Distribution – Chamba (1843), Mandi (5064)

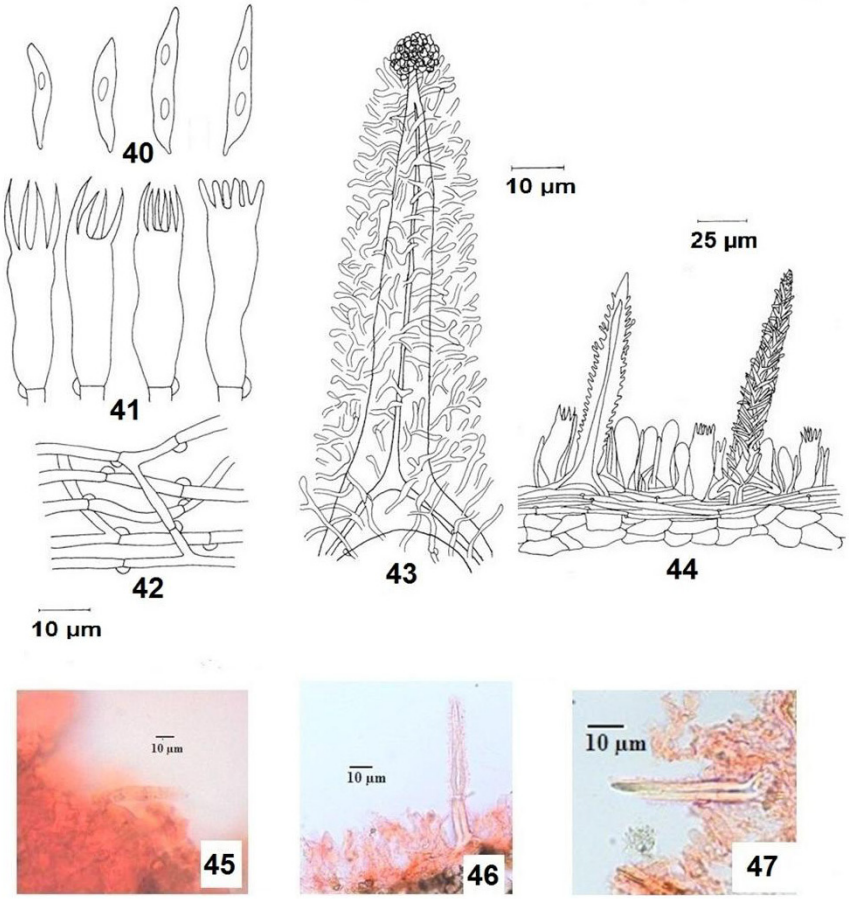
■***Trechispora microspora*** (P. Karst.) Liberta, Taxon 15: 319, 1966.
Distribution – Chamba (1472, 1842)

Trechispora mollusca (Pers.:Fr.) Liberta, Can. J. Bot. 51: 1878, 1973.
Distribution – Kullu (3706, 3707, 3708), Kullu (R)

■ ***Trechispora praefocata*** (Bourdot & Galzin) Liberta, Taxon 15: 319, 1966.
Distribution – Kangra (5066)

****Tubulicium vermiferum*** **var.** ***hexasterigmatum*** Jaspreet & Dhingra **var. nov.**
Mycobank 803487 Plate VII, Figs 40–47

Holotype – India: Himachal Pradesh, Kangra, Harnota, on bark of living *Ziziphus nummularia*, Jaspreet 5069 (PUN), August 27, 2009.
The new taxon is different from *T. vermiferum* (Bourdot) Oberw., in having 4–6 sterigmate basidia.



Tubulicium vermiferum var. *hexasterigmatum* Figs. 40-47: 40. Basidiospores; 41. Basidia; 42. Generative hyphae; 43. Cystidia; 44. L.S. through basidiocarp; 45-47 Photomicrographs (45. Basidiospores; 46. L.S. basidiocarp; 47. Cystidia.

Basidiocarps resupinate, adnate, effused, up to 230 µm thick in section; hymenial surface smooth, yellowish white when fresh, pale yellow to pale orange to grayish orange on drying; margins thinning, paler concolorous to indeterminate. **Hyphal system** monomitic. Generative hyphae up to 2.5 µm wide, septate, clamped, thin–walled; basal hyphae parallel to the substrate, less branched; subhymenial hyphae vertical, densely branched. **Cystidia** 53.0–99.0 × 9.4–10.5 µm, subconical to subcylindrical, thick–walled, with narrow lumen, multi–rooted, covered with dendroid hyphae, covered with crystalline

encrustation at the apex, which dissolves in 3% KOH solution projecting up to 40 µm out of the hymenium. **Basidia** 26.0–40.0 × 8.8–10.0 µm, subclavate, 4–6 sterigmate, with basal clamp; sterigmata up to 15.2 µm long. **Basidiospores** 20.0–28.0 × 4.0–4.5 µm, sigmoid to vermicular, apiculate, thin–walled, smooth, with oily contents, acyanophilous, inamyloid.

Remarks – The new variety matches *T. vermiferum* on the basis of sheathed with dendroid hyphae lyocystidia in combination with vermicular basidiospores, but differs in having 4–6 sterigmate basidia in comparison to 4–sterigmate ones.

Distribution – Kangra (5069, 5070)

■***Tubulicrinis borealis*** J. Erikss., Symb. bot. upsal. 16 (1): 79, 1958.

Distribution – Solan (3813, 4604)

■***Tubulicrinis calothrix*** (Pat.) Donk, Fungus, Wageningen 26: 26, 1956.

Distribution – Sirmaur (3987, 4605)

Tubulicrinis chaetophorus (Höhn.) Donk, Fungus, Wageningen 26: 14, 1956.

Distribution – Chamba (1848), Shimla (3521, 3522, 4606), Chamba (R)

■***Tubulicrinis confusus*** K.H. Larss. & Hjortstam, in Hjortstam & Larsson, Mycotaxon 26: 437, 1986.

Distribution – Shimla (4607)

■***Tubulicrinis effugiens*** (Bourdot & Galzin) Oberw., Zeitschr. Für Pilzkunde 31: 35, 1966.

Distribution – Shimla (4610)

Tubulicrinis gracillimus (Rog. & Jacks.) Cunn., Bull. N. Z. dep. sci. ind. Res. 145: 141, 1963.

Distribution – Shimla (3367, 3476, 3477, 4611)

Tubulicrinis hamatus (Jacks.) Donk, Fungus, Wageningen 26: 14, 1956.

Distribution – Chamba (1846, 1847), Shimla (3498, 3499)

■***Tubulicrinis orientalis*** Parmasto, Eesti NSV Tead. Akad. Toimetised 16: 393, 1967.

Distribution – Chamba (4612, 4613)

Tubulicrinis strangulatus Larss. & Hjortstam, Mycotaxon 26: 438, 1986.

Distribution – Chamba (1848, 4616, 4617), Shimla (3372)

Tubulicrinis subulatus (Bourdot & Galzin) Donk, Fungus, Wageningen 26: 14, 1956.

Distribution – Chamba (3701, 3702, 3703), Kullu (R), Shimla (3373, 4382)

■***Vararia minidichophysa*** Boidin & Lanq., Bull. Soc. Mycol. France 91: 463, 1975.

Distribution – Solan (3837, 3838, 4990)

■***Vararia rugosispora*** Boidin, Lanq. & Gilles, Cryptog. Mycol. 1: 328, 1980.

Distribution – Solan (4991, 4992)

◊***Vararia sphaericospora*** Gilbertson, Pap. Michigan Acad. Sciences, Arts, Lett. 50: 176, 1965.

Distribution – Chamba (3421, 3523), Shimla (3422, 3645), Sirmaur (3637)

Vararia vassilievae Parmasto, Eesti NSV Tead . Akad. Toim. Biol. Sear 14: 231, 1965.

Distribution – Chamba (R), Kullu (R), Shimla (R)

■***Veluticeps abietina*** (Pers.) Hjortstam & Tellería, Mycotaxon 37: 54, 1990.

Distribution – Chamba (4901, 4911)

Vesiculomyces sulcatus (Rehill & Bakshi) Boidin & Lanq., Mycotaxon, 16(2):493, 1983.

Distribution – Chamba (R), Kullu (R), Shimla (R)

■ ***Xenasmatella ardosiaca*** (Bourdot & Galzin) Stalpers, Stud. Mycol. 40: 37, 1996.
Distribution – Chamba (4622)
Xenasmatella vaga (Fr.) Stalpers, Stud. Mycol. 40: 37, 1996.
Distribution – Chamba (R)
□***Xylodon asperus*** (Fr.) Hjortstam & Ryvarden, Syn. Fung. (Oslo) 26: 34, 2009.
Distribution – Chamba (1867), Shimla (4946, 4947), Sirmaur (4016)
■***Xylodon brevisetus*** (P. Karst.) Hjortstam & Ryvarden, Syn. Fung. (Oslo) 26: 35, 2009.
Distribution – Chamba (1870, 3673, 3674, 3675, 3676, 3678)
□***Xylodon crustosus*** (Pers.) Chevall. [as '*crustosum*'], Fl., gén. env. Paris (Paris) 1: 272, 1826.
Distribution – Chamba (4949)
■***Xylodon juniperi*** (Bourdot & Galzin) Hjortstam & Ryvarden, Syn. Fung. (Oslo) 26: 38, 2009.
Distribution – Kangra (4952)
□***Xylodon pruni*** (Lasch.) Hjortstam & Ryvarden, Syn. Fung. 23: 100, 2007.
Distribution – Chamba (3677, 3678, 3679, 3680), Kullu (3418, 3601, 3602), Shimla (4961)
■***Xylodon rimosissima*** (Peck) Gilb., Mycologia 54(6): 667, 1962.
Distribution – Kangra (4962, 4963)
Xylodon spathulatus (Schrad.) Kuntze, Revis. Gen. pl. (Leipzig) 3(2): 541, 1898.
Distribution – Chamba (1868, 1869, 4960), Shimla (R)

Acknowledgements
The authors thank Head, Department of Botany, Punjabi University, Patiala, for providing research facilities and Prof. Nils Hallenberg (University of Gothenburg, Gothenburg, Sweden) for expert comments and peer review.

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Dhingra, G.S. & Singh Avneet P. 2009. Diversity of Family *Hyphodermataceae* (*Polyporales*, *Agaricomycetidae*) in Himachal Pradesh. In Germplasm Diversity & Evaluation– Algae, Fungi & Lichens (Eds. Atri NS, Gupta RC, Saggoo MIS, Singhal VK) Bishen Singh Mahendra Pal Singh, Dehradun, U.K. (India): 171–189.
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Dhingra, G.S. & Rani Malka. 1994. North–West Himalayan *Thelephoraceae* (*Basidiomycetes*) – Genus *Tomentella* from Dalhousie hills. In Current Research in Plant Sciences (Eds. Sarma, T.A., Saini, S.S., Trivedi, M.L. & Sharma, M.) Bishen Singh Mahendra Pal Singh, Dehradun.: 43–56.
Dhingra, G.S. & Singla Nishi. 1993. Studies in North–West Himalayan *Corticiaceae* (*Basidiomycetes*) – I. Some interesting species from Dalhousie Hills. *The Journal of the Indian Botanical Society* **72**: 29–33.
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Dhingra, G.S. & Sood Shruti. 1992. Two new records of genus *Tubulicrinis* from Dalhousie hills. *Geobios New Reports* **12**: 62–64.
Kaur Harpreet, Kaur Jaspreet and Dhingra, G.S. 2010. "Four New Records of Genus *Tomentella* (*Agaricomycetes*) From India". *The Journal of the Indian Botanical Society* **89**: 371–374.
Kirk, P.M., Cannon, P.F., Minter D.W. and Stalpers, J.A. 2008. *Dictionary of the Fungi* (10th Ed.). Wallingford Oxon, UK.
Priyanka, Dhingra G.S. & Kaur Navneet. 2011. *Phlebiopsis mussooriensis* (*Agaricomycetes*), a new corticioid species from India. Mycotaxon **115**: 255-258.

Priyanka & Dhingra, G.S. 2011. Two new species of *Hyphoderma* (*Agaricomycetes*) from India. *Mycotaxon* **119**: 255–260.
Rattan, S.S. 1977. Resupinate Aphllophorales of North Western Himalayas. Biblthca Mycol. 60, Cramer, Germany 427 pp.
Singh Avneet P., Priyanka, Dhingra, G.S. & Singla Nishi. 2010. A New Species of *Hyphoderma* (*Basidiomycetes*) from India. *Mycotaxon* **111**: 71–74.
Singh Avneet P., Priyanka, Dhingra, G.S. & Singla Nishi. 2010. A New Species of *Phlebia* (*Basidiomycetes*) from India. *Mycotaxon* **112**: 21–24.
Singh Avneet P., Dhingra, G.S. & Kaur Jaspreet. 2010. "*Athelopsis parvispora* (*Basidiomycetes*) a new species from India". *Mycotaxon* **113**: 327–329.
Thind, K.S. & Rattan, S.S. (1968). The *Thelephoraceae* of North Western Himalayas. *Indian Phytopath. Soc. Bull.* 4: 15–24.
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Thind, K.S. & Rattan, S.S. (1972). *Thelephoraceae* of India VIII. *Res. Bull. (N.S.) Panjab Univ.* 23(3–4): 125–136.
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Radulodon indicus sp nov. (Agaricomycetes) from India

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Abstract
A new corticioid species, *Radulodon indicus* is described in association with a log of *Cedrus deodara* from Jammu and Kashmir, India.
Key words: *Basidiomycota,* Ramban, Nathatop

Introduction
While conducting fungal forays in Nathatop area of district Ramban, Jammu and Kashmir (India), Jyoti collected a resupinate, non–poroid fungus associated with a log of *Cedrus deodara* (Roxb. ex D. Don) G. Don. On the basis of comparison of macroscopic and microscopic features (Rattan 1977, Eriksson et al. 1981, Stalpers 1998, Nakasone 2001, Bernicchia and Gorjón 2010) it has been identified as a species of *Radulodon* (odontioid basidiocarps, thick-walled, clamped basal hyphae and acyanophilous, subglobose to globose basidiospores), named here as *R. indicus.* It differs from *R. pseudomucidus* in having scattered conical spines, longer basidia and being a temperate species. A portion of the basidiocarp was sent to Prof. Nils Hallenberg (Sweden), who confirmed the generic affiliation..

Radulodon indicus Jyoti & Dhingra **sp. nov.** **Figs. 1 - 6**
Holotype: India, J&K: Ramban, Nathatop, on log of *Cedrus deodara*, 11. September 2012, Jyoti 5987 in PUN. Mycobank no. 807 509.
Etymology: The epithet refers to the country of collection, India
Basidiocarp resupinate, adnate, effused, ≤ 400 µm thick in section, hymenial surface ceraceous to membranaceous, aculeate with scattered, conical spines 1 to 2/mm in density, and ≤ 1 mm long; yellowish white when fresh becoming orange white on drying; margins thinning, paler concolorous, to indeterminate.
Hyphal system monomitic; generative hyphae ≤ 4.5 µm wide, branched, septate, clamped; basal zone very thin, of thin- to thick-walled hyphae parallel to the substrate; subhymenial hyphae vertical, compactly arranged, thin-walled.
Cystidia 80–136 × 3.3–4.5 µm, hyphoid, with obtuse apex, flexuous, thin-walled, mainly occurring in apex of spines, projecting ≤ 60 µm out of the hymenium.
Basidia 38–51 × 3.3–4.5 µm, narrowly clavate, 4-sterigmate, somewhat sinuous, with basal clamp; sterigmata ≤ 7.2 µm long.
Basidiospores 6.8–8.5 × 5.2–7.2 µm, subglobose to globose, thin- to somewhat thick-walled, with oily contents, inamyloid, acyanophilous.
Substratum: Known only in association with log of *Cedrus deodara*.
Distribution: Known only from the type locality.

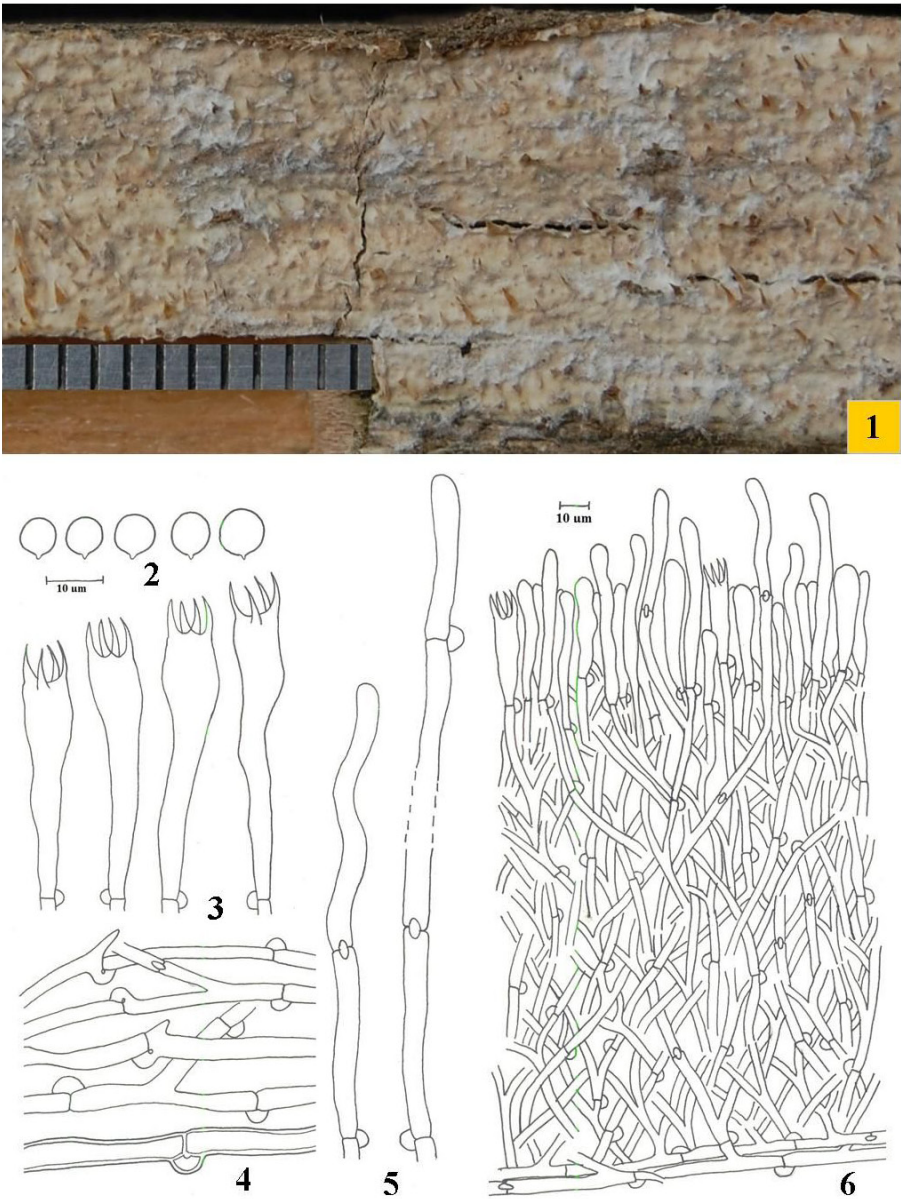

Plate 1: *Radulodon indicus* (holotype). Fig 1) Basidiocarp showing hymenial surface. Fig 2-6) Microscopic structures. 2) Basidiospores 3) Basidia 4) Hyphae. 5) Cystidia 6) Vertical section through basidiocarp.

Remarks: *Radulodon indicus* resembles *R. pseudomucidus* (Petch) Stalpers (reported from Srilanka) in having odontioid basidiocarp and subglobose to globose, thin- to somewhat thick-walled, inamyloid, acyanophilous basidiospores, but differs in having scattered, conical spines, longer basidia and temperate origin.

Acknowledgements
The authors thank Head, Department of Botany, Punjabi University, Patiala, for providing research facilities; Dr. Nils Hallenberg, Professor Emeritus in Botany, Erik Menveds vej 11, DK- 8400 Ebeltoft, Denmark for expert comments.

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Nakasone KK. 2001. Taxonomy of the genus *Radulodon*. Harv. Pap. Bot. **6**(1): 163-177.
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Stalpers JA. 1998. On the genera *Sarcodontia*, *Radulodon* and *Pseudolagarobasidium*. Folia Cryptog. Estonica. Fasc. **33**: 133-138.

Type studies in Stereum 3
Species described by N. Patouillard, either alone or with other mycologists

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Introduction

N. Patouillard (1854-1926) was an industrious mycologist and described a number of new species, especially in his period as head curator at the National Science Museum in Paris (PC). After his death in his collection was split and the major part was bought by the Farlow Herbarium, Cambridge Massachusetts, United States (FH), while some specimens ended up at the Stockholm fungarium in Sweden (S). In an on-going study on the types of species described as *Stereum*, I have had the opportunity to examine the types of *Stereum* species described by N. Patouillard both in Farlow and in Stockholm. In the following, the fungaria where the types are deposited are indicated with the common acronym, FH, PC and S, respectively. In a standard way, the place of publication is indicated together with the type locality, if known.

List of species

aratum, Stereum Pat., Bull. Soc. Myc. Fr. 23:72,1907. Viet Nam, FH!
= *Xylobolus princeps* (Jungh) Boidin.

bagliettoanum, Stereum (Fr.) Pat. Eassi tax. P. 73, 1900. The type was not found in FH.

campaniforme, Stereum Pat. Bull. Soc. Myc. Fr. 24:165,1908. New Caledonia, FH!
= *Stereum* s. str. Badly contaminated and sterile. It is probably an immature specimen of *Stereum hirsutum* with its finly tomentose pileus under which there is a thin dark line.

cryptacanthum, Stereum (Pat.) v. H. et L., Sitzungsarb. Akad. Wiss. Wien, math.-naturw. Kl. 116, abt. 1.742. 1907. The type was not found in FH.

cupulatum, Stereum Pat. Enum. Champ. Guadel.& Martinique, p.23. 1903. Guadeloupe, FH!
= an imperfect species of unknown identity.

fallax, Stereum Pat. Bull. Soc.Myc. Fr. 7:162. 1891. Guayaquil, Ecuador, FH!
= *Asterostroma cervicolor* (Berk. & M. A. Curtis) Massee.

flabellatum, Stereum Pat. Bull. Soc. Myc. Fr. 16:179, 1901, Guadeloupe, FH.
= *Podoscypha* sp. Its statuswill be treated in a later paper.

fragile, Stereum Pat. Bull. Soc. Myc. Fr. 16:179, 1901. Les Palmites, Guadeloupe, FH!
= *Stereum versicolor* (Sw.) Fr.

guadelupense, Stereum Pat., Bull. Soc. Myc. Fr. 15:201,1899. Guadeloupe, FH!
= *Gomphus guadelupense* (Pat.) Amarati.

lagerheimi, Stereum Pat., Bull. Soc. Myc. Fr. 7:162. 1891. Guayaquil, Ecuador. FH!

= *Porostereum crassum* (Lev.) Hjortst. & Ryvarden.

muscicolum, Stereum Pat., Ann. Jard. Bot. Buitenz. Suppl.1:116, 1897. Java, FH!

= *Cyphellostereum muscicolum* (Pat.) D. A. Reid .

neocaledonicum, Stereum Pat. & Har., J. Bot.17:6,1903. Neocaledonia, FH!

= *Porostereum vibrans* (Berk. & M. A. Curtis) Ryvarden.

riofrioi, Stereum Pat., Bull. Soc. Mycol. Fr. 8:117, 1892., South Sudan, FH .

= *Hymenogloea riofrioi* (Pat) Pat.

rufo-fulvum, Stereum (Mont.) Pat. & Lagerh., Bull. Herb. Boissier 3:56,1895. Chile, FH!

= *Peniophora rufomarginata* (Pers.) Litsch.

Type studies in Stereum s. lato 4 Species described in or transferred to the genus by M. C. Cooke and G. Massee, either alone or with M. Berkley

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Abstract
The types of 22 species described in or transferred to *Sterum* by M. C. Cooke and G. Massee have been examined. Four names are accepted, while the remaining 18 are taxonomic synonyms.

Introduction
This is a paper in an ongoing study of *Stereum* species and names given to species in the genus.
M. C. Cooke (1825-1914) and G. Massee (1850-1917) were both curators of the mycology collection at the Royal Botanic Garden t Kew in London. The types of all the species they described, including those of *Stereum,* are naturally in Kew (K), and this information is not repeated for each species in the following. The species are listed alphabetically according to specific epithet with an indication to where they were described and then their current taxonomic status.

List of species
alliciens, Stereum Berk. & Cooke, Jour. Linn. Soc. 15:389. 1876.
= *Eichleriella alliciens* (Berk. & Cke.) Burt.
alutaceum, Stereum Berk.. & Cooke, Jour. Linn. Soc. 15:388. 1877.
= *Cotylidia aurantica* (Pers.) Welden.
aterrinum, Stereum Cooke, Grevillea 13:3, 1884.
= *Punctularia strigozonata* (Schw.) Talbot.
atrocinereum, Stereum (Massee) v.d. Byl, Ann. Univ. Stellenb. 7, pt. 3:44. 1929.
= *Porostereum spadicum* (Pers.:Fr.) Hjorst. & Ryvarden.
cinerascens, Stereum (Schw.) Massee, J.Linn. Soc. Bot.27:179, 1890.
= *Lopharia cinerascens* (Schw.) G. Cunn.
crucibuliforme, Stereum Massee, J. Linn. Soc. 27:168. 1890.
= *Nidularia emodensis* (Berk.) Lloyd.
haydenii, Stereum Massee, Linn. Soc. Bot. Jour. 27:199. 1890.
=*Cylindrobasidium evolvens* (Fr.) Jülich.
kurzianum, Stereum Cooke, Grevillea 18:55, 1890.
= *Amylostereum ferreum* (Berk.) Boidin.

latum, Stereum Cooke & Massee, Grevillea 20:92,1892.
= *Porostereum papyrinum* (Mont.) Hjorst. & Ryvarden.
lugubris, Stereum Cooke, Grevillea 12:85, 1884.
= *Punctularia strigoso-zonatum* (Schw.) Talbot.
monochroum, Stereum Cooke & Massee, Grevillea 20:91, 1892.
= *Stereum versiforme* (Sw.) Fr.
pallidum, Stereum (Pers.) Cooke, Cat. Br. Basidiom. p. 80, 1909.
= *Cotylidia pannosa* (Sow.: Fr.) D. Reid .
pannosum, Stereum Cooke, Grevillea 8:56, 1879.
= *Stereum illudens* Berk.
pannosum, Stereum Cooke & Massee, Grevillea 21:38,1892.
= nomen illegit. non Cooke 1879.
pictum, Stereum Massee, J. Linn. Soc. 27:185. 1890.
= *Stereum versicolor* (Sw.) Fr.
radicale, Stereum (Berk.) Massee, Jour. Linn. Soc. 27:187. 1890.
= The type is an old and weathered agaric. Cunningham noted that it is *Steccherinum ochraceum* (Pers. :Fr.) S. F. Gray.
This is not the case. The type is monomitic with simple septate generative hyphae, which is far from the hyphal system of *S. ochraceum*. The name should be dropped from consideration.
rameale, Stereum (Berk.) Massee, Bot. J Linn. Soc. 27:187, 1890.
= *Septobasidium rameale* (Berk.) Bres.
retirugum, Stereum Cooke, Proc. Roy. Soc. Edinb. p. 456, 1882.
= *Porostereum spadiceum (*Pers. :Fr.) Hjortst. & Ryvarden.
rubropallens, Stereum (Schw) Cooke, Grevillea 20: 35, 1891.
= *Hyphoderma rubropallens* (Schw.) Ginns.
spongiosum, Stereum Massee, Jour. Linn. Soc. Bot. 27:172. 1889.
= *Thelephora albidobrunnea* Schw.
tuberosum, Stereum (Grev.) Massee, British Fungus Flora 1. 130, 1892.
= *Tremellodendropsis tuberosum* (Grev.) Corner.
xanthellum, Stereum Cooke, Grevillea 9:12, 1880.
= *Podoscypha aurantiaca* (Pers.) Welden.

Type studies in Polyporaceae 28. Species described by F. Currey

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Introduction
F. Currey (1819-1891) was educated as a lawyer, but became a naturalist and was the first botanical secretary of the Linnaean Society of London. However, he had also with a keen interest in fungi and described among other things, also a number of polypores which is listed in the following. The types of all are today in the Kew herbarium (K), thus, this information is not repeated for each species. The species are treated alphabetically according to specific epithet, with reference to the single publication in which they were published, besides the type locality.

Abstract
The types of 5 poroid species described by F. Currey have been examined. Four are taxonomic synonyms, while one name is illegitimate.

List of species
cinereo-fuscus Polyporus 1876:124, Nakawa evergreen forest, Pegu, India
= *Fomitopsis rhodophaeus* (Lev.) Imazeki.
crassipes , Polyporus 1876: 122, Yomak river, Pegu, India.
= *Micoporus xanthopus* (Fr.) Kunth.
incertus, Polyporus 1876: 123, Pegu, India.
= *Trichpatum spruce*i (Berk.) Rahjenb. & Bianchin.
kurtzii, Hexagonia 1876: 125, Mullah, Burma.
= *Hexagonia glaber* Fr.
umbrina, Trametes 1876: 124, Nakawa, Pegu, India.
= Nomen illegit, non *T. umbrina* Fr 1845.
renamed *Trametes curreyii* Cooke = *Oxyporus cervino-givus* (Jungh) Ryvarden

References
Currey, F. 1876: V. On a collection of Fungi mad by Mr. Sulpie Kurz, Curator of the Botanic Garden, Calcutta. Trans. Linn. Soc. Ser. 2, 1:119-131.

Type studies in Polyporaceae 29
Species described by Carl Kalchbrenner

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Abstract
C. Kalchbrenner described 57 polypores out of which 33 are considered taxonomic synonyms, 6 names are illegitimate, while the types for 18 species could not be found.

Introduction
C. Kalchbrenner (1807- 86) was an Austrian priest with a keen interest in mycology. He corresponded with several international mycologists who over time sent him numerous collections. Totally, he described more than 400 taxa from all continents, and a complete list of them can be found in Lizon (1993). After his death, his collections were given to the National Museum of Bratislava (BRA) in Slovakia, at that time a part of the Austrian Empire. Over the following years the collections were neglected and at least when it comes to the polypores, many were attacked by insects and in the end apparently thrown away. Thus, many of his polypore types are today not present in the Slovak National Museum in Bratislava, Slovakia.
However, one of the correspondents to whom Kalchbrenner sent material, was M. C. Cooke (1825-1914) mycological curator at the Royal Botanic Garden, Kew in London where many of Kalchbrenners types can be found today and where I have examined them. A search for those not present in Kew where done in the National Museum in Bratislava where a few where found and sent me for examination.
It is evident from the following list that the majority of the polypores Kalchbrenner described are today relegated to synonymy. One reason is that he never visited any of the larger European herbaria where he could have examined overseas specimens. Thus, he had to trust the often vague literature descriptions of his times.
In the following, the species are treated alphabetically according to specific epithet, with reference to where he published the name the besides the type locality. K indicates that the examined types are in the Kew Herbarium, while those found in the National Museum Bratislava is noted with BRA, the well known acronyms for the institutions. Further. In the end, there is a list of the publications in which Kalchbrenner described polypores.

List of species
armitii, Polyporus, Muell. & Kalchbr**.**, 1882: 94, Dunrobin. N. Queensland, Australia, BRA.
= *Polyporus arcularius* Fr, The type is sterile and badly insect eaten.
baurii, Polyporus, Kalchbr.1881:53, Bajuza Caffrariae, South Africa.
= *Trametes cotoneus* (Pat.) Ryvarden, teste Reid 1975:70.
birretum Polyporus, Kalchbr. 1876:114, New South Wales, Australia. Type not found.

chrysoleucus, Polyporus, Kalchbr. 1875:72, Rockhampton, Queensland, Australia.
= *Oxyporus cervino-gilvus* (Jungh.) Ryvarden.
collybioides, Polyporus, Kalchbr.1882 Richmond river, Australia, K .
= *Polyporus, arcularius* Fr. Teste C. H. Cunningham in Kew.
P. cupreolaccatus Kalch., in Wettstein, Øst. B. Zeitschrift 35, name changed for *P. laccatus* Kalch.,1885, non *P. laccatus* (Timm.) Pers. 1825.
cyphelloides, Polyporus, Kalchbr. 1868b.431, Victoria, Australia type lost.
dispar, Polyporus, Kalchbr. in Cooke 1882a:101, Victoria, Australia, type lost.
eucalypti, Polyporus, 1875:73, Rockhampton, Queensland, Ausralia, K.
= *Fomitopsis feeii* (Fr.) Kreisel,
focalis, Polyporus, Kalchbr.1881: 54, Australia, type lost.
gausapatus, Polyporus, Kalchbr. in Cooke 1882:102, Australia, K.
= *Coriolopsis floccosa* (Jungh.) Ryvarden.
glabratus, Polyporus, Kalchbr. 1876:115, Queensland, Australia, BRA.
= *Amauroderma rugosum* (Blume et Nees:Fr.) Torrend. The type is badly eaten by insects.
glirinus, Polyporus, Kalchbr. 1881:55, K.
= *Trametes hirsuta* (Fr.) Lloyd.
hodgkinsoniae, Polyporus, Kalchbr. in Cooke 1882:96 Richmond, River, Australia, K.
= *Trichaptum biforme* (Fr.) Ryvarden.
hololeucus, Polyporus, Kalchbr. 1876:115, Victoria, Australia, K.
= *Trametes lactinea* Berk.
hypopolius, Polyporus, Kalchbr. in Cooke 1882:99, Rockhampton, Australia, BRA.
= *Earliella scabrosa* (Pers.) Gilbn. & Ryvarden.
hypothejus, Polyporus, Kalchbr. in Cooke 1882:102, Richmond river, Australia, type is lost.
illotus, Polyporus, Kalchbr. in Cooke 1882a:102, Richmond river, Australia, K.
= *Coriolopsis polyzona* (Pers.) Ryvarden.
inconstans, Polyporus, Kalchbr.1881.55, Mont Boschberg, South Africa, SAM.
= *Phellinus* sp. Teste Reid 1975 :74.
laccatus, Polyporus Kalchbr. in Wettstein 1885:81
nomen ilegit., non *P. laccatus* (Timm.) Pers. 1825, see *P. cupreolaccatus* Kalch.
leonotis, Polyporus, Kalchbr. In Thüm. 1875:73, Port Denison, Australia, K.
= *Coriolopsis polyzona* (Pers.) Ryvarden.
linhartii, Polyporus, Kalchbr. inn Linhart 1884: no 252 , Ungarn (BR).
= Ganoderma australe (Fr.) Pat.
lividus, Polyporus, Kalchbr., Richmond river, Australia, K.
= *Perenniporia tephroporia* (Mont.) Ryvarden.
lorenzianus, Polyporus, Kalchbr. 1879:21, Uruguay. Type not found.
lugubris, Polyporus, Kalchbr. In Roumeg. 1882:96, Pacific Ocean, type not found.
macowanii, Daedalea, Kalchbr. in Thüm. 1876a:362, see Reid 1973.
= *Trametes elegans* (Fr.) Fr.
macowanii, Polyporus, Kalchbr.1881:54, Somerset, East Boschberg, South Africa, K.
= *Bjerkandera adusta* (Fr.) P. Karst.

mirus, Polyporus, Kalchbr. In Thüm. 1877:145
= *Fomes fomentarius* (L.:Fr.) Fr. Teste Donk 1978:57.
moesta Trametes, Kalchbr., 1881 : 56, Murriiztown, South Africa, type lost, see Reid 1975:88.
morosus, Polyporus, Kalchbr. 1869:496, Scepusu, Hungary, K.
= *Ischnoderma benzoinum* teste Sacc. VI:137, 1888.
muelleri, Polyporus, Kalchbr. in Cooke 1882:97, New South Wales, Australia, K.
= *Polyporus grammocephalis* Berk.
multilobus, Polyporus, Kalchbr. in Cooke 1882a:95, Richmond river, Australia, type not found.
murinus, Polyporus, Kalchbr.1875:72, Rockhampton, Queensland, Australia, type not found. nomen illegit. non *P. murinus* Rostk 1838. changed to *P. lirinus* Sacc. I p 260.
myclodes, Polyporus, Kalchbr.1875:73, Queensland, Australia, BRA.
= The type is totally destroyed by insects, no pores left.
obscurus, Polyporus, Kalchbr.in Thümen 1880:137. Mongolia borealis.Type not found.
ochracea, Daedalea, Kalchbr. In Thüm. 1878 no1205, Somerset East, South Africa (F).
= *Trametes meyenii* (Kl.) Lloyd.
ornithorhynchi, Polyporus, Kalchbr.. In Cooke 1882a:96, Richmond River, Australia.
= *Polyporus grammocephalus* Berk.
osseus, Polyporus, Kalchbr. 1865:217, Hungary, K.
= *Oligoporus obductus* (Berk.) Gilb. & Ryvarden.
pentzkei, Polyporus, Kalchbr.1883b: 175, Daintree river, Australia, type is lost.
perdurans, Polyporus, Kalchbr.1880a:1, Tasmania, Australia, K.
= *Coltricia oblectans* (Berk.) G. H. Cunningh.
pinastri, Lenzites. Kalchbr. 1875 :49, Hungary, type not found.
= *Trametes betulina* (L. :Fr.) Fr. teste Donk 1974 :107.
pisiformis, Polyporus, Kalchbr. In Cooke 1882 :98, Melbourne, Australia, K.
= *Trametes hirsuta* (Fr.) Lloyd.
placodes, Polyporus, Kalchbr.1875:73, Rockhampton, Australia, K.
= *Coriolopsis strumosa* (Fr.) Ryvarden.
ponderosus, Polyporus, Kalchbr. in Cooke 1882a :99, Rockhampton, Australia, type not found.
proteus, Polyporus, Kalchbr. In Cooke 1882a :102, Melbourne, Australia, type not found..
= Nomen illegit., non *P. proteus* Berk 1843.
puellaris, Polyporus, Kalchbr. In Roumeg. 1882:96 , Pacific Ocean, type not found.
puniceus Polyporus, Kalchbr. In Roumeg 1882: 96, Pacific Ocean, type not found.
rufolateritius, Polyporus, Kalchbr. In Cooke 1882 a :104, Richmond river, Australia, BRA.
= *Rigidoporus vinctus* (Berk.) Ryvarden.
sciurinus, Polyporus, Kalchbr. in Thüm. 1882:117. Siberia, type not found.
= *Innotus hispidus* Teste Sacc. Syllog. Fung. 23:382, 1925.
scutiger, Polyporus, Kalchbr. 1867a:259.
= Nomen illegit., non *P. scutiger* Fr. 1828, changed to *Polystictus kalchbrenneri* Fr. 1868.

= *Trametes gibbosa* (Fr.) Fr., teste Donk 1974:180.
seriatus, Polyporus, Kalchbr. in Cooke 1882a:102, type not found.
spadiceus, Polyporus, Kalchbr. 1868:a:102.
nomen illegit., non Jungh. 1838.
strangeri, Polyporus, Kalchbr.1883a:106, Riverina, Australia, BRA.
= *Microporus affinis* (Blume et Nees:Fr.) Kunth.
torrida, Lenzites, Kalchbr.1880 :154, Richmond river, Australia, K.
= *Hexagonia glaber* Fr.
vossii Polyporus, Kalchbr. in Voss 1879:689, Yugoslavia.
= *Polyporus ciliatus* Fr. teste Donk 1974:142.
vulpinus Polyporus Kalchbr, nomen illegit, non Fr. 1852.
xerampelins, *Polyporus,* Kalchbr.1875:72, Rockhampton, Queensland, Australia, K.
= *Phylloporia pectinata* (Kl.) Ryvarden.

Acknowledgements
Dr. Pavel Lizon, Slovakia and Dr I. Kautmanova of the Slovak National Museum have both been helpful with literature and finding type material for this study. Their support is deeply acknowledged. The staff at the Kew Herbarium has as always been most helpful by giving me working facilities and being of assistance when needed.

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Type studies in Polyporaceae 30 Species described by J. B. Ellis, either alone or with other mycologists

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Abstract
The types of 13 polypores described by J. B. Ellis, either alone or with other mycologists have been examined. Three are accepted while the rest is relegated to synonymy.

Introduction
Job Bicknell Ellis (1829-1905) was a prominent North American mycologist (for a biblography, see . Kaye 1986). He was most interested in parasitic micro fungi, but described species also within other groups. Among these there is also a small number of polypores which is listed in the following. The species are treated alphabetically according to specific epithet, with reference to where it was published, besides type locality and the herbarium in which I have examined his types, which are either the New York Herbarium (NY) or the Farlow Herbarium (FH).

List of species
andersonii, Mucronoporus, Ellis & Everh., J. Mycol. **6**: 79, 1890, Newfield, New Jersey (NY).
= *Inonotus andersonii* (Ellis & Everh.) Cerny, for a description, see Gilbertson & Ryvarden 1986: 361.
cryptopus, Polyporus, Ellis & Barth, Erythea 4:79, 1896, Rockport, Kansas, USA (FH).
= Accepted species in *Polyporus*, for a description see Gilbertson & Ryvarden 1987:657.
everhartii, Mucronoporus, Ellis & Gall., J. Mycol. 5:141, 1889, New Jersey (FH).
= *Phellinus everhartii* (Ellis & Gall.) A. Ames. For a description, see Gilbertson & Ryvarden 1987:559.
fumosogriseus, Polyporus, Cooke & Ellis: Grevillea 9:103, 1881, New Jersey, USA(NY).
= *Bjerkandera adusta* (Willd.:Fr.) P. Karst.
fulvidus, Mucronoporus Ellis & Everh. Proc. Acad. nat. Sci. Philad. 46: 323, 1894, Alameda, Berkeley California, USA (NY).
= *Phellinus ferreus* (Pers.) Bourd. & Galzin.
hamatus, Mucronoporus Ellis & Everh. 1889, Sierra Leone, (FH).
= *Phellinus gilvus* (Schw.) Pat.
obesus, Polyporus, Ellis & Everh. Torrey bot. Club 24: 125, 1897, Newfield, New Jersey, USA (NY).
= *Coltricia montagnei* (Fr.) Murrill.

obolus, Polyporus Ellis & T. Macbr**.**, Bull. Lab. Nat. Hist. Iowa State Univ. 3: 68, 1896, Nicaragua (NY).
= *Polyporus tricholoma* Mont.

semiplicatus, Polystictus, Ellis & T. Macbr**.**, Bull. Lab. Nat. Hist. Iowa State Univ. 3: 192. 1896. Nicaragua (NY).
= *Trametes membranacea* (Fr.) Kreisel.

subglaber, Polystictus, Ellis & T. Macbr**.**, Bull. Lab. Nat. Hist. Iowa State Univ. **3**: 192, 1896, Nicaragua (FH).
= *Phellinus gilvus* (Schw.) Pat. , the type is sterile.

sublilacinus, Mucronoporus, Ellis & Everh., Bull. Torrey bot. Club **27**:50, 1900, St. Martinville, Louisiana, USA, on pine log (FH).
= *Phellinus pini* (Fr.) Bond. & Singer.

subluteus, Polyporus Ellis & Everh, Am. Nat. 31: 339, 1897, London, Canada (NY).
= *Trametes pubescens* (Schumach.:Fr.) Pilat.

vittata, Hexagonia Ellis & T. Macbr**.**, Bull. Lab. Nat. Hist. Iowa State Univ. **3**: 192, 1896, Nicaragua (NY, S).
= *Datronia stereoides* (Fr.) Ryvarden.

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Gilbertson, R. L. & Ryvarden, L. 1986-87: North American Polypores,, Fungiflora, Norway, 884p.
Kaye, G. C. 1986: Job Bicknell Ellis 1829-1905, Mycotaxon 26:29-45.

Type studies in Polyporaceae 31 Species described by George Edward Massee

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Abstract
G. E. Massee described 12 polypores out of which 8 are considered to be taxonomic synonyms, one are accepted while four names are illegitimate.

Introduction
G. Massee (1850-1917) was mycology curator at the Kew Herbarium from 1893 to 1915 and was mainly interested in microfungi such as smaller pyrenomycete and rust fungi, but he described a number of polypores as well. All his types are at the Kew herbarium where I have had the opportunity to examine them at several occasions. Since he received specimens from several correspondents, there are also lectotypes and/or authentic specimens in other herbaria, especially in New York (NY) and Farlow in Cambridge, USA (FH), which have been examined when necessary.
The species is treated alphabetically according specific epithet. If the type is not present in Kew, this is specifically indicated by the acronym of the pertinent herbarium. After the place where the species was described, the type locality is cited.

adusta Lenzites Massee Bull. Misc. Inf., Kew, 1910: 250, India (K).
= *Lenzites acuta* Berk.
albellus, Polyporus Massee Bull. Misc. Inf., Kew: 171, 1899. Selangor, Malaysia.
= nomen illegit, non Peck 1878. Massees type is *Polyporus grammocephalus* Berk.
albidus, Polystictus Massee, J. Bot., Lond. 30: 162, 1892. St Vincent (NY).
nomen illegit., non (Schaeef.) Cooke. Massees type is *Trametes cubensis* Mont.
bartteletti, Hexagonia Massee, Kew Bull. 1908: 216, 1908. Gujana, Georgtown, hortus botanicus (K).
= *Dichmotus setulosus* (Henn.) Masuka & Ryvarden.
diminutus Polyporus Massee, Jour. Bot. 34 :153, 1896, Victoria, Australia (K).
= *Panellus pusillus* (Pers. ex Lév.) Burds. & O.K. Mill.
gleadowii Polystictus Massee, Bull. Misc. Inf., Kew 1901:130, Dehar Dun, India (K).
= *Trametes modesta* (Fr.) Ryvarden.
gollani, Daedalea Massee, Bull. Misc. Inf., Kew 1908:217, Golan, India (K).
= *Antrodiella zonata* (Berk.) Ryvarden.
hollandii, Polyporus Massee, Bull. Misc. Inf., Kew 1901:163, Old Calabar, Africa (K).
= *Ganoderma colossum* (Fr.) C. F. Baker.
resupinatus, Fomes Massee, British Fungus Flora 1:226, 1892, Scarborough, England (K).

= *Phellinus laevigatus* (P. Karsten) Bourdot & Galzin.

ridleyi, Polystictus Massee, Bull. Misc. Inf., Kew 1906:256, Kedak, Malaysia (K).
= *Trametes menziezii* (Berk.) Ryvarden.

tasmanicus, Polyporus Massee, Bull. Misc. Inf., Kew 1899: 179, Tasmania (K).
= nomen illegit., non Berkeley 1859.

villosus Polystictus Massee, Bull. Misc. Inf., Kew 1906:93, India (K).
= nomen illegit., non Fr. 1851.

Studies in Neotropical polypores 36
A note on the genus *Henningsia*

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Abstract
Henningsia macrospora Gibertoni & Ryvarden and *H. ater* Ryvarden are described as new and a synopsis of the genus is provided.

Introduction
Henningsia is an endemic small Neotropical genus described by H. Møller based on a specimen from southern Brazil. The genus is characterized by brown to black basidiocarps, which shrink quite considerably as if soaked with a resinous substance. The hyphal system is monomitic with simple septate, wide generative hyphae and numerous gloeoplerous hyphae throughout the basidiocarps, which first are light coloured and then changing to brown or black. This colour and consistency change makes the genus distinct and rather easy to recognize in the field.
For some years, we have had two unnamed collections from the genus and after a re-examination of them; we felt it was time to make up a synopsis of the genus.

Henningsia Møller, Bot. Centralbl. 72:231, 1897.
Basidiocarps flabelliform to spathulate, laterally stipitate to almost sessile and dimidiate, flexible when fresh, rigid and fragile when dry, first light coloured, drying deep brown to black, hymenophore first smooth, then poroid, , brightly yellowish becoming black, bruised when fresh, 3-10 per mm, hyphal system monomitic, generative hyphae with simple septa, rather wide, gloeoplerous hyphae present, pale brown with oil drops, basidiospores subglobose to ellipsoid, smooth, slightly thick-walled without reaction in Melzer´s reagent. White rot in dead hardwoods.
Type species. *Henningsia geminella* Møller = *H. brasiliensis* (Speg.) Speg.
Remarks. The genus is striking in the colour change with the ultimate black and slightly shrunken basidiocarps, often curled in dry condition. The black colour in dry condition, the simple septate hyphae and the numerous gloeoplerous hyphae set it apart from other Neotropical genera with black basidiocarps.

Key to species

1. Spores ellipsoid to navicular ..... **H. ater**
1, Spores globose to subglobose 2

2. Spores 3.5-4 x 3-3.5 µm ..... **H. brasiliensis**
2. Spores 6-7 x 4.5-5 µm ..... **H. macrospora**

Henningsia brasiliensis (Speg.) Speg.
Bol. Acad. Nac. Cien. Cordoba 23:411, 1919. - *Polyporus brasiliensis* Speg. op. cit. 11:436, 1889. - *Henningsia geminella* Møller, Bot. Centralbl. 72:231, 1897.
Basidiocarps annual, caespitose, often imbricate, laterally stipitate or even dimidiate with a contracted base and then flabelliform to spathulate, 6 cm wide, 12 cm long and 2 mm thick, fleshy when fresh, margin entire, pileus orange yellow to bright reddish brown when fresh, becoming darker to bay or black when dry, smooth but wrinkled in dry condition, and glossy waxy to finely pubescent, pore surface bright yellow when fresh bruising black, becoming brown when dry, pores angular, thin walled, 7-10 per mm, tubes concolorous, easily separated from the context in fresh condition, 1-2 mm thick, context chestnut brown to grey, up to 1 mm thick, waxy when fresh, brittle when dry and with a black dense cuticle at least ate the base.
Hyphal system monomitic; generative hyphae with simple septa, hyaline, thin-walled, occasionally thick walled in the context, 6-12 um wide.
Gloeoplerous hyphae present in the trama and the context with a brownish content, 4-15 µm wide.
Cystidia absent.
Basidia 8-14 x 4.5-5 µm clavate, 4-sterigmate and a basal simple septum.
Basidiospores 3.5-4 x 3-3.5 µm, subglobose, smooth, thin walled and without reaction in Melzer's reagent.
Substrata. Dead hardwoods.
Distribution. A rare species known from Brazil, French Guyana and Costa Rica, but probably widespread in the Neotropical zone.
Remarks. The caespitose basidiocarps with a bright yellowish pore surface and the brown pileus becoming black when dry should help in the field while the simple septa generative hyphae and the subglobose spores are diagnostic together with the macromorphology.

Henningsia macrospora Gibertoni & Ryvarden nova sp.
Holotype: Brazil, Pernambuco, Sao Lourenco do Mata municipality, Ecological Station Tapacura, May 1998, Leg. T. Gibertoni 06 (URM, isotype in O). MB 807396.
Basidiocarps annual, caespitose, dimidiate with a contracted base, semicircular, 2-4 cm wide and long and 1.2 cm thick at the base, probably fleshy when fresh, shrinking considerable by drying , pileus dark brown with scattered black spots adpressed velutinate to or tomentose to almost hispid in parts, probably smooth becoming wrinkled to almost curly and distorted in dry condition, colour of pore surface unknown when fresh, black when dry, pores angular, thin walled, 3-5 per mm, tubes concolorous, up to 4 mm deep

with a dense black line towards he context, this snuff brown homogenous, slightly corky, up to 1 cm thick at the base.
Hyphal system monomitic; generative hyphae with simple septa, hyaline, thin-walled, 3-8 um wide.
Gloeoplerous hyphae present in the context, yellow to brown, 4-8 µm wide in trama, in context up to 20 µm wide, slightly darker in Melzer's reagent.
Cystidia absent.
Basidia 14–18 x 5-7 µm, clavate, 4-sterigmate.
Basidiospores 6-7 x 4.5-5 µm, subglobose to ellipsoid, smooth and thin walled and negative in Melzer's reagent.
Substrata. Dead hard wood tree.
Distribution. Known only from the type locality, but is probably widespread in the Amazonian forest.
Remarks. The blackish basidiocarp when dry the simple septate hyphae mixed with numerous gloeoplerous hyphae and the large spores make this a distinctive species

Henningsia ater Ryvarden nova sp.
Holotype: Costa Rica, Punta Arenas, Valle Coto Brus, Progreso Canino Cotoceto 1550 m, 3 November 2004. L. Ryvarden 46821 (O). MB 807397.
Basidiocarps annual, sessile, semicircular, 2-4 cm wide and long and 1. cm thick at the base, probably fleshy when fresh, shrinking considerable by drying , pileus sulcate probably because of shrinking during drying, black with scattered tufts of brown tomentum consisting of brown erect hyphae, being probably lighter or more even covered with tomentum when fresh and young, colour of pore surface unknown when fresh, black when dry, pores angular, thin walled, 3-5 per mm, tubes concolorous, up to 3 mm deep without a black line towards he context, the snuff brown and homogenous, rather dense, up to 1 cm thick at the base.
Hyphal system monomitic; generative hyphae with simple septa, hyaline, thin-walled, 3-8 um wide.
Gloeoplerous hyphae present both in trama and in context, golden yellow, 4-8 µm wide in, slightly darker in Melzer's reagent.
Cystidia absent.
Basidia 16–20 x 4-7 µm, clavate, 4-sterigmate.
Basidiospores 7-9 x 3-4 µm, cylindrical to slightly navicular, smooth and thin walled and negative in Melzer's reagent.
Substrata. Dead hard wood tree.
Distribution. Known only from the type locality.
Remarks. The blackish basidiocarp when dry the simple septate hyphae mixed with numerous gloeoplerous hyphae and the large cylindrical to navicular spores make this a distinctive species

Studies in Neotropical polypores 37 Some new and interesting species from tropical America

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Abstract
The following species are described as new, and keys are provided for their respective genera in the Neotropics: *Ceriporia aurea* Ryvarden, *Ceriporia straminea* Ryvarden, *Datronia parvispora* Ryvarden, *Rigidoporus brunneus* Ryvarden, *Trichaptum bulbocystidiatum* Ryvarden and *Trichaptum deviatum* Ryvarden. The new combination *Junghuhnia subundata* (Murrill.) Ryvarden is proposed.

List of species

Ceriporia aurea Ryvarden nova sp.
Holotype: Venezuela, Estado Arugua, Choroni, 5 February 2006, on hard wood log, L. Ryvarden 47390 O, isotype in URM (Recife, Brazil). MB 807403.
Basidiocarps annual, resupinate, effused, in the holotype about 10 x 4 cm, up to 1 mm thick, fragile when dry, margin white and cobwebby, not present all around the poroid surface, the latter warm yellow, pores round to sinuous as the type specimen was growing on a sloping substrate, 2-3 per mm; tube layer up to 400µm deep, subiculum white and of loose cobwebby structure, very thin.
Hyphal system monomitic; generative hyphae richly branched, often at right angles, 2-7 µm wide in the trama, up to 10 µm wide and more thick-walled in the subiculum and margin.
Cystidia and other sterile hymenial elements absent.
Basidia 12-15 x 4-6 µm, clavate, tetrasterigmatic.
Basidiospores 4-5 x 2 µm, cylindrical to allantoid.
Substrata. On dead hard wood log.
Distribution. Known only from the type locality, but probably widespread in the Amazonian and adjacent areas.
Remarks. The species is undoubtedly related to C. *viridans* (Berk. & Br.) Donk, which has whitish to pinkish colours often with a greenish tint when dry has smaller pores, 3-5 per mm.

Ceriporia straminea Ryvarden
Holotype Bolivia, La Paz, Nor-Yungas, Carmen Pampa, 17. February 1956, Leg. R. Singer B 1231 in K, isotype in O. MB 807404.

Basidiocarps annual, resupinate; 2 x 4 cm in the holotype, pore surface straw coloured, pores angular to partly irregular 1-3 per mm, dentate and deeply split, up to 3 mm deep, drying brittle, subiculum thin, up to 200 µm thick, soft, white and of loose cottony consistency.
Hyphal system monomitic; generative hyphae simple septate, thin walled, 3-5 µm in diam.
Cystidia or other sterile hymenial elements lacking.
Basidia 12-15 x 5-6 µm with four sterigmata and a simple septum at the base.
Basidiospores 4.5-5.5 x 2.5-2.8 µm, ellipsoid, smooth, thin walled and negative in Melzer's reagent.
Substrata. Rotten hard wood.
Distribution. Known only from the type locality.
Remarks. The straw-coloured basidiocarp with the strongly split and dentate pore surface besides the ellipsoid spores, should make it rather easy to recognize.

Key to Neotropical species of *Ceriporia*

(NB Colours refer to dried basidiocarps)

1. Cystidia present in the hymenium 2
1. Cystidia absent from the hymenium 3

2. Basidiospores globose, basidiocarps blackish ..... **C. meruloideus**
2. Basidiospores allantoid, basidiocarps whitish ..... **C. cystidiata**

3. Basidiocarps purplish or deep orange 4
3. Basidiocarps white, yellow, ochraceous to pale brown 5

4. Basidiocarps purplish pores 3-4 per mm ..... **C. purpurea**
4 Basidiocarps deep orange to reddish brown, pores 7-9 per mm ..... **C. spissa**

5. Basidiospores, 7-9 µm long 6
5. Basidiospores shorter 7

6. Basidiospores allantoid, basidiocarp white ..... **C. reticulata**
6. Basidiospores oblong ellipsoid to subcylindrical, basidiocarp pale citric yellow ..... **C. citrina**

7. Basidiospores allantoid to cylindrical 8
7. Basidiospores sub cylindrical, ellipsoid to subglobose 10

8. Basidiospores allantoid, 4-6 µm long, pores thin-walled, 3-5 per mm ..... **C. viridans**
8. Basidiospores cylindrical 4-4.5 µm long, pores thick-walled, 2-3 per mm 9

9. Pore surface warm yellow, spores 2 µm wide ..... **C. aurea**

9. Pore-surface unevenly whitish brown, spores 1.5. µm wide ..... **C. albobrunnea**

10. Basidiospores subcylindrical to oblong ellipsoid 11
10. Basidiospores subglobose ..... **C. xylostromatoides**

11. Pore surface evenly brown when dry 12
11. Pore surface white, yellow, cream to pale tan or buff when dry 13

12. Pores 6-8 per mm, round..... **C. ferruginicincta**
12. Pores 1-3 per mm, angular ..... **C. amazonica**

13. Pores 6-8 per mm, basidiospores 3-3.5 x 1.5-2 µm 13
13. Pores and basidiospores larger 14

13. Basal hyphae strongly encrusted..... **C. incrustata**
13. Basal hyphae more or less smooth..... **C. microspora**

14. Pores round, 2-5 per mm, basidiospores 2-2.5 µm wide ..... **C. alachuana**
14. Pores angular to hexagonal, 1-2 per mm, basidiospores 2.5-3 µm wide 15

15 Pore surface straw coloured, pores angular to irregular, up to 3 mm deep.. **C. straminea**
15. Pore surface cream coloured, pores angular to hexagonal, up to 0.5 mm deep
..... **C. dentipora**

Datronia parvispora Ryvarden, nova sp.
Holotype: Costa Rica, Punta Arenas, Valle Coto Brus, Sabalito, Amistad Haciendo, 1300 m.a.sl. 5 November 2004, on dead hard wood log, L. Ryvarden 46870 (O) isotype in Costa Rica (USJ). MB 807405.
Basidiocarp annual, sessile, pileate reflexed and elongated along the substrate, pileus up to 4 mm wide, 1- 2 cm long and 1 mm thick, flexible and slight reflexed in dry condition, upper surface dark brown, finely velutinate and azonate or weakly so, pore surface white, pores round, 7-10 per mm, almost invisible to the naked eye, tubes whitish, up to 0.5 mm deep, context whitish becoming brown towards the upper surface and with a hint of a dark zone close to the base, up to 250 µm thick.
Hyphal system trimitic, generative hyphae with clamps, 1-5 µm wide, arboriform skeletal hyphae hyaline to pale yellowish, thick- walled and dominating in the basidiocarp, 3-10 µm wide and with a long unbranched basal part, up to 160 mm long from the clamps where they arise, skeletal hyphae scattered, pale brown 4-10 µm wide. All hyphae without reaction in Melzer's reagent.
Basidia 15- 20 x 4-6 µm with 4 sterigmata and a basal clamp.
Basidiospores 5-6 x 2-2.5 µm, cylindrical.
Substrata. On dead hard wood log .
Distribution. Known only from the type locality.

Remarks. The species is characterized by its thin and small brown basidiocarps, the sparingly branched arboriform skeletal hyphae and the small spores.

Key to neotropical species of Datronia

1. Pores 1-2 mm wide 2
1. Pores smaller 3

2. Spores 10-12 x 3-4 µm ..... **D. mollis**
2. Spores 14-16 x 6-8 µm ..... **D. decipiens**

3. Pores 7-8 per mm, almost invisible to the naked eye 4
3. Pores 2-5 per mm 6

4. Spores up to 6 µm log, basidiocarp effuse reflexed, pileus up to 4 mm wide ..... **D. parvispora**
4. Spores longer than 6 µm, basidiocarp sessile to dimidiate, pileus more than 1 cm wide.. 5
4. Pileus brown, hirsute to villose, becoming scrupose with tufts of hairs or warts, ... **D. taylorii**
4. Pileus glabrous and brown with bay cuticle spreading from the base ..... **D. glabra**

6. Upper surface soon glabrous and black, basidiocarps small, rarely above 1 cm wide ..... **D. scutellata**
6. Upper surface tomentose to velutinate eventually becoming glabrous in narrow zones , basidiocarps usually wider than 1 cm 7

7. Spores 2-3 µm wide, with age becoming glabrous and black in narrow zones ..... **D. caperata**
7. Spores 2.5-4 µm wide, upper surface persistently velutinate to glabrous..... 8

8. Pores 2-3 per mm ..... **D. brunneoleuca**
8. Pores 4-5 per mm ..... **D. stereoides**

Junghuhnia

For a long time I have in writing and on labels used the name *Junghuhnia subundata* (Murrill) Binder al. However, as pointed out, among other places, in Index Fungorum, this combination is invalid (basionym not cited, place of publication not cited), see paragraph 41.5 in the International Code of Nomenclature for Algae, Fungi and Plants. (Melbourne Code 2012). To have a valid name available for this rather common species, a new combination is proposed below.

Junghuhnia subundata (Murrill.) Ryvarden comb. nov.
Basionym: *Poria subundata* Murrill, Mycologia 13:86, 1921. MB 807409.

Basidiocarp resupinate, adnate, effused, dense and tough when fresh, woody hard when dry and then slightly contracted, larger basidiocarps crack up, taste mild, pore surface straw-coloured to pale sand- coloured when fresh, dries to ochraceous, often with a slight patch wise discolouration, becoming ultimately pale yellow- brown with orange tints, shiny when turned in incident light, margin white, absent to very narrow, pores tiny, invisible to the naked eye, 7-9 per mm, tubes concolorous with the pore surface, up to 5 mm thick and indistinctly stratified in thick specimens, subiculum absent to very thin and ochraceous, and in some specimen there are red zones in the attacked wood or bark
Hyphal system dimitic, generative hyphae hyaline and with clamps and simple septa(?), usually extremely difficult to find, 1.5-3 µm wide, skeletal hyphae dominating, thick-walled, but with a wide and distinct lumen, 4-6 µm wide, apically thin-walled and often slightly swollen to small bulb like structure.
Cystidia of two types, a) hymenial ones ventricose and smooth with acute to rounded with a bent base, in some cases arising in the subhymenium, more commonly as the apical bent part of a skeletal hyphae that may be extended for a distance of 120 µm, frequent to very scanty, b) embedded, large heavily encrusted tramal cystidia, extremely difficult to release from the trama in which they are embedded and they are usually observed as large club-like heavily encrusted organs running parallel with the pore walls, up to 20 µm wide in the apical encrusted part.
Basidia 7-10 µm long, 4 sterigmata.
Basidiospores 2.5-3 x 2-2.5 µm, minute, subglobose to broadly ellipsoid, hyaline, thin-walled and non-amyloid.
Substrata. On dead hardwoods of many genera.
Distribution. Neotropical and quite common in the Caribbean area, specimens have been seen from Puerto Rico, Costa Rica and Panama.
Remarks. The very tiny spores, the tan -straw coloured pore surface with extremely tiny pores should make the species recognizable. The spore shape separates it from the other resupinate species described in the genus. The occurrence of the cystidia is apparently variable and sometimes they are easily observed, while they in other specimens are difficult to find and good vertical sections of the pores are necessary to ascertain their presence. The red zone observed below the basidiocarps in some collection is of uncertain identity since it apparently is absent in some collections and may represent another organism.
The septation of the generative hyphae is extremely difficult to observe and according to my opinion, seemingly both clamps and some scattered simple septa are present. Fresh specimens should be examined carefully to have this point elucidated.

Rigidoporus brunneus Ryvarden nova sp.,
Holotype: Brazil, Sao Paulo, Parque Eastadual das Fontes do Ipiranga, 8. November 2001, Leg. A. M. Gugliotta 1099, on unknown hardwood log.
Inst. de Botanica , Sao Paulo SP 381513, Isotype in O, MB 807406.
Basidiocarps dimidiate to fan shaped, pileus 3 cm long and 4 cm wide and 2 mm thick, upper surface dark brown to almost black near the base, strongly radially veined, probably due to shrinking under drying, finely scrupose, margin sharp and bent in dry condition, inner part of the basidiocarp almost like a lateral stipe, smooth, ochraceous becoming

more browns towards point of attachment, pore surface evenly pale brown in dry condition, pores round, a few larger probably due to shrinking under drying, 5-8 per mm, tubes concolorous, 2 mm deep, context white, 0.5 to 0.7 mm thick.
Hyphal system monomitic, generative hyphae 3-6 µm in diam, simple septate, hyaline, thin- to thick-walled.
Cystidia not seen.
Basidia 10-15 x 4-5 µm, rounded, 4-sterigmate.
Basidiospores 3-3.5 µm, globose, hyaline, smooth, thin-walled, non-amyloid.
Substrate. On unknown dead hardwood tree.
Distribution. Known only from the type locality.
Remarks. The species clearly belongs in *Rigidoporus* by its simple septate generative hyphae being the only hyphae present, arranged parallel in radial direction, and the small globes spores.
More collections are of course desirable to verify the full variation in the shape of the basidiocarps.

Key to neotropical species of *Rigidoporus*

1. Basidiocarps pileate **2**
1. Basidiocarps resupinate **14**

2. Basidiocarps pale buff to cream, up to 6 cm thick; pores 5–6 per mm; basidiospores, 7–10 × 6.5–10 µm ..... **R. ulmarius**
2. Basidiocarps of different colour, up to 1 cm thick; pores > 6 per mm; basidiospores < 7 µm long **3**

3.Thick-walled cystidia present **4**
3. Thick-walled cystidia absent **7**

4. Basidiocarps tiny, less than 7 mm wide, pendant ..... **R. micropendulus**
4. Basidiocarps different and larger **5**

5. Basidiocarps laterally stipitate ..... **R. biokoensis**
5. Basidiocarps sessile to dimidiate **6**

6. Pore surface cream to orange, basidiospores ellipsoid ..... **R. andinus**
6. Pore reddish to buff when dry, basidiospores globose ..... **R. lineatus**

7. Basidiocarps pendant, first as individual basidiocarps up to 15 mm wide, later fused to larger basidiocarps, upper surface greyish to pale brown ..... **R. concrescens**
7. Basidiocarps laterally stipitate to sessile or dimidiate, upper surface ochraceous to reddish orange when fresh **8**

8. Pore surface bright to deep orange without a reddish tint, basidiocarps often large and 0.5–2 cm thick at the base, growing in clusters..... **R. aurantiacus**
8. Pore surface distinctly reddish, Basidiocarps small to medium, rarely above 1 cm thick .. **9**

9. Basidiocarps sessile to occasioanally resupinate ..... **R. microporus**
9. Basidiocarps stipitate **10**

10. Basidiospores 6–7 µm in diameter..... **R. grandisporus**
10. Basidiospores < 6 µm in diameter **11**

11. Basidiocarps azonate, ochraceous; context white with black lines; pore surface isabelline; cystidiols 12–15 µm long ..... **R. amazonicus**
11. Basidiocarps zonate, different colour; context without black lines, pore surface different colour; cystidiols absent..... **12**

12. Basidiocarps cinnamon, fulvous to snuff brown; pore surface fulvous..... **13**
12. Basidiocarps first white becoming brown to grey with age or drying; pore surface white; basidiospores globose 3–4 µm..... **R. mutabilis**

13. Basidiospores globose 4–6 µm in diameter ..... **R. mariae**
13. Basidiospores globose up to 3 µm in dimeter..... **R. brunneus**

14. Pores 5–7 per mm; thick-walled cystidia and cystidiols absent ..... **R. crocatus**
14. Pores > 7 per mm; thick-walled cystidia and cystidiols present..... 15

15. Basidiocarps ressupinate to efussed-reflexed, pale ochraceous buff to pinkish ochraceous; hyphal system pseudodimitic; basidiospores ovoid to subglobose 4–5.5 × 3–4 µm ..... **R. vinctus**
15. Basidiocarps resupinate, isabelline to beige; hyphal ystem monomitic; basidiospores globose 5–5.5 (–6) µm..... **R. undatus**

Trichaptum bulbocystidiatum Ryvarden nov. sp.
Holotype: Costa Rica, Punta Arenas, La Amistad Pacifico, Estacion Biologicas Las Tablas, finca Cafrosa, entre senderos Higuero y Ripario, 1300 m. a. s.l. 29 September 2000, on dead hard wood log, L. Ryvarden 42922 (O) , isotype in USJ, MB 807407.
Basidiocarps annual, resupinate. up to 8 cm long, 3 cm wide and 0.4 mm, flexible and tough, margin determinate and narrow, pore surface grey, pores slightly irregular round to elongated, 2-3 (4) per mm entire and in parts almost merulioid, tubes concolorous, up to 200 µm deep, subiculum whitish to 100 µm in cracks of the substrate.
Hyphal system dimitic; generative hyphae thin-walled, with clamps, occasionally branched, 2.5-4 µm in diam; skeletal hyphae thick-walled, 3-5 µm in diam; hyaline to pale brown.
Cystidia of two types, 1) slightly ventricose and tapering towards the apex which is covered with a small crystal crown. thick walled , up to 30 µm long and 6 µm wide, often in clusters, 2) bulbous with a distinct smooth and thick walled apex, up to 15 µm

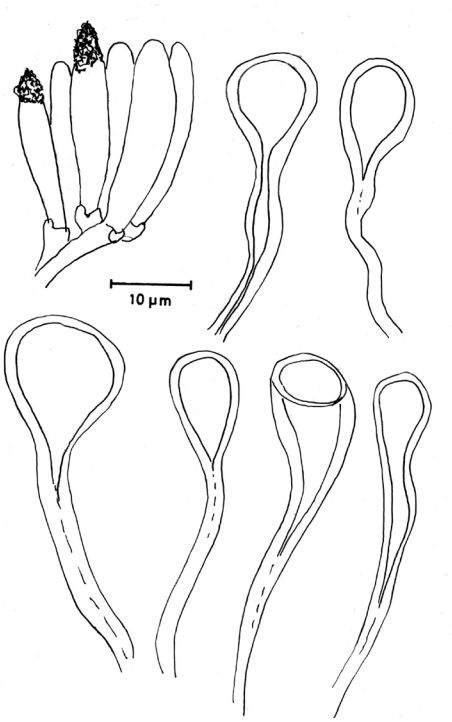

Fig. 1. *Trichaptum bulbocystidium*, types of cystidia. From the holotype.

diameter, thick walled, but in some cystidia the more thin walled apex has collapsed and give the cystidia appearance of a flattened head, up to 45 µm from the clamp from which they arise, most abundant in the trama and the dissepiments, weakly dextrinoid.
Basidia not seen.
Basidiospores not seen.
Substrata. Dead hardwood log.
Distribution. Known only from the type locality.
Remarks. It is with a little doubt this species is described as new, since basidiospores are not observed. However, the bulbous cystidia and the greyish resupinate basidiocarp with irregular pores are all rather characteristic and should make it rather easy to recognise, both in the field and with a microscopical examination.

Trichaptum deviatum Ryvarden, nov. sp.
Holotype: Venezuela, Estado Miranda, Mount Avila above Caracas, about 2000 m, on dead hardwood log, 2. February 2006, Ryvarden 46959 (O). MB 807408.
Basidiocarps perennial, resupinate, in the type 8 x 4 cm and 1 mm thick, tough when dry, margin partly present, pale grey and cottony, up to 2 mm wide, pore surface evenly grey with some brown tinges or shades, the pores circular to angular or even split due to

growth on a sloping substrate, 5-7 per mm dissepiments farinose by projecting cystidia, tube layer up to 0.5 mm deep, tubes walls greyish with a dark brown trama, context 100 µm thick, dark brown to almost black sharply constricting the greyish inner walls of the tubes, in older part of the basidiocarp with up to 5 layers each about 60-100 µm thick separated by thin whitish zones.
Hyphal system dimitic; generative hyphae thin-walled, with inconspicuous clamps, 2-3.5 µm in diam; skeletal hyphae hyaline to yellowish brown in context and inner trama, thick-walled, , 2-4 µm in diam and without reaction in Melzer's reagent.
Cystidia abundant, scattered in the hymenium, numerous in the dissepiments and there partly as endings of skeletal hyphae and with an apical crown of crystals, moderately thick-walled, 15-40 x 3-6 µm.
Basidia clavate, 4-sterigmate, 12-17 x 5-6 µm, with a basal clamp.
Basidiospores 4.5-6 x 1.7-2 µm, cylindrical, hyaline, smooth, IKI- .
Substrata. On unknown hardwood log.
Distribution. Known only from the type locality.
Remarks. This species is deviating in the genus by being completely resupinate while all other known species in the Neotropical zones, with exception of *T. bulbocystidiatum* described here, are pileate although some times with a decurrent pore surface. The spores are also smaller than in the other Neotropical species.

Key to Neotropical species of Trichaptum

1. Basidiocarps pileate **2**
1. Basidiocarps resupinate **11**

2. Upper surface glabrous to adpressed tomentose mixed with glabrous zones.....
2. Upper surface strongly strigose to hispid **9**

3. Pores large, 5-8 per cm, whole basidiocarp dense and deep purplish to almost black .....
..... **T. sprucei**
3. Pores smaller, basidiocarps greyish, clay coloured to pale brown **4**

4. Hymenophore distinctly hydnoid ..... **T. griseofuscens**
4. Hymenophore poroid **5**

5. Basidiocarps rarely above 3 mm thick, flexible, petaloid to fan shaped or effused reflexed often in clusters, pileus velutinate to hirsute **6**
5. Basidiocarps usually 1 to 10 cm thick, dense and hard, usually single, pileus glabrous..**7**

6. Pore surface grey to black, pores entire, upper surface often grey to whitish .... **T. sector**
6. Pore surface pale violet when fresh fading to beige or pale brown, pores often lacerate with tendencies to becoming irpicoid, upper surface grey to deep beige, often in dense zones ..... **T. biforme**

7. Pores irregular at least in parts, 1-2 per mm or longer, pore surface split by age, basidiocarp brown ..... **T. variabilis**
7. Pores regular and round, pore surface even, basidiocarps greyish to clay coloured **8**

8. Pores 8-10 mm, hardly visible to the naked eye, basidiocarps often bluish grey, up to 2 cm thick, generally small ..... **T. durus**
8. Pores 3-4 per mm, basidiocarps greyish to clay coloured or brown, up to 14 cm thick in massive specimens ..... **T. fumosoavellanea**

9. Pileus with a dense mat of dark brown to black strigose to hispid hairs, basidiocarps sessile ..... **T. perrottetii**
9. Pileus with gray to pale brown hirsute hairs; basidiocarps resupinate, effused-reflexed or sessile **9**

10. Pores 1-2 per mm, spores cylindrical 5.5-8 x 2-2.5 µm..... **T. byssogenum**
10. Pores 2-4 per mm, spores ellipsoid, 4.5-6 x 2.5-3 µm ..... **T. strigosum**

11. Bulbous cystidia present, pores 2-4 per mm ..... **T. bulbocystidiatum**
11. Bulbous cystidia absent, pores 5-7 per mm ..... **T. deviatum**

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A note on Theleporus Fr.

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Abstract
The genus *Theleporus* Fr. is redescribed and a new species, *T. monomiticus* Ryvarden is added to the genus.
Key words. Polyporaceae, dendrohyphidia, South Africa.

Introduction
Theleporus Fr. was described as early as in 1848 (see below for reference) based on a sterile specimen from Natal in South Africa, today in the Stockholm herbarium (S). For a long time the genus slept in oblivion until it was described in modern terms by Ryvarden & Johansen (1980:51) and then again in Ryvarden (1979:12). Recently Zhou & Dai (2013) studied the genus in China and added two more species besides discussed the circumscription of the genus.
For a long time only the type specimen was known, but in 1983 a fertile specimens was found in Krüger National park, not so far from the type locality. This specimen was fertile which made it possible to get a better impression of the microscopical characters of the species, which is redescribed below. A specimen from Brazil collected in 1987 was macroscopically virtually identical with the two South African specimens, but had a monomitic hyphal system. Recently it was re-examined and it was decided it would be useful to describe it to draw the attention to the genus also in South America. The Chinese new species have not been available for studies and only the type species and a new South American one are included here.

Theleporus Fr.,
Kungl. Vet. Akad. Handl. 11:138, 1848.
Basidiocarps resupinate, adnate, irregularly poroid, light cream to ochraceous, pores 3-6 per mm, angular or often not completely closed, thus the hymenophore may appear semi labyrinthine (lens), some pores with a papillae, hymenium restricted to the bases of the pores and slightly down the otherwise sterile pore walls, often the hymenium is visible (lens) as a whiter and denser layer in the bottom of the pores. Hyphal system mono to di-trimitic, generative hyphae with clamps, vegetative hyphae probably of two types, partly as skeletal hyphae more or less unbranched and parallel in the tube walls, but binding hyphae also present but these may represent upper parts of arboriform skeletal hyphae, all vegetative hyphae hyaline to very pale yellowish when solid, non-amyloid and dextrinoid, dendrohyphidia present, gloeocystidia present or absent, spores ellipsoid, smooth, and non amyloid. On hard wood, a tropical genus with white rot.
Type species: *Theleporus cretaceus* Fr. op.cit.

Remarks. The genus is above all characterized by its semiporoid white basidiocarps with basidia lining usually both the vertical pore walls and the bottom part of the shallow pore. Further, dendrohyphidia are present in the two species included here. As shown by molecular studies by Zhou and Dai the genus is related to *Grammothele*, which is separated, by its dextrinoid skeletal hyphae and a hydnoid to distinctly poroid basidiocarps. A discussion how-to separate the genera have to be postponed until the type species of *Theleporus* has been sequenced.

Key to African and American species of *Theleporus*

1. Hyphal system dimitic, most pores with a central papillae, spores 7-8 x 3-3.3 µm, African species.....**T. cretaceus**
1. Hyphal system monomitic, pores without a central papillae, spores 5-6 x 4-5 µm, American species .....T**. monomiticus**

Theleporus cretaceus Fr. op.cit
Basidiocarps annual, resupinate, adnate and widely effused, dense and brittle when dry, pore surface white to cream, pores angular and in parts irregular and connected to adjacent pores by narrow openings, on average, 3-4 per mm, pores up to 200 um deep, hymenium restricted to the bases of the pores and more whitish than the sterile pore walls, subiculum very thin.
Hyphal system trimitic or dimitic, generative hyphae hyaline, thin-walled and with clamps, 2-4 um wide, skeletal hyphae thick-walled to solid, 2-3.5 um wide, arranged more or less parallel in the tube walls, binding hyphae probably present, solid, 2-4 um wide. All types of vegetative hyphae, non-amyloid and non-dextrinoid.
Basidiospores 7-8 x 3-3.2 µm, broadly cylindrical, smooth and non-amyloid
Basidia18-25 x 5-6 with four sterigmata and a basal clamp.
Gloeocystidia 20-40 x 4-7 µmm tubular and slightly sinuous in outline with oil drops. Dendrohyphidia 15-32 x 3-7 µm, hyaline and non- amyloid.
Substrate. On unknown hard wood.
Distribution. Known from Natal and Transvaal in South Africa.
Remarks. The whitish basidiocarp with shallow and partly irregular pores with a central papillae should make it possible to recognize it in the field. No specimens have been found during extensive c collecting in central Africa which may indicate that either it is a very rare species or is more or less restricted to South Africa.
Specimens examined: South Africa, Natal, Fungi Natalense no 32 (lectotype in S). South Africa, Transvaal, Krüger Nat. Park 28 February 1983, on *Acacia* sp. L. Ryvarden 20645 (O).

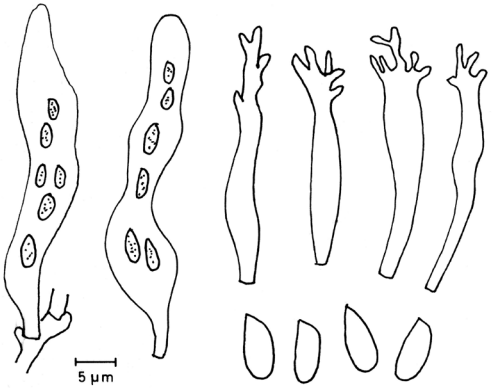

Fig. 1 *Theleporus cretaceus*, gloeocystidia, dendrohyphidia and spores. From Ryvarden 20645, see text.

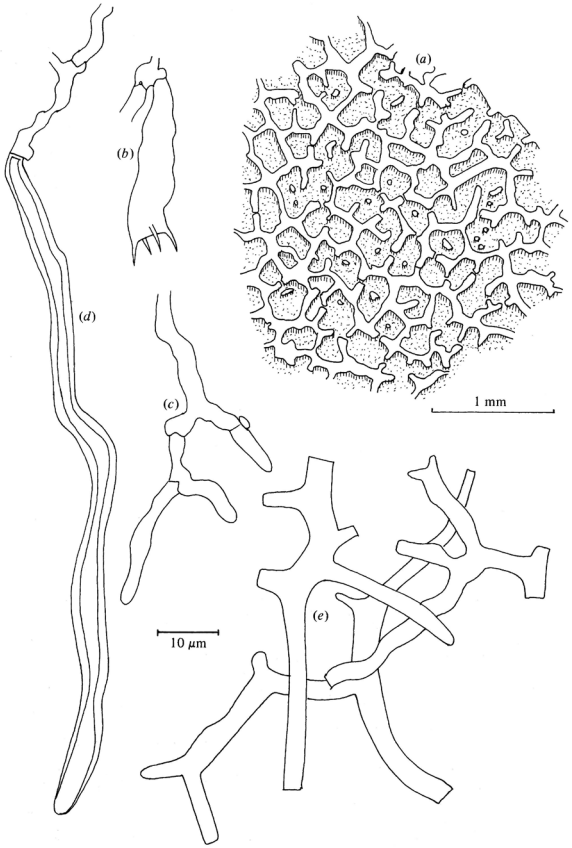

Fig. 2 *Theleporus cretaceous*, part of basidiocarp showing irregular pores, basidium, skeletal, generative and binding hyphae. From the lectotype.

Thelephorus monomiticus Ryvarden nov. sp.
Holotype: Brazil, Sao Paulo State , Santos, Cananeia, Ihla da Cardoso, 2. February 1987, on hard wood log, L. Ryvarden 24782 (O), isotypes in Sao Paulo (SP) and Recife (URM). Mycobank no
Basidiocarps annual, resupinate, adnate and widely effused, dense and brittle when dry, pore surface white to cream, pores angular and in parts irregular and connected to adjacent pores by narrow openings, on average, 3-4 per mm, pores up to 200 um deep, hymenium restricted to the bases of the pores and more whitish than the sterile pore walls, subiculum very thin.
Hyphal system monomitic, generative hyphae hyaline, thin walled and with clamps, 2-4 um wide, non amyloid and non dextrinoid.
Basidiospores 5-6 x 3-4 µm, oblong ellipsoid to drop shaped, smooth, hyaline, thin walled and without reaction in Melzer's reagent.
Basidia 12-15 x 4-6 µm, clavate and with 4 sterigmata.
Cystidia not observed.
Dendrohyphidia present in the hymenium, sparingly branched, hyphoid, smooth and hyaline, up to 15 µm long.
Substrate, on unknown hard wood log.
Distribution. Known only from the type locality.
Remarks. This new species is superficially identical with the generic type species and was filed as such for a long time. However, a new examination revealed that it was monomitic and has distinctly small spores.

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Perplexostereum Ryvarden & Tutka nov. gen

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Abstract
The genus *Perplexostereum* is described and illustrated with *Stereum endocrocinum* Berk. as type. It is characterized by a unique combination of a stereoid pileate basidiocarp, tubular cystidia and rounded, ornamented and amyloid spores. The new combination *P. endocrocinum* (Berk.) Ryvarden & Tutka is proposed.

Introduction
In 2012, one of us (Czech ST) visited Kanchenjunga national park in Nepal and made some scattered collections of wood inhabiting fungi. One specimen was superficially by sight identified as *Xylobolus semipileatus* (Berk. & M. A. Curtis) Boidin, having all the macroscopical characters so typical for this species. However, a microscopical examination revealed it completely different with prominent cystidia and globose amyloid and ornamented spores. The latter remind one of *Dichostereum* which however is a genus where all known species are resupinate and where cystidia are unknown. We can find no genus which reasonably can accommodate it and thus, we described it in a new genus.

Perplexostereum Ryvarden & Tutka nova gen. Mycobank 807398.
Basidiocarps perennial, pileate dimidiate, pileus dark brown, zonate, finely velutinate to pubescent, hymenial surface smooth, ochraceous, in section with a thin black zone between the hymenial part and the upper surface of the pileus, hyphal system dimitic, generative hyphae hyaline and with clamps, skeletal hyphae pale brown and almost solid, cystidia present in the hymenium, hyaline tubular, thin-walled, basidiospores subglobose hyaline, ornamented and strongly amyloid in Melzer's reagent. On coniferous wood.
Type species: *Perplexostereum endocrocinum* (Berk.) Ryvarden & Tutka.
Remarks. The genus is unique by its combination of characters. Macroscopically it is indistinguishable from a fairly large specimen of *Xylobolus subpileatum* by its dimidiate basidiocarp with a dark brown velutinate to almost hirsute upper surface and a smooth ochraceous hymenophore.

Fig. 1. *Perplexostereum endocrocinum* (Berk.) Ryvarden & Tutka, basidiocarp - Pileus (above) Lower side (below). Photo: S. Tutka.

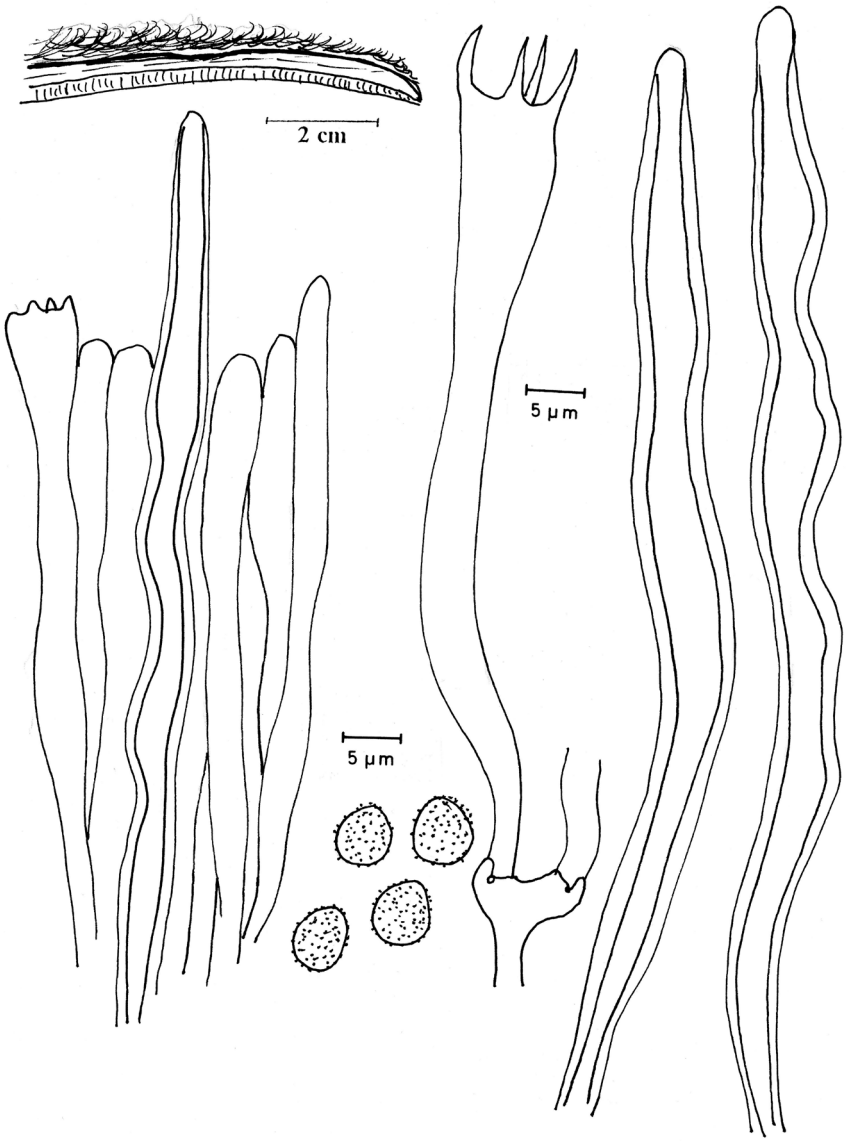

Fig. 2. *Perplexostereum endocrocinum* (Berk.) Ryvarden & Tutka, a) section of basidiocarp, b) part of hymenium, c) basidium, d) cystidia, e) spores. From the holotype, del. L. Ryvarden.

Perplexostereum endocrocinum (Berk.) Ryvarden & Tutka, comb.nov.
Fig. 1-2
Basionym: *Stereum endocrocinum* Berk. , Hooker's J. Bot. Kew Gard. Misc. 6: 169, 1854.
Mycobank no. 8080944.
Basidiocarps perennial, dimidiate, up to 10 cm wide and long, probably flat fresh bent in dry condition and very hard, upper surface dark brown, velutinate to pubescent in narrow concentric zones, margin sharp, hymenial surface smooth, ochraceous, in section concolourous 4 mm thick, separated from the brown upper of the pileus by a thin distinct black line, upper brown part 3 mm thick, dense.
Hyphal system dimitic with clamped, hyaline generative hyphae, 3-6 µm thick skeletal hyphae pale to distinctly brown, especially in the pileus cover, 4-6 µm wide, especially dominating in the brown upper part of the basidiocarp.
Cystidia present in the hymenium , tubular, hyaline and thin walled, 6 -12 µm wide and to 100 µm long from the clamps from which they arise., not projecting above the basidia.
Basidia 22-25 x 5-6 µm, clavate, with four sterigmata**.**
Basidiospores subglobose, 5-6 µm in diameter, hyaline, distinctly ornamented by tubercles and small projections, strongly amyloid in Melzer's reagent.
Substrata. On dead coniferous wood, either of *Abies*? or *Juniperus?* sp.
Distribution. Known only from Nepal (see below).
Remarks. This is remarkable species by its deceiving external characters being in this respect identical with *Xylobolus subpileatum* (Berk.) Boidin by its smooth brown zonate pubescent pileus and smooth hymenophore. However, the cystidia and the ornamented amyloid basidiospores exclude any relationship to that genus. The spores remind one of those seen in *Dichostereum*, a genus however, where all species have resupinate basidiocarps and hyaline cystidia are unknown.

Specimens examined:
Nepal, Yangma valley, 28 November 1850, Leg. W. J. Hooker, Type in K.
Nepal, Kanchenjunga national park, 3000 m a.s.l. on *Abies* or *Juniperus*, 2012, Leg. S. Tutka no 9, O, K.

Peniophora amazonica Ryvarden & Aparecida sp. nov.

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Abstract
Peniophora amazonica is described as new. Based on a collection from the Amazonas, it is characterised by a brown basidiocarp, large encrusted cystidia and cylindrical spores.

Key words. Cortiaceae, Amazonas, encrusted cystidia.

Introduction
Peniophora is a large genus of resupinate corticoid fungi characterized by the presence of gloeocystidia and, in most species, large encrusted metuloid cystidia and large smooth non-amyloid spores. See Chamuris (1988) and Yurchenko (2010).
A few years ago, one of us (M.A. de J.) collected a brown resupinate specimen which was sent to Oslo for identification. Gloeocystidia, large encrusted cystidia and long cylindrical spores characterized the specimen, which clearly indicated that *Peniophora* was a genus to consider. So far, only one *Peniophora* species has been reported from the Amazon area, i.e. *P. albobadia* (Schwein.) Boidin (Gomez-Silvia & Gibertoni 2009). This is quite different from the one described here, see Chamuris 1988.
Lopharia is similar to *Peniophora* in many respects but has smooth ellipsoid to cylindrical spores and most species have encrusted metuloid cystidia (see Hjortstam & Ryvarden 1989) . However, its hyphal system is dimitic with skeletal hyphae and gloeocystidia are absent.

Peniophora amazonica Ryvarden & Aparacida Nov. species Fig. 1
Holotype: Brazil, Amazonas state, Adolfo Ducke forest reserve, January 2008, leg. M. Apericida de Jesus LPM 3466 in INPA, isotype in O. Mycobank 807400**.**
Basidiocarps perennial, resupinate , adnate, rounded in shape, up to 5 cm in longest dimension and 200 µm thick, smooth, but cracked into polygons 2-5 mm wide, pale greyish brown, dark brown in section
Hyphal system monomitic with clamped, hyaline generative hyphae, 3-10 µm wide, hyaline to pale brown in the subiculum.
Cystidia: two types presen,
a) metuloid cystidia, pointed, thick walled , up to 120 µm from the clamp at the base, 8.12 µm wide, mostly apically encrusted, but occasionally, hyaline to pale brown in basal part of the basidiocarp.

b) gloeocystidia, tubular and slightly sinuous, thin walled , hyaline to pale yellow, up to 80 µm long from the clamps at base, 5-12 µm wide.
in the hymenium, tubular and tapering towards the apex thick-walled and heavily encrusted in the upper part , hyaline to pale brown, 8-12 µ m wide, up to 120 µm from the clamps where they arise, not projecting above the basidia,
Basidia 20-45 x 5-8 µm, clavate, with four sterigmata**.**
Basidiospores 10-13 x 3-4 µm, cylindrical, hyaline, smooth and without reaction in Melzer's reagent.
Substrata. On dead hardwood log .
Distribution. Known only from the type locality.
Remarks. The deeply cracked, brown coloured surface will probably be sufficient to recognize the species in the field. The colour, and microscopically narrow cylindrical spores and large cystidia characterize the species.

See figure next page.

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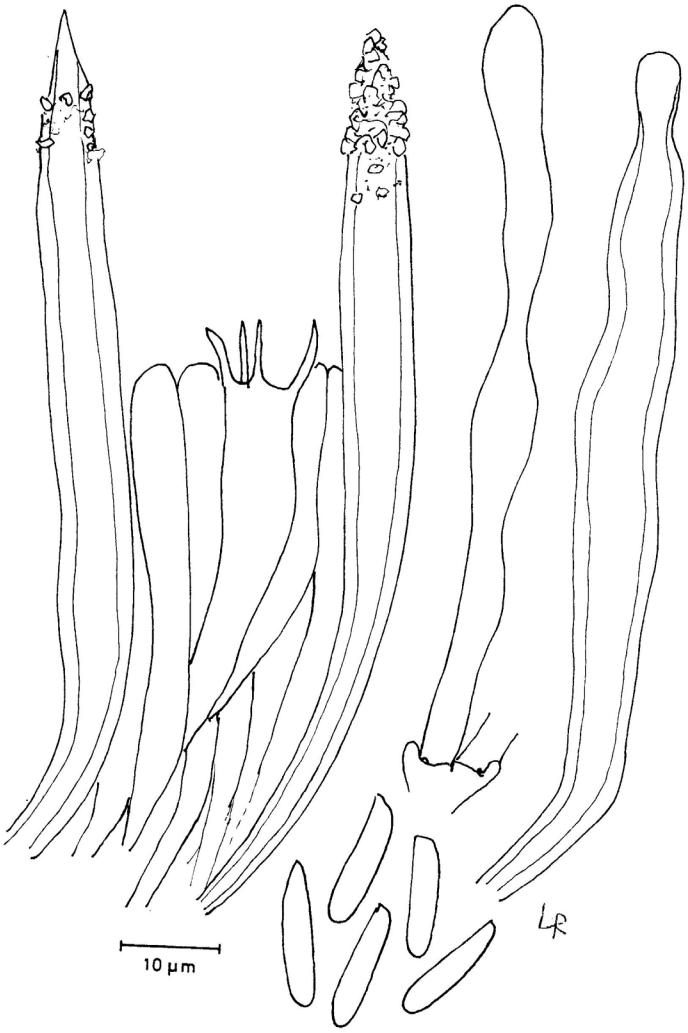

Fig. 1. *Peniophora amazonica*, a) part of hymenium with cystidia, b) gloeocystidium, c) cystidium, d) spores. From the holotype. Del. L. Ryvarden.

Errata

Ceriporia

By an oversight I created an illegitimate homonym:, *Ceriporia dentipora* M. Mata & Ryvarden, Syn. Fung. 27: 62, 2010, non .*Ceriporia dentipora* Ryvarden Syn. Fung. 27: 39, 2010.
The former is here given a nomen novum *Ceriporia ochracea* Ryvarden, MB 807 507, with the same holotype as for the illegitimate name. For a key to neotropical species of the genus, see Studies in Neotropical polypores 37 in this issue.

Wrightoporia

As well as in *Ceriporia*, I unfortunately made an illegitimate homonym: *Wrightoporia micropora* Aime & Ryvarden 2007, non W. *micropora* Buchanan & Ryvarden 2000. The is here given a nomen novum of the illegitimate name came from Guyana and make it necessary to create a nomen novum: *Wrightoporia microporella* Ryvarden, MB: 807 508, with the same holotype as for the illegitimate name.
An updated key to *Wrightoporia* in the Neotropics is given below.

Key to the neotropical species of *Wrightoporia*

1. Basidiomata perennial, resupinate to effused reflexed, woody hard, pore surface grey to pale brown ***W. tropicalis*** (Cooke) Ryvarden
1. Basidiocarp annual to biennial, resupinate to distinctly pileate, soft to fragile, pore surface pinkish to ochraceous or wood coloured 2

2. Basidiomata resupinate 3
2. Basidiomata pileate 8

3. Pore surface pinkish to lilac ***W. bracei*** (Murrill) I. Lindblad & Ryvarden
3. Pore surface whitish, ochraceous, or pale straw coloured 4

4. Spores 5–6 µm in diameter ***W. lenta*** (Overh. & J. Lowe) Pouzar
4. Spores 3.5–4.5 µm in longest dimension 5

5. Pores 1–3 per mm, irregular, basidiocarp soft, cottony, easy to separate from the substrate ***W. avellanea*** (Bres.) Pouzar
5. Pores tiny 6–8 per mm, basidiocarp hard to tough, adnate 6

6. Skeletal hyphae dextrinoid ***W. microporella*** Ryvarden
6. Skeletal hyphae non-dextrinoid 7

7. Generative hyphae with simple septa, subiculum white ***W. efibulata*** I. Lindblad & Ryvarden
7. Generative hyphae with clamps, subiculum pink ***W. roseocontexta*** Ryvarden & Iturr.

8. Upper surface chestnut coloured ***W. brunneo-ochracea*** A. David & Rajchenb.
8. Upper surface wood coloured or ochraceous 9

9. Pores 1–3 per mm, spores subcylindrical to oblong ellipsoid ***W. porilacerata*** Log.-Leite, A.L. Gerber & Ryvarden
9. Pores 3–4 per mm, spores subglobose ***W. cremea*** Ryvarden

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