Supplementary Table 1 —Psychoactive Mushroom Species Reported from India||

Technical Report · January 2021 CITATIONS READS 0 6,101 3 authors: Michael James Winkelman Prasad Lamrood Ahmednagar College Arizona State University 202 PUBLICATIONS 3,837 CITATIONS 19 PUBLICATIONS 122 CITATIONS SEE PROFILE SEE PROFILE John W. Allen Publishing Ethnomycological Journals: Sacred Mushroom Studies 54 PUBLICATIONS 282 CITATIONS SEE PROFILE Some of the authors of this publication are also working on these related projects: Ethnomycological Journals: Sacred Mushroom Studies Vol. X. View project Magico-religious Practitioners View project



Indian Journal of Traditional Knowledge Vol 21(2), April 2022, pp 341-352



Does India have entheomycology traditions? A review and call to research

Michael James Winkelman^{a,*} John W. Allen^b, Prasad Y Lamrood^c, Meena Maillart-Garg^d, Bobby Luthra Sinha^e & N C Shah^f

aSchool of Human Evolution and Social Change, Arizona State University, Tempe, Az. USA 85281
 bEthnomycological Journals: Sacred Mushroom Studies, Multidisciplinary Association of Psychedelic Studies. San Jose, Ca. USA 95117
 CDepartment of Botany, Ahmednagar College (Affiliated to Savitribai Phule Pune University), Ahmednagar 414 001, Maharashtra, India
 dIndependent Scholar, Cosianama Learning Experience, New Delhi 110 070, India
 fRetd. Scientist, CSIR-CIMAP, Lucknow 226 024. Uttar Pradesh, India

E-mail: michaeljwinkelman@gmail.com

Received 27 September 2020; revised 30 October 2021

	Supplementary Table 1 -	- Psychoactive Mushroom Sp	ecies Reported	from India	
Genus	Species [synonyms]	State and occurrence citation	Holotypes ^a	Isotypes ^b	Alkaloids ^c & chemical analysis citations
Amanita	Amanita gemmata (Fr.) Bertill. (Syn.=Amanita orientigemmata)	Shimla (Glen), Summer Hill, Taradevi, Baghi, Jubbal & Chopal, HP ^{i,ii,iii,iv}	AMH MUBL	UNK	ibotenic acid, muscimol ^v
	Amanita muscaria (L.) Lam	Idukki District, KL ^{vi,vii} ; Kodaikanal, TN; Guntur, AP ^{viii,ix,x, iii, iv}	AMH MUBL	UNK	ibotenic acid, muscimol, and muscazone ^{xi, xii}
	Amanita muscaria Var. flavivolvata (Singe) Jenkens	Narkanda & Hattoo (Hatu) Peak in Shimla District of HP ^{iii, xiii}	KASH	UNK	suspected, Amanita muscaria; NKA
	Amanita muscaria var.formosa Pers.	Hirpora, Gulmarg & Doodhpatheri, J&K ^{iv, xiii, xiv}	BDUK KASH	UNK	ibotenic acid, muscimol, and muscazone ^{xv, xvi}
	Amanita pantherina (DC ex. Fr.) Kummer	Kodaikanal, TN; Shillong & Shella in Meghalaya; HP; Chada & Dindori, MP ^{xvii, ii, iii, iv, x, xviii}	TF	UNK	ibotenic acid, muscimol, and muscazone ^{xv, xvi}
	Amanita pantherina var, velatipes (Atk.) Jenkens	Shimla, HP; Chajpur, UP ⁱⁱⁱ	UNK	UNK	suspected ibotenic acid, muscimol & muscazone NKA
	Amanita regalis (Fr.) Bert (Syn.= Amanita muscaria var. regalis (Fr.) Bertillon	Garhwal, UK; Jaiharikhal, UP ^{xix, iv}	UNK	UNK	ibotenic acid, muscimol ^{xx, xxi}
Claviceps	Claviceps purpurea (Fr.) Tul.	Maharashtra; WB; TN ^{xxii, xxiii,}	UNK	UNK	ergotamine ^{xxvi, xxvii}
Copelandia	Copelandia bispora (Malençon & Bertault) Singer & R.A. Weeks [Syn.=Panaeolus bisporus (Malençon & Bertault) Ew. Gerhardt)	Tirunelveli & Mundanthurai Tiger Reserve, TN; KL ^{xxviii, iv} 1		UNK	bluing on exposure psilocybine psilocine ^{xxix}
	Copelandia cyanescens (Berk. & Broome) Singer [Syn.=Panaeolus cyanescens (Berk. & Broome) Sacc.]	Sinhgad, MH; Madras & Guindy Deer Park, TN; WBxxx, xxviii, iv, xxxi, xxxii, xxxiii, xxxiiv, xxxii	АМН	UNK	baeocystine psilocybine psilocine ^{xxxv, xxxvi, xxxvii}

(Contd.)

Genus	Supplementary Table 1 — Psy Species [synonyms]	State and occurrence	Holotypes ^a	Isotypes ^b	Alkaloids ^c & chemical
	Copelandia tirunelveliensis[Syn.=Panaeolus tirunelveliensis (Natarajan & Raman) Ew. Gerhardt]	citation Tirunelveli, Mundanthura & Kodimudi Teak Plantations, TN ^{xxxviii, iv, xxviii}	MUBL	UNK	analysis citations bluish-gray in cap; NKA
	Copelandia tropica Natarajan & Raman	Myladumpara & Paraiadi at Cardamom Estates, KL ^{iv, xxviii}	MUBL	UNK	turns turquoise on bruising; NKA
Gymnopilus	Gymnopilus braendlei (Peck) Hesler (Syn.=Gymnopilus braendlei (Peck) Singer)	Jodpala, Coorg District (Kodagu), KA ^{xxxix, xl}	MUBL	UNK	pileus staining with greenish tint ^{xli}
	Gymnopilus luteus (Peck) Hesler	Koynadu Coorg District (Kodagu), KA ^{xxxix}	MUBL	UNK	staining bluish-green at base, psilocybin ^{xli, xlii}
	Gymnopilus spectabilis [Syn.=Gymnopilus junonius P. D. Orton]	Poonkunnam in Thrissur & Kuthirakkodi, Begur, Wayanad Dt., KL; Dodabetta, Ooty & Nilgiris, TN ^{Xliii, iv, xxviii, xliv, xlv}	MUBL KFRI MF	UNK	psilocybine, bis- noryangonin, & hispidin ^{xlvi, xlvii, xlviii}
Inocybe	Inocybe corydalina var. corydalina Quél.	KL, TN ^{x, xlix}	AMH	UNK	baeocystine, psilocybine & psilocine ^{xlix, 1}
Panaeolus	Panaeolus africanus Ola'h	KL; Madras, Children's Park, TN; iv, xxviii, xxxiii	MUBL	ULQ	psilocybine & psilocine ^{li}
	Panaeolus cyanoannulata Atri, M. Kaur & A. Kaur sp. nov.	Jeewanpur Jattan, Hoshiarpur Dist., PB ^{liv}	PUN	UNK	blue staining species; NKA
	Panaeolus castaneifolius (Murrill) A.H. Smith	Sangrur Dist., PB ^{lv}	PUN	UNK	Psilocybine ^{lii}
	Panaeolus cinctulus (Bolton) Britzelm	Palakkad, KL ^{xxxiii}	TBGT	UNK	psilocybine
	Panaeolus cyanescens (Berk. & Broome) Sacc.(see Copelandia cyanescens)	KL ^{iv, xxxiii}	TBGT	UNK	baeocystine, psilocybine, & psilocine ^{lvi, lvii}
	Panaeolus subbalteatus (Berk. & Brome) Sacc. [Syn.=Panaeolus cinctulus (Bolton) Sacc.]	Palakkad, KL; Madras & Guindy Deer Park, TN ^{iv, xxviii, xxxiii, lii}	TBGT ENCB	UNK	baeocystine & psilocybine xliv, lviii, lix, lx
	Panaeolus tropicalis Ola'h	Patiala, PBxxxviii, lv	PUN	UNK	Psilocybine ^{lii, liii}
Psilocybe	Psilocybe aztecorum var. bonetii(Guzmán) Guzmán [Syn.= Psilocybe bonetii Guzmán)	KL Ooty, Nilgiris, & Dodabetta, TN ^{iv, xxviii, xlii, lxi, lxii}	MUBL	ENCB	Psilocybine ^{lx, lxiii}
	Psilocybe caeruleoannulata Singer ex Guzmán	Thiruvananthapuram Dist., Kallar, KL ^{xxxiii}	TBGT	UNK	psilocybine, psilocine ^{l,}
	Psilocybe cubensis (Earle) Singer	BR; Orissa; Munnar, Sasthanada, Arippa, Muthanga, Brahmangiri & Thirunelly in KL: Madras & Guindy, TN ^{iv, xxviii, xxiii, xliv, lxii}	XAL MUBL KFRI MF	L	baeocystine, psilocybine & psilocine ^{lviii, lxv, lxvi}
	Psilocybe fimetaria (P.D. Orton) Watling	Heggala-Thora, Virajpet, Kodagu (Coorg) Dist. & Mysore Dist., KA ^{lxvii}	MUBS NCKKRSMF	UNK	psilocybine, psilocine ^{lxviii}
	Psilocybe indica Sathe & J.T. Daniel		AMH	UNK	turning pale blue on bruising NKA
	Psilocybe keralensis K. A. Thomas, Manim. & Guzmán	Ponkuzhy, Wayanad Dist., KL ^{lxii}	XAL	L	bluing on cap & stipe NKA

	Supplementary Table 1 — Ps	Supplementary Table 1 — Psychoactive Mushroom Species Reported from India (Contd.)					
Genus	Species [synonyms]	State and occurrence citation	Holotypes ^a	Isotypes ^b	Alkaloids ^c & chemical analysis citations		
	Psilocybe natarajanii Guzmán [Syn.=Psilocybe aztecorum var. bonetii (Guzmán) Guzmán sensu Natarajan & Raman]	Tiger Shola Forest & Kodaikanal, TN ^{xxviii, lxi, lxx}	MUBL	L	suspected, see Psilocybe pseudoaztecorum NKA		
	Psilocybe pseudoaztecorum [syn.=Psilocybe aztecorumvar. aztecorum sensu Natarajan & Raman	Kodaikanal & Nilgiris, TN ^{xxviii, lxi, lxx} l]	MUBL	L	bluing in stipe NKA		
	<i>Psilocybe samuiensis</i> Guzmán, Bandala & J. W. Allen	Devikulam Lake & Munnar, Idukki Dist., KL xliv, xlv, lxxi	KFRI MF	XAL & BISH	baeocystine, psilocybine, & psilocine ^{lxxii}		
	Psilocybe semilanceata (Fr.) P. Kumm.	Poona (Pune) & Sinhagad, MH ^{xxx, lxxiii, lxxiv}	AMH	UNK	Baeocystin & psilocybine ^{xlix, l, lxxv}		
	Psilocybe subaeruginascens Höhnel	Vellarimala Hills, Calicut Dist., KL ^{lxii}	XAL	L	psilocybine & psilocine ^{lxxvi}		
	Psilocybe subcubensisGuzmán [Syn.=Psilocybe cubensis (Earle) Singer]	Muthanga Wildlife Sanctuary, Wayanad Dist., KL ^{iv, xxviii, lxii}	XAL	L	psilocybine & psilocine lxxviii psilocine		
	Psilocybe wayanadensis K. A. Thomas, Manin, & Guzmán	Muthanga & Wayanad Dist., KL ^{xliv, lxii}	XAL	L	blue bruising NKA		

Abbreviations in Table

^aHolotypes: **AMH**= Ajrekar Mycological Herbarium of M. A. C. S., Pune; **BISH**=Bishop Museum Herbarium Pacificum, Honolulu, Hawaii; **BDUK**= Botany Department University of Kashmir; **ENCB**=Instituto Politécnico Nacional de México; **KASH**=Herbarium of Plant Taxonomy, Division of Botany, Kashmir University, Kashmir; **KFRI MF**=Kerala Forest Research Institute-Macrofungi; **MUBL**=Herbarium of Madras Univ. Botany Laboratory, Madras, India; **MUBSNCKKRSMF**= Department of Biosciences, Mangalore University, Mangalagangotri, Mangalore Karnataka, India; **PUN**=Herbarium Punjabi Univ., Patiala, Punjab, India; **TBGT**=Herbarium of Jawaharlal Nehru Tropical Botanical Garden and Research Center (JNTBGRI), Thirvananthapuram, India; **TF**=Tropical Forest Research Institute in Madhya Pradesh, India; **ULQ**=Université Laval, Quebec; **XAL**=Instituto de Ecologia, A. C. Herbarium, Xalapa, Veracruz, Mexico; ^bIsotypes: **L**=Leiden Univ., Leiden, Nederlands; **BISH**=Bishop Museum Herbarium Pacificum, Honolulu, Hawaii; **ENCB**=Instituto Politécnico Nacional de México, **XAL**= Instituto de Ecologia, A. C. Herbarium, Xalapa, Veracruz, Mexico; **ULQ**=Université Laval, Quebec.

^cAlkaloids and Citations: Bluing indicates presence of psilocin or psilocybin; NKA= No Known Analyses

^{1.} Bhatt R P, Kumar A & Lakhanpal T N, Fleshy Fungi of North-Western Himalayas, *Indian J Mycol, Pl Pathol*, 18 (2) (1988) 143-148.

^{2.} Bhatt P R, Tulloss R E, Semwal C K, Bhatt V K, Moncalvo J-M *et al.*, The *Amanitaceae* of India: A critically annotated checklist, *Mycotaxon*, 88 (2003) 249-270.

^{3.} Ashok K, Bhatt R P & Lakhanpal T N, The *Amanitaceae* of India; Bishen Singh Mahendra Pal Singh (Dehra Dun, India) 1990 159.

^{4.} Natarajan K, Kumaresan V & Narayanan K, A Checklist of Indian Agarics and Boletes (1984-2002), *Kavaka*, 33 (2005) 61-128.

^{5.} Gilbert J, & Şenyuva H, Bioactive Compounds in Foods, (Blackwell Publishing, Oxford, UK) 2008 119.

^{6.} Pradeep C K & Vrinda K B, Some noteworthy agarics from Western Ghats of Kerala, *J Mycopathol Res*, 1 (2007) 1-14.

- 7. Vrinda K B & Pradeep C K, Toxic and hallucinogenic mushrooms of Kerala, *J Mycopathol Res*, 49 (2) (2011) 231-246.
- 8. Cooke R C, Fungi, Man and his Environment (Logeman, London), 1977.
- 9. Natarajan K, South Indian Agaricales III, Kavaka, 5 (1977) 35-39.
- 10. Sathe A V & Sasangan K C, Agaricales from Southwest India III, Biovigyanan, 3 (1977) 337-338.
- 11. Takemoto T, Nakajima T & Sakuma R, Isolation of a flyicidal constituent: Ibotenic acid from *Amanitamuscaria* and *Amanitapantherina*, *Yakugaku Zasshi*, 84 (12) (1964) 1233-34.
- 12. Good R, Muller G F R & Eugster C H, Isolierung & Charakterisierung von PRÄ Muscimol und Muscazon aus *Amanitamuscaria* (Fr.) Hooker, *Helvetica Chimica Acta* 48 (1965) 927-930.
- 13. Pala S A, Wani A H & Riyaz A M, Diversity of Macrofungal genus *Russula* and *Amanita* in Hirpora Wildlife Sanctuary, Southern Kashmir Himalayas, *Biodiversi Taz*, 13 (2) (2012) 65-71
- 14. Pala S A, Wani A H & Mohmmad Y B, Ethnomycological Studies of Some Wild Medicinal and Edible Mushrooms in the Kashmir Himalayas (India), *Int J Med Mushrooms*, 15 (2) (2013) 211–220
- 15. Chilton W, Ott S & Ott J, Toxic metabolites of *Amanitapantherina*, *A. corthurnata*, *A. muscaria* and other *Amanita* species, *Lloydia J Nat Prod*, 39 (2 & 3) (1976) 150-157.
- 16. Ott J, *Amanita muscaria. Pharmacotheon: Entheogenic Drugs: Their Plant Sources and History*, (Natural Products. Kenniwick, Washington), 1993 323-358, 440, 446, 475.
- 17. Shajahan M, Roychoudbury N, Saha A K & Samajpati N, Mushroom flora of Khasi Hills (Meghalaya), India, *Indian J Mycol Res*, 26 (1988) 75-85.
- 18. Verma R K & Pandro V, Diversity and distribution of amanitaceous mushrooms in India, two new reports from sal forest of central India, *Indian J Trop Biodivers*, 26 (1) (2018) 42-54.
- 19. Bhatt V K, Bhatt R P, Gaur, R D & Singh M P, Mushrooms of Garhwal Himalaya: The Genus *Amanita* Pers. ex Hooker, *Mushroom Res*, 8 (2) (1999) 1-8.
- 20. Stijve, T, De Koningsvliegezwam, Amanita Regalis (Fr.) Michael, de Paddelstoel van het jar 2000 (The Royal fly agaric, the mushroom of the year 2000). *Antwerpse Mycologische Kring (AMK) Mededelingen* vol. (2000) 2:46-53.
- 21. Elonen, Erkki, Tarssanen L & Härkönen M, Poisoning with Brown Fly Agaric, Amanita Regalis. *Acta Medica Scandinavica* vol. 205 (1-6): 121-123. 1979
- 22. Nath P & Padwick, GW, Ergot in India, Curr Sci, 10 (1941) 88-89
- 23. Mukerji B & Dey N K, Assay of Indian Ergot, Curr Sci, 10 (11); 88-89
- 24. Thomas K M, Ramakrishnan T S & Shrinivasan K V, Natural occurrence of ergot in South India, *Proceedings of the Indian Acad Sci*, B 21 (1945) 93-100

- 25. Hawksworth D L, Kirk P M, Sutton B C & Pegler D N, *Ainsworth & Bisby's Dictionary of the Fungi*, eighth ed., Inter Mycol Inst Surrey 1995.
- 26. Grasso V, Rassegna delle species di *Claviceps* e delle loro piante ospiti, *Ann Sperim Agr*, 9 (1955) 51-89 & 99-112.
- 27. Hofmann A, The Mexican relatives of LSD; The sacred mushroom Teonanácatl, *LSD My Problem Child*: 101-144. McGraw-Hill. New York. 1980.
- 28. Natarajan K & Raman N, South Indian Agaricales, Bibliotheca Mycologica, 89 (1983) 1-203.
- 29. Senn-Irle B, Nyffenegger A & Brenneison R, *Panaeolusbisporus*-an adventitious fungus in Central Europe, rich in psilocin, *Mycologist*, 13 (4) (2000) 177-179.
- 30. Sathe A & Deshpande S, Agaricales of Maharashtra In Advances in Mycology & Plant Pathology, eds S Chattopadhyay & N Samajpati, (Calculta: Oxford & IBH Pub. Co.) 1982 81-88
- 31. Senthilarasu G & Kumaresan V, Diversity of agarics (gilled mushrooms) of Maharashtra, India, *Curr Res Environ Appl Mycol*, 4 (1) (2014) 58-78.
- 32. Amandeep K, Atri N & Munruchi K, Two new coprophilous varieties of Panaeolus (Psathyrellaceae, Agaricales) from Punjab, India, *Mycosphere*, 4 (3) (2013) 616-625. Doi 10.5943/mycosphere/4/3/13
- 33. Bijeesh C, Pradeep C K & Vrinda K B, Psychedelic Mushrooms from Kerala. Mushroom Research Lab, JNTBGRI (Jawaharlal Nehru Tropical Botanic Garden & Research Institute, Palode, Thiruvananthapuram, Kerala), (2019) DOI: 10.13140/RG.2.2.22474.21446
- 34. Bose S F, Description of fungi in Bengal, *Proceedings of the Indian Association of Cultivation and Science*, 4 (1920) 109.
- 35. Heim R, Hofmann A & Tscherter H, Sur une Intoxication Collective a Syndrome Psilocybien Causee en France par un *Copelandia*, *Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences*, 262 (1966) 519-523
- 36. Stijve T, Psilocin, psilocybin, serotonin and urea in Panaeolus cyanescens from various origin, *Persoonia*, 15 (1992) 117-121
- 37. Allen J W, Magic Mushrooms of the Hawaiian Islands, Ethnomycological Journals Sacred Mushroom Studies IV (Psilly Publ. and Raver Books: Seattle) 1998 1-52
- 38. Gerhardt E, Taxonomische Revision der Gattungen *Panaeolus* und *Panaeolina* (Fungi, *Agaricales*, *Coprinaceae*) 47 (Schweizerbart'sche Verlagsbuchhandlung. Stuttgart) 1996
- 39. Purushothama K B & Natarajan K, Studies on South Indian Agaricales XXII; *Ad Plant Sci*, 56 (20) (1989) 1073-1074.
- 40. Senthilarasu G & Kumaresan V, Diversity of agaric mycota of Western Ghats of Karnataka, India, *Curr Res Environ Appl Mycol*, 6 (1) (2016) 75–101.

- 41. Guzmán G, Allen J W & Gartz J, A worldwide geographical distribution of the neurotropic fungi, analysis and discussion, *Anali dei Civ Mus Rovereto*, 14 (2000) 189-270.
- 42. Mahmood Z A, Bioactive Alkaloids from Fungi: Psilocybin, In *Natural Products*, edited by K Ramawat & J M Mérillon (Springer, Berlin, Heidelberg) 2013.
- 43. Orton P D, New checklist of British agarics and boleti part III; Notes on genera and species, *Transactions of the British Mycological Society*, 43 (1960) 159-439.
- 44. Mohanan C, *Macrofungi of Kerala*. KFRI Handbook No. 27, (Kerala Forest Research Institute, Peechi, Kerala, India) 2011
- 45. Farook V A, Khan S S & Manimohan P, A checklist of agarics (gilled mushrooms) of Kerala State, India, *Mycosphere*, 4 (1) (2013) 97-131. Doi 10.5943 /mycosphere/4/1/6.
- 46. Hatfield G M, Occurrence of Bis-noryangonin and hispidin in *Gymnopilus* species, *Lloydia*, 34 (2) (1971) 260-263.
- 47. Hatfield G M, Valdes L J & Smith A H, Proceedings-isolation of psilocybin from the hallucinogenic mushroom *Gymnopilusvalidipes*, *Lloydia*, 40 (6) (1977) 619.
- 48. Nozoe S, Koike Y, Kusano G & Seto H, Structure of *gymnopilin*, a bitter principle of an hallucinogenic mushroom *Gymnopilus spectabilis*, *Tettrahedron Letters*, 24 (16) (1983) 1735-1736.
- 49. Stijve T & Kuyper T W, Psilocybin in various higher fungi from several European countries, *Planta Medica*, 51 (5) (1985) 385-387.
- 50. Stijve T & Meijer A A R, Macromycetes from the State of Paraná, Brazil; The psychoactive species, *Arq*, *Biol Technology*, 36 (2) (1993) 313-329.
- 51. Ola'h G M, Etude Chimiotazonomique sul les *Panaeolus*, Recherches sur la Presence des corp Indoliques dans ces Champignons, *Comptes Rendus Hebdomadaires des Séances de l'Academie des Sciences*, 267 (1968) 1369-1372.
- 52. Ola'h G M, A taxonomic and physiological study of the genus *Panaeolus* with the Latin descriptions of the new species, *Revue de Mycologia*, 33 (4) (1969) 284-290.
- 53. Ola'h GM, Le Genre *Panaeolus*: Essai Taxinenomique et Physiologique, *Revue de Mycologie M Memoire* Hors-ser, 10 (1970) 222.
- 54. Kaur, A, Atri, N. & Kaur M, Diversity of coprophilous species of Panaeolus (Psathyrellaceae, Agaricales) from Punjab, India. *BIODIVERSITAS*, 15 (2) (2014) 115-130. DOI: 10.13057/biodiv/d150202
- 55. Kaur M, Kaur H & Malik N, Genus Panaeolus: New records from India, *Journal on New Biological Reports*, 3 (1) (2014) 52-59.
- 56. Stijve T, Vorkommen von serotonin, psilocybin und urea harnstoff in Panaeoloideae, *Beiträgezur Kenntnisder* Pilze *Mitteleuropa* III (1987) 229-234.

- 57. Merlin M D & Allen J W, Species identification and chemical analysis of psychoactive fungi in the Hawaiian Islands, *J. Ethnopharmacology*, 40 (1993) 21-40.
- 58. Repke D, Leslie D T & Guzmán G, Baeocystin in Psilocybe, Conocybe, and Panaeolus, *Lloydia*, 40 (6) (1977) 566-578.
- 59. Beug M & Bigwood J, Psilocybin and psilocin levels in twenty species from 7 genera of wild mushrooms in the Pacific Northwest U.S.A. *J. Ethnopharmacology* vol. 5(3): 271-285. 1982
- 60. Ott J & Guzmán G, Detection of psilocybin in species of *Psilocybe*, *Panaeolus*, and *Psathyrella*, *Lloydia J Nat Prod*, 39 (4) (1976) 258-260.
- 61. Natarajan K & Raman N, A new species of *Psilocybe* from India, *Mycologia*, 77 (1) (1985) 158-161.
- 62. Thomas K A, Manimohan P, Guzmán G, Tapia F & Ramirez-Guillén F, The Genus *Psilocybe* in Kerala State, India, *Mycotaxon*, LXXXIII (2002) 195-207.
- 63. Anderson C, Krisstinson J & Gry J, Occurrence and use of hallucinogenic mushrooms containing psilocybin alkaloids, *Tema Nord*, (2009/2008) 606.
- 64. Silva P S, Cortez V G & Silveira R M B, The mycobiota of Itapuã State Park, Brazil: I. Species of Strophariaceae (Agaricales). *Mycotaxon*, 97 (2006) 219-229.
- 65. Bigwood J & Beug M, Variation of psilocybin and psilocin levels with repeated flushes (harvests) of mature sporocarps of *Psilocybe cubensis* (Earle) Singer, *J. Ethnopharmacology*, 5 (3) (1982) 287-291.
- 66. Gartz J, Extraction and analysis of indole derivatives from fungal biomass, *J Basic Microbiol*, 34 (1) (1994) 17-22.
- 67. Karun N C & Sridhar K R, Elephant Dung Inhabiting Fungi in the Western Ghats, *Curr Res Environ Appl Mycol*, 5 (1) (2015) 60-69.
- 68. Benedict R G, Tyler V E & Watling R, Bluing in *Conocybe*, *Psilocybe*, and a *Stropharia* Species and the Detection of Psilocybin, Lloydia *J Nat Prod*, 30 (2) (1976) 150-157.
- 69. Sathe A V & Daniel J, Agaricales (Mushrooms) of Kerala State. In: Agaricales (Mushrooms) of South West India, series 1, edited by Sathe A V, Maharashtra Association for the Cultivation of Science, Research Institute, 1 (1980) 75-108.
- 70. Guzmán G, Supplement to the monograph of the genus *Psilocybe*. In: *Taxonomic Monographs of Agaricales*, *Bibliotheca Mycologica*, edited by O Petrini & E Horaks, (Berlin-Stuttgart. Cramer) 159 (1995) 91-141.
- 71. Guzmán G, Bandala V M & Allen J W, A new bluing *Psilocybe* from Thailand, *Mycotaxon*, 46 (1993) 155-160.

- 72. Gartz J, Allen J W & Merlin M D, The Ethnomycology, biochemistry, and cultivation of *Psilocybe samuiensis* Guzmán, Bandala and Allen, sp. nov., a new psychoactive fungi from Thailand, *J. Ethnopharmacology*, 43 (1) (1994) 73-80.
- 73. Bhide V P, Pande, Alaka., Sathe, A V, & P G Patwandaan, 1987. Fungi of Maharashtra. Pune, India.
- 74. Senthilarasu G, Diversity of agarics (gilled mushrooms) of Maharashtra, *Curr Res Environ Appl Mycol*, 4 (1) (2014) 58–78. Doi 10.5943/cream/4/1/5
- 75. Mantle P G & Waight E S, Occurrence of psilocybin in the sporophores of *Psilocybe semilanceata*, *Trans Br Mycol Soc*, 53 (1969) 302-304.
- 76. Koike Y, Yokoyama K, Wada K, Kusano G & Nozoe S, Isolation of psilocybin from *Psilocybe argentipes* and its determination in specimens of some mushrooms, *J Nat Prod*, (*Lloydia*), 44 (3) (1981) 362-365.
- 77. Allen J W & Merlin M D, Observations regarding the suspected psychoactive properties of *Panaeolinafoenisecii* Maire. In: *Year book for Ethnomedicineandthe Study of Consciousness*, edited by C Rätsch, 1 (1992) 99-115.
- 78. Keller T, Schneider A, Regenscheit P D, Rücker T, Jaspers J & Kisser W *et al.*, Analysis of psilocybin and psilocin in *Psilocybe* subcubensis Guzmán by ion mobility spectrometry and gas chromatography–mass spectrometry, *Forensic Sci Int*, 99 (1994) 93-105.