

- Name – Arvind Parihar
- Designation – Botanical Assistant, Cryptogamic Unit, BSI, H.Q.
- Date of Joining in BSI – 03.04.2007 as Preservation Assistant Grade – I
- Field of work/specialisation – Macro-fungi
- Proposed Ph. D. Title – “Taxonomic studies on woody and fleshy poroid fungi of Koderma wildlife sanctuary, Jharkhand”



Annual Action Plan Projects Carried out- 2 (TWO)

Project 1- Wood Rotting Fungi of Koderma Wildlife Sanctuary, Jharkhand

**Name of the executing Official - Arvind Parihar (Under the Supervision of Dr. J.R. Sharma, Ex-Scientist 'E', BSI, NRC, Deharadoon)**



Families- 15

Genera - 51

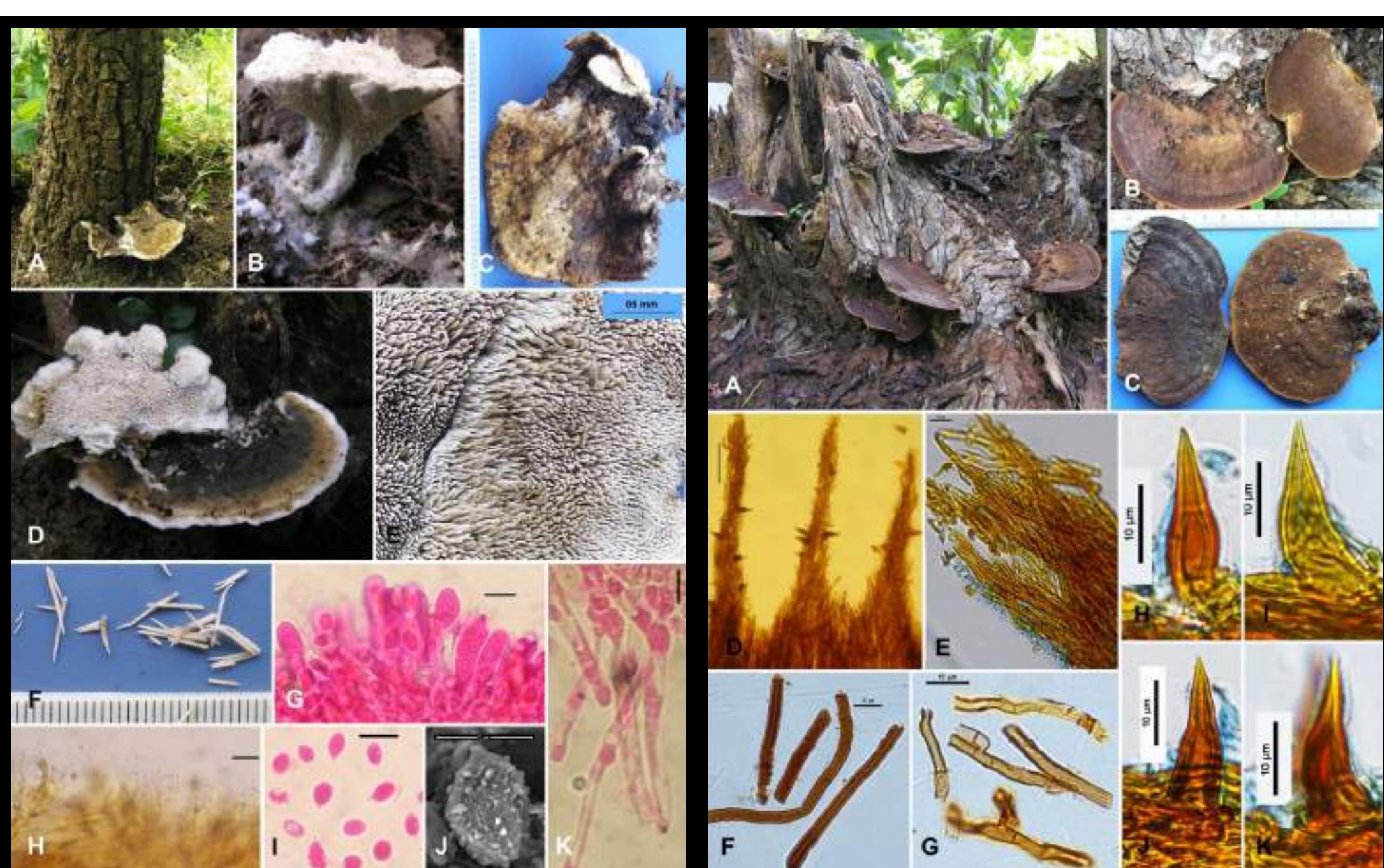
Species - 99





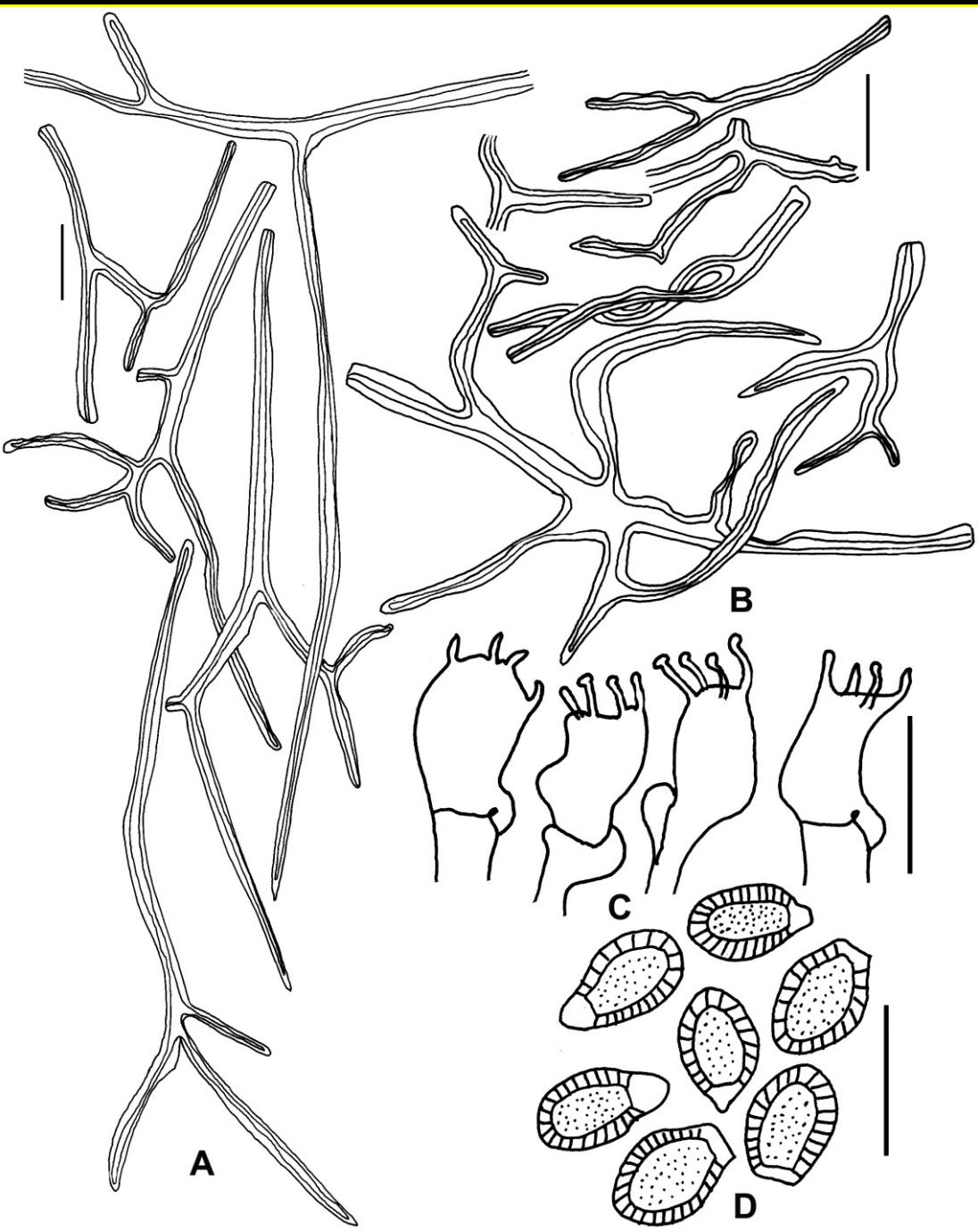
***Flavodon flavus***: A. Habit; B. Basidiomata showing pileate nature; C. Basidiomata showing effused reflexed nature; D. Pores; E. Lamellate hymenophore; F. Basidiomata with scale showing pilear surface and pore surface; G. Section of Basidiomata showing duplex context; H. Section of Basidiomata showing incrusted cystidia; I. Generative hyphae; J. Skeletal hyphae; Scale bars: G = 1 mm; H-J = 10 µm.

***Earliella scabrosa***: A. Habitat; B. Basidiomata showing red cuticle arising from the base; C. Duplex context; D. Pore surface; E. Section through tubes showing basidia and basidiospores; F. Basidiomata with scale; G. Binding hyphae; H. Skeletal hyphae; I. Basidiospores; Scale bars: C = 500 µm; E & G-I = 10 µm.

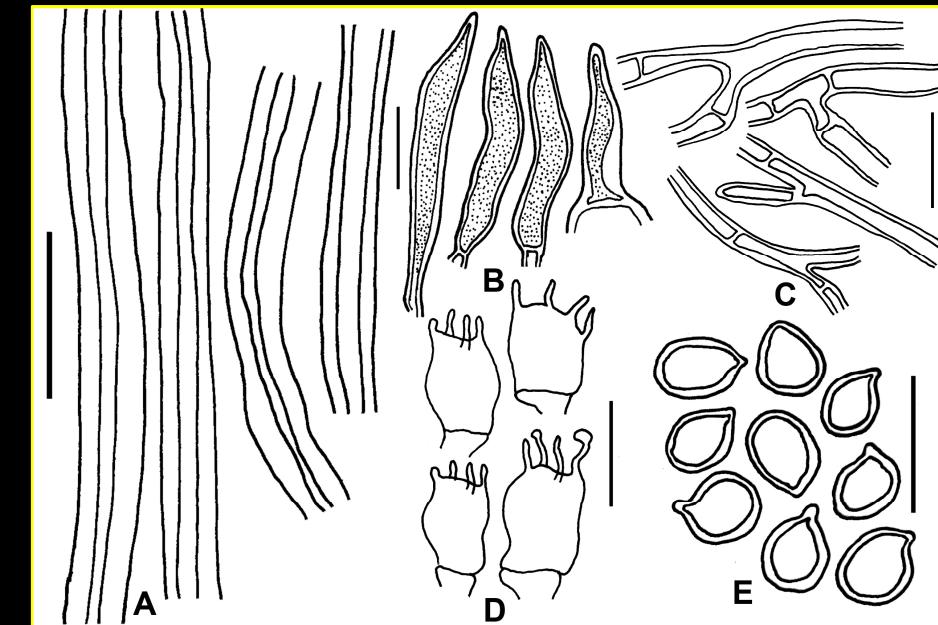


**Beenakia fuliginosa:** A. Habitat; B. Habit; C. Basidioma with scale showing pilear surface; D. Basidiomata showing pilear surface and pore surface; E. Hymenophore showing teeth; F. Teeth; G. Section of basidiomata showing basidioles; H. Section of basidiomata showing basidia; I. Basidiospores; J. SEM image of basidiospores; K. Hyphae from subiculum; Scale bars: E = 5 mm; G, H-I & K = 10  $\mu\text{m}$ ; J = 5  $\mu\text{m}$ .

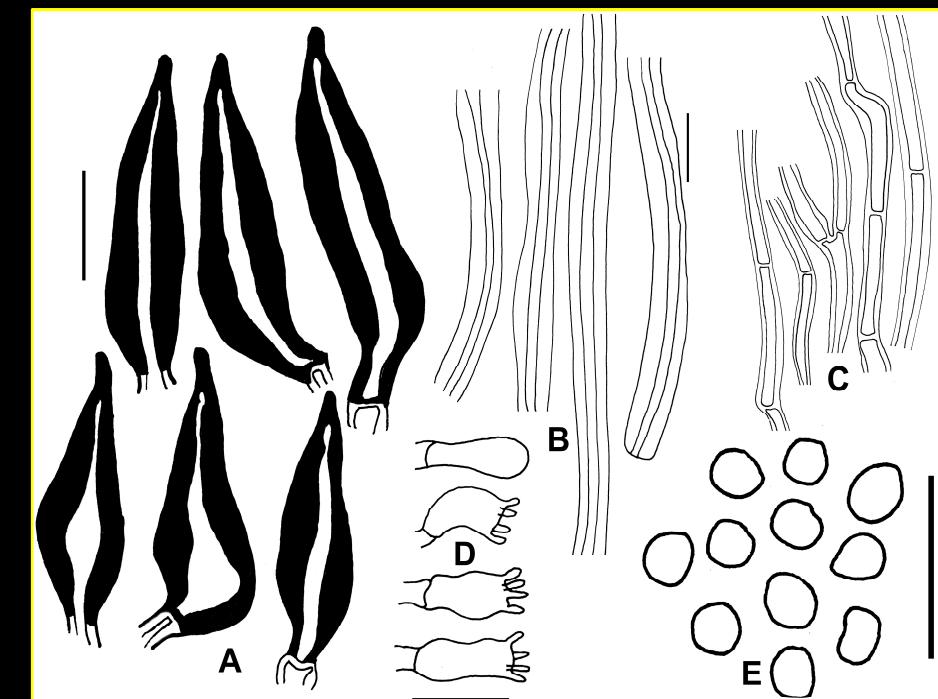
**Fuscoporia rhabarbarina:** A. Habitat; B. Habit; C. Basidiomata with scale showing pilear surface and pore surface; D. Section through the tubes showing hymenial setae; E. Section through tubes showing Interwooven hyphae; F. Skeletal hyphae; G. Generative hyphae; H-K. Hymenial setae; Scale bars: D = 50  $\mu\text{m}$ ; E-K = 10  $\mu\text{m}$ .



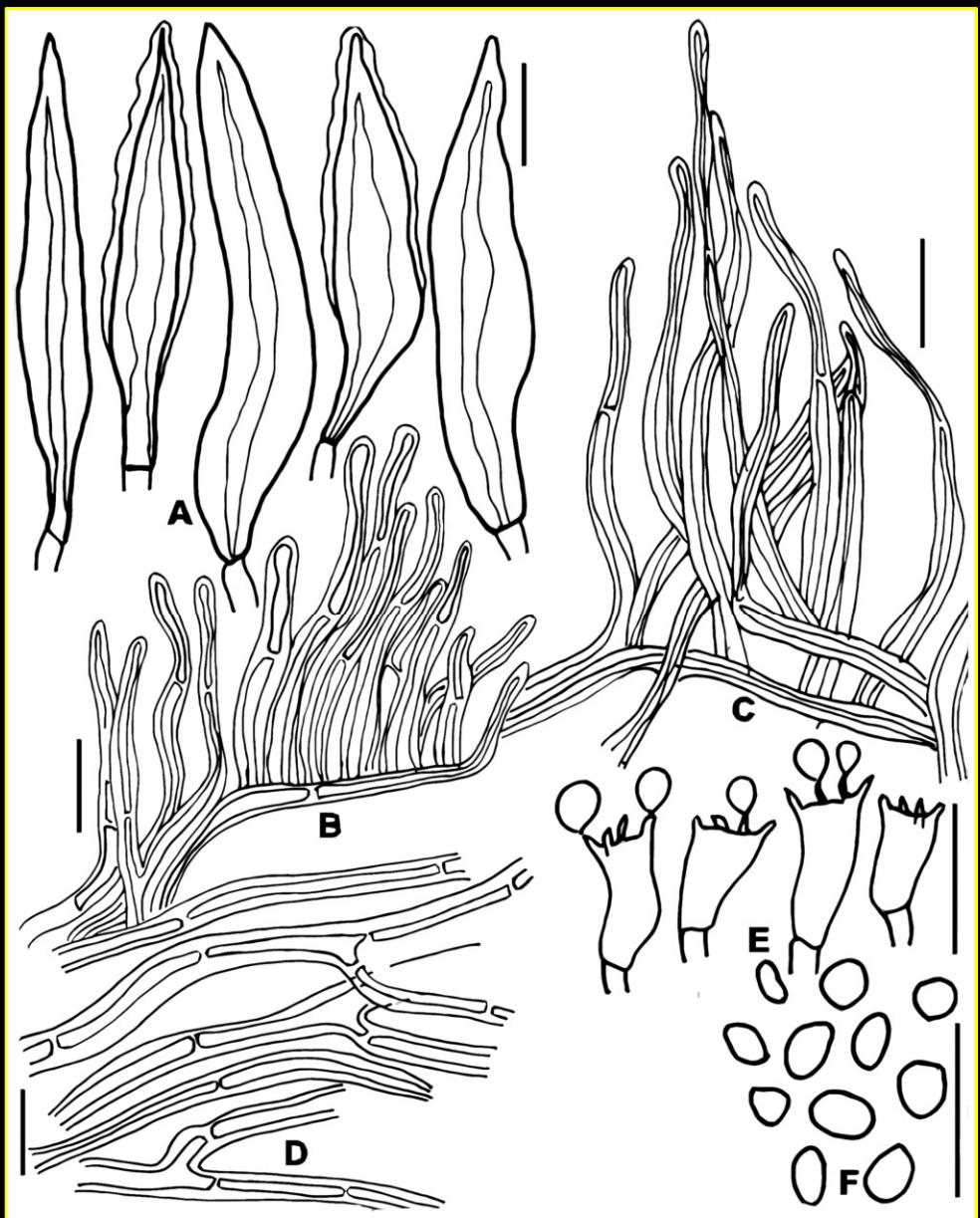
*Ganoderma appplanatum*: A. Skeletal hyphae; B. Binding hyphae; C. Basidia; D. Truncate basidiospores; Scale bars: A-D = 10 µm.



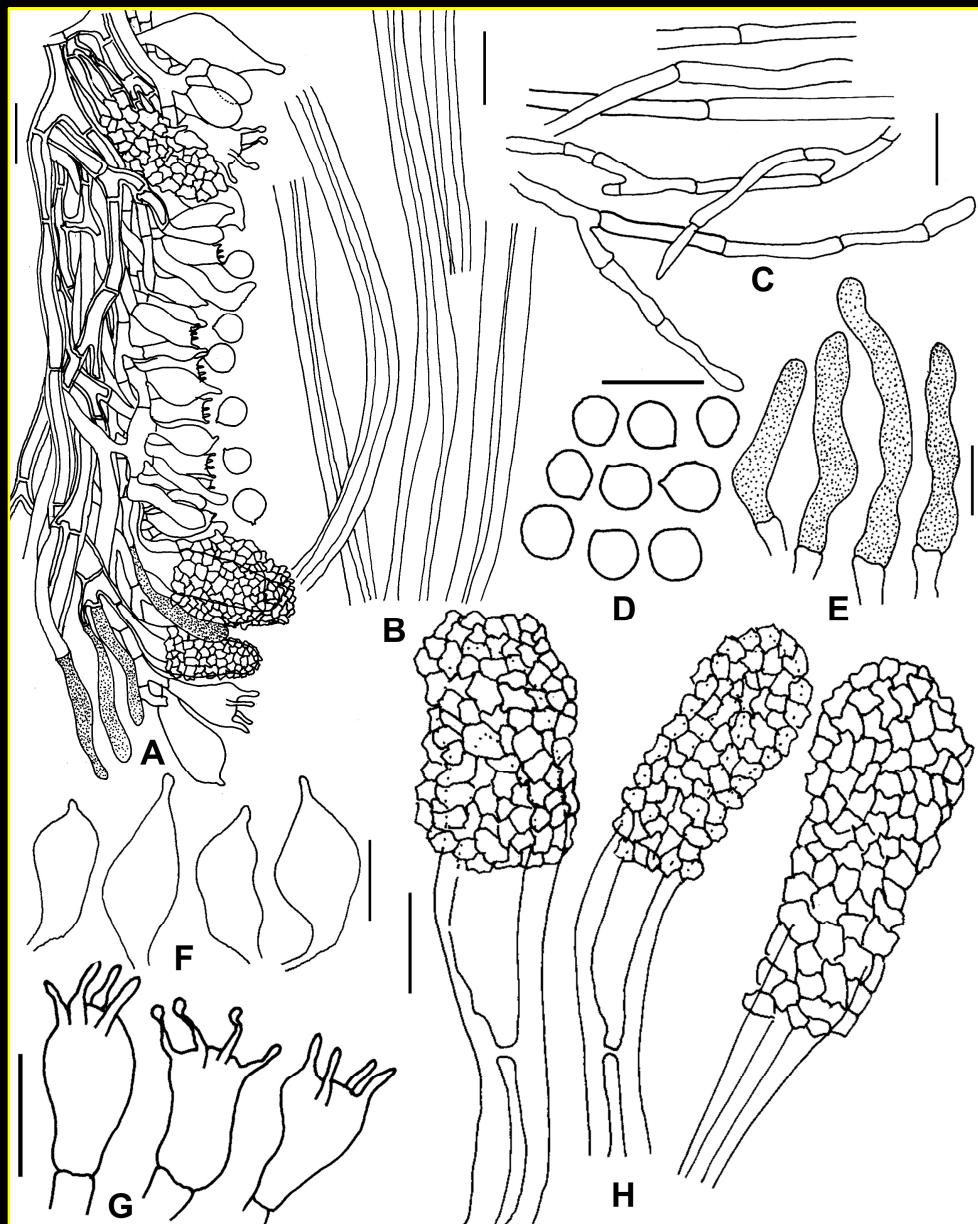
*Fulvifomes glaucescens*: A. Skeletal hyphae; B. Hymenial setae; C. Generative hyphae; D. Basidia; E. Basidiospores; Scale bars: A-E = 10 µm.



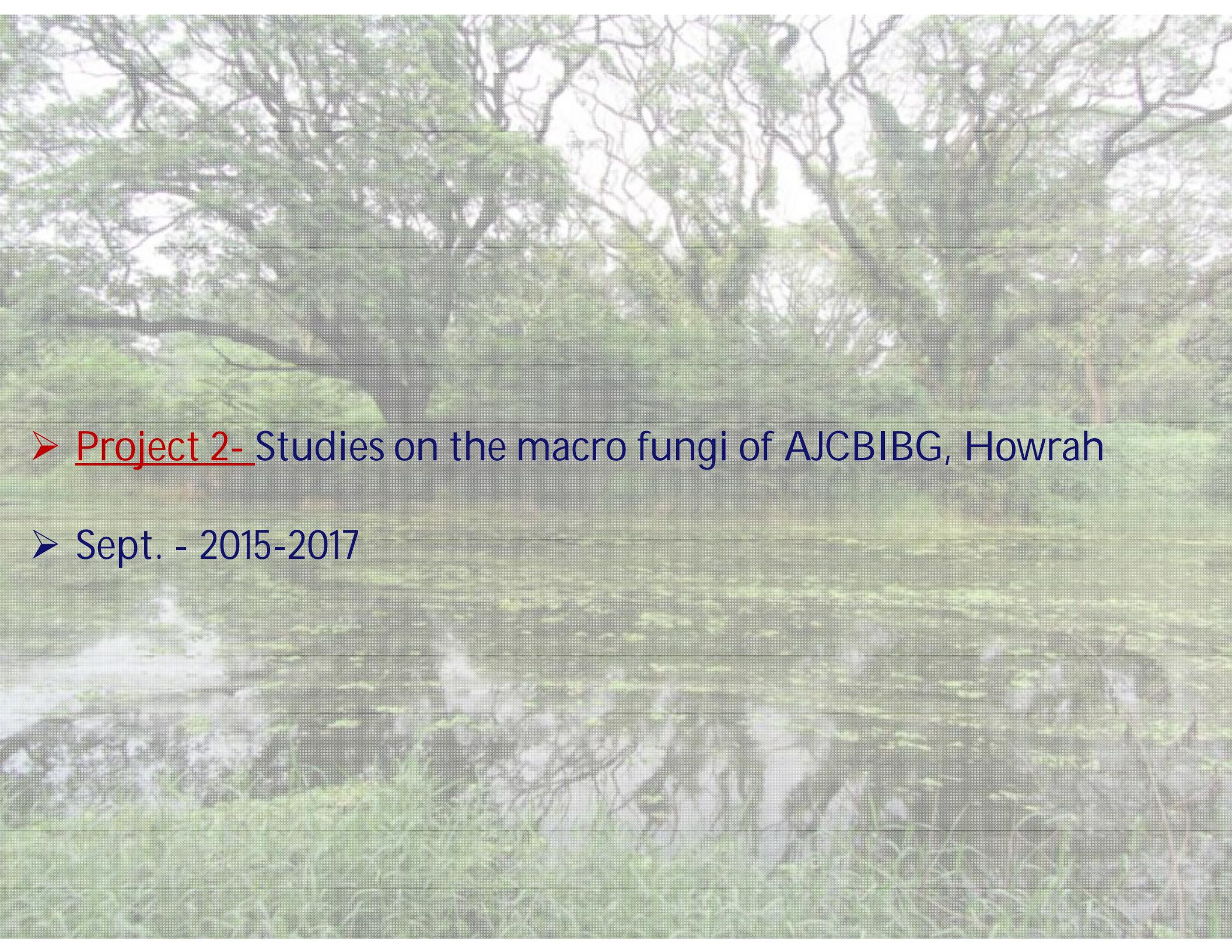
*Phellinus extensus*: A. Hymenial setae; B. Skeletal hyphae; C. Generative hyphae; D. Basidia; E. Basidiospores; Scale bars: A-E = 10 µm.



**Hymenochaete rheicolor:** A. Hymenial setae; B & C. Hyphae from upper pileal surface; D. Generative hyphae; E. Basidia; F. Basidiospores; Scale bars: A-F = 10  $\mu\text{m}$ .



**Rigidoporus vinctus:** A. Section through the tubes; B. Skeletal hyphae; C. Generative hyphae; D. Basidiospores; E. Gloeoporus hyphae; F. Smooth cystidia; G. Basidia; H. Apically incrusted cystidia; Scale bars: A = 25  $\mu\text{m}$ ; B-H = 10  $\mu\text{m}$ .

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- A large tree with a very wide, gnarled trunk and sprawling branches. The canopy is dense with green leaves. The trunk has several large, prominent roots exposed at the base, some of which are covered in moss or small plants.
- Project 2- Studies on the macro fungi of AJCBIBG, Howrah
  - Sept. - 2015-2017

Total Number of research Paper published - 15+4

## List of Publications -

1. Das, K., Hembrom, M.E., **Parihar, A.** (2013) – Two Interesting species of stinkhorns from India. *NeBIO* **4**(4): 1–6.
2. Hembrom, M.E., **Parihar, A.** and Das, K. (2013) – A new species of *Poronia* from India. *Current Research in Environment & Applied Mycology*. **3**(2): 182–185.
3. **Parihar, A.**, Hembrom, M.E. & Das, K. (2013) – New Distributional Records of *Ganoderma colossus* (Ganodermataceae) From Jharkhand and Rajasthan. *Indian Journal of Plant Sciences* **2**(4): 49–53.
4. Das, K., Chakraborty, D., **Parihar, A.** (2013) – *Cortinarius trivialis*, a new record of wild mushroom from India showing intercontinental conspecificity. *NeBIO* **4**(5): 91–93
5. Hembrom, M.E., **Parihar, A.**, Martin, M.P., Watling, R. and Das, K. (2014) – First report of *Astraeus odoratus* from India. *Kavaka* **42**: 16–19.
6. Hembrom, M.E., **Parihar, A.**, and Das, K. (2014) – *Gyrodontium sacchari* (Spreng.) Hjortstam – a new record of wood-inhabiting hydnoid fungus from India. *Journal on New Biological Reports* **3**(2): 71–74.
7. Das, K., Hembrom, M.E., Parihar, A., Mishra, D. and Sharma, J.R. (2014) – *Strobilomyces polypyramis* – rediscovery of a wild mushroom from Sikkim, India. *Indian journal of Plant Sciences* **3**(2): 13–18.
8. **Parihar, A.**, Hembrom, M.E. and Das, K. (2014) – *Borofutus dhakanus* (Boletaceae)-An Addition to Indian Mycobiota. *Nelumbo* **56**: 342–345.
9. Das, K., Hembrom, M.E., **Parihar, A.** & Zhao, R.L. (2015) – A new species of *Cyathus* (Agaricaceae) from India. *Turkish Journal of Botany* **40**: 97–103.
10. Das, K., **Parihar, A.**, Hembrom, M.E. (2015) – A new species of *Bondarzewia* from India. *Turkish Journal of Botany* **39**: 128–133.
11. Das, K., Hembrom, M.E., Dutta, A.K., **Parihar, A.**, Paloi, S. & Acharya, K. (2016) – *Ramaria subalpina* (Gomphaceae): a new edible fungus from India. *Phytotaxa* **246** (2): 137–144.

Continued.....

## List of Publications -

12. Hembrom, M.E., **Parihar, A.**, Das, K. (2016) – Three interesting wood rotting macro-fungi from Jharkhand, India. *Journal of Threatened Taxa* **8**(2): 8518–8525 (2016)
13. Acharya, K., Das, K., Paloi, S., Dutta, A.K., Hembrom, M.E., Khatua, S. and **Parihar, A.** (2016) – Exploring a novel edible mushroom *Ramaria subalpina*: Chemical characterization and Antioxidant activity *Pharmacogn J.* **9**(1): 30–34.
14. Hembrom, M.E., Das, K., Nilsson, R.H., **Parihar, A.**, Baghela, A., Mehta, N., Singh, S.K. and Hallenberg, N. (2016) – Morphology and phylogeny reveal a novel hydnoid taxon from India: *Mycorrhaphoides stalpersii* gen. and sp. nov. *Nordic Journal of Botany*. **000: 001–010, 2016**, doi: 10.1111/njb.01256, ISSN 1756-1051.
15. Chakraborty D., **Parihar A.**, Mehta, N., Baghela A., and Das K. (2017) – A new species of *Xerocomus* (Boletaceae) from India. *Mycosphere* **8**(1): 44–50 (2017).

## Articles in Hindi -

1. **Parihar A.** & Kumar A. (2010) – Jain dharm ke pujaniya vriksh evam unke vegyanik mahatv. *Vanaspati Vaani* **19**: 149–156
2. **Parihar A.** (2010) – Ganoderma lucidum ek chamatkari aushadhi. *Vanaspati Vaani* **19**: 87–88
3. **Parihar, A.** & Hembrom, M.E. (2013) – Ek Anokhi Prakirya, Spalt. *Vanaspati Vaani* **22**: 117–120.
4. Hembrom, M.E. & **Parihar, A.** (2013) – Prof. Kartar Singh Thind – Ek Kavaka Vigyanii. *Vanaspati Vaani* **22**: 143–144.

## Abstracts published

1. **Hembrom, M.E.**, Parihar, A. & Das, K.. (2014) Preliminary studies on Wood-rotting and Gasteroid Macrofungi of Rajmahal hills. Proceedings of the National seminar on cryptogamic Botany, Kalyani University. 2014: 27.
2. Parihar, A., **Hembrom, M.E.** & Das, K.. (2014) Macro fungal diversity in Kodarma wild life sanctuary. Proceedings of the National seminar on cryptogamic Botany, Kalyani University. 2014: 23.
3. **Hembrom, M.E.**, Parihar, A. & Das, K. 2016. Wood rotting fungi of Rajmahal hills, Jharkhand. Proceedings of the National Conference on “Challenges and Opportunities in Mycological Research 2016: 98–99
4. **Hembrom, M.E.**, Parihar, A. & Das, K. Hymenophoral diversity among wood-rotting macrofungi of Jharkhand. Proceedings of the International Conference on The green planet: past, present and future 2016: 55.
5. Parihar, A., **Hembrom, M.E.**, & Das, K. A detailed account of woodrotting macrofungi from Koderma wildlife sanctuary. Proceedings of the International Conference on The green planet: past, present and future 2016: 98–99.

New taxa : Genus - 1  
Species - 8



***Mycorrhaphoides stalpersii*** Hembrom,  
Nilsson, A. Parihar, K. Das, A. Baghela &  
S.K. Singh

- ***Xerocomus longistipitatus*** K. Das, A.  
Parihar, D. Chakr. & A. Baghela



***Cyathus thindii*** K. Das, Hembrom, A.  
Parihar & R.L. Zhao



***Bondarzewia zonata*** K. Das, A.  
Parihar & Hembrom



***Ramaria subalpina*** K.  
Das & K. Acharya



***Poronia radicata***  
Hembrom, A. Parihar  
& K. Das

## Taxa new to India:

- Genus- 1
- Species – 8

1. *Phallus atrovolvatus* Kreisel & Calonge
2. *Mutinus bambusinus* (Zoll.) E. Fisch
3. *Cortinarius trivialis* J.E. Lange
4. *Astraeus odoratus* Phosri, Watling, M.P. Martín & Whalley
5. *Gyrodontium sacchari* (Spreng.) Hjortstam
6. *Perenniporia bambusicola* Choeyklin, T. Hatt. & E.B.G. Jones
7. *Ganoderma elegantum* Ryvarden



**Borofutus dhakanus** Hosen & Zhu L. Yang

New distributional record – 2 (TWO)



**Ganoderma colossus** (Fr.) C.F. Baker



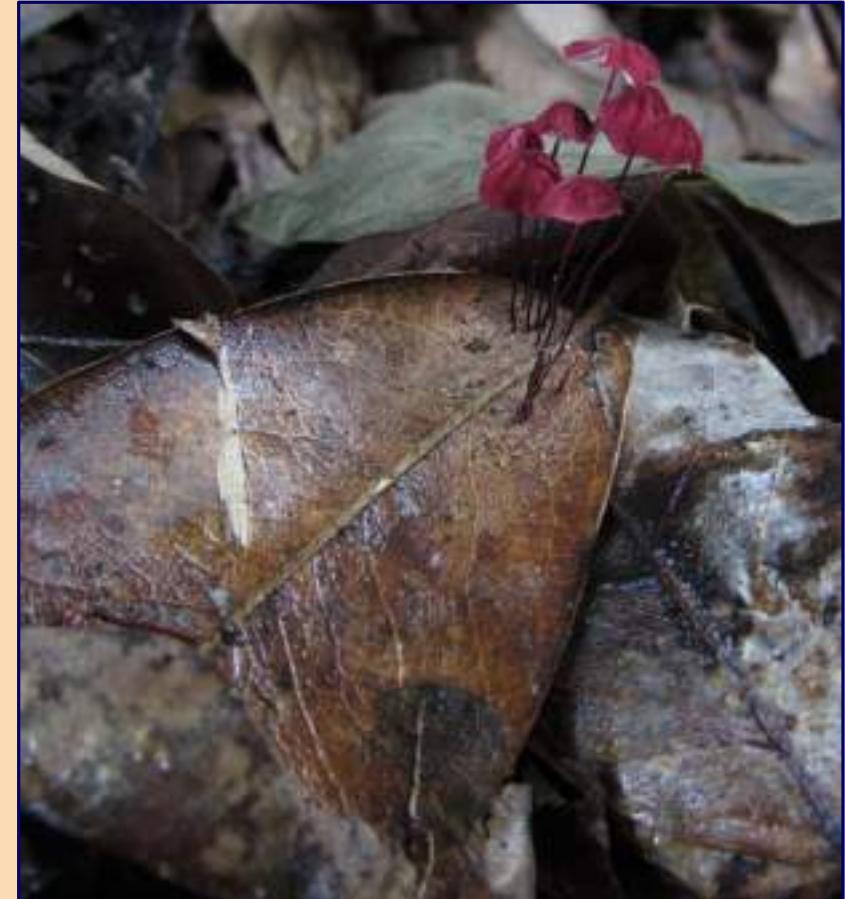
**Beenakia fuliginosa** (Mass Geest.) Parmasto & Ryvarden

Other duties -

- Maintenance of Fungi Lab
- Accession and Incorporation of Fungi samples including HOLOTYPE materials

Future plans –

- Concentrate on the Taxonomic studies of Fleshy fungi of AJCBIBG



# Thank-You

