

## ICAR-AINP ON SAP MAIN CENTRE, ASSAM

### Research publication

1. Badal Bhattacharyya, A. A. L. H Baruah, Utpal Bhuyan and Purnima Das. 2007. Management of termites in preserved setts of sugarcane in Assam. *Pesticide Research Journal*, 19(1):45-46.
2. Badal Bhattacharyya, A. A. L. H. Baruah, Purnima Das and U. Bhuyan. 2008. Field efficacy of *Beauveria bassiana* (Bals.) Vuill. and *Metarhizium anisopliae* (Metsch.) Sorok against white grubs in Assam. *Journal of Biological Control*, 22(1): 81-84.
3. Badal Bhattacharyya, Borah P, Hazarika, L. K., Baruah, A. A .L. H. and Bhuyan U. 2009. Integrated management of cutworm in potato crop raised from true potato seed (TPS). *Pesticide Research Journal*, 21(1):1-4.
4. Badal Bhattacharyya, U. Bhuyan, P. Borah and D. Pujari. 2010. Seasonal incidence of cutworm, *Agrotis ipsilon* (Hfn.) in Potato (*Solanum tuberosum*) (L.) raised from true potato seed. *Indian Journal of Applied Entomology*, 24(1): 58-62.
5. Romila Akoijam and Badal Bhattacharyya. 2011. Occurrence of soil arthropods in some selected ecosystems of Jorhat district of Assam, India. *Journal of Insect Science*, 25(1):98-102.
6. Romila Akoijam and Badal Bhattacharyya. 2012. Standardization of Method for Soil Arthropods Extraction by Tullgren Funnel. *Indian Journal of Ecology*, 39(1): 153-155.
7. Romila Akoijam, Badal Bhattacharyya, Lunglu Marangmei. 2013. Tullgren Funnel-An Efficient Device for Extracting Soil Microarthropods. *Environment and Ecology*, 32(2): 474-476.
8. Pujari, D., Badal Bhattacharyya, Mrinmoy Das. 2013. Insect pest management in organic agriculture *International Journal of Plant Protection*, 2 (6): 467-472.

9. Badal Bhattacharyya, D. Pujari, G. Handique, U. Bhuyan, A. A. L. H Baruah and Mrinmoy Das. 2013. Distribution of soil arthropods in different ecosystems of Assam. *Current Advances in Agricultural Sciences*, 5(2): 242-244.
10. Romila Akoijam, Badal Bhattacharyya and D.J. Nath. 2013. Soil Arthropod Extraction Tullgren Funnel Method. *Indian Journal of Ecology*, 40(1): 128-131.
11. Pujari, D., Badal Bhattacharyya, Mrinmoy Das. 2013. Insect pest management in organic agriculture. *International Journal of Plant Protection*, 2(6): 467-472.
12. Badal Bhattacharyya and D. Pujari. 2014. Field evaluation of *Beauveria brongniartii* and *Metarhizium anisopliae* against white grubs damaging green gram in Assam. *International Journal of Plant Protection*, 7(1): 67-70.
13. Badal Bhattacharyya, D. Pujari, U. Bhuyan and A. A. L. H. Baruah. 2014. Management of potato cutworm, *Agrotis ipsilon* (Hufnagel) in Assam. *Pesticide Research Journal*, 26(1): 82-85.
14. Badal Bhattacharyya, Utpal Bhuyan and Dwiban Pujari. 2014. Management of red ant, *Dorylus orientalis* Westwood (Hymenoptera: Formicidae) in potato. *Journal of Entomological Research*, 38(4): 265-267.
15. Badal Bhattacharyya, Himangshu Mishra, Dhanalakhi Gogoi and Sudhansu Bhagawati. 2014. Management of termite in preserved setts of sugarcane (*Saccharum officinarum*) with microbes. *Current Advances in Agricultural Sciences*, 6(2): 176-179.
16. Badal Bhattacharyya, A. K. Sharma, S. P. Gawande and Kolla Sreedevi. 2014. Occurrence of *Lepidiota* sp. (Coleoptera: Scarabaeidae) in western Assam. *Current Biotica*, 8(2):195-196.
17. Badal Bhattacharyya, Mrinmoy Das, Himangshu Mishra, D. J. Nath and Sudhansu Bhagawati. 2014. Bioecology and management of giant African snail, *Achatina fulica* (Bowdich). *International Journal of Plant Protection*, 7(2): 476-481.
18. Badal Bhattacharyya, Dwiban Pujari, Utpal Bhuyan, Gautam Handique, Abu Adil Lutful Haque Baruah, Satyendra Kumar Dutta and Seiji Tanaka. 2015. Seasonal life cycle and

biology of *Lepidiota mansueta* (Coleoptera: Scarabaeidae): a serious root-feeding pest in India. *Applied Entomology and Zoology*, 50(4): 435-442.

19. R. S. Chandel, Mandeep Pathania, K. S. Verma, Badal Bhattacharyya, Sumit Vashisth, Vinod Kumar. 2015. The Ecology and Control of Potato White grubs of India. *Potato Research* 58: 147-164.
20. Badal Bhattacharyya, Sudhansu Bhagawati, Himangshu Mishra and Dhanalakhi Gogoi. 2015. Evaluation of some insecticides against white grub, *Lepidiota masueta* in *Colocasia esculenta*. *Journal of Entomological Research*, 39(4): 361-363.
21. Dwiban Pujari and Badal Bhattacharyya. 2016. Grub Density of *Lepidiota mansueta* (Coleoptera: Scarabaeidae) in Different Habitats of the Majuli River Island of Assam, India. *Acta Phytopathologica et Entomologica Hungarica*, 51(1): 93-101.
22. Mrinmoy Das, Badal Bhattacharyya, K Das and S K Dutta. 2016. Morpho-physiological and biochemical analysis of host plants of foliage feeding scarab beetles. *Journal of Entomology and Zoology Studies*, 4 (5): 239-241
23. Badal Bhattacharyya, Gautam Handique, D. Pujari, S. Bhagawati, H. Mishra, D. Gogoi and H. Debnath. 2016. Species Diversity and relative abundance of scarab beetle fauna in Assam, North East India. *Journal of Entomology and Zoology Studies*, 5 1): 711-716.
24. G Devi, H Mishra, Bhattacharyya, Badal and Nath, D. J. 2016. Occurrence of entomopathogenic nematode (Rhabditida: Heterorhabditidae, *Steinernem atidae*) in white grub infested areas of Majuli, Assam, India. *Journal of Biopesticides*, 9(2): 148-156.
25. Sudhansu Bhagawati, Badal Bhattacharyya, Himangshu Mishra and Dhanalakhi Gogoi. 2016. Chemical management of termites (*Odontotermes obesus*) in preserved setts of sugarcane (*Saccharum officinarum*). *Journal of Entomology and Zoology Studies*, 5(1): 856-859.
26. Gautam Handique, Amrita Phukan, Badal Bhattacharyya, Abu Adil Lutful Baruah, Syed Wasifur Rahman, Rajen Baruah. 2017. Characterization of cellulose degrading bacteria

from the larval gut of the white grub beetle *Lepidiota mansueta* (Coleoptera: Scarabaeidae). *Archives of Insect Biochemistry and Physiology*, 94(2), e21370

27. Dwiban Pujari, Badal Bhattacharyya, Himangshu Mishra and Dhanalakhi Gogoi and Sudhansu Bhagawati. 2017. Field evaluation of some insecticides against white grub, *Lepidiota mansueta* B. (Coleoptera: Scarabaeidae), on potato (*Solanum tuberosum*) in Assam, India. *Applied Biological Research*, 19(1): 89-93.
28. Gautam Handique, Badal Bhattacharyya, Abu Adil Lutful Baruah and Ratan Boruah. 2017. Antenna morphology and sensilla microstructure of male and female *Lepidiota mansueta* Burmeister (Coleoptera: Scarabaeidae). *Invertebrate Reproduction and Development*, 61(3): 200-205.
29. Badal Bhattacharyya, S. Bhagawati, H. Mishra, D. Gogoi, K. Pathak, S. Bhattacharjee and S. Borkotoki. 2017. Evaluation of some granular insecticides against white grub, *Lepidiotamasueta* B. in potato (*Solanum tuberosum* L.). *Journal of Entomology and Zoology Studies*. 5(5):1441-1444.
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31. Navanita Deka, U. Barman and Badal Bhattacharyya. 2018. Farmers' Attitudes towards Group Approach on Management of White Grub (*Lepidiota mansueta*). *International Journal of Current Microbiology and Applied Sciences*, 7(03): 465-471.
32. Dwiban Pujari, Badal Bhattacharyya, Himangshu Mishra, Sudhansu Bhagawati, Dhruba Jyoti Nath and Binoy Kumar Medhi. 2018. Linking soil physico-chemical properties with the recent upsurge of *Lepidiota mansueta* (Coleoptera: Scarabaeidae) in sugarcane ecosystem of Majuli river island, Assam, India. *Journal of Entomological Research*, 42(1): 19.
33. Himangshu Mishra, Badal Bhattacharyya, Dhanalakhi Gogoi, Sudhansu Bhagawati and Snigdha Bhattacharjee. 2018. Management of *Odontotermes obesus* (Ramb.) through bio-

control agents in preserved setts of sugarcane. *Journal of Entomology and Zoology Studies*, 6(5): 662-664.

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35. Badal Bhattacharyya, Banajit Choudhury, Pranati Das, Satyendra Kumar Dutta, Sudhansu Bhagawati and Khanin Pathak. 2018. Nutritional composition of certain soil dwelling scarabs of Assam, India. *Coleopterist Bulletin*, 72(2): 339-346
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37. Rinki Mani Kalita, Jisna George, Gitanjali Devi and Badal Bhattacharyya. 2019. Isolation of EPN from Assam Agricultural University. *Journal of Entomology and Zoology Studies*, 7(5): 208-214.
38. Rinki Mani Kalita, Jisna George, Lipika Khataniar, Gitanjali Devi and Badal Bhattacharyya. 2019. Occurrence of Entomopathogenic nematodes (EPNs) from fields of Assam Agricultural University, Jorhat, Assam. *Journal of Entomology and Zoology Studies*, 7(6): 680-686.
39. Dhanalakhi Gogoi, Badal Bhattacharyya, Himangshu Mishra, Sudhansu Bhagawati and Snigdha Bhattacharjee. 2019. Distribution and abundance of *Lepidiota albistigma* in relation to soil physicochemical properties in lower Brahmaputra valley of Assam. *Indian Journal of Entomology*, 81(4): 688-693.
40. Sudhansu Bhagawati, Badal Bhattacharyya, Himangshu Mishra and Snigdha Bhattacharjee. 2019. Efficacy of different microbial agents against *Lepidiota mansueta* Burmeister (Coleoptera: Scarabaeidae) in green gram. *Journal of Entomological Research*, 43(1): 69-72.

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50. Bhairavi, K.S., Bhattacharyya, B., Devi, G., Bhagawati, S., Das, P.P.G., Devi, E.B. and Manpoong, N.S. 2021. Evaluation of two native entomopathogenic nematodes against *Odontotermes obesus* (Rambur) (Isoptera: Termitidae) and *Agrotis ipsilon* (Hufnagel) (Lepidoptera: Noctuidae). *Egyptian Journal of Biological Pest Control*,31: 111.
51. Devi, E.B., Bhattacharyya, B. and Bhagawati, S. 2021. Evaluation of some IPM modules against red ant *Dorylus orientalis* Westwood in potato. *Indian Journal of Entomology*: e20350.
52. Bhagawati, S., Bhattacharyya, B., Medhi, B.K., Bhattacharjee, S. and Mishra, H. 2021. Diversity of Soil Dwelling Collembola in a Forest, Vegetable and Tea Ecosystems of Assam, India. *Sustainability*: 13, 12628.
53. Bhattacharyya, B., Bhagawati, S., Das, P.P.G. and Devi, E.B. 2022. Effect of physic nut oil against potato cutworm, *Agrotis ipsilon*. *Journal of Entomological Research*, 46(1): 73-76.

### **Monograph**

1. Badal Bhattacharyya, D. Pujari, G. Handique and S.K. Dutta. 2013. Monograph on *Lepidiota mansueta* Burmeister (Coleoptera: Scarabaeidae). Published by the Directorate of Research (Agri.), AAU, Jorhat-13.

### **Books**

1. Badal Bhattacharyya, S. K. Dutta, Himangshu Mishra, Sudhansu Bhagawati and Snigdha Bhattacharjee. 2016. Handbook on Insect Pests of Potato and their Management, Published by the Directorate of Research (Agri.), AAU.
2. Badal Bhattacharyya, Sudhansu Bhagawati, Arjun Singh Baloda, Kritideepan Sarmah, Elangbam Bidyarani Devi, Nang Sena Manpoong, Partha Pratim Gyanudoy Das and

Peter Shyam. 2020. Arthropod and Molluscan Pests of North East India and Their Management, Published by the Directorate of Research (Agri.), AAU.

### **Book chapters**

1. Mrinmoy Das, Badal Bhattacharya, D. Pujari and G. Handique. 2016. Faunal Composition of Scarab Beetles and Their Hosts in Assam.in: Arthropod Diversity and Conservation in the Tropics and Sub-tropics. Chakravarthy, Akshay Kumar, Sridhara, Shakunthala (Eds.), Springer, 335-344. (doi: 10 1007/978-981-10-1518-2\_21).
2. Badal Bhattacharyya, Sudhansu Bhagawati, Snigdha Bhattacharjee, Partha Pratim G. Das and E. Bidyarani Devi. 2020. Indigenous Pesticidal Plants of North-East India, In: Green Wealth of North-East India, Eds. Dr. R.N. Bhattacharjee, Retd. Professor, Department of Botany, Cotton University, Assam.
3. Badal Bhattacharyya, Sudhansu Bhagawati and Snigdha Bhattacharyya. 2020. Biopesticides for pest management, published in the “Integrated farming system for sustainable agriculture” from Directorate of Extension Education, AAU, Jorhat.

### **Extension bulletins/ research bulletins**

1. Badal Bhattacharyya, A.A.L.H.Baruah, D.Pujari, Utpal Bhuyan and G. Handique. (2011). *Lepidiota mansueta* Burmeister (Coleoptera: Scarabaeidae): A Severe Key Pest in Majuli Island, Assam, Published by the Directorate of Research (Agri.), AAU, Jorhat-13.
2. Badal Bhattacharyya, D.J. Nath, Sudhansu Bhagawati, Dhanalakhi Gogoi and Himangshu Mishra. 2014. Mechanical elimination of termite queen. Published by the Directorate of Research (Agri.), Assam Agricultural University, Jorhat-785013, Assam.
3. Badal Bhattacharyya, Himangshu Mishra, Dhanalakhi Gogoi and Sudhansu Bhagawati.2014. “*Lepidiota mansuetar* susanghata niyatran pranali”. Published by the Directorate of Research (Agri.), Assam Agricultural University, Jorhat-785013, Assam.



4. Badal Bhattacharyya, D.J. Nath, Himangshu Mishra, Dhanalakhi Gogoi and Sudhansu Bhagawati.2014. “Brihat African samukar susanhata niyantran’. Published by the Directorate of Research (Agri.), Assam Agricultural University, Jorhat-785013, Assam.
5. Badal Bhattacharyya, Sudhansu Bhagawati, Khanin Pathak, Snigdha Bhattacharjee, Himangshu Mishra and Partha Pratim Gyanudoy Das. 2018. “Bhur Pukor susanghata niyatran pranali”
6. Badal Bhattacharyya, Sudhansu Bhagawati, Khanin Pathak, Snigdha Bhattacharjee, Himangshu Mishra and Partha Pratim Gyanudoy Das. 2018. “Khadya Rupe Hatipukar Byawahar”. Published by the Directorate of Research (Agri.), Assam Agricultural University, Jorhat-785013, Assam.
7. Badal Bhattacharyya, Sudhansu Bhagawati, Kritideepan Sarmah, Partha Pratim Gyanudoy Das, E. Bidyarani Devi, Nang Seena Manpoong and Peter Shyam. 2020. “Ronga Poruar huhangato niyantran Pranali”. Published by the Directorate of Research (Agri.), Assam Agricultural University, Jorhat-785013, Assam.