



INSECT FAUNA ASSOCIATED WITH CULTIVATED EDIBLE MUSHROOMS IN HIMACHAL PRADESH

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ABSTARCT: Substrate and sporocarp samples were collected from nine locations belonging to three districts of Himachal Pradesh to record the faunistic associations of insects with four cultivated edible mushrooms, viz. *Agaricus bisporus*, *A. bitorquis*, *Pleurotus sajor caju* and a newly introduced specialty mushroom *Calocybe indica* during the year 2004-05. Dipteran flies, and beetles occurred predominantly in all the four test mushrooms. Among dipteran flies *Bradysia* sp. was most widely distributed as it occurred in all the locations under survey except Berthin, where only beetles were found. While their adults hovered in large numbers over the cropping bags, their larvae were present inside the substrate as well as sporocarps. Adults were also captured in the yellow traps laid in the cropping rooms of *A. bisporus* and *P. sajor caju*, their number being more in latter than in former. Three species of beetles, viz. *Staphylinus* sp., *Scaphisoma nigrofasciatum* and an unidentified belonging to family Histeridae were prevalent at all the locations. Out of these, *Staphylinus* sp. was the only one observed in all the four mushrooms. *S. nigrofasciatum* and an unidentified histerid beetle were associated with *P. sajor caju* only. The grubs and adults of former were observed on the sporocarps on which they fed voraciously and formed tunnels. Springtails formed the other predominant associated fauna of all the mushrooms. Two species viz., *Achorutes armatus* and *Lepidocyrtus cyaneus* were found in the overlapping populations from the substrates of these mushrooms. The predominance of insects in *P. sajor caju* could be attributed to open gilled sporocarps of this mushroom which provided ample hiding space for grubs, larvae and adults of springtails.

KEY WORDS: *Agaricus bisporus*, beetle, edible mushrooms, fly, springtails