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Poster Presentation

Study of Detoxifying Enzymes Activity and Needle Terpenoid Transformation during the Feed of Siberian Moth *Dendrolimus superans sibiricus* Tschetw. (*Lepidoptera, Lasiocampidae*) Larvae on the Fir and Larch

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Effect of feeding on the host plant, which are contrast in respect of terpenoid content (fir and larch) on the spectrum and activities common esterases of main organs of *Siberian silkmoth* larvae were studied. Fed on the fir which contains 50 fold quantity of terpenoids then larch leads to increase of general esterase activity and expression of additional isozyme. The composition and quantities of terpenoids in larval feces after treatment by esterase and monooxygenase (MO) inhibitors were compared.

We have found that treatment of larvae by esterase and MO inhibitors as well as the change of food plant (from larch to fir) did not lead to significant alteration of terpenoid composition in larval feces. When the larvae were treated by MO inhibitor and moved from larch to fir we found the 1.5 and 2.0 fold increase of sum terpenoids in feces respectively. The treatment of esterase inhibitor did not affect on quantity of terpenoids in feces. We showed that the larvae can metabolize a high concentrations of the terpenoids in the needles of host plants. The food plant change did not cause significant stress-effect on the larvae, which successfully finished development and pupated; emerged adults were good progenetive. Key role in degradation of food plant terpenoids in Siberian moth larvae apparently play monooxygenase system.