

13 EUROPEAN CONGRESS OF LEPIDOPTEROLOGY

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Under the auspices of

SOCIETAS EUROPAEA LEPIDOPTEROLOGICA

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V.N.Olschwang, I.A.Bogacheva, G.A.Zamshina: Latitudinal trends of taxonomy, phenology and trophics in Urals Macrolepidoptera

The materials used for comparison were collected in forest zone, from forest steep to forest tundra, on the Southern (766 species), Middle (545) and Polar (211) Urals. The decrease in species number in different families is not proportional; on the Polar Urals where only 16 families (of 22) were found the increase of Nymphalidae (from 8.6 to 21.8 %) and Geometridae (from 27.0 to 34.1%) proportion and the diminishing of Noctuidae percentage (from 36,9 to 17,5) were shown. Seeking the reason of this trend we turned to lepidopteran trophics. Food resources of Macrolepidoptera were divided into 6 groups: (1) deciduous trees and shrubs; (2) evergreen plants; (3) forbs; (4) grasses; (5) mosses and lichens; (6) the other kinds of food (wood, roots, dead leaves). The proportion of species feeding on food resources which do not support high larval growth rate (4-6) lowers; the share of species connected with deciduous trees and forbs does not change; the percent of species on evergreen plants grows significantly towards the North. Food preference in Nymphalidae and Geometridae well represented in the forest tundra stays here unchanged while among Noctuidae the proportion of species on wooden plants (both deciduous and evergreen) increases and that on herbs (especially on grasses) and on poor food resources (6) falls. The proportion of lepidopteran species on Ericaceae and Vacciniaceae rises but that on Fabaceae and Asteraceae decreases. Species richness on a plant often might be attributed to its wide distribution but not in all cases: some plant genera retaining in the North long lists of consumer spe-

cies (e.g. Galium and Viola) are there not so frequent. The percent of polyphagous species inside Macrolepidoptera group changes insignificantly. The phenology of Macrolepidoptera also was studied. Species hibernating on larval stage might give them advantages at high latitudes. The proportion of such species on the Polar Urals really demonstrates a trend to increasing (from 47,6 to 54,6%); the species feeding on food resources 4-6 hibernate as larvae. Trophics and phenology of Macrolepidoptera certainly play an important role in their distribution to the North; for many species however some features of their larval behavior and their temperature preferences might be among the leading factors.