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Variations in shell colour in some land-snail species

The problem of adaptation is central in biology. Changes in external coloration producing mask effect is common of many species. Selections from populations of the following species were made during 1957-73: *Bradybaena fruticum* (Müller), 6283 specimens; *B. schrencki* (Middendorff), 140 specimens; *B. transbaicalia* Shileiko, 516 specimens; *B. almaatini* (Skvortsov), 904 specimens; *B. lantzi* (Lindholm), 1457 specimens; *Fruticocampylaea narzanensis* (Krynicky), 672 specimens; *Caucasotachea atrolabiata* (Krynicky), 126 specimens.

Shell colour shades were estimated according to the International Unit System and the manual by A Bondartzev (1954). In *B. lantzi* the middle band colour was considered. Genetics of the characters was unknown. The higher was the habitat over sea level the greater was the proportion of light-coloured and light-colour-banded shells in a population. Similar variations were recorded for transition from forest to open habitats. Another adaptation to open sites was numerous distinct bright bands against a light and less intensive background. Therefore, *Xeropicta krynickii* (Krynicky) specimens were difficult to distinguish from the surrounding curled leaves or stripy cotton grass fruits. On the whole, maximal mask effect was typical of open-site residents. Merging with the background reduced predation and could be ascribed to the hypothesis of visual selection (Mayr, 1965; Cain & Sheppard, 1952).