

Abstract

The Solenopleurid trilobite *Sao hirsuta* Barrande, 1846 is known from "Middle" Cambrian sedimentary rocks of the Czech Republic, Germany and Spain. It is one of the first trilobites on which ontogenetic development was described in detail (Barrande, 1852). This diploma thesis is the first modern revision of the ontogeny of this species for more than fifty years. Thesis is primarily based on quantitative methods and a detailed study of morphology of the exoskeleton.

Changes in the dorsal exoskeleton during ontogenetic development of *S. hirsuta*, including the discovery of intrainstar morphological and size variability and the transition from isometric growth to the allometric growth, were described in detail by using quantitative methods (biometric measurements and geometric morphometrics). In the protaspid period different instars of *S. hirsuta* were recognized.

Detailed morphological studies revealed several different morphotypes of protaspid stages. Some of which may represent different taxa. The morphology and the condition of the hypostome was described, including changes of hypostome during ontogeny. The study of segmentation in the species *S. hirsuta* shows hypoprotomeric development with the initial accumulation phase, middle equilibrium phase and terminal depletion phases.

Key words: *Sao hirsuta*, Trilobites, Ontogeny, Hypostome, Geometric Morphometrics, Cambrian, Skryje-Týřovice Basin.