

SPIDERS IN TERATOLOGICAL RESEARCH.

Summary

Experiments conducted for many years on the effect of temperature on embryonic development of the spider *Tegenaria atrica* produced a number of different deformations of prosoma. A teratogenic factor act particularly effective in early stages of embryogenesis is the thermal shock. It consist in subjecting embryos to alternating actions of two temperatures: 14°C and 32°C which are changed twice a day for the first ten days of development, i.e. from the moment of oviposition until the appearance on the germ band of the first metameres of prosoma. In this way individuals with olygomely, symely, heterosymely, polymely, bicephaly as well as individuals with complex anomalies were obtained. It has been reported that the above mentioned malformations in the consecutive research seasons occur at

different frequencies. Observations and analysis of these malformations in spiders may have enormous implications for understanding of normal morphogenesis, because deformed specimens show evident developmental trends imperceptible during normal embryogenesis and postembryogenesis. Moreover, monstrosities of atavistic nature allow to draw conclusions on the developmental trends in the past phylogeny of these arthropods. The most important are the deformations which result from a metameric disturbance because these are permanent and not subject to regenerative processes and spontaneous processes of repair. The appearance of individuals with various malformations in the structure of the body in the wild may be due to increasingly frequent weather anomalies..