Mikhaevitch T.V. The life strategy of the *Plumatella fungosa (Phylactolaemata)* bryozoans in the temperature gradient. The 7 th Belarus Zool. Conference, Minsk, Belarus, 1994, pp.82-84.
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The life strategy of the modular organisms such *Phylactolaemata* determines by the specificity of the modules and the colonies development.
Zooid is the autonomous module of the colony for main physiological functions. The singularity of the development of bryozoans colonies consists in the interaction of the zooids *ontogenesis* and the colonies *astogenesis.* The growth, budding and orientation of the zooids are under control of the integral organism, the colony.
The variability of the life strategy of the *Phylactolaemata* colonies under the impact of the different ecological factors manifested by the heterogeneity of the growth of the multimodule and the bifurcations of the clones. The temperature, one of the main ecological factors, determines the ecological variability of the colonies, known for *Phylactolaemata.* The temperature impact in the gradient 22, 27 and 32˚C on the bryozoans growth have been studied for the first time in 1991-1993.
Normally, the colonies of *P.fungosa* grow up via the external budding. Analysis of the length on the different ontogenesis phases of the first 7 th zooids, analysis of the interval between every zooid budding ($D_{brgnm,}$ days), and analysis of the duration of the period of the vegetative maturation (D_v, days) showed that the complex of zooids has the heterogeneity for above cited parameters and represent the multimodule of the colony. The multimodule is a pattern of the colony, with morphological heterogeneity, that permit the colony to extend in the three-dimensional space.
The maximal heterogeneity of the multimodule in the colony ontogenesis have been observed at optimal temperature 27˚C: the zooids average length in the moment of vegetative maturation was bigger for 15 %, the maximum zooids length was bigger for 24 %, the parameters D_v and D_{brgnm} have been reduced for 2,5 times in comparison with the same parameters at the extremes temperatures. Inside of the multimodule the 3 rd zooid have had bigger heterogeneity at 27 and 32˚C, 4 th and 6 th zooids at 22˚C. Every zooid of the multimodule generates the generation, clone. The clones at 27˚C have been composed by 2-4 zooids, at 22˚C – by 1-2 and at 32˚C – only by 1 zooid.
It's difficult to separate the age phases of the colonies *astogenesis* because the zooids *ontogenesis* and the clones *ontogenesis* doesn't coincide on time. The colonies of *P.fungosa* have been divided conditionally by the bifurcations. The base of every bifurcation, that finish with growing bud, is zooid-leader. Probably, the general colonial control regulates and direct conditionally named "growing colonial substance", reinforcing by the zooids-leader the bases of the bifurcations, for guarantee its terminal growth.
It's possible to determine the physiological age of the colony based on the analysis of the heterogeneity of the zooids parameters. Two colonies of *P.fungosa* with age 26 days (149 zooids) and 33 days (146 zooids) were on the younger *astogenesis* phase, because its have had a lot of growing buds (37 % and 40%), heterogeneous line of the zooids of the medium dimensions – 42 % and 21 and 17,5 % of leaders, respectively for two cited colonies. The 3 rd colony with age 26 days (189 zooids) was physiologically older, because it have had only 9 % of the growing buds. The 3 rd colony have had two zooids groups (53 % and 38 %) with main reproductive load that have been generated in total 145 floatoblasts.