

THE GLYCOGEN CONTENT IN MARINE INVERTEBRATES

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On a poursuivi la variation mensuelle du glycogène et de la humidité en fonction de la température, chez les 8 organes du gastéropode Rapana thomasiana Grosse et 2 organes du Mytilus galloprovincialis Lmk.

Determination of glycogen was performed by DUMITRU's method (1967). The mean monthly temperature of the sea water when sampling the marine invertebrates was considered.

Determinations showed that *Rapana thomasiana* Grosse deposits great quantities of glycogen during the year in all the tissues. The glycogen values presented are given in g % of dry substance. Glycogen is maximum accumulated in the beginning of spring and autumn in different organs as follows: hepatopancreas-24-30 %; excretory organ-19-32 %; vitellogenous gland-56 %; mantle-68 %; foot-24-33 %; branchia-40 %; testis-17 % (November). Glycogen content minima are recorded in different periods of the year in different organs: vitellogenous gland-8 % in May and June (17,5 °C-18°C); hepatopancreas-3 % in May; foot-15,5 % in May; testis-4 % and 8 % in May and September (22°C), respectively.

The glycogen in the hepatopancreas of *Mytilus galloprovincialis* Lmk. has the annual minimum values in the winter months: 4 %-6 % in January - February (5°C-6°C). With the beginning of spring this organ accumulates much glycogen, which reaches a maximum content by autumn: 18 %, in October (18,5°C).

In the mussel mantle there are two annual minima of glycogen accumulation-5 % and 16 % in January and August (24°C) respectively, and two maxima-32 % and 26 %, in May-June and October-December (10°C), respectively.

Our data confirm that the molluscs deposit great quantities of glycogen which constitutes a source of energy for the anaerobic formation of

ATP (HOCHACHKA, 1975).

The annual oscillations of humidity in different tissues of *Rapana thomasiana* ranged between the following values: hepatopancreas-54-76 %; vitellogenous gland-80-84 %; mantle-62-81 %; foot-70-90 %; branchia-78-92 %; testis-50-92 %; salivary gland-68-76 %.

In the digestive diverticulum of the mussel, the humidity oscillated during a year between 72 % and 82 % and in the mantle between 78 % and 88 %.

It is observed that the hepatopancreas of *Rapana thomasiana* is a "dry" organ, with unusually small water content in comparison with the other tissues.

A certain parallelism is noticed between phosphorus content and humidity increase or decrease, in different organs of the *Mytilus galloprovincialis*. The same is noticed for the foot and testis of *Rapana thomasiana* (MIRZA & SERBAN, 1980).

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