Acta Juvenum vol. 3: s. 63-68, 2018
Ith ACADEMIC HIGH SCHOOL
Janina Kossakowska-Debicka
in KIELCE

GROWTH RATE OF *HYPOGYMNIA PHYSODES* THALLUS CONDITIONING ENVIRONMENTAL HUMIDITY BASED ON THE ASSESSMENT OF THE GROWTH OF THE AREA OF THALLUS

Grzegorz Kuropatwa

Key words**:** *lichens, biological activity, thallus, moisture*

ABSTRACT

The aim of the study was to demonstrate the relationship between humidity of the external environment (atmospheric air) and the intensity of the growth of the *Hypogymnia physodes*. Access to light, appropriate humidity, clean environment, and good hatching habitat are essential requirements for lichen growth and reproduction. *Hypogymnia Physodes* form a leafy thallus spread on the ground. Leafs of thallus create overlapping rosettes. The anatomical structure indicates its heteromericity, due to this the presence of the upper bark enables the ectohydration of the thallus. Light-assisted access and differential humidity in the study allowed to make measurements of the rate of growth of the thallus cyclically. The methodology of the study included doing monthly outline of the thallus and then calculating its area in two test samples, i.e. 90% of the humidity obtained by systematic spraying and 60% of humidity corresponding to natural conditions in the biological laboratory. Obtained results expressly indicate the differences in the appearance of sprayed (larger volume, intense green colour) and thalluses which were cultured in low humidity (shrivelled thalluses, small leaves, brown-livid thalluses), where no growth was recorded during the research. Humidity is a basic conducive factor in the growth a of lichen. This is also indicated by field observations, which show that the autumn and spring periods are the time of the most intense thallus increase caused by the bigger precipitation in these periods.

Grzegorz Kuropatwa, Ith Academic High School Janina Kossakowska-Debicka in Kielce

e-mail: grzesk42@gmail.com