



## **Growth, chamber building rate and reproduction time of *Palaeonummulites venosus* under natural conditions.**

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Investigations on *Palaeonummulites venosus* using the natural laboratory approach for determining chamber building rate, test diameter increase rate, reproduction time and longevity is based on the decomposition of monthly obtained frequency distributions based on chamber number and test diameter into normal-distributed components. The shift of the component parameters 'mean' and 'standard deviation' during the investigation period of 15 months was used to calculate Michaelis-Menten functions applied to estimate the averaged chamber building rate and diameter increase rate under natural conditions.

The individual dates of birth were estimated using the inverse averaged chamber building rate and the inverse diameter increase rate fitted by the individual chamber number or the individual test diameter at the sampling date. Distributions of frequencies and densities (i.e. frequency divided by sediment weight) based on chamber building rate and diameter increase rate resulted both in a continuous reproduction through the year with two peaks, the stronger in May /June determined as the beginning of the summer generation (generation1) and the weaker in November determined as the beginning of the winter generation (generation 2). This reproduction scheme explains the existence of small and large specimens in the same sample.

Longevity, calculated as the maximum difference in days between the individual's birth date and the sampling date seems to be round about one year, obtained by both estimations based on the chamber building rate and the diameter increase rate.