



PARAMETERIZATION OF *MYRIOPHYLLUM AQUATICUM* (PARROT FEATHER) GROWTH UNDER LABORATORY CONDITIONS

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Macrophytes are important primary producers for the proper functioning of aquatic ecosystems. However, excessive growth of these organisms can lead to the loss of ecosystem services and high management costs. Thus, knowledge of growth parameters is vital for studies evaluating the potential for managing these organisms. This study describes the growth rate of *Myriophyllum aquaticum* Vell. Verdc., Haloragaceae (parrot feather), a species widely distributed in tropical and neotropical environments. Plants were collected in the littoral region of a eutrophic environment (Monjolinho Reservoir, São Carlos, SP, Brazil, 22° 00' S and 47° 54' W). Stems of approximately 7 cm (n: 18) were planted in growth chambers (112 x 68 x 41 mm) with sediment from the reservoir. These chambers were filled with previously filtered water from the reservoir (418 x 273 x 100 mm). The chambers were incubated under controlled conditions (light: 43.1 $\mu\text{mol s}^{-1} \text{cm}^{-2}$; photoperiod: 12/12 h; temperature: 25 $\pm$ 1 °C). For 5 months, plant length was measured every 3 days. The average growth kinetic was fitted to the logistic model. The model parameterization indicated a growth constant of 0.02 d⁻¹, corresponding to a doubling time of 37 days. An important characteristic of this species is the increasing prominence of shoots in biomass growth. Stems contribute little to the increase in biomass driven by shoot emergence (on average, 2 shoots per stem) and their subsequent growth. At the end of the experiment, 88% of the biomass came from shoot growth. As mentioned, these results corroborate models that address the growth and maintenance of these organisms as a function of local variations (e.g., degree of eutrophication, turbidity, etc.) and alterations resulting from climate change (e.g., browning, increased temperature, seasonal flow changes).

Key words: *aquatic macrophyte; growth rate; doubling time; mathematical model.*

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