

ERRATUM

Vol. 37 (2004) 379–393: Growth of the Lichen *Rhizocarpon lecanorinum*, with Comments on Aplin-Hill and Lichenometric Curves. By Stephen R. Clayden, Allan Pentecost, and Robert J. MacG. Dawson

The following paragraphs have been corrected:

On page 382:

The data were analysed with reference to the growth model of Aplin and Hill (1979; Hill, 1981, 2002). This predicts that the radial growth rate of a circular lichen thallus is a function of its radius (r):

$$dr/dt = \alpha sr/(r + 2s) \quad (1)$$

where α is a rate constant (units: yr^{-1}) postulated to reflect the rate of carbohydrate production, and s is a distance constant (units: mm) accounting for lateral movement of carbohydrate. The full curve of equation 1 is a rectangular hyperbola (Fig. 1). Taking the reciprocal of both sides of the equation yields a straight-line relationship between $1/\Delta r$ and $1/r$:

$$1/\Delta r = (r + 2s)/\alpha sr = 1/\alpha s + [(2/\alpha) \cdot (1/r)] \quad (2)$$

This could be used, in principle, to assess the goodness of fit of the function to a set of growth rate data. However, reciprocal transformation introduces considerable unevenness ('heteroscedasticity') in the variance of y ($1/\Delta r$) at different values of x (r).

Aplin and Hill (1979; Hill, 1981) showed that a linear relationship is also obtainable by integrating equation 1:

$$r_2 - r_1 = \alpha s \Delta t - 2s \ln(r_2/r_1) \quad (3)$$

On pages 388–389:

Applicability of the Aplin-Hill function

The variability of radial growth recorded here for *R. lecanorinum* does not signify that the Aplin-Hill model fails to fit the data. Rather, it indicates that tighter controls on possible sources of growth rate variation other than thallus size are required to better test its applicability. Similar difficulties were encountered by Armstrong (1983) and Proctor (1983) in their attempts to fit Aplin-Hill curves to growth data for *R. geographicum*. Proctor (1983) estimated the rate and growth constants from visually, not statistically, fitted curves. However, in both studies, as here, the trend of the plots of Δr against r was generally consistent with the curve of the Aplin-Hill function.