

## CORRIGENDUM/ERRATUM/ADDENDUM

# Allometric growth of a common Nassariidae (Gastropoda) in south-east Brazil— CORRIGENDUM / ERRATUM / ADDENDUM

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1) The phrases: ‘Subsequently, the Chi-square test ( $\chi^2$ ) was used to evaluate the existence of differences between the eigenvalues of each principal component.’ (page 1096, left column, between lines 49–51) and ‘When comparing each PC between the areas, significant differences were apparent. Individuals from Camaroeiro were larger ( $t = 2.10$ ,  $P < 0.05$ ) than those from Cidade and also had a larger apical angle ( $t = 11.63$ ,  $P < 0.05$ ). However, individuals from Cidade had a larger shell aperture ( $t = -11.23$ ,  $P < 0.05$ ), represented by PC3.’ (page 1098, right column, between lines 7 and 13) should not be considered in the text.

2) Where it is read in the printed text (page 1096, right column, between lines 11 and 26) ‘...The small-sample, bias-corrected form of ...were computed for all candidate models.’ it should be:  
‘...Akaike information criterion (AIC) (Burnham & Anderson, 2002) was used for model selection according to the equation:

$$AIC = n \left( \log \left( 2\pi \frac{RSS}{n} \right) + 1 \right) + 2k$$

**Table 3.** Values of Akaike information criterion (AIC), AIC differences ( $\Delta_i$ ), and Akaike weights ( $w_i$ ) for the linear (*Ln*), quadratic (*Qd*), and cubic (*Cb*) models applied to the six morphometric relations of *Nassarius vibex* in the Camaroeiro bed. Bold percentages correspond to the most plausible models.

Model	L/W	L/H	L/AI	L/Aw	W/H	AI/Aw
AIC						
<i>Ln</i>	-596.7	-692.4	-432.5	-406.7	-600.5	-408.1
<i>Qd</i>	-594.7	-692.9	-431.7	-406.8	-610.9	-407.6
<i>Cb</i>	-595.0	-693.4	-429.7	-405.6	-611.3	-407.8
$\Delta_i$						
<i>Ln</i>	0.0	1.0	0.0	0.1	10.9	0.0
<i>Qd</i>	2.0	0.5	0.8	0.0	0.4	0.4
<i>Cb</i>	1.8	0.0	2.8	1.2	0.0	0.3
$w_i$ (%)						
<i>Ln</i>	<b>56.19</b>	25.17	<b>52.11</b>	38.09	0.24	<b>37.33</b>
<i>Qd</i>	20.67	32.40	35.01	<b>40.02</b>	44.51	30.30
<i>Cb</i>	23.14	<b>42.43</b>	12.88	21.89	<b>55.25</b>	32.37

AI, aperture length; Aw, aperture width; H, shell height; L, shell length; W, shell width.

**Table 4.** Values of Akaike information criterion (AIC), AIC differences ( $\Delta_i$ ), and Akaike weights ( $w_i$ ) for the linear (*Ln*), quadratic (*Qd*), and cubic (*Cb*) models applied to the six morphometric relations of *Nassarius vibex* in the Cidade bed. Bold percentages correspond to the most plausible models.

Model	L/W	L/H	L/AI	L/Aw	W/H	AI/Aw
AIC						
<i>Ln</i>	-545.1	-682.4	-395.2	-397.1	-538.3	-416.8
<i>Qd</i>	-545.3	-680.4	-393.2	-396.3	-553.5	-416.7
<i>Cb</i>	-544.3	-697.2	-392.9	-394.3	-553.2	-416.6
$\Delta_i$						
<i>Ln</i>	0.1	14.8	0.0	0.0	15.2	0.0
<i>Qd</i>	0.0	16.8	2.0	0.8	0.0	0.1
<i>Cb</i>	0.9	0.0	2.3	2.8	0.3	0.2
$w_i$ (%)						
<i>Ln</i>	36.32	0.06	<b>59.53</b>	<b>52.12</b>	0.03	<b>35.29</b>
<i>Qd</i>	<b>39.03</b>	0.02	21.90	35.00	<b>53.74</b>	33.19
<i>Cb</i>	24.65	<b>99.92</b>	18.57	12.88	46.23	31.52

AI, aperture length; Aw, aperture width; H, shell height; L, shell length; W, shell width.

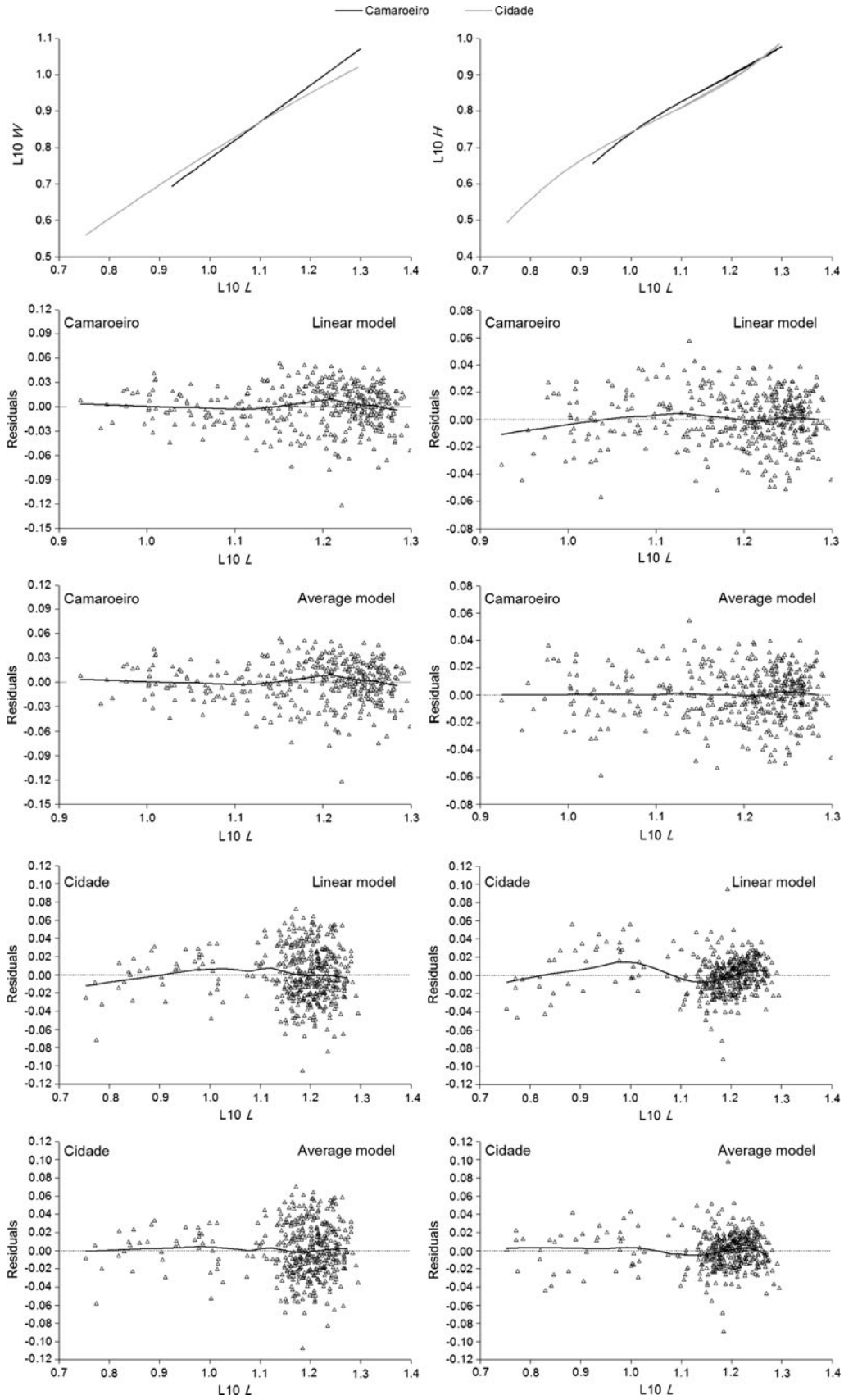


Fig. 4.

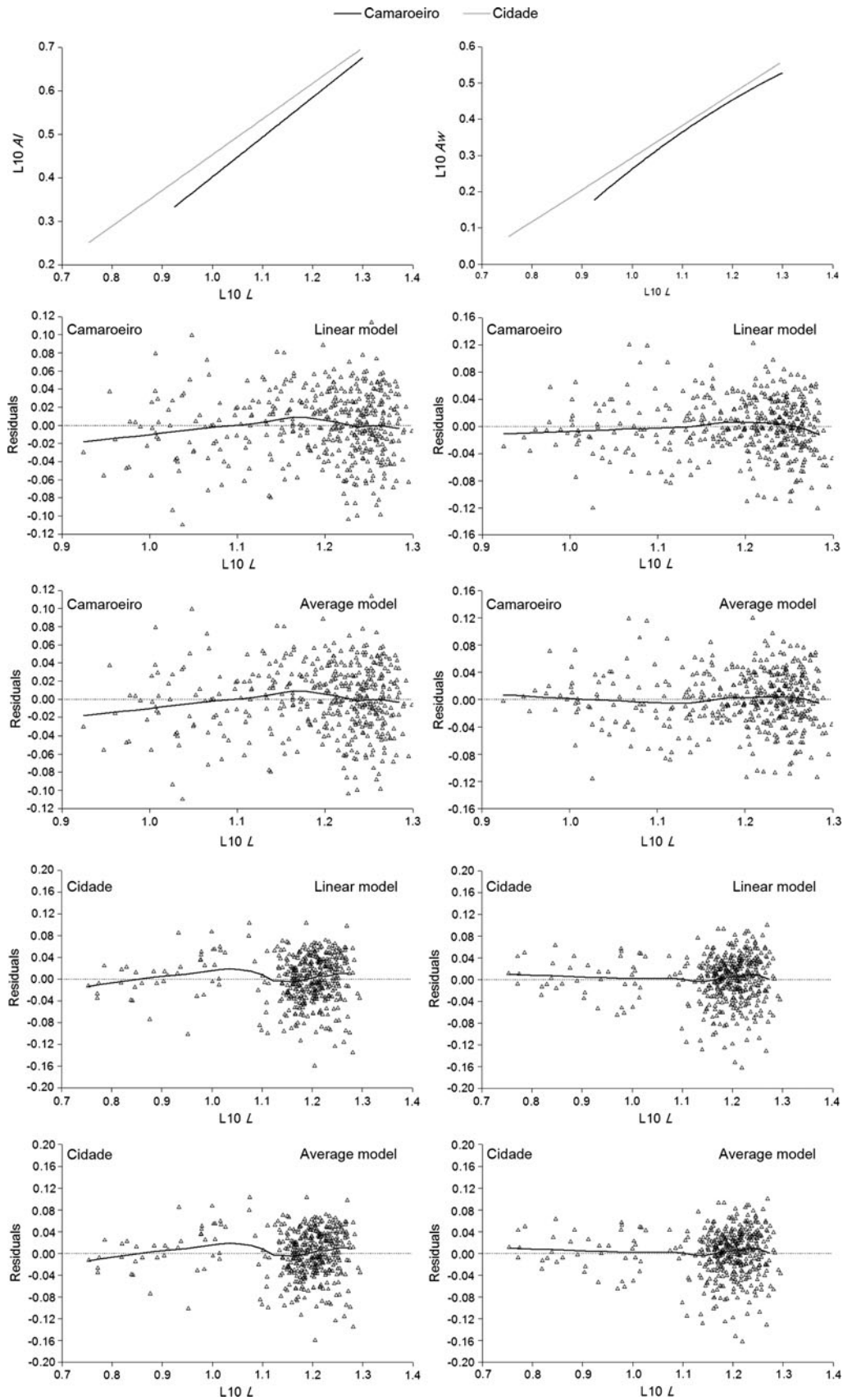


Fig. 4. Continued

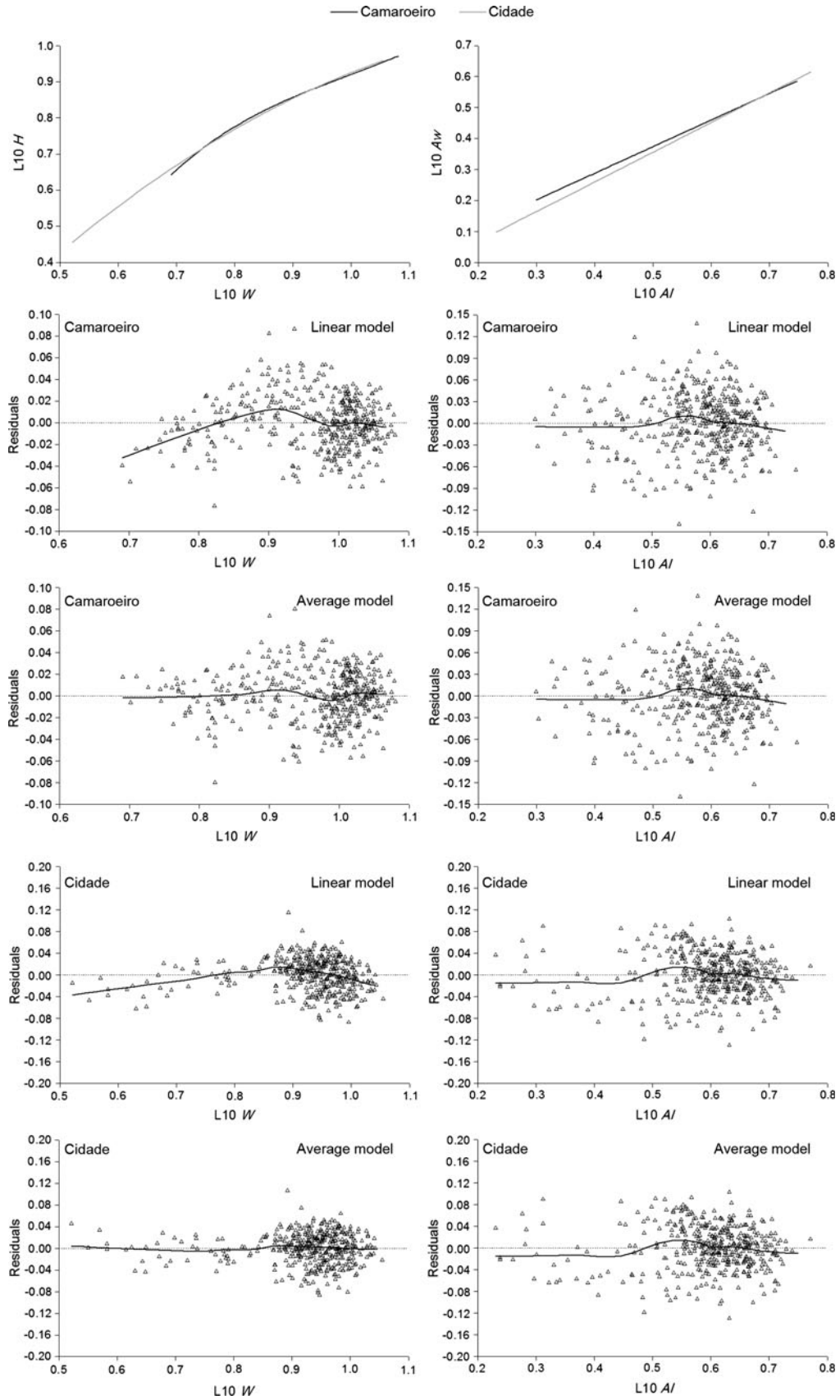


Fig. 4. Continued

where  $RSS$  is the residual sum of squares of the regression,  $n$  is the number of observations, and  $k$  is the number of parameters of the regression plus 1. In this case, it was necessary to assume normally distributed deviations with homogeneous variances for the data. The model with the smallest  $AIC$  value ( $AIC_{min}$ ) was selected as the “best” among the models tested. The  $AIC$  differences,  $\Delta_i = AIC_i - AIC_{min}$  were computed for all candidate models.’

3) As the reference (Hurvich & Tsai, 1989) on ‘Material & Methods’ was excluded from the text, it should not be considered in the ‘Reference’ section.

4) The subsection ‘Allometric growth’ on ‘Results’ should be:

‘The relative growth of Camaroeiro specimens varied widely during development. The linear model was the most frequent, with high values of  $w_i$  for three of the six morphometric relationships (Table 3). The quadratic model was more plausible for the relationship  $L/Aw$ , whereas the relationships  $L/H$  and  $W/H$  better fit the cubic model, with the highest values of  $w_i$  (Table 3). The linear model was also the most common for three of the six morphometric relationships for the Cidade population (Table 4). The relationships  $L/W$  and  $W/H$  were better explained by the quadratic model, while  $L/H$  by the cubic.

Both areas shared some similarities in the models tested for many of the relationships analysed (Tables 3 & 4), with the cubic and linear models being the most frequent and with the highest plausibility. Differences were observed in the relationship  $L/W$ , in which the linear model was the most plausible for Camaroeiro, whereas the quadratic model had the highest value of  $w_i$  for the Cidade individuals. For some relationships it was difficult to isolate a single plausible model, given their low and similar  $\Delta_i$  values. This was the case of  $L/Aw$  for Camaroeiro, where it was not possible to discard the linear model, even though the quadratic model had a higher  $w_i$ . In these cases we opted to accept and plot, the average model, using the corresponding  $w_i$  as weights (Figure 4). The residual plots of the average models, which showed a lower dispersion of the data when compared to the linear models residuals, also indicated a differential relative growth for all of the non-linear average models (Figure 4).

The Camaroeiro individuals showed isometric growth between  $L/W$ ,  $L/Al$ , and  $Al/Aw$  (Figure 4), whereas the growth of  $L$  in relation to  $H$  and  $Aw$  varied, being described by quadratic and cubic relationships. In the relationships  $L/H$  and  $W/H$ , the cubic model showed a variation over time in the relative growth.

In the Cidade bed, the growth of shell length in relation to width and height was determined by quadratic and cubic relationships, indicating variation in growth during the development of the individuals (Figure 4). Furthermore,  $W/H$  also showed variations in relative growth. The relationships  $L/Al$ ,  $L/Aw$ , and  $Al/Aw$  best fit the linear model.’

The last paragraph of the subsection ‘Allometric growth’ in ‘Results’ was not modified and should be considered in the original text.

5) New versions of Tables 3 and 4, and Figure 4 are provided.

6) In the Discussion section (page 1100, right column, lines 31 to 34) where it is read ‘The linear allometric model, used in several allometric growth studies, was not the most common for all relationships in *N.vibex* (Tables 3 and 4). Most of the relationships were better explained by the *Cb* model ...’ it should be ‘Some of the relationships were better described by the *Qd* and *Cb* models, ...’

## REFERENCE

Yokoyama L.Q. & Amaral A.C.Z. (2011) Allometric growth of a common Nassariidae (Gastropoda) in south-east Brazil. *Journal of the Marine Biological Association of the United Kingdom*, 91(5): 1095–1105.