

# Erratum to: Aboveground biomass and carbon stock are related with soil humidity in a mangrove at the Piraquê-Açu River, southeastern Brazil

José Thales da Motta Portillo<sup>1</sup> · Vinícius Londe<sup>1</sup> · Francisco Wagner Araújo Moreira<sup>1</sup>

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The original version of this article unfortunately contained a mistake. The values of aboveground biomass and carbon assimilated were underestimated in the published article. The correct values are as follow:

## Abstract

In Brazil, few studies have been conducted about the assimilation of carbon and biomass accumulation in mangroves despite its great role as a carbon sink. In this sense, this study aimed to estimate the aboveground biomass (AGB) and carbon stocked by mangrove species in a stretch along the Piraquê-Açu River in southeastern Brazil, and to verify their relation with some soil parameters. For such, the height and diameter of all trees inside six plots of 100 m<sup>2</sup> were measured and used to quantify AGB through an allometric equation, and soil samples were collected to calculate granulometry, humidity, time of infiltration and permeability. Multiple regressions were used to identify relations between AGB and soil parameters. A total of 296 trees were found in the area and the AGB and carbon assimilated were 48.61 t ha<sup>-1</sup> and 24.30 t ha<sup>-1</sup>, respectively. *Laguncularia*

*racemosa* was the most abundant species and contributed with 61% of these values. Only a positive relation between AGB/carbon of *L. racemosa* and soil humidity was found, probably due to the substrate characteristics which contain a large concentration of silt/clay, and may store more water and do not yet provide firmness to the roots. By comparison, this mangrove had a low amount of AGB and carbon stocked and has yet to develop structurally. Along with other ecological functions and its associated ecosystem services such as supplying food for the local community, these features highlight the importance to conserve the studied mangrove and the interlinked coastal ecosystems.

## Results

A total of 48.61 t ha<sup>-1</sup> of aboveground biomass and 24.30 t ha<sup>-1</sup> of carbon were estimated for the mangrove, wherein *L. racemosa* was the species with the highest biomass and carbon, followed by *R. mangle* and *A. schaueriana* (Table 2).

**Table 2** Total aboveground biomass (AGB) and carbon stock, in t ha<sup>-1</sup>, for three mangrove species found at the Piraquê-Açu River, Aracruz, Espírito Santo, Brazil

Plots	<i>Laguncularia racemosa</i>		<i>Rhizophora mangle</i>		<i>Avicennia schaueriana</i>	
	AGB	Carbon	AGB	Carbon	AGB	Carbon
0	2.61	1.31	-	-	-	-
1	8.98	4.49	0.28	0.14	1.55	0.77
2	7.31	3.66	3.47	1.74	1.47	0.74
3	9.76	4.88	1.45	0.73	1.09	0.55
4	-	-	-	-	3.24	1.62
5	1.05	0.53	6.08	3.04	0.27	0.13
Total	<b>29.71</b>	<b>14.86</b>	<b>11.28</b>	<b>5.64</b>	<b>7.61</b>	<b>3.81</b>

The online version of the original article can be found at <http://dx.doi.org/10.1007/s11852-016-0482-4>

✉ Vinícius Londe  
vlonde.ecologia@gmail.com

<sup>1</sup> Graduate Program in Ecology of Tropical Biomes, Department of Biodiversity, Evolution and Environment, Federal University of Ouro Preto, Campus Morro do Cruzeiro, s/n, Ouro Preto, Minas Gerais 35400-000, Brazil