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MAJOR NECROMASS STOCKS AND FORESTS DYNAMICS AT TWO ALTITUDES IN YANACHAGA- CHEMILLÉN NATIONAL PARK, PERU

Robert Arteaga* & César Arana

Departamento de Ecología. Museo de Historia Natural. Universidad Nacional Mayor de San Marcos. Lima, 15072, Peru. *Correspondence to robert.arteaga@unmsm.edu.pe

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The capacity of forests to store carbon is a key feature which determine the degree of conservation of the environment. The objective of this study was estimate the major necromass stocks in Paujil station of the Yanachaga-Chemillén National Park (Lowland Western Amazonian Rainforest) in Central Peru. These plots are representative for two altitudes and types of vegetation: PNY-03, altitude 853 m, slightly marked hill forests and PNY-05, 448 m, alluvial high terrace *terra firme* forest. We used the procedures proposed by RAINFOR (*Red Amazónica de Inventarios Forestales*). We considered dead logs with a minimum diameter of 10 cm classified in three degrees of decay. Volume of logs was estimated using allometric models. Dead wood density was determined using the proposed formula by *Chao et al.* 2009. Finally, the necromass stock was calculated as the product of volume and density. We registered 281 dead individuals in PNY-03, and 309 for PNY-05. The dead wood volume in PNY-03 was 79.49 m³/ha and for PNY-05, 72.56 m³/ha. Estimated necromass stock for PNY-03 was 32.11 Mg/ha and for PNY-05 was 33.57 Mg/ha. We found significant differences (independent *t* test, $p < 0.005$) in normalized, with the Box-Cox method, volume and necromass values only for the lowest degree of decay between plots. These quantities of necromass stocks are typical for western Amazonian forests. The higher value of volume of dead wood in the highest altitude plot is explained by the occurrence of an extraordinary mortality event in 2011 for this plot. However, this occurrence did not increase the necromass stock as expected. The lower stock of necromass in this plot is explained by dominance of palms and lower values of basal area and density of dead wood. We suggest the development of more research to establish new allometric models for a better estimation of volume.