Correction to: Seasonal fluctuations of extracellular enzyme activities are related to the biogeochemical cycling of C, N and P in a tropical terra-firme forest

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The original online article has been updated as there was a mistake in the calculated enzyme activities and the related vectors. The enzyme activities were a factor 100 too small, affecting the values reported in the text and in Figs. 3 and 4. Furthermore, the equations used for the calculation of the proportional activities indicated ln-transformations while ln-transformations should not have been applied. This affected Fig. 5.

The correct equations, in-text corrections and correct figures are shown below.

The correct equations for the proportional activities are without an ln-transformation:

$$C{:}N_{proportional} = \frac{BG}{BG + NAG}$$

and

$$C{:}P_{proportional} = \frac{BG}{BG + AP}$$

The correct text in the results with the enzyme activities is:

Average EE activities (as expressed per gram soil C; for values per dry soil see Fig. S3.5)

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were 21.13±0.06 µmol g C^{-1} day^{-1} for BG, 86.82±0.33 µmol g C^{-1} day^{-1} for NAG and 2020.98±4.49 µmol g C^{-1} day^{-1} for AP, while in 5–15 cm those activities were 23.01±0.12, 63.21±0.31, and 2626.40±7.74 µmol g soil C^{-1} day^{-1} for BG, NAG and AP respectively (Fig. 3a, c, e). In the top 5 cm EE activity rates peaked just before drier season and were lowest in the wetter season: BG and NAG peaked just before the drier season (in June, 31.34±0.78 µmol g C^{-1} day^{-1} and 137.31±3.87 µmol g C^{-1} day^{-1} respectively) while AP peaked in September (3190.60±57.30 µmol g C^{-1} day^{-1}). The lowest EE activities at 0–5 cm

depth were all in January (BG 12.54±0.45 µmol g C^{-1} day^{-1}, NAG 39.80±0.97 µmol g C^{-1} day^{-1} and AP 1254.93±18.69 µmol g C^{-1} day^{-1}).

This pattern was reflected at 5–15 cm, but with BG showing highest rates in August (34.47±2.40 µmol g C^{-1} day^{-1}), and NAG and AP peaking in September (121.58±6.13 µmol g C^{-1} day^{-1} and 4461.28±89.68 µmol g C^{-1} day^{-1} respectively). The lowest EE activities at this depth were in January for BG and NAG (12.10±0.29 µmol g C^{-1} day^{-1} and 19.61±0.60 µmol g C^{-1} day^{-1} respectively), and in June for AP (1051.54±33.51 µmol g C^{-1} day^{-1}).
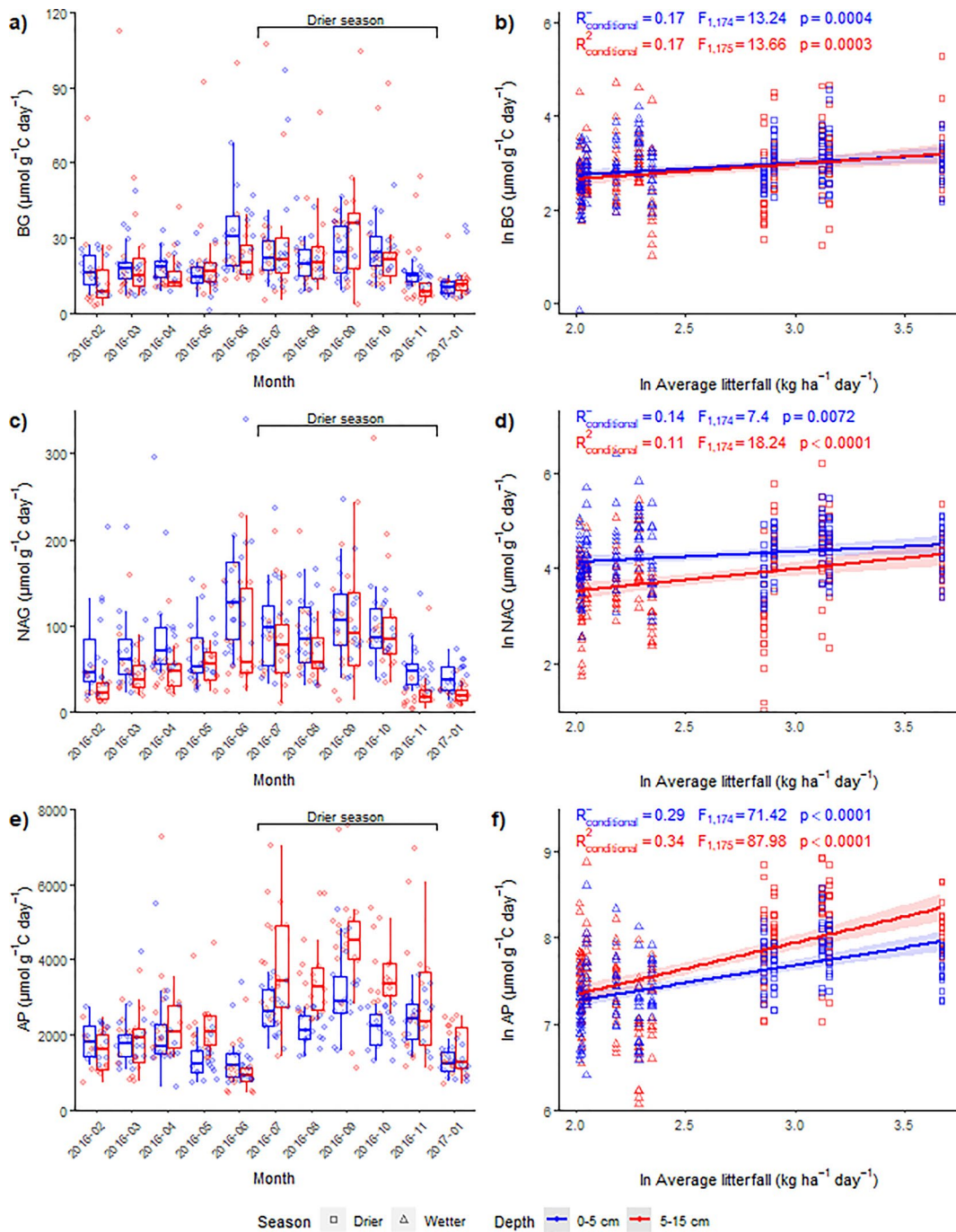
The correct figures:

Fig. 3 C, N and P related extracellular enzyme activities (BG, NAG and AP per soil C) from February 2016 till January 2017, and their relation to the average monthly leaf litterfall. Boxplots are showing the median, the lower and upper hinges correspond to the first and third quartiles (plots **a**, **c** and **e**). The text in plots **b**, **d** and **f** shows the relation between enzymes and litterfall established with linear mixed effects model, with the sampling location as a random effect
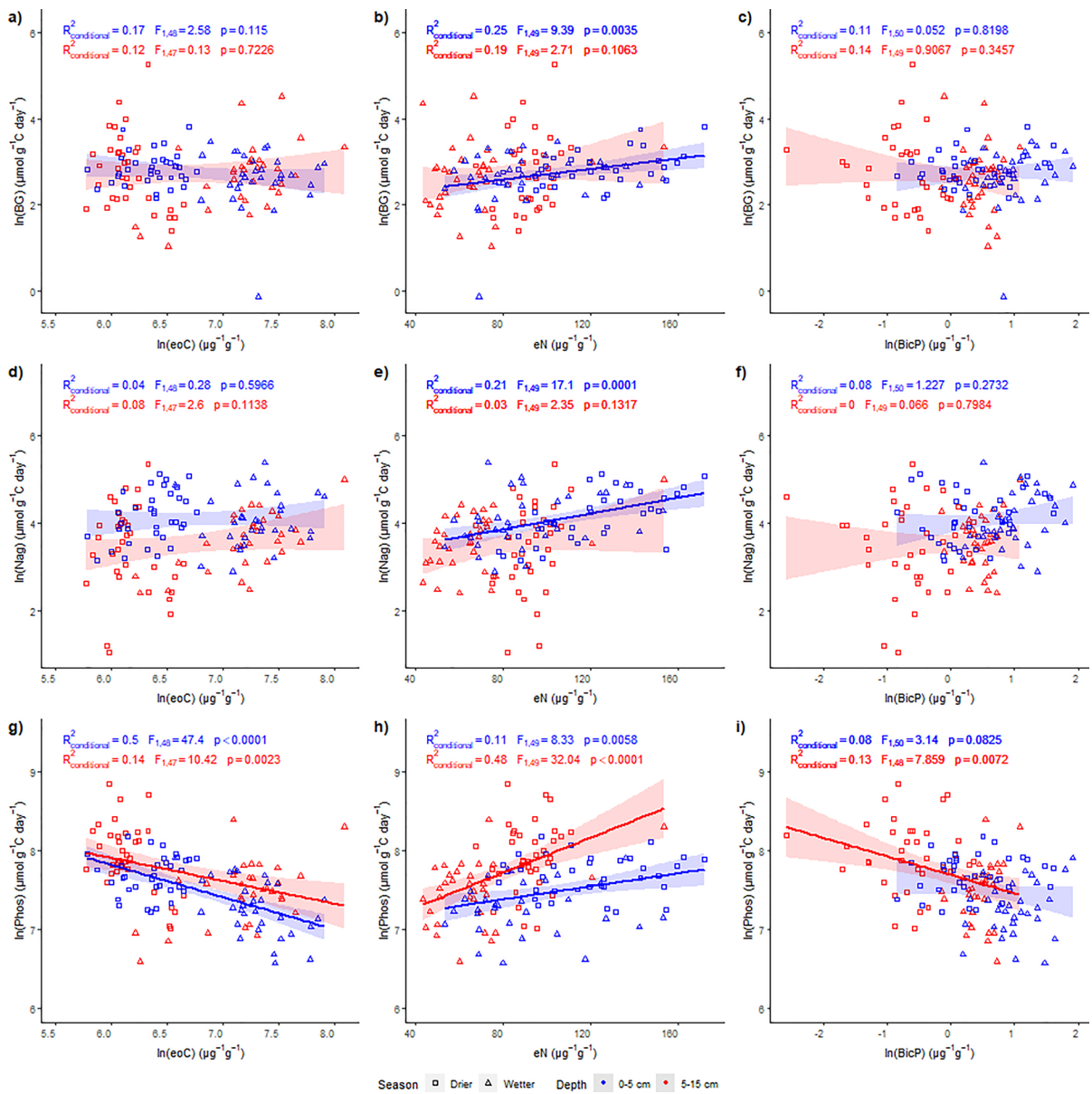
Fig. 4 Relations between EE and extractable soil nutrients at 0–5 cm and 5–15 cm. Conditional R^2, F and p values for linear mixed effect models with sampling location as a random effect. **a**, **b**, and **c** β-glucosidase as related to eoC (natural logarithm), eN and Olsen P (natural logarithm); **d**, **e**, and **f** N-acetyl glucosamidase as related to eoC (natural log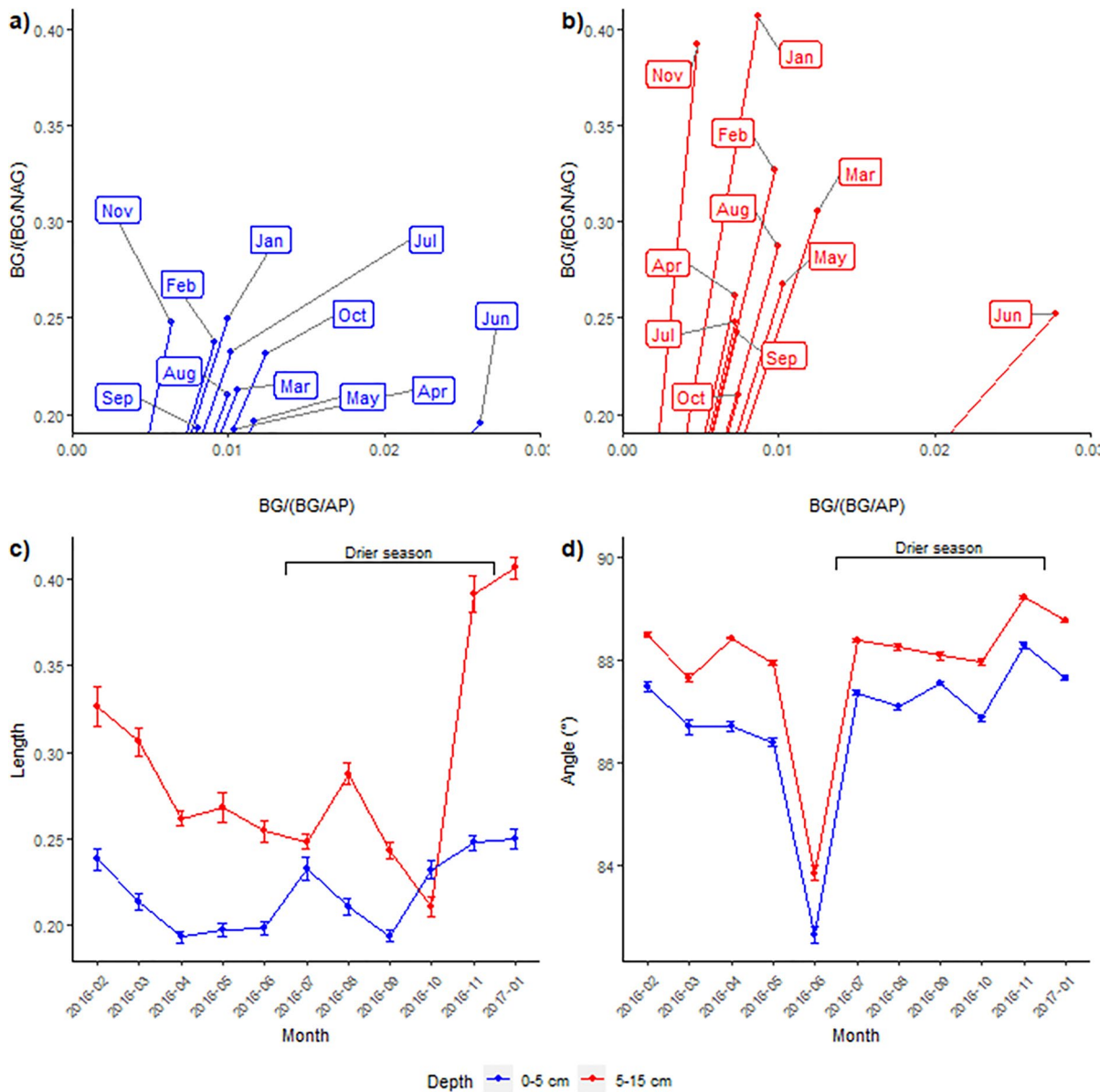arithm), eN and Olsen P (natural logarithm); **g**, **h**, and **i** Phosphatase as related to eoC (natural logarithm), eN and Olsen P (natural logarithm)

Fig. 5 Average monthly vectors of proportional enzyme activities at **a** 0–5 cm and **b** 5–15 cm, and average vector properties, **c** length (unitless), and **d** angle (in degrees) of the monthly average vectors. The error bar in **c** and **d** represents the standard error