

Correction

ECOLOGY

Correction for “Rapid responses of soil microorganisms improve plant fitness in novel environments,” by Jennifer A. Lau and Jay T. Lennon, which was first published August 13, 2012; 10.1073/pnas.1202319109 (*Proc. Natl. Acad. Sci. U.S.A.* **109**, 14058–14062).

The authors wish to note the following: “We discovered an error in the plant trait and fitness dataset used in this publication. The error occurred in a column of data corresponding to a random effect (plant mesocosm) that was never statistically significant in any of the analyses. Correcting this error did not alter any of the primary conclusions of the manuscript; we still detect strong effects of microbe evolutionary history on plant fitness responses to drought, and results presented in all figures remain correct. In most cases, correcting the error did not qualitatively change any results and typically increased confidence in our findings (reducing p-values). However, in two cases a significant result became non-significant. First, based on the corrected dataset, we now detect no evidence that plants flowered earlier in wet soils (the p-value changed from marginally significant at $P = 0.05$ to $P = 0.13$). Second, we detect no evidence for plant–microbe co-(mal)adaptation. In other words, plants do not produce significantly more fruits or biomass when growing with a mismatched microbial community. Neither of the findings that were altered by the correction were major components of the manuscript.”

As a result of this, a number of statements in the text must be corrected. On page 14059, left column, first full paragraph, line 12, “fruit number: $P > 0.39$; flower number: $P > 0.84$ ” should instead appear as “fruit number: $P = 0.56$; flower number: $P = 0.55$.”

On page 14059, left column, second full paragraph, lines 13–14, “on fruit number, $F_{1,254} = 14.55$, $P = 0.0002$, and on flower number, $F_{1,284} = 6.51$, $P = 0.011$ ” should instead appear as “on fruit number, $F_{1,254} = 16.66$, $P < 0.0001$, and on flower number, $F_{1,286} = 6.27$, $P = 0.013$ ”; in the same paragraph, lines 16–17, “58% decrease in fruit production” should instead appear as “59% decrease in fruit production”; and in the same paragraph, lines 18–19, “20% decrease in fruit number” should instead appear as “19% decrease in fruit number.”

Also on page 14059, left column, third full paragraph, line 6, “fruit number: $P > 0.39$; flower number: $P > 0.84$ ” should instead appear as “fruit number: $P = 0.56$; flower number: $P = 0.55$.”

On page 14060, left column, first paragraph, line 2, “ $F_{1,10} = 2.61$, $P = 0.14$ ” should instead appear as “ $F_{1,6} = 0.23$, $P = 0.65$ ”; in the same paragraph, lines 4–5, “Contemporary drought delayed flowering by 1 d ($F_{1,10} = 4.93$, $P = 0.05$)” should instead appear as “Contemporary drought delayed flowering by 1 d, although this effect was not statistically significant ($F_{1,5.5} = 3.21$, $P = 0.13$)”; and in the same paragraph, line 8, “ $F_{1,6} = 17.82$, $P = 0.0055$ ” should instead appear as “ $F_{1,12} = 23.61$, $P = 0.0004$.”

On page 14061, left column, first full paragraph, the text that reads:

“Although much of the adaptive plant response to drought stress observed in our experiment can be attributed to changes in the belowground microbial community, we also detected some evidence for interactions between plant history and microbial history on plant growth and fitness traits. Plants produced slightly more fruits and biomass when there was a mismatch between plant history and microbe history, independent of the contemporary soil-moisture environment [plant history \times microbe history interactions on fruit number ($F_{1,252} = 8.40$, $P = 0.0041$), and biomass ($F_{1,94} = 5.27$, $P = 0.024$)]”

should instead appear as:

“Much of the adaptive plant response to drought stress observed in our experiment can be attributed to changes in the belowground microbial community, and we detected no evidence for interactions between plant history and microbial history on plant growth and fitness traits (e.g., fruit number: $F_{1,252} = 0.18$, $P = 0.67$; biomass $F_{1,46} = 0.24$, $P = 0.63$).

Lastly, the P values shown in Fig. 1 are incorrect. The corrected figure and its legend appear below. The article has been corrected online with these changes.

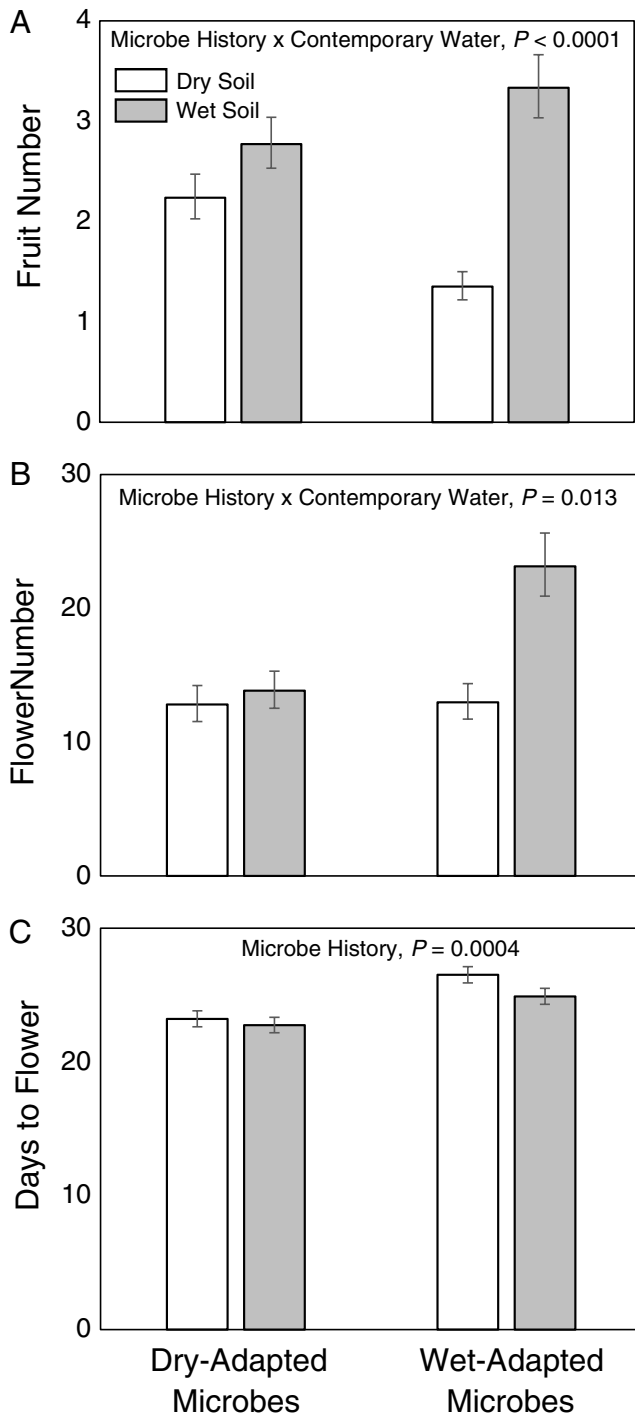


Fig. 1. Effects of microbe history (dry- or wet-adapted) and contemporary soil moisture (dry or wet soil) on plant fruit number (A), flower number (B), and flowering date (C). Error bars indicate back-transformed least squares means ± 1 SEM.

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