

Influence of seasonal humidity and nitrogen on soil ciliate and bacterial diversity beneath the canopy of *Neltuma laevigata*

Carlos Manuel Martínez-Reyes^{a,b}, Mariana González-Macedo^a, Marcelo Rojas-Oropeza^a, Salvador Rodríguez-Zaragoza^c, Nathalie Cabirol^{a*}.

^a Group Functional microbial soil ecology and environmental protection, Department of Ecology and Natural Resources, Faculty of Science, Universidad Nacional Autónoma de México (UNAM), Mexico City, CP 04510, Mexico.

^b Posgrado en Ciencias Biológicas, Universidad Nacional Autónoma de México, México.

^c Microbial Ecology Lab, FES Iztacala, Universidad Nacional Autónoma de México, Edo. México 540 90, Mexico.

*Corresponding author: nathalie.cabirol@ciencias.unam.mx

Figure 1.

Average annual rainfall in Ixmiquilpan, Hidalgo, Mexico, over a 90-year period (1930–2020). The slope equation and R^2 values for each four-month period are shown.

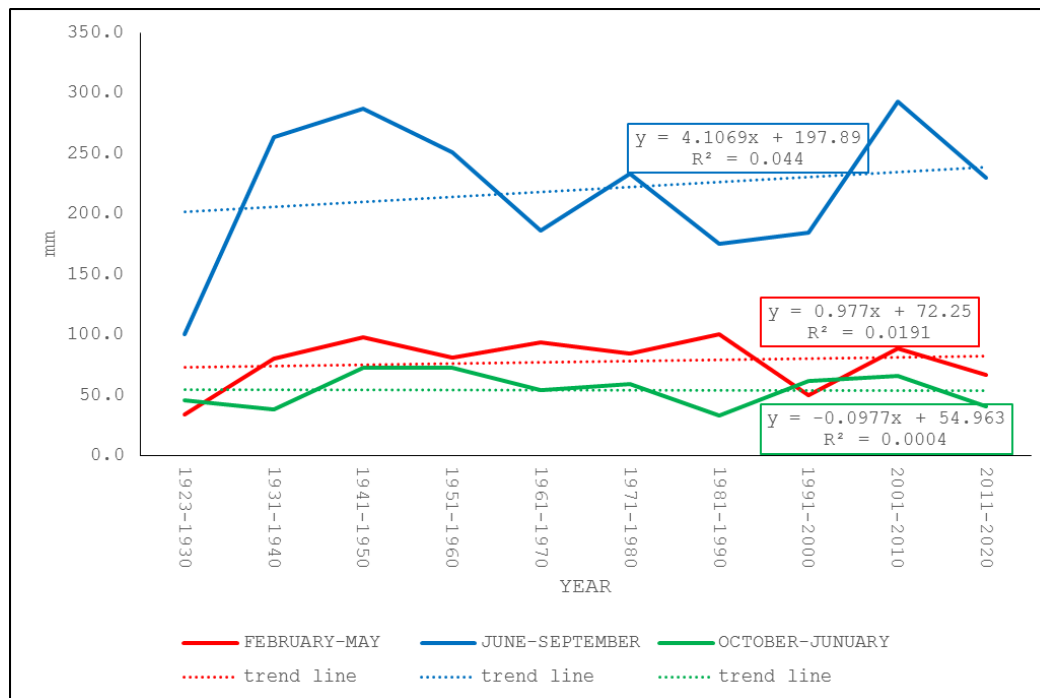
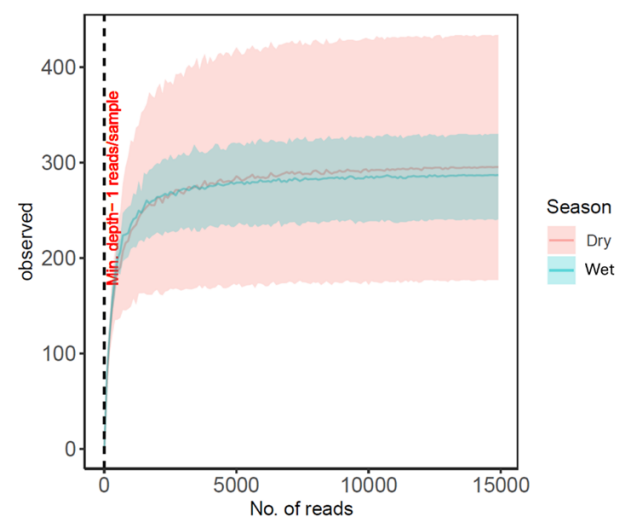


Figure 2. ASV rarefaction curve by season.



	Observed	Chao 1
Wet	283.3	285.4
Dry	293.3	300.2

Table 1. Normality was assessed using the Shapiro–Wilk test. For both seasons, bacterial diversity did not significantly deviate from normality ($p > 0.05$).

Variable	Season	W statistic	p-value
H_Bacteria	Wet	0.9914	0.8227
H_Bacteria	Dry	0.9993	0.9487