

Poster presentation.

NITROGEN ADDITION CHANGES THE ABUNDANCE OF FOLIAGE SPIDERS IN PATAGONIAN WOODLANDS

Martínez, Lucía C.^{1,2}; Haedo, Joana P.^{1,3}; Pompozzi, Gabriel⁴; Pérez-Méndez, Néstor⁵; Panchuk, Justina³; Garibaldi, Lucas A.⁶ & Marrero, Hugo J.^{1,3}.

1. Laboratorio de Interacciones Bióticas en Agroecosistemas (LIBA). gabrielpompozzi@gmail.com.
2. Departamento de Biología, Bioquímica y Farmacia, Universidad Nacional del Sur, Bahía Blanca, Argentina.
3. Centro de Recursos Naturales Renovables de la Zona Semiárida (CERZOS), CONICET.
4. Laboratorio de Entomología, IADIZA(CCT CONICET-Mendoza), Mendoza, Argentina.
5. Institut de Recerca i Tecnologia Agroalimentàries, IRTA-Amposta, Carretera de Balada, Km1, 43870 Amposta, Tarragona, España.
6. Universidad Nacional de Río Negro, Instituto de Investigaciones en Recursos Naturales, Agroecología y Desarrollo Rural (IRNAD), Río Negro, Argentina.

Ecological interactions are regulated by bottom-up cascading effects. In this way, the modification of limiting nutrients in soil could cause changes in the nutritional content of plants, affecting both the abundance of herbivores and their predators, such as spiders. We performed a field experiment to evaluate the interactive effects of nutrient addition (nitrogen, phosphorus, and potassium) in Argentina Patagonian woodlands. For this, we used a dominant tree of the study system (*Nothofagus antarctica*) and measured leaf nutrients, abundance of spiders and potential prey (herbivorous insects) present in the foliage. The most abundant family of spiders found was Anyphaenidae, a group belonging to foliage hunters. Our results showed that the maximum values of spiders abundance were given at intermediate levels of leaf nitrogen while at higher levels of nitrogen the abundance of spiders decreases. We found no effects of phosphorus and potassium addition in this study. In addition, we found a positive relationship between the abundance of potential preys and spiders. We conclude that the quadratic relationship between leaf nitrogen and spider abundance could be mediated by changes in the abundance of foliar herbivores, which could be spider potential preys. Our results suggest that the addition of nitrogen in forest systems can cause "bottom-up" effects in trophic webs through changes in foliar nitrogen content and the abundance of foliar herbivores, that ultimately modify the abundance of forest foliage predators such a spiders.