



ASSIMETRIA FLUTUANTE E HERBIVORIA NOS CAMPOS RUPESTRES

Dr. Pablo Cuevas-Reyes

Universidad Michoacana de San Nicolás de Hidalgo, México

Fluctuating asymmetry is a parameter used to measure developmental stability in plants, which can be altered by disturbances, pollution and biotic factors such as herbivory. Reintroduced environments represent stressful conditions to plants that can be observed in different ways. We evaluated the effects of environmental stress on herbivory and fluctuating asymmetry levels in individuals of *Chamaecrista semaphora* (Fabaceae) and *Tibouchina heteromalla* under natural and restored habitat conditions in rupestrian fields in Brazil. We found contrasting results, in *C. semaphora*, no relationship was found between FA and herbivory on two ontogenetic stages (saplings and adults) in both environments, suggesting that FA did not represent an indicator of stress. The frequency and amount of leaf area removed by folivores was higher in saplings compared to adults plants under natural habitat, while the opposite trend was observed on restored habitat for adults plants. The restored habitat did not represent an environmental stress condition to *C. semaphora*, indicating that this endemic plant may represent a good candidate to restoration programs in harsh environmental studied. In *T. heteromalla*, individuals of restored areas had greater leaf area, higher levels of herbivory and fluctuating asymmetry compared to individuals that occurred in natural areas. In both environments, the proportion of individuals with damage by herbivory was higher than the proportion of undamaged individuals. We found a positive relationship between herbivory and fluctuating asymmetry levels in both environments, suggesting a causality of herbivory on the levels of fluctuating asymmetry. However, more favorable conditions in the restored areas enhanced leaf growth, resulting in higher fluctuating asymmetry, indicating the presence of developmental errors proportional to leaf size.