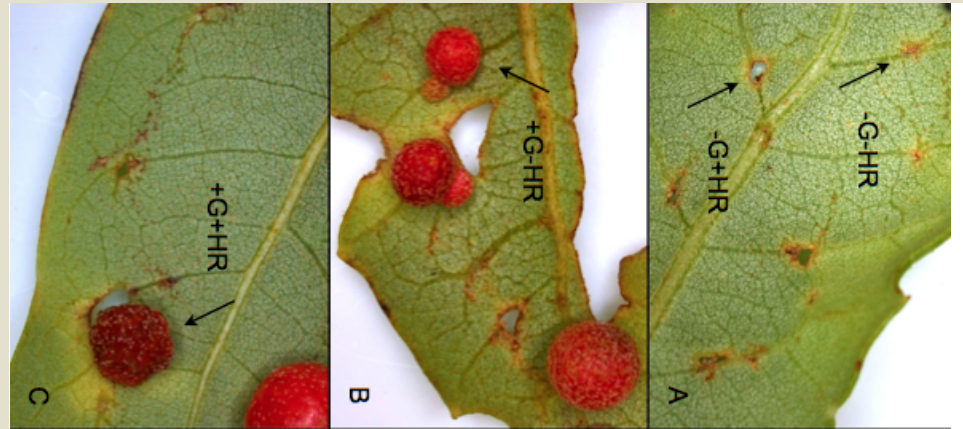


## ***Incidence and efficiency of a hypersensitive-like response in Plateau live oak against a host specific Cynipid gall former***

Hypersensitive response (HR) is a plant defense resulting from a gene-for-gene interaction between plants and their pathogens and less frequently their insect herbivores. The effects of HR on natural populations of the species-rich Cynipid gall formers are unexplored. With C. M. Campbell we are investigating the consequences of HR-like lesions that develop in the leaves of *Q. fusiformis* in response to oviposition by *B. treatae*. Our goal is to assess whether these HR-like lesions function as a plant defense against this specialist herbivore, and if so, to estimate the importance of the defense. Thus we have examined the probability of gall establishment in the presence and absence of HR-like lesions within and among individual live oak trees monitored in each of two years. We have found that the probability of gall formation is significantly reduced by HR-like lesions which illustrates that lesions act as a plant defense. HR-like lesions are commonly observed while the effectiveness of HR-like lesions varies widely among trees and across years.



**Outcomes of oviposition into leaves of *Q. fusiformis* by *B. treatae*. A) Oviposition scars with (+HR) and without (-HR) hypersensitive-like lesions; B) gall developing without HR; and C) with HR.**

