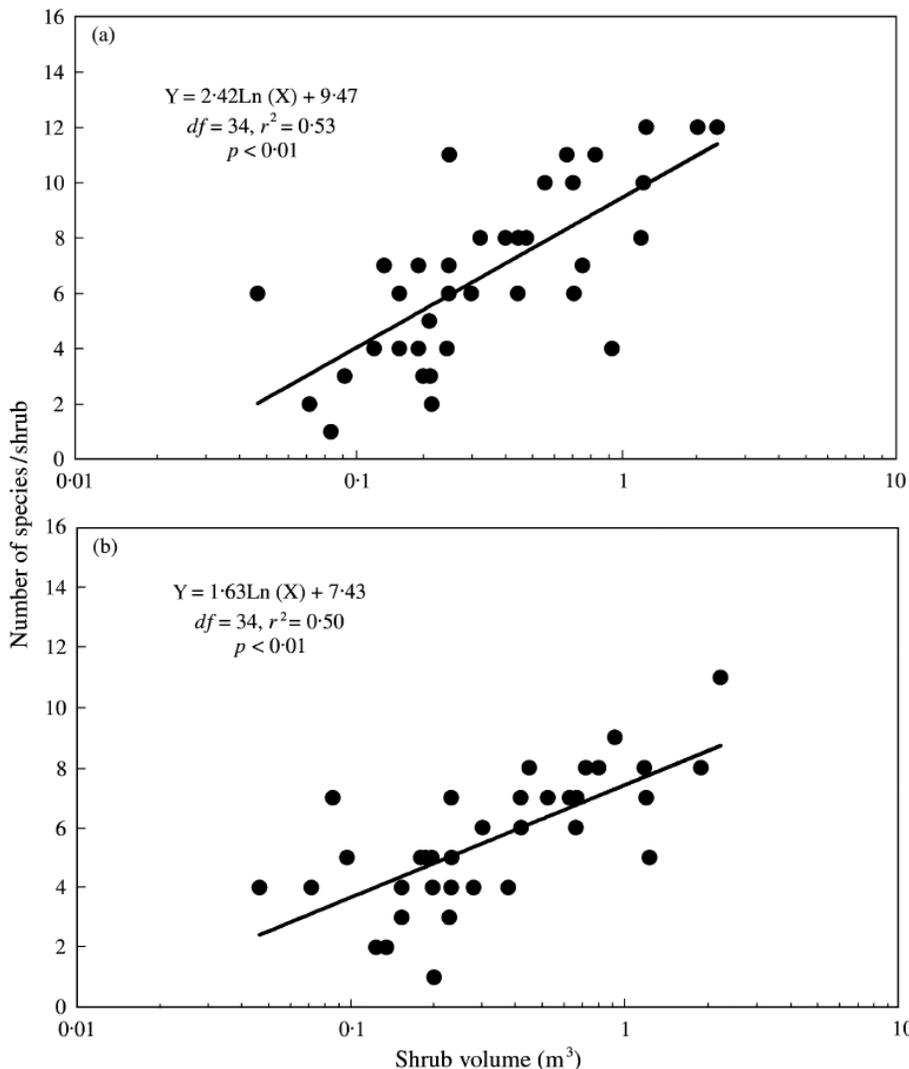




Habitat Size Impacts Arthropod Species



Caption: Numbers of specialist herbivore arthropod species found on isolated shrubs of different sizes. The top graph (a) shows the number of species before all arthropods were removed by fumigation. The bottom graph (b) shows the number of species two weeks after fumigation. Results from linear regression analyses are displayed on each graph.

OBSERVATIONS, NOTES & QUESTIONS

BACKGROUND INFORMATION	BIG IDEAS, NOTES & QUESTIONS
<p>How many different species will be found in a habitat of a certain size? Answering this question could help us better understand patterns in where species are found. It could also help us predict how many species will be lost from damaged habitats and design protected areas to save Earth’s remaining wildlife.</p> <p>To investigate the relationship between species number and habitat size, scientists studied species of arthropods — such as beetles, grasshoppers, flies, and moths — in a desert in central New Mexico, USA. They focused on arthropods that live on desert shrubs. Some of these arthropod species are specialist herbivores that feed and live only on these shrubs. The sand and grasses between the shrubs do not provide the food or shelter that these specialist species need to survive for long periods.</p> <p>The scientists counted the number of specialist herbivore arthropod species on individual, isolated shrubs. They also calculated the volume of each shrub, which can be used as a measure of habitat size for the arthropods. The scientists then used an insecticide to fumigate, or kill all the arthropods on, these shrubs. Two weeks after fumigation, they counted the arthropod species that had returned to each shrub. These arthropods came from other places in the environment, including shrubs that had not been fumigated.</p>	