

Biology

What good can nectar do a fern?

Scientists have wondered for years why ferns make nectar. Ferns don't have flowers, so they don't need this sweet fluid to lure pollen-spreading creatures. In studies of other kinds of plants, botanists have found that the steady traffic of nectar-sipping ants reduces damage to leaves by leaf-eating insects, so they proposed that fern nectar also attracts ants. Until now, however, ferns have baffled all attempts to determine whether the ants actually afford them significant protection.

Researchers have observed for the first time that a species of *Polypodium* fern in Mexico indeed suffers less damage when ants feed on its nectar, report Suzanne Koptur of Florida International University in Miami and her colleagues. Their analysis appears in the May *AMERICAN JOURNAL OF BOTANY*.

Koptur's team blocked ant traffic to some of the young fronds of *P. plebeium* in a wet mountain forest in Veracruz. After a month, the fronds without ants were significantly more battered by other insects than control fronds on the same plant.

The team also looked at—and dismissed—another proposed explanation: that nectaries lure creatures which somehow disperse fern spores. The fern that Koptur studied makes nectar only when the fronds are young and particularly vulnerable, stopping before spore production.

—S. M.