

Pollination: A wild transaction

How does it work, and who participates?

When animals assist stationary plants with reproduction, the interaction is mutually beneficial to both partners. Plants pay pollinators for their transportation efforts with nutritious rewards (sugary nectar or protein-rich pollen). Are bugs, birds, and bats aware of this evolutionary deal? In fact, most are likely unwitting participants that passively detach pollen grains from their bodies while rooting around floral structures for food.

Pollination is a dirty job!

A careful look at the bodies of insect and vertebrate pollinators often reveals a golden glow. Researchers have combed bumble bees to remove their sticky cargo and discovered that, on average, a single individual is covered with nearly 10,000 pollen grains! Among the vertebrate pollinators, furry bats deliver a greater proportion of the pollen they pick up from flowers than do feathered birds. Slippery feather structures and active preening allow hummingbirds to shake off much of their hitchhiking pollen load.

Sonoran Desert specialists:

Some desert pollinators do perform their services actively. The yucca moth is one such example. Females use specialized mouth parts to transfer pollen between yucca flowers. Some of the seeds resulting from this active fertilization will become food for the moth's larval offspring.



© Mark Dimmitt /
ASDM Sonoran Desert Digital Library

Not all pollinators are equal:

Considered the queen of pollination, the European honeybee is not actually the best pollinator in many areas. Honeybees can outcompete native pollinators but may not pollinate native plants like mesquite trees as well as the natives do. Honeybees fail to provide the buzz pollination that many flowers require. They also forage earlier in the daytime and steal plant rewards before native pollinators are active.

© Jim Honcoop /
ASDM Sonoran Desert Digital Library



© Jim Honcoop /
ASDM Sonoran Desert Digital Library



© 2008 Rhonda Spencer /
ASDM Sonoran Desert Digital Library