

## Which came first: the chicken or the egg? - Part 1

A chicken-and-egg problem asks which of two things brought about the other one. But it becomes a serious question when asking how all the forms of life arrived here. An even more serious question - an embarrassing one to evolutionists - is what came first: Tegeticula moths or Yucca plants? Actually it is not the question that is awkward, but the answer - they had to appear at the same time. Neither of these can produce offspring that will survive without the help of the other. In biology, symbiosis is an interaction between two dissimilar organisms living in close physical association; especially one in which each benefits the other.

The yuccas seen locally are a rosette of stiff, sword-shaped leaves which pop straight out of the ground. Later in the year a stalk moves up, topped with clusters of waxy white flowers. The writer found an established planting hard to eradicate, because when even a small piece of the succulent part was left in the ground, it sent up a new rosette to greet his springtime! Little attention was given to the small white moths which appeared around the Yucca at flowering time - that it, until more was learned about this remarkable relationship - Science Dept. (ed. D.A.B. Owen) *The Testimony*.

Actually, there are four different species in the Prodoxidae family of moths. The adults, which are small, move around during daytime which is unusual for moths. Tiny spines cover their wings. Remarkably, each of the four species of moth is adapted to a particular species of yucca (Enc.Britt.). This multiplies the problem for our hapless evolutionists many times over, because they insist it all happened by chance mutations - which had to be good enough to be "naturally selected" in both moth and yucca - and had to occur in the same year for both species to survive - four times over!

The moths emerge when the yucca flowers open. Ignoring other kinds of flowers, the female heads straight for one of the yucca blossoms and begins her work. Using her palpi or tentacles which are specially adapted for the purpose, she scrapes together a ball of pollen perhaps three times the size of her head. Carefully shaping the ball, she turns it around and around until finished. The moth then grips the ball with her tentacles and flies away with it to another blossom, possibly on another plant.

Descending to the base of the pistil - the female reproductive part of a flower - she carefully inserts her ovipositor, or egg-laying tube, into the seed capsule. Among the several thousand species of moth, only the yucca moths possess an ovipositor capable of piercing the skin of the yucca seed pod. After laying four or five eggs she moves out of the pistil and inserts the pollen ball firmly in the opening thus formed. The larvae which hatch from the eggs are picky eaters - only yucca seeds please! They will eat nothing else. They eat about half the approximately 200 seeds produced by the plant. If the moth does not pollinate the flower, no seeds develop and her offspring die. She avoids laying too many eggs in any seed pod, so that there are always at least half the seeds left uneaten - allowing the plant to also reproduce its own species. At the point where the eggs are laid the seeds fail to develop - their swelling could crush the fragile eggs.

This moth is called a "highly efficient pollinator...The yucca can be fertilized by no other insect, and the moth can utilize no other plant" - Enc.Britt. This arrangement has gone on for millennia without a hitch - far more reliable than any man-made system. Is it rational to believe that this was constructed without any intelligently directed effort?