



Content for Development of a Short Film

Topic: Migration

Keywords: Migration, Butterflies, Seasons, Migration Patterns, Science

Background Information:

Every fall, usually around October, hundreds of millions of monarch butterflies fly from the United States to warm nesting grounds in central Mexico or southern California. The monarch butterfly is the only insect that migrates north and south the way birds do. They will fly as far as 5,000 miles on their tiny wings when their trip is over.

Why do they do that?

The first reason is simple. Monarch butterflies die in cold weather. So they migrate south to find warmer places where they can spend the winter hibernating comfortably, waiting for it to get warm again so they can fly home.

The second reason is not so simple. While the butterflies may spend all winter basking in the warm rays of the sun, they have to go back to their northern home range when it comes time for the females to lay their eggs so their larvae will have the right food to eat. So, every spring, the monarchs migrate north.

The monarchs return to the same tree every year. Except the butterfly that leaves Central Mexico for the United States in March isn't the same one that flies back the following October.

A monarch butterfly only lives about two to eight weeks in early summer when it is busy reproducing. On the other hand, the generation born in late summer can live for seven months and even longer because they enter a phase in their lives called *diapause*. During *diapause* every last monarch butterfly migrates Central Mexico or southern California where it will spend the winter. No single butterfly can live long enough to make a complete the journey from North America to Mexico and back; in fact, it will take *four generations* of butterflies to make a single round trip.

How do they know where to go?

Because their lives are so short and the journey is so long, monarch butterflies have found a way to pass down all the information the new generation needs to complete the 5,000 mile migration. Each generation inherits a flight pattern from its parents, and based upon the position of the sun in the sky and the internal compass that is built into the base of their antennae, it finds its way to the same tree year after year.

That an insect that weighs barely half a gram can fly on a trip 5,000 miles long is definitely one of the most remarkable feats in nature.