



# WILDLIFE NOTES

## Mourning cloak butterfly

Every school kid who has seen a chrysalis or cocoon, kept in a classroom through the winter, knows that the caterpillar inside is changing into a butterfly or moth. It's a process called metamorphosis, and it's how butterflies and moths evolve into adults.



But one winter day, weeks before the leaves are on the trees or early flowers are in bloom, months before the classroom butterfly is ready to emerge from its chrysalis, a bright New Mexico sun and a gentle breeze from the south put the temperature on the rise. A fifth grader, who is supposed to be working on long division, looks out the window and sees a butterfly flying over the snow.

Chances are the butterfly is a mourning cloak, and in



all probability, a female. The butterfly that will emerge on the school windowsill, however, could be any of approximately 250 New Mexico species.



One of the most widespread and beautiful species in the hemisphere, *Nymphalis antiopa* contradicts much standard butterfly behavior. Easily identified, the dorsal surface is a deep plum-purple, bordered by a single row of bright blue dots and yellow margins (pale in older butterflies, bright in newly emerged ones). The edges of the wings are sharply angular. The mourning cloak's appearance makes confusion with other species unlikely.

Its behavior is like no



other butterfly either. The approximate life span for most butterflies in the United States is from four days to two weeks. The mourning cloak is the longest-lived of North American butterflies, some individuals living as long as 10 months.

Adults over-winter in hibernation (usually in hollow trees) and emerge on warmer winter days to feed on tree sap or, if available, fermented fruit. Like all insects, it is cold-blooded, but warms itself by seeking sunlight, basking with its dark wings open to absorb warmth. When the temperature rises, the photosensitive

butterfly moves into the shade, closing its wings to reduce heat absorption.

The seemingly blind prediction—that the butterfly flying over the snow is a mourning cloak—has foundation. What about the claim that it's a female? The species name, *antiopa*, was given to the butterfly by Linnaeus, who named a lot of things in the 1700s and who was one of the species' keenest observers. *Antiopa* was queen of the Amazons, a tribe of women in Greek mythology. Of course Linnaeus may have picked the name for some other reason, but only in the past 10 years have studies shown

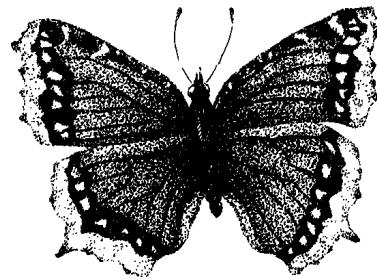
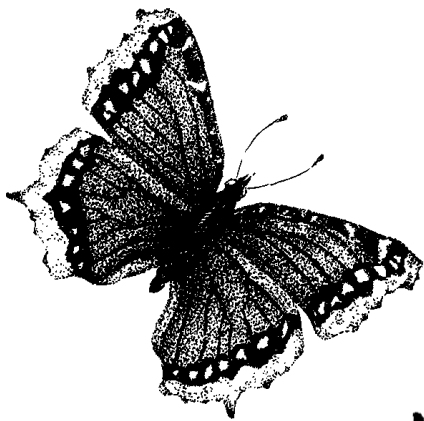
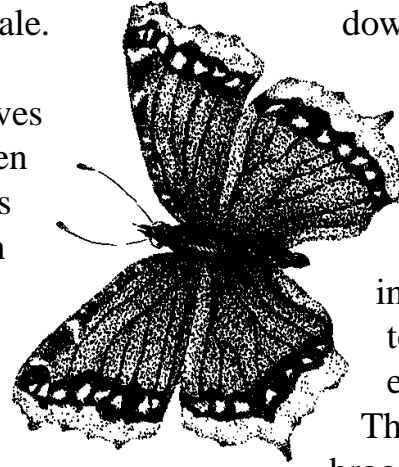
that mourning cloaks that live through the winter are exclusively female.

Later in the spring, after leaves have turned green and the chrysalis in the classroom has hatched, butterflies of all descriptions are visiting flowers and mud puddles—all but the mourning cloak. There is a spring hiatus when adults are rarely seen. Before she dies, the female has laid her eggs on one of several host plants such as black willow, aspen, cottonwood, or stinging nettle.

Hatched caterpillars are

black with several rows of spines, a row of red spots down the back, and white specks along the sides. Mature larvae undergo a quick metamorphosis in the chrysalis (two to four weeks) and emerge as adults. The second of two broods emerges in late summer or early fall.

It is then, when the butterflies of summer have begun to fade in color and die, when leaves have begun to turn and the new school year is about to begin, that the mourning cloak is freshest and most beautiful.



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