

Painted Lady

The damage produced by the caterpillar of the painted lady butterfly (*Vanessa cardui*) is unique and conspicuous, involving the tying of leaves to create a shelter within which they feed. Typically 2-5 leaves may be webbed together and ragged chewing injuries will be evident.

The caterpillars within the webbed leaf shelter are notably spiny and early stage larvae are pale brown. As they age they become variably marked with black and yellow, with considerable range in the overall coloration.

The caterpillars have a wide range of food hosts but primarily feed on plants in the families Asteraceae (Compositae), Boraginaceae, and Malvaceae. Various thistles are particularly common hosts and the name “**thistle caterpillar**” is sometimes given to this species. During outbreak years the caterpillars may extensively defoliate thistle in late spring, sometime then wandering in large numbers in search of new host plants. Common mallow and hollyhock are other host plants commonly eaten, but many other plants hosts for the insect, including sunflowers and soybeans.

The adult painted lady is a large butterfly marked predominantly with orange and black. White spots tip the forewing; dark eyespot markings occur on both the upper and lower sides of the hind wing. Wing span ranges from 5.0-9.0 cm with females being somewhat larger than males.



Leaf shelter produced by a caterpillar of the painted lady butterfly.



Caterpillars of the painted lady butterfly.



Top and side view of the painted lady butterfly.

The painted lady is a highly migratory species that is almost constantly in motion. During winter, they vacate most of the US remaining active only in parts of the extreme southwestern states and northwestern Mexico, particularly Baja Mexico. In late spring, they move northward as host plants emerge in spring. The size of these migrations varies tremendously from year to year and is most dependent on the occurrence of spring rains in their overwintering areas. When a favorable precipitation pattern occurs in the southwest, painted lady populations can explode and subsequently may migrate into Colorado in enormous numbers in late spring. During these years the painted lady is often the most common butterfly over extensive areas of the western US. In other years with less favorable weather patterns it is much less common.

The painted lady butterfly lays its cream colored eggs on leaves, laying a single egg on a leaf. Eggs hatch in 3-5 days the developing larvae construct

a loose shelter of silk among the leaves within which they feed and develop. Larval development can be rapid, typically involves 5 instars, and is normally completed within two weeks. The full grown larvae then migrate in search of a protected site to pupate. They attach the end of the body with a bit of silk and hang suspended downward before molting to the pupal stage. Initially the pupal stage is in the form of a greenish chrysalis but this changes to a predominantly silver/gray. The adult butterfly emerges in about a week after pupation.

Following their annual colonization of the state there may be several generations produced annually in Colorado. During late summer painted ladies may be seen in a southerly migration and none survive winter outdoors in the state.

Peak feeding by painted lady caterpillars typically is most common in early summer, following the annual



Painted lady caterpillar (thistle caterpillar) feeding on Canada thistle.

migration of the adults into the state. Damage to hemp is limited to foliage and the populations of caterpillars almost never reach sustained high numbers due to the presence of abundant natural controls. Furthermore, significant weeds, notably Canada thistle, are even more preferred and are far more likely to be significantly damaged than is hemp. Damage to hemp by caterpillars of the painted lady can sometimes be visible, due to the leaf tying, but effects on crop growth and yield are likely to be minimal and insignificant.

Lepidoptera: Nymphalidae