

MOTHS



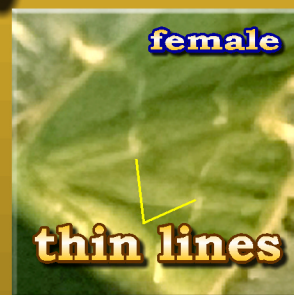
Moths comprise the largest group of insects in the order **Lepidoptera**, which also includes **Butterflies** and **Skippers**. Like their relatives, these insects possess stocky bodies (slimmer in males), large heads and compound eyes, two pairs of membranous wings covered with scales, and long antennae. However, they are distinguished by several significant and distinctive traits (not all are conspicuous in field observations). A key difference is the presence of a **frenulum**, a structure that hooks the forewings to the hindwings, allowing both sets to act in unison during flight. Their antennae--characterized by **feathery** or **comb-like** features on males of the majority of species--lack any kind of ball, knob, or club shape at the apex. Most notably, moths hold their wings **horizontally** at rest (though some fold the wings roof-like over their bodies) rather than vertically like butterflies. One additional attribute, helpful for identification in a broad sense, is that moths tend to be **nocturnal** (a few exceptions are crepuscular/diurnal). With well over 150,000 species worldwide and some 12,000 across North America, moths are represented by an extensive number of species in the Mojave Desert region.

Family GEOMETRIDAE (Emeralds)

Thin-Lined Chlorochlamys (*Chlorochlamys phyllinaria*)



Dolan Springs; AZ



Dolan Springs; AZ



Measurements:

Average: Length: .6" Wing Span: 1"

Distinguishing Field Characteristics:

small size; **green** to brownish overall; wings have 2 **thin tan stripes** (inner one curves towards leading edge) and **tan fringe** on trailing edge; long, tan antennae (combed on male; simple on female)

Notes:

common; found in various habitats in the southern US from GA west to CA; small, thin caterpillar (segmented, light green, brownish head) feeds on various plants; adults feed on nectar, active from March to November (depending on location); **bivoltine** (2 broods per year); lifespan a few days or more

Mojave presence: native; rare

Comments:

This species is very similar to the **Blackberry Looper C. chlorochlamys** (left), but is distinguished by several important differences: 1) the blackberry seldom (if ever) occurs in the western US; 2) has a bold tan stripe down the length of its body; and 3) possesses bold tan coloration on **costa** (leading edge of wing) and marginal borders. Their larvae are similar (right).



Though the Thin-Lined Chlorochlamys Moth does occur in the western US, it is still rather rare in the Mojave region, due to the harsh environment. The female shown above from Dolan Springs, AZ, is the only one I have ever seen. Unfortunately, it was nighttime under an incandescent porch light, and I only had my iPhone with me, so the pictures are barely adequate, but certainly better than nothing! Good enough, at least, to identifying such characteristic features as overall color, thin wing stripes (particularly the inner stripe that curls inward to the leading edge of her wing), and the lack of a tan mid-dorsal line down the length of her body.

Family LASIOCAMPIDAE (Tent Moths)

Western Tent Moth (*Malacosoma californicum*)

Measurements:

Average: Length: .7" Wing Span: to 2"

Distinguishing Field Characteristics:

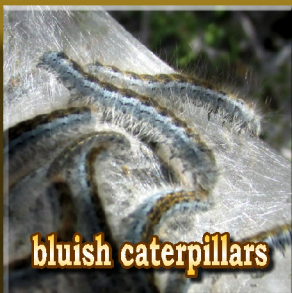
medium size; furry head and body; pubescent wings, tan to brown with dark transverse band bordered in pale tan; short, comb-like antennae; (m) red-brown; smaller than female; stubbier wings; (f) reddish tan; larger than male



dark variant



pale variant



bluish caterpillars



typical pattern

Notes:

common, but adults seldom seen; found in a variety of habitats in western NA from s CAN south to n MEX (occasionally east to Atlantic region); aka **Brown Tent Moth**, **Western Tent Caterpillar**; 6 subspecies; females deposit eggs around branch (preferentially on sunny side of plants) in late summer where they lay in

Willow Spring; RRCNCA; NV

diapause (dormancy) over winter; **univoltine** (1 generation per year); young caterpillars (furry; bluish flanks with brown dorsal line; 1.5") communal in silky, eponymous **tents**, solitary when mature, feed on variety of plant leaves; adults emerge July to August, do not feed; adult lifespan of just 1-4 days

Mojave presence: native

Comments:

While adult moths are seldom recognized, their larvae are common sights in the pinyon-juniper life zone of the Mojave region. They are conspicuously seen moving about in and around their communal silken tents (left), thus the



name **tent caterpillars**. Most such tents, while not exclusive, are found in the **Desert Almond** *Prunus fasciculata* (right), a member of the rose family (**Rosaceae**), which is incidentally a fairly reliable identifier of the plant. These plants are quite common in the higher elevations of **Red Rock Canyon National Conservation Area**, such as at Willow Spring just off the Scenic Loop.



Family NOCTUIDAE (Owlet Moths)

Black Cutworm (*Agrotis ipsilon*)

Measurements:

Average: Length: .75" Wing Span: 1.5"

Distinguishing Field Characteristics:

medium size; furry brown body and forewings, pale hindwings; dark, roughly "Y-shaped" spots (surrounded by pale, then dark, borders) on forewings; little to no sexual dimorphism except (m) antennae **bipectinate** (combed on both sides of main shaft); (f) simple (uncombed) antennae

Notes:

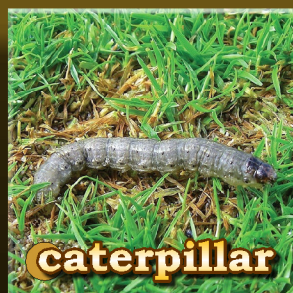
common; ranges throughout NA from s CAN south to SA, also circum-Pacific Rim, Europe and N Africa to Asia; eggs laid singly or in large clusters in dry grass debris or leaves of low-growing plants; 1-4 broods per year depending on local conditions; aka **Greasy Cutworm**, **Ipsilon Dart**, **Floodplain Cutworm**, etc.; pupates underground; segmented, yellowish-brown to black caterpillars (often streaked) with dark heads, covered with granules, to 2.25" in length, feed on many plants, including almost any grain and vegetable crop, making them serious agricultural pests; adults feed on nectar, but are limited in their role as pollinators; active May to July and/or September to October (depending on brood



LV Municipal GC; LV, NV



LV Municipal GC; LV, NV



caterpillar



pale hindwings



LV Municipal GC; LV, NV



photo: T. Baute

brown pupa

and environmental conditions); entire lifecycle completed in 35-60 days; lifespan of adults to 14 days

Mojave presence: native to migratory

Comments:

While black cutworms are very common as a species, the harsh environment of the Mojave Desert does not suit them most of the year. They'll migrate farther north to cooler areas, rather than contest the heat and dryness of the desert. The specimen photographed above at the [Las Vegas Municipal Golf Course](#) made its appearance in March of 2017, before the arrival of the region's notoriously oppressive summer climate.

Family NOCTUIDAE (Owlet Moths)

Alfalfa Looper (*Autographa californica*)



Las Vegas, NV



Las Vegas, NV



Las Vegas, NV



Measurements:

Average: Length: .7" Wing Span: 1.75"

Distinguishing Field Characteristics:

medium size; furry body patterned with mosaic of tan to gray; distinct, whitish, comma-shaped stigma on dorsal forewings; paler hindwings; at rest, wings folded "roof-like" over body; 2 elevated ear-like tufts behind head; dark eyes; long, simple antennae; no sexual dimorphism

Notes:

common; mainly nocturnal; found in w NA from Pacific coast east to CO/NM, and sw CAN south to nw MEX; aka **Chocolate Looper**; eggs laid singly or in clusters on undersides of leaves; one or more broods per year; caterpillars to 1.5" in length (green to

grayish green; pale stripe down sides; sparsely spiked) feed on variety of plants; adults feed on nectar from numerous flowers; larva considered a minor crop pest; active February (usually July) to October depending on latitude; lifespan of adults 7-10 days

Mojave presence: native

Comments:

Look for the distinctive "comma" markings on the forewing when the moth is at rest; otherwise this species is difficult to identify on the fly. Alfalfa loopers are not common in the Mojave region. The specimen shown here making a reststop in my Jeep in Las Vegas, NV, in April of 2019 is the only one I have photographed to date.

Special Note:

The cartoonish locomotion of this caterpillar (left) is typical of all larvae of the so-called "looper" moths. Note it only has appendages at the front and rear; none in between. Thus, when it moves, the head goes forward first, then the rear, resulting in the body "looping" upwards. This is the source of the nickname **loopers**, or **inchworms**--as if they're measuring their progress one inch at a time!



Family SPHINGIDAE (Hawkmoths)

White-Lined Sphinx Moth (*Hyles lineata*)

Measurements:

Average: Length: 1.5" Wing Span: 3.5"

Distinguishing Field Characteristics:

large size; thick, furry body; brown head with white stripes; brown forewings with bold tan longitudinal stripe, and **thin white stripes** covering veins; dark hindwings with **pink band**; large brown eyes; short brown simple antennae; inconspicuous sexual dimorphism

Notes:

common; ranges throughout NA from s CAN south to Central America, most of US (rare elsewhere) in a variety of habitats; female lays many green eggs; **bivoltine** (2 broods per year), later generation overwinters; caterpillars 3" (variable coloration, often black with yellow stripes, orange head and anal plates, orange posterior "horn"), pupate underground, often emerge in huge

hordes feeding on any available plants; adults hover to feed on nectar; excellent vision; active day/night February to November; formerly in genus **Celerio**; adult lifespan about 4 weeks

Mojave presence: native

Comments:

Sphinx moths are attracted to a variety of flowers, and in the process serve as important pollinators. A long-tongued individual enjoys a **Narrow-Leaf Milkweed** *Asclepias fascicularis* (left) in **Grand Canyon NP** in July, 2017; another inspects a **Desert Willow** *Cleopsis linearis* (right) in Dolans Springs, AZ, in Sept., 2021.

April is when the caterpillars make their debut. **Yellow Cups** *Primrose* *Camissonia brevipes* makes a good first meal for a customer at the Hoover Dam Lodge in the **Lake Mead NRA** in 2019 (left). Elsewhere, thousands emerged and were on the march, including the one shown here (right), in Dolan Springs, AZ, in 2022.



Hoover Dam; Lk Mead NRA



Las Vegas, NV



Dolan Springs, AZ



Dolan Springs, AZ

