

## GEOMETRIDAE

### *AETHALOIDA PACKARDARIA*



**CATERPILLAR** Uniformly gray; dorsal tubercles on A2, A4, and A8; ventral tubercle on A3. Third pair of true legs much larger than other true legs. Head silver-gray, slightly cleft.

**ADULT** Wingspan 3.5 centimeters. Wings dark gray with fine black wavy lines.

**ECOLOGY** Caterpillars are common on buckbrush during June and July. Adults are nocturnal, typically with two observable flight periods; the first from March to June, the second in August and September. Found in dry forests in California and southwestern Oregon.

## GEOMETRIDAE

*ANACAMPTODES CLIVINARIA*

**CATERPILLAR** Silver-gray; a subtle hump on dorsum of A2 and A8.

**ADULT** Wingspan 4.0 centimeters. Forewings mottled white and gray, wavy black and yellow medial lines. Hindwings with nearly straight medial lines.

**ECOLOGY** Caterpillars are common; feed on snowbrush and bitterbrush during late spring. Adults are nocturnal; fly from late spring to early summer. Found in open dry forests and woodlands; widely distributed in western North America.

## GEOMETRIDAE

### *ANAGOGA OCCIDUARIA* - AMERICAN BARED UMBER



**CATERPILLAR** Yellow-tan with diffuse red-brown shading; small hump on middorsum of A5.

**ADULT** Wingspan 2.8 centimeters. Forewings pale yellow to brown with a jagged dark brown median band.

**ECOLOGY** Caterpillars are common; feed on flowering trees and shrubs, particularly maple, blueberry, and ocean spray. Adults are nocturnal; fly in early summer. Found in wet conifer forests; widely distributed in western North America.

## GEOMETRIDAE

*APODREPANULATRIX LITARIA*

**CATERPILLAR** Green with a wide middorsal white band.

**ADULT** Wingspan 3.5 centimeters. Forewings mottled dark gray or brown with two wavy dark medial lines and a row of black postmedian spots.

**ECOLOGY** Caterpillars are uncommon; feed on *Ceanothus* during spring. Adults are nocturnal; fly from late summer to fall. Found in moist coniferous forests; widely distributed in western North America.

## GEOMETRIDAE

### *ARCHIEARIS INFANS*



**CATERPILLAR** Green; dorsally with yellow spots at the location of primary setae (pinaculae); subdorsally two faint yellow longitudinal lines; laterally a distinct yellow line. The presence of four pairs of midabdominal prolegs is a very unusual feature for inchworms. Head yellow-green.

**ADULT** Wingspan 3.5 centimeters. Forewings dark red-brown to black with a white median band and white subapical patch. Hindwings red-orange with a black anal band and discal spot.

**ECOLOGY** Caterpillars are uncommon; feed on alder during late spring. Adults are diurnal; fly in early spring. Found in wet forests; widely distributed in northern North America.

## GEOMETRIDAE

PEPPER MOTH - *BISTON BETULARIA*

**CATERPILLAR** Intermixed shades of tan and light green; cone-like humps on head and T1.

**ADULT** Wingspan 4.8 centimeters. The wings are variable in color from pale gray to a dark black-brown, with wavy black lines and heavily speckled with dark gray spots.

**ECOLOGY** This species is the pepper moth that has been cited as an example of industrial melanism in England. Caterpillars are common, generalist feeders on flowering trees and shrubs, particularly alder, willow, and chinquapin. Adults are nocturnal; fly from early to midsummer. Found in wet forests and riparian habitats; widely distributed in western North America.

## GEOMETRIDAE

### *CAMPAEA PERLATA* - FRINGED LOOPER



**CATERPILLAR** The presence of two pairs of midabdominal prolegs is an unusual feature for inchworms. In this species the prolegs on A5 are slightly reduced. In contrast, the midabdominal prolegs on A5 and A6 in plusiines (Noctuidae) are nearly equal in size (see *Autographa californica*). The body color is variable in this species but is generally drab, such as the gray-brown depicted here. The ventral fringe of knobby hairs is unique among inchworms in the Pacific Northwest.

**ADULT** Wingspan 3.9 centimeters. Forewings pale green-white with two white lines counter-shaded with darker green.

**ECOLOGY** Caterpillars are common; feed on many broadleaf trees, such as serviceberry, red and mountain alder, and hazel, during April and May. Adults are nocturnal; fly in summer. Found in moist forests; widely distributed in western North America.

## GEOMETRIDAE

*CHESIADODES CINEREA*

**CATERPILLAR** Yellow-green; middorsal white band encompassing a golden central longitudinal line with black edged gray dashes on A2 through A8; broken scalloped white lateral line.

**ADULT** Wingspan 3.0 centimeters. Forewings elongate, light to dark gray with thin black lines.

**ECOLOGY** Caterpillars are common; feed on rabbitbrush during June and July. Adults are nocturnal; fly in midsummer. Found in dry sagebrush rangelands and juniper woodlands; widely distributed in western North America.



## GEOMETRIDAE

### *CHLOROCHLAMYS TRIANGULARIS*



**CATERPILLAR** Yellow-green. Head more strongly yellow.

**ADULT** Wingspan 1.9 centimeters. Forewings pale green with thin white lines that may fade to yellow as the moth ages.

**ECOLOGY** Caterpillars are common; feed on rabbitbrush during June and July. Adults are nocturnal; fly in late summer. Found in dry sagebrush rangelands and juniper woodlands; widely distributed in western North America.

## GEOMETRIDAE

*CHLOROSEA BANKSARIA*

**CATERPILLAR** The lateral flanges on A2 through A5 are characteristic of three common inchworms (see *Nemoria darviniata*; the third species, *Synchlora aerata*, is not illustrated in this volume). Green with minute white dots and oblique yellow-white stripes; enlarged lateral flanges on A2 through A5.

**ADULT** Wingspan 3.4 centimeters. Wings green with a single white line. This moth may be distinguished from other green geometers by its large size and the single white line.

**ECOLOGY** Caterpillars are common; feed on ocean spray during May and June. Adults are nocturnal; fly in midsummer. Found in wet and dry forests; widely distributed in western North America.

## GEOMETRIDAE

### *COCHISIA SINUARIA*



**CATERPILLAR** Yellow with an undertone of green; T1 with a pair of minute bumps. Head red-brown with two cone-like projections.

**ADULT** Wingspan 5.0 centimeters. Wings pale gray with narrow wavy black lines.

**ECOLOGY** Caterpillars are common; feed on manzanita during late spring to early summer. Adults are nocturnal; fly in fall. Found in dry woodlands and forests from western Oregon to Arizona.

## GEOMETRIDAE

*CYCLOPHORA DATARIA*

**CATERPILLAR** The colors of this inchworm vary in the intensity of contrast between light and dark markings. Colors range from tan, to brown, to gray, but always with the darker middorsal semicircle countered by the anterior lateral light markings, particularly on A2 through A5.

**ADULT** Wingspan 2.4 centimeters. Wings yellow to pale brown with fine black speckles and a small round white spot near the discal cell.

**ECOLOGY** Caterpillars are common; feed on white oak during July and August. Adults are nocturnal; fly in summer. Found in oak woodlands ranging from California to British Columbia.

## GEOMETRIDAE

### *DASYFIDONIA AVUNCULARIA*



**CATERPILLAR** Red-brown with shades of dark pink; broken yellow spiracular line; lateral patches of dark red-brown on each abdominal segment.

**ADULT** Wingspan 3.0 centimeters. Forewings brown with black lines and a white subapical spot. Hindwings red-orange, each with two black lines.

**ECOLOGY** Caterpillars are uncommon; feed on bitter cherry during late spring to early summer. Adults are diurnal; fly in spring. Found in montane forests; widely distributed in western North America.

## GEOMETRIDAE

*DREPANULATRIX CARNEARIA*

**CATERPILLAR** Yellow-green with pale-yellow speckles; multiple discontinuous, longitudinal lines, and ten middorsal red spots.

**ADULT** Wingspan 2.5 centimeters. The wings vary from cream-white, to pink or orange; each forewing has three narrow, nearly straight red lines.

**ECOLOGY** Caterpillars are uncommon; feed on *Ceanothus* during July and August. Adults are nocturnal; fly in early summer. Found in wet and dry forests; widely distributed in western North America.

## GEOMETRIDAE

### *DREPANULATRIX FALCATARIA*



**CATERPILLAR** A patchwork of white, silver, gray, tan, and black; a thin yellow spiracular line, counter shaded with black patches, is broken by patches of gray-white.

**ADULT** Wingspan 3.0 centimeters. Forewings slightly falcate, red-orange to pink, each with three lines. Hindwings white.

**ECOLOGY** Caterpillars are common; feed on *Ceanothus* during spring. Adults are nocturnal; fly in early spring. Found in wet and dry forests; widely distributed in western North America.

## GEOMETRIDAE

*DREPANULATRIX FOEMINARIA*

**CATERPILLAR** Body color variable, green or brown; lateral yellow band with ragged edges on light green body with faint white longitudinal markings; spiracles orange.

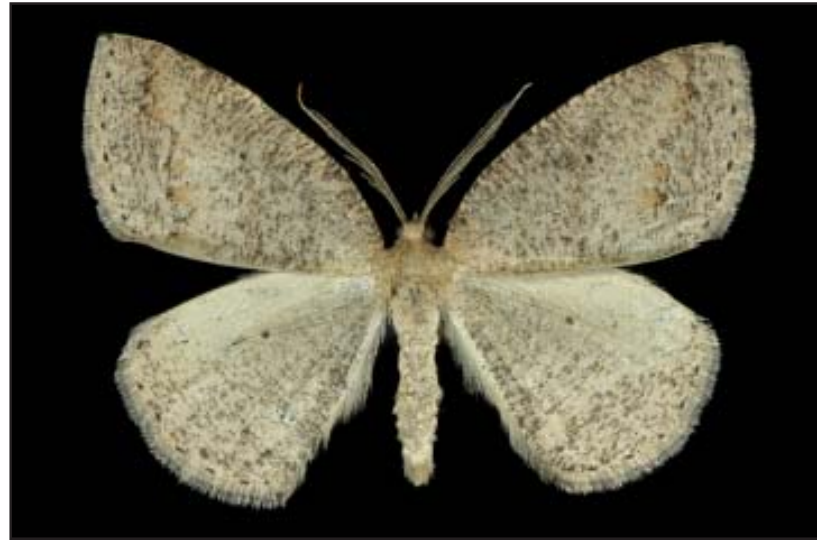
**ADULT** Wingspan 3.1 centimeters. Wings brown, speckled with black, and show amorphous gray-black markings.

**ECOLOGY** Caterpillars are common; feed on *Ceanothus* from June through August. Adults are nocturnal; fly in spring. Found in wet and dry forests; widely distributed in western North America.



## GEOMETRIDAE

### *DREPANULATRIX MONICARIA*



**CATERPILLAR** Green with a velvet appearance; small middorsal white spots or patches may occur on midabdominal segments; middorsal red-brown streak on thorax and anterior abdomen.

**ADULT** Wingspan 2.8 centimeters. Forewings pink to light red, finely mottled with black flecks, postmedian line of black spots.

**ECOLOGY** Caterpillars are common; feed on species of *Ceanothus* from May through July. Adults are nocturnal; fly from spring to fall. Found in wet and dry forests; distributed along the West Coast from southern California to British Columbia.

## GEOMETRIDAE

*DREPANULATRIX UNICALCARARIA*

**CATERPILLAR** Mottled brown and gray-black; faint scalloped subspiracular line.

**ADULT** Wingspan 4.0 centimeters. Forewings gray to red-orange with a narrow, sharply angled postmedian line.

**ECOLOGY** Caterpillars are common; feed on *Ceanothus* during spring. Adults are nocturnal; fly during two distinct periods: late spring to early summer and late summer to fall. Found in wet and dry forests; widely distributed in western North America.

## GEOMETRIDAE

### *DYSSTROMA CITRATA*



**CATERPILLAR** Yellow-green; no other markings.

**ADULT** Wingspan 3.2 centimeters. Forewings with a black median band, a dark brown basal band, and a yellow apical patch.

**ECOLOGY** Caterpillars are common; feed on flowering trees and shrubs, such as alder and thimbleberry. Adults are nocturnal; fly from midsummer to fall. Found in moist forests; widely distributed in western North America.

## GEOMETRIDAE

*DYSSTROMA FORMOSA*

**CATERPILLAR** Light green with a white hue, and white subdorsal longitudinal lines.

**ADULT** Wingspan 3.1 centimeters. Forewings with a gray median band and a dark brown basal band.

**ECOLOGY** This species is the most common inchworm on currants and gooseberries; feeds on many species of *Ribes* during June and July. Adults are nocturnal; fly in midsummer. Found in dry forests; widely distributed in western North America.

## GEOMETRIDAE

### *DYSSTROMA SOBRIA*



**CATERPILLAR** Head and body yellow green with ten middorsal red spots.

**ADULT** Wingspan 3.8 centimeters. Forewings with a white median band and dark brown basal and postmedian bands.

**ECOLOGY** Caterpillars are uncommon; feed on species of Ericaceae, such as salal and rhododendron, during April and May. Adults are nocturnal; fly in midsummer. This species is limited to moist forests of the Pacific West.

## GEOMETRIDAE

SADDLEBACK LOOPER - *ECTROPIS CREPUSCULARIA*

**CATERPILLAR** Mottled white, gray, tan, brown, and golden; a black subdorsal dual striped longitudinal line extends from the head to A8; A8 with a pair of small dorsal warts.

**ADULT** Wingspan 4.1 centimeters. Forewings white with fine, dentate black lines.

**ECOLOGY** Caterpillars are very common, generalist feeders occurring in the spring and early summer on numerous flowering trees and shrubs, such as alder, willow, and snowberry, and conifers, such as Douglas-fir and western hemlock. Adults are nocturnal; fly in spring. Found in wet forests, riparian habitats and woodlands; widely distributed in western North America.

## GEOMETRIDAE

### *ELPISTE LORQUINARIA*



**CATERPILLAR** Body may be either green or brown; prominent lateral yellow band and faint yellow longitudinal markings are consistent in both body colors.

**ADULT** Wingspan 2.8 centimeters. Forewings with falcate apex, pale yellow or brown; each forewing has two narrow lines and three black marks in the submarginal area.

**ECOLOGY** Caterpillars are common; feed on red alder and willow from June through August. Adults are nocturnal; fly in late summer. Found in rain forests of the Pacific Northwest.

## GEOMETRIDAE

MAPLE SPANWORM - *ENNOMOS MAGNARIA*

**CATERPILLAR** Green with yellow shading; tan-brown circumsegmental swellings around the posterior edge of A2, A3, and A5. Head green.

**ADULT** Wingspan 5.2 centimeters. Forewings yellow-orange with many small dark spots and a sharply angular outer margin.

**ECOLOGY** Caterpillars are uncommon; feed on alder and willow in late spring. Adults are nocturnal; fly in fall. Found in moist forests; widely distributed in western North America.



## GEOMETRIDAE

### *ERANNIS TILIARIA* - LINDEN LOOPER



**CATERPILLAR** Dorsum brown with black longitudinal lines; yellow laterally with faint to distinct red-brown shading around the spiracles; ventral part of body off-white.

**ADULT** Females are wingless. Male wingspan 4.0 centimeters. The wings are cream colored to pale yellow with fine speckles and dark wavy bands, the outer bands varying from solid black to pale brown.

**ECOLOGY** Caterpillars are very common; feed on many broadleaf trees and shrubs, such as serviceberry, white oak, and hazel, during May and June. Adults are nocturnal; fly in late fall. Found in oak woodlands; widely distributed in western North America.

## GEOMETRIDAE

*EUCHLAENA JOHNSONARIA*

**CATERPILLAR** Small dorsal warts on A1 and A5, body with swirls of cream and light brown colors.

**ADULT** Wingspan 4.0 centimeters. Forewings falcate with a scalloped margin, dark brown to pale yellow with thin lines and black postmedian spots. Hindwings with a strongly scalloped margin.

**ECOLOGY** Caterpillars are uncommon; feed on cascara and mock orange during May and June. Adults are nocturnal; fly in midsummer. Found in moist forests; widely distributed in western North America.

## GEOMETRIDAE

### *EUCHLAENA TIGRINARIA*



**CATERPILLAR** Silver and gray with dorsal patches of red-brown; posterior of A1 and A5 with a subdorsal wart.

**ADULT** Wingspan 3.9 centimeters. Wings pale orange and speckled with many dark spots.

**ECOLOGY** Caterpillars are common; feed on many broadleaf trees and shrubs, particularly serviceberry and hazel, during April and May. Adults are nocturnal; fly in midsummer. Found in moist forests; widely distributed in western North America.

## GEOMETRIDAE

*EUDREPANULATRIX RECTIFASCIA*

**CATERPILLAR** Brown head and light green body with faint white lines; small middorsal reddish brown spots or patches may occur on midabdominal segments; middorsal reddish brown streak on thorax and anterior abdomen.

**ADULT** Wingspan 2.8 centimeters. Forewings white to pink with fine gray mottling and a narrow postmedian line.

**ECOLOGY** Caterpillars are common; feed on species of *Ceanothus* from June through August. Adults are nocturnal; fly from early to late summer. Found in wet and dry forests; widely distributed in western North America.

## GEOMETRIDAE

### *EULITHIS XYLINA*



**CATERPILLAR** Red-brown-amber; black collar around T2; intersegmental rings are pale gray-brown.

**ADULT** Wingspan 3.4 centimeters. Forewings with a dark brown median band with a smooth outer margin.

**ECOLOGY** Caterpillars are very common; feed on many broadleaf trees and shrubs, such as ocean spray, red stem osier, ninebark, and azalea, during June and July. Adults are nocturnal; fly in midsummer. Found in moist forests and riparian habitats; widely distributed in western North America.

## GEOMETRIDAE

*EUPITHECIA ANNULATA*

**CATERPILLAR** Golden-yellow-green dorsally and laterally; venter olive green, no other markings.

**ADULT** Wingspan 2.3 centimeters. Forewings gray-brown with faint dark bands and a black discal spot. Hindwings with a checkered margin.

**ECOLOGY** Caterpillars are common; feed on conifers, such as hemlock and Douglas-fir, during late spring and early summer. Adults are nocturnal; fly in early spring. Found in coastal rain forests of the Pacific western states.

## GEOMETRIDAE

### *EUPITHECIA GILVIPENNATA*



**CATERPILLAR** Yellow-green with a dark red middorsal line from the head to A10.

**ADULT** Wingspan 2.6 centimeters. Forewings black, often with orange medial spots and an orange subapical patch.

**ECOLOGY** Caterpillars are common; feed on manzanita during late spring and early summer. Adults are nocturnal; fly in early spring. Found in dry forests and oak woodlands in the Pacific western states.

## GEOMETRIDAE

*EUPITHECIA GRAEFII*

**CATERPILLAR** Color variable from solid green, a rosy pink, to red-pink, typically matching color with the hostplant.

**ADULT** Wingspan 2.3 centimeters. Forewings brown with a red-yellow cast; each forewing has an elongate, black discal spot.

**ECOLOGY** Caterpillars are common; feed on manzanita and madrone from April through June. Adults are nocturnal; fly in summer. Found in dry forests and woodlands; widely distributed in western North America.



## GEOMETRIDAE

### *EUPITHECIA MAESTOSA*



**CATERPILLAR** Light green throughout; immaculate.

**ADULT** Wingspan 2.0 centimeters. Forewings with brown basal and medial lines; each forewing has a faint transverse yellow band.

**ECOLOGY** Caterpillars are common, generalist feeders occurring in the spring on hardwood trees and shrubs, such as serviceberry, ash, ocean spray, and elderberry. Adults are nocturnal; fly from spring to midsummer. Found in moist forests; widely distributed in western North America.

## GEOMETRIDAE

*EUPITHECIA MISTURATA*

**CATERPILLAR** Variable in color from white to rosy brown; A1 through A6 with distinct darker transverse band that is expanded anteriorly in the center and along each side near the subdorsal area.

**ADULT** Wingspan 1.8 centimeters. Forewings pale gray; each forewing has a small black discal spot.

**ECOLOGY** Caterpillars are very common, generalist feeders occurring in late spring and early summer on the foliage and flowers of flowering trees and shrubs, particularly ocean spray, manzanita, snowberry, and oak. Adults are nocturnal; fly in summer. Found in woodlands and wet and dry forests; widely distributed in western North America.

## GEOMETRIDAE

### *EUPITHECIA NEVADATA*



**CATERPILLAR** Darker green dorsally with small white dots; lighter green ventrally with a white hue and small white dots; lateral off-white band bordered with streaks of red, mostly on thorax and posterior abdominal segments.

**ADULT** Wingspan 2.6 centimeters. Forewings white to gray with red to brown costal and submarginal patches.

**ECOLOGY** Caterpillars are common; feed on bitterbrush and species of *Ceanothus* during June and July. Adults are nocturnal; fly in early spring. Found in dry forests and juniper woodlands; widely distributed in western North America.

## GEOMETRIDAE

*EUPITHECIA RAVOCOSTALIATA*

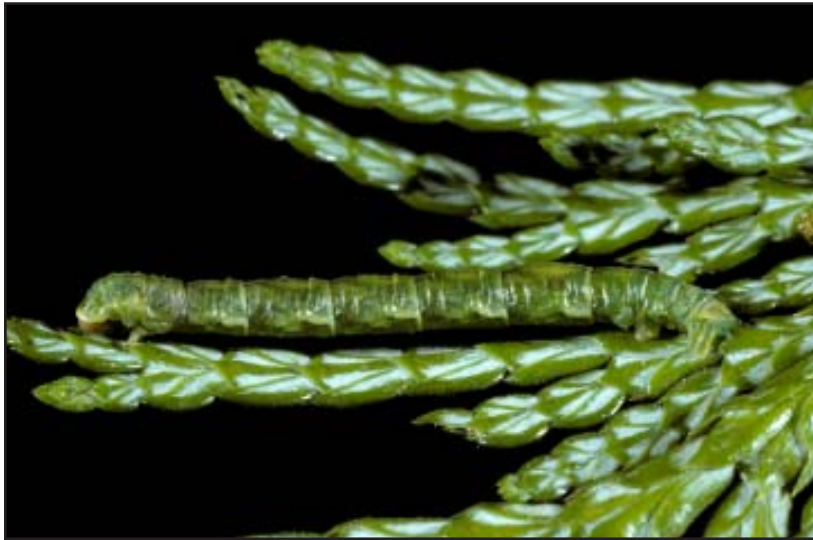
**CATERPILLAR** Dorsum and venter green; lateral off-white band bordered by a solid red line below.

**ADULT** Wingspan 2.3 centimeters. Forewings elongate and pointed with white and black costal and submarginal patches.

**ECOLOGY** Caterpillars are common; feed on cascara from June to August. Adults are nocturnal; fly in early spring. Found in woodlands and wet and dry forests in the Pacific western states.

## GEOMETRIDAE

### *EUPITHECIA UNICOLOR*



**CATERPILLAR** Green with shades of yellow, matching foliage of the foodplant for a cryptic appearance.

**ADULT** Wingspan 2.5 centimeters. Forewings red-brown to yellow-orange with a thin black medial line, often with black streaks along the submarginal border.

**ECOLOGY** Caterpillars are common; feed on western red cedar from May to July. Adults are nocturnal; fly in late summer. Found in wet coniferous forests from southern California to British Columbia.

## GEOMETRIDAE

*EUSTROMA SEMIATRATA*

**CATERPILLAR** Red-brown; T3 with a transverse black line.

**ADULT** Wingspan 3.3 centimeters. Forewings with a black median band that has a jagged outer margin.

**ECOLOGY** Caterpillars are common; feed on herbaceous plants, such as fireweed, during spring. Adults are nocturnal; fly in fall. Found in open habitats associated with wet and dry forests; widely distributed in western North America.

## GEOMETRIDAE

### *GABRIOLA DYARI*



**CATERPILLAR** Mostly brown, dorsum with light caramel-colored patches; subdorsally and laterally abdomen with slightly swollen areas; white dorsal patches on A1, A3, and A8. This caterpillar can contort its body into a configuration that looks like a male cone of conifers.

**ADULT** Wingspan 2.8 centimeters. Forewings dark, mottled gray to black; each forewing has a narrow, wavy, black median line and a curved, black basal line.

**ECOLOGY** Caterpillars are uncommon; feed on conifers, such as Douglas-fir and western hemlock, during late spring. Adults are nocturnal; fly in summer. Found in wet and dry coniferous forests; widely distributed in western North America.

## GEOMETRIDAE

*HESPERUMIA LATIPENNIS*

**CATERPILLAR** Gray mixed with white-gray; small dorsal tubercles on A2 and A2 slightly bulging laterally; small ventral tubercles on A3.

**ADULT** Wingspan 3.5 centimeters. Forewings a uniform pale gray; each forewing has a narrow, sharply dentate median line.

**ECOLOGY** Caterpillars are common; feed on ocean spray and currants during spring. Adults are nocturnal; fly in midsummer. Found in wet and dry forests; most common west of the Cascade Mountains, ranging from California to British Columbia.



## GEOMETRIDAE

### *HESPERUMIA SULPHURARIA*



**CATERPILLAR** The body color of this species is highly variable, often matching its background. The subdorsal wart on A2 is the best trait for tentative field identification.

**ADULT** Wingspan 3.5 centimeters. Forewings pale to dark yellow with purple-brown median and basal bands and a broad purple-brown discal spot; markings are variable from very prominent bands to nearly no marks except for the discal spot.

**ECOLOGY** Caterpillars are very common; feed on many broadleaf trees and shrubs, such as species of *Ceanothus*, manzanita, ocean spray, and bitterbrush, from May through July. Adults are nocturnal; fly in midsummer. Found in woodlands and wet and dry forests; widely distributed in western North America.

## GEOMETRIDAE

*HYDRIOMENA MANZANITA*

**CATERPILLAR** Off-white, almost translucent; middorsal black line from T2 through A9. Head light brown.

**ADULT** Wingspan 3.2 centimeters. Forewings elongate and pale gray with obscure markings forming dark curved bands.

**ECOLOGY** Caterpillars are common; feed on manzanita and madrone during June and July. Adults are nocturnal; fly in spring. Found in dry conifer forests and oak woodlands along the West Coast from California to British Columbia.

## GEOMETRIDAE

### *HYPAGYRTIS UNIPUNCTATA*



**CATERPILLAR** Tan and brown; A4 and A5 with a diffuse patch of white.

**ADULT** Wingspan 3.3 centimeters. Forewings white, mottled with yellow and brown; each forewing has a small black discal spot. Hindwings with margin slightly scalloped.

**ECOLOGY** Caterpillars are common; feed on alder during spring. Adults are nocturnal; fly in late summer. Found in wet forests; widely distributed in western North America.

## GEOMETRIDAE

*IRIDOPSIS EMASCULATA*

**CATERPILLAR** Dorsal red markings with irregular borders, noticeably expanded and constricted on A3 through A6; subdorsally and laterally green.

**ADULT** Wingspan 3.5 centimeters. Forewings pale gray-cream with narrow wavy black lines and a brown patch bordered by two black tooth-like marks in the subapical area.

**ECOLOGY** Caterpillars are common; feed on maple, alder, and *Vaccinium* during spring. Adults are nocturnal; fly in midsummer. Found in woodlands, riparian habitats, and wet and dry forests; widely distributed in western North America.

## GEOMETRIDAE

*ITAME BITACTATA*

**CATERPILLAR** Green to gray-brown with white and brown shading on each segment separated at an oblique angle.

**ADULT** Wingspan 3.1 centimeters. Forewings gray with black dashes and lines.

**ECOLOGY** Caterpillars are common; feed on currants and gooseberries during late spring. Adults are nocturnal; fly in midsummer. Found in dry forests; widely distributed in western North America.

## GEOMETRIDAE

*ITAME COLATA*

**CATERPILLAR** Mottled silver, gray, and white; darker patch near spiracles.

**ADULT** Wingspan 2.3 centimeters. Forewings gray; each forewing has a broad brown postmedian band curved and outlined in black.

**ECOLOGY** Caterpillars are common; feed on bitterbrush and sagebrush during spring. Adults are nocturnal; fly from mid- to late summer. Found in pine forests and juniper woodlands; widely distributed in western North America.

## GEOMETRIDAE

### *ITAME GUENEARIA*



**CATERPILLAR** Light red to orange-pink; lateral yellow patches on A1 and A2.

**ADULT** Wingspan 2.8 centimeters. Forewings pale gray; each forewing has a yellow postmedian band outlined with brown. Hindwings white to yellow.

**ECOLOGY** Caterpillars are common; feed on California coffeeberry during spring. Adults are nocturnal; fly in midsummer. Found in dry open forests and woodlands; distributed in the Pacific western states and the Southwestern states.

## GEOMETRIDAE

*ITAME QUADRILINEARIA*

**CATERPILLAR** Green with dark brown patches sublaterally.

**ADULT** Wingspan 2.8 centimeters. Forewings gray with fine dark lines; each forewing has a bright yellow patch along the costal margin on the venter (not shown) of the forewing.

**ECOLOGY** Caterpillars are common; feed on snowbrush during spring. Adults are nocturnal; fly in midsummer. Found in wet and dry forests; widely distributed in western North America.



## GEOMETRIDAE

### *LAMBDA FISCCELLARIA* - OAK (HEMLOCK) LOOPER



**CATERPILLAR** Color highly variable, typically white, gray, and light brown; longitudinal lines in different shades of typical body colors; paired black dorsal spots.

**ADULT** Wingspan 3.7 centimeters. Forewings slightly falcate, gray to yellow-tan, each with narrow black postmedian and basal lines edged with orange, and a small black discal spot.

**ECOLOGY** This caterpillar is very common and may cause heavy defoliation of its principal host, white oak; present from June to September. Adults are nocturnal; fly in fall. Found in oak woodlands and coniferous forests; widely distributed in western North America.

## GEOMETRIDAE

*MELANOLOPHIA IMITATA*

**CATERPILLAR** Green with multiple white lines creating a middorsal longitudinal band; lateral white line extends from T1 to A10.

**ADULT** Wingspan 3.7 centimeters. Forewings a dull mottled brown with narrow wavy lines and small black marginal spots.

**ECOLOGY** Caterpillars are common; feed on Pinaceae, particularly Douglas-fir, during spring and early summer. Adults are nocturnal; fly in early spring. Found in wet and dry coniferous forests; widely distributed in western North America.

## GEOMETRIDAE

### *NEMATOCAMPA RESISTARIA* - FILAMENT BEARER



**CATERPILLAR** Mottled caramel, brown, and gray-white. Two very long filaments middorsal on A2 and A3, each forked creating two smaller filaments with white tips.

**ADULT** Wingspan 2.5 centimeters. Forewings falcate, pale cream to deep yellow with broad purple-brown borders and narrow wavy lines.

**ECOLOGY** Caterpillars are common; feed on the foliage of flowering trees, shrubs, and herbaceous plants such as maple, alder, snowberry, oak, and mint, during spring and early summer. Adults are nocturnal; fly in late summer. Found in open habitats, woodlands, and forests; widely distributed in western North America.

## GEOMETRIDAE

*NEMORIA DARWINIATA*

**CATERPILLAR** The lateral flanges on A2 through A5 are characteristic of three common inchworms (see *Chlorosea banksaria*; the third species, *Synchlora aerata*, is not illustrated). Coloration in this species varies among light green, yellow, tan, and brown.

**ADULT** Wingspan 2.9 centimeters. Wings green with narrow, curved, white basal and median lines.

**ECOLOGY** Caterpillars are common; feed on many broadleaf trees and shrubs, such as white oak, myrica, ocean spray, bitterbrush, and snowbrush, during March to September. Adults are nocturnal; fly in midsummer. Found in woodlands, and wet and dry forests; widely distributed in western North America.

## GEOMETRIDAE

### *NEOALCIS CALIFORNIARIA*



**CATERPILLAR** This caterpillar is variable in color (shades of off-white, brown, and gray) and pattern. In fact, the lack of notable features in combination with the presence of mature larvae occurring in early spring serve as the best clue to the identity of this species.

**ADULT** Wingspan 3.6 centimeters. Forewings mottled cream to dark brown with wavy dark median and basal lines.

**ECOLOGY** This is the most abundant moth species that is capable of feeding extensively on foliage of numerous species of conifers and angiosperms in the fall and into the early summer of the following year. Caterpillars are very common; feed on broadleaf trees, such as big-leaf maple and serviceberry; shrubs, such as myrica and blueberry; as well as many conifers, such as pines and Douglas-fir. Adults are nocturnal; fly from late summer into fall. Found in woodlands, and wet and dry forests, particularly common west of the Cascade Mountains; distributed from California to British Columbia.

## GEOMETRIDAE

*NEPYTIA UMBROSARIA*

**CATERPILLAR** Middorsal white band edged with a thin black line; laterally golden brown with a faint white spiracular line.

**ADULT** Wingspan 3.6 centimeters. Forewings mostly gray with jagged median and basal lines; each forewing has a small black discal spot.

**ECOLOGY** This is one of the most abundant conifer-feeding caterpillars in western forests. Caterpillars are very common; feed on conifers in spring. Adults are nocturnal; fly from mid- to late summer. Found in wet and dry coniferous forests; widely distributed in western North America.

## GEOMETRIDAE

### *OPEROPHTERA BRUCEATA* - BRUCE SPANWORM



**CATERPILLAR** Green; prominent subdorsal white bands.

**ADULT** Females are wingless. The male wingspan is 2.9 centimeters. Forewings solid dark gray to pale cream with fine dark lines.

**ECOLOGY** This species was previously known as *O. occidentalis* and is very similar in appearance to an exotic pest, *O. brumata*, the winter moth. This is one of just a few species of moths exhibiting a limited flight period restricted to November and December. Caterpillars are very common; feed on many broadleaf trees, such as big-leaf maple, oak, red alder, bitter cherry, hazel, and willow, from March to June. Adults are nocturnal, males fly in early winter. Found in low elevation woodlands and wet forests; widely distributed in western North America.

## GEOMETRIDAE

*OPEROPHTERA DANBYI*

**CATERPILLAR** Green with white spots demarking the location of primary setae and three dorsal white longitudinal lines, lateral line light yellow.

**ADULT** Females are wingless. The male wingspan is 3.4 centimeters. Forewings elongate and gray with dark lines.

**ECOLOGY** This is one of just a few species of moths exhibiting a limited flight period restricted to November and December. Caterpillars are uncommon, generalist feeders on the foliage of flowering trees and shrubs, particularly ash, cherry, and oak, during the spring. Adults are nocturnal, males fly in early winter. Found in woodlands in the Pacific Northwest.



## GEOMETRIDAE

### *PERIZOMA COSTIGUTTATA*



**CATERPILLAR** Red-brown; immaculate.

**ADULT** Wingspan 2.5 centimeters. Forewings gray with three black costal bars.

**ECOLOGY** Caterpillars are common; feed on ocean spray during spring. Adults are nocturnal; fly from spring to midsummer. Found in woodlands, and wet and dry forests; widely distributed in western North America.

## GEOMETRIDAE

*PERO MIZON*

**CATERPILLAR** Body color is highly variable, often gray with faint black markings; A2 through A4 swollen ventrally. Head slightly cleft.

**ADULT** Wingspan 4.1 centimeters. Forewings pale red-brown with a darker median area, wing edge dentate.

**ECOLOGY** Caterpillars are common; feed on many broadleaf trees, such as snowbrush, hazel, Pacific dogwood, and madrone, from April to August. Adults are nocturnal; fly from mid- to late summer. Found in wet conifer forests of the Pacific Northwest, especially abundant west of the Cascade Mountains.

## GEOMETRIDAE

### *PERO OCCIDENTALIS*



**CATERPILLAR** Mottled light yellow, tan, and brown; no other distinctive markings.

**ADULT** Wingspan 3.4 centimeters. Forewings dark gray-brown, wing edges dentate; each forewing with a red-black median band. Males have slightly dentate antennae with minute antennal branches.

**ECOLOGY** Caterpillars are common; feed on the foliage of Pinaceae and some hardwood shrubs, such as ocean spray, during spring. Adults are nocturnal; fly from late spring to midsummer. Found in woodlands, and wet and dry forests; widely distributed in western North America.

## GEOMETRIDAE

*PHIGALIA PLUMOGERARIA*

**CATERPILLAR** Gray-brown; lateral golden yellow patches on A1 through A3 apparent, faint on A4 through A7; a pair of small dorsal warts on A1 through A3, and A8.

**ADULT** Females are wingless. Male wingspan 4.5 centimeters. Forewings pale gray; each forewing with four thin black lines. Hindwings pale gray, each with a small black discal spot. Antennae pectinate.

**ECOLOGY** Caterpillars are common; feed on oak and serviceberry during spring. Adults are nocturnal, males fly in early spring. Found in oak woodlands along the Pacific coast from California to British Columbia.

## GEOMETRIDAE

### *PROBOLE AMICARIA*



**CATERPILLAR** Pale green and brown to red-brown; A5 with a slightly raised transverse ridge.

**ADULT** Wingspan 3.5 centimeters. Forewings falcate, pale mottled brown with a darker brown submarginal area, the subapical part of the median line extends to the wing margin in an abrupt, concave curve.

**ECOLOGY** Caterpillars are common; feed on dogwood and huckleberry during spring. Adults are nocturnal; fly from late spring to early summer. Found in wet conifer forests of the Pacific Northwest.

## GEOMETRIDAE

*PROTITAME MATILDA*

**CATERPILLAR** Yellow-green to light red-brown; no other notable markings.

**ADULT** Wingspan 2.1 centimeters. Forewings white to pale yellow with a thin, straight basal line and postmedian line. Hindwings with a curved postmedian line.

**ECOLOGY** Caterpillars are common; feed on willow and poplar during spring. Adults are nocturnal; fly from spring to midsummer. Found in woodlands, and wet and dry forests; widely distributed in western North America.

## GEOMETRIDAE

### *RHEUMAPTERA SUBHASTATA*



**CATERPILLAR** Black; prolegs and spiracular area pale orange. Head orange.

**ADULT** Wingspan 3.1 centimeters. Forewings white with black borders and mottled black basal and median areas.

**ECOLOGY** This caterpillar lives in folded leaf tents and is common on mountain alder during August and September. Adults are diurnal; fly from late spring to midsummer. Found in montane forests; widely distributed in western North America.

## GEOMETRIDAE

OMNIVOROUS LOOPER - *SABULODES AEGROTATA*

**CATERPILLAR** Dorsum and lateral region of T1 through A9 with longitudinal stripes of black, orange, gray, and white; mostly light yellow below the spiracular line. Head orange with a pair of black spots near the top of the head capsule.

**ADULT** Wingspan 4.4 centimeters. Forewings slightly falcate, pale yellow to darker brown with converging, dentate median and postmedian lines.

**ECOLOGY** This is one of just a few species that may occur 'on the wing' any month of the year, a behavior connected to its distribution along relatively mild coastal environments. Caterpillars are common; feed on red elderberry, salmonberry, red alder, and ocean spray, from May to September. Adults are nocturnal; fly throughout the year. Found in wet coastal forests in the Pacific western states.



## GEOMETRIDAE

### *SELENIA ALCIPHEARIA*



**CATERPILLAR** Head, thorax and parts of A5 and A6 streaked with white and gray; A1 through A4 golden yellow; A6 through A10 darker brown; A5 and A6 with a pair of dorsal humps.

**ADULT** Wingspan 4.2 centimeters. Forewings falcate, mottled pale yellow to brown; each forewing has three narrow, black lines and an apical orange patch.

**ECOLOGY** The caterpillar in this photo was reared in the lab from eggs obtained from a female moth field-collected live at a blacklight and then placed in a container for a couple of days. Caterpillars are uncommon; feed on the foliage of maple, alder, and birch. Adults are nocturnal; fly from early spring to midsummer. Found in wet forests; widely distributed in western North America.

## GEOMETRIDAE

*SEMIOTHISA BURNEYATA*

**CATERPILLAR** Green mottled with white patches and spots, the dark and light green hues of the caterpillar result in a remarkable example of cryptic coloration.

**ADULT** Wingspan 3.0 centimeters. Forewings light red-pink-brown; each forewing has two to three nearly straight black lines.

**ECOLOGY** Caterpillars are common; feed on cedars during late spring and early summer. Adults are nocturnal; fly from early to late summer. Found in wet coniferous forests; distributed in the Pacific western states.

## GEOMETRIDAE

### *SEMIOTHISA SUBMINIATA*



**CATERPILLAR** Green with faint white dorsal longitudinal lines; cream-white lateral line.

**ADULT** Wingspan 2.8 centimeters. Forewings pink to red-pink; each forewing has a broad, curved, black postmedian band and a smaller black basal band.

**ECOLOGY** Caterpillars are uncommon; feed on willow during late spring. Adults are nocturnal; fly in midsummer. Found in riparian habitats of dry forest and woodlands; widely distributed in western North America.

## GEOMETRIDAE

*SERICOSEMA JUTURNARIA*

**CATERPILLAR** Poorly defined patches of alternating light and dark gray-brown; minute warts subdorsally on A2 through A5; yellow spiracles.

**ADULT** Wingspan 3.5 centimeters. Forewings pale tan with a curved black postmedian line and a variable black submarginal border.

**ECOLOGY** This species may be the most abundant moth in post-fire regeneration habitats, where snowbrush is the dominant vegetation. Caterpillars are very common; feed on *Ceanothus* from May to July. Adults are nocturnal; fly in midsummer. Found in woodlands, and wet and dry forests; widely distributed in western North America.

## GEOMETRIDAE

### *SICYA CROCEARIA*



**CATERPILLAR** Green with red-brown highlights; middorsum of A3 and A5 with a dual pronged horn the length of which is equal to the body width; a third shorter horn occurs middorsally on A8.

**ADULT** Wingspan 3.4 centimeters. Forewings slightly falcate, yellow with narrow basal and median lines, pink-red in the postmedian areas.

**ECOLOGY** Caterpillars are uncommon; feed on red alder during June and July. Adults are nocturnal; fly in midsummer. Found in wet conifer forests; widely distributed in western North America.

## GEOMETRIDAE

*SPARGANIA MAGNOLIATA*

**CATERPILLAR** Yellow-green with a lateral diffuse band of rosy red.

**ADULT** Wingspan 3.0 centimeters. Forewings gray with wavy black lines and bands; each forewing has a small black discal spot. Hindwings pink-gray.

**ECOLOGY** Caterpillars are common; feed on fireweed during spring. Adults are nocturnal; fly from spring to late summer. Found in open habitats associated with wet forests; widely distributed in western North America.

## GEOMETRIDAE

### *STAMNODES COENONYMPHATA*



**CATERPILLAR** Green with a tint of yellow along a subdorsal longitudinal band.

**ADULT** Wingspan 3.1 centimeters. Forewings pale yellow with a white postmedian band and gray-black median and apical patches.

**ECOLOGY** Caterpillars are common; feed on mountain mahogany during late spring. Adults are nocturnal; fly in early spring. Found in dry oak woodlands; distributed in southern California and southwestern Oregon.

## GEOMETRIDAE

*SYNAXIS CERVINARIA*

**CATERPILLAR** Light green to green-brown to red-orange; dorsally T2 swollen into a transverse ridge; minute middorsal wart on A4 and A8.

**ADULT** Wingspan 4.3 centimeters. Forewings strongly falcate, red-brown to gray, with narrow basal and median lines.

**ECOLOGY** Caterpillars are common; feed on willow, cascara, bitterbrush, and species of *Ceanothus* from June to August. Adults are nocturnal; fly from spring to midsummer. Found in woodlands, and wet and dry forests; widely distributed in western North America.



## GEOMETRIDAE

### *SYNAXIS FORMOSA*



**CATERPILLAR** Dorsally gray-brown with thin longitudinal lines; ventrally gray-yellow with patches of gray-brown; a pair of small dorsal warts on A2 through A5; A8 with a small hump.

**ADULT** Wingspan 4.2 centimeters. Forewings gray with jagged black postmedian and basal lines outlined in white. Hindwings white with a scalloped gray margin.

**ECOLOGY** Caterpillars are common; feed on rabbit brush during late spring. Adults are nocturnal; fly in fall. Found in dry juniper woodlands and sagebrush rangelands in western North America.

## GEOMETRIDAE

*SYNAXIS JUBARARIA*

**CATERPILLAR** Mottled gray to light brown-red; a pair of prominent dorsal warts on T1, A4, and A5; a pair of very small warts on A3, A6, and A7.

**ADULT** Wingspan 4.0 centimeters. Forewings strongly falcate, pale yellow to orange, with narrow basal and median lines.

**ECOLOGY** Caterpillars are common; feed on many broadleaf trees and shrubs, such as big-leaf maple, ash, red alder, and snowberry, during late spring. Adults are nocturnal; fly in fall. Found in wet conifer forests; widely distributed in western North America.

## GEOMETRIDAE

### *THALLOPHAGA TAYLORATA*



**CATERPILLAR** One of very few species found on sword fern. This caterpillar is easily identified by its orange, brown, and tan body with faint white subdorsal longitudinal lines; midabdominal intersegmental areas orange brown.

**ADULT** Wingspan 3.3 centimeters. Forewings slightly falcate, lightly speckled brown with a dark brown median band and postmedian line, or separate small postmedian spots.

**ECOLOGY** This is the most abundant caterpillar on sword fern. Caterpillars are common; feed on sword fern during May and June. Adults are nocturnal; fly in early spring. Found in wet conifer forests in the Pacific western states.

## GEOMETRIDAE

*TRIPHOSA CALIFORNIATA*

**CATERPILLAR** Numerous longitudinal lines and bands of pink-gray, black, yellow, and light brown; the most distinctive trait is the lateral yellow band edged dorsally by a black line.

**ADULT** Wingspan 3.3 centimeters. Forewings dark gray with a wavy median band and thin lines. Hindwings white with gray borders and scalloped margins.

**ECOLOGY** Caterpillars are common; feed on coffeeberry during late spring and early summer. Adults are nocturnal; fly in early spring. Found in open habitats, woodlands, and wet forests in the Pacific western states.

## GEOMETRIDAE

### *TRIPHOSA HAESITATA*



**CATERPILLAR** Translucent green; lateral off-white band; dorsal and lateral cream-white lines.

**ADULT** Wingspan 3.9 centimeters. Forewings variable red-brown with darker and lighter wavy bands. Hindwings with the margin strongly dentate.

**ECOLOGY** This is the most abundant caterpillar on cascara. Caterpillars are common; feed on cascara during June and July. Adults are nocturnal, overwinter, fly from late summer into next spring. Found in woodlands and wet conifer forests; widely distributed in western North America.