



Introduction

The Class Insecta (Phylum Arthropoda) includes all insects, within which group we find the Family Lepidoptera (Butterflies and Moths). Butterflies are mainly active in the day and have club-like antennae, whereas moths are most often nocturnal and have more complex featherlike (plumose) antennae. Moths and butterflies are seasonal, spending much of their lives obscured from view as eggs, pupae, or larva. Spring is a time when numerous species suddenly appear in flight during their respective “flight periods.” While butterflies have been relatively well studied, the study of moths involves a seemingly endless number of fascinating species, most of which have not been identified.

Within the butterfly group of the Lepidoptera we find butterflies and skippers. Skippers, Family Hesperidae, are common in our area but are not covered in this guide. The skippers are best described as stout small butterflies that appear to be a cross between butterflies and moths. Skippers have antennae that are curved or hooked at the tip and often hold their forewings upward and the hindwings outward.

The Lepidoptera consists of an estimated 112,000-165,000 butterflies and moths and up to 20,000 butterfly species worldwide. In North America (North of Mexico and including Hawaii), there are 725 species of butterflies and skippers, with 575 regularly occurring in the lower 48 states. In California we find somewhere in the range of 185 butterflies and 51 skipper species. In San Luis Obispo County we find a good representation of this diversity. This guide covers 34 species found along the coastal areas of Estero Bay. However, once an observer leaves the coast to head inland, an entirely new group of Lepidoptera will be encountered.

The following is a photographic guide to the butterflies captured in the Estero Bay area between 2004-2006. Certainly more species may be found in our area, but these are the most prevalent species. Species accounts were created by summarizing the literature from multiple sources and blending in our local knowledge. The order of presentation of accounts and the common and scientific names follows the North American Butterfly Association's (NABA) standardized list of 2001.

Useful books covering larger geographic areas are available and are on page 20. Current taxonomy is available in the NABA 2001 checklist of butterflies. This list standardizes names, thereby attempting to limit the confusion over past synonyms and various recognitions of taxonomic groups.

Included in each species description are codes identifying state park units where the given species was found during surveys. Codes are provided as a reference and are not intended to represent the true range in our local state parks. Codes are as follows: MDO (Montaña de Oro State Park), MSSB (Morro Strand State Beach), LOOR (Los Osos Oaks Reserve), MBSP (Morro Bay State Park), Powell (new acquisitions around Los Osos Middle School), and HC (Harmony Coast-a new coastal acquisition near the town of Harmony). The map below shows the relative locations of our park units. The “Powell” property is not shown, as it is technically part of MBSP. However, “Powell” contains such unique habitat (baywood fine sands coastal dune scrub) that it should be considered separately.



Family: PAPILIONIDAE (Swallowtails)

Subfamily: Papilioninae (Swallowtails)



Pale Swallowtail (*Papilio eurymedon*)

A widespread common species seen outside populated areas in more wild areas such as chaparral, streamsides, woodlands, and canyons. Seen nectaring at flowers of *Rhamnus* spp., *Prunus* spp., and *Ceanothus* spp., or at mud puddles. This butterfly flies rapidly. Males patrol hilltops seeking mates. LOOR, MDO (Hazard Cyn.)



Western Tiger Swallowtail (*Papilio rutulus*)

A widespread and commonly seen butterfly found gliding along water courses, gardens, and suburban areas wherever the food plants occur: sycamore, willow, cottonwoods, or alders. Males travel water courses looking for mates; groups congregate at mud puddles. This species is more yellow than the Pale Swallowtail. MDO (Shark's Inlet).



Anise Swallowtail (*Papilio zelicaon*)

A widespread and common species found in many open habitats, roadsides, fields, vacant lots, bare hills, and disturbed habitats. Feeds on a variety of plants, including citrus trees. The use of the introduced fennel (*Foeniculum vulgare*) has likely caused them to be more common than in the past. Males are commonly seen hilltopping looking for mates. MDO (Islay Cr.), MBSP (Cerro Cabrillo).

Family: PIERIDAE (Whites and Sulphurs)

Subfamily Pierinae (Whites)



Sara Orangetip (*Anthocharis sara*)

A widespread, common species from late winter to early summer found in meadows, fields, and other disturbed sites and sunny places. This species is not a hill topper, males can be found patrolling streams and valley bottoms for females. They eat and oviposit on plants in the Brassicaceae family such as radish, mustard, and rock cress. Larvae have minute hair like projections tipped with toxic oils from the consumption of these plants. MDO (Coon Cr., Islay Cr.), HC, MBSP (“Portola Pt.”).



Checkered White ♀ (*Pontia protodice*)



Checkered White ♂ (*Pontia protodice*)

A widespread, common species from late winter to mid-fall found in disturbed areas and lowlands, rarely high peaks. They feed on plants of the Brassicaceae family. The female is more heavily marked than the male and either sex may seek the opposite. MDO (Bluff Tr.) Powell, EB.



Mustard White (*Pieris napi*)

Although circumpolar, this species is absent from Southern California and the Southwest. Occurrences here are at the southern extent of the California range. Restricted to openings in cool moist woods, the food plants consist of mustards (Brassicaceae). Emerge February-May and have 2-3 broods. MDO (Coon Cr.).



***Introduced species**

Cabbage White (*Pieris rapae*)

A widespread and common species found year-round due to its polygeneitic (multiple generations per season) nature. This non-native species was introduced to Quebec from Europe in 1860 and its larva is now a serious pest of Brassicaceae crops. They can be found most everywhere except those places with extreme climatic conditions. MBSP, MSSB, HC, MDO.

Subfamily: Coliadinae (Sulphurs)



Orange Sulfur ♂ (*Colias eurytheme*)



Orange Sulfur ♀ (*Colias eurytheme*)

A very common, widespread species found year around in this area. It prefers open habitats such as suburbs and agricultural land. Its preferred food is alfalfa and other

leguminous species. Many females occur in the “alba” form where white replaces the typical orange wing color. Males have UV reflective wings. MDO (Shark’s Inlet, Islay Cr., Hazard Cyn.), HC, MSSB, EB, Powell.



Cloudless Sulfur ♀ (*Phoebis sennae*)

Found in a variety of open habitats, including gardens. A strong migrant that travels north, this is a regular vagrant but is likely not resident here. A cold winter may cause them to be uncommon for years. Caterpillar forms a tent with leaves and excreted silk threads. Food plants are *Cassia* spp. trees and other legumes, including *Trifolium* spp. Found in deserts and as far south as Argentina. MSSB.

Family: LYCAENIDAE (Gossamer Wing Butterflies)

Subfamily: Theclinae (Hairstreaks)



Brambel Hairstreak (*Callophrys dumentorum*)

A common species from February through April with one brood per year. This is an agile butterfly that is more intense bluish green along California’s central coast. It feeds on the nectar of buckwheat (*Eriogonum* spp.), and the larva consumes *Ceanothus* spp. and deerweed (*Lotus scoparius*). Found in chaparral, coastal scrub on rocky hills, serpentine soils, and sand dunes. Males frequently perch on protruding branches over washes and openings in the chaparral. LOOR, HC, MSSB, MBSP (Black Hill), MDO (Shark’s Inlet, Badger Camp).



Gray Hairstreak (*Strymon melinus*)

Common to abundant (the most widespread hairstreak) with multiple broods per year occurring February through November. Prefers open habitats such as coastlines, chaparral, and parks with suitable host plants which include *Eriogonum* spp. Males have orange abdomens while females have gray. Large orange eyespots at the hind wings allow it to escape attack with a wing tear rather than an attack to the head. MBSP (Morro Rock), HC.



Hedgerow Hairstreak (*Satyrium saepium*)

From late May through July, the most abundant species in the chaparral. This species has just one brood and the larvae feed and pupate on *Ceanothus* spp., especially *cuneatus*. Adults drink nectar from buckwheat (*Eriogonum* spp.), and *Ceanothus* sp. They are typically found in arid forests, coastal scrub and chaparral and thus named the hedgerow hairstreak. Powell.

Subfamily: Polyommatainae (Blues)



Silvery Blue (*Glaucopsyche lygdamus*)

A widespread but locally common to uncommon species with one brood per year (February through June). This species feeds on a wide variety of legumes such as lupine (*Lupinus* spp.), deerweed (*Lotus scoparius*), rattleweed (*Astragalus* spp.), and vetch (*Vicia* spp.). Caterpillars exude a sugary honeydew and so are attended by ants. Powell, LOOR and in coastal scrub at MBSP and MDO.



'Morro' Boisduval's Blue ♀ (*Plebejus icarioides* 'moroensis')



'Morro' Boisduval's Blue ♂ (*Plebejus icarioides* 'moroensis')

Locally common March to July, with males appearing first, this species flies only along the immediate coast of San Luis Obispo and western Santa Barbara counties. Feeds on *Lupinus chamissonis* and caterpillars are ant-attended. This variety is restricted to the

dunes at Vandenberg Air Force Base, Pismo/Guadalupe dune system and the dunes of Morro Bay (MSSB, Los Osos, and MDO). Subspecies, often called the Morro blue butterfly, is not recognized by the NABA.



Spring Azure (*Celastrina ladon*)

This widespread species flies for many months with its 2-3 broods. Larvae are attended by ants and consume the buds, flowers, and young fruit of *Ceanothus* spp., *Quercus* spp., *Aesculus* spp., *Cornus* spp., and *Arctostaphylos* spp. Found in a wide variety of deciduous woodlands along streams and is often the first spring butterfly to emerge from its chrysalis. HC, MSSB, MBSP (Cerro Cabrillo), MDO (Islay Cr.).



Western Tailed Blue (*Everes amyntula*)

A moderately common species with two broods, found March through August, especially May and June. They are found in moist lowlands, sandy clearings, chaparral, and coastal sage scrub, preferring *Astragalus* spp. and *Vicia gigantea*. As they drink they twitch their hind wings, drawing attention to their tails (they're the only southern California blue with tails) and away from their head. These are weak fliers and won't be found far from food or more than a few feet off the ground. HC, EB, MBSP (Park Ridge), MDO (Islay Cr.).



Acmon Blue (*Plebejus acmon*)

This extremely common species can be found from March through September in a wide variety of open spaces. The primary foods for larvae are *Lotus scoparius*, *Astragalus* spp., and *Eriogonum* spp. while adults feed on *Eriogonum* spp. nectar. Larvae are ant attended. Early spring adults tend to have darker, richer colors than those later in the season. All park units.



Western Pygmy-Blue (*Brephidium exile*)

Common to abundant with many broods per year, this butterfly is most commonly seen in September. It is the smallest butterfly species in North America and has a very weak flight. It feeds on *Chenopodium* spp., *Atriplex* spp., and *Salicornia* spp., and can be found in coastal salt marshes and lowland disturbed sites. EB, MDO (Islay Cr.).



Marine Blue (*Leptotes marina*)

This species is common from March through October, peaking in July and found in open areas, disturbed sites, and water courses. It consumes the buds and blossoms of ornamental plants as well as *Vicia* spp., and *Astragalus* spp. Populations have increased with an increased use of plumbago and wisteria in the landscape. The butterfly was named for its color rather than any marine influences. MDO (Coon Cr.) and edge of estuary at MBSP.

Subfamily: Riodinidae (Metalmarks)



Mormon Metalmark (*Apodemia mormo*)

This fast moving, widely distributed species is locally uncommon. It has two broods (April through June and August through September) and favors dry, rocky hills, sandy soils, and anywhere its food plant *Eriogonum* spp. grows. Local populations are adapted to particular hosts (various *Eriogonum* spp.) and adjust flight times with flower blooms. This reduces gene flow between populations so much so that some claim there to be multiple species. MDO dune scrub, HC, Powell.

Family: NYMPHALIDAE (Brushfoots)

Subfamily: Nymphalinae (True Brushfoots)



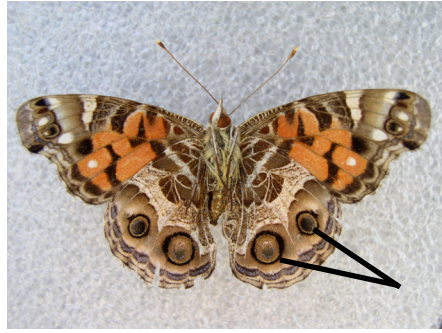
Gabb's Checkerspot (*Chlosyne gabbii*)

This common species has one flight, from March through June. It can be found on coastal dunes, streambeds in oak woodlands and chaparral, feeding on plants in the Asteraceae family such as *Lessingia filaginifolia*, *Corethrogyne* spp., and *Heterotheca grandiflora*. It is an aggressive butterfly and will fly up and challenge everything that comes in its path. MSSB, Powell, MDO (Islay Cr.).



Red Admiral (*Vanessa atalanta*)

This common, widely distributed species breeds throughout the year, having many broods. Its food sources include *Urtica* spp., and is locally common along the edges of riparian areas. Both horse dung and rotting fruit attract these species too. Sometimes a butterfly will pick a perch somewhere and return consistently for weeks. Powell, MDO (Islay Cr.).



American Lady (*Vanessa virginiensis*)

This uncommon species has many broods per year in April through November. Larvae prefer *Artemisia* spp., *Gnaphalium* spp., and *Anaphalis* spp. Adults eat nectar from *Cirsium* spp., and *Eriogonum* spp. They can be found in many open situations, stream sides, and coastal chaparral. MBSP.



West Coast Lady (*Vanessa annabella*)

This is the most common “Lady” species, found all year, but most commonly in February through November. Larvae eat plants in the Malvaceae family, especially the introduced *Malva parviflora* (cheeseweed). Adults consume nectars similar to the American lady. They can be found in open areas, especially disturbed land where mallow grows. MDO (Hazard Cyn., Islay Cr.).



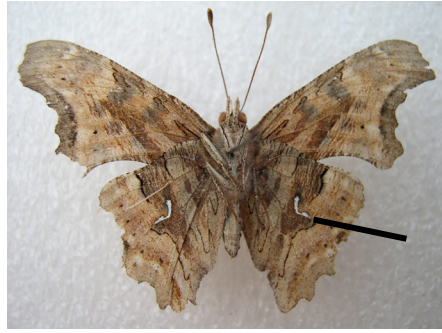
Painted Lady (*Vanessa cardui*)

This is one of the most widespread species in the world and thus also named the Cosmopolite. It has 2 + broods and can be found nearly all year, from February through November in most any open places such as meadows, parks, and mountain tops. It consumes a variety of plants especially *Cirsium* spp., *Malva* spp., *Fabaceae* spp., and *Amsinckia* spp. Each year butterflies emigrate north from Mexico in March and April, sometimes in such large numbers that it inhibits driving. One year traffic on California's I-15 was halted! Powell, LOOR, MSSB, MDO (Shark's Inlet).



Mourning Cloak (*Nymphalis antiopa*)

This widespread species is not too common here, although it has many broods and can be found most of the year. It's found in woodlands, stream sides, parks, and yards eating *Salix* spp. and *Populus* spp. It can camouflage itself perfectly against dark tree bark with its uncommon pattern. It may be the longest living butterfly, between 10 and 12 months. In milder climates one may find worn individuals from the previous year and freshly emerged individuals on the same day. MDO (Coon Creek).



Satyr Comma (*Polygonia satyrus*)

An uncommon species found in openings in riparian areas, marshes, orchards, and moist areas with *Urtica* spp., their main food source. Camouflaged to look like a dead leaf, they emerge and fly from June/July through October/November and over winter in a hanging shelter made by sewing edges of a nettle leaf together with the silk they exude. Emerge in February to be joined by the next brood in June. MDO (Islay Cr., Coon Cr., Hazard Cyn.).



California Tortoiseshell (*Nymphalis californica*)

This species is, in most years, rare with one brood, and found from May through fall, then over wintering and emerging in April or May. Found in chaparral and open woodlands, consuming *Ceanothus cuneatus*. Irregular outbreaks occur with vast numbers of butterflies and caterpillars covering *Ceanothus* spp. This seems to be involved with population pressure, host plant availability, and climatic conditions. MDO (Islay Cr.).



Mylitta Crescent (*Phyciodes mylitta*)

This species is the most common of the Crescents, found March through October with 2 + broods per year. It receives food and nectar from various thistle species, the native thistle, *Cirsium* spp., and introduced thistles. The butterfly can be found in moist, verdant areas and canyons and in fields, meadows, and other disturbed sites. The Crescents have dry and wet season forms and males and females differ, making identification challenging. In the 1800's non-native thistles spread across the west and Mylitta followed. It is now a rather ubiquitous species. HC, MDO (Islay Cr.).



Common Buckeye (*Junonia coenia*)

This extremely common species flies from March through October and has 2-4 broods per year. Found at shorelines, roadsides, and other disturbed areas and consumes *Antirrhinum* spp., *Plantago* spp., and *Mimulus aurantiacus*, among others. Very territorial and challenges anything that happens along its path. All park units.



Variable Checkerspot (*Euphydryas chalcedona*)

This abundant, widely distributed butterfly is extremely variable, containing 3-5 sub-species. Found in chaparral, oak woodland, and grasslands consuming *Mimulus aurantiacus*, *Rosa californica*, *Penstemon* spp., *Antirrhinum* spp., *Castilleja* spp., and *Symphoricarpos mollis*. Adults also eat nectar of *Eriogonum*, and *Eriodictyon*. Caterpillars have the ability to hibernate in drought conditions, so one year the species may be uncommon and the next year abundant. Powell, MDO (Islay Cr., Valencia Pk., Hazard Cyn.).

Subfamily: Limenitidinae (Admirals and Relatives)



Lorquin's Admiral (*Limenitis lorquini*)

This abundant species is found in riparian areas and channels near host plants which include *Salix* spp. and *Populus* spp. Both host plants are riparian species. The butterfly has two broods from April through September. Adults are especially aggressive, attacking almost anything, including birds. Young caterpillars are camouflaged by resembling bird droppings. LOOR.

Subfamily: Satyrinae (Satyrs)



Common Ringlet (*Coenonympha tullia*)

A common species often mistaken for a white moth. Found in native grasslands, open oak woodlands, and coastal dunes. Flies Feb-Sept, is very variable, and is a fragile, weak flier. Wings become tattered in just a few days. HC, MDO, LOOR, MBSP.

Subfamily: Danainae (Monarchs)



Monarch ♂ (*Danaus plexippus*)



Monarch ♀ (*Danaus plexippus*)

The only butterfly to annually migrate north and south, although no individual makes the entire round trip journey. Migrates north April-June; resides there June-August, and migrates south September/October. Over-winter in coastal Monterey pines (*Pinus*

radiata), Monterey cypress (*Cupressus macrocarpa*), and *Eucalyptus* spp. The preference for introduced *Eucalyptus* spp. often causes observers to forget that native trees were used prior to the invasion of these trees. Consumes mainly *Asclepias* spp. Adults nectar on coyote bush (*Baccharis pilularis*), and mule fat (*Baccharis salicifolia*). The toxicity of milkweed makes adults distasteful to predators. The male has black scent patches in the middle of his hindwings used in courtship. All park units.

Selected Useful Books and References

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