

LEPIDOPTERA OF ALBANY HILL, ALAMEDA CO., CALIFORNIA

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The following list summarizes observations of Lepidoptera (moths and butterflies) at Albany Hill, Alameda Co., California, during 1995-1999. Data originate from about 75 daytime and crepuscular visits of 0.5 to 3.5 hrs, in all months of the year. All of the butterfly species and some of the moths were recorded by RLL, most of the moth species and their larval host plants by JAP.

A total of 145 species is recorded (30 butterflies, 115 moths), a modest number considering the extent and diversity of the flora. However, many of the potential larval host plants may be present in too small patches to support populations of larger moths or butterflies. Nonetheless, we were surprised that colonies of some of the species survive in a small area that has been surrounded by urban development for many decades, including some rare ones in the East Bay region, as annotated below. Moreover, the inventory is incomplete. A more comprehensive census would be accomplished by trapping moths attracted to ultraviolet lights. In a habitat of this size, however, such survey would attract an unknown proportion of species from surrounding areas.

Larval collections are indicated by date-based JAP lot numbers (e.g. 95C37 = 1995, March, 37th collection). Larval foods of most of the other species are documented in other populations. Host plants are recorded at Albany Hill for 75 species (65% of the moths, 52% of the total); the rest were observed as adults only. Of the total, 15, possibly 18 (13%), are non-native exotics in California. At least six of the butterflies and several of the moths are vagrants here and/or depend upon plants in subtending urban and weedy areas.

Rare and unusual species. No species is formally designated as endangered or threatened, but several were surprise discoveries, rare or unknown species for this region.

Greya reticulata (Riley). -- We found this small moth abundant in late March and early April, in 1995 and 1998, using buds of *Sanicula crassicaulis* for oviposition. After its original description from Los Angeles and Alameda, reticulata was 'lost' for nearly a century prior to its rediscovery in Santa Clara Co. in the 1960s, where its larvae feed on *Osmorrhiza*. Several colonies are known, including San Bruno Mt., San Mateo Co., but there had been no record in the East Bay since the 1880s. *Sanicula* was not previously known to be a larval host.

Perittia cygnodiella (Busck). -- Larval mines were abundant on *Symphoricarpos* in 1995. This species was described from British Columbia and is widespread in the Pacific States but is rare in collections because the adults are inconspicuous, diurnal, and fly in early spring. Larvae had been reared only at San Bruno Mountain previously, and we had no prior record of the species in the East Bay area.

Elachista gildorella Kaila. -- Two individuals of this previously undescribed, grass-mining species were taken at the same spot on the northwest slope of the hill in April 1995 and 1998. This species is known from only two other localities, San Bruno Mountain and Point Reyes.

Elachista marachella Kaila. -- Several specimens of a second undescribed species were collected on the north slope of Albany Hill in March, April, and June. Larvae were found mining *Ehrharta erecta* in Strawberry Canyon on the UC Berkeley campus in 1978-85. This introduced grass also occurs on Albany Hill, but *marachella* is a member of a complex of closely related Californian species, and native grasses presumably serve as larval hosts.

Epinotia lomonana (Kearfott).-- This species also is rarely seen, because the adults fly in late fall. It was recorded in Orinda in 1961 and once as a vagrant in urban Berkeley. The larvae feed on native *Prunus*, and unexpectedly, we found a relict colony on the patch of *P. subcordata* at Albany Hill.

Acleris keiferi Powell. -- Larvae of this species were found on *Rosa californica*. *A. keiferi* was described 35 years ago from specimens collected in San Francisco in the 1920s and 1930s, and there were specimens from Berkeley collected in 1931 and Bear Creek (now at the bottom of Briones Reservoir) in 1957. It remained rare in the East Bay area until 1993 when we discovered a colony on Brooks Island, also feeding on *Rosa californica*. Elsewhere the larvae have been found on *Rubus* and *Fragaria*.

Oidaematophorus occidentalis Walsingham -- This species, which we have not seen from the Bay Area previously, was originally described from Colusa and Shasta counties. At Albany Hill the larvae are suspected to feed on *Wyethia angustifolia* and/or *Grindelia hirsutula*, based on records in British Columbia.

Battus philenor (L.) (Pipe Vine Swallowtail). -- Individuals were observed on at least six dates, flying in woods and hilltopping. The larval host plant, *Aristolochia*, is not known here but perhaps overlooked? Individuals fly long distances from the larval colonies, but the nearest known

colony is Brooks Island-Pt. Richmond; hence this frequency of vagrants would be surprising.

Pieris napi (L.) (Veined White).-- Single females were flying near Cerrito Creek, in 1996 and 1997, posing a mystery. Populations are known in the Berkeley Hills, but individuals of this species rarely wander far from their shaded habitat where *Cardamine* grows. This plant is present in the Albany Hill flora, but it is surprising if the colony of milkmaids is large enough to support a resident population of *P. napi*.

Danaus plexippus (L.) (Monarch).-- There has been an overwintering aggregation of the Monarch butterfly in the *Eucalyptus* grove at the top of Albany Hill for many years. In recent years numbers have consistently ranged in the hundreds, perhaps more than 1,000. They were particularly conspicuous in December 1997. There is an aggregation site at the Richmond Field Station and others in Alameda and San Leandro, also in *Eucalyptus*. No larval breeding site is known in coastal parts of the East Bay counties.

LIST OF THE LEPIDOPTERA RECORDED FROM ALBANY HILL

Abbreviations: **la**: larvae; **mi**: leaf mines; **ga**: plant gall; **ad**: adults. Dates indicated by **I** (January) to **XII** (December). **Introd.**: introduced species, non-native in California. **Vagr.**: Probable vagrant individuals from surrounding urban and more distant habitats. Several butterflies are regularly or often observed (e.g. *Battus philenor*, *Vanessa atalanta*, *V. virginiensis*, but their larval food plants are rare or unknown on Albany Hill). The Monarch Butterfly (*Danaus plexippus*) is a winter but not breeding resident, the adults forming overwintering aggregations in *Eucalyptus* trees.

Nomenclature follows the 'Check List of the Lepidoptera of America North of Mexico' (Hodges et al. 1983) updated from recent literature. Most of the butterflies and a few of the moths have been accorded regional subspecies names, which are not assigned here.

MOTHS

Eriocraniidae

Dyseriocrania ?auricyanea (Walsingham)

la, mi: on *Quercus agrifolia* (95C37.1, 96C41.1, 97D9.1, 98D22.3), abandoned & occupied III, IV.

Tischeriidae

Tischeria splendida Braun

la, mi: on *Rubus vitifolius* (95C46), III, **ad**: emgd. IV; **ad** in field VI.

Nepticulidae

Stigmella ?canadensis (Braun)

mi: *Alnus rhombifolia* (98E13.1, J6), V, X (abandoned)

Stigmella heteromelis Wilkinson & Scoble

la, mi: on *Heteromeles arbutifolia* (95C36, 96C47.1, 97B), I, II, III; **ad**: VI

Stigmella variella (Braun)

mi: *Quercus agrifolia* (95C37.3, 95F13.1, 96C41.2, 97D9.2, 98D22.2), abandoned & occupied III, IV, VI

Stigmella sp.

mi: *Salix lasiolepis* (95C41.3), abandoned III

Heliozelidae

Coptodisca saliciella (Clemens)

mi: *Salix lasiolepis* (95C41.2, 96K1.1), abandoned III, X

Prodoxidae

Greya reticulata (Riley)

ad: ovip. flowers *Sanicula crassicaulis*, III, IV

Tineidae

mi: *Toxicodendron diversilobum* (95J3), abandoned IX

Bucculatricidae

Bucculatrix albertiella Busck

la: *Quercus agrifolia* (97D9.3), IV, **ad:** emgd. by VII

Bucculatrix koebelilla Busck

ad: VI assoc. *Artemisia californica*

Bucculatrix separabilis Braun

la: *Baccharis pilularis* (95C43, 98E12), **ad:** emgd. IV, VI

Bucculatrix variabilis Braun

la: *Baccharis pilularis* (95C43, 97B6, D11.1), II, III, IV **ad:** emgd. II to IV

Depressariidae

Agonopterix alstroemeriana (Clerck)

introd.

ad: VI, IX

Agonopterix nervosa (Haworth)

introd.

ad: IX

Agonopterix oregonensis Clarke

la: inflor. *Sanicula crassicaulis* (98D20), IV; **ad:** emgd. V

Oecophoridae

Batia lunaris (Haworth)

ad: VI

Endrosis sarcitrella (L.)

ad: IV

introd.

Esperia sulphurella (F.)

introd.

la: *Quercus* bark with *Polyporus gilvus* (97B2), **ad:** emgd. III & in field III to V

Elachistidae

Elachista gildorella Kaila ms

ad: IV

Elachista marachella Kaila

ad: III, IV, VI

Perittia cygnodiella (Busck)

la, mi: *Symphoricarpos mollis* (95D1, 96C48), III, IV, **ad:** emgd. XII, I; *Symphoricarpos ?albus* (95D3), IV, **ad:** emgd. I & III in field

Blastobasidae

Holcocera sp. 1

la: on *Ribes californicum* (97D14), IV, *Baccharis pilularis* w/ *Aristotelia* shelters (98G9.1);
ad: emgd. V, VIII, in field VI. Probably a scavenger.

Holcocera sp. 2

ad: IV

Hypatopa sp.

ad: V, VII

Coleophoridae

Batrachedra salicipomonella Clemens

la: *Pontania* galls on *Salix lasiolepis* (96C51, 96K1), III, X, **ad:** emgd. V, XI

Coleophora ?baccharella Landry ms

la: *Baccharis pilularis* (95C44, 97B7, 98E11), II, III, V; **ad:** emgd. VII-IX

Coleophora pruniella Clemens

la: *Salix lasiolepis* (96C50), III; **ad:** emgd. IV

Gelechiidae

Aristotelia argentifera Busck

la: *Baccharis pilularis* (97B5, 98G9), II, VII; **ad:** emgd. III, VIII

Chionodes chrysopyla (Keifer)

la: on *Corylus* under *Quercus agrifolia* (95D16, 98E8), on *Q. agrifolia* (97D4), IV; **ad:** emgd. V, in field VII

Chionodes nanodella (Busck)

ad: IX

Chionodes occidentella (Chambers)

ad: II-IV, X

Chionodes petalumensis Clarke

la: on *Quercus agrifolia* (97D3), IV; **ad:** IX

Gnorimoschema baccharisella Busck

ga: *Baccharis pilularis* (95C44.1, 95D5, 97B8, 98F20, G8), II, IV, VI, VII; **ad:** emgd. IX

Recurvaria bacchariella Keifer

la: *Baccharis pilularis* (95D4, 98E10), IV, V; **ad:** emgd. IX

Scrobipalpula psilella (H.-S.)

la: *Gnaphalium ?canescens*, II; **ad:** emgd. III

Symmetrischema striatellum (Murtfeldt)

la: *Solanum americanum* ((95C40), **ad:** emgd. IV introd.?

Symmetrischema tangolias (Gyen)

pupa: *Solanum americanum* (98E16), V (DOA) introd.

Telphusa sedultiella (Busck)

la: *Quercus agrifolia* (97D7, 98D21), IV, **ad:** emgd. V, in field VI, IX, X, XII

Plutellidae

Ypsolopha cervella (Walsingham)

la: *Quercus agrifolia* (97D2), IV; beaten from but did not feed on *Corylus*, under *Q. agrifolia* (95D14, 98D23), **ad:** emgd. IV, V, in field VII

Schreckensteiniidae

Schreckensteinia festaliella (Hubner)

ad: III, IV, VI, VII, IX introd.?

Sesiidae

Synanthedon bibionipennis (Boisduval)

ad: VII to pheromone bait assoc. blackberry

Pterophoridae

Amblyptilia pica (Walsingham)

la: *Scrophularia californica* (96C44), III, **ad:** emgd. IV

Oidaematophorus grandis Fish

la: in stems *Baccharis pilularis* (98G10), VII

Oidaematophorus griscescens Walsingham

la: *Baccharis pilularis* (97D11), IV; **ad:** emgd. IV, V

Oidaematophorus occidentalis Walsingham

ad: VI

Platyptilia williamsi Grinnell

la: *Artemisia douglasiana* (98E14), *Anaphalis margaritacea* (98E15), V; **ad:** emgd. VI

Tortricidae

Olethreutinae

Epinotia albangulana (Walsingham)

la: *Alnus rhombifolia* (98E13), V; **ad:** emgd. VI & in field VI

Epinotia columbia (Kearfott)

la: *Salix lasiolepis* (95C41.1, 96C50, 97B9, C2), II, III, **ad:** emgd. III, IV, V

Epinotia emarginana (Walsingham)

la: *Quercus agrifolia* (97D5, 98E5) beaten from but did not feed on *Corylus*, under *Q. agrifolia* (95D15), IV, V; **ad:** emgd. V & in field VI, IX, X, XII

Epinotia lomonana (Kearfott)

la: *Prunus subcordata* (95D6, 96C45), III, IV, **ad:** emgd. X

Grapholita lunatana Walsingham

ad: III, IV

Phaneta apacheana (Walsingham)

la: *Gnaphalium ?bicolor* (96C42), III, **ad:** emgd. V

Tortricinae

Acleris hastiana (L.)

la: *Salix lasiolepis* (96C50, 97B9.1), II, III; **ad:** emgd. IV, V

Acleris keiferi Powell

la: *Rosa californica* (95D10.1), IV, **ad:** emgd. V

Acleris senescens (Zeller)

la: *Salix lasiolepis* (96C50, 97B9.3)), II, III, **ad:** emgd. IX, X

Acleris variegana (Schiffermuller)

introd.

la: *Prunus subcordata* (95D6), IV, *Rosa californica* (96C52), III, **ad:** emgd. IV, V

Croesia albicomana (Clemens)

la: *Rosa californica* (95D10, 96C52), III, IV, **ad:** emgd. IV, V

Cnephasia longana (Haworth)

introd.

ad: VI.1962 (RLL)

Archips argyrospilus (Walker)

la: *Prunus subcordata* (95D7), **ad:** emgd. IV

Argyrotaenia citrana (Fernald)

la: *Heteromeles arbutifolia* (96C47), III, *Scrophularia californica* (97B4), **ad:** emgd. II, IV & in field III to VII, IX

Clepsis peritana (Clemens)

ad: III, V-VII, IX, XI

Crambidae

Dicymolomia metalliferalis (Packard)

ad: IX

Eudonia rectilinea (Zeller)

ad: VI

Hellula rogatalis (Hulst)

ad: X

Diastictis fracturalis (Zeller)

ad: IX

Nomophila nearctica Munroe

ad: VIII

vagrant

Pyrausta subsequalis (Guenee)

ad: II, III, V, VII-X

Udea profundalis (Packard)

ad: IV-VI, X, XI

Uresiphita reversalis (Guenee)

ad: II, III, VII-X; **la:** observed on *Genista monspessulana*, IX, XI

introd.

Pyralidae

Homoeosoma electellum (Hulst)

ad: IX

Phycitodes mucidellum (Ragonot)

ad: VIII

Geometridae

Dysstroma citrata (L.)

ad: IX

Dysstroma mancipata (Guenee) complex

ad: IV, V

Elpiste marcescaria (Guenee)

ad: VI

Epirrhoe plebeculata (Guenee)

ad: I, II, III

Eupithecia rotundopuncta Packard

ad: off *Q. agrifolia* trunks, III; **la:** on *Q. agrifolia*, V (98E9)

Eupithecia sp. 1

la: beaten from *Corylus* under *Quercus agrifolia* (95C39, 97D13.1), III, IV & from *Q. agrifolia* (97D8.1), IV

Eupithecia sp. 2

la: beaten from *Prunus subcordata* (95D8), IV

Hydriomena nubilofasciata (Packard)

la: *Quercus agrifolia* (95C49), III, *Corylus* under *Q. agrifolia* (95D17), not reared [? ID];

ad: emgd. I;

Hydriomena quinquefasciata (Packard)

ad: V

Sabulodes aegrotata (Guenee)

la: on *Marah fabaceus* (97D13), IV

Synaxis ?mosesiani Sala

la: *Prunus subcordata* (96D7), IV, **ad:** emgd. X

unplaced sp. (Eupithecia?)

la: *Quercus agrifolia* (95C39), III, not reared

unplaced sp. (Eupithecia?)

la: *Quercus agrifolia* (97D8.1), IV, not reared

unplaced sp. (Eupithecia?)

la: *Prunus subcordata* (95D8), IV not reared

unplaced sp.

la: beaten from *Corylus californicus* (95D11, D13.1, 98E7), not reared

unplaced sp.

la: *Quercus agrifolia* (98E6), not reared

Dioptidae

Phryganidea californica Packard

la: *Quercus agrifolia* in 1950s RLL. The California Oak Moth develops defoliating populations periodically but was seen in the East Bay area in the late 1990s.

Arctiidae

Spilosoma vagans (Boisduval)

ad: IV

Spilosoma vestalis Packard

la: *Ribes sanguineum* (98F2), VI; **ad** emgd. III.99

Noctuidae

Autographa californica Speyer

ad: III, IV

Catocala hippolyta Stretch

ad: IX, beaten from trunk *Q. agrifolia*

Heliothis phloxiphagus Grote & Robinson

vagr.

ad: VI

Heliothis zea Boddie

ad: IX

Homoglaea ?carbonaria (Harvey)

la: *Salix lasiolepis* (96C50.1, 97B9.2, C2.1, 98E9), II, III, V; **ad:** emgd. VIII, DOA II

Nola sp.

la: beaten from *Corylus* under *Quercus agrifolia* (95D12, 96D8) from *Q. agrifolia* (97D8.2), from *Salix lasiolepis* (97D12), IV

Orthosia praeses (Grote)

la: *Scrophularia californica* (96C43), *Vicia* (98D8) [ID?], III, IV; **ad:** emgd. XII;

unplaced sp. (Orthosia?)

la: beaten from *Quercus agrifolia* (97D8), IV

unplaced sp.

la: beaten from *Corylus californicus* (95C38), III not reared

unplaced sp.

la: beaten from *Prunus subcordata* (95D9), IV not reared

BUTTERFLIES

Hesperiidae

Pyrginae

Erynnis tristis (Boisduval)

ad: IV.10 to IX.18

Pyrgus communis (Grote)

ad: IV.9 to IX.10

Hesperiinae

Hylephila phyleus (Drury)

introd.?

ad: V, VIII, IX

Ochlodes sylvanoides (Boisduval)
ad: VII.5 to IX.25

Paratrytone melane (Edwards)
ad: III.27 to XI.6

Polites sabuleti (Boisduval)
ad: IV, V, VII-XI.6

Papilionidae

Battus philenor (L.) vagr.?
ad: IV-VI, VIII-X. The larval food plant, Aristolochia, is not recorded on Albany Hill,

Papilio eurymedon Lucas vagr.
ad: IV, V, VI

Papilio rutulus Lucas
ad: III.20 to IX.27

Papilio zelicaon Lucas
ad: II.11 to XII.24; ovip., eggs on *Foeniculum vulgare*, V

Pieridae

Colias eurytheme (Boisduval) vagr.
ad: IV, V, VI, IX, X

Euchloe ausonides (Lucas)
ad: IV

Pieris napi (L.) vagr.?
ad: III, IV

Pieris rapae (L.) introd.
ad: II.11 to X.15

Lycaenidae

Celastrina ladon (Cramer)
ad: V.1 to VII.5

Glaucopsyche lygdamus (Doubleday)
ad: III, IV

Plebejus acmon (Westwood & Hewitson)
ad: VII, VIII

