

Taxonomy of southern California Erebidae and Noctuidae (Lepidoptera) with descriptions of twenty one new species

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Table of contents

Introduction	3
Materials and methods	4
Family EREBIDAE Leach [1815]	5
Subfamily Herminiinae Leach [1815]	5
<i>Idia occidentalis</i> (Smith, 1884), REVISED STATUS	5
Subfamily Catocalinae Boisduval [1828]	5
Tribe Melipotini Grote, 1895	5
<i>Cissusa indiscreta</i> (Henry Edwards, 1886)	5
<i>Drasteria convergens</i> Mustelin, NEW SPECIES	6
Tribe Ophiusini Guenée, 1837	7
<i>Heteranassa fraterna</i> (Smith, 1899)	7
Family NOCTUIDAE Latreille 1809	8
Subfamily Acontiinae Guenée, 1841	8
Tribe Acontiini Guenée, 1841	8
<i>Tarachidia nigra</i> Mustelin, NEW SPECIES	8
<i>Conocharis acutus</i> (Smith, 1905)	9
Subfamily Oncocnemidinae Forbes & Franclemont, 1954	9
<i>Oncocnemis duplex</i> Troubridge and Mustelin, NEW SPECIES	9
<i>Oncocnemis helena</i> Mustelin, NEW SPECIES	11
<i>Oncocnemis sala</i> Mustelin, NEW SPECIES	13
<i>Oncocnemis kelsoensis</i> Robertson and Mustelin, NEW SPECIES	14
Subfamily Stiriinae Grote, 1882	15
Tribe Annaphilini, NEW TRIBE	15
<i>Annaphila scurlockorum</i> Sala and Mustelin, NEW SPECIES	16
Subfamily Condicinae Poole, 1995	18
Tribe Condicini Poole, 1995	18
<i>Draudtia andrena</i> (Smith, 1911)	18

Tribe Leuconyctini Poole, 1995	18
<i>Fotella fragosa</i> (Grote, 1883)	18
Subfamily Bryophilinae Guenée, 1852	18
<i>Cryphia flavipuncta</i> Mustelin, NEW SPECIES	18
Subfamily Xyleninae Gn., 1837	20
Tribe Caradrinini Boisduval, 1840	20
<i>Protoperigea umbricata</i> Mustelin, NEW SPECIES	20
<i>Protoperigea subterminata</i> Mustelin, NEW SPECIES	22
<i>Protoperigea parvulata</i> Mustelin, NEW SPECIES	24
<i>Protoperigea calientensis</i> Mustelin, NEW SPECIES	25
Tribe Phlogophorini Hampson, 1918	27
<i>Aseptis fanatica</i> Mustelin, NEW SPECIES	27
<i>Aseptis torreyana</i> Mustelin, NEW SPECIES	29
Tribe Apameini Gn., 1841	30
<i>Apamea robertsoni</i> Mikkola and Mustelin, NEW SPECIES	30
<i>Apamea digitula</i> Mustelin and Mikkola, NEW SPECIES	31
<i>Photedes sofiae</i> Mustelin, NEW SPECIES	33
<i>Mammifrontia sarae</i> Mustelin, NEW SPECIES	34
Tribe Xylenini Guenée, 1837	35
<i>Agrochola decipiens</i> (Grote, 1881), new combination	35
Subfamily Hadeninae Guenée, 1837	35
Tribe Orthosini Guenée, 1837	35
<i>Perigonica tertia</i> Dyar, 1903	35
Genus <i>Anarta</i> Ochsenheimer, 1816	36
<i>Anarta fusculeta</i> (Smith, 1891), NEW STATUS	36
Tribe Eriopygini Fibiger and Lafontaine, 2005	37
<i>Lasionycta sala</i> Troubridge and Mustelin, NEW SPECIES	37
<i>Lacinipolia strigicollis</i> (Wallgren, 1860)	39
<i>Trichocerapoda harbisoni</i> Mustelin, NEW SPECIES	39
<i>Trichocerapoda oceanis</i> Robertson and Mustelin, NEW SPECIES	40
<i>Hexorthodes nipana</i> (Smith, 1910)	41
Discussion	42
References	43

Abstract

Twenty-two new taxa of owlet moths (families Erebidae and Noctuidae) are described along with three status changes from subspecies to species, eleven new synonymies, and twenty-one new combinations. Of the new taxa, one is a new tribe, Annaphilini Mustelin, **n. tribe**, and twenty-one are new species from southern California: *Drasteria convergens* Mustelin, **n.sp.**, *Tarachidia nigra* Mustelin, **n.sp.**, *Oncocnemis duplex* Troubridge and Mustelin, **n.sp.**, *O. helena* Mustelin, **n.sp.**, *O. sala* Mustelin, **n.sp.**, *O. kelsoensis* Robertson and Mustelin, **n.sp.**, *Annaphila scurlockorum* Sala and Mustelin, **n.sp.**, *Cryphia flavipuncta* Mustelin, **n.sp.**, *Protoperigea umbricata* Mustelin, **n.sp.**, *P. subterminata* Mustelin, **n.sp.**, *P. parvulata* Mustelin, **n.sp.**, *P. calientensis* Mustelin, **n.sp.**, *Aseptis fanatica* Mustelin, **n.sp.**, *Aseptis torreyana* Mustelin, **n.sp.**, *Apamea robertsoni* Mikkola and Mustelin, **n.sp.**, *A. digitula* Mustelin and Mikkola, **n.sp.**, *Photedes sofiae* Mustelin, **n.sp.**, *Mammifrontia sarae* Mustelin, **n.sp.**, *Lasionycta sala* Troubridge and Mustelin, **n.sp.**, *Trichocerapoda harbisoni* Mustelin, **n.sp.**, and *T. oceanis* Robertson and Mustelin, **n.sp.** The relationship of these new species to their closest relatives is discussed. The following new combinations are proposed to maintain consistency in generic concepts between the European and North American faunas: *Agrochola decipiens* (Grote, 1881), **n. comb.**, *Anarta chartaria* (Grote, 1873), **n. comb.**, *Anarta trifolii* (Hufnagel, 1766), **n. comb.**, *Anarta mutata* (Dod, 1913), **n. comb.**, *Anarta fulgora* (Barnes & McDunnough, 1918), **n. comb.**, *Anarta castrae* (Barnes & McDunnough, 1912), **n. comb.**, *Anarta hamata* (McDunnough, 1930), **n. comb.**, *Anarta oregonica* (Grote, 1881), **n. comb.**, *Anarta montanica* (McDunnough, 1930), **n. comb.**, *Anarta columbica* (McDunnough, 1930), **n. comb.**, *Anarta alta* (Barnes & Benjamin, 1924), **n. comb.**, *Anarta subalbida* (Barnes & Benjamin, 1924), **n. comb.**, *Anarta obesula* (Smith, 1904), **n. comb.**, *Anarta farnhami* (Grote, 1873), **n. comb.**, *Anarta crotchii* (Grote, 1880), **n. comb.**, *Anarta oaklandiae* (McDunnough, 1937), **n. comb.**, *Anarta projecta* (McDunnough, 1938), **n. comb.**, *Anarta edwardsii* (Smith, 1888), **n. comb.**, *Anarta florida* (Smith, 1900), **n. comb.**, *Anarta antica* (Smith, 1891), **n. comb.**, and *Anarta decepta* (Grote, 1883), **n. comb.**

Key words: Erebidae, Noctuidae, Catocalinae, Acontiinae, Oncocnemidinae, Psaphidinae, Bryophilinae, Xyleninae, Hadeninae, Annaphilini, *Drasteria*, *Tarachidia*, *Oncocnemis*, *Annaphila*, *Cryphia*, *Protoperigea*, *Aseptis*, *Apamea*, *Photedes*, *Mammifrontia*, *Lasionycta*, *Trichocerapoda*, *Agrochola*, *Anarta*

Introduction

The owlet moth fauna of southern California displays exceptional species diversity because of the many different biogeographic regions and habitat zones found within the area. This diversity also correlates with an abundance of endemic plant species, as well as climate conditions from extreme xeric conditions to high elevation mountane habitats. Also, the coastal mesas of southern California are rich in endemic species.

During efforts to catalogue the owlet moths of southern California, I uncovered several taxa that did not belong to well recognized species and therefore warranted closer examination. The descriptions of a number of these were published in 2000 (Mustelin *et al.*, 2000), and I complete this work by describing an additional 21 species as novel