



# *The Taxonomic Report*

OF THE INTERNATIONAL LEPIDOPTERA SURVEY



## THE YOSEMITE BUTTERFLIES (TEXT): SUPPLEMENT OF ADDITIONAL INFORMATION, COLLECTIONS AND CORRECTIONS FOR VOLUME 5, NO. 1.

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### INTRODUCTION

Two years have passed since *The Yosemite Butterflies: Text* appeared in the Taxonomic Report 29 December 2004. The Yosemite Butterflies color plates issue illustrates all taxa known to occur in that region, though some male or female representatives were not available to illustrate. A revised edition of the *Yosemite Butterflies (Text)* is also being published which will incorporate additional butterfly species and subspecies into the annotated checklist, include recent names changes, taxonomic studies and collecting records which have also been recently added. Recent names changes are used in the color plates. Such additional information is presented here for the benefit of those who obtained the first edition and will help readers to know the reasons behind the name changes made in the color plates. This publication also addresses corrections of errors made in the original edition.

### YOSEMITE BUTTERFLIES NAMES CHANGES 2005-2006.

The following names in the Yosemite region have changed because of subsequent work or revisions since the first edition. Some proposed taxonomic changes are not used herein pending further review and study of those taxa. Some literature is cited. Authors for scientific names are listed only if not given in the first edition of the *Yosemite Butterflies Text*.

*Hesperopsis libya lena*: is now *Hesperopsis libya* (Scudder). Great Basin population.

Andrew D. Warren (2005) in his coverage of Oregon/Great Basin populations of this species raised questions about the use of the name *lena*. Yosemite populations differ from *lena* from the Montana type locality so that name should not be used.

*Papilio indra indra*: is now *Papilio indra* (Central Sierra Nevada).

Paul Opler notes (pers. comm.) that the Sierra Nevada populations that have long had the nominotypical *indra* ssp. name applied to them actually differ from *Papilio indra indra* (TL: Pikes Peak) in Colorado. The Sierran

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populations are also isolated from the Rocky Mountains *indra* with recently described *phyllisae* in the southern Sierra and *shastensis* J. Emmel & T. Emmel from northern California. Other subspecies in the Great Basin have either been described or will be in the near future.

***Papilio eurymedon eurymedon.***

Paul Opler notes that there is geographic variation within the species. Coast Range populations in the state show some differences. Since the TL (Emmel, Emmel & Mattoon, 1998j) is in the Sierra Nevada, Yosemite populations would represent the nominotypical subspecies.

***Colias alexandra edwardsii.***

James Scott, Steve Kohler and Michael S. Fisher (2006) proposed that *edwardsii* is a different species than *Colias alexandra* W. H. Edwards. No change is made herein pending further evaluation of that issue.

***Lycaena cuprea lapidicola.***

The correct subspecies name has proven to be controversial. See Warren (2005) and Scott (2006).

***Atlides halesus estesi.***

The subspecies name *corcorani* dos Passos is now used.

***Satyrium fuliginosa maculadistinctum* in the Yosemite region is now *Satyrium semiluna maculadistinctum.***

This change is made based on the work of Paul Opler and Andrew Warren (Warren, 2005) and recognized as such by COSEWIC (2006).

***Loranthomitoura spinetorum* is now *Cisincisalia spinetorum* and *Loranthomitoura johnsoni* is now *Cisincisalia johnsoni.***

The genus name was updated. Others place both in the genus *Callophrys*.

***Euphilotes battoides glaucon* and *australoglaucon* are now *Euphilotes glaucon* subspecies.**

See Warren (2005) for discussion. This revision was anticipated in the Yosemite first edition.

***Glaucopsyche piasus excubitus=excubita.***

Both names were given in the original description. The correct spelling is *excubita*.

***Plebejus (Icaricia) lupini* (Eastern Sierra population) now includes: *P. lupini goodpasturei.***

Including *goodpasturei* in the region was not based on revisions since 1998. It is based on evaluating additional collections in that region. Blend zone populations occur commonly in the region.

***Speyeria zerene* near *zerene* is now *Speyeria zerene monticola.***

Reasons for the change were discussed in the first edition. John Emmel now favors the recognition of *monticola* as different from nominotypical *zerene* (pers. comm.).

***Adelpha (bredowii) californica* is now *Adelpha californica.***

Warren (2005) recognized *Adelpha californica* as a species different than *bredowii* Geyer or *eulalia* (Doubleday). Other supporting work by Prudic & Warren is in preparation.

***Oeneis chryxus stanislaus* and *ivallda***

James A. Scott (2006) recognized two species in *chryxus* (Doubleday & Hewitson) and proposed that *stanislaus* and *ivallda* are subspecies of *Oeneis calais* (Scudder). No change is made herein pending further evaluation of that issue.

## RECENTLY ADDED BUTTERFLIES TO THE YOSEMITE REGION

### LYSIDE SULPHUR *Kricogonia lyside* (Godart).

**General:** John F. Emmel reports that there is a record of three strays taken in the Mono Lake Basin E of the Sierra Nevada. The specimens are in his private collection but the collection data and collector information were separated from the specimens and lost. Thomas C. Emmel verified the locality information with the collector (name now unknown).

### SUPERPERPLEXING HAIRSTREAK *Callophrys perplexa superperplexa* (Emmel, Emmel & Mattoon).

**Taxonomic note:** The TL is Big Pine Creek, Inyo County, California. Recently described in the Systematics of Western North America publication (1998h). This subspecies is characterized by having a prominent postmedian macular band on the HW below in most individuals, though obsolete in some individuals. This taxon can resemble *Callophrys comstocki* and occurs close to or even with *Callophrys lemberti* populations on the Sierra Nevada E slope. Emmel, Emmel & Mattoon recognized the questionable status of *superperplexa* but linked it with *perplexa* based on a contiguous cline with *perplexa* to the south and the shared *Eriogonum fasciculatum* hostplant used by many southern Sierra Nevada *C. perplexa* populations.

**General:** The northern limit of this subspecies was believed to be Bishop Creek (Inyo County) about 12 miles N of Big Pine Creek but Jim Brock collected a larva at Lower Rock Creek (May 24, 2000 on *Eriogonum kennedyi*) in Mono County and reared it to an adult (emerged March, 2001). Adults likely fly from late March into early May.

### DESERT MOUNTAINS AZURE *Celastrina echo* (W. H. Edwards). Desert mountains/eastern Sierra Nevada segregate.

**Taxonomic note:** The actual separation of *Celastrina echo* as a separate species from *ladon* was by Guppy & Shephard in 2001. Eastern Sierra Nevada and Mojave Desert populations were long known as “near *cinerea*” (W. H. Edwards) in previous checklists for the state but the actual taxonomic status of these *Celastrina* is unresolved. Currently, most workers treat this segregate as a *Celastrina echo* because of the questionable and unstudied status of the azures in the West, including *cinerea* which may not actually occur in the state.

**General:** This segregate was known to occur north to Pine Creek Canyon in Inyo County but recently was found in Lower Rock Creek Canyon, Hot Creek and in the Bodie Hills near Bridgeport Canyon in Mono County. No doubt, others have seen it in those localities but failed to recognize the significance.

### DOTTED BLUE *Euphilotes enoptes* “*aridorum*” Austin.

**Taxonomic note:** The TL is “Nevada: Washoe County, Peavine Peak Road at US 395, 1646m T20N R19E S7 on USGS Verdi, Nev. 7.5 quadrangle.” John Emmel and Gordon Pratt state (pers. comm.) that Yosemite *enoptes* populations on *Eriogonum elatum* differ (males are much lighter dorsally) from Nevada *aridorum* or are questionably distinct from *E. enoptes* populations on *Eriogonum nudum*.

**General:** It is questionable if *aridorum* occurs in California. *E. enoptes* recently found by Paul Opler and Evi Buckner near the Mammoth airport on July 4 and 5, 2006 may be this taxa because of visual similarities to *aridorum* and the association with *Eriogonum aridorum*, the host *aridorum* is named after. The flight is in July and possibly early August.

### GOODPASTURE’S (LUPINE) BLUE *Plebejus lupini goodpasturei* Austin.

**Taxonomic note:** Treated as an undescribed eastern Sierra Nevada population in the first edition (*Yosemite Butterflies, Text*). Collecting since 2004 has shown that populations in the Bodie Hills are fairly typical *goodpasturei* (females are mostly brown above per John F. Emmel, pers. comm.) and the Glass Mountain area populations from McGee Canyon and Taylor Springs are similar. Populations from the E Sierra Nevada from Mono Lake south have females with more blue on the upper surface, apparently blending with intermediate populations in the southern Sierra. The eastern Sierra population overlaps ranges with *P. lupini alpicola* at Warren Creek 8500’ off the Tioga Road. Further collecting and study may show that two species in the *lupini* complex are involved in Mono County.

## POSSIBLE SPECIES THAT MAY OCCUR IN THE YOSEMITE REGION

**CERAUNUS BLUE** *Hemiargus ceraunus gyas* (W. H. Edwards).

This species occurs commonly on the E slope of the Sierra Nevada N to at least Whitney Portal in Inyo County. It also breeds in the southern San Joaquin Valley near Bakersfield in Kern County. It could be found on either the west or east slopes of the Sierra Nevada in the region.

## ADDITIONAL IMPORTANT RECORDS FOR THE YOSEMITE REGION.

### HESPERIIDAE

*Erynnis pacuvius lilius*: Mono County: Ridge E of Creen Canyon, common 21 VI 2006 (KD).

*Hesperia uncas giuliani*: Mono County: McGee Canyon Rd. near Glass Mountain and Taylor Creek Springs, both 20 VI 2006 (KD).

*Polites sabuleti sabuleti*: Mono County: Hot Creek 24 VI 2006 (KD).

*Ochlodes sylvanoides omnigena*: Mono County: Upper Lee Vining Canyon 12 VIII 2006 (KD).

### PIERIDAE

*Euchloe lotta*: Mono County: Ridgetop 9200' 1.5 to 2 miles SW of Bodie (off Cottonwood Canyon Rd.) 21-22 VI 2006 (KD).

*Anthocharis thoosa pseudothoosa*: Mono County: Lower Rock Creek 14 V 2006, southern range extension for the eastern Sierra Nevada (KD).

*Kricogonia lyside*: Mono County: Mono Lake Basin, no specific locality, date or collectors name (three specimens in the John F. Emmel collection).

### LYCAENIDAE

*Lycaena xanthoides*: Mono County: Lower Rock Creek 24 VI (sympatric with *L. editha*) and 6 VII 2006 (KD).

*Lycaena editha editha*: Mono County: Lower Rock Creek 24 VI 2006 (KD).

*Lycaena heteronea* (eastern Sierra Nevada "klotsi"): Mono County: Lower Rock Creek 24 VI 2006 (KD).

*Callophrys perplexa superperplexa*: Mono County: Lower Rock Creek Rd., larva on *Eriogonum kennedyi* 24 V 2000, emerged "March 2001" (Jim Brock).

*Callophrys lemberti*: Mono County: Hot Creek day area, 14 V 2006 (KD). Four individuals taken were *lemberti* phenotypes, not *C. comstocki interrupta* (although these are not reliably separated on the basis of just a few specimens).

*Cisincisalia spinetorum spinetorum*: Mono County: Taylor Creek Springs 20 VI 2006 (KD).

*Deciduphagus augustinus* (eastern Sierra Nevada): Mono County: Lower Rock Creek 14 V 2006 (KD).

*Incisalia eryphon pallescens*: Mono County: Lower Rock Creek 14 V 2006 (KD); Sawmill Camp, Glass Mountain 20 VI 2006 (KD); Taylor Creek Springs 20 VI 2006 (KD), Bodie Hills in Bridgeport Canyon 22 VI 2006 (KD).

*Leptotes marina*: Mono County: Lower Rock Creek, common 14 V, 24 VI and 6 VII 2006 (KD).

*Echinargus isola*: Mono County: Lower Rock Creek 14 V and 24 VI 2006 (KD).

*Celastrina echo* (Desert mountains/ eastern Sierra Nevada segregate): Mono County: Hot Creek day area 14 V 2006 (KD); Lower Rock Creek 14 V, 24 VI and 6 VII 2006 (KD); Bodie Hills near Bridgeport Canyon 22 V 2006 (KD).

*Euphilotes glaucon glaucon*: Mono County: McGee Canyon and Taylor Creek Springs 20 VI 2006 (KD). Bodie Hills in Bridgeport Canyon 22 VI 2006 (KD) and off Bodie Rd. above 8000' 21-22 VI 2006 (KD).

*Euphilotes enoptes "aridorum"*: Mono County: Upper Lower Rock Creek Rd. 0.5 mi. SW of US 395 , ex larva on *Eriogonum elatum* 26 VII 84 (Gordon Pratt); Hwy. 395, 7.5 mi. N. of Lee Vining ex-larva on *E. elatum* ex larvae 16 VII 85 (G. Pratt); East Sweetwater Mtns., Rd. to Frederick Mine along Frying Pan Creek 6,5000' nr. E. elatum 19 VII 2005 (G. Pratt & JFE); Masonic Mtns, 4 to 5 miles E of Bridgeport Reservoir 7200' near E. elatum 20 VII 2005 (G. Pratt & JFE); near Mammoth Airport on *Eriogonum aridorum* 4 and 5 VII 2006 PAO.

*Glaucopsyche pius nevada*: Mono County: Bodie Hills 1-2 mi. W of Bodie and 1.5 to 2 mi. SW of Bodie, common 21 and 22 VI 2006 (KD).

*Glaucopsyche lygdamus* (eastern Sierra Nevada): Andrew Warren believes the name *orcus* (W. H. Edwards may apply to this population.): Mono County: Hot Creek 14 V 2006 (KD); Lower Rock Creek 14 V 2006 (KD); Bodie Hills 2 mi. W. of Bodie 21 VI 2006 (KD).

*Plebejus (melissa) fridayi*: Mono County: Mammoth Camp 22 and 28 VII 22 (JA Comstock). The name *melissa* in brackets above is based on controversy on what species the name *fridayi* actually applies to.

*Plebejus icarioides fulla*: Mono County: Subalpine forest W below Saddlebag Lake 31 VII 04 (KD, placed as ssp. *icarioides* in original records section), 13 VIII 06 (KD).

*Plebejus shasta calchas* Mono County: Ridge (9200') 1.5 to 2 mi. SW of Bodie 22 VI 2006 (KD).

*Plebejus lupini goodpasturei*: Mono County: McGee Canyon and Taylor Creek Springs 20 VI 2006 (KD); Bodie area and Bodie Hills (including Bridgeport Canyon) E of US 395: 21 and 22 VI 2006 (KD). Blend zone with southern Sierra populations: Lower Rock Creek 14 V 2006 (KD); Tioga Pass Rd. W of Lee Vining at 7500' 26 VI 99 (KD) and Warren Creek at 9000' 5 VII 06 (KD).

*Agriades cassiope cassiope*: Mono County: NW side of Greenstone Lake 12 VIII 06 (PAO, Howard Grisham, Ricky Patterson & KD); 15 VIII 06 (R. Patterson).

## NYMPHALIDAE

*Phyciodes pulchellus*: (Black eastern Sierra Nevada). Mono County: Lower Rock Creek 24 VI 2006 (KD). Populations at Taylor Creek Springs 20 VI 06 (KD) and Hot Creek 24 VI 06 (KD) appear to be intermediates to *vallis*.

*Nymphalis milberti subpallida*: Mono County: Bodie Hills 8000' 3 mi. W of Bodie off Bodie Rd. 21 VI 2006 (KD). Very large population in open wet meadow on nettles.

*Limnitis weidemeyerii* near *latifascia*: Mono County: Bridgeport Canyon 22 VI 2006 (EARLY for state, KD).

## SATYRIDAE

*Neominois ridingsii pallidus*: Mono County: McGee Canyon Rd. at approx. 7000' (near Glass Mountain), common 20 VI 2006 (KD); Taylor Springs 20 VI 2006 (KD); Bodie Hills in Bridgeport Canyon 1.5 to 2 mi. S. of Bodie Rd. 22 VI 2006 and stray taken on ridge 9200' 1.5 to 2 mi. SW of Bodie 22 VI 2006 (both KD).

## ADDITIONAL NOTES ON TAXONOMIC ISSUES AND COLLECTING FINDS IN THE YOSEMITE REGION

Since the first section of this publication was published, a number of taxonomic issues have arisen and other new information has come to light. Some name changes affecting the names of Yosemite butterflies are proposed in various publications. Some of those names are not used here pending review and acceptance of those names by the scientific community. Issues involved are usually mentioned so readers will be aware of them.

*Lycaena xanthoides* and *Lycaena editha* were found sympatric and synchronic together in Lower Rock Creek, Mono County on 24 VI 2006 by the author. More collecting and rearing here would be necessary to research the taxonomic issues between these two entities.

*Callophrys comstocki interrupta*: Reported records from Hot Creek (Mono County) likely refer to *Callophrys lemberti*. Green *Callophrys* taken there (one by Michael Smith labeled as *comstocki* but actually examined by Andrew Warren and four specimens collected there by the author (Davenport) appear to be *lemberti*. *Callophrys comstocki interrupta* does occur in the White Mountains of California and Nevada SE of the Yosemite region.

*Plebejus fridayi*: Scientific researchers (Gompert, Fordyce, Forister, Shapiro & Nice, 2006) have now recognized alpine populations of the butterfly long known by many authors as *fridayi* as a species. Their view is that this butterfly arose as a hybrid of two existing species (*melissa* and *idas*). James Scott (2006) expressed similar conclusions in his discussion of this group and recommended the name combination *P. atrapraetextus fridayi*. The name *fridayi* (Chermock, 1944) may prove to apply to high elevation populations of *P. melissa* different from the alpine entity on the high Sierra Nevada Passes. The name *fridayi* is applied herein to the newly recognized alpine species, but further studies may show that it applies to a different entity in the *Lycaeides* complex.

*Phyciodes pulchellus* (southern Sierra Nevada segregate): Populations at lower elevations of the west slope of the Sierra Nevada from Yosemite National Park south to Kern County present variable black and orange phenotypes that resemble both nominate *pulchellus* and *montanus*.

*Nymphalis antiopa*: Yosemite populations have been included under the nominotypical subspecies by most workers. Norbert Kondla (pers. comm.) states that U. S. and European populations differ. Andrew Warren (2005) believes such a view is questionable because of variation within populations. The matter is not resolved here.

*Neominois ridingsii pallidus*: Records now demonstrate the close connecting links to this insect in the subalpine Sierra Nevada and the Great Basin. See records above.

## CORRECTIONS OR CLARIFICATIONS FOR THE YOSEMITE BUTTERFLIES TEXT, VOLUME FIVE, NUMBER ONE.

### Type Locality Issues:

*Parnassius clodus sol*: TL is Baxters, Placer County (Shepard & Shepard in Howe, 1975). The TL given by Miller & Brown in 1981 was Nevada (=Sierra Nevada?).

*Colias philodice eriphyle*: TL given by Miller & Brown in 1981 was the English name "Lake Lahache" (British Columbia). Norbert Kondla reports that the more correct name is the French name "Lac la Hache" which is the name for that locality used in maps of that region.

*Satyrium californicum californicum*. The TL given in the first edition (Text) was actually the TL for "*Thecla borus*", currently viewed as a synonym of this taxon. The correct TL is actually "California", restricted to Capell Creek, 9 mi. NNE of Napa, Napa County, California. (Miller & Brown, 1981).

*Euphydryas chalcedona chalcedona*: The TL given in the first edition (Text) was actually the TL for *Melitea cooperi*, currently viewed as a synonym of this taxon. The correct TL is believed to be near San Francisco (Miller & Brown, 1981).

## Records Section:

**Tuolumne County:** Under *Agriades podarce cilla*, the Deadman Creek record for 29 VII 99 was not collected by JGP but is likely a valid record.

**Mono County:** Obsidian Camp Road is also known as Little Walker River Rd. Mill Creek Road records by John G. Pasko were actually from Mill Canyon Rd. There is actually a Mill Creek Rd. at Walker but it is in a residential area. The Bodie Rd. record for *Apodemia mormo mormo* is actually 0.3 mi. E. of US 395. John Pasko has no records for *E. anicia wheeleri* from Tom's Place though others have reported it there. Under *E. chalcedona olancha*: John Pasko's record from Owens River Gorge is actually Owens Gorge Rd. E. of Tom's Place.

*Satyrium fuliginosa* (=semiluna) *maculadistinctum*: Some or all records from the Minaret Summit area reported from Mono County may prove to be in Madera County.

*Plebejus melissa paradoxa*: Reported records from Upper Summers Canyon (Mono County) are incorrect. The collected blues were all *P. fridayi*.

*Plebejus icarioides*: The record cited for this species from subalpine forest W of Saddlebag Lake 31 VII 04 (KD) is likely ssp. *fulla*, not ssp. *icarioides*.

*Speyeria coronis* (Eastern Sierra Nevada): Records of "*coronis*" from Obsidian Camp Rd. (=Little Walker River Rd. 17 VIII 2000 (KD) are questionable. Many if not all were misidentified *Speyeria zerene malcolmi*.

*Chlosyne hoffmanni hoffmanni*: Some or all records from the Minaret Summit area reported from Mono County may prove to be in Madera County.

## Various corrections:

Pg. 5: Under *Thorybes diversus*: Should read Sivels Mountain, NOT "ountain"

Pg. 14: Under *Papilio indra indra*: Robert Langston (and others) have found individuals at Saddlebag Lake that resemble subspecies *phyllisae*. The overall population does not.

Pg. 15: Under *Pontia occidentalis occidentalis* under General comments: Should read "Underneath", NOT "nderneath."

Pg. 24: Under *Satyrium sylvinum megapallidum*: Under Taxonomic note: Correct spelling of Humbolt River to Humboldt River.

Pg. 53 in Yosemite checklist. The correct name is *Callophrys lemberti lemberti*, NOT "*lembeti*."

Pg. 63: in Records Section: The correct name is *Callophrys lemberti lemberti*, NOT "*limberti*."

Pg. 70 in Records section. Under *Neominois ridingsii pallidus*: A reference to *O. chryxus stanislaus* has the first "s" in "stanislaus" incorrectly capitalized.

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