

NEW RECORDS, RANGE EXTENSIONS, AND FIELD DATA
FOR COLORADO BUTTERFLIES AND SKIPPERSJAMES A. SCOTT, SCOTT L. ELLIS, AND DONALD EFF
Lakewood, Hotchkiss, and Boulder, Colorado

In the decade since the publication of *Colorado Butterflies* by Brown, Eff, and Rotger, 13 species of butterflies and skippers new to Colorado (marked with *) and many range extensions in Colorado have been discovered. Additional records for rare or little-known species, and many foodplant records, are also included in this report. Changes in nomenclature have been largely avoided. Abbreviations of collectors used in the records are: SLE (Scott L. Ellis), JAS (James A. Scott), DE (Donald Eff), and SJ (Samuel A. Johnson).

NYMPHALIDAE

Euptychia pyracmon Butler (= *henshawi* Edwards, Ehrlich & Ehrlich, 1961). Lee Miller collected a specimen which he believes to be this species in Don Eff's front yard in Boulder on July 24, 1957. This record is only the second for the State and the first for the northern portion.

Euptychia dorothea (Nabokov). Don Eff collected this species on Flagstaff Mountain, Boulder Co., July 22, 1961. It is common in Fremont and El Paso counties from about July 15 to August 18.

Oeneis alberta oslari Skinner. This arctic, formerly recorded only from South Park, is now known to range south to Fremont County and north to Middle Park. It occurred commonly in Devil's Hole, Echo Canyon, Fremont Co., June 10, 1965 (Glenn Scott). Eff and Ellis have taken it commonly in high grass growing in sage flats near lodgepole pines in Grand Co.: 1 mi. W. of Tabernash, 9,000 ft., May 26 (1963) to June 27 (1962) (DE, SLE); Fraser, 1966 (DE).

Danaus gilippus (Cramer). A small colony of this species was established for one year in an alkali seep where milkweed is common, in Stingley Gulch, 6,000 ft., Delta Co., August 1959 (SLE). Other sightings on the western slope are: Unaweep Can., 10 mi. E. Gateway, and nr. Paradox, Montrose Co., both August 13, 1966 (SLE, SJ). Specimens were taken at Salida, Fremont Co., July 11, 1966, and seen in Boulder, September 23, 1966 (both JAS).

Heliconius charitonius vazquezae Comstock & Brown. Lee Miller collected one specimen in Strain Gulch, south of Morrison, Jefferson Co., July 25, 1957.

Speyeria idalia (Drury). One worn female was collected at Indian Park, west of Sedalia, Douglas Co., August 24, 1961 (W. Cobban), in

the foothills of the Front Range. It was caught in a grassy meadow within a ponderosa pine forest.

Speyeria cybele carpenterii (Edwards). This subspecies has been taken north of the San Juan Mountains in several localities, primarily in the Uncompahgre and Dolores River drainages. Specimens are known from the LaSal Mountains in extreme western Montrose County. Localities are: Owl Creek Pass Road, 8,000 ft., Ouray Co., July 28, 1963 (SLE); Tabeguache Creek, 8,000 ft., Montrose Co., August 2, 1964 (SLE).

Speyeria aphrodite byblis (Barnes & Benjamin). The name *byblis* is used here to denote western slope *aphrodite* because of the smaller size and lighter color of these specimens as compared to eastern slope material. Although it probably occurs elsewhere, Ellis has not seen *byblis* in any areas other than the Rabbit Ears Pass area in Routt Co. and the North Fork and Gunnison River drainages of Gunnison and Delta cos. *S. aphrodite byblis* is extremely common on Highway 135 east of Somerset in Gunnison Co., and along the Leroux Creek Road at about 7,500 feet in Delta Co. (both SLE).

Speyeria nokomis (Edwards) has been taken in three localities in western Colorado, two of which are wet, freshwater, sedge seeps. A single worn female was taken on Rogers Mesa, 5,850 ft., Delta Co., August 25, 1959 (SLE), and established colonies have been discovered by Ellis near the Dolores River in Mesa Co., 6,200 ft., and in the Paradox Valley in Montrose Co., 5,200 ft.

Brown (1965: 47-54) has shown that the type locality for *nokomis* is probably in southeastern Utah or southwestern Colorado, rather than "Hayden and Sneffels Mts." in Ouray County.

Speyeria mormonia eurynome (Edwards). This montane species was taken at two places on the plains by Scott, a worn female at Lakewood, Jefferson Co., in September, and another worn female in Boulder, October 8, 1965.

* *Boloria epithore chermocki* Perk. & Perk. Several localities in the southwestern mountains have been discovered to harbor this species. The nearest states where it has been previously recorded are Montana and Idaho (Perkins & Perkins, 1966). Brown (*in litt.*) gives the following Colorado records: Rico, Dolores Co., August (Frank Clay Cross); Iron-ton Meadows, Ouray Co., June 18, 1961 (S. F. Perkins).

Boloria eunomia caelestis (Hemming), previously recorded only from the eastern slope, has been taken in Gunnison County: 5 mi. south of Tincup on Willow Creek, 10,700 ft., July 19, 1964 (SLE).

Euphydryas anicia alena Barnes and Benjamin, occurs in Moffat County. Captures were made 5 miles south of Maybell, on Lay Peak,

and 10 miles west of Craig, on June 13, 1965 (JAS). They were caught on sage-covered hilltops, with the more common *editha*, from which they are very distinct. Ellis discovered a curious population of *anicia* on the Black Mesa Road, Grand Co., 9,500 ft., on July 15, 1963, in which two forms, one black and one red, fly together and show little phenotypic blending.

* *Euphydryas editha* (Boisduval). This species, although previously unrecorded from Colorado, has been found to be widely distributed in western Colorado, including Moffat County, transition zone localities in the Gunnison and Uncompahgre River drainages, Middle Park, and the San Juan Mountains. The species is remarkably constant throughout its range in Colorado. F. M. Brown, who is studying San Juan Mountains specimens, thinks that this material represents a population most closely related to *lehmani* Gunder among described species.

DELTA Co.: Carl Smith Reservoir, 8,000 ft., June 15, 1958 (SLE). GRAND Co.: 1 mi. W. of Tabernash, 9,000 ft., June 27, 1962 (SLE, SJ); Gore Pass road, June 27, 1962 (SJ). GUNNISON Co.: Almont, July 6, 1957 (DE); Curecanti Creek, 8,000 ft., June 21 (1962) to June 25 (1961) (SLE); Coal Creek, 7,500 ft., June 23, 1964 (SLE); Black Mesa Road, 8,000 ft., July 29, 1965 (SLE). MOFFAT Co.: Lay Peak and 10 mi. west of Craig, June 13, 1965 (JAS). MONTROSE Co.: 25 Mile Ranger Station, 8,500 ft., July 16, 1965 (SLE). OURAY Co.: Owl Creek Road, east of Ridgeway 5-6 miles, first two weeks of June (F. M. Brown). SUMMIT Co.: Green Mountain Reservoir, June 25, 1962 (W. Cobban).

Chlosyne fulvia (Edwards). This checkerspot has been found in several localities in the Arkansas River drainage system on the eastern slope. The two specimens figured by Brown *et al.* (1957: 80) are quite unlike specimens which Scott and Johnson have taken on the eastern slope. The latter are similar to western slope specimens. At Pueblo the foodplant is *Castilleja integra* (Scott, 1968) growing on gypsum-rich shale. Although some of Johnson's specimens have been taken at granitic soil sites, *fulvia's* distribution in association with gypsum should be investigated. Eastern slope records:

EL PASO Co. (all SJ): Star Ranch, 6,000 ft., late May and late August; Highway 115 near main entrance to Fort Carson; Ute Pass, 9,000 ft., May 29, 1965. FREMONT Co.: gypsum quarry on Fleming Mountain, July 12, 1965 (JAS); Box Canyon, July 6, 1966 (JAS). PUEBLO Co.: Rock Canyon anticline north and south of the Arkansas River, and Wild Horse Park, May, July, and August (three broods) (JAS).

Western slope specimens probably should not be called *cyneas* (Godman & Salvin) in view of their similarity to eastern slope material. Ellis has found that a dwarf *Castilleja* is the foodplant. Eff's and Ellis' records for the western slope follow.

DELTA Co.: N. confluence of Gunnison and Smith Fork rivers, 5,500 ft., May 19, 1963 (SLE); Black Ridge, 6,000 ft., June 5, 1965 (SLE); gypsum claims 5 mi. southeast of Austin, 6,000 ft., June 3, 1965 (SLE). MESA Co.: Black Ridge, 7,000

ft., May 17 to 30, 1961 to 1965 (DE, SLE, and David Bauer); Colo. Nat. Mon., May 17, 1961 (DE, D. Bauer). Ellis believes that the dryness of these localities precluded any August captures.

* *Chlosyne acastus* (Edwards). This species was first taken in Colorado by Mr. Hugo Rodeck in the San Luis Valley. Since then it has been found to be widespread throughout the Upper Sonoran Zone of western Colorado. It is often very abundant, at times swarming, at lower elevations in Delta, Mesa, Rio Blanco and Moffat counties (SLE, JAS), where it is generally distributed on shale hills and into the juniper-pinyon belt on the mesas at about 7,500 feet. Ellis has found *acastus* closely associated with a species of *Erigeron*, and believes this may be the foodplant. ALAMOSA Co.: Mosca Pass Trail, Great Sand Dunes Nat. Mon., June 25, 1955 (H. Rodeck). MESA Co.: Saddle Rock Campground, May 14, 1960 (DE); Trail of the Serpent (both localities in Colo. Nat. Mon.), May 18, 1961 (David Bauer).

Chlosyne damoetas (Skinner). Ellis has found this species to be extremely common in the San Juan Mountains, particularly in the Wilson Peak area of San Miguel Co., in July and August. Don Eff records it from Copper Lake in Gunnison Co., July 18, 1960. It is now recorded from the Sangre de Cristo Mountains on Galena Peak, Fremont Co., July 14, 1966 (Kathy Scott). It was previously unrecorded from the western slope.

Phyciodes picta Edwards. One northern record has been found. Bob Pyle took the species at the Highline Canal, Arapahoe Co., early June, 1965, on the eastern plains.

Phyciodes pallida (Edwards). Brown (1966: 443-448) has restricted the type locality of *pallida* to Flagstaff Mountain, Boulder County, and according to priority, *pallida* is the name that should be applied to material from the Colorado Front Range. Bauer (in Ehrlich & Ehrlich, 1961) has presented evidence for considering *pallida* as separate from *mylitta* (Edwards). *P. pallida* was taken on September 7, 1966, in Clear Creek Canyon one mile west of Golden, Jefferson Co. (JAS). This specimen represents the first record of a second brood of *pallida* in Colorado.

Phyciodes texana (Edwards). A worn specimen caught in Italian Gulch, near Coaldale, Fremont Co., June 27, 1966 (Kathy Scott) represents the second record for the state.

Junonia coenia (Hubner). Several specimens were taken in the northern part of the state by Jim Eff, on Chautauqua Mesa, Boulder, October 5, 1957. This is the second record from northern Colorado.

* *Marpesia petreus* (Cramer). This species was taken as a stray in southeastern Colorado. William H. Howe caught a battered individual

on alfalfa near Olney Springs, Crowley County, August 31, 1958, the first state record.

LYCAENIDAE

Apodemia mormo mejicanus (Behr). Specimens from the Rock Canyon Anticline, Pueblo County, and specimens from Fremont County, are closest to the subspecies *mejicanus*. The name *cythera* (Edwards) should not be applied in Colorado (Opler & Powell, 1962).

Atlides halesus (Cramer). Ellis has found this species in several areas of the North Fork River drainage, particularly in Leroux Creek in Delta County. The species seems to be associated with mistletoe growing on juniper in this area. Specimens have been taken from mid-May to late August.

Satyrium acadica coolinensis Watson & Comstock. This species has been found in association with serviceberry (*Amelanchier*) in Delta and Gunnison counties. A female was observed to oviposit on serviceberry rather than willow, its reported host, although the species has been found on willow along the Smith Fork River in Delta County. The species flies during an extremely short period in late July. It particularly visits flowers of a small *Chrysothamnus*.

DELTA Co.: Leroux Creek, 7,500 ft., July 27, 1962; Hubbard Creek, 7,500 ft., July 22, 1962. MONTROSE Co.: Highway 92 near Crystal Creek, 7,800 ft., July 15, 1962. GUNNISON Co.: W. Muddy Creek, 8,500 ft., July 27, 1964 (all SLE).

Satyrium sylvinus (Boisduval) is occasionally very common in Delta and Gunnison counties. It may be found in almost any willow-bordered stream between 5,000 and 7,000 feet in the North Fork Valley, and is commonly found in the Dolores and Uncompahgre drainages. Adults fly from mid-July to late August (SLE).

Satyrium liparops aliparops Michener & dos Passos. At Lakewood, Jefferson County, on the plains, this species feeds on box elder (*Acer negundo*). Larvae, pupae, and adults have been found on small trees growing in a lush gully. Adults fly in late June and early July. More than a third of the specimens in this colony, especially females, have a reddish flush on the dorsal surface of the forewing. The 1965 season's summary of the *News of The Lepidopterists' Society* erroneously listed the locality as Fremont County. *S. liparops* is rather widespread through the oak belt in Routt, Delta, Gunnison, and Garfield counties. Nearly all the specimens Ellis has caught have been taken in oak thickets, although specimens were taken on box elder on the Smith Fork River in Delta County. Nearly all specimens from these areas have rusty patches on the forewings of both sexes, although to a lesser extent on females.

Satyrrium fuliginosum semiluna Klots. Ellis and Johnson have taken this species in large numbers on dry sage hillsides with various species of *Eriogonum* in abundance, but the foodplant could not be determined.

GRAND CO.: Highway 40 near Big Muddy Creek, June 28, 1962 (SLE, SJ); Beaver Creek, July 3, 1963 (William Cobban). MOFFAT CO.: 2 miles southeast of Craig, June 13, 1956 (DE). ROUTT CO.: 4 mi. north of Hayden, June 29, 1962 (SLE, SJ); shrubby hill just west of Steamboat Springs, July 11, 1962 (JAS).

* *Tmolus azia* Hewitson. One specimen of this species was collected by Jim Eff on Chautauqua Mesa, at Boulder, on July 16, 1957. A possibility that might account for its fresh appearance appears to be that some Texan, many of whom spend their summers at Chautauqua, unknowingly transported a larva or pupa there.

Callophrys spinetorum (Hewitson). This species seems to be rare on the western slope. In the Black Ridge area of Mesa County, *spinetorum* may be associated with a mistletoe growing on *Pinus edulis*. Shields (1966) gives records from Gunnison, Mesa, and La Plata counties.

Callophrys apama homoperplexa Barnes & Benjamin. A female was observed to oviposit on *Ceanothus fendleri* on Chautauqua Mesa, Boulder, May 30, 1966 (JAS).

* *Callophrys affinis* (Edwards). Although *C. affinis* had been suspected as a Colorado resident, collection records have not appeared until recently. Eff took a fresh specimen one mile west of Tabernash, 9,000 ft., May 30, 1966, and Ellis caught what appears to be *affinis* near Basalt, Eagle Co., in early June. Tilden (1963) gives four records from the eastern slope.

Callophrys eryphon (Boisduval). Ellis has found this species in association with *Pinus edulis* in Delta County, and in association with *Pinus contorta* on Rabbit Ears Pass in Routt County.

Lycaena editha montana Field. Recently this species has been collected commonly throughout Routt and Grand counties on the western slope. Now it may be counted as an eastern slope resident, having been collected at Tuxedo Park, Rocky Mountain National Park, August 10, 1934 (G. H. and J. L. Sperry, in AMNH), and at Fort Collins, Larimer Co., July 8, 1960 (Ed Marker).

* *Lycaena mariposa penroseae* Field. Bob Pyle of Denver, Colo., in correspondence with Scott, wrote about this species: "The data for *Lycaena mariposa* are as follows: Fort Collins, Colorado, July 8, 1960, Ed Marker. It was caught in a weedy meadow near the city limits, and Ed told me it was flying in profusion, along with *L. editha*." Judging from this record, the species could occur also on the western slope in the northern part of the state.

Lycaena nivalis browni dos Passos. Eff has found this mainly western slope insect twice on the Corona Pass Road, Boulder Co., on the eastern slope, on June 30, 1963, and July 11, 1962.

Glaucopsyche lygdamus oro Scudder and *Scolitantides piasus daunia* (Edwards) have both been observed to oviposit on lupine, probably *Lupinus argenteus* Pursh, near Boulder.

Everes comyntas valeriae Clench. Females have been observed ovipositing on *Astragalus flexuosus* Dougl. near Boulder. Only four of 64 males collected in Boulder and Jefferson counties has the orange lunule on the upper surface of the hind wing, so *valeriae* is presumably the northern Colorado representative.

Philotes spaldingi Barnes & Macdunnough. Rotger has reported to us that the food plant is *Eriogonum racemosum* Nutt.

Philotes enoptes ancilla Barnes & Macdunnough and *P. battoides centralis* Barnes & Macdunnough. Rotger (*in litt.*) reports *Eriogonum umbellatum* Torr. as the foodplant for *battoides centralis*, and Scott has taken 120 specimens of *ancilla* on or near *E. umbellatum*, so probably this is the foodplant for both species. Assuming the same foodplant for both, perhaps interspecific competition has made the two species almost completely allopatric in Colorado; only one verified record is known where the two species occur together. *P. enoptes* occupies the northern, and *battoides* the southern half of the state west of the plains.

* *Philotes rita coloradensis* Mattoni. This species, a new record for the state, has been found to be abundant in the San Luis Valley, in the Wet Mountain Valley, along the Arkansas River in the mountains, and occurs on the plains east of Colorado Springs (Mattoni, 1966). Oviposition deep in the flowers has been observed on *Eriogonum effusum* Nutt. in Fremont and Lincoln counties, and adults occur on this plant in Saguache County. Possible records of this species from Cheyenne and Prowers counties are given by Brown *et al.* (1957: 173). It is a prairie species; it typically occurs with *Pyrgus scriptura*; *Yvretta rhesus* (Edwards) flies in the same localities in May. *P. rita* often flies with *P. battoides centralis* until the end of July.

CHAFFEE CO.: Chalk Creek Trout Farm, August 11, 1965 (JAS). CUSTER CO.: and FREMONT CO.: many localities in the Wet Mountain Valley around Westcliffe, northwest to the Arkansas River around Cotopaxi, July 18 to August 23, 1965 (JAS). EL PASO CO.: west from Kendrick, in roadcuts along highway 94, to 15 miles east of Colorado Springs, August 21, 1964 (R. Mattoni) (Mattoni, 1966). LINCOLN CO.: south of Kendrick, August 21, 1964 (R. Mattoni) (Mattoni, 1966) (type locality). SAGUACHE CO.: 2 miles southwest of Villa Grove, 18–19 July, 1966 (Kathy Scott).

Plebejus acmon lutzii dos Passos. This feeds on *Eriogonum*, presumably *E. effusum*, near Westcliffe in Custer County, as does *Philotes rita*.

Whereas *rita* deposits eggs singly inside the perianth, *acmon* deposits eggs singly on a pedicel.

PIERIDAE

Colias scudderi ruckesi Klots. This subspecies was collected by Richard Holland near Whiskey Pass, Costilla Co., August 9, 1964.

Phoebis sennae (Linnaeus). A single specimen of this migratory sulphur was taken on Rogers Mesa, Delta Co., July 24, 1964 (SLE). *P. sennae* is seen regularly in the fall in Boulder and Jefferson counties.

Anthocaris sara inghami Gunder. This subspecies, rather than *julia* Edwards, occurs at lower elevations on the western slope. In Delta County, Ellis found *inghami* common in the pinyon-juniper belt along Leroux Creek, from mid April to late May, 1961–62, and in Smith Fork Canyon. Eff found it at Black Ridge, Mesa Co., May 13, 1960.

Euchloe creusa (Doubleday). This butterfly has been found widely distributed in the western part of the state. Northern records follow.

MOFFAT CO.: 5 miles south of Maybell, and 10 miles west of Craig, Lay Peak, June 13, 1965 (JAS). MESA CO.: Black Ridge, May 11–22, 1961–66 (DE). DELTA CO.: common (SLE).

Colias caesonina (Stoll). One specimen was taken on Flagstaff Mountain, Boulder Co., June 15, 1958 (Jim Eff).

Pieris beckerii Edwards. Several eastern slope records for this species have been found. Gordon and Henrietta Thayer of Boulder found it in Deer Creek Canyon, 7½ miles north of Boulder on Highway 7, April 19, 1958. It occurs along the Arkansas River in Fremont County (JAS), and it is common near Pueblo in late May and August (JAS).

* *Ascia monuste* (Linnaeus). The first definite capture of this species in Colorado was at Fountain Valley School, El Paso County, 1957, by F. M. Brown.

Neophasia menapia (Felder & Felder). In Fremont, Montrose, and Ouray counties many captures have been made among pinyon pine (*Pinus edulis*) with no other species of pine present, so probably pinyon pine serves as a foodplant.

PAPILIONIDAE

Papilio bairdii Edwards. *P. bairdii* and the form *brucei* Edwards and so-called subspecies *hollandii* Edwards have been found on the eastern slope and on the plains. A specimen of *brucei* in the University of Colorado Museum from the summit of Two Buttes, Prowers County, August 10, 1957, was caught by Dr. Hugo Rodeck. Scott found all three forms flying together in gulches and on hilltops in Fremont County between

Cotopaxi and Salida. Larvae and eggs were found on *Artemisia dracuncululus* Linnaeus. Form *bairdii* constituted 70%, *brucei* 26%, and *hollandii* 4% of the sample. Raymond Jae caught a specimen in his back yard in Denver, September 1, 1963, which appears to be a hybrid between *brucei* and *polyxenes*. This record, and captures of *brucei* from southeastern Wyoming on the plains (DeFoliart, 1956), indicate that *brucei* is widespread over the eastern part of Colorado. On the western slope the only new record is a specimen of *bairdii* from Cedar Mesa near Curren Creek, Delta Co., June 17, 1960. This specimen may represent a spring brood in Colorado; all other Colorado specimens are of the long second brood, which has been recorded on the wing from July 16 to August 27.

Papilio bairdii oregonius Edwards. Specimens taken by Hugo Rodeck at Harper's Corner, Dinosaur National Monument, Moffat Co., 7,600 ft., July 15-16, 1949, tend toward *oregonius* rather than *brucei*. As *oregonius* has been recorded from "southern Nebraska" (Kent Wilson, in Ehrlich & Ehrlich, 1961), perhaps it also occurs on the plains in northeastern Colorado.

Papilio nitra Edwards. This swallowtail, thought possibly to be a hybrid between *P. zelicaon* Lucas and *P. polyxenes* Fabricius, has been found to be generally distributed at the edge of the Front Range north to Laramie, Wyoming. Records are: Jarre Canyon, Douglas Co. (JAS); Mother Cabrini Shrine, Jefferson Co. (RJJ); Chautauqua Mesa (DE), top of Green Mountain (JAS), and north of mouth of Boulder Canyon, (John Justice), the latter three in Boulder County; from May 1 to about June 5. It always flies with *zelicaon*, but in Scott's experience, never with *polyxenes*. Where *polyxenes* and *zelicaon* fly together, as in Coal Creek, Jefferson County, apparently *nitra* is not present. A natural mating of a male *zelicaon* with a female *polyxenes* was observed on Table Mountain, Jefferson County, May 20, 1966 (JAS), so hybridization cannot be ruled out.

Papilio indra minori Cross. Ellis has taken this subspecies in the canyons below the Black Canyon National Monument, at the confluence of the Gunnison and Smith Fork Rivers, 6,000 ft., Delta County, from May 19, 1963, to June 5, 1965. Thomas C. Emmel has taken the subspecies on the south rim of the Monument. Here the foodplant may be *Lomatium grayi* Coult. & Rose growing on the canyon walls. Emmel & Emmel (1964) give *Lomatium eastwoodae* (C. & R.) Macbr. as the foodplant for Mesa County. Dark *minori*-like specimens should be expected all over the western mesas. Brown *et al.* (1957: 214) figure a female *minori* as *bairdii*.

HESPERIIDAE

Erynnis telemachus Burns. Burns (1960) has given the name *telemachus* to the species called *plautus* by Brown *et al.* (1957: 256).

Erynnis brizo (Boisduval & Le Conte) and *burgessi* (Skinner). These two names as used in *Colorado Butterflies* refer to *brizo burgessi* according to Burns (1964). Typical *brizo* does not occur in Colorado. Burns gives a record of *b. burgessi* from Glenwood Springs, May 8 (USNM), which is a northward extension of the recorded range on the western slope.

Erynnis persius fredericki H. A. Freeman and *lucilius afranius* (Lintner). Scott observed several females of *afranius* ovipositing on *Lupinus* in Gregory Canyon, Boulder County, in the spring of 1966, and Samuel A. Johnson observed a female of one of these species ovipositing on grass on Chautauqua Mesa, Boulder County.

Pyrgus xanthus Edwards has been found in small numbers flying over gravel beds near streams.

CHAFFEE CO.: 5 mi. west of Buena Vista, 9,000 ft., May 16 and June 8, 1965 (SJ). EL PASO CO.: Beaver Crk., Rampart Range, 9,000 ft., May 22, 1966 and July 4, 1965 (SJ). GUNNISON CO.: Curecanti Crk., 8,500 ft., June 21, 1962 (SLE). MONTROSE CO.: Cottonwood Crk., Uncompahgre Plateau, 8,200 ft., June 4, 1961 (SLE). SAN JUAN CO.: Howardsville, July 3, 1965 (JAS).

Pyrgus scriptura (Boisduval). This species occurs in the San Luis Valley, in the Wet Mountain Valley, and on the northeastern plains. It is a prairie species.

CUSTER and FREMONT COUNTIES: Wet Mountain Valley from Westcliffe northwest, July 18 to August 20, 1965 (JAS). SAGUACHE CO.: 2 miles southwest of Villa Grove, July 18–19, 1966 (Kathy Scott). WELD CO.: Black Hollow Oil Field, June 30, 1964 (JAS).

* *Heliopetes ericetorum* (Boisduval). This species was taken 3 miles east of Somerset, Gunnison County, July 6, 1962, by D. S. Chambers (genitalia examined).

Pholisora mejicana (Reakirt). This skipper was taken in Kerr Gulch, Fremont County, June 22, 1966, and July 30 and August 26, 1965 (JAS), where it was flying with *Pholisora catullus* (Fabricius).

Pholisora alpheus (Edwards) occurs in areas where shale or other rock is sparsely covered with vegetation. A northward extension to Moffat County may now be reported.

DELTA CO.: Big Gulch, Redlands Mesa, 5,800 ft., May 31, 1964 (SLE). MOFFAT CO.: 10 mi. west of Craig, June 13, 1965 (JAS). OURAY CO.: Billy Creek, 7,000 ft., June 26, 1965 (SLE). PUEBLO CO.: 1 mi. north of Pueblo, August 5, 1962 (JAS). OTERO CO.: La Junta, July 7, 1966 (Glenn Scott).

* *Pholisora libya lena* (Edwards). This skipper has been found in association with the Mancos Shale in Delta County, usually flying singly on steep, nearly barren hillsides, although the species is attracted to *Helianthus* and *Chrysothamnus* when these plants are in bloom. Adults emerge from mid-June to late August. June specimens are much darker than late August specimens.

DELTA Co.: North Fork Gunnison River, 3 mi. south of Hotchkiss, 5,500 ft., June 10 to August 25, 1962 (SLE). MESA Co.: near Escalante siding, 5,000 ft., July 6, 1962 (SLE).

* *Ancyloxypha numitor* (Fabricius). Dr. Hugo Rodeck caught a specimen in tall grass in a wet meadow below Two Buttes Reservoir, Baca County, August 10, 1957, on the plains in the southeast corner of the state.

Yvretta rhesus (Edwards). Captures in southeastern Wyoming by Defoliart indicate that this species could occur on the plains in northern Colorado. It occurs in the Wet Mountain Valley, as Cockerell caught a specimen at Westcliffe, May 25, in Custer County.

Oarisma edwardsii (Barnes). This Colorado rarity was taken by Samuel Johnson at Rock Creek, El Paso County, June 26, 1965.

Stinga morrisoni (Edwards). This skipper has been found in the Arkansas Valley, and an additional northern record has been discovered.

EL PASO Co.: Beaver Crk., Rampart Range, late May-June 27, 1962-66; Star Ranch, late May-June 21, 1962-65; Williams Canyon, June 14, 1965 (all SJ). CHAFFEE Co.: 5 mi. W. Buena Vista, June 8, 1965 (SJ). FREMONT Co.: just southeast of Bear Creek, near Salida, June 15, 1966 (JAS); 1 mile northeast of Swissvale, June 20, 1966 (JAS). JEFFERSON Co.: top of Genesee Mountain, June 6, 1966 (JAS).

Hesperia juba (Scudder). *H. juba* has been found on the eastern slope, where it has two broods.

BOULDER Co.: 3 mi. into Lefthand Can., May 23, 1962 (JAS); Gregory Canyon, May 19-29 (SJ, JAS). DOUGLAS Co.: mouth of Jarre Can., May 12, 1962 (JAS). JEFFERSON Co.: Lakewood, August 21-September 15 (JAS); Jefferson County Dump south of Golden, September 1, 1965 (JAS); Clear Crk. Can. 1 mi. west of Golden, September 7, 1966 (JAS).

Hesperia nevada (Scudder). This skipper occurs in the northwestern corner of the state in Moffat County, where it was taken by Scott at the localities listed for *Euphydryas editha* from that county. Most of the specimens have much wider white bands on the ventral surface of the secondary than specimens from Park County.

* *Hesperia ottoe* Edwards. Long thought to occur in the state, *ottoe* was found by Dr. Url Lanham at Marshall, Boulder County, July 7, 1961. The specimens, genitically determined as *ottoe*, are in the University of Colorado Museum.

Hesperia comma (Linnaeus). MacNeill (1964) has clarified the status of populations in this species, with the result that four names are recognized in Colorado; *ochracea* Lindsey and *manitoba* (Scudder) on the eastern slope, *colorado* (Scudder) on the higher mountains, and *uricola* Boisduval on the western slope.

Polites sabuleti (Boisduval). In the San Luis Valley, where it was previously reported (Brown *et al.*, 1957), *sabuleti* is locally common from Fort Garland north to the Great Sand Dunes National Monument (F. M. Brown). Ellis has found the species to be extremely common throughout low grassy areas in Delta and Mesa counties, on the western slope. It also occurs in alkaline seeps. Females have been seen to oviposit on lawn grass in many areas. *P. sabuleti* is double brooded, flying in June and in August. Surprisingly, a specimen has been taken in the Arkansas River Valley, on the eastern slope, on a hilltop at the mouth of Kerr Gulch, Fremont County, June 18, 1966 (JAS).

Polites coras (Cramer). Don Eff has taken a specimen in Bluebell Canyon, Boulder County, August 31, 1965. This record is the second for Colorado.

Ochloides yuma scudderi (Skinner). This skipper has been found in a few isolated alkaline seeps in Delta County, and in an extensive freshwater seep in Mesa County. Specimens taken in Colorado seem to be darker than typical *yuma yuma* from California, giving the name *scudderi* validity. All specimens Ellis has seen have been flying in August; no indication of a June brood has been found. Ellis' records follow.

DELTA Co.: Leroux Creek, 5,700 ft., August 11, 1960; Austin, 5,400 ft., August 1958; North Fork of the Gunnison River, 3 mi. south of Hotchkiss, 5,600 ft., August 25, 1962. MESA Co.: Unaweep Canyon, 10 mi. east of Gateway, 6,200 ft., August 15, 1964 to September 4, 1965. MONTROSE Co.: near Paradox, August 13, 1966 (SJ).

Atrytone delaware lagus (Edwards). A specimen of this rare skipper was captured at Deer Creek, Jefferson County, July 21, 1962 (JAS), and others were caught in Boulder County in Bluebell Canyon, July 4, 1958 and July 24, 1957 (DE), and on Flagstaff Mountain, Boulder County, July 19, 1958 (DE).

Amblyscirtes simius Edwards. This skipper was recorded previously from only the southern plains, but now has been found in the northern part of the State on Round Butte, Larimer County, June 29, 1964 (JAS), and in the Arkansas River Valley, one mile up Bear Creek near Salida on summits of low hills, June 15–19, 1966 (JAS). It is a prairie species, occurring only on the summits of low knobs.

MEGATHYMIDAE

Megathymus streckeri (Skinner). A range extension of this species from the San Luis Valley into the Gunnison River Valley has been reported. The record is two miles east of Sapinero, Gunnison River, 7,200 ft., Gunnison County, June 28, 1964 (SLE).

Megathymus yuccae navajo Skinner. This species occurs in the San Luis Valley, as indicated by a record from Rock Creek Ranch, Rio Grande County, near Monte Vista (larvae collected April 28, emerged May 13-15) (SJ).

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