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## Review of the *Speyeria egleis* complex in Montana, with the description of two new subspecies (Lepidoptera: Nymphalidae: Heliconiinae)

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**ABSTRACT:** Four phenotypically and geographically distinct sets of populations of *Speyeria egleis* are identified in Montana. Two new subspecies are named from northwestern and northcentral Montana. Two existing names are recognized (*S. e. macdunnoughi* from southwestern Montana, southeastern Idaho and northwestern Wyoming, and *S. e. albrighti* from central Montana. *S. e.* near *macdunnoughi* from Oregon and Washington is discussed.

**Additional key words:** Island ranges, Sweet Grass Hills, Morrell Mountain, Highwood Mountains.

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### INTRODUCTION

At the present time, thirteen described subspecies of *Speyeria egleis* (Behr, 1862) are recognized in North America (Pelham 2020). Of these, two occur in Montana, *S. e. macdunnoughi* (Gunder, 1932) and *S. e. albrighti* (Gunder, 1932). Historically, all Montana *egleis* populations with a brownish colored under hindwing disc have been assigned to *macdunnoughi* and all populations with an olive-green colored under hindwing disc have been assigned to *albrighti* (Ferris and Brown 1981; Kohler 1980). During the course of my study of Montana butterflies, I have identified at least four distinct sets of populations which can be phenotypically and geographically segregated. The purpose of this paper is to define the characters of these four distinctive populations and to describe two new subspecies.

### DISCUSSION

In this study, the two current subspecies of *S. egleis* are recognized. Two additional subspecies, one from northwestern Montana and another from island mountain ranges in northcentral Montana are designated below. Each of the subspecies is discussed and defined, and material examined for this study is listed. Forewing length measurements (from the junction with the thorax to the wing apex) are given in millimeters. The specimen figures are 0.8 life size and to scale.

*Speyeria egleis macdunnoughi* (Gunder, 1932)  
(Figs.1-20)

*Argynnis macdunnoughi* Gunder, 1932, Can. Entomol. 64(12): 280-281.

*Argynnis macdunnoughi* Gund.; McDunnough, 1938, Mem. S. Calif. Acad. Sci. 1: 15.

*Speyeria (Speyeria) egleis macdunnoughi* (Gunder); dos Passos and Grey, 1947, Amer. Mus. Novit. (1370): 5, 18; dos Passos, 1964, Mem. Lepid. Soc. (1): 94.

*Speyeria egleis macdunnoughi* (Gunder); Miller and Brown, 1981, Mem. Lepid. Soc. (2): 142; Pelham, 2008, J. Res. Lepid. 40: 318; Pelham, 2020, [www. butterfliesofamerica.com/US-Can-Cat.htm](http://www.butterfliesofamerica.com/US-Can-Cat.htm).

The type locality of *macdunnoughi*, as stated by Gunder is “Elkhorn Ranch Resort, Gallatin County, Mont.” He also added a note, which read, “For the convenience of future students who may wish to know the definite type locality of *macdunnoughi*, I quote from a letter received from Dr. McDunnough, ‘If you go up what they call (at the Resort) Spring Creek for about half a mile, the path branches to the right about where the water ceases to flow and rises sharply over a ridge, ending in an open meadow. If you cross this meadow to the top of the slope, you will find *Argynnis* plentiful in the open woods to the right. Slightly earlier than my date might be a better collecting time.’” The additional data, “7000 feet, Upper Gallatin Canyon” was added by dos Passos and Grey (1947).

Gunder named *macdunnoughi* for Dr. James H. McDunnough, who collected the holotype male, allotype female and two male paratypes, and placed the specimens in the Canadian National Collection at Ottawa. Dr. McDunnough is among some of the best-known names in Canadian butterfly study. He was a tireless collector and systematist in the first half of the 19<sup>th</sup> century who built up the Canadian National Collection considerably (Gunder, 1932; Layberry, Hall and Lafontaine, 1998). The material examined by Gunder (1932) and upon which he based the description of *macdunnoughi* consisted of the four Canadian National Collection specimens (holotype, allotype and two male paratypes) all collected by Dr. McDunnough at the type locality Aug. 1, 1928, and an additional two males and one female paratypes in Gunder’s collection, “together with a series of males and females taken by Mr. Hutchins, Mr. Wind and Dr. Albright of Great Falls, Montana, in the same general region, including the Teton Range South in Wyoming” (Gunder, 1932).

The original description was brief, and not much definitive information can be extracted from it. Gunder said, “in size and superficial appearance near to *oweni* Edw. from the Mt. Shasta, Calif. but on the upper sides obviously related to the *chitone* Edw. group, though dwarfed in size in comparison. *Oweni* has an almost uniform dark ground color above, while *macdunnoughi* has a lighter aspect through the limbal areas. Also in *macdunnoughi* the yellow band on the under side secondaries is more pronounced or definite. *Macdunnoughi* also is of a drab greyish appearance in some specimens on the under side. (One paratype in Canadian coll. is unsilvered . . .)”. The taxon *chitone* is now a subspecies of *hesperis*.

This subspecies is characterized by the usually medium-brown color of the discal area of the under hindwing. The lighter aspect of the dorsal ground color in the limbal (post-median) wing areas is present in both sexes, but is more extensive in females. It becomes more obvious in flight-worn individuals. The under hindwing discal spots of *macdunnoughi* may be silvered or un-silvered (**Figs. 13-18**) (**Table 1**). In the material examined for this study, approximately 25% of specimens were un-silvered.

The distribution of *macdunnoughi* in Montana is shown in **Fig. 127**. It extends south into northwestern Wyoming and has been recorded in the following counties: Big Horn, Fremont, Hot Springs, Johnson, Park, Sheridan, Teton and Washakie. The distribution also includes parts of southern Idaho. Probable records for that region include the following counties: Ada, Adams, Bannock, Bear Lake, Boise, Bonneville, Caribou, Clearwater, Elmore, Franklin, Fremont, Idaho, Jefferson, Latah, Lemhi, Madison, Power, Teton, Valley, and Washington (Pelham, pers. com). Both Dornfeld (1980) and Hinchliff (1994) reported *macdunnoughi* from northeastern Oregon. However, Warren (2005) said, “until geographic variation of *S. egleis* in eastern Oregon and Idaho can be studied in more detail, populations throughout the Ochoco, Aldrich, Blue and Wallowa mountains are herein called *Speyeria egleis* nr. *macdunnoughi*.” He listed its occurrence in the following counties: Baker, Crook, Grant, Harney, Umatilla and Union. A Grant Co. specimen is shown in **Figs. 21-22**. Pelham (2020, pers. com.) also cited nr. *macdunnoughi* records for Columbia and Garfield counties in southeastern Washington. Throughout its range, *macdunnoughi* flies in a single brood from late June through August, depending on elevation and progression of the season. Peak flight is normally from early to mid-July.

James and Nunalee (2011) gave the life history details for *S. egleis* nr. *macdunnoughi*. They reared it twice from gravid females collected near Mt. Misery, Garfield Co., Washington. They listed the recorded host plants of *egleis* as *Viola nuttallii* (Nuttall's Violet), *V. praemorsa* (Prairie Violet), *V. adunca* (Blue Violet), *V. purpurea* (Goosefoot Violet) and *V. walteri* (Prostrate Blue Violet). Of these, *nuttallii*, *praemorsa* and *adunca* are common and widespread in Montana and could be the presumed host plants for our *egleis*. No life history work has been done for any of the Montana populations. Typical *macdunnoughi* adults are shown in **Figs. 1-20**. For this study 52 males and 12 females were examined. Average forewing length of males was 26.7 mm, with a range of 25.0 to 29.0 mm. Average forewing length of females was 28.7 mm, with a range of 27.5 to 30.0 mm. Average forewing length of the series of 8 males of near *macdunnoughi* from Grant Co. Oregon was 27.8 mm, with a range of 27.0 to 30.5 mm.

**Material Studied:** MONTANA: **Beaverhead Co.:** Baily Hill, Jackson, 3 July 1942, 1♂, H. A. Howland Coll.; Polaris, 16 July 1943, 1♂, 22 July 1943, 1♂, 16 July 1944, 9♂, 18 July 1944, 6♂, H. A. Howland Coll.; 7 mi. NW Bannock Pass, 22 July 1986, 1♂, S. Kohler Coll.; **Broadwater Co.:** Avalanche Gulch, 6.5 mi. up, 8 July 2005, 1♂, S Kohler Coll.; **Carbon Co.:** vic. MT-WY state line, 8100', Main Fork Rock Cr., SW Red Lodge, 23 July 2019, 1♂, S. Kohler Coll.; **Gallatin Co.:** Jackson Cr. Trailhead, Bridger Mts., NE Bozeman, 23 June 2014, 1♂, S. Kohler Coll.; below Sacajawea Pass, 8550', Bridger Mts., 25 July 2013, 1♂, S Kohler Collector; Sacajawea Peak, Bridger Mts., 19 July 2007, 1♂, S. Kohler Coll.; above Fairy Lake, 7600', Bridger Mts., 19 July 2007, 2♀, 24 July 2013, 2♂, S. Kohler Coll.; **Jefferson Co.:** Boulder River Rd., SW Basin, 24 August 1993, 1♂, S. Kohler Coll.; **Lewis & Clark Co.:** Deadman Coulee Rd., 4200', N. Wolf Creek, 25 August 2011, 1♀, S. Kohler Coll.; **Madison Co.:** Gravelly Range Rd., 7290', at N. USFS boundary, 27 June 2013, 1♂ 1♀, S. Kohler Coll.; S. slope Lone Mtn., Madison Range, 2 August 2006, 1♂ 2♀, S. Kohler Coll.; **Ravalli Co.:** near Skalkaho Pass, 21 August 1981, 1♀, S. Kohler Coll.; **Sanders Co.:** Baldy Mountain, 6800', NE Plains, 24 July 1996, 1♂, S. Kohler Coll.; **Stillwater Co.:** Benbow Mine Rd., 9000', 17 mi. SW Fishtail, 18 July 1989, 1♂, B. Vogel Coll.; Benbow Mine Rd., 10000', Stillwater Plateau, near Dean, 8 August 2013, 1♂, S. Kohler Coll.; Emerald Lake, West Rosebud Canyon, 10 July 1997, 1♂, S. Kohler Coll.; Mystic Lake Rd., 15 August 1986, 2♀, S. Kohler Coll.; **Sweet Grass Co.:** Picket Pin Rd., 8500', W. Nye, 4 July 2013, 1♀, S. Kohler Coll.; Picket Pin Mtn., 10000', W. of Nye, 17 July 2014, 1♂, S. Kohler Coll.; Picket Pin Rd., 9000-9500', East Boulder Plateau, 17-19 mi. W. of Nye, 25 July 2019, S. Kohler Coll.; vic. Picket Pin Mtn., 8950-9500', W. Nye, 31 July 2013, 1♂, S. Kohler Coll.; S. slope Picket Pin Mtn., 9000-9700', W. of Nye, 31 July 2015, 1♀, S. Kohler Coll.; **WYOMING: Lincoln Co.:** Swift Cr., near Afton, 28 June 1972, 2♂, 28 June 1973, 4♂, 29 June 1973, 2♂, L. P. Grey Coll.; Swift Cr., Afton, 27 June 1972, 2♂, 1 August 1973, 2♂ 2♀, D. Eff Coll.; **OREGON: Grant Co.:** Aldrich Mtn. Lookout Rd., 7.1-7.5 mi. E. jct. Fields Creek Rd., Aldrich Mts., 16 July 2016, 8♂, R. L. Romeyn Coll.

*Speyeria egleis albrighti* (Gunder, 1932)  
(Figs. 23-44)

*Argynnis albrighti* Gunder, 1932, Can. Entomol. 64(12): 281-282.

*Argynnis albrighti* Gund.; McDunnough, 1938, Mem. S. Calif. Acad. Sci. 1: 15.

*Speyeria (Speyeria) egleis albrighti* (Gunder); dos Passos and Grey, 1947, Amer. Mus. Novit. (1370): 5, 18; dos Passos, 1964, Mem. Lepid. Soc. (1): 94.

*Speyeria egleis albrighti* (Gunder); Miller and Brown, 1981, Mem. Lepid. Soc. (2): 142; Pelham, 2008, J. Res. Lepid. 40: 318; Pelham, 2020, www.butterfliesofamerica.com/US-Can-Cat.htm.

The type locality of *albrighti* as stated by Gunder is, "Highwood Mts., Chouteau County, Montana". The type series in Gunder's collection (now in LACM) consisted of only three specimens, the holotype male and allotype female, both collected June 24, 1931 at the type locality, and one paratype male collected July 26, 1931 at Monarch, Cascade County, Montana. Monarch is in the Little Belt Mts. south of the Highwood Mts. All three specimens were collected by C. C. Albright, for whom Gunder named this subspecies. Clifton Clarence Albright was born in Shelby, New York September 16, 1877 and moved to Montana in 1905. He died in 1946 at the age of 68. Albright, who practiced medicine in Augusta, Anaconda and Great Falls, Montana, evidently maintained a serious interest in botany and entomology. His substantial butterfly collection was donated to Montana State University, Bozeman following his retirement (Great Falls Tribune April 8, 1946, p. 6). Some years ago, C. C. Albright's granddaughter, Charlotte Albright (pers. corresp.), provided some additional information. "I don't know when he started collecting, but he was certainly active in the 1920's and 1930's, and traded extensively

with other collectors. He was an eye, ear, nose and throat doctor. By the time my father, Joe, was a teenager my grandfather was already suffering from Parkinson's disease, so that my father and uncle did most of the collecting—the usual technique was to ride on the running board of their car and jump off after likely specimens. They would go to the Highwood and Little Belt Mountains on weekends”.

Again, the original description was brief, with focus on the heaviness of the upper side maculation and the shade of green on the under hindwing. Gunder said, “Nearest to *platina* Skin. from Utah and Idaho. The black designs of the upper sides are extra heavy and the light spots marking the position of the under side silver spotting, is very lightened in contrast, like those on upper side *gallatini* McD. In *platina* the green cast or shadow design is very delicate, an olive shade, while in *albrighti* this green is dark, heavier and the brown in conjunction is more pronounced. In female *albrighti* this greenish cast of design is even more developed”.

Since Gunder's description, very few specimens of *albrighti* had been obtained from the Highwood Mountains. Most specimens collected in Montana that were referred to *albrighti* had been collected in the Crazy Mountains, Sweet Grass County or the Little Belt Mountains in Cascade and Meagher Counties. Moeck (1957), in commenting on *albrighti* noted the peculiar suffused, sordid green disk, making it a very attractive and distinctive insect, but said that in the Rocky Mountains they had found the various *egleis* races not too easy to locate, and that they prefer fairly high altitudes. Howe (1975) observed that *egleis* are largely confined to rather high, cool and moist elevations, and that *albrighti* inhabits a remote area seldom visited by lepidopterists, and is a poorly known subspecies of rather uncertain status.

For my own part, I had determined that in order to better define which populations of Montana *egleis* truly represented the concept of *albrighti*, that I would need a long study series from the Highwood Mountains. Unfortunately, prior to 2011, I had only been able to obtain five examples, mainly from riparian areas at the lower elevations. In 2011, and subsequent years, hikes to the upper parts of Highwood Baldy Mountain and the higher ridges east of Highwood Creek produced much better results, and larger series were obtained.

This subspecies is larger in size than *macdunnoughi*, and on the upper side there is more basal suffusion of dark scales and the overall black maculation is heavier. The discal area of the under hindwing of *albrighti* is most often overlaid with a diffused shade of dull brownish green. The spots in the discal area of the hindwing are always silvered (**Figs. 23-44**) (**Table 1**).

The distribution of *albrighti* is limited to southcentral Montana (**Fig. 127**). Reports of *albrighti* from the western slopes of the Big Horn Mountains in Wyoming (Ferris & Brown, 1981) are most likely referable to *macdunnoughi*. For this study 219 males and 22 females were examined. Average forewing length of males was 27.0 mm, with a range of 23.0 to 31.5 mm. Average forewing length of females was 29.3 mm, with a range of 27.0 to 32.5 mm. It flies in a single brood from late June through August, depending on elevation and progression of the season. Peak flight at the type locality is normally from early to mid-July.

**Material Studied:** MONTANA: Cascade Co.: Monarch, 29 May 1934, 3♂, 15 June 1934, 1♂, 24 June 1934, 1♂, H. E. Nelson Coll.; near Kings Hill, 20 August 1935, 1♀, C. C. Albright Coll.; Chouteau Co.: Highwood Mts., 14 July 1999, 2♂, S. Kohler Coll.; Highwood Cr., Highwood Mts., 15 July 2010, 3♂, S. Kohler Coll.; Highwood Baldy, 7540', Highwood Mts., 28 July 2011, 14♂ 1♀; vic. Prospect Peak, 5880', Highwood Mts., 27 July 2011, 40♂ 1♀, S. Kohler Coll.; near jct. trails 412 & 413, 5850', Highwood Mts., 11 July 2013, 26♂ 2♀; jct. White Wolf & Marie Spring trails, 5875', Highwood Mts., 10 July 2014, 38♂ 2♀, S. Kohler Coll.; jct. White Wolf & Marie Spring trails, 5850', Highwood Mts., 2 July 2015, 14♂, S. Kohler Coll.; near jct. White Wolf & Marie Spring trails, 5800-5900', Highwood Mts., 13 July 2020, 14♂ 2♀, S. Kohler Coll.; Golden Valley Co.: Little Snowy Mts., 14 May 1978, 3♂, S. Kohler Coll.; Judith Basin Co.: Yogo Peak, 8800', Little Belt Mts., 31 July 2020, 4♂, S. Kohler Coll.; Meagher Co.: Kings Hill, Little Belt Mts., 20 August 1935, 1♀, 29 August 1935, 1♀, C. C. Albright Coll.; Loco Mountain & trail 636, 7585', Crazy Mts., 4 August 2011, 33♂ 6♀, S. Kohler Coll.; Sweet Grass Co.: Crazy Mts., 23 July 1971, 4♂, L. P. Grey Coll.; Swamp Creek Rd., Crazy Mts., 23 July 1975, 4♂, 24 July 1975, 7♂ 1♀, 20 July 1976, 1♂, 12 July 1978, 4♂ 1♀, S. Kohler Coll.; Big Timber Canyon, Crazy Mts., 19 July 1973, 3♂ 1♀; vic. Twin Lakes, Crazy Mts., 31 July 2007, 1♀, S. Kohler Coll.

*Speyeria egleis morrellensis* – new subspecies  
(Figs. 45-92)

**ZooBank registration:** [urn:lsid:zoobank.org:act:C79016E0-6B31-40D2-84EE-C184D1287232](http://urn:lsid:zoobank.org:act:C79016E0-6B31-40D2-84EE-C184D1287232)

During the course of this study, it became obvious that the *egleis* populations inhabiting the higher mountains of the northwestern portion of Montana were distinct from those of other areas of the state.

**Definition:** The most striking characteristic of *morrellensis* dorsally is the extremely dark, dusky appearance. In both males and females, the orange ground color of the wings of many individuals is largely obscured by basal suffusion of black scales. It is the smallest of any of the Montana subspecies with an average forewing length of 25.1 mm for males, with a range of 21.0 to 28.5 mm, and an average of 27.4 mm for females, with a range of 25.0 to 30.5 mm. For this study, a total of 388 males and 76 females were examined (Figs. 45-92) (Table 1).

**Etymology:** This subspecies is named for the type locality, Morrell Mountain. The name “Morrell” has been tied to the peak, lake, stream and falls, and a prairie in the Seeley Lake area. Their namesake, Charles Thomas Morrell was a pioneer in Territorial Montana and one of the area’s early homesteaders. He owned a gun and sporting goods store in Helena and manufactured the first gun in Montana in 1889, just before it became a state. Morrell was the youngest of five children and grew up in the state of New York. He followed his sister to Helena after she wrote to her brother telling him it would be a fine place for him to start a business. In 1894 he moved out into the unsettled area northwest of Helena now known as Seeley Lake. He homesteaded the area until 1910 when he moved back to Helena. It is likely that his homestead at the mouth of Morrell Creek was responsible for the creek and surrounding landmarks eventually bearing his name. The Jocko Indian Trail came into the Seeley Lake area from Placid Lake to the southwest, and the Summit Indian Trail followed Morrell Creek going northward (Barber and Rieman, 2011).

**Distribution and Phenology:** This subspecies is found only in the higher elevations of the Rocky Mountains in northwestern Montana (Fig. 127). It flies in a single brood from late June through August, depending on elevation and progression of the season. Peak flight at the type locality is normally from early to mid-July.

**Types:** Holotype male: **MONTANA: Powell Co.:** vic. Morrell Lookout, 7600’, 10 mi. E. Seeley Lake, 9 July 2009, S. Kohler Coll. Allotype female: **MONTANA: Powell Co.,** below Morrell Lookout, east of Seeley Lake, 11 July 2000, S. Kohler Coll. Paratypes (369 males, 67 females): **MONTANA: Powell Co.:** Morrell Lookout, E. Seeley Lake, 15 July 1992, 1 ♂, S. Kohler Coll.; below Morrell Lookout, east of Seeley Lake, 16 July 1977, 55 ♂ 11 ♀, 11 July 2000, 45 ♂ 15 ♀, S. Kohler Coll.; below Morrell Lookout, 7450’, E. of Seeley Lake, 17 July 2001, 21 ♂ 3 ♀, 20 July 2001, 36 ♂ 7 ♀, S. Kohler Coll.; N. of Morrell Lookout, E. of Seeley Lake, 9 August 2002, 6 ♂ 3 ♀, S. Kohler Coll.; vic. Morrell Lookout, 7600’, 10 mi. E. Seeley Lake, 12 July 2004, 14 ♂ 1 ♀, 10 July 2007, 16 ♂, 9 July 2009, 10 ♂ 1 ♀, 9 July 2014, 9 ♂ 2 ♀, 4 July 2015, 2 ♂ 1 ♀, 22 July 2016, 2 ♂, S. Kohler Coll.; vic. Morrell Lookout, 7300-7700’, 10 mi. E. Seeley Lake, 7 July 2009, 19 ♂, S. Kohler, Coll.; vic. Morrell Lookout, 10 mi. E. Seeley Lake, 23 July 2011, 35 ♂ 2 ♀, S. Kohler Coll.; vic. Morrell Lookout, 7400’, 10 mi. E. Seeley Lake, 15 July 2013, 74 ♂ 15 ♀, 26 July 2013, 16 ♂ 4 ♀, S. Kohler Coll.; vic. Morrell Lookout, 7700’, 10 mi. E. Seeley Lake, 29 June 2016, 3 ♂, S. Kohler Coll.; Morrell Lookout Rd., 7500’, 10 mi. E. Seeley Lake, 12 July 2016, 5 ♂ 2 ♀, S. Kohler Coll.

**Deposition of Types:** The holotype male, allotype female, and three male and three female paratypes will be deposited in the McGuire Center for Lepidoptera and Biodiversity, Gainesville, Florida. The remaining paratypes are in the author’s collection.

**Type Locality:** Montana: Powell County: vicinity of Morrell Lookout, 7300-7700’, 10 miles east of Seeley Lake. The lookout is located on the ridge leading up to the summit of Morrell Mountain.

**Additional Material Studied:** **MONTANA: Glacier Co.:** near Two Medicine, 3 August 1978, 1 ♂, S. Kohler Coll.; Spot Mountain, near Two Medicine, 28 July 1998, 4 ♂, S. Kohler Coll.; Mount Henry, 8500’ near Two Medicine, 2 August 2001, 3 ♂ 1 ♀, S. Kohler Coll.; Mount Henry, near Two Medicine, 22 July 2005, 1 ♂, S. Kohler Coll.; **Lewis & Clark Co.:** Scapegoat Mountain, 9200’, Scapegoat Wilderness, 22 July 2009, 7 ♂, S. Kohler Coll.; Flint Mountain, 8000’, Scapegoat Wilderness, 23

July 2009, 8♂; above Copper Camp, 8235', 12 mi. N. of Lincoln, 4 August 2009, 3♀, S. Kohler Coll.; Red Mountain, 9000-9400', 13 mi. N. of Lincoln, 4 August 2009, 12♂ 2♀, S. Kohler Coll.; SW slope Red Mountain, 7700-8660', NE Lincoln, 21 July 2015, 15♂ 1♀, S. Kohler Coll.; **Missoula Co.:** Cottonwood Lakes Rd., 10 mi E. Seeley Lake, 21 July 1978, 1♂ 1♀, S. Kohler Coll.; near Necklace Lakes, Swan Range, 19 August 2000, 1♂, W. Kerling Coll.; vic. Holland Lookout trail 42, 2 August 2002, 4♂, S. Kohler Coll.; **Teton Co.:** Mount Wright, 38 mi. NW Choteau, 29 July 2005, 1♂, 11 July 2007, 1♂, S. Kohler Coll.; Mount Wright, 8000', 40 mi. NW Choteau, 9 August 2014, 11♂ 1♀, S. Kohler Coll.

***Speyeria egleis kutoyisiks* – new subspecies**  
**(Figs. 93-126)**

**ZooBank registration:** [urn:lsid:zoobank.org:act:8A673343-B55C-4DFE-AE7E-662764D91DC5](http://urn:lsid:zoobank.org:act:8A673343-B55C-4DFE-AE7E-662764D91DC5)

The “Island Ranges” of central Montana rise up from the surrounding prairies in contrast to the main mass of the Rocky Mountains to the west where the mountains dominate the intervening valleys. Montana’s island ranges include the Sweet Grass Hills, Bears Paw Mts., Little Rocky Mts., Highwood Mts., Judith and Moccasin Mts., Little Snowy Mts., Big Snowy Mts., Little Belt Mts., Big Belt Mts., Castle Mts., and Crazy Mts. Because of their separation from the Rockies and from each other, the possibility exists that distinct populations of species of butterflies are present in these island ranges that differ substantially. Subspecies *albrighti* is restricted to a group of island ranges including the Highwood, Judith, Little Snowy, Big Snowy, Little Belt, Big Belt and Crazy Mts. Of all the island ranges, the most isolated are the Sweet Grass Hills, Bears Paw Mts. and the Little Rocky Mts. It comes as no surprise then, that another distinct subspecies of *egleis* would be present in this group of island ranges. Norbert Kondla, my neighbor to the north in Canada first brought this population to my attention in 1989.

**Definition:** This is the largest of the Montana subspecies, with forewing length of males averaging 29.1 mm with a range of 21.0 to 32.0 mm, and females averaging 31.5 mm, with a range of 28.0 to 35.0 mm. Dorsally, the wings have the least amount of basal suffusion of black scales, and the maculation is the least heavy, allowing a greater amount of the orange ground color to show. The ground color of the discal area of the under hindwing in many male individuals is a warm golden buff, overlaid with only a slightest dull greenish brown sheen, while others display this sheen of variable intensity. Females have more brownish tone to this sheen, but overall the ventral hindwing has a light appearance. The dorsal wing surface has a noticeable two-tone appearance, where the orange ground color in the post-median wing areas is a lighter shade. This character is present in both sexes, but is more pronounced in the females.

**(Figs. 93-126) (Table 1).**

**Etymology:** Kutoyisiks is the Blackfoot Indian word for the Sweet Grass Hills, and means “sweet pine hills. The Sweet Grass Hills possess special significance to the Blackfoot Indians and to other tribes on the northern Great Plains. According to legend, the creator Napi fashioned the hills in the dim past out of the rocks left over from the formation of the Rocky Mountains. Napi liked his creation so much that the hills became a favored resting place for the old trickster. Located in the heart of a fertile bison hunting ground, the hills served as a vantage point for game and as a lookout for enemies trespassing in Blackfoot territory. Because of the isolation and connection with the creation of the earth, they have deep cultural significance to the Blackfoot as a spiritual refuge where teenage boys made vision quests to help guide them into adulthood. Many of the Blackfoot’s traditional stories take place in and around the hills. One of those involves the Blackfoot culture hero Kutoyis (Blood-Clot Boy) who sought to rid the world of evil in the early history of the world. It was in the Sweet Grass Hills that Kutoyis defeated Lizard or Frog Man after an epic battle that lasted many days. The Blackfoot paid tribute to his memory by naming the hills “Kutoyisiks” in his honor (Montana Department of Transportation Historical Highway Marker).

**Distribution and Phenology:** This subspecies is found only in the Sweet Grass Hills, Bears Paw Mts. and Little Rocky Mts. of northcentral Montana (**Fig. 127**). It flies in a single brood from late June through July, depending on progression of the season. Peak flight at the type locality is normally from early to mid-July.

**Types:** Holotype male: **MONTANA: Toole Co.:** Pratt Canyon, 4470-5000', West Butte Sweet Grass Hills, 1 July 2019, S Kohler Coll. Allotype female: **MONTANA: Toole Co.:** Pratt Canyon, 4460-4800',

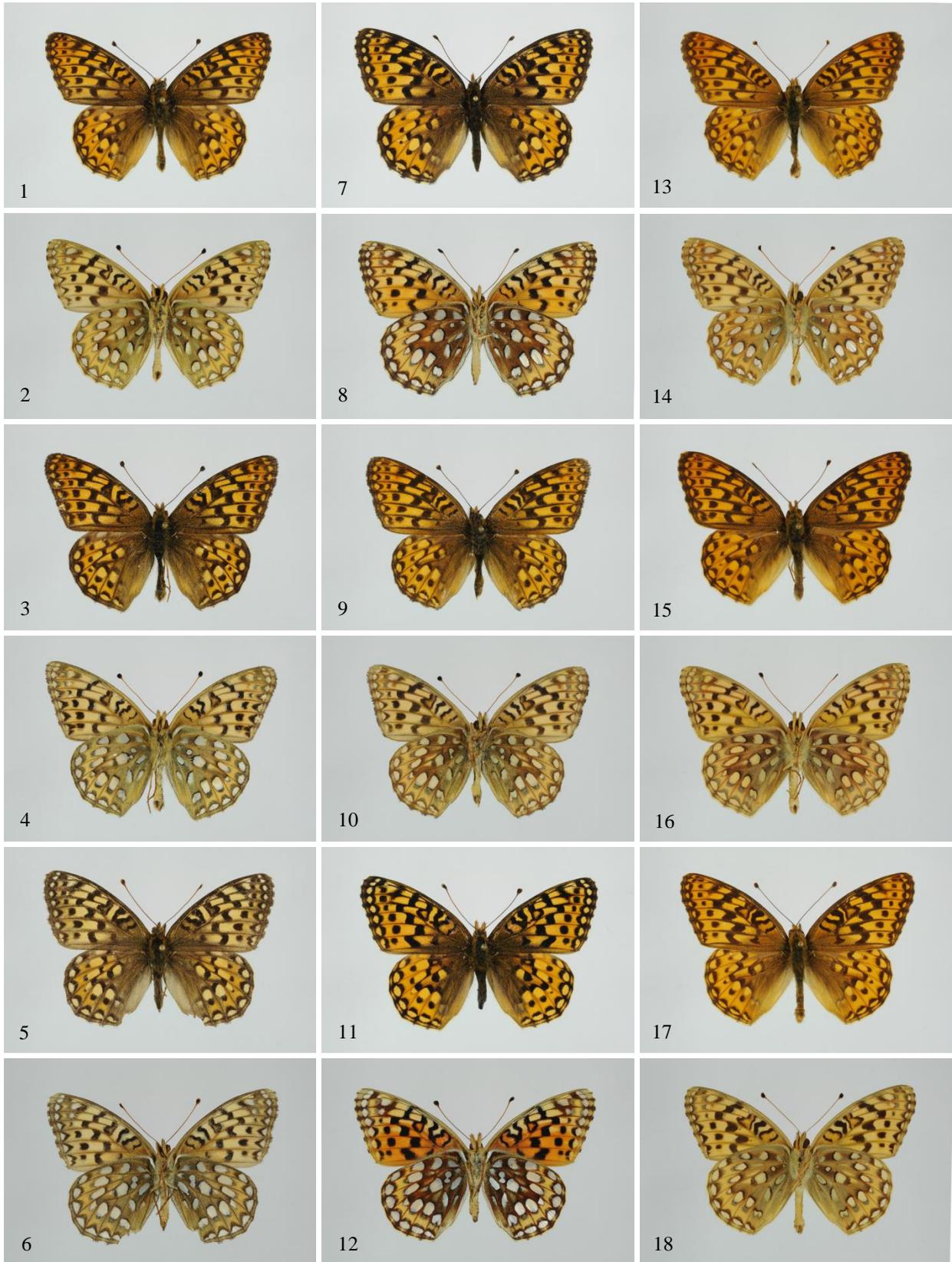
West Butte Sweet Grass Hills, 16 July 2019, S. Kohler Coll. Paratypes (249 males, 86 females): **MONTANA: Toole Co.:** Pratt Canyon, 4705', West Butte, Sweet Grass Hills, 9 July 2001, 1 ♂, S. Kohler Coll.; Pratt Canyon, West Butte, Sweet Grass Hills, 10 July 2001, 2 ♂ 2 ♀, 24 July 2002, 16 ♂ 3 ♀, 22 July 2003, 2 ♂ 3 ♀, S. Kohler Coll.; Pratt Canyon, 4800', West Butte, Sweet Grass Hills, 29 July 2004, 1 ♂, 12 July 2007, 10 ♂, 12 July 2007, 10 ♂, 24 June 2009, 4 ♂, 25 June 2009, 2 ♂, S. Kohler Coll.; Pratt Canyon, 4470-5000', West Butte, Sweet Grass Hills, 26 June 2019, 4 ♂, 1 July 2019, 51 ♂ 2 ♀, S. Kohler Coll.; Pratt Canyon, 4430-4800', West Butte, Sweet Grass Hills, 9 July 2019, 79 ♂ 4 ♀, S. Kohler Coll.; Pratt Canyon, 4460-4800', West Butte, Sweet Grass Hills, 12 July 2019, 40 ♂ 23 ♀, 16 July 2019, 26 ♂ 42 ♀, 19 July 2019, 2 ♂ 8 ♀, S. Kohler Coll.

**Deposition of types:** The holotype male, allotype female, and three male and three female paratypes will be deposited in the McGuire Center for Lepidoptera and Biodiversity, Gainesville, Florida. The remaining paratypes are in the author's collection.

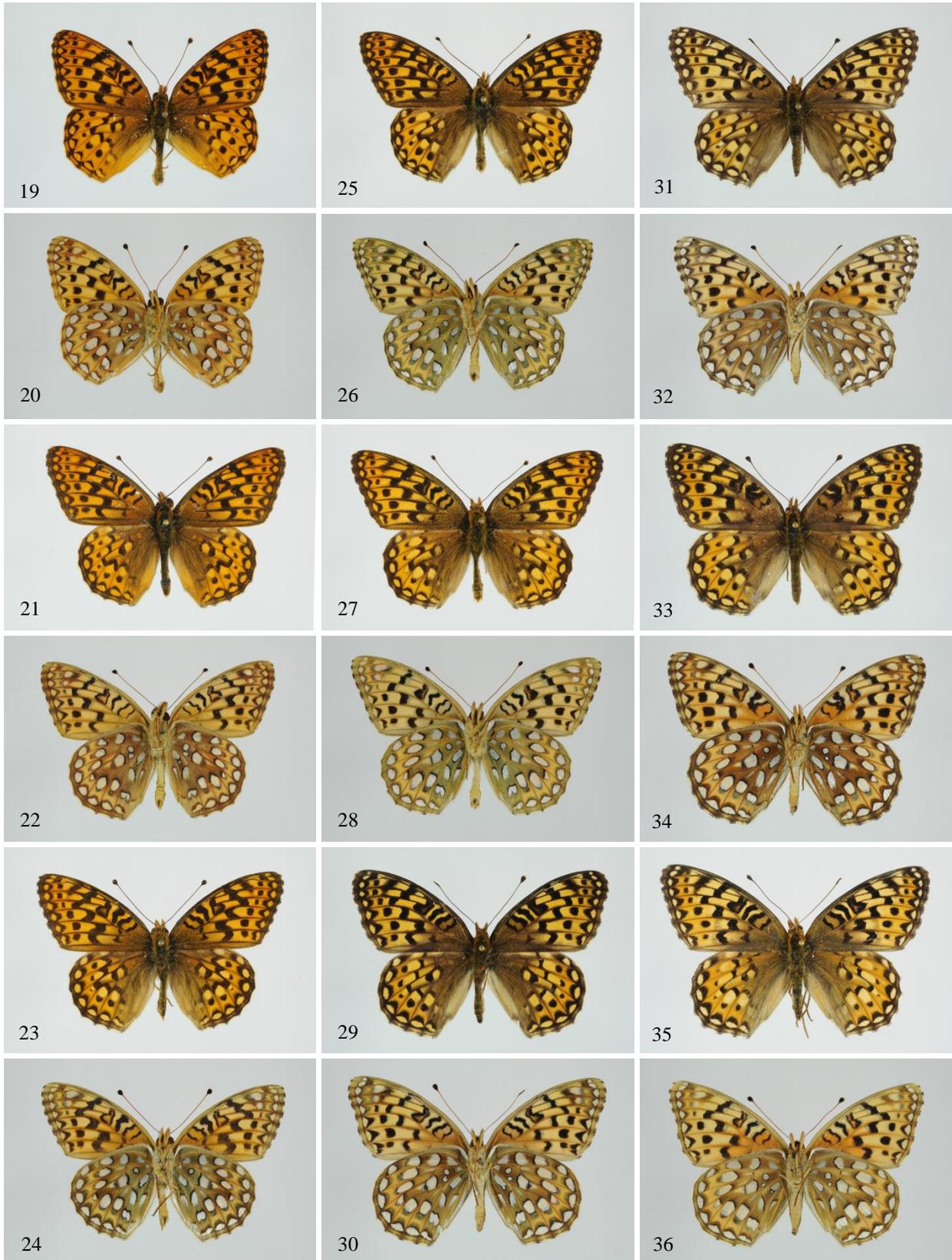
**Type Locality:** Montana: Toole County: Pratt Canyon, 4430-5000', West Butte, Sweet Grass Hills. The Sweet Grass Hills in the northern parts of Toole and Liberty counties near the Alberta-Montana border in northcentral Montana are unique in that they are the highest isolated peaks in the United States. Of volcanic origin, the Sweet Grass Hills are prominent landmarks, rising nearly 3000' above the surrounding prairie with rolling hills extending to the north almost to the Alberta-Montana border. They are visible for more than 50 miles and consist of three distinct butte complexes with scattered grassy hills connecting them. The three buttes are West Butte (elevation 6983'), Middle or Gold Butte (elevation 6512') and East Butte (elevation 6958'). The stream that flows in Pratt Canyon is Simmons Creek. The high peaks of the Sweet Grass Hills rise abruptly from the surrounding prairie and support montane plant communities, including coniferous forests, which have their closest counterparts in the Cordilleran Rocky Mountains over 80 miles to the west (Thompson and Kuijt, 1976). These authors conducted the first detailed study of the montane and subalpine flora of this isolated mountain range. They found *Viola adunca* and *V. canadensis* in the riparian forests along Simmons Creek, extending well into the montane region, and *V. canadensis* in the aspen grovelands. Open groves of *Populus tremuloides* surrounded by grasslands are found on grassy south-facing slopes as high as 1800m. Both of these violets could be considered possible host plants for *S. e. kutoyisiks*.

**Additional Material Studied:** **MONTANA: Blaine Co.:** N. Fork Little Peoples Cr., 3800-4500', Little Rocky Mts., SE Hays, 26 June 2018, 3 ♂, 3 July 2018, 1 ♂, 4 July 2018, 1 ♂, 6 July 2018, 1 ♂, 10 July 2019, 1 ♂, 17 July 2019, 1 ♂, 23 June 2020, 5 ♂, 25 June 2020, 3 ♂, 15 July 2020, 1 ♂, S. Kohler Coll.; N. ridge N. Fork Little Peoples Cr., Little Rocky Mts., SE Hays, 5 July 2018, 4 ♂ 1 ♀, S. Kohler Coll.; hill W. jct. CR 303 & 304, 4300', 4.3 mi. S. Lloyd, Bears Paw Mts., 11 July 2019, 2 ♂, S. Kohler Coll.; **Chouteau Co.:** Sandy Creek Rd., 4300-4800', SE Rocky Boy, Bears Paw Mts., 24 June 2020, 1 ♂, S. Kohler Coll.; **Hill Co.:** Miners Gulch, 4350-4850', E. Beaver Creek Rd., Bears Paw Mts., S. Havre, 14 July 2020, 5 ♂, S. Kohler Coll.; Miners Gulch, 4340-4900', E. Beaver Creek Rd., Bears Paw Mts., S. Havre, 21 July 2020, 1 ♂, 22 July 2020, 2 ♂, S. Kohler Coll.; **Liberty Co.:** Breed Creek, East Butte, Sweet Grass Hills, 5 August 2003, 1 ♀, 28 July 2005, 1 ♀, S. Kohler Coll.; Mount Royal, East Butte, Sweet Grass Hills, 30 July 2004, 1 ♂ 2 ♀, S. Kohler Coll.; Breed Creek, 4720-4800', East Butte, Sweet Grass Hills, 6-7 mi. SE Whitlash, 15 July 2009, 2 ♂, S. Kohler Coll.; **Phillips Co.:** Beaver Creek Rd., Little Rocky Mts., NE Zortman, 4 July 2018, 1 ♂, S. Kohler Coll.; **Toole Co.:** West Butte, Sweet Grass Hills, 12 July 1980, 1 ♂ 2 ♀, N. G. Kondla Coll.; Limekiln Creek, West Butte, Sweet Grass Hills, 10 July 2002, 1 ♂, S. Kohler Coll.

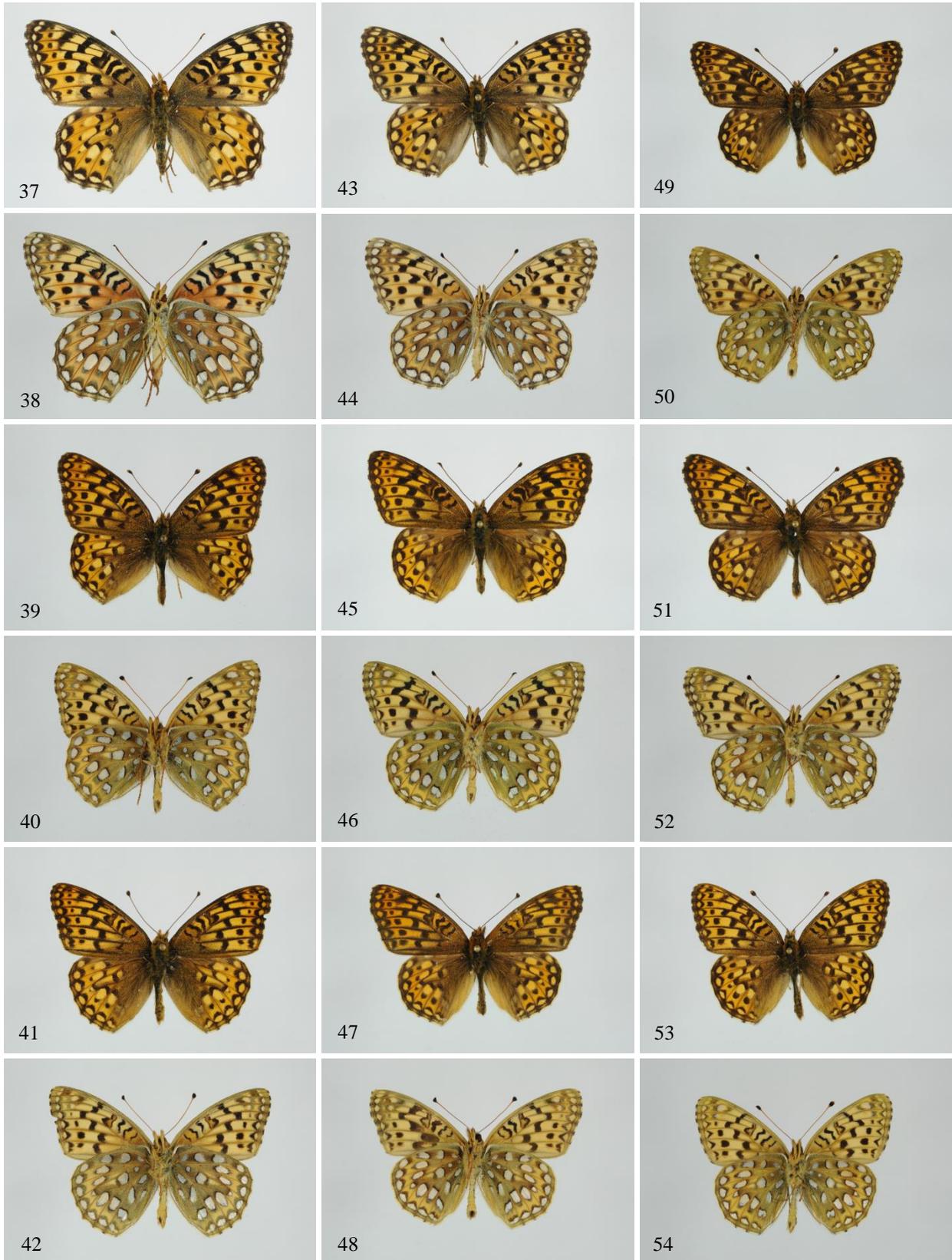
There is the possibility that either one or both of the new subspecies of *egleis* will be found in Canada, due the close proximity to the border, of some of the Montana records. Layberry, Hall and Lafontaine (1998), commented on *egleis* in Canada. "This species has been reported several times from southwestern Alberta and southwestern British Columbia (Guppy et al., 1994). All of these records have proved to be misidentifications. The Great Basin Fritillary does occur close to the Canadian Border in Montana and may still be discovered in southern Alberta".



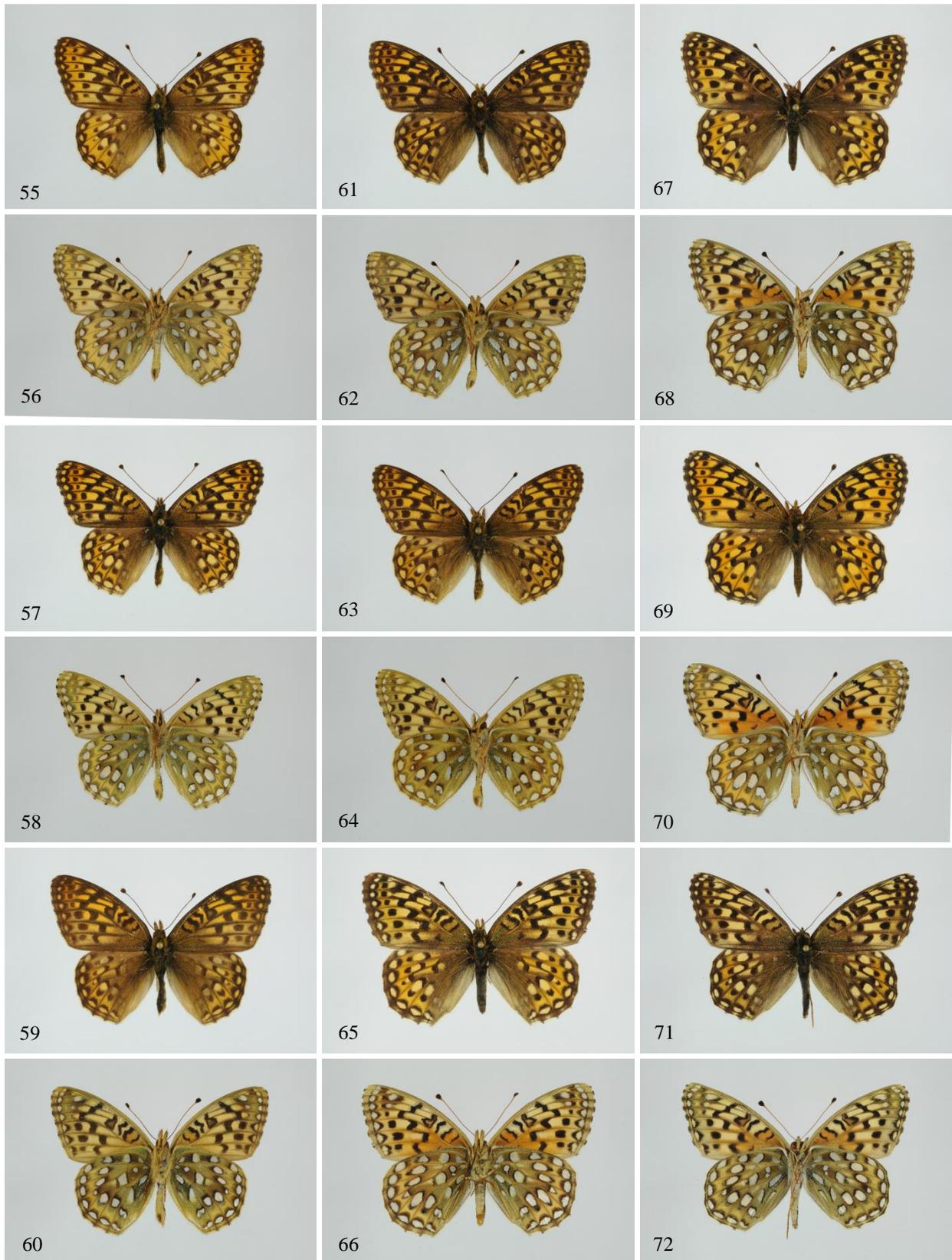
**Figs. 1-18.** *S. e. macdunnoughi*. **Fig. 1.** Gallatin Co., MT, ♂ (d). **Fig. 2.** Same, (v). **Fig. 3.** Same, (d). **Fig. 4.** Same, (v). **Fig. 5.** Gallatin Co., MT, ♀ (d). **Fig. 6.** Same, (v). **Fig. 7.** Madison Co., MT, ♀ (d). **Fig. 8.** Same, (v). **Fig. 9.** Sweet Grass Co., MT, ♂ (d). **Fig. 10.** Same, (v). **Fig. 11.** Sweet Grass Co., MT, ♀ (d). **Fig. 12.** Same, (v). **Fig. 13.** Beaverhead Co., MT, ♂ (d). **Fig. 14.** Same, (v). **Fig. 15.** Same, (d). **Fig. 16.** Same, (v). **Fig. 17.** Same, (d). **Fig. 18.** Same, (v). Figs. 0.8 life size and to scale. Photos S. Kohler.



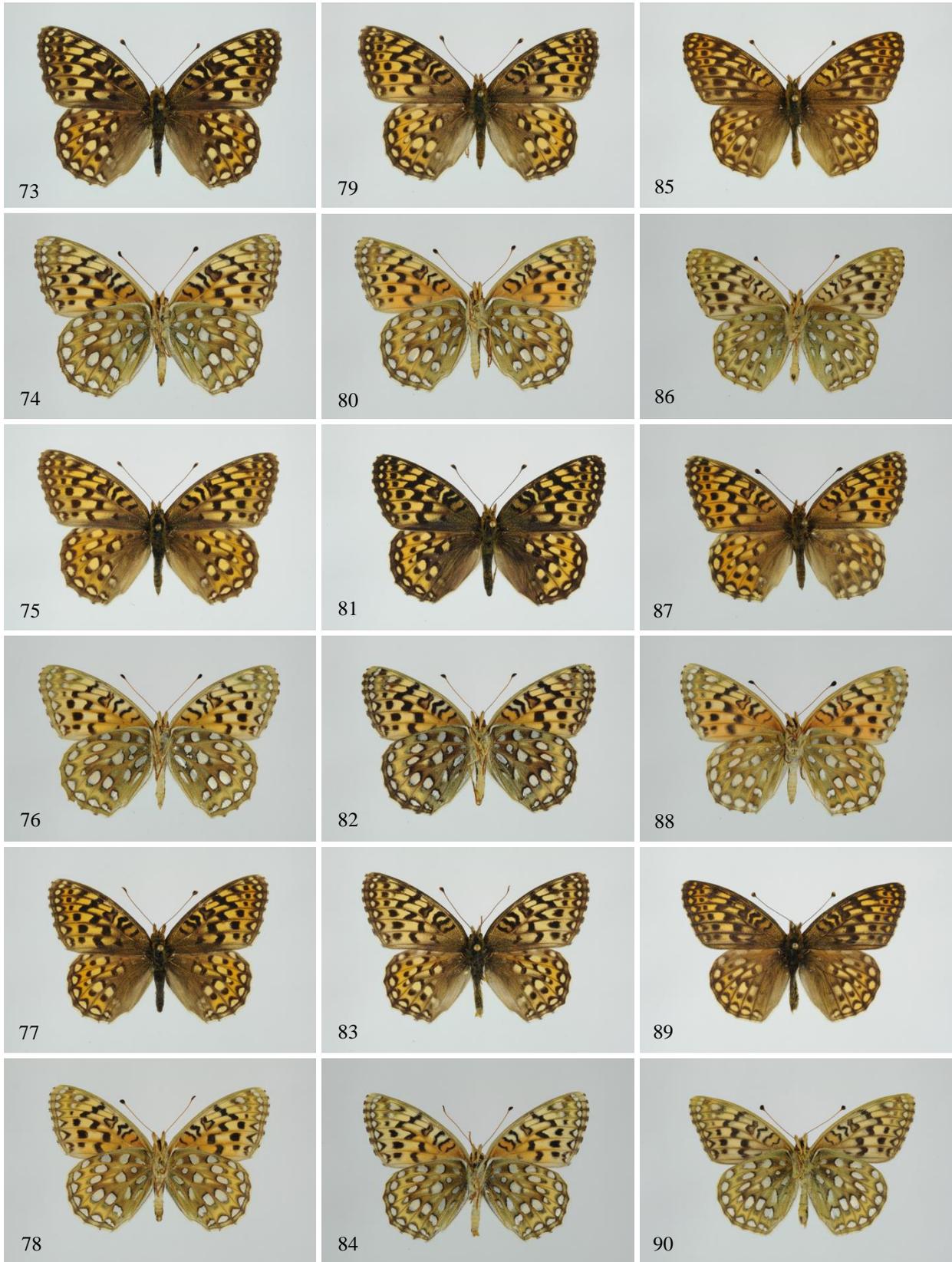
**Figs. 19-20.** *S. e. macdunnoughi*. **Fig. 19.** Lincoln Co., WY, ♂ (d). **Fig. 20.** Same, (v). **Figs. 21-22.** *S. e.* near *macdunnoughi*. **Fig. 21.** Grant Co., OR, ♂ (d). **Fig. 22.** Same, (v). **Figs. 23-36.** *S. e. albrighti*. **Fig. 23.** Chouteau Co., MT, ♂ (d). **Fig. 24.** Same, (v). **Fig. 25.** Same, (d). **Fig. 26.** Same, (v). **Fig. 27.** Same, (d). **Fig. 28.** Same, (v). **Fig. 29.** Chouteau Co., MT, ♀ (d). **Fig. 30.** Same, (v). **Fig. 31.** Same, (d). **Fig. 32.** Same, (v). **Fig. 33.** Same, (d). **Fig. 34.** Same, (v). **Fig. 35.** Same, (d). **Fig. 36.** Same, (v). Figs. 0.8 life size and to scale. Photos S. Kohler.



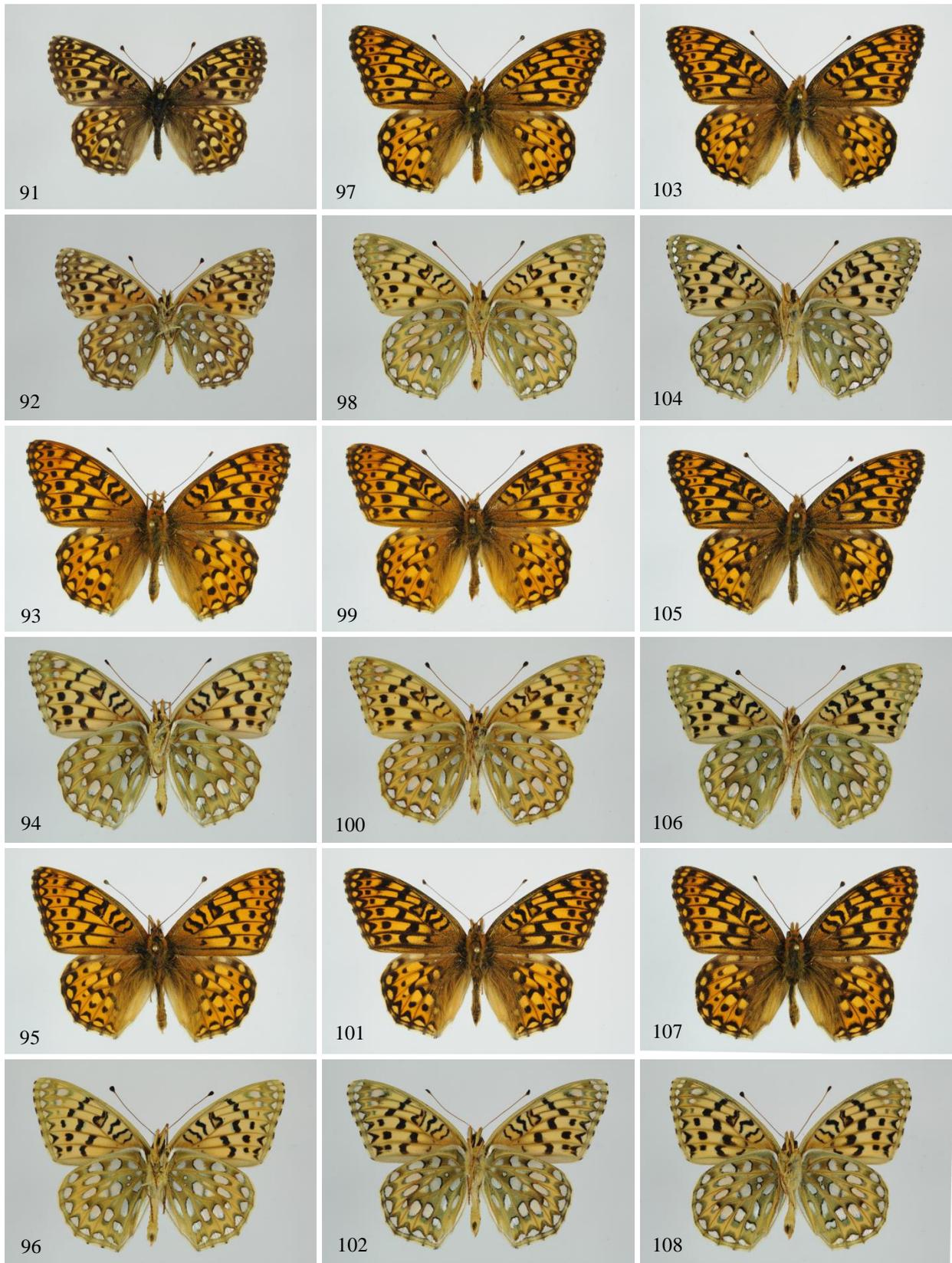
**Figs. 37-44. *S. e. albrighti*.** **Fig. 37.** Chouteau Co., MT, ♀ (d). **Fig. 38.** Same, (v). **Fig. 39.** Sweet Grass Co., ♂ (d). **Fig. 40.** Same, (v). **Fig. 41.** Meagher Co., MT, ♂ (d). **Fig. 42.** Same, (v). **Fig. 43.** Meagher Co., MT, ♀ (d). **Fig. 44.** Same, (v). **Figs. 45-54. *S. e. morrellensis*.** **Fig. 45.** Powell Co., MT, holotype ♂, (d). **Fig. 46.** Same, (v). **Fig. 47.** Powell Co., MT, paratype ♂ (d). **Fig. 48.** Same (v). **Fig. 49.** Same, (d). **Fig. 50.** Same, (v). **Fig. 51.** Same, (d). **Fig. 52.** Same, (v). **Fig. 53.** Same, (d). **Fig. 54.** Same, (v). Figs. 0.8 life size and to scale. Photos S. Kohler.



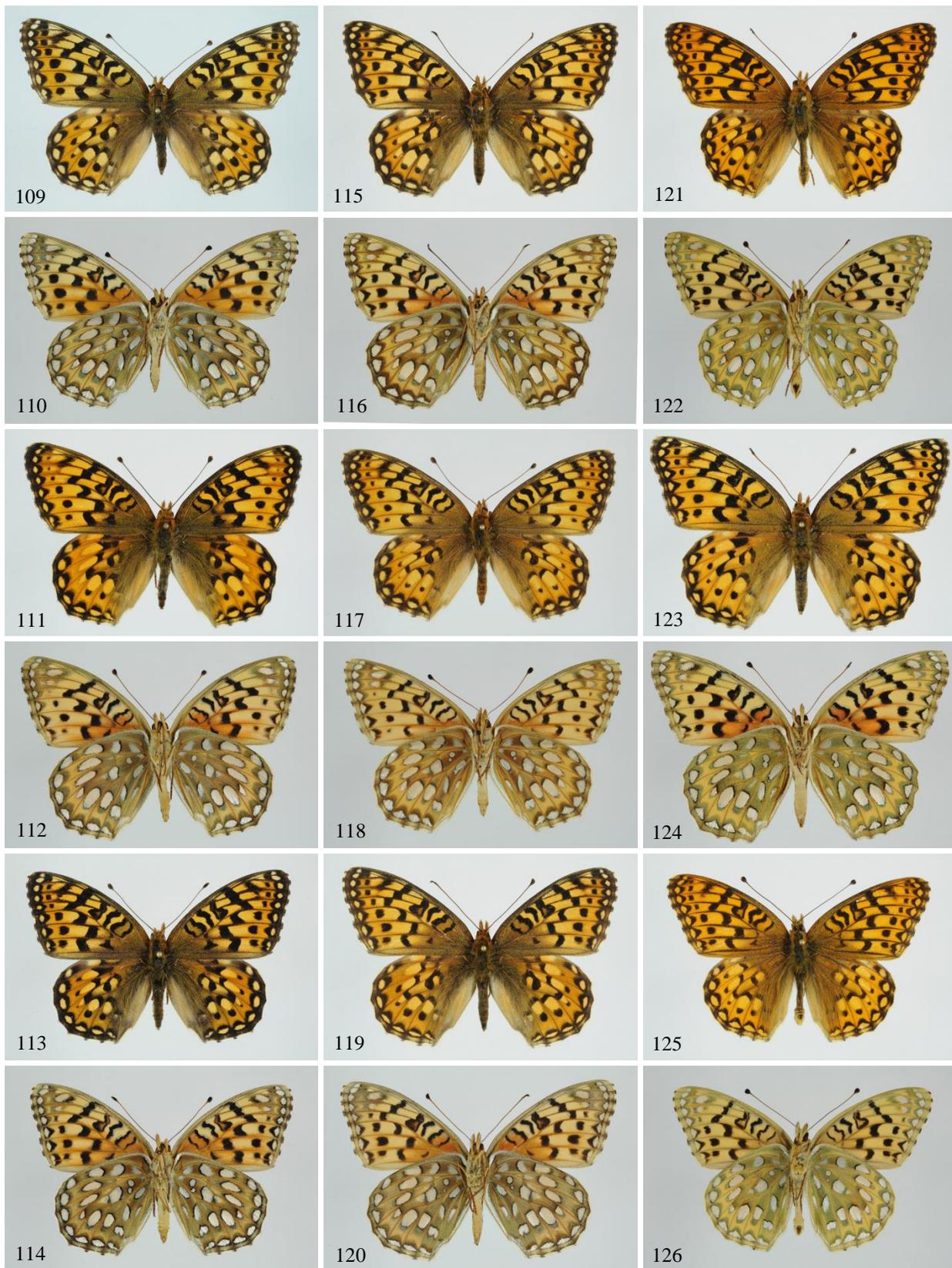
**Figs. 55-72.** *S. e. morrellensis*. **Fig. 55.** Powell Co., MT, paratype ♂ (d). **Fig. 56.** Same, (v). **Fig. 57.** Same, (d). **Fig. 58.** Same, (v). **Fig. 59.** Same, (d). **Fig. 60.** Same, (v). **Fig. 61.** Same, (d). **Fig. 62.** Same, (v). **Fig. 63.** Same, (d). **Fig. 64.** Same, (v). **Fig. 65.** Powell Co., MT, allotype ♀ (d). **Fig. 66.** Same, (v). **Fig. 67.** Powell Co., MT., paratype ♀ (d). **Fig. 68.** Same, (v). **Fig. 69.** Same, (d). **Fig. 70.** Same, (v). **Fig. 71.** Same, (d). **Fig. 72.** Same, (v). Figs. 0.8 life size and to scale. Photos S. Kohler.



**Figs. 73-90.** *S. e. morrellensis*. **Fig. 73.** Powell Co., MT, paratype ♀ (d). **Fig. 74.** Same, (v). **Fig. 75.** Same, (d). **Fig. 76.** Same, (v). **Fig. 77.** Same, (d). **Fig. 78.** Same, (v). **Fig. 79.** Same, (d). **Fig. 80.** Same, (v). **Fig. 81.** Same, (d). **Fig. 82.** Same, (v). **Fig. 83.** Glacier Co., MT, ♀ (d). **Fig. 84.** Same, (v). **Fig. 85.** Teton Co., MT, ♂ (d). **Fig. 86.** Same, (v). **Fig. 87.** Teton Co., ♀ (d). **Fig. 88.** Same, (v). **Fig. 89.** Lewis & Clark Co., ♂ (d). **Fig. 90.** Same, (v). Figs. 0.8 life size and to scale. Photos S. Kohler.



**Figs. 91-92.** *S. e. morrellensis*. **Fig. 91.** Lewis & Clark Co., MT, ♀ (d). **Fig. 92.** Same, (v). **Figs. 93-108.** *S. e. kutoyisiks*. **Fig. 93.** Toole Co., MT, holotype ♂ (d). **Fig. 94.** Same, (v). **Fig. 95.** Toole Co., MT, paratype ♂ (d). **Fig. 96.** Same, (v). **Fig. 97.** Same, (d). **Fig. 98.** Same, (v). **Fig. 99.** Same, (d). **Fig. 100.** Same, (v). **Fig. 101.** Same, (d). **Fig. 102.** Same, (v). **Fig. 103.** Same, (d). **Fig. 104.** Same, (v). **Fig. 105.** Same, (d). **Fig. 106.** Same, (v). **Fig. 107.** Same, (d). **Fig. 108.** Same, (v). Figs. 0.8 life size and to scale. Photos S. Kohler.



**Figs. 109-126.** *S. e. kutoyisiks*. **Fig. 109.** Toole Co., MT, allotype ♀ (d). **Fig. 110.** Same, (v). **Fig. 111.** Toole Co., MT, paratype ♀ (d). **Fig. 112.** Same, (v). **Fig. 113.** Same, (d). **Fig. 114.** Same, (v). **Fig. 115.** Same, (d). **Fig. 116.** Same, (v). **Fig. 117.** Same, (d). **Fig. 118.** Same, (v). **Fig. 119.** Same, (d). **Fig. 120.** Same, (v). **Fig. 121.** Blaine Co., MT, ♂ (d). **Fig. 122.** Same, (v). **Fig. 123.** Blaine Co., MT ♀ (d). **Fig. 124.** Same, (v). **Fig. 125.** Hill Co, MT, ♂ (d). **Fig. 126.** Same, (v). Figs. 0.8 life size and to scale. Photos S. Kohler.

## DATA DETAILS FOR SPECIMEN FIGURES

*Speyeria egleis macdunnoughi*. **Figs. 1-2. MONTANA: Gallatin Co.:** Jackson Cr. trailhead, Bridger Mts., NE Bozeman, 23 June 2014, S. Kohler Coll. **Figs. 3-4.** Same, above Fairy Lake, 7600', Bridger Mts., 24 July 2013, S. Kohler Coll. **Figs. 5-6.** Same, above Fairy Lake, Bridger Mts., 19 July 2007, S. Kohler Coll. **Figs. 7-8. Madison Co.:** S. slope Lone Mountain, Madison Range, 2 August 2006, S. Kohler Coll. **Figs. 9-10. Sweet Grass Co.:** Picket Pin Mountain, 10000', west of Nye, 17 July 2014, S. Kohler Coll. **Figs. 11-12.** Same, S. slope Picket Pin Mountain, 9000-9700', W. of Nye, 31 July 2015, S. Kohler Coll. **Figs. 13-14. Beaverhead Co.:** Baily Hill, Jackson, 3 July 1942, H. A. Howland Coll. **Figs. 15-16.** Same, Polaris, 18 July 1944, H. A. Howland Coll. **Figs. 17-18.** Same, 16 July 1944, H. A. Howland Coll. **Figs. 19-20. WYOMING: Lincoln Co.:** Swift Cr., nr. Afton, 29 June 1973, L. P. Grey Coll.

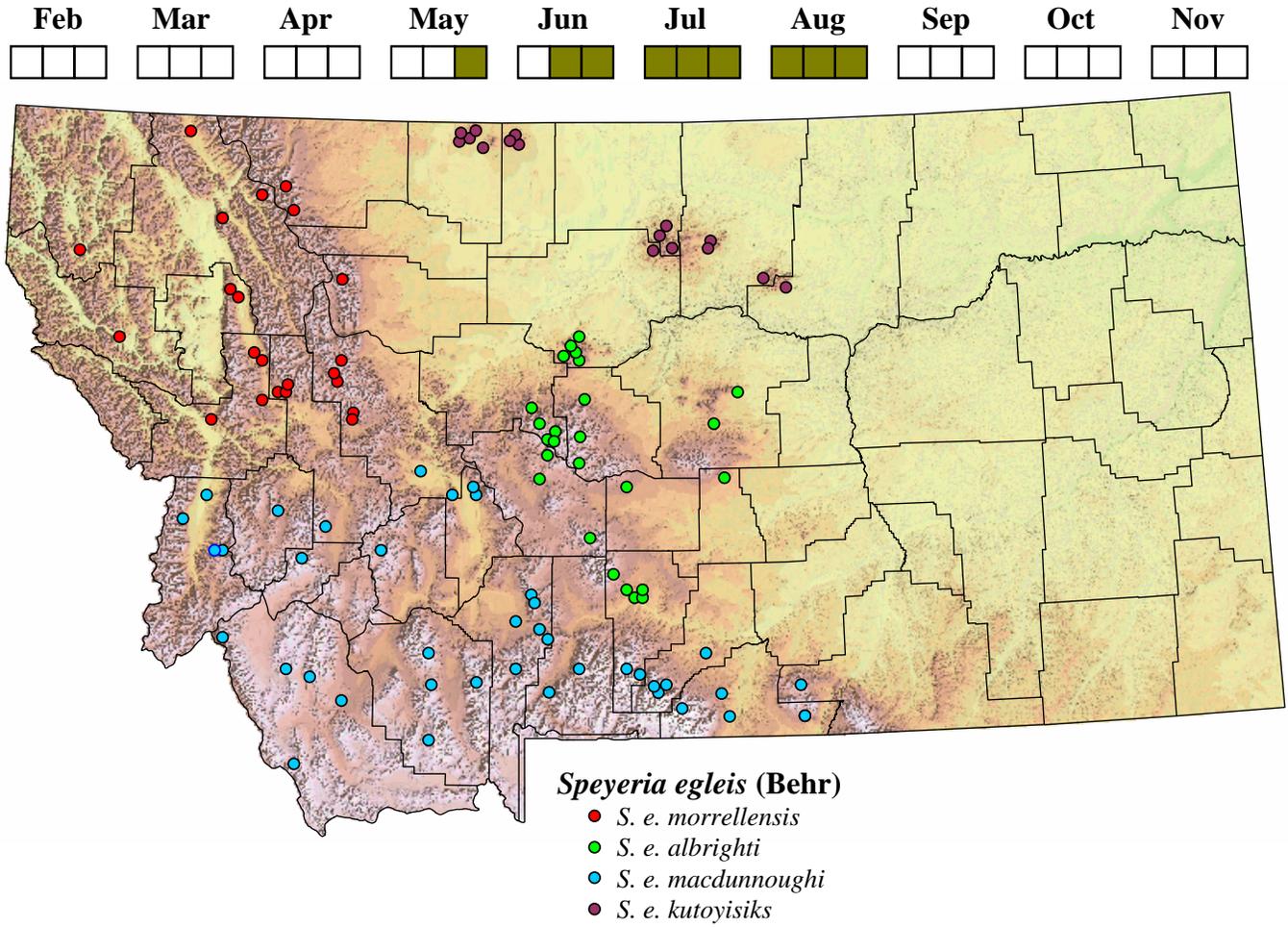
*Speyeria egleis* near *macdunnoughi*. **Figs. 21-22. OREGON: Grant Co.:** Aldrich Mtn. Lookout, Aldrich Mts., Rd. 7, 1-7.5 mi. E. jct. Fields Cr. Rd., 16 July 2016, R. L. Romeyn Coll.

*Speyeria egleis albrighti*. **Figs. 23-24. MONTANA: Chouteau Co.:** jct. White Wolf & Marie Spring trails, 5875', Highwood Mts., 10 July 2014, S. Kohler Coll. **Figs. 25-26.** Same, Highwood Baldy, 7540', Highwood Mts., 28 July 2011, S. Kohler Coll. **Figs. 27-28.** Same, jct. White Wolf & Marie Spring trails, 5875', Highwood Mts., 10 July 2014, S. Kohler Coll. **Figs. 29-30.** Same, nr. jct. trails 412 & 413, 5850', Highwood Mts., 11 July 2013, S. Kohler Coll. **Figs. 31-32.** Same, vic. Prospect Peak, 5880', Highwood Mts., 27 July 2011, S. Kohler Coll. **Figs. 33-34.** Same, Highwood Baldy, 7540', Highwood Mts., 28 July 2011, S. Kohler Coll. **Figs. 35-36.** Same, jct. White Wolf & Marie Spring trails, 5875', Highwood Mts., 10 July 2014, S. Kohler Coll. **Figs. 37-38.** Same, nr. jct. White Wolf & Marie Spring trails, 5800-5900', Highwood Mts., 13 July 2020, S. Kohler Coll. **Figs. 39-40. Sweet Grass Co.:** Swamp Cr. Rd., Crazy Mts., 12 July 1978, S. Kohler Coll. **Figs. 41-42. Meagher Co.:** Loco Mountain & trail 636, 7585', Crazy Mts., 4 August 2011, S. Kohler Coll. **Figs. 43-44.** Same.

*Speyeria egleis morrellensis*. **Figs. 45-46. MONTANA: Powell Co.:** vic. Morrell Lookout, 7600', 10 mi. E. Seeley Lake, 9 July 2009, S. Kohler Coll. **Figs. 47-48.** Same, vic. Morrell Lookout, 7400', 10 mi. E. Seeley Lake, 15 July 2013, S. Kohler Coll. **Figs. 49-50.** Same, vic. Morrell Lookout, 7400', 10 mi. E. Seeley Lake, 26 July 2013, S. Kohler Coll. **Figs. 51-52.** Same, vic. Morrell Lookout, 10 mi. E. Seeley Lake, 23 July 2011, S. Kohler Coll. **Figs. 53-54.** Same, below Morrell Lookout, 7450', E. of Seeley Lake, 20 July 2001, S. Kohler Coll. **Figs. 55-56.** Same. **Figs. 57-58.** Same, vic. Morrell Lookout, 10 mi. E. Seeley Lake, 23 July 2011, S. Kohler Coll. **Figs. 59-60.** Same, vic. Morrell Lookout, 7300-7700', 10 mi. E. Seeley lake, 7 July 2009, S. Kohler Coll. **Figs. 61-62.** Same, vic. Morrell Lookout, 10 mi. E. Seeley Lake, 23 July 2011, S. Kohler Coll. **Figs. 63-64.** Same, below Morrell Lookout, east of Seeley Lake, 16 July 1977, S. Kohler Coll. **Figs. 65-66.** Same, 11 July 2000, S. Kohler Coll. **Figs. 67-68.** Same, below Morrell Lookout, 7450', E. of Seeley Lake, 17 July 2001, S. Kohler Coll. **Figs. 69-70.** Same, vic. Morrell Lookout, 10 mi. E. Seeley Lake, 23 July 2011, S. Kohler Coll. **Figs. 71-72.** Same, below Morrell Lookout, 7450', E. of Seeley Lake, 20 July 2001, S. Kohler Coll. **Figs. 73-74.** Same, below Morrell Lookout, east of Seeley Lake, 16 July 1977, S. Kohler Coll. **Figs. 75-76.** Same. **Figs. 77-78.** Same, below Morrell Lookout, east of Seeley Lake, 11 July 2000, S. Kohler Coll. **Figs. 79-80.** Same, vic. Morrell Lookout, 7400', 10 mi. E. Seeley Lake, 15 July 2013, S. Kohler Coll. **Figs. 81-82.** Same, below Morrell Lookout, east of Seeley Lake, 16 July 1997, S. Kohler Coll. **Figs. 83-84. Glacier Co.:** Mount Henry, 8500', near Two Medicine, 2 August, 2001, S. Kohler Coll. **Figs. 85-86. Teton Co.:** Mount Wright, 38 mi. NW Choteau, 11 July 2007, S. Kohler Coll. **Figs. 87-88.** Same, Mt. Wright, 8000', 40 mi. NW Choteau, 6 August 2014, S. Kohler Coll. **Figs. 89-90. Lewis & Clark Co.:** SW slope Red Mtn., 7700-8660', NE Lincoln, 21 July 2015, S. Kohler Coll. **Figs. 91-92.** Same.

*Speyeria egleis kutoyisiks*. **Figs. 93-94. MONTANA: Toole Co.:** Pratt Canyon, 4470-5000', West Butte, Sweet Grass Hills, 1 July 2019, S. Kohler Coll. **Figs. 95-96.** Same, Pratt Canyon, 4470-5000', West Butte, Sweet Grass Hills, 26 June 2019, S. Kohler Coll. **Figs. 97-98.** Same. **Figs. 99-100.** Same, Pratt Canyon, 4470-5000', West Butte, Sweet Grass Hills, 1 July 2019, S. Kohler Coll. **Figs. 101-102.** Same, Pratt Canyon, 4470-5000', West Butte, Sweet Grass Hills, 26 June 2019, S. Kohler Coll. **Figs. 103-104.** Same, Pratt Canyon, 4430-4800', West Butte, Sweet Grass Hills, 9 July 2019, S. Kohler Coll. **Figs. 105-106.** Same, Pratt Canyon, 4470-5000', West Butte, Sweet Grass Hills, 1 July 2019, S. Kohler Coll. **Figs. 107-108.** Same, Pratt Canyon, 4430-4800', West Butte, Sweet Grass Hills, 9 July 2019, S. Kohler Coll. **Figs. 109-110.** Same, Pratt Canyon, 4460-4800', West Butte, Sweet Grass Hills, 16 July 2019, S. Kohler Coll. **Figs. 111-112.** Same. **Figs. 113-114.** Same, Pratt Canyon, 4460-4800', West Butte, Sweet Grass Hills, 12 July 2019, S. Kohler Coll. **Figs. 115-116.** Same, Pratt Canyon, 4470-5000', West Butte, Sweet Grass Hills, 1 July 2019, S. Kohler Coll. **Figs. 117-118.** Same, Pratt Canyon, 4460-4800', West Butte, Sweet Grass Hills, 12 July 2019, S. Kohler Coll. **Figs. 119-120.** Same, Pratt Canyon, 4430-4800', West Butte, Sweet Grass Hills, 9 July 2019, S. Kohler Coll. **Figs. 121-122. Blaine Co.:** N. ridge North Fork Little Peoples Cr., 4500-5000', Little Rocky Mts., SE Hays, 5 July 2018, S. Kohler Coll. **Figs. 123-124.** Same. **Figs. 125-126. Hill Co.:** Miners Gulch, 4350-4850', E. Beaver Cr. Rd., Bears Paw Mts., S. Havre, 14 July 2020, S. Kohler Coll.

**Fig. 127.** Distribution of *Speyeria egleis* subspecies in Montana.



**Table 1. Characteristics of Montana *Speyeria egleis* subspecies**

Subspecies	FW Length		Dorsal wings		Ventral HW		
	males	females	maculation	basal suffusion	disc color	silvering	submarginal band
<i>macdunnoughi</i>	26.7	28.7	light to moderate	light to moderate	medium brown	silvered or unsilvered	yellowish buff, caps on median and submarginal spots medium brown
<i>albrighti</i>	27.0	29.3	moderate	moderate	dull brownish green, browner in females	always silvered	yellowish buff, caps on median and submarginal spots greenish brown
<i>morrellensis</i>	25.1	27.4	heavy	heavy	darker dull brownish green, browner in females	always silvered	dull yellowish buff, caps on median and submarginal spots darker greenish brown
<i>kutoyisiks</i>	29.1	31.5	light	light	warm golden buff with slight to moderate greenish brown sheen, browner in females	always silvered	golden buff, caps on median and submarginal spots lighter greenish brown

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