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LEPIDOPTERA IN THE UNPUBLISHED FIELD NOTES OF HOWARD GEORGE LACEY, NATURALIST (1856–1929)¹

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Howard George Lacey was born 15 April 1856 at Wareham, Dorset, England. His elementary education was received at Charterhouse, Hampshire; he studied at Frankfurt, Germany and later received a B.A. degree from Cains College, Cambridge. Although educated for the ministry, he soon gave up this career for that of naturalist. At the age of 26 he came to the United States, arriving in New York 17 June 1882, and proceeded to Kerrville, Texas where he arrived 30 June. Here he bought a ranch in the hill country about seven miles southwest of Kerrville on Turtle Creek (Figure 1) where he spent the next thirty-seven years raising livestock and studying the natural history of the area.

Lacey was a member of the Bournemouth Scientific Society, San Antonio Scientific Society, National Geographic Society, American Audubon Union, and American Ornithologists' Union. He collaborated with the Smithsonian Institution, U. S. Department of Agriculture, and other institutions for the advancement of natural science.

So far as can be determined, he published no scientific papers. Instead, he chose to collect biological specimens which were sent to various contemporary taxonomists and natural history museums. Many of his field collections and observations were recorded in a ledger which is the basis for this account. His ledger is now in the Witte Memorial Museum Library, San Antonio, Texas placed there by his sister Miss Beatrice Lacey.

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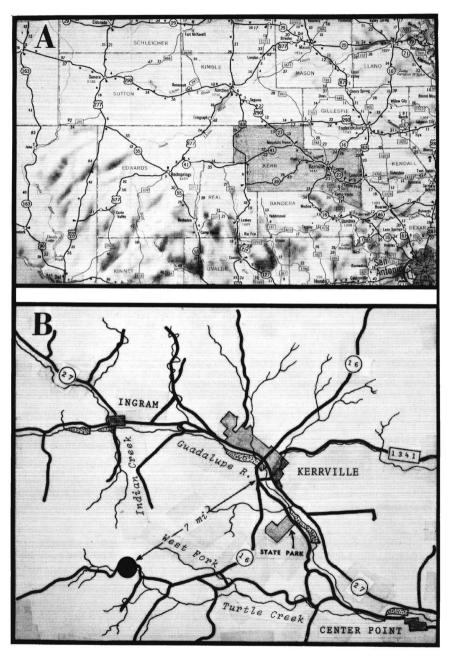


Fig. 1. A, Kerr and surrounding Texas counties; B, location of Howard G. Lacey's ranch in relation to Kerrville, Texas.

Some of the botanical and biological specimens named in his honor are: Quercus laceyi Small, Strymon laceyi Barnes & McDunnough, Graptolitha laceyi Barnes & McDunnough, Logoa laceyi Barnes & McDunnough, Peromyscus boylei laceyi Attwater, and Reithrodontomys laceyi Attwater. Only the last two were mentioned in his field notes.

Lacey's primary interests were birds and mammals of which he made numerous records. Later he became interested in Lepidoptera. The first and last recorded notes pertaining to Lepidoptera were 28 October 1882 and 23 April 1919 respectively. On 10 April 1898 he wrote: "Saw indigo bird and caught a few butterflies for Dr. Barnes. I intend to study the butterflies of the neighborhood from this date."

His collecting was not limited to butterflies. Many moths were collected, apparently at lantern light. Although most of the specimens were sent to taxonomists and institutions, he also accumulated a personal collection. On 16 May 1902 he wrote: "W. G. Dodge came over from Kerrville to see the butterflies."

Preparatory to moving back to England (8 Aug. 1919), Lacey left his local Lepidoptera collection with C. Stanley Coppock, an intimate friend, who had also come from England and settled at Kerrville a few years after Lacey. In 1925, Mrs. Ellen S. Quillin, then director of Witte Memorial Museum, attempted to obtain the collection for the Museum. Still later, his field notes were acquired. Excerpts from correspondence between Mrs. Quillin and Miss Beatrice Lacey, sister of Howard, disclose what happened.

On 25 March 1934 Miss Lacey wrote: "I have been thinking things over since my last letter to Mr. Coppock. . . . I feel Howard would like me to give his notes and diary to the Witte Memorial Museum if you say they will be of use, and will be taken care of. It hurts to part with them, but I would rather feel they are of use when I have passed over and Howard would like them to be of use I feel sure. I ask you to accept them in his name and mine with all good wishes."

Mrs. Quillin's reply of 11 April 1934 stated in part: "I received your letter this morning in which you are transferring to us as a gift the lifetime notes of your brother. I certainly believe you are doing the right thing and that Mr. Lacey would approve were he here, because when Mr. Lacey visited this Museum, at that time only two school rooms thrown together to make a Museum, the last time he was in Texas [1925] and the Attwater collection had just been added, he expressed his regret that the butterfly and moth collection he had made could not go with the Attwater collection. It seems that when he left his collection with one

of the Coppock children [1919] bugs got into some of it and other specimens were sold off. He said that the selling was with his consent inasmuch as he had then given up Texas ever getting a Museum in which to place them. That summer [1925] after he left I tried to locate the collection and found that it was held for sale. Mr. Lacey had given me only his verbal wish and I, therefore, could not push the matter.

"We have had made a typewritten copy [300 pages] of Mr. Lacey's notes which I bound last week so that scientists of note might use them for reference without in any way fingering or tearing the originals. The original books will be taken to be bound this afternoon and from then on will be placed under lock and key in my own office."

Lacey's field notes are a veritable data bank on the local flora and fauna. Most of his collecting was done at or near his ranch. Each time he ventured far from the ranch an entry was made in his field notes. For those museums having specimens collected by Lacey with dates, but without locations, the following may be of help. Dates are inclusive.

- 28 February-27 October 1888, trip to England and return.
- 8 May 1893-10 April 1894, trip to England and return.
- 3–23 November 1896, hunting trip on Nueces River and Frio Divide. [Apparently Uvalde County Texas.]
- 15–26 July 1898, fishing trip to Paint Creek. [This creek empties into the South Llano River. Most of it lies in northeast Edwards County Texas.]
 - 25–26 June 1899, to San Antonio [Bexar County Texas].
- 27–[28] June 1899, went to the Medina [River] and back the next day. [Apparently in Bandera County Texas.]
- 26 July–5 August 1899, went to the Llano [River] fishing and had a very jolly trip. I got no new butterflies but took several very dark specimens of *T. damon* [Callophrys gryneus castalis.] [Apparently Kimble County Texas].
- 15 November–14 December 1899, our usual hunt on the Frio [River]. [Uvalde County Texas.]
- 7–19 July 1900, fishing on Llano River. As there were no flowers out I got only a few [butter] flies. On July 17th when we started home the South Llano was up about five feet. [Probably Kimble County Texas.]
- 25–30 July 1901, got back to town after a short trip to the Llano [River] with Carr and company. We camped a few miles above London. *Elada* [*Texola elada*] was about the only butterfly about. [London is in northeast Kimble County Texas.]

27 August 1901–29 March 1902, trip to England and return. Got back to the ranch little before sundown.

13–27 July 1902, fishing trip to Llano [River] camped near head of South Llano River. [Edwards County Texas.]

10–31 July 1904, fishing on Llano River. Few [butter] flies as bloom was very scarce. [Probably Kimble County Texas.]

17 July–2 August 1907 (19–31 July in camp) on fishing trip to the San Diego River in Mexico via San Antonio and Del Rio, Texas.

15–31 July 1909, fishing trip to Devils River. [Val Verde County Texas.]

23 November-6 December 1916, hunting trip to Paint Creek [Edwards County Texas].

16 July 1919, sold my ranch and stock. After selling the ranch, I put in a day or two loafing around Kerrville and then spent a week on Paint Creek swimming near the spring. Eagles, I think, used the nest on the bluff above the springs and the herons seem to have increased in numbers; nine nests in the big tree. [Apparently this was one of Lacey's favorite spots.]

8 August 1919 he left Kerrville, Kerr County, Texas for his native home in England. Still fascinated by the wonderful Hill Country of the Edwards Plateau and drawn by the devoted fellowship of old friends, he returned to Kerrville in summer of 1925 for a short but last visit, health failing. He died 5 March 1929 at the home of his sister, Miss Beatrice Lacey, 50 Wellington Road, Bournemouth, England.

In the following list of Lepidoptera mentioned in Lacey's field notes, arrangement generally follows dos Passos (1964) for the skippers and butterflies, and McDunnough (1938) for the moths. The italicized name is the species most likely collected or observed by Lacey; often he recorded only the species name. The exact citation given by him is shown below the complete scientific name. Following this are the dates and locations of specimens collected (c) or observed (s). If he gave a quantity, this too is shown. Example: (c-3) or (s-1) means he collected three, or saw one. Other pertinent remarks from his field notes are also given. Statements in brackets are those of the authors. If a specific county is not given, it may be assumed that Lacey collected or observed the specimens at or near his ranch located about seven miles southwest of Kerrville, Kerr County, Texas.

Of the 144 species of Lepidoptera recorded by Lacey, several are no longer to be found in the Kerrville area, probably due to extensive grazing by domestic sheep and goats. A few species could be considered only

strays even at the time collected. He recorded migratory flights of *Kricogonia lyside*, *Libytheana bachmanii*, and *Danaus plexippus*.

Lepidopterous species collected by Lacey and included in the list but not recorded in his field notes are: *Tmolus azia* (Hewitson), *Strymon alea* (Godman & Salvin), *Chlosyne endeis* (Godman & Salvin), *Calephelis rawsoni* McAlpine, *Graptolitha laceyi* Barnes & McDunnough, and *Lagoa laceyi* Barnes & Dunnough.

Megathymidae

Hesperiidae

Panoquina ocola (Edwards) 1863. "Ocola". 19-VIII-1907 (c-3), have not seen it since 1899. [Should be found occasionally.]

Lerodea eufala (Edwards) 1869. "Eufala". 18-III-1900 (c), didn't see eufala all last year, the year before it was common; 11-IV-1901 (c). [Have recent records.]

Amblyscirtes aenus aenus Edwards [1878]. "Amblyscirtes aenus". 23-IV-1899 (c-3), 23-IV-1903 (c), 26-IV-1903 (c). [Have recent records.]

Amblyscirtes oslari (Skinner) 1899. "Oslari". 15-IV-1900 (c). [Have recent records.]

Amblyscirtes nysa Edwards 1877. "Nysa". 24-III-1900 (s), 15-IV-1900 (c), 1-IX-1900 (c), 4-IV-1901 (c), 18-VI-1902 (c), 13-27-VII-1902 (c) [Edwards Co.], 23-IV-1903 (c). [Have recent records.]

Amblyscirtes eos (Edwards) 1871. "Comus". 28-III-1900 (c), 1-IX-1900 (c), 22-III-1901 (s), 11-IV-1901 (c), 24-IV-1902 (c), 18-IV-1903 (c-5). [No recent records, but should be found occasionally.]

Amblyscirtes celia Skinner 1895. "Celia". 1-IX-1900 (c), 11-IV-1901 (c). [Have recent records.]

Euphyes vestris metacomet (Harris) 1862. "Vestris". 15-IV-1900 (c), 1-IX-1900 (c). [Have recent records.]

Atrytone delaware lagus (Edwards) 1881. "H. delaware". 11-VIII-1901 (c), 21-VIII-1901 (c-5). [No records since 1901, but should be found rarely.]

Wallengrenia otho egeremet (Scudder) 1863. "Otho". 1-IX-1900 (c). [Have recent records.]

Polites vibex praeceps (Scudder) 1872. "Brettus". 28-VIII-1907 (c-1 \circ), have not seen it here before. [Have recent records.]

Hesperia viridis (Edwards) 1883. "E. nevada". 11-II-1901, caught E. nevada in my hand but let it go as I had nothing to put it in. [Have recent records.]

Hylephila phyleus (Drury) 1773. "Phylæus". 11-IV-1901 (c). [Have recent records.]

Copæodes aurantiaca (Hewitson) 1868. "Procris". 10-IV-1902 (s). [Have recent records.]

Lerema accius (Smith) 1797. "L. accius". 3-I-1905 (c), 29-X-1916 (c).

Not often seen but has been common at morning glory vines at the house. [Have recent records,]

Pholisora catullus (Fabricius) 1793. "Catullus". 6-IV-1900 (s), 18-III-1901 (s), 13-27-VII-1902 (c) [Edwards Co.], 5-XI-1902 (c-2). [Have recent records.]

Celotes nessus (Edwards) 1877. "P. nessus". 27-III-1900 (c), 30-IV-1901 (c), 18-VI-1902 (c), 13-27-VII-1902 (c) [Edwards Co.]. [Have recent records.]

Heliopetes domicella (Erichson) 1848. "P. domicella". 23-VIII-1916 (c). 23-VIII-1916 (c).

[Stray, no recent records.]

Heliopetes laviana (Hewitson) 1868. "Ericetorum". 11-VIII-1907 (c). A day or two ago I got two white hesperids (Ericetorum). [So far as we know Heliopetes ericetorum has not been taken in Texas. H. laviana occasionally occurs at San Antonio, New Braunfels, and Austin. It could very easily range over to Kerr County in a good year.]

Pyrgus communis communis (Grote) 1872. "P. tessellata". 25-II-1900 (c-2), 8-III-1900 (s), 21-I-1901 (s), 5-XI-1902 (c). [Have recent records.]

Erynnis brizo (Boisduval & LeConte) 1834. "N. brizo". 21-II-1900 (c), 8-III-1900 (s), 10-IV-1902 (c). [Burns (1964) located three hybrid examples in museums from Kerr Co. Texas without dates; these could be them. Burns and the Kendalls have collected the area without finding E. brizo.]

Erynnis zarucco funeralis (Scudder & Burgess) 1870. "N. funeralis". 27-IV-1899 (c-1), 14-III-1900 (c), 13-IV-1900 (s-fresh), 18-V-1901 (c), 5-XI-1902 (c). [Have recent records.]

Erynnis martialis (Scudder) 1869. "N. martialis". 20-III-1899 (c-several), 17-IV-1899 (c), 25-III-1900 (c-1), 13-III-1901 (c-several). [Burns (1964) located five museum specimens with incomplete dates from Kerr Co. Texas. These dates should help fill the void. No records since 1901. Careful searching by Burns and the Kendalls have failed to locate this species in the Kerrville area.]

Gesta gesta invisus (Butler & Druce) 1872. "Nisoniades llano". 13-27-VII-1902 (c), fishing trip to Llano River, camped near head of South Llano [River] [Edwards Co.]. 10-31-VIII-1904 (c-1) [Kimble Co.]. [Have recent records.]

Grais stigmaticus (Mabille) 1883. "Grais stigmaticus". 20-IV-1903 (c), 30-VIII-1916 (c), 1-IX-1916 (c-1), 2-IX-1916 (c), 27-IX-1916 (s), 29-X-1916 (c-several), 21-IX-1917 (c-5). [Have recent records.]

Achlyodes thraso tamenund (Edwards) (1807). "Near Grais". 10-31-VII-1904 (c-1) [Kimble Co.], 19-VIII-1907 (c-1), 27-IX-1916 (c-1), 29-X-1916 (c-1). [Should be found occasionally.]

Systasea pulverulenta (Felder) 1869. "S. zampa". 6-IV-1901 (c-1) first I have ever seen at the ranch. 2-VIII-1901 (s), 8-VIII-1901 (c), 2-VI-1902 (s). [Have recent records.]

Cogia hippalus outis (Skinner) 1894. "C. outis". 23-IV-1899 (c-1), 27-IV-1899 (c-3), 10-V-1899 (c-2), 7-IV-1900 (s), 8-IV-1900 (c), 15-IV-1900 (c), 6-IX-1900 (s), 30-III-1901 (s), 4-IV-1902 (s), 18-IV-1902 (s) common now. [Have recent records.]

Thorybes pylades albosuffusa Freeman 1943. "Pylades". 17-IV-1899 (c), 1-IV-1900 (c), 6-IV-1900 (s), 15-IV-1900 (c), 20-III-1901 (c), 7-IV-1902 (c). [Have recent records.]

Achalarus lyciades (Geyer) 1832. "A. lycidas". 19-IV-1901 (c), 1-V-1901 (c), 10-V-1901 (c-2), 28-VI-1901 (c). [No records since 1901, probably no longer in the area.]

Achalarus casica (Herrich-Schaffer) 1869. "Epigena". 24-VIII-1899 (c), 28-VIII-1900 (c), 28-IX-1909 (s-2 or 3 lately), 25-IV-1910 (c-2), 26-IV-1910 (c-2). [No recent records, probably no longer in the area.]

Achalarus toxeus (Plötz) 1882. "A. coyote". 17-IX-1916 (c). [Should be found occasionally.]

Autochton cellus (Boisduval & LeConte) 1834. "C. cellus". 17-IV-1899 (c), 13-IV-1900 (s), 15-IV-1900 (c), 1-IX-1900 (c), 4-IV-1901 (s), 16-IV-1901 (c), 19-IV-1901 (c) commoner than usual, 7-IV-1902 (s). [No recent records, probably no longer in the area.]

Urbanus proteus (Linnæus) 1758. "E. proteus". 26-IX-1900 (c), 13-VI-1902 (c), 10-31-VII-1904 (c-1) [Kimble Co.]. [No recent records but should be found around cultivated beans.]

Urbanus dorantes (Stoll) 1790. "E. rauterbergi". 23-IX-1900 (c), 11-VIII-1907 have seen several specimens lately. [No recent records. Should be found occasionally.]

Chioides catillus albofasciatus (Hewitson) 1867. "E. albofasciatus". 24-VIII-1899 (s), 28-VI-1901 (c), 2-IX-1902 (s), 1-VII-1904 (c-poor specimen), 9-VII-1904 (s), have seen six specimens since the first. 11-VIII-1907 (c) have taken several good specimens lately. [Should be found occasionally.]

Chioides zilpa (Butler) 1874. "like Albofasciatus". 1-IX-1916 (c-3), caught three long-tailed hesperids like albofasciatus, 29-X-1916 (c-1). [Should be found rarely.]

Epargyreus clarus clarus (Cramer) [1775]. "E. tityrus". 11-VII-1899 (c), 25-VIII-1899 (c), 11-IV-1901 (s), 9-V-1901 (c), 10-V-1901 (c), 2-VI-1901 (c), 1-VII-104 (c). [Have recent records.]

Proteides mercurius mercurius (Fabricius) 1787. "Eudamus idas". 16-VI-1899 took a large skipper *Eudamus idas*, have never seen it before. [No records since 1899, probably a stray.]

Papilionidae

Battus philenor philenor (Linnæus) 1771. "P. philenor". 30-31-I-1900 (sduring the month), 3-II-1900 (s), 8-III-1900 (s), 2-III-1901 (c), 5-XI-1902 (s), 12-IX-1916 (saw mantis eating one). [Have recent records.]

Battus polydamas lucayus (Rothschild & Jordan) 1906. "P. polydamas". 26-IX-1900 (saw one quite close). [Should be found rarely.]

Papilio polyxenes asterius Stoll 1782. "P. asterius". 19-III-1899 (s), 8-III-1900 (s), 8-IV-1900 (c), 2-III-1901 (c). [Have recent records.]

Papilio cresphontes cresphontes Cramer [1777]. "P. cresphontes". 21-III-1899 (s), 24-III-1900 (s), 1-IV-1901 (s). [Have recent records.]

Papilio glaucus glaucus Linnæus 1758. "P. turnus". 19-III-1899 (s), 9-III-1900 (s), 17-III-1901 (s), 13-27-VII-1902 (c) [Edwards Co.], 29-II-1908 (s). [Probably western distribution limit. Should be found occasionally.]

Papilio multicaudata Kirby 1884. "P. daunus". 29-VIII-1899 (c) Kerrville, 6-IX-1900 (s), 17-VIII-1902 (c), 18-VIII-1902 (c), 5-IX-1908 (saw several times lately), 15-IV-1910 (c-2) it is not as a rule common but it is by no means rare some years, 18-IX-1912 (c). [Have recent records.]

Papilio troilus Linnæus 1758. "P. troilus". 11-III-1900 (s), 14-III-1901 (c-fresh), 17-IX-1903 (found one caught by a green-grey spider). [Western distribution limit. Have recent records.]

Pieridae

Pieris protodice protodice Boisduval & LeConte 1829. "P. protodice". 12-II-1900 (s), 8-III-1900 (s), 4-III-1901 (s), 5-XI-1902 (c). [Have recent records.] Ascia monuste phileta (Fabricius) 1775. "P. monuste". 11-VIII-1901 (c), 11-VIII-1907 (c) commoner than usual, 14-VIII-1914 (c) fairly common for the last week or two. [Should be found occasionally.]

Colias eurytheme eurytheme Boisduval 1852. "C. eurytheme" also "Ariadne". 21-II-1899 (c-several), 22-II-1899 (s), 3-II-1900 (c), 21-II-1900 (c-5), 8-III-1900

(s), 8-IV-100 (have seen several winter forms lately), 18-I-1901 (c-1) white form, 31-I-1907 (s), 24-I-1909 (s). [Have recent records.]

Colias cesonia (Stoll) 1790. "C. cæsonia". 22-II-1899 (s), 8-III-1900 (s), 18-II-1901 (saw several), 7-III-1909 (c). [Have recent records.]

Anteos clorinde nivifera Fruhstorfer 1907. "Gonepteryx clorinde". 25-IX-1900 (c), 26-IX-1900 (c), 27-IX-1900 (s), 10-VI-1901 (s), 2-IX-1916 (c-1), (s-2), 8-IX-1961 (c), 29-X-1916 (c-2). [Should be found occasionally.]

Phoebis sennæ eubule (Linnæus) 1767. "C. eubule". 8-III-1900 (s), 17-X-1902 (c) quite common this month, 5-XI-1902 (s), 28-I-1903 (s). [Have recent records.]

Phoebis agarithe maxima (Neumoegen) 1891. "C. agarithe". 3-VI-1899 (c-2), 15-VI-1899 (c), 22-VIII-1901 (s), 3-IV-1902 (s), 7-IV-1902 (s), 11-VIII-1907 (fairly common, hard to get perfect), 23-VIII-1916 (c) very common, 29-X-1916 (has been very common). [Have recent records.]

Kricogonia lyside (Godart) 1819. "K. lyside". 10-V-1899 (c-5), 12-V-1899 (common), 12-IV-1900 (s), 7-XI-1900 (scarce), 9-IV-1902 (s) quite a number, all flying in southwesterly direction singly; wind south, 10-IV-1902 (c), 14-IV-1902 (of the hundreds that crossed the road as I was riding to town Saturday, everyone of them was going in a southerly direction), 30-IV-1902 (out fresh), 18-VI-1902 (c), 27-V-1903 (c-fresh), 29-VIII-1907 (very common), 1-VI-1918 (swarms, 3 or 4 forms, were passing the ranch today from soon after noon till about 4 p.m., all going East. Lena Denton phoned from the Masterson ranch to say the same thing was happening there. There was a constant stream of them crossing the trail. 22-VI-1918 (still numerous), 11-IV-1919 (s) few, 12-IV-1919 (going south), 13-IV-1919 (still going south). [Have recent records.]

Eurema mexicana (Boisduval) 1836. "E. mexicana". 30-IV-1900 (c) numerous. [Have recent records.]

Eurema lisa Boisduval & LeConte 1829. "E. lisa". 21-I-1901 (s), 5-XI-1902 (s), 26-I-1909 (c). [Have recent records.]

Eurema nicippe (Cramer) [1780]. "Nicippe". 21-I-1901 (s), 5-XI-1902 (s). [Have recent records.]

Nathalis iole Boisduval 1836. "N. iole". 22-II-1899 (s), 30-31-I-1900 (s) this month, 8-III-1900 (s), 18-I-1901 (c), 21-I-1901 (c), 5-XI-1902 (c), 24-I-1909 (s). [Have recent records.]

Anthocharis midea midea (Hübner) [1809]. "Genutia". 15-IV-1900 (c), 11-IV-1901 (c), 7-IV-1902 (c), 16-IV-1902 (c), 1-III-1909 (s), 7-III-1909 (c). [Have recent records.]

Riodinidae

Calephelis australis Edwards 1877. "C. australis". 1-IX-1900 (c), 18-IV-1901 (c), 13-27-VII-1902 (c) [Edwards Co.]. [Have recent records.]

Calephelis rawsoni McAlpine 1939. Not mentioned by Lacey. Holotype male and one paratype male collected by Lacey, July 1908 Kerrville, Texas and just Kerrville, Texas respectively. It is unlikely that Lacey actually collected these specimens at Kerrville. The authors have reared this species from vicinity of Lacey's old ranch but have been unable to locate suitable habitats in or very near Kerrville.

Lycaenidae

Harkenclenus titus watsoni (Barnes & Benjamin) 1926. "T. titus". 11-VI-1900 (c), 21-VI-1900 (c) on button willows [Cephalanthus occidentalis] which are just out, 17-VI-1901 (c-2), 25-V-1902 (c-1♀). [No recent records but should be found occasionally.]

Satyrium calanus falacer (Godart) [1824]. "T. calanus". 12-V-1899 (c), 17-V-

1899 (c-20) all fresh, 15-V-1900 (c), 14-V-1901 (c), 18-V-1901 (c) about 20, 14-V-1902 (c) first few I get are always darker than the later ones, 21-V-1902 (common), 24-V-1903 (c). [Have recent records.]

Calycopis beon (Stoll) 1782. "T. cecrops". 27-111-1900 (s), 2-111-1901 (c),

13-VI-1902 (s), 18-VI-1902 (c). [Have recent records.]

Tmolus azia (Hewitson) 1873. Not listed in Lacey's field notes. Recorded by Barnes & McDunnough (1913). Collected by Lacey (19), Paint Creek, Edwards Co. Texas. No date given. According to Lacey's field notes, he visited Paint Creek 15 July 1898, 23 November to 6 December 1916, and 19–26 July 1919; the last two dates are ruled out for obvious reasons, leaving 15 July 1898 most likely date of capture. [A stray.]

Callophrys henrici solatus Cook & Watson 1909. "I. irus". 20-III-1899 (c-6), 21-III-1899 (c-4), 8-III-1900 (c), 13-III-1901 (c-3), 15-III-1901 (c) several, 16-III-1903 (c). [Single brooded. Have recent records.]

Callophrys gryneus castalis (Edwards) 1871. "T. damon". 13-III-1899 (c), 21-III-1899 (c-2) [Kimble Co.], 26-VII—5-VIII-1899 (c) several very dark, 9-III-1900 (s), 2-III-1901 (c), 30-IV-1902 (c). [Have recent records.]

Atlides halesus corcorani Clench 1942. "A. halesus". 15-VI-1899 (c-2), 25-VIII-1899 (c), 27-III-1900 (s), 1-IX-1900 (c), 21-VIII-1901 (s), 13-VI-1902 (s), 18-VI-1902 (c), 7-III-1909 (c). [Have recent records.]

Euristrymon ontario autolycus (Edwards) 1871. "Autolycus". 15-V-1900 (c), 17-V-1901 (c) 40 good specimens, 21-V-1902 (common), 24-V-1903 (c). [Have recent records.]

Panthiades m-album (Boisduval & LeConte) [1833]. "T. m-album". 29-VIII-1907 (c) first I have ever seen. [No records since 1907. Probably western distribution limit.]

Strymon melinus franki Field 1938. "T. melinus". 14-III-1900 (c), 24-V-1903 (c) on milkweed blossoms. [Have recent records.]

Strymon columella istapa (Reakirt) [1867]. "T. columella". 25-VI-1902 (c) first I have seen here. [Should be found occasionally. Have one recent record.]

Strymon alea (Godman & Salvin) [1887]. Callicista laceyi Barnes & McDunnough 1910. Not mentioned in Lacey's field notes. C. laceyi was described from a female collected by Lacey in July 1909 at Del Rio, Texas. Lacey left Kerrville 15 July 1909 for the Devils River on a fishing trip. He stayed until 31 July. It is unlikely that he passed through Del Rio which would have been considerably out of his way. The most likely place of capture was on the Devils River north of Del Rio in Val Verde Co.

Leptotes marina (Reakirt) 1868. "L. marina". 10-V-1899 (c-1). [Should be found there occasionally.]

Hemiargus ceraunus zachæina (Butler & Druce) 1872. "L. gyas". 5-XI-1902 (c-1), like isola without black spots beneath upper wing, 29-X-1916 (fairly common). [Have recent records.]

Hemiargus isola alce (Edwards) 1871. "Isola". 8-IV-1900 (s), 5-XI-1902 (c), 10-II-1903 (c). [Have recent records.]

Everes comyntas comyntas (Godart) [1824]. "E. comyntas". 27-IV-1899 (c-1\,), 9-VIII-1899 (c), 24-III-1900 (s), 21-VI-1900 (c), 30-III-1901 (c) have been out a few days. [No recent records, but should be found occasionally.]

Libytheidae

Libytheana bachmanii larvata (Strecker) [1878]. "L. bachmanii". 7-XI-1900 (scarce), 24-IV-1901 (c), 5-XI-1902 (c), 28-I-1903 (s), 10-II-1903 (s) out every warm day throughout the winter, 13-VIII-1916 (swarming), 20-VIII-1916 migrating in countless thousands all going southeast, 21-VIII-1916 still going east in less numbers. 12-IX-1916 hundreds of thousands on the verbesina weeds [Verbesina]

virginica L.] last few days, 25-IX-1916 still going southeast, 5-X-1916 large flight went by the ranch, 8-X-1916 still migrating, 16-X-1916 few disreputable specimens going east, 29-X-1916 swarming and migrating. [Have recent records.]

Libytheana carinenta mexicana Michener 1943. "Carinenta". 5-XI-1902 (c).

[Probably a stray.]

Nymphalidae

Anaea andria andria Scudder 1875. "A. andria". 18-III-1900 (c), 13-III-1901 (s), 7-III-1909 (c), 4-I-1917 (c). [Have recent records.]

Anaea aidea morrisonii (Edwards) 1883. "A. morrisonii". 7-XI-1900 (c). [Should be found rarely.]

Mestra amymone (Ménétriés) 1857. "C. amymone". 8-IX-1898 (c-1), 27-IX-1898 (c-1), 18-VI-1900 (s), 22-VI-1900 (s), 7-VII-1900 (c) [Kimble Co.], 25-VI-1902 (c). [Have recent records.]

Marpesia chiron (Fabricius) 1775. "Timetes chiron". 28-VIII-1899 (c-1) have been looking for him every day since I saw him on the 24th, 3-VIII-1902 (s), 14-VII-1905 (s-worn), 11-VIII-1907 (c-1) saw another, 25-VIII-1907 (s) third seen this year, 1-IX-1916 (s-1). [Should be found rarely.]

Marpesia petreus (Cramer) [1776]. "T. peleus". 14-VIII-1907 (c-2), 29-VIII-1907 (c-1) a good specimen, third taken and fourth seen this year. [Should be found rarely.]

Limenitis astyanax astyanax (Fabricius) 1775. "Ursula". 30-IV-1902 (c) they have been out for about a week. [Have recent records.]

Limenitis archippus watsoni (dos Passos) 1938. "L. disippus" [Possibly hybrid]. 25-VI-1899 (c) at San Antonio [Bexar Co. Texas], 14-VII-1905 (c-1) fresh, it is not at all common here. [Have recent records.]

Limenitis bredowii eulalia (Doubleday) [1848]. "H. californica". 22-VIII-1900 (s-1) saw another about two years ago, 29-IX-1900 (s-2), 3-XI-1900 (s-1), 4-XI-1900 (s), 13-27-VII-1902 (c) [Edwards Co.], 8-VIII-1903 (s), 17-IX-1903 (c), 18-IX-1903 (s), 29-IX-1903 (s-2) fresh, 30-IX-1903 (s), 15-IV-1904 (s-3), 18-VI-1904 (c), 9-VII-1904 (s), 29-VIII-1907 (s) fresh, 12-IV-1910 (s-several) fresh, 3-IV-1916 (s) fresh, 29-X-1916 (fairly common). [Occasionally becomes temporary resident. Have recent records.]

Metamorpha steneles biplagiata (Fruhstorfer) 1907. "V. steneles". 26-27-VI-1904, saw what I suppose was V. steneles but the ground color was yellowish instead of white; tried hard to get him but failed. [Should stray into area rarely.]

Vanessa atalanta (Linnæus) 1758. "Atalanta". 30-I-1900 saw this month, 4-II-1900 (s), 8-III-1900 (s), 21-I-1901 (s), 5-IX-1902 (s), 24-I-1909 (s), 4-I-1917 (s). [Have recent records.]

Vanessa virginiensis (Drury) [1773]. "Huntera". 30-I-1900 saw this month, 8-III-1900 (s), 21-I-1901 (s), 17-II-1901 (s) often very small in winter and early spring [attributed to scarcity of larval food plant], 5-XI-1902 (c). [Have recent records.]

Vanessa cardui (Linnæus) 1758. "P. cardui". 8-III-1900 (s), 21-VIII-1901 (c) common, 16-XII-1902 (s). [Have recent records.]

Junonia cœnia cœnia (Hübner) [1822]. "J. cœnia". 20-III-1900 (c), 13-IV-1900 (s), 5-XI-1902 (s), 26-I-1909 (c). [Have recent records.]

Nymphalis antiopa lintnerii (Fitch) 1856. "V. antiopa". 25-II-1900 (s) worn, 17-V-1900 (s), 31-V-1900 (c), 18-II-1901 (s), 2-III-1901 (s), 8-V-1902 (c), 27-V-1903 (s-2), 28-V-1903 (c-1), 31-V-1903 (c-1), 22-II-1907 (s) more than ever before, 7-V-1911 (c-several); not common at the ranch. Saw none in 1899 and only two in 1898. [Should be found occasionally.]

Polygonia interrogationis (Fabricius) 1798. "C. interrogationis". 22-II-1899

(s), 4-II-1900 (s), 30-IV-1900 (c) numerous, fresh, 30-IV-1902 (c). [Have recent records.]

Polygonia comma (Harris) 1842. "P. comma". 15-IV-1900 (s), 11-IV-1901 (c). [No records since 1901. Probably no longer present.]

Chlosyne janais (Drury) 1782. "Synchloe janais". 27-VI-1899 (c) [Bandera Co.], 22-VII-1908 (s) in garden. [Should stray into the area occasionally.]

Chlosyne lacinia adjutrix Scudder 1875. "S. lacinia". 27-VI-1899 (c) [Bandera Co.], 13-IV-1900 (s), 5-IV-1901 (c), 15-IV-1902 (s), 16-IV-1902 (c), 5-XI-1902 (c), 5-XI-1902 (s), 11-VIII-1903 (1-ex larva; larva found on white ragweed [Parthenium hysterophorus L.], 31-VIII-1903 (1-ex larva). [Have recent records.]

Chlosyne endeis (Godman & Salvin) 1894. Not listed in Lacey's field notes. Recorded by Barnes & McDunnough (1913). Collected by Lacey (13, 19); 3 marked "Texas," the 9 May 1902, Edwards Co., much worn. [Strays].

Phyciodes texana texana (Edwards) 1863. "E. texana". 21-I-1901 (s), 2-III-1901 (s), 30-IV-1902 (s) fresh, 25-VI-1902 (c), 20-II-1909 (c). [Have recent records.]

Chlosyne nycteis nycteis (Doubleday) [1847]. "P. nycteis". 12-IV-1900 (s), 30-III-1901 (s), 10-IV-1902 (s), 16-IV-1902 (c). [Have recent records.]

Chlosyne gorgone carlota (Reakirt) 1866. "Ph. ismeria". 19-IV-1899 (c). [No recent records, but should be present.]

Phyciodes tharos (Drury) [1773]. "Ph. tharos". 13-III-1900 (s), 18-III-1900 (s), 7-III-1909 (c). [Have recent records.]

Phyciodes phaon (Edwards) 1864. "Phaon". 18-III-1900 (c), 30-III-1901 (c), 5-XI-1902 (s), 7-III-1909 (c). [Have recent records.]

Phyciodes vesta (Edwards) 1869. "Ph. vesta". 21-III-1899 (s), 18-III-1900 (c), 18-III-1901 (s), 25-IV-1901 (c), 7-IV-1902 (c), 10-IV-1902 (c), 5-XI-1902 (c), 24-I-1909 (s). [Have recent records.]

Thessalia theona bollii (Edwards) [1878]. "M. bollii". 25-V-1900 (c) first I have ever seen, 28-V-1900 (c-1), 21-VI-1900 (c-3), 6-IX-1900 (s), 19-V-1908 first I have seen here for years, 5-IX-1908 (c) fairly common on the hill, 7-IX-1908 (c) more on the hill. [Have recent records.]

Dymasia dymas (Edwards) 1864. "M. dymas". 25-26-VI-1899 (c) San Antonio [Bexar Co.]. [Have recent records, but urbanization is rapidly destroying habitats.] Texola elada ulrica (Edwards) 1877. "M. elada". 15-26-VII-1898 took good series [Edwards Co.], 25-30-VII-1901 (c) [Kimble Co.], 8-VIII-1901 (c), 30-IV-1902 (c). [Have recent records.]

Poladryas minuta minuta (Edwards) 1861. "M. arachne". 15-VII-1898 (c-2) [Edwards Co.], 27-IX-1898 (c-18) near [ranch] gate, 21-VI-1900 (c), 14-IV-1901 (s), 20-IV-1901 (c-45), 21-VIII-1901 (s), 22-IV-1902 (s) several, 23-IV-1902 (c), 30-IV-1902 (common), 9-VI-1902 (s) many on Kerrville road, 13-VI-1902 (fairly common), 21-VIII-1904 fresh brood out, 7-IX-1908 (c-2), 26-I-1909 (s) not seen generally until April, 15-VIII-1909 (c) several, 12-IV-1910 (s), 14-II-1911 (s) along Turtle Creek road. [No records since 1911. Habitats probably destroyed by over grazing of sheep and goats.]

Euptoieta claudia (Cramer) [1776]. "E. claudia". 31-I-1900 (s) this month, 4-II-1900 (s), 21-II-1900 (c), 7-XI-1900 (c), 17-II-1901 (s), 5-XI-1902 (s). [Have recent records.]

Euptoieta hegesia hoffmanni Comstock 1944. "E. hegesia". 15-VIII-1909 saw fine fresh E. hegesia but failed to get it. [Should stray into the area rarely.]

Heliconius charitonius vazquezæ Comstock & Brown 1950. "Heliconius charitonius." 26-VII-1898, one of the Miller boys caught it by hand in Kerrville and brought it to Palmer's place. I have not seen it here before. 19-VII-1908, saw one in the garden but couldn't get it. [Migrant. Should be found there occasionally.]

Dryas julia moderata (Stichel) 1907. "Colænis julia". 7-X-1900, Jim Taylor

took one last month and brought it to me to identify. 6-X-1906 (s-2), 11-VIII-1907 (c-1) at the ranch; better than I got in Mexico. 14-VIII-1907 (c-1) saw three others. [Migrant. Should be found occasionally.]

Agraulis vanillae incarnata (Riley) 1926. "A. vanillae". 24-IV-1900 (s) fresh, 2-II-1901 one settled three times on the stem of my pipe as I was having a smoke near the little dam, 5-XI-1902 (s) fresh. [Have recent records.]

Danaidae

Danaus plexippus plexippus (Linnæus) 1758. "D. archippus". 28-X-1882 crowds going south, 23-X-1892 were passing over all day, 25-III-1900 common, weary looking, 17-V-1900 (s) fresh, 13-III-1901 (s) worn, 30-IV-1902 (c) fresh, 5-XI-1902 (s) fresh, 27-V-1903 (s-1) fresh, 19-X-1904 in swarms, 29-II-1908 (s) fresh, 8-X-1916 gathering about the willows and pecans, 10-X-1916 going south in hundreds, 31-III-1917 going north, not in the big bunches that go south in the fall, 5-X-1918 for the last week they have been swarming in the pecan.

Danaus gilippus strigosus (Bates) 1864. "Strigosus". 21-I-1901 (s), 13-III-1901 (s), 5-XI-1902 (s), 24-I-1909 (s). [Have recent records.]

Satyridae

Euptychia hermes sosybius (Fabricius) 1793. "N. sosybius". 11-VI-1900 (c), 1-VII-1904 (s). [Should be found occasionally.]

Euptychia cymela cymela (Cramer) [1777]. "Eurytus". 15-V-1900 (c). [Possibly western distributional limit. Have recent records.]

Euptychia rubricata Edwards [1871]. "N. rubricata". 5-V-1900 (s), 28-VIII-1900 (c), 6-IX-1900 (c), 4-III-1901 (s-1), 6-IV-1901 (c), 16-IV-1901 (c), 8-V-1902 (c). [Have recent records.]

Cercyonis pegala texana (Edwards) 1880. "S. texana". 21-VI-1900 (c), 7-19-VII-1900 (c) [Kimble Co.], 16-VI-1901 (s) several, 9-VI-1902 (s). [Have recent records.]

Sphingidae

Manduca sexta (Johanssen) 1763. "Carolina". 12-IX-1916 yesterday I took

a large Carolina sphinx from a mantis. [Have recent records.]

Sphinx eremitoides Strecker 1874. "H. eremitoides". 12-IX-1916 a mantis was eating an H. eremitoides, 13-IX-1918 yesterday I noticed 3 or 4 H. eremitoides resting on posts while fixing fence. This morning I went around with a poison jar and gathered in about 20. Their color matched the cedar posts exactly. 14-IX-1918 (c-6), 22-IV-1919 many on fence posts, 23-IV-1919 more, quite a bunch of them. [Have recent records, but never found common.]

Hemaris thysbe (Fabricius) 1775. "Thysbe". 10-III-1900 (c), 25-III-1900 watched female laying its eggs on flower buds of black haw [Crataegus tracyi Ashe]. Last year I found the caterpillars of this moth feeding on honeysuckle [Lonicera albiflora T. & G.] 13-III-1901 (c-1). [Should be found occasionally.]

Hemaris diffinis (Boisduval) 1836. "H. axillaris". 10-III-1900 (c). [Should be found occasionally.]

Amphion nessus (Cramer) 1777. "Amphion nessus" 28-III-1900 (c). [Should be found occasionally.]

Xylophanes tersa (Linnæus) 1771. 7-XI-1896 on Nueces [River] [Uvalde Co.] picked up a sphinx larva with false eyes on it like the elephant hawk at home [Deilephila elpenor L.] [Have recent records.]

Hyles lineata (Fabricius) 1775. "C. lineata". 10-III-1900 (c-2), 19-V-1908 screech owl feeding her young Sphinx moth (lineata). [Have recent records.]

Saturniidae

Hyalophora cecropia (Linnæus) 1758. "Cecropia". 6-IV-1900 (1) ex pupa, another 3 or 4 days ago. 3-IV-1901 (1) ex pupa, 12-V-1901 (1) ex pupa, 24-V-1903 (1) ex pupa. [Should be found occasionally.]

Actias luna (Linnæus) 1758. "Luna". 6-III-1908 yesterday I saw a beautiful fresh luna moth. [Have recent records.]

Antheraea polyphemus (Cramer) 1775. "T. polyphemus". 11-VI-1902 on the first of the month Rawson got me a female *T. polyphemus*; she laid a lot of eggs which I brought home and the larvae were hatched this morning. 6-III-1918 (c). [Have recent records.]

Hemileuca maia (Drury) 1773. "Hemileuca maia". 4-XI-1900 (c-1) first this year, 11-XI-1902 (1) ex larva, 18-XI-1902 a female hatched from one of my pupae. I took it outside with a bit of mosquito curtain over the box. It was immediately surrounded by males. All the males came up wind to the box and when they over ran the scent, circled back to it like a pack of hounds. 31-X-1903 (s), 23-X-1904 (c), 11-XI-1912 (s) first this season. [Have recent records.]

Hemileuca grotei Grote & Robinson 1868. "H. grotei". 5-XI-1902 (c), 7-XI-1902 ($1 \circ$) ex larva, 9-X-1904 ($1 \circ$) ex larva. [Have recent records.]

Eacles imperialis (Drury) 1770. "Eacles imperialis". 26-VIII-1901 (c). [No recent records. Probably western distribution limit.]

Amatidae

Horama texana Grote 1867. "Horama texana". 1-IX-1916 (c) first I have seen here, 2-IX-1916 (c). [No recent records but should be found occasionally.]

Arctiidae

Apantesis arge (Drury) 1770. "Arge". 7-XI-1900 (c), 26-II-1901 watched arge deposit eggs on a dead grass stem. [Have recent records.]

Hyphantria cunea (Drury) 1770. "H. cunea". 16-X-1900 caterpillars have stripped most of the pecans and walnuts of their leaves; ranchers are busy attending to the caterpillars. 6-X-1909 worse than ever, the caterpillars get into everything and in some places are all over the ground. 10-X-1916 webworms (H. cunea) very numerous this year. [Have recent records.]

Noctuidae

Pseudaletia unipuncta (Haworth) 1809. "L. unipuncta". 9-X-1904 very common a week or two ago, 26-XI-1904 numerous caterpillars this year. [Have recent records.]

Lithophane laceyi (Barnes & McDunnough) 1910. Not mentioned by Lacey in his field notes. Described from specimens collected by Lacey. Should be there.

Spodoptera frugiperda (Smith) 1797. "L. frugiperda". 9-X-1904 very common a week or two ago, 26-XI-1904 same as above. [Have no recent records.]

Catocala consors (Smith) 1797. "Consors". 25-V-1902 (c) out now. [Have recent records.]

Catocala junctura Walker 1857. "Junctura". 25-V-1902 (c). [Have recent records.]

Catocala frederici Grote 1872. "Catocala frederici". 31-V-1903 (c) at night. This is the fourth of this rare species that I have taken. [Should be found rarely.]

Catocala ultronia (Hübner) 1823. "Ultronia". 25-V-1902 (c). [Should be taken rarely.]

Catocala similis Edwards 1864. "Similis". 25-V-1902 (c). [Should be found rarely.]

Catocala micronympha Guenée 1852. "Micronympha". 25-V-1902 (c). [Have recent records.]

Catocala amica (Hübner) 1818. "Amica". 25-V-1902 (c). [Have recent records.]

Alabama argillacea (Hübner) 1823. "A. argillacea". 9-X-1904 swarms everywhere, 26-XI-1904 numerous. [No recent records but should be found regularly.]

Notodontidae

Datana ministra (**Drury**) 1773. "Caterpillars". 27-VI-1899 the pecan trees on the Medina [River] [Bandera Co.] are completely stripped of their leaves by caterpillars, something like those of our buff-tip moth [*Phalera bucephala* L.] [Have recent records.]

Lasiocampidae

Malacosoma disstria Hübner 1820. "M. disstria". 23-IV-1900 last Friday and Saturday the train was delayed for half an hour in the neighborhood of Boerne, Texas [Kendall Co.] by the quantity of caterpillars on the rails that prevented the wheels from getting a grip on them. These caterpillars are completely stripping the oak trees. [This species was very abundant during 1959–1964 throughout central Texas. It has since been under control, apparently through natural biological means.]

Megalopygidae

Lagoa laceyi Barnes & McDunnough 1910. Not mentioned by Lacey. Described from specimens collected by Lacey. No recent records, but it should be found there rarely.

Acknowledgment

This article is dedicated to the memory of our very dear friend and fellow Lepidopterist, Mrs. Ellen Schulz Quillin who died suddenly at her home in San Antonio, Texas 6 May 1970. Mrs. Quillin was founder of the Witte Memorial Museum and Director for thirty-seven years, and Director Emeritus until her death. She was a noted botanical author and lecturer. Without her foresight in acquiring the hand scribed field notes of Howard George Lacey, these data could not now be made available to the Lepidopterists' community.

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A REVISION OF SPEYERIA NOKOMIS (NYMPHALIDAE)¹

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It is proposed that *Speyeria nokomis nitocris* (Edwards) be elevated from the synonymy as placed by dos Passos (1964), to subspecific rank for the reasons which are delineated in the paragraphs below.

In an earlier work (dos Passos and Grey 1947), Speyeria nokomis nitocris was treated as a valid subspecific taxon, but later (1964), dos Passos treated this taxon as synonymous with S. nokomis nokomis (Edwards). For the past several years, we have made a study of this insect in Colorado (M. F.) and in Arizona and New Mexico (C. D. F.). The Colorado insect, S. nokomis nokomis is quite distinct in habitat and fascia from the Arizona-New Mexico insect, S. nokomis nitocris.

Speyeria nokomis nokomis (Edwards)

Original Description: "Descriptions of certain species of diurnal Lepidoptera found within the limits of the United States and British America." No. 3. Proc. Acad. Nat. Sci. Philadelphia 14: 221 (1863). Figured by Edwards, B. N. A. pl. Argynnis 4 (1868).

Type Locality: This was fixed by dos Passos and Grey (1947) as Mount Sneffels, Ouray Co., Colorado. This location has been questioned by Brown (1957b, p. 335) and does not appear consistent with presently known habitats for *n. nokomis*. The neotype male (AMNH) bears the label "Oslar Sneffels Mts Ouray Co Col Aug 9000 Ft.," "A. nokomis." and "Ex Coll. Wm. C. Wood Acc. 36915."

Discussion: In the plate which accompanies this paper, three subspecies of Speyeria nokomis are figured. Dorsally the males are similar

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