The Butterfly Princess ***published on MG public website, 12/2020***
By Erika Choffel

Ximena (pronounced him-men-a) McGlashan (1893-1986), often referred to as the "Butterfly Princess", was said to have collected more than 20,000 butterflies with her father, Charles Fayette McGlashan.[1] And about 180 miles northwest of San Francisco, in the small town of Truckee, CA, inside the local recreation center, is a partial (about 1200) yet fascinating collection of her Lepidoptera, the order of insects that includes butterflies and moths, in excellent condition. I was grateful for her careful attention to design as I gazed at the wall of specimens from around the world, acquired both by collecting natives, and purchasing eggs and larvae to essentially be farmed in the early 1900's. The display, which includes her father's nearly 4 decades of collecting, has 4 panels of 15 cases each. Her articles in *The Butterfly Farmer* magazine, which she produced in 1913-1914, are full of stories from professionals, lists of suppliers, and details one best practices for farming, including capturing and caring for egg, pupa and chrysalis.

photo by Erika Choffel.
The surviving McGlashan display at the Truckee-Donner Recreation center, Truckee, CA. These framed cases, patented by the McGlashans, are on the exterior wall of the appropriately named, The Butterfly Preschool.

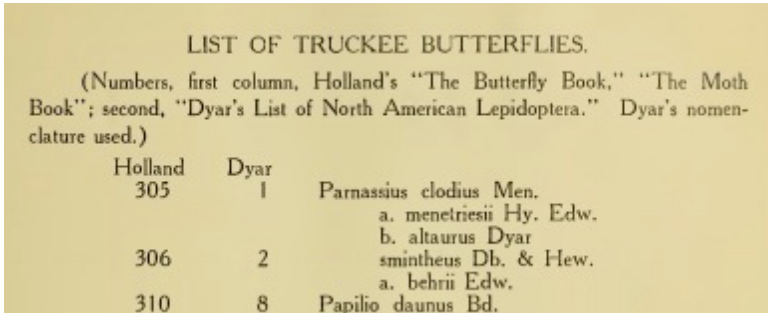
Ximena was trained as a teacher, and upon return to her hometown of Truckee, near Lake Tahoe, she tried to incorporate the study of butterflies into the curriculum. The more she studied and collected, the more her hobby grew into what she thought would be her life's work, enabling her to escape the classroom, which she did not fully enjoy.[2] Before she was 21, Ximena became the first butterfly farmer in the U.S.[3] Her passion began with her father, Charles (C.F.) McGlashan, a teacher, attorney, newspaper editor, and controversial personality, whose extensive hobby of entomology intrigued her. He told her a woman could earn far more from butterflies than from teaching, and she took that as a challenge and began work. Once that passion was ignited, Ximena further studied lepidopterology and even developed a correspondence course for the study of entomology. Ximena combined her father's interests and her own to run a flourishing business of selling mounted butterflies to collectors, dealers and museums, earning a whopping $500 per 10-week season. She wrote, "a woman can earn $50 a week with no capital and no knowledge of entomology."[4]

Ximena faced challenges in the current attitudes of scientists of her time. She writes, "Almost at the outset I discovered that anyone who attempts to break into the charmed circle of the entomologists will find few guides. All the books are printed for scientists, not beginners. The novice must grope his way as best he can. The learned men who might help him are deeply absorbed in biological problems, which engross their time to the exclusion of almost everything else. The very best that the beginner can hope to do is to fall into the clutches of some collector who will teach him just enough

about collecting to get his specimens. If he tries to sell there is no one to assist him in finding honorable purchasers and he meets with obstacles and disappointments".[5]

There were certainly famous lepidopterists in the U.S. during Ximena's lifetime:

- Titian Ramsay Peale, II (1799-1885), noted entomologist, gifted illustrator and author of *The Butterflies of North America, Diurnal Lepidoptera: Whence They Come, Where They Go, and What They Do*. He was probably the first lepidopterist in the U.S., although through multiple tragedies, he was unable to publish during his lifetime;. A century later it was done.
- William Henry Edwards (1822-1909), authored the 3 volume set, *Butterflies of North America*, and recommended books for Charles McGlashan.
- Ferdinand Heinrich Herman Strecker (1836- 1901), friend of the McGlashans, collected over 200,000 butterflies and moths from around the world, including 300 new species and over 100 new subspecies.
- Ximena used work by Harrison Gray Dyar Jr. (1866-1929), and William Jacob Holland (1848-1932) in her listing of her butterflies and moths. Dyar, a taxonomist, is most famous for his classification of Lepidoptera. Holland is known for spreading interest in butterflies & moths, and wrote *The Butterfly Book*, which is still used today. Holland had amassed a collection of over 250,000 butterfly & moth specimens.

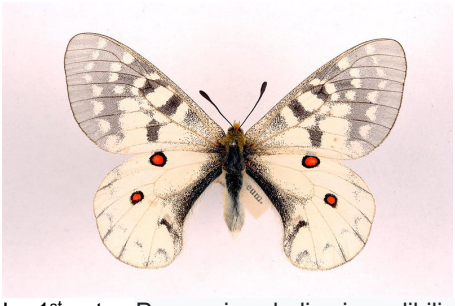


LIST OF TRUCKEE BUTTERFLIES.

(Numbers, first column, Holland's "The Butterfly Book," "The Moth Book"; second, "Dyar's List of North American Lepidoptera." Dyar's nomenclature used.)

Holland	Dyar	
305	1	Parnassius clodius Men.
		a. menetriesii Hy. Edw.
		b. altaurus Dyar
306	2	smintheus Db. & Hew.
		a. behrii Edw.
310	8	Papilio daunus Bd.

This is a sample of Ximena's butterfly listing from *The* Butterfly Farmer.



Her 1st entry, Parnassius clodius incredibilis Bryk and Eisner 1932 : 99, Creative Commons. A high elevation butterfly still seen in the Truckee area, per Art Shapiro.

- Edward O. Essig (1884-1964) was professor of entomology at the University of California, Berkeley, where Ximena first attended college. Unfortunately she discontinued her work after marriage to raise a family, as was the accepted path of the times.
- Margaret Fountaine (1862–1940) collected 22,000 butterflies from around the globe and travelled more widely than any other entomologist before or since.[6] She was primarily a collector, and the male dominated field did not consider her (or any woman) to be a serious scientist.
- And more recently, two brothers, John and Tom Emmel (1941-2018), were the first to do a thorough workup of butterflies in the Western United States. The location of their study: Donner Pass. In 1998, the Emmels discovered a new species about 20 miles south of Truckee.

Why Truckee?

Donner Pass, near Truckee, receives more snow than most places in the United States, but the amount and timing of snowmelt, which signals the start of butterfly season, varies from year to year,. Nearby is the Sierra Nevada Snow Laboratory, a source of climatological data, jointly managed by the Federal government and the University of California. Butterfly season starts at the beginning of June, on average, but in very light snow years, it can start as early as April and in very snowy years, not until late June, or even July.[7]

Butterfly season lasts until September and into October some years. There have been two reports of butterfly population explosions: one in 1992 due to a hard freeze in 1990 that wiped out predators and parasites; and another in 2019 due to a large 2007 fire that resulted in growth of a host plant, California lilacs (*Ceanothus*), which needs fire to germinate (extreme stratification).

The Donner-Truckee area has Western slopes and Eastern cliffs, with thick shady forests, open meadows, and granite stone. With all the variation in soil, light, food sources, elevation, and weather, it stands to reason that there is also great variation in wildlife. In fact, "With well over 100 distinct species, the Donner Summit area (Lake Tahoe) boasts such diversity the site ranks as one of the richest butterfly faunas documented in North America north of Mexico."[8]

Why 1912?

Ximena McGlashan, an 18-year-old forward thinker, was clearly a woman in the right place at the right time. The demand for butterflies by museums, scientists, collectors, and to some extent wealthy fashion, had become very popular in some parts of the world over the previous decades, creating a growing market. She not only seized that market opportunity, but also used her teaching background to share her business plan with other amateur butterfly farmers. She earned a Bachelor's Degree in entomology from Stanford using her earnings from her woman-owned business, which included her correspondence course and the sale of farmed butterflies. (According to the 24th Annual Register 1914-1915, Stanford would have cost her $350-$500 per semester for room, board, fees and tuition).[9] Within only a few years, however, Ximena's sources and clients all but dried up due to WWI.

The Truckee exhibit is in the original cases patented by the McGlashans. The collection began in 1871 and was completed in 1912, and has been on display for over 80 years[10], having survived three moves, a fire, an earthquake, and vandalism.

I personally have mixed feelings about collections of any wildlife, but scientists sometimes discover new species while analyzing academic collections. Most entomologists that I found agree that the extinction of butterflies, such as the Xerces Blue from San Francisco in the 1940s, was due to habitat destruction, not collecting.[11]

My only disappointment is the lack of identification of each specimen in Ximena's collection. In 1997, a local Truckee area entomologist, John Wakefield, began that research, but I found no update except for his obituary. Ximena listed the moths and butterflies in one of her magazines issues[12] but the list does not correspond to the visual specimens in any clear way.

Close-up photos by Erika Choffel.
In the 1st frame, if the bright blue one is a blue morpho. It is not native to the Truckee Donner region, since it lives in rain forests, and not above 4600 feet above sea level.
In the 2nd frame, the large "owl butterfly" is most likely one of 20 species in the *Caligo* genus, which is native to the rainforests of Mexico, Central and South America, and extremely unlikely to be seen in the wild in the U.S.
In the 3rd frame, if the striped one above the large purple one, facing downward, is a long zebrawing, it also is not native to the Truckee-Donner area, as it rarely gets as far north as New Mexico. It is only slightly possible that it might have migrated that far north. In 1996, Florida declared it as the official state butterfly.

The McGlashan collection, although artistically beautiful, is not, by today's standards, a helpful scientific tool, and cannot measure any turnover or extinctions. Many of the specimens have only a dorsal view, but ventral views are also important in identification. Ximena labeled butterflies with "Truckee, CA", without detailing if it was found there, or raised there, or simply added to her collection there. Today, there's a tremendous diversity in the butterfly species that live at Donner Pass, more than virtually anywhere else in North America.[13] In fact, there are over 100 species in the Truckee and Donner Pass area.

Entomology professor Art Shapiro from the University of California, Davis, has outlined drawbacks of the collection also.[13] One is the lack of precise locations, as I mentioned. Ximena identifies her specimens with "Truckee, California" but we do not know if that is the specific small town of the early 1900's, or the entire lake region as some of her listings can be found 50 miles from Truckee. Furthermore, we don't know if a specimen was found in a meadow or near a granite cliff, or at 6,000 or 10,000 feet elevation."

The collection at the Truckee Recreation Center today includes primarily exotics acquired from exchange or purchase. It features some natives but with no details. Additional confusion results from the realignment, reclassification and renaming of certain species into taxonomic families different from what was once thought. Shapiro spent over 35 years studying *Lepidoptera* of the Tahoe area, and compared the McGlashan list with his findings. Many species are no longer in the area (although he did identify several *Plebejus saepiolus* or Greenish Blue butterflies, common to the Northwestern U.S.). Their absence today could be due to many factors including vegetation disturbances from 1860-1880 due to Truckee's lumber, ice farming, and railroad construction activities and people heading West for the Gold Rush of 1848-1855. In 1900, Truckee was a growing town of 2,300 people. By 1960, the population had shrunk to 1,000 when the Winter Olympics were held nearby, and has swelled since then to more than 16,000 as of 2018.

The area is actually more wooded now than in Ximena's day, which could also account for part of the decline since butterflies avoid the shade. Sadly, the butterfly that bears the McGlashan name (*Euphydyras chalcedona spp.macglashanii*), described in a book by another daughter of Charles, Nona McGlashan, was reported as being destroyed in the 1906 San Francisco earthquake. The *Euphydryas chalcedona* varies in color whether it's on the east or west slope of Donner Pass, a distance of fewer than 20 miles. And today, it generally survives only below 5,000 feet elevation. Truckee sits at 5,817.

All 3 photos of Euphydryas *chalcedona* are from Douglas Co, NV, on the SE corner of Lake Tahoe. Note the considerable variations in the dorsal sides of these two Euphydryas *chalcedona* examples on the left.
Genus euphydryas (checkerspot) ; species *chalcedona*; subspecies *macglashanii*. Ventral view is on right.
Photos used with permission by Andrew D. Warren, http://butterfliesofamerica.com/
(To see many more variations, look at Bugguide.net https://bugguide.net/node/view/25005/bgimage)

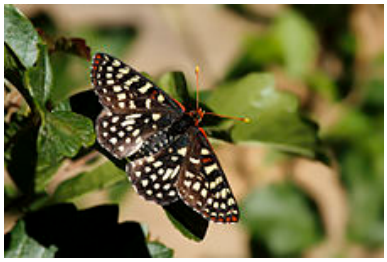
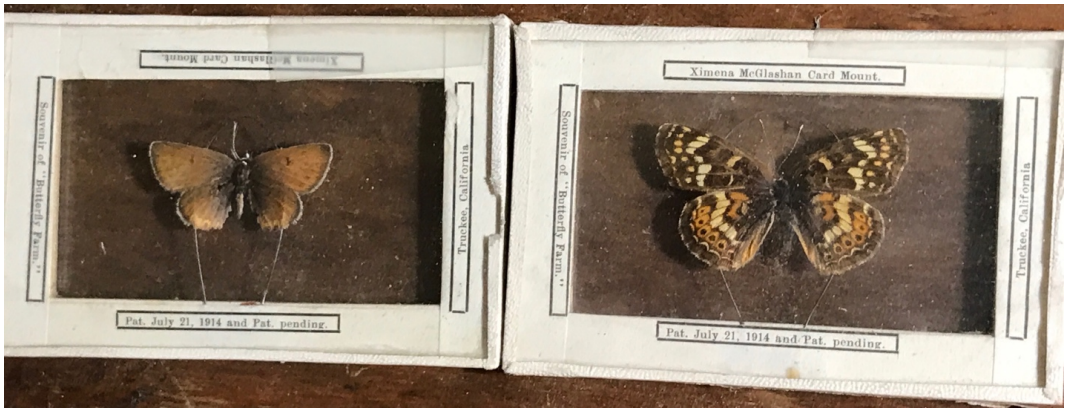


photo by Alan Vernon. Creative Commons, Wikipedia.
Euphydryas *chalcedona*

Ximena from 1913 *Butterfly Farmer* magazine
Public Domain, Wikipedia.



Ximena and her father did an outstanding job of securing and encasing the specimens. They, along with her sister Lenora, had acquired several copyrights, including this mount. Pat. Pending notation July 21, 1914. Photo courtesy of Truckee-Donner Historical Society.

What did she accomplish, then?

"She [Ximena] wrote of her correspondence lessons, 'My greatest aim has been to inspire a love for the beautiful in entomology…. My greatest wish has been to add happiness and sunshine to the lives of my pupils'."[14] And over 100 years later, I am grateful to Ximena McGlashan, who increased my appreciation in the variable design in butterflies, her goal accomplished. I learned and understood her target audience to be amateurs and hobbyists. She hoped other women would find an income from such a business. She saw a niche and filled it. Currently, the Truckee-Donner Historical Society is awaiting approval for the collection to be accepted as an official Nevada County (California) Historical Marker. And although Dr. Shapiro notes that Ximena's collection is far from being scientifically useful, she is listed in his credits in a report on the status of Donner Pass butterflies that he presented to Congress, providing management options for butterfly fauna there. Shapiro estimates there are 155 butterfly species in the Donner Pass area with 173 subspecies (though new subspecies have often been established), most living at the upper elevations. But there are likely only 3 endemic species native to and found only in that area.[15] The passionate work with butterflies done just before the First World War by a 19-year old woman has touched many lives.

Almost every state has a butterfly exhibit open to the public, and the Smithsonian in Washington, D.C. has one as well. One of my personal favorites is the Sammons Butterfly House, part of the Texas Discovery Gardens in Dallas on the Texas state fairgrounds. And without learning from Ximena McGlashan's butterfly collection, I would not have found a gem in "my own back yard". South Texas has 300 or more skipper and butterfly species in the entire Lower Rio Grande valley. The area comprising the cities of Mission, McAllen, and Harlingen is where the uppermost Central American butterflies and the southernmost North American butterflies mingle. The National Butterfly Center (NBC) is "the largest native plant botanical garden in the United States. This 100-acre preserve is home to …the greatest volume and variety of wild, free-flying butterflies in the nation." In fact, *USA Today* calls the National Butterfly Center in Mission, Texas, "the butterfly capital of the

USA."[16] October is their annual butterfly festival, where the air is thick with thousands of beauties. Road trip, anyone?

[1] Truckee-Donner Recreation & Park District, https://www.tdrpd.org/253/Butterfly-Display
[2] *The American Magazine*, Vol LXXVL, August 1913, pages 33-34, digitized by Google, found at https://babel.hathitrust.org/cgi/pt?id=uc1.d0001423797&view=1up&seq=127&q1=McGlashan
[3] Sproat, Heidi, editor, "Ximena McGlashan Letter of April 1915", *Echoes from the Past* newsletter, March 2014, issue 1, page 2, https://www.truckeehistory.org/uploads/5/1/9/2/51923135/2014.03_echoes_march_issue_1_final.pdf
[4] *The San Francisco Call*, October 27,1912, image 4, Digitized.https://chroniclingamerica.loc.gov/lccn/sn85066387/1912-10-27/ed-1/seq-4/
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[6] Waring, Sophie, "Margaret Fountaine: a lepidopterist remembered", *National Center for Biotechnology Information*, January 21, 2015 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4321127/
[7] Shapiro, Art, "Donner Pass", *Art Shapiro's Butterfly Site*, http://butterfly.ucdavis.edu/sites/donner
[8] McLaughlin, Mark, "Abundance of Butterflies add to the Donner Pass' Allure", *Tahoe Daily Tribune*, June 17, 2015, and McLaughlin, Mark, "Sierra Sights: a bevy of butterflies adds to the allure of Donner Pass", June 22, 2015, *Sierra Sun*, https://www.sierrasun.com/sports/sierra-sights-bevy-of-butterflies-adds-to-the-allure-of-donner-pass/
[9] "24th Annual Register", Published by Stanford University, February, 1915, http://sul-derivatives.stanford.edu/derivative?CSNID=00001976&mediaType=application/pdf
[10] Truckee-Donner Recreation & Park District, op. cit.
[11] Warren, Andrew, "Why We Still Collect Butterflies", The Conversation, June 11, 2015, http://theconversation.com/why-we-still-collect-butterflies-41485
[12] McGlashan, Ximena, *The Butterfly Farmer Magazine*, November, 1913, p 125-130, https://catalog.hathitrust.org/Record/000529259 has a -list of butterflies & moths in the collection, however, as of 1997, with local entomologist John Wakefield's death, each in the collection has yet to be identified specifically.
[13]Shapiro, Arthur M., "False Faunas: on Mistrusting Old Special Lists" *American Entomologist* (Winter 1998), pp. 238-250. https://academic.oup.com/ae/article/44/4/238/2389523 then click on PDF at bottom of page to see
[14] Moderator nomad, *The Insect Collectors' Forum*, op. cit.
[15] Shapiro, A.M. 1996. Status of Butterflies. Pages 743-757 In: *Sierra Nevada Ecosystem Project: Final Report to Congress, Vol. II, Assessments and scientific basis for management options.* Univ. of California, Centers for Water and Wildland Resources, Davis, CA. 95616.
https://pubs.usgs.gov/dds/dds-43/VOL_II/VII_C27.PDF
[16] https://www.nationalbutterflycenter.org

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- https://www.mentalfloss.com/article/68164/lost-book-titian-peale-americas-first-lepidopterist by Erin McCarthy
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