

Baril Creek: Searching for the Mariposa Copper

Robert Bercha

www.insectsofalberta.com

In corresponding with Norbert Kondla back in July of this year, the topic of filling out some of the missing species in my personal collection came up. One such species was the Mariposa Copper, *Lycaena mariposa*. Norbert recommended a disturbed habitat area just north of Baril Creek. The site is a reasonably large area consisting of a manmade meadow with an old resource road leading off into the trees to the west. I do not believe either of us held out a lot of hope that there would be many butterflies there, as most of our individual collecting trips earlier in the year had found significantly reduced numbers of both, species and individuals. In fact, it was shaping up to be a relatively poor year for collecting in general (at least within easy driving distance of Calgary).



Looking north across the manmade meadow at the Baril Creek site. The Coyote Hills are to the left and the road cut associated with Highway 940 runs along the tree line on the right of the photo. (Photo © R. Bercha)

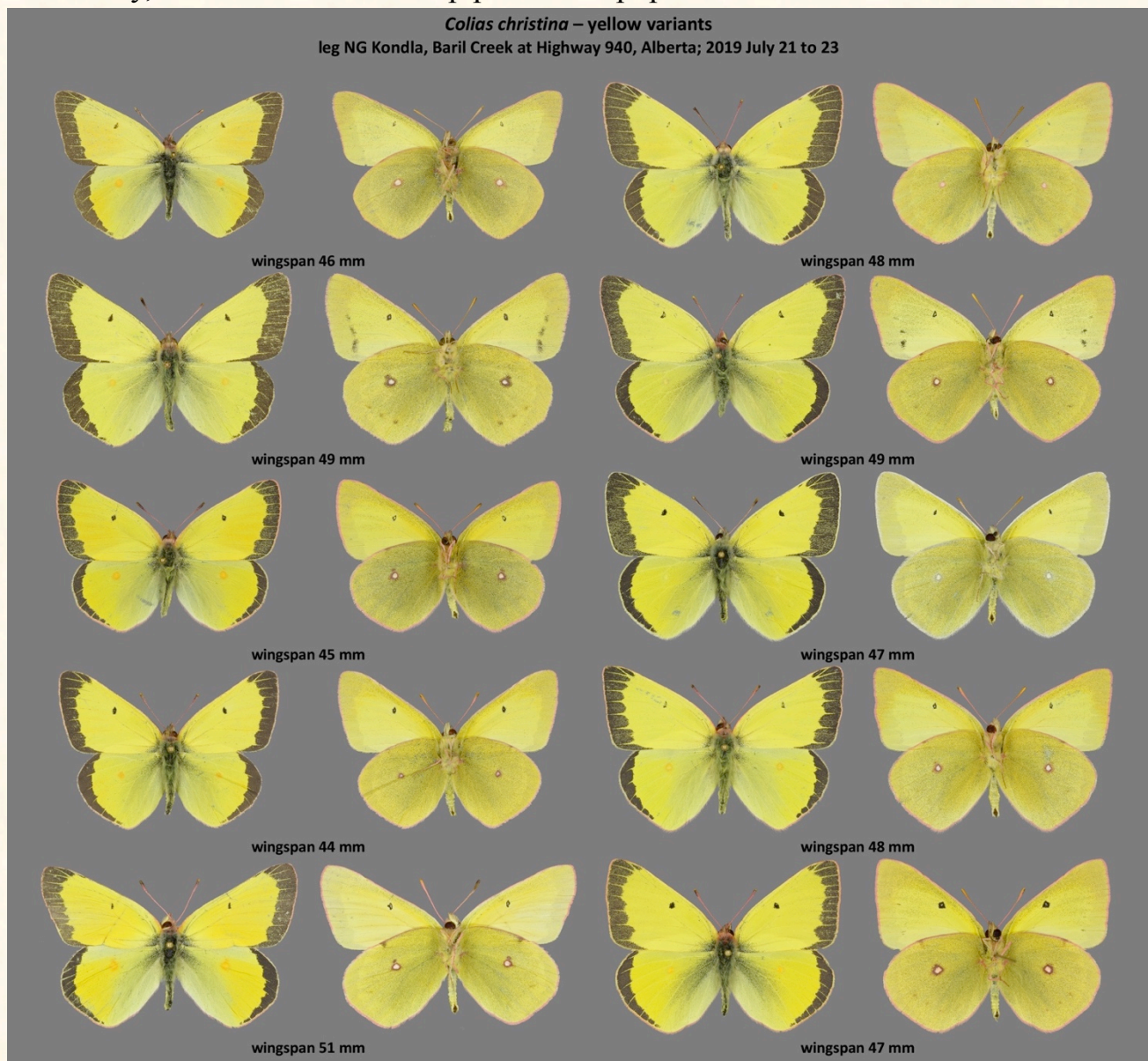
Baril Creek is the dividing line between the Sibbald (to the north) and Cataract Creek (to the south) Public Land Use Zones. The area is accessed from Calgary by following Highway 22X west to Highway 22 and then driving south to Longview. Next, turn west onto Highway 541 and follow the road along the Highwood River valley to the junction of Highway 541 and 940. Finally, turn south towards the

Coyote Hills and drive approximately 3km along Highway 940 to the site on the west side of the road (Google Map Coordinates: 50.360774, -114.638554). It is an easy 1.5 hour drive from Calgary on paved roads up until Highway 940, where the road becomes gravel.

Over time, Baril Creek has cut a deep valley along the southern edge of the Coyote Hills before crossing under Highway 940 as it flows down to the Highwood River. The manmade clearing is just to the north of the creek valley with the resource road running west along the southern side of the Coyote Hills just to the north of the creek. The habitat in the area consists of mixed spruce/pine/aspen forest with interspersed meadows. The manmade clearing and resource road make for easy walking with only minor inclines. The sides of the valley are steep and require a scramble in some places to get down to Baril Creek. Prior to my visit, Norbert surveyed the Baril Creek site on July 30th and reported that “the butterfly populations were poor with very limited numbers of bugs – but that Mariposa was there up in the trees.” Thus, it was with some optimism that I decided to head down to Baril Creek on August 1st to have a look for myself. Getting up that morning it looked like it was going to be a stellar day for a butterfly survey. The forecast predicted hot temperatures close to 30°C with no clouds. The hour and half drive down to Baril Creek proved to be uneventful and the site was easy to find just off the road.

Upon reaching Baril Creek at 12:15PM, I grabbed my gear out of the van and headed off to the west side of the road. After climbing up a 30-foot-high road cut, I had my first look at the manmade meadow. The area was roughly 1.1 hectares or about 2 football fields in size with the old resource road leading off into the trees on the western corner. The weather was perfect with blue skies, a few scattered clouds, no wind, and a temperature of 28°C. Although the vegetation in the meadow looked dry, there was still abundant floral resources including: Common Yarrow, Indian Paint Brush, White and Red Clover, Asters, Toadflax, Harebell, Meadow Buttercup and Alfalfa. Walking further to the west along the resource road into the trees, where the area was less dry, additional floral resources included: Goldenrod and Cinquefoil. The total amount of time I spent at Baril Creek that day was almost 2 hours. During that time, I surveyed the meadow, then walked up the resource road and checked out three clearings. Afterwards, I followed a branch of the road down a steep slope to Baril Creek before heading back to the meadow through the woods. It turned out to be a spectacular day for Lepidoptera, with an abundance of butterflies belonging to 12 different species. In part, I attributed the large number of butterflies to the high temperatures (average of 27°C) we had enjoyed for the five days prior to my visit – which provided ideal conditions for butterfly emergence. Most importantly, I encountered the Mariposa Copper in the manmade clearing and down in the creek valley. A few other observations of interest were that many of the

Colias christina were predominantly yellow (see Norbert's photos below). Secondly, white females made up part of the population.



I visited the locality a second time on September 4th and spent roughly 2 hours surveying the area. The weather that day was quite similar to the previous visit with clear blue skies and a high of 27°C. After spending some time in the manmade clearing, I walked west along the resource road for almost 2.5km. There were definite signs of cooler temperatures and the coming of fall with the aspen starting to turn yellow and the lush green in the forest floor turning brown. The floral resources at this time of year were also significantly reduced, with only a few Cinquefoil, Asters and Toadflax still flowering. As expected, due to it being later in the season, the butterfly numbers were significantly reduced with only 3 species of butterflies encountered (Table #1). Interestingly the Alfalfa Looper, *Autographa californica*, was out in significant numbers nectaring on the scarce floral resources.

In further discussions with Norbert, this area had a cornucopia of butterfly species present at different times of the year. Based on previous surveys he conducted from 2008 to 2010 and 2019, additional species encountered at this site included: *Chlosyne palla* (Northern Checkerspot), *Colias interior* (Pink-edged Sulphur), *Cupido amyntula* (Western-tailed Blue), *Erynnis persius* (Persius Duskywing), *Euphydryas anicia* (Anicia Checkerspot), *Icaricia icarioides* (Icarioides Blue), *Icaricia lupini* (Lupine Blue), *Lycaena dione* (Great Grey Copper), *Lycaena helloides* (Purplish Copper), *Phyciodes cocyta* (Northern Pearl Crescent), *Phyciodes pulchellus* (Field crescent), *Pontia occidentalis* (Western White), *Plebejus melissa* (Melissa Blue), *Polites mystic* (Long Dash Skipper), *Pterourus canadensis* (Canadian Tiger Swallowtail), *Speyeria aphrodite* (Aphrodite Fritillary), *Speyeria mormonia* (Mormon Fritillary) and *Speyeria zerene* (Zerene Fritillary). Including these species, and the ones that I encountered in 2020, a total of 30 species were found at this site. Definitely a locality worth a few more visits in 2021 to see what additional species may be found!

Acknowledgements: I would like to thank Norbert Kondla for reviewing this article and suggesting improvements, permission to use the image on the preceding page, and the use of data from his collection records. Thanks also to Patrick Bercha for his enthusiastic pursuit of heated-up *Colias* and his willingness to join his father on numerous trips to the back roads of Alberta. Lastly to my wife, Deborah, for her tolerance of my fascination with six legged critters.



Mariposa Copper, Lycaena mariposa. Photo © R. Bercha)

Table #1: Baril Creek Butterfly Survey (2020)

Species	Common Name	August 1st # Identified	September 4th # identified
<i>Boloria chariclea</i>	Purple Fritillary	5	
<i>Cercyonis oetus</i>	Dark Wood Nymph	5	
<i>Coenonympha inornata</i>	Inornate Ringlet	1	
<i>Colias christina</i>	Christina's Sulphur	5	1
<i>Colias philodice</i>	Common Sulphur	2	1
<i>Limenitis arthemis</i>	White Admiral	1	
<i>Lycaena mariposa</i>	Mariposa Copper	5	
<i>Pieris rapae</i>	Cabbage Butterfly	1	
<i>Plebejus idas</i>	Northern Blue	4	
<i>Plebejus saepiolus</i>	Greenish Blue	5	
<i>Speyeria hesperis</i>	Northwestern Fritillary	5	
<i>Thymelicus lineola</i>	European Skipper	1	1
Totals		40	3



Plebejus idas on Common Yarrow at Baril Creek (Photo © R. Bercha)