

THE TYPE LOCALITY FOR TWO MOTHS (PYRALIDIDAE,  
SATURNIIDAE) COLLECTED BY LT. W. L. CARPENTER,  
U.S.A., IN COLORADO, 1873

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In 1874 A. S. Packard described *Crambus carpenterellus* and *Hemileuca diana* from material collected by Carpenter while on the Hayden Survey in Colorado. Since Dr. A. B. Klots has need for a reasonably precise type locality for the crambid, I have investigated for him and find that one can be selected. The basic data are found in F. V. Hayden's "Annual Report . . . for the year 1873," published in 1874.

The solution to the problem for *Hemileuca diana* is easily found. Packard wrote (1874:557) of the source: "Plum Creek, September 12 (Lieutenant Carpenter)." There are a number of Plum Creeks in Colorado. The one involved (see Peale, p. 199) lies in Douglas County and drains the foothills from Palmer Lake northward almost to Littleton where it enters the South Platte River. In 1873, as today, two roads traveled along the principal branches of Plum Creek. The older road follows Plum Creek southward from the junction with the South Platte and gains the Platte-Arkansas Divide via the west branch. The railroads and the main highway, Interstate 25, follow the east branch to Larkspur and then strike due south, or continue to Palmer Lake.

The easternmost tributary of East Plum Creek heads at Palmer Lake and is the stream farthest south in the system. This stream was named Carpenter Creek by the Hayden Survey. A good type locality for *Hemileuca diana* would be headwaters of East Plum Creek between Larkspur and Palmer Lake. The extent of Plum Creek is found on the U.S.G.S. 7½ min. quadrangles Dawson Butte, Kassler, Larkspur, Littleton and Sedalia.

Packard's statement about the source of his series of *carpenterellus* is vague. He wrote (p. 548) "Mountains of Colorado, July 19, August 12, September 8 (Lieutenant Carpenter)." The September date is the earliest one mentioned in the report for return to the eastern foothills of the mountains after a summer near and about the continental divide. The published evidence (p. 556) is that Carpenter was still on the "Pacific slope" as late as 6 September. Other evidence in the report places the party at the head of Eagle River on the north slope of Tennessee Pass at this time. The shortest possible horseback route from the camps on the

upper Eagle River to the foothills around Turkey Creek is 120 miles. Even a hardened cavalryman of the 1870's would find that ride a noteworthy one to accomplish and collect specimens on both 6 and 8 September. There are three references (p. 548, 549 and 556) to material collected in the foothills on 8 September by Carpenter. Perhaps the 6 September date is wrongly placed on the Eagle River.

The date 12 August is referred to several times. On p. 551, 553 and 554 it is associated with "in the mountains." On p. 567 Osten-Sacken wrote of willow galls collected by Carpenter: "those taken on East River, August 12, still contained the caterpillars. . . ." East River is a tributary of the Gunnison River in western Colorado. It has its headwaters in a lake on the south side of Schofield Pass above Gothic in Gunnison County. The river flows southward and joins the Gunnison at Almont. Willows (*Salix*) are common along the banks of the East River throughout its course. Since the Survey spent considerable time mapping the Elk Mountains, and Schofield Pass is in those mountains, I suspect that Carpenter collected somewhere near Gothic on the East River, rather than in the *Atriplex*-grasslands nearer the Gunnison River. The entire East River lies in Gunnison County and is shown on U.S.G.S. 7½ min. quadrangles Almont, Cement, Crested Butte, Gothic, Oh-be-joyful and Snowmass Mountain.

"In the mountains" is associated with the date 19 July on a number of pages—548, 549, 551, 556, etc. The nearest dates associated with definite localities are 16 July at Fairplay (p. 548) and 21 July at Twin Lakes (p. 562). In 1873 there were three routes by which Carpenter might have traveled from Fairplay to Twin Lakes. Gannett (p. 675) described each of them as follows:

"In the Park Range the most northerly pass is Mosquito Pass at the head of Mosquito Gulch. Its elevation is 13,438. The ascent is steep, and difficult for pack animals on both sides; except in mid-summer, there is a great deal of snow on the trail."

"Weston's Pass, Park Range, at the head of the Little Platte. Elevation 11,676. A good wagon-road crosses this pass. The ascent on the South Park side is by easy grades, but on the Arkansas side it is much steeper."

"Trout Creek Pass, Park Range. Elevation 9,346 feet. This pass is through the low rugged hills south of Buffalo Peaks, and near the salt works. The stage-road to Arkansas Valley crosses this pass. It is an extremely easy one."

Today, 100 years later, the last is the only one of the three passes in regular use, being the pass by which U.S. Highway 24 crosses the "Park Range," now called the Mosquito Range.

Hayden himself gives us the clue to which pass was used. On p. 49 he wrote of the work in the Park Range "our last move was along the divide from Weston's Pass to the base of Buffalo Peaks." This move was made

on 22 July. Apparently while Hayden and the surveyors went to occupy their station on Buffalo Peaks, Carpenter and an advance party moved to Twin Lakes. Thus we can be quite sure that the 19 July specimen(s) of *Crambus carpenterellus* were collected in the vicinity of Weston Pass on the boundary between Park and Lake counties. Good camp could easily be made on the Park County side of the pass. In fact, I camped there myself in the 1930's. It is an area of typical Hudsonian forest, grassland and bog. The region is well shown on U.S.G.S. 7½ min. quadrangles Mount Sherman and South Peak.

Faced with selecting one of these three diverse localities as the type locality for *carpenterellus*, I reneged and passed the problem to Dr. Klots. He wrote to me "July 19 is the most logical of the three dates . . . for this species to be flying. August 12 is possible, but it would be pretty well gone by then. I think September 8 would be much too late." Thus Dr. Klots settled upon Weston Pass, Park County, Colorado to be the type locality for *Crambus carpenterellus* Packard.

#### LITERATURE CITED

- GANNETT, H. 1874. Geographical Report of Henry Gannett, M.E., in Hayden, 1874, p. 670-681.
- HAYDEN, F. V. 1874. Annual Report of the United States Geological and Geographical Survey of the Territories, embracing Colorado, being a report of progress of the exploration for the year 1873. Government Printing Office, Washington, D.C. 718 p. illus.
- OSTEN SACKEN, C. R. 1874. Notice on the galls collected by Lieutenant W. L. Carpenter, in Hayden, 1874, p. 567.
- PACKARD, A. S., JR. 1874. On the geographical distribution of moths in Colorado, in Hayden, 1874, p. 543-560, 15 figs.
- PEALE, A. C. 1874. Report of A. C. Peale, M.D., geologist of the South Park Division, in Hayden, 1874, p. 193-273, illus.

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#### THE MATURE LARVA OF *SPHINX VASHTI* (SPHINGIDAE)

*Sphinx vashti* Strecker is widely distributed in the western half of North America (Hodges 1971, in Dominick et al., The Moths of America North of Mexico, Fascicle 21, Sphingoidea: p. 59-61). The egg, larva, and pupa were first described by Dyar (1894, Psyche 7:177), who reared it on Snowberry (*Symphoricarpos albus*). Recently, Comstock (1966, J. Res. Lepid. 5:218-219) described and figured the egg and first instar larva. The mature larva is depicted here for the first time.

On 14 July 1958 I found a larva feeding on Coralberry (*Symphoricarpos orbiculatus*) in the front yard of my home in Ottawa, Kansas. The mature larva is pale apple green with blue-green granulations on the dorsum. The lateral oblique lines on the abdomen are lavender or purplish-red. The caudal horn is dark red to deep blue at the tip. In Dyar's specimen the lateral lines were