

Status Surveys for *Chrysina woodi* and SGCN Butterflies of the Sacramento Mountains Complex

Interim report.
Contract #26-516-0000-00022



Phyciodes cocyta apache, Spiller Canyon. June 2026

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Introduction

This project entails completion of status surveys primarily for 4 Species of Greatest Conservation Need (SGCN) insects found in the Sacramento Mountains of New Mexico (NM). Wood's jewel scarab (*Chrysina woodi*) occurs in Mexico, west Texas, and southeastern NM. The other focal species are 3 butterfly subspecies endemic to the Sacramento Mountains. These include the Sacramento Mountains Western Green Hairstreak (*Callophrys affinis albipalpus*), Sacramento Mountains White-lined (Sheridan's) Hairstreak (*Callophrys sheridanii sacramento*), and Apache Northern Crescent (*Phyciodes cocyta apache*).

Methods

Site selections for initial butterfly surveys were made in several ways.

1) A review of many known occurrence sites was conducted by checking nmrare.org, gbif.org, and published literature; consulting with NM butterfly expert Steve Cary; and gathering high-quality occurrences from citizen science websites (i.e., inaturalist.org, bugguide.net, and butterfliesandmoths.org). Sites with known occurrences were and will continue to be targeted.

2) Data was also gathered on known host plants from iNaturalist.org and SEINet (<https://swbiodiversity.org/>). This was less useful due to the age of many historical records, the likelihood of succession, and difficulties associated with identifying some host plants early in the season.

3) Other sites were targeted for having seeps and/or middle to high elevation meadows that appeared to be potentially suitable habitat for the target species based on satellite imagery or when potentially suitable sites were found in the field.

In addition, the New Mexico State University (NMSU) Arthropod Collection was examined for specimens of focal species, and a request for information on focal species was sent to the Eastern New Mexico University Insect Collection and Natural Heritage NM.

Potential habitats for Wood's jewel scarab have been and are being identified by visiting the general areas suggested by intersecting potential little walnut (*Juglans microcarpa*) habitat with known Wood's jewel scarab occurrences in and near the Sacramento Mountains. The distribution of little walnut habitat was determined based on internet sources and published literature.

Field surveys for butterflies are being conducted by methodically or randomly walking back and forth through each site in a way that, to the extent feasible, makes butterflies in all suitable portions of the site equally visible. Photographs of sites and butterflies are taken when possible (Canon SX50S) and when necessary for identification. Some butterflies are netted with a standard handheld insect net for better identification, and some are collected and vouchered to aid in identification and to document occurrences of certain non-focal species.

Spreadsheets and shapefiles containing all known occurrences for the 4 focal species are being compiled from Natural Heritage NM data, museum collections, literature, citizen science websites, and surveys conducted for this project. These files will be submitted with the final report.

Results and Discussion

Gathering information and records to identify initial surveys sites for all focal species began on March 16, 2026. The first site visits to evaluate butterfly habitats and some initial observations of butterflies took place April 4-5, 2026. Regular surveys for focal butterflies began April 17, 2026.

The spreadsheets and shapefiles for all known occurrences of the focal species are still being prepared, with work thus far focusing primarily on the Apache Northern Crescent. There are currently 20 occurrences in the spreadsheet for this species; this number will definitely increase. Several of these occurrences are very close together and multiple might even have come from the same location, so some occurrences may be pooled.

Initial site visits looking for Wood's jewel scarab habitat took place in June and are ongoing. These indicate that little walnut is more widespread on the eastern slopes of the Sacramento Mountains than collections records (<https://swbiodiversity.org/seinet>) and citizen science photographic records (iNaturalist.org) suggest. However, gaining access to these areas isn't straightforward. Based on site visits, there may also be Arizona walnut x little walnut (*Juglans major* x *J. microcarpa*) hybrids in the area, but whether this is of significance to Wood's jewel scarab is unknown. Three main areas of interest for Wood's jewel scarab surveys have been identified:

1) Arroyos in the foothills along Picacho Road, between US Route 82 in Chaves County and US Route 70 in Lincoln County. A mid-June site visit led to detection of multiple areas with little walnut, a known primary food source of Wood's jewel scarab adults, and there is a photographic record of the beetle just a few miles away at a ranch on US 82. There are also patches of little walnut along US 82 in the Rio Penasco valley. Attempts are being made to contact ranchers along Picacho Road for permission to either access to their lands or to pass through them to lands managed by the federal Bureau of Land Management. If these attempts are unsuccessful, nocturnal light surveys will be conducted from the public right-of-way.

2) State Road 368 (NM 368) in Lincoln County, from US Route 70 to Arabela, NM. A site visit in mid-June led to the determination that this road also traverses some areas of little walnut, and there are 2 photographic records of Wood's jewel scarab Arabela over the last 11 years. There is also much private ranch land in this area, so access is being investigated and light trapping might also be needed here. Weather concerns, including flash flood alerts, temporarily prevented a full assessment of the northern half of NM 368 during the mid-June visit. This area will be investigated in future.

3) Similar areas south and west of Dunken, NM will soon be evaluated. This area likely contains some habitats similar to those in the 2 previously mentioned areas; these areas will likely present similar access obstacles. Satellite images indicate that this area may have less habitat than the areas described above.

Anecdotally, the spring was abnormally dry this year, which may have adversely affected surveys for all species and could delay emergence of Wood's jewel scarab adults from their pupation sites in the soil. An early warm spell in March may also have caused the very early emergence of butterflies (Steve Cary, pers. comm.), possibly before surveys even began. Precipitation and soil moisture currently seem to be about normal in Otero County and most of Lincoln County, perhaps because of very recent rains (<https://www.drought.gov/>).

Of the focal species, only Apache Northern Crescents have been detected so far, at one site on the Spiller Canyon Trail in Otero County. About 4-5 individuals were observed, but they were very skittish and hard to observe or photograph. A male was vouchered and deposited at the NMSU Arthropod Collection in Las Cruces. Potential host asters were also observed. This site will be surveyed again to make observations on plant use; no more individuals will be collected at this site.

In addition, 3 previously undetermined specimens of the focal species Sacramento Mountains Western Green Hairstreak were found in the NMSU Arthropod Collection, dating from July 1978 and July 1980. These were collected by Greg Forbes, “6 miles north of Ruidoso” at 7,000 and 7,300 feet elevations. There are also records from Richard Holland’s work from the same general era and area, so these NMSU records may or may not represent a locality distinct from Holland's records. Records from that era are usually vague compared to more recently collected information. More than 25 sites have been evaluated and/or surveyed for butterflies, some more than once. Some of these sites will be surveyed again, and surveys will be conducted at new sites. Survey locations are provided below; more detailed information will be provided in the final report.

Table 1. Butterfly Survey Sites through June 20, 2026

Site Name

Alamo Canyon 1
Alamo Canyon 2
Russia Canyon 1
Russia Canyon 2
Upper Karr Recreation Area
La Luz Canyon 1
La Luz Canyon 2
La Luz Canyon 3
Near Seep Canyon 1
Near Seep Canyon 2
Seep Canyon
Scott Able Canyon
Bear Canyon
Hay Canyon
State Road 532 - Forest Road 127A
Sierra Blanca/ slopes adjacent Ski Apache
Wills Canyon 1
Wills Canyon 2
Wills Canyon 3
Wills Canyon 4
Bonito Valley Road
Big Bonito Trail
Eagle Creek (State Road 532 - Eagle L. CG Rd.)
Agua Chiquita Canyon 1
Lower Sleepy Grass
Sleepy Grass CG meadows
Bailey Canyon upper meadow
Bailey-La Luz 1
Bailey-La Luz 2
Lower Fir Group CG
Spiller Canyon Trail
High Rolls Roadsides