

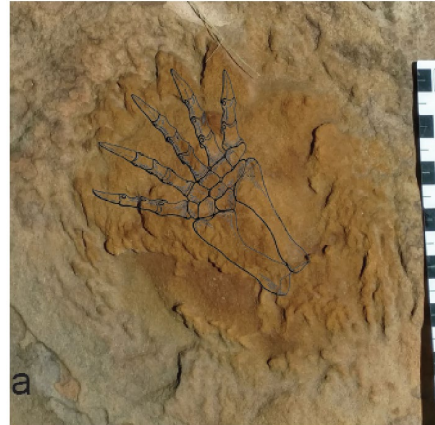
## ***2021 Colorado Scientific Society Field Trip***

### ***Toe Thrusts and Turtle Toes – Trackways and Tectonics of the Boulder-Weld Allochthon, Boulder Open Space and Mountain Parks Cherryvale and White Rocks Properties***

Trip Leaders: Sue Hirschfeld, Beth Simmons, Bruce Trudgill, Bob Raynolds and Ned Sterne



***toe thrust***



***turtle toes***

The field trip will highlight the recent discovery at Cherryvale of dinosaur and non-dinosaur fossil tracks in floodplain deposits of the Laramie Formation, as laid down along the shoreline of the retreating Western Interior Seaway at 68-69 Ma. The trackways occur among the historical workings of the Boulder-Weld coal field, which date as far back as 1859. The field trip will also feature new structural interpretations of the Boulder-Weld Allochthon, the 216 mi<sup>2</sup> remnant of a once larger feature, that moved east up to two miles from the flank of the Front Range into the western part of the Denver Basin. Excellent outcrop exposures and subsurface well control in the Cherryvale and White Rocks areas reveal thrust and normal faults developed above the basal decollement of the allochthon as it ramped 900 feet up-section between bedding-parallel detachments in the Upper Transition Member of the Pierre Shale.

Join us for a one-day field trip on either Saturday September 25<sup>th</sup>, or Saturday October 2<sup>nd</sup>.

- The field trips will start at 8:30 a.m. at Eldorado Park and Ride at the junction of Marshall Road (Colo. 170) and Colo. 93, south of Boulder. They end at 4:00 p.m. in the Heatherwood neighborhood east of Boulder. The drive from Heatherwood back to Eldorado Park and Ride, where carpooling starts, takes about 25 minutes.
- Transport will be in private cars. Carpooling is encouraged, Covid19 restrictions permitting. (There isn't enough parking along Cherryvale Road for everyone to come in their own car.)
- Bring your own lunch. Drinks will be provided at our Walden Pond Park lunch stop.
- The trip requires 3.5 miles of walking on unimproved social trails over gently rolling terrain with a few short steeper grades. Bring your own water for the walks and raingear is advised.

Group size is limited to 15 in these protected open space areas. The trips are provided at no cost and open to those who are current on their 2021 CSS membership dues (membership is \$25: [www. https://coloscisoc.org/membership-payment/](https://coloscisoc.org/membership-payment/)). Contact Ned Sterne via [nedsterne@aol.com](mailto:nedsterne@aol.com) to reserve your spot, and please specify which day you would like to attend.