

Supplemental Material

1. Oxygen and carbon isotope cross plots for Ediacaran–Cambrian carbonates

Cross plots for oxygen ($\delta^{18}\text{O}$) and carbon ($\delta^{13}\text{C}$) isotopes from carbonate samples from the lower member of the Wood Canyon Formation in the Death Valley Region (Fig. S1) and from the Deep Spring Formation in the White-Inyo Ranges and Esmeralda County (Fig. S2). The data from each of the three marker beds in the lower member of the Wood Canyon Formation, as well as from the three members of the Deep Spring Formation, are colored separately. The $\delta^{18}\text{O}$ values in the White-Inyo and Esmeralda regions are lower than those in the Death Valley region, reaching values as low as $\sim -23\text{‰}$. These data do not support the interpretation that the regional secular changes in $\delta^{13}\text{C}$ are driven by meteoric diagenesis.

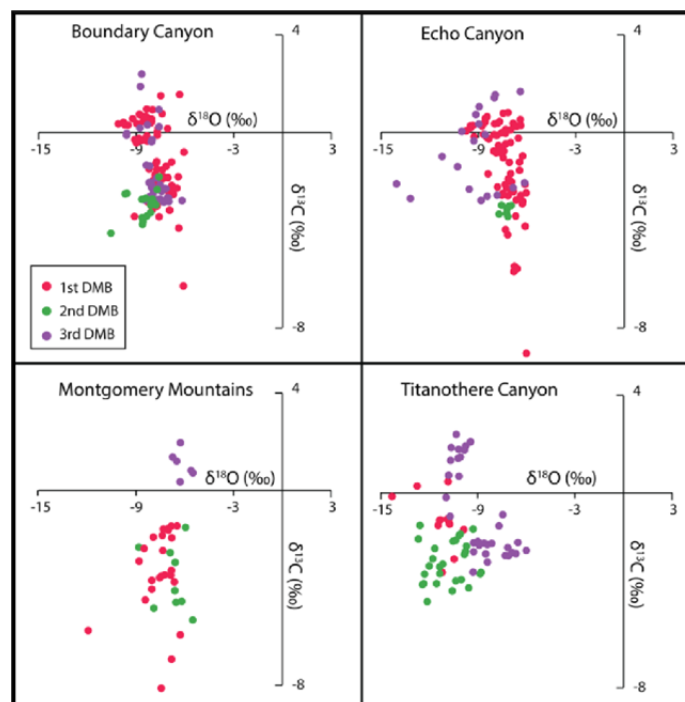


Figure S1. Oxygen and carbon isotope cross plots for data from four sections of the lower member of the Wood Canyon Formation in the Death Valley region. DMB—dolomite marker bed.

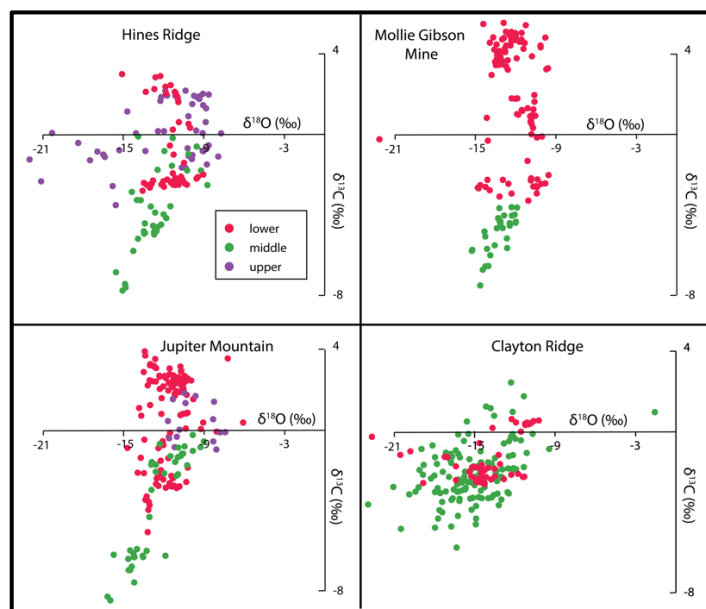


Figure S2. Oxygen and carbon isotope cross plots for data from four sections of the Deep Spring Formation in the White-Inyo Ranges and Esmeralda County. The three colored dots refer to the different members of the Deep Spring Formation.

2. Descriptions of key sections

Below, is more detailed information about the latest Ediacaran through early Cambrian localities that were visited and studied as part of this report. Because all Ediacaran body fossil finds were in the lower member of the Wood Canyon Formation and the Dunfee and Esmeralda members of the Deep Spring Formation, the descriptions provided here are limited to these units and their bounding units. Below are descriptions of sections and sites visited, including those that not shown in Figure 7 in the manuscript. The sites are listed in order from most paleo-proximal to most paleo-distal.

Death Valley Region: Silurian Hills (L1702)

At this locality, there are just few meters of quartzitic sandstone channels and micaceous siltstone below an erosional contact with overlying, poorly sorted red to purple arkosic sandstone and conglomerate of the middle member of Wood Canyon Formation. These few meters of quartzitic sand channels interbedded with micaceous siltstone are interpreted as the lower member of the Wood Canyon Formation, but it is possible that this interval is actually part of the Stirling Quartzite, and that the middle member Wood Canyon Formation sits directly on the Stirling Quartzite here, as it does in all localities further to the south. No fossils were discovered at this section.

Death Valley Region: Salt Spring Hills (E1704 and E1705)

The Salt Spring Hills are divided into the northern and southern exposures, with highway 127 in between the two ranges. Both exposures were visited as part of the study. The southern exposure has <10 m of lower member Wood Canyon Formation exposed. In the southern Salt Spring Hills, there were irregular three-dimensional structures of 3–5 cm of unknown origin in diameter within green micaceous siltstone. These structures resembled some of the possible

erniettomorphs from the Montgomery Mountains (Smith et al., 2017), but we were unable to determine if these structures were biotic or abiotic in origin. The northern Salt Spring Hills has yielded discoidal fossils from the upper member of the Wood Canyon Formation (Hagadorn and Waggoner, 2000), but no body fossils have been described or found in the lower member.

Death Valley Region: Southern Nopah Range (E1703)

In the southern Nopah Range, a section of the Wood Canyon Formation was measured up-section from the War Eagle Mine. This section was previously measured in detail and described by Diehl (1974). At this site, a handful of poorly preserved pyritized (now iron oxides) tubular fossils were found in the lowest parasequences of the lower member of the Wood Canyon Formation. These fossils were found at a similar stratigraphic interval to those in the Montgomery Mountains, a few meters below the first dolostone marker bed. A few of these tubular fossils had poorly defined lateral ridges, similar to those from the Montgomery Mountains. Thus, we interpret these as tubular body fossils similar to those from the Montgomery Mountains. In addition, some possible erniettomorphs were found, but these structures had no ribbing, making it difficult to distinguish them from abiotic sedimentary structures.

Death Valley Region: Montgomery Mountains (E1634 and E1635)

The Montgomery Mountains are located to the northwest of Pahrump, Nevada, near the townsite of Johnnie. In a Geological Society of America conference abstract, Horodyski (1991) first reported *Ernietta* from the lower Wood Canyon Formation near the townsite of Johnnie. The only sites in which definitive erniettomorphs were found in this study were in the Montgomery Hills (Smith et al., 2017). This area also contains several fault blocks with abundant and well-preserved Ediacaran tubular body fossils preserved as iron oxides (Smith et al., 2017). This section is located on the Montgomery thrust sheet, the same thrust sheet as the section at Chicago Pass (Burchfiel et al., 1983).

Death Valley Region: Spring Mountains

The Spring Mountains are very close to the Montgomery Mountains, but the two localities are on different thrust sheets. This section is on the Wheeler Pass thrust sheet. A section in the Spring Mountains was also visited and measured as part of this study. At this locality, a few cloudinomorphs preserved as iron oxides were found at a similar stratigraphic horizon to where they were found in the Montgomery Mountains.

Death Valley Region: North of Echo Canyon (E1412)

A small geologic map and measured stratigraphic section north of Echo Canyon were published in Stewart (1970). This section can be accessed via the Echo Canyon road and hiking to the northeast. This section was measured and sampled as part of this study; no body fossils were found in this region. This section is located on the Schwab Peak thrust sheet (Snow and Wernicke, 1989).

Death Valley Region: Boundary Canyon (E1407, E1708, E1413)

The Boundary Canyon section is just north of the Daylight Pass Road, ~4 km to the southeast of Corkscrew Peak, and is an often-visited Ediacaran–Cambrian boundary section in the southwest, largely due to accessibility. A description of this section was published in Corsetti

and Hagadorn (2000). In this publication, this section was measured and sampled for $\delta^{13}\text{C}$, and was one of the sections used to document an association between the first occurrence of the trace fossil *Treptichnus pedum* and a large negative carbon isotope at the Ediacaran–Cambrian Boundary. Here, this section was re-measured and sampled for $\delta^{13}\text{C}$ values, reproducing at higher resolution the negative excursion published in Corsetti and Hagadorn (2000). Despite extensive searching at this site, no body fossils were found at this locality.

Death Valley Region: Titanother Canyon (E1904, E1905, E1906, E1907, L1914)

This section is only ~7 km away from the Boundary Canyon section, but is accessed by hiking down Titanother Canyon via the Titus Canyon Road. This section is well exposed, but is more difficult to access than many of the other sites described as part of this study. The section is a ~4.5 km hike from the Titus Canyon Road. This road is a one-way road, and closes daily at dusk, making time on the outcrop limited. A high clearance, four-wheel drive vehicle is recommended for this road. This region was mapped and described by Reynolds (1969).

A composite section of this area was made by measuring detailed sections of the lower member of the Wood Canyon Formation in the ridges and gullies to the west of Titanother Canyon. This section is slightly overturned and offers spectacular exposure of bedding surfaces. No body fossils were discovered in the lower member of the Wood Canyon Formation at this locality.

Death Valley Region: Other visited sites

Chicago Pass – This section is well known and easily accessible, just off Route 178 (Charles Brown Highway). It is well-described in the literature and is a common stop for field trips (Corsetti and Hagadorn, 2000; Jensen et al., 2002; Kennedy and Droser, 2011; Loyd et al., 2012). Despite searching the area and targeting stratigraphic intervals in the lower member of the Wood Canyon Formation that have yielded body fossils in other areas, no body fossils were found here.

Bare Mountain – This locality is just south of the town of Beatty, Nevada, and just east of Interstate 95. This section contains one of the few sections of the Stirling Quartzite that is carbonate-dominated in the middle-upper part of the unit (informal members C and D) and contains lithofacies similar to those of the Reed Dolomite. The carbonate strata are heavily recrystallized and ductilely deformed.

Funeral Mountains – In the Funeral Mountains, there is a well exposed section of the Stirling Quartzite into the lower member of the Wood Canyon Formation. Like the Stirling Quartzite at Bare Mountain, the middle to upper part of the Stirling Quartzite is carbonate-dominated, with lithofacies that are similar to those of the Reed Dolomite further north. At this locality, Langille (1974) reported *Cloudina* from member D of the Stirling Quartzite, but we were not able to confirm this find in this study.

Desert Range – The Desert Range section described in Stewart (1970) is located between the Spring Mountains and the Delamar section. We attempted to visit this section, but were unable to because, at the time of writing, it was located on the Nevada Test Site land.

White-Inyo Region: Whippoorwill Wash (E1654, E1655, E1656)

The Ediacaran–Cambrian section in Whippoorwill Wash has not been previously studied in detail. It is described briefly in the USGS Quadrangle map by Nelson (1971). It is easily

accessible via the Waucoba Saline Road, which cuts through exposures of the Reed Dolomite through the Campito Formation.

At this locality, the upper Reed Dolomite through part of the Esmeralda Member of the Deep Spring Formation were measured in the exposures to the northeast of the road. A section of the upper Esmeralda Member through the Dunfee Member of the Deep Spring Formation was measured on the southwest side of the road. The sedimentology of the Deep Spring Formation at this locality is similar to other sections with a few notable differences. One is that there is evidence for multiple karstic exposure surfaces within the Dunfee Member. In between two of these exposure surfaces at the top of the Dunfee Member were beautiful digitate stromatolites. This is the only known occurrence of stromatolites anywhere in this member. Additionally, poorly preserved pyritized tubular body fossils were found in the Dunfee Member and in the basal micaceous siltstone beds of the Esmeralda Member at this locality. These fossils were found in association with casts and molds of other ribbed tubular body fossils, similar to the *Gaojiashania* found at Mt. Dunfee and in the Montgomery Hills (Fig. 7; Smith et al., 2016, 2017). This is the only section in which body fossils were found in the basal beds of the Esmeralda Member.

White-Inyo Region: Hines Ridge and Andrews Mountain (E1414, E1650, E1651)

Hines Ridge is easily accessible from Bishop, CA, via turnoff from Waucoba Road. This section is well known and described in several papers, theses, and field guides (Gevirtzman and Mount, 1986; Parsons, 1996; Corsetti and Hagadorn, 2000; Oliver and Rowland, 2002; Lorentz, 2007; Smith et al., 2019). This area has been mapped by Nelson (1966b). During this study, sections were measured on Hines Ridge and on the ridge to the east coming down from Andrews Mountain. The two sections were very similar lithologically. Lenses of shelly fossils were found in the uppermost beds of the Reed Dolomite and lowermost Dunfee Member of the Deep Spring Formation at this locality, confirming previous reports of these fossils (Taylor, 1966; Signor et al., 1987). These recrystallized fossils were originally identified as *Nevadatubulus*, *Coleoloides*, *Sinotubulites*, and *Wyattia*, but were later identified as cloudinids by Grant (1990). Remnants of the problematic structures interpreted as microbially induced sedimentary structures described by Nelson and Smith (2019) were found at this locality, but were not as well developed as they were at the Juniper Mountain locality.

White-Inyo Region: Juniper Mountain (also known as Loretto Road; E1419, E1658)

Sections were measured on the ridges coming down from the west side of Juniper Mountain in Little Cowhorn Valley. The Reed Dolomite and Deep Spring Formation are well exposed throughout this region (Nelson, 1966b). Small shelly fossils were first reported from the Dunfee Member of the Deep Spring Formation (Signor et al., 1987) and confirmed here. No other body fossils were found at this locality. The Esmeralda Member in this region contains the best examples of the problematic tubular structures described in Nelson and Smith (2019).

White-Inyo Region: Mollie Gibson Mine (E1418, E1661)

The Mollie Gibson Mine is accessible via a dirt road turnoff from Interstate 168 (Nelson and Durham, 1966; Nelson, 1966a). Possible *Pteridinium* from the Esmeralda Member of the Deep Spring Formation had been previously reported from this site (Cloud and Nelson, 1966; Nelson and Durham, 1966); however, these structures were later reinterpreted as microbially induced sedimentary structures (Nelson and Smith, 2019). *Wyattia* (later interpreted as

cloudinids) were reported from the uppermost Reed Dolomite at this locality (Taylor, 1966). In this study, cloudinids were found in the Dunfee Member of the Deep Springs Formation, but no other body fossils were found here.

White-Inyo Region: Other visited sites

Black Canyon/Marble Canyon – Ediacaran–Cambrian strata are exposed in upper Black Canyon or Marble Canyon on the west side of the White Mountains (Nelson, 1966a). At this section, there is pervasive cleavage, and the carbonate beds are very recrystallized. No fossils were found in this area.

Area Northwest of Juniper Mountain – This area is accessible by driving through the Little Cowhorn Valley (Nelson, 1966b). These exposures are in steep gullies overlooking and to the southwest of Deep Spring Lake. The section is a relatively continuous section, but there are bed parallel faults that structurally cut out some of the more recessive units. There is pervasive cleavage in this area, making it difficult to see sedimentary features and textures. A section was measured here, but was not plotted in Figure 7 due to uncertainties in unit thickness.

Reed Flat/Schulman Grove – The exposures of the Ediacaran–Cambrian units in the Ancient Bristle Cone Pine Forest are the most visited sections in the White-Inyo Ranges. Outcrops of the Reed Dolomite are easily accessible from the Schulman Grove Visitor Center, but there are plenty of other exposures outside of the protected Ancient Bristle Cone Pine Forest. Rare lenticular beds of recrystallized shelly fossils can be found in the upper Reed Dolomite at this locality.

Esmeralda County: Mt. Dunfee (E1412, E1511, E1512, E1515)

The Reed Dolomite through Deep Spring Formation at Mt. Dunfee section in Esmeralda County has been studied in detail in many previous studies (Stewart, 1970; Albers and Stewart, 1972; Signor et al., 1987; Oliver, 1990; Parsons, 1996; Rowland et al., 2008; Smith et al., 2016). In this study, we do not report any new additional data from this section. The data shown in Figure 7 is from Smith et al. (2016).

Esmeralda County: Clayton Ridge (E1624, E1625, E1626)

Clayton Ridge is the most paleo-distal section of the Deep Spring Formation included in this study. There are some outcrops of the Reed Dolomite and Deep Spring Formation further to the north, flanking Lone Mountain (Albers and Stewart, 1972), but these sections are poorly exposed and heavily recrystallized.

Clayton Ridge has spectacular cliff exposures ~6.5 km south of Silverpeak Road (Albers and Stewart, 1972). This area is mapped at a 1:200,000 scale, and thus does not distinguish between formation members or include small scale structural features, of which there are many. Three stratigraphic sections forming one composite section of the Dunfee and Esmeralda members of the Deep Spring Formation were measured north of the first major gully and east of a northeast-southwest trending fault. There is pervasive cleavage in this region, but marker beds such as the stromatolite reefs and ooid grainstones are recognizable. The Dunfee Member of the Deep Spring Formation here contained more dolostone than at other localities. No fossils were found at this locality.

Esmeralda County: Other visited sites

Area east of Mt. Dunfee – The rocks to the east of Mt. Dunfee have been mapped by Albers and Stewart (1972), and shelly fossils have been reported from the Dunfee Member from one of the exposures ~2 km to the southeast of Mt. Dunfee (Signor et al., 1987). Due to the limited exposure and structural complexity of the outcrop just to the southeast of Mt. Dunfee, no stratigraphic section was measured here. More extensive exposures of the Deep Spring Formation are found further to east, just west of Interstate 95 in a few different fault blocks.

Magruder Mountain – Stratigraphic sections of the Deep Spring Formation at Magruder Mountain were included as part of a Master's Thesis on this unit (Parsons, 1996). During this study, these sections were visited, but the outcrop was determined to be too poor to measure a detailed section here.

Delamar, NV (Prospect Mountain)

The Stirling Quartzite, Wood Canyon Formation, and Zabriskie Quartzite were recognized in the Delamar area, replacing the previous name of Prospect Mountain Quartzite, by Stewart (1974). At this locality, a ~25 m thick basalt unit in the upper part of the Stirling Quartzite was initially mapped by Callaghan (1937) and interpreted as a Tertiary basalt sill. Stewart (1974) later interpreted this vesicular basalt as an Ediacaran flow within the quartzite. We agree with the interpretation of Stewart (1974) and suggest that some of the basalt flows are at the transition between the Stirling Quartzite and Wood Canyon Formation, possibly extending up into the lowermost beds of the Wood Canyon Formation. It is unclear if a few meters of the lower member of the Wood Canyon Formation is present at this locality, or if the middle member of the Wood Canyon Formation sits directly on the Stirling Quartzite.

Caliente, NV

Similar to the strata at Delamar, sections near Caliente, Nevada, were initially mapped and described as the Prospect Mountain Quartzite (Callaghan, 1937; Tschanz and Pampeyan, 1970) and were later reinterpreted as the Stirling Quartzite, Wood Canyon Formation, and Zabriskie Quartzite (Stewart, 1974). The lithostratigraphy of these sections is similar to those at Delamar, Nevada. As described by Stewart (1974), the best exposure of these units is in Antelope Canyon to the northwest of Caliente, but there are other exposures of these units in the surrounding area. As part of this study, the section at Antelope Canyon was visited but not measured. Similar to the section at Delamar, the upper Stirling contains a thick (~37 m) vesicular basalt flow that was reinterpreted by Stewart (1974) as Ediacaran in age.

3. GPS Coordinates for the bases of measured stratigraphic sections

Section	Latitude (°N)	Longitude (°W)	Locality
L1702	35.5447°	116.077°	Silurian Hills
E1704	35.60383°	116.2682°	S. Salt Spring Hills
E1705	35.66012°	116.2696°	N. Salt Spring Hills
E1703	35.84368°	116.0926°	Southern Nopah Range
E1634	36.39481°	116.104°	Montgomery Mountains
E1635	36.39478°	116.1057°	Montgomery Mountains
E1412	36.51906°	116.6662°	North of Echo Canyon
E1407, E1408, E1413	36.75047°	16.96958°	Boundary Canyon (E1408 is middle marker and E1413 is upper marker bed above E1407)
E1904	36.79940°	117.03329°	Titanother Canyon; all WCFI up to L1914
E1906	36.79677°	117.002635°	Titanother Canyon; 1 st dolomite bed
E1907	36.79547°	117.02614°	Titanother Canyon; 2 nd dolomite bed
L1914	36.79546°	117.02779°	Titanother Canyon; 3 rd dolomite bed and up
E1654	37.0224°	117.9565°	Whippoorwill Wash
E1655	37.01778°	117.954°	Whippoorwill Wash
E1656	37.01682°	117.9521°	Whippoorwill Wash
E1414	37.10357°	118.0939°	Hines Ridge
E1651	37.10082°	118.0966°	Hines Ridge
E1419	37.174°	118.0597°	Jupiter Mountain
E1658	37.17955°	118.0538°	Jupiter Mountain
E1418	37.34393°	118.1382°	Mollie Gibson Mine
E1661	37.33927°	118.1393°	Mollie Gibson Mine
E1624	37.72927°	117.48475°	Clayton Ridge
E1625	37.72864°	117.48538°	Clayton Ridge
E1626	37.73035°	117.48770°	Clayton Ridge

REFERENCES CITED

- Albers, J.P., and Stewart, J.H., 1972, Geology and Mineral Deposits of Esmeralda County, Nevada: Reno, Nevada, Mackay School of Mines, University of Nevada.
- Burchfiel, B.C., Hamill, G.S., and Wilhelms, D.E., 1983, Structural geology of the Montgomery Mountains and the northern half of the Nopah and Resting Spring Ranges, Nevada and California: Geological Society of America Bulletin, v. 94, no. 11, p. 1359–1376, [https://doi.org/10.1130/0016-7606\(1983\)94<1359:SGOTMM>2.0.CO;2](https://doi.org/10.1130/0016-7606(1983)94<1359:SGOTMM>2.0.CO;2).
- Callaghan, E., 1937, Geology of the Delamar District, Lincoln County, Nevada: University Nevada, Bulletin, v. 31, no. 5, p. 1–69.
- Corsetti, F.A., and Hagadorn, J.W., 2000, Precambrian-Cambrian transition: Death Valley, United States: Geology, v. 28, no. 4, p. 299–302, [https://doi.org/10.1130/0091-7613\(2000\)28<299:PTDVUS>2.0.CO;2](https://doi.org/10.1130/0091-7613(2000)28<299:PTDVUS>2.0.CO;2).
- Diehl, P.E., 1974, Stratigraphy and sedimentology of the Wood Canyon Formation, Death Valley area, California: California Division of Mines and Geology Special Report 106, p. 37–48.
- Gevirtzman, D.A., and Mount, J.F., 1986, Paleoenvironments of an earliest Cambrian (Tommotian) shelly fauna in the southwestern Great Basin, USA: Journal of Sedimentary Research, v. 56, no. 3, p. 412–421, <https://doi.org/10.1306/212F8931-2B24-11D7-8648000102C1865D>.
- Grant, S., 1990, Shell structure and distribution of Cloudina, a potential index fossil for the terminal Proterozoic: American Journal of Science, v. 290, p. 261–294.
- Hagadorn, J. W., and Waggoner, B., 2000, Ediacaran fossils from the southwestern Great Basin, United States: Journal of Paleontology, v. 74, no. 2, p. 349–359, <https://doi.org/10.1666/0022-1163>.
- Jensen, S., Droser, M.L., and Heim, N.A., 2002, Trace fossils and ichnofabrics of the Lower Cambrian Wood Canyon Formation, southwest Death Valley area, *in* Corsetti, F.A., Proterozoic–Cambrian of the Great Basin and Beyond: SEPM (Society for Sedimentary Geology) Volume and Guidebook 93, p. 123–135.
- Kennedy, M.J., and Droser, M.L., 2011, Early Cambrian metazoans in fluvial environments, evidence of the non-marine Cambrian radiation: Geology, v. 39, no. 6, p. 583–586, <https://doi.org/10.1130/G32002.1>.
- Langille, G.B., 1974, Problematic calcareous fossils from the Stirling Quartzite, Funeral Mountains, Inyo County, California: Geological Society of America Abstracts with Programs, v. 6, p. 204–205.
- Lorentz, N.J., 2007, On protracted Laurentian rifting, continental freeboard, and cap carbonates in Neoproterozoic time [Ph.D. thesis]: Los Angeles, California, University of Southern California.
- Lloyd, S.J., Marenco, P.J., Hagadorn, J.W., Lyons, T.W., Kaufman, A.J., Sour-Tovar, F., and Corsetti, F.A., 2012, Sustained low marine sulfate concentrations from the Neoproterozoic to the Cambrian: Insights from carbonates of northwestern Mexico and eastern California: Earth and Planetary Science Letters, v. 339–340, p. 79–94, <https://doi.org/10.1016/j.epsl.2012.05.032>.
- Nelson, C.A., and Durham, J.W., 1966, Guidebook for Field Trip to Precambrian–Cambrian Succession, White-Inyo Mountains, California: San Francisco, California, Geological Society of America, Paleontological Section, 17 p.

- Nelson, C.A., 1966a, Geologic map of the Blanco Mountain quadrangle, Inyo and Mono counties, California: U.S. Geological Survey Map GQ-529, scale 1:62,500.
- Nelson, C.A., 1966b, Geologic map of the Waucoba Mountain quadrangle, Inyo County, California: U.S. Geological Survey Map GQ-528, scale 1:62,500.
- Nelson, C.A., 1971, Geologic map of the Waucoba Spring quadrangle, Inyo County, California: U.S. Geological Survey Map GQ-921, scale 1:62,500.
- Nelson, L.L., and Smith, E.F., 2019, Tubey or not tubey: Death beds of Ediacaran macrofossils or microbially induced sedimentary structures?: *Geology*, v. 47, no. 10, p. 909–913, <https://doi.org/10.1130/G46473.1>.
- Oliver, L., 1990, Stromatolites of the Lower Cambrian Deep Spring Formation: Mount Dunfee, Esmeralda County, Nevada [M.S. thesis]: Las Vegas, Nevada, University of Nevada.
- Oliver, L.K., and Rowland, S.M., 2002, Microbialite reefs at the close of the Proterozoic Eon: The Middle Member Deep Spring Formation at Mt. Dunfee, Nevada, *in* Corsetti, F.A., ed., *Proterozoic–Cambrian of the Great Basin and Beyond*: SEPM (Society for Sedimentary Geology) Pacific Section Book 93, p. 97–122.
- Parsons, S.M., 1996, Sequence stratigraphy and biostratigraphy of the lower member of the Deep Spring Formation: Implications for the Neoproterozoic–Cambrian boundary in the Basin and Range Province, western United States [M.S. thesis]: Las Vegas, Nevada, University of Las Vegas, 181 p.
- Reynolds, M.W., 1969, Stratigraphy and Structural Geology of the Titus and Titanother Canyon Area: Death Valley, California [Ph.D. Thesis]: Berkeley, California, University of California, 310 p.
- Rowland, S.M., Oliver, L.K., Hicks, M., Duebendorfer, E., and Smith, E., 2008, Ediacaran and early Cambrian reefs of Esmeralda County, Nevada: non-congruent communities within congruent ecosystems across the Neoproterozoic–Paleozoic boundary: *Field Guide to Plutons, Volcanoes, Faults, Reefs, Dinosaurs, and Possible Glaciation in Selected Areas of Arizona, California, and Nevada*: Geological Society of America Field Guide, v. 11, p. 83–100.
- Signor, P.W., Mount, J.F., and Onken, B.R., 1987, A pre-trilobite shelly fauna from the White-Inyo region of eastern California and western Nevada: *Journal of Paleontology*, v. 61, no. 3, p. 425–438, <https://doi.org/10.1017/S0022336000028614>.
- Smith, E.F., Nelson, L.L., Strange, M.A., Eyster, A.E., Rowland, S.M., Schrag, D.P., and Macdonald, F.A., 2016, The end of the Ediacaran: Two new exceptionally preserved body fossil assemblages from Mount Dunfee, Nevada, USA: *Geology*, v. 44, no. 11, p. 911–914, <https://doi.org/10.1130/G38157.1>.
- Smith, E.F., Nelson, L.L., Tweedt, S.M., Zeng, H., and Workman, J.B., 2017, A cosmopolitan late Ediacaran biotic assemblage: New fossils from Nevada and Namibia support a global biostratigraphic link: *Proceedings of the Royal Society B: Biological Sciences*, v. 284, no. 1858, p. 20170934, <https://doi.org/10.1098/rspb.2017.0934>.
- Smith, E.F., Tarhan, L.G., and Nelson, L.L., 2019, Ediacaran-Cambrian transition of the Southwestern USA—Field Trip of the North American Paleontological Convention, 19–22 June 2019: *PaleoBios*, v. 36, p. 1–29, <https://doi.org/10.5070/P9361044021>.
- Snow, J.K., and Wernicke, B., 1989, Uniqueness of geological correlations: An example from the Death Valley extended terrain: *Geological Society of America Bulletin*, v. 101, no. 11, p. 1351–1362, [https://doi.org/10.1130/0016-7606\(1989\)101<1351:UOGCAE>2.3.CO;2](https://doi.org/10.1130/0016-7606(1989)101<1351:UOGCAE>2.3.CO;2).

- Stewart, J.H., 1970, Upper Precambrian and Lower Cambrian strata in the southern Great Basin, California and Nevada: U.S. Geological Survey Professional Paper 620, 206 p., <https://doi.org/10.3133/pp620>.
- Stewart, J.H., 1974, Correlation of uppermost Precambrian and Lower Cambrian strata from southern to east-central Nevada: U.S. Geological Survey Journal of Research, v. 2, no. 5, p. 609–618.
- Taylor, M.E., 1966, Precambrian mollusc-like fossils from Inyo County, California: Science, v. 153, no. 3732, p. 198–201, <https://doi.org/10.1126/science.153.3732.198>.
- Tschanz, C.M., and Pampeyan, E.H., 1970, Geology and mineral deposits of Lincoln County, Nevada: Nevada Bureau of Mines Bulletin, v. 73, 188 p.