15 February 2003
Collecting Trilobites from the Middle Cambrian Shales in the Drum Mountains

We decided to take advantage of the incredibly mild winter we are having here. We made a trip out to the Drum Mountains of west-central Utah. When we first collected here in the early 1980's there was hardly a trail into the canyon. No one had ever worked in the cliffs above the valley floor. Work was easy and the specimens were numerous. Today the quarries are numerous and deep and the collecting is very hard. The shale is dirt soft near the surface but quickly becomes too hard to break, even with a three pound sledge. There are some serious excavations on the hillside by persons who knew how to work. Efforts are occasionally rewarded by the discovery of one of a number of very rare trilobites. Many hammers have been broken and many disappointing days have been spent trying to acquire one of these beauties.

The Drum mountains contain two of the fossiliferous formations, the Wheeler Shale and younger, Marjum Limestone Formations. The Wheeler is famous for its abundance of common trilobites, the*Elrathia kingii*, *Asaphiscus wheeleri*, and *Peronopsis interstricta*usually found in the House Range. The Drum mountains present a confusing assortment of trilobites. Instead of *Elrathia kingii*, we find*Elrathia marjumi*. Many other species occur with slight variations and different species names. The Drum mountains have a mixture of the Wheeler and Marjum formations in what is referred to by some as the Pierson Cove Formation. This designation is informal and is more correctly referred to as the Marjum. Here we find some of the same species as found in the Wheeler such as *Asaphiscus wheeleri* (represented by a much larger version that found in the House Range, and *Altioculus harrisi*, also slightly different than the one found in the House Range. Other species occur with these including *Olenoides nevadensis* (never been found in Nevada),*Dorypyge swaseyi* and a number of other species, some not found in the House Range.

Even though many of these species are somewhat common, good complete specimens are rare and difficult to acquire because of the hardness of the matrix. Many of the specimens have to be reattached to the counterpart and prepared through the covering layer to expose the details that are lost when the rock is initially split open. The reason for this is the texture on the surface of most of these species. They have granules and spines that tend to hold on to the rock above and allow the matrix to often split either through the specimen or just under it. The matrix is also difficult to prepare and those willing to spend the time and effort typically ask a fairly dear price for their efforts. Commercial collectors can get over $2,000 for a nice *Olenoides*.

We have had a number of disappointing days while working the Drums. This wasn't

one of them. Time will tell just how successful we were. Several of the specimens will need to be prepared. We brought back at least two very nice *A. harrisi* (both inverted and will need prep work), two possible *D. swaseyi* (need prepping) and several large *A. wheeleri*.

View from the quarry that we were working. The white spot is the sun reflecting off of the shale at quarries in the distance.

Val, resting after the hike, and admiring the view.

A view looking southwest from one of the many quarries. Many other quarries are visible in the far distance. They are worked more commonly because they require very little hiking.

A view north from the quarry showing the steep and rugged the mountain

A hopeful Glade with a rock three times his size

The rock seldom cooperates and resists splitting on the natural bedding plain unless given time to weather. Like others, we aren't that patient.

Glade at work in the hard shale. Other quarries are visible behind him and on the hill in the far distance.

Great exercise if nothing else

Ah! At last, a real beauty. A nice 3" *Asaphiscus wheeleri*. Unlike most of the other species, this one will take very little to prepare.