

## **Rose Cottage Cave**

### **Summary**

Rose Cottage Cave is a site that gives archaeologists clues into the behaviors of Middle Stone Age peoples. Because this site has so many levels and was occupied over such a long period of time, researchers are able to compare the tools from different levels and time periods. They are able to see if any gradual changes occurred or any instantaneous changes, like the Howiesons Poort Industry for example. Also in these levels are many charcoal remains of hearths. These hearths can give insight as to what types of vegetation were in the area, or what the climate was like. Looking at the area directly surrounding the hearths gives insight into what types of activities were going on there and whether or not nuclear families were involved. Whether it be knapping tools, preparing food, or simply sitting are ideas that can be proved or disproved from evidence such as bone remains (or lack thereof) or flakes. When taking in all the evidence available at this site, it gives understanding to the peoples that inhabited Rose Cottage Cave during the MSA.

### **Paleo-Environment**

The paleo-environment of the Rose Cottage area has changed over time. Little information is known about the environment during the MSA because of the difficulty of preserving the organic material in the lower levels (Wadley, 1995). Also, this site has not been fully excavated yet. Some stratigraphic dates are known, but the lowest level thoroughly excavated is ca. 27,200 BP. There is evidence presented, however, which illustrates the environment from the Pleistocene through the Holocene.

The environment has changed from the Pleistocene to present day. From charcoal deposits in the cave, archaeologists have determined that the late Pleistocene environmental conditions were much cooler and quite probably more moist than today. The LP Rose Cottage Cave area was composed of alpine macchia (wide, open landscape with small bushes), as found from Esterhuysen's charcoal analysis of the woody species appearing between 13,000 and 12,000 BP. A younger level dating 9560 +/- 70 BP was occupied during warmer and probably a drier setting than the earlier time period. Later during the Holocene the area changed to thicket woodland, specifically on the hillsides surrounding the area (Wadley, 1997). No matter the time period, this area was probably a little more mild than surrounding areas because it is located in the Caledon River corridor, which is about 50 km wide. Being in the corridor protects a little from the harsher elements.

Today, the area is sub-humid with summer rainfall and winter frosts. The Rose Cottage area is now primarily grassland. In addition to the open grassland, there are rocky sandstone hillslopes with patches of bush and scrub thicket. On top of many of the

hills there still exists zones of alpine macchia, but only at altitudes of 1800 m or higher (Wadley, 1997).

### **Artifacts**

Rose Cottage Cave is very rich in artifacts. The artifacts are all in the form of stone tools, however. There is an abundant supply of art, but this is in younger layers, well out of the MSA. The Middle Stone Age layers of this site are very interesting. It is one of only six sites that contains the Howiesons Poort Industry located between two MSA industries (Wadley, 1997). This site has a tool sequence that includes Pre-Howiesons Poort, Howiesons Poort, post-Howiesons Poort, a final MSA, and an MSA/LSA transition (Wadley, 1997).

The traditional MSA tools exist. Chips, chunks and cores make up 63%, 15%, and 1% of the total assemblage, respectively. Tools include flakes (endstruck 7% of total assemblage, sidestruck 2%), points (4% of formal tools), scrapers (12 % of formal tools) and blades (38% of formal tools). Formal tools only make up .5% of the tools found here at Rose Cottage. Included in the formal tool category is the Howiesons Poort Industry. This industry is one of backed tools including backed blades, segments, broken backed and various other backed pieces. Howiesons Poort makes up 9% of the formal tools. Also found are some miscellaneous tools that include retouched pieces, broken tools, an adze, and a ground stone (Wadley, 1997).

Many trends are noticed between the tools found before and after the Howiesons Poort industry. The pre-Howiesons Poort MSA is dominant in points. In post-Howiesons scrapers dominate the assemblage. The early points tend to be sharply pointed, have reduced butts, and are thick. The younger points are smaller, equilaterally triangular, step-flaked and thin. The Howiesons Poort Industry marks a shift in the size of artifacts from larger to increasingly smaller.

Bladelets bring up another interesting point. At this site, bladelets were found throughout all of the MSA levels. This notion, however, is contradictory to the usual traditional MSA technology. Usually, bladelets are related to LSA deposits, even sometimes being the deciding factor to make the assemblage LSA (Wadley 1997). At Rose Cottage, however, they are found dispersed through all MSA levels, proving that this technology was not a purely LSA invention but instead represents a shift in production from an already existing technology from the MSA.

When this site is looked at as a whole, we see that it is characterized by irregular endstruck flakes where the manufacture of flake-blades is not stressed. Bladelet production occurs throughout the history of the site, although it is uncommon in MSA sites, making Rose Cottage Cave unique. Pressure flaking, endstruck flakes and the bipolar technique are all used to create flakes found in the assemblage. The final MSA is comprised of a relatively high proportion of knives, as well as a high percentage of side

scrapers. This site is also one of only six that shows Howiesons Poort Industry clearly between two MSA levels.

### **Excavation**

P.T.N Harper analyzed Middle Stone Age stone tools excavated between 1989 and 1993 at Rose Cottage Cave. He was attempting to research his idea that suggested that the MSA sequence includes a pre-Howiesons Poort, Howiesons Poort, and post-Howiesons Poort Industry, a final MSA, and an MSA/LSA transition. With the research done at Rose Cottage Cave Harper feels that he has shown that the “entire MSA sequence is part of a continuum and that there is no break in the basic traditions” of the stone tool making.

There were previous excavations by B.D. Malan between 1943 and 1946, and by P.B. Beaumont in 1962. These excavations also dealt with the Middle Stone Age stone tool sequences. Malan did not publish his findings but the information he attained was analyzed by other two other archaeologists by the names of Lyn Wadley and the aforementioned Harper. Wadley has continued to excavate MSA levels at Rose Cottage and studies the arrangement of artifacts around hearths to determine behavior. She studies ceramics and art from later periods at the cave as well.

### **Location**

Rose Cottage Cave is located on the Platberg River near Ladybrand in the eastern Free State of South Africa. Ladybrand is in a sub-humid, summer rainfall area, but it does receive some winter precipitation. It lies within the Caledon River corridor, which is about 30 miles wide. This area has moderately severe winter frost in contrast to the severe winter frost of the surrounding areas. The cave itself is a 10m wide by 20m long rock shelter that is eroded into a type of sandstone called Karoo. At some point in the past a large part of the roof collapsed across the front part of the cave leaving only narrow east and west entrances. (Wadley, 1997) This collapse allowed for sunlight to shine in on some of the sediments that had accumulated within. The shelter is north facing and receives direct sunlight during winter and is shady during summer. The sediments are made up of roof debris eroded from the sandstone. There is also a spring in the back of the cave which has produced sediment. The spring is more prevalent in periods of heavy rainfall.

### **Dates**

Rose Cottage Cave contains a stratified sequence of layers that consist of the Middle Stone Age and the Later Stone Age. The layers that deal with the Middle Stone Age have been dated between 50,200 and 26,900 +/- 550. (Wadley, 1995) These dates were obtained through radiocarbon dating. At least 22 finite radiocarbon dates have been

obtained for the top layers and there are several infinite dates from lower in the Middle Stone Age sequence. These dates are estimates but are not highly controversial. Radiocarbon dating is a well-established method of chronometric dating.

There has also been luminescence dating done at the cave. This technique has been determined to have overestimated the dates at the cave. Problems with dating might occur at this site because of the natural spring in the cave. The natural spring is believed to have brought into the cave traces of uranium and potassium in the water from elsewhere. This is a problem because luminescence dating relies on the radioisotopes of these two elements. If they are flowing into the cave from somewhere else then they are not representative of the cave. (Woodborne, 1997)

### **Food Remains**

Food remains at the site are found in the form of bones and residue from tools. The sedimentary layers at the site dealing with the MSA contain bones of wildebeests and indeterminate sized bovids. The bones at this level are mostly crushed and hard to identify. In younger layers the bones range from those of hares to those of zebras. The occupants of Rose Cottage Cave ate local vegetation as well as meat. The organic material disintegrates over time so the direct evidence is hard to locate. There is evidence from residues on bones and tools that provide evidence of the plant material consumed. These residues are observed microscopically and then identified. Approximately 50% of the tools observed had plant residue present. This suggests a high proportion of tools used for plant food processing. There were also tools with both blood and plant residues on them which suggests multi-use of these tools, and variety in the diet. (Williamson, 1997)

### **Features**

There is evidence for hearths and fire pits at Rose Cottage Cave. Hearths are important because they illustrate part of the culture and intellect of those who occupied Rose Cottage Cave. Some of the hearths seem to have had specialized tasks taking place next to them and they do not look like family hearths where people slept and cooked meals. (Wadley 1997) There are not many bone fragments around some of the hearths, which seems to support the interpretation that they were the focus of specific types of activities. There have been suggestions that hearths in the cave are widely spaced to provide for privacy. This has been observed today of modern hunter-gatherers. If this is the case then one could assume that perhaps different family units congregated in around hearths and performed different tasks together. The evidence for this theory is lacking somewhat. The flakes in the cave from the act of knapping are not centralized around hearths. They are spread out fairly evenly, so one can not prove that hearths provide evidence for gathering together and completing tasks.

Hearths provide other types of evidence besides that of possible culture and intellectual ability. They are also very important because they provide evidence of the

types of vegetation present at the time of occupancy as well as climatic changes around the time of occupancy. This information can be deduced from the charcoal that these fire places produced from burning wood. In other words, the types of vegetation burned at the cave tell us what type of vegetation existed, and by knowing that we can deduce what the climate was like.

This site was used very frequently. The high density of the hearths provides us with some evidence for this. A stronger form of evidence comes from the stone tool artifacts found at the site. There are artifacts at Rose Cottage Cave from all stages of the Middle Stone Age. Many of these tools are made from opaline which is a rock type like chert. This rock type is not found locally at Rose Cottage. It is found at outcrops which are a considerable distance from the site. Occupants of the cave were traveling great distances for raw material to produce tools. This provides more evidence that Rose Cottage Cave was being inhabited often because of the frequency of these tools. If a person is making the effort to travel long distances to attain something and then coming back to their origin, it seems safe to say that they live there or are occupying that area for a period of time. That, incorporated with the evidence for stone tools all through the MSA, could be conceived as evidence for occupation at this site over and over again.