

■ SOUTH AFRICA

Florisbad, South Africa: Over 120,000 years of human activity

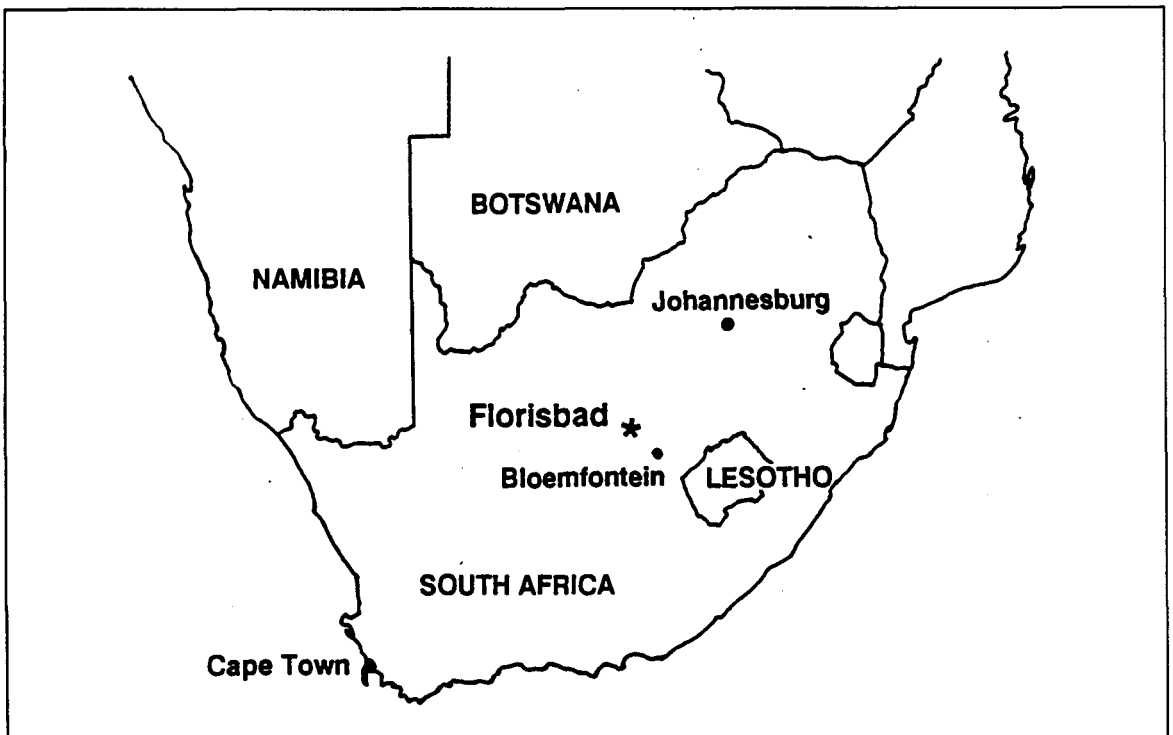
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Introduction

Palaeontological and archaeological interest in the Florisbad mineral spring site (28°46'S, 26°04'E, Figure 1) dates back to 1912, when stone artifacts and fossilised bones were recovered from the spring mound after an earthquake caused a new spring eye to erupt in the vicinity of a recently enlarged pool. A description of this mate-

rial was published in 1913 by Robert Broom. He regarded the collection as proof of the unequivocal association of extinct mammals with humans (Broom 1913). Sporadic excavations were conducted at the site during the subsequent two decades. On 25 July 1932 part of a human cranium was discovered in one of the old spring eyes by Professor T.F. Dreyer from the Grey University College in Bloemfontein. In 1952 a new series of excavations were undertaken by Dr A.C. Hoffman, director of the National Museum in Bloemfontein. Material from these excavations underlined the importance of Florisbad. This Middle/Upper Pleistocene site is the type site for the Florisian Land Mammal Age estimated at greater than 130,000 (possibly in the region of 400,000) to about 10,000 years B.P. (Klein 1984), as the characteristic suite of extinct and extant fauna from this time period was first identified from here and a similar nearby site, Vlakkraal. Since 1980 the site has been administered as a research station by the National Museum. The buildings are maintained as work, accomodation and storage facilities, and various research projects have been undertaken there by Museum staff

Figure 1. Location of Florisbad



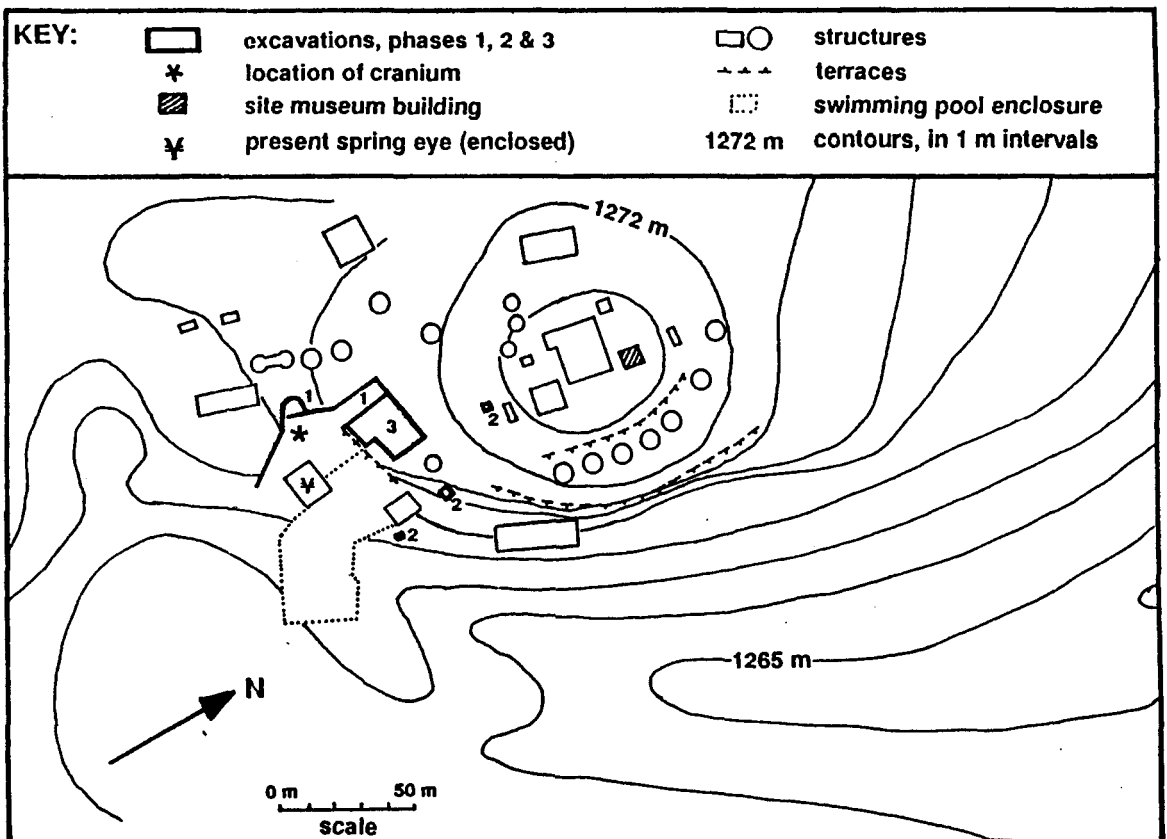
members. This note briefly summarises recent archaeological research at Florisbad.

Recent research

The first phase of the archaeological work at Florisbad (Figure 2) after 1980 was aimed at gaining a better understanding of the nature and stratigraphy of the site. The second phase (not yet completed) is concerned with exploring the extent of the archaeological deposits by means of a series of testpits, and the third phase (initiated in 1989) is further investigating one particular archaeological level. A dating project is also currently underway. It is hoped that this project will provide dates for the Florisbad cranium, and the Middle Stone Age level (discussed below) in the near future. Research has concentrated on the spring mound, which is in some parts up to 12 m

thick (Rubidge and Brink 1985). The springs occur where underground water is forced to the surface at a point where dolorite intrudes the ecca shale bedrock. Sediments were deposited as a result of spring discharge, lacustrine sedimentation, and probably also through wind action (Butzer 1988; van Zinderen Bakker 1989; Joubert and Visser 1991). Within the sedimentary mound there are dark organic horizons. These have been interpreted as peats or bogs, which formed when the ground was water-logged (Joubert and Visser 1991). It is evident from the 1981 drilling programme that there is considerable three dimensional variability in the sediments across the mound (Rubidge and Brink 1985). This reflects the complex micro-environmental history of the site, which was due in part to spring eye movement along the intrusive dolorite dyke, and partly to the fluctuating levels of the nearby palaeolake, which at times inundated the springs.

Figure 2. Site plan of the spring mound area showing locations of the excavations, spring eye, and site museum building (redrawn from a map by N.J. Grobler)



The Middle Stone Age level area excavation

The archaeological research at Florisbad is being undertaken against a background of palaeontological (Brink 1987), sedimentological (Rubidge and Brink 1985; Butzer 1988; Joubert and Visser 1991) and palynological (van Zinderen Bakker 1989) work. This provides an environmental context for Middle Stone Age human activities. The current excavations at Florisbad are concentrated on an extensive MSA level. An area of 144 m² of this level was uncovered during the 1981-1984 excavations by R.J. Clarke and K. Kuman (Kuman and Clarke 1986), and since 1989 this area has been expanded. It is anticipated that over 450 m² will have been investigated by the end of 1996. The aim of this large-scale excavation is to gain an understanding of the spatial distribution of human activities at the site.

The MSA level occurs in the sands overlying an extensive organic-rich horizon. Archaeological material from the horizon comprises stone artifacts, faunal remains, and a hearth feature of burnt sand mixed with fragments of charcoal and burnt bone (Kuman and Clarke 1986; Brink 1987; Kuman 1989). The material from current work at the site is similar to that from the 1981-84 excavation, although no other features have so far been uncovered. The stone artifacts are mostly irregular flakes of hornfels, with a very low percentage of formal tools. The broken up bones from a restricted range of animal species make up the faunal component (Brink 1987). These are mostly bovinds with a body mass of below 100 kg, although other fauna such as *Hippopotamus amphibius* are also present. The very specific size class of bovid represented suggests that prey were actively selected (Brink 1987), rather than trapped. Middle Stone Age hunting technology is thought not to include the bow and arrow, and hunters probably utilised spears if not traps. Spear hunting requires the hunter to be in close proximity to the animal, which can be achieved by waiting in ambush for the chosen prey. Ambush sites are often located near water sources where animals are likely to be present (O'Connell et al. 1992). Carcass butchering and processing is often undertaken in the vicinity of the ambush location. There are Later Stone Age (LSA) and ethnographic examples of ambush sites (Crowell and Hitchcock 1978; Hitchcock 1982; Brooks and Yellen 1987;

O'Connell et al. 1988, 1992) often with constructed hunting blinds, although of course the bow and arrow was used at these later sites. The repeated butchering of carcasses which takes place in the vicinity of a fixed point such as a hunting blind will, to some extent, create a certain amount of bone accumulation, which can be archaeologically visible. The bones accumulated in this way show characteristic butchery and breakage patterns.

The *Hippopotamus amphibius* component of the faunal remains is interesting in that, although some of the bones are fragmented (particularly ribs) in a way similar to that of the bovid remains, two articulated vertebral columns, two pelves, and other largely complete bones have been uncovered in the recent excavations. It is postulated that MSA humans scavenged from natural deaths of hippo around the spring pools at a time when the nearby palaeolake had dried up, and water was scarce in the local environment.

Florisbad after the Middle Stone Age

The Florisbad site documents the continued association of human beings and a water resource. There was LSA utilisation of the springs, as is evident from the stone artifacts found in the upper units of the excavations. Various radiocarbon dates from these levels confirm the Holocene presence (Kuman and Clarke 1986; Kuman 1989). Historically, Koranna groups were established in the vicinity by the time the first Europeans became aware of the springs in the 1840s. In 1860 Hendrik Venter, a Trekker farmer, bought the farm which included the springs and began farming in the area. The springs later became the principle source of financial income for his grandson, Floris Venter (hence Florisbad), as Floris' growing reputation as a 'healer' drew people to the mineral springs. The increasing popularity of the mud-pack and mineral bath treatments at Florisbad led to the expansion of the pools, and the spectacular discovery of the palaeontological and archaeological richness of the site. Florisbad is now a permanent research station dedicated to discovering the details of its past.

Florisbad has a long history as the location of human activity. Part of the current project is to set up a site museum in the oldest extant building, erected in 1903. The farm buildings were razed during the Anglo-Boer war (1899-1902), and the

corrugated-iron house was erected initially as temporary accomodation. The building therefore has some historical significance in itself. The displays in the museum will emphasise the time depth and diversity of human activity at Florisbad, as a microcosm of change at a fixed point in the landscape.

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