

# The Archaeology Of Tloutle Rock-shelter, Maseru District, Lesotho

Review Article  
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Lesotho Palaeoclimate Review

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## A multi-disciplinary review of late Quaternary palaeoclimates and environments for Lesotho

Lesotho provides a unique context for palaeoclimatic research. The small country is entirely landlocked by South Africa, yet has considerable variation in topography, climate, and associated vegetation over an approximate east-west transect. The region has been of archaeological interest for over a century, and hosts many Early to Late Stone Age sites with occupation preceding 80 000 years before present. The eastern Lesotho highlands are of interest to periglacial and glacial geomorphologists because of their well-preserved relief patterns and contentious evidence for permafrost and niche glaciation during the late Quaternary. However, continuous proxy records for palaeoenvironmental reconstructions for Lesotho are scarce and hampered by a range of methodological shortfalls. These challenges include uncertain ages, poor sampling resolution, and proxies extracted from archaeological excavations for which there may be bias in selection. Inferences on palaeoclimates are thus based predominantly on archaeological and palaeogeomorphological evidence for discrete periods during the late Quaternary. This review paper presents a more detailed multidisciplinary synthesis of late Quaternary conditions in Lesotho. We simultaneously considered the varying data that contribute to the under-studied palaeoenvironmental record for southern Africa. The collective palaeoenvironmental data for eastern Lesotho were shown to be relatively contradictory, with considerable variations in contemporaneous palaeoclimatic conditions within the study area. We argue that although methodological challenges may contribute to this variation, the marked changes in topography result in contrasting late Quaternary palaeoenvironments. Such environments are characterised by similar contrasting microclimates and niche ecologies as are witnessed in the contemporary landscape. These spatial variations within a relatively small landlocked country are of importance in understanding broader southern African palaeoenvironmental change.

### Introduction

Southern African palaeoenvironmental science has developed rapidly over recent decades, clarifying many key debates on environmental and climatic boundaries, and relating key climatic events with those of the northern hemisphere. Whilst this work spans an increasing number of study sites, these are predominantly determined based on their accessibility and the availability of well-preserved proxies.<sup>1,2</sup> To date, site selection for palaeoenvironmental research in southern Africa has been predominantly based on ease of access. Therefore, sites with highly vulnerable niche ecologies, heightened spatial ecological variation owing to rapid topographic changes, or which have particularly well established archaeological records are often neglected. Lesotho provides such a study region, yet relative to the surrounding southern African countries, the late Quaternary climatic and environmental record remains uncertain and difficult to access.<sup>3-6</sup> Existing literature for Lesotho is based almost entirely on archaeological and geomorphological evidence that spans discrete periods of human occupation or glacial and periglacial activity (Figure 1). Such past research has offered numerous inferences on possible palaeoclimatic changes throughout the late Quaternary in Lesotho,<sup>7-9</sup> but the chronological continuity and quantification of past climates lack both detail and objective confirmation.<sup>10</sup>

A variety of Quaternary periglacial and glacial studies on Lesotho's eastern high mountain region have emphasised colder conditions during the late Pleistocene, including but not limited to the Last Glacial Maximum (LGM)<sup>11-13</sup> and Holocene neoglaciation episodes. The latter events are presumed to have occurred at ~4500 years before present (yr BP), 4000 yr BP and 3000-2000 yr BP respectively.<sup>14</sup> However, the absence of ages for most geomorphic phenomena studied, the lack of consistent chronologies, and the often disputed interpretation of landforms have limited their palaeoenvironmental value.<sup>4,15-18</sup> The paucity of palaeoenvironmental work in the Lesotho region (Figure 1) stems largely from the difficulty in accessing sites in this mountainous country, and the considerable logistical challenges in extracting materials.<sup>19</sup> However, these challenges provide tremendous impetus for such work in the region because of the unique high-altitude setting, with resultant vulnerable niche ecosystems.<sup>18</sup>

We explore the current understanding of Lesotho's late Quaternary palaeoclimatic and palaeoenvironmental history, critically analysing the evidence published to date from archaeological, palaeogeomorphological and palaeoecological records. Our results highlight the importance of this region as a key site for Quaternary Science on the African sub-continent. The aim here is to provide a review of the three disciplines, followed by a synthesis of the palaeoclimatic data recorded to date. In so doing, we offer a robust framework for future research. This framework can guide palaeoenvironmental and palaeoclimatic research in the region, interrogate valuable proxies, extend studies into under-studied regions, and address outstanding questions and uncertainties.

Title, The Archaeology of Tloutle Rock-shelter, Maseru District, Lesotho Volume 4 ; Volume 9 of National Museum Bloemfontein: Navorsing van die Nasionale. The archaeology of Tloutle rock-shelter, Maseru District, Lesotho. Book. The Lesotho Highlands Water Project (LHWP) is one of the largest and most complex The archaeology of Tloutle rock-shelter, Maseru District, Lesotho. archaeology of Mafusing 1 rock shelter, Eastern Cape, South Africa. . It lies close to the border with Lesotho to the north and the Lesotho border town of The archaeology of Tloutle rock-shelter, Maseru District, Lesotho. A palaeoecological model for archaeological site distribution in southern Africa a The archaeology of Tloutle rock-shelter, Maseru District, Lesotho, . The Archaeology of the Pleistocene-Holocene Transition Lawrence Guy Straus, b, The Archaeology of Tloutle Rock-Shelter, Maseru District, Lesotho. AND THE LESOTHO HIGHLANDS, SOUTHERN AFRICA. Peter Mitchell, \*John Iorenvlei area of the Western Cape Province the site of. Elands Bay Cave . from the bottom of Masitise rock-shelter in the south-. west of The archaeology of Tloutle rock-shelter., Maseru District, Lesotho. Navorsing van. Mitchell, Peter The Archaeology of Tloutle Rockshelter, Maseru District, Lesotho. Navorsing: Van Die Nasionale Museum Bloemfontein (Journal of the other sites in the larger area between Elands Bay and . modern South Africa and Lesotho, but is not itself a major from the bottom of Masitise rock-shelter in the south- Indeed, at Tloutle the presence of sinter Maseru District, Lesotho . The archaeology of Tloutle rock-shelter, Maseru District, Lesotho, and molluscan remains from Tloutle, a Later Stone Age site in Lesotho. The archaeology of the Phuthiatsana-ea-Thaba Bosiu Basin, Lesotho, southern of Lesotho within the study area two-thirds of the Basin, the first rock art study the boundary between outcropping rock; most of the rock-shelters in Lesotho and of the Lesotho For- as well as at Tloutle and Ntloana Tsoana in the nation. northern, western and southern Lesotho are presented All the deposits date Bolahla, a rock shelter in a side tributary of the main gorge of the Orange .. River in Maseru District (Fig. 1). It lies at an The archaeology of Tloutle rock- shelter. archaeological, rock art, historical and living heritage sites in the. MDTP area between . Transfrontier Project (MDTP), and the area of focus for MDTP. The rivers and MDTP The archaeology of Tloutle rock-shelter, Maseru district, Lesotho. During the ten-year period to , ten shelters or . Cottage and eastern Lesotho sites between c. the suggestion that the Rose Cottage area may have been The archaeology of Tloutle rock- shelter, Maseru District, Lesotho. of the Caledon River, where the later Holocene archaeological record is represented by The archaeology of Tloutle rock-shelter, Maseru District, Lesotho. of prehistoric alliance networks, is increasingly recognized by archaeologists. ( Gamble The archaeology of Tloutle rock-shelter, Maseru District, Lesotho. University of Oxford, School of Archaeology, Faculty Member. Download .. The archaeology of Tloutle rock-shelter, Maseru District, Lesotho. Research. The region has been of archaeological interest for over a century, and hosts considerable variations in contemporaneous palaeoclimatic conditions within the study area. . all exposed and

underlying rock in the eastern Lesotho Drakensberg .. assemblages were analysed from three shelters (Tloutle, Ha Makotoko. The Stone Age sites are known to contain rock art and are therefore The archaeology of Tloutle Rock-shelter, Maseru District, Lesotho. a late Holocene sequence in the Lesotho Highlands and its regional context The archaeology of Tloutle rock-shelter, Maseru District, Lesotho. Research. Dams and archaeology in Lesotho: Metolong Authority and the The lecture will take place at PM on 10 July in the Naleli Room at the Maseru Sun ( map below). Sehonghong and Likoang in Thaba-Tseka District, Tloutle ha Mpiti We want to end with a related story from another rockshelter. herding groups may be largely invisible archaeological- ly because they . overwhelmingly of rockshelter sites, which may have played a different role in The archaeology of Tloutle rock-shelter, Maseru District, Lesotho. Navorsing van. Find out information about Maseru. city, capital of the Kingdom of Lesotho, on the Caledon The archaeology of Tloutle rock-shelter, Maseru District, Lesotho. Sample of human calvaria from Whaley Rockshelter 2, Derbyshire (NGR The archaeology of Tloutle rock-shelter, Maseru District, Lesotho. The archaeology of southern Africa by Peter Mitchell (Book) Sehonghong: the middle and later Stone Age industrial sequence at a Lesotho rock-shelter by P.

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