

The Palaeolithic Research Agenda for Qatar as presented here is primarily concerned with academic and scientific research rather than any management issues.

### **Resource Assessment**

Stone tools represent the earliest evidence of Palaeolithic occupation in Qatar, as elsewhere. These, the most ancient of artefacts, are found in a variety of different locations, such as limestone ridges and wadi terraces (Scott-Jackson J.E. et al., 2009). As Qatar succumbs to increasing pressure to meet the demands of the 21<sup>st</sup> Century, the survival of important Palaeolithic evidence is threatened by, for example, road building and urban development. Opportunities to discover and conserve Palaeolithic artefacts in Qatar may, in recent times, have been lost as the result of disagreements regarding the original categorization of stone tools discovered by Holger Kapel (1967). These disagreements led subsequent investigators to believe that there could be no Palaeolithic in Qatar (see Scott-Jackson J.E. et al., 2008:43-44; Scott-Jackson J.E. et al., 2009:125, for a discussion of the argument).

### **Research Agenda**

Advances in knowledge rely on measures taken now to preserve enough physical and documentary evidence to secure an understanding of the Palaeolithic of Qatar. To this end, a research methodology has been developed by the PADMAC Unit, under the direction of Dr Julie Scott-Jackson (University of Oxford). The focus of the methodology is the use of a **Palaeolithic Survey Grid (PSG)** for Qatar. The **PSG** is a matrix of 4km x 4km grid squares (see Figure 1) which cover the whole of Qatar (the **PSG** coordinates comply with the Qatar National Grid system). Each specific grid square in the **PSG** has a unique identifier which allows repeatable, testable fieldwork data sets to be produced. The use of this method facilitates both the coordination of Palaeolithic field investigations (wherever in Qatar they are conducted) and retention/access to the information generated. The **Palaeolithic Survey Grid** master record, in addition to all other relevant data, is held on the QNHER GIS Database.

The aim of the **PSG** methodology is to ensure that whenever Palaeolithic investigations are undertaken in Qatar, the resultant data is incorporated into the Palaeolithic database. Recording the presence or absence of Palaeolithic archaeology in any one place has a two-fold purpose. Firstly, it allows for the monitoring of areas that may be affected by weather and geomorphological processes that can effectively reveal or cover artefact scatters. Secondly, having determined with certainty the presence or absence of Palaeolithic archaeology, a better understanding of the Palaeolithic use of the landscape as a whole can be achieved. If Palaeolithic surface scatters (or indeed isolated artefacts) are found, then appropriate methodologies must be deployed to investigate such archaeology (for additional information and methodologies, see Scott-Jackson J.E. et al., 2008:51).

### **Method:**

#### **Desk-Based Assessment (prior to field investigation)**

1. Identify **PSG** Square to be investigated using the coded **PSG** GIS layer held by the Qatar National Heritage and Environment Record (QNHER), for example see **PSG J9**;
2. Within the target square, identify specific areas of Palaeolithic potential (see example at Figure 2) based on an assessment of the landform (using Digital Terrain Mapping (DTM)), with reference to the geology, geomorphology, aerial/satellite imagery (e.g. Google Earth; Bing), previous

archaeological investigations and finds (e.g. Kapel 1967). All these datasets are available as geo-referenced layers within the QNHER;

3. Map possible routes to the specific **PSG** and areas of Palaeolithic potential, using aerial/satellite imagery to identify indicators such as tracks, natural obstacles, human structures etc;
4. Enter waypoints and tracks to the chosen locations onto the GPS instrument to be used in the field. The PADMAC Unit uses MotionX software on the Apple iPhone 3Gs, but any quality GPS instrument that provides mapping, tracking and waypoints can be used.

### **Field Investigation**

5. To reach a chosen **PSG**, the waypoints and tracks previously entered into the GPS instrument are utilized (4x4 vehicle would normally be necessary to reach areas of Palaeolithic potential). The tracking device must be turned on as soon as the vehicle is off-road. This is crucial as subsequent analysis of the **PSG** must be based on exact location data. However, the written report for the specific **PSG** will only show the tracking within that **PSG**, as each square is a discrete entity.
6. The **PSG** forms (see attached) provide the basis for the **Field Investigation Report**. Fieldworkers complete the **PSG** forms for each location investigated. Important observations should be noted both in the specific area covered by foot and from the vehicle. All observations should be supported by geo-referenced photographs (many modern camera systems have this feature) or should be labeled with the location's grid reference.
7. Following standard practice, all archaeology or geological specimens are labeled and placed in an appropriate bag/container for off-site analysis and recording. The location of each find is to be given a waypoint number and a GPS reference. This information is also written on the container, together with **PSG** reference, the date, description of find and finder's name.

### **Off-site analysis**

8. On completion of a **PSG**, the tracking is uploaded as data to the QNHER for permanent recording. All GPS instruments have a mechanism for transferring such tracking data (e.g. XMotion on the iPhone, which allows tracks to be emailed as Google Earth kmz files).
9. All waypoints relating to the specific **PSG** investigation (e.g. artefact find-spots and geological features) are uploaded to the QNHER with appropriate labeling and descriptions.
10. The tracking and waypoints can then be viewed together in Google Earth. Using this combined data, maps for the particular **PSG Field Investigation Report** are then produced at appropriate scales (e.g. a positioning view at a coarse scale such as 30km x 30km and a detailed view of the **PSG** at 4km x 4km).
11. All geo-referenced photographs are transferred to computer to be included in the **PSG Field Investigation Report**.
12. The **PSG Field Investigation Report** is compiled from the mapping, the individual investigator's **PSG** forms and the photographs (see **PSG J9**).

## **Research Strategy**

It is envisaged that the Palaeolithic Research Agenda for Qatar will become an established corpus, ultimately incorporating a full record of the Palaeolithic of Qatar. In addition to the continued fieldwork using the **Paleolithic Survey Grid (PSG)** method given here, a full assessment of the assemblages and individual artefacts collected by Kapel (1967) and others is now needed.

Other data relevant to the Palaeolithic derived from investigations associated with later time periods (for example Neolithic and Bronze Age) could also be incorporated. Likewise, environmental data linked to geomorphological processes are a desirable inclusion, as is information on more recent landform modification by urban development and road building.

The compilation of these data will provide a framework for future researchers and students of the Palaeolithic of Qatar.

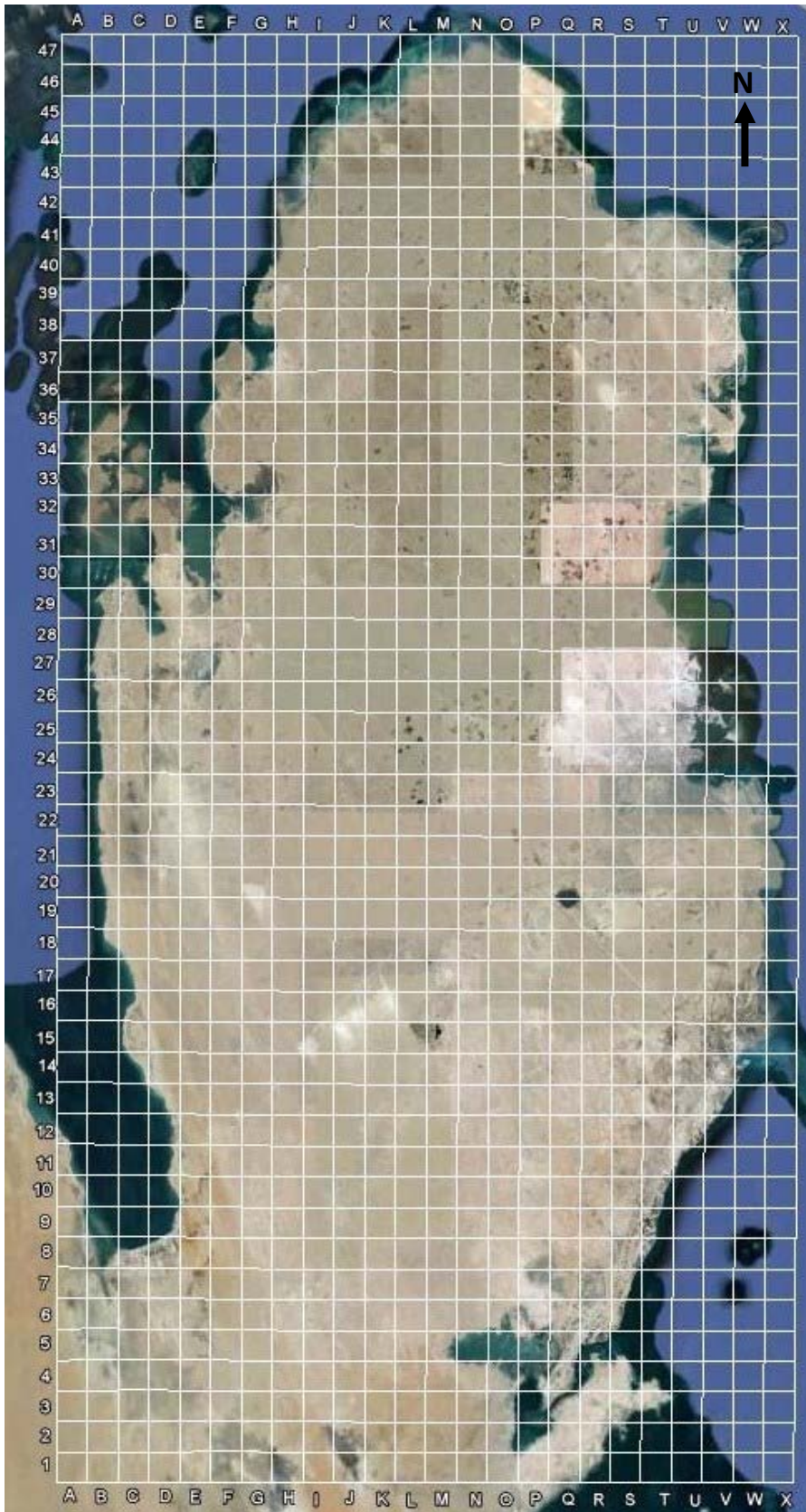


Fig 1: Palaeolithic Survey Grid for Qatar (superimposed on Google Earth Map).



Fig 2: **Palaeolithic Survey Grid** for Qatar (superimposed on Google Earth Map). Known (southern) areas of Palaeolithic potential, as identified for the 2010 pilot study investigations, are shown by white line.