

The new, digital Atlas was developed through the digitization and georeferencing of all of these sources. The GIS pointfile locates each site and includes data for each site, such as coordinates, historical periods, as well as archaeological, ethnographic and geographic data.

### The result

As a result of this project, a database with more than 15,000 archaeological sites has been created, and the final product can be displayed in both digital form and as paper maps (Map 1).

Sites were divided based on the modern provincial boundaries so that antiquities inspectors and archaeologists from each province can edit, modify, and add the results of new fieldwork. Permission to access the GIS shapefiles will be granted to institutions and individual researchers upon application to the Iraqi State Board of Antiquities and Heritage. These data can be useful for anyone seeking to select sites to be excavated. In addition, when the Iraqi central government or local governorates plan development projects in the countryside, the new system will reduce the risk of damage to archaeological sites by informing the decision makers of their location already at the planning stage of projects.

Dr. al-Hamdani obtained his PhD from SUNY Stony Brook in 2015. From 2003 to 2010 he was director of the Dhiqar province office of antiquities and heritage. Since 2003, he has conducted field work and excavations in southern Iraq.

—Abdulameer al-Hamdani, PhD  
*Anthropological archaeologist for the  
 Iraqi State Board of Antiquities and Heritage*

### References

#### Adams, Robert McC.

- 1965 *Land behind Baghdad: A History of Settlement on the Diyala Plains*. Chicago and London: The University Press of Chicago.
- 1981 *Heartland of Cities*. Chicago: University of Chicago Press.

#### Al-Hamdani, A.

- 2008 Protecting and Recording our Archaeological Heritage in Southern Iraq. *Near Eastern Archaeology* 71: 221-230.
- 2014a Kingdom of reeds: the archaeological heritage of southern Iraqi marshes. *The American Academic Research Institute in Iraq (TAARII) Newsletter* 9: 15-20.
- 2014b Dirasa Maidaniya lil mawaqei al-Athariya fi Hawr al-Hammar [A field study for the archaeological sites in Hawr al-Hammar]. *Sumer* 59: 63-115 (Arabic).

#### Gibson, McG.

- 1972 *The City and Area of Kish*. Miami: Field Research Projects.

#### Salman, A.

- 1975 *Atlas of the archaeological sites in Iraq*. Directorate General of Antiquities, Ministry of Culture. Baghdad: Al-Huria Printing House.

#### Stone, E.

- 2008 Patterns of Looting in Iraq. *Antiquity* 82: 125-138.

#### Wilkinson, T.J. and Tucker, D.J.

- 1995 *Settlement Development in the North Jazira, Iraq: A Study of the Archaeological Landscape*. London: The British School of Archaeology of Iraq and Baghdad: The Department of Antiquities and Heritage in Iraq.

#### Wright, H.T.

- 1981 The Southern Margins of Sumer: Archaeological Survey of the Area of Eridu and Ur. Pp. 295-338 in *Heartland of Cities: Surveys of Ancient Settlement and Land Use on the Central Floodplain of the Euphrates*, by R. McC. Adams. Chicago and London: University of Chicago Press.

## Archaeological Survey in Northern Erbil Province, Iraqi Kurdistan

Since 2015, I have been fortunate to participate with the *Settlement History of Iraqi Kurdistan* project conducting archaeological survey work in the Kurdistan Regional Government (KRG) region in northern Iraq as a GIS (Geographical Information System) analyst and field archaeologist. The *Settlement History of Iraqi Kurdistan* project<sup>1</sup> is one of four large-scale survey projects within the framework of the Assyrian Landscapes Research Group (see Ur 2013) in the KRG. The project area covers a large portion of the Duhok and Erbil governorates on both sides of the Great Zab river. Following the completion of work in Duhok governorate in the 2015 season, the 2016 season saw the project begin archaeological survey and reconnaissance work in northern Erbil governorate east of the Zab river. Particular attention was devoted to intensive field survey in the Harîr valley covering approximately 42 km<sup>2</sup> (Kolinski 2017), a relatively fertile plain area south of the Harîr mountain range. 91 sites, 20 of which were architectural features such as castles, watermills, and cemeteries, and 6 caves were registered over the course of the 2016 field season, with evidence of occupation ranging from the Hassuna period (early 6<sup>th</sup> millennium BCE) to late medieval and modern.

I will focus briefly on the findings from four transects for which I planned logistics and led field activities; these were in the vicinities of the villages of Arkaua, Darbandok, Barazan, and Mamdi<sup>2</sup>, all relatively close to the town of Harîr. Following preparation by analysis of satellite imagery, sites were documented in the field with GPS and Total Station, and surface pottery and other artifacts were collected for chronological determinations. The Arkaua and Darbandok transects were intended to identify settlement along the trade route to the Spilak pass (Kolinski 2017), while the Barazan and Mamdi transects investigated settlement on the east bank of the Haraş river and its tributary streams. No prior archaeological work had been conducted in this particular area of the Harîr plain, other than a cursory cataloguing in the *Atlas of the Archaeological Sites of Iraq* (Salman 1976) of some prominent tells and castle ruins near the towns of Batas and Harîr just adjacent to the areas covered by these transects.





"Dariusz Piasecki © UGZAR project".

A total of thirteen sites were discovered in this sector, all situated very close to rivers or streams; two near Arkaua, two near Darbandok, five near Barazan and four near Mamdi. The earliest evidence of occupation dates to the Ninevite 5 period at site S212 near Arkaua and at a tell near Barazan (on which the village *muhtar*, or headman, has fairly recently built an impressive mansion). There is a long occupational gap among the sites surveyed within these transect areas, with the subsequent evidence of occupation represented by Late Bronze Age and Neo-Assyrian ceramics at two sites in the vicinity of Arkaua and Darbandok. Like much of the rest of the Assyrian heartland region and its periphery (Kolinski 2016, Ur 2010, Wilkinson 1995), this area appears to have been abandoned following the collapse of the Assyrian empire for quite some time, as the occupations for the Hellenistic and the Parthian periods are each only represented at two sites<sup>3</sup>. The area of these transects, and indeed the entire Harîr plain seems to show evidence of a peak in settlement and population in the Sassanian and Early Islamic periods, with only five of thirteen sites in these transects lacking diagnostic ceramics. Within the entire survey area from the 2016 season, virtually all the largest sites had ceramics characteristic of these periods. Later periods were only represented at S213, a site cut through by the M3 highway, with baked bricks and ceramics dating to the Abbasid and undifferentiated later Islamic<sup>4</sup> periods. In addition

to the sites already mentioned, one site was of an undetermined dating, and an old cemetery with carved gravestones and a grist mill ruin near the village of Barazan lacked any ceramics that would allow for precise dating (though these probably date to the last few centuries). It must be noted that much of the land around these villages is currently used for agriculture, with the effect of potentially obscuring or destroying archaeological remains on the surface. Therefore, the absence of materials or sites dating to a certain period does not necessarily imply that no one lived in the region in that given period.

Of particular interest was the site S212, located on a flat hilltop in between the two Darbandok streams east of Arkaua village and just west of the M3 highway, the main roadway in the Harîr plain. Ceramics collected from the surface dated to the Ninevite 5 (Early Bronze Age), Late Bronze Age, Neo-Assyrian, and Sasanian periods. Most interestingly, a great abundance of lithic artifacts was present on the surface of the site, including 19 flint cores, flint blades, and a large number of lithic debitage (Kolinski 2017). It is very likely that this was an area of lithic manufacture or a very large cache, probably in use in the early 3<sup>rd</sup> millennium BC, though later dates cannot be ruled out based on the pottery found. Excavation would be required to further confirm the dating of the lithic workshop or cache.

One may wonder what it is like for archaeological teams working so close to an active warzone (since the start of the



Mosul offensive in late October 2016, however, the front has been pushed to the Tigris river). While the area under the control of the Kurdistan Regional Government is very safe compared to the rest of the immediate region, the tense security situation resulting from the ongoing war against the Islamic State of Iraq and Syria (ISIS) presents unique challenges to teams working in the country. This was immediately evident upon arriving at Erbil airport this past season: our project drone was confiscated despite paperwork (especially unfortunate considering some of the incredible landscapes and sites in the studied region), and subsequent clearance was impossible to attain due to the presence of an American airbase just beside the town of Harîr. The presence of the airbase caused the local *Asayish* (Kurdish security forces) to dispatch an armed squad on the first two days of work at the large tell site of Gird-î Tle. While we were forced to leave the area the first day of work, the commander of the *Asayish* unit permitted us to remain on the second visit once it became apparent we were only there for government sanctioned archaeological work. The next few weeks saw no further disruptions to our work, though the daily flyovers of Black Hawk, Osprey, and Chinook helicopters, small transport planes and reconnaissance drones at the air strip was an ever-present reminder of the proximity of the conflict. In addition to the current conflict, recent past conflicts including the Iran-Iraq war, the al-Anfal campaign, and the Gulf War have also left a number of active minefields and munition dumps within the project area, although the vast majority of these have been disarmed. It must, however, be mentioned that besides these occasional reminders, it is easy to completely forget that active combat is taking place only a half hour drive or so away – the Kurdish security forces have been highly effective in maintaining stability and peace within their borders. Indeed, much of the enthusiasm of the ongoing archaeological project teams can be owed to this, as well as to the generous cooperation offered by the respective antiquities ministries in the KRG.

The Settlement History of Iraqi Kurdistan project will continue with the final season of fieldwork in 2017, also in Erbil province. A final publication can be expected for 2018, which will include a catalogue of maps, sites, and finds. The immediate years are sure to be promising with regards to the archaeology of the Kurdistan region of Iraq. A comprehensive dataset based on many years of archaeological research in the region will no doubt shed light on the historical settlement of the region in great detail, as the Assyrian Landscapes Research Group projects share a joint methodological framework and chronology, allowing for comparison of results. The author would like to thank the Settlement History of Iraqi Kurdistan team for the opportunity to join the project, as well as the Erbil antiquities department representatives and Kurdish colleagues, whose hospitality and welcome were overwhelming.

—Arthur Stefanski

*PhD Candidate, Near and Middle Eastern Civilizations,  
University of Toronto*

## References

### Koliński, R.

- 2016 Season 2015. Poznań: Adam Mickiewicz University. <http://archo.amu.edu.pl/ugzar/season2015.htm> (accessed 15 January 2017)
- 2017 Season 2016. Poznań: Adam Mickiewicz University. <http://archo.amu.edu.pl/ugzar/season2016.htm> (accessed 15 January 2017)

### Salman, A.

- 1976 *Atlas of the archaeological sites of Iraq*. Baghdad.

### Ur, J.

- 2010 *Urbanism and Cultural Landscapes in Northeastern Syria. The Tell Hamoukar Survey, 1999-2001*. Oriental Institute Publications 137. Chicago: University of Chicago.
- 2013 ALRG Working Ceramic Typology v.7.

### Wilkinson, T.J.

- 1995 Late-Assyrian Settlement Geography in Upper Mesopotamia. Pp. 139–160 in *Neo-Assyrian Geography*. Quaderni di Geografia Storica 5. Rome: University di Roma.

## Notes

- 1 Led by Adam Mickiewicz University. The project is financed by grant 2014/13/B/HS3/04872 of the National Science Centre of the Republic of Poland.
- 2 Kurdish names presented here according to the normalization scheme devised for the *Settlement History of Iraqi Kurdistan* project.
- 3 It should be noted that pottery of the post-Assyrian, Babylonian and Achaemenid periods in this area is rather poorly known (Ur 2013: 105).
- 4 Period 21 in the ALRG Working Ceramic Typology (Ur 2013), i.e. any late ceramic that isn't diagnostic to the Middle-Late Islamic periods.

## MTAAC: Developing New Computer Applications for Cuneiform Studies

For the next two years, beginning in June 2017, the University of Toronto's Department of Near and Middle Eastern Civilizations will host a new research project aimed at developing tools for the computerized information extraction and automated translation of cuneiform texts. Toronto's Social Sciences and Humanities Research Council of Canada (SSHRC)-funded team will be joining with partners from the University of Frankfurt and the University of California, Los Angeles to collaborate on the project "Machine Translation and Automated Analysis of Cuneiform Languages" (MTAAC). This is one of 14 projects chosen to investigate 'big data' questions in the Humanities and Social Sciences, following a successful application to round four of the Trans-Atlantic Platform Digging Into Data Challenge.

The starting point for our project is the fact that, while Ancient Mesopotamia has produced tens of thousands of cuneiform texts, the number of specialist scholars who are able