



## **New Chronology for the Middle Palaeolithic Sequence of Kaldar Cave; Insights from the Third Excavation Season**

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**Abstract:** As a key archaeological site, Kaldar Cave provides evidence of the Middle to Upper Palaeolithic transition in Iran. It is also one of the earliest sites with cultural materials attributed to early AMHs in western Asia. Apart from the earlier obtained dates from its Upper Palaeolithic sequence, we provide here the recently obtained Thermoluminescence date from layer 5. In this paper, we elaborate and correlate this dating to a broader discussion within the Zagros Middle and Upper Paleolithic sites. In this study, we also present brief information on the freshly recovered lithic industries, Paleontological data, the obtained T.L dating, and its position in the stratigraphic sequence.

**Keywords:** *Dating, Thermoluminescence, Middle Palaeolithic, Zagros Chronology, Kaldar Cave.*

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## Introduction

Since the 1930's report by Henry Field for an Upper Paleolithic type of lithics at two rock shelters in the Fars province (Field, 1939: 495) and his recognition of the archaeological importance of Kunji cave (Field 1951: 91, footnote 22), to explorations of Hunter and Tamtama Caves in 1949 by Carlton S. Coon (Coon 1951 and 1957), there have been enormous efforts and research on Zagros Paleolithic potential and its importance. Many of these studies have been published in the form of explorations and surface collection reports, some excavation reports, and finally few lithic industry studies and comparative analyses. However, the majority of the research carried out in the region is case studies. The major excavation reports and contextual studies within the Iranian Zagros consist (Hole and Flannery 1967; McBurney 1969, 1970; Bewley 1980, 1984: 35-38; Speth 1971; Baumler and Speth 1993; Jaubert et al. 2009; Trinkaus and Biglari 2006; Biglari et al. 2009; Conard et al. 2009; Otte et al. 2007; Otte et al. 2011; Ghasidian et al. 2009; Ghasidian 2010; Conard and Ghasidian 2011; Mashkour et al. 2012; Tsanova 2013; Bazgir et al. 2014; Allué et al. 2018; Bazgir and Tumung 2014; Bazgir and Davoudi 2014; Ollé et al. 2014; Becerra-Valdivia et al. 2016; Shidrang et al. 2016; Bazgir 2016; Rey Rodríguez et al. 2015; Ghasidian et al. 2017; Bazgir et al. 2017; Becerra-Valdivia et al. 2017; Heydari-Guran et al. 2021; Reynolds et al. 2022).

Although our intention in this article is not to deal with the statement of the problems in the Zagros region Paleolithic research, however, a quick look at the Zagros Paleolithic literature, lack of application of multidisciplinary studies could be easily noted in comparing to Levantine sites and other nearby regions. Additionally, another major problem in the Iranian Paleolithic in general and the Zagros Mountains in specific is the scarcity of obtained dates from the excavated fills of caves and open-air sites. In other words, the Zagros sites are mostly suffering for the absence of dating results, not for lack of localities. There are several reasons for this situation; in the initial stage of the Zagros Paleolithic studies from the beginning of the Twenty century to 1980, only foreign archaeologists carried out works there. Additionally, a twenty years gap in the Paleolithic studies seems to be the most imperative reason. As a result, due to their problems with regular visits to Iran and their study areas, most of the research was interrupted and was limited to few exploration or excavation reports therefore we cannot see any long-term or goal-oriented studies. It is also obvious and worth mentioning that, from the 1930s to the 1990s, advanced and accurate dating techniques were not available, at least for Iranian studies. Times go on, but except for a single attempt by McBurney at Humian 1 Cave (McBurney 1969, 1970; Bewley 1980, 1984: 35-38) and few Iranian-foreign joint teams (Conard et al. 2009; Ghasidian et al. 2009; Ghasidian 2010; Conard and Ghasidian 2011; Otte et al. 2011; Bazgir et al. 2014; Bazgir et al. 2017; Becerra-Valdivia et al. 2017; Heydari-Guran et al. 2021), we again do not see dating results from the Zagros sites systematically to achieve a broad view of the region's chronological framework. Referring to the above introduction and despite all the efforts in understanding the Middle to Upper Paleolithic transition, up to date, except for Shanidar Cave in Iraqi Kurdistan and BawaYawan in the Kermanshah region, no other site produced both M.P. and U.P. chronological results in the Iranian Zagros Mountains (Fig. 1). In this article, we are presenting the new dating from the Middle Paleolithic sequence from Kaldar Cave. Dating the Upper Paleolithic sequence of Kaldar Cave using Thermoluminescence showed ages ranging from  $23100 \pm 3300$  to  $29400 \pm 2300$  B.P. The three  $C^{14}$  dates produced results in the ranges of 38650–36750 cal B.P., 44200–42350 cal B.P., and 54400–46050 cal B.P., respectively all at 95.4% probability (Bazgir et al. 2017). In our third excavation season, we achieved a new date from layer 5 which includes an outstanding Mousterian lithic assemblage. Apart from the new dating, here we also provide brief information on recovered lithic industry and Paleontological data from this excavation season.



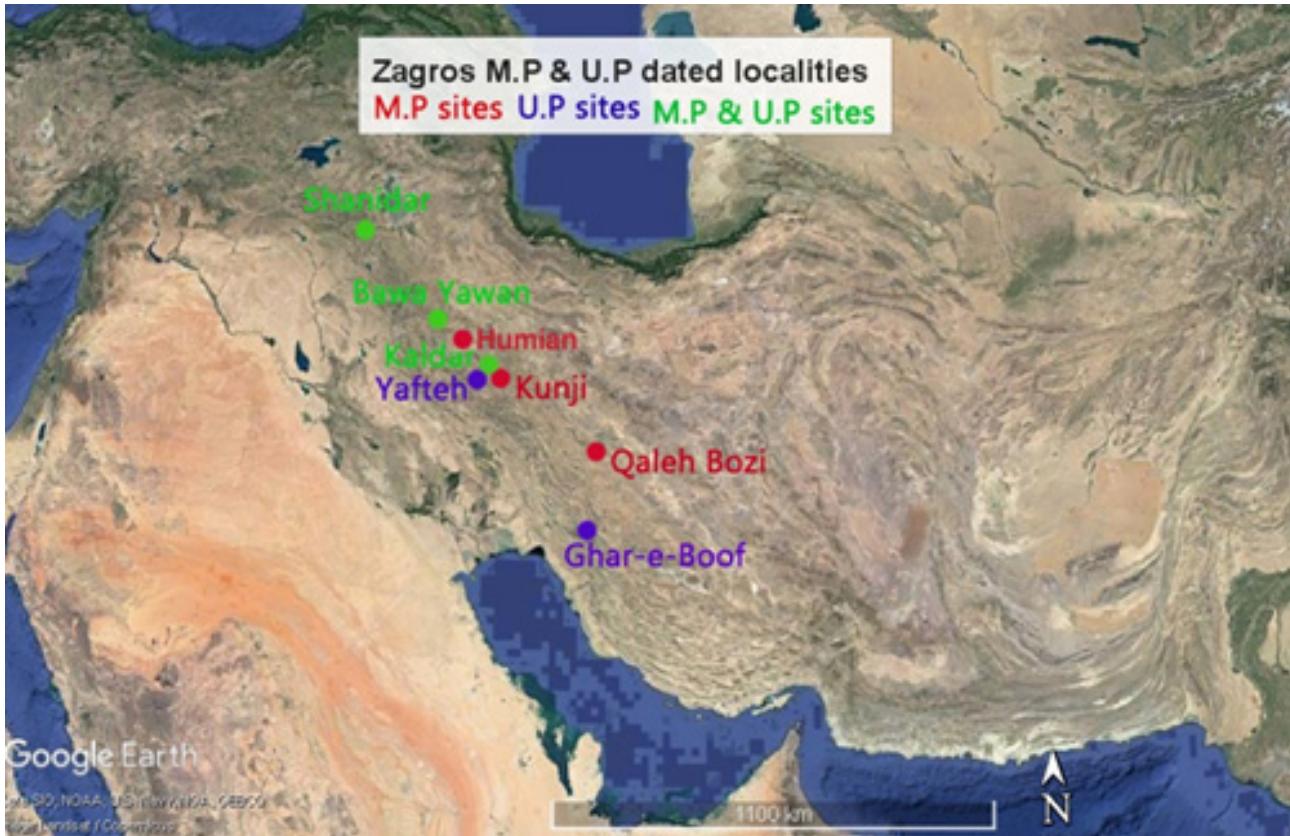


Fig. 1: Location of M.P. and U.P. dated localities within the Zagros Mountains; M.P. sites shown in red color, U.P. in purple, and M.P. & U.P. in green.

### Dating

Thermoluminescence dating was performed on a heated sample from Layer 5 at the Research Centre for Conservation & Restoration of Cultural Relics of the Research Institute of Iranian Cultural Heritage (RICT). The sample has successfully been dated. As in the previous study (Bazgir et al. 2017), the same method and procedure were applied to obtain the data. The outer surface (3 mm) of the sample was removed for sample preparation and instrumentation. To account for the alpha radiation contribution to the natural dose measurements, the fine grain technique is used (ibid). Alpha radiation travels an extremely short distance in heated objects (approximately 25  $\mu\text{m}$ )<sup>63</sup>. Thus, we used grains less than 10  $\mu\text{m}$  in size. The sample was crushed and treated with 10% HCl to remove carbonates and organic material. Then, the sample was washed with distilled water and then with acetone. Finally, the grains were suspended in acetone and deposited on aluminum discs that were 10 mm in diameter and 0.5 mm in thickness. The TL measurements were performed using an ELSEC7188 instrument. The potassium contents of the sample were determined by flame photometry. To determine the contributions from U and T, the “pairs” technique was used; thus, the dose rate was measured using a 7286 low-level alpha counter<sup>64</sup>. External dose rates were measured by in situ dosimetry<sup>65</sup>. To determine the external dose (the radiation level of gamma rays in the environment or the environmental dose of the studied layer), three environmental dosimeters containing crystals of calcium fluoride ( $\text{CaF}_2$ ) were placed in layer 5 for 31 days (Fig. 2). After measuring and calculating, the average numerical value of 0.55 mGy/a (milligrams per year) was obtained, which was used in the final calculations to determine the age of the flint. Measurements of the water content and fading test were considered (Table 1).

The obtained data comes from a heated flint from Layer 5, at the boulder with layer 4 (Fig. 3).



Fig. 2: Location of the Dosimeters Shown Within the Section.

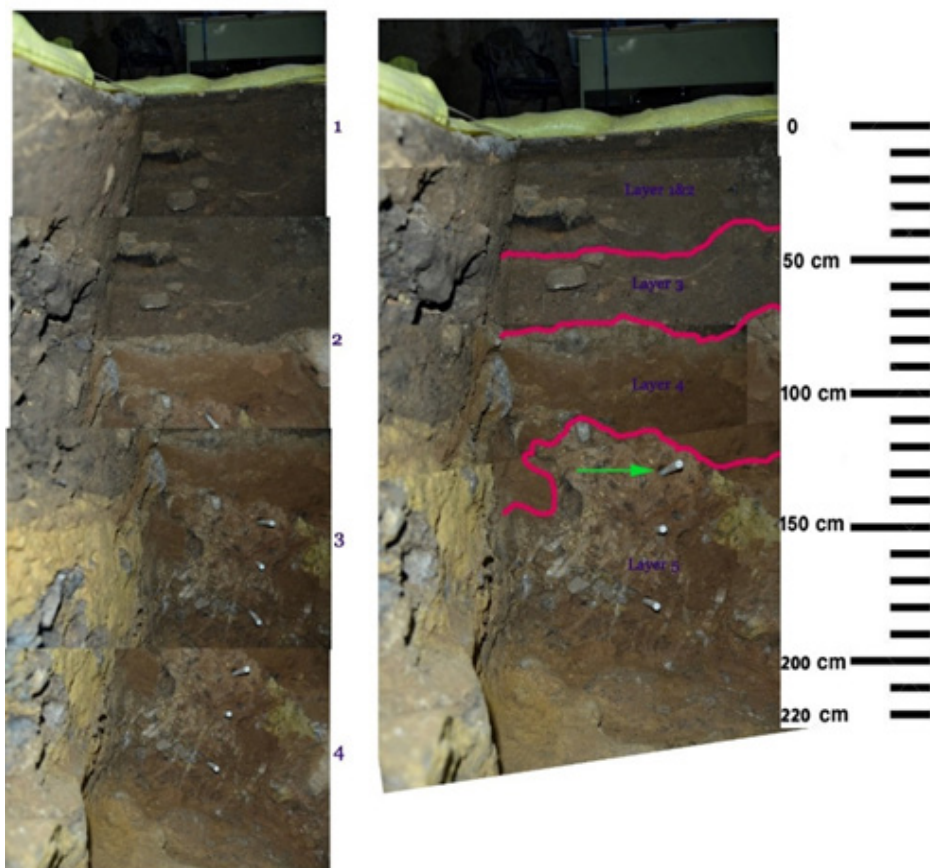


Fig. 3: The Location and Associated Depth of the Dated Flint Indicated by the Green Arrow.

Although dating more samples would make it more precise to estimate the transitional time, however, in terms of the stratigraphic hierarchy, the obtained date from this season is fully consistent with the earlier dates from layer 4.

**Table 1: Results of the Numerical Amount of Radioactive Elements in the Sample, Equivalent Dose, and Obtained Age of the Flint**

Sample	Specification	Th (ppm)	Ur (ppm)	K%2	Equivalent dose (ED)	Age
Flint B	Layer 5 - S3	0.64	1.04	0.55	70.14	63044±6120

### Lithic Industry

The recovered lithic assemblage from this season from layer 5 at Kaldar Cave clearly shows an outstanding Mousterian technology. The lithic artifacts are dominated by tools using the Levallois technique and show a high number of pointed and elongated tools mostly in the form of flakes and points. The retouched Mousterian points also consisting a considerable percentage of the assemblage. The technological analysis of the Middle Paleolithic lithic assemblage of Kaldar Cave shows a high proportion of pointed elements, which may have been the main goal of the tool-making strategy at Kaldar Cave. Analyses in progress tests are aimed at testing hypotheses on the possible use of these pointed objects in hunting (Fig. 4). The Upper Paleolithic lithic industry at Kaldar Cave includes diagnostic technological elements for the Baradostian or Zagros Aurignacian, such as Arjeneh points, carinated pieces, and different blade and bladelet cores. This layer has a unique blade and bladelet assemblage, that might be considered to be an

index for the Baradostian within the Iranian Zagros and even beyond.

Here, a small selection of the lithic industries from layers 5 and 4 are shown (Fig. 5). A paper that provides a detailed study on the industries is in preparation.



Fig. 4: Selected Artifacts from Middle Paleolithic of Kaldar Cave 3<sup>rd</sup> season.



Fig. 5: Selected Artifacts from Upper Paleolithic of Kaldar Cave 3<sup>rd</sup> Season.

### Faunal Remains

Remains of large mammals recovered in the third excavation season at Kaldar Cave are much less abundant than lithics. Layers 1 to 3 yielded remains of *Vulpesvulpes*, a small *Canis* (probably domestic), a deer of the size of *Damamesopotamica*, *Capreolus?*, *Capra*, *Bostaurus*, and *Hystrix*. Layer 4 yielded: *Carnivoraindet*, *Dama*, a large deer of the size of *Cervuselaphus*, and *Capra*. *Cervuselaphus* has been documented in Kaldar Cave (Bazgir et al. 2017). The *Capra* remains do not include specimens that are diagnostic at the species level, but the specimens, including those from level 4 tend to be small. Species *Capra aegagrus* lives today in Iran and is somewhat smaller than other species, like *Capra caucasica*. In this field season, we did not recover



the remains of large mammals from layer 5. The remains recovered during the last field season confirm that the fauna from the different levels of Kaldar Cave is consistent with Palaearctic affinities. The Zagros mountains form locally the southern border of the Palaearctic and did so also during the Late Palaeolithic. The climate or environment of the area had more affinities with the areas to the North than with the surrounding areas (East, South, West). The variety of deer species so far to the South is notable and suggests that the environment of the Khorramabad valley was not very dry when layers 1 to 4 were deposited (Fig. 6).

1. *Bostaurus* right radius and ulna in distal view.
2. *Capra* cf. *aegagrus* third (or distal) phalanx, right of the axis of the foot, axial view.
3. *Capra* cf. *aegagrus* right upper molar, buccal view.
4. *Capra* cf. *aegagrus* third lower premolar, lingual view.
5. *Canis* sp. (probably domestic)
6. *Chelonia* cf. *Testudo*, ventral plate.
7. *Hystrix* left ulna, medial view.
8. *Vulpesvulpes* right ulna, lateral view.
9. *Vulpesvulpes* left edentulous mandible, lingual view.
10. Cf. *Damamesopotamica* distal part of first (or proximal) phalanx, left of the axis of the foot:  
a) plantar, b) axial view.
11. Cf. *Damamesopotamica* left lower canine, labial view.
12. *Cervuselaphus* first (or proximal) phalanx, left of the axis of the foot, axial view.

## Discussion and Conclusion

Based on its suitable location within the Wild Life Century zone, Kaldar contains almost untouched layers with intact living floors that make it one of the rare sites with potential for future goal-oriented excavations. A thick part of its Middle Paleolithic sequence (almost 80 cm) has yet to be dated. However, the current dates and earlier lithic data confirm that this locality had been occupied at least since the middle of the Middle Paleolithic era. To date, Kaldar Cave and Bawa Yawan rock shelter (Heydari-Gauran et al. 2021) are the only sites within the Iranian Zagros that produced both Middle and Upper Paleolithic dating. Available data from Kaldar also shows continuity from the Pleistocene into the Holocene, which makes it also interesting for research on the younger cultural developments. However, as discussed earlier, the absence of Epipaleolithic cultural remains at this locality is crucial. The obtained dates from the second excavation season have led us to abandon the Epipaleolithic designation we previously applied to the recovered bladelet assemblages (Bazgir et al. 2014, 2017). During this excavation season, we came closer to the idea that the site may not have been occupied during the Epipaleolithic era. The recovered lithic industry at this season shows the earlier features. A large number of the artifacts are in the form of points and pointed elements. The unique blade and bladelet assemblage from Kaldar could be considered as an index for the Baradostian/Zagros Aurignacian assemblage within Iranian Zagros and beyond.

The current state is that we are still far from assessing a precise transitional timing of the M.P. to U.P. The obtained dates from both the U.P. & M.P. sequences of the Zagros sites do not match or in some cases, are not even close to each other. For instance, in the case of Bawa Yawan, both of its U.P. and M.P. dates seem too young compare to the Humian 1, Shanidar, Kaldar, Ghar-e-Boof, and even Yafteh. The Kunji Cave M.P. date shows a comparatively much younger chronology. The



Fig. 6: Selected Bones and Teeth of Large Mammals from Kaldar Cave from the 3<sup>rd</sup> Excavation Season

moment of the M.P. to U.P. transition of the region is not yet exactly known and more precision could be obtained by dating the boundary between layers 4 and 5 of the Kaldar Cave and other sites sequences. We also recovered a fragment of a human skull from layer 4. Although DNA analysis confirmed its human nature, an initial attempt to date the specimen returned a nearly recent date, which is most probably due to contamination. For this reason, we prefer to wait for the next excavation and then try to find more human remains.

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### ***Bibliographical References***

Allué, E., I. Expósito, L. Tumung, A. Ollé, B. Bazgir

2018 "Early evidence of *Prunus* and *Prunus cf. amygdalus* from Palaeolithic sites in the Khorramabad Valley, western Iran", *Comptes Rendus Palevol*.

Baumler, M. F. and J. D. Speth

1993 "A Middle Paleolithic Assemblage from Kunji Cave, Iran", in: *The Paleolithic prehistory of the zagros-Taurus*, edited by Deborah Olszewsky and Harold Dibble, University Museum Monograph 83, University Museum Symposium Series 5. Philadelphia, PA: University of Pennsylvania, pp. 1-73.

Bazgir, B.

2016 "Archaeological Excavation at Kaldar Cave: Continuation of Goal-Oriented Paleolithic Research in the Khorramabad Valley", in *14<sup>th</sup> Annual Symposium on the Iranian Archaeology*, Iranian Center for Archaeological Research (ICAR), Tehran, Iran.

Bazgir, B. and L. Tumung

2014 "Possible Evidences of Hunting Activities from the Middle and Upper Paleolithic Sites of Gilvaran, Ghamari and Kaldar: A Case Study Based on Microwear and Techno-Functional Analysis (In Persian with English abstract)", *Modares Archaeological Research* 5, No 9 & 10, pp. 35-49.

Bazgir, B. and D. Davoudi

2014 "Test Excavations at Gilvaran, Kaldar, Ghamari Caves and Gar Arjeneh Rock Shelter (In Persian)", in *Brief Articles in the 12<sup>th</sup> Annual Symposium on the Iranian Archaeology*, Iranian Center for Archaeological Research (ICAR), Tehran, Iran.

Bazgir, B., A. Ollé, L. Tumung, L. Becerra-Valdivia, K. Douka, T. Higham, J. van der Made, A. Picin, P. Saladié, JM. López-García, HA. Blain, E. Allué, M. Fernández-García, I. Rey-Rodríguez, D. Arceredillo, F. Bahrololoumi, M. Azimi, M. Otte, E. Carbonell

2017 "Understanding the emergence of modern humans and the disappearance of Neanderthals: Insights from Kaldar Cave (Khorramabad Valley, Western Iran)", *Scientific Reports* 7: 43460 | [DOI: 10.1038/srep43460](https://doi.org/10.1038/srep43460)

Bazgir, B., M. Otte, L. Tumung, A. Olle, S. Ganesh Deo, P. Joglekar, J. Manuel Lopez Garcia, A. Picin, D. Davoudi, J. Van Der Made

2014 "Test excavations and initial results at the Middle and Upper Paleolithic sites of Gilvaran, Kaldar, Ghamari caves and Gar Arjene Rockshelter, Khorramabad Valley, Western Iran", *Comptes Rendus Palevol* 13, pp. 511-525.

Becerra-Valdivia, L., K. Douka, D. Comeskey, B. Bazgir, N.J. Conard, C. W. Marean, A. Ollé, M. Otte,





L. Tumung, M. Zeidi, T. F.G. Higham

2017 "Chronometric investigations of the Middle to Upper Paleolithic transition in the Zagros Mountains using AMS radiocarbon dating and Bayesian age modelling", *Journal of Human Evolution* 109, pp. 57-69.

Bewley, R.

1980 *Houmian, Iran*, M.Phil. thesis, Department of Archaeology, University of Cambridge, Cambridge, U.K

1984 "The Cambridge University Archaeological Expedition to Iran, 1969. Excavations in the Zagros Mountains: Houmian, Mir Malas and Barde Spid", *Iran* 22, pp. 1-38.

Biglari, F., M. Javeri, M. Mashkour, M. Yazdi, S. Shidrang, M. Tengberg, K. Taheri, J. Darvish

2009 "Test Excavations at the Middle Paleolithic sites of Qaleh Bozi, Southwest of Central Iran, a Preliminary Report", *Iran Palaeolithic*, pp. 29-38.

Coon, C.S.

1951 *Cave Explorations in Iran 1949*, Museum Monographs, The University Museum, University of Pennsylvania, Philadelphia.

1957 *The Seven Caves: Archaeological Explorations in the Middle East*, New York.

Conard, N. J., E. Ghasidian, S. Heydari-Guran,

2009 "The open-air Late Paleolithic site of Bardia and the Paleolithic occupation of the QalehGusheh Sand Dunes, Esfahan Province, Iran", *British Archaeological Research International Series*, pp. 141-54.

Conard, N. and E. Ghasidian

2011 "The Rostamian Cultural Group and the taxonomy of the Iranian Upper Paleolithic", in *Between Sand and Sea: the Archaeology and Human Ecology of Southwestern Asia*, edited by N. Conard, P. Dretchsler, A. Morales, Kerns Verlag, Tübingen, pp. 33-52.

Ghasidian, E.

2010 *Early Upper Paleolithic occupation at Ghār-e Boof Cave; a reconstruction of cultural tradition in Southern Zagros Mountains of Iran*, Unpublished Ph.D. diss., Eberhard-Karls Universität Tübingen.

Ghasidian, E., S. Heydari-Guran, M. M. Lahr

2017 "Upper Paleolithic cultural diversity in the Iranian Zagros Mountains and the expansion of modern humans into Eurasia", *Journal of Human Evolution* 132, pp. 101-118.

Field, H.

1939 *Contributions to the Anthropology of Iran*, Chicago, Field Museum Press. 2 vols.

1951 "Reconnaissance in Southwestern Asia", *South western Journal of Anthropology* 7, pp. 10-86.

Ghasidian, E., A. Azadi, S. Heydari-Guran, N. Conard

2009 "Late Paleolithic Cultural Traditions in the Basht Region of the Southern Zagros of Iran", in *Iran Palaeolithic*, edited by M. Otte, F. Biglari, and J. Jaubert, Proceedings of the XV World Congress (Lisbon, 4-9 September 2006), pp. 125-140.



Heydari-Guran, S., S. Benazzi, S. Talamo, E. Ghasidian, N. Hariri, G. Oxilia, S. Asiabani, F. Azizi, R. Naderi, R. Safaierad, J. J. Hublin, R. A. Foley, M.M. Lahr

2021 "The discovery of an in situ Neanderthal remain in the BawaYawanRockshelter, West-Central Zagros Mountains, Kermanshah", <https://doi.org/10.1371/journal.pone.0253708>

Hole, F and V. Flannery

1967 "The Prehistory of Southwest Iran: A Preliminary Report", *Proceedings of the Pre-historic Society* 33, pp. 147-206.

Jaubert, J., F. Biglari, J.-G. Bordes, L. Bruxelles, V. Mourre, S. Shidrang, R. Naderi, M. Mashkour, B. Maureille, J.-B. Mallye, Y. Quinif, W. Randu, V. Laroulandie

2009 "The Middle Paleolithic occupation of Mar Tarik, a new Zagros Mousterian site", in *Iran Palaeolithic*, edited by M. Otte, F. Biglari, J. Jaubert, Proceedings of the XV World Congress UISPP, Lisbonne, Vol. 28, BAR International Series, pp. 7-27.

Mashkour M., V. Radu, J. Darvish

2012 "The Upper Paleolithic Faunal Remains FromYafteh Cave (Central Zagros), 2005 Campaign. A Preliminary study", in *L'Aurignacien de la grotteYafteh (fouilles 2005-08) et son contexte / The Aurignacian of Yafteh Cave (2005-08 excavations) and its context*, edited by Otte M., S. Shidrang, D. Flas, Liège, ERAUL 132, pp. 117-126.

McBurney, Ch.

1969 "On An Examination of Rock Painting in The KuhDasht Area", *Bastanshenassi va-Honar-e Iran* 3, pp. 7-8.

1970 "Paleolithic Excavations in the Zagros Area", *Iran* 8, pp. 185-86.

Otte, M, F. Biglari, D. Flas, N. Hashemi, M. Mashkour, A. Mohaseb, R. Naderi, L. Radu, S. Shidrang, and N. Zwyns

2007 "New research on the Aurignacian in the Zagros Region: Test excavation at Yafteh Cave, Lorestan, Iran", *Antiquity* 81, Issue 311, pp. 82-96.

Otte, M., S. Shidrang, N. Zwyns, and D. Flas

2011 "New radiocarbon dates for the Zagros Aurignacian from Yafteh cave, Iran", *Journal of Human Evolution* 61, pp. 340-346.

Olle, A., L. Asryan, B. Bazgir, L. Fernández-Marchena, K. Hardy, S. Buckley, P. Loza, M. Marro, A. Pederagnana

2014 "Creating a reference collection of hafting adhesives to interpret some "black spot" residues on lithic artefacts", XVII UISPP World Conference, Burgos (Spain) 1<sup>st</sup>-7<sup>th</sup> September.

Rey-Rodriguez, I., J. M. Lopez Garcia, A. Blain, M. FernandezGarcia, X. Pedro, L. Tumung, A. Olle, B. Bazgir

2015 "Preliminary data for the environmental reconstruction of the latest Pleistocene from Kaldar Cave (Khorramabad Valley, Iran) through the small-vertebrates assemblages", in *14<sup>th</sup> Annual Symposium on the Iranian Archaeology*, Iranian Center for Archaeological Research (ICAR).

Reynolds, T., Ch. Hunt, E. Hill, E. Tilby, E. Pomeroy, A. Burke, G. Barker

2022 "Le Moustérien du Zagros :une vision synthétique à partir de la grotte de Shanidar The Zagros Mousterian: The view from Shanidar Cave", *L'Anthropologie*, p. 103045. <https://doi.org/10.1016/j.anthro.2022.103045>



Shidrang, S. F. Biglari, J.-G. Bordes, J. Jaubert

2016 "Continuity and Change in the Late Pleistocene Lithic Industries of the Central Zagros: A Typo-Technological Analysis of Lithic Assemblages from Ghar-e Khar Cave, Bisotun, Iran", *Archaeology, Ethnology and Anthropology of Eurasia* 44 (1), pp. 27-38.

Speth, J.,

1971 "Kunji Cave", *Iran* 9, pp. 172-73.

Tsanova T.,

2013 "The beginning of the Upper Paleolithic in the Iranian Zagros. A taphonomic approach and techno-economic comparison of Early Baradostian assemblages from Warwasi and Yafteh (Iran)", *Journal of Human Evolution* 65 (1), pp. 39-64. <http://dx.doi.org/10.1016/j.jhevol.2013.04.00>.

Trinkaus, E. and F. Biglari

2006 "Middle Paleolithic human remains from Bistun Cave, Iran", *Paléorient* 32, pp. 105-111.