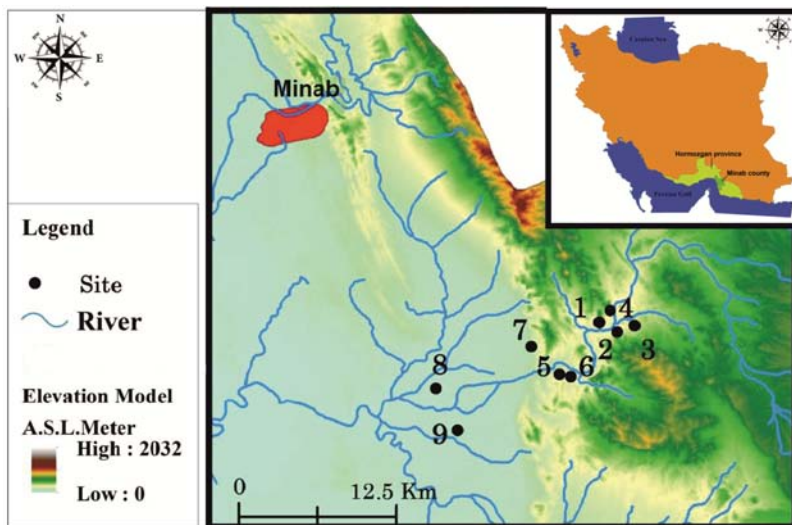


## Human remains from Sar-Ney 3, Iran, 2019

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The Sar-Ney dam construction project, 28km south-east of Minab, Hormozgan province, was preceded by the archaeological rescue survey project led by the Iranian Center for Archaeological Research (ICAR) in 2017. Nine sites were discovered during the survey (**Figure 1**). Among these six were settlement sites consisting of rubble stone structures and pottery fragments that had belonged to semi-sedentary societies. They are located at the bottom of a valley that will be covered by water in 2020 after the completion of the dam. Other archaeological sites are located on the path of the water pipe system and will not be flooded (Mirghaderi 2017). A salvage excavation



**Figure 1.** Location of Minab County in Hormozgan Province, Iran. Archaeological sites: (1) Sar-Ney 1, (2) Sar-Ney 2, (3) Sar-Ney 3, (4) Sar-Ney 4, (5) Dashtak 1, (6) Dashtak 2, (7) Karian graveyard, (8) Sheikh Bakhtiar tomb and (9) Haririha graveyard (after Mirghaderi 2017).

project was carried out in March 2019 at three sites (Sar-Ney 1, 2, 3) that were in the back of the future dam reservoir. Human remains were discovered only at Sar-Ney 3 and these will be discussed here. This site is located near Sar-Ney village, c. 100m south of Sar-Ney river and c. 2.5km west of the dam ( $26^{\circ}58'4.83''N$   $57^{\circ}18'9.76''E$ ). The site was probably used by nomadic or semi-sedentary groups during the late Qajar (1785-1925) and early Pahlavi periods (1925–1979), as suggested by the pottery fragments. In addition, some rectangular rubble stone structures were observed on the ground surface.

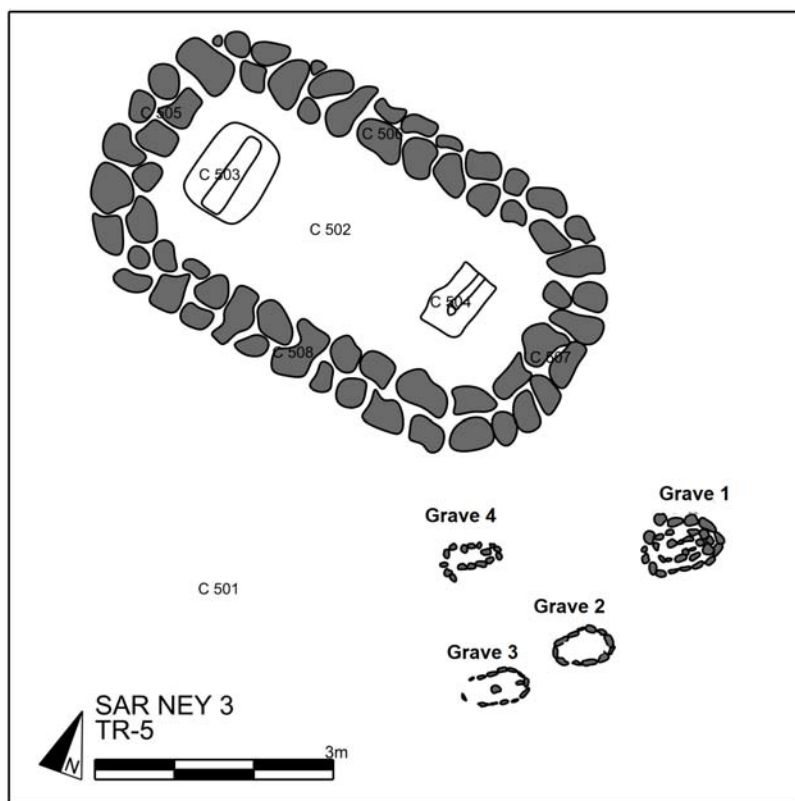
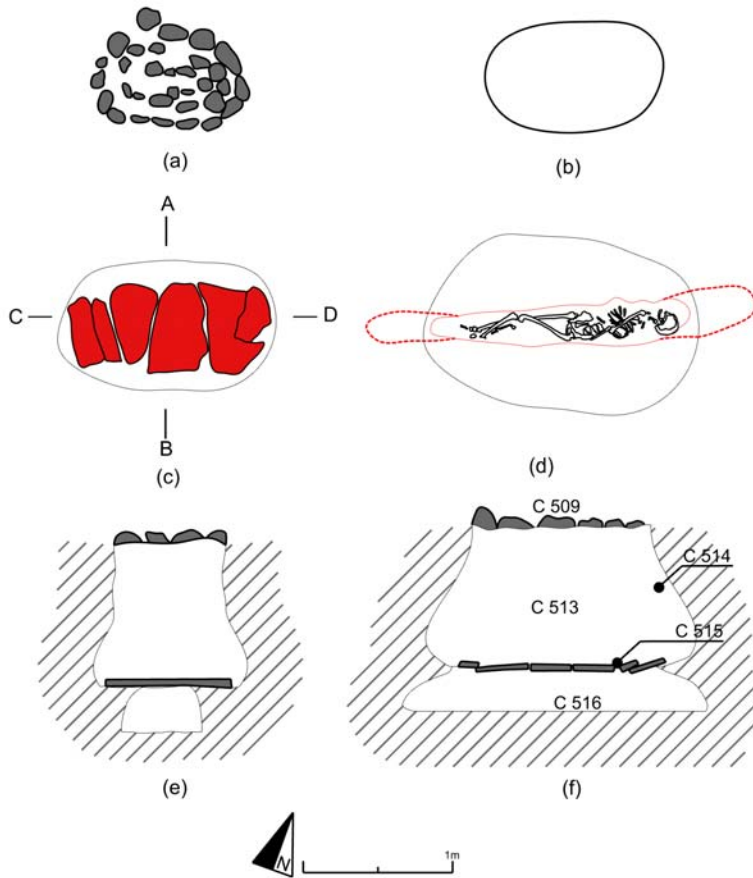


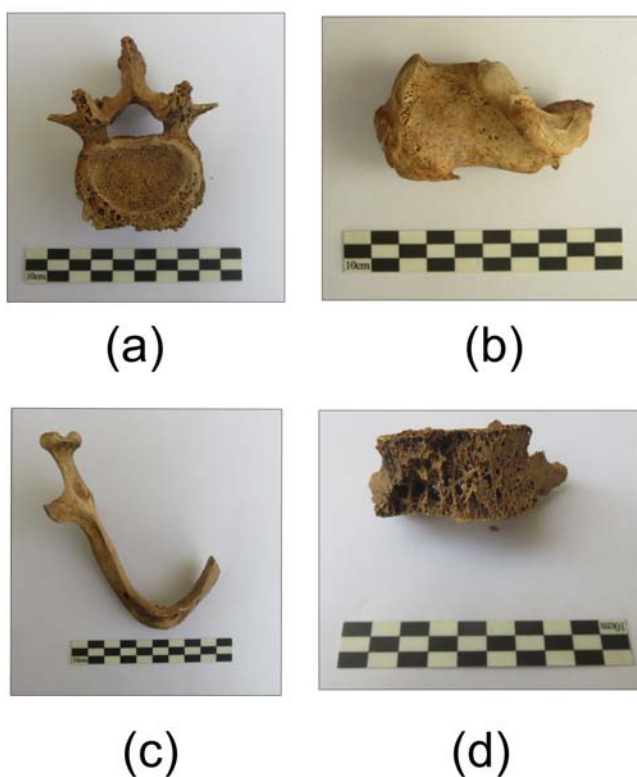
Figure 2. Trench 5 at Sar-Ney 3 (drawing by Sepide J. Yeganeh).

A 10×10 meter trench was opened at the site (Figure 2). This trench (No. 5) contained six graves. Two of them were located inside the rectangular rubble stone structure that was not excavated and the others (numbers 1 to 4) were SE to this structure. The shape of the graves is uniform (Figure 3). At the grave's surface there are some stones that are arranged in an oval shape. Muslims are not allowed to have grave superstructures more than 10cm in height over the earth that they are buried



**Figure 3.** Structure of the grave 1: (a) the stones in the top soil, (b) the outline of the grave after removing the top soil stones, (c) the level of the *lahad* stones (they are marked in red), (d) *lahad* gap (red line) under the *lahad* stones and position of the skeleton inside the grave, (e) A–B section of the grave, (f) C–D section of the grave (drawing by Sepide J. Yeganeh).

in (Khomeini 2013). The graves are filled with soil and the subsurface layer contains some flat stones above the skeleton. These stones are called *lahad* stones and they keep the skeleton tight inside the grave. *Lahad* in the Islamic funeral rite is the narrow gap at the bottom of the grave to place the body, and the *lahad* stones are placed above this gap completely covering the *lahad* gap. In the Islamic belief system, the dead do not believe in their death, and even after burying them, they try to stand up and go home, but as they move, their head crashes to the *lahad* stone above their head and then they realize they are dead (Khomeini 2013). The graves do not contain any



**Figure 4.** Skeletal pathologies in the individual from the grave 1: (a) vertebral spondylosis, (b) calcaneal bone spurs, (c) *ante mortem* tooth loss, (d) osteoporosis in vertebrae (photographs by Mahsa Najafi).

cultural materials, which is also consistent with the Islamic tradition. The bodies are placed on the right side, with no coffin.

In the Islamic tradition the head of a dead person should be directed to the west and they should face Mecca (Qibla), i.e., south-west in this part of Iran (Sistani 2018).

**Table 1.** Human remains from Sar-Ney 3. F\*\* – more likely female than male; CO – *cribra orbitalia*. Dental caries has been scored for the deciduous dentition.

Grave	Sex	Age-at-death	Dental caries	Pathological conditions
1	F**	old adult		osteoarthritis and osteoporosis
2	-	6 years old	1/2	bilateral CO (stage 2)
3	-	6 years old	0/4	bilateral CO (stage 2)
4	-	6 years old	0/11	bilateral CO (stage 2)

However, at Sar-Ney 3 the faces were directed to north, and heads to the east, which does not follow the expected orientation. Perhaps the nomadic people were not aware of the proper direction of Mecca.

The depth of the grave is the same as the average human stature or at least up to the shoulders to prevent animal access to the dead body. Following Islamic tradition there is just one skeleton per grave as it is forbidden to bury a person in the grave that was previously used. A “pillow” of soil was noted, that raises the head a bit up and makes its position fixed (Khomeini 2013).

The human remains excavated at Sar-Ney 3 were studied using standard protocols (Buikstra & Ubelaker 1994). They were roughly complete and relatively well preserved. Sex of the skeleton in Grave 1 was assessed based on pelvic and cranial traits. Age-at-death was estimated based on cranial suture closure, and pubic symphyseal and auricular surface changes. The individual suffered from osteoarthritis of the vertebrae and this diagnosis was based on features including ridge lipping around the vertebral bodies and porosity of the surface with extensive spicule formation (Figure 4a). Bone spurs in both calcanei are visible as well (Figure 4b). All the teeth of this individual were lost *ante mortem*, and all the tooth sockets are completely obliterated (Figure 4c). The individual was also found to exhibit signs of osteoporosis such as changes in cortical bone thickness that are visible in all lumbar vertebrae (Figure 4d).

Graves 2, 3 and 4 contained subadult skeletons of approximately 6 years of age. Their age-at-death was estimated using tooth development. Porosity in the orbital vaults (*cribra orbitalia*, CO) in these individuals was scored using the following scale: 0 (unobservable) 1 (no CO), 2 (porosity), 3 (real cribra). Stage 2 has been observed in all subadult individuals (Table 1).

Dental caries were observed in the individual from grave 2 and in the  $rm_2$  dental wear was extended below the cemento-enamel junction into the root. The right half of the mandible was present and the first and second molars were *in situ*. The individual from grave 3 had only the first and second upper molars present on both sides and the other teeth were missing *post mortem*. In the individual from grave 4 the maxillary teeth were missing *post mortem* on the left side, except the second molar, and the right alveolus was complete. The right half of the mandible including all the dentition was preserved whereas the left side is missing.

**Acknowledgments:** Special thanks to Arkadiusz Soltysiak from the Department of Bioarchaeology, Institute of Archaeology, University of Warsaw for his kind support and advice in writing this report. Many thanks to Zeinab Hadi Dastjerdi, student of archaeology at Tehran University, for her assistance in preparing the figures.

## References

- Buikstra J.A., Ubelaker D.H. (eds.) (1994), *Standards for data collection from human skeletal remains*, Fayetteville: Arkansas Archaeological Survey.
- Khomeini R.A. (2013), *Tahrir al-wasila* [Exegesis of the means of salvation], Tehran: Moasseseye Tanzim va Nashr-e Asar-e Emam Khomeini. [in Persian]
- Mirghaderi M.A., Saedian S., Hadi Z., Rezaei Baghbidi B. (2017), *Report on the archaeological survey in Sar-Ney dam and water system*, Tehran: Iranian Center for Archaeological Research. [in Persian]
- Sistani S.A. (2018), *Resaleh of tozih-al-masael* [Explanation of issues], Tehran: Qalam Azin-e Reza. [in Persian]