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Fulayj: a Sasanian to early Islamic fort in the Sohar hinterland

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Summary
Fulayj fort is located on the fertile al-Bāṭinah plain of Oman, 12 km inland from Ṣaḥam and 32 km south-east of the key urban centre and major medieval port of Sohar (Ṣuḥār). The chance discovery of the site by Nasser Al-Jahwari in 2012 provided an important breakthrough in our potential understanding of the late pre-Islamic and initial Islamic period occupation in Oman. Finds collected during the first survey of the site were inspected by Derek Kennet and identified as likely to be of late Sasanian or very early Islamic date. Following further recording in 2014, a broad, multidisciplinary archaeological investigation was launched in 2015. Two seasons were completed by a joint British-Omani team in 2015 and 2016. Following a break in operations, a third season of fieldwork was completed in 2022.[1] These investigations have confirmed the initial dating of the fort and substantially enhanced our understanding of all aspects of its planning, construction, history of occupation, internal organization, nature of use, etc. It is possible that Fulayj formed part of a wider defensive military cordon protecting the commercial and agricultural potential of the fertile coastal strip and urban centre of the Sohar hinterland. These wider aspects will be returned to again for further consideration below.

Keywords: Sasanian Empire, late antiquity, Islamic conquest, eastern Arabia, military frontier

Nature of the site

Fulayj fort occupies a low terrace at the end of an interfluve overlooking the broad braided course of the north-west–south-east-oriented Wādī al-Maḥmūn. It is located roughly halfway between the coast and the mountains (Fig. 1). The results of survey and excavation indicate that the occupation can be characterized in terms of four main phases of activity, three of which are widely separated chronologically (Al-Jahwari et al. 2018; Priestman 2019). This includes: Phase 1) the intensive and large-scale occupation of the area during the early Iron Age, both as a settlement and wider funerary landscape; Phase 2) the construction and use of a small, heavily defended, and relatively isolated fort between the fifth and mid-sixth centuries AD; Phase 3) reuse and continued occupation of the fort between the late sixth and late seventh or early eighth centuries; and Phase 4) a protracted sequence of abandonment in which the structure of the building gradually collapsed but its remains continued to be used on a limited and episodic basis as a place of temporary shelter over many centuries into the late Islamic period. The latest stages of activity may be connected with the growth of the nearby palm gardens and settlement of Falaj Al-Ḥārth and the remains of several open water channels and underground *falaj* (pl. *aflāj*) systems which skirt the surrounding area of the fort (Fig. 2).

The key focus of the investigation reported here concerns the activity in Phases 2 and 3 and to a lesser extent — though necessarily, due to the nature of the excavation sequence presented — the abandonment of the fort in Phase 4. The earlier occupation of the area in Phase 1 appears to have occurred perhaps up to a

[1] The third season of the British-Omani Fulayj Fort Project took place over a six-week period from 14 February to 27 March 2022. The project was co-directed by Dr Seth Priestman (Durham University), Prof. Nasser Al-Jahwari (Sultan Qaboos University), Dr Eve MacDonald (Cardiff University), and Dr Derek Kennet (Durham University). The first two seasons of the project in 2015 and 2016 were supported by the European Research Council Persia and its Neighbours Project. Financial support for 2022 was provided by research grants from the Anglo-Omani Society and the Society of Antiquaries Beatrice De Cardi Award. In addition to the co-directors, the fieldwork team included the authors above with further assistance from Mohammed Nural Islam, Mohammed Kamal Mohammed Mustofa, and Redoan Hossein.

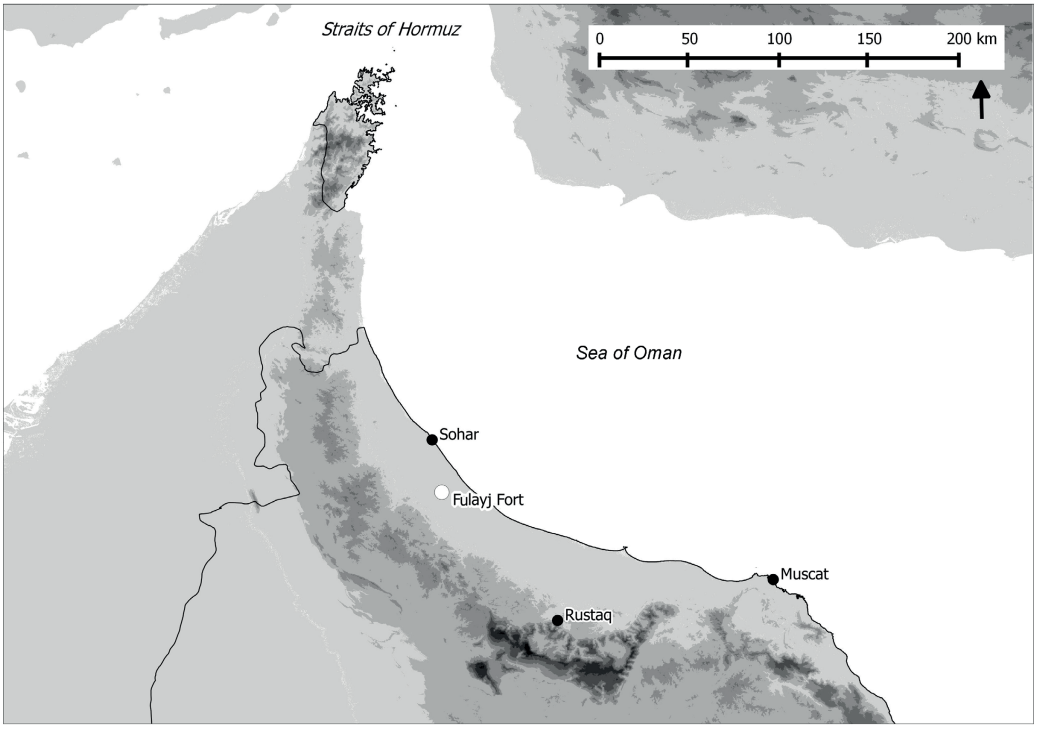

Figure 1. *The location of the fort at Fulayj near Saham on the Batinah plain of Oman, c.30 km to the south-east of the major medieval port of Sohar (illustration by Kristen Hopper).*

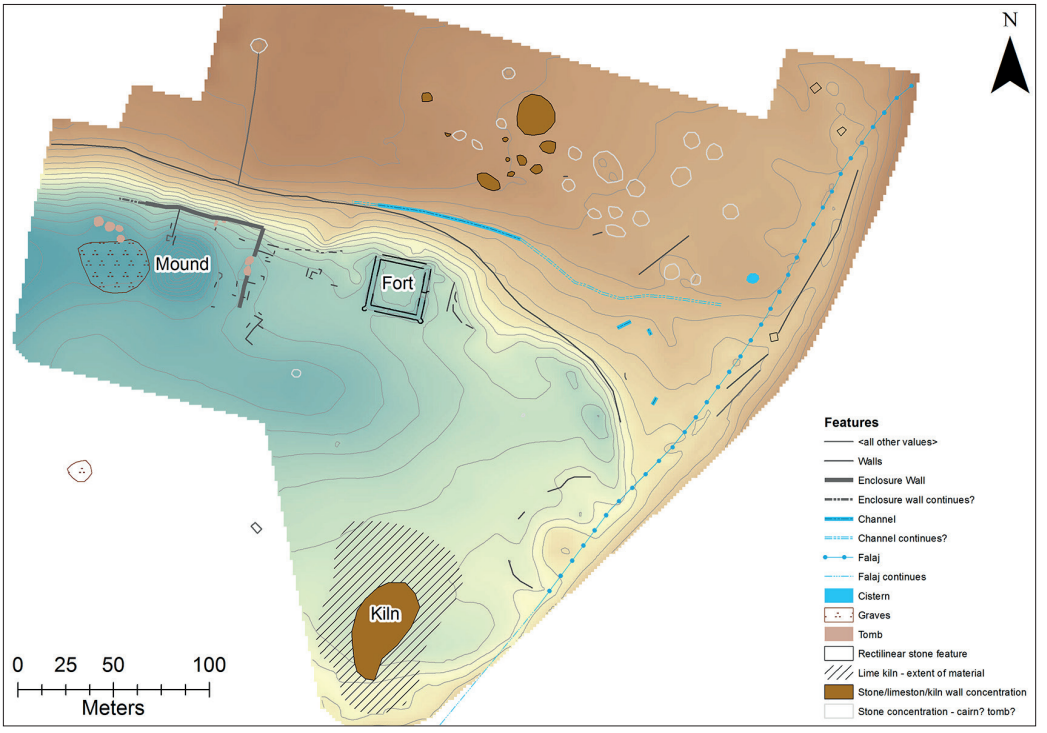

Figure 2. *The location of Fulayj fort, the lime kilns to the south, and the surrounding water channels,* falaj, *and other archaeological features (illustration by Kristen Hopper).*

Figure 3. *Fulayj fort: an oblique aerial view looking across the structure to the north-east (photograph by Davit Naskidashvili).*

millennium earlier than the reuse of the area in Phase 2. One can reasonably assume that there is no significant cultural connection between these different episodes of human activity. Therefore, other than the general documentation of residual Iron Age period finds or testing of certain portions of the stratigraphic sequence where required, no attempt has been made actively to investigate the Phase 1 activity across the site.

The fort constructed in Phase 2 consists of a regularly planned, square stone building with external sides measuring almost exactly 30 x 30 m with projecting U-shaped corner towers and slightly offset flanking towers protecting a single narrow entrance facing to the east (Fig. 3). The building was carefully and expertly constructed with flat-faced blocks of locally obtained limestone and rounded basalt, with tightly arranged packing layers of smaller stones bound together and further reinforced with locally prepared lime mortar or *sarūj*. The walls are thick, extending to a width of *c*.2.6 m and are preserved to a conspicuously even height across the structure. This, combined with the relatively limited quantity of collapsed masonry on the surface, supports a hypothesis that the thick stone walls provided a foundation for a more substantial mud-brick superstructure. This interpretation seems to be further supported by the presence of decayed mud-brick material that collapsed, we presume, from the fort walls encountered within the most recent excavations. Located 160 m to the south of the fort is a low, fire-reddened mound measuring *c*.40 m across covered with vitrified kiln wall material (see Fig. 2). This material, together with the preserved base of a kiln floor and accumulations of burnt lime, indicates that the area contained several industrial installations (lime kilns) used in the preparation of lime mortar. Ceramic evidence and the results of a test excavation clearly link the lime kilns chronologically to the occupation of the fort, making this, as far as we are aware, the earliest known *sarūj* production site in Oman.

Detailed single context recording, individual 3D location of finds, full sieving, and soil flotation sampling have been undertaken across a series of limited area excavations carried out in 2015 and 2016. This includes areas surrounding the fort entranceway, various sectors of the interior, a slot against the fort exterior, and the south-western corner tower. The areas of exposure indicate that there are no internal structures or solid floor levels associated with the initial occupation of the fort in Phase 2. The thin, poorly defined primary occupation horizon suggests that the use of the fort may have been either relatively short-lived or not of a significant domestic nature. A secondary phase of activity was detected in several areas of the excavations (Phase 3). This was first noted in 2015 as an ephemeral hearth deposit overlying the initial occupation against the base of the wall in the south-west corner. In 2016 other, more substantial traces of Phase 3 activity were encountered, including secondary modifications to the stone structure of the fort entranceway and most significantly, the insertion of a perpendicular mud-brick wall abutting the original fort wall in the north-east interior providing what appears to be an internal room division. The mud-brick wall was itself cut by a large, deeply excavated oven or *tannūr* (pl. *tanānir*) constructed from slabs of stone and tile, indicating different stages to the later building activity.

Excavations in 2022

The key aim of the fieldwork season undertaken in 2022 was to expand the investigation of the area in the north-east corner of the fort where secondary Phase 3 mud-brick architecture had been identified in a small area in 2016. To pursue this aim, the original excavation (Trench F) covering 2 x 4 m, was expanded to a single larger block of 6 x 7 m (Trench F2), encompassing the whole area of the previous trench and the whole north-east corner of the fort. In addition, a further area measuring 3 x 6 m was opened to the west (Trench P), separated by a 1 m baulk (Fig. 4). As well as providing a better understanding of the structural elements found in the 2016 season, the work in Trenches F2 and P was intended to reveal more about potential phases of occupation and duration of use of the fort in the Sasanian period (Phase 2), as well as information on the critical interface between Phases 2 and 3. These could potentially reveal whether the fort was either continuously occupied from the point of its late pre-Islamic construction into the early Islamic period or there was a break in use before the structure was reused and modified in Phase 3. The same retrieval methodologies were deployed in 2022.

Results of the excavation in Trench F2 indicate — significantly — that there is a discernible build-up of occupation remains associated with the Phase 2 occupation even prior to the construction of the fort. This could perhaps be explained by the prolonged presence of those involved in the construction activity although intuitively, it would be surprising if a work camp had been erected directly within the construction area. Alternatively, it is possible that a less substantial structural precursor existed in the location of the fort and that this was later replaced by the solid stone architecture. Given these considerations, Phase 2 can thus be divided into three sub-phases, which comprise a relatively thin horizon of occupation that pre-dates the construction of the fort (Phase 2a), the fort construction event itself, including the digging and filling of a shallow wall foundation trench (Phase 2b), and ephemeral traces of occupation following the fort construction (Phase 2c). Surprisingly, the latter remain some of the hardest to identify securely within the excavation sequence. In addition, excavation in Trench F2 revealed further information related to the secondary occupation in Phase 3, including the full thickness of the previously partially revealed north–south-oriented mud-brick wall at *c.*66 cm and its continuation over the full 6 m span of the trench into the southern baulk leading towards the fort entranceway (Fig. 4). A second perpendicular east–west return wall reveals a complete room within the north-east corner of the fort with a compact floor surface and a large stone ringed post pad, presumably for a central roof support (Fig. 5). To the west, in Trench P, partially preserved remains of a poorly built stone structure from the same phase continue into the western baulk. Together these remains contribute to an emerging picture showing that the later use and transformation of the fort interior involved different modes of construction and was relatively extensive. The use of internal room divisions and structures such as a large domestic oven, contrasting with the open empty fort interior in Phase 2, may point to an important change in status and function of the fort during the early decades following the initial Islamic conversion in Oman.

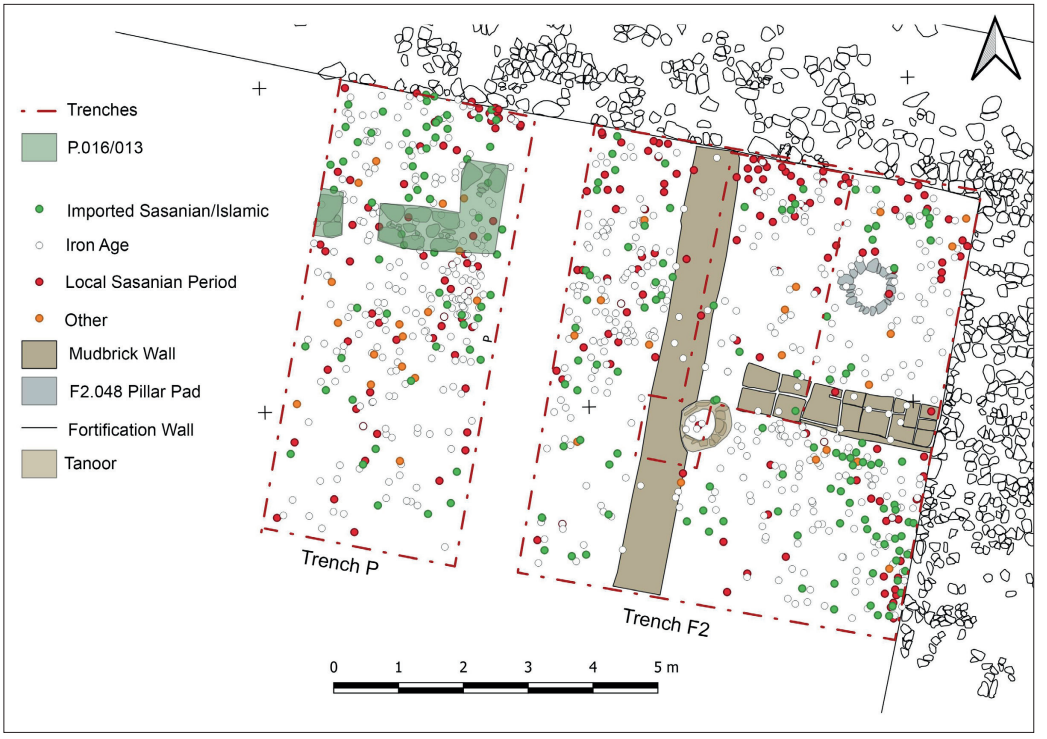

Figure 4. *Excavation of Trenches F2 and P completed in the north-east corner of the fort in 2022, showing the newly revealed mud-brick and stone architecture and the distribution of ceramic finds.*

Figure 5. *Trench F2 in the north-east corner of the fort showing the mud-brick architecture associated with Phase 3.*

Pottery finds

In total the excavations of Trenches F2 and P yielded 2037 sherds. These derive from a combination of pottery fragments recovered *in situ* given three-dimensional location coordinates, and those recovered as bulk finds among the sieved material. The sieving of all deposits across the excavation through 3 mm mesh ensures the complete recovery of ceramics and the full recording of fragments down to very small sub-1 g weight-range sizes. Only a limited quantity and variety of ceramics have been identified associated with the Sasanian to early Islamic occupation (483 sherds; Fig. 6). The vast majority of the ceramics from almost every context belongs to the earlier Iron Age occupation (74%). In addition, there remain relatively low quantities of ceramics that cannot be identified (N-ID.CW = 1.8%) and just two sherds from Trench P related to the late Islamic occupation (Late Islamic Cream Incised = LICI). The frequency of Iron Age period ceramics indicates both the extent and concentration of earlier activity on the site, and the scale of residuality as a major factor in the site formation process. There is also a strong possibility that Iron Age ceramics were introduced into the Phases 2–4 sequence via their inclusions in mud-brick materials and the subsequent erosion of these architectural elements.

Most of the ceramics directly associated with the occupation of the fort cannot be dated with sufficient precision to determine whether they belong to either the initial late Sasanian (Phase 2) or early Islamic (Phase 3) horizons of activity (Fig. 7). This applies to the main categories of imports including hard lime spalled vessels — mostly jars (= small grey vessels: SMAG); closely associated large-incised storage vessels (= LISV); sandy bitumen lined transport container vessels (= sandy torpedo jars: TORP-S); turquoise alkaline glazed wares (= TURQ.T), which include a mixture of jars and bowls; and a few examples of possible Indian cooking pots (= INCOP). The only significant, more closely datable group identified during the 2022 season, comprises examples of yellow-green alkaline glazed wares (= TURQ.YG). These include two examples (F2.053/FN577 and P.007/FN188) of relatively large (28 cm and 30 cm in diameter) closed bowls with troughed rim forms, broadly related to Type 64 as defined in the assemblage from Kūsh (Kennet 2004: 37). The presence of this type in Periods I and II at Kūsh, and its absence, for example, from the *c.* mid-seventh- and eighth-century occupation of Ṣīr Banī Yās (Carter 2008) and Area D at Jazīrat al-Hulayla (Sasaki & Sasaki 1996; 1998; 2000), suggest a dating of this type between the fifth and sixth or possibly early seventh centuries. This type is also heavily

Class	Name	Trench F2		Trench P	
		ENV	Wgt (g)	ENV	Wgt (g)
Iron Age	Mixed Iron Age	1026	48645.4	490	13305.4
COB	Coarse buff ware (cylinders)	167	8323.5	88	4646.8
SMAG	Small grey vessels	98	2772.6	42	997.9
TORP-S	Sandy torpedo jars	35	2050.9	17	698.5
N-ID.CW	Non-identified coarse ware	19	826.4	18	547.0
TURQ.T	Turquoise alkaline glazed	9	63.7	11	59.9
TURQ.YG	Yellow-green alkaline glazed	5	58.9	1	44.3
LISV	Large incised storage vessels	4	197.3	4	608.2
INCOP	Indian cooking pots	1	37.2	0	0.0
LICI	Late Islamic cream incised	0	0.0	2	86.1
Total		*1364*	*62975.9*	*673*	*20994.1*

Figure 6. *Ceramic finds from Trenches F2 and P showing the maximum estimated number of vessels (ENV) and aggregate weight per class.*

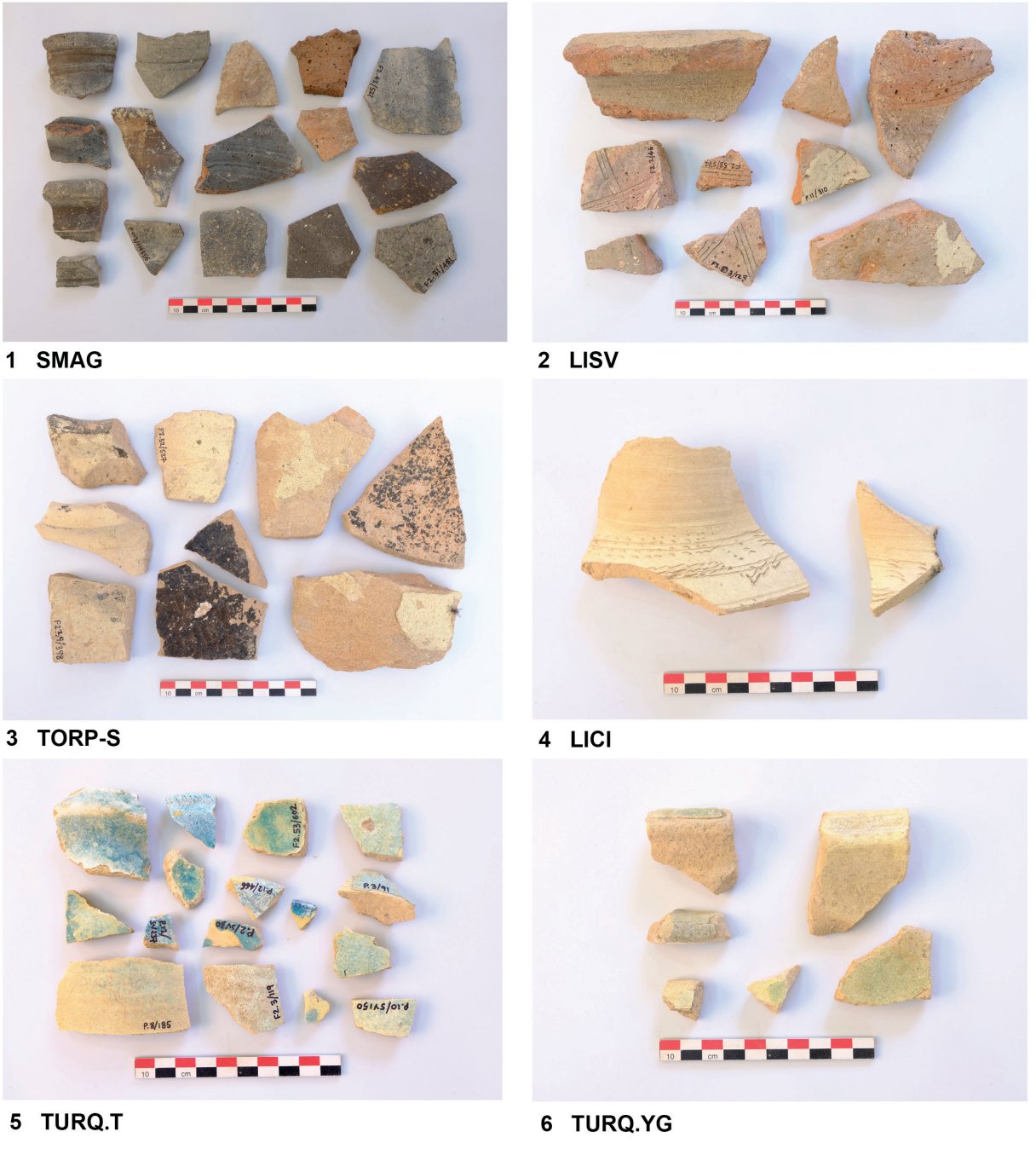

Figure 7. *Typical examples of main ceramic imports represented within the excavations of Trenches F2 and P related to the occupation of the fort and later activity.*

Material	PHASE								Total Weight (g)
	1	2a	2b	2c	3	4a	4b	US	
Pottery	305.7	2296.0	1452.7	907.3	1765.6	41555.5	16267.1	925.7	65475.6
Animal bone	109.7	2808.2	52.8	60.9	151.9	520.3	102.5		3806.3
Soil sample	115.4	477.4	93.5	125.6	310.4	335.4	1080.1		2537.8
Lime mortar	1.2	9.9	3.9	8.2	14.1	892.8	1089.5		2019.6
Ceramic		119.7	72.2	25.0	108.7	913.0	673.7		1912.3
Snail shell	3.0	16.3	2.4	3.5	23.4	306.9	988.8		1344.3
Shell	28.1	313.2	44.7	33.0	80.9	162.8	311.3		974.0
Stone object		343.3			17.2	598.6			959.1
Charcoal	2.5	21.4	1.7	12.2	13.1	174.8	340.1		565.8
Glass vessel	1.0	57.4	2.2	7.7	16.4	11.4	14.5	4.6	115.2
Finger ring				22.0	0.7				22.7
Iron			4.3		1.7	6.8			12.8
Chipped stone				0.5			11.8		12.3
Copper alloy						0.4	1.6		2.0
Bead		0.0		0.0	0.0			0.4	0.4
Total	*566.6*	*6462.8*	*1730.4*	*1205.9*	*2504.1*	*45478.7*	*20881.0*	*930.7*	*79760.2*
Phase vol. litres	*1005*	*1475*	*350*	*330*	*1150*	*8308*	*15483*		*28101*

Figure 8. *A summary of the small finds, bulk finds, and environmental evidence from Trench F2 recorded by weight (in grams) and by phase.*

concentrated across the surface of the extensive later Sasanian port city at Būshehr, where it provides a key type-fossil for the dating of the settlement at its largest extent before the city's early Islamic collapse (Priestman 2021, i: 95; 2021, ii: 90, figs 22–23; 2022: 171).

Other finds

The complete sieving of excavated deposits from the first topsoil to the earliest levels reached produced low concentrations of other types of finds and environmental evidence (Fig. 8). The latter includes collections of animal bones, marine and terrestrial invertebrates, and carbonized plant remains as well as background scatters of manufactured materials such as fragments of lime mortar and fired clay. Artefactual evidence includes a small number of beads, part of a polished stone finger ring, copper alloy and iron objects, and glass vessel fragments. A few diagnostic glass vessels were identified including part of a trefoil mouthed jug and a facetted bowl.

Archaeobotanical analyses

Archaeobotanical analyses focusing on the historical archaeology of eastern Arabia remain generally limited. The first seasons of fieldwork at Fulayj in 2015 and 2016 provided the opportunity to obtain unique information on food and fuel procurement strategies for these less well-documented periods within the region (Dabrowski et al. 2021a). Comparable datasets are also available from Mleiha (Mulayḥah) (Dabrowski et al. 2021b) and Kūsh (Dabrowski et al., forthcoming; Tengberg, Dabrowski & Kennet, forthcoming) in the United Arab Emirates and Qalhāt in Oman (Dabrowski et al. 2015; 2018). The archaeobotanical analysis undertaken on the assemblage from Fulayj indicates that local agricultural activities included the use of date-palm gardens alongside cereal cultivation (hulled barley, free-threshing wheat), and fruit trees (jujube trees). They suggested that the catchment areas for fuel ranged from the local site surroundings, where date-palm by-products could be obtained, to the foothills and lower

Figure 9. *The flotation machine built at Fulayj. The water is recycled and recirculated via a domestic pump (left). The sediment is poured into the main barrel and the carbonized macro-botanical remains are gathered in a fine mesh (right) before being air dried (bottom).*

altitudes of the nearby mountains. The analysis also highlighted the earliest evidence of the use of sorghum (*Sorghum bicolor* sp. *bicolor*) in eastern Arabia. This has been securely identified and directly dated via micro-AMS, enabling a reconstruction of the diffusion of this tropical crop within the Middle East and the western Indian Ocean, probably originating in India (Dabrowski et al. 2021a: 8). Excavation in 2022 enabled us substantially to enlarge the sample of archaeobotanical remains through the use of a bulk soil flotation system (Fig. 9). In total seventy-nine sediment samples were processed in 2022 corresponding to 1772 litres from Trench F2 (60 samples = 1293 litres) and Trench P (19 samples = 479 litres). These samples range from less than 1 litre to a maximum of 40 litres per context.

Dating and interpretation

The absolute dating of the occupation sequence from Fulayj securely ties the different stages of archaeological development to certain major historical events (Fig. 10). Six separate and dependable high-precision AMS dates from different areas of the site indicate, with a high degree of confidence, that it was built sometime between AD 417 and 561. This includes samples from the fort wall foundation cut, the deposit the cut was made into, and the first occupation deposit formed on top of the cut. In addition, one sample was obtained from the test excavation of the lime kiln area to the south (C.001/SN3). This is particularly important as the operation of the lime kilns is likely to have been exclusively connected with the construction of the fort. The date range in each case appears strikingly similar. Unfortunately, the standard deviations on the dates cannot be expected to be narrowed much further, due to the flat calibration for this period. However, one date is potentially of particular importance. This comes from below the elevation of the fort wall and appears to be from the deposit into which the fort wall foundation was cut (A021/SN45).[2] The *terminus post quem* from this sample is AD 440 at 2σ or AD 478 at 92.3% confidence. This falls within the range of all the other accepted Phase 2 samples, but given its stratigraphic position, it could indicate a slightly narrower date for the fort construction between the mid- or late fifth and mid-sixth centuries.

A further four samples from Phase 2 should be disregarded. Two were obtained from Melanoides (snail shells: A.018/SN33, A.019/SN46), which provide dates within the third millennium BC. It appears that the

[2] There remains some slight doubt surrounding this stratigraphic interpretation because the context was recorded within the relatively small area of exposure at the base of a 1 x 4 m slot opened as Trench A during the first season in 2015.

Lab No.	Context	Find No	Phase	Age C14 BP	IntCal20	Notes	Sample
Beta-414254	A.009	SV36	4	81 ± 20	1694–1917 AD	Deposit sealing the burning layer (A.014)	Unidentified round wood
Beta-414253	A.007	SN5	4	297 ± 22	1508–1654 AD	Deposit at east end of trench high up within the sequence	Dicot heart wood, tyloses present
Beta-412646	B.004	SN5	4	284 ± 20	1520–1659 AD	Sloping deposit high up within the sequence	*Ficus* round wood with outer cortex
MUSE-20021	E.024	SN3	3	1175 ± 20	772–950 AD	Below (E.017) and immediately above the parallel wall footing alignment {E.016}, south of the southern entrance flanking tower	*Sorghum bicolor* sp. *bicolor* grain
Poz-89868	F.026	FN153	3	1295 ± 23	664–774 AD	Upper fill of the oven inserted into one of the internal rooms	*Prosopis* sp. twig
Poz-89865	E.024	FN246	3	1306 ± 22	660–775 AD	Below (E.017) and immediately above the parallel wall footing alignment {E.016}, south of the southern entrance flanking tower	*Tamarix* sp. twig
Poz-89927	F.045	SN22	3	1346 ± 30	643–775 AD	Occupation deposit that formed immediately following the insertion of the mud-brick architecture	*Tamarix* sp.
Beta-412641	A.014	SN19	3	1370 ± 23	608–758 AD	Thin burning deposit against the fort wall above the foundation cut	*Chamaerops* young axis
Poz-89926	F.036	SN20	3	1405 ± 28	601–664 AD	Fill of the large post hole within the mud-brick room	*Tamarix* sp.
Beta-412642	A.016	SN24	3	1434 ± 21	596–652 AD	Deposit resting against the fort wall above the foundation cut	*Chamaerops* petiole
Poz-89928	F.049	FN174	3	1495 ± 29	542–641 AD	Context abutting the fort wall but running under the mud-brick wall and thus crucial for dating the phase of activity that post-dates the construction of the fort but pre-dates to insertion of the mud-brick architecture	*Tamarix* sp.
Poz-89929	G.015	FN215	2	1375 ± 29	604–759 AD	*In situ* burning into which the fort wall foundation cut was made [stratigraphic interpretation must be wrong]	*Tamarix* sp.
Beta-414257	A.021	SN45	2	1530 ± 20	440–599 AD	Deeply stratified deposit below the elevation of the fort wall foundation cut	*Prosopis*
Beta-414259	B.009	SN25	2	1568 ± 22	431–560 AD	Fill of foundation cut for the fort wall	Unidentified dicot poorly preserved
Beta-414258	B.007	SN17	2	1573 ± 20	430–551 AD	First occupation deposit formed on top of the foundation cut fill	*Prosopis* fungal hyphae
Beta-412651	C.001	SN3	2	1565 ± 21	432–561 AD	Lime kiln deposit south of fort	*? Prosopis* twig with pith
Beta-414255	A.017	SV64	2	1585 ± 30	419–550 AD	Occupation deposit into which the fort wall foundation cut was made	*Prosopis* heart wood tyloses present
Poz-89866	E.027	FN309	2	1607 ± 22	417–538 AD	Stratigraphically sealed context that formed after the fort was constructed but before the insertion of the entranceway addition (E.012)	*Tamarix* sp. twig
Poz-89930	G.016	FN243	2	2422 ± 33	750–402 BC	Lower fill of fort wall foundation cut	Angiospermae (not *Prosopis*)
Beta-414069	A.018	SN33	2	3980 ± 29	2576–2395 BC	Early fort occupation layer, appears to be residual	Snail shell
Beta-414256	A.019	SN46	2	4192 ± 24	2889–2674 BC	Early fort occupation layer, appears to be residual	Snail shell

Lab No.	Context	Find No	Phase	Age C14 BP	IntCal20	Notes	Sample
Poz-89931	N.005	FN59	1	2403 ± 30	734–398 BC	Deposit abutting the transverse wall	*Ziziphus* sp.
Poz-89924	E.034	FN326	1	2454 ± 33	756–413 BC	*In situ* hearth immediately to the east of the fort entrance	*Ziziphus* sp.
Poz-89923	E.032	FN321	1	2471 ± 34	767–421 BC	Localized deposit sealed under (E.028), which is below (E.027) within the entranceway	Angiospermae (not *Prosopis*)
Poz-89869	G.014	SN8	1	2859 ± 24	1116–931 BC	*In situ* hearth sitting directly on top of {G.020}	*Tamarix* sp.
Beta-414260	B.011	SV54	1	3221 ± 21	1518–1436 BC	Stony deposit in sounding below the fort occupation	*Ziziphus/Paliurus*

Figure 10. *A complete list of AMS samples obtained from across the project in 2015 and 2016. Calibrated using OxCal 4.4 at 95.4% probability using the IntCal20 atmospheric curve (Reimer et al. 2020).*

snail shells themselves are ancient and form part of the background soil horizon. Two samples from Trench G appear to be problematic and may suggest a misreading of the associated stratigraphy. One sample, interpreted as being from the fort wall foundation cut fill (G.016/FN243), provides a date within the first millennium BC. It is possible the sample was residual, although the material itself has been confirmed as being short-lived. Alternatively, it may come from the deposit the cut was made into (i.e. Phase 1). A second sample from the deposit the foundation was cut into (G015/FN215) is dated to the seventh century AD. This appears implausibly late given the greater weight of other available dating evidence; the reason for this intrusive sample remains unclear.

While we can confirm the construction of the fort in the late pre-Islamic period, the reoccupation of the fort clearly occurred in the period that followed. This is confirmed again by samples from multiple areas across the site. Here the steepening of the calibration curve allows for a closer dating of the sequence. The series of dates from the north-east corner of the fort, connected with the mud-brick architecture, is particularly informative. A sample obtained from the deposit abutting the fort wall but sealed below the mud-brick wall (F.049/FN174), indicates that the latter was built after the mid-sixth century (*tpq* AD 542). Within the subsequent construction associated with the room inside the mud-brick wall, a sample from a large post hole (F.036/SN20), probably providing a roof support, can be dated within the first three-quarters of the seventh century. This ties in with similar seventh-century dating from within the same room (F.045/SN22) and from the opposite side of the fort from a fire lit at the base of the fort wall overlying the earlier occupation in Trench A (A.016/SN24). Finally, the construction of a large oven (F.026/FN153), cutting into the mud-brick wall in Trench F, and probably built after the room was initially abandoned, again indicates that the occupation below should be dated within the first three-quarters of the seventh century (*taq* AD 664).

Conclusion

The six-week excavation season completed in February–March 2022 produced significant new information that enriches our understanding of Fulayj and advances our general aims concerning the investigation of the site. A number of broad outlines concerning the main history of the fort had been established in the first two seasons of excavation in 2015 and 2016 (Al-Jahwari et al. 2018; Priestman 2019), but key aspects of the evidence required validation and refinement. Secondary occupation, detected in the form of the inner face of a perpendicular mud-brick wall abutting the stone fort wall, was uncovered within a 2 x 4 m sondage opened in 2016. This area has now been exposed over a 7 x 9 m area, within which were revealed the wall's full thickness, a complete room with a return wall in the north-east corner of the fort, the continuation of another internal room division to the south, and stone architecture to the west. Furthermore and importantly, it has been possible to identify a relatively substantial and rich occupation containing typical late Sasanian period finds that pre-dates the construction of the fort. It is possible that

a more ephemeral defensive structure was erected in an earlier phase.

The key observation that can be made in connection with the fort is that it was clearly a well-planned military structure that stands outside local architectural norms, in terms of both its construction methods and plan. The limited amount of surface material associated with the site suggests a building that was not intensively occupied or one that was not occupied for a long period. The working hypothesis is that this is a late Sasanian fort built according to a common late antique architectural style represented by projecting U-shaped corner and entrance flanking towers (Sauer, Nokandeh & Omrani Rekavandi 2022: 751, fig. 7.25, nn. 23, 32). As such, it provides important evidence of a period of potential direct Sasanian military rule on the al-Bāṭinah plain in Oman — possibly during the reign of Khusraw I or earlier — as suggested by the early Islamic historical tradition as well as texts such as Shapur I's Naqsh e-Rustam inscription (Tabari 1.985–986 = Bosworth 1999: 291–292; § 3 = Huyse 1999, i: 23–24; 1999, ii: 38; Kennet 2007: 88). Fulayj represents the first securely dated site with Sasanian period occupation in Oman and the first anywhere facing onto the Indian Ocean.

The fort continued to be occupied in the decades surrounding the first arrival of Islam in Oman — the time of the Julandā kings. A rare literary source compiled in Oman around the mid-tenth century normally attributed to al-ʿAwtabi, describes the situation at least three centuries earlier (Munt 2017: 266–267). It refers to a treaty in which the coastal portions of the al-Bāṭinah were controlled and, to some extent, populated by a Persian population, while the interior mountains and deserts were left to the local Arab tribal population which governed as clients of the Sasanian state through the office of the Julundā. It is possible that while the mutual benefits of this arrangement helped maintain the status quo for several centuries, the foreign presence may have fostered growing local resentment. As we know from subsequent events, the balance of power in the region shifted decisively after the 630s with the spread of Islam and the emergence of a unified Islamic polity following the Ridda Wars (Kennedy 2007). The successful conversion of the Azd tribes was a particularly important and decisive event, bringing onside one of the most powerful factions within the region. Within a short time, the Julundā kings, galvanized by this new religious and political mission, turned on their former overlords and expelled the Persians from Oman via the port of Sohar.

The radiocarbon-dating evidence associated with the Phase 3 reoccupation of Fulayj indicates that the fort continued to be occupied at the precise moment of the spread of Islam in Oman, and that further structural modification continued to be made within the fort through the mid-decades of the seventh century. The insertion of new room divisions within the fort, and particularly the construction of a large domestic oven, perhaps also signal significant changes in the structural use of the space and general function of the site within this crucial transition period.

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