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# LIST OF REPORTS.

Assistant Secretary to (	Government	for Gozo				•••	A
Treasury							В
Customs and Port Dep	artment						C
Railway							D
Museum							E
Registry of His Majest	cy's Superior	Courts					F
Registry of Courts of J	udicial Polic	e					F
Public Registry							G
Police							H
Chief Government Med	lical Officer	and Superir	ntendent of	Public Healt	h		1
Corradino Prison							K
Charitable Institutions				•••			L
University							M
Lyceum and Secondary	Schools						M
Elementary Schools						:	M2
Post Office							N
Agriculture				•••			0
Public Works					***		P
Water Works and Elec	tric Lighting	g					Q
Emigration							R
Libraries							S

THE MUSEUM, Valletta, 5th August, 1920.

#### THE TARXIEN TEMPLES.

The excavation of the Tarxien megalithic ruins continued during the years 1918 and 1919 and was brought to an end in September of the latter year.

The ruins discovered in 1915 and 1916 were reported upon in Archæologia (vols. LXVII and LXVIII 1916 and 1917). Those reports give an account of the clearing of two megalithic sanctuaries extending in a S.W.-N.E. direction for about 150 feet with an average width of 80 feet. The present facade and the outer court represent the front of the latest sanctuary which extends to about 80 feet in length with the main axis pointing S.S.W.-N.E. The second temple which is the earlier of the two, has an axis about 80 feet in length with a direction W.S.W-E.N.E. making with the axis of the later building an angle of 30 degrees.

The excavations during 1918 brought to light a third sanctuary, at the N.E. end of the nothern building, which is quite independent of the same.

The third building is made of roughly-hewn stone blocks and slabs larger in size than any used in the other sanctuaries. It consists of two sets of double, symmetrical, semicircular apses with a straight passage between them ending in a square space.

The apses on the right side (East) are but little damaged for a height of about 7 feet, those on the left, however, were rearranged when the second building came to be raised.

The first apse on the left must have been pulled down and rebuilt in order to accommodate a flight of steps that led to the top of the building, the second one was reduced in size to allow the building of the innermost apse of the second temple.

The central passage ends in a square space with a wall in front made of three large, roughly hewn, slabs on end, at right angles with the walls at the sides.

This is an exceptional arrangement, as rectangular spaces are rarely met with in the Maltese neolithic buildings. This rectangular room is limited on the right by a large upright block, mutilated in later days, that rests on the ground rock.

The block which formed the left wall of the room is wanting but its place is clearly indicated by the raised rock surface which marks the outline of its base.

What remains of this early building is easily described. The entrance is marked by a high sill-stone beyond which a flat slab is layed on the floor. Of the two pillars at the entrance, the left one is wanting but the cleared area on the floor shows where it originally stood. To the right of the doorway is a recess made of three large blocks and, further on, a semicircular room, of about 200 square feet, of which the walls consist of seven large slabs on end resting on the rock surface which is carefully trimmed to receive them. The slabs, 2 feet thick, are roughly squared, though so nicely cut at the sides that they fit to perfection at their line of contact. Their surface is not smooth but hammer-dressed showing deep concoidal fractures. These slabs, about 7 feet high, had originally a course of ashlar masonry laid on top. This course has disappeared but the remains of one of the stones, 2 ft. 4 ins. high, was found and preserved in situ.

A huge monolith limits this apse to the northeast, and a smaller one to the left is the right pillar of the entrance and limits the second apse.

This apse is made of seven slabs on end which fit into each other with great accuracy. Though no masonry was found lying on the slabs it is probable that the room was domed over.

One of the slabs in this room (the fourth one from the left) is pierced by two holes 4 ins in diameter, at a height of about 2 feet from the floor. The object of these holes is not evident.

Another very important feature is to be observed in this room. A small window-like opening is cut at the junction of the second and third slab from the left, at a height of 2 ft. 5 ins. from the floor. This opening, originally neatly cut and rabbeted, is now broken at the base so that the space beyond the slabs is no longer concealed from view.

This window opened at the back on a small quadrangular room which when roofed over made an excellent recess for the instalment of an oracle. A proof that this oracular room was once covered over we have in the fact that the two slabs in which the window is cut are shorter by about 1½ ft. than the other slabs of the apse. A gap 12 ft. long was thus left at the top and this was filled up by the ends of the flat slabs which, laid at right angles to the wall, roofed the space behind.

One of the slabs in which the window is cut is cleverly pierced by a hole which opens at the base of the slab. A small object dropped in this hole found its way in the outer apse. Thus beside the voice that came out of the window, a concealed communication existed between the oracular room and the apse of the sanctuary.

The floor of this sanctuary is made of beaten limestone dust (torba) but the main passage which is 5 ft. wide is paved with a fine square stone slab. In the uprights used in this third sanctuary a peculiarity is observed which is not often met with in our megalithic ruins. At the base of the stone uprights, both slabs and pillars, an arched hollow is cut which probably served for the insertion of a pole by which the stone was levered up or moved about. The larger stones of Hagiar Kim are also hollowed out at the base in the same manner. Some of the cavities at Tarxien were carefully filled up with stone plugs so as to render them invisible.

This hollowed base of uprights can well be taken as a sign of antiquity, for in the better cut stones of later buildings this concavity is never observed. It is probable that the early masons used the lever to place the large stones in situ, but that later generations found out how to handle the large blocks without levering them up or at least without cutting a notch at their base to do so.

Of the front of this third temple barely a trace remains. This rearing of the building to the west of it has necessitated the removal of the boundary wall but a more thorough and extensive destruction of material must have taken place at a later date. Judging from the remains of stone works and of potsherds, found in abundance, the destruction of this site must have taken place in the late Punic or Roman period of our history. In front of the building the bed rock was uncovered and levelled, a catchment basin for rain water was made, and a trench about 11 ft. deep and 2 ft. wide, covered by 18 slabs, led the rain water to a bell-shaped tank 14 ft. deep to the southeast. The cistern is rendered with water proof mortar and is still in use by the farmer of the neighbouring fields.

In this rectangular space which has an area of about 250 sq.ft., square pillars were made to stand for the purpose of roofing over the space with large slabs.

The southern side of this space consists of a roughly hewn stone pillar 15 ft. in length which is not laid on the rock but rests on soil and debris. Very probably, this was a standing pillar which served the purpose of a landmark and of a guide to the worshippers. In more utilitarian days the pillar was pitched down and used for the western boundary of the projected cistern.

Between this fallen pillar and the southern front of the ruins a series of blocks are strewn about without any apparent order. Some of these blocks are of enormous size, and although large pieces were cut and removed in later days some of the fragments still measure 15ft. in length.

If is probable that these blocks once stood on end and formed the eastern boundary of the sanctuaries, as, between these blocks and the walls of the buildings there is only a thick packing of stones and earth to brace firmly the slabs of the apses. To the east of these stray blocks the rock is laid bare and no trace of buildings exists.

Over these remains 7 ft. of soil have gradually been heaped up in the course of centuries. For about two feet from the ground this soil is gray, light and homogeneous as if made of ashes and soil washed down by the rain and deposited as silt. About 3 ft. above this layer, ordinary red soil is laid mixed with stones and fragments of pottery; an other layer of field soil, about 2 ft. thick, was finally laid in later days, and this contains stones and fragments of later pottery and other rubbish brought in with the sweepings of roads and the house-refuse contained in manure.

This gives an idea of how the fields came to be made and how these ruins finally disappeared under the soil brought by natural agencies or laid by the husbandman.

To the east of the space cleared out in front of the earliest building just described, the ground rises somewhat rapidly towards the fields on the hill top. In the thickness of the soil in front of the eastern building the people who made the fields built a barrel-shaped kiln in which, probably, charcoal was burnt. The walls are made of small stones and not of bricks and there are signs of moderate firing. No lime was found at the bottom but many lumps of charcoal were met with. The sherds collected on the spot were of a late Roman type showing that the kiln built in the soil that covered the ruins, is of a late date.

Beyond the kiln, blocks of stone laid to buttress the walls of the sanctuary, jut out all along the back of the apses. Although several blocks were removed from their original positions, and of others only fragments remain, it is easy to make out the outline of a series of small rooms which ended in the long oracular room. To the east of these rooms remains of extensive buildings are to be found in a very poor state of preservation.

The reason of this dilapidation is not difficult to understand. These buildings stood on the top of the hill so that when the ruins were turned into an arable field the standing stones were broken down to the ground. The uprights further down to the hill had only their top broken off before the space between them was filled up with stones chippings and the soil laid to the surface.

Another reason for the fragmentary state in which the eastern ruins are found is that the stones employed in this building are of a comparatively small size and consequently more liable to be wrecked than the large blocks.

One large slab, 15 ft. long and 7 ft. wide, which stood on end to the south was overthrown to be got out of reach of the plough.

The ruins of this place were cleared as far as one could follow their alignment and when numerous trenches cut in the field revealed nothing but stray stones, the excavation in the eastern and southern directions had to be stopped.

The general aspect of these ruins does not suggest great antiquity for the stones are not imposing and the spaces enclosed are small when compared with those of the sanctuaries to the west. The potsherds, however, and the flint implements met with among the débris of these ruins are of an early type probably earlier than those found in the temples themselves. The fact is that these buildings have not the characters of a sanctuary and were not in any way meant to be imposing or grandiose. It is more probable that they served humbler

purposes and were intended mainly for dwelling places for the attendants of the temples or for accommodating visitors awaiting to be called to the ceremonial festivities or to the sacrificial offerings.

The first portion of the eastern ruins has the appearance of a rectangular court. To the south the entrance to this court in 4 ft. 2 ins. wide with a pillar on each side. To the left a straight wall made of thick slabs has a rectangular doorway, cut like a frame in a slab, which opens on the set of small rooms leading to the oracular chamber.

In front (to the north) the space is limited by a low wall with round room at the back. To the right (east), a wall 3 ft. thick and about 2 ft. high, is made of squared blocks of stone.

A torba floor layer, 5 ft. wide, is laid along the whole of this eastern wall, and ends to the south in a carefully constructed recess, paved in front, flanked by a pillar on each side and backed by a slab 4 ft. long and 7 ins. thick. This passage of torba floor has a jagged edge in front and appears to have been worn out for a few inches. The rest of the court is also covered with torba floor at a slighty lower level. 5 ft. from the western wall, to the left of the doorway, a circular patch of erosion, 4 ft. in diameter, is caused by the continuous action of fire.

Coming out of this court and turning to the left a slab 15 ft. long is reached which at a time stood on end and formed part of the outer wall of these ruins. Two deep conical holes were cut on the surface of this stone after it was thrown down. Between the slab and the recess at the end of the rectangular court a number of blocks of stone mark the boundary of a set of small rooms. In this space, as well as under the slab, sherds of the best neolithic type were met with.

Further on, to the east, a step leads up to a passage 3 ft. 6 ins. wide and about 23 ft. long. For the first 9 ft., this passage is paved and bordered by slabs on end. On the right side only one of the slabs remains in situ. A deep round hole is dug at the end of this paved passage which ends in a torba floor; to the left it widens into another passage which at the same time is an entrance to a small room with curved walls made of slabs on end. The width of the room, is 5 ft. and its length is 9 ft.

After 7 ft. 6 ins. of torba floor, the passage is paved for a length of 5 ft. and then laid with torba again for about 7 ft. To the left there is an entrance to a second room with curved walls, about 12 ft. long 4 ft. wide.

The passage is limited in front by a long slab which serves the purpose of a doorsill at the entrance of a circular room with a diameter of 8 ft. The walls of this room are made of slabs on end, the floor is of beaten earth.

Very probably two more rooms, symmetrical with those to the west, existed to the east of the long passage but not a trace of their walls has been found. At this point the surface of the ground was cleared down to the rock and a pit 20 ft. long 10 ft. wide and about 6 ft. deep was found, full of stones. This pit has an artificially cut entrance 4 ft. by 2 ft. and other openings which must have been formed when the roof of the pit, thinned beyond the ristance of the rock, gave way. This pit, was simply a small quarry which yielded by scraping a white, soft, clayey limestone. Deep scratches can be seen on the walls made by sharp stones of which several were found at the bottom of the pit.

The soft material obtained from this pit was utilized for the making of the torba floors of the rooms and passages. Mixed with stones and beaten, this clayey material makes an even floor which can be smoothed to any degree and which, in time, hardens to the consistency of almost a solid stone.

To the south of this pit the surface is not encumbered with stones but the soil is gray owing to a free admixture with ashes. A well squared block about 6 ft. long and 2½ ft. wide along which a slab 7 ft. 8 ins. is laid, suggests a table

on which carcases of sacrificial animals, raw or cooked, may have been handled. Two large stone grinders were found in the immediate vicinity. Fragments of animal bones, of which many were carbonized were found in abundance near these stones, and sherds of rough pottery mixed with others of a clearly neolithic type were collected in great numbers. This corner of the building was probably destined fo the handling of foodstuffs.

The northern part of this eastern portion contains the remains of a series of rooms used, probably, as dwellings. Only the fundations of these rooms, made of comparatively small stones, are now to be seen. They are all circular with a torba floor and, apparently, independent of each other. No entrance to these rooms is to be seen at present. More rooms than those actually discovered must have existed at one time, for groups of stone blocks, at several points of the field are met with, often in the vicinity of patches of torba floor, which suggest remains of rooms more or less completely destroyed.

It is difficult to describe the grouping of the rooms to the northeast of the

field

Behind the walls of the eastern apse, there are the rooms connected with the oracular chamber. To the east of these rooms two rows of blocks formed the foundation of a wall, 10 ft. thick, which originally embraced the building and extended to the north and then to the west, forming the boundary wall of the sanctuary in this direction.

This wall has not been followed throughout all its length but a trial shaft has shown its direction to the north-west. A shaft was cut in the field to the north-west of the building when it was observed that two stone blocks, each at least 5 ft. in length, 3 tt. 4 ins. in width, and 2 ft. in thickness join the blocks laid behind the temple and with a slight curve take a direction north by west.

The first room to the east of the oracular chamber is elliptical in shape, 9 ft. 5 ins long and 6 ft. 10 ins. wide. What remians of the walls are stumps of slabs on end, but it is not clear that the slabs were very high at any time. The whole arrangement, both in this and in the other rooms, appears to point out that these were hut foundations, of which the walls were of a perishable material; the dwellings were rather tents than solid rooms. There is no proper entrance to this room but a sort of threshold can be traced, to the south, which is now filled up with stones and forms part of the wall of the quadrangular space.

The next room is similar to the one just described and is 8 ft 10 ins. long by by 6 ft 6 ins. wide; its boundary wall is made of roughly shaped stones of various sizes.

Patches of torba floor lie to the east of this room and, further on, the boundaries of a third room are made out from groups of boulders aligned in a semicircle. This room has a torba floor and is 8 ft. 10 ins. long and 7 ft. wide.

Beyond this room, both in front and on the sides, stones of various sizes are to be found in irregular groups which were once part of a building the outlines of which cannot be made out. Patches of torba floor were also found which give no clue to the kind of space they covered.

Trenches were cut in all possible directions to explore the field but with a negative result, nothing but stray blocks having been met with. The excavation of this site was consequently, stopped and a rubble wall was built to keep back the soil of the field at a higher level than the ground cleared to the rock.

When the work in the eastern field was stopped I gave all my attention to the space in front of the buildings to the south which was in part encumbered by blocks of stone and soil, and to the west by a roadway once on the surface of the field and now about 7 ft. above the ground.

A portion of this high passage was removed and this enabled us to find the extreme end of the façade and the original boundary wall that enclosed the sanctuaries to the west. The clearing of this part of the field has completely revealed the shape of the fore-court of the temples. The front of the building is distinctly concave and constitutes the arc of a circle 63 feet in radius between the extreme eastern point and the opposite end to the west, a distance of about 100 ft.

The main entrance is in the middle of this arc. The threshold is a large semicircular slab 15 ft. long and about 10 wide. In front of the threshold a round slab is fixed in which a pair of large deep conical holes connected at the apex is cut. These double V shaped holes found constantly at the entrance of all important rooms are characteristic features of the Maltese neolithic sanctuaries. They are often drilled into pillars and slabs. They may have served the purpose of rope-holes to tie animals or to fix a door or a curtain but as in many cases no utilitarian purpose can be ascribed to such holes we are inclined to attribute to them a mystic or religious significance.

To the right of the main entrance, two large well-squares blocks of stone are found occupying 20 ft. of the front line; a third block, further to the southeast, is wanting but its stump still marks its original site.

These blocks served as foot-stones to large slabs that once formed the outer wall and of which only the stump of the middle one is in situ. On close observation one can see that the wall-slabs lapped for about 2 ft. over the edge of the foot stones which, for that width, were left rough whilst the rest of the surface was rubbed smooth.

At the south-eastern end of the foot-stones a very remarkable structure is laid which marks the end of the front line.

This is a stone block 11 ft. long 9 ft. wide and 3 ft. thick, in which a rectangular surface 7 ft. by 6 ins. is cut at a depth of 3 ins. Five conical holes in this surface are arranged almost as a quincunx. Another similar hole, which does not go as deep as the others, is cut in the right hand corner of the ledge surrounding the pit.

The block has a step in front and was originally surrounded on the three other sides by upright slabs which are now broken to the level of the block. Standing in front of this block a barrel-shaped stone t ft. 5 ins. high was found. As it is hollowed out from both ends its section is that of an hour-glass.

It is not easy to understand the use of this curiously worked block.

The conical shaped holes suggest at first that they were used as mortars in which grains, such as wheat or millet, were pounded or rubbed with a long wooden pestle. Some of the holes, in fact, show lateral wearing away by friction. That cakes were made just outside the precints of the sanctuary is not very improbable. It is also possible that the holes were used in connection with some sort of game played with stone balls. This is suggested by a heap of balls, varying in diameter from one to four inches, found in the vicinity of this quaintly wrought stone.

It is highly interesting to note that at the western end of the front line, symmetrical with the one described and at an equal distant from the main entrance, a similar block of stone with holes was fixed. Like the one on the eastern end, the block is approached by a step 15 ft. long and appears to have been flanked by walls. Unfortunately of this block only a fragment remains which, however, shows the section of two conical holes similar to those tound on the eastern block. This block, therefore, analagous to the one at the other end of the front line, marked the end of the façade on this side.

In a line with this block the remains of two foot-stones were found and, further on, fragments of other blocks show that a continuous line of blocks existed between the entrance and the west end of the front line. The façade was therefore made of two symmetrical halves and at the centre was the main entrance.

The forecourt in front of the entrance is well laid with beaten earth forming a hard and smooth surface; many blocks of stones encumbered the forecourt some being stones that must have been thrown over from the old building and some were properly laid as parts of minor structures.

To the southeast, there is a fine slab which appears to have been laid at the entrance of a circular room of which some of the blocks, that one formed its wall, are still standing. Further on to the west, two large blocks lay still in situ but as they are not connected with other stones their importance cannot be estimated. A large block, from which a portion was detached, as proved by the marks left by the iron wedges, encumbers the western end of the forecourt. At the back of this block, later occupants of the ruins dug out a bell-shaped water tank, 12 ft. deep, which is carefully plastered to render it wateright. The mouth was reduced to a small opening by two other blocks of stone. This tank was found full of stones and red earth; it contained animal bones, mostly of dogs and potsherd of a late Punic or Roman type. No neolithic or Bronze Age material was found in this tank.

To the extreme west in a field which was acquired in order to complete the excavation, no important material beyond the frontline and the boundary wall was met with. Stray blocks are abundant but seem to be simply the result of the pulling down of the huge boundary wall.

One stone is interesting as it is worked and shows extensive usage. It is an oval block about 8 ft. long and 4 ft. across, with a circular depression measuring 3 ft. 3 ins by 3 ft. 1 in. and with a depth of 8 ins.; in the southern end of this depression a round cuplike hole 10 ins. in diameter and 9 ins. deep is cut.

The holes in this block may have been used as mortars in which food was probably ground or mixed.

A very interesting observation was made in connection with the second block with conical holes at the western end of the forecourt.

As the greater part of the block is wanting the foundations on which the stone was originally laid is open to inspection. Under the block a number of stone balls varying in diameter from 12 to 6 ins, were carefully laid in rows which happily were not tampered with by the people who broke and removed the overlaying stones.

Spherical stones of various sizes are constantly found in our megalithic ruins. We have always considered them as being rollers on which blocks of stones were moved. The diameter of the stones go up to 2 ft. and of these we have specimens at Hagiar Kim, Hal Saflieni and Tarxien. Now we find that such round stones, arranged according to their size, formed a convenient layer under large horizontal blocks. Probably, most of the stones that served the purpose of rollers were buried under the horizontal blocks and thus got rid of. If the balls had some religious meaning they sanctified at the same time that they levelled the structure under which they were laid.

Beside the large balls numerous small ones are often met with in our megalithic ruins.

WESTERN BOUNDARY WALL. Behind the western end of the front line the removal of the mound of stones that formed the roadway to the field brought to light the base course of the boundary wall that embraced the two first apses and extended towards the north to meet the wall that limited the sanctuary in the northeastern field.

Only the base course of this cyclopean wall was left standing, the other courses were ruthlessly broken and thrown over, probably to utilize the good building stone of which they were made. Many of the blocks and the stones strewn over the western field are the fragments of the fine hammer-dressed ashlars that walled in the triple sanctuary.

The five stones of the base course that were uncovered measure respectively 8 ft. 5 in., 5 ft. 6 ins., 7 ft. 3 ins., 5 ft. 3 ins. with an avarage height of 3 ft. 7 ins. and a depth of about 2 ft.

The rest of the wall, heading north, is lost under 6 ft. of soil and was not thought worth the trouble and the expense of clearing.

DETAILS OF THE EXCAVATION. The accidental shifting of a stone block brought to light animal bones, neolithic sherds and flat pebbles of hard stone which appeared to have been laid on purpose under the stone. This suggested the examination of all the blocks that could be moved without any risk of their being damaged.

As a result of this investigation it was found that bones of young animals (sheep mostly), fragments of pots, flint fiakes or implements, and sea shore pebbles were ritual objects placed under stone blocks or slabs before these were laid in position.

In a few cases more important objects were also placed.

The space under the altar stone in front of niche Q, in the court T, is reached through the main opening in front, though a plugged gap on the left and through a gutter in the pavement that goes under the altar. Red soil had found its way through all these gaps. This soil was carefully removed and the following objects found enbedded in it:—I cowrie shell, I limpet shell, 8 flint flakes, I stone figurine representing a crouching dog and a human tooth. This is an incisive tooth of a young person and has two parellel grooves filed at the root.

Under the block to the right of this niche, 3 flint flakes, animal bones, 2 bone borers, 2 smooth flat pebbles, and some black sherds were found.

In an irregular cavity under the stone altar to the left of the entrance at T, symmetrical with niche Q, the following objects were found in the red soil:

A number of black, smooth, neolithic sherds, 3 shoulder blades of kids, one bone borer, 2 flakes of obsidian, one of them measuring  $2\frac{1}{2}$  ins. (6 cms.) by  $\frac{3}{4}$  ins. (4 5 cms.) by  $\frac{3}{4}$  in. (2 cms.), one red clay pyramidal spindle-whorl 2 ins. high, one smooth globular stone used as a hammer.

From under the first block to the left beyond the entrance of room V we obtained:

Animal bones, potsherds, and a fine, dark, heavy whet-stone 38 ins. long and one cowrie shell.

At the corner of the next block, a fine flint knife 95 mm. long and 20 mm. wide was found.

Under another block in the same room we discovered:

Animal bones, potsherds, flint flakes, and a fine dark stone axe 70 mm. long, with convex surfaces and a sharp edge jagged through usage.

The blocks of stone separating the two spaces R and T were all carefully moved and replaced in situ.

To the right of the block on which the stone statue stands, a small cavity carefully plugged with a stone exists. From the red soil that filled the cavity a few black, highly burnished, potsherds were obtained. Another cavity to the left of the statue is covered by a conical stone which is still in situ. The soil from this cavity yielded:—

six flint flakes, of which one is  $2\frac{1}{8}$  ins. (56 mm.) long and 1 in. (22 mm.) wide and another one 3 ins. (8 cms.) long  $1\frac{1}{2}$  in. (4 mm.) wide and  $1\frac{1}{8}$  in. (3 mm.) thick; portion of an ox rib with smoothed edges, a hard stone disc, black sherds, leg bones of sheep partly carbonised, a small bone borer, a seashell (trochus), portion of a hard-stone ring with an external diameter of  $3\frac{1}{2}$  ins. (9 cms.) and 4 ins. (13 mm.) thick.

From under a broken slab behind the statue we got :-

Numerous fine neolithic sherds, bones of young sheep, vertebras and ribs, 2 triangular hard stones used as rubbers or cutters, a few round pebbles, one small disc cut out of a clay potsherd, a fine, slightly curved, flint knife, about 5 ins. (13 cms.) long, a flat flint flake 9 ins. (22 cms.) long and 7 ins. (18 cms.) broad, a leaf-shaped flint stone 8 ins. (20 cms.) long, a long flint implement, broken at the tip—, 9½ ins. (24 cms.) long, 2 flakes of obsidian of which one 4 ins. (10 cms.) long, triangular in shape, a bone spatula 9 ins. (22 cms.) long, made from an ox rib and a smaller one 6 ins. (153 mm.) long, and a lump of calcite.

The next block behind the statue yielded:

One stone shallow cup one hard-stone triangular rubber with hole for the insertion of the fingers, one hard-stone mallet, one large chert tool, a few chert flakes, and a sea-shell (conus) with a filed slit, close to the apex to allow of its being threaded.

From the oracular room and the spaces adjoining it, a number of neolithic objects were obtained.

Neolithic postherds were very abundant, some of the sherds being of an exceptionally fine quality.

Flint flakes, flint knives, clay statuettes, polished stone pendants, bone implements, stone hammers, hard stone rings and hard stone and lava grinders were met with. A set of two large almond-shaped corn grinders were found in the furthest limit of the eastern field.

Two oval slingstones of limestone (globigerina) are worth special notice. Oval and biconical slingstones are met with in all megalithic ruins, at the Hal Saflieni hypogeum they were found in abundance. As a rule they are well worked and finished but they rarely show traces of ornament.

One of the two slingstones met lately at Tarxien,  $3\frac{1}{2}$  ins. (85 mm.) long  $1\frac{1}{2}$  ins. (30 mm) in diameter, tapers at each end, and at about one third from one of the ends it has three small holes drilled in a line.

The other stone,  $1\frac{1}{2}$  ins. (38 mm.) long and  $1\frac{1}{2}$  ins. (20 mm.) in diameter, has two small knobs in relief at its upper third. A fine axe-shape pendant, found at floor level, is  $1\frac{3}{4}$  ins. (44 mm.) long and about  $1\frac{1}{4}$  ins. (32 mm.) at its broadest portion; it is of a greenish colour with a mottled appearance and with shiny micaceous specks in its structure.

Bone Objects. Beside the bone spatulae and the bones mentioned before, two fine curved bone needles, with well formed head and eye, were met with, and a fragment of an ivory object 2 ins. (55 mm.) long with five round bosses cut in relief.

FIGURES OF STONE ANE EARTEHNWARE. The following figures were obtained during the last two years of the excavation:

Animal figures—A small stone figure of a dog was found under the altar of niche Q. It measures nearly  $1\frac{1}{2}$  ins. (37 mm.) in length and about  $1\frac{1}{2}$  ins. (15 mm.) in height. The animal, clumsily modelled, is in a crouching position, the artist meant to show a very lean beast for the processes of the vertebral column are unduly prominent.

A small ivory pendant in the shape of a sitting bird was found in the western field. In has a round base less than  $\frac{3}{4}$  in. (11 mm.) in diameter and about  $\frac{1}{2}$  in. (7 mm.) high, in which two converging holes for a thread are drilled. The head and the back show traces of a red stain.

Human figures. (1) Right leg and foot of small human terracotta figurine, probably of the fat type. It is of a reddish colour and well polished.

- (2) Human face carved in low relief on one of the sides of a rectangular piece of limestone, rounded at the top and broken at the base. The forehead and nose stand out clearly, the eyes are but two small holes, the mouth is shown by a line and the chin is very faintly marked. The figure, about 1\frac{3}{4} ins. (34 mm.) high, and \frac{3}{4} in. (20 mm.) broad and thick was found in 1917 in neolithic deposit.
- (3) Head of limestone statuette, broken at the neck, about 1\frac{3}{4} ins. (45 mm.) high and 1\frac{1}{2} ins. (40 mm.) thick. The face is broad and flat, with a rounded chin, straight nose, linear eyes with eyelids shown in relief; the mouth is clear-cut with thick lips. There is a marked degree of prognathism, the forehead is low and the neck abnormally thick. The hair is thick and arranged in folds which end at the back in a long braid reaching to the base of the neck.
- (4) Small clay headless figurine, about 1½ in (30 mm.) high, in a sitting posture, with thighs drawn up against the chest; the left leg crosses the right one and the right arm, of which the hand is wanting, goes to the right knee. The left arm is missing. Two pendulous breasts come in touch with the thighs, the back is flat and the waist is slender. This figurine is modelled with a freedom which is in marked contrast with the usual Buddha—like figures of the Maltese monuments.
- (5) Fragment of clay female figure of which the legs and the bust are missing. The back is flat, broad and slightly bent forward; the thighs are firmly closed together and their under part is deeply concave. The sexual triangle is shown by a deep incision. The fragment is 4 ins. (10 cms.) across, about 2½ ins. (65 mm.) high, the length of the thighs being just over 3 ins. (80 mm.) It is of a red colour due to a fine slip laid on a coarse material.
- (6) Fragments of the lower part of a limestone statuette, broken at the waist, below which the hips are covered with a plaited kilt; it is 7 ins. (18 cms.) high and 6 ins. (15 cms.) across the hips.
- (7) Fragment of a baked clay figurine in a sitting posture, about 2 ins. (55 mm) broad and about  $1\frac{1}{2}$  ins. (42 mm.) high of which the upper part of the bust and the legs are wanting. What remains of the figure is well modelled and shows no abnormal obesity. The back is straight and the sexual triangle is shown by a deep incision. The baking is poor and the surface shows red patches at the points where it was exposed to a greater heat.
- (8) Head of a baked clay statuette about 2½ ins. (70 mm.) high and with a circular base, 2 ins. (50 mm.) in diameter, at a level where the neck should join the shoulders. It is well modelled, with a clear-cut nose, prominent jaws, thick lips, small ears and eyes outlined in relief. It has a short curly wig, the curls being shown by deep notches. Its light fawn colour is due to a fine slip laid on course material. The back of the head, the right cheek and the tip of the nose are damaged.

Carved Stones. A quaintly sculptured stone block, in a battered condition, was found among the debris of the Tarxien ruins. The block is of ordinary building limestone (globigerina) and measures about 7 ins. (18 cms.) in height 9½ ins. (24 cms.) in width and about 8 ins. (20 cms.) in thickness.

It seems to represent the lower part of a sitting figure. The upper portion might have been cut on a separate stone to be laid on this carved block, which has at the upper surface a mortise to receive the tenon that kept it in place.

On this block we have the lower part of a figure, from the waist downwards, covered with a plaited skirt which reaches below the knee. A pair of fleshy, pear shaped legs hang below the skirt. The feet are broken at the ankles.

The figure sits on a panelled rectangular bench which is distinctly shown below the skirt. The sides of the stone are decorated with human figures in low relief.

The right side has two standing figures, of the usual Maltese neolithic corpulent type, separated from each other by a narrow pillar. The figures resemble the statuettes found at Tarxien, Hal Saflieni and Hagiar Kim. Both are naked to the waist, but draped down to the knees. A pair of pear-shaped legs protrude beyond the kilt.

The right fore-arm is bent on the chest and the left arm hangs straight along the body. The head, in both figures, is badly defined, the stone being damaged at this level.

A pair of similar figures is carved on the left side of the block. It is not clear whether the figures are draped but they show the abnormally fat hips and thighs. The arms are arranged as in the first pair described, and a narrow pillar stands between the figures.

Below, these figures, the surfaces of the stone is sunk to a depth of about 2 centimetres and in this space a group of figures is carved in relief. This group consists of a central sitting figure with the left arm bent and the elbow resting on the knee. To the left a human head is sketched but the rest of the body is uncertain. To the right, another sitting figure, with round face, has the left arm bent and the forearm resting on the lap; the right arm is bent upwards and the hand is raised at a level with the head.

On the opposite side of these figures the under surface of the stone is decorated with a reed ornament in relief like the milling of a coin.

The block is damaged by rough handling and is in places covered with a stalactitic slime which cannot be removed and which renders the outline of the figures uncertain at many points.

### NEOLITHIC STATION AT HAL GINWI.

In the year 1917, halfway on the road that from Zeitun leads to Marsaxlocc, a few large blocks of stone in a field on the right called our attention and Dr. Albert V. Laferla who was doing military duty in the neighbourhood, volunteered to employ his spare time to supervise the excavation in the vicinity of the outcropping stones. A small sum was laid aside for the purpose out of the Museum vote and Mr. Hardinge of London contributed one sovereign to help the investigation. During the month of July the field to the north of a large slab on end was excavated with the result that the remains of an extensive neolithic building were laid bare. There were no absidal arrangements usual in the Maltese sanctuaries but groups of small rooms were disposed to the right and left of a main corridor made of slabs on end of the type of the well known megalithic monuments. The stones used in these buildings were middle-sized and the spaces enclosed by them were quadrangular and not circular. Otherwise the remains recalled, in most of the details, the larger stone monuments so numerous in Malta. The use of megaliths was exclusively reserved for the outer walls the remains of which can be traced under the walls of the fields.

The moderate size of the rooms, their arrangement alongside of the corridors and the modest main entrance give the impression that the building was not a public sanctuary but rather a private dwelling-house. A few flint and chert flakes were met with but potsherds were very abundant. The sherds were typical of the Maltese neolithic age both as to material and to workmanship. The black ware was common but it was mostly plain and unornamental. Sherds of a highly ornamented ware characterised by decorations in relief on a smooth ground were met with on the floor of one of the rooms.

#### OTHER PREHISTORIC REMAINS.

Numerous remains of prehistoric buildings from which typical neolithic sherds were obtained, were noticed during the last five years in several districts of Malta.

On the southern slopes of Gneina bay, to the N.W. of the island, megaliths it situ were found by Mr. J. E. Neale, M.A., then doing duty with the Y.M.C.A. at Ghain-Tuffieha camp.

Small stone circles were, evidently, enclosed by rough blocks. Many of these standing stones have disappeared in the deep fissures formed by natural cleavage of the cliff which is rapidly wearing away. Fine neolithic sherds, chert flakes and flint chips were obtained from among the ruins and from patches of thick grey ashes strewn on the top of the cliff.

A stone circle was also discovered by Mr. Neale in a field on the other side of the road opposite the building known as "Ta Zammitellu" at Mgar, and another one on the high ground to the north end of St. Paul's bay.

A fine stone circle was discovered at Marfa by the Curator accompanied by Mr. C. Rizzo. The remains in a bad state of repair, are those of an elaborate building. Neolithic sherds and flint flakes were obtained. The place is worth clearing and surveying.

Remains of a dolmen were met with on the cliffs overlooking Fomm-ir-rieh, and megaliths in situ are still standing on the Pellegrin plateau known as il Kala. Megaliths stand close to the edge of the cliffs to the south of Casal Dingli not very far from the Madliena chapel. Capt. Stone of the Mercantile Marine found a good number of microliths in the vicinity of these stones. A collection of such micro-flints, mounted by Capt. Stone, is now shown in the Valletta Museum.

#### BRONZE AGE CAVE AT THE MARSA.

In November 1918, a cave was accidentally discovered by the workmen who levelled the ground at the Marsa, close to Casal Curmi, for the construction of an airship station. It was cleared by the kind permission and help of the Civil Engineer of H. M.'s Dockyard. The cave, artificially dug out in the rock, is about 25 ft. long, by 15 feet broad and 6 feet high in the middle part. It extends in an E.S. E. direction and is entered from an elongated shaft, covered originally with long stone slabs, the two slabs remaining in situ being about 6 feet long, 3 feet wide and 8 in. in thickness. Two uprights stood at the entrance which was reached through a short ramp. The cave was completely filled with red soil and stones that found their way through the entrance and through holes in the thin roof that gave way here and there.

Human bones (2 adult skeletons, the skeleton of a young person and the skull of a female adult) were discovered. They were probably laid on cobbles arranged on the floor of the cave. The whole arrangement recalls the cave of Burmghez at Mkabba, but the potsherds met with are later and are probably of the Bronze Age period. One stone trough 5 feet long, 2 feet wide and 1 feet 8in. high, was found on a bed of cobbles and a flat trough 20 in. long and 15 in. wide with a distinctly concave surface, appears to have been used for crushing olives in order to get the oil by washing the broken fruits. At one of the ends the stone has an opening and a lip to allow the water to flow out from the surface.

At a higher level Punic sherds were found.

The cave appears to have been inhabited in the Bronze Age period and used subsequently as a burial place, probably in the early Punic period.

In the vicinity of this cave several rock-tombs were met with. The tombs were of an early type, dating, probably as far back as the 5th century B.C.

#### MALTESE ROCK TOMBS OF THE PUNIC PERIOD.

A group of tombs in the Musta district, north of Kligha valley, in a field called Hoxbiet-il-ward was excavated last June by kind permission and help of the owner the late Mr. Charles Strickland. Colonel Robertson I.M.S. and Mr. C. Rizzo C.E. helped in the excavation. The tombs are cut in a soft clayey rock and one of them was almost completely destroyed probably when the field was made. Of this tomb, only the floor of the shaft and of the burial chamber remained and lying on it, the remains of skeletons, a cinerary urn and a few other clay vessels were found.

A well-preseved small tomb in close proximity to the first one was also opened. This consisted of a rectangular shaft 7 feet long and about 3 feet wide and 8 feet deep, and of a circular chamber with a vaulted roof closed with a large stone slab. The remains of two interred bodies were found along with a few clay pots of the early Punic type. The tomb itself is of an early pattern having a round chamber and a rectangular shaft.

Kallilia. On the 18th. July 1917, a well tomb was accidentally opened on the Kallilia plateau. The shaft 5'8" wide by 4'1" was only 4'2" deep and had only one chamber dug at its north-west face. The oblong chamber with rounded corners was 7 feet long and about 6 feet wide in the middle line. The remains of a body was laid on its back and a group of pottery was embedded in mortar at one end of the trench that runs along the whole length of the chamber. Both the architectural features and the quality of the pottery denote a tomb of a late period.

Another group of well-tombs was met with, later on, on the Kallilia plateau in January 1918. The place was inspected at once and three rock-tombs were found at a distance of a few feet from each other. The first one cleared consisted of a pentagonal shaft 5' 9" deep, 6' long and 5' 11" wide at the top. At the bottom of this shaft, in the western wall, a funeral chamber with vaulted ceiling was cut 6' 5" long and 6' 2" wide. The slab which sealed the entrance was still in situ but a fine red soil found its way through gaps at the sides and filled up the chamber to a height of 2', completely burying its contents. When the soil was cleared it was found that beyond the entrance the chamber had a deep trench along its front and on the ledge of rock at the back, the remains of at least four skeletons were found. The bones were rotten owing to the dampness of the soil that covered them. Three lamps, 2 large amphorae, 1 deep bowl, vase and 1 trefoil-tipped jar were recovered.

The second tomb had a rectangular shaft 7' long, 4' wide and 7' deep and one funeral chamber was cut at each end at the bottom. The chamber to the west, had the slab sealing the entrance still in situ. Red soil had penetrated into the chamber to a small extent. The tomb had been used over and over again and the various groups of pottery deposited with the dead could be seen as left by those who sealed the tomb after the last burial ceremony. A peculiar feature of this tomb were the recesses cut in the wall for the preservation of funeral pottery, and a ledge of rock left all along the tomb for the deposition of the body. This kind of funeral couch, 7' 3" long, was quite plain except for a raised protuberance at one end on which a human face was roughly carved. The skeleton of a male body was found laying on this couch with the head just behind the carved face. Along with the body, on the platform, 2 clay plates were found. Two lamps, 5 jugs and 1 plate were lying at the foot of the couch; and 1 large amphora and 2 dishes on the floor close to the opposite wall; I cinerary urn and 2 jugs were at the furthest end of the room and a jug and 2 plates in the recess at the back; the other recess was empty and so was the lamphole.

The chamber to the east end of the shaft was somewhat irregular in shape, with a straight wall on the left and a curved one on the right. There was no trench cut in the floor and the bones of several skeletons lay mixed with the

soil which had found its way into the tomb. One large amphora lay across the chamber just beyond the entrance and one deep bowl, a jug and two clay dishes were all the furniture the tomb contained.

#### WELL-TOMBS AT RABAT.

A set of well-tombs was cleared in December 1918 in a field on the Boschetto Road.

The tombs were completely rifled long ago and full of red-soil. The tombs themselves were, however, very well cut and deserve special notice.

The shaft, 9 feet deep,  $8\frac{1}{2}$  feet long and about 3 ft. wide, had two burial-chambers cut in a line with the bottom, one on each side. Three deep notches on each side of the walls helped the people to go up and down the shaft. Each chamber was rectangular, about 9 ft. long, 5 ft. wide and 3 ft. 9 in. high. A central trench 1 ft. 5 in. deep extended to nearly the whole length of the floor thus forming a ledge on each side, about 1 ft. 8 in. wide on which the bodies were deposited flat on their back. A small niche was cut at the back of each chamber for the placing of a lamp or an incense burner. These niches were carefully cut and had a small pillar carved in the rock on which the lamp had to stand. One of the chambers had a roughly cut, semi-elliptical lamp-hole on the side wall. The soot in this hole shows that a lamp was left buring there for some time.

The flagstones that once covered the entrance to these chambers were still in the shaft; they were regularly squared and finished and had on one of the surfaces two cylindrical holes, through half the thickness of the stone, connected probably with a locking arrangement. The contents of these chambers were few and in a fragmentary state. One clay cinerary urn with broken handles was recovered, together with fragments of clay lamps, oil vessels, thin glass bottles and ashed human bones.

### SMALL CATACOMB OF THE LATE ROMAN PERIOD.

At Rabat, a small catacomb of the late Roman period was cleared in March 1919. It was accidentally discovered in the field belonging to St. Dominic's Convent, at the back of St. Dominic's Square.

The catacomb cleared by the kind consent of the Rev. fathers, was full of soil, and with the roof stove in at the entrance.

Seven steps led down to the main room in the three walls of which three openings were cut. On the left the opening did not go deeper than a couple of feet; it is clear that the cutting was simply designated for further enlargment of the catacomb.

On the right, the opening led to another room reached by descending two more steps. In the walls of the room burial chambers were cut, at a level about three feet from the ground with an arcosolium arrangement at the entrance. The one in front, parallel to the wall, was about 6 ft. long, with rounded corners and with a ledge at one end with two holes in which the heads of two bodies were to be laid. The chamber on the right was also intended for two bodies, and had the two head rests as in the other chamber. In the left wall an unfinished loculus was cut to a depth of about one foot.

In front of the main room the entrance leads to another room one step down. In the left wall of this room a burial chamber with arcosolium entrance is cut parallel to the wall with two head-rests at one of the ends. In the right wall another chamber was sketched but never completed. The arcosolium entrances to two of the chambers have a concave front above the square doorway in the shape of a scallop shell. The shell pattern is brought out in black lines in one

case and in lines of red ochre in the other. No remains were found in the interesting catacombs which was duly surveyed with the help of Mr. C. Rizzo P.A.A. and of Prof. R. Galea P.A A. After a proper survey, the catacomb was properly roofed over at the entrance and closed in a way that it can be opened and inspected when required.

#### WELL TOMB AT HAL-AXIAK.

Whilst cutting the rock for the foundations of a Government School at C. Asciak on the road to Gudia, in a field called "Ta San Filep" several well tombs were met with. One of them was in a fair state of preservation and contained a mass of pottery and of human bones.

A rectangular shaft 7 ft. deep, about 7 ft. long and 4 ft. wide, had four notches in a vertical line on the two opposite walls. In the eastern wall a rectangular chamber was originally, sealed, with a flagstone 5 in thick 3 ft. 4 in. high an 2 ft. 7 in. wide. A trench 13 in. wide bisected the floor of the chamber which was vaulted at the back.

Human bones were heaped both at the back and at the sides of the chamber showing that it served the purpose of an ossuary when other tombs in the vicinity were cleared. The pottery was also heaped here and there without apparent symmetry. The following articles were obtained from the tomb and sent to the Valletta Museum:— 6 clay cinerary urns, 16 clay idgs and bottles, 11 lamps of a Punic type, 8 deep cups, 2 cups with handles, 4 flat plates and 3 glass bottles. All these articles were mostly in a fragmentary state but some of them are in a good state of preservation.

The following objects were presented to the Museum:—

Mr. Enrico Sammut Mr. Emmanuele Xerri Notary C. Micallef de Caro J. Balbi, Esq. Miss S. Mamo ... Mr. V. Cilia la Corte The Secretary of the "Junta para ampliacon de estudios e investigaciones scientificas" Madrid Miss Agnese Schembri

Miss Mary Zammit of Villa Zammit (Clapp bequest)

Mr. Raffaele Caruana Staff Surgeon Barford, R.N. H. W. Finchan, Esq., Clerkenwell 3 old documents concerning Malta.

I seal of the Order, 34 silver and brass coins of Pius IX,

2 brass binding tools, 3 old printed leaflets. Diploma of Notary, guide book to Sicily, 1 brochure in Maltese, 1 photo of Chief Justice Micallef, 1 print representing a picture of Caravaggio.

4 nankeen napkins from the old "Casa Industriale".

2 small polished stones.

I large iron hinge from old Galley-slave Prison.

16 volumes on "investigaciones paleontologicas y prehistoricas 1914-15".

I gold-tipped distaff, I miniature decoration of Gioacchino Murat, I large oval portrait of Grand Master Rohan, I large oval portrait of Grand Master Pinto, 2 large oil portraits of Mr. Schembri, 1 old oil painting representing a battle scene.

I Assyrian cylinder, I black seal-stone, I scarab ring stone, I small miniature in frame, 2 inlaid daggers, I gold and I silver nugget in case, I Papal old coin, I Spanish costume of Torero complete, I pencil portrait by G. Farrugia, 2 enamel pictures in plush frames, 19 volumes of illustrated books.

I model of gondola.

I red clay jar and sherd from Lemnos (Moudros).

2 casts of seals of Grand Master Guerin de Montagu.

Canon I. dei Conti Formosa	1 stone slab—facsimile of Phœnician inscription.
Mr. Francesco Casha	I oil painting in guilt frame.
R. Caruana Dingli, Esq	I framed pencil portrait of Schranz the Artist.
Rev. Dean Vassallo, C.V.O., D.D.	2 Roman ivory hair pins.
Joseph Schembri, Esq	Framed pen-and-ink drawing by Mr. B. Pellegrini Vidal.
Dr. Allan Moore	Model of Gozo boat.
	Water colour view of Vittoriosa quay.
Dr. Luigi Debono	Framed old manuscript.
Mr. Edward Borg	6 medals and framed photo.
Mr. Enrico Calleja, L.S. & A	Framed pen-and-ink drawing.
General O. Swaan, R.A.F	2 models, to scale, of Maltese tombs.
Mr. Lewis Mizzi, LL.D	I volume "Done et ses ruines", I volume, Catalogue des
	Sculptures Musée de Constantinople.
Mr. Forrester Paton	I volume "Conder, Rise of Man", I volume "Fergusson,
	Rude Stone monuments", 15 casts of Tarxien friezes.
Messrs. F. Borg & Flli	ı large clay oil jar.
Chev. Ed. D'Ancona	17 arrows etc. from the Caroline Islands.
Mr. Edgar Cesareo	I miniature on parchment.
The Director Victoria and Albert	17 watches and movements.
Museum	
John Borg, Esq., M.D	ı clay askos.
The Hon. Supt. of Public Works	I marble inscription, I brass urn.
The Hon. Comptroller of Char. Ins.	2 majolica jars, 3 copper measures, 1 hard stone mortar.
The Hon. Treasurer	Specimens of bread rebate cards and local currency issued
	in 1914.
His Honour the Lieut-Governor	A collection of photos, handbills, war stamps etc. and 22
	wooden toys made by the wounded for a local War
	Museum.

	List of objects acquired for the Museum:—	ALTERNATION OF THE PARTY OF THE
1	set of silver and copper coins.	r cinquina of La Valette.
	old coins and I old medal	2 Victorian pennies.
36	old prints.	2 old seals.
88	old drawings.	1 large picture frame.
3	old measures.	2 old distaffs.
I	old copper plate.	I portrait of Magistrate Parnis.
I	medal of Pius IX.	1 Roman jar.
8	small bronze statuettes.	1 gold Roman coin.
20	volumes on antiquities.	12 clay figurines.
I	silver medal of The Malta Eucharistic Congress.	ı old dagger.
I	model of Maltese boat.	1 Sicilian coin.
1	old bodkin.	3 silver spoons.
	table and I tea spoon (silver).	7 Sicilian coins.
ICOL	silver medal of Sir Ralph Abercrombie.	Agraese Schemant and Carlotte
	the second transfer of the second sec	

TEM. ZAMMIT, Curator.