

IV.

NOTICE OF RECENT EXCAVATIONS IN THE HILL FORT OF DUNSINANE, PERTHSHIRE. BY T. A. WISE, M.D., F.S.A. Scot.

Last summer, I had an opportunity of examining the excavations made by Wm. Nairne, Esq., on his hill of Dunsinane; and as he has been so kind as to allow me to exhibit the three skulls to the Society, that were found in the rude chambers in the hill, I shall avail myself of the opportunity of stating a few particulars as to what had been previously done in excavating this interesting hill, and what has now been accomplished.

Dunsinane Hill has been rendered so famous by the genius of Shakespere, in the noblest of his dramas, that it is equally vain for the antiquarian and historian to allege that Macbeth was a popular and just prince, during whose reign there was peace and plenty, and that his castle, as well as his cairn, are in Aberdeenshire:¹ the dramatic magician willed it, and Macbeth is considered a treacherous usurper of the crown, and a bloody tyrant. The reason of this difference being, that the dramatist did not confine himself to the accuracy of the historian.

Tradition, says Chalmers, relates that Macbeth reigned seventeen years, ten of which he spent at Carnbeddie, which the country people call Carn-beth, and Macbeth's Castle. As this is within a few miles of the British fortress upon Dunsinane Hill, in which he probably sometimes deposited his most valuable effects in times of emergency, it might, from this circumstance, have received the name of Macbeth's Castle; particularly as this term is applied in Scotland to camps or fortifications, by entrenchments or ramparts. Such an opinion will enable us to explain numerous local associations.

In the valley of Strathmore, near the hill of Dunsinane, is an artificial mound of earth named Lawton, upon which it is said Macbeth distributed justice; and upon the neighbouring hill is the "King's Seat," from whence is seen the Birnam Wood; and tradition adds, as he gazed upon the magnificent scene before him, Macbeth thought the wood began to move. Wyntoun relates, as a belief in his time, that the Northumbrian army, in their progress against Macbeth,

¹ Chalmers's Caledonia, vol. i., p. 412.

passed the Firth of Tay by Brynnam (Birnam), then a royal forest, to Dunsinane, " ilka man baring until his hand a busk of that wode there ;"¹ and adds, from tradition, that

My flyttand wod thai callyd ay,
That lang tyme aftyre-hand that day.

The invading army here alluded to was led by Malcolm, son of old King Duncan, whom Macbeth had murdered. The son fled to England for protection, and Edward the Confessor is said to have given him a kind reception, and supported his claim to the Scottish throne, by a powerful army commanded by Siward, the Earl of Northumberland. This army may have been seen by Macbeth from the " King's Seat" at a great distance. The experienced general hastened to collect his forces, and appeared to have concentrated them twelve miles east from Dunsinane Hill. There a furious conflict is said to have ensued between the two armies, and where tradition asserts Macbeth was defeated, after he had slain *Osbert*, the gallant son of the Earl of Northumberland. The spot where the usurper was defeated is marked by a large mass of whinstone, called Macbeth's Stone (said to weigh twenty tons) ; others allege this stone marks the spot where one of Macbeth's generals fell. Under a small stone in the same park of Balmoral Castle, is said to rest the remains ; or where the son of the Earl of Northumberland was slain by Macbeth :² while in the neighbourhood is a tumulus called " Belle-duff," said by tradition to be where Macbeth was buried,³ but most probably where some of the slain were interred. Macbeth escaped from the field, and retired to one of his castles in the north, and was slain by Macduff, some years afterwards, at Lumphanan in Aberdeenshire.⁴

The name of Macbeth was long popular in Scotland, and his character is still well known by the people about Dunsinane ; but his ancient castle in the neighbourhood has disappeared, while his stronghold on the hill remains, probably not very much altered from the time when he occupied it. He was known to be very rich, and, as he left it suddenly, the residents in the neighbourhood believe that he had not an opportunity of removing his treasure from the for-

¹ Cronykill, vol. i., p. 238, written in the latter part of the fourteenth century, and the Tragedy of Macbeth, the beginning of the seventeenth century.

² On examination, I found no one had been buried there.

³ This is stated in a map of the estate of Belmont, prepared in 1758. On examining this tumulus last year, a rude stone coffin was found near the centre, and several feet under the surface. It had been examined before.

⁴ On the 5th of December 1056. See likewise Sinclair's Statistical Account, vol. i., p. 505, and Chalmers's Caledonia, vol. i., p. 406, *et seq.*

tified hill. This encouraged them to excavate the top of the hill, as they were satisfied a proper degree of perseverance was only required to find out the treasure. Last year, they had been disappointed, as previous excavators were; but they have uncovered antiquarian remains that are very interesting. To understand these, I shall give a few particulars of the hill, of its fortifications, its erections, and their contents.

The hill of Dunsinane is 800 feet in height above the neighbouring plain, and 1114 feet above the level of sea, and may be distinguished from the heather-clad hills, with which it is surrounded, by being of a conical shape, and covered with green sward. On a nearer inspection, it is found detached from the others by deep valleys on each side, and commands a most beautiful and varied prospect. On the south, the undulating surface of the Sidlay hills, and of the rich and fertile carse of Gowrie, the estuary of the Tay, St Andrews, and the hills of Fife; while to the north, the whole of the extensive and fertile Strathmore is seen, bounded by the Grampian range of mountains. The top of Dunsinane Hill has undergone considerable changes by the influence of the weather, so that there are different opinions as to the nature of its fortification. There appeared to be two roads up to the top of the hill, a very precipitous one towards the south, which led directly to the top, and another which wound round the eastern side, forming an inclined plain, and terminating with the other road to the south of the fortification. This was of an oval form, the long diameter being 169 steps in an east-south-east direction, and the broadest transverse diameter 89 steps. This space appears to have been cleared of rock, and large quantities of black earth, brought from the valley below, to form an earthen wall 20 feet broad at its base, and tapering upwards to the height of probably 10 or 12 feet (Fig. 1, section of fort). Where the hill was abrupt in its descent, layers of large packed boulders (Fig. 1, *a a*) were placed upon the rock, along the inner and outer edge of the wall, upon which sod and earth was heaped so as to form a strong breastwork tapering upwards. This breastwork and spiral ascent, with its parapet, were probably strengthened by wooden palisades.

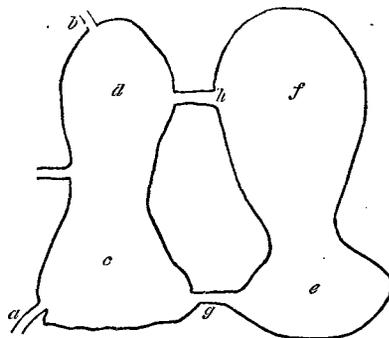
Fig. 1.



The late Principal Playfair, when minister of Meigle, made excavations in

the Dunsinane Hill, and, in a section made across the top of the hill at its widest part, he found flagstones, charcoal, and bones of several species of animals. At the southern extremity of this section, there was found a pit adjoining the rampart full of fat and moist earth, loose stones, burnt wood, and bones of cattle, sheep, and hares, but not of the human body.¹

Fig. 2.



Upon digging, last year, into the south-east side of the top of the hill, and several feet under the grass covering, four rude chambers were found built of freestone, generally of old red sandstone, some of the varieties of which seem to have been brought from a considerable distance. (Fig. 1 represents a section of these chambers *b b*.) The stones were all undressed, and carefully built, but no cement appeared to have been used in their erection. On examining these chambers more carefully, they were found to occupy a quadrangular space (see Fig. 2), and to communicate with each other by small passages, two feet broad, by three in height. Two entrances (*a* and *b*) led by an inclined plane to (*c* and *d*), which entered into two other chambers (*e* and *f*) by two passages (*g* and *h*).

The southern wall of chamber (*c*) was nearly straight, and was probably the outer wall stated by Principal Playfair to be 5 or 6 feet in height, and he supposed it formed part of the wall of the rampart. This wall extended backward to *d*, forming two chambers 20 feet in length, having two entrances; and in one of them (*h*) the three skulls were found. These chambers had usually a rounded figure, were 7 or 8 feet in diameter; and after the wall had been raised

¹ View of Agriculture of Perthshire.

2 or 3 feet above the stone flooring of the chamber, the stones overlapped each other as the building advanced upwards, so as to form a roof, which was completed by a large flat stone placed over the top, the rude substitute for an arch. The greatest height of these chambers was 6 feet from the floor, which was laid with undressed flags.

As the roofs of these chambers had fallen in, or their walls had been disturbed by former excavations, it was not always easy to discover their original figure, particularly as they were filled with black earth and stones, the accumulation of ages. Some of the masses of trap, containing portions of quartz and other stones, were fused together by the action of fire, and were found deep in these excavations. There were also quantities of vegetable charcoal, chiefly of oak and plane trees, with rotten straw, and fragments of animal bones much decayed. Among these the teeth of horses and cattle, and horns of deer, were distinguished, and from their quantity, proved the slovenly habits of the rude occupants. I could find no portion of the human body among these numerous fragments of bone. The only domestic utensil found in these caverns was a quern, eighteen inches in diameter, surrounded by four border stones, to prevent the scattering of the grain during the grinding process. This was above and by the side of the passage (*b*), and was probably in the position in which it had been used.

The passage (*h*) between the inner chambers (*d* and *f*) was built up, and on opening it three skulls were found with a number of fragments of human bones. The bodies must have been placed in a sitting position, with the knees pushed up to the chin. Unfortunately, the only bones I saw were those of the head; so that no idea of their stature could be formed. Two of the skulls were of adults—one of these probably of a male, and the other of a female. They were well formed, and of a large size; with healthy teeth, and their crowns worn nearly flat by the attrition of the hard description of food they had lived on. The skulls exhibited palpable evidence of having been subject to the long-continued action of moisture, as the greater part of the gelatinous constituent of the bone had disappeared, leaving the denser bones light, porous, and exceedingly brittle, and the less compact bones very friable, breaking down on the slightest pressure.

I subjoin tabulated measurements of the crania in inches and tenths; these include the extreme length, breadth, and circumference, &c. Their form will be rendered more evident by comparison with No. 1, the skull of an Asiatic.

Extreme length.	Measurement taken from the root of the nose, over the middle of the skull to the posterior edge of the foramen magnum.	Circumference of the skull, taken on a level with the superciliary arches.	Breadth of the base of the skull, taken from the lower parts of the meatus auditorius externus to the similar spot on the opposite side.	Distance from the meatus auditorius externus to the perpendicular height of the head by calliper compasses.	Distance from the meatus auditorius externus to the root of the nose.	Distance from the meatus auditorius externus to the middle space between the two last.	Distance from the meatus auditorius externus to the horizontal prominence behind.	Distance from the meatus auditorius externus to the middle space between the last and the perpendicular line.	
No. 1. 6 $\frac{9}{10}$ 14	19 $\frac{1}{2}$	4 $\frac{1}{2}$	5 $\frac{1}{10}$	4 $\frac{1}{10}$	4 $\frac{9}{10}$	4 $\frac{1}{10}$	4 $\frac{9}{10}$	Mussulman female, Bengal	
No. 2. 7 $\frac{1}{10}$ 14 $\frac{1}{10}$	22	—	5 $\frac{1}{10}$	4 $\frac{1}{10}$	5 $\frac{1}{10}$	4 $\frac{1}{10}$	5	Dunsinane, male	
No. 3. 7 $\frac{1}{10}$ 15	20 $\frac{1}{2}$	—	—	—	—	—	—	Dunsinane, female.	
No. 4. 7 14 $\frac{1}{10}$	19 $\frac{1}{10}$	3	4 $\frac{1}{10}$	3 $\frac{1}{10}$	4 $\frac{9}{10}$	4	4 $\frac{1}{10}$	Small skull, Dunsinane Hill	

No. 1. The skull of a Mohammedan female about sixty years of age. General size small; frontal region low and narrow; coronal and temporal small; parietal and occipital full. No teeth, and alveolar processes worn away. Bones of the skull thick, with sutures partially obliterated. Nasal and cheek-bones small and not prominent. Jaws well proportioned; and lower projecting considerably.

No. 2. Skull of an adult male, well formed, bones moderately smooth, thin, and very brittle, from the absence of animal matter. Teeth worn flat, with the exception of the wisdom teeth. The frontal, coronal, and temporal regions full and rounded; and the cerebellar moderately full. The cheek-bones and jaws large, and well-formed. Nasal bones small.

No. 3. Fine formed skull, probably of an adult female, much broken and very brittle. The frontal suture very distinct; and the frontal, temporal, and coronal regions full. Cerebellum rather small; and nasal bones small. The upper jaw small; teeth much worn—one of the wisdom teeth less so, the other fallen out during life. The orbits large and oblique.

No. 4 is the skull of a child, probably a female: not yet shed the first set of teeth, which have some tartar, and one of the molar teeth is carious. The bones of the skull smooth, thin, and completely ossified, and not quite so brittle as the adult skulls. The frontal region short and very narrow; coronal moderately high, parietal and occipital regions large. The coronal suture is separated on the left side a quarter of an inch, while the right side of the head is flattened and deformed. This injury must have been done before death.

These skulls had probably belonged to persons of low rank, as they had no implements of the chase, or personal ornaments buried with them, as was generally the case with individuals of condition. Had these chambers been inhabited by the earliest inhabitants of the country, we should most probably have found the remains of stone implements, which are very rarely found in such hill fortifications.

From these facts it would appear that there was a strong British fortification upon the Hill of Dunsinane, prepared by an ancient people, who had advanced so far in refinement as to have felt the importance of uniting in considerable bodies, to defend themselves against their powerful enemies. The number of such fortifications on each side of Strathmore, and the immense labour that must have been expended, and the quantity of charcoal and bones found in the example now under consideration, seem to prove that such "strengths" were places of resort to large numbers of persons, probably on sudden emergencies. The caverns may have been used for securing their food and most valuable effects, and were probably only occupied when the weather was very cold and stormy. This agrees with the description of similar chambers as used by the ancient Germans:—"Solent, et subterraneos specus aperire, eosque multo insuper fimo onerant, suffugium hiemi, et receptaculum frugibus, quia rigorem frigorum ejusmodi locis molliunt: et si quando hostis advenit, aperta populatur, abdita autem et defossa, aut ignorantur, aut eo ipso fallunt quod quærenda sunt."—(*Tacitus de Moribus Germanorum*, cap. 16.) The three skulls may have belonged to the same family, who had met with a sudden or violent death. We could suppose the infirm—probably the imbecile—child had been destroyed, and buried with its parents; a barbarous custom by no means uncommon among rude savage races.