

I.

MEGALITHIC MONUMENTS OF HOLLAND, AND THEIR RELATION
WITH ANALOGOUS REMAINS IN NORTHERN EUROPE. BY ROBERT
MUNRO, M.A., M.D., F.S.A. Scot.

The Museums of Holland are not rich in prehistoric remains, and with the exception of a remarkable group of rude stone monuments called *Hunnebedden*, found in the north of the country, Holland possesses no megalithic antiquities of any kind.

The Antiquarian Society of Amsterdam has a small collection of interesting curiosities, such as fine old carved furniture, silver cups, drinking horns, antique weapons, &c., none of which, however, date back beyond historic times.

In the Museum *Van Oudheden*, Leyden possesses a very good collection of general and ethnographical antiquities, of which the Egyptian department is most valuable. The museum occupies a ground floor and three upper floors, divided into eleven rooms, and contains, besides the Egyptian antiquities, Greek, Roman and Etruscan bronzes,

weapons, vases, sarcophagi, cinerary urns, statues, casts from the antique, models of tombs and other ancient structures. On the upper floor are exhibited all the objects of local interest in the Prehistoric department. Amongst these are some stone implements, bronze celts, variegated beads, combs with incised circles and running scroll patterns, and a considerable collection of iron objects. I was particularly interested to find here some iron knives and shears, and a three-pronged iron implement, similar to those found in the Ayrshire lake-dwellings. The latter, labelled "*Utrecht*," was only about twenty inches long, but in other respects, such for example as the twisted handle and curved prongs, it was almost identical with the Lochlee object.¹ Among some models on a central table in this room was one of a restored Swiss lake-dwelling, and another of a giant's grave or Hunnebed from the Drenthe. The latter, as well as some relics from the same district, would have been likely secured for the museum at the time when Dr Jansen was keeper of its antiquities. This gentleman had in 1848, published a valuable book, entitled *Drentsche Oudheden*, containing accurate measurements and a minute description of all the Hunnebedden then known in that district.

As the only account of these Hunnebedden, which I had read up to this time, was that given in Fergusson's *Rude Stone Monuments*, in which the author combats the commonly entertained opinion that they date back to the Stone Age, and assigns them to a more recent period, ranging "from the Christian era down to the time when the people of this country were converted to Christianity," I determined to settle my own doubts on this point, as far as possible, by a visit to the locality. Accordingly, on the morning of the 14th June, we started for Assen, the capital of the province of Drenthe, where, upon our arrival at the station, we had the good fortune to fall in with the inspector of police, Mr Kerkhoff, who spoke both French and English tolerably well. Under his guidance we first visited the local museum in the Townhall, which, though only a single room in the building, turned out to be a most interesting collection of prehistoric antiquities, many of which were said to have been found in the Hunnebedden. Among the objects

¹ See *Proc. Soc. Antiq. Soc.*, 1879, p. 230.

here exhibited were perforated stone hammers, and stone and flint hatchets of all sizes and the usual types. Some were made of grey granite, others of basalt or porphyry, and a few of jade; but, whatever material was used, they were all highly finished and more or less polished. Flakes, knives, arrow-heads, and spear-points, all of flint and of superior workmanship, as well as several specimens of the ubiquitous spindle whorl, were also represented. There were harp-shaped fibulæ, bronze knives, some plain celts, a few paalstabs with and without loops, and socketed celts with loops. Strings of variegated beads, well-shaped querns, perforated stone discs, and some rounded stones are also among the objects jotted down in my note-book. Pottery was well represented by a number of urns and some so-called "drinking cups." The former were occasionally adorned with straight or wavy lines; some had a bulging shape with ears half way down, and others were pointed below. Their contents appear to have been nothing more than ashes, earth, and fragments of bone.

After inspection of the museum, we took a carriage and drove to the village of Rolde, about four miles distant, near which, in a field are located, within a stone's throw of each other, two examples of the Hunnebedden. These are always accessible whatever the crop in the field may be, as the ground on which they stand, as well as a right of way to the nearest road, just sufficient for a narrow pathway, has been purchased by the Dutch Government. The first we came to was a very perfect specimen, as will be seen from the accompanying engraving from a photograph (fig. 1), which shows that all the capstones still rest on their supports. It is composed of seven large granite boulders transversely laid over a corresponding number of uprights on each side, and an additional one at each end. A few smaller stones, apparently as wedges, were inserted here and there to support the capstones, and in the space beneath, which would be about one yard in depth, and at least as much in breadth, were a few round stones like large cannon balls. In noting the external dimensions of this rude megalithic structure I made its length fourteen paces and its greatest breadth about four. A venerable-looking oak has taken up its quarters so close to it that its roots have overlapped one of the large side stones to such an extent that the tree

looks as if it grew on the stone. Two similar trees have taken possession of the other Hunnebed, and entwined their roots in a most fantastic manner over its stones. Hence these Rolde monuments are locally distinguished as the one-tree, and two-tree, Hunnebed. The large oak on the latter measures not less than 14 feet in circumference at its base, but it is now showing decided symptoms of decay. All the capstones in this Hunnebed have not retained their original position, the largest, a granite block over 6 feet long and 4 feet thick, having fallen down. On carefully inspecting their present position, it will be

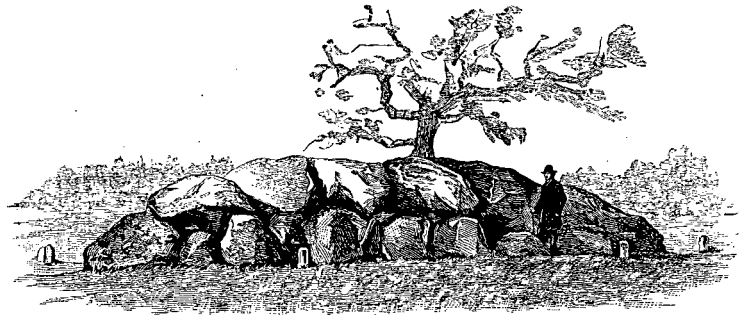


Fig. 1. Hunnebed at Rolde, Province of Drenthe, Holland.

seen that the original form of this monument, both as regards size and structure, must have been very similar to, if not identical with, that of the former.

On our way back we visited an artificial mound known as the Seat of Justice, situated in a young plantation on the other side of Rolde, and not many yards off the road to Assen. This traditionally ancient *forum*, or public meeting-place, consisted of a raised ring of earth, surrounding a bowl-shaped cavity, having a diameter of 20 yards and a depth of 7 or 8 feet. The surrounding ring, the maximum diameter of which was about 40 yards, was interrupted, on one side, by an opening a few yards wide, and as deep as the floor of the enclosed area to which it gave access.

The next Hunnebed, one of the most perfect specimens of the kind we saw, was at Tinarlo, near the railway station of Vries-Zuidlaren. It is built of eleven large stones, three of which are capstones, three at each side and one at each end, and stands prominently exposed on an open heath. Mr N. Westendorp states that urns and beads of amber were found inside its chamber, and broken pottery and burnt bones outside at the foot of the supporting stones.

With the exception of two, one at Noordlaren, in the province of Groningen, on the north-east, and the other at Gasterland, in Friesland, the entire group of these Hunnebedden, fifty-four in number, is confined to the Drenthe, extending in a south-eastern direction in the form of a band, some 20 miles long and about half this in breadth. The smallest is at Exlo, having only one capstone with four supports, and hence may be considered a true dolmen; while the largest is the Borger Hunnebed, with forty-five stones, ten of which are capstones. This giant structure was upwards of 70 feet long and 14 feet wide; and its largest stone measures 10 feet 10 inches by 8 feet 6 inches, and 4 feet 6 inches. Between these sizes the other monuments of the kind occupy an intermediate position ranging in a uniform gradation.

At Emmen there are several examples, one of which at first sight looks to be of enormous size, extending in length to not less than 125 feet. A closer inspection, however, proves it to be made up of three separate Hunnebedden placed in a row with a short interval between each.

The chambers enclosed by these large stones did not vary much in size, except, of course, in their length. Their average height was about 1 yard, and their breadth varied from 1 to $1\frac{1}{2}$ yard. The side stones were not always placed close together, spaces being occasionally left of sufficient width to allow a man's body to pass through. The inner surfaces of the stones were more or less flat and smooth, but in no instance did they appear to have been hewn or fashioned by the hand of man. They were constructed of selected boulders found scattered over the district, which, according to geologists, were originally transported from the mountains of Scandinavia during the glacial period.

Among some of the further notable peculiarities of the Drenthe monuments may be mentioned the following:—

1. They are universally admitted to have been closed at both ends ; and according to Mr L. Oldenhuis Gratama,¹ they were also higher and wider at their western extremity. This feature Mr Gratama has also observed in a sepulchral structure at Eexet.
2. When an entrance to the chamber existed, which was sometimes the case, it was always placed on the long side facing the south or sun. This entrance was constructed of two rows of stone, running parallel to each other, but at right angles to the main chamber, thus forming a sort of passage called by the Dutch archæologists "*Portail*."
3. As to direction there appears to have been no definite rule, notwithstanding that the majority have their long axis running east and west.
4. In some instances they were surrounded by a second range of smaller stones, not circularly disposed, but following at a little distance the course of the larger structure.
5. Only a few, and these the smaller examples, show indications of having been formerly covered by an earthen mound.

Considering the long exposed and unprotected condition of these monuments, it is not likely that any relics of intrinsic value would remain to the present time, even should they have escaped the plundering propensities of succeeding races ; hence their reported contents, though in some instances apparently well-authenticated, cannot be admitted as throwing much light on their age and purpose.

According to Mr I. Van Lier's report, published about the middle of last century, there were found in the Grafkelder, "three urns, four flint celts, a long chisel of flint, very Danish in type, and now preserved at Assen, a ball of ironstone (pyrites ?), and a flint arrow-head, also perhaps a pierced stone hammer."²

It is also recorded that in 1865 the poetess Titia Brongersma caused excavations to be made under the great Borger Hunnebed, when some

¹ *Compte Rendu, Cong. Intern. d'Anthrop et d'Arch. Prehistor.*, 7th Session, p. 269.

² *Proc. Soc. Antiq.*, 1872.

broken urns were found. Mr Franks, however, says that none of the urns at Assen can with certainty be attributed to the Hunnebedden; but, on the other hand, it seems to be unquestionably accepted as a fact that stone and flint axes, and other implements usually associated with the Stone Age, have been found in them. No traces of bronze or of any kind of metal have ever been found in any of them. In the following extract Mr Franks expresses his opinion of their age:—"I entirely dissent from Fergusson's view. The similarity of the pottery to that known to belong to the Stone Age; the presence of numerous barrows with later pottery, of quite a different character, in the same district; and the discovery of urns exactly like our Anglo-Saxon urns, but not buried in barrows,—all seem to me sufficient to show that Drenthe has passed through many of the same stages of civilisation as the other parts of Europe, and the age of the Hunnebedden seems to me unquestionably far anterior to the Christian era."¹

Mr Alfred Saddington, the author of an article in the *Journal of the British Archaeological Association* for 1870, gives as his opinion, one, however, shared with other writers, that the Hunnebedden were originally covered with earth, and that the outer range of smaller stones, sometimes still extant in some of them, defined the basis of the tumulus. On this point Mr Fergusson says—

"The first question that arises with regard to these Hunnebeds is, were they originally covered with earth or not? That some of the smaller ones were and are is clear enough, and some of medium size are still partially; but the largest, and many of the smaller, do not show a vestige of any such covering; and it seems impossible to believe that on a tract of wretched barren heath, where the fee-simple of the land is not now worth ten shillings an acre, any one could, at any time, have taken the trouble to dig down and cart away such enormous mounds as would have been required to cover these monuments. It seems here clearer than almost anywhere else, that even if it had been intended to cover them, that intention in more than half the cases was never carried into effect."—*Rude Stone Monuments*, p. 321.

With these remarks of Mr Fergusson I entirely agree, and any person who looks on the Hunnebed at Tinarlo, standing on a flat barren heath, which at all times must have been as totally incapable of cultivation as

¹ *Proc. Soc. Antiq.*, 1872.

it now is, cannot, I think, arrive at any other conclusion; certainly the common and most feasible explanation of their present denuded condition, viz., that the surrounding tumuli have been dissipated for agricultural purposes, has no force whatever when applied to this case.

During the years 1866-7-8 these monuments were threatened with complete destruction, owing to the peasants having commenced to break up their stones for road metal. By the timely intervention, however, of Mr Oldenhuis Gratama of Assen, who drew the attention of the public authorities to the circumstance, this misfortune was averted by a State decree ordering the land on which they stood to be forthwith purchased.¹ This was accomplished at a very considerable expense, and as speedily as possible, and now the Hunnebedden are not only preserved for all time coming, but always accessible to visitors—thanks to the enlightened liberality of the Dutch Government. Since then the Hunnebedden have attracted much attention, and become the subject of many articles in archaeological journals. As an important addition to their literature, I am glad to be able to announce, on the authority of the author, Mr Gratama, to whom I have already referred in this paper, that another brochure on the subject will shortly appear.

The mystery which surrounds the Drenthe megalithic monuments is, however, partially if not altogether, removed by a comparison between them and analogous remains in other countries. By attaching a wider signification to the word dolmen than that which limits it to a rude cromlech supported on a few uprights, we have seen that the Drenthe group may be subdivided into two sections, according as they have or have not an entrance passage. Now it is worthy of note, that while dolmens without a *portail* are found over a very large area, extending along the shores of the Mediterranean and German Oceans from Palestine to Scandinavia, those with a gallery are chiefly confined to the north and north-west of Europe, finding their greatest development in the south of Scandinavia, North Germany, Brittany, and the British Isles.

Certain stone monuments in Brittany, locally known as *allées couvertes*, as for example, the Roche-aux-Fées, about 20 miles from Rennes, which

¹ "Open Brief aan het Collegie van Gedeputeer de Staten van Drenthe over de Zorg Voor en het Onderhoud der Hunnebedden." Assen, 1868.

is no less than 60 feet long, are distinguished from the Drenthe group by having an entrance at one of the extremities instead of at the side. On the other hand, the northern megalithic monuments include specimens of all the varieties found in the Drenthe, with this additional element, that those having a gallery are either partially buried in earth, or, as is often the case in Denmark, entirely covered by a tumulus. Mounds of the latter description generally go under the name of Giants' Graves (Jettestuer). One of the finest specimens of this kind is situated in a field at the village of Öm, near Roskilde, which, when in the vicinity, I took the opportunity of visiting. Its position is conspicuously marked by a conical mound protected at its base by a circular stone wall, and completely overgrown with trees and bushes—oak, ash, wild-cherry, rowan, raspberry, and other smaller shrubs. The entrance to the chamber is by a wooden gate (modern of course), which is always kept locked, and the key deposited in an adjacent farm-house. From this gate a narrow passage flanked with stones, at first open above but gradually getting covered, leads to the interior. When the thick darkness was dispelled by lighting a few candles kept in readiness in suitable corners, we had an opportunity of scanning the walls of this mighty, and no doubt once sacred, home of the dead. But nothing remained to indicate what its former contents were. The floor was covered with flint, gravel, and some flat stones apparently embedded in clay. The chamber was of an oval shape, measuring about 8 yards long, 3 broad, and rather over 6 feet high. The roof, which was formed of four immense blocks, was supported by fifteen stones set on end, which thus completed the entire circumference of the chamber. These latter were as close to each other as their natural edges admitted of, and the spaces between were neatly built up by small stones apparently split and prepared for their respective positions. All the large stones in the structure were selected and arranged so as to present a comparatively flat and smooth surface to the interior. The opening or inner end of the passage leading to the chamber was formed of two side stones, about 30 inches apart, and nearly 4 feet high, with one stone above as a lintel. Had the soil been entirely removed from this structure it would have presented a *fac-simile* of one of the larger Hunnebeds of the Drenthe.

Another point which greatly strengthens this association is the geographical position of the Drenthe monuments, which shows that, while they are widely separated from the analogous remains in Brittany and the south-west of France, they just skirt the south-western edge of the great northern region of megalithic remains. Whatever therefore archaeological research has done, or may yet do, in elucidating the history, purpose, and general phenomena of the latter, may be held as applying with equal certainty to the straggling group in the Drenthe.

The northern or Scandinavian area of these monuments, to which I now direct attention, occupies a well-defined region on the western shores of the Baltic, including Denmark, the southern provinces of Sweden, Sleswig, Holstein, and the north of Holland, and from the latter kingdom they extend eastwards through Hanover, Mecklenburg, and Brandenburg to the isle of Rügen. According to Virchow,¹ not a trace of them is to be found beyond the River Oder, while on the south their limit is exactly defined by the central mountains of Germany, to which they run up as a narrow band on the left bank of the Elbe.

In Denmark they are generally described as consisting of two classes—(1) Dolmens or Cromlechs, and (2) Jettestuer or Giants' Graves. "The former are elevated mounds surrounded by a number of upright stones, on the top of which are erected chambers formed of large blocks of stone. The mounds are either circular or oval, and hence they are called Runddysser or Langdysser. The former, or circular mounds, are smaller than the latter, and contain one stone chamber composed of one capstone usually supported on five uprights. On the other hand, the long monuments vary greatly in size, but, generally speaking, are from 60 to 120 feet in length, and from 16 to 24 feet in breadth. In a few instances, however, these measurements have been greatly exceeded. Sometimes they contain three stone chambers, a large one in the middle and a smaller one at each end. The majority, however, have two, but when the number is reduced to one it is remarkable that it is always placed at one end, whatever the length of the mound may be. Thus at the Clelund field in the district Lindkund, in the domain of Ribe, there exists a

¹ *Compte Rendu*, Cong. Intern. d'Anthrop. et d'Arch., Session 7th, p. 215.

stone enclosure which is about 370 feet in length,¹ in which, however the stone chamber is situated only 40 feet from the south-west end."

The stone chambers are formed of a capstone resting on several supports placed in a circular manner. "The capstone is often from 30 to 40 feet in circumference, and 8 to 10 feet in length; the side of it which is turned underneath, and forms the roof of the chamber, has always a smooth flat surface, while the side turned uppermost is almost always of a very irregular form. The supporting stones are also flat only on the side which is turned to the chamber. They commonly fit close to each other, the small openings, which, from the nature of the material, may occur between them, being stopped up with flat pieces of stone placed one upon the other. The usual height of the supporting stones is from 6 to 8 feet and their breadth from 2 to 3 feet; their number depends on the height of the chamber; they are usually from four to five, but occasionally about fifteen have been met with in one of those structures; whence it follows that such a chamber must have had more than one roofing stone. The floor of the chamber itself is paved partly with flat stones, and partly with a number of small flints which appear to have been exposed to a very powerful heat. The chambers are either quite round, from 5 to 7 feet in diameter, or they are oval and from 12 to 16 feet in length, or they are merely formed of their supporting stones, so placed that the two longest form the side walls and the shortest the capstone at the end. Entrances of regular form, enclosed with blocks of stone, provided with a roof, and leading to the chambers of the long cromlechs, are very rare, and are met with only in the largest of them. There is in general an opening between two of the supporting stones, which is sometimes indicated externally by two flat stones placed upright, or occasionally by a row of stones placed alongside of the hill and leading to such entrance."²

The giants' graves are similar monuments, but greatly enlarged, having several capstones and an entrance passage, also formed of large stones, and opening towards the east or south. They are more or less covered with earth, such as we have seen in the example at Öm, and enclose a chamber or sometimes two chambers of an oval or circular form, and

¹ Worsaae's *Primeval Antiquities*, p. 81.

² *Ibid.*, p. 80.

varying in size from 16 to 24 feet in length, and from 5 to 8 feet in breadth. When the earth with which the chambers are filled is removed they are found to be sufficiently lofty to admit of an adult person standing upright. Among this earth, the object of which was "to protect the repose of the dead in their grave," are found unburnt skeletons, implements, weapons, and ornaments of flint or bone, pieces of amber, and coarse vessels of clay, all of which are precisely similar to the remains discovered in the simple dolmens. According to Danish archæologists, all these megalithic monuments belong to the Stone Age, and are still abundantly found in the country, though many have been destroyed to make room for agricultural purposes. "They are most frequently met with on the coast, particularly on the north and west coast of Seeland, on the coasts of Fühnen, in the north of Jütland at the Lümfjord, particularly in the domain of Thisted, as well as along the east coasts of Jütland, Sleswig, and Holstein.¹ They occur more rarely on the west coasts, and still more seldom in the interior of the country."

The Stone Age burials of Sweden are confined to a few provinces in the south, chiefly Skåne, Hallande, Vestergötlande, and Bohuslan. They are of four different kinds, and number in all about 500.²

- (1) Dolmens constructed like those in Denmark and so-called structures in other countries. This kind of monument is generally placed on a mound, of an oval or circular shape, and has the chamber partially covered with earth. These mounds are always surrounded by a line of large stones.
- (2) The second kind is distinguished from the first by having a covered entrance to the chamber looking east or south, and the whole structure covered with earth except the top. They are very rarely entirely covered up like the giants' graves in Denmark. They vary greatly in size. The largest, situated near the church of Karleby, Vestergötlande, has its chamber roofed over by nine blocks of stone, and measures 18 yards in length, with a breadth of rather less than 8 feet. The entrance passage is 13 yards long.

¹ Worsaae's *Primeval Antiquities*, p. 78.

² See article by Oscar Montelius, *Compte Rendu*, Cong. Intern. d'Anthrop. et d'Arch. Prehist., Session 7th, p. 152.

- (3) The third kind of burials consists of large cists constructed of flagstones, and surrounded by, but not entirely covered over with earth. They differ from the previous graves by being constructed of flagstones instead of massive blocks, and having no entrance passage. These also vary in size, being from 8 to 34 feet long and about 3 to 8 feet broad.
- (4) The fourth kind is similar to the third, but smaller, and their distinguishing character is that they are always covered by a tumulus.

Besides these, other forms of burial are occasionally met with, belonging to the Stone Age, in which the body was simply committed to the ground without any stone protection, either megalithic or otherwise.

It was customary in all these burials to deposit weapons, implements, or ornaments beside the body when laid in the tomb, and the body was sometimes placed in a recumbent or sitting posture. Cremation was not practised in Sweden, according to Oscar Montelius, during any part of the Stone Age, and the habit did not become the rule till the second Bronze Period.

It would thus appear that there is only a chronological difference between these varieties of tombs, the *sepulture à galerie* being a mere development of the primitive dolmen, which in the subsequent Bronze Age gave way to the ordinary barrow, suitable for the protection of urns, and which at a still later period, during the Iron Age, gave place to the ship-burials, cairns, and large tumuli, characteristic of the pagan Vikings, as manifested in the great mounds of Thor, Odin, and Freya at Gamla Upsala, and at Gokstad on the Sandefjord—the scene of the recent discovery of the famous Viking ship.

Hanover, Oldenburg, and Mecklenburg, are very rich in monuments similar to the Stone Age burials of Denmark and Sweden, as already described. At Riestedt, near Ulzen, in Hanover, there is, on the summit of a tumulus, a very singular dolmen of an oblong form, which measures about 40 feet long and over 6 feet in breadth. Another at Naschendorf, near Wismar, consists of a mound surrounded by a large circle of stones and a covered chamber on its summit. Remains of a megalithic structure at Rudenbeck, in Mecklenburg, though now imperfect, show that

originally it was constructed like an *allée couverte*. It had four supports on each side, two at one end (the other end forming the entrance), and two large capstones. The length would have been about 20 feet, breadth $7\frac{1}{2}$ feet, and height from the floor to the under-surface of roof about 1 yard. According to Bonstetten, no less than two hundred of these monuments are found distributed over the three provinces of Luneburg, Osnabruck, and Stade; and the most gigantic examples in Germany are in the Duchy of Oldenburg.¹

Of the existence and appearance of similar antiquities in the district around Stralsund and the Isle of Rügen, the four photographs now exhibited will be sufficient evidence. They were originally taken for Dr Rudolph Baier, keeper of the Stralsund Provincial Museum, to whom I am indebted for duplicates.

The contents of these monuments are said to be everywhere the same. Just as in Denmark and Sweden, unburnt bones, stone implements, bits of amber, fragments of pottery, &c., reward the explorer, if he should be fortunate enough to find a grave that has not been previously opened.

There is just one word of precaution here necessary to prevent confusion between the sepulchral phenomena hitherto described, and those of the subsequent Bronze and Iron Ages. According to Dr Worsaae, cremation was the outcome of higher and more advanced religious principles than characterised the inhabitants of the Stone Age, who, as we have seen, buried their dead in the megalithic tombs along with food vessels, weapons, ornaments, and such articles as were supposed to be serviceable in the life beyond the grave. This innovation appears to have been introduced into Denmark towards the beginning of the Bronze Age, and, generally speaking, corresponds with the entire duration of the period in that country. But both forms of burial appear to have been prevalent, at least at the commencement of the Bronze Age. The unburnt body was deposited either in a stone cist or a wooden coffin. The latter was made out of a stout oak log, split into two portions, one of which was scooped out like a canoe sufficiently deep to contain the extended body, and the other used as a cover. Several of these singular

¹ See Bonstetten's *Essai sur les Dolmens*.

coffins have been found not only in Denmark, but also in North Germany and England, and their contents, owing to the preservative quality of the tannin in the oak, rank amongst the best preserved and most remarkable antiquities in Europe. The adoption of cremation as the general rule of burial must have occupied a considerable time, and was followed by a corresponding change in the outward ceremonies. The circles of massive stones and megalithic chambers entirely disappear, and, with the exception of small stone cists sufficient to protect the urns, no large stones, either externally or internally, were made use of. Their external appearance is commonly that of mounds or barrows of mere earth, or earth and stones, which, on being explored, are found to contain the relics of burnt bodies, placed in vessels of clay with objects of metal. The mounds of the Bronze Period occur in great abundance both in the islands and mainland, and differ in no marked degree from the tombs of the Iron Age. The only noteworthy difference is that in graves of the Iron Age cremation is abandoned, and the early form of interment, viz., that without burning the body, is restored. Hence in Denmark, while the age of burning corresponds with that of Bronze, the age of interment is as characteristic of the Iron as it is of the Stone Age.

On the other hand, in Norway, where only one dolmen has hitherto been discovered, and in those northern provinces of Sweden already excluded from the region of megalithic monuments, cremation was practised for a much longer period, and lingered on amongst the pagan Vikings, long after it had been abandoned in Denmark, and hence in the northern regions it became coeval with the Iron Age. The Norwegian burials, with few exceptions, belong to the Iron Age, and contain weapons and implements of iron, shell-shaped brooches, beads of glass, and filigree-work, as well as other kinds of ornamentation peculiar to the Iron Age. Indeed, this scantiness of the stone and bronze burials, and the abundance of those of the Iron Age, is one of the most striking features of Scandinavian archæology. According to Mr Lorange, the latter are found on the slopes of all the valleys, even the most secluded, from Christiansand to the North Cape.¹ They generally occur as low mounds

¹ *Compte Rendu*, Cong. Intern. d'Anthrop. et d'Arch. Prehist., Session 7th, p. 64 *et seq.*

of small stones (cairns), or stones and earth mixed, and are sometimes surrounded by a circle of stones. In external form they are circular, oval, triangular or quadrangular; and when near the sea often assume the shape of a ship, indicated by a large standing stone at each end, and sometimes one in the centre representing a mast. Mr Lorange divides the Norwegian ones, many of which he has explored himself, into three kinds based on the arrangement of the bones and relics, the character of these relics and the presence or absence of Roman or Byzantine remains.

In the first class there is no chamber. The bones are burnt, and generally put into earthen vases. The objects, which consist of small ornaments of bronze and iron, and sometimes small glass beads of a style and workmanship devoid of any trace of Roman influence, are always burnt along with the body.

The second class is distinguished by small square chambers formed of flagstones, and contain the ashes of the dead, generally in bronze vases. The ornaments, which now show a decided Roman origin, are not subjected to the action of fire; but any weapons, such as spears, swords and bucklers, appear to have been first bent and twisted, and then thrown into the burning pile. One of the bronze vases had a Roman inscription. Another beautiful vase was found in a tumulus at Fycklinge, Vestmanland, in Sweden, in 1818, with the following inscription:—*APPOLLINI GRANNO DONUM AMMILLIUS CONSTANS PREFECTUS TEMPLI IPSIUS VOTUM SOLVIT LIBENTISSIMO MERITO.*¹

The third kind has larger chambers formed of flags. The bones are sometimes burnt and sometimes unburnt, and all the objects deposited in the graves are carefully arranged without any trace of having passed through the fire. The urns are of baked clay, bronze, or glass, and the articles are of native manufacture, but in imitation of Roman art. Characteristic bracteates, swords, and lance-heads now make their appearance, upon which is introduced the later Iron Age, with its well-known Viking burials.

In conclusion, it appears to me to be fairly well established from the above facts and arguments that the Drenthe Hunnebedden were the outcome of the same general system of Stone Age civilisation which pro-

¹ *Antiquités Suédoises*, par O. Montelius, fig. 372, *a*.

duced the analogous remains in Denmark and Southern Scandinavia. With regard to the exposed condition of the former, it is difficult to form an opinion whether this was their originally intended condition, because we have no evidence to disprove the theory, that the earthen mounds now surrounding the giants' graves of Denmark were a subsequent and much later addition to the stone monuments. All that can now be said is, that if the Drenthe monuments were surrounded by earthen mounds, many of them would be identical with the Danish chambered tumuli; and, on the other hand, if the latter were denuded of their surrounding earth, the remaining stone skeletons would be identical with the former. The whole question becomes still more obscure when we consider that ordinary dolmens or cromlechs, so widely scattered over Western Europe, are almost invariably exposed, and exhibit hardly any traces of a mound. It is only when the dolmens become more elaborate in structure that we find some of them partially and others entirely covered up with earth, in which latter case there usually exists an entrance passage. Hence it would appear that the tumulus is a later phase of the megalithic burials, which ultimately altogether supplanted the megalithic portion of the structure. As protection of the dead body must have been the main object of all sepulchral structures, it cannot be supposed that an exposed dolmen would be sufficient for this purpose; hence the chief question that remains to be solved is, What additional protection was used by the dolmen builders? a question which, however, must be deferred to some other time.