

PART IV.

GENERAL INFERENCES.

In reference to the lapidary concentric ring-cuttings and cup-cuttings in Scotland, &c., I will take the liberty of adding a few general observations about their possible import or meaning, their date, &c.

CHAPTER IX.—IMPORT OF THE RING AND CUP SCULPTURES.

Of the real objects or meaning of these stone-cut circles and cups we know as yet nothing that is certain. They are archæological enigmata which we have no present power of solving; lapidary hieroglyphics and symbols, the key to whose mysterious import has been lost, and probably may never be regained. But various doctrines and hypotheses which have been proposed as to their origin and object necessarily require more or less consideration on our part.

They have been supposed, for instance, by the Rev. Mr Greenwell, Sir Gardner Wilkinson, Dr Graves, and others, to be archaic maps or plans of old circular camps and cities in their neighbourhood, telling possibly of their direction and character—"such (observes Sir Gardner Wilkinson) as are traced in time of danger by the Arabs on the sand to guide the movements of a force coming to their direction" (Journal of British Archæological Association for January 1860, p. 109). But I believe this idea has now been abandoned as untenable by some, if not by all, of the antiquaries who first suggested it.

The carvings have been held by some as intended for dials, the light of the sun marking time upon them,—or upon a stick placed in their central cups,—and its shadow corresponding with one of the central radial grooves; but they have been found in localities which neither sun nor shadow could reach, as in the dark interiors of stone sepulchres and underground houses. Others have regarded them as some form of gambling table; but they occur on perpendicular and slanting, as well as flat rocks; and besides, if such were their use, they would scarcely have been employed to cover the ashes of the dead.

I have heard them spoken of as rude representations of the sun and stars, and of other material and even corporeal objects¹ of natural or Sabeen worship; but all attempts to connect the peculiar configurations and relations which they show with any celestial or terrestrial matters have as yet confessedly failed. Nor have we the slightest particle of evidence in favour of any of the numerous additional conjectures which have been proposed,—as that these British cup and ring carvings are symbolic enumerations of families or tribes; or some variety of archaic writing; or emblems of the philosophical views of the Druids; or stone tables for Druidical sacrifices; or objects for the practice of magic and necromancy.

My friend Mr Dickson of Alnwick has, in some archæological observations relating to the incised stones found upon the hills about Doddington, Chatton, &c., “suggested that these carvings relate to the god Mithras (the name under which the sun was worshipped in Persia), that about the end of the second century the religion of Mithras had extended over all the western empire, and was the favourite religion of the Romans,” a system of astrological theology; that in the sculptured Northumberland rocks the central cup signifies the sun, “the concentric circles, probably the orbits of the planets;” and the radial straight groove “the way through to the sun.” In consequence, Mr Dickson holds these rock sculptures to be “the work of the Romans, and not Celtic,” having been cut, he supposes, as emblems of their religion by Roman soldiers near old British camps, after they had driven out their native defenders. But if they were of Roman origin, they would surely be found in and around Roman stations, and not in and around British localities—in Roman graves, and not in old British kist-vaens. The fact, however, is that they abound in localities which no Roman soldiers ever reached, as in Argyleshire, in Orkney, and in Ireland. And possibly even most of them were cut before the mythic time when Romulus drew his first encircling furrow

¹ Two archæological friends of mine—both dignitaries in the Episcopal Church—have separately formed the idea that the lapidary cups and circles are emblems of old female Lingam worship, a supposition which appears to me to be totally without any anatomical or other foundation, and one altogether opposed by all we know of the specific class of symbols used in that worship, either in ancient or modern times.

around the Palatine Mount, and founded that petty village which was destined to become—within seven or eight short centuries—the Empress of the civilised world.

Some archæologists have attempted to carry back the lapidary cuttings to the influence of an eastern race, who appear to have known the west, and perhaps the north, of Europe, for several centuries before Rome even was founded, and who are imagined to have cut the lapidary rings, not for the worship of the Persian god Mithras, but of the Phœnician god Baal. From its novelty and peculiarities this theory requires a more detailed consideration from us than any of the preceding suggestions.

CHAPTER X.—THEIR ALLEGED PHŒNICIAN ORIGIN.

The chief supporter of this theory of the Phœnician origin of the cup and ring cuttings is the eminent Swedish archæologist, Professor Nilsson, to whom I have already referred in chap. viii. He holds that the Druidism or Druidical worship, which Julius Cæsar found prevalent in Gaul and Britain at the time of his invasion of these countries (*viz.*, upwards of half a century before the Christian era), was a form of religion that never reached Scandinavia, and which at that time was—relatively, at least—recent in England and France, being only, perhaps, two or three centuries old, and fundamentally a younger type of a more ancient and oriental creed. For he believes that anterior to Druidism in Britain there existed here, and in the north of Europe,—as a result of Phœnician commercial intercourse and colonisation,—a form of eastern Solar worship; that our megalithic circles, &c., were reared by these Sun worshippers, and not by the Druids—for in none of the classical notices of Druidism are these stone circles ever distinctly alluded to, whilst they exist in many countries where neither Celt nor Druid was ever known;¹ that Stonehenge, Abury, &c., were erected as Sun

¹ Stone circles have been found in almost every country in the old world, from Greenland southward. Nor are ancient circles of this kind wanting even in Australia. My friend, Mr Ormond, informs me, that he has seen many, especially in the district near the Mount Elephant plains, in Victoria. “The circles (Mr Ormond writes me) are from ten to a hundred feet in diameter, and sometimes

temples to the Phœnician Sun-god, Baal; and that our lapidary ring-cuttings on the stones of New Grange and Dowth, and upon the rocks of Northumberland, &c., are also the work of these Sun worshippers, and were cut for the purpose of symbolising the sun;—the single central cup and central ring indicating the solar luminary, and perhaps each additional circle afterwards added around this solar figure, recording and honouring—as he suggests—the death of some near relative.¹ Professor Nilsson further maintains that this supposed Solar worship in Western and Northern Europe prevailed during the Bronze era; and that circular or concentric figures and designs upon ornaments, implements, weapons, &c., are invariably associated in these European countries with the Bronze age, and consequently with the era of Sun worship,—except where they have descended, and been adapted to articles of the Iron age, as designs which were ornamental merely, and without any inner signification.²

In relation to these opinions let me here observe, that it seems to be a fully established fact in ancient history that, on the shores of the Atlantic Ocean, the Phœnicians founded Gadir, Gadeira, or Gades (Cadiz),³ about

there is an inner circle. The stones composing these circles, or circular areas, vary in size and shape. Human bones have (he adds) been dug out of mounds near these circles. The aborigines have no traditions regarding them. When asked about them, they invariably deny knowledge of their origin."

¹ See his *Skandinavisk Nordens Ur-Inväare*, p. 143.

² Professor Nilsson has published at length his observations on the early Phœnician intercourse and colonisation of Western and Northern Europe in the essays already referred to at p. 73, *ante*.

³ For the special historical data proving the date of the founding of Gadeira, see Mr Kenrick's scholarly and learned history of "Phœnicia" (p. 125, &c.), or the more extended work, "Die Phœnizier," of Professor Movers of Breslau, vol. ii., p. 147, &c. "The foundation," remarks Mr Kenrick, "of Gades by the Tyrians, twelve centuries before Christ, is one of *the* best attested facts of such ancient date" (p. 209). In Strabo's time (20 B.C.), Cadiz, which, after six or seven centuries, had become a Carthaginian, and ultimately a Roman conquest, was still, according to him, a city second only to Rome in population; and, as a proof of the extent of Phœnician colonisation in Southern Spain, he states (iii. 11, § 18), that "the whole of the cities of Turdetania and the neighbouring places" in the Spanish Peninsula, were in his days inhabited by the Phœnicians,—including under that term, as he always does, the inhabitants of Carthage, as well as those of Tyre and Sidon. See

eleven or twelve centuries before the commencement of the Christian era; and this colony or city was not perhaps, by one or two centuries,¹ the earliest of the many Phœnician settlements² established upon the coast of Tartessus, Tarshish, or Southern Spain. We know that the powerful and wealthy city of Tyre, "the crowning city," whose "merchants are princes," and itself "a mart of nations" (according to the striking language that, seven or eight centuries before Christ, Isaiah uttered in regard also Mr Grote in his *History of Greece*, vol. iii. p. 374, as to these towns being "altogether Phœnicised." Strabo mentions (iii. 11, § 6), that the largest merchant ships which in Roman times visited the ports of Naples (Dicaearchia) and Ostia were the ships of Turdetania—representatives, as they were, of the ancient "ships of Tarshish," a name given to large vessels in ancient Biblical times, apparently on the principle that all commercial ships of unusual size were, in Great Britain, thirty or forty years ago, called "East Indiamen," whether they traded eastward or not.

¹ "Phœnicia," observes Mr Kenrick, "had, no doubt, been enriched by intercourse with Tartessus during the [anterior] period of the ascendancy of Sidon, before any attempt was made to obtain a permanent establishment there" (p. 124). The mention of Tarsis as a gem in the breastplate of the Jewish High Priest (Exodus xxviii. 20), shows that precious stones were already imported from Spain to the East as early as about fifteen centuries B.C. (see Kenrick's *Phœnicia*, p. 118, and Professor Mover's "Die Phœnizier," Band ii. p. 592). "We are therefore, surely," observes a cautious and critical writer, Sir John Lubbock, "quite justified in concluding that between B.C. 1500 and B.C. 1200 the Phœnicians sailed into the Atlantic and discovered the mineral fields of Spain and Great Britain" (see his *Prehistoric Times*, p. 46). Homer represents Sidon as abounding in works of bronze (ἐκ Σιδῶνος πρὸν χαλκόν) at the era of the Trojan war (*Odys.* xv. 424).

² "Scylax (c. 1), whose *Periplus* was composed about 340 B.C., mentions," observes Sir Cornwall Lewis, "many factories of the Carthaginians to the west of the Pillars of Hercules, apparently on the European side."—(*Astronomy of the Ancients*, p. 449. See also Strabo in Note 2, p. 82, *ante*). Eratosthenes speaks of the coasts of Mauritania (southward from Cadiz and the Straits of Gibraltar), as containing in early times 300 Phœnician settlements (see Kenrick's *Phœnicia*, p. 135; and Grote's *Greece*, vol. iii. p. 367). Sir Cornwall Lewis lays down the voyage of Hanno, whose *Periplus* is extant, as being partly for the foundation of colonies, and partly for discovery. "He is supposed," adds Sir Cornwall, "to have sailed along the [Atlantic] coast as far as Sierra Leone, and according to the best considered conjecture, his expedition took place about 470 B.C."—(*Astronomy of the Ancients*, p. 454). The Rev. Isaac Taylor, in his work on "Words and Places," points out Phœnician names running along the Atlantic coast of Africa (p. 39. See also Mover's "Phœnizier," vol. ii. p. 534).

to it), had in her fairs—as Ezekiel witnesses, about 600 years B.C.—“silver, iron, tin, and lead,” from Tarshish; and further, that Tarshish was then her merchant, “by reason of the multitude of all kinds of riches” (Ezekiel xxvii. 12). Further, there is the greatest probability, if not certainty, that the tin—alluded to in Ezekiel—which was sometimes used as a metal by itself,¹ but which was far more indispensably necessary in the formation of bronze²—one of the most valued and popular metals in these and in still more ancient times³—was derived either from the

¹ *Tin by itself.*—In ancient times tin seems to have been used sometimes by itself, as well as in the form of alloy. The earliest separate mention of it as a metal is about 1450 B.C., when it is enumerated among the spoils taken by the Hebrews from the Midianites (Numbers xxxi. 22). Homer describes Agamemnon’s corselet as containing twenty rods or bars of tin (*Iliad*, xi. 25), and his shield as showing twenty bosses of the same metal (*Il.* xi. 34). The greaves of Achilles were made, we are told, of ductile tin (*Il.* xliii. 612, and xxi. 592), and his shield is represented as having been welded of five layers, the two innermost of which were of tin (*Il.* xx. 271); while some of the devices moulded upon its surface were formed of tin, as the fence round the vineyard (*Il.* xviii. 564). Tin is represented also by Homer as entering into the composition of the chariot of Diomedes (*Il.* xxiii. 503). In ancient times, let me add, it was not always employed in the formation of bronze and metallic implements. Thus, it has been lately ascertained that the glaze of the bricks of Babylon and Nimrod contain an oxide of tin; and these bricks are supposed to have been made about six or eight centuries B.C. (see Kenrick’s *Phœnicia*, p. 455).

² Bronze generally contains about 88 or 90 per cent. of copper, and 10 or 12 per cent. of tin. “It is remarkable,” observes Mr Kenrick, p. 213, “that the same proportions result from the analysis of the bronze instruments found in the sepulchral barrows of Europe, of the nails which fastened the plates with which the treasury of Atreus at Mycenæ was covered, and of the instruments contained in the tombs of ancient Egypt. . . . In the mirrors of the ancient Etruscan tombs the proportion of tin is sometimes as high as 24 or even 30 per cent.” (See more instances of the composition of ancient bronzes in Smith’s *Dictionary of Greek and Roman Antiquities*, 2d edit. p. 25.)

³ In our English Bible, the Hebrew word “nahas,” signifying bronze, has been translated brass. But brass, a metallic alloy of copper with zinc, was probably little, if indeed at all, known in these ancient times, as one of its components—zinc—seems to have been undiscovered (see Dr Percy’s *Metallurgy*, Part i. p. 519). Some of the Biblical notices of the use of bronze—and hence of the import of tin—are both early and remarkable. Shortly after the Israelites left Egypt, about 1490 B.C., the women gave up the mirrors of polished bronze which they had brought from Egypt

streams and mines of Spain, or the far richer stores of Cornwall, or the Cassiterides;¹ and that the Phœnician amber trade was conducted from a

(see the composition of Egyptian bronze in preceding note) to form the brazen laver (Exodus xxxviii. 8); and at the building of Solomon's temple, about 1000 B.C., the Phœnician metallurgists cast, of bronze, enormous pillars, a molten sea supported by twelve oxen, lavers upon wheels, &c.,—works which would test the skill of the best modern artificers in metals.

¹ TIN, *whence derived in ancient times.*—Till some later discoveries in metallurgy, only two or three portions of the earth were known to contain tin in any available or marketable quantity, namely, first, Banca, and other adjacent islands in the Straits of Malacca, in the East Indies; secondly, Drangiana or Sejestan, Persia; thirdly, Spain and Portugal; and fourthly, the Scilly Isles, Cornwall, and the adjoining part of Devonshire. From which of these localities was the tin which was used in ancient times derived?

First, We have the very best reason for knowing that in former times the tin used by the civilised nations that were spread along the shores of the Mediterranean was not derived from Banca or the East. In Arrian's "Periplus of the Erythræan Sea," we have recorded with all the minutiae of a modern invoice the exact articles of traffic carried backwards and forwards between Egypt, Ceylon, Africa, India, &c., some eighteen centuries ago. In these authentic documents we have various notices of tin as a recognised article of merchandise. We find it, for example, as an article of commerce at the following emporia, namely, Canè, on the southern coast of Arabia; Barygaza, at the mouth of the Nerbudda (north of Bombay); and at the port of Bacaré, on the Malabar coast. But then, at these points, instead of being carried from the East to Egypt, it is invariably entered in them as exported from Egypt to them. The trade in tin at these parts is from the West to the East, and not from the East to the West, though in this latter direction, in these invoices, we have articles entered from the farthest parts of India, and even from China. If tin had in ancient times ever been brought commercially from Banca—where the supply is abundant—the knowledge of the locality of such a rich and valuable commodity would never have been lost.

Secondly, Strabo, writing about 20 B.C., states regarding the district of the Drangæ:—"Tin is found in the country" (Book xv. chap. 11, § 10); but, according to his able translators, Messrs Hamilton and Falconer, "none is said to be found there at the present day" (see Bohn's edition, vol. ii. p. 126.) We have no authority, so far as I am aware, except that of Strabo, as to tin being found in Drangiana, a district at the eastern end of the present kingdom of Persia. At all events, it had not been found in quantity enough to have been sent down within the century after Strabo wrote to India to interfere with the tin traffic from Alexandria and the west of Europe to India, as described by Arrian in the preceding

point still further to the north--both forms of merchandise being chiefly or entirely carried by the seaward route through the Straits of Gibraltar, till at last the land and river routes from the Germanic and Atlantic Oceans to the Mediterranean became more opened up. And we must not forget, that a nation which--besides navigating her vessels to Malta, Sardinia, the Balearic Isles, and other parts of the Mediterranean Sea--traded to Tartessus, some 2500 miles from home, would have comparatively no insurmountable difficulty in reaching the southern parts of Britain. Indeed, when we consider the first and leading fact, that this most active commercial and marine people had factories and colonies, that proved rich and thriving, and some of which were planted on the Atlantic shores of Spain, at the least 1100 or 1200 years B.C., it seems hardly possible to resist the second and resultant fact that, during the course of the long centuries which they thus spent on one part of the Atlantic ocean, the same innate energy, and the same irrepressible love of enterprise, would induce, if not compel, the same people to visit with their vessels

paragraph. Nor, several centuries earlier does the tin of this country seem to have been worked to any considerable extent, as we find no notice of it in Ezekiel's description of this merchandise of that "mart of nations," Tyre, 600 B.C.

Thirdly, Spain and Portugal contained in former times, and contain still, a small quantity of tin, both in streams and lodes. But at the present day they furnish an extremely small quantity of that metal, and probably in ancient times never furnished any great supply. In the two last London Exhibitions specimens of Spanish or Portuguese tin were shown; and Mr Forrester tried to work it in Galicia, but, I believe, has given up the enterprise; and Dr George Smith (in his able essay on the Cassiterides, pp. 1 and 46) shows from official information that there is little or no tin-mining now in the country, and that Spain never appears to have produced any considerable quantity of this metal.

Fourthly, Cornwall and Devonshire.--Dr Smith points it out as an axiom in tin-mining, that "wherever tin has been produced in any considerable quantities within the range of authentic history, there it is still abundantly found" (p. 45). In the last year's return from the tin mines in Cornwall, the quantity raised is reported to be as great as it was ever known to be in any one year. No doubt these British mines were, as pointed out by Strabo, Diodorus, and other ancient authorities, the great source of tin from the earliest historic periods. It is remarkable that in olden times we have no allusion to any want or scarcity in the production of this metal; and the quantity used in the bronze age must have been very great indeed.

the coasts of that same ocean, and its nearest islands, such as Britain. Indeed, to reach the Eider or shores of the Baltic¹ for its electron or amber,² or even the northernmost part of Norway or Thule, was not so

¹ Professor Nilsson holds that, probably, the Phœnicians traded as far north as the celebrated fishing-grounds in the Lofoden Isles, within the arctic circle, bringing from thence fish, furs, &c. The fires of Baal were lit till lately at Beltane time in some of these islands. That fish was a great article of merchandise among the Phœnicians we know historically from different points, and from their coins, &c. They had stations for making salted provisions, as at Mellaria, in Spain, &c. (Strabo iii. 18). Incidentally we learn that the Tyrians had a fish market at Jerusalem in the time of the prophet Nehemiah, or about 440 B.C. (Nehemiah xiii. 16).

² AMBER.—Pliny (xxxvii. 11) tells us that the word "Electron" or Amber was applied in ancient times to our common bituminous amber (which—as he long ago hinted—naturalists now regard as probably the gum or product of a primeval pine); and secondly, to either a natural or artificial mixture of about four parts of gold to one of silver,—an alloy, perhaps, showing some of the colour or appearances of amber. Some very early notices of amber occur, as in the *Odyssey* of Homer (iv. 73, xv. 460, and xviii. 296). In the two last of these passages the amber was in pieces, and the use of the plural shows that it was probably not a metal. In the first passage the amber is represented as brought to the island of Syria by a Phœnician ship, before the breaking out of the Trojan war. Some centuries later, about 450 B.C., Herodotus describes amber, as in his time, one of the things imported, like tin, from the western extremities of Europe, as their only known source—a description that can apply to common bituminous or vegetable amber alone, and not to any alloy of gold and silver, the elements of which abounded around them in Greece. Herodotus states that the story of his day was, that amber came from the river Eridanus, which opened into the Northern Sea (iii. § 115). The shores of the Northern Sea or German Ocean along the western coast of Denmark have always served as the principal source of the amber trade; and in his late learned disquisition on the subject, Professor Werlauf of Copenhagen states (*Bidrag til den Nordiske Ravhandels Historie*, p. 91) that though the coast has become greatly changed and washed away in the course of centuries, yet the shores and mouth of the Eider, in Holstein—in all probability the old Eridanus—and the islands opposite it, have, up to our own time, supplied this bituminous substance in the greatest quantity, though it is cast up also upon some other beaches after rough weather. Pliny states that it was latterly brought overland from the shores of Prussia to the head of the Adriatic, and hence to southern Europe; but this appears not to have occurred till the time of the Roman Emperors, or many centuries after it had been carried seaward into the Mediterranean from the shores and isles of the German Ocean (xxxvii. 11. 3). In early times there may have been land routes across Europe for such light and

long a voyage from Tartessus, as Tartessus originally was from the parent cities of Sidon or Tyre.¹

valuable commerce, which we cannot now easily trace. Pytheas, the Massilian astronomer and traveller, who calculated, with his gnomon alone, the latitude of Marseilles within a few seconds only of correct time, voyaged, passing by the Straits of Gibraltar, about 350 B.C., to Britain and Northern Europe, and first described to his unbelieving contemporaries and successors Thule as a district or island on the Norwegian coast, as far north as the 66th degree of latitude. He tells us that in the islands where the amber was obtained, there was an estuary (*æstuarium*) of the ocean, implying an ebb and flow of the sea,—such as, of course, occurs on the coast of the Germanic Ocean, but which could not possibly hold true in regard to the waters and shores of the Baltic. . . (See Pliny xxxvii. 11; Nilsson, p. 71; and Humboldt's *Cosmos*, vol. ii. note 171). He states that Thule and other neighbouring seas contain neither earth, air, nor water separately, but a concretion, which he had himself seen, of all these, resembling marine sponge or jelly-fishes, which he was told could neither be travelled over nor sailed through (see Strabo ii. chap. 4 § 2). This description is now acknowledged to apply exactly to the appearance put on by the circular pieces of sludge or young ice, when the freezing of the Northern Sea threatens to begin. (See Nilsson's "Nordens Ur-Invånare," p. 140, and Sir John Lubbock's "Prehistoric Times," p. 42.) And his allegation, that he reached a northern mountain in Thule where the nights were only two or three hours long, and where the barbarians showed him the place in which the sun lies in bed (*ἔπου ὁ ἥλιος κοιμᾶται*), is an observation which Professor Nilsson of Lund, in the present century, has confirmed; for the inhabitants of Dunö showed him exactly in the same way a hill-top from which the sun was visible the whole of midsummer night, repeating to him the observation which had been made to Pytheas between two and three thousand years before (p. 74). Yet these two observations, and others, of Pytheas, have induced many literary men in his own, and even in later times, to look upon him as telling traveller's fables. Pytheas states about amber, that at the place where it was obtained it was sometimes found in such great quantity that it was burned as a light—an occurrence which, according to Werlauf (p. 42), has happened also in later times amongst the inhabitants of Western Slesvig. From the electrical power which amber possesses of attracting light substances, the Greek philosopher Thales argued, according to Diogenes Laertius, that it was endowed with a soul; and as Thales lived above six hundred years B.C., the specimens of amber which he saw and experimented upon in Greece could not have reached there by the Massilian land route, which did not then exist, but it must in all probability have been carried thither from the western extremities of Europe by ships which possibly had been already engaged in the far distant amber and tin trades for centuries before.

¹ *Phœnician Navigation*.—It seems only idle to argue, as some have done, that the

But there are strong objections against the triple idea of Professor Nilsson, that (1) the age of bronze in western and northern Europe is (2) the age of our Megalithic circles, and that both are (3) the direct effects of Phœnician influence and colonisation among us.

It appears, for example, difficult or impossible to explain why the Phœnicians should not have introduced into western and northern Europe both iron and bronze, or iron as well as bronze. They early possessed both metals, and worked in both. They exported both from Tarshish. Ten centuries before Christ, the Phœnician craftsman sent from Tyre to Jerusalem was skilful to work in iron as well as in gold, silver, and bronze—as stated in the letter of King Hiram of Tyre to king Solomon in 2 Chronicles ii. 14. Four or five centuries earlier, or about 1440 B.C., the Canaanites (and the Phœnicians, if not, as many good ethnologists hold, of the same race, and only “Canaanites by the sea,” were at least their nearest neighbours) had apparently abundance of iron and iron implements (Joshua xvii. 16, and Judges i. 19). Jabin, king of the Canaanites about 1300 B.C., had as many as “900 chariots¹ of iron” (Judges iv. 3 and 13); and mention of the possession of such chariots by the Canaanites is made about a century and a half previously (Joshua xvii. 16). Besides, iron was used for many and various other purposes by the early Israelites,² Assyrians,³ Greeks,⁴ &c.

voyages of the Phœnicians were all coasting cruises in sight of land,—seeing we know for certain that they constantly crossed the Mediterranean Ocean to Malta, Sardinia, &c., where no land was visible for many long days, guided probably by the sun by day, and using, it is alleged, during the night the fixed stars “Cynosure,” or the Little Bear, as a means of directing their course (see Kenrick’s Phœnicia, pp. 235, 236),—means which, I am assured, modern navigators still occasionally employ,—especially when their compasses go wrong, an occurrence not very unfrequent in iron-built ships.

¹ In the time of Isaiah, or 600 B.C., “there was in the land no end of their chariots” (Isa. ii. 7). Yet, in accordance with the desolation of the land and its highways, predicted thirty-three centuries ago (see Leviticus xxvi. 32, and again Isaiah xxx. 8), there does not exist at the present day, in any part of the Holy Land, “such a thing as a single wheeled carriage” of any sort, “not even a wheelbarrow” (see Dr Robert Buchanan’s “Clerical Furlough” in 1859, p. 93). “Roads for wheeled carriages,” observes Dean Stanley, “are now unknown in any part of Palestine” (“Sinai and Palestine,” p. 184).

² Thus iron was employed in the construction of various implements and instru-

Perhaps, however, the marked prevalence of tools, implements, and ornaments of bronze, in northern and western Europe—as specially proved to us in our grave-diggings—before the introduction to any notable extent of articles of iron, is explicable by the same circumstances—whatever these circumstances may be¹—which led in the East

ments (see Numbers xxxv. 16); for hewing tools (Deut. xxvii. 5); for axes, agricultural instruments, and saws (Deut. xix. 5; 2 Kings vi. 5, 6; 2 Sam. xii. 31; 1 Chron. xx. 3); for nails for the doors of the gates of the temple (1 Chron. xxii. 3); for spear-heads and weapons of war (1 Sam. xvii. 7, where it is stated that Goliath's spear-head weighed 600 shekels of iron). Mines of brass and ironstone are mentioned in Deuteronomy viii. 9. The 28th chapter of the book of Job proves the high degree of perfection to which the art of mining had reached in his day, for we have in this chapter, says Mr Kenrick, “a complete description of the art of mining—tunnelling through the rock by artificial light, the construction of adits, shafts, and water courses, whether for obtaining a stream or for draining the mine, and the application of fire to separate the metal from the ore.” (See his *Phœnicia*, p. 265).

³ Iron seems, according to Mr Layard, to have been the most useful and most abundant of metals amongst the Assyrians (*Nineveh and its Remains*, vol. i. p. 341, and vol. ii. p. 415). Amongst other objects of iron from Nineveh in the British Museum, “may be particularly specified,” says Dr Percy, “tools employed for the most ordinary purposes, such as picks, hammers, knives, and saws.” Mr Layard (“Discoveries in the Ruins of Nineveh and Babylon,” p. 198) gives the figure of a saw found by him in the northmost palace at Nimroud. It is a double-handled saw, similar in form and shape to that used by carpenters of the present day for dividing large pieces of wood. It is about three feet six inches in length. “There is,” observes Dr Percy, “no object in the Museum of greater interest than this rusted saw, and it is computed that while it could not be later in date than 880 B.C., it may have been considerably earlier” (see Dr Percy's *Metallurgy*, Part ii., *Iron and Steel*, p. 875).

⁴ Thus a ball of iron, and twelve pieces made fit for arrows, are given away at the games held at the funeral of Patroclus (*Iliad*, xxvii. 125 and 850); and Homer mentions the use of iron for axles of chariots (*Il.* v. 723), for fetters (*Odyssey*, i. 204), for axes, bills, &c. (*Il.* iv. 485, and *Od.* xxi. 3 and 81.) (See p. 89 for references to notes above.)

¹ The relative age at which copper, bronze, and iron appear among different nations, and in different parts of the world, seems to be by no means always the same. Last century, in the Polynesian Islands, the stone age at once ceased, and that of iron began at the advent of Cook and other voyagers. In a very few parts of the world, as in North America and Eastern Hungary, a kind of copper age, in which tin and bronze were unknown, seems to have followed that of stone. In the early periods of the Chaldean monarchy, or about 1500 B.C., all the implements found

to the early and general preponderance of bronze over iron weapons. In the Trojan war and the heroic age of Greece, all the military weapons mentioned seem made of bronze,¹ though Homer speaks of iron as used

amidst the primitive Chaldean ruins are either in stone or bronze. Flint and stone knives, axes, and hammers abound in all the true Chaldean mounds, but by no means so unpolished as those of the drift in France and England. In the early times of Chaldea iron is seemingly unknown, and when it first appears is wrought into ornaments for the person, as bangles and rings.—(See Rawlinson's *Five Great Monarchies*, vol. i. p. 119, &c.)

¹ Homer describes the spears, swords, and other weapons of his heroes at the Trojan war, or about 1200 B.C. as made of “*χαλκός*.” The original meaning of *χαλκός* is, no doubt, copper; but some of its alloys, and particularly that with tin forming bronze, passed under the same name, just as at the present day shillings and sovereigns in our coinage pass under the names of silver and gold, instead of being called alloys of these metals which they virtually are. We know that the armour, and particularly the offensive armour of the ancient Greeks, must have consisted of bronze and not of copper, because it possessed the physical qualities of the former and not of the latter. A bronze sword or spear can be made both very sharp in its edge and strong in its texture, whilst it is impossible to invest a similar copper instrument with the same qualities. Homer represents Ulysses as striking Demacoon on the temple with such force that his spear passed twice through the cranium, the point penetrated through the opposite temple (*Iliad*, iv. 502.) If it were possible to effect such a penetrating wound with a bronze spear, it was certainly not possible to produce this and many other extreme wounds mentioned in the *Iliad* with instruments of copper alone, as copper spears or swords would have bent or twisted under the force applied to them. The cutting power of these ancient weapons comes strongly out in the speech of Apollo to the Trojans, immediately after the fall of Demacoon, when he argues with the Trojans that “the flesh of the Greeks is neither made of stone nor of iron, so that when struck it should resist the flesh-rending bronze” (*Iliad*, iv. 511). But further, before the Trojan war bronze and its qualities were well known to the Greeks. In the old city of Mycenæ, Pausanias (*II. 16 § 5*) describes the treasury and the tomb of Atreus, the father of Agamemnon, the great leader of the Greek hosts against Troy. The structure is probably entirely sepulchral, and according to Gell, Hughes, Dodwell, and others, is as old, and probably older, than the Trojan war. On examining, within this century, the nails which had fastened the plates of metal that formerly lined the interior of this Atreian tomb or treasury, Sir William Gell found them to consist of bronze, and that the tin and copper composing them were in the usual proportions (see his *Itinerary of Greece*, p. 33, plate 7. See also Hughes, in his *Travels in Sicily, Greece, &c.*, vol. i. p. 234). As another argument for *χαλκός* or copper being used as a term to include other metallic

for other purposes.¹ Was it the greater existing amount of bronze, or of the elements of bronze—and hence its relative cheapness—in these ancient times,² or was it the greater facility of melting and working and giving it a sharp edge,—or was it a want of knowledge of any easy means of rendering the iron sufficiently hard and useful as a weapon of war,³ that led, in these early eras, to the general adoption of bronze, and the rejection of iron, as metals for cutting and military weapons? I do not know if these or any other reasons, as yet suggested, are adequate to explain the difficulty of our British ancestors, for instance, manufacturing for themselves—or purchasing from others, as the Phœnicians—implements of bronze⁴ in preference to implements of iron. Or, seeing this

alloys, let me merely add, that the word originally used for copper-smith came to be employed betimes to include a worker in metallic compounds generally, so that the smith or iron-worker, for example, passed under the general designation of *χαλκίης*, or brazier. For instance, Herodotus (l. 68) speaks of a coppersmith (*χαλκίης*) being engaged in his workshop in beating out iron. In still earlier times, Homer speaks of the manufacturer of iron axes as *αἰεὶ χαλκίης*, literally a brazier; and a smithy, as *χαλκίον* (Odys.) ix. 391). See a learned paper on the early history of Brass by Dr Hodgson, in the "Archæologia Æliana," vol. i. p. 17 seq.

¹ See footnote on this point, No. 4, p. 90.

² When the accumulation of materials made by David for the building of the Temple at Jerusalem is mentioned in Chronicles, it is significantly stated that "David prepared iron in abundance for the nails for the doors of the gates, and for the joinings, and brass in abundance," so as to be both "*without weight*" (1 Chronicles xxii. 3 and 14). It seems here implied that the amount of bronze in relation to iron was comparatively unlimited. Elsewhere it is stated that Solomon, in forming the vessels of the temple, used such an amount of brass or bronze, that its weight "could not be found out" (2 Chron. iv. 18, and 1 Kings vii. 47). When we remember that one-tenth of all this bronze or brass "*without weight*" consisted of tin from the west of Europe, and particularly from Cornwall, it tends to give us some idea of the immense extent of the tin trade in these days. Other facts strengthen this idea, as at Babylon, the hundred massive gates, with their lintels and side-posts all entirely made of bronze, as mentioned by Herodotus (Lib. I. c. 179).

³ Yet Homer, in the Odyssey (ix. 392), gives an excellent account of tempering iron by plunging it when hot into cold water.

⁴ Both Strabo (iii. 5 § 11) and Cæsar (B. G. iv. c. 22) speak of bronze as one of the imports at their day into Britain, though the raw tin was for long, no doubt, their richest export from the island,—as we import cotton from America, the East Indies, &c., and send it back to the same countries as cotton cloth. The Phœnicians pro-

difficulty, ought we to go farther back into prehistoric archæology, to reach an era when bronze, in relation to iron, was, in this and other parts of Europe, almost the only metal employed in the arts either of peace or war?¹

That our Phœnician visitors and colonists raised our megalithic circles, and sculptured rings upon our rocks as Solar worshippers, is still more a question of doubt.

In imitation of the Canaanites and their Phœnician kinsmen and neighbours, the Hebrews sometimes, in their idolatry and obduracy, paid worship "to the sun, and to the moon, and to the planets, and to all the hosts of heaven" (2 Kings xxiii. 5; xvii. 16; xxi. 3-5; Deuteronomy iv. 19; xvii. 3.) "Baal and Ashtaroth, the two chief divinities of Phœnicia," to quote Mr Kenrick, "were unquestionably the sun and moon; and the minor deities appear either to have been the same heavenly bodies, or at least to have represented objects of astral worship" (p. 298). In addition to the worship offered to Baal in his original solar character, his name came to be regarded as that of supreme god and ruler. He occupied the place of both Apollo and Zeus or Jupiter in the mythologies of Greece and Rome. That Baal worship extended widely at an early period over western and northern Europe, is so far rendered highly probable by various circumstances, as, for example, by the frequent prefix of Baal to the names² of localities in the West as in the East; and,

bably brought back the tin mixed with copper, in the form of the elegant bronze weapons and ornaments that we meet with in ancient British tombs, &c., but which, as we know from the moulds left, came betimes to be manufactured in this country. The abundant copper deposits in Cornwall seem never to have been worked till the fifteenth century; and the Cornish ore is difficult to reduce to pure copper—one strong reason for it not being used in very early times (see Dr Thurnam in "Crania Britannica," p. 102).

¹ For ample evidence, as drawn from our cemeteries, &c., of the predominating use of bronze by our British ancestors before iron was much or at all used, see the very masterly work of Sir John Lubbock on "Prehistoric Times."

² "In Syria and the East, the numerous names of places," argues Mr Kenrick, p. 300, "to which Baal is prefixed in Palestinian geography, as Baal-Gad, Baal-Hamon, Baal-Thamar, Baal-thelisha, indicate the early and wider diffusion of his worship." The same argument applies to the west and north of Europe, where we have names with the same prefix of Baal, in Balerium (or Land's End), Bel Tor, in Devonshire,

specially by the persistence and popular representation of some of the older observances of Baal-worship,—such popular superstitions being always very difficult to eradicate when the results of a religious creed.¹

Bel-an, in Montgomeryshire, Baal Hills, Yorkshire, &c. ; and, according to Nilsson, in more northern names, as the Baltic, the Great and Little Belt, Beltberga, Baleshangen, Balestranden, &c. According to him, Baal is a prefix as far north in Norway as the Lofoden Isles, where it occurs in the villages Balseld and Balsford. (Nilsson, p. 48.)

¹ FIRE-FESTIVALS.—Few superstitious usages of former times have continued for a longer time than the keeping of days for fire-festivals. Two great fire-festivals seem to have been formerly observed in our own country, and over a great extent of northern and western Europe, namely, 1. Beltane, upon the opening of summer on the first of May ; and, 2. Samhain or Hollowmass eve, on the first of November—new or old style. A third fire-festival day has betimes sprung up at midsummer's eve or St John's eve (22d or 23d June), usually displacing, where it is observed, the Beltane festival, and accompanied by the same customs. It is to the first of these festivals namely, Beltane, from *Baal*, the Phœnician god, and *Teine*, *Tine*, or *Tene*, fire, as a possible and probable continuation in the west of the old oriental fire-worship of Baal, that I chiefly advert in the text. For the former great, and comparatively late annual prevalence of Baal-fires or Beltanes in Great Britain, in Scandinavia, on the Continent, &c., see numerous extracts in Brand's "Popular Antiquities" (May-Day and Midsummer Eve); Jamieson's Scottish Dictionary, article "Beltane;" Hislop's "Two Babylons;" Nilsson's "Skandinanska Nordens Ur-Invånare" (pp. 14-76); Grimm's Mythologie, pp. 579, &c. &c. Some Celtic authors have described it as a Celtic festival, but it has long been practised in the Lofoden Islands, and in other parts too far north in Norway for a Celt to have reached. Latterly, I have seen it stated that the word "Beltane," or "Beltein," does not signify Baal's fire, but merely "a lucky" fire. Unfortunately, however, for this suggestion, the name of it in Scandinavia is Baldersbål or Balder's pyre, a word which no Celtic ingenuity could easily change into "lucky" fire. The distinguished geologist, Leopold von Buch, who saw the Baal-fires or Baldersbål lit up at Midsummer's-eve at the island of Hindön, in the far north of Norway, and within the arctic circle, shrewdly remarked that it was almost inconceivable to suppose that such a northern people should ever have themselves originated the idea of lighting fires on the hill tops in their own country at Midsummer's-eve—a time when daylight is almost so continuous with them, that the smoke rather than the flame of the fire was visible ; and from this alone he argued the foreign or eastern source of the practice ;—a practice, besides, which surely must have been brought from some common centre, since it could scarcely spring up spontaneously among so many distant countries and populations. In the Isle of Man—the geographic

But the idea promulgated by Professor Nilsson, that our great Megalithic circles in this and other adjoining countries were originally reared as

centre of the British islands—the month of May bears the old significant name of Boaldyn or Baal's fire; and on the eve of May-day, old style, there are still numerous fires lit up in all directions,—so numerous", says Mr Train, "as to give the island the appearance of a general conflagration" (Train's *Isle of Man*, vol. i. p. 315); whilst the individuals surrounding them blow horns and hold a kind of jubilee on the occasion. Mr Harrison, in his late edition of Waldron's "*Isle of Man*," says that it was customary to light two fires in honour of the pagan god Baal, and to drive the cattle between these fires as an antidote against murrain or any pestilential disease for the year following (p. 124). Mr O'Flaherty tells us that in the tenth century, King Cormac was in the habit of erecting two fires, between which both the people and the cattle of the district were driven for purification (see "*Transactions of the Irish Academy*," vol. xiv. p. 100, &c.); in the same way as when the Hebrews "served Baal, they caused their sons and daughters to pass through the fire" (2 Kings xvii. 16, 17). Mr Toland, an Irishman by birth, but who resided much in this country and on the Continent, writing 150 years ago, observes:—"Two rude fires, as we have mentioned, were kindled by one another on May-eve in every village of the nation (as well throughout all Gaule as in Britain, Ireland, and the adjacent lesser Islands) between which fires the men and the beasts to be sacrificed were to pass. One of the fires was on the cairn, another on the ground." (See his *History of the Druids*, 1814, p. 117.) Mrs Abbott, of Copenhagen, tells me that on both the Danish and Swedish coasts of the Baltic, the Baal-fires may be still seen, on the evening of the 23d of June, lit up in a long line at the distance of about one mile from each other. Tetlan and Temme (*Preussische Sag*, p. 277) say, that in Prussia and Lithuania, on St John's-eve, fires are seen as far as the eye can reach. Grimm remarks that, in the celebration of their fire-festivals the northern parts of Germany have adopted Easter or May-day, as Lower Saxony, Westphalia, Holland, Friesland, &c.; while the more southern parts, as the shores of the Rhine and Austria, with the kingdoms lying between them, hold the 23d of June as their fire-festival; and again some parts, like Denmark and Kärnten, keep both days (Grimm's *Deutsche-Mythologie*, p. 581). For similar fire-festivals in other parts of Europe, see Grimm, pp. 589-591, &c. In Scotland formerly various forms of frolic and merriment reigned on Beltane-day, as we know from King James the First of Scotland's celebrated poem, "*Peebles to the Play*," describing some of the usages of our forefathers on that festival in the early part of the fifteenth century; and Robert Burns has similarly described the superstitions and festivities of Hallowmass or Halloween. Fires were formerly burned at this last festival or November eve, as well as on May-eve. "On the eve of the first day of November," says Toland, "there were also such fires kindled [as on May-day]; accompanied as

Baal or Solar temples, by the spread of Phœnician influence and colonisation among our ancient forefathers, is an opinion which seems open to the gravest objection. Stone circles of varying sizes are, as we have just seen in a footnote to a preceding page (p. 81), known in almost every portion of the world, from Greenland to Australia, and consequently in many portions where Phœnician fancies and ideas never reached. Besides, if gigantic megalithic circles, like Stonehenge, Abury, Salkeld, Callernish, &c., were erected in Britain as solar temples to the Phœnician Baal, we should naturally expect that many circles on the same gigantic scale should be found to exist, or to have existed, in Phœnicia itself, and in its numerous eastern colonies. I am not aware, however, that there can be adduced any evidence whatever to this effect; for the exceptional presence of a single small circle, as observed by Dean Stanley, near the site of Tyre, scarcely deserves consideration in such a question as this.¹ Again, that our English large megalithic circles were not

they constantly were by sacrifices and feastings." (*History of the Druids*, p. 117.) In some parts of Scotland these November fires are still lit up. Dr Arthur Mitchell informs me, that a few years ago, he counted within sight of a railway station in Perthshire ten or a dozen of these Samhain fires burning in different directions on a Halloween night.

¹ It has been sometimes argued that the erection of megalithic structures with rude and unhewn stones implied necessarily on the part of the builders a want of knowledge of metallic tools. But certain circumstances tend to refute this as an absolute idea. Thus a Semitic race—living contiguous to the Phœnicians—viz., the Hebrews, erected the first stone circles and single monoliths, of the rearing of which we have any historical record, after—if we should except the very earliest, which is even doubtful—they were possessed of bronze and iron tools. All the monoliths spoken of in Scripture, and the twelve stones reared at Gilgal after the passage of the Jordan, seem to have been erected as memorials of important facts, events, or covenants, or as sepulchral stones; but the circles of twelve stones which Moses raised at the foot of Mount Sinai, inclosing an altar of earth within its circuit, was more certainly of a religious character. For an interesting and ample discussion of the various bearings of the single pillar-stones, stone circles, cairns, &c., mentioned in the Bible, I would beg to refer to some dissertations on the subject in Dr Kitto's "Palestine; the Bible History of the Holy Land," pp. 241, 356, 404, and 428. Dr Kitto does not allude to the remarkable fact that it is several times specially commanded that, although iron and other instruments were well known and used at the time, the stones used to build altars should

Phœnician solar temples, is strongly borne out by the fact, that none of the solar temples of Phœnicia and the East consisted—as our megalithic circles do—simply of a circular series of open and more or less distant upright stones. On the contrary, they were built, as we have every reason to believe, from the remaining temple walls in Gozo, Malta, &c., solidly of stones; and though possibly, like some large eastern public buildings left occasionally roofless above, this appears not to have been usually the case with Phœnician temples.¹ The coins of Berytus, Byblus, Tripoli, &c., seem always to represent Astarte as standing under a roofed temple. Doubting, then, that the megalithic circles of Great Britain were raised as solar Phœnician temples, we doubt also entirely that the concentric circles and cups carved upon our rocks and stones were cut out upon them by sun-worshippers, and that they were sculptured by them as symbols be whole, and not hewn or touched by any tool. (See Exodus xx. 25, and Deuteronomy xxvii. 5.) “An altar of whole stones over which no man hath lift up any iron” was in consequence erected on Mount Ebal by Joshua about 1450 B.C. Some twelve or thirteen centuries later, the altar erected in the Temple—after the profanation of it by Antiochus Epiphanes—was, according to the first Book of the Macabees (iv. 47), built of “whole [or unhewn] stones, according to the law.”

¹ Josephus quotes the Greek author Menander, the Ephesian, to the effect that some ten centuries B.C., Hiram, king of Tyre, raised in the city “a bank on that called the ‘Broad Place,’ and dedicated that golden pillar which is in Jupiter’s [Baal’s] temple; he also went and cut down timber from the mountain called Libanus, and got timber of cedar for the roofs of the temples,”—one of which he rebuilt and consecrated to Hercules, and another to Ashtaroth (see Whitson’s translation of Josephus’ Works, Essay against Apion, Book I. § 18). Menander’s circumstantial account of the position of the bank on the “Broad Place” or “Broadway” of the city—no doubt a well known street or square in ancient Tyre (as it is in its mighty representative—the modern American Tyre)—was possibly copied from the public records. Josephus elsewhere states (§ 17), that the Tyrians kept “with great exactness” their public records, both domestic and foreign; and it is certainly much to be deplored that these chronicles, with the history of the Phœnicians by Dios, and all the other native literature of Phœnicia, have, with one questionable exception, utterly perished; a loss which is the more to be lamented, for none of the nations of antiquity diffused more widely over the ancient world a knowledge of industry and of the blessings of peace and commerce. What another flood of light might we have on ancient history if, by any strange chance, a copy of Pytheas’s account of his travels in Britain (350 B.C.) should ever turn up in the yet unexplored parts of Pompeii or elsewhere. Pytheas “travelled all over Britain on foot” (Strabo ii. 4 § 2).

of their Sun-god. The idea that these circles and cups are in any way connected with Baal or Solar worship seems to me entirely hypothetical, and without any direct proof or evidence whatever in its favour. In answer to Professor Nilsson's lengthy and ingenious archæological speculations upon this point, it may be enough, on the present occasion, to reply, in regard to British stone concentric ring-carvings and cups—

1. That the carvings of concentric circles and cups are not by any means confined to the bronze era, for they are found from the earliest to the latest ages in architecture and lapidary carving; while, on the other hand, the bronze era itself, besides displaying so frequently circular and spiral forms, contains many bronze articles, cut and ornamented with angulated double and single zig-zags, chevrons, and rhomboid lines (see Nilsson's *Skandinaviska-Ur-Invånare*, p. 2); and stones, also, as in the Kivik monument—supposing it, as Nilsson thinks, to be of the bronze age—carved with weapons, animals, chariots, and men differently dressed and armed. Nor must we forget that during the bronze age in the East, metallic figure sculptures were common, as on temple offerings, and on the helmets, shields, and chariots of some of the Greek heroes.

2. That we have no evidence whatsoever, from any Phœnician or any other ancient remains, that a series of cups or of successive concentric circles or rings—divided or not by a traversing radial duct or groove—was ever anywhere connected with Solar worship, or with the religion of Baal.

3. That it is altogether gratuitous to imagine that our cups and series of concentric lapidary rings were cut to symbolise the sun, to which they have no similarity except the one equivocal attribute of roundness.

4. That over the shores of our own country, as well as in the interior of it, these lapidary cuttings have already been discovered extending far too widely and generally for being the possible product and effects of Phœnician influence and civilisation among us, unless—contrary to all existing ideas—the Phœnician people had found an extensive general domicile in this island. On the other hand, it must further be remembered, that the same specific lapidary carvings remain as yet undiscovered in the true colonies and country of Phœnicia.¹

¹ I have seen drawings by Mr Adams, Miss Smith, Mr Bartlett, and others, of a few stones marked in the Giant's Temple (*Torre dei Giganti*) at Gozo, and the ruins of

5. These lapidary concentric rings and carvings are found profusely cut upon chambered tumuli in Brittany, where—as we shall see in a subsequent chapter—the contained relics of the barrows do not include bronze instruments, nor have any apparent connection with Professor Nilsson's Bronze and Phœnician era,—but are all, on the contrary, of the anterior materials belonging to the so-called “Stone age.” And,

6. Though carefully looked for by Sir Gardner Wilkinson in Devonshire, and by him and by Mr Blight in Cornwall, lapidary cups or circle cuttings have not yet been found, with one single exception (p. 52), in any part of these two counties. Yet if these cups and circles had been Phœnician in their origin, they ought certainly to have been discovered more abundantly in these two counties than in any others, seeing they formed the district in which alone the tin trade existed. In reference to this last remark, let me here add, that the abundance of the lapidary cup and circle cuttings in some counties, as in Northumberland, Argyle-

Hagar Keem, near Crendi in Malta, but with one exception—that of a stone with two or three concentric circles at Hagar Keem—all the few others seemed short ornamental raised volutes, such as Rawlinson represents as forming a double bracket for a statue of Astarte in Etruria (see his edition of Herodotus, vol. ii. p. 543). Besides, we have no adequate evidence that the old cyclopic buildings in Gozo and Malta were built by the Phœnicians at all. A few of the stones are minutely dotted or picked over the surface, as in the case of some of the lozenged ornaments at New Grange, Ireland. I have seen it suggested, that possibly our British lapidary circles may be found similar to those cut on the pilasters and other stones discovered at the entrance of the so-called Treasury of Atreus at Mycenæ. But the drawings of Mr Dodwell (see his *Tour through Greece*, vol. ii. p. 232) and of Mr Donaldson (see Stewart and Revett's *Antiquities of Athens*, Supplement, p. 32) show the carvings on these Mycenæan stones not to be single nor concentric circles, but to consist of long and elegant continuous strings of double spirals, encircling the columns, and introduced between chevrons and soffits. Besides entirely varying from the ancient British sculptures in this respect, and in the advanced spirit of design which they display, they are further different, in being not incised; but, according to Mr Donaldson, “cut in very low relief.” Mr Dodwell states the curious fact, that upon the fragments of pottery scattered on all sides near this so-called tomb of Atreus, spiral and zig-zag ornaments are seen similar to those sculptured on the marbles and pillar at the entrance (p. 237). Dodwell, Clarke, Mure, and others, believe the architectural spiral zig-zag ornaments at Mycenæ not to be Greek in their origin, but rather Asiatic or Egyptian. No one, as far as I am aware, has suggested their Phœnician origin.

shire, Orkney, &c., and their nearly entire absence from others, as Cornwall, Devon, and Pembroke,¹ is a subject by no means undeserving of attention, and one which may yet contribute to the solution of the difficulties connected with their origin and object.²

Are not the Kivik Sculptured Stones Cimbrian?

Before leaving altogether Professor Nilsson's ideas and opinions on these and other questions connected with the present inquiry, I will take this opportunity of adding, that—though I have hitherto cited without criticism—his observations on the Kivik monument, I have the gravest doubts of—even as to that monument—being Phœnician in its origin. On the contrary, I incline to think that the historical figures answer better to the accounts which we have of the customs of the neighbouring ancient Cimbri than to any account which we have of the Phœnicians. In other words, in all probability, they are native rather than foreign. During a century or two before the Christian era, large masses of Cimbri traversed and devastated various parts of Europe, and invaded Gaul and Italy. They at different times defeated no less than five Roman consular armies (Tacitus, *Germania*, cap. xxxvii.) A nation of these Cimbri seems to have been fixed from the time of Pytheas³ at least (350 B.C.), down to the time of the Roman Emperors,⁴ in the

¹ The Rev. Mr Barnwell and Mr Blight have examined most of the megalithic structures in Pembrokeshire without finding any example of the circle or cup cutting, and yet the eyes of both were well instructed for the purpose. I should have already stated (p. 20) that it was Mr Barnwell who discovered the circle-cutting in the Goggleby stone after several antiquaries had passed without noticing it, and I confess to have been one of the number.

² In the special localities in which the ring and cup sculptures are, there is this analogous difficulty: Why are they found, as at Caerlowrie, upon the lid of one kistvaen only out of several placed in the same ground? Or, as at Ford, on the lids of two out of several mortuary urns or pits? Do they note any specialty of creed, officé (as priests), or rank on the part of those, over whose remains they are placed? Why are some megalithic circles marked, and not others? Why only some of the obelisks at Largie, Ballymenach, &c., and not on all of them?

³ Mommsen's *History of Rome*, vol. iii. p. 178.

⁴ See Tacitus's *Germania*, § 37; and *Mela*, iii. 123 3.

modern kingdom of Jutland or Denmark—the ancient Cimbrian Chersonese, the *Promontorium Cimbrorum* of Pliny: and Tacitus describes them, as in his time, small in number, but still great in renown. This, the “original country,” of the Cimbri, as some have termed it,¹ stands at a short distance across the Cattogat, from Scania, where the site of the Kivik monument is placed. The sculptures on the monument, especially on the stones 7 and 8, perhaps portray more faithfully a victory festival of the Cimbrians than of the Phœnicians. “The Cimbrian,” writes Mr Mommsen, “fought bravely—death on the bed of honour was deemed by him the only death worthy of a freeman, but after the victory he indemnified himself by the most savage brutality. . . . The effects of the enemy were broken in pieces, the horses were killed, the prisoners were hanged, or preserved only to be sacrificed to the gods. It was the priestesses—grey-headed women in white linen dresses and unshod—who offered these sacrifices.”² These priestesses thus dressed, and, adds Strabo (Book vii. chap. 11, § 4), bearing drawn swords, went to meet the captives throughout the camp, and having crowned them, led them “to a brazen vessel containing about twenty *amphoræ*, and placed on a raised platform, which one of the priestesses having ascended, and holding the prisoner above the vessel, cut his throat. . . . In battle, too, they beat skins stretched on the wicker sides of chariots, which produces a stunning noise.”³

¹ See *Cimbri*, in Smith's Dictionary of Geography, vol. i. p. 623.

² History of Rome, translated by Professor Dickson, vol. iii. p. 180. On the practice of immolating prisoners of war by the natives of Anglesea, see Tacitus's *Annales*, lib. xiv. cap. 30.

³ Strabo, Book VIII. chap. ii. § 3. In 1845, Lisch found inclosed in a mound at Peccatel, in Mecklenburg, a round cauldron three feet in diameter and two in depth, placed between what he conceives to be a large altar on which the victim was placed, and a station which he supposes to have been the position of the sacrificing priest or priestess in such Cimbric rites. The edge of the cauldron projected about a foot above the level of the altar. The skeleton of an unburnt human body lay in a trough or coffin six feet long, three feet broad, and one in depth, in the neighbourhood of the cauldron. Both this coffin and the so-called altars and sacrificing station were made of sand, mixed clay, and hardened up with clay. (See “*Jährbucher des Vereins für Mecklenburgische Geschichte und Alterthumskunde*,” ix. p. 369).

The strange figures around the caldron or altar, in the second row of stone 8, and last row of stone 7, probably portray the dress of women rather than of men; and their great numbers is more in accordance with the fact stated by Strabo, that the Cimbri were accompanied in their military expeditions by their wives, than with the idea that the Phœnicians would carry such an array of priests as we have on these stones, to such a very distant shore as the coast of Scania. Under this view, we would beg further to suggest, that the conical body represented centrally in figure 1, is not a symbol of Baal, but possibly a representation of the elongated spear or *materis*, which the Cimbri carried (Mommsen, iii. 179). In the drawings of the Kivik stones,¹ given by Hilfeling, Sjöborg, and Holmberg, this central cone is very much more elongated and spear-like than it is in the sketch published by Nilsson. Holmberg considers it to be a bronze celt seen in profile; the narrow bodies on either side to be bronze arrow points; and the lateral hatchets, with knobbed handles, to be true representatives of the bronze form of that weapon.

CHAPTER XI.—THEIR PROBABLE ORNAMENTAL CHARACTER.

Without attempting to solve the mystery connected with these archaic lapidary cup and ring cuttings, I would venture to remark that there is one use for which some of these olden stone carvings were in all probability devoted—namely, ornamentation. From the very earliest historic periods in the architecture of Egypt, Assyria, Greece, &c., down to our own day, circles, single or double, and spirals, have formed, under various modifications, perhaps the most common fundamental types of lapidary decoration. In prehistoric times the same taste for circular sculpturings, however rough and rude, seems to have swayed the mind of archaic man. This observation as to the probable ornamental origin of our cup and ring carvings holds, in my opinion, far more strongly in respect to some antique stone-cuttings in Ireland and in Brittany than to the ruder and simpler forms that I have described as existing in Scotland and England. For instance, the cut single and double volutes, the complete and half concentric circles, the zig-zag and other patterns, which

¹ See Holmberg's *Hällristningar*, p. 15, and Tab. xlv. fig. 162, &c.

cover almost entirely and completely some stones in those magnificent though rude Western Pyramids that constitute the grand old mausolea of Ireland and Brittany, appear to be, in great part at least, of an ornamental character, whatever else their import may be. The great curbstone, for example, at the entrance of New Grange, covered with double volutes (see Plate XXIX. fig. 1), and many of the lapidary cuttings in the interior of that gigantic barrow, the granite blocks forming the props of the passage into the sepulchral chamber at Gavv Inis (see Plate XXX. fig. 1), and some other Brittany stones, seem to present patterns of ornamental lapidary carving.

In some of these, and in other instances, the stones are densely covered with various and endless rock-cuttings, with curved, spiral, and angled lines, like the face of a tattooed¹ Polynesian, and possibly somewhat like the faces of our British forefathers in those distant days when they stained their skins with woad. The surfaces of the stones in the Irish and the Brittany instances I have referred to in the preceding paragraph, and the surfaces of the tattooed Polynesian faces, are indeed so much alike in general character, as to suggest a possible general origin—in the one instance as well as in the other—in that craving which naturally exists, even among the rudest people, for decoration and embellishment; and, after all, an elaborately tattooed stone is not, perhaps, to our ideas at least, so strange as an elaborately tattooed skin. In far later and mediæval times we see the old sculptured stones and crosses of Scotland and Ireland decorated in a more perfect but yet analogous way—and for an analogous object too—by endless and elegant scrolls, circles, volutes, chevrons, and other interlaced and ever-varying patterns cut upon their faces and sides.

CHAPTER XII.—THEIR POSSIBLY RELIGIOUS CHARACTER.

The Scottish concentric ring-cuttings and cup-cuttings, however, are far ruder and simpler than the Irish and Brittany examples of old lapi-

¹ M. Dumont d'Urville, in his "*Voyage de l'Astrolabe*," gives numerous figures of tattooing amongst the Polynesians. The principal figures upon the face consist of simple or compound spirals (see the accompanying plates, tom. i. pl. 63, 74, &c) They indulge also in abundance of circular and crescentic lines and figures.

dary ornamentation to which I have referred. They lack that elaborateness and diversity of detail which characterise the cuttings within the Irish and Brittany sepulchral chambers. They are also in most cases far more sparse in their distribution, and more rough and rude in their details, than we would naturally perhaps expect in rock or stone surfaces carved for mere and pure decoration only. At the same time these ancient rock-cuttings in Scotland and England present indisputably, wherever they occur, the same archaic "handwriting on the wall,"—they are everywhere so wonderfully similar in their type of art,—so nearly and entirely like to each other in all localities in their general artistic conception and details, as to prove that they originated in some fixed community of objects or ideas among those that cut and formed them—whether their origin was ornamental, or symbolic, or both. But, whatever else was their object, that they were emblems or symbols connected in some way with the religious thoughts and doctrines of those that carved them, appears to me to be rendered probable, at least, by the position and circumstances in which we occasionally find them placed. For in several instances we have seen that they are engraved on the outer or inner surface of the stone lids of the ancient kistvaen and mortuary urn. The remains of the dead which occupied these cists and urns were covered over with stones carved with these rude concentric circles, apparently just as afterwards—in early Christian times—they were covered with cut emblems of the cross placed in the same position. Man has ever conjoined together things sacred and things sepulchral,—for the innate dread of death and the grave has ever led him, in ancient as in modern times, to invest his burial rites and customs with the characters and emblems of his religious creed.

In some instances the carved stone employed to cover the body or ashes of the dead, or used in the construction of their megalithic cists, seems to have been taken for that purpose from other localities where possibly it had been already regarded as sacred, and had possibly served for other religious purposes. Thus, for example, the carved cist-cover at Craigiehill is, at one end, broken off right through two or three series of concentric rings (see Plate XI. fig. 2), which must have been cut upon it before it was reduced to its present shape and size; the small slab from the cist at Caruban has been similarly mutilated through the

linear course of the carving upon it, to allow of it being placed as a panel in the end of the grave; and a few of the sculptured stones in the megalithic sepulchral crypts and galleries of Ireland and Brittany have been ascertained to be carved upon their hidden as well as upon their exposed sides, showing that they were sculptured, in part at least, ere they were placed in their present situations.

Perhaps it might be further argued that the presence of the concentric rings and cups on the sides of Long Meg, the Calder stones, and the stones of other "Druidic Circles," goes to show their sacred or religious character,—whether we regard megalithic circles as places of worship, or places of sepulture, or both. The same remark applies to their appearance upon cromlechs; and, if possible, more emphatically still to their occurrence upon sepulchral monoliths and standing stones.

CHAPTER XIII.—THEIR AGE, OR THE DATE OR DATES AT WHICH THE RINGS AND CUPS WERE CUT.

The central cup, with or without a surrounding circle or circles, constitutes one of the most simple, and consequently most frequent, forms of ancient sculptured ornamentation. Nothing could possibly be more rude and primitive, except it were one or more unornamental straight lines or grooves such as we occasionally see both traversing and passing beyond the cups and rings. The very simplicity of the cup and circle forms is one strong reason for our regarding these types of sculpture as the most archaic stone carvings that have been left to us. When once begun, such types of lapidary carving and ornamentation would—for the same reason—be in all likelihood readily transmitted down to future generations—and perhaps to races even—that followed long after those who first engraved them on our stones and rocks. Possibly their sacred symbolisation—if they were sacred—contributed to the same end; for forms and customs that were originally religious observances often persist through very long ages after their primary religious character is utterly forgotten, and even where the type of religion has been totally changed.¹

¹ As, for example, the use of the old pagan marriage-ring in the Christian marriage rites of some churches; the general avoidance of marriage in May, a supersti-

As yet, we want a sufficient body and collection of data to determine with any accuracy the exact age or ages and periods at which the lapidary cup and ring cuttings we have described were sculptured. But the facts we possess are quite sufficient, I think, to prove that the date or dates at which they were for the most part formed must be very remote. In evidence of this I shall appeal in the following chapters—though at the risk of some recapitulation—to their precedence of letters, and traditions; to various data regarding the connection of these rude sculptures with the dwellings and sepultures of archaic man; to the archaic character of the antiquarian relics with which they have been found in combination; and to their geographical distribution as bearing upon their antiquity.

CHAPTER XIV.—THEIR PRECEDENCE OF LETTERS AND TRADITIONS.

In no instance have the lapidary cup and ring cuttings been found in Scotland or England conjoined in any way with any attempts at any form, however rude and primitive, of letter-cutting or letter-writing. We have no reason whatever to believe that the ring and cup cuttings are themselves, as we have heard suggested, unknown words, or hieroglyphics, for they are too few in number and too analogous in form for such a purpose;¹ and if any type of letters had been known to the carvers of the cups and rings, examples of these letters would almost inevitably have been found somewhere cut alongside of these sculptures.² We are

tion described some eighteen centuries ago by Ovid; the ancient heathen well-worship, which is not yet extinct in some parts of the British islands; the lighting up of Baal-fires on May and Midsummer's eve, &c., &c.

¹ All the cups, for example, upon the cromlechs and tumuli, figured in Plates VIII., IX., and X. are so similar—as are all the concentric circles upon Long Meg, in Plate VII.—that they offer singly no such differences as render them capable of being interpreted as individual and separate letters.

² Governor Pownall, in the "*Archæologia*" (vol. ii. p. 260), imagines the broken gridiron-looking markings at New Grange (Pl. XXVII. fig. 5) to be some old Eastern or Phœnician inscription; and Mr Du Noyer, in the *Meath Herald* for October 21, 1865, reports among the sculptured tombs of Sleive-na-Caillighe what he believes to be short Ogham inscriptions or letters. But my observations in the text apply to British antiquities, and not to those of Ireland.

not aware when a knowledge of letters reached the western shores of the Old World, and whether they came in, as some hold, with a race using bronze weapons and ornaments,¹—or with a later race, using iron implements, as others maintain. At all events, they were not apparently known or employed in Western Europe for centuries after the inhabitants of Western Asia had engraved their deeds and thoughts upon rocks and stones, bricks and tablets of clay. And in regard to Britain, we are at all events fully entitled, I believe, to hold that the race or races that cut our many rude ring and cup sculptures were not, either at the beginning of the practice, or even up to the termination of it, acquainted with the use and carving of letters—or otherwise, as I have just stated, we would almost inevitably have found traces of their letters in connection with some of these lapidary sculptures.

Nor am I aware that in any spot in which the ring and cup sculptures have been found, has tradition preserved the faintest remembrance, either of their object or their presence. They are too decidedly “things of the past,” for even the most traditional of human races to have retained the slightest recollection of them.² Thus, for example, in the kistvaen

¹ Certainly not with the bronze era, for traces of writing on old bronze weapons have not been found except in a very few instances. Two of these instances consist of bronze helmets, with Greek inscriptions cut upon them. One of them—the helmet of Hiero I.—is probably of the date of 474 B.C.; the second may possibly be a century earlier. (See these helmets and the inscriptions upon them figured in Mr Franks' valuable additions to the “*Horæ Ferales*,” pl. xii.) Both of these helmets are now in the British Museum. At Constantinople there is still preserved the brazen stand of the famous golden tripod, which was dedicated by the confederate Greeks to Apollo at Delphi, after the defeat of the Persian host at Plataea, B.C. 479. On its stalk is engraved, in ancient Greek letters, a battle-roll of the Greek army, which was possibly used by Herodotus himself in drawing up his history. (See Rawlinson's *Herodotus*, vol. iv. p. 451).

² The carving of circular markings upon a kind of stone that is remarkable for the tempting facility with which it may be incised, is a practice followed in one spot of the British Isles at the present day. The rock at Fetheland Head, Shetland, is formed of *steatite* or soap-stone. It is as easily cut or whittled with a common knife as a piece of wood. Three years ago, my friend Dr Arthur Mitchell saw the herring fishermen, in a day of idleness, cutting circles with their knives in the face of the rock, without the operators being able to assign any reason for their work, except that others had done it before them. The circles were all single, round, and small,

of the large barrow which formerly stood at Carnban, in Argyleshire, some two miles west of Lochgilphead, we have seen (p. 31) a sculptured slab introduced as a loose panel, within the stone grave of the great chief or priest in whose honour the barrow was raised. Of all races, the Celtic is specially retentive of traditional descriptive appellations. But he who was buried in the cairn gives no more his own name to it—as, no doubt, he did at first for long ages; and instead of recognising the barrow by his special appellative, the neighbouring Highlanders have, from time immemorial, known it merely from the colour or figure of its stones, under the meaningless name of “Carnban,” or “the white or fair cairn.” Did the occupant of this originally great cairn, with his flint fragments buried beside him, belong to an earlier branch of the Celtic race than the present? Or did he and his brotherhood, who sculptured the rocks in the same valley with rings and cups, not pertain to a population or a race really older than the Celtic?

CHAPTER XV.—THEIR CONNECTION WITH ARCHAIC TOWNS AND DWELLINGS.

When cut upon rocks *in situ*, the cups and rings have usually been found, in Northumberland, within the walls of archaic camps or towns, or placed at a small distance from them. At Old Bewick, some of the sculptured stones stand both within and without the great and striking ramparts of that ancient British city; and at Rowtin Lynn and Chatton Law there are walled camps or citadels in the immediate neighbourhood of the sculptured rocks; and the sculptured rocks themselves are included within their secondary defences or out-towns (see *ante*, p. 50). We have found the same observation to hold good in reference to examples of other isolated cut stones in Northumberland, Cornwall, Isle of Man, &c.

But in highly cultivated districts the march of agricultural improve-
without any central cup or side duct. On the same rock were initials and crosses carved out. Dr Mitchell found also circular marks on the rock, varying in diameter from ten to thirty inches—of an older date, and some of them turf-covered—which had been made, not by a knife, but by a pick or pointed chisel. The larger circles are averred by the natives to be of Danish origin.

ment has generally swept away all traces of ancient human habitations in the neighbourhood of the sculptured cists and monoliths; though not always. We have, for example, found (p. 45), within a few miles of Edinburgh, the carved kistvaen at Craigie Hill placed outside the ramparts of an ancient walled town; and the monolith at Comiston occupying a similar position (p. 46).

There exist no precise facts to fix the age at which the ancient British towns at Old Bewick, Rowtin Lynn, Craigie Hill, Comiston, &c., were inhabited; but probable data bearing on the point may yet be recovered in the form of buried tools, pottery, and weapons—as, for example, even in the varying and particular forms of their flint arrow-heads—in the special types of their walls and defences—in the characters and shapes of their included hut and house foundations and pits, &c. Wanting, however, still any adequate facts to determine the exact age of these towns or forts, we cannot through them approach with any accuracy the era of the archaic sculptures connected with them. Nor must we forget, in attempting to reason from the age of these ramparted dwelling-places, that in all likelihood—in ancient as in modern times—the same spots served for cities and communities through many long generations; and that the sculptures may belong to their earliest and not to their latest period of existence.

Within these archaic towns and camps no lapidary circles and cups have yet, I believe, been found in immediate connection with the stones of their hut foundations, circles, and pits—the dwelling-places of their olden inhabitants. They have been discovered, however, upon the stones of single human dwellings probably equally old. Among the most antique types of artificial human habitations in this country are our underground houses or “weems.” I have already adduced instances of one or two of these underground weems having, in their structure, stones sculptured with rude cups and rings, &c. The origin and general age of this type of artificial human dwelling we know not, though the rude materials and relics occasionally found within them prove the earlier forms of them to be very ancient. But some facts show that the ring and cup cuttings were as old or older than the date of the building of the most ancient type of these weems; for in one or two archaic earth-dwellings of this kind, blocks of stone, carved with ring and

cup cuttings (see Plates XX. and XXV. fig. 3), have been discovered both in the foundations and roof of the weems, where they had apparently been introduced and used, after serving other functions as sculptured stones; and possibly at so advanced a date from the time of their carving, that all reverence for the sculptures themselves had died out in the minds of the generation who used them as simple building material.¹

These underground weems are seemingly artificial representations of those natural caves which formed in all likelihood, at a still earlier period, the dwellings of our archaic forefathers. On the coast of Fife there are several of these natural caves or "weems," as they are still called in that district. One, which was lately opened near Easter Wemyss, contained numerous relics of bones, broken and split for the extraction of the marrow, as in the bones of the ancient Danish midden-heaps. In another cave, nearer the village of Easter Wemyss, which I visited with Dr Dewar, I found faded appearances of some depressions or cups with small single circles cut on the wall. Probably a more minute and extensive search in these caves would discover many more such carvings;² and it is not impossible that they or similar rude sculpturings

¹ The edges, however, of the rings and cups upon the large stone from the weem at Letham Grange, described at p. 41, are still so sharp as to show that the block had not been greatly exposed and weathered before it was buried in the foundation of this underground house. Could the builder of this weem have cut these markings upon the stone, with the hope of thus investing it with any sacred and protective character, before he placed it in the foundation of his dwelling?

² I leave this sentence as it was written, above two years ago. Shortly after that period I revisited Wemyss to inspect the other caves of the district, and make more minute observations than I could do in my first hurried visit, and discovered on the walls of some of them many carvings of animals, spectacle ornaments, and other symbols, exactly resembling in type and character the similar figures represented on the ancient so-called Sculptured Stones of Scotland, and like them, probably about a thousand years old. The small circles and cups which I saw in the Court Cave on my first visit, proved, on more careful inspection, to be the faded fragments of ends of two or more so-called "sceptres" or sceptre ornaments. On the occasion of my revisiting the caves, I was accompanied by Drs Joseph Robertson, Duns, and Paterson; but my esteemed friend Mr John Stuart, who has so admirably collated our Sculptured Stones, declined to make one of the party, as he deemed it im-

may yet be detected on the walls of those caves which, from their containing fragments of the bones of men and animals, with weapons, and other rude works of human art, are known to have been, in very distant and remote times, the dwellings of man; such as Kent's Hole, Wokey Hole, Brixham Cave, and the old inhabited caves of Belgium, France, &c.

CHAPTER XVI.—THEIR PRESENCE ON THE STONES OF THE MOST ANCIENT FORMS OF SEPULTURE.

Our archaic forefathers have left us many more specimens of the tombs of the dead than of the dwellings of the living; and ancient sepulchres have ever formed great treasuries for archæological investigation. These sepulchres are, as we have already seen, especially rich in the rude sculpturings after which we are inquiring. They have been found (see Chapter iv.) on the stones covering urns; on those forming the lids of kist-vaens, specially of the short and earlier form; within sepulchral chambers; and on the stones of cromlechs; not to speak of their appearance upon sepulchral stone pillars and megalithic circles. Some of these forms of sepulture, as the megalithic circle, the chambered tumulus, and its fundamental prototype, the uncovered cromlech, are in their origin beyond—perhaps very far beyond—our historic era. The carvings upon these sepulchral stones are probably all as old, and some of them even older, than the megalithic tombs of which these stones form a part. We have evidence of this in the facts I have already adverted to in pp. 81 and 105,—as that, for example, in one or two of the sculptured stones within the great sepulchral chamber at New Grange, some sculptures can be felt carved upon the backs of the blocks,—a position in which they could only have been cut before the sepulchre itself was reared. It is apparent that on other stones the sculpturings were made after the blocks were placed, as the patterns

probable that we would find anything interesting. I described at length these Fife Cave carvings to the Royal Society of Edinburgh on the 2d January 1865, and illustrated them by a full series of drawings of the sculptures made by Mr Drummond, R.S.A., and Dr Paterson. My communication on the subject (see Appendix) was published in the "*Proceedings of the Royal Society of Edinburgh*," vol. v. p. 521 to 526.

are continued from the face of one stone to another.¹ Not knowing with any reliable exactitude the era of these great sepulchral works, on the stones of which the cups, rings, &c. are cut, we fail of course in fixing the data of the sculpturings themselves. But that some of these sepulchres and their attendant sculpturings are very ancient, we know from another piece of evidence which we shall consider for a moment, viz.,—the nature of the relics which have been found in connection with them.

CHAPTER XVII.—THE ARCHAIC CHARACTER OF THE CONTEMPORANEOUS RELICS FOUND IN COMBINATION WITH THEM.

Antiquarian relics found in connection with ancient human habitations, whether the dwellings of single families or of large communities, are liable, as archæological chronometers, to mislead us by the evident fallacy that these dwellings may have, in ancient times, been often the residences, not of one generation, but of many successive generations, and even of successive races of men.

A similar source of fallacy is often involved in the answers which the archæologist may obtain from the examination of ancient places of sepulture, unless he pursues his interrogations with all due caution; for chambered tumuli, burial mounds, and cemeteries when once rendered sacred structures and spots, by the interment of the dead, continued occasionally to be used as places of sepulchre, for long ages by later and distant populations. Hence the well-known fact, that as late as 785, Charlemagne had to issue a special order to his christianised Saxon subjects, that they should cease from interring their dead in the tumuli of

¹ When speaking of the lines cut upon the cromlech called the Merchant's Table, at Locmariaker in Brittany. Mr Lukis observes, that "the stones were engraved *previously* to the construction of the cromlech, for the scored lines pass over the tops of the props at the points in contact with the capstones. This ornament was, however," Mr Lukis adds, "completed [occasionally] after the erection of the whole structure, for in the instance of Gavri Inis, the small stones—wedged into the spaces between the principal—have the scored work continued over their surfaces."—*Archæologia* for 1853, vol. xxxv. p. 250.

the pagans, instead of burying them in the churchyard.¹ (*Ut corpora Christianorum Saxonum ad cœmeteria Ecclesie deferantur, et non ad tumulos Paganorum.*) Many of our oldest barrows and burial mounds contain, in this way, *secondary* or later interments, which have often been confounded in archæological researches with the *primary* burial, for which the barrow or mound was raised. The long barrows of England, for example, seem to have been originally the graves of a population who had elongated skulls,² and apparently possessed no metallic weapons; but in other parts of the long barrows, and before reaching

¹ Pertz's *Monumenta Germanicæ Historica; Legum*, tom. i. p. 49. In the same capitulary Charlemagne issued orders against the practice of burning the dead, and laid it down as a capital crime. (*Si quis corpus defuncti hominis secundum ritum paganorum flamma consumi fecerit, et ossa ad cinerem redierit capite punietur.*)

² The doctrine of the greater antiquity in Britain, of the long-headed or dolicocephalic, as compared with the round-headed or brachycephalic race, was first broached some twenty years ago, by one of our greatest leaders in Scottish archæology, Professor Daniel Wilson. (See his *Prehistoric Annals of Scotland*, 1851, p. 160, &c.) A late writer on the subject, and a most keen and accurate observer, Dr Thurnam, in an essay "On the Two Principal Forms of Ancient British and Gaulish Skulls,"—in speaking of his own extensive experience in England, remarks, in regard to the long-chambered barrows of North Wilts and Gloucestershire,—“There is no well authenticated proof that metallic objects, whether of bronze or iron, have in any case been found in the undisturbed chambers of these tombs, which, however, yield well-chipped flakes and arrow heads, and also axes of flint. The skulls from these barrows, which are those of a people of middle, or even short stature, seem certainly the remains of a more ancient people than those who raised most of the circular tumuli of this part of the island.” Dr Thurnam, in the essay referred to, p. 39, and previously in the “*Crania Britannica*,” enumerates as the results of his observations and study of British barrows, in regard to their shape, and the skull forms of those buried in them, the brief axiom,—“Long barrows, long skulls; round barrows, round or short skulls.” The connection of the long skull with the long barrow and the Stone period seems founded on well established facts by Dr Thurnam with regard to some parts of Great Britain; but it is doubtful if his axiom holds true of all parts of England, or of other countries, and still more distant human races. The skulls from the Neanderthal and Engis caves, when man was contemporaneous with the cave bear, are elongated in form; one from the cave of Lombribe in the “rein-deer period,” is said, on the contrary, to be round. But the whole subject of skull forms, as connected with ages and races of men, is still at best involved in no small doubt and difficulty.

the spot in which their *primary* occupants have been placed, other graves are frequently enough met with in the same mound; and their *secondary* occupants are occasionally found to have been buried with weapons of bronze, and even of iron.

In this respect single graves or kist-vaens are freer from doubt than grave mounds, and barrows, and cairns. The sculptured slab in the Coilsfield cist covered an urn presenting, to use the language of Professor Wilson,¹ "the usual characteristics of primitive sepulchral pottery." (See figure of a portion of this sepulchral urn in Plate XIII. fig. 2.) In Plate XI. fig. 5 is sketched an urn with even ruder markings, found near Scarborough in a tumulus, some of the stones of which were cut with cups and rings. Yet archaic man ornamented his sepulchral and other pottery far oftener than he cut figures on stones; and his bone carvings were often more elaborate than his lapidary. The mode of burial, with the body more or less contracted and bent within a short cist or grave, is usually regarded as a form of interment older and more archaic than that with the body buried at full length and in long kist-vaens. Most, if not all, of the single cists hitherto found covered with sculptured slabs,

¹ Unfortunately this fragment of urn has not been preserved, and the original sketch of it, from which Dr Wilson made his woodcut, is also lost. On asking Mr Birch of the British Museum, the author of the well-known and classical work on the "History of Ancient Pottery," the probable age of this urn, as far as could be judged from the sketch of it given by Dr Wilson, and copied, as stated above, into Plate XIII., that eminent archaeologist replied, "It is always desirable, if possible, to see the object itself before pronouncing an opinion, but the urn seems to me closely like those found in Wales and Ireland of the so-called stone period. Its closely-hatched lines have great similarity with the vases of North Wales and Ireland, and it was no doubt of a light brown, imperfectly baked clay, such as is commonly found in the early Celtic graves, and some examples of which are engraved at the end of my work on pottery (vol. ii. *ad finem*). It must therefore be assigned to a remote epoch as to style." My friend, the Rev. Mr Greenwell of Durham, another high authority on such questions, has kindly outlined, as seen in Plate XIII., the probable shape of this Coilsfield urn, and adds, that such urns are found not unfrequently in Ireland, are often associated with bronze daggers, and hence probably, he thinks, pertains to the bronze period. "The Scarborough urn (Plate XI. fig. 5) is," he adds, "of the type of those that contain the burnt bones of a body, and which in all cases, except in the Coilsfield instance, have been found with the circular-marked stones."

have been of the short form, and hence of the earliest type, as the stone-coffins at Carlowrie (p. 28), and Craigie (p. 28.) The cist at Carnban, which contained the sculptured stone panel, is only four feet in length. The cist at Oatlands or Balnakelly, in the Isle of Man (see p. 19), with a cupped stone standing near it, is short also, being two feet three inches in breadth, and between four and five feet in length. Some of the sculptured sepulchral lids were small, as they merely covered urns, and hence burned bones, and are important as marking the very frequent co-existence of the cup and ring cuttings with the practice of cremation.

Within the urns and cists connected with these sculptured stones nothing has been as yet found, I believe, except tools and weapons formed of flints and other stones, with implements and ornaments of jet and bone,—all of them works of a very antique type. But, as far as the British Isles are concerned, we still greatly lack data to indicate—on any large scale—the kinds of implements which co-existed and were buried with those men whose sepulchres show the ring and cup carvings. We want also greatly any characteristic crania from such sepulchres, in order if possible to arrive at the probable race or races of the primary carvers of these rude sculptures. It is true that the human bones hitherto discovered where the urn lid or kist lid has been sculptured with rings and cups have been few, and almost always destroyed by burning; for, as just stated, the sculptures and cremation are often conjoined. But in very ancient times, with the Celt, and probably the pre-Celt and Turanian, as with the Greek, Roman, and early Saxon, the inhumation was sometimes used as well as the incineration of the body; and in the ancient tumuli of Brittany, and the cromlech sepulchres of the Channel Islands, the archaic dead have been found both buried and burned in different yet analogous barrows, and even within the same sepulchre.

In Brittany much more successful inquiries have been made than in our own country as to the contemporaneous relics and weapons of the stone carvers. We have already seen that the stones in a few of the great sepulchral barrows and chambers of Brittany have been found marked and carved,—the sculpturing in some of them, as at Gavr Inis, Locmariaker, Long Island, &c., being far more elaborate and objective than the simple rude cup and ring carvings of Great Britain,—and hence, we infer, later than them in date, unless we may hold—what is not

impossible—that the art of lapidary sculpturing advanced at a very different rate of progress in the two countries.

Many of the Brittany barrows have been opened in search of supposed treasures, &c., for years past, without the character of their contents having been ascertained; but the interiors of others, where sculptures exist, have been examined and determined with the greatest accuracy. Thus one large Brittany barrow,—that of St Michael's Mont, at Carnac,—was found to have the single large slab covering its contained cist cut with cups, like many of our Scottish stones. See a sketch of these cups on this Brittany slab in Plate XI. fig. 4. They were not, I believe, above one and a half inch in diameter each. This ruder cup-carving most probably marks this tumulus as of an age older than some of the other elaborately carved sepulchral chambers of the same district. The contents of the St Michael's Mont barrow are consequently interesting, as marking the kind of contemporaneous weapons, ornaments, &c., that were known to those men whose hands cut these cup sculpturings. There were found within the sepulchral chamber thirty-nine polished celts of jade, tremolith, and other stones; nine pendants and one hundred small beads, mostly of jasper, perforated, and hence probably the remains of necklaces; two fragments of flints; and a ring of small beads, said to be formed from the bones of a bird's leg. Fragments of the calcined bones of the occupant of the tomb were discovered underneath the floor of the chamber.¹

Another and more gigantic Brittany barrow was opened a few years ago at Tumiac, in Arzon. On some of the slabs forming the sepulchral chamber of this Tumiac tumulus “curious ornamental work,”²

¹ See Mr Barnwell in the *Archæologia Cambrensis* for 1862, and “Fouilles du Mont Saint-Michel,” by M. René Galles.

² The ornamental work on three of the stones of the Tumiac barrow was curious and exceptional. On one of the supporting slabs of the chamber, there was, at its upper part, a kind of double crescent, formed of two strings of circles or beads, like an imperfect necklace or collar. Lower down on the face of the same stone were four crossed and somewhat irregular lines, ending each in a very imperfect and irregular circle. On another of the stones were a number of projecting points, in rows, like small mammillary protruding pegs; and at its lower part, two parallel straight lines, which end in curves at both extremities. (See L. Galles' “Fouille du Tumulus de Tumiac en Arzon.”)

observes Mr Barnwell, "was found, and a large number of stone implements,—some more than eighteen inches long; and necklaces of stone beads, the various articles being nearly forty in number. All the stone celts had been fractured across about two-thirds of their length." "On this occasion," adds Mr Barnwell, "and indeed on all other similar ones where these chambers have been explored, no copper or bronze implement has ever been found. The articles are invariably of stone, and in the case of the grand chambers of Plouharnel, of gold." The body in this Tumiac barrow was inhumed, and without incineration, whilst that contained in the neighbouring barrow at St Michael's Mont had been burnt.¹

A remarkable sculptured slab containing carvings of hatchets, bows, &c., found in opening the tumulus of Manné-er-Hroek at Locmariaker, is represented in Plate XXXII. fig. 3. This carved slab was found amongst the stones filling up one end of the sepulchral chamber. In opening the tumulus MM. Lefebvre and Réne Galles dug down about thirty feet from the summit before they reached this central sepulchral chamber, which measured about thirteen feet by nine, and was about five feet high. Within it were found the following objects:—A hundred and four broken stone hatchets of tremolite and jade, one of them eighteen inches in length; two perfect jade hatchets, thirteen inches long, and of beautiful finish; five beautiful pendants of jasper; forty-four small beads in jasper, quartz, and agate; one prism of crystalline quartz; three pieces of sharp cutting flint; a quantity of charcoal; and some fragments of pottery. Earthy matter covered the floor to the depth of about a foot and a half, but no trace of bones or animal matter could be detected.

Weapons and ornaments of bronze have been found within some megalithic tombs and cromlechs, analogous in their type of building to those of Tumiac, St Michael, and Manné-er-Hroek.² When discovered they have

¹ *Archæologia Cambrensis* for 1862, p. 335.

² Baron Bonstetten, in his "Supplément d'Antiquités," states that in the megalithic tomb at Plouharnel a kind of ligula in bronze was also found; and more lately, in his "Essai sur les Dolmens," he adduces a few rare and exceptional instances of bronze implements being found in these catacombs in France and Spain, though throughout Northern and Western Europe their general and primary con-

been found usually, if not always, in circumstances showing that they were most probably introduced secondarily, or later than the primary age and use of the catacombs. Indeed layers, showing different and distant burial deposits, have been repeatedly found along with relics and bones displaced laterally to admit of the interment of others. Dr Lukis has specially pointed out this fact in relation to the megalithic catacombs in the Channel Islands, where he had an unusually favourable opportunity of studying the contents of these tombs and their interior arrangements, in consequence of their cavities having in long past times become silted up—and stereotyped, as it were, for modern investigation—by layers of sea-sand. We have figured a specimen of cup-carvings on the props of one of these cromlechs (see Plate VIII. fig. 2). In one only, however, of the many archaic sepulchres which he examined did Dr Lukis find an implement of bronze. In this instance, in the upper layers filling the interior of a cyclopic chambered tumulus in Guernsey, covered by nine capstones, he discovered beneath one of the capstones an ancient armband made of a copper alloy. In subsequently pursuing his researches downwards among the contents of this megalithic tomb, Dr Lukis states that he “arrived at the usual varieties of pottery, bearing evidence of greater age accompanied by many stone instruments, mullers and mills of granite;” and he believes the metallic armband—and another found near it of jet, pretty highly ornamented—must have been placed within the cromlech for security or otherwise at a subsequent period.”¹ Elsewhere he has stated that,—with this spurious exception,—in all his extensive re-

tents are entirely of the stone age. But cromlech building, we must remember, has extended to other districts of the world, and has in them extended onwards into later periods. As proof of the occasional posterior introduction of relics into cromlechs with *secondary* interments or otherwise, M. Bonstetten states, that inside an archaic “dolmen” at Locmariaker, and sunk down twice the depth of some remains of archaic pottery and flints, two statuettes in terra-cotta of Latona, coins of the second Constantine, and some Roman pottery, were found. Messrs Christy and Ferard opened fourteen cromlechs near Constantin, in Africa, and discovered in their interior, besides the corpses,—which were buried in a bent or contracted position,—worked flints, bits of pottery, rings of copper and iron, and in one instance, a coin of the Empress Faustina, who died 200 A.C. (See *Recueil de la Société Archéologie de Constantin* for 1863, p. 214.)

¹ Journal of the British Archæological Association, vol. iii. p. 344.

searches among the deposits within the megalithic sepulchral chambers and cromlechs of the Channel Islands, "no metallic instruments nor ornaments were discovered, nor even indications of the knowledge or use of metals."¹

We have had several megalithic catacombs and cists opened in England of late years, as at Rodmarton, Uley, Littleton Drew, West Kennet, Long Lowe, Nympsfield, Arlington, &c., where the relics found interred with the dead were entirely those of the Stone age; but the walls of these olden tombs have not been examined with the necessary care for the discovery of cup and ring markings, and possibly none may be present. In the field adjoining the sculptured stones of Largie, in Argyleshire (see anteriorly, p. 34), a megalithic round tumulus with three chambers or compartments in it was lately examined by the Rev. Mr Mapleton and Mr Greenwell. One of the three chambers was nearly twenty feet long. They found within these catacombs burnt and unburnt bones, charcoal, flints, and several urns or rather portions of urns, some of which were ornamented externally. The Rev. Mr Greenwell believes, from the examination which he has made of this great barrow, that the dead deposited in it at different periods were at one time inhumed and at another burned. But he concludes further—contrary to the general opinion on such subjects—that the age of cremation in this tumulus preceded, and perhaps long preceded, the age of burial.

At present I am not aware that within any of the sepulchres, whose stones are marked only with the incised ring and cup cuttings, any kind or form of metallic tool or instrument has yet been found. Should further and more extended observation confirm this remark, then it will naturally follow that the *commencement* of these sculpturings must be thrown back to the so-called Stone period, or to an era anterior to the use

¹ I have mentioned anteriorly (p. 65) Mr Conwell's discovery at Slieve-na-Calligh, in Ireland, of an extensive old "city of the dead," containing a great number of chambered tumuli with carvings on their stones. In one of the crypts of one of these chambered cairns Mr Conwell found what in all probability were the remains of a secondary and late interment, viz., a few fragments of iron and of small bronze rings and glass beads. No similar metallic relics have hitherto been found anywhere else in this large necropolis, except a bronze pin, probably also a secondary introduction.

of metals; unless, indeed, we can imagine, with some archæologists, that in consequence of the extreme age, moisture, &c., of these places of interment, any bronze or iron articles deposited in them have disintegrated and totally disappeared in consequence of the destructive oxidation of the metals—an idea contradicted by the chemical fact that the human and other bones have been more or less spared under conditions which, on this supposition, have removed all the metallic objects.

I have no doubt, however, that at whatever time the simple cup and ring sculptures were first begun to be cut, the practice of carving them—if it did not initiate in—was at least continued into, and indeed extended during the so-called Bronze era, and perhaps till a later period;¹ for bronze tools and ornaments have been occasionally found in localities in Argyleshire, Northumberland, and elsewhere near to spots where the sculptures exist in unusual numbers; though none yet have been discovered, as far as I am aware, in immediate and direct connection with these carved stones or cists themselves.

Mere peculiarities in the artistic type of the figures found cut on stones and metals, on pottery and bone, &c., have been sometimes held as suffi-

¹ Last century an example of lapidary circles, &c., was found upon the sepulchral slabs of a cist which contained iron weapons. The discovery was made in opening a barrow at Aspatria in Cumberland, and is casually described by Mr Rooke in the *Archæologia*, vol. x. p. 113. On digging the barrow, a stone cist was exposed containing the skeleton of a tall man. Beside the skeleton lay a long iron sword and dagger, their handles ornamented with silver; a gold buckle and a figured ornament, in the end of a piece of belt; with remains of a shield and battle-axe, and of a horse-bit and spurs, all very much corroded by rust. The stones marked were two cobblestones which inclosed the west end of the cist. The sculptures upon them consisted of single and double rings, some with cups and others with crosses in their centres. One of the stones had on it "marks which resemble" letters, but none such are visible in the accompanying sketches in the *Archæologia*. These lapidary rings, however, differed entirely from all the British forms described in this essay, as their "rims and the crosses within them are cut in relief"—raised and not incised. Lately I made, through Mr Page of Carlisle, full inquiries after these stones of Aspatria, but unfortunately they have disappeared. The crossed circles or discs on these Aspatria stones is common on Scandinavian stones (see anteriorly p. 73); but I know no other example of it in Great Britain. The relics are such as we would expect to find in a Scandinavian grave, and probably mark the interment as a result of the Scandinavian settlement of Cumberland.

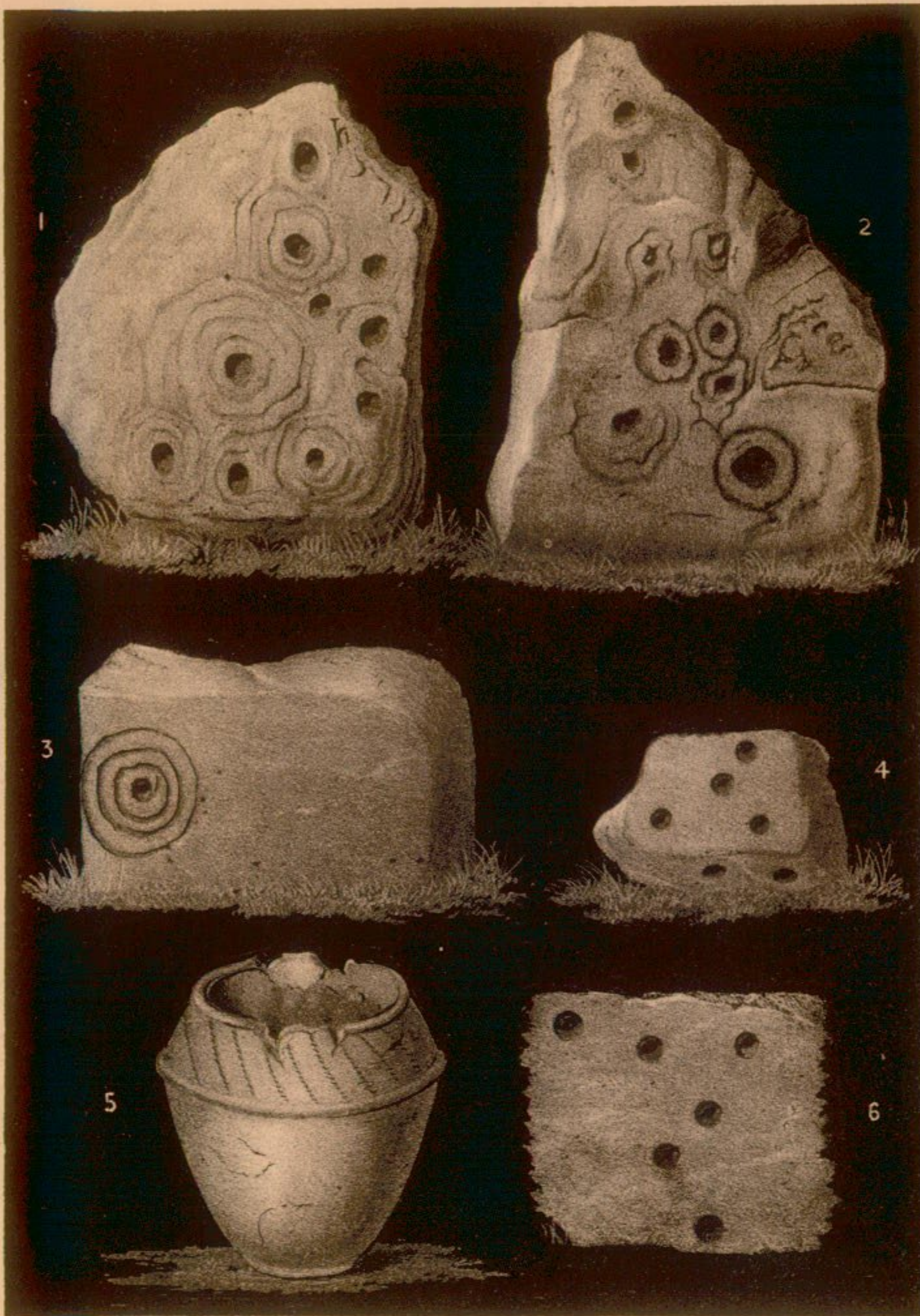
cient criteria for determining the age of their production. Thus the pottery, for instance, of the Stone and of the Bronze age, shows usually on its surface only dots, nailmarks, and compositions of straight lines, from the markings of cords or thongs upon the soft clay; and occasionally, in addition, we find some curved, circular, and spiral lines. It has been stated by various antiquaries,¹ that, on the contrary, while all attempts at the representation of natural objects, as plants, animals, weapons, &c., are rare, the ornamentation of the bronze age is specially characterised by combinations of circular, spiral, and sometimes zigzag lines; and certainly such are the geometric patterns generally seen on the most ancient bronze ornaments and weapons—whether we regard these combinations and peculiar types of decoration as foreign or native, Semitic or Aryan, Asiatic or European, Eastern or Western, in their origin. Again, however, if we turn to carvings on stones, we find that in some localities, apparently before metals were much if at all used, archaic man attempted to cut representations of external objects, as celts, animals, &c., upon the walls of his sepulchral chambers, as we have already seen (p. 69-70) in the cromlechs and chambered tumuli of Brittany. While we are not entitled, then, to draw any strong inference as to the age of the lapidary cup and ring sculptures from their artistic characters being supposed to be comparable with the geometric forms of ornamentation of the Bronze era, we are yet perhaps entitled to hold that—from their rudeness in artistic type—our Scottish and English cup and ring sculptures are earlier than those lapidary carvings and representations of natural and artificial objects which, along with circles and zigzags, exist in the cairns of Brittany;—and are consequently, according to this mode of reasoning, to be carried back with them in their origin to the so-called Stone age.

But the very formation and cutting of such lapidary cups and rings has been supposed of itself to involve the use of metallic tools. Let us, therefore, in the next chapter inquire for a moment into the soundness of this opinion.

¹ See Kemble's *Horæ Ferales*, p. 78; Lubbock's *Prehistoric Times*, p. 25; and Nilsson's *Skandinaviska Nordens Ur-Invanare*, p. 2, &c. Professor Nilsson and his school regard all the earlier and finer ornamentation upon our archaic bronzes as Semitic or Eastern, and not Celtic or Western, in their origin.

PLATE XI.

FROM YORKSHIRE AND BRITTANY TUMULI.



CHAPTER XVIII.—THE KIND OF TOOLS BY WHICH THE CUP AND RING CUTTINGS WERE SCULPTURED.

It has been argued that such sculpturings could not belong to the distant and so-called Stone age in archæology, because they could not have been cut except by metallic implements. In speaking, for example, of some sculptured stones in the sepulchral chambers and cromlechs of Wales and Brittany, Dr Lukis observes that it is difficult to conceive the possibility of the stones being cut by any but metallic tools (*Archæologia*, vol. xxxv. p. 250). MM. Merimée and Closmadeuc express a similar opinion as to the impossibility of sculpturing the stones of Gavr Inis without metallic implements (*L'Ile de Gavr Inis, &c.*, p. 14).

In most localities the ring and cup cuttings are found chiefly, and in some instances solely, carved upon the comparatively soft and easily worked sandstone rocks of the district. In Northumberland, as already stated, all the sculptured rocks hitherto discovered are sandstone, while the older and harder rocks in the neighbourhood of the sculptured stones show no markings whatever. But in other localities the rings and cups are engraved on stones and rocks far more difficult to cut, as on whinstone in the cromlech near Ratho; on dense schist as in Argyleshire; or on hard primitive granites, syenites, &c., as on the stones at Rothiemay, Midmar, &c. The presence, however, of the rings and cups upon these harder and more primitive rocks does not necessitate the knowledge and the use of metallic tools on the part of the sculptors. For I have found experimentally that the rings and cups can be engraved deeply and without difficulty upon the Argyleshire schist, and even upon hard Aberdeen granite, with a flint celt and a wooden mallet. In the Edinburgh Antiquarian Museum there is a block of grey Aberdeen granite from Kintore, forming one of the sculptured stones of Scotland, and containing upon one side two crescents, &c. (See it figured in Mr Stuart's "Sculptured Stones of Scotland," pl. cxi. fig. 3.) On the back of this hard granite Mr Robert Paul, the doorkeeper of the Museum, tried for me the experiment I allude to, and cut, in two hours, two-thirds of a circle with a flint and wooden mallet. The flint used was about three inches long, an inch in breadth, and about a quarter of an inch in

thickness. The circle which he sculptured with it in the granite was seven inches in diameter; and the incision itself was nearly three quarters of an inch broad, above a quarter of an inch in depth, and very smooth on its cut surface. In hewing out the circle with the flint, its sharp tips from time to time broke off, but another sharp edge was always immediately obtained by merely turning it round.

The result of this simple and decisive experiment seems to me to be important, as showing that if these archaic cuttings could be sculptured alike either by stone or by metallic tools, their mere character and form afford no evidence whatsoever that they were not carved till after the discovery and use of metallic implements. In other words, the experiment shows that they might have been produced before the introduction of metals—or during the Stone age.

CHAPTER XIX.—THEIR ANTIQUITY AS SHOWN BY THEIR GEOGRAPHICAL DISTRIBUTION IN THE BRITISH ISLANDS.

The ring and cup sculpturings have been found in many of the inland districts of England and Scotland. But—for the sake of argument only—let us look at their distribution for a moment in districts nearer our shores. Taking this view of their localisation, we find that they have now been discovered along the *whole length* of the British Isles, from Cornwall and Dorsetshire in the south to Orkney in the far north; and also across their *whole breadth*, from Yorkshire and Northumberland on the eastern coast of England to Kerry on the western coast of Ireland. At these distant and diverse points, and in the mainland districts between them, they everywhere present a sameness of type and form, showing—like a peculiar language—a sameness among the race or races that carved them. In other words, they all evidently indicate, wherever found, a common thought of some common origin, belonging to a common people. But how very long is it since a common race inhabited, simultaneously or successively, the four different and distant parts in the British Islands that I have just named, and dwelt also in the inland and intervening districts? Yet it was evidently at some such remote date that these rude and simple lapidary carvings were primarily

and chiefly made; and the last question that meets us is, What race or races cut them?

CHAPTER XX.—THE RACE THAT FIRST INTRODUCED THE CARVING OF THE LAPIDARY RING AND CUP SCULPTURINGS.

British historical records can only be truly said to begin with the notices of our Island and its inhabitants left us by Julius Cæsar, half a century before the commencement of the Christian era. At that date the population appears to have been mainly Celtic, but partially also Belgic and Iberian (if we may trust to the subsequent observations of Tacitus upon “the dark and curly-haired Silures”); and many have held that the Celts—including the two divisions of the Cymry and Gael—were the aborigines of these islands. During the ten or twelve centuries that followed the commencement of our historical records, we know that England was subdued and overrun by four different races of conquerors, viz., by the Romans, the Saxons, the Danes, and the Normans; and during the long prehistoric ages that preceded the notices left by Cæsar, our country was probably then—as afterwards—the seat and scene of repeated immigrations of new inhabitants and conquerors. For we know that when the curtain of western European history first rises in Pre-Christian times, it affords us strange glimpses of whole nations and hordes, like the Cimbri and Helvetii, changing from site to site in greater and smaller masses in quest of new settlements and new conquests. By the era of the first Roman invasion of Scotland, A.D. 81, our forefathers were already so advanced in civilisation as to build and use war chariots—a fact in itself showing no mean progress in the mechanical arts; and they had ere this time passed through the era of bronze weapons, for they fought at the battle of the Mons Grampius with what, to the Roman eye, seemed huge (*ingentes*) swords, large and blunt at the point (*enormes gladii sine mucrone*),¹—a form of weapon which we can only suppose to have been made of iron.²

¹ Tacitus, *Vita Agricola*, § 32.

² A century and more before Agricola invaded Scotland, Julius Cæsar had found the Celtic nations of Gaul provided with long two-edged iron swords (see Livy,

We have no adequate data as yet to fix the date of advent to our shores of the Cymry and Gael, and to determine whether or not they brought along with them, at their first arrival, as some hold, a knowledge of the metallurgic arts. But much evidence has been gradually accumulating of late years to prove that there had existed some pre-Celtic races in Britain.¹ Without venturing in the least to point out all,

xxxviii. 17 and 21). Diodorus Siculus states that they had also spears formed with a long blade of iron, and had invented iron coats of mail (V. 30). When the Roman armies first encountered those of Gaul in 222 B.C., the Gauls were even then, according to Polybius (ii. 33), provided with iron swords; but the metal was soft, and bent in battle. It was, says Mr Aiken, when describing this circumstance, "of the kind at present called 'hot-short,' a defect which," he adds, "much of the iron now made in the southern departments of France is very liable to" (*Illustrations of Manufactures*, p. 251). When Julius Cæsar attacked by sea the Veneti, or inhabitants of Armorica, in the year 56 B.C., he found them furnished with a strong fleet of oak ships, above two hundred in number, clinker-built with large iron nails, and the anchors of the vessels provided with chain cables of iron. In a very suggestive chapter in his late interesting work on the "Early Races of Scotland," Colonel Forbes Leslie hints that the Veneti owed probably their knowledge of naval architecture to the previous influence of Phœnician art and science among them (p. 47 to 61).

¹ Perhaps comparative philology, and the study of the ancient names of some of our mountains, rivers, and places, may yet afford the archæologist surer means than we generally use of ascertaining the presence in this island, in ancient times, of races before the Celtic. That Iberians, speaking the Basque or Euskarian language, partially inhabited the southern and western parts of Great Britain in the time of Tacitus, and long previously, is generally admitted to be of high probability; and their presence in western Europe is held by most ethnologists to be ante-Celtic. Perhaps they will yet be found to have left some of their language and appellatives not in south Britain only, but even far northward. One of the best known provinces of Spain bears the Basque name of Asturia, or, in other words, a district of "river and rock," from *Asta*, rock, and *Ura*, water. In Scotland we have the Basque word "Ura" forming—apparently now in modified forms—the names of various streams and lakes, possibly before the advent of the Celts; as the rivers and lochs Ure, Urr, Ury, Ore, Orr, Ayr, Aire, Yar, &c., used either singly, or as prefixes and affixes to other names. Tacitus tells us that Agricola, after passing the isthmus formed by the estuaries of the Clota and Bodotria (Clyde and Forth), stationed his army during the winter before the battle of the Mons Grampius, or A.D. 83, in the land of the "Horesti," a district which is usually supposed to be Fife, or more probably the southern part of Perthshire. May this term "Horesti"

let me simply note two or three. A race of Megalithic Builders—if we may so call them—who have not left in their sepulchres, and therefore we infer did not possess, in their earlier era at least, any metal tools or weapons, seem to have either preceded the Celts, or to have formed our first Celtic or Aryan wave; and judging from the extent of their remains in massive chambered catacombs and cromlechs, in numerous cyclopean forts, gigantic stone circles, &c., they must have held the country for a considerable length of time, and overspread the whole of it by the diffusion of their population. From their remains, as left in their tombs and elsewhere, we know that they employed weapons and tools of horn, wood, and *polished* stone; manufactured rude hand-made pottery; had ornaments of jet, bone, &c.; partially reared and used cereals, as indicated by their stone mullers and querns; and possessed the dog, ox, sheep, and other domestic quadrupeds. I do not stop to discuss the various questions whether these Megalithic Builders did or did not hollow out and use the archaic single-tree canoes found on our shores, rivers, and lakes;—whether they were the people that anciently whaled in the Firth of Forth with harpoons of deer-horn, when its upper waters were either much higher or its shores much lower than at present;—whether they or another race built the earliest stone-age crannoges or lake habitations;—and again, whether there was not an antecedent population of simple fishers and hunters, totally unacquainted with the rearing of corn and cattle, and who have bequeathed to Archæology all their sparse and sole historic records in casual relics of their food, dress, and weapons—buried in heaps and mounds of kitchen refuse which they have incidentally accumulated and left upon our own and upon other northern and western coasts of Europe. Whether these formed one, or two, or more races, let me add, that long anterior to the Megalithic Builders

not be composed of the same elements as the Basque word Asturias, but reversed; the *Ura* or *Or* being placed first, and the *Asta*, or *Esta*, being last; and the whole signifying—like the analogous Euskarian word—“a land of rivers and rocks, or hills?” Sometimes the accidental change of a single letter makes the recognition of an old word very difficult, as in the instance of the word cited above (Bodotria). It has been often said that there is no traceable relation between the river Forth and this its old Latin name Bodotria. But the properly spelt form was possibly Fodotria, and if so, the analogy between it and Forth then becomes self-evident.

there certainly existed in our Island a tribe of inhabitants that dwelt, in part at least, in natural or artificial caves, where their bones and their contemporaneous relics have been found; who possessed implements and weapons of stone and flint, but rough, and *not* polished like those of the Megalithic Builders; who seemingly possessed no pottery; who—if we may judge from the want of rubbers and querns to grind corn food—had little or no knowledge of agriculture; and who lived in those far distant times when the colossal fossil elephant or mammoth,¹ the woolly-haired rhinoceros, the gigantic cave-bear, the great hyæna, &c., were contemporaneous inhabitants with him of the soil of Britain; when the British lion² was a veritable reality and not a heraldic myth; and when possibly England was still geologically united to the Continent, and the Thames was only a tributary of the Rhine. I am not aware that we have yet sufficient evidence to consider as of the same family with these ancient Cave-men, or as of a race still anterior to them, the Flint-folk of the southern counties of England, whose *unpolished* flint hatchets—besides being found in great abundance on the banks of the Somme and Loire—have been discovered in various parts in the river-drifts of south England, and an excellent specimen of which, along with the bones of an elephant, was dug up, in the last century, from a gravel-pit near Gray's Inn Lane, in the centre of London itself.³ It sounds like an archæological romance

¹ According to Professor Buckland the fossil elephant was—judging from the specimen found in the ice at Tunguss—“clothed with coarse tufty wool of a reddish colour, interspersed with stiff black hair, unlike that of any known animal; that it had a long mane on its neck and back, and had its ears protected by tufts of hair, and was at least sixteen feet high.” (See his *Reliquæ Diluvianæ*, p. 172. See also a drawing and description of it in Figuier's “World before the Deluge,” London, 1865, p. 350.) Between the years 1820 and 1833, on the coast of Norfolk alone, the fishermen, in trawling for oysters, have fished up no less than two thousand molar teeth of the fossil elephant—one proof among others of the former abundance of the animal in this part of the world. (See *Ibid.* p. 336.)

² The *Felis spelæa* or pleistocene lion, has (observes Mr Owen) left its remains in many stratified deposits of the pliocene period in Britain (*Palæontology*, p. 384). It measured, if we may judge from its remains, “four yards” in length, according to Figuier, “with a size exceeding that of the largest bull” (*World before the Deluge*, p. 354). Lately Messrs Dawkins and Sandford have shown that the *Felis spelæa* is a large variety only of the *Felis Leo* (*Palæontographical Society Essays*, vol. xiii.)

³ The original account of the discovery of this British elephant and the stone axe,

thus to find the rude weapon of an archaic Briton, who hunted of yore on the ground where the metropolis of England now stands, apparently lying alongside of a skeleton of the wild game which he then and there pursued,—and that game nothing less than a British elephant.¹ What

as given in a letter written by Mr Bagford in 1715, and published in Hearne's edition of Leland's *Collectanea*, vol. i. preface, p. lxxiii., is probably worth quoting. Mr Bagford is not, of course, aware of the specific difference between the British elephant (*Elephas primigenius*), whose fossil tusks, teeth, and bones, often turn up in our soil, and the African and Asiatic elephant (*Elephas Africanus* and *E. Asiaticus*), known to the Romans. After speaking of the antiquarian zeal of Mr John Conyers, Mr Bagford remarks:—" 'Tis this very gentleman that discovered the body of an elephant, as he was digging for gravel in a field near to the sign of Sir John Oldcastle in the fields, not far from Battlebridge, and near to the river of Wells, which, though now dried up, was a considerable river in the time of the Romans. How this elephant came there is the question? I know some will have it to have lain there ever since the universal deluge. For my own part, I take it to have been brought over, with many others, by the Romans in the reign of Claudius the Emperor, and conjecture (for a liberty of guessing may be indulged to me as well as to others who maintain different hypotheses), that it was killed in some fight by a Briton; for not far from the place where it was found a British weapon, made of a flint lance, like unto the head of a spear fastened into a shaft of a good length, which was a weapon very common amongst the ancient Britons, was also dug up, they having not at that time the use of iron and brass, as the Romans had. This conjecture may perhaps seem odd to some; but I am satisfied myself, after having viewed this flint weapon, which was once in the possession of that generous patron of learning, the reverend and very worthy Dr Charlett, Master of University College, and is now preserved among the curious collections of Mr John Kemp, from whence I have thought fit to send you the exact form and bigness of it." A rude figure of this flint weapon was published by Hearne; and a more careful one is given by Mr Evans in one of his excellent papers on Flint Implements in the Drift (see the *Archæologia*, xxxviii. p. 301). This London flint weapon is not smooth and polished like those found in the Brittany and other megalithic tumuli and cromlechs, but rough, unpolished, and similar in shape, size, and form to those found on the banks of the Somme and Loire. It is now preserved in the British Museum.

¹ Dr Buckland enumerates various localities in the valley of the Thames where the remains of the mammoth have been discovered. These remains seem to be specially frequent on the site of London. "In the streets of London," he observes, "the teeth and bones are often found in digging foundations and sewers in the gravel." Again, he speaks of the remains occurring "in almost all the gravel pits round London," (see his *Reliquiæ Diluviance*, pp. 174, 175);—as if forsooth the site of the

a contrast do such antiquarian revelations suggest between the objects of pursuit of the archaic and of the modern Londoner!

To which of these races of men, or to what others, should we refer the first sculpturings of the cup and ring cuttings which we have been considering in the present essay? The question is one which, in the present state of archæological knowledge, cannot be positively answered. Many additional data are required,—particularly in the way of more careful and correct observations on the contemporaneous works and relics with which the sculptures are generally connected; and also on the extent of their diffusion. Do they exist over Europe generally, or are they limited to special localities in it? Sculptures, analogous, at least, to the cup and ring carvings of Britain, are, we have seen (see p. 71), traceable in Scandinavia. Are they common in that or other countries which the Celtic race never reached? But still more, are they to be found in the lands of the Lap, Finlander, or Basque, which apparently neither the Celt nor any other Aryan ever occupied? Do they appear in Asia within the bounds of the Aryan or Semitic races? Or can they be traced in Africa or in any localities belonging to the Hamitic branches of mankind? Do they exist upon the stones or rocks of America or Polynesia?

But we have some data which perhaps entitle us to suggest a possible approximate opinion on the question of the race or races that first cut these cup and ring carvings. They have now been found in sufficient abundance upon the stones of the chambered catacombs, cromlechs, and megalithic circles of this country, of the Channel Islands, and of Brittany. We have already, a few pages back, seen that the relics found in some of the chambered catacombs where these rude lapidary sculptures are carved, belong entirely to the Stone period, and consequently we infer that the age of the earliest of these sculpturings—as found in this connection—was the Stone era. But further, if any of them were thus carved in the Stone age, they were carved—according to the chronological opinions of most archæologists—anteriorly to the advent of the Celt to our shores.

English metropolis had been formerly a favourite haunt and home of the gigantic English mammoth. In Plate XXI. he represents a section of the cave called Goat-Hole, in Glamorganshire, where an elephant's head and human skeleton are marked on the spot in which they were actually found—lying near to each other (p. 275).

Besides, on another ground, we believe the earlier of these stone carvings are possibly anterior to the age of the Celt, namely, because they are found—though hitherto but sparingly—on cromlechs and dolmens; and cromlech-burying and building is not characteristic of the Celt; for in all probability this form of sepulture—involving, as it does, a rude but quaint type of architecture often so massive and gigantic as to be difficult of execution—was commenced and practised anterior to his arrival in our Island and in Western Europe. For though found in some countries—like Brittany, Cornwall, Wales, Ireland, &c.—inhabited since the beginning of the historical era by the Celt, yet both the simple and galleried cromlech are relatively or entirely wanting in other countries—like Cisalpine Gaul and some of the most central and eastern provinces of ancient Gaul¹ itself—districts that were assuredly Celtic in their popu-

¹ In his excellent essay, *De la distribution des Dolmens sur la Surface de la France*, M. Bertrand points out that, geographically, these megalithic structures—"dolmens," and open galleried cromlechs or chambered barrows—exist chiefly on the islands, capes, and coasts of Northern and Western France, from the mouth of the Orne to the mouth of the Gironde; that in the interior of the kingdom they are met with principally in proximity to the course of navigable, and particularly of large, rivers that they are almost entirely wanting, however, along the chief ancient tracts of Celtic and Pre-Roman commerce by the valleys of the Rhone, of the Seine, Soane, and Upper Loire; that they are similarly sparse and deficient in the last, and in the very heart of ancient Gaul or in the olden Celtic districts of the *Ædui*, *Senones*, *Lingones*, *Bituriges*, *Arverni*, *Cenomani*, *Boii*, and *Ambarri*, except at some points where these districts are penetrated by the rivers *Garthe*, *Eure*, and *Orne*; that they apparently belong, in their larger and most massive forms, chiefly to the latter part of the Stone age, and to a population which generally buried and did not burn the dead; and that their builders did not migrate across France from east to west, but penetrated first from the sea-shore, and by its rivers, into the western portions of the kingdom. Baron Bonstetten, in his *Essai sur les Dolmens*, endeavours to show that—as far as we can judge from the aggregations and chains of stone relics that they have left—the race of cromlech-builders, along both of the shores of the western portion of the Baltic, through Denmark and the Danish Isles, onwards to the northern parts of Holland, stretched their habitations at the same time from the shore inward into Mecklenburg, Hanover, &c. According to the same author, without remaining in Belgium, they seem to have passed onward into France, following the geographical points and routes pointed out by M. Bertrand. They crossed over into Great Britain, and occupied principally its western section

lation in the earliest historical times. Besides, it is a form of sepulture which has been followed in countries, as Scandinavia, where the Celt never dwelt, and in others, again, where neither the Celt nor any other branch of the Aryan race ever penetrated, as in Barbary, Constantin, Algiers, Oran, on the banks of the Jordan, &c.¹ In other words, the race that erected

and the eastern and southern section of Ireland. Arrived at the Gironde, they left the sea-shore, avoided the travelling difficulties of Gascoigne, and crossed southern France, obliquely in the direction of the Gulf of Lyons. Thence their remains are found running like a broad belt along the whole northern and western shores of the Spanish peninsula. They reappear in Grenada and Andalusia, on the southern coast of Spain, and stretch southward across the Mediterranean to Algiers, Constantin, and other parts of northern Africa; and perhaps passed, Baron Bonstetten suggests, to Egypt, and there formed the Tamhu (or men of the north) under Rameses [who, we may remark, are represented in the Theban tombs with leather dresses and tattooed limbs]. All the more northern cromlechs that remain in Europe are found to be of the Stone age. But as we pass southwards, bronze implements, at first seemingly altogether of foreign manufacture, gradually, though sparingly, appear, till at last, in the cromlechs of Africa, bronze, stone, and iron are found mixed up together in their contents. In this long pilgrimage the race of cromlech-builders, whilst apparently always keeping near to the sea-shore, still spread to a certain distance inwards for pasture and food for their flocks, which consisted evidently, from the various relics left, of the ox, sheep, horse, &c. Their weapons in the earlier and northern part of their European journey seem to have been entirely those of the Stone era, with the celts, axes, beads, &c., in some instances highly worked up and polished. Baron Bonstetten—whose account I have been following—further believes that, before appearing on the shores of the Baltic, they had passed or been pursued across Europe from the Black Sea and Caucasus,—and perhaps from still more southern districts,—where their remains are traceable; and that at different times they sent away offshoots that reached India, Palestine, Greece, Etruria, and elsewhere. In their long pilgrimage from the Baltic to the African shores of the Mediterranean, the nomadic race of cromlech-builders formed, Baron Bonstetten maintains, a pastoral people, living upon the products of their flocks, and upon fishing and hunting; and he holds, that the chain of cromlechs which they have left in their long and probably slow migration from the shores of the Baltic to the frontiers of Egypt, are so similar in general type as to prove the identity of the great tribe or nation of men who, out of veneration for their dead, reared them;—and yet the very name of this people is lost in prehistoric darkness. They succeeded, in his opinion, to the Cave-men of the west; but preceded all historical races. He adds an interesting map illustrative of his ideas of the geographical course and extent of their pilgrimage.

¹ See the observations of Mr Rhind in *Journal of Archæological Association*, vol. i.

megalithic cromlechs has been much more widely diffused over the world's surface than the Celtic; possibly, or indeed probably, sojourned in our country before them;¹ and in other parts, as Greece, pre-existed the oldest remains of the earliest traces of historic civilisation.²

(1859), and in the *Archæologia*, vol. xxxix.; Shaw's *Barbary and Levant*, p. 67; Irby's *Travels in Syria and the Holy Land*; Madden in *Transactions of Royal Irish Academy for 1863*, p. 117; Sir Gardner Wilkinson, in *Journal of Archæological Association for 1862*, p. 43, &c.

¹ Archæologists, very zealous for the continuation of the most archaic practices down to the most modern times, might argue that the old memorial standing stones and slabs are perpetuated in our present churchyard obelisks and upright grave-stones; and that cromlechs have *their* prototypes in the table or flat form of tomb-stone supported by lateral slabs or by stone props, that is so common in many of our Christian burying-grounds. In the churchyard of Santon, Isle of Man, is a very massive unhewn slab, formerly supported by corner-stone props, and which no doubt formed, before it fell, no contemptible specimen of a cromlech. In 1656, the vicar of the parish, Sir John Cosnaghan, was—in consequence of a strong desire expressed by him before death—buried under this, “The Great Stone,” as it was then termed. But for a far more interesting notice of the continued construction in the present day in Upper India of cromlechs of this form, and other megalithic structures, see Dr Hooker's “*Himalayan Journal*,” vol. ii. p. 276.

² We have already alluded in a preceding footnote (see p. 99) to the very ancient tombs or so-called treasuries at Mycenæ; and they afford us a kind of chronometer of the great age of our European cromlechs. For, near Mycenæ, there is an old cromlech of the usual form, built of massive unhewn stones, according to the common type and arrangement. (See a sketch of it in Bonstetten's *Essai sur les Dolmens*, p. 41). How very much older must this rude megalithic structure be than any of the ruins in the city of Mycenæ itself, archaic as these ruins are? The so-called tomb of Atreus or Agamemnon is usually considered as reaching to twelve or more centuries B.C. (see Gell, Hughes, Clarke, &c.), “the remains of Mycenæ being,” to use the language of Mr Dodwell (*Travels, &c.*, vol. ii. p. 229), “enveloped in the deepest recesses of recorded times.” The tomb is of the form of a gallery, chamber, and side crypt, very analogous in type to that of New Grange and other western catacombs; but its stones are polished and hewn, and the ornaments upon its pillars are, from the specimens left, of a simple yet elegant character. (See footnote in a previous page, 99.) The enormous lintel stone placed over the entrance of the dome-shaped chamber or tomb may “perhaps (observes Dr Clarke) be mentioned as the largest slab of hewn stone in the world” (*Travels*, 4th ed., vol. vi. p. 503). If these tombs are, as usually believed, thirty centuries old, the rude unhewn cromlech near Mycenæ, and other similar cromlechs, must be many

It appears to me not improbable, therefore, that the race of Megalithic Builders, whether Celtic or Pre-Celtic, who had tools of flint and polished stone, first sculptured our rocks and stones with the rude and archaic ring and cup cuttings. But the adoption, and even more extended use, of these forms of ornamental and possibly religious symbols passed down, in all likelihood (with their sepulchral practices, and with other pieces of art and superstition), to the inhabitants of the Bronze age, with its era of cremation and urn-burial,—and thence onwards to other and later times; and perhaps they can be still traced in the spiral, circular, and concentric figurings upon our ancient Celtic bronze weapons and ornaments; on their stone-balls and hatchets; on ancient bone implements and combs; and even possibly among some of the symbols of the so-called “Sculptured Stones” of Scotland.¹

It is important, at the same time, to recollect that the *origin* of the cup and ring cuttings may be still older than even the age of the earliest Celts or of the Megalithic Builders, for no doubt man attempted to carve and sculpture at a still earlier epoch in his history. We have proofs of this in the works of the archaic Cave-men of the Dordogne in France, who were contemporary in that district with the reindeer, had no pottery, and apparently possessed no domestic animals—not even the dog. Among their cave relics² there have been found several rude draw-

centuries older still. Let me merely add here, that the so-called Gate of the Lions at Mycenæ—built, along with its cyclopean walls, at a very early period of the city's existence—is archæologically interesting as the oldest piece of known lapidary sculpture in Europe; and it is interesting to connect with it the other fact, that scenes in the Agamemnon of Eschylus and the Electra of Sophocles—plays written four or five centuries before the commencement of the Christian era—are placed by their ancient authors in front of this very archaic sculptured gate, the remains of which continue comparatively entire down to our own times.

¹ See, for instance, the drawings of these Sculptured Stones in Mr Stuart's magnificent work on the subject in Plates IX., XXV., XXVII., &c.

² See M. Lartet's *Cavernes du Perigord; objets gravés et sculptés des temps Pré-historiques*, &c. See especially the drawings in pp. 20, 29, and 31. Latterly M. Lartet has found in these caves a broken plate of ivory, scratched with a portrait of the mammoth, and evidently executed by one who had himself seen this fossil elephant. (See a copy of this remarkable portrait in the *Annales des Sciences Naturelles*, 5^{me} série; *Zoologie et Paléontologie*, tom. iv. Pl. xvj.)

ings of animals, &c., scratched on bone and stone, apparently by means of the sharp point of a flint implement; and a poinard made of the horn of a reindeer, and having a rude attempt at the carving out of the form of that animal upon the handle of the weapon. It is possible, as I have already ventured to hint, that the examination of the *walls* also of these old inhabited caves and rock-shelters may yet detect upon them also some attempts at lapidary cuttings or sculpturings,—and none could be well conceived of a more primitive and rude type than the cup and ring cuttings described in this essay.