

VI.

REPORT ON THE MUSEUMS OF SWITZERLAND AND NORTH ITALY, OBTAINED UNDER THE VICTORIA JUBILEE GIFT OF HIS EXCELLENCY DR R. H. GUNNING, F.S.A. Scot. BY JOSEPH ANDERSON, LL.D., ASSISTANT-SECRETARY AND KEEPER OF THE MUSEUM.

The Council having done me the honour to give me a commission under the Gunning Fellowship to visit and report upon the Museums of Switzerland and North Italy, I began the round with the Central German Museum at Maintz, and finished with the National Museum of France at St Germain, both of which I had seen and reported on before, but which it was of great use to me to see again in this connection, because in these great general collections the sequences and relations of many things, seen only as isolated groups in smaller local collections, become clearly intelligible. I had also the advantage of seeing the vast anthropological collections of the International Exposition and the Trocadero at Paris. But though the results of these visits to the Museums of Maintz and Paris may have given valuable aid in classifying and systematising the knowledge obtained in the course of the tour, they have added no descriptive matter to the present report, which simply includes the museums of the prescribed area of Switzerland and North Italy.

Entering Switzerland by the Black Forest Railway, I visited the Museums of Schaffhausen, Constance, St Gall, Chur, Zurich, Lucerne, Bienne, Neuchatel, Berne, Friburg, Lausanne, and Geneva. In North Italy I visited the Museums of Como, Milan, Parma, Reggio, Modena, Florence, Bologna, Ravenna, Venice, Murano, and Verona.

SWITZERLAND.

SCHAFFHAUSEN.

The Museum at Schaffhausen occupies a portion of the large building which is chiefly devoted to the Municipal Library. It contains an extensive series of geological and mineralogical collections, and a somewhat miscellaneous collection of antiquities, arranged in one large room and two smaller apartments.

The most interesting part of its archæological series is the collection from the Kesslerloch, a cave of the Reindeer period, situated near Thayngen, between Schaffhausen and Constance. The cave was explored by the Natural History Society, Schaffhausen, and the relics obtained from it are chiefly preserved in the Museums of Schaffhausen and Constance—a portion fairly representative of the whole being at Schaffhausen. The cave was not large, but the quantity of the relics, both of the food and implements of the occupants, was very considerable. Among the animals, the Reindeer is present in great numbers, while the Cave Lion, the Mammoth, the Rhinoceros, and the Urus are represented by a few individuals only. The only domestic animals are the dog and horse. The series of implements of stone and bone is very interesting. By far the larger number are simple flakes of flint. They are accompanied by hammer-stones of the usual kind,—water-worn pebbles of a size and shape convenient to be held in the hand, and bearing on their ends and corners the evidence of use. There are also nodules of flint, unworked, and a few cores showing the marks of detached flakes. The flakes, as a rule, are not large. A few run from about 3 to about 5½ inches in length, but these are exceptional. Some of the longer flakes have well-worked scraper-like ends. Many of the shorter triangularly shaped flakes and splinters are ticketed as arrow-heads, but there are no spear or arrow-heads of the more finished types. In fact, from the absence of such finished implements, and the presence of such an immense number of flakes and cores—over 12,000 altogether,—I came to the conclusion that the production of flakes, and not of surface-chipped implements, was the flint industry of the cave. But if there was no evidence of elaborately finished work in flint or other stone, it was quite otherwise with the implements made of bone and deer-horn; and the impression left on my mind was that although the flint relics far outnumbered those of bone, this was no factory of flint implements in the usual sense, but a factory of implements of bone, where flint working was confined to the production of such flakes and other tools of that material as were required in the processes of bone-working. The implements of bone and deer-horn were for the most part finely finished, and the quantity of stumps, tines, splinters, and cut or partially worked portions of the beams of antlers showed to what an extent the raw materials of the 250 reindeer skeletons indicated by the refuse had been utilised. The objects made, whether from the horns or bones, were chiefly spear and arrow or javelin points, and this is probably the true reason why finished arrow and spear points of flint were absent. These bone arrow and javelin points are of forms similar to those still used by many modern savage tribes, plain and roughly cylindrical, tapering to a point at one end, and having an oblique section at the other, by which they could be lashed to the shaft. The rarer forms are those with a series of notches or barbs on one side, and the rarest of all those in which there are such barbs on both sides, similar to the well-known implements of the Dordogne Caves, but with a perceptible difference in make and finish. Another characteristic feature of resemblance between the bone-work of the Dordogne Caves and that of the Kesslerloch is the presence in this collection of those curious objects which the French archæologists have termed *batons de commandement*. These so-called *batons* are portions of the beam of a reindeer horn, with a round hole of about an inch in diameter bored through the strong part where an antler joins the beam. They are remarkable because they

generally bear some kind of ornamentation scratched into or cut out of the surface of the horn. In this case there are three such implements, and several fragments, all distinguished from the other implements by the manner in which the surface of the horn has been smoothed, and by the artistic nature of the carvings incised upon it. One shows a spirited figure of a reindeer, another has a drawing of a horse on one side, and on the other two figures supposed to be reindeer, but the heads are obliterated and the outlines faint. Another antler, not perforated, shows the head of a reindeer, and there is a small fragment carved in relief which has been supposed to represent the head of a musk-sheep, though the identification seems problematic. No pottery was found, and no stone axes.

Besides the Kesslerloch collection there can hardly be said to be any general collection of prehistoric objects of the Stone and Bronze Ages from the surrounding district. The Iron Age is represented by a small but interesting group of local burials. Among these is a series of small globular-shaped urns from so-called Celtic graves in Lohringen. From other so-called Celtic graves at Bissingen Wald there are a number of objects of no very determinate character; among which, however, is a rather rare form of oblong plaque of thin bronze ornamented with straight-line patterns and dots in repoussé. From another group of similar graves at Gennersbrun are two similar plaques. I notice them because they recalled to my mind a fragment of a plaque with almost the same ornamentation which we have in our Museum, found in a cairn in the north of Scotland. From Schleithem there is a collection of objects from Reihengraber, or burials of the Burgundian period, among which there are twelve of the characteristic belt-clasps with silver inlay, and two of the long fibulæ with semicircular heads and radiating knobs. Among the iron weapons from these graves is a fine broad-bladed double-edged sword, 30 inches in length, with a slight cross-guard and triangular pommel.

In the vestibule is a fine mosaic pavement from Schleithem, about 9 feet by 5 feet, a collection of local Roman remains, and a number of sepulchral slabs with incised effigies, but none of any importance in connection with mediæval art. There is also a small Ethnographic collection, including a series of stone implements and other weapons from the South Pacific and from North America.

CONSTANCE.

The Rosgarten Museum at Constance, in the old Guildhall, is a museum of Natural Science, with an archaeological department. The archaeological portion of the museum is very rich in specimens, and is essentially a Lake Dwelling collection, derived for the most part from stations in the Lake of Constance. The arrangement is puzzling, because the collections from the different localities have been partially classified by material, with the idea of showing the sequence of the stages of prehistoric culture. The cases, which have glass roofs and sides, are of the form familiar to our childhood as that of "Noah's Ark," and quite as crowded. I have been long familiar with the appearance of a very crowded collection, but I never understood what crowding really meant till I saw this museum. I spent the best part of a day in it, and came away with an impression that it possessed a magnificent collection, if one could only see it as it should be seen. Among the different Lake Dwellings which

are here represented, and from some of which there are several hundreds of implements of stone and bone, are Wangen, Hemmenhofen, Ermatingen, Steckhorn, and others in the Unter See, and Wallhausen, Sipplingen, Bodmann, Lutzelstetten, Unter Uldingen, Nusdorf, Maurach, and others in the Boden See. If these separate collections were spread out and arranged, so that it might be possible to compare one station with another, the museum would be a most instructive one. I was, however, interested in a selection of Lake Dwelling pottery, arranged to show its ornamentation, alongside of a set of pottery from Indian graves at Costa Rica—not at all to the disadvantage of the Indian potter. I also examined with much interest a collection from a series of graves opened in Chin-chin, among which I was surprised to find four thin flat implements of a hard schist, one of which by its oval shape reminded me of the peculiar implements of porphyry from Shetland, although it differed from that the Shetland type in being unpolished. Among a group of objects from a Lake Dwelling on the Mindlisee there is a leaf-shaped spear-head of bronze, about 3 inches in length, with a slight midrib, but without a projecting socket, and having two segmental indentations near the base—a rather unusual form. Among these objects is also what is called a small stone axe, apparently of limestone, the blade of the shape of the Middle Age executioner's axe, and the handle a prolongation of the same piece of stone. The blade measures about 4 inches in length, with an edge of about 4 inches, and the handle does not exceed 6 inches in length. Had it not shown the faceted surface produced by the polishing process, I should have been disposed to regard it as a freak of nature, and I came away with the impression that it was a fabrication, but I subsequently saw small axes of the same form in iron—blade and handle in one piece—at Zurich, where they were classed among Roman things, and called votive-offerings. From Waldkirch is a fine polished axe of serpentine, of the form that has both ends alike and sharp, and the perforation for the handle exactly in the centre. There are here a considerable number of imperforate stone axes in nephrite and jadeite, chiefly from Lake Dwelling stations in the Boden See. A number of wooden vessels and implements from Lake Dwellings are preserved in glass tanks filled with water, but the water becomes so discoloured with the dark peaty matter still remaining in the wood that it is impossible to see them properly. In the vestibule is a stone cist containing an Alemannish interment, the skeleton exposed, and showing on one arm an arm-ring of bronze, and at one side a fine glass cup. Here also are a number of very large round-bottomed urns of dark-coloured paste from graves in the neighbourhood of Constance.

ST GALL.

I went to St Gall to see the illuminated manuscripts of the Gospels preserved in the library of the old monastery there. The monastery has long disappeared, but a number of the books—*libri Scottice scripti*, as they were entered in the ninth century Catalogue—still exist, and are interesting to us as being not only written but illuminated in the peculiar style common to the manuscripts of the early Celtic Church in Scotland and Ireland. The monastery was founded by St Gall, one of the companions of Columbanus, in 612; rebuilt, and the relics of St Gall transferred to the new church, about 845, and continued to be fre-

quoted by Celtic monks till the twelfth century. The finest of the manuscripts now remaining is a copy of the four Gospels, known as codex 51, which contains illuminated pages representative of the Four Evangelists, the Crucifixion, Christ in Glory coming to Judgment, and two decorative pages, one of which is the first words of Matt. i. 18, arranged as in the corresponding page in the "Book of Kells." There is a fragment of a Gospel of St Matthew (codex 1395), which has an illuminated page representing the evangelist seated in a chair writing his Gospel, with an angel holding a book in front of him, and another fragment of the Gospel of St John, which has an illuminated page, of ruder execution, representing St John the Evangelist seated with his symbol of the eagle over his head. In the sacristy is preserved the Bell of St Gall, made of sheet iron riveted up the side, like the bells of the early Celtic Church with which we are now familiar.

CHUR.

The Rätisches Museum, at Chur, contains a collection of miscellaneous character, including a small series of prehistoric antiquities, among which are some objects of Alt-Italische types found in graves in the neighbouring valleys, but not of sufficient interest for detailed description. There are also here some fragments of a Celtic manuscript of the Gospel of St Luke, similar in character to those preserved at St Gall.

The Treasury of the Church of St Lucius at Chur is a most interesting ecclesiastical museum. The existing fabric of the church, which was once the Cathedral of the diocese, dates from the twelfth century, but there are still preserved in it architectural and ecclesiastical relics of an earlier date, derived from a pre-existing church. Among these are a series of slabs of white marble, which seem to have formed a screen round the choir like that in San Ambrogio at Milan. Of some of these now forming the basement of an altar in the church at Chur I show a photograph. They are ornamented with patterns of interlaced work of broad flattish bands, the upper surfaces of the bands being so channelled as to present the appearance of three parallel ridges of triangular section. This peculiarity of the division of the interlacing bands into three or more ridges is a general characteristic of the interlaced ornamentation of Switzerland and Italy. Here it is also characterised by the introduction of floral ornaments in the spaces formed by the interlacing patterns, and is associated with foliageous scroll-work of a style altogether different from that of this country. Among the collection of ecclesiastical relics in the Treasury of the Church of St Lucius is a small reliquary or shrine of copper plated with silver. It resembles the Monymusk reliquary in its general form, which is that of a narrow oblong box with a lid like a high-pitched roof, and has a ring in either end as if for suspension. It is ornamented on all sides with patterns of interlaced work, of Carolingian style, and has the front further ornamented with a gilt boss in the centre surrounded by eight settings of coloured glass. The back has a border of interlaced work round a panel of conventional serpents, having heads at either end. In the lower part of the end of the box there are two hippocampi facing each other, their tails interlacing to produce a pattern. Both ends are similarly ornamented, except that the one has in the centre an equal armed cross, and the other a triquetra. In the triangular

spaces of the ends there are two birds on opposite sides of a tree feeding on the fruit. It is regarded as Carolingian work of the ninth century. Another small box or reliquary of wood is covered with plates of ivory carved with guilloche and scroll-work, birds, &c., and is attributed to the eleventh century.

ZURICH.

The Museum at Zurich, occupying a portion of the building appropriated to the Town Library, consists partly of a geological and mineralogical collection, but is chiefly a museum of antiquities. It has collections of Greek, Roman, Egyptian, Assyrian, and mediæval antiquities, but the section most worthy of study is that which exhibits the prehistoric antiquities of the local districts. The local section consists chiefly of collections from the Lake Dwellings, not only of the Lake of Zurich, but of most of the other lakes of Switzerland, and, as the cases are of the old-fashioned kind, made for capacity, and are rather crowded, there is occasionally some difficulty in discriminating between the groups of objects from various localities. The arrangement is fairly successful in showing the distinction between the special features of the stations of the Stone and Bronze Ages. One of the features of the Museum, too, is the demonstration of the methods in use among the Lake Dwellers for working the stone from which they fashioned their axes and hammers. The sawing, from a rough block of diorite, of a portion of the stone having the size and shape requisite for being fashioned into an axe or hammer-head, is illustrated, and the boring of the hole for the haft of a stone axe of the perforated form is shown both from the ancient examples found, with the processes in various stages of completeness, and also by an ingenious reconstruction of the mechanical devices indicated by these ancient specimens. Thus the visitor sees a block of stone in the process of being actually sawn through, and a shaft-hole in a stone hammer in the process of being actually bored through by tools of soft wood working with sand as the abrading medium. Among many hundreds of stone axes here accumulated from the Lake Dwellings of Switzerland there is little variety of form, and few are remarkable for their fineness of finish. As a rule, they are mostly mere wedges, and their chief interest lies in the evidence of how they were made and fitted into their handles. These imperforate axes were hafted in various ways. The butt end of the wedge is inserted in a hole pierced into, or through, the thick end of a club; or it is socketed into a short piece of stag's horn, and the other end of the stag's-horn socket is mortised into the thick end of a club; or the club takes the form of a branch with a knee, which is cut off short, and the short part split, or cut out for the insertion of the butt of the axe, and bound tightly with bast; or the stag's-horn socket carrying the axe may be bored through the upper end, and the shaft put through the bore. Saws, borers, and knives of flint are fastened into their handles of wood or stag's horn with bitumen. Arrow-heads of flint are not uncommon. They are here principally of the triangular form, with barbs and stem, the leaf and lozenge shapes being scarcely represented. Among the most curious and rare of all prehistoric objects are the fragments of bows of yew from Robenhäusen. Some curious implements of stag's horn, one about 14 inches in length, and shaped like the head of a mason's pick, with an oval hole in the middle for the haft, are shown from Bauschanze; another, shaped like the modern iron axe,

with a portion of the wooden handle still in the haft-hole, from Wollishofen, and one almost similar, but slightly smaller, from Uetliberg.

The collection of Bronze Age things from the Lake Dwellings is very rich in its variety of forms, chiefly of personal ornaments. The large tanged knife, with long curved and pointed or scythe-shaped blade and thick back, which is often ornamented with segmental or wavy lines on the blade, is also present in large numbers; but the weapons proper, such as swords, daggers, and spear-heads, are less abundantly represented. The number of gigantic bronze pins with ornamental heads, from Wollishofen, one of the Bronze Age stations on the Lake of Zurich, is surprising. Among the rarer bronze objects from this station is an anvil, of the small size characteristic of the Bronze Age, but with a projecting horn like the modern anvil. In the same group are a socketed hammer, and a mould in sandstone for such a hammer, a bronze sword 24 inches in length, of the form with almost straight edges, a midrib, and the blade ornamented with lines parallel to the edges on either side of the midrib, having the hilt of bronze, with a concave button-like pommel and a slight swelling in the middle of the grip. A larger sword of the same type, with the handle slightly imperfect, comes from the Limmat, and a very fine sword, 24 inches in length, with a broad heavy leaf-shaped blade and flat handle-plate, with four rivet holes in the plate and two in the wings, comes from Letten, from which there is also a long, narrow, straight-edged blade, having a long taper towards the point and a short triangular flat tang for insertion into the handle, with holes for three rivets placed triangularly. A large bronze ring or bracelet, from Wollishofen, is ornamented in a very beautiful manner with concentric circles and arcs of dots and lines, and from the same place are two small wheel-shaped objects of tin, with four spokes each, and a tiny gold ring—one of the few instances in which gold has been found in the Lake Dwellings. There is a considerable amount of pottery from Wollishofen, and the pottery from the Lake of Zurich is a very large collection, showing many vessels of unusual size. The ornamentation is most varied, but not as a rule fine, though the shapes of some of the vessels are not inelegant.

Compared with the abundant produce of the lakes, the collections of pre-historic objects found on the land seems small. The stone objects are few, chiefly perforated hammers, but from the Limmat there is a small implement of polished stone, about 2½ inches in length, with four holes in the four corners, which in this country would have been called a bracer. It is the only example I have noticed on the Continent. Among the bronze objects, the broad spud-shaped palstave is the most common. A very fine oblong rectangular plate of thin bronze, ornamented with straight-line patterns in *repousse*, from Bauernhof, was associated with two flat bracelets and a number of harness rings. There is another with somewhat similar patterns from Affolten. They recalled to my recollection some small fragments of apparently similar plates we have from the north of Scotland, and I afterwards found that there were more or less perfect pieces of the same kind in the museums at Berne, Geneva, and Fribourg. They seem to have been parts of girdles or belts of thin bronze, probably affixed on leather.

Among the Iron Age things are a number of swords and other weapons of La Tène type and two iron palstaves from Limmat, of the same form as the bronze palstaves, with oval-shaped wings. My attention was attracted by a

very pretty little urn of greyish clay, with bulging sides and everted lip and about 5 inches high, which was ornamented with three rows of impressions made with the teeth of a comb-like instrument; but instead of being straight, as such impressions usually are in this country, they formed a series of arcs of small circles. The urn was attributed to the Helveto-Roman period, and was said to have been found in a cist near Zurich, with a skeleton at full length and two circular bronze armlets of the double-toothed pattern characteristic of that period. From a grave at Basel Augst I noticed a circular bronze plaque, about 3 inches in diameter, with open-work ornament of nondescript beasts intertwined with each other. A somewhat similar plaque with open-work of a geometrical pattern is among the contents of graves from Ottenbach. Classed among Roman things both here and at Maintz, I saw several smaller plaques or harness mountings with open-work in patterns of quasi-Celtic or trumpet-shaped forms, but I failed to find one authenticated as to its associations. They seem to have been obtained singly, and they are in most cases without specific statements as to locality and circumstances. An arm-ring of bronze from Ottenhausen, of a form new to me but of which I had seen one specimen at Maintz, was in the form of a plain ring of cylindrical section but swelling to the front, and bearing in the middle of the expansion a circular plaque with raised edges as if to receive a large setting, the whole ornament presenting the appearance of a magnified finger-ring of the Middle Ages. From a grave at Rute near Bulach, in the neighbourhood of Zurich, is a very fine neck-ring of bronze, highly ornamented with a kind of running scroll in relief, and having three circular expansions in front, with sockets for settings. Among many interesting examples of belt-clasps from Frankish or Burgundian graves was a beautiful terminal belt-mounting in bronze with a border of interlaced work, and having the central panel filled with an open interlaced pattern, from the Frankish cemetery of Villnachen. A curious group of relics from a tumulus at Lunkhofen contains a number of clay urns, three bracelets of silver with engraved trefoil-like ornamentation, three fibulæ inlaid with red coral or coloured glass, a small ring of lignite, two large amber beads, and a number of bronze rings of different sizes, several pendants of bronze, the attachments of which are figurines of cast bronze finished with the graver. They have been called "priapic" because the sexual organs are rudely indicated.

There is a large collection of Roman remains in this Museum, chiefly from Roman sites in Switzerland. They are of the usual character of such remains found almost everywhere in the provinces of the Roman Empire, but among them I counted sixteen small bells of iron, from 2 to 4½ inches high, and shaped like sheep-bells but with straighter sides.

The medieval collection is not large, and contains few things of much importance, but it possesses one rare object—a beautiful example of early leather-work, the shoe of the Abbess Hildegard, covered with stamped scroll-like patterns, and attributed to the ninth century.

The Museum at Zurich has a considerable collection of prehistoric bronze implements from Hungary, presenting many forms that are quite unknown in this country. Among them is a series of axes with a long shaft-socket projecting on either side of the weapon. For the hammer end these axes have a conical button-shaped head carried on a short neck above the shaft-socket, while the axe-blade below is long and narrow and slightly curved. The celts

and palstaves also present varieties of form that are seldom seen to the north of the valley of the Danube.

LUCERNE.

There are two Museums at Lucerne—one at the Gletscher Garten, with a small collection of Lake Dwelling things from the Baldegger See, and the Municipal Museum in the town itself. It has, along with the usual collection of pictures, a small collection of antiquities, neither very well arranged nor fully labelled. There is in it, however, a fairly good collection of lacustrine remains from the Pile Dwellings of the Lake of Sempach. It presents a considerable number of stone implements, some of the polished axes being larger and better finished than is common among the Lake Dwellings. The bronze implements are comparatively few and unimportant, and the ornaments of bronze consist chiefly of the commoner varieties of pins and bracelets or arm-rings. The pottery in general is coarse and fragmentary, though there are one or two of the smaller vessels of better make. A few objects of iron occur, which seem to indicate the occupation of the site probably as late as the period of the Roman domination. There are in the general collection a few antiquities from the mainland, among which are the contents of some Alemannian graves from Rotwill. A number of bricks or tiles from a thirteenth-century church attracted my attention from their being stamped with interlaced patterns, and with subjects apparently from a bestiary, such as the griffin, pelican, sagittarius, &c.

BIEL.

The Museum Schwab at Biel contains the Lake Dwelling collection of the late Col. Schwab, arranged in one room of a very good local museum, consisting of a fine art collection, a collection of natural history, and the collection of antiquities. The largest and most interesting part of the latter collection is from the lakes of Bienne and Neuchatel. Among the stone objects are some very pretty jade implements from Lattringen. The bronze collections from Moringen and Nidau are very extensive, comprising several hundreds of specimens, chiefly of armlets, gigantic pins, knives, and celts. Among them is a fine spear-head from Nidau-Steinberg, with the two sides of the blade slightly unsymmetrical, and the socket finely ornamented with two mouldings round the butt end and five bands of wavy lines between them and the spring of the blade. Here also are some of the sheath ends or mountings of the butt ends of spear-shafts, some of which resemble the specimens we have from Orkney and from Ireland. A number of large penannular bronze armlets, having the interior surface concave, the exterior highly convex, and the curve elliptical, are highly ornamented with bands of straight-line patterns, triangles, lozenges, zig-zags, and concentric circles. From Cortailod there is a chariot-wheel of bronze, about 20 inches in diameter, with four round hollow spokes, and a thin rim of bronze, with nail-holes for the casing of the rim. From Lattringen is a very pretty broad dagger-blade of bronze, with six rivets all in place, the blade ornamented by lines parallel to the edges. Among the rarer bronze objects are three socketed hammers of bronze, the socket in the line of the length of the implement. Arrow-heads of bronze are rare, but there is one

here from Estavayer which might have been modelled on a flint arrow-head of the common triangular form with barbs and stem. Among the axes of bronze those with flanges or wings and side-loops seem to be the most abundant; several of these have the rare peculiarity of having the wings set parallel to the plane of the cutting edge, so that if the implement were perforated for the handle between the wings it would be of the same form as the modern axe of iron. Socketed axes of bronze are less numerous, but there are here a few with the squarish socket so common with us. Flat axe-heads of bronze occur more rarely, and among them the elongated variety with both ends terminating in sections of circles is not uncommon. Socketed chisels, which are rare with us, appear here in greater abundance; and there are saws of bronze, not with the semicircular blades of the northern types, having the teeth in the concave edge of the blade, but with elongated and thin flat blades like the modern implements of steel, and pierced at the two extremities as if to be used like the frame-saw. The Lake Dwelling knife, with the long, curved, thick-backed blade, made to be hafted sometimes with a socket and sometimes with a tang, is here very numerously represented from various localities, some even retaining their handles of stag's horn. The smaller knives of bronze, with rounded or oval-shaped blades, sometimes with thick backs, at other times double-edged, or edged all round, sometimes with a rivet-hole in the end of the blade, and retaining part of the bone handle, sometimes with a tang for insertion into the handle, and often with a handle of bronze cast in the same piece with the blade and having a loop at the end for suspension, are not uncommon. A notable implement of bronze is the fish-hook—some barbed and others unbarbed, some single and others double, and except as regards their material, scarcely inferior to those of the present day. The weapons proper—the swords, daggers, and spear-heads of bronze—are not abundant, and present no striking features of difference from the usual types. The pottery, which almost fills the whole of the wall-cases, is a remarkable collection, including almost every variety of form and ornamentation known among the Lake Dwellings. The most notable pieces are those of dark-coloured paste inlaid with tin in various complicated patterns, the effect being that of a light-coloured design on a dark ground, though the tin is now in many cases even darker than the clay. One shallow concave dish or plate, 15 inches in diameter, from Cortaillod, is quite entire, and has a fine bold pattern, consisting of an outer border with cusps, and an inner border of a meander pattern, round a centre of radiating chequers, all filled in with lines or strips of tin as fine as threads. Though so finely ornamented this vessel does not seem to have been thrown on the wheel. Another deep bowl-shaped vessel with round bottom, 9 inches in greatest diameter and 6 inches in height, also from Cortaillod, has the upper part of its exterior surface decorated in a most elaborate manner with a double row of square panels, filled with alternate chequers of horizontal and vertical straight lines, or with small concentric circles, or with chevrons, or diagonal lattice-work. Fragments of vessels similarly inlaid with tin have been found at Estavayer, Montellier on the Lake of Morat, and elsewhere. The collection of iron things from Marin or La Tène that is here displayed is quite unique. The spear-heads go to 15 inches in length, with a strong midrib, and thin broad blade, sometimes oval or leaf-shaped, but oftener with

a wavy or indented outline, not unlike some of the shapes of iron spear-heads from Central Africa. The swords go to 35 or 36 inches in length, double edged, the edges going almost straight from the hilt to very near the point, or with a very slight taper and obtusely pointed. Of the hilt nothing remains but the tang, which is generally long. The scabbards are of thin plates of iron, and are often ornamented on the outer side near the mouth with a style of ornamentation more closely resembling that of certain objects found in Gaulish tombs in France and Switzerland than anything else. Money of Roman and Gaulish coinages was found with them.

In an ante-room there are a few small collections from Iron Age graves. From Herbringen are portions of so-called chariot-mountings and ornaments of bronze and gold with fragments of iron weapons. From another group of graves there is a breast-plate of the peculiar form with a central circular plate of open-work surrounded by concentric flattened rings of bronze, a brassard or tubular armet of bronze swelling in the middle, a short iron sword, and its sheath of bronze.

Like many other collectors, Col. Schwab seems to have collected from every source open to him, and the mixture of a multitudinous collection of stray objects from many quarters and of widely different epochs with the local objects gives trouble to the visitor who is desirous of gaining some definite conception of the special characteristics of the lacustrine collections.

NEUCHÂTEL.

There are two Museums at Neuchâtel—one devoted exclusively to natural science, and the other to art and antiquities. Both are handsomely lodged in spacious buildings near the shore of the lake. The Musée Historique, as the collection of antiquities is styled, is arranged in a fine suite of rooms on the ground floor of the building, which gives accommodation to it and to the Art Galleries in the rooms above. The principal feature of the archaeological department here is Desor's collection of lacustrine remains, which is exceedingly rich in bronze objects, and has also a fine selection of Iron Age types from Marin. Among these is one sword-sheath of bronze, ornamented down one side with a repeating pattern of a double recurving scroll, the spaces between being filled with triangles of curves, each having an almond-shaped form in the centre. The collection of pottery from the Lake Dwellings is large, and many of the vessels are finely made. Among the noticeable objects in the collection from Concise are flint saws in the handles fastened with bitumen; arrow-heads of bone, which are rather unusual in their forms; and chisels of bone, formed of the leg-bones of sheep, with the joint left for the head of the instrument. Pointed instruments of this description are common, but those with broad chisel-shaped ends are less frequently met with. Among the bronze weapons from this station is a very fine sword, about 24 inches in length, with almost straight edges, and the blade ornamented by four lines parallel to the edges; the hilt of bronze, with a slightly swelling cylindrical grip ornamented with three parallel mouldings, and instead of a pommel, having a terminal crescentic plate with incurving spirals at each side and a tang-like projection in the middle. The hilt is fastened to the blade by two rivets in the wings. Among the other implements of bronze there is here a rare form of palstave,

with the wings parallel to the plane of the cutting edge. From Auvernier there is a bronze sword, with a very peculiar hilt, also in bronze, the grip swelling in the middle, and with a slot between the swelling and the upper part, which is finished off by an oval curved plate in place of a pommel. The bronze arm-rings or bracelets from this station are noteworthy for their size and the unusual fineness of their rectilinear ornamentation. A very unusual object is an oval shield-boss in bronze, with four smaller bosses on the rim. Here also are the contents of several of the burials on the mainland of Auvernier opposite the Lake Dwelling (of which there are also others at Berne), and the principal grave-chamber, a large cist of rude stones, is set up in the grounds of the Museum. Among the collections from prehistoric grave-mounds and cemeteries is one of those curious circular "breast-plates," as they are called, which are made of a disc of bronze in open-work surrounded by three flat concentric rings of bronze, found with the skeleton of a woman and a double spiral arm-band in a tumulus at Vauroux. There is also a large collection from Burgundian and Helveto-Burgundian graves, repeating the broad, heavy iron swords, knives, or scramasaxes, girdle-buckles, and inlaid belt-clasps, which are characteristic of these interments.

The Middle Age and more recent antiquities of the district are also well represented in this Museum. I noticed on the capital of a pillar and on other fragments of sandstone from the Chateau de Neuchatel, which was destroyed by fire in the fifteenth century, a number of interlaced patterns of the usual character—the surfaces of the bands dressed into three ridges. They are assigned to the thirteenth century, on what evidence I know not.

Here, also, is a large case filled with forgeries and fabrications of quasi-relics from the Lake Dwellings—hammers of serpentine, bone implements of every kind made on a grindstone from bones actually fished up from the lake bottom, stone moulds, and deer-horn handles with stone axes in them.

BERNE.

There are two Museums in Berne. The largest collections are in the Cantonal Museum, which is arranged in two divisions—one mediæval and the other prehistoric.

The prehistoric collection is arranged in a long gallery on one side of a cloister-like court. In its general character it consists chiefly of Lake Dwelling collections, and these seem to be largely derived from the stations in the Lake of Biemme. From Moringen in that lake is a very large collection of objects in stone and bronze. Among them is a bronze palstave, with a loop on one side, still in its wooden handle, made of a kneed branch, the part that receives the head of the palstave being cut out of the centre of the wood, so that the two sections of the handle are jammed between the wings of the palstave, which have been hammered down upon them. From the same station are two curious balls of burnt clay called children's playthings. They are each about 2 inches in diameter. One has six projections on its surface, surrounded by four concentric circles, giving it some slight analogy to our knobbed and ornamented stone balls. The other has intersecting grooves round the circumference, dividing it into quadrants. From Lattringen, in the same lake, are a number of unusually large axes of diorite, and several of the rough

blocks of stone showing the marks of the sawing process by which the pieces intended for the formation of axes were cut from the block. From Luscherz, in the same lake, there are about one hundred arrow-heads of flint, mostly of the triangular shape with barbs and stem, and a splendid axe of jade of a clear green colour and finely polished. From Gerolfingen, in the same lake, are a number of flint knives and saws, still in their handles of wood with asphalt fastening, and three thin flat stone objects, somewhat chisel-shaped at both ends, having one end slightly narrower than the other, and pierced with a small hole. They are of polished serpentine, and bear considerable resemblance to the pendant breast ornaments of the N. American Indians. Among the objects from this station are a number of beads of copper. From the station of Fenil there is a very remarkable necklace of forty-five beads of copper, varying from about a quarter to half an inch in diameter. There are in this collection also three chisels of copper, 5 inches in length, bearing the hammer marks on their heads; a flanged axe-head, said to be of copper; and five or six triangular dagger-blades, the largest about 5 inches in length, said to be of the same metal. Among the multitudinous array of implements in stag's horn from this station are a number of very well-made buttons—flat discs with a loop on the underside, cut out of the solid horn. It is curious to find along with the copper implements above mentioned triangular arrow-heads of flint, and a well-made flint knife or dagger, still retaining its wooden hilt bound round the insertion of the blade with bast, and terminating at the free end in a button-shaped pommel. From the station of St Peter's Insel are a number of finely formed flint-flake knives, a curious necklace of bronze wires plaited together with rings suspended from it, and an iron socketed axe, like those of bronze, but without a loop, still in its wooden handle, made of a kneed branch, having the short end inserted in the socket of the implement. The station of Sutz is also represented by a large collection of flake knives, many of them elegantly formed. From Chavannes there are flint flakes from 8 to 10 inches in length, and from Vingelz a large collection of axes and hammers of diorite and flint arrow-heads. From Brugg are a number of bronze swords of the common continental forms, but among them are several of the almost straight-edged form with slight midrib and flat tang, with rivet-holes like the Irish form. Other five swords in bronze are from the Lake of Luissel near Bex; some from the same place are also in the Museum of Lausanne. Among the personal ornaments from the Lake Dwellings here none are more remarkable than the enormous pins with ornamental heads, which occasionally exceed 18 inches in total length. The La Tène period is largely represented by a collection of the curious iron swords and scabbards, spear-heads, &c., which are characteristic of the station of Marin. A very large and fine spear-head of iron from Oberezihl has an inlaid pattern in the Gaulish style. From a grave-mound at Allenluften is a golden girdle—a fillet of thin gold, with straight-line ornamentation in *repousse*. From a similar mound at Dotzingerberg there is one of those brassards, or long cylindrical armlets of thin bronze, swelling in the middle, which are not uncommon in Central Europe, but are unknown to us; and from Grossholtz a type of breast-plate, as it has been called—which is equally unknown to us—consisting of a central circular plate of bronze, slightly convex, and ornamented with pierced work, surrounded by from four to six flat concentric rings of bronze; from Murzelen a series of bronze armlets, and a button-like ornament

of gold ; and from Murzingen a fine bronze armlet. Here also is part of the collection of objects found in a cemetery of cists at Auvernier, which, from their being situated on the mainland opposite the Pile Dwellings in the lake were supposed to be graves of Lake Dwellers. The objects found with the skeletons (for the bodies were unburnt) consist of bronze bracelets, rings, and pins, small stone axes of serpentine, and pendants made of the teeth of the wolf and bear and the tusks of the wild boar, pierced at one end for suspension. More notable, however, are the collections from cemeteries of the Iron Age, in three of which are chariot-burials, viz., at Anet, Grauholz, and Grachwyll. Besides the remains of the chariot wheels and mountings, the Grachwyll collection is remarkable for the splendid vase of bronze, the upper part of which is ornamented with a figure of archaic type standing between four beasts, which was found in association with the burial. These chariot-burials of Switzerland bear a close resemblance to the Gaulish interments of the same type from the department of Marne, of which a number are preserved in the Museum at St Germain. There is here also a very considerable collection of iron weapons, &c., from the cemetery of Tiefenau, and from the Burgundian cemeteries of Villeneuve, Ursins, Daillens, Wabern, and Rubigen, the latter presenting some fine belt-clasps of the usual form, beautifully inlaid with interlaced work. From Elisried there are also a number of clasps, some with figures, but most with interlaced work and other patterns, plaques of bronze, inlaid and ornamented with settings and filagree, and beads of variegated glass.

Among the Roman things, of which there is a large collection, I saw two small votive-axes of iron, one with the letter V on the blade, and similar to one I had noticed in the Museum at Zurich. They recalled to my recollection a small axe of stone of the same unlikely shape which I had seen at Constance.

As in some other Swiss museums, there is here a case filled with forgeries and fabrications of articles which are pretended to have been found in Lake Dwellings and excavations. A great many of the typical forms of Lake Dwelling implements are represented by more or less successful imitations—pottery, stone moulds, pendants, daggers, pincers, and even arrow-heads of bronze, stone hammers, and flint arrow-heads, and stag's-horn handles with axes of diorite in them.

The other Museum in Berne is contained in two rooms of the Hotel de Ville. It consists of a small but choice collection of Lake Dwelling things, very well arranged and displayed. The specimens being classified according to their uses and materials, but unticketed as to their localities, the collection serves as an admirable popular illustration of the civilisation of the Lake Dwelling period, although it loses the value which it would otherwise have possessed in a scientific point of view.

FRIBOURG.

The Cantonal Museum of Fribourg is a large building, containing eleven rooms, of which the major portion is occupied by a picture gallery and a natural history collection. Three rooms are given to the archæological department. The prehistoric section is almost entirely derived from the Lake Dwellings of the lakes of Neuchatel, Bienne, and Morat. But the station

principally represented is that of Estavayer, in the Lake of Neuchatel, from which there are between 300 and 400 objects in stone and bone, bronze and pottery, for the most part of the usual types. Among the stone articles are the usual hatchets in their stag's-horn sockets, and a fine flint saw in its wooden mounting. There are comparatively few arrow-heads, and as a rule flint implements of any kind are rare, the hatchets being usually of diorite and serpentine, though one or two of small size are marked as of nephrite. The bronze collection from Estavayer is more remarkable. It presents a number of bronze pins of gigantic size, some being from 10 to 12 inches in length, with many varieties of ornamental heads. There are also a number of the long, curved-bladed knives with thick backs, some with sockets and some with tangs, and several of the small, thin, oval-shaped blades which have been supposed to be razors or leather-knives. The series of bracelets of the light hollow per-annular form, ornamented with patterns of straight lines and circles, is very interesting, but perhaps the most remarkable of the bronze objects is one of singular form, consisting of a socket about 5 inches in length with a rivet-hole on one side, surmounted by an irregularly oval loop curving outwards, and coming back to join a button-shaped projection on the other side of the socket; across this loop there is a straight cylindrical bar, on which are four loose rings, the whole cast in one piece. It is conjectured to have been the terminal ornament of the rear part of a war-chariot, and is almost exactly similar to one found at Chevroux, a station on the same side of the Lake of Neuchatel. I noticed also a unique bronze pin, with a globular head of stag's horn, bound round the middle with silver. Among the collections from other localities I noticed three axes of nephrite,—one from Greng in the Lake of Morat, another from Locras, and a third from Font in the Lake of Neuchatel. There was also an axe-handle of wood from Font; the axe-head was not in it, but another axe, handled in a fac-simile of it, was placed beside it.

There is a considerable collection of Roman remains, including a mosaic pavement from Cormerod representing Theseus and the Minotaur.

From a Burgundian cemetery at Le Rapitaz there are upwards of twenty belt-clasps of bronze, several of which are ornamented with interlaced work inlaid with silver, and a diadem or fillet of gold ornamented in *repousse*, which was found with fibulæ, fragments of a bronze vase, and the iron tires of two chariot-wheels in a tumulus at Chatonnaye.

The Middle Age collections consist chiefly of arms and armour, and ecclesiastical furniture and utensils.

One feature of the natural history collection is deserving of mention. The fauna of the Canton are exhibited in one large room, and grouped in accordance with their habits and environments on a miniature landscape which occupies the whole centre of the floor, the wall-cases representing the mountain ranges.

LAUSANNE.

The Cantonal Museum of Lausanne is a large museum of natural history and antiquities. The archæological department occupies four rooms, and is well arranged, but not well lighted. The collections, like those of most other Swiss museums, are principally from Lake Dwellings; but as this Museum contains the collections of the late M. Troyon, they include a large number of

interesting things from prehistoric cemeteries in the neighbourhood, and a considerable collection of crania. Among the collections from the Lake Dwellings the most extensive are from the Lakes of Geneva, Morat, and Neuchatel, but there are smaller collections from the Lakes of Bienne, Bourget, and Annecy. In the collection from the Lake of Neuchatel I counted six socketed hammers of bronze, of which three had loops, thirty-six sickles, seven bronze swords, and two triangular bronze daggers with hilts of bronze. The numbers of the long curved knife, of the Lake Dwelling form, with tang or socket, and of the long pins with ornamental heads, are very great. From Chevroux there are two poignards in flint, beautifully worked, and still in their wooden handles, and a number of knives and saws of flint fastened into their wooden handles with bitumen. From Corcellettes, in the Lake of Neuchatel, there is a very remarkable vase of bronze—broad, shallow and round-bottomed, with an upright brim, having two loops for suspension, pierced with rectangular holes, and the bottom ornamented with running spirals. In form and decoration it closely resembles a series of similar bronze vessels found in Scandinavia. Along with it, among the things from Corcellettes, there is one half of a spectacle-shaped brooch of bronze, with ornamentation of concentric circles and spirals, which is also similar to a class of objects not uncommon in Scandinavia and North Germany. The collections from the Lake of Geneva include a large number of things from the station, which has been styled "La grand cite de Morges." Among these are a number of things of comparatively late date, but I was interested in observing amongst the Bronze Age things a curved scraping-knife of bronze, like the socketed blade we have from Skye, alongside of which there was placed a similar implement of steel, in its wooden handle, as still in use among the wood-carvers of the Oberland. Among the objects from the Lake of Morat were two very pretty bronze dishes, about 5 inches diameter and $3\frac{1}{2}$ inches deep, with rows of bosses in *repousse* round the circumference. There are also some fine bronze swords from the Lake of Luissel near Bex, one of which, with hilt of bronze, the grip swelling in the middle, and in place of a pommel an oval plate ending in incurving spirals with a tang-like projection between them, is similar to a sword in the Museum of Neuchatel, from Concise. From Chamblandes, a cemetery of the Stone Age, and attributed to the people of the Lake Dwellings of that period, there are a number of interesting burials, the most striking objects connected with them being about 120 tusks of the wild boar, of large size, which were found disposed in double rows upon the necks or breasts of the skeletons. Among the contents of a grave of the Bronze Age at Baulmes, consisting mostly of rings and other fragments of personal ornaments, there is a very large brassard, beautifully ornamented. From a small cemetery at Verchiez, where a number of cists with unburnt burials were discovered, there are spiral armlets of bronze wire, and large pins with ornamented disc-shaped heads. In one cist was a brassard or arm-defence of thin bronze, bent to an arc of a circle, and ornamented with a combination of straight-line and punctulated patterns. Such brassards—mostly, however, completely circular and wider in the middle than at the extremities—have occasionally occurred in association with flat axes of bronze and bronze daggers, and are thus assignable to the Bronze Age. There are two bracelets of bronze, richly ornamented in the usual style of Bronze Age decoration, from one of a group of cists at Boiron on the mainland, opposite the Lake

Dwelling of Morges, the richest of the Bronze Age stations in the Lake of Geneva. From some excavations at Bex there is a very rare object, which recalled to my recollection a similar one in our Museum. It is a small bronze spherical bell, or crotal, with pierced sides and a loop at the top. A pellet of bronze is still inside. This one was found with a number of other bronze articles, including a thin triangular dagger-blade with a bronze hilt, a large pin of bronze with a circular head, and four smaller ones, a gorget or diadem of thin bronze, and a slightly flanged axe-head. Another of these spherical bells of open-work in bronze which I saw in the Museum at Fribourg was found in the Lake Dwelling at Auvernier, and is figured by Keller, who was rather at a loss what to make of it, seeing that it was in two pieces, and the pellet, which would have explained its use, was gone. From the neighbourhood of Lausanne was another unusual article which caught my attention. It was one of those oval-shaped quartzite pebbles, with an obliquely elongated hollow worn in each of its flat sides, and a well-defined groove round the edges for suspension. These are common in Scandinavia, and, without the groove, in Ireland, while we have perhaps half a dozen Scottish examples, but this was the only one I saw in Switzerland. From Charpigny in the Rhone valley are the contents of a number of cists, consisting of several varieties of bronze bracelets, and large hair-pins similar to those so common in the Lake Dwellings, bronze axes, a dagger, and what is very unusual, a comb of bronze, and quantities of rude pottery. Here also were three "breast-plates," as they are called, composed of a disc of open-work in bronze, rising to the centre like a boss, and round it a series of from three to six concentric rings, flat, and made to lie each within the other. These are from graves at Croix Rances and Dorigny.

There are large collections of objects from heathen graves of the early Middle Ages, such as the cemetery of Bel Air near Lausanne, in which there have been found nearly 300 graves, many of the interments being in wooden coffins, others in cells excavated in the rock, and others in stone-lined graves. The range in time of the interments is fixed as between the fifth and ninth centuries by coins of the late Roman Empire and sterling of Charlemagne found in them. The weapons consist chiefly of large, heavy, single-edged short swords of iron and iron spear-heads, and the other objects are mostly belt-mountings, clasps and buckles, fibulæ, keys, bone combs, beads and vases of pottery, which were usually found placed at the feet of the skeleton. From other cemeteries at Severy, Arnex, Daillens, Marnens, Perpigny, Bofflens, &c., there is a remarkable series of belt-clasps of bronze, ornamented with figures, and occasionally with inscriptions of the Christian period, the commonest subject being Daniel in the den of lions. From Prissier there is a very curious buckle with two nondescript animals, and an inscription in debased Roman characters, which seems as plain as that on the Newton Stone, but is equally undecipherable. It resembles the Newton Stone, too, in having a swastika forming part of the inscription.

Among the Roman antiquities there is, from Rosemont near Lausanne, a finely ornamented bronze jug, with a handle ornamented like the one we have from Wigtonshire, and a bronze comb with the figure of a bird sitting on either end, from Aigle.

There is a large general collection of foreign antiquities for comparison from

Denmark and Sweden, from the Dordogne Caves, from Hungary, and from Peru and Mexico.

I was a little surprised to notice here an arrow-head of flint, apparently of the barbed and stemmed form, enclosed in a silver heart-shaped mounting, open on one side, and having engraved on the back the letters M. C., apparently in early seventeenth-century lettering, from Scotland, the precise locality unspecified. I saw a flint arrow-head in a somewhat similar mounting in the museum at Modena. There is one also in the Campana collection at the Louvre, and in the British Museum there are two mounted as pendants in Etruscan necklaces.

GENEVA.

There are two museums at Geneva—the Cantonal Museum at the University, and the Musée Fol in a house fitted up for the purpose by the founder.

The archæological part of the Museum at the University contains a very extensive series of collections from the Lake Dwellings, chiefly of the Lakes of Geneva and Neuchatel. Among the objects from the station of Geneva there are several axes of jadeite; in another group there is one from Locras on the Lake of Biemme, which is marked as of nephrite, and two narrow chisel-shaped implements from the same place, marked respectively of jadeite and nephrite. From Ballotte, on the Lake of Geneva, there is an extensive collection, in which are several hundred stone axes and a large quantity of pottery and bone implements of the usual lacustrine types. From Tougues, on the Lake of Geneva, there is a great quantity of pottery, among which are many shallow saucer-shaped vessels with narrow flat bottoms. The bronze collection from this station is large, and includes several varieties of palstaves, sickles, knives, and bracelets, rings and pins of great size with ornamental heads, and small wheel-like objects with four or eight spokes. In this collection also there is one of those big crescent-shaped objects of earthenware, which have given rise to so much speculation, some considering them as objects of worship and others as head-rests. The impressiveness of the general collection from the Lake of Geneva, however, is due rather to the number of objects than to the variety of types represented, as they are for the most part repetitions of the forms in stone and bronze, bone and pottery, which are to be seen in such numbers in almost all the other museums of Switzerland. There are here, however, a few of the rarer objects, such as Bronze Age hammers, with the upper part socketed; some finely shaped bronze axes with slight flanges, especially one from Niton with a rounded butt, having a nick in the middle, like those in Italy; a socketed axe from Geneva with a circular socket and loop at the side; one of those curious curved scraping-blades, of which we have an example from Skye; a ferrule of a sheath end in bronze, terminating in a knob; stone moulds for palstaves, hammers, and chisels, and one particularly curious mould for turning out ten small rings of bronze at one casting. From the rock-shelter at Veyrier are a number of flint implements—chiefly flakes, a few small implements in bone, and one of those curious objects in reindeer horn, with a round hole pierced through the expanding portion of the horn, which the French archæologists have styled *batons de commandement*, and which have been already alluded to in the account of the collection at Schaffhausen. This particular implement—

which closely resembles those from the French caves—has, like them, also the representation of an animal carved on one side. The animal has curved horns, and is supposed to be a goat or chamois. But this implement differs from most others of its kind in having a carving on the other side which represents a straight branch or twig, giving off about thirty leaflets, the only instance of a representation of a foliageous subject known to me in the whole range of these primitive carvings. From the Dolmen de Lazzar at Cazejourde there are six arrow-heads of flint, a necklace of beads of bone and jet intermingled, and a fine lance-head of cherty flint. From the neighbourhood of Geneva there is a small collection of casually found stone implements, consisting of about thirty polished axes, one wedge-shaped hammer-axe unperforated, four perforated axes of different shapes, and one of the slightly curved forms so commonly found in Scandinavia. Of two axes of jade, one is labelled as from St George, and the other has no locality. There are ten iron swords and one ornamented scabbard of the La Tene type, and a number of spear-heads of the same character, but without localities. From graves at Passeray near Geneva there are a number of spotted and bossed beads of variegated glass, and bracelets of blue glass, and a large number of Burgundian belt-clasps, mostly unticketed. One large one from Balme, near La Roche, has a very rude representation of the Triumphal Entry into Jerusalem—Christ riding on an ass and blessing with two forefingers, one man throwing a garland under the feet of the ass, and three more standing by. As these figures filled the entire field at his disposal, the artist has put the heads of the other spectators in a row along the margin of the buckle, which has an outer ornamental border filled with figures of the conventional beast with long jaws, two fore-paws and no hind feet, the body terminating in a convoluted fish-like tail, which was, from the period of the catacombs and through the Middle Ages, the customary mode of representing the whale that swallowed Jonah.

There is a very large and fine collection of Roman pottery, chiefly ornamented bowls and dishes of 'Samian' ware, a saucer-shaped vessel of silver with guilloche border, and several silver vases with finely engraved ornamentation from St Genis. In this department there is also a hoard of bronze or brass cooking-vessels, found with coins of Augustus and the Antonines in the neighbourhood of Martigny. The hoard contains about thirty different vessels, many of them in fine preservation. They consist of the usual forms of paterae and sauce-pans of various sizes, colanders, and caldron-formed and jug-shaped vessels with side-handles.

The Musée Fol is principally a collection of fine art, comprising objects of Greek, Egyptian, Etruscan and Roman origin, such as painted vases, terracottas, metal mirrors, intaglios, cameos, ancient glass vessels, beads, &c. The collection of beads is very extensive, and I went carefully over them here, as I did everywhere, to see if there occurred among them any of those typically Celtic, or Scottish and Irish beads, of dark-blue glass, enamelled on the surface with yellow spirals passing from one side of the bead to the other. Spotted and variegated beads are found in vast numbers in this collection, but neither here, nor in any other collection in Switzerland or N. Italy, have I been able to find a single example of the blue beads with yellow spirals that are so characteristic of our collections.

NORTH ITALY.

Como.

The Museum at Como was closed at the date of my visit, but I was more than repaid for this disappointment by the visit I paid to the old basilica of San Abbondio, attributed to the tenth century. Here are the remains of a marble screen, similar to that at Chur, of which some of the finest slabs had been taken for the fronts of altars, and the remainder—some of which were sadly mutilated—were standing against the wall near the west end of the nave. In a recess on the opposite side were a number of smaller sculptured fragments. These slabs were mostly sculptured with interlaced patterns, the bands of which were cut into three ridges, like those at Chur. A few had scroll patterns, but interlaced work was the prevailing form of their decoration.

MILAN.

There are three Museums in Milan—the Archæological Museum in the Brera, the Museo Civico in the Giardini Pubblici, and the Museo Poldi Pezzoli in the Via Morone.

The Brera, an old Jesuit College, now converted into a picture gallery and museum, contains the archæological collections on the ground floor. They are not of very great importance, the bulk of them being of an architectural character. In one room there are, however, a few local collections from prehistoric graves and terramaras. The most interesting of these is a collection of objects found with an incinerated interment of the Iron Age at Sesto Calende. The grave contained an urn of amphora form, but without handles, ornamented round the neck and shoulders with parallel bands of a chevron pattern, the triangular spaces filled with lines parallel to one side. It stands about 9 inches high, and its greatest width at the shoulder is about $7\frac{1}{2}$ inches. The mouth of the urn was covered by an inverted, shallow, saucer-shaped dish. With it there are two small vases, about 4 inches high, with nearly straight sides, divided into zones by outside mouldings, and having a round expanded disc-like foot. Of objects in metal there is an iron sword, 21 inches in length, the upper part of the blade ornamented with wavy lines, and the hilt of the form of the Gaulish sword-hilt, having those peculiar projections which have been aptly named *antennæ*. Fragments of a sheath of thin bronze are adherent to the blade. A spear-head of iron, the ferrule of the butt-end of its shaft, and a javelin-head represent the other arms of offence. Of defensive armour there are a pair of bronze greaves, almost as fine in their lines as the old Greek specimens, and a globular helmet of bronze, the crown and sides of which are much broken and show no signs of the attachment of a pair of long and somewhat trumpet-shaped horns of bronze, which, from their having been found detached and lying among the broken wheels and mountings of a chariot near the other end of the grave, are supposed to have belonged to the chariot, and not to the helmet, though helmets with such horn-like appendages are not unfrequently found in Gaulish graves. The harness of the horses is represented by two iron bridle-bits and some broken rings and buckles. But the most singular thing in this group of grave-goods is a bronze bucket-shaped vessel, about 13 inches in height and 9 inches in width at the shoulder, from

which it narrows slightly to a recurved brim, furnished with two flat loop-handles rivetted on. It is curiously ornamented in *repousse* work, with about one-third up from the bottom a row or band of rude figures of men and animals, a narrower band of dots and concentric circles, a row of birds, and another row of dots and concentric circles. As the objects from these graves differ widely in character from those found in Roman or Etruscan tombs, and present a certain resemblance to the contents of the chariot graves of Marne and Switzerland, they have been attributed to a Gallo-Italic culture, probably of the fourth or fifth century B.C. Unfortunately, the iron things are all breaking up, and most of them have already gone to pieces. In another case there is a collection of somewhat similar sepulchral pottery and objects in bronze and iron—chiefly rings, fibulæ, buckles, &c., of bronze, and fragments of iron instruments in the last stages of decay—from a prehistoric cemetery at Golasecca. Other collections, more determinable by the forms of the pottery than by the accompanying implements of bronze and iron, are from graves of the same period at Vergiate, Brescia, and Trezzo. In another case are the contents of a Lombard grave, attributed to the seventh or eighth century A.D., consisting of a short blunt-pointed sword of iron with a bronze hilt, a leaf-shaped spear-head of iron, the boss and the iron handle of a shield, and a number of plaques of gilt bronze with geometrical ornament in relief from Roveda. A small collection from a turbarry at Gozetta seems to represent the terramaras of the district, and for comparison there is a small Lake Dwelling collection from the Lake of Zurich. There are a few bronze implements of the Bronze Age, chiefly palstaves from various localities, and very few stone implements.

Among a number of things from various excavations in the city of Milan itself, and chiefly of the Roman period, is a fine gold torc of twisted wires, with a button and loop fastening, found in the Piazza del Duomo.

There is a large collection of mediæval objects, chiefly arms and armour, and in one case a very fine group of objects of ecclesiastical use, among which is a small casket of gilt bronze, chased and enamelled, and having a rudely executed pattern of interlaced work on the lid. Among the architectural fragments, which form the bulk of the collection exhibited in the large hall, are a number of very interesting Lombard pillars, their capitals sculptured sometimes with grotesque figures of animals and at other times with interlaced work. One of the most characteristic of those bearing interlaced work has an inscription to the memory of the Archbishop Theodore, who died A.D. 739, and another is inscribed IVLIANVS ME FECIT.

The Museo Civico in the Giardini Publici is chiefly a natural history museum, but has also a very good collection of lacustrine remains from Switzerland for comparison with its local collections from the turbaries and terramaras of Lombardy. These collections from the local areas present no very remarkable features. There is a small but fairly representative collection from the Pile Dwellings of the Lago di Varese, which is interesting as repeating on the Italian side of the Alps many of the types found in such abundance on the Swiss side. The flint arrow-heads from this lake present an unusual variety of form. There are also several very interesting collections from prehistoric cemeteries, in one of which, from Ternovo, there were six shield-bosses of iron with the handles, six long heavy double-edged swords, and as many massive spear-heads, with a number of knives, two pairs of shears, a quantity of buckles

and belt-clasps, and fourteen small cross-shaped plaques of thin gold, some of which are ornamented with interlaced work. There is also a very interesting collection of prehistoric remains from the island of Elba, consisting of flint flakes, arrow-heads of the Mediterranean type, polished stone axes of the type having conical butt-ends, bronze socketed celts with the socket square externally as well as internally and the blade spade-shaped—a type unknown with us, and a number of axes of bronze with the helve-hole through the upper part of the axe parallel to the cutting edge, as in the modern axe of iron.

The Poldi Pezzoli Museum is more a museum of art than archæology, but it contains a very extensive and fine collection of mediæval and ecclesiastical metal-work, tapestry, and furniture. I noticed, however, in one case a series of thirteen bronze spear-heads, varying from about 2½ inches to over 10 inches in length, one of which had the socket ornamented with a chevron pattern, one large palstave of the Italian type, ornamented with groups of parallel lines, a bronze sword with narrow blade, 24½ inches in length, and only about 1 inch in width at the widest part, the hilt of bronze terminating in those curved ends, and which are indicated by the term *antennæ* given to them by the continental archæologists, and three triangular thin bronze daggers with bronze hilts, and one having a bronze sheath with a button-like termination.

Of the churches in Milan, the church of San Ambrogio was to me the most interesting, on account of the profusion of interlaced patterns in the decoration of the doorway of its atrium, attributed to the ninth century, and the early Christian monuments preserved in the church itself.

PARMA.

The Museum at Parma is a museum of antiquities, and is arranged in fifteen rooms of the Palazzo della Pilotta, which also contains an extensive picture-gallery and a public library of 200,000 volumes and 5000 manuscripts.

The museum collections are well arranged, and consist for the most part of antiquities of the Roman period, derived from the site of the Roman city of Velleia, where excavations have been made from time to time for more than a century. The objects from this interesting site are mostly arranged in two of the rooms of the museum and one corridor. It is an impressive collection, but thoroughly Roman, and needs no description in detail. In one room there are twenty-five Roman statues in marble, chiefly from the Basilica of Velleia, and in another a series of magnificent bronzes. Another room is almost filled with architectural fragments from the Roman theatre at Parma. In another room, which is almost entirely devoted to Roman pottery, there are some very large amphoræ and a magnificent collection of "Samian" ware. Among the miscellaneous objects stated to have been found in ruins of Roman time in and around the city are eight armillæ of gold—military decorations they are called—which interested me on account of their resemblance to some of the gold and silver torcs of Northern Europe. One pair were torcs of two round gold wires twisted together, and closed by uniting the ends in a solid junction, like one of the silver armillæ from the Skaill hoard in Orkney. Another pair were formed of three circular gold wires plaited together, one of the wires being milled and the other two plain, and the armlets having a solid closure similar to that of the last-mentioned pair. A third pair were similarly formed of

three wires, but instead of a solid closure, they had a fastening made of a pin passing through two loops, each loop being half the thickness of the terminal part of the bracelet. The fourth pair were plaited of six smooth circular wires of equal thickness, almost exactly like one of the silver torcs in the Skail hoard, and closed like the last described by a pin and two loops. One of the most striking things in this Museum is the *Tabula Alimentariorum* of the poor children of Velleia, containing directions by the Emperor Trajan for their sustenance. It is beautifully engraved on a great plate of bronze, measuring about 9 feet in length by about $4\frac{3}{4}$ feet in width. There are also two very fine pieces of mosaic pavement, one of which has a border of plait-work of two strands with a square in each loop. Two early Roman cinerary urns of marble are interesting from their bearing fine carvings of birds picking grapes from a vine-shoot which winds scroll-wise round the body of the urn—a Pagan form of decoration, which subsequently became one of the most common of Christian emblems. In another room a piece of similar scroll-work in wood attracted my attention. It was part of the old door of San Bertoldo,—a piece of wood-work of the eleventh century, of which the frame-work was still entire though all the panels were gone but one. It bore a spiritedly executed scroll of foliageous work, having triangular bunches of grape-like fruit, with a bird and a four-footed beast placed alternately in the interspaces of the scroll and feeding on the fruit—both motive and style recalling forcibly the analogous scrolls on the Ruthwell Cross and some of the sculptured stones of the north of Scotland. The collections of Etruscan sarcophagi with reclining figures, and of Græco-Italian painted vases, are very extensive, and contain many choice examples. There is also a very fine series of bronze mirrors with figure subjects engraved on the backs. From a group of burials at the Porta San Barbara are a number of dishes of red pottery, not unlike "Samian," among which is a small jar-handle with the crescentic upper termination characteristic of the terramaras, a flat saucer-shaped vessel of black ware, and a round bottle-necked vessel of coarse grey clay. With one of the skeletons is a bronze wine-jug with a trefoil-shaped mouth, and two of these bronze situlæ or bucket-shaped vessels with perpendicular sides, which are abundant in N. Italy, and only occasionally found on this side of the Alps. Another burial, but of a later period, from Bedonia, consists of a large cist of rough stones, in which with the burnt bones are the fragments of a cinerary urn, bracelets of silver and bronze, a bronze fibula, a small glass vessel, and beads of amber and glass. The urn had been covered with an elegantly shaped shallow vessel in red ware, marked on the bottom with the maker's name. Compared with the bulk of the remains of the Roman, Greek, and Etruscan civilisations here gathered together, the prehistoric collections are small, but they possess a special interest from the fact that they are mainly derived from the terramaras of the Province of Parma. The collections from the terramaras of Castione, Parmaisan, Castelazzo, Poviglio and Noceto, and that of the Marchesa dalla Rossa, from the ossiferous caverns of Trapani, are arranged on the ground floor. The objects from these terramaras are principally of Bronze Age, and present a general resemblance to the collections from the Lake Dwellings of a corresponding period, but with differences peculiar to themselves. There are some fragments of bronze swords, and the common form of bronze axe is that with flanges or wings coming low down on the blade, which is less rounded at the

edge than is common with us. The pottery is very varied in form; some vessels are rude and plain, and others ornamented on the exterior with knobs, some of which are pierced as if for suspension. A series of wide shallow dishes with side-handles, which are frequently of considerable size, appear to have been used as stew-pans. The scarcity of implements in stone and of weapons in bronze, compared with their extraordinary abundance in the Lake Dwelling collections of the Swiss museums, is striking. I noted among the few bronze weapons here a short sword with a sheath of bronze, a triangular thin dagger-blade with four rivet-holes in the butt, and three leaf-shaped spear-heads.

This Museum also contains a most extensive collection of coins, consisting of upwards of 30,000 specimens, an immense number of the dies of Parmesan coins and medals, and a large collection of seals. The Parmesan series of coins and medals is arranged in one room, and the dies and seals in another. The Museum also possesses a large ethnographic and illustrative general collection. There is a room entirely devoted to inscriptions, chiefly of the Roman and early Christian periods. The mediæval collections are not extensive, but there is an interesting collection of Venetian glass, chiefly of late date.

The Baptistery of Parma, of late twelfth-century work, is ornamented round the exterior of the lower storey with a series of symbolic sculptures in panels, some of which are apparently from a bestiary.

REGGIO.

The Museum at Reggio was closed for repairs at the time of my visit. The custodian was kind enough to allow me to look in at the door of the archaeological department, but I could not enter, in consequence of the floor having been newly painted. It is a very large and interesting collection illustrative of the archæology of the Province.

MODENA.

The Museo Civico at Modena possesses a good prehistoric collection well arranged and displayed. One method of displaying the specimens is by attaching them on boards about 12 inches square and painted white. One of the most interesting collections here is that from a cemetery of the Bronze Age at Cumarola. The bodies were unburnt, and the objects discovered with them include a number of polished stone axes of serpentine, arrow-heads of flint, lozenge-shaped and triangular, with tangs, and arrow-heads, and thin flat triangular dagger-blades in copper or bronze. Among the stone implements from an early excavation at Cumarola is one of serpentine, of a very remarkable form, resembling the semicircular implements of obsidian from Easter Island, of which we have two specimens in the Museum here. From Imola there are also a number of small axes of greenstone, and a lop-sided wedge-shaped hammer of the same material. Among the collections from the terramaras of the Province of Modena, that from Gorzano is specially rich in large and fine specimens of pottery. Many of these are water-jars with flat loop handles, closely approximating to mediæval forms. Among the relics from this terramara are several things which indicate the presence of Roman influence, and some which are probably of even a later period.

From the cemetery of Casinalbo there are a number of sepulchral urns, large bowl-shaped vessels with side-handles; and from a terramara of the same name, a quantity of curious implements of deer-horn, made from the butt end of the horn with the burr on it, in the shape of hammers. From Montale there is a very large and varied collection of stone and bronze implements of the usual types, along with some hundreds of clay beads or whorls, six of the peculiarly shaped bone combs with semicircular handles characteristic of the terramaras, and one long narrow comb, which has the singular peculiarity for a long comb, of having teeth at both ends. In another collection from Rastellino I noted a singular feature among its implements of deer-horn. Many hammer-like objects made of the butt end of the horn with the burr on it are obliquely pointed at the end opposite the burr, and pierced with an oblong rectangular haft-hole, like some of our deer-horn implements from Orkney. These rectangular holes occur again among the implements from the terramara of San Ambrogio, from which there are also two very curious oval-shaped discs of clay, 5 inches by $4\frac{1}{2}$ inches, slightly concave on one side, convex on the other, and pierced with holes like a colander, the holes less than $\frac{1}{4}$ inch in diameter. One of the features of this Museum is its collection of the remains of the fauna of the terramaras, including *ursus arctos*, the wolf, badger, wild-cat, domestic dog, goat, sheep, and swine, and the red deer and fallow deer. There is also a case of restored pottery vessels, the shape of the vessel being blocked out in plaster, while the fragment or fragments from which the vessel is reproduced are attached to the plaster-shape in their relative positions. In the collection of extra-provincial antiquities I noted eleven arrow-heads of flint from Perugia, five from the Lago di Varese, and one fine large polished celt from Perugia, about 13 inches in length. From Castelvetro there is a very large collection of the pottery and other objects, loosely styled Etruscan. The principal object in this series is the Gallasina vase in bronze, about 28 inches high and 20 inches wide.

Set up in one of the vestibules are two vast dolii or earthenware jars, wanting the upper parts. The larger of the two is 6 feet in height from the base to the fracture in the upper part, and there it is nearly 5 feet in diameter, the side being fully 2 inches in thickness. The collection of Roman remains, though large, presents nothing requiring special notice.

In the cloister there is a large collection of inscribed monuments and sarcophagi of Roman and early Christian times. One tegulated cover of a sarcophagus of early date has a reaping-hook and a sheaf of corn sculptured on the projecting quoins which ornament the front corners. A similarly tegulated cover of a sarcophagus of sixteenth century expresses the same thought by a hideously sculptured skull on each of the corners. On the capital of a Lombardic pillar I noticed a curious thing in sculpture, which I have not observed in any other instance. The stone being of a greyish tint, the eyes of the sculptured figures were made of black stones set in. This curious device brought to my mind the unique case of the wooden female figure dug up at Ballachulish and preserved in our Museum, the eyes of which are filled in with water-rolled pebbles.

There are considerable collections from the Swiss Lake Dwellings and from Gallo-Roman graves, and a collection of mediæval antiquities, including a fine series of Modanese Majolica.

BOLOGNA.

The Museo Civico of Bologna is by far the most interesting and important of the museums I visited in North Italy. Its archaeological collections are splendidly exhibited in twenty-three rooms, in a large building to which special additions had recently been made for the exhibition of the extensive and unique collections from the cemeteries of the Certosa and its neighbourhood. These new rooms, the chief of which is a long gallery, contain in one unbroken series the contents of about 300 graves, the systematic excavation of which, under the auspices of the Municipality and superintendence of Sig. A. Zannoni their municipal engineer, occupied more than five years. The innumerable objects recovered from these tombs are classified according to the relative antiquity of the tombs, and arranged in the cases accordingly, each local group separated from the others, and the contents of each grave of the group separated from the rest by divisions of red cord. The whole collection, unique of its kind, and enormously rich in monumental sculpture, painted vases, and implements vessels and personal ornaments of bronze, is of the highest archaeological importance and interest. The excavations exposed four different groups of tombs—ancient cemeteries of the later Iron Age of Italy at the period of transition to the peculiar culture to which the name Etruscan has been applied, to distinguish it from that of the Iron Age cemetery of Hallstatt, which is typical of the transalpine areas. Of the total number of burials, about 115 were burnt and 250 unburnt. Some were in cists, others in simple graves laid in the earth, or in wooden coffins of rectangular shape, and a few were in those deep circular shafts or pits which in France have received the name of *puits funéraires*, or funeral wells. Many were marked above ground by monumental stones,—sometimes mere unhewn blocks, sometimes more or less dressed to shape, and in many cases sculptured with figures of men and animals. Many of these sculptured monuments were found broken and prostrate on what had been once the surface level, showing that before the cemeteries had been covered up they had been long neglected and misused. There are nearly a hundred of these monuments in the Museum. They are generally ornamented with sculptures in low relief, on one face only, but some are sculptured on both faces. Sometimes the ornamentation is divided into two, three, or four compartments, separated from each other by horizontal bands. Usually the whole face of the stone is surrounded by a border of a running spiral in the Grecian style. The representations most frequently met with on these monuments are those of a warrior with sword and buckler, or a leave-taking scene, and the departed borne off in a chariot drawn by winged horses. Sometimes one or more of the compartments present a couple of serpents or hippocampi posed face to face, a motive which could not fail to remind me of the sculptured stones of Scotland. One has a wolf suckling an infant. Another has a high-prowed vessel, with six rowers, riding over the waves, which are represented by a horizontal band of Greek spirals among which fishes are inserted, to show that water is meant. On another is a mermaid in the customary attitude of holding something in both hands over her head. Out of the total number of about a hundred of these monuments only nine bear inscriptions. They are in the old Etruscan characters, and though they are very brief, I am not aware that they have been satisfactorily read. There seems

to be little difference between the contents of the graves otherwise distinguished as containing burnt and unburnt burials, and both classes were marked in the same way above ground by monumental stones. The general contents, whether of burnt or unburnt interments, were clay vases, cinerary or non-cinerary, and implements, and personal ornaments of bronze. The vases, of which there must have been between 700 and 800, are of many varieties of form, none very rude or approaching to our sepulchral form or style of ornament, but generally possessing a certain elegance of form, and many presenting the shapes and styles of decoration familiar to us in the vases of Magna Græcia. Many are painted, others have simply a black glazed surface, and the rudest have a rough reddish-brown surface. I noticed, in several cases in which the sculpture of the monumental stone that had marked the grave was excessively rude, that the contrast between its crudity and the almost classical beauty of the fine designs on the painted vases which the grave had contained was great indeed; yet they evidently belonged to the same time and to the same household. Among the most remarkable of the bronze objects recovered from these graves are the large vessels of thin bronze. Some are shaped like buckets, conical below and the rim turned inwards from the shoulder, others are pail-shaped, cylindrical with horizontally corrugated sides. These were sometimes found doing duty as cinerary urns,—that is, containing the burnt bones of the burial. One is specially remarkable from its being decorated round the circumference with four zones or bands of quaintly designed figures in relief. The attachments of the handle are worked in relief like rams' horns. The upper band of figures represents a procession headed by two armed warriors on horseback, followed by a number of fantastic figures with conical helmets, oval shields, and lances, and by a series of warriors, with shields and lances, some of which wear hemispherical casques while others have conical helmets and lances. The second band represents a sacrificial ceremony with priests leading an ox, followed by women carrying sacrificial vessels and fagots of sticks. The third band represents a banquet at which the personages repose on couches, while others appear as if bringing to the scene of the banquet a live pig and two oxen, and two men are carrying between them a dead stag suspended by the feet from a pole, and in the distance a man is chasing a hare into a net. In the fourth or lowest band is a procession of animals—a stag followed by winged panthers or lions. This unique bronze vessel is of the same class, though much finer than the one from Sesto Calende whose fragments I saw in the Museum at Milan. Of the personal ornaments found in connection with these interments, the most abundant are fibulæ of various forms in bronze and silver, bracelets of bronze, finger-rings and ear-rings of gold, silver, and even of iron, and beads of glass and amber. There were also a few mirrors of bronze of the Greek form but without ornamentation on the back, so far as I noticed. Among the rarer objects are here and there an *æes rude*, the earliest form of the money of the Italian peninsula.

Another singular feature of the Museum at Bologna is the room devoted to the Fonderia del Bologna, a hoard of bronze implements and ornaments found in excavating for some street improvements in the Piazza di San Francesco, in the middle of the city. This hoard is the largest ever heard of, consisting of about 14,000 pieces of manufactured bronze, the whole weighing upwards of a ton and a half. They were found in a gigantic earthenware jar, the upper

part of which was gone. The jar stands now in the middle of the room, and the objects formerly within it are arranged in the wall-cases round the whole room. There are upwards of 1300 axes of bronze, chiefly of the flanged and socketed types, mostly broken, but in not a few cases still perfect. Many of those that are unbroken, however, have the blade so shortened by repeated sharpening as to be mere worn-out stumps, which have evidently been sent to the foundry to be re-melted. There are but few portions of swords, and the number of dagger-blades is also comparatively small. Of spear-heads there are more than 100, mostly of the common leaf-shaped type. The large socketed or tanged knife of the Swiss Lake Dwellings with the curved blade and thick back is represented by less than a score of specimens. Sickles are more numerous represented, though they do not exceed 100 in number. Chisels, gouges, saws and files, and bridle-bits scarcely exceed about a score or thereby of each. Bracelets number nearly 200, and fibulæ are the most abundant of all, their number being over 2000, and almost all wanting the pins. In this condition, of course, they were useless, and went for old metal, the pin at this period being an unhinged one, and simply a prolongation of the body of the fibula bent back to meet the catch at the other end. Among the other objects represented are tutuli or discs with a conical projection in the centre, nails, buttons, portions of a big caldron and of smaller vessels of thin bronze. It is remarkable that the typical forms of implements and ornaments that are most prevalent on the other side of the Alps are hardly represented here, while several of those that are most abundantly represented here are but rarely seen in the Swiss museums.

In another room are the contents of a number of tombs of the early Iron Age from Tojano, Caselecchio, and Monteveglio, among which are more of the pail-shaped vessels of bronze with perpendicular and corded or corrugated sides, lunate razor-blades, fibulæ, and cinerary vases of terra-cotta painted with geometric patterns. Here are also large collections from the terramaras of Castelaccio, consisting chiefly of the peculiar pottery vessels, sometimes with looped side-handles, but more often with horned or lunated handles projecting from the lip, implements of bone or deer horn, whorls and loom-weights of baked clay and quantities of flint chips, but few flakes and no finished implements. Another terramara at Castelfranco, with a solitary bronze spear-head, has pottery in the main similar, a quantity of deer-horn picks or axes with rectangular haft-holes, rubbing stones, and oblong rounded boulder-stones with grooves cut round them. From a rock-shelter, called the Grotto del Fame, are a quantity of flint chips, bone implements, a few articles of bronze, and some large vessels of rude pottery. In the room devoted to vases of the Greek style the collection is very extensive and fine, including about a score of magnificently decorated vases of the largest size up to about 3 feet high. In another room devoted to Italo-Etruscan relics there are a considerable number of prehistoric things such as various forms of bronze palstaves, spear-heads, knives, &c. classed with strigils, mirrors, and statuettes, &c.; but there is apparently no record of their original associations. There are four rooms filled with Egyptian collections of great variety and interest, and two rooms full of Roman antiquities from Northern Italy, besides the three rooms and corridors on the ground floor filled with sculptures, inscriptions, and architectural fragments.

The mediæval collection occupies four rooms, in one of which, devoted to

Monumenti Sacri, I counted no fewer than eighty illuminated antiphonals. In another there are casts of three crosses, one of which, from St Juliana, is ornamented in the Lombardic style of the ninth century with patterns of plait and knot work formed by two bands of three ridges. Of another group of three crosses, in the same room, one has intertwisted work of a double plait, the bands having four ridges.

FLORENCE.

Besides the Natural History Museum and the Museum of San Marco, which is an art collection, there are two museums of antiquities at Florence,—the Archæological Museum in the Palazzo di Crocetta, and the Museo Nazionale in the Palazzo del Podesta. The Archæological Museum is archæological chiefly in the old classical sense, containing very extensive and fine collections of Egyptian, Greek, Etruscan, and Roman antiquities, very well arranged and displayed, though, as is often the case in these old palaces, some of the rooms are rather dark. In the Egyptian collection, which in some respects rivals those of the Louvre and the British Museum, there is a chariot with its mountings in complete order, a remarkable series of bronze axes in their peculiar handles, and a most extensive and interesting collection of the implements of trades and utensils of domestic life. Of course there is the usual assortment of mummies and mummy-cases and sarcophagi, and the collection of vases from sepulchral chambers is notable, not only for the number and variety of the specimens exhibited, but from the care with which the better specimens are mounted on little wooden stands, like miniature Chippendale basin-stands. In the rooms devoted to the Greek and Etruscan antiquities there is a vast display of bronze armour, and implements and ornaments of bronze, among which one sees here and there a few specimens of types of pre-historic time, such as leaf-shaped spear-heads, short bronze leaf-shaped swords, and thin flat triangular dagger-blades, with the bronze handles rivetted on, and bronze palstaves of the general Italian types. From the Tower of Telamon there are twelve leaf-shaped spear-heads, and twelve of quadrangular section, a specially Italian form about 13 inches in length, twenty-four ferrules of spear-shafts, and twelve curved knives with thick backs and tangs, nearly resembling those of the Swiss Lake Dwellings. In another case I noticed a one-stilted votive-plough in bronze, which might almost have passed for a miniature of the Shetland plough in our Museum. From Chiusi there were a number of cinerary urns of peculiar forms, generally tall flask-shaped vases of black ware, which had been found in small pits built round with stones. These urns had usually covers of shallow bowl-shaped vessels, often with a loop-handle on one side of the bulge, and were decorated with meander or swastika ornaments in squares, and horizontal bands of intercrossed lines. With the urns are a number of those curious thin crescentic blades of bronze with tangs or handles of the same piece, which are assigned to the transition from the age of Bronze to that of Iron.

The Museo Nazionale, which contains the collections of mediæval and later date, is arranged in thirteen rooms, some of them of great size. It is chiefly remarkable for its collections of arms and armour, and of Florentine pottery and painted ware. The ecclesiastical section is also rich in choice examples

of mediæval church furniture, metal-work, and carved ivory diptychs and triptychs.

RAVENNA.

The small Museo Classense adjoining the Municipal Library at Ravenna is noteworthy as containing among its local collections a number of interesting fragments of early ecclesiastical sculptures with interlaced work and Byzantine ornament. Apart from these the most interesting objects are two exquisitely beautiful gold ornaments in the form of fillets, about an inch in width and 8 inches in length, bent into the shape of a flattened curve with the ends joined by a continuation of the fillet, and the whole surface inlaid with garnets or coloured glass in the manner of cloisonné, the cloisons being apparently thin flat plates of gold, forming a most elaborately reticulated pattern. These objects were found outside the city, near the mausoleum of Theodoric, and the work bears some resemblance to that on the scabbard of the sword found in the grave of Childeric, now in the Louvre, but far more minute and elaborate in pattern and execution. One could spend a month among the ecclesiastical antiquities of Ravenna. I visited all the earlier churches, specially those having round towers associated with them, and was particularly interested in the ciborium or baldachino of stone over the altar in the north aisle of the basilica of St Appollinaris in Classe, which has its arches richly decorated with bands of interlaced work in various patterns. It was erected in the time of the Archbishop Valerius (807-12) as appears from the inscription over one of the arches—AD HONOREM DNI. N. IHV. XPI. ET SCI. ELEVCHADII SVB TEMP. DOM. VALERII ARCHIEP. EGO PETRVS PRESB. FECIT. The church itself is assigned to the sixth century; the detached round tower or belfry is supposed to be of the same date, but the upper part seems certainly later. A group of sculptured figures under two long panels of interlaced work set gablewise ornaments the doorway of the tower.

VERONA.

There is a Museo Civico at Verona, which contains a considerable collection of prehistoric objects and a section of local antiquities of the Roman period exhibited in rooms off the picture gallery. It contains a considerable collection of Lake Dwelling and terramara things from the Palafitte del Mincio near Peschiera and from Lake Dwellings in the Lake of Garda. These present no features of special importance. There is, however, a collection of flint implements and worked flints from the Breonio sites which certainly astonished me. There are over a thousand specimens, I should think, in all, and while many of them are of the usual types, a very large number are of shapes and workmanship quite different from any genuine productions of prehistoric time I have anywhere seen. I have been unable to obtain an authentic description of these Breonio "flint-factories."

There is at Verona a Roman amphitheatre in good preservation. But I was more interested in the church of San Zeno, a basilica of Lombard style, the existing fabric dating from about the middle of the twelfth century, but erected on the site of a ninth-century church. A series of sculptures on either side of the doorway are arranged in panels. On the left are ten panels, five on each side of a sculptured pilaster rising to the height of the door; the two lower

panels contain representations of a combat between two knights with conical helmets and kite-shaped shields. In the one panel they are on horseback and fight with spears, in the other they are on foot and fight with swords. The eight panels over these contain representations of the life of the Saviour, arranged from left to right and succeeding each other upwards: a panel with two niches—(1) the Visitation, two females embracing; (2) the Birth of the Saviour, the Virgin reclining, beside her a manger with the Babe in it, over the manger the heads of the ox and the ass, and in the apex of the niche the Star of Bethlehem. Panel with three niches—(1) the Adoration of the Shepherds; (2) the Angel appearing to the Magi; (3) the Magi before Herod. Then follow the Presentation in the Temple, and the Angel appearing to Joseph; the Flight into Egypt; the Baptism by John in the Jordan; the Betrayal by Judas; the Crucifixion. On the other side of the doorway is a series of Old Testament stories arranged in the same manner. But the two lower panels answering to those on the other side with the combats are filled with a hunting scene—in the right panel a stag chased by three hounds, one of which fastens on its flank, while in the left panel comes the pursuing horseman, blowing a hunting-horn. These two panels are curiously disfigured by cup-markings pitted all over the sculptures as if by persistent knocking at them with stones. Over them the Old Testament scenes come as follows:—Adam naming the Beasts; Adam being thrown into a deep sleep; Eve being taken from Adam's side; the Temptation; the Expulsion from Paradise; the result of the Fall—Adam delving, Eve spinning and nursing two babes. The special interest of these sculptured panels is the occurrence of a hunting scene and combats along with the purely Scriptural representations around the doorway of a church, showing that there is no incongruity in similar associations of hunting scenes with Scriptural representations on the sculptured stones of Scotland.

VENICE.

The Museo Civico at Venice is chiefly an art collection with a few mediæval antiquities and architectural fragments. There is also an Archæological Museum, so-called, in the Palazzo Ducale, consisting chiefly of sculpture. I went to Murano to see the Museum there, which contains a very interesting collection of ancient Venetian glass, and looked carefully over the beads to see if I could detect any relation between them and those that are found in this country, but without any definite result.

SUMMARY.

The Museums of Switzerland in general partake largely of one character, in consequence of the bulk of their collections having been derived from the Lake Dwellings.¹ No country in Europe has had greater facilities for the formation of archæological collections of a specially instructive

¹ All the objects of special interest from the Lake Dwellings, and terramaras are figured in Dr Robert Munro's *Lake Dwellings of Europe*, Lond., 1890.

and scientific character, and the number of good museums they have established in consequence is quite remarkable. But there is one disadvantage arising from the multiplication of collections. The objects from a single Lake Dwelling station, composing a whole scientific group and representing the complete record of its culture-history, have rarely been kept together, but are generally distributed through several, and in some cases through many, museums. Yet they are all worth visiting, and when one has seen them all he receives a very vivid if somewhat confused idea of the enormous mass of material which has been made available for the study of the strange conditions of prehistoric life on the Swiss Pile Dwellings.

In general, the collections in the museums of North Italy exhibit greater variety. The groups of objects from the terramaras here become the special feature, although they do not bulk so largely in proportion to the other collections as the Lake-Dwelling series in the Swiss Museums. South of the Alps the Stone and Bronze Ages are but feebly represented in comparison with the Iron Age, the proto-historic and the historic series.

Considered as museums, without respect to the nature of their contents, it seems as if the Italian institutions, which in their archæological departments at least are mostly more modern than the Swiss ones, were also more liberally provided with space and equipment, and more scientifically arranged and displayed. In so far, however as the scientific arrangement and display of archæological collections may be said to have become a fine art, there is nothing that I have seen to compare with the museums of St Germain and Bologna. But of course with many museums, as with our own, the expense is the principal consideration. Even in St Germain I have not seen much in the way of Museumism that was absolutely new to me, but I have become more than ever convinced of the immense importance and practical utility of the system so fully carried out there, and in the Central German Museum at Mainz, of representing by casts and fac-similes, typical finds and specimens, the originals of which are preserved elsewhere; and of showing models to scale of the different varieties of sepulchral and defensive structures of pre-historic times.

In conclusion I have to say that the knowledge derivable from a visitation of foreign museums is always of a kind that is singularly incommunicable. They present so many unfamiliar features, and tell their story, as it were, in a foreign tongue, more or less unintelligible to the visitor until by repeated visits his eyes become familiarised with the features of the types, and his mind begins to take in their relations to other types that are more familiar to him. But there are many archæological links to be picked up (as I have endeavoured now and then in these pages to show), and there is the still more important knowledge to be gained of the special types that are characteristic of the different areas—a knowledge that is only to be obtained by careful inspection and comparison of many different and widely separated collections.