

## II.

NOTICE OF ANCIENT "FEEDING-BOTTLES" FOR INFANTS (ONE CONTAINING REMAINS OF MILK, RECENTLY PRESENTED TO THE MUSEUM OF THE SOCIETY); WITH NOTES OF THE DISCOVERY OF SIMILAR VESSELS IN GALLO-ROMAN GRAVES, AND INSTANCES OF THEIR OCCURRENCE IN ENGLAND. BY JOHN ALEXANDER SMITH, M.D., V.P.S.A. Scor.

Among the numerous articles recently presented to the museum of the Society, one donation is especially interesting to us. It was made by Sir Walter Simpson, Bart., and consisted of a collection of various objects of archaeological interest which belonged to his late father, our much loved and much mourned Fellow and former Vice-President, Professor Sir James Young Simpson, Bart., M.D. My intention at present, however, is only to notice two fictile vessels which formed part of this donation.

These vessels are of small size and height; one formed of a reddish-coloured clay (see fig. 1. of the annexed woodcut), showing remains of a slight glaze on its outer surface, is of a somewhat globular shape below, and tapers gently upwards to a rather wide mouth above, the lip of which is full and rounded. It measures three inches in height and about  $3\frac{1}{4}$  inches in greatest breadth, and is only ornamented by two slightly indented parallel lines which encircle the shoulder of the vessel.

The other (fig. 2) is more ornamental in character; it is a shallower vessel,

rounded and more flattened in shape, and has a small opening or mouth above, and in addition a loop-shaped handle projecting on one side. Its surface is ornamented with a series of slightly projecting broad and rounded leaves or mouldings which spring from the under part of the vessel, and rise upwards towards its shoulder, where they terminate in rounded extremities. The handle is also ornamented with a couple of bold projecting ribs. The mouth of the vessel is bevelled within to hold a lid, which had been fitted to it like that of some of our modern fictile teapots, and it is interesting to notice that a small notch had been cut out



Fig. 1.



Fig. 2.

## INFANTS' FEEDING BOTTLES.

Fig. 1. Plain and without handle (3 inches high).

Fig. 2. Ornamented and with handle (2 inches high).

of this bevelled part, on opposite sides of the mouth. This must have been done for the purpose of receiving two projections which had existed on the bottom of the lid, and, on the lid being put in its place, these projections would pass through the notches, and the slightest turn of it to either side would have the effect of locking the lid, so that it could not fall from its place when the vessel was raised or moved about. The fashion of occasionally locking the lid is still used by the French potters, I have been told, but not by the potters of Britain. The vessel measures 2 in. in height by  $3\frac{3}{4}$  in. in greatest diameter. It is formed of a fine reddish clay covered on its surface with a rich black glaze, and almost reminds one of the ancient Etruscan ware; it bears marks, however, of

having been repaired, and is probably similar in character and use to the other vessel (fig. 1).

The distinguishing characteristic of both of these vessels is the presence of a small tapering nipple-like projection, about three-fourths of an inch in length (slightly broken at the point in fig. 1), which rises upwards from one side of the body of the vessel, and is pierced with a very small opening. It is evident that it is not well adapted for the purpose of being used as a spout merely to pour fluids from the vessel, and still less to give passage to a wick on the supposition of the vessel having been a lamp, the size of the aperture being apparently too small to be available for either of these purposes. It rather suggests, therefore, the idea that it was intended to allow fluids to be slowly sucked from it, not like the modern drinking-cup of an invalid, to which, however, it is closely related, but may have been probably the sucking or feeding-bottle of an infant, nursed in this artificial way.

As the subject of ancient feeding-bottles is a new one, at least in our Society, I shall notice some of the evidences of their being really intended for the use of infants; and shall shortly allude to those found on the Continent, especially in France, and next to those which have been discovered in England.

The learned Father Montfauçon, in his great work of "Antiquity Explained" (I quote from the third volume of the translation, published by David Humphreys, M.A., London, 1721, folio), has given a representation on plate XX. of two somewhat similar vessels, on the authority of Bonamie. One closely resembles the last of the two just described; the other is more simple, and somewhat pear-shaped in character, the large opening to allow the vessel to be filled, which, however, is covered with a hollow perforated disk or strainer, being at the thicker extremity of the vessel, and the sucking nipple, at its other tapering and pointed extremity. It has also a looped handle attached to one side, for use by the left hand. This vessel reminds us exceedingly of the ordinary glass "feeding-bottles," of a closely corresponding kind, used for nursing infants in our own day (one of which I now present to the Museum of the Society, for comparison with the ancient ones), and only gone out of fashion from the application of glass and India-rubber tubing and nipple, to the now improved feeding bottles of the latest fashion. These little vessels, Montfauçon includes with

other Roman fictile ware, and says, "they are thought to have been table or kitchen utensils, but for what use they were designed the reader must judge, for I cannot find it out." Vessels of corresponding character and shape have been long known to antiquaries, and latterly, for want, perhaps, of a better explanation, they have been assumed to be "feeding-bottles" for infants, for which purpose they seemed suitable enough.

An archæologist of more modern times has added much to our knowledge of antiquities, and especially of the objects found in ancient Gallo-Roman and Franc graveyards. I refer to M. l'Abbe Cochet, Inspector of Historical Monuments of the Seine Inferieure; he has published the results of his explorations in the Memoirs of the Society of Antiquaries of Normandy, and more recently has gathered them together, and published them in his valuable work, "La Normandie Souterraine." (I quote from the second edition, Paris, 1855, 8vo.) He tells us that numerous glass and fictile vessels were found deposited beside the dead in these ancient Gallo-Roman graves, belonging, as he believed, to the earliest centuries of our era. Some of the dead, indeed the most of the dead, had been burned, whilst a few had been simply buried, and both were apparently of the same antiquity. These vessels found buried beside the dead were, however, exactly similar to other fictile and glass vessels which had been used by the living, and were found on the sites of various Roman mansions or villas. As, for example, the fictile and glass vessels found in the Roman villas or towns of Entretat, Bordeaux, Chateau-Gaillard, Braquemont, Saint Margaret, and Maulévrier are exactly the same; they are of the same clay, have the same glaze, and the same forms, and are stamped with the names of the same potters and glass-makers, as those taken from the cemeteries of Dieppe, Cany, Lisieux, Thiétreville, and Barentin. Some of these vessels, both of glass and earthenware, contained the remains of the dead,—their bones burned and broken into small pieces; while others had apparently contained food or drink when they were deposited beside the dead; and in all probability, Abbe Cochet thinks, honey or milk, as some Gallo-Roman vases found at Cany still contained a white liquid; or even wine, as the Abbe Lebœuf has ascertained, from a bottle containing wine found in 1752 at Anières, on which was inscribed the words, "Utere Felix." Vessels found in other places have still remaining inscribed on them the words, "Bibe" or "Bibas," and "Felix bibas" or "Utere Felix," clearly showing the use

to which they had been set apart. Others had probably contained food, and the remains of food in the shape of the shells of edible molluscs of different kinds were also found.

In other graves, Abbe Cochet also found groups of fictile and glass vessels of a much smaller size, which had apparently been used for food and drink, and along with them occasionally one of the vessels with the nipple projection, or a "feeding bottle;" these he considered to have all belonged to children, and were found, as he believed, in the graves of children. He was fortunate enough to find the skeletons of young children associated with these peculiar vessels, as in particular in one instance at the Roman cemetery at Cany, where the skeletons of several young children were found together, and were carefully examined by anatomists, who were able to ascertain among the remains those of an infant of ten or twelve months, and along with it was found the globular vessel with its nipple-like spout—the "feeding bottle" of the infant, which had thus been buried with it. I may notice that the fact of the skeletons of infants and children being found in these graves even when the remains of the adults exist only as burned and broken bone ashes, is quite in accordance with the Roman law which forbade the burning of the bodies of children below the age of seven years, but ordered them simply to be buried in the earth. The same fact is referred to by Juvenal, who is also quoted by the Abbe Cochet. In these same children's graves were found, in addition to the vessels of the nursery, the toys, beads, and playthings of the children.

This discovery of Abbe Cochet, taken in connection with the characters of the vessels themselves, leaves little doubt of the correctness of the opinion of their being really the feeding bottles of infants. The infants' feeding bottle is styled by the French a *biberon*, and from the nipple-like projection on these vessels, they have also been designated *tetines*; they have been found formed of earthenware and also of glass in various Gallo-Roman cemeteries. They vary somewhat in shape, some being without and others with handles, which are generally set at right angles to the nipple-like spout, either on one side or the other of the vessel, as if for the purpose of its being used by the right or left hand of the nurse. Some are taller and more jug-like in shape than others. One, figured by Abbe Cochet, which was found at Neuville-le-Pollet, is more rounded in character with its nipple projecting from the rounded surface, some-

what resembling the form of the mother's breast itself; but all or nearly all have the same nipple-like spout, a very few only being mentioned that have the mouth of the vessel contracted apparently to answer the same purpose.

I have not noticed any arrangement or markings to make us fancy that either a natural or an artificial teat had been tied for use over these small projecting spouts. The mouth of these vessels had been apparently covered with a perforated disk, which may have in some cases also answered the purpose of a strainer, and, while it prevented the contents of the vessel being spilt, at least in any quantity, allowed the infant to suck freely by its admitting air into the bottle. Abbe Cochet mentions that a glass feeding-bottle found by him had a perforated bone lid or cover, which appeared to have been at one time attached by a cord to the handle of the vessel.

M. Cochet tells us in his second work—"Sépultures Gauloises, Romaines, Franques, et Normandes, Paris, 1857," 8vo—that these feeding vessels have been found at Dieppe, Lillebonne, Cany, Fécamp, Lisieux, Evreux, Bordeaux; at Gièvres, at Soing, in Sologne; at Steinfort, and in the Duchy of Luxemburg. Specimens of them are preserved in many of the museums of France, as at Sèvres, the Louvre, Rouen, &c.

The Abbe Cochet mentions a curious fact which I have not before seen specially noticed, and to which I wish to call the attention of the Society, namely, the great abundance of manufactured chipped and wedge-shaped flints, which he met with in some of his explorations, many of the sepulchral deposits being regularly surrounded with them.

Since Abbe Cochet's book was published, much has been written on the uses of chipped flints, and their being among the supposed earliest antiquities of man. I do not know in what respect these flints found by the Abbe Cochet differed from those of a supposed very early age, but the use of flints chipped or dressed for some purpose or other, must have been considerable in Gallo-Roman times, from the abundance in which they occur with some of their sepulchral remains. To show this, I quote a passage from Abbe Cochet's account of the Roman cemetery of Dieppe or Neuville-le-Pollet, in "La Normandie Souterraine:"—

"Tours nos vases etaient entoures de silex tailles d'une façon cunéiforme; plusieurs de ces silex paraissaient avoir subi l'action du feu.

Chaque sépulture un peu notable s'annonçait de loin par une véritable masse de cailloux. Ces pierres, soit par hasard, soit à dessein, étaient retombées sur les vases et presque toujours les avaient grandement fracturés ; c'était la ce qui rendait si difficile l'extraction des objets pressés entre plusieurs silex."

"Nous n'avons jamais eu l'occasion de remarquer ailleurs une aussi grande abondance de silex taillés, disposés autour de sépultures romaines pour les préserver. Nous en avons également rencontré à Cany et à Fécamp, mais en moins grande quantité."—Pp. 76, 77.

In the Journal of the British Archaeological Association for June 1870 the first paper is an interesting one "On Early Tetinæ," by H. Syer Cuming, Esq., one of the Vice-Presidents of the Association, and also a Fellow of our Society. Mr Syer Cuming says, "In this country and abroad many antique vessels of terra cotta have been discovered which were formerly regarded as oil cruses for the service of lamps ; but which are now accepted as infants' feeding bottles, upon which the title of tetinæ has been bestowed." Mr Cuming finds what he considers specimens of these vessels among the Greek fictile vases in the British Museum, dating from about 700 to 500 B.C. One of these has its mouth protected by a strainer ; it has also a spout and handle set at right angles to each other. A vessel apparently somewhat similar in character to this one, but probably of Roman red-ware, is in our Scottish Museum of Antiquities ; it is  $2\frac{7}{8}$  inches broad by  $2\frac{1}{2}$  inches high. From its very small size it is rather difficult to believe it to have been intended for a feeding bottle. There is also in our Museum another still smaller vessel of reddish ware with a black glaze, which has a handle on one side and a nipple-like spout ; but the vessel is very small, measuring 2 inches in height, and the opening of the spout is large, so that it rather suggests the probability of its having been used as a small lamp. In the true feeding bottles, I may state the little spout seems commonly to rise from the middle or lower part of the vessel, while in this vase or supposed lamp it springs mainly from the upper part.

Mr Syer Cuming refers to a curious vessel shaped like a cow, and having a teat-like projection at its hinder part, which was found long ago in Sicily, and was figured in Akerman's Repository of Arts, vol. ii., pl. 23. From its peculiar shape, and the teat-like projecting spout, he considers it was probably intended to hold milk, and to be really a feeding bottle. He

next describes and figures various ordinary examples found in Romano-German graves, one of which exactly corresponds in its appearance with the first of the vessels now presented to the museum; the others are jug-like vessels of different heights, with handles, and have the usual nipple-like projections or spouts.

Mr Syer Cuming next gives us details of the few instances of the discovery of these vessels in England. They have not yet, as far as I am aware, been discovered in Scotland, which is perhaps not to be wondered at when we think of the more limited Roman occupation of our country, and the comparative scarcity therefore of our Roman remains. The first of these vessels discovered in England, Mr Cuming tells us, was in 1848, at Shorne in Kent, along with other Roman vessels, a group of which, including a feeding bottle, which belongs to the class of those without handles, is figured in the *Journal of the British Archæological Association*, vol. iv., 1849,—no suggestion as to its supposed use being, however, indicated in the paper. Another instance was discovered in 1861 in the Roman cemetery of St Sepulchre at Canterbury, an account of which is published by John Brent, jun., F.S.A., in the *Archæologia Cantiana*, vol. iv., 1861. It is there figured and described. It was formed of red ware, and was supposed to have been deposited beside the remains of some child to whom, when living, it was the means of conveying nutriment. Mr Cato has furnished Mr Syer Cuming with notes of one of these peculiar vessels found in the grave of a child in the Isle of Thanet, and in this instance it resembled the first of our specimens in having, he says, like the German ones, no handle. Others have been found at Stoneham, and in other parts of Suffolk, and also in Yorkshire. I am informed by Mr Charles Wakefield, that three "feeding bottles" of the same character as the one first described without the handle, are preserved in the museum at York, which were found in that neighbourhood about the year 1856; one is of red-glazed pottery, and the others of yellowish clay. There are also in the same museum, several specimens corresponding somewhat in character to the second specimen described. Two infant's feeding vessels were found in Lancashire, at Wilderspool, near Warrington, in 1869. They were formed of the red ware, and from the relations of the handle to the nipple, one appears to have been intended for the right hand and the other for the left; in other



respects, however, the vessels are not exactly a pair. Dr James Kendrick of Warrington has since published details of the Roman remains found at Wilderspool in the "Reliquary," No. 4, vol. xi., July 1870, p. 43. He has figured the two "feeding bottles," which he says were found in a conical pit 2 feet in diameter at the top, and the sides of which showed that a strong fire had been burned in it; the vessels were partially filled with a greyish brown dust, amongst which the microscope detected small grains of phosphate of lime, clearly indicating, as he thought, that it had been used as a sepulchral urn, though probably for a young child, as no distinguishable fragment of bone remained. He states that according to Pliny it was not usual to burn the bodies of children prior to their having cut their teeth, though feeding bottles would be used beyond that age. Mr Syer Cuming says the clay of which these tetinæ were composed was so absorbent that the lips could not be pressed against them without adhering; he therefore thinks that when used for feeding infants, their spouts must have been provided with a calf teat or some such thing as a protective. May this absorbent character not have been simply caused by the loss of the glaze of the vessel, either by the mere lapse of time, or rather by the hot fire to which the vessel had apparently been exposed?

Mr Syer Cuming tells us tetinæ have been found in London, some of the red pottery and others of the grey or smother-kiln ware. In conclusion, he refers to mediæval "feeding bottles," some of which seem considerably to resemble the drinking cups with long spouts now used by invalids.

I regret much that I am not able to say where or from whom Sir J. Y. Simpson got the feeding bottles which I have described. Some time ago, when conversing with Sir James about the various articles found in graves, he alluded to the fact that vessels, supposed to be the "feeding bottles" of infants, had actually been got in what was believed to be the graves of children. He did not, however, say that he had procured specimens of these vessels, in which he seemed much interested, as I am sure he would have done had any of them been at that time in his possession. I know that not long before his last illness he paid his first, and but a very short visit to Rome and Naples; and he may perhaps have brought these vessels home with him from the Continent. One of

them at least seems exactly similar to those found in Romano-German graves.

Abbe Cochet's discoveries of the food vessels and drinking cups buried with the dead have been already referred to, some of which appeared to have contained fluids like honey, and others a whitish fluid which was supposed might probably have been milk. I have not however found any account of the presence of milk being certainly proved as still existing in any of these *tetinae*, or published in the various notices of their discovery. Now, however, I am fortunate enough to be able to supply this missing link as to their use, although from the other circumstances already mentioned, there seems to be no reasonable doubt as to its having been fully established. When our zealous curator, Mr Joseph Anderson, went to Sir Walter Simpson's to superintend the careful removal of the donation to the Museum, he naturally packed the different articles as closely together as possible, and taking up a small sharp-cornered fragment of stone, he dropped it for safety into the wide-mouthed sucking bottle without the handle. The stone was thus rattled about in the apparently empty vessel, and some days after, on inverting the bottle to take out the stone, portions of a thin yellowish crust or skin which had lined the bottom of the vessel, the continuity of which had been broken by the stone, and thus had been made to peel partially off, fell out along with the stone. The crust was subjected to a careful examination by Mr Anderson and myself. It showed an irregular surface next the interior of the vessel, much engrained with dust, the other side having a smooth and horny appearance. It was slightly flexible in character, and was evidently of an organic nature, taking fire when held to a flame, and melting with a smell of burning cheese. It had indeed somewhat of a horny cheesy-like consistence, and there was little doubt it was the dried-up remains of milk which the vessel had contained. To make the matter sure, however, I took part of the crust to our well-known and obliging analytical chemist, Dr Stevenson Macadam, and in a day or two received from him the following note :—

“The crust from the interior of the supposed child's feeding bottle consists essentially of casein, and represents exactly what would be left in a vessel where some milk was allowed to dry up.”

In this instance, therefore, the “feeding bottle” most certainly had

contained milk. The presence of the small nipple-like projection with its minute bore, as well as, in this case, its actually containing the remains of milk, and all the other circumstances connected with the finding of these curious vessels, leave no doubt, on my own mind at least, that we have here an example of an ancient attempt to supply an ancient want, common doubtless, to the whole family of man. When from any cause, natural or artificial, the natural supply of the best source of nourishment for the infant, the mother's breast, failed, then, as now, it became necessary to feed the child in some other way with the next best food, the milk of the lower animals; and bring it up, as the common phrase has doubtless been then, as now, "by the hand," or "on the bottle."