Getting Medieval On Your Buckles
By
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1. Introduction

From Roman times to the present day, buckles have been second only to simple knots in terms of fastening things. Certainly, they permit the wearer a much wider variety of style and hence allow the wearer to appear more fashionable. Furthermore, with thicker leather belts, knots would be impractical, if not impossible to tie. Surprisingly, with some notable exceptions, the buckles of the modern day do not vary too significantly from those of our ancestors. However, the humble buckle has gone through a number of fashion and practical variations over the centuries. So, what does a medieval buckle look like? How different is it from its modern counterpart? This article will address those questions in the context of medieval Europe, with particular emphasis on the UK, where the favorable metal detecting laws have produced a nearly complete timeline of buckles from Roman times onward.

2. Buckle style through the ages

2.1. *Early buckles*

It is likely that the first buckles were invented in the pre-bronze age and made from horn or bone as a result of someone getting fed up with having to repeatedly tie and untie a knot. It was probably nothing more than what we might identify as a brooch, a simple ring through which the strap would have been threaded and fixed by a pin. The buckle was given its name by the Romans (*buccula*) and it is with the Romans that we see the first widespread archaeological evidence of the use of the buckle. The Romans used plenty of buckles on their armor and their horse tack, but their use was not restricted to the military. A number of very ornate Roman buckles have turned up in civilian contexts. In general, Roman military buckles are very utilitarian, resembling the simple "D" shape – a shape that is ubiquitous throughout the buckle's history (Fig. 1). Some examples of square buckles also survive, but in far fewer numbers than the D shaped ones. Roman military buckles are almost always found with a buckle plate. The buckles are largely made out of bronze, but often have (had) stronger iron tongues. It is not unlikely that as many buckles were made completely out of iron as were made out of bronze, but most iron buckles have since degraded in the ground. The Romans, however, laid the foundation for dark ages and medieval buckle design.

2.2. *Early Anglo-Saxon*

In the 4th and 5th Centuries, most buckles were of decidedly Roman styling. All of Europe had at least been affected by the Roman Empire, if not under its rule. Thus it is not unexpected that local artisans copied much of what they saw coming out of Rome, and adding to it their own local flavor. So, early Britannic, Danish and Saxon buckles all follow the basic D shape, with an uncommonly large number of them being cast in a traditional Roman design of two dolphins meeting head on (Fig. 1 & 2a). In addition, scrollwork began to decorate the shapes of these buckles and some of the first integral plates start to appear (Fig. 2).

2.3. *Middle Saxon*

In the 6th Century AD, buckles appear to be more and more an important accessory in society, perhaps a sign of status as it most buckles were worn as part of girdles outside the clothing. An inordinately large number of highly decorative buckles, many of precious metals have been unearthed in
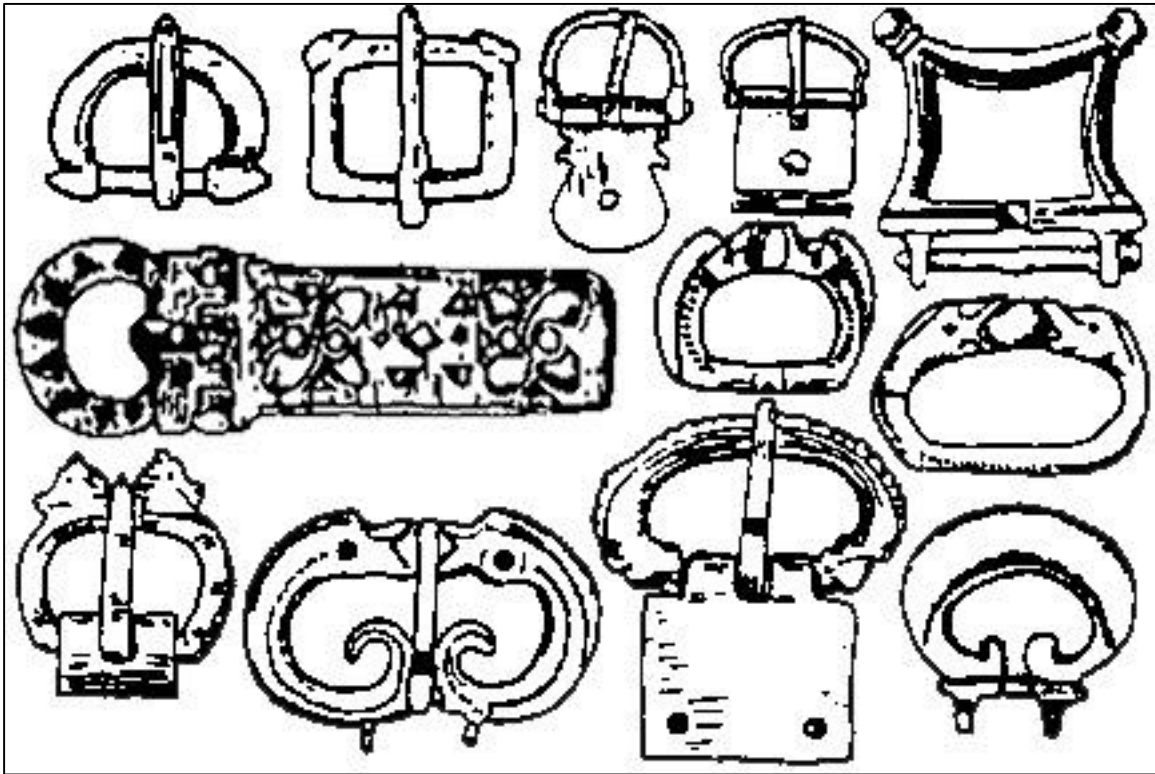
Figure 1. Roman buckles found at military or villa sites in the UK and continental Europe. From Marshall (1987). Ratio 1:1

middle Saxon graves (Fig. 2). The most famous of these is the fabulous buckle of the Sutton Hoo burial (dating to around 625 AD). Many of these buckles are inlaid with silver or gold wire, gems, enamel or other intaglio work. The basic shape of middle Saxon buckles changes slightly to more of an oval form although the square buckle remained a common design as well (Fig. 2). The tongue, now also usually of bronze extends beyond the lip of the buckle and is bent down over the buckle. Most buckles found from this period also have an attached buckle plate of bronze. The plates take on either an inverted triangular (akin to a horse's head), square, or semi-circular shape (Fig. 2a). The middle Saxon period appears to have done away with most types of integral buckle/plate types in favor of casting the two separately. There are almost always three rivets on the plate, two near the buckle bar and one at the tip of the plate (forming a triangle). These rivets often took the shape of a medieval footprint. On the more simple, utilitarian buckles, decoration consisted primarily of what is known as "ring and dot" design that reproducers have deduced was made by a special engraving tool (Fig. 3). This design is found on a wide variety of Saxon articles and makes them easily identifiable to the time period.

2.4. *Late Saxon and Norman*

From the 9th to 11th Centuries, we see a resurgence of Roman styling intermingled with Saxon types. The oval buckle once again becomes more D-shaped and the lobe of the D becomes much thicker, and often dished, a distinctly Norman style (Fig. 4). Buckles with cast integral plates become are again produced, but plates by and large remain separate from the buckle. Most common plates are incised with decorative patterns (often floral), replacing much of the ring and dot design of the middle Saxon period. Viking buckles largely retain the Saxon styling throughout this period, but begin to mix in influence from Normandy and other places. The tongues on buckles return to a pin shape and are often set into grooves in the now thickened D lobe. The two-dolphins buckle returns during this period (perhaps it never
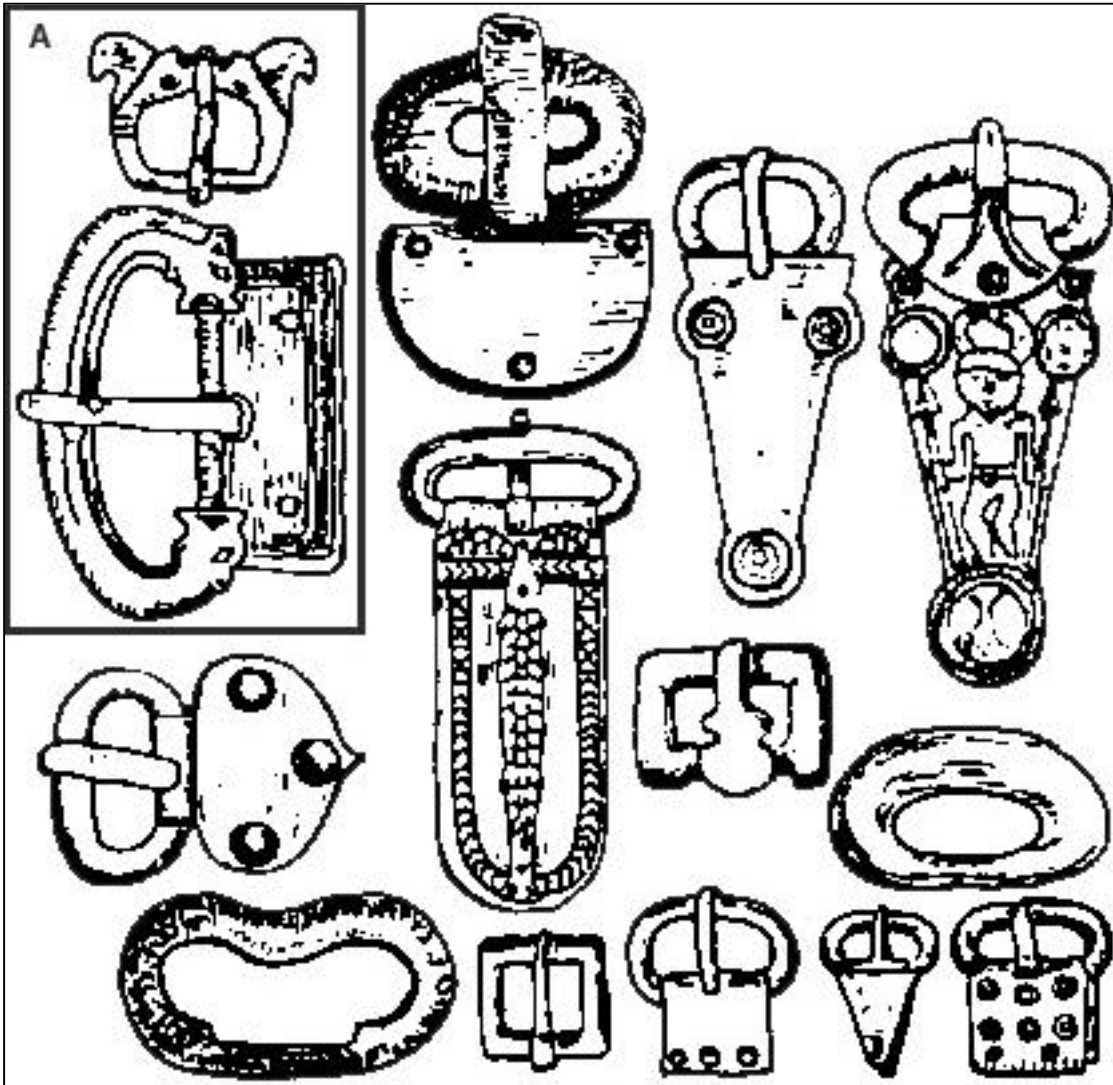
Figure 2. Early and Middle Saxon buckles from the UK. From Marshall, 1987. Ratio 1:1
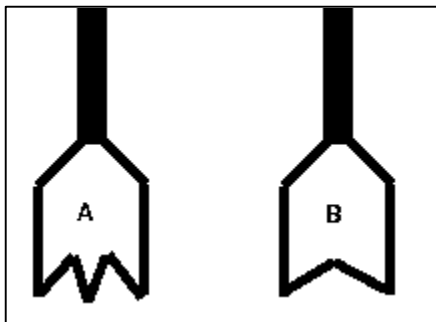

Figure 3. Buckle engraving tool designs for (A) Saxon ring-and-dot and (B) medieval zig-zag designs.

disappeared entirely) and is very clear in more ornate buckles (Fig. 4). A lack of historical examples probably resulted in many buckle makers turning the dolphins around (tails together), and this variety started to degrade, becoming less and less recognizable on lower quality buckles (Fig. 4).

Around the start of the 11th Century a crude variety of the two dolphins buckle is born as the knopped buckle (Fig. 5). Actually, knops have been on buckles since Roman times (see Fig. 1). This style would remain, in various forms, until the late 15th Century. The most common variety was to place two knops (Mickey Mouse ears) on the sides of the lobe of the D-shape. The shape of the knops varied widely, and sometimes only one knop was placed in the center of the lobe. This style would evolve into another common buckle in a few centuries.
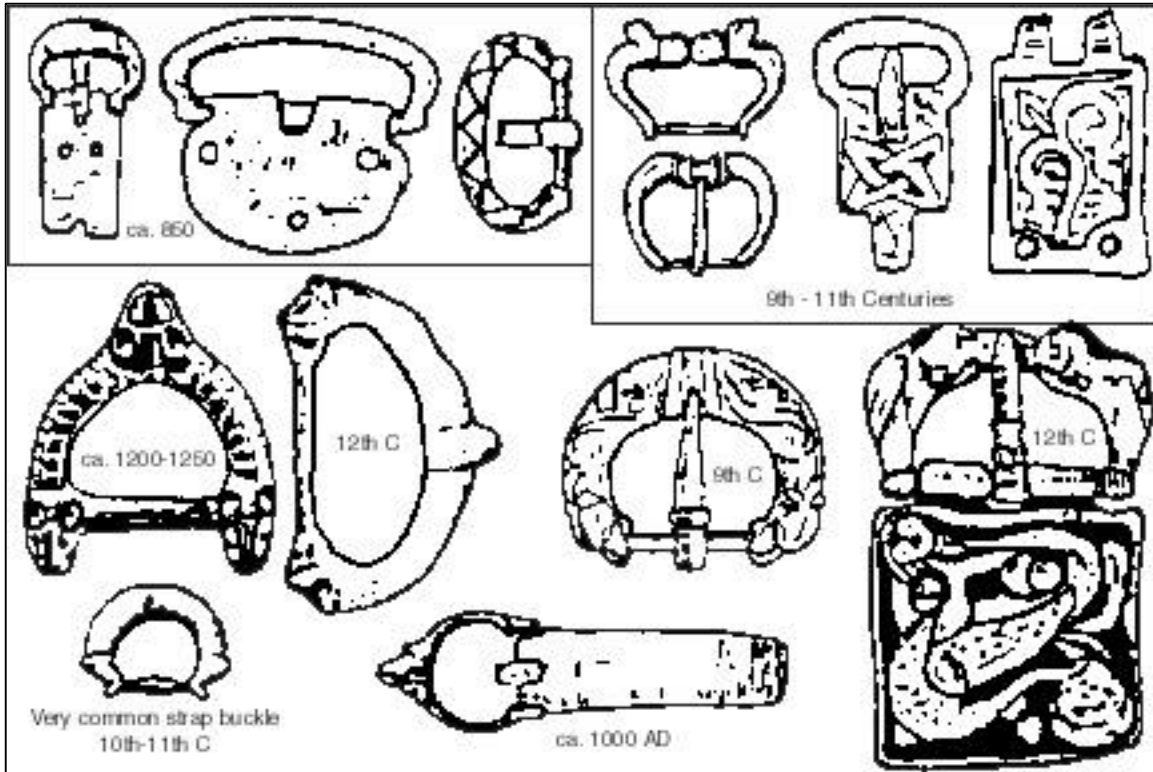
Figure 4. Late Saxon – early medieval buckle styles (9th-12th C). From Marshall, 1987. Ratio 1:1
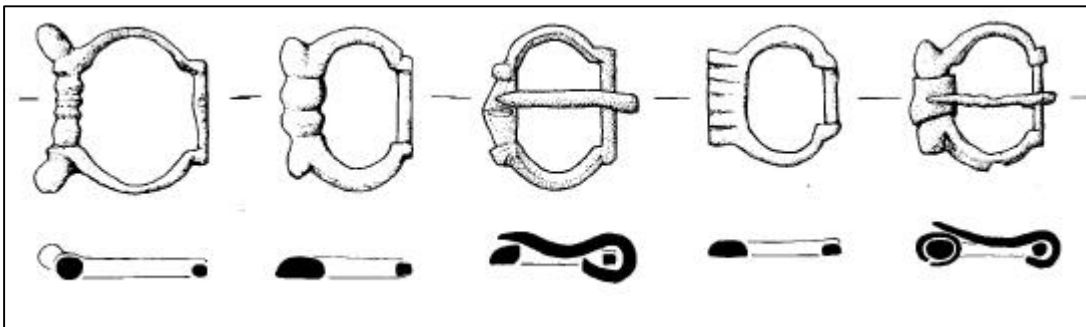

Figure 5. Knopped buckles of the 12th to 14th Centuries (Egan and Pritchard, 1993). Ratio 1:1

2.5. *1200 – 1500 A.D.*

Enter the thirteenth Century. Based on increased finds and the decrease in quality among the majority of finds, it might be inferred that the buckle was evolving from less of a fashion accessory into more of an every day utilitarian item. Buckles continue to be made in the classic D shape, and some of the more ornate have Limoges floral designs in enamel of various colors. Commonly, however, the buckles are mass produced in limestone moulds (some of these moulds have been found), and are of relatively simple design. The most popular appear to be the knopped varieties, or the single knop that has now spread to cover the entire front of the lobe, making the buckle again more oval (Fig. 6). The design of the lip of the buckle became much more varied, but invariably resulted in an indentation for the tongue in the center. An alternative lip that made its appearance during this period was the roller buckle (Figs. 5 & 6). The lip was cast thin and a sheet of metal was rolled around it, allowing the belt to slide smoothly across the buckle, reducing wear on both. Some buckles that have been identified as coming from spur straps are cast with integral plates, but the majority of buckles have separate plates. The plates are usually plain,

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but sometimes decorated with floral or geometric patterns and held in place by two to four round rivets (Fig. 6).
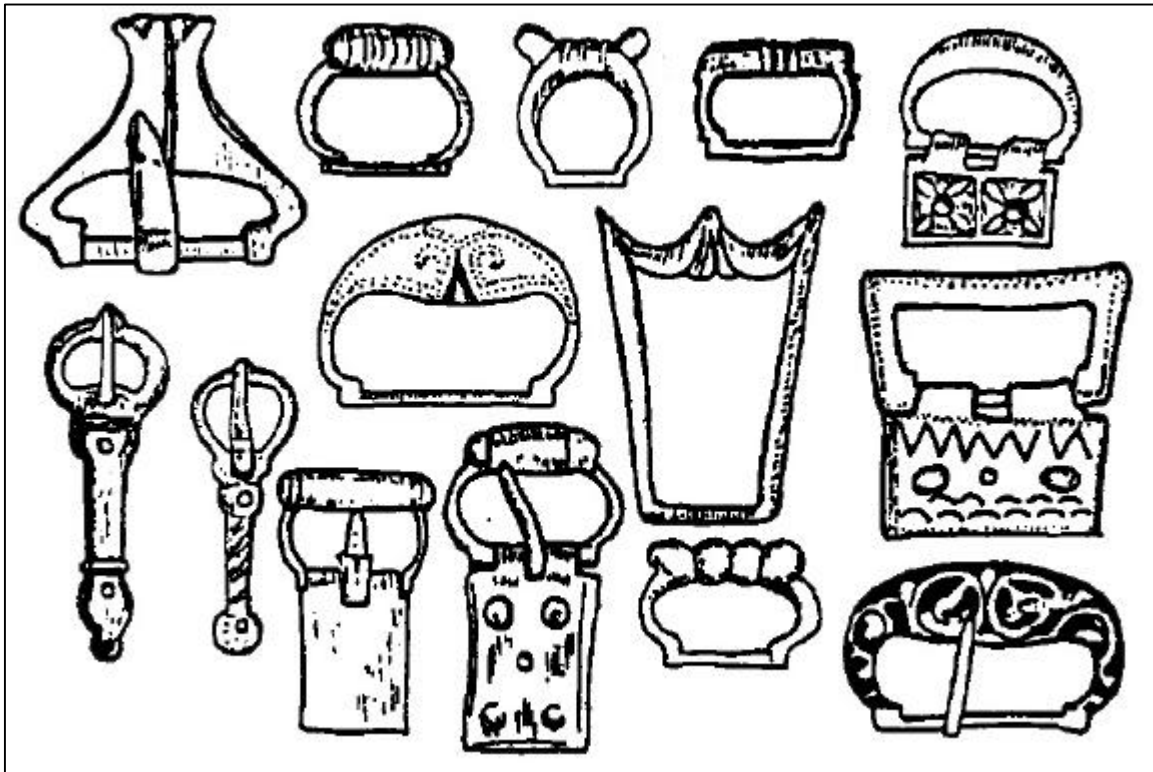

Figure 6. A variety of buckle styles from ca. 1200 – 1400 (from Marshall, 1987). Ratio 1:1
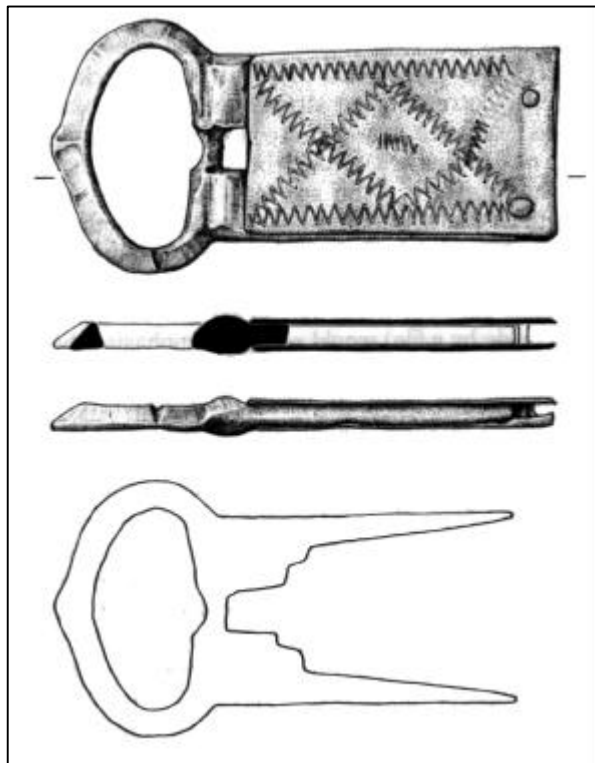

Figure 7. The "forked spacer" buckle common to the 14th C. was a variation on the pointed, single-loop, D buckle. From Egan and Pritchard, 1993. Ratio 1:1

2.5.1. *14th Century introductions*

The knopped buckle continued to be the standard buckle through the 14th Century, but it was joined by another type around the middle of the century. This second type was a derivation on the single, central knop design of the previous two centuries. The basic shape was that of a minaret (when stood on end), or of a pointed D. Although sometimes these buckles were produced for use with a simple strap or wrap-around plate, the most common form of this buckle was known as a "forked spacer" buckle (Fig. 7). It is so called because, to accommodate thicker belts, a pair of tines (like a two-pronged fork) were cast as part of the buckle. The tongue was then attached, the strap or belt cut to fit, and a pair of rectangular plates of bronze were riveted on either side of the fork. In most cases, it

appears the plates were soldered to the fork before the belt was riveted into place.   The forked-spacer buckle is not a common find to say the least, but it is the style of buckle that is often seen on funerary effigies of the period as well as in manuscript illuminations. We can imagine that it was a well liked variety, especially with the wealthier members of society (it would have been costlier to produce and hence more likely to be repaired than discarded)

Around 1350, a single-looped buckle with a plate, but no pin was introduced and used until about 1500 (Fig. 8). In place of the pin was a clasp that rotated around the lip of the buckle frame, it held the belt by means of a bar fitting on the belt, rather than by holes. This sort of buckle was practical for straps that did not pull much weight and needed to be operated by one hand.
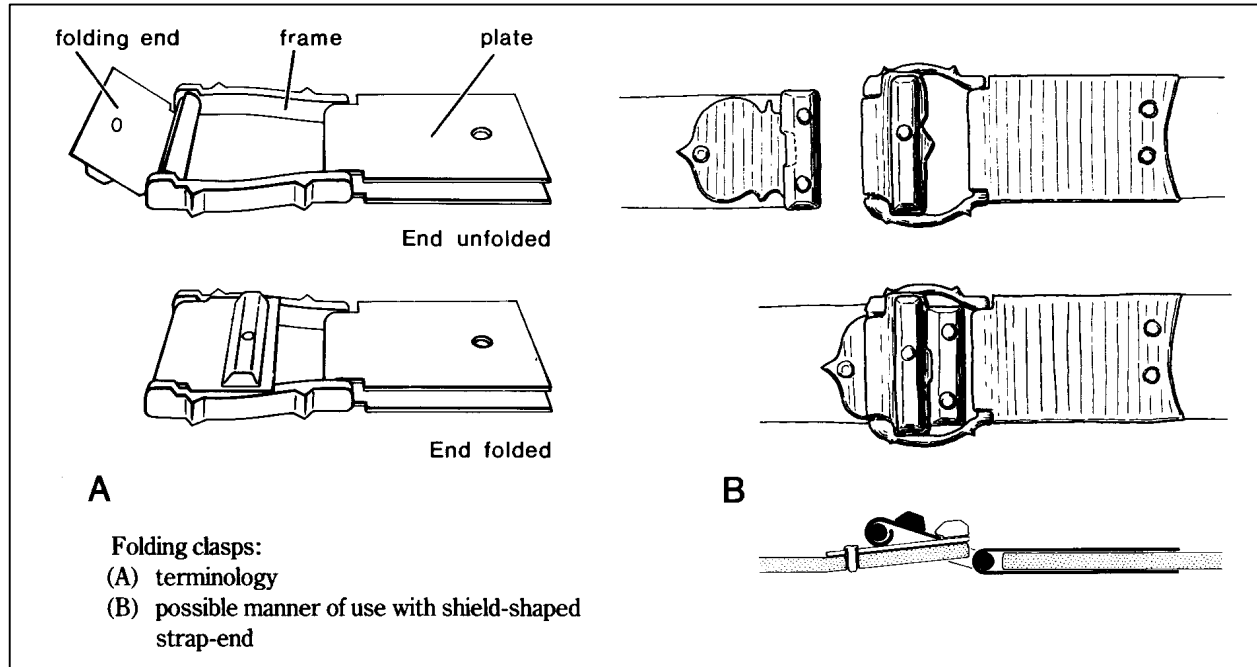

Figure 8. Clasp buckle of the late 14th C. From Egan and Pritchard, 1993. Ratio 1:1

Another buckle style that makes its appearance in the later-14th Century (but it didn't really take off until the 15th Century) is the figure eight, or "spectacle" buckle (Fig. 9). It is a double loop buckle with the pin at the center. The earliest forms (ca. 1370s) are of a simple circle bisected with the pin bar. These buckles were usually attached directly to the strap rather than using an intermediary plate. The second loop served to draw the strap terminal back down and keep it from flapping around. It also reduced some of the strain on the strap as it pulled against the pin. This sort of buckle is seen frequently on armor from the 1400's onward. In the 1400s these buckles appear to have become more commonplace than single loop varieties. Many of the double loop varieties took on specialized forms to aid their purposes, including the addition of hangers and combination round and square loops.

2.6. *1500 – 1650 AD*

Buckles in the 16th Century don't vary too much from the previous century, with the exception that single loop buckles did make a slight comeback, primarily, it appears, on utilitarian straps, rather than for decorative girdles and in general disappeared from use around 1600. The spectacle buckle remains the most common type of buckle found in the context of the 1500-1650 period and its ornamentation increases slightly (Fig. 10). In addition, the ornate buckles are generally larger than those of previous centuries and many more buckles of the square and semi-round double-loop are found (Fig. 10). The lips

on spectacle buckles often consisted of cast decoration. Plain spectacle buckles continued to be used for most utility straps. Many double loop buckles are concave along the lip-to-lip axis to make feeding of the strap easier.
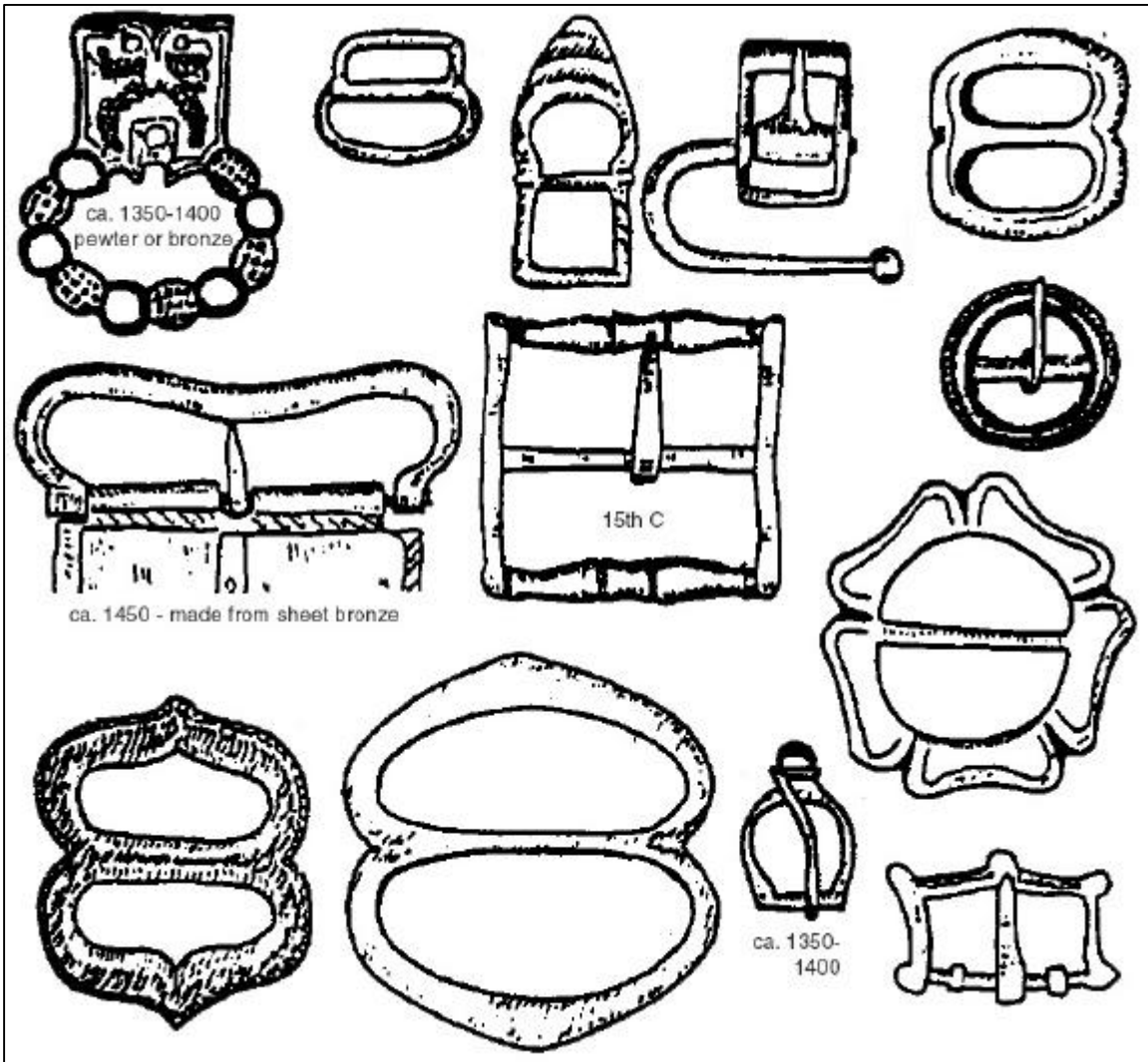

Figure 9. Various buckles from ca. 1350-1500 AD (From Marshall, 1987). The basic "spectacle" buckle is in the upper right. Ratio 1:1

2.7. *Strap slides*

It is interesting to note that throughout the 12th to 17th Centuries, buckle frames are found that have obviously never had a pin (Fig. 11). Some of these have internal protrusions, but others look just like buckles, single and double loop. The single loop varieties are usually square and have a hole on one of the sides. These have been identified as strap slides, or accessories to hold the strap end to the strap. Although illustrations of these are rare, they do exist in enough quantity to infer they were very common items. One such example is shown on the archer's bracer in the Museum of London's Dress Accessories book (Fig. 12).

On the whole, there are a wide variety of buckles, and it does not appear that designs, once introduced, ever disappeared entirely. The common D-shaped and square buckles appear throughout the period. Many of these designs persist to the modern day.
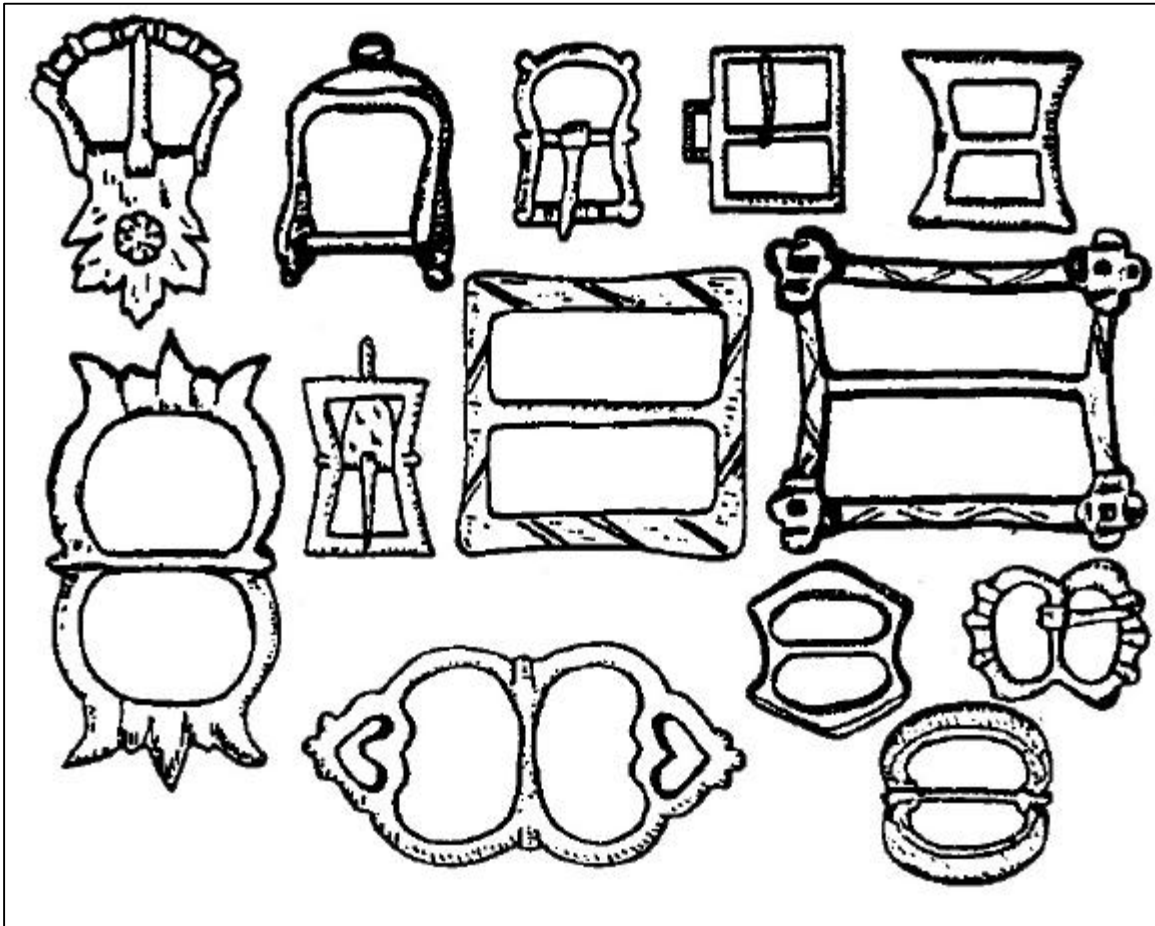
Figure 10. Buckle varieties from ca. 1500-1650 AD (from Marshall, 1987). Ratio 1:1
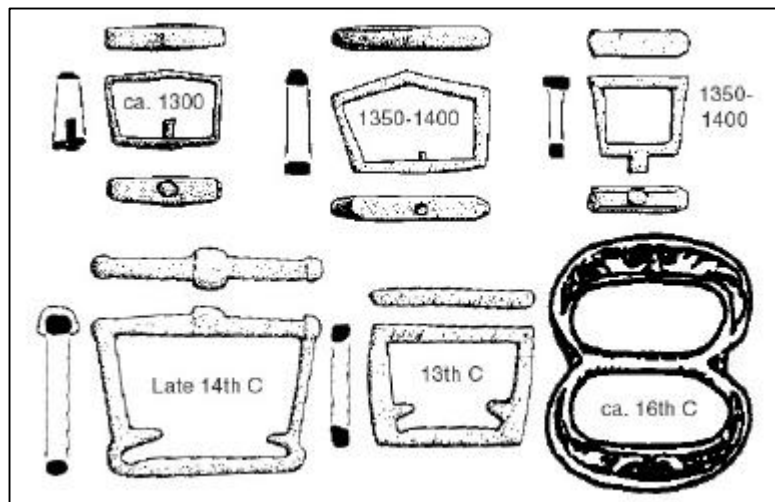

Figure 11. Strap slides have been common belt fittings from at least the early 14th C and possibly earlier. Buckle diagrams from Marshall (1987) and Egan and Pritchard (1993). Ratio 1:1
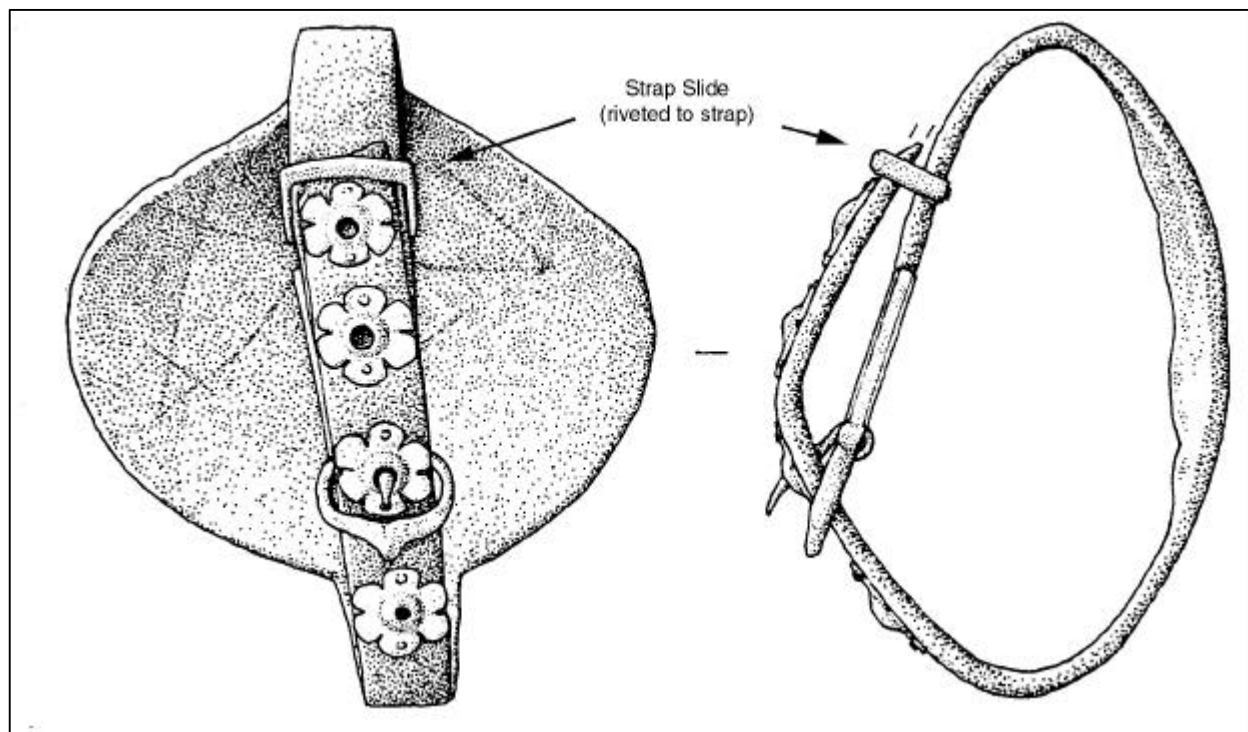
Figure 12. Archer's bracer (arm guard) from the mid-14th C. Note the forked-spacer buckle and the strap slide (similar to Fig. 11 upper left) riveted to the strap. From Egan and Pritchard (1993). Ratio 1:1

3. Dimensions

Contrary to popular belief, most buckles were relatively small, and even the widest belts were at most 5 or 6 cm in width. The majority of buckles are between one and two centimeters (the width of the strap that would have fit through the buckle). It is likely, however, that most of the buckles falling into this range are utilitarian types that were probably used on purses, shoes, fixing straps, books, etc… But, one must keep in mind that many girdles, worn about the person were utilitarian in nature as well. Lords and kings would probably not have wasted their money on decorative buckles for the sword belts and armor of their assayed armies. Helmet straps would have been narrow and utilitarian, as would the belts of most of the lower classes. Narrow belts are less expensive and hold a purse and dagger as well as a wider belt. There are other practical considerations to belt size. During several periods within the middle ages, it was the fashion to wear several belts, each with its own purpose (sword, purse, etc…). Wide belts would be burdensome to the wearer.

Of the remainder of buckles that are found by metal detectorists, their width clearly identifies them as either belt buckles (if ornate), or large strap buckles (e.g., horse girdles). The width of these buckles ranges from 2 to 5 cm. The largest buckle (actually a fragment) the author has ever found has a strap width of 5 cm (Fig. 13). It is not surprising that medieval buckles are not huge if one examines closely the width of belts in the funeral brasses and reliefs of knights of the period. With but a few exceptions, they are not unusually wide, perhaps 4 to 5 cm.

The length of the buckle varies, but for single loop strap buckles appears to be about identical with the width and never more than about 3 cm in length. Larger or varieties can be longer, but mostly

they were just made wider to accommodate larger straps, and only made longer if they needed to permit the passage of raised belt studs. A good average for buckles throughout the period is about 2 cm x 2 cm.

The buckle was almost never a thick item. With some exceptions it did not exceed about half a centimeter in thickness (see Figs 5, 7, 8 & 11). It was rare that a buckled strap would be called upon to counter forces heavy enough to fracture bronze of that thickness (though examples where that has clearly happened are common field finds).

4. Production

Most buckles of the period covered in this article were cast in bronze. The pin bar was part of the buckle (the addition of a separate iron pin bar was only begun in the late 1600s). Buckles that needed to be stronger (e.g., armor buckles) would be made out of iron, but these usually don't survive in the ground. The pins (or tongues) of the buckles were most often in bronze as well. Early examples, and those on iron buckles are also in iron. Pewter also was used, though not as extensively as bronze. Being a weaker metal, its use appears to be restricted to smaller straps or ornate girdles. After casting, the buckle frame would probably have been filed to rough shape and tumbled in sand to polish it up. A pin would be attached and it would be sold.

Figure 13. A large pointed, single-loop, D buckle from the author's collection. Ratio 1:1

There is clear evidence that at least from the late 1200s buckles were produced 100s at a time in large limestone moulds. This leads us to believe that they were, for the most part, a relatively common dress accessory and used in most facets of everyday life. Also, it is thus not a stretch to shatter the pre-metal detector notion that metal work was scarce and never discarded. As today, one could always sell the metal back to a forge, but with as many buckles being found as there are, it is likely no one lost much sleep over a lost buckle or broken belt.

A rare alternative to the cast buckle is the sheet buckle. This was a buckle formed out of sheet and round stock bronze (Fig. 14). The frame was made by bending a strip of sheet into a semi-kidney shape and making small loops at either end. A pin bar was then inserted through the loops and a pin attached. Fig. 16 is the only known example of such a buckle. More common were simple buckles made from bent round stock iron or bronze. The bar would be bent into a simple D-shape, meeting at the back and a pin added. Buckles like this are readily available today and are common on most military items.

Although you may come across the occasional cast plate, most buckle plates were made from very thin (0.016" or thinner) sheet bronze. The folded over method of attachment was most common. This consisted of cutting a pin groove in the middle of the flattened plate, and filing indentations on either side for the buckle shoulders, then the plate was folded over and the buckle inserted, pin first through the hole. The plate would then be compressed around the belt and riveted in place with thin brass rivets. There is some conjecture as to whether plate decorations were added before or after riveting. I prefer to decorate my reproduction plates before they are folded over (easier to work).
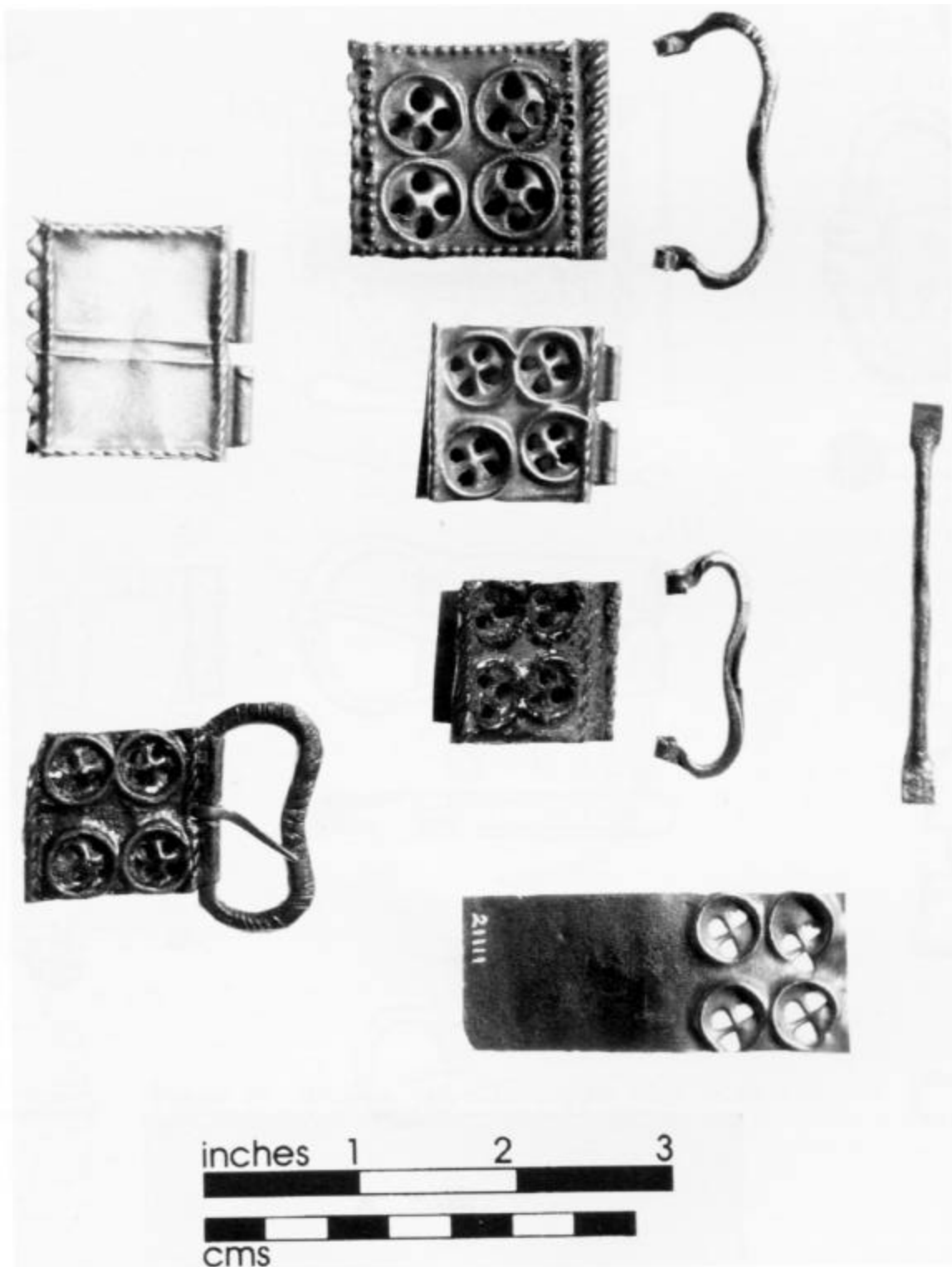
Figure 14. A London buckle maker's horde from the 15th C. The components make a sheet bronze, kidney-shaped buckle similar to the complete cast one to the left side of the figure. The horde is in the Museum of London (E.R. 319). From Margeson, 1993.

5. Purchasing medieval style buckles

Look around you, chances are you can find buckles that will work perfectly for medieval belts and straps. Watch bands often have very excellent reproductions that are just the right size. Another avenue is to keep your eye on belts in the department stores. Every now and then, you'll see a buckle that will work for your period. Try buckle suppliers too. There are several on the Internet so you can go medieval buckle shopping from your own home. Unfortunately, the modern buckle has one major difference from its medieval counterpart. On almost all modern buckles, the pin bar has been soldered to the frame after casting, meaning it is set below the frame, rather than in-line as medieval buckles were. Also, the pins on many of these buckles take on a sway back appearance. If modifying such a buckle for medieval use, straighten the pin and file the end to more of a point.

If you'd prefer a reproduction buckle instead of a modern variation, there are several SCA merchants who sell cast buckles that have been either reproduced from documented sources (photographs and drawings of museum pieces or contemporary illustrations) or cast from moulds made of actual medieval buckles. These buckles sell anywhere from $3 to $25 depending on the work required, but they can be well worth it if accuracy is what you are after. Among the merchants who sell these reproductions are Talbot's Fine Accessories, Historic Enterprises, Gaukler Medieval Wares, Billy and Charlie, and Anshelm Arms. Their contact information can be found at the end of this article.

6. Making medieval buckles

If you are having trouble finding buckles, or none of the available styles suits your needs, or you are just the kind of person who enjoys making their own stuff, constructing medieval looking buckles is not too difficult. If you have the ability and experience to cast buckles, you can use the figures in this article as a basis for the moulds, they are all 1:1. For the rest of us, though, I'll cover making a few of the basic types below and no casting is involved. In most cases, you should not need much more than a tin snips, several 1/16" drill bits (you'll break these frequently), a 3/8" (or any large size) drill bit, a coping saw with a blade that will cut brass, a half-round file, a small rat-tailed file, some steel wool, a small ball-peen hammer, a wire snip, and a small flat-head screw driver. If you have a Dremel tool with cutting and grinding bits, that is even better.

6.1. Making the buckle

The dimensions of all the following buckles are 0.1" (between 2 and 3 mm) thick, and will fit a 3/4" wide belt. Start by visiting your local hobby store, home improvement warehouse, department store, or scrap yard. Get a bar of brass, 0.1" thick, by 1 to 1.5 inches wide and at least a few inches long. K-S is a widely carried brand of finished flat brass stock. Also, get some round brass rod, 1/16" and 1/8" diameter, and flat sheet brass about 0.032" thick by 3/4" inches wide (if you want to make a buckle plate and strap end).

To make a buckle, trace the shape of the buckle on the brass (you can use any of the designs from the figures in this article). Use a scribe so that the design doesn't get smudged away as you work. Lay out the buckle on the brass stock with the width of the buckle matching the width of the brass (this will reduce cutting). If you want it wider, lay it out lengthwise and make it as wide as you want, but its length will be limited to the width of the brass. For all buckles, I recommend placing the parts that will the most filing toward the end of the bar. This way you can file these areas while you still have the rest of the bar to hold on to. If you have a lot of excess to remove, start with the coping saw (tin snips if you are very strong, or Dremel cutting wheel if you are impatient). Make the gross removals and then switch to the half-round file. Once you have the shape roughed out, bevel the upper edge of the outside rim of the buckle with the file and de-burr the rest with steel wool.

Now, it is time to clear out the buckle center. Make a divot with the center punch somewhere inside the center (near but not on the edge is preferable). Take your large drill bit and drill a hole at the divot you just made (remember to allow for the radius of the drill bit, so you don't drill into the frame). Once you've drilled the hole, insert the coping saw blade and attach it to the saw. Carefully saw around the edge of the buckle center until you've removed that plug of brass. Use the rat-tail file to de-burr the edges, and then bevel them.

Next cut the buckle from the bar using your favorite cutting method from above. Follow the outline of the buckle as much as possible, as it is easier to remove the excess brass from the bar stock later on than from the small buckle you'll now have to hold on to. If you have a vice or clamp, put the finished part of the buckle between two pieces of scrap leather or cloth (even paper towels work ok) to keep the brass from getting marred by the vice and secure the buckle in the vice. If you don't have a vice, a C-clamp on the edge of a table will work too. Now file down the remainder of the buckle, again beveling the upper, outer lip. Thin down the pin bar until it is roughly square in cross-section. The frame is now complete.

6.2. Attaching the pin

To attach the pin, take the $1/8^{th}$ inch brass rod, and mark off enough to go from just past the outer edge of the frame lip to about 1/2" past the pin bar. On a metal surface, flatten the rod the full length of the pin (not too flat though). Now cut it from the rod and, using a pair of needle nose pliers, bend the pin around the pin bar so that it can rotate and so the end of the pin extends just past the lip of the buckle. The buckle is finished.

6.3. Attaching the buckle to the belt

If you now want to attach it to a belt, there are two ways. The first is to cut a 1/2" to 3/4" long by 1/8" to 1/4" wide (depending on the pin width) opening in the belt, starting about an inch in from the end. Place the pin through the opening from behind, and fold the strap back down through the buckle (so the top of the buckle matches with the face of the strap). Now either rivet or sew the strap end to the strap to secure the buckle.

The other way to attach the buckle is with a plate. Use the 0.032" x 3/4" inch brass stock to make the plate. Mark off about 3 inches, cut, and fold in half. If you want to decorate the plate, jump to Section 6.4 before folding the plate in half, decorate it and then return here. Along the folded edge, make your pin opening using a file, or Dremel with cutting wheel if you prefer. De-burr the plate with steel-wool. Now, slide the buckle in to the plate, pin first through the opening, so the top of the buckle matches the top of the plate. Cut a 1/4" inch groove in the center of the end of the strap that is going into the plate. This will give the pin some clearance. Push the strap into the plate until it butts up to the buckle and pull it away ever so slightly, so the buckle can move.

Now, coming at it from the buckle, clamp the plate and strap together with one of those strong plastic and rubber spring clamps. Make two divots near the end of the plate with the center punch. This is where the rivets will go. Use the 1/16" drill bit to drill through both sides of the plate and the strap. Next, fit the 1/16" brass rod into the first hole until it just protrudes from the other side (1 mm or so). Cut the rod so you have an equal amount left sticking out the other side (you can also use solid brass brads here). Using a light weight ball-peen hammer, peen over the ends of the rivet to secure the plate (make sure you are peening on a flat metal surface - you may want to lay down a piece of fabric or tape to reduce marks on the plate). Repeat that with the other hole. The strap is now secure. If you want to add more rivets, that is up to you. Either one or two just below the pin are common. You can make a strap

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end in the same manner as the plate. Most strap ends were simple rectangles or had the leading corners angled.

6.4. Decorating the plate (and strap end)

If you want to decorate your buckle plate or strap end. It is best to do so while it is unfolded. Use a pencil to mark out the design you want (leaving room for the pin hole), and draw it on a piece of paper as well so it is easy to follow. The classic design is called wriggle work and is accomplished using a special tool. This tool can be made by filing a V-shaped groove into the end of a narrow flat-head screw driver (Fig. 3). It will take some work, so practice on scrap first, but soon you'll learn how to "walk" the screw driver along the brass, leaving alternating little triangular gouges in the metal. A sharp scribe will work to make more simple zig-zags.

An alternate design, common in Saxon times, is ring-and-dot. The tool for this can be made out of a slightly larger screw driver with two V-shaped grooves filed into the head, leaving a three pronged fork (file them to sharp points – Fig. 3). Make a center punch mark where you want a dot, and place the middle prong in the divot. Now spin the screwdriver around several times. You'll scribe a circle with a dot in the middle. Repeat as desired.

Although buckles are often viewed as minor accessories on reenactment clothing or gear, to the owner, it is often the part of the outfit that just doesn't fit with the rest of it. Fortunately, if one wishes to complete the look by employing medieval replica buckles, the opportunities to do so are readily available. I thank you for reading this article and encourage everyone to get medieval on their buckles.

7. Some buckle references:

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Billy and Charlie's Finest Quality Pewter Goods, 21-B E. Circular Ave., Paoli, PA 19301. E-mail: billy@billyandcharlie.com. Web: http://www.billyandcharlie.com

Gaukler Medieval Wares, 1052 Amphion St., Victoria B.C., CANADA V8S 4G3. Tel: +1 (250) 595-1104. E-mail: mark@medievalwares.com. Web: http://www.medievalwares.com

Historic Enterprises. 17228 Voorhes Ln., Ramona, CA. 92065-7109. Tel: +1 (760) 789-2299. E-mail: historic@pacbell.net. Web: http://www.historicenterprises.com

Talbot's Fine Accessories, 240 E. Palmer Ave., Northlake, IL 60164. Tel: +1 (708) 562-7667. E-mail: DougStrong@aol.com. Web: http://talbotsfineaccessories.com.

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