

## Mary Rose Ballock Knives by Maggie Richards

The Mary Rose ballock-knives are numerically the largest contemporary group of such daggers known, apart from the Lubeck finds (see Seitz, H., 1965). The 65 ballock knives recovered represent the largest assemblage of such weapons excavated in Britain. Whilst they are positively and securely dated to the mid-sixteenth century and are therefore from the post-medieval period, they can be used to provide an insight into this form of a dagger which was commonly used throughout the fourteenth and fifteenth-centuries. Securely dated examples of these weapons from these earlier periods in Britain are virtually impossible to find. However, examples of ballock-knives can be found within museum collections, including The Museum of London, The Royal Armouries (Leeds), and The Wallace Collection. In addition such weapons have been excavated from medieval sites in Europe.

What is a ballock knife?

The ballock knife or kidney dagger can be distinguished from other types of a dagger by the two carved and rounded basal hilt-prominences or lobes which can be found on the haft positioned directly above the blade. In the Medieval period the English dubbed this weapon the ballock knife, whilst the French described it as a "dague a couillettes". Such names reflect the shape of the hilt, with the two rounded lobes representing ballocks, whilst the phallic-form hand grip tipped with a pommel represents the male member.

A ballock-knife haft is usually turned and carved from a solid piece of wood (however, hafts can be found made of other fabrics such as metal or ivory, but wood appears to be the most common fabric used).

Each haft is shaped with a bulbous or flattened protrusion at the butt end of the grip to form a pommel; and a pair of lobes (a single prominence to either side of the grip) at the blade end. The function of a pommel was to provide a counterweight to the blade, ensuring the production of a balanced weapon, and it also served to prevent the hand slipping off the end of the haft. The lobes served to replace the normal protective metal hand guard which is found on other types of daggers and swords. The grip is formed by the perpendicular area from directly above the lobes to the point directly beneath the pommel, and is simply the area by which the dagger would have been held.

An auger was used to drill the centrally positioned tang hole through the length of the haft. The tang hole is positioned at two external points on the haft: to the centre of the pommel, and centrally beneath the grip between the underside of the lobes. The blade had an extruded length of metal (the tang) attached to the worked blade which was inserted through the length of the haft. On the pommel the tang hole is round and marks the point where the tang was finally secured in position beneath a metal button. Buttons were usually domed with a small central hole, but could be round or square in shape. Between the underside of the lobes the tang hole was shaped to accept the widest point of the finished blade.

In most instances the blade was manufactured with a single cutting edge (a wedge-shaped blade), although some ballock-knives blades were double edged (a diamond shaped blade). Occasionally small iron wedges were positioned by the side (or to both

sides) of a wedge-shaped blade in the tang hole, these served to fill in any small gaps between blade and haft, and ensured that the blade did not move when the dagger was in use. To finally secure the blade in position and protect the haft from splitting a lobe guard (made of iron or a copper alloy) was usually, but not always, fitted to the underside of the lobes. Often the lobe guard comprised no more than a plate, either the same size as, or smaller than, the area under the lobes and grip. However, some ballock-knives have exaggerated guards where the lobe guard plate is extended at either end and curves down over either side of the blade. The author has identified different methods of attaching a lobe guard to the haft including small pins or nails or alternatively two large rivets, one passed through each lobe.

A leather sheath was often used to cover and protect the blade when not in use. Thin lathes of wood (such as beech) were sometimes used as a lining and strengthener to the inside of the sheath. A sheath was usually suspended from a belt or girdle. In some instances, extra pockets were added to the sheath to store by-knives. A good quality sheath would often be decorated and have a metal chape fitted at the end of the sheath. The chape prevented the point of the dagger piercing the sheath. By-knives were usually hafted with wood (although in instances where the ballock-knife haft was made of ivory or some other exotic material, then so too were the by-knives), and were often made in sets with differing sizes of by-knife, from a small pricker (with a fine pointed needle-like blade) to larger knives with blades of three to four inches. A trousse consisted of a ballock knife and accompanying by-knives.

By-knives were made in the same way as ordinary knives. This was either: a solid handle into which the blade tang was inserted - a whittle tang knife; or a bi-partite handle which was attached by nails or rivets to either side of a flattened tang - a scale tang knife.

### **Origins of the name - ballock knife**

From 1840, during the prudish Victorian era, arms historians sought euphemisms for unseemly words such as 'ballocks' and they ultimately came up with the term 'kidney dagger' for these weapons. Since the nineteen forties there have been attempts to reinstate the contemporary English terminology throughout the classification and description of arms and armour (Peterson, 1968). However, even today, on the eve of a new millennium, not all public institutions have reverted to such original terminology and language. Therefore, in some museums (e.g. the Royal Armouries, Leeds) these weapons are recorded and displayed as ballock knives, whilst in others they are still labeled as kidney daggers, (eg. the Mary Rose Museum, Portsmouth).

It is often stated that an alternative contemporary term for a ballock-knife was a dudgeon dagger (Peterson, 1968, 28; Weland 1985, 86). This assertion is supported with the statement that this was because the wooden hafts were commonly manufactured from boxwood. Indeed, it certainly appears that boxwood was a preferred wood for the manufacture of dagger and knife handles throughout the Medieval period, as a 1380 Ordinance for Cutlers stated that "No handle of wood except dogeon" was to be used, and over two hundred years later it was recorded that Turners and cutlers... doe call this woode (boxwoode) dudgeon, wherewyth they make dudgeon-hefted daggers (OED).

However, the author has yet to find a reference which implicitly links a ballock knife with the term dudgeon dagger. Whilst it would seem that boxwood was the most popular material used, other types of wood were used, as shown by the microscopic identification of the 65 Mary Rose ballock knife hafts - boxwood (57), maple (5), ash (1) fruitwood (1).

One haft has proved impossible to identify. Until a study of the wood species used for all other types of wooden dagger hilts is carried out within arms collections throughout the country and comparative data obtained, it is perhaps impossible to state with absolute conviction that only ballock-knives were referred to as dudgeon daggers.

It is also often commonly stated that the sexual derivation of the name of the ballock-knife arose in part from the original position in which the dagger was worn, suspended from a belt or girdle positioned directly in front of the male genitalia. Iconographic evidence of this statement proves to be relatively scarce, a rare exception being displayed on a 1386 stone-tomb effigy of a knight, Walter von. Hohnenklingen (Edge & Paddock, 1988,76).

The majority of sources identified depict the ballock knife positioned behind the right hip of the wearer, a position which can be considered to be a more practical and comfortable way in which to carry such a weapon. For a right-handed man the left hip was the position in which to carry the primary weapon - a sword, with the right hip, used for the secondary weapon, the dagger. A ballock knife was often kept within a leather sheath, and was sometimes accompanied by a small by- knife (or knives).

#### Early Iconographic References to Ballock Knives

Ballock- knives appear in the first half of the fourteenth century, early illustrations of these weapons occur in the Bohemian Bilderbibel of 1300-50 held in the National Library, Vienna (Peterson, 1968, 27) and in the Luttrell Psalter, c.1335 - 40, where an archer can be found wearing such a dagger (Ward-Perkins, 1940,47).

A brass dating to 1332 (Clayton, M., 1979, plate 67) can be found in the Museum of Brussels and it depicts two individuals, J. and G de Heere, both of whom are wearing a kidney dagger to the right hip. Both knives have a single rivet through each lobe indicating the attachment of an iron lobe guard. A striking feature is the six rivets or jewelled studs which are affixed through, or to, each grip. It would seem probable that these are purely a decorative feature, rather than suggesting that the grip comprises two wood scales. If the grip were bi-partite, logic would suggest that the lobes were made of metal, but the presence of the rivets in the lobes firmly suggests wood. Therefore, it would seem probable that the haft is a solid piece of wood featuring decorative grip studs or jewels. In addition, the pommels are very large, and they resemble faceted pentagons. Dimensionally, the pommels appear to match the larger examples commonly found on late sixteenth-century ballock knives.

An early documentary reference dated to 1337 (Oxford English Dictionary) describes a "ballok-kynf with boutones ouergylte" which proves to be an apt description for the dagger to be found on a church brass dating to 1360, the subject is Sir William de Aldeburgh and the brass can be found in Alborough Church, Yorkshire (Clayton M, 1979 plate 3). Worn behind the right hip of the knight, the dagger blade is partially

obscured, but the haft is clearly visible. The grip appears to taper very slightly from the pommel down toward the very rounded lobes, but it is the trefoil-shaped pommel which is of greatest interest. It is impossible to state whether the dagger depicted was actually gilded (ouergylte) at the pommel, but it is perhaps likely, given the elevated social status of the owner. It is worth noting that the motifs on the armour and shield are composed of trefoil-shaped elements, so perhaps the dagger haft was deliberately manufactured to fit in with the rest of the armorial decoration belonging to Sir William de Aldeburgh.

### **Mary Rose ballock knives**

Sixty-five ballock knives were recovered from the Mary Rose. However, the blades had usually disintegrated, with only the wooden hafts surviving. Nine ballock-knives were recovered from the hold, 15 from the orlop deck, 11 from the main deck and 19 from the upper deck, with the remainder being excavated from areas outside the hull. However, one ballock knife was found stored inside a locked oak chest which was stowed on the main deck. Storage suggests the protection of an item of worth, and many other items within the chest were valuable including, silver coins, silver jewellery, pewter items, a knife handle with an engraved copper top (one of only two recovered, thought to be Flemish in origin). Interpretation of the entire contents of the chest suggests an owner with the position of a master-gunner (Richards 1997, 96). It is perhaps of significance that the haft of this dagger is the only one to be made of pomoideae (fruitwood), as this may perhaps indicate a ballock-knife of superior quality.

The faceted morphology of the pomoideae haft is very like an example housed in the Metropolitan Museum, New York which bears a highly decorated etched blade (Dean 1929, plate XX). If there had been a similar quality of decoration on the Mary Rose dagger blade it would perhaps offer an explanation as to why it was securely locked away, and was not in everyday-use.

### **Dimensional Variations present in the Mary Rose hafts**

Reflecting the variation in morphological traits, the Mary Rose hafts are not of uniform dimensions. Diameters of the pommel ranges from 26mm (1") - 41mm (1 3/5").

Grip lengths range between 76mm ( 3") and 92mm (3 3/5"), whilst the diameter of the grip (comparative measurements taken at mid point of grip) range from 19mm (3/4") - 33mm (1 3/10"). The maximum length of the haft (from the tip of the lobe to tip of pommel) ranges from 105mm (4 1/5") to 127mm (5").

### **Morphological variations observed in the Mary Rose hafts**

#### **pommel**

The morphology of all the pommels on the Mary Rose daggers can be likened to that of a large bulbous 'mushroom' with the grip beneath forming the 'stalk' . Many of the pommels are plain with no decorative features other than that provided by the metal button which was used to secure the tang of the blade in position. With these plain pommels the underside is often chamfered. However, the remainder of the pommels,

feature decoration of some kind, with a number bearing raised ridges or incised lines. Both of these features serve to visually divide the uppermost surface of the pommel into eight roughly equidistant sections without disturbing the smooth 'circular' pommel outline when the haft is viewed from directly above.

Several pommels, whilst retaining the 'mushroom' form, are decorated in a slightly different manner, and in contrast to those already described do not retain a smooth circular outline when viewed directly from above. One example has four roughly cut sections carved at regular intervals, creating four alternate triangular sections, the final result being a pommel divided into eight sections. The outermost edge of the 'mushroom' is not smooth, having been carved in conjunction with the divisions on the top of the pommel to create a crude 'floral' shape.

Another pommel has decoration applied in a similar fashion to that just described, the difference being that five crude circular sections are carved out, which, with the resultant spaces in-between creates a pommel divided into ten sections. The most ornate pommel features eight 'leaves' or 'petals' carved at regular intervals, resulting in a division of sixteen sections.

## **Grip**

Five distinct shapes of ballock knife grips are present within the Mary Rose assemblage.

- i) diamond cross section - the top and base points of the diamond form a central, subtly defined raised ridge. This runs down the length of both grip front and the back. The 'side points' of the diamond are rounded off for comfort. Total : 36
- ii) faceted-hexagonal cross section - the grip comprises six faces Total : 2
- iii) faceted - octagonal cross-section - the grip comprises eight faces Total : 24
- iv) round cross section - the grip is circular, smooth and has no features Total : 2
- v) oval cross section - the grip is ovoid, smooth and has no features Total : 1

Diamond and faceted grips would both serve to provide a non-slip grip, an important characteristic for a hand-held weapon, and not surprisingly, these types dominate the assemblage, with the diamond being slightly more-favoured in comparison to the faceted octagonal grip. Handling a dagger haft has suggested that perhaps the diamond grips were more comfortable in the hand, because with the faceted examples, the extra number of ridges causes the grip to sit less easily in the palm.

Within the rounded lobes there are two forms of finished appearance. In most instances the outer tip of the lobe is blunt), giving each lobe a globular appearance, whilst in others the tips of the lobes are exaggerated and honed to a sharp point). In such examples the points curve slightly inward toward the blade, producing the effect of an inverted pair of bull/buffalo horns. Both types (i and ii) of lobe are usually symmetrically paired, but at least four examples are asymmetrical, as they have been finished with one lobe larger than the other. It is not clear whether this is a deliberate design feature or quite simply the inferior result of a less skilled maker. When the combinations of the variations in the morphology of the pommel, grip and lobes are examined, it would seem that if a grip was faceted, then usually so too were the pommel and lobes. However, there is at least one example of a faceted grip topped by a plain, undecorated pommel. Equally, a diamond grip usually has rounded/horned

lobes and is topped with a plain, undecorated pommel. In some instances, pommels demonstrate a chamfer to the underside.

Lobe guards and fixings As most did not survive, it would appear that iron was used in the manufacture of lobe guards on the Mary Rose daggers. Evidence of this can be seen in residual staining to the underside of the lobes.

If the guards had been made of a copper-alloy, it is likely that they would have survived well, as evidenced by other fittings found on Mary Rose domestic knives and other artefacts. It can be stated with certainty that each ballock knife had a lobe guard because on every example the fixing holes can still be clearly seen. Attachment to the haft was either by small pins/nails or rivets.

In many instances a single small nail was hammered through the guard into each lobe. Radiography has shown that these nails penetrated to a depth of 8mm (3/10"). In addition to the single small nail to each lobe, other combinations were utilised: two nails/pins. What is not clear in these latter instances is whether the nails/pins were applied through the lobe guard, or whether small cuts had been made in the guard itself. These cuts could then be bent at right angles to form the attachment pins.

The other form of lobe guard fixing used, was a rivet, one through each lobe. As would be expected in the case of rivets they penetrated through the thickness of the lobes. This is evidenced by holes to both to the upper side and underside of each lobe. A solid rivet measuring 4mm in diameter and 15mm in length, can be seen in situ in one haft. A dagger with a rivet protruding through the wood lobe would not seem to be a satisfactory finish, it is perhaps likely that a decorative button was positioned over the rivet as seen on the ballock knife featured in Dean 1929, plate XX .

In a few examples a drilled fixing hole comparable in size and appearance to that of a rivet is only found on the underside of each lobe. Radiography has confirmed that these holes stop just short of the uppermost side of each lobe.

Radiography has also provided evidence of the only surviving Mary Rose guard which, together with a small section of blade is encased in a thin layer of concretion. The radiograph demonstrates that the guard fully covered the whole area underneath the lobes, but that the guard did not protrude beyond the outer tip of the wooden lobes.

### **Buttons**

Many copper alloy buttons survived in situ on the pommel, whilst those made of iron had disappeared. However, residual staining from the disintegrated iron buttons remains on the wood surface, often allowing the shape of the button to be determined. Buttons seem to have been domed, and square, round or faceted (both iron and copper alloy were used for all shapes). Width or diameter of a button seems to be fairly consistent at 12mm (1/2"). Few buttons feature any decoration, although there are exceptions which feature incised lines.

### **Blades**

Blades, in common with the lobe guards did not survive intact and in most instances the dagger blade had totally disintegrated, although a robust, albeit slightly concreted

portion of a blade can still be found adhering to one dagger. However, this does not mean that no comment can be made about the nature of the blade assemblage. Examination of both the shape and size of the tang hole (positioned between the lobes on the underside of each haft) can reveal the maximum width of the blade and also suggest whether there was a single cutting edge or a double-edged blade fitted.

A triangular wedged shaped tang hole suggests a single cutting edge and a diamond shaped tang hole suggests a double-edged blade. In addition, some of the wedge-shaped tang-holes look like 'keyholes' suggesting that in these instances small iron wedges were inserted to help affix the blade firmly in position.

Utilising these sources the width of blade on the 65 Mary Rose examples ranged from 15mm (3/5") - 32 mm (1 1/4") and all were singled edged, with the exception of one example which had a double edged blade measuring 20mm (3/4") in width.

Radiography of concretions has revealed a few incomplete sections of ballock knife blades. Examination of these in conjunction with the remains of the leather sheaths has allowed maximum blade length to be estimated at 335mm (13 1/5").

### **Leather sheaths**

The leather sheaths found in association with the ballock knives are mainly fragmentary. The best example, although only one side of the sheath has survived intact, had a ballock knife) and by-knives found in situ. Measuring 335mm in length, the sheath has a maximum width of 30mm. A fragment bears a simple incised design comprising two parallel lines with a simple zig-zag design between them. This would have formed part of the central panel which is approximately 10mm in width. The decoration would have run down the entire length of the sheath. The sheath is made of cowhide (bovine) and is not particularly good quality leather, however, it is thick and hardwearing, characteristics necessary for the sheathing of a sharp blade. Other sheaths were found to have been lined with beech lathes.

### **Mary Rose ballock knife, by-knives**

A total of 42 by-knife hafts, were recovered, however, no blades survived. Thirteen were removed from concretions adhering to or in close association with four kidney dagger hafts. Post-excavation examination has resulted in a positive association of a further 16 by-knives with 12 ballock knives.

Where more than one by-knife was found to be associated with a particular dagger they were often identical in morphological form, graduated in dimensions, and manufactured from the same species of wood to form a 'matching set'. An additional 13 by-knives have been identified by form only, it has not proved possible to positively associate these with any individual dagger haft. The very tiny by-knife hafts were probably some form of 'pricker' or stiletto' and were fitted with a blade more like a sharp needle than a knife. Two by-knives proved to be different from the majority recovered. Both form components of a trousse, with otherwise matching by-knives. One appears to be simply a 'fake' knife and is a solid piece of boxwood carved to form a handle and 'blade'. Its exact purpose is unclear as it could not function as cutting implement. The other 'unusual' by-knife within the assemblage features a thin copper cap and hilt band.

### **Scale tang by-knives**

Thirty-nine by-knife hafts (all wood) were manufactured in two halves (the scales). They were affixed to a flat blade tang by a number of centrally placed rivets. All hafts were tapered with the widest point at the butt end. Overall haft length ranged from 41mm to 95mm. Each scale cross-section is either a flattened semi-circle or a triangle. Therefore, when the two scales were fitted together the hafts were either ovoid or diamond in cross-section. Uppermost points of the 'diamond' produced raised ridges running down the length of the centre-front and centre back of the handle, which, as with those to be found on the ballock knife hafts, could provide a firm grip by preventing rotation.

### **Whittle tang by-knives**

Only two by-knife hafts (both maple) were made from a solid piece of wood and drilled to accept a whittle tang. They were both ovoid in cross-section, and as with the scale tang knives they tapered from butt to blade end.

They formed a trousse with the only dagger which has a grip with an ovoid cross section.

Wood Species used in manufacture of by-knife hafts.

As with the ballock knife hafts the majority (33) are made of boxwood. Four are maple (3 positive identifications plus 1 tentative i.d.) 1 willow (a tentative id), one beech, and three hafts are too degraded to obtain a positive identifications.

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