

inventory for all of Elizabeth Cittie lists: 11 Matchcokes (4 roubles of match in the same muster Capt. John Martin), 29 Snaphaunces, 299 Peeces, 2 Peeces Sevicable, 34 pistols and 2 Petronell present in 1624-25.

A total of 375 firearms are listed in the inventory for Elizabeth Cittie, this accounts for fully 36 percent of all firearms listed in the Muster for the entire colony. Elizabeth Cittie, therefore, plays an important role with regard to any analysis of firearms analysis based on Muster records. It is significant to note that of 375 firearms noted in the muster only 11 are listed as Matchcockes and in that same Muster listing is the only mention of "roules of match". Further, of note is the fact that the Muster listing of matchlocks at locations in the Virginia Company portion of Elizabeth City east of the Hampton River. This pattern means that matchlocks are listed at the locations of Forts Henry and Charles. This entry for Elizabeth Cittie provides a platform for supporting the position that the matchlock, not only was a rarity in Virginia by 1625, but shows up in the vicinity of forts, and that the descriptive terms of Peece, petronell, Peeces Fixt, serviceable, not fixt and certainly Snaphaunce, all refer to self-igniting arms.

## CHAPTER IV

## ARMS ANALYSIS OF THE VIRGINIA COMPANY MUSTER OF 1624-25

Documentary sources from the late sixteenth and early seventeenth-century do not clearly or consistently, define firearm topologies in sufficient detail so as to allow the modern reader to assess whether a "peece" or "gone" is a self-igniting type or a matchlock, let alone whether it refers to snaphaunce or wheel-lock, or even particular form of firearm. Therefore, in an attempt to provide an approach that is intended to clarify period firearm definitions, historic records were analyzed by taking the original author's descriptive reference to firearms and comparing that description within the context in which the term is being used. By taking this comparative approach an interpretation of the historic term can be formed which relates to a modern definition.

The best and most comprehensive surviving document that categorically lists possession at the individual level for colonists in Virginia is the Muster of 1624-25 conducted immediately prior to the dissolution of The Virginia Company of Virginia. The muster lists in detail the type of items being inventoried as well as the quantity. It was this attention to detail that highlighted the Muster as the best primary source document to assist in conducting an interpretation of firearms represented in Virginia during the first quarter of the seventeenth-century. While the Muster serves as the benchmark for developing interpretations of the terminology it must be remembered that several individuals took the inventory, Captain John Harvey (future two term Governor

of Virginia), John Pory, Abraham Peirse and Samuel Mathews conducted the inventory, and likely not in conjunction with one another, which begs the question of consistency of terms used and recordation standards (Barka 1993: 313). Inconsistencies are especially notable with regard to firearms. There are several terms in the Muster that undoubtedly refer to a particular type of gun or ignition devise but are difficult to ascribe to a modern typological definition. Therefore a seventeenth-century context for arms terminology needed to be developed that would assist in establishing an accurate interpretive definition of a particular gun type.

By Using the Muster and working form other period discussion on firearms, consistent details emerge that suggest that specific descriptive terms can be applied to particular types of firearms and ignition types and help to overcome the inherent inconsistencies of these documents. One such contemporary document is the discussion of the "Crown Gift" of 1622, provided by the government to the Colonists after the disastrous Native American uprising of 1622. The contemporary descriptions of the items contained in the shipment includes 1200 obsolete firearms and assorted other military supplies, an assumption can be made that firearm terminology would not have changed significantly in such a short period, and therefore would be a reliable source to use in developing a definition analysis of firearm terms.

In an attempt to clarify the Muster as a detailed and comprehensive inventory of firearms in Virginia in 1624-25, each inventory in the Muster was listed individually noting the type of firearm and quantity of each in the possession of individuals and these data are presented in Appendix A. There have been several charts presented in earlier studies, however these arms tallies focused on communities rather than individuals in the

Muster. The point of preparing the chart in this paper was to try and direct attention towards questions of personal ownership of firearms and how relating gross quantity by settlement/ community may suggest misleading interpretations of the purpose for either large quantities of firearms (i.e. Elizabeth Cittie) or seemingly small numbers (Colledge Lands Henrico). The simple fact seems to be that with rare exceptions, each individual owned one long gun (e.g. Peece) possibly two. It seems therefore that there was approximately one gun per adult male in Virginia in 1624-25 when the Muster was taken. Other interesting aspects of the arms inventory become apparent by looking at the Muster of firearms at the individual level. Taken day-by-day the Muster shows some interesting trends. There is a fairly consistent listing of firearm types for each cluster of people inventoried. For instance there is very little jumping around of firearm terminology while a particular muster was being taken. If the person recording the Muster for a community begins with, the number of "Peeces" that description seems to hold through a long list of inventories. Likewise if there is a listing for "Peeces Fixt" they are all "Peeces Fixt" throughout that portion of the inventory. One of the most telling listings occurs in Elizabeth Cittie. There are four inventories for Snaphaunces in a row for a total of 29 "Snaphaunce Peeces", but the Muster notes eighteen adult men within these four inventories, therefore if a purely quantitative analysis is made it looks as though there are four individuals who are preparing for armed conflict, when in fact, it seems as though we are really looking at an average of 1.5 "Snaphaunce Peeces" per man as opposed to one person owning twenty four of these long arms.

There also may be a correlation between the person who actually conducted the inventory and their specific knowledge of armament. It seems reasonable that if each of

the four men conducting the muster understood a commonly used term like Peece, which meant any heavy long arm, fired from the shoulder there would be no variation as to how these guns were listed. In fact we see Peeces, Peeces Fixt, Peeces Not Fixt, Snaphaunce, and Snaphaunce Peeces uniformly identified separately. There are no cases of overlapping of the terms noted above. The only overlap occurs with "Matchcockes", "Petronell" and "Pistoll" each therefore a distinct firearm; different from any variation of "Peece"

The muster includes the following descriptive terms: Snaphaunce, Snaphaunce peeces, Match-cocks, Pistoll, Pistole, Peeces, Peeces Fixt, Petronell, Peeces Serviceable and Peeces not Fixt. All of these terms have or rather had a distinct descriptive meaning to the authors of the Muster. Some are not particularly difficult to interpret, as they are terms still understood by arms specialists and their contemporary use still describes the same firearm type or form. An obvious example is the terms "pistol" and "pistole" as they appear in the Muster. These terms undoubtedly represent a period spelling variation of the current English term, pistol that describes a small handgun capable of being fired using one hand (Fig. 15). Further, the term as used in the Muster probably describes two ignition types, the snaphaunce and the wheel-lock. These two forms were the only practical ignition types adapted to the pistol in Europe during the first quarter of the seventeenth century (Blackmore 1985). Also, "Match-cocks" as listed in the Muster describe in all probability the matchlock, as we understand the type today, i.e. that being a large full-stocked, smooth bored arm fired from the shoulder and possibly requiring a support to aid in aiming the weapon.

The derivation of the term petronell will be dealt with later in the paper, but it is important to note here that this is one of the descriptive terms that can, and have been the source of much confusion and misinterpretation by those trying to interpret the firearms of this period using the Muster and other contemporary documents. It is interpreted by Jester to be a firearm form rather than an ignition type (Jester 1964: 36). It is mistakenly defined as a small arm fired from the chest and represents a horseman's carbine (Fig.4). I propose that the term is a describing an ignition type, the wheel-lock and is a firearm of carbine size that is hung from a sling, which crosses the breast i.e., hung from the chest, not fired from it.

The confusion continues with the definition of Snaphaunce and the various qualifiers for the arm type labeled "peeses". Some early authors suggest peeces fixt as meaning conversion of matchlocks to a flintlock (Brown, 1980; Jester 1964). However, there is no direct evidence, either archaeologically or in document sources for this ever occurring in Europe let alone the frontier of Virginia. Conversion from one flint type to another would be much more likely; this would mean that the firearm type we currently define as a snaphaunce could be converted to the English-lock Type I (Fig. 15); (Straube 1990). Current research indicates however, that conversions of this type must not have been common until the end of the 1620s and into the 1630s. By the 1640s the English lock had evolved into a very distinctive form that bore little if any resemblance to the snaphaunce, a 1644 painting illustrates very clearly a pistol in this Type II English Lock form (Godwin et al 2003a: 91). It seems probable that mechanical developments had taken place during this period to the point that the snaphaunce, conversion of snaphaunces to English-locks and the Type I English-lock were on their way out of the

scene by the end of the 1640s. Therefore we are left with these enigmatic ca 1625 terms to interpret, but the evidence points to the snaphaunce being a solid 1610s–20s (Fig. 14) firearm and the rare conversions would overlap that period briefly into the 30s ultimately being replaced by mid-century with the English-lock Type II (Godwin Et Al 2003a&b).

It can therefore be postulated that the terms appearing in the Muster as “Snaphaunce”, “peeces” and “peeces fixt” are all equivalent and represent the ignition type we currently understand as a snaphaunce, ie: a flintlock arm with a separate battery and pan cover. If this is a correct assumption, the arms represented in the Muster indicate that by 1625 approximately 94 percent of all firearms in Virginia were Snaphaunces, 0.5 percent were wheel-locks and matchlocks representing 5.4percent.

The Muster provides numerous indications that this combining of terms may be appropriate. For example in the muster for Captain Ralph Hamer at Hog Island shows “Peeces, 5: Musketts Matchlocks, 6”. At Martins Hundred the muster for William Harwood indicates, “Peeces Fixt, 10: Matchcocks, 25...” and that of Ellis Emerson shows “Peeces Fixt, 1: Matchcock, 1...” (Appendix A). It is not known who took what specific inventory, however, there is a consistency and what appears to be a deliberate attempt to distinguish between various types of firearms, especially by singling out the Matchlock from other types of firearms. The same distinction is true for pistols, for example the muster of Edward Barkley at Hog Island includes “Peeces, 3: Pistoll, 1” (Appendix A). Most likely however this difference relates to a major size and functional difference as a pistol would refer to a hand held firearm normally carried in the belt or in saddle holsters.

There is little likelihood that the pistols referred to in the muster are anything but true snaphaunces or wheel-locks, as European matchlock handguns are virtually non-existent (Blackmore 1985). The muster of Nathaniel Basse lists the following arms: "peeeces, 7; pistols, 2; petrenell, 1" (Appendix A), here again is a distinction between firearm types, pistols either snaphaunce or wheel-lock is distinguished by size in all probability, with the term petrenell indicating a wheel-lock long arm and "peeeces" indicating snaphaunce long arms.

The musters for Elizabeth City provide an interesting insight to the description of arms that may be supportive of viewing all references to "peeeces" as Snaphaunces. The muster of William Tucker includes "Snaphaunce peeeces, 24; pistols, 4..." John Downeman's includes "Snaphaunce peeeces," as does John Layden and William Cole. Miles Prickett and the remainder of the individuals represented in the muster are shown as owning "peeeces" (Appendix A).

No muster includes the term "snaphaunce" or, "snaphaunce peece" with any other reference to "peece" or "peece fixt". Further, if a qualifier exists with a Matchlock it is "Musketts" not "peece". Reference to "Peeeces" as a qualifier exist only with listing for the Snaphaunce, therefore I feel it is safe to assume that "Snaphaunce", "Snaphaunce Peeeces", "Peeeces" and "Peeeces Fixt" refer to the modern definition of the snaphaunce, a flintlock ignition form that incorporates a sliding pan cover.

The only reference to "Peeeces not Fixt" is found in the muster of Edward Blaney, it contains the following: "Peeeces serviceable, 11 and pistolls; Peeeces not Fixt, 8; Murder, 1; Chambers, 2; Match cocks, 10; Match, 6". In this inventory I interpret "Peeeces not Fixt" as the opposite of "Peeeces serviceable" i.e.: arms in disrepair or unready for



immediate service, not an unconverted firearm ignition devise, as may be assumed by an earlier interpretation.

Further evidence for this hypothesis is the separate listing of 10 "match cocks". If indeed "Peeces not Fixt" equated to unconverted matchlocks they should be included with the inventory for Match Cocks. The terms Snaphaunce, Peeces and Peeces Fixt never are used concurrently in individual musters and seem to be interchangeable descriptions for what we now commonly call the Snaphaunce.

## CHAPTER V

### ANALYSIS AND INTERPRETATION

The previous discussions have served to illustrate characteristics of firearms technology as well as terminology in the context of the period documents. Specifically, in the Muster of 1624-25 the terms used by the individuals conducting the inventories is a wealth of information, not only for the identification of the firearms possessed by early Virginia English colonists but also how firearms (as well as other items) were described by contemporaries.

The terminology used in the inventory is not as clear as one may think. Historians of arms and colonial history have traditionally used documents, such as the Muster, as a literal, insiders view to the arms terminology of early seventeenth-century. These period documents provide a valuable insight into our understanding of firearms in the seventeenth-century, however, it is a disservice to these written resources, when the terms of three hundred and fifty years ago are equated almost unquestioned in the last half of the twentieth century to terms which usually have their derivation no earlier than the eighteenth century (Spencer 1992). It is important to discuss any firearms analysis in the context of period documents, and relate modern interpretations to the firearms found archaeologically. The premise used in this paper is to take an analytical view of the terminology contained in the Muster and compare that data with period definitions and contrast these to the accepted terms and definitions, it was then hoped that a value

judgment could be derived as to what those archaic terms actually mean as definitions of gun ignition types, and in turn apply those interpretations to archaeological data.

The terms for *peece*, *peeses fixt serviceable*, *not fixtd* and *petronell* present the most intriguing interpretive problems. Typically an arms researcher equates the term *piece* to a gun of any type, further, *piece* can be used as an adjective describing a particular form of firearm, such as 'fowling piece'. A 1617 dictionary entry provides the following definition of *peece*: "a fowling PEECE, or hand-gunne" (Minsheu 1617:354), which indicates the more generic use of the term *peece*, which interestingly, is consistent with modern use of the term. Also, the antiquated term for a military musket can also be "piece" or "peece".

Eighteenth-century references to arms will often contain the term *piece*, usually in the context of a musket or fowler. By the eighteenth-century the flint ignition type most widely accepted in Northern Europe and England was the French or true flintlock. Therefore the term *piece* was not a descriptive term for the ignition type but rather, was synonymous with the concept of "gun" (Minsheu 1617: 354).

In the seventeenth-century, particularly the first quarter, the term conveyed a dual meaning. Not only does the term refer to a form of firearm, but also to the ignition type. Therefore I disagree with the concept of the term *peece* equating to muskets (defined as matchlocks) and *peeses fixt* referring to matchlocks which have been converted into some other type of ignition form (Jester; 1964:), or to the true flintlock as Brown postulates (1980:84). There is no archaeological evidence that the flintlock (combined battery and pan cover) was present in Virginia during the first quarter of the seventeenth-century.

A more accurate interpretation is that "peece" and "peeses fixt" as well as "peeses not fixt" all refer to a specific ignition type, the snaphaunce. The qualifier "fixt" and "not fixt" possibly refer to accoutrements, such as a plug bayonet, powder flask, horn, etc. comprising a unit ready for use. The rationale for this view is found in the Muster under the entries for ammunition and supplies (Barka 1993). These entries are very specific as to what was present while the inventory was being taken, thus the entries for powder, shot, lead, etc. given in bulk amounts, suggest that the figures could not represent individual horns or flasks of powder and shot. Therefore I think it may be reasonable to interpret the term "fixt" etc. as an indication of individual portions of powder and shot in a quantity sufficient to allow the arm to be used (Onions 1955: 707). Also, there is no indication of any cartridge boxes, flasks, horns, etc. in the Muster, this may be assumed to be additional evidence that the qualifier 'fixed' refers to a gun with powder and shot sufficient to be of immediate service. The Oxford Universal Dictionary notes in a 1638 definition of fixed: "Prepared, put in order" (Onions 1955: 707) and goes on to provide this example of its contemporary usage "Fixed ammunition: a charge of powder and shot enclosed together in a wrapper or case ready for loading". A 1663 definition of the term states: "To adjust, make ready for use" (Onions 1955: 707). These period definitions provide a valuable insight to the context in which the term was used as a qualifier to "peece".

The term 'not fixed' may refer to either of two scenarios. One being that there is a partial assemblage of powder and/or shot. Or, the individual recording the inventory used this term as a qualifier to indicate that there were no associated accoutrements with the gun that would allow for its immediate use. In either case however, I am of the opinion

that these two terms are a reflection of firearms as a functional unit rather than as a reference to repaired guns or modifications to an arms conversion as Brown suggests. In checking period dictionary references, no indication was noted that "fixed" etc. related to firearm type, but rather are terms associated with the trappings of firearms.

The term "petronell" as used in the context of the Muster and in the early seventeenth-century in general poses some very interesting interpretive possibilities. As mentioned in previous chapters it is my hypothesis that the term petronell has been misunderstood, therefore, misused by arms collectors and historians for many years. The most common definition of petronell in the arms literature describes a form of gun that has a sharp downward curving buttstock, designed to be fired from the chest (Fig. 4). The word derivation has usually been attributed to the French word *poitrine* referring to the chest. This distinctive form of arm, in reality, could not have been effectively fired by positioning it one's chest. Most likely it was used as a large pistol, possibly from horseback.

The term *petronel* as used to describe the gun by its mode of firing is probably a result of arms researchers using the incorrect root word as a basis for developing a definition of the term. Most guns that exhibit the distinctive style of the petronell have a variety of ignition types, including matchlocks and snaphaunces. The more likely derivation of the term, particularly as it is used in early seventeenth century contexts, is from the Spanish word 'pedernal'. Lavin (Lavin 1965) provides a compelling argument for this being the case. Lavin notes that the records of a mid-sixteenth-century auction lists "two dozen flint stones (*piedras de pedernal*) for arquebuses", which given the period

of this reference, it is likely that the reference is to the wheellock, i.e. an ignition type, not a form of gun.

Although the production of wheel-locks was virtually unknown in Spain in the sixteenth-century the form was present, probably imported from Germany. In the account of Gil Sanchez de Bazan, Keeper of the Jewels to Prince Felipe, are listed "two arquebus locks (*llaves*) which his Highness bought in Madrid before he went to Germany" the entry was made before 1548. The term *llave* referred only to the wheel-lock until the advent of the snap-lock made it necessary to add a descriptive adjective to differentiate between the types (Lavin 1965: 51). If one takes the description *pedras de pedernal* as the stones necessary to the operation of the wheel-lock arquebuses then "*arcabux de pedernal*" was synonymous with *arcabuz con su llave*, and both referred to the wheel-lock or *llave de pedernal*" (Lavin 1965: 52).

The interpretation of the term *petronel* as equating to the wheel-lock also helps to address the fact that even though the wheel-lock was known to be present in the Virginia colony during this period (Fig. 5), there is no mention of them in the Muster. Sir John Smythe notes in his *Certain Discourses Military* 1590, in discussing the merits of firearms being used from horseback, provides the most compelling period verification that, indeed the term *petronel* equates to the wheel-lock;

"And also, putting their touch-powder into the pans of their pieces, although there be no wind to disperse the same, yet upon every motion of their horses they are ready to pout the powder beside their pans. ***And if their pieces be petronels, then if their stones should happen to break or not to stand right in their cocks, whereby they should fail to strike just upon the wheels, being firelocks,*** (emphasis added) or upon the hammers or steels, if they be snaphaunces...(Hale 1964: 115).

This quote provides the best period documentation for the interpretation of the term petronel equating to the wheel-lock, combined with the derivation of the word from Spanish, there is little doubt that the listing for petronel in the Muster is referring to the wheel-lock.

The term snaphaunce is somewhat less ambiguous, however, there is the potential for confusion as to the specific type of ignition when a particular descriptive adjective is used. There is no evidence that the true flintlock form, which has an integral battery and pan cover and a fully internal vertical pivoting sear that engages the notched tumbler, was present in Virginia until the beginning of the second quarter of the seventeenth-century. That fact alone would indicate that the snaphaunce listed in the Muster is in fact the snaphaunce ignition type that has a separate battery and pan cover.

In the early seventeenth-century, the French flintlock was in its developmental stages (Gusler & Lavin 1977: 15), and not widely disseminated. There were however several variations of the flintlock form in sufficient quantities for common use specifically the English lock and several forms of Portuguese flintlocks (Daehnhardt 1978) until late in the second quarter of the century. This would support an interpretation that the snaphaunce listed in the Muster and other contemporary seventeenth century documents was indeed the snaphaunce ignition type, as we understand it today.

One period reference to the snaphaunce also refers to it as a firelock (Minsheu 1617: 454). The term firelock however, is usually reserved for the wheel-lock in many period references. Recent authors have interpreted the term as referring to a flintlock, probably due to the commonly encountered references in the eighteenth-century where

the term firelock was associated with the true flintlock, which adds to the confusion of what exactly are the expected flint arms in the early part of the seventeenth-century.

There are also some enigmatic references that can provide some confusion as to what is being described. A case in point is found in the inventory of items to supply 35 men for Smythe's Hundred entered into the records of the Virginia Company on May 18, 1618: "Twenty Musketts. 10 with snapphammers, & 10 without and moulded onto them". The meaning of "without [snapphammers] and moulded onto them" is not clear, however a 1603 definition of *Mould* states "to create, produce, or form, *out of* certain elements or material, or upon a certain pattern; also to plan, design, Also with" (Onions 1955). It is difficult to visualize how this could relate to ignition type, such as matchlocks or wheellocks. This may in-fact be an indication of incomplete weapons that would be assembled in the Colony; at Jamestown by a gunsmith (Jackson?) as this description is part of a comprehensive invoice for outfitting men being sent to the colony (Kingsbury 1933:96).

The Virginia Company records further note in 1620 the account for furnishing the ship "Supply" as listing 9 muskets "wherof 6 are with snaphanses" which leaves three unaccounted for as to ignition type. However, interestingly there is a listing for 1qtr of .100 match included in this purchase from Bristol. Also on the account are 8 Callivers and an additional musket. (Kingsbury 1933: 385). The possible argument for a matchlock interpretation of the three unspecified muskets is the record for the "Supply" list match cord in the invoice, and as the Muster clearly indicates, match and Matchlocks are consistently listed together. Sending incomplete arms for assembly in the Colony would probably be reflected as a separate entry in the inventory, such as the "Supply" inventory



entry for "2 sives to make gunpowder in Virginia". In both cases the listings indicate the majority of arms as being the snaphaunce musket.

The archaeological record, as limited as it is, does indeed show that the majority of firearm ignition types found on early seventeenth century sites are the snaphaunce.

## CHAPTER VI

## CONCLUSION

This paper is an attempt to provide a better understanding of the firearms in use in Virginia in the years immediately preceding the devolvement of the Virginia Company in the mid-1620s. There have always been popular beliefs as to what arms were being used by these early colonists. The archaeological evidence is sparse for this period and firearm components in the few sites known are rare. Only a few complete gunlocks and a modest quantity of arms furniture have been recovered in an archaeological context that is reliably dated to the first quarter of the seventeenth-century. What is apparent from the few specimens known is that all ignition types available in the period are indeed present archaeologically on Virginia sites and the greatest number are snaphaunces.

What I attempted to accomplish in this study was to pose some answers to the questions associated with firearm use between 1607 through 1625. The period documents were assessed using new interpretations of historic or period arms terminology. What is presented here does not constitute new information, but rather, a new approach to understanding these period documents.

Period dictionaries provided a wealth of insight for placing the interpretations of terms in a correct period context. It would have been difficult to arrive at any meaningful analysis of the arms terminology had these dictionary sources not been available.

Likewise, Smyth's treatise on the military, which in one long, rambling paragraph, established the period verification of the petronel equating to the wheel-lock.

The most significant interpretation to be postulated in the paper is the hypothesis that the term 'peece', in all likelihood, refers to the snaphaunce, and is not merely a generic label for a wide variety of firearms. If the Muster is viewed in the light of this model, over 90 percent of the guns listed are self-igniting flint arms. Gone forever are the theories that have the majority of the inhabitants in Colonial Virginia armed with matchlock guns and that the snaphaunce was a rarity in the Colony. The Muster and other documents portray the colonists as recognizing the necessity of efficient modern firearms for defensive as well as offensive purposes. The concept of establishing a viable financial enterprise without the benefits of the proper equipment doesn't make sense. I believe it has been difficult for many researchers to come to grips with the traditional concept of the Virginia Company investors supplying the inhabitants of the colony with firearms unsuited for the demands of the frontier.

In Virginia during the first quarter of the seventeenth-century the vast majority of firearms in the hands of colonists were the snaphaunce. The matchlock is well documented, but I suspect that it was relegated to the role of a secondary defensive weapon. Therefore one would expect to find this arm only at the fortified settlements and subsequently used as a piece of light ordnance. The gun of choice and therefore most prevalent and most likely to be encountered archaeologically would be the snaphaunce. These interpretations provide a new concept as to the importance of efficient, practical and specialized guns to be used in the context of the early Virginia frontier, and that the archaeological record supports these assumptions.

**FIGURES**