# RENAISSANCE DBA REVISITED 

By Stephen O'Leary

At the end of his article "Renaissance DBA" (WI 61), Mr Andrew Thomas invited comment through the letters page of WI. As my response was too long for the letters page, the Editor has kindly agreed to publish it as an article. Like Mr Thomas, I would welcome readers' comment through the same channels.

Like Mr Thomas, I have sought to extend DBA into the Renaissance period, but I approached the problem from a different perspective. My main areas of interest are the Italian Wars (1494-1559) and the Wars of Religion (including the Thirty Years' War and the English Civil Wars), and my rules naturally tend to reflect those preoccupations. In fact, the similarities between my system and Mr Thomas's seem to outweigh the differences, which I find encouraging as it presumably reflects a similar historical interpretation.

## DESIGN PHILOSOPHY

My starting point was the observation that although we (rightly) think of the Renaissance as a period of great change in military methods, it was also a period of strong continuity with the past. My two main aims in formulating the rules were therefore as follows:

## Change

During the Renaissance (say, 1450-1700) the armies of Western Europe underwent a continuous and rapid evolution - probably the most rapid in their history before the 20th Century. Much of the fascination of this era lies in tracing these changes, and the ways in which contemporary commanders attempted to cope with them. It was essential that the rules should portray the successive changes in weapons and doctrine which took place over the period.

## Continuity

At the same time, armies to the east of Germany changed much more slowly. They, like Western armies at the start of our period, still had much in common with the armies of Antiquity and the Middle Ages. Indeed, some of the later armies in the DBA lists are Renaissance armies. The new rules should therefore involve as little alteration as possibile to the existing rules of DBA.

## GENERAL RULES

All the rules of DBA remain in force except as noted below. Some new troop types and one new terrain type are introduced, and consequential amendments made to the existing rules. Minor changes are made in some other rules.

Some further changes are included as optional rules: any or all of these can be used at the stipulation of campaign organisers or by mutual agreement.

## NEW TROOP DEFINITIONS

## Reiter:

Horsemen, usually armoured, with pistols or arquebus, and sword, in deep and usually close formation. They fought by "caracole", each rank discharging its firearms at the target, then counter-marching to the rear whilst reloading. Reiter developed in response to the widespread introduction of the pike at the start of our period, which left shock cavalry at a disadvantage. They had some success against close-action foot, but were vulnerable to infantry firepower, and particularly to
harder-charging cavalry. Includes reiter, cuirassiers, all mounted arquebusiers and carabineers not in open order.

## Arquebusiers:

Foot, usually unarmoured, relying on the volume of fire from there match-fired shoulder-arms. Inferior in firepower to bows and crossbows, they were popular because easy to come by. Their formation, made loose by the need to keep each man's match away from his neighbours' powder, increased their vulnerability to shock action, especially by Horse. Weak in the open, they did best from cover or fortifications, or in co-operation with pikes, who could give them cover from behind. Also includes handgunners.

## Musketeers:

Similar to arquebusiers, but equipped with the more powerful matchlock musket. The musket's heavier ball, and higher rate of fire due to improved drill and the use of "Apostles", made them less vulnerable to cavalry. Some might have flintlocks.

## Bayonet Muskteers:

Similar to musketeers, but able to defend themselves at close quarters with plug or ring bayonets. If steady, they were quite capable of shock action, and almost invulnerable to cavalry. This enabled European armies eventually to dispense with the pike altogether. Also includes Musketeers equipped with other hand-to-hand weapons, such as Polish axemen, streltsi, and Montrose's Irish foot. Can be referred to simply as "bayonets".

## Pike-and-Shot:

Composite units consisting of relatively small bodies of pikes and (usually) muskets in co-operation, sometimes stiffened with light artillery or polearm-men. Introduced by the Dutch under Maurice of Nassau and developed by Gustavus Adolphus, this system gradually replaced the earlier, much larger and more homogenous, formations of the 16th century. Effective against foot because they combined firepower and shock action, but less so against horse (which enjoyed a revival at that time) because less suited to all-round defence, and because of a lower ratio of pikes to shot.

## Dragoons:

Essentially musketeers mounted on second-rate horses, but dismounting to fight. Their often lighter weapons, and the need to provide horse-holders, made their fire less effective than that of true musketeers. In game terms, they move like cavary but fight like arquebusiers.

## Knights:

Covers also those hard-charging, back-and-breast cavalry found in some armies later in our period, including Swedes, and some French and Royalist English. They were often supported by small bodies of musketeers, which tended to slow them down.

## Note:

Spanish Sword-and-Buckler men are treated as either Warband or Auxilia, at the owner's choice, since they demonstrated some of the features of each of these troop types. They enjoyed some successes against pikes, especially if disordered, but were vulnerable to heavy cavalry and inferior in close combat to true Blades such as halberds.

## Terminology:

Arquebusiers, Musketeers, Bayonets and Dragoons are collectively referred to as Firearms. Reiter and pike-and-shot are NOT Firearms.

## BASING

Reiter and Dragoons are based as Cavalry. Arquebusiers, Musketeers, Bayonets, and Pike-and-Shot are based as Auxilia.

Pike-and-Shot are represented by 4 (in $6 \mathrm{~mm}, 8$ ) figures in a single line abreast. The middle 2 (4) figures are pikemen and the other figures musketeers.

Dragoons can have one or two horseholders added to their base for improved visual effect.

## TERRAIN

Linear obstacles were a feature of many battles in our period. These can be field fortifications (Ravenna), walls (Pavia), streams (Breitenfeld), ditches (Lutzen), sunken roads (Bicocca) or hedges (Naseby). They are a movement obstacle to animals and wheels, and offer defensive cover to foot. They should be represented on the table by suitable model terrain, no wider than 50 paces.

## Optional Rules

Linear obstacles were so characteristic of this period that, if both players agree, the player deploying the terrain should roll 1 die and subtract 1 , to give the minimum number of 600 -pace lengths of linear obstacles which must be used in the terrain. The player not deploying the terrain may now claim up to the first two such lengths for his use as field fortifications. If he claims none, his opponent may claim them instead.

## CAMPS

Except in Eastern Europe, camps were not usually fortified in this period. A distinction is therefore drawn between a (fortified) camp and an (unfortified) baggage train. The baggage train resembles a camp in all respects except its defensive value, and should be represented by a collection of wagons, animals, tents, spare cannon and so on. A baggage train can be surrounded by a field fortification if one is available.

The army lists provided below indicate which armies have fortified camps. All others have baggage trains.

All references to camps in the rules apply equally to baggage trains unless otherwise noted. The converse does not apply.

## DEPLOYMENT

If a player is using field fortifications, he must deploy them at the same time as his camp. They must lie wholly within 600 paces of his baseline or shore edge.

## TACTICAL MOVES

## New Troops:

Reiter move as Knights. Dragoons move as Cavalry (and are treated as mounted for all movement purposes except combat outcome).

Arquebusiers and Musketeers move as Auxilia. Bayonets and Pike-and-Shot move "Other foot".

## Linear Obstacles:

These count as no additional distance wide, but any element crossing one or more obstacles during its movement counts as in bad going. Artillery and war wagons therefore cannot cross such obstacles except at a gap or bridge.

## Looting (Optional Rule):

At the start of his bound, after dicing for tactical moves, the player must test for any of his elements, excluding artillery and
war wagons, that can reach the enemy baggage train within 2 tactical moves (excluding optional extra road distance, but taking terrain effects into account).

Any element failing to score the required minimum must make a full tactical move towards the baggage train, using as direct a route as possible. Elements may change direction to avoid impassable terrain or bad going, but not hostile elements. Each element moves before the next one dices. Compulsory moves do not count against the number of moves available for the bound.

Scores required to avoid a compulsory move are:

| Mounted: | New Model Army | 3 |
| :--- | :--- | :--- |
|  | Swedes, all dragoons | 4 |
|  | Any, if bayonets in army | 4 |
|  | Other | 5 |
| Foot: | Warband | 5 |
|  | Other | 4 |
| Die modifier: | General's element +1 |  |

## Die modifier: $\quad$ General's element +1

If a friendly element is already in contact with the baggage train no other elements need dice. An element need not dice if it will voluntarily be moved towards the train, or into contact with a hostile element, or is already in such contact or in a position to fire its weapons at a hostile element if so equipped.

## INTERPENETRATING FRIENDLY TROOPS

Arquebusiers and Musketeers can pass through each other, or through Psiloi, mounted troops, Pikes, Pike-and-Shot or Blades. The element passed through must be facing in the same or opposite direction.

Arquebusiers and Musketeers can recoil through mounted troops, Pikes, Pike-and-Shot or Blades (extraduction). Mounted troops, Pikes, Pike-and-Shot and Blades can recoil through Arquebusiers and Musketeers (introduction).

## DISTANT SCORING

Firearms can shoot to a range of 200 paces. All normal rules apply.

## CLOSE COMBAT

| Combat Factors: | Reiter |
| :--- | :--- |
| Arquebusiers | +2 |
| Musketeers | $+3 v$ foot, +2 v mounted |
| Bayonets | +4 |
| Bike-and-shot | $+5 v$ foot, $+3 v$ mounted |
| Dragoons | $+3 v$ foot, $+2 v$ mounted |

An element fighting Dragoon counts them as a foot opponent, including for combat outcomes.

Pikes and Spears may not count a second rank of the same type against Reiter or if they are shot at by, or have just moved into contact with, firearms. This is in addition to existing restrictions.
Arquebusiers and Musketeers who are fighting mounted troops add +2 if supported by an element of Pikes which is contiguous behind and facing in the same direction, and neither is in bad going or defending a linear obstacle.

## Tactical Factors

+1 if camp followers or foot defending a wall or field fortification, in close combat or if shot at.
+1 if camp followers or foot defending other linear obstacles, in close combat only.
+1 if camp followers or foot occupying a baggage train (can be cumulative with either of the above).
+2 if camp followers or foot occupying a (fortified) camp.
The -2 for bad going does not apply to arquebusiers, musketeers or dragoons.

## COMBAT OUTCOME

## Total less than that of the enemy but more than half:

Reiter. As "Other mounted".

Arquebusiers.
Musketeers.
Dragoons.
Bayonets.
Pike-and-shot.
"Other foot". Destroyed by Knights or Reiter if in good going, or by Warband. If not, recoil.

Other existing classes are unchanged.

## Total half or less than half that of enemy:

Light horse.

Reiter.

Psiloi.
Others.

Camp followers or foot (including Dragoons) defending a linear obstacle count for combat outcomes as in bad going. Mounted troops (also including Dragoons) forced to recoil or flee across a linear obstacle count as in bad going.

## ARTILLERY CAPTURE

## Optional Rule:

Artillery destroyed in close combat by Dragoons, or foot other than Warband or Psiloi, is captured and can be turned on its former owners.

For victory purposes, it counts as an element lost to its original owner, but not as one gained by the captor. The new owner gets a free change of face at the end of the combat round, and can use the element starting next bound. If this is an enemy bound, he can fire even if he took the face change.

If recaptured by its original owner, artillery does not count as an element lost, but reduces the original owner's losses by 1. Otherwise, the same rules apply as for its capture.

## ARMY LISTS

The lists are numbered in the same order as the WRG Renaissance Lists 1420-1700 (2nd Edition). They are based to some extent on those lists, but mainly on an analysis of 53 prominent battles during our period.

Abbreviations are as used in DBA, with the following additions: $\mathrm{Re}=$ Reiter, $\mathrm{Aq}=$ Arquebusiers, $\mathrm{Mu}=$ Musketeers, $\mathrm{By}=$ Bayonets, $\mathrm{P} \& S=$ Pike-and-shot, $\mathrm{Dg}=$ Dragoons. $\mathrm{FC}=$ army can have a fortified camp.

Elements described as $\mathrm{Ax} / \mathrm{Wb}$ are Spanish swordsmen. All such elements in an army must be treated as the same type, but the player may choose whether that is to be Auxilia or Warband. He must announce his choice before deployment begins, and may not change it during a campaign.

Each individual element of a type described as Aq/Mu can be either Arquebusiers or Musketeers. The player must announce

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his choice for each element before deployment begins, and may not change it during a campaign. This choice thus represents armies in transition between the two types of firearms. Players who wish to be historically accurate should allow Arquebusiers to predominate early in the given lifetime of that army, and Musketeers later

1. Hussite $1419-1436 . \mathrm{E}=1,2.13 \mathrm{Kn}+23 \mathrm{Cv}$ or $12 \mathrm{LH}+24 \mathrm{Bd}$, $4 \mathrm{WWg}, 33 \mathrm{Aq}$ (handguns) or 4Bd, 2 Art . FC.
2. Imperialist 1419-1493. $\mathrm{E}=1,3,6,7,8,10,11,30,50,51,53,66.5$ $3 \mathrm{Kn}, 22 \mathrm{LH}, 24 \mathrm{Pk}, 14 \mathrm{Cb}, 14 \mathrm{Cb}$ or $3 \mathrm{Aq}, 12 \mathrm{Ps}$. FC.
3. 100 Years War French $1420-1493$. $E=2,4,5,7,8,9,10.43 \mathrm{Kn}$, $24 \mathrm{Pk}, 24 \mathrm{Cb}, 13 \mathrm{Lb}$ or $4 \mathrm{Cb}, 3 \mathrm{Ax}$ or $3 \mathrm{Cb}, 1 \mathrm{Art}, 1 \mathrm{Art}$ or 2 Ps .
4. 100 Years War English $1420-1455$. $E=3,7,9,28.43 \mathrm{Kn} / 4 \mathrm{Bd}$, $64 \mathrm{Lb}, 14 \mathrm{Bd}$ (bills), 14 Lb or Art.
5. Wars of Roses English $1455-1487 . \mathrm{E}=3,5,28.33 \mathrm{Kn} / \mathrm{Bd}, 3$ 4 Bd (bills), $34 \mathrm{Lb}, 24 \mathrm{Bd}$ or 4 Lb or 3 Ax or $14 \mathrm{Pk}+13 \mathrm{Aq}, 1 \mathrm{Art}$ or 2Ps.
6. Low Countries $1420-1489 . \mathrm{E}=2,3,7,8.23 \mathrm{Kn}, 64 \mathrm{Pk}, 24 \mathrm{Bd}, 1$ $4 \mathrm{Cb}, 12 \mathrm{Ps}$. FC.
7. Early Burgundian $1420-1470 . \mathrm{E}=2 \cdot 3 \cdot 4 \cdot 6.63 \mathrm{Kn} / 4 \mathrm{Bd}, 24 \mathrm{Pk}$, $24 \mathrm{Cb}, 24 \mathrm{Lb}$.
8. Later Burgundian 1471-1477. $\mathrm{E}=2,3,6,11.33 \mathrm{Kn} / 4 \mathrm{Bd}, 1$ $3 \mathrm{Kn}, 12 \mathrm{LH}, 24 \mathrm{Lb}, 14 \mathrm{Cb}, 24 \mathrm{Pk}, 1$ Art.
9. Spanish 1420-1492. $\mathrm{E}=3,4,64,71.33 \mathrm{Kn}, 42 \mathrm{LH}, 14 \mathrm{Cb}, 1$ $3 \mathrm{Ax}, 12 \mathrm{Ps}, 24 \mathrm{Sp}$ or 4 Pk .
10. Italian Condottiere $1420-1494 . \mathrm{E}=2,3,10,11,50,66.63 \mathrm{Kn}$, 12 LH or $3 \mathrm{Ax}, 14 \mathrm{Cb}, 14 \mathrm{Cb}$ or $3 \mathrm{Aq}, 24 \mathrm{Sp}$ or 4 Pk or $14 \mathrm{Cb}+1$ $2 \mathrm{LH}, 1$ Art or 2Ps.
11. Swiss $1420-1515 . E=2,8,10,12,13,14,18,19,22.13 \mathrm{Kn}$ or Art or $2 \mathrm{LH}, 84 \mathrm{Pk}, 24 \mathrm{Bd}, 12 \mathrm{Ps}$ or 3 Aq or 4 Cb .
12. Florentine 1495-1530. $\mathrm{E}=11,13,14,18,19,20,22,23.13 \mathrm{Kn}$, $44 \mathrm{Pk}, 24 \mathrm{Pk}$ or 4 Bd or $3 \mathrm{Aq}, 14 \mathrm{Cb}, 12 \mathrm{Ps}, 1 \mathrm{Art}$ or 2 LH .
12a. Macchiavellian 1500s. $\mathrm{E}=11,13,14,18,19,20,22,23.13 \mathrm{Kn}$, $44 \mathrm{Pk}, 6 \mathrm{~Wb} / \mathrm{Ax}$ (fact) or 4 Bd (theory), 14 Cb or 2 Ps .
13. Milanese $1495-1530 . \mathrm{E}=11,12,14,18,19,20,22,23.23 \mathrm{Kn}, 1$ 3 Kn or $\mathrm{Art}, 22 \mathrm{LH}, 12 \mathrm{LH}$ or $2 \mathrm{Ps}, 24 \mathrm{Cb}$ or 3 Aq or 4 Pk .
14. Venetian 1495-1530. $E=11,12,13,18,19,20,22,23,66.1$ $3 \mathrm{Kn}, 32 \mathrm{LH}, 1 \mathrm{Art}, 13 \mathrm{Aq}, 14 \mathrm{Cb}$ or $2 \mathrm{Ps}, 23 \mathrm{Cb}, 33 \mathrm{Cb}$ or 3 Aq .
15. Venetian $1530-1600 . E=50,51,66,67.14 \mathrm{Re}, 12 \mathrm{LH}, 14 \mathrm{Re}$ or $2 \mathrm{LH}, 24 \mathrm{Pk}, 33 \mathrm{Aq}, 23 \mathrm{Aq}$ (Schiavoni), 12 Ps , 1 Art or 2 LH .
16a. Knights of St John 1420-1522. E = 66,67,71. $23 \mathrm{Kn} / 4 \mathrm{Bd}, 2$ $4 \mathrm{Sp}, 24 \mathrm{Cb}, 14 \mathrm{Cb}$ or $3 \mathrm{Aq}, 1 \mathrm{Art}, 43 \mathrm{Cb}$.
16b. Knights of St John 1522-1570. $\mathrm{E}=67,71$. $23 \mathrm{Kn} / 4 \mathrm{Bd}$, 2 $4 \mathrm{Pk}, 73 \mathrm{Aq}, 1 \mathrm{Art}$.
16. Teutonic Knights $1420-1562 . \mathrm{E}=30,53,55,56,69.33 \mathrm{Kn}, 2$ 3 Kn or $3 \mathrm{Cv}, 23 \mathrm{Cv}, 13 \mathrm{Cb}$ or $3 \mathrm{Aq}, 14 \mathrm{Pk}, 23 \mathrm{Ax}$ or $14 \mathrm{Pk}+1 \mathrm{Art}$, 12 Ps .
17. Spanish 1494-1512. $\mathrm{E}=11,12,13,14,22.13 \mathrm{Kn}, 13 \mathrm{Kn}$ or $2 \mathrm{LH}, 22 \mathrm{LH}, 24 \mathrm{Cb}, 23 \mathrm{Ax} / \mathrm{Wb}, 24 \mathrm{Cb}$ or 4 Pk or $3 \mathrm{Ax} / \mathrm{Wb}, 13 \mathrm{Aq}$, 1 Art.
18. Spanish or Imperialist $1512-1559 . E=12,13,14,22,23,67,71$. $12 \mathrm{LH}, 1 \mathrm{Art}, 44 \mathrm{Pk}, 43 \mathrm{Aq}, 13 \mathrm{Kn}$ or 3 Cv or $3 \mathrm{Aq}, 12 \mathrm{LH}$ or 4 Re or 2 Ps .
19. Spanish $1560-1609$. $E=24,25,27,31,31 \mathrm{a}, 32,67,68,71.1$ $4 \mathrm{Re}, 13 \mathrm{Kn}$ or $3 \mathrm{Cv}, 12 \mathrm{LH}$ or 4 Re or 3 Dg or $2 \mathrm{Ps}, 1 \mathrm{Art}, 44 \mathrm{Pk}, 2$ $3 \mathrm{Aq}, 23 \mathrm{Aq} / \mathrm{Mu}$.
20. Austrian 1560-1606. $\mathrm{E}=52,54,67,68,69.14 \mathrm{Re}, 14 \mathrm{Re}$ or $3 \mathrm{Cv}, 42 \mathrm{LH}, 24 \mathrm{Pk}, 23 \mathrm{Aq}, 13 \mathrm{Ax}$ or $2 \mathrm{Ps}, 1 \mathrm{Art}$. FC.
21. French 1494-1525. $\mathrm{E}=11,12,13,14,18,19,26.13 \mathrm{Kn}, 23 \mathrm{Kn}$ or 4 Pk or 4 Cb or $1 \mathrm{Art}+12 \mathrm{Ps}, 22 \mathrm{LH}$ or $4 \mathrm{Cb}, 24 \mathrm{Pk}, 44 \mathrm{Cb}, 1$ Art.
22. French $1526-1559 . E=12,13,14,19,20,26.13 \mathrm{Kn}, 12 \mathrm{LH}, 4$ $4 \mathrm{Pk}, 23 \mathrm{Aq}, 1 \mathrm{Art}, 23 \mathrm{Aq}+12 \mathrm{LH}$ or $24 \mathrm{Pk}+14 \mathrm{Re}$.
24a. French Huguenot $1562-1640$. $\mathrm{E}=25 \mathrm{a}, 32 \mathrm{a}$. 13 Kn (Henri IV) or 3 Cv (Millers), 24 Re or $3 \mathrm{Aq}, 53 \mathrm{Aq} / \mathrm{Mu}, 12 \mathrm{Ps}, 1 \mathrm{Art}, 2$ 4 Pk or $3 \mathrm{Aq} / \mathrm{Mu}$.
24b. Huguenot Royalist $1589-1598 . \mathrm{E}=25 \mathrm{~b} .14 \mathrm{Re}, 23 \mathrm{Aq} / \mathrm{Mu}$, $44 \mathrm{Pk}, 1 \mathrm{Art}, 13 \mathrm{Kn}$ or $4 \mathrm{Re}, 24 \mathrm{Pk}+2 \mathrm{LH}$ or 33 Aq .
25 a . French Catholic $1562-1587 . \mathrm{E}=20,24 \mathrm{a}, \mathrm{b}, 27.13 \mathrm{Kn}, 13 \mathrm{Kn}$ or 4 Re or $2 \mathrm{LH}, 14 \mathrm{Re}$ or $2 \mathrm{LH}, 44 \mathrm{Pk}, 33 \mathrm{Aq}, 1 \mathrm{Art}, 13 \mathrm{Aq} / \mathrm{Mu}$. 25 b . French Catholic $1589-1598 . \mathrm{E}=24 \mathrm{~b}, 13 \mathrm{Kn}, 14 \mathrm{Re}, 44 \mathrm{Pk}, 3$ $3 \mathrm{Aq}, 1 \mathrm{Art}, 23 \mathrm{Aq} / \mathrm{Mu}$.
23. Tudor English 1489-1559. $\mathrm{E}=23,26,28,29.2$ 2LH, 3 4Bd (bills), $34 \mathrm{Lb}, 1 \mathrm{Art}, 13 \mathrm{Aq}$ or $2 \mathrm{Ps}, 24 \mathrm{Pk}$ (landsknechts) or 14 Bd +14 Lb or $13 \mathrm{Kn}+3 \mathrm{Cv}$ (demilances).
24. Elizabethan English $1560-1620 . E=20,25 a, 28,29.12 \mathrm{LH}, 1$ 2 LH or 3 Cv (demilances), $24 \mathrm{Pk}, 23 \mathrm{Aq}, 14 \mathrm{Bd}$ (bills), $14 \mathrm{Lb}, 2$ 4 Pk or 3 Ax (Irish), $13 \mathrm{Aq} / \mathrm{Mu}$ or $2 \mathrm{Ps}, 12 \mathrm{Ps}, 13 \mathrm{Aq} / \mathrm{Mu}$ or Art or 4Bd (galloglaich).
25. Scots $1513-1620$. $\mathrm{E}=4,5,26,27,28.84 \mathrm{Pk}, 23 \mathrm{~Wb}$ or $2 \mathrm{Ps}, 1$ $2 \mathrm{LH}, 13 \mathrm{Aq}$ or 2 Ps or Art.
26. Irish $1420-1620 . \mathrm{E}=26,27,29.22 \mathrm{LH}, 24 \mathrm{Bd}+23 \mathrm{Ax}$ or 2 $4 \mathrm{Pk}+2 \mathrm{Aq} / \mathrm{Mu}, 33 \mathrm{Ax}$ (bonnachts), 33 Ps .
27. Swedish $1390-1610$. $\mathrm{E}=2,17,53,54 \mathrm{a}, \mathrm{b}, 55,56.23 \mathrm{Kn}, 43 \mathrm{Bd}$ or $4 \mathrm{Pk}, 24 \mathrm{Pk}$ or $3 \mathrm{Cb}, 33 \mathrm{Cb}$ or $3 \mathrm{Aq}, 12 \mathrm{Ps}$.
28. Dutch $1568-1590 . \mathrm{E}=20.24 \mathrm{Re}, 12 \mathrm{LH}$ or $2 \mathrm{Ps}, 1 \mathrm{Art}, 44 \mathrm{Pk}$, $23 \mathrm{Aq}, 23 \mathrm{Aq} / \mathrm{Mu}$.
31a. Dutch Maurician 1590-1650. $\mathrm{E}=20,32,33,42 \mathrm{a}$. 2 4Re, 1 2 LH or 2 Ps or 3 Mu or $3 \mathrm{Dg}, 1 \mathrm{Art}, 84 \mathrm{P} \& \mathrm{~S}$.
32a. French $1600-1640 . \mathrm{E}=24 \mathrm{a}, 33,34,42 \mathrm{a}, \mathrm{b} .24 \mathrm{Re}, 13 \mathrm{Cv}$ or 3 Kn (Musketeers), 14 Re or 2Ps or 3Dg, $1 \mathrm{Art}, 44 \mathrm{Pk}, 13 \mathrm{Aq}, 2$ 3 Mu .
32b. French 1640-1660. $\mathrm{E}=33,36,42 \mathrm{a}, \mathrm{b} .24 \mathrm{Re}, 13 \mathrm{Cv}, 14 \mathrm{Re}$ or 2 LH or 2 Ps or 3 Dg or $3 \mathrm{Mu}, 74 \mathrm{P} \& \mathrm{~S}, 1$ Art.
29. Spanish 1609-1659. $\mathrm{E}=31 \mathrm{a}, 32 \mathrm{a}, \mathrm{b}, 36,41,42 \mathrm{~b}, 68,71.14 \mathrm{Re}$, 14 Re or $3 \mathrm{Cv}, 14 \mathrm{Re}$ or 2 LH or $3 \mathrm{Dg}, 1 \mathrm{Art}, 44 \mathrm{Pk}, 23 \mathrm{Aq}, 23 \mathrm{Mu}$.
30. ECW Royalist $1620-1651$. $\mathrm{E}=32,35,36,38,39.33 \mathrm{Kn}$ (Cavaliers) or $3 \mathrm{Cv}, 13 \mathrm{Cv}$ or 3 Ax (levies), 13 Cv or $3 \mathrm{Dg}, 13 \mathrm{Cv}$ or $4 \mathrm{P} \& \mathrm{~S}$ or 3 Mu or $2 \mathrm{Ps}, 1 \mathrm{Art}, 54 \mathrm{P} \& \mathrm{~S}$.
31. ECW Parliamentarian 1641-1645. $\mathrm{E}=34,39.13 \mathrm{Cv}, 13 \mathrm{Cv}$ or $4 \mathrm{Re}, 13 \mathrm{Cv}$ or $3 \mathrm{Dg}, 13 \mathrm{Cv}$ or $4 \mathrm{P} \& \mathrm{~S}, 13 \mathrm{Cv}$ or $4 \mathrm{P} \& \mathrm{~S}$ or 3 Mu or 2Ps, $64 \mathrm{P} \& \mathrm{~S}, 1$ Art.
32. New Model Army 1644-1660. $\mathrm{E}=31 \mathrm{a}, 33,34,37,38,39.3$ $3 \mathrm{Cv}, 23 \mathrm{Cv}$ or $4 \mathrm{P} \& \mathrm{~S}, 13 \mathrm{Cv}$ or $3 \mathrm{Dg}, 54 \mathrm{P} \& \mathrm{~S}$, 1 Art.
33. Montrose's Scots 1645-51. $\mathrm{E}=36,38.13 \mathrm{Cv}, 13 \mathrm{Cv}$ or 2 Ps or $3 \mathrm{Mu}, 43 \mathrm{By}$ (Irish), 23By or 3 Wb (Highlanders), $33 \mathrm{~Wb}, 12 \mathrm{Ps}$. 38. Scots Covenanter 1639-51. $\mathrm{E}=34,36,37,39$. 13 Kn (lancers), $23 \mathrm{Cv}, 13 \mathrm{Cv}$ or 3 Dg or 3 Mu or $2 \mathrm{Ps}, 1 \mathrm{Art}, 64 \mathrm{P} \& \mathrm{~S}, 1$ $4 \mathrm{P} \& \mathrm{~S}$ or 3 Wb (Highlander).
34. Irish Confederate 1639-60. $\mathrm{E}=34,35,36,38.23 \mathrm{Cv}, 64 \mathrm{P} \& S$, $14 \mathrm{P} \& S$ or 4 Bd (galloglaich), 13 Ax (bonnacht) or 3 Wb (Redshanks), $13 \mathrm{Ax}, 12 \mathrm{Ps}$.
35. TYW Bohemian 1618-1621. $\mathrm{E}=42 \mathrm{a}, \mathrm{b}, 52.14 \mathrm{Re}, 22 \mathrm{LH}, 1$ 3 Cv or $2 \mathrm{LH}, 24 \mathrm{Pk}, 43 \mathrm{Mu}, 12 \mathrm{LH}+13 \mathrm{Mu}$ or $14 \mathrm{P} \& \mathrm{~S}$ (Moravian guard) +1 Art. FC.
36. TYW Swedish 1611-1648. $\mathrm{E}=33,42 \mathrm{a}, \mathrm{b}, 54 \mathrm{~b}, 56,57.33 \mathrm{Kn}, 1$ 3 Kn or 3 Dg or 3 Mu or $2 \mathrm{Ps}, 13 \mathrm{Kn}$ or $4 \mathrm{P} \& \mathrm{~S}, 64 \mathrm{P} \& \mathrm{~S}, 1 \mathrm{Art}$. 42a. TYW Imperialist 1618-1648. $\mathrm{E}=31 \mathrm{a}, 40,41,42 \mathrm{~b}, 52,54 \mathrm{~b}, 68$. $14 \mathrm{Re}, 14 \mathrm{Re}$ or 3 Cv or 3 Kn (Pappenheim), 13 Cv or $2 \mathrm{LH}, 1$ 2 LH or 3 Mu or 3 Dg or $2 \mathrm{PS}, 1 \mathrm{Art}, 44 \mathrm{Pk}, 33 \mathrm{Mu}$.
42b. TYW German or Danish 1618-1648. $\mathrm{E}=$ 31a,40,41,42a,b,52,54b,68. $14 \mathrm{Re}, 14 \mathrm{Re}$ or $3 \mathrm{Cv}, 13 \mathrm{Cv}, 1 \mathrm{Art}, 4$ $4 \mathrm{Pk}, 43 \mathrm{Mu}$.
37. Monmouth's English 1685. $\mathrm{E}=48.23 \mathrm{Cv}, 54 \mathrm{P} \& \mathrm{~S}, 43 \mathrm{Ax}$ (levy), 13 Bd (scythes).
38. Irish Jacobite 1689-1691. $\mathrm{E}=48.1$ 3Cv, $13 \mathrm{Dg}, 3$ 4P\&S, 2 $3 \mathrm{Mu}, 13 \mathrm{Cv}$ or 3 Mu or Art, 33 Ax (Raparees), 13 By (French). 45. Scots Jacobite 1689. $\mathrm{E}=48.13 \mathrm{Cv}, 13 \mathrm{Dg}, 14 \mathrm{P} \& \mathrm{~S}$ or $3 \mathrm{Mu}, 1$ $3 \mathrm{Mu}, 12 \mathrm{Ps}, 73 \mathrm{~Wb}$ (Highlanders).
39. Swedish 1649-1700. $\mathrm{E}=48,54 \mathrm{~b}, \mathrm{c}, 57.13 \mathrm{Cv}, 13 \mathrm{Cv}$ or 3 Kn (Drabants), $23 \mathrm{Dg}, 1 \mathrm{Art}, 34 \mathrm{P} \& \mathrm{~S}, 33 \mathrm{Mu}, 13 \mathrm{Mu}$ or $3 / 4 \mathrm{By}$.
40. Venice $1600-1700 . \mathrm{E}=68,71.24 \mathrm{Re}, 12 \mathrm{LH}, 13 \mathrm{Dg}$ or $3 \mathrm{Mu}, 1$ Art, 23 Mu or $4 \mathrm{By}, 23 \mathrm{Mu}$ (Oltremarine), $24 \mathrm{P} \& \mathrm{~S}, 13 \mathrm{Aq}$ (Morlacchi).
41. European 1650-1700. $\mathrm{E}=43,44,45,46,48,54 \mathrm{~b}, \mathrm{c}, 68,71.2$ $3 \mathrm{Cv}, 13 \mathrm{Dg}, 13 \mathrm{Cv}$ or 2 LH or $3 \mathrm{Dg}, 1 \mathrm{Art}, 24 \mathrm{P} \& \mathrm{~S}$ or 3 Mu or 4 By , 53 Mu or 4 By .
42. Byzantine $1420-1453 . \mathrm{E}=66.13 \mathrm{Cv}, 23 \mathrm{Kn}, 42 \mathrm{LH}, 24 \mathrm{Bd}$ (Varangoi), 14 Ax or $3 \mathrm{Aq}, 2$ 2Ps. FC.
43. Hungarian 1440-1526. $\mathrm{E}=2,19,51,53,65,66,67.23 \mathrm{Kn}, 4$ $2 \mathrm{LH}, 24 \mathrm{Pk}, 13 \mathrm{Aq}, 1 \mathrm{Art}, 23 \mathrm{Ax}$ or 2Ps. FC.
44. Moldavian or Wallachian $1450-1550 . \mathrm{E}=2,19,50,51,66,67$. $13 \mathrm{Cv}, 13 \mathrm{Cv}$ or $2 \mathrm{LH}, 32 \mathrm{LH}, 33 \mathrm{Ax}, 13 \mathrm{Ax}$ or $3 \mathrm{Bw}, 23 \mathrm{Ax}$ or 1 $4 \mathrm{Cb}+13 \mathrm{Aq}, 12 \mathrm{Ps}$. FC.
45. Moldavian, Wallachian or Transylvanian 1550-1648. $\mathrm{E}=$ $21,40,42 \mathrm{a}, \mathrm{b}, 52,67,68.13 \mathrm{Cv}, 23 \mathrm{Cv}$ or $2 \mathrm{LH}, 22 \mathrm{LH}, 14 \mathrm{Re}, 3$ 3 Aq or 3 By (Dorobanti), $14 \mathrm{Pk}, 23 \mathrm{Ax}$ or (Haiduks) $14 \mathrm{Sp}+1$ $3 \mathrm{Aq} / \mathrm{Mu}$ or $14 \mathrm{Pk}+13 \mathrm{Aq} / \mathrm{Mu}$. FC.
46. Polish $1450-1510 . E=2,17,19,30,41,53,55,65,66,67,69.3$ $3 \mathrm{Kn}, 33 \mathrm{Cv}, 12 \mathrm{LH}, 13 \mathrm{Bw}, 13 \mathrm{Cb}$ or $3 \mathrm{Aq}, 24 \mathrm{Sp}, 12 \mathrm{Ps}$. FC.
54a. Polish 1510-1576. $\mathrm{E}=21,30,54 \mathrm{a}, 55,56,58,67,68,69.23 \mathrm{Kn}$ (Hussars), 23 Cv (Pancerni), $12 \mathrm{LH}, 23 \mathrm{Aq}, 13 \mathrm{Bd}+13 \mathrm{Aq}$ or 1 $3 \mathrm{Kn}+13 \mathrm{Cv}, 2 \mathrm{WWg}, 1 \mathrm{WWg}$ or Art. FC.
54b. Polish $1576-1670 . \mathrm{E}=21,30,41,42 \mathrm{a}, \mathrm{b}, 46,48,56,57,58$, $68,69.13 \mathrm{Kn}, 23 \mathrm{Cv}, 22 \mathrm{LH}, 23 \mathrm{Mu}$ or $13 \mathrm{Kn}+13 \mathrm{Cv}, 13 \mathrm{Mu}$ or $4 \mathrm{Re}, 14 \mathrm{P} \& \mathrm{~S}$ or $3 \mathrm{Mu}, 2 \mathrm{WWg}, 1 \mathrm{WWg}$ or Art. FC.
54 c . Polish $1670-1700 . \mathrm{E}=46,48,57,58,68,69.13 \mathrm{Kn}, 23 \mathrm{Cv}, 2$ $2 \mathrm{LH}, 23 \mathrm{By}, 13 \mathrm{By}$ or $4 \mathrm{Re}, 14 \mathrm{P} \& \mathrm{~S}$ or $3 \mathrm{By}, 2 \mathrm{WWg}, 1 \mathrm{WWg}$ or Art. FC.
47. Muscovy 1420-1533. $\mathrm{E}=17,30,53,54 \mathrm{a}, 55,58,65,66,67,69.4$ $3 \mathrm{Cv}, 13 \mathrm{Cv}$ or $2 \mathrm{LH}, 22 \mathrm{LH}, 24 \mathrm{Sp}, 23 \mathrm{Bw}$ or $3 \mathrm{Aq}, 12 \mathrm{Ps}$. FC.
48. Muscovy 1533-1629. $\mathrm{E}=17,30,41,54 \mathrm{a}, \mathrm{b}, 56,58,67,68,69.4$ $3 \mathrm{Cv}, 13 \mathrm{Cv}$ or $2 \mathrm{LH}, 22 \mathrm{LH}, 23 \mathrm{Aq}$ or 3 By (streltsi), 2 WWg , 1 Art or 2 Ps . FC.
49. Muscovy 1629-1700. $\mathrm{E}=41,46,54 \mathrm{~b}, \mathrm{c}, 57,58,59,68,69.33 \mathrm{Cv}$, $14 \mathrm{Re}, 13 \mathrm{Cv}$ or $2 \mathrm{LH}, 22 \mathrm{LH}, 24 \mathrm{P} \& \mathrm{~S}, 13 \mathrm{By}$ (streltsi), 1 Art, 1 Art or 2Ps.
50. Cossack $1550-1700 . \mathrm{E}=54 \mathrm{a}, \mathrm{b}, \mathrm{c}, 55,56,57,58,59,65,69.5$ $2 \mathrm{LH}, 12 \mathrm{LH}$ or $3 \mathrm{Cv}, 22 \mathrm{LH}$ or $3 \mathrm{Aq} / \mathrm{Mu}, 12 \mathrm{LH}$ or 3 Bd or 2 Ps , 2 WWg or 2 LH . FC.
51. Ukrainian 1648-1654. $\mathrm{E}=57,58.52 \mathrm{LH}, 13 \mathrm{Cv}$ or $2 \mathrm{LH}, 2$ 3 Mu or 3 Ax (mujiks), 43 Ax . FC.
60 . Conquistador (Mexico) $1500-1530 . \mathrm{E}=61.13 \mathrm{Cv}, 13 \mathrm{Aq}, 1$ $3 \mathrm{Cb}, 33 \mathrm{Ax} / \mathrm{Wb}, 33 \mathrm{Ax}$ (Indians), $12 \mathrm{Ps}, 13 \mathrm{Ax}$ or $2 \mathrm{Ps}, 13 \mathrm{Ax}$ or Art.
52. Mexican 1485-1530. $\mathrm{E}=60,61.34 \mathrm{Bd}$ or $3 \mathrm{Ax}, 33 \mathrm{Ax}, 33 \mathrm{Ax}$ or $2 \mathrm{Ps}, 32 \mathrm{Ps}$.
53. Conquistador (Peru) $1530-1550 . \mathrm{E}=63.13 \mathrm{Cv}, 34 \mathrm{Pk}, 2$ $3 \mathrm{Aq}, 13 \mathrm{Cb}, 33 \mathrm{Bd}$ (Canari), 23 Ax (Indians), 13 Ax or 2 Ps . 63. Inca $1530-1550 . \mathrm{E}=62,63.34 \mathrm{Bd}, 63 \mathrm{Bw}$ (slingers), 32 Ps . 64. Granada 1420-1492. $\mathrm{E}=9,71.23 \mathrm{Kn}$ or $3 \mathrm{Cv}, 42 \mathrm{LH}, 24 \mathrm{Sp}, 2$ $4 \mathrm{Cb}, 22 \mathrm{Ps}$.
54. Mongol 1420-1495. $\mathrm{E}=50,53,55,58,65,66,69,70.42 \mathrm{LH}$ or


Thirty Years War action with figures from the collection of Mark Allen. Gustavus Adolphus charges to his death. 25 mm figures from Wargames Foundry. Terrain by Rob Baker of First Corps from the editor's collection.
$3 \mathrm{Cv}, 52 \mathrm{LH}, 22 \mathrm{LH}$ or 4 Bw or $4 \mathrm{Sp}, 12 \mathrm{LH}$ or Art.
66. Ottoman 1420-1495. $\mathrm{E}=2,10,15,16,49,50,51,53,65,71$, $72,73,75.43 \mathrm{Cv}, 32 \mathrm{LH}, 24 \mathrm{Bw}$ (Janissaries), 2 Art, 12 Ps. FC. 67. Ottoman 1495-1570. $\mathrm{E}=15,16,19,20,21,50,51,52,53$, $54 \mathrm{a}, \mathrm{b}, 55,56,69,70,71,72,73,74,75.43 \mathrm{Cv}, 22 \mathrm{LH}$ (Janissaries), 24 Bw or $4 \mathrm{Aq}, 12 \mathrm{LH}$ or $3 \mathrm{Aq}, 2$ Art, 12 Ps . FC.
68. Ottoman 1570-1700. $\mathrm{E}=20,21,33,42 \mathrm{a}, \mathrm{b}, 47,48,52,54 \mathrm{a}$, b, c, 56, 57, 70, 71, 73, $75.43 \mathrm{Cv}, 22 \mathrm{LH}, 24 \mathrm{Mu}$ (Janissaries), 1 2 LH or $3 \mathrm{Mu}, 2 \mathrm{Art}, 12 \mathrm{Ps}$. FC.
69. Tartar 1405-1700. $\mathrm{E}=21,53,54 \mathrm{a}, \mathrm{b}, \mathrm{c}, 55,56,57,58,65,67$, $69,70.13 \mathrm{Cv}, 13 \mathrm{Cv}$ or $2 \mathrm{LH}, 52 \mathrm{LH}$ or 2 Ps , 22 LH or $3 \mathrm{Aq} / \mathrm{Mu}$. FC.
70. Persian 1405-1700. $\mathrm{E}=65,66,67,68,70,72,77.13 \mathrm{Kn}$ or 3 Cv , $53 \mathrm{Cv}, 13 \mathrm{Cv}$ or $3 \mathrm{Aq} / \mathrm{Mu}, 22 \mathrm{LH}, 23 \mathrm{Bw}$ or $3 \mathrm{Cv}, 13 \mathrm{Cv}$ or 2 Ps or Art.
71. Moorish $1420-1700 . \mathrm{E}=16,19,20,21,31,33,47,66,67,68$, $72,75,76.23 \mathrm{Cv}, 42 \mathrm{LH}, 13 \mathrm{Cv}$ or 2 LH or 3 Re or $3 \mathrm{Cm}, 23 \mathrm{Cb}$ or $3 \mathrm{Aq}, 12 \mathrm{Ps}, 23 \mathrm{Cb}$ or 4 Sp or $13 \mathrm{Bd}+1 \mathrm{Art}$.
72. Mameluke $1420-1516 . \mathrm{E}=66,67,70,71.63 \mathrm{Cv}, 22 \mathrm{LH}, 43 \mathrm{Cv}$ or $23 \mathrm{Ax}+2$ Ps. FC .
73. Abyssinian 1420-1700. $\mathrm{E}=66,67,68,72,74,76.13 \mathrm{Cv}, 2$ $2 \mathrm{LH}, 13 \mathrm{Aq} / \mathrm{Mu}, 63 \mathrm{~Wb}, 22 \mathrm{Ps}$.
74. Adal Sultanate 1450-1550. $\mathrm{E}=20$ (Portuguese), 67,73,74. 1 $3 \mathrm{Cv}, 22 \mathrm{LH}, 13 \mathrm{Aq}, 33 \mathrm{Bw}, 33 \mathrm{~Wb}, 22 \mathrm{Ps}$.
75. Sinnar 1510-1700. $\mathrm{E}=66,67,68,71,73,76.13 \mathrm{Kn}$ or $3 \mathrm{Cv}, 6$ $3 \mathrm{Cv}, 32 \mathrm{LH}, 14 \mathrm{Sp}$ or $3 \mathrm{Cv}, 12 \mathrm{Ps}$ or $2 \mathrm{LH}, 12 \mathrm{Ps}$.
76. West Sudanese $1420-1700 . E=71,75,76.13 \mathrm{Kn}, 23 \mathrm{Cv}, 3$ $2 \mathrm{LH}, 14 \mathrm{Sp}, 33 \mathrm{Bw}, 13 \mathrm{~B} w$ or $3 \mathrm{Aq} / \mathrm{Mu}, 13 \mathrm{Cm}$ or 3 Bw or SC . 77. Moghul 1520-1550. $\mathrm{E}=69,70,78.53 \mathrm{Cv}, 2$ 2LH, $13 \mathrm{Aq}, 1$ Art, $13 \mathrm{Cv}+22 \mathrm{LH}$ or $23 \mathrm{Bw}+12 \mathrm{Ps}$. FC.
78. North Indian $1520-1700 . \mathrm{E}=77,78,79,80,81.23 \mathrm{Cv}, 22 \mathrm{LH}$, 13 Bw or $3 \mathrm{Aq} / \mathrm{Mu}, 23 \mathrm{Bw}, 1 \mathrm{El}$ or 3 Wb (Rajputs), 1 El or Art or $3 \mathrm{Cv}, 1 \mathrm{El}$ or $2 \mathrm{LH}, 2$ 2Ps.
79. Vijayanagar 1450-1630. $\mathrm{E}=78,80,81$. 13 Kn or $3 \mathrm{Cv}, 23 \mathrm{Cv}$, $22 \mathrm{LH}, 23 \mathrm{~Wb}$ (swordsmen), 23 Bw or $3 \mathrm{Aq}, 2 \mathrm{El}, 1$ Art.
80. Bahami $1420-1620 . \mathrm{E}=78,79,80,81.23 \mathrm{Cv}, 22 \mathrm{LH}, 23 \mathrm{~Wb}$ (swordsmen), $23 \mathrm{Lb}, 13 \mathrm{Lb}$ or $3 \mathrm{Aq}, 2 \mathrm{El}, 1 \mathrm{Art}$ or 2 Ps .
81. Calicut or Orissa 1420-1620. $\mathrm{E}=78,79.80,81$. $3 \mathrm{El}, 23 \mathrm{Bw}, 3$ 3 Wb (swords), $34 \mathrm{Sp}, 12 \mathrm{Ps}$.
82. Japan $1420-1550$. $\mathrm{E}=82,84,85.63 \mathrm{Cv} / 4 \mathrm{Bd}$ or $3 \mathrm{Bd}, 63 \mathrm{Ax}$.
83. Japan $1550-1615$. $\mathrm{E}=83,84,85,87$. $43 \mathrm{Cv} / 4 \mathrm{Bd}$ or $3 \mathrm{Bd}, 4$ $3 \mathrm{Aq}, 43 \mathrm{Ax}$ or 4 Sp .
84. Japanese Monks 1420-1615. $\mathrm{E}=82,83,84.43 \mathrm{Bd}, 4$ 3Aq, 4 3 Wb .
85. Ming Chinese $1420-1630 . E=82,83,86,87,88.33 \mathrm{Cv}, 22 \mathrm{LH}$, $24 \mathrm{Sp}, 24 \mathrm{Cb}$ or $3 \mathrm{Aq}, 24 \mathrm{Bw}, 1 \mathrm{Art}$ or 2 Ps . FC.
86. Manchu $1600-1700 . \mathrm{E}=85,87.13 \mathrm{Cv}, 13 \mathrm{Cv}$ or $2 \mathrm{LH}, 32 \mathrm{LH}$, 24 Bw or $2 \mathrm{LH}, 23 \mathrm{Aq}$ or $2 \mathrm{LH}, 23 \mathrm{Cb}$ or $2 \mathrm{LH}, 12 \mathrm{Ps}$ or Art or 2LH.
87. Korean $1570-1615 . \mathrm{E}=83,85,86.23 \mathrm{Cv}, 13 \mathrm{Cv}$ or $2 \mathrm{LH}, 4$ $3 \mathrm{Bw}, 44 \mathrm{Sp}, 12 \mathrm{Ps}$ or Art.
88. Siam or Burma 1420-1700. $\mathrm{E}=85,87,88,89,90.23 \mathrm{Bw}, 2$ $3 \mathrm{Ax}, 13 \mathrm{Bw}+13 \mathrm{Ax}$ (Siamese) or $13 \mathrm{Aq} / \mathrm{Mu}+1$ Art (Portuguese), $2 \mathrm{El}, 12 \mathrm{Ps}, 12 \mathrm{Ps}$ or (Japanese guards) 3 By or $3 \mathrm{Bd}, 1 \mathrm{El}$ or $2 \mathrm{LH}, 13 \mathrm{Aq} / \mathrm{Mu}$. FC.
89. Khmer 1420-1594. $\mathrm{E}=88,90$. $33 \mathrm{Bw}, 33 \mathrm{Ax}, 13 \mathrm{Cb}, 13 \mathrm{Bd}, 2$ $\mathrm{El}, 12 \mathrm{Ps}, 12 \mathrm{Ps}$ or 2 LH .
90. Java or Malaccas 1495-1600. $\mathrm{E}=88,89,90.44 \mathrm{Sp}$ or $3 \mathrm{Ax}, 2$ 2 Ps or $3 \mathrm{Ax}, 23 \mathrm{~Wb}$ (swordsmen), $13 \mathrm{Aq}, 2 \mathrm{El}$ (Malaccas) or 1 $3 \mathrm{Aq}+13 \mathrm{Bd}$ (kris).

