

in 1448. Admittedly these were all extremely powerful chieftains holding large parts of the country, but even Scanderbeg's father, John Castriotes, a relatively minor chieftain, was able to offer the Venetians the service of an auxiliary contingent of 2,300 cavalry in 1411 (in exchange for 1,000 ducats a year). Scanderbeg's army never exceeded about 18,000 men. Its core comprised some 8-10,000 men, chiefly light horse who are described in the 'Commentarii' (attributed to Pope Pius II) as 'lightly armed cavalry, swift horsemen, good for looting and plundering'.* About 2-3,000 of them (a 15th century Italian source says 3,500) constituted the household troops, whose names and acts of bravery, so we are told by Melchior Michaelis (15th century?), Scanderbeg knew by heart, and whose sleeping quarters and meals he shared 'as a common soldier'. These included what Barletius described in the late-15th/early-16th century as Scanderbeg's *praetoria cohors*, a personal bodyguard made up entirely of soldiers from Kroya, probably numbering 6-800 men (see below). A further 3-5,000 men were posted on Albania's eastern frontier under Scanderbeg's uncle, Moise Golem, from whose lands (the two Dibras) they were largely recruited. Of all of these troops, the majority were therefore raised from the Castriotes family lands. At the most only about a quarter were provided by Scanderbeg's allied chieftains and nobility whom, as we have already seen, he had good cause to distrust. (In fact he actually took every opportunity to replace them with his own officers, one of the means by which he was able to consolidate his position and weld together the League's loose confederation of independent chieftains.) At Abulena in 1457 only 5,000 of the army of 17,000 were provided by League chieftains.

In addition a further 10,000 or so men could be raised by recourse to a general call to arms. In 1450, for instance, Scanderbeg increased his forces to 18,000 men by this means; of these, 1,500 were sent to garrison Kroya under Count Vrana Altisferi, 8,000 were held back by Scanderbeg himself (doubtless his central army), and the balance were organised into small detachments to harass and ambush the approaching Turks (who were commanded by the future sultan Mehmed II). In addition there were further troops to be found scattered across Albania as fortress garrisons, each of 400-2,000 men, comprising infantry and, by Scanderbeg's time at the latest, artillery too.

Scanderbeg's forces probably had gunpowder artillery and firearms from the outset, at least for the defence and siege of fortresses. Kroya, for instance, had about 30 small cannon in 1450. It seems likely that it was introduced into Albania by the Venetians in the second half of the 14th century for use in their own fortresses, a capacity in which they continued to maintain sizeable ordnance thereafter (5 bombards, 6 bombardelles and 20 handguns in Scutari in 1452, to mention but one example). The largest train of artillery recorded in use by the Albanians on any occasion during the 15th century appears to have been that fielded for the siege of Berat in 1455, where Scanderbeg's 14,000-strong army was provided with 5 bombards and 13 cannon plus 500 handguns (the latter also being recorded in use by Albanian troops during the defence of Sfetigrad in 1448).

One further source of troops was provided by foreign mercenaries and auxiliaries. In 1450, for instance, we are told that Scanderbeg's field-army included 'Slavs, Italians, Germans and others' (the 'others' undoubtedly including Hungarians), and in 1451 his ally Alfonso V the Magnanimous, Aragonese king of Naples, provided him with several hundred Catalans. A few years later, in 1455, Alfonso may have provided a force of as many as 2,000 men plus some artillery, though the sources actually differ regarding its size; the most reliable claim it comprised either 500 handgunners and 500 archers (Barletius), or 1,000-1,200 infantry and 500 cavalry (Makusev). Its commanders were Tesso Sabello and Sancto Garillo. In 1460-61 Scanderbeg returned the favour by providing Albanian troops to support Alfonso's successor, Ferdinand I, against his Neapolitan barons and the French claimant to the throne, René d'Anjou. Scanderbeg himself led the 1461 contingent, which an Albanian envoy to Ferdinand described as numbering 1,000 horse and 2,000 infantry archers, figures which are confirmed in addition by a Milanese envoy in Venice. Another source, however, mentions only 2,000 men in all, while three other contemporaries speak of a contingent of 600, 700 or 800 cavalry, this probably representing Scanderbeg's personal guard unit from Kroya.

WALLACHIA

Wallachians, or Vlachs (Byzantine *Vlachoi*), are first mentioned in Byzantine sources — retrospectively — in Cedrenus' 11th century chronicle, referring to c.976. From the late-10th century onwards they frequently appear in the context of Byzantino-Bulgarian conflicts, and it was the Wallachian leaders Peter, Assen and Kalojan or Ioannitsa who were responsible for the foundation of the Second Bulgarian Empire in 1186. According to legend Wallachia itself came into existence in 1290 when the Transylvanian voivode Radu

*He adds that they were 'useless for warfare according to the Italian style, and helpless against our swords and our spears', which is probably true enough of a close melee between Albanians and heavily-armed condottieri. The Albanian forte, however, lay in skirmishing and ambushes, not formal set-piece battles.

Negru led many Roumanins to settle there. In c.1307 or 1310 it became an Hungarian banate under a Cuman* chieftain, Basarab (d. 1352), under whom it achieved independence following his defeat of King Charles Robert at Posada in 1330. This independence was shortlived, however, since in 1392/3 the principality became tributary to the Ottoman Turks, under whom, despite frequent rebellions throughout the 15th century, it nevertheless retained its autonomy, even after it had become a vassal state in 1476.

Its armed forces were comprised of two distinct elements, called the 'lesser army' and the 'greater army' respectively. Whereas the latter constituted the *arrière-ban*, the former was an infantry and cavalry force comprised of the voivode's (prince's) retinue and standing troops, the troops of the *slugi* or boyars, and the so-called 'district banners', made up of fortress garrisons and landowning peasants led by their individual district *pircalabi* (sheriffs). Principal element was the *curteni*, the court bodyguard of infantry and cavalry, its name being derived from *curte* ('court'); the same term could also indicate men serving the local military administration. Under the infamous Dracula (Vlad Tepes, 'Vlad the Impaler', 1456-62 and 1476) many of the *curteni* were provided by *viteji*, landowning peasants promoted to the lesser nobility as a reward for bravery on the battlefield, and it is doubtless these to whom a contemporary account alludes when it describes how he 'enlisted a number of noble and faithful horsemen and foot-soldiers whom he gave the money and riches of those killed'. Nevertheless, it is clear that the *viteji* were less numerous and their role less important than in neighbouring Moldavia (see below). Standing troops seem to have originated under Vlaicu Voda (Vladislas I, 1364-c.1377). It is claimed that under his grandson Mircea cel Batran (Mircea the Old, 1386-1418) they numbered as many as 18,000 infantry and 17,000 cavalry, but a more accurate idea of their numbers can probably be drawn from the establishment of a bodyguard of just 1,000 men, including 100 cavalry, by Dan II (1420-31), and a reference by Doukas to Vlad Dracul's *curteni* on one occasion numbering just 300 men. The small number of chiefly foreign mercenaries to be found in Wallachian employ from the beginning of the 15th century usually formed part of the *curteni*, as for instance did the Hungarians and Moldavians provided to Dracula by King Matthias Corvinus and Stephen the Great. One cavalry element of Mircea the Old's standing forces called the *scutelnici* or 'substitutes' indicates that some mercenaries at least were maintained by scutage.

The 'greater army' appears to have first been called up under Basarab, though the term itself is only first to be found in Wallachian sources at the beginning of the 15th century, being mentioned especially under Mircea the Old and Dracula. Requiring the voivode's personal presence in the army, it was a call to arms used in times of national emergency, involving the military service of all men aged 12 or over capable of bearing arms. It is recorded by two Italian ambassadors that when Dracula utilised this levy in 1462 he raised his forces to 22,000 or 24,000 men thereby, though another account claims 30,900. Its officers appear to have been provided by the *viteji*. An additional contribution made by Wallachia's peasantry to the armed forces was that of providing the 'district banners' mentioned above, a selective levy which formed part of the lesser army. These were raised on the basis of fixed quotas of men being supplied from each town and village when required, these being recruited by the voivode's sheriffs rather than the local boyar, which meant, therefore, that the boyars' troops were comprised solely of their own retainers, and that the chances of dissent amongst the nobility were minimised by this limitation of their armed strength. (Even so, under a weak voivode the power of the boyars was such that their consent was often required before military action could be taken.) It seems probable that the quotas of men required from the villages were very small, since even large towns appear to have supplied only 50, 100 or 200 men. Organisation was clearly decimal.

Wallachian field-armies were never particularly large, and often included a considerable proportion of infantry. Western chroniclers' estimates of 10,000 Wallachians at Nicopolis in 1396 can probably be dismissed out of hand — modern estimates would have it that there were no more than 2-3,000. The Italian traveller Torzelo estimated in 1439 that the Wallachian army numbered 15,000 men 'ranking among the most valiant in the world', doubtless referring to the combined elements of the lesser army. Vlad Dracul led 6-7,000 men to join Hunyadi's army in October 1444, and at least 4,000 (organised in 4 companies, i.e. 1,000 men in each) were present at the Battle of Varna, while Vladislas II led a similar number (7-8,000) at Kossovo in 1448. The largest figure for a Wallachian army in this period belongs to Dracula's reign, for as we have already seen he allegedly raised 22-24,000 men in 1462 (though Chalkokondyles says he had only 7-10,000, probably referring only to the lesser army). Whatever it lacked in size, however, the Wallachian army made up for in reputation. Mihailovic, present in the Ottoman army during the campaign of 1461-62, says that 'we were greatly afraid, even though the Wallachian voivode had only a small army, and therefore we always advanced with great caution in fear of them, and every night surrounded ourselves with ditches.'

*The Cumans and Wallachians were very similar in arms and appearance, and significantly the terms 'Cuman' and 'Wallachian' are used interchangeably in 13th-14th century Hungarian sources.

Dracula, incidentally, appears to have been the first voivode to introduce artillery into Wallachian field-armies; its effectiveness is testified by Mihailovic, who tells us that the army opposing Mehmed II's crossing of the Danube in 1462 'killed 250 Janissaries with cannon-fire'. Other sources tell us that Dracula's total armed forces comprised a potential 10,000 cavalry and 30,000 infantry.

Chief military officers after the voivode were the *ban* of Oltenia on the Danube, responsible for frontier defence against the Turks, and the *Spatar* (from the Byzantine *spatharios*), effectively the Marshal, who in the earlier part of this period was responsible for the army's horses but later became the voivode's commander-in-chief.

Wallachian contingents in Ottoman armies

Like all tributary and vassal states, Wallachia was nominally obliged to supply troops to the Ottoman army — Doukas even records that Mircea the Old was killed whilst campaigning under Murad II in 1418. Vlad Dracul too led Wallachian troops in Murad's service, as in 1435 when, Doukas relates, he 'always had to lead the way, because Sultan Murad was afraid that he might attempt to ambush him'! The size of these Wallachian contingents (*Eflak*, as the Ottomans usually refer to them) appears to have been considerable: 12,000 are recorded to have been present in the army that marched against Uzun Hasan in 1473, 10-12,000 in that which fought against Stephen the Great of Moldavia in 1476, and according to two Ottoman sources 20,000 in the army that marched against him in 1484.

At the same time Ottomans could be found in Wallachian armies, the sultan often providing auxiliaries to support the Danesti faction (descendants of Mircea the Old's brother, Dan I, 1383-86) or other rivals for the throne. Dan II, for example, used Ottoman troops against Radu II throughout the 1420s, while Dracula's brother Radu III was supported against him by Mehmed II in 1462.

MOLDAVIA

The principality of Moldavia was originally established in 1352 or 1353 by King Louis the Great of Hungary as a Transylvanian march against Tartar inroads, its first voivode being Bogdan Dragosh (after whom it was at first called Bogdania, the Ottomans continuing to call the country 'Boğdan' ever after). Dragosh threw off Hungarian hegemony as early as 1359 (others say 1365), though after 1397 the country instead became nominally a Polish-Lithuanian vassal. Serious Turkish inroads commenced in the mid-15th century, and tribute was first paid to the Ottomans in 1455, but Stephen the Great (Stefan cel Mare, 1457-1504) successfully repudiated their overlordship and, despite a major defeat in 1476, Moldavia thereafter remained independent until after his death. Polish suzerainty was effectively ended in about 1480, from which time Stephen openly aligned himself with Moscow against the king of Poland. An attempt by King Jan Olbracht (1492-1501) to reimpose Polish claims in 1497 resulted in the defeat of his Polish-Lithuanian troops, supported by Teutonic Knights, by an alliance of Moldavians, Hungarians and Crim Tartars plus 2,000 Ottoman auxiliaries.

Moldavia's armed forces differed little in composition from Wallachia's, comprising 'lesser' and 'greater' armies in exactly the same way, though with the distinct difference that unlike the Wallachians, or come to that the Transylvanians, virtually the entire army was mounted on campaign, which gave it considerable mobility, though the majority of the peasants were only mounted infantry and actually dismounted on the battlefield and fought on foot. The 'Chronicle of Oláh' tells us also that: 'The Moldavians hold themselves to be nobler and braver than the Wallachians, and their horses are better. They can put an army of 40,000 in the field'. Stephen the Great's physician, Muriano, put this figure somewhat higher in 1502, stating that Moldavia 'can assemble an army of 60,000 men in times of need'. Other accounts mention 45-75,000. Most sources seem to agree that the cavalry element (heavy cavalry of boyars, *curteni* and *viteji*, light cavalry of landowning peasants) numbered only about 12-15,000 men, the balance being infantry supplied chiefly by the general levy upon which, it can therefore be seen, considerable reliance was placed.

The obligation of all able-bodied freemen to perform military service when called upon by the voivode is only first to be found mentioned in Moldavian records in 1444, but doubtless it existed in the 14th century and probably even earlier. Little is known of its utilisation in the 14th century, except that when fighting against King Sigismund of Hungary in 1395, Stephen I 'marched with all his people's force', comprising 'a light-armed host and a great multitude of archers'. The Polish chronicler Jan Dlugosz (d. 1480) confirms Stephen the Great's frequent use of the general levy, stating that 'only women and children remained at home', and that 'if he found a peasant without arrows, a bow and a sword, he ruthlessly condemned him to be beheaded.' Nicolae Costin referred to Moldavian peasant-soldiers in 1467 with 'scythes, spears and

axes', and Baltazar de Piscia described the army he saw in 1476 as comprised largely of *rustici* armed with bows, swords and spears. They were led by their district *starostas* (marshals).

The standing troops of the lesser army seem to have been first established by Petru I Musat (1375-91), and comprised the voivode's *curteni* — his standing troops, including castle garrisons and frontier guards (the *strajeri*), some (but very few) mercenaries, and his personal retinue — plus the contingents of the boyars. Under Stephen the Great at least, and probably since the 14th century, the cavalry element of the standing troops was provided by *viteji*, while the infantry were comprised of *voinici* (see page 6) and *iunaci* ('the brave'). Eye-witness descriptions of the army fielded in 1476 put the strength of these household troops at 10,000, but doubtless this does not include all of the frontier troops or castle garrisons, which appear to have been big enough to increase its numbers to 15,000. The figure of 10,000 also occurs in the first half of the 15th century (as, for instance, in 1430, when Sigismund of Hungary called for the voivode of Moldavia to provide that many men for service against the Ottomans), and the gradual increase in size of the standing army is reckoned to have been one of Stephen's achievements.

In addition the *curte* could field a small amount of artillery, probably introduced in the early-15th century. Stephen's army at the Battle of Vaslui in 1475 included 20 guns, and the next year he had an unknown number of cannons at Valea Alba. Most of Moldavia's guns and gunpowder, together with some other armaments (notably swords), were imported from Brasov in Transylvania and Lwów in Poland.

TRANSYLVANIA

Third of the Roumanian principalities, Transylvania was an Hungarian vassal throughout this period, and as a result of the exodus to found Wallachia under Radu Negru late in the 13th century it had the smallest Roumanian population of the three. Its voivode Stephen Laszkovic led allegedly, albeit improbably, 16,000 men at Nicopolis in 1396, but other than that it was only towards the middle of the 15th century, following the commencement of Ottoman raids in 1420, that Transylvania briefly entered the military limelight under its most famous voivode, the celebrated Janos Hunyadi (1440-56).

Traditional military service appears to have been identical to that found in Moldavia and Wallachia, with a lesser army of vassals and mercenaries, backed up by a general levy of able-bodied men when necessary. In Hunyadi's time the mercenary elements were Poles, Germans (including Hungarian 'Saxons'), Bosnians, Italians and Bohemians; the latter even included Taborite Hussites during 1443, commanded by Jenick of Meckov, Uhersko, and Jan Capek of San, and Bohemians fought in addition at Varna, Kossovo and Belgrade. It is probably the lesser army that is intended by a reference to the 'entire' nobility of Transylvania fielding 3,000 men for Sigismund in 1430. In 1456 Hunyadi put 6,000 'veterans' into Belgrade under his son Ladislaus, again probably the lesser army but this time backed up by a larger proportion of mercenaries.

Hunyadi made considerable use of the general levy: in 1442 he raised 15,000 'peasants, townsmen and Szeklers' to confront and defeat an invading Ottoman army, and in 1456 he raised 10,000 from his own estates round Hunedoara and Banat for the relief of Belgrade. In addition Transylvanian peasant levies fought in Hunyadi's armies at both Varna and Kossovo, and he raised a total of 12,000 foot and 1,000 horse from amongst them for the relief of Belgrade. One further source of troops, referred to in 1443, 1444, 1448 and 1456, was provided by crusaders, many of whom were similarly peasants; according to the 'Historia Boemica' only a third were or became skilled at handling arms, while the rest fought with slings and scythes. Most were from Poland, Germany and Austria, and allegedly as many as 20,000 assisted in the defence of Belgrade in 1456.

See also the following section on Hungary.

HUNGARY

Following his accession to the throne, King Charles Robert d'Anjou (1308-42) created a new aristocracy to replace the so-called 'little kings' of the late Arpád-dynasty era. They were required to provide feudal military service, and in addition each had to establish and maintain a personal company of armoured horsemen called a *banderium*, usually recruited mostly from the lesser nobility of their own estates and partly from foreign mercenaries. These *banderia* varied greatly in size (some vassals even having more than one) but could be of substantial dimensions, often comprising 500 men and sometimes over 1,000, but also sometimes numbering as few as 25 men. Strictly speaking the size of each *banderium* depended on the extent of the vassal's estates, and inevitably those of the king, queen, and high-ranking court and church officials were the biggest — the king's *banderium* was about 7,000-strong, for instance, and in the 15th century the despot

of Serbia's (on account of his lands within Hungary) numbered 8,000. They were organised on a decimal basis, with units of 10, 100, and 1,000 men, the last being called a *dandar*, and were maintained at the vassal's expense, though, since they came to be looked upon as private armies at a very early stage, the king often found it necessary to recompense them when he required their support, which could usually only be invoked in wartime.

The other principal means of raising an army in the earlier part of this period was by calling upon the *generalis exercitus*, a sort of *arrière-ban* involving the obligatory service (theoretically as cavalry) of the entire lesser nobility, which in Hungary was considerable (numbering between 20-40,000 families by the 15th century). However, by a law of 1222 these could only be called upon to serve within the boundaries of Hungary and only for 15 days, not being obliged to serve beyond the frontier at all. The constrictions this imposed upon a military expedition are well-evinced by an episode of 1439, where the lesser nobility abandoned King Albrecht I's army during a campaign against the Ottomans because their 15 days were up, obliging Albrecht, left with insufficient troops, to abandon his undertaking. In addition the *generalis exercitus* lacked organisation and leadership, and by the early-15th century at the very latest the lesser nobility of which it was comprised had largely deteriorated into an ill-armed, upper-class peasantry serving chiefly on foot (horses, where owned, being used only for transport).

The largest armies raised during the 14th century were seemingly those which marched to Zara in 1345 (80,000 Hungarians, Bosnians, Austrians, Croats, Bohemians and Styrians), and fought against Sultan Bayezid I at Nicopolis in 1396. The latter army is variously stated by contemporaries to have numbered from 16,000 (Schiltberger) and 60,000 (Froissart) to 150,000 men (Philippe de Mézières), A. S. Atiya and other modern authorities tending to favour figures of 80-100,000; Froissart in fact has it that Bayezid estimated the strength of the whole Christian army at 100,000, a figure repeated by Boucicault's biographer. Atiya ('relying almost entirely on the chroniclers', as he puts it) agrees that the entire army, including crusaders, totalled 100,000 men, of which the 'Hungarian' elements comprised 60,000 Hungarians, 10,000 Wallachians and 13,000 Styrian, Bohemian, Polish and Italian mercenaries and crusaders mixed. Another authority calculated that the Hungarian army was made up of 36,000 Hungarians, 26,000 Hungarian mercenaries, 16,000 Transylvanian infantry, 10,000 Wallachians and 12,000 German and Bohemian mercenaries — i.e., 100,000 men in all. The individual figures cited for the non-mercenary elements in this list are certainly not beyond the realms of possibility; the proposed quantity of mercenaries, however, does stretch credibility a little too far.

The Militia Portalis

Following the army's poor showing at the Battle of Nicopolis, a *Diet* (assembly) of 1397 ordained that in future those of the so-called lesser nobility who were unfit for service were to be exempted. Instead each baron and noble was to provide and equip an archer, probably mounted, from each 20 *jobagiones* or 'serf-lots' that he owned. However, this attempt at reform proved unsuccessful, and new attempts at reorganisation were instigated by Sigismund (1387-1437) in 1432-35. The better-off members of the lesser nobility were still required to serve in person, but the poorer of them were exempted. In the event of a general campaign those with lands (lay and ecclesiastic landowners alike) were now required to field 3 mounted men per 100 *serf-lots*, i.e. one man per 33 (amended to one man per 10 in Transylvania in 1435), armed with at least a bow by the decree of 1432 or with bow, quiver, sword and lance by that of 1435; these constituted the *militia portalis* (the *serf-lots* probably being the same as *portae*, which were units of tax-assessment). Those with less than 33 *serf-lots* were grouped together to jointly supply the appropriate contribution of men, each county being expected to provide a specific quantity under its *comes*. The 15-day time limit was abolished and service could now be called upon for as long as required. The principal restriction on its use was that the *militia portalis* could only be mustered in wartime. Sigismund anticipated being able to raise some 12,000 men by this means. In 1454 a new decree actually called for 4 mounted archers and 2 infantrymen per 100 *portae*, the text of the decree admitting to the 'extraordinary' nature of this doubled demand, promising to revert to 'ancient custom' thereafter. By this time *serfs* owing fealty to a lord or prelate were allowed to be incorporated into their *banderia* on campaign.

The service of one man per 20 *jobagiones* reappeared briefly in 1432 while an army was being raised against the Hussites, and this proportion of service was again called for in 1459, the *militia* in addition being expected to serve outside of the kingdom when led by the king in person, though its obligatory duration of service was now reduced to 3 months. This service was required of Wallachians, Ruthenians and Slavs in addition to Hungarians, but not of the much-privileged Saxons or the Szeklers, Cumans, Jazyges and Tartars, who performed military service under their own leaders as they always had. (Szekler service as set out in 1473, when it was in decline, was divided into those who served with 3 other mounted men; those

who served alone on horseback; and those who served as lightly-armed infantry. The Szeklers and Saxons together provided 4,000 men in 1430.)* A decree of 1463 increased the militia obligations so that nobles with 10 serfs or less had to serve in person, and for every additional 10 serfs had to field a mounted archer. However, this increased requirement was shortlived, probably lasting only a few years at most before reverting to the 1:33 ratio originally introduced by Sigismund. Yet another decree, this time dating to 1492, revised the obligation to 1:20 again (armed with bow, shield, lance, and if possible a mail corselet), amended in 1498 to 1:36, or 1:24 in the southern border counties which fielded hussars while the rest fielded heavy cavalry. It has actually been suggested that the word 'hussar' itself was derived in the mid-15th century from the frequent practice of calling upon one man in each 20 (*husz*) to serve in the militia portals.

Matthias Corvinus and the Black Army

The most celebrated Hungarian soldier of the 15th century was Janos Hunyadi, voivode of Transylvania 1440-56, appointed Hungary's *Capitaneus Generalis* in 1453, who achieved a series of notable victories over the Ottoman Turks in Transylvania in 1442 with a largely mercenary army comprised principally of Bohemians. This he maintained at his own expense until his election as Regent in 1446, upon which he introduced a tax (a florin on every porta) designed to finance the maintenance of such a permanent army, since the banderia, although they still existed, were regarded as too ineffective and unreliable to constitute the nucleus of a standing army. This policy was continued under Hunyadi's son Matthias Corvinus (king of Hungary 1458-90), under whom the mercenary army steadily increased in size. Modern authorities generally refer to his army as the 'Black Army' (*Acies Negri* or *Exercitus Nigrorum*), though this term was actually only first used to describe the forces of his successor Vladislav II (László VI), which were admittedly based on a core of mercenaries originally employed by Matthias. The chronicler Bonfini was the first to use the name, attributing it to the 'toughness of its soldiers', modern writers mistakenly claiming instead that it arose from the fact that the soldiers wore black armour or black uniforms, for which there is no evidence at all. It was comprised of light and heavy cavalry, infantry and artillery, with cavalry usually predominant. Though many of the Hungarian lesser nobility provided its officers, most of these mercenaries were certainly foreigners, a fact that can probably best be explained by the answer given to Bertrandon de la Brocquière when he himself remarked on it after seeing 25 Germans arrive to join the garrison of Belgrade in 1433: on asking why Serbs or Hungarians were not employed instead, the Germans told him that 'the Serbians were subjects and tributaries of the Turk, so they could not be trusted; and as for the Hungarians, they were so much afraid of him [the sultan] that if he should appear they would not dare to defend it [Belgrade], however great its strength. They were therefore obliged to call in foreigners'.

As early as 1463 a Venetian letter reported that Matthias' standing army numbered 2,000 cavalry and 5,000 infantry; that these included the royal banderium is likely, as too is the fact that it probably included many Bohemians, Germans and Silesians since these had likewise constituted the mainstay of Hunyadi's own mercenary troops (German and Bohemian handgunners featuring prominently in Hunyadi's forces at the Battle of Kossovo in 1448, for example). Bonfini, writing after Matthias' death, speaks of Bohemians, Hungarians and Serbian light cavalry as comprising the king's 'three armies' in 1477 and 1482; doubtless the Bohemians predominated since Bonfini actually states that Matthias' 'Black Army' was comprised of Bohemians. Certainly many of his leading generals were Bohemians, but many others were Germans, Serbs† and Silesians, all of which provided substantial elements of the army, as can be seen from the following table giving details of Matthias' army as it stood in 1475/9, taken from the report of another Venetian, Sebastiano Baduario:

Bohemians, Moravians, Silesians	6,000 heavy cavalry 10,000 infantry
Hungarians	10,000 heavy cavalry 4,000 infantry

*Many different theories have been put forward regarding the origins of the Székely or Szeklers. Some say they were descended from a Bulgar tribe, others that they were descended from the Avars or even the Huns. However, one more recent explanation relates them to the Blachi (often confused with the Vlachoï, or Wallachians), a Qarluq tribe whose name means 'white-piebald' or 'white-legged', a description of their horses. Interestingly, the later Székely border regiment and the 19th century Székely cavalry rode white-legged horses 'in conformity with a tradition dating back several centuries', and the word Szekler could itself derive from *săkil*, meaning a white-legged horse. Szeklers still provided military service in exchange for their lands up to the late-15th century, their leaders — chief of whom was the Count Székely — being accepted as equal in status to feudal lords.

†Serbs settled in Hungary in large numbers from 1400 on. Their military obligations, always set higher than those of native Hungarians, were invariably assessed in hussars rather than heavy cavalry.

Szeklers with lance, shield and bow	16,000 cavalry
Transylvanian banderia	(?8-10,000) cavalry
	2,000 handgunners
	2,000 Wallachian infantry
Vuk Brankovic, despot of Serbia in exile	5,000 hussars
Auxiliary forces	
Voivode of Moldavia	12,000 cavalry
	20,000 infantry
Voivode of Wallachia	8,000 cavalry
	30,000 infantry

Of these, the first two elements are undoubtedly the 'Black Army' and the banderia respectively. Despite the fact that even on their own they total 30,000 men, most chronicles imply that Hungarian armies of this date were relatively small, on the whole numbering only between 10-20,000 men; for instance Vlad Dracul, voivode of Wallachia, observed of the 20,000-strong Hungarian army en route to Varna in 1444 that it was smaller even than the retinue that customarily accompanied the Ottoman sultan on hunting trips! It is clear from Baduario's list, however, that the total number of troops available was over 125,000. In addition Marino Sanudo reckoned that 120,000 Hungarian troops were available in an emergency, probably referring to the potential manpower available from a general levy of the banderia, lesser nobility and better-equipped serfs.

In 1485 — by which date Matthias had established a shortlived empire by his conquest and occupation of Lower Austria, Styria, Carinthia, Moravia, Silesia and Lusatia — the 'Black Army' itself totalled as many as 20,000 cavalry, 8,000 infantry, 5,000 wagons, and artillery, but it had reached the zenith of its fortunes. Its maintenance was proving a severe drain on the resources of the crown, which would have been utterly crippled if Matthias' plan to employ perhaps 10,000 Swiss (he had first employed a Swiss contingent in 1482) had not been annulled by his death. His successor King Vladislav II of Bohemia was not able to maintain it thereafter, not least because he was obliged to abolish the tax that had supported it in exchange for the Hungarian nobility's support of his claim to the throne. The army itself, under its German commander Johann Haugwitz, was sent against the Turks without provisions or pay, and in the political turmoil which followed Matthias' death began to depend on looting for its sustenance, until, after his accession, Vladislav sent the celebrated Pál Kinizsi against it with a banderial army. Reeling back from Kinizsi, the 'Black Army' clashed with the invading forces of Sigismund of Austria and was subsequently dispersed (1493), though some elements were nevertheless retained thereafter in Vladislav's service.

Following the demise of the 'Black Army' the nobility forced the Diet to exert pressure on Vladislav so that their personal banderia thenceforward received regular pay in much the same way as the mercenary army had. Indeed, the tax that had previously maintained the 'Black Army' was collected again in 1491 and then from 1493 on for this very purpose, the nobility usually collecting and retaining it for themselves. In 1498 the banderial armies were recorded as follows:

Royal banderium	1,000 cavalry
Despot of Serbia's banderium	1,000 hussars
Banderia of prelates and the Church	6,750 cavalry
Banderia of <i>bani</i> and voivodes of vassal territories, paid by the king	1,600 cavalry
Banderia of 40 barons and 2 Croatian counts	(?6,700-12,500) cavalry

By this time the militia *portalis* may have itself been comprised of mercenaries, employed on the basis of one per 20, 24 or 36 *portae*, and had anyway become hard to distinguish from banderial troops.

Artillery

Though the first reference to the use of gunpowder artillery in Hungary goes back to the relatively early date of 1354, it was chiefly reserved for the defence of fortresses until the mid-15th century, possibly because Hungarian thinking in this field was influenced at an early stage by the Ottoman preference for big, unmanoeuvrable guns as described on page 00. Brocquière actually gives a description of brass cannons that he saw in Belgrade in 1433 that could equally well have applied to Ottoman guns: 'two of them were formed of two pieces, and one of such a size I never before saw the like. Its mouth was 42 inches in diameter'. The bore of this gun was therefore greater even than that of Urban's monster used at the siege of Constantinople, while most authorities agree that Urban himself was an Hungarian. Hunyadi and Matthias seem to have been responsible for the introduction of field-artillery, doubtless under the influence of their Bohemian

mercenaries since it appears to have generally been used in conjunction with the tactical deployment of wagons on the battlefield. Baduario records in his report of 1475/9 that in addition to having equipped the barges of the Danube fleet with guns, Matthias' field army had as many as 30 bombards firing 100-200 lb shot, 30 culverines firing 50-100 lb shot and 12 gun-carriages each mounted with 6 guns firing 50 lb shot. Nevertheless, Matthias apparently favoured trebuchets for siege-work. Most of his gunners were Hungarian artisans from the towns.

The river fleet

In the 15th century a small flotilla (*naszad*) of river-boats was maintained on the Danube and the Sava with its principal bases at Belgrade and Sabac. Crewed principally by Serbs and other South Slavs, it performed sterling work during the Ottoman siege of Belgrade in 1456. As already mentioned, Matthias Corvinus subsequently equipped it with artillery.

THE HOLY ROMAN EMPIRE

For much of this period the Holy Roman Empire underwent severe political unrest resulting from the elective nature of the German monarchy, the principal intention of its seven Electors (see page 000) being to secure their own autonomy by preventing the establishment of a strong, hereditary dynasty on the throne. In the long run, however, they were entirely unsuccessful in this ambition, since the inevitable result of their policy was the establishment of not one but *three* powerful ruling families, the Wittelsbachs, Luxembourgs and Habsburgs, who between them ruled the Empire throughout the 14th and 15th centuries, the Habsburgs ultimately establishing a dynasty that was to rule the Holy Roman Empire uninterrupted from 1452 right up until 1806, and the Austrian Empire thereafter until its disintegration in 1918. At one time or another during the period covered by this book the Holy Roman Empire included — in addition to the conglomeration of virtually independent duchies and counties that made up Germany itself — Austria, Styria, Carniola, Carinthia and the Tyrol (these being the nucleus of Habsburg territory), plus Luxembourg, Bohemia, Moravia, Lusatia, Brandenburg and Silesia* (which were the core of the Luxembourg lands) and even Hungary and North Italy. The less important Wittelsbachs' lands principally comprised Bavaria, the Rhine Palatinate, Holland and Friesland.

The principal result of his vassals' virtual independence was that the Emperor was dependent on the goodwill of the Imperial Diet (parliament) for military support, both for the defence of the Empire and for the so-called *Romzug* ('Rome expedition'), when he would travel to Rome for his coronation as Emperor. The *Romzug*, the furnishing of an army of about 12,000 men for 6 months' service by approval of the Diet, remained the basis on which Imperial armies were mustered throughout this period and even into the 17th century, and even when the provision of troops (*Volkshilfe*) was gradually replaced by the provision of money (*Geldhilfe*) in order that mercenaries might be hired direct, the sums allotted were still described as *Römermonaten* or 'Rome money'. Either way, professional soldiers were favoured over the feudal *Landesaufgebote* from the 13th century onwards, since in addition to obliging the nobility to provide troops in times of danger the latter also called for the conscription of every thirtieth, tenth or even fifth able-bodied freeman — a likelihood which made the German nobility, with an innate dread of peasant insurrection, understandably nervous. In addition, if the Diet approved the summoning of troops from the nobility and the cities these almost invariably arrived late, if at all, and since the 6-months' military service approved by the Diet commenced with recruitment rather than muster, the effective campaigning time available was often curtailed by several weeks as a result. Furthermore, these contingents were often sent on campaign unpaid, which did little for their morale.

As some indication of the problems inherent in the *Volkshilfe* system, when Sigismund asked the Diet to approve his request for an army of 6,000 *Gleiven* (i.e. lances, in 15th century Germany usually comprised of a man-at-arms, page and archer/crossbowman, all mounted, sometimes including in addition several attendants serving as foot-soldiers†), for a campaign against the Hussites, he was told that it was impossible to raise an army that size in Germany or to supply it once it was in Bohemia; they would, however, authorise the raising of 3-4,000 *Gleiven* if the cities would raise another 1,000 of their own, but the cities insisted that such a requirement was beyond their financial capabilities. Nevertheless, in 1430 the Diet actually authorised

*Polish Silesia was in fact a Luxembourg vassal from the 13th century on, becoming part of Bohemia in 1368, and Silesians are frequently to be found in Bohemian-Imperial armies or contingents throughout this period, even fighting against the Poles (as in 1331, and at Tannenberg in 1410). They probably appeared in their greatest numbers under Emperor Sigismund.

†In fact there could be 2 servants and up to 3 archers or crossbowmen in a *Gleve*, of whom the mounted archer(s) dismounted to fight. For the lance unit elsewhere in Europe see volume 1, pages 6, 22, 29, 35 and 41; and below, pages 67 and 69.

the raising of as many as 8,200 Gleven, though fairly certainly with tongues firmly in cheeks since they even expected Burgundy, Savoy and the Ordensstaat of the Teutonic Knights to provide contingents. The resultant army, considerably smaller than that authorised, was routed at Domazlice in 1431. Gleven were organised on a decimal basis, each 10 being commanded by a Captain and each 100 by an *Oberhauptmann*. In addition there could be found *Einspännige*, mounted men without any following, who were usually attached to Gleven for tactical purposes. The latter are comparable to Italian 'broken lances'.

By contrast, the hiring of mercenaries (including many of the Emperor's feudal vassals) usually ensured prompt attendance and professional quality. Their payment was usually covered by Römermonaten or additional taxes which had to be approved by the Diet, invariably only after prolonged wrangling between Diet and Emperor. Between raising such troops and actually being given the money with which to pay them months, or even years, could elapse, during which time the Emperor had to borrow the necessary money at fantastically high interest rates (20-30%), which can have done little for the economy of the Imperial household. Even then, the sum authorised by the Diet tended to cover only the soldiers' wages, not the inevitable administrative costs, so that the actual strength of an army was often well below its Diet-approved theoretical strength. Other than Romzug-money, Geldhilfe sometimes took the form of authorisation being granted to the Emperor to collect a direct tax called the *Gemeiner Pfennig*, calling for payment of half or one per cent of the value of all property or income. Generally speaking, the Diet authorised Volkshilfen and Geldhilfen alike for the year following, but towards the end of this period they were sometimes authorised for several years at a time, as in 1495 when a Gemeiner Pfennig was granted for 4 years.

An inevitable result of these various restrictions being placed on the Imperial establishment was an increasing reliance by Emperors on the troops of their own hereditary territories — Luxembourg lands for most of the 14th and early-15th centuries (1308-13, 1346-1400 and 1410-37), and Habsburg lands thereafter — so that as the 15th century progressed the Imperial army became more and more an Austrian/Habsburg army, an ongoing process completed only in 1806 with the final abolition by Napoleon of the Holy Roman Empire and the creation of the nascent Austrian Empire. Admittedly, as dukes of Austria the Habsburgs had to contend with their own Diet at home just as they had to contend with the Imperial Diet in Nuremberg, but since they were usually being asked for troops in order to defend their own territory against outside aggression they generally tended to argue less and ensure that requisite troops and money were made available more quickly. Before long Austria's Diet authorised the maintenance of a small regularly-paid frontier force to guard against border incursions (the 'daily war', as it was called), numbering 1,000 cavalry in 1432. These troops, comprised both of mercenaries and militiamen from the frontier towns, were a key element in the defence of Austria against both the Hussites and the Hungarians, and later (from 1471 on) against the Ottomans too.

Town militias

Though their principal military responsibility was the defence of their own towns and the maintenance of their walls, in cases of particular danger town militiamen could be found serving outside of their home towns, though rarely further than a half-day's distance from them. However, by the late-13th century it had become fairly commonplace to find at least some mercenaries being hired to serve in place of militiamen, a trend which continued throughout this period. Nevertheless, it was a slow process; initially only the defence of the most exposed towers and the suburbs beyond the town walls was allocated to hired professionals, but in due course they took responsibility for the inner defences too and often even provided captains for the town militia. Du Boulay points out that one occasional complication resulting from the hiring of mercenary captains was that they might turn out to be related to those hired by the town's enemies, in which circumstances the campaign was 'rarely pursued to a conclusion', seemingly a rare enough occurrence anyway through lack of money, determination and military competence on the part of the inexperienced local knights who tended to be hired. More professional bodies of mercenary troops, with uniforms or badges to distinguish them, were also available, but these tended to function independently, in much the same rapacious capacity as the Free Companies that roamed France throughout the Hundred Years' War.

Organisation was usually based on the division of the town into *Viertel*n (quarters) based on its principal gates. Each quarter was commanded by a *Viertelmeister* appointed by the town council, who was assisted by other officers plus trumpeters and tower guards. The mayor himself usually doubled as commander of the militia, though towards the end of this period professional soldiers were often employed in this capacity instead, largely as a result of the growth in importance of artillery. The municipal authorities were often responsible for the militia's arms and equipment, which, coupled with the added expense of hiring mercenaries, resulted in many militia forces being proportionately small. The largest force fielded by Vienna,

for instance, numbered just 300 cavalry and 5,184 infantry (this was in 1458). Strassburg and Aachen, on the other hand, fielded about 20,000 men and 19,826 men in 1392 and 1387 respectively.

Many towns boasted their own firing ranges and drill squares, and some attempt was made at training even in peacetime. In addition, in the late-14th century some towns began to maintain their own artillery, which became the responsibility of a paid officer called a *Büchsenmeister* or *Geschützmeister* (who received an additional year's pay if he was successful in repulsing an enemy assault).

Artillery

Gunpowder artillery was apparently in use in Germany by the 1320s, a later source recording the use of *serpentine et canons* at the siege of Metz in 1324; indeed, many continental authorities even attribute the invention of gunpowder to a German monk of Metz or Fribourg named Berthold, dating the discovery to 1313 (based on erroneous dating of one ms.) or 1320. In early German sources the term *Büchsen* or *Püchsen* was generally used for firearms of all types, but later these terms came to refer only to handguns. Amongst the many types of early gun referred to by this term were *Pfeilbüchsen* (quarrel-guns, for which see page 160 and figure 145 in volume 1); *Karrenbüchsen* (light guns on *chars* or *charrettes* as described on page 157, volume 1, firing shot weighing about 3 lbs); *Wagenbüchsen* (wagon-guns, probably like that illustrated in figure 170); *Centnerbüchsen* (guns usually firing 100 lb shot); and *Tarasbüchsen* (tarasnicas as depicted in figures 167 and 168, copied from the Hussites).

Much bigger than any of these were the massive bombards used in siege-work here as elsewhere in Europe, with the one difference that, judging from the size of their shot, the very largest of them appear to have been in the same class as the giant guns used by the Ottomans rather than those developed in France and the Low Countries. One fielded by the city of Frankfurt for the siege of the Count Palatine's castle of Tannenberg in 1399 required 20 horses to draw its barrel and another 34 to draw its stand, plus 14 wagons to transport 16 large shot, 12 smaller shot and the requisite gunpowder. It is on record that Tannenberg's walls were pierced at the second shot from this monster (appropriately named *Der Grosse Frankfurter Büchse*), which is unsurprising when one learns that shot discovered in the rubble of the castle weighs some 925 lbs.

By the late-15th century individual German princes and cities could field considerable quantities of artillery. Markgräf Albrecht Achille of Brandenburg, for instance, proposed in 1474 that his army of 30,000 men should be accompanied by 30 serpentines, 10 mortars and 70 ribaudequins, while the city of Innsbruck in 1486 had 8 large cannon, 2 large mortars of 24-inch calibre, 4 medium-sized mortars, 5 medium-sized cannon, 13 serpentines and 15 cortaux. The Duke of Lower Bavaria-Landshut had a similarly large yet diverse collection of guns in 1488-89, comprised of 4 large cannon, 3 mortars, 9 medium-sized cannon, 18 small bombards, 17 serpentines, 1 cortaud and 31 culverines.

THE HUSSITES

The Hussites were named after Jan Hus, a Bohemian reformer whose execution as a heretic at the Council of Constance in 1415 gave rise to an upsurge of nationalism in Bohemia. There were two principal Hussite factions, comprised of the moderate Orebiters and the more extremist Taborites. The former, named after Mount Horeb (i.e. Mount Sinai), who were also referred to as Utraquists (see figure 128) or the Calixtine faction, represented the intellectual, urban element of the Hussite movement. Their most important leader was the celebrated half-blind Jan Zizka, who became one of the 4 captains of Tabor in 1420 before assuming leadership of the Orebiters in 1423. It was after his death in 1424, on which Prokop the Short became their principal leader, that the Orebiters began to call themselves the Orphans. The Taborites, named after Mount Tabor (as they called their place of assembly in southern Bohemia), appealed more to the populace. In addition to the armies fielded by these two factions a third force was provided by the mercenary-stiffened Prague levy, and others by pro-Hussite provinces. There was also a Polish-Lithuanian involvement, King Vladislav II's nephew Zygmantas Kaributas (Zygmunt Korybut) contriving to have himself elected regent of Bohemia in 1421 with Zizka's support.

The conflict of opinions that resulted from the fragmentary nature of the Hussite movement inevitably led to internal tension, such as existed between the Praguers and the Taborites almost from the outset. Friction was frequently apparent between the movement's various other factions too, particularly between Prague and the Orebiters in 1424 (ending in the collapse of Old Prager power for 10 years, following the Battle of Malesov that year). Korybut made some attempt to unite the Hussites, but where diplomacy failed even he resorted to force, resulting in clashes with both the Orebiters and the Taborites. However, in 1427 he was subjected to close confinement when plans were discovered in which he had intended to restore Bohemia to the Catholic church in exchange for its crown, and he subsequently fled the country. Prokop the Bald

(or 'the Great'), the leader of the Taborites, was thereafter recognised as effective leader of the country. Only on a handful of occasions — as at Vysehrad in 1420, Aussig in 1426 and Glatz in 1428 — did as many as 3 of the Hussite movement's factions actually co-operate with each other.

Even thus fragmented, the Hussites could field considerable forces to confront the several Catholic crusades launched against them between 1420 and 1432. Zizka led some 9,000 men from Tabor in support of Prague as early as 1420*, and in 1421 a Prager army under Wilhelm Kosta of Postupice numbered 7,000 men and 320 wagons. The same year Korybut allegedly led a force of 5,000 Poles and Lithuanians in support of a Moravian Hussite faction called 'The Temperate Ones' (*Qui Mediocres Vocantur*); perhaps half this force was of cavalry since a Silesian source of 1422 put his strength at 2,500 men-at-arms. In 1423 Zizka led 3,000 Orebites with 120 wagons at the Battle of Horice, and in 1424 he fielded 7,000 infantry, 500 cavalry and 300 wagons against the Praguers at Malesov. At the end of 1429 the introduction of the so-called *spanile jizdy* ('glorious' or 'beautiful rides', comparable to the English *chevauchées*) against Germany saw Prokop the Bald organise 5 armies totalling in all 40,000 infantry, 4,000 cavalry and 3,000 war-wagons, probably their largest muster of the entire period of the Hussite wars, though in 1431 he is again reputed to have led 40,000, or possibly 55,000, men and 3,000 wagons, this time allegedly including some 8,000 Poles and Lithuanians under Korybut (though a more credible source puts his contingent at only about 1,000 Polish knights and mercenaries).

The wagons referred to several times above were the key to the Hussites' military superiority over their German and Catholic Bohemian opponents, as will be explained in the section on tactics. The crews of such wagons are variously recorded in contemporary sources as 10 or 20 men. The 'Hodětín Ordinance' says 20, comprised of 2 well-armed drivers, 2 handgunners, 6 crossbowmen, 14 flailmen, 4 halberdiers and 2 pavisiers; the 'Nuremberg Entwurfen' of 1428 and 1430 list instead only 2 flailmen, 2 halberdiers and 2 or 4 crossbowmen. Interestingly an Austrian *Wehrordnung*, or army ordinance, of 1431, calling for military reorganisation designed to combat Bohemian incursions, specifies Hussite-style service wherein strong wagons pulled by 4 horses provide the nucleus of the army, each crewed by 20 men comprising a driver, 3 handgunners, 8 crossbowmen, 4 flailmen and 4 halberdiers; an amendment to this ordinance the following year mentions handgunners but no longer specifies a quantity, probably a tacit admission that it was impossible to equip as much as 15 per cent of the army with firearms! Amongst Bohemians and Austrians alike, each wagon had its own commander, wagons then being grouped into tens, and then into 'lines' of 50 and 100 wagons under *Zeilmeistern* (Line masters), overall command being the responsibility of the Captain of Wagons. In addition there was a Captain of Cavalry, a Captain of Infantry and a Captain of Artillery. The infantry at least were organised in units of 100 men, this being the usual strength of the *rota*, which is the unit mentioned in Zizka's ordinance of 1423. Hussite cavalry were normally outnumbered by their infantry on a ratio of about 1:10; they first appeared in 1420, when Zizka trained a body of crossbow-armed young townsmen to act in a scouting capacity, mounting them on captured German horses (the unharnessed wagon horses otherwise being utilised). As support for the movement grew, the retinues of pro-Hussite Bohemian noblemen (*szlachta*) came to predominate amongst the cavalry.

Other than their war-wagons, the Hussites' other principal tactical innovation was the large-scale introduction of firearms onto the battlefield. In addition to the various conventional types of gun that had been universally adopted throughout Europe and the Near East by the early-15th century, the Hussites made widespread use of two types of artillery of their own invention, the *tarasnice* and the *houfnice*. The latter, called a *Haufnitze* or *Haubitze* in German (giving rise to our 'howitzer'), only first appears in official sources during the 1440s, but other accounts say howitzers were used at the Battle of Aussig in 1426 and were the principal type of Hussite field-gun. It had an 8-12 inch calibre. The *tarasnice* is described under figures 167 and 168. Their larger guns, the ubiquitous bombards, only saw action during sieges. At the 6-month siege of Karlstein in 1422, where the Praguers under Korybut fielded 41 guns, there were 4 large bombards of which one, called *Rychlice* ('Rapid') could fire 30 shots a day compared to the 7 shots which were all that the others could manage. On this occasion at least, and doubtless on others too, the Hussite besiegers also used a large number of trebuchets, which appear to have done more damage than the guns.

Modern authorities reckon that a Hussite army of 6,000 men would have had about 36 field-guns, 10 larger guns and about 360 handguns, and that in the 'glorious rides' of 1429-30 (where the Taborites were accom-

*Sigismund's opposing army on this occasion numbered some 80,000 men according to his contemporary biographer Eberhart Wendecke, a Prague chronicler stating that in addition to Germans it included Serbians, Wallachians, Bulgarians, Poles, Ruthenians, Russians, Lowlanders, Swiss, Englishmen, Frenchmen, and Aragonese and other Spaniards.

panied by the better-equipped Prague militia and other troops) their 3,000 wagons may have included 300 field-guns, 60 larger guns, 5 bombards and as many as 3,000 handguns.

A renewed bout of anti-Hussite crusades took place in 1464-71, led by Zdenek of Sternberk and other Catholic Bohemian lords against King Georg Podiebrad of Bohemia, the so-called 'Hussite king'. The enemy this time principally comprised Hungarian and Silesian troops under Georg's son-in-law King Matthias Corvinus of Hungary. King Georg, needing more and more men to stand up to Matthias' largely professional army, took to hiring mercenaries and independent free companies, the latter usually called 'Brotherhoods' or 'Beggars' (*Bratricsi*), comprised of Bohemians who had been employed as mercenaries in other countries (appropriately enough including Hungary). They were paid for by the revenues of the silver mines at Kutna Hora and elsewhere. In addition, in 1470 he issued an edict that each of Bohemia's 10 districts were to raise and maintain a permanent defence force, ranging in strength from 350 men to more than 1,000 and probably numbering about 6,000 men in all. Approximately a tenth were to be cavalry, the rest infantry with a war-wagon per 18-20 men, therefore totalling about 270-300 wagons in all. By these means Georg was able to field armies of between 5-10,000 men, of whom only 1,000 at the most were usually cavalry.

THE ORDENSSTAAT OF THE TEUTONIC KNIGHTS

After the fall of the city of Acre in 1291, the headquarters of the Teutonic Knights of the Hospital of St Mary of Jerusalem moved to Venice, but remained there only until 1309, at which date it was transferred to Marienburg in Prussia. The Order flourished during the course of the 14th century, purchasing Reval and northern Estonia from Denmark in 1346; seizing the Polish duchy of Dobrzyn in 1392 and the island of Gotland in 1398; and being ceded Samogitia by Lithuania in the same year, thus finally linking the Prussian and Livonian halves of the *Ordensstaat*. It reached the limits of its territorial expansion by acquiring Neumark in 1402. This apogee of its power was shortlived, however. Dobrzyn was returned to Poland by the Order in 1405, Gotland was returned to Denmark 2 years later, and in 1409 Samogitia received Polish-Lithuanian support in a revolt that was to culminate in the campaign and battle of Tannenberg in 1410. The Order's defeat there was disastrous, and payment to Poland of a war-indemnity that amounted to 10 times the average annual income of the King of England led to financial ruin. After several decades more, the German nobles and burghers of the *Ordensstaat* revolted in 1454 and offered to hand Prussia over to Casimir IV of Poland. 13 years of bitter war ensued, with the Order's 8,000 unpaid mercenaries ultimately selling the towns that they garrisoned — including Marienburg itself in 1457 — to the Poles and rebel German lords. By the Peace of Thorn of 1466 Casimir received a further considerable part of Prussia and the homage of the Order's *Hochmeister* (Grand Master).

Though the Order survived even this humiliation with remarkable resilience it was, nevertheless, the effective end of an era, especially since one of the conditions of the Peace was that thereafter no less than half of the Order's brethren were to be Poles. The Peace of Thorn effectively divided the Order too, for one of its results was that the *Landmeister*n (see below) of Livonia and Germany became far more independent. The Order's Livonian brethren played an active and notably successful role as allies of Lithuania against the Muscovites in a war of 1499-1503, under their celebrated Landmeister Walther von Plettenberg, who defeated the Russians on the Seritsa River in 1501 (where his 4,000 horse, 8,000 foot and artillery drove back 40,000 Muscovites), and then won a signal victory with only 5,000 men at Lake Smolina in 1502. The Order's final demise in Prussia came some 20 years later, when the last *Hochmeister* became a Lutheran. It survived somewhat longer in Livonia, until smashed in the mid-16th century by Ivan the Terrible, the last Livonian Landmeister ceding the Order's lands to Poland in 1562.

Organisation remained much the same as is set out in *Armies of Feudal Europe*. Principal officers of the Order were the *Hochmeister*, his deputy the *Grosskomtur* (Grand Commander), the *Ordensmarschall* (Marshal of the Order), *Spittler* (Hospitaller), *Trapier* (Draper, or Quartermaster) and *Tressler* (Treasurer). Of these the *Grosskomtur* acted as castellan of Marienburg, and the Treasurer inevitably also stayed with the main Convent. The others became local administrators-in-chief, the Hospitaller commanding Elbing, the Draper Christburg, and the Marshal Königsberg, where the Order's headquarters was to be established after the loss of Marienburg in 1457. In addition to these there were the provincial Landmeisters of Germany, Prussia*, Livonia and Italy, plus occasionally regional commanders called *Landkomturen*. The Livonian Landmeister was usually based at Wenden, and was assisted in turn by his own marshal, draper and treasurer. The basic unit of administration in Prussia and Livonia alike was the *Komturei* ('commandery'), comprising at least

*The Prussian Landmeister's office was abolished when the Order's headquarters was transferred to Marienburg at the beginning of this era.

a dozen brother knights plus usually about 100 or more other soldiers — serving brethren, mercenaries and militiamen — commanded by a *Komtur* (commander) or a castellan, or in the case of more isolated commanderies a *Vögt* (advocate), who was also responsible for tax collection and local government.

Teutonic Knight armies were generally comprised of 4 distinct elements, being brethren, vassals, mercenaries, and adventurers. The brethren were either brother knights (*Ritterbrudern*) or serving brethren (*Diendebrudern*), the latter being non-knightly men-at-arms. They were organised into lances as elsewhere in Europe, each lance comprising a man-at-arms, another armed horseman, and a mounted crossbowman or archer (who probably often fought mounted in the role of light cavalrymen), plus 4 horses, the man-at-arms mounting the fourth horse just before entering battle. Relatively small in numbers, many brethren served as officers and NCOs to bodies of mercenaries and militiamen. Most were Germans (from the north in Livonia, from the south in Prussia), but by the end of the 14th century they also included many Poles and even Prussians and Lithuanians. The Order's vassals provided cavalry in return for grants of land, and even infantry in the form of a militia levy (see below). The cavalry included many light horse, raised on the basis of one per 40 or 50 *Hufen* at the beginning of this period, increasing to one per 25-30 *Hufen* by the 1370s and one per 10-15 by the early-15th century (though in the frontier wilderness of Lithuania and Samogitia estates remained somewhat larger). Men-at-arms tended to serve in exchange for estates twice the size of those of light cavalrymen. In Estonia in 1350 it was stipulated that one 'well-armed' German (i.e. a man-at-arms) and 2 natives 'who have at least helm and shield' were to serve for each 100 *Hufen*. The Teutonic Knights tended to call such native light cavalry *Turkopolen*, i.e. Turcopoles. In addition to those fielded by their vassals others were provided by mercenaries, particularly Bohemians and Poles. Most of the Order's mercenaries, however, were Germans.

The element I have called adventurers are those often inappropriately called 'crusaders' in both contemporary and modern sources. Like the Order's mercenaries they were chiefly Germans, but also came to the Ordensstaat from much further afield and included Englishmen, Frenchmen, Lowlanders, Italians, Hungarians, Scots and Swiss. Although some came in fulfilment of a crusader's vow, most came for practical military experience or, more often, simply for loot. Froissart observed that Prussia was the place for a soldier to go to 'take his profit', and where 'all knights and esquires go to advance themselves', while the 15th century poet John Gower complained that knights went to Prussia and Tartary simply 'to win praise' or to secure a lady's affection. Celebrities from Western Europe who participated in such expeditions included King John of Bohemia, who during a campaign of 1328-29 contracted the ophthalmia that was to lead to his blindness; Henry of Grosmont, Duke of Lancaster, who led his own company of horse and foot to Prussia in 1352; Jean de Grailly, the Captal de Buch, in 1357; Albert, Duke of Austria, who in 1377 came with allegedly as many as 2,000 men; Henry Bolingbroke, Earl of Derby, the future King Henry IV of England, in 1390 and 1392 with companies of supposedly 300 men (but more probably about 150-200); and Marshal Boucicault, who indulged in 3 separate expeditions to Prussia in the late-14th century. Even Chaucer's Knight was such an adventurer, for we are told that he had often raided in Lithuania. Sienkiewicz claims that as many as 22 nations were represented in the Order's army at Tannenberg, the Burgundian chronicler Enguerrand de Monstrelet specifically mentioning that a few knights from Normandy, Picardy and Hainault were present in addition to a seemingly considerable number of Hungarians. The presence of non-Germans on this occasion was exceptional, however, for they were rare in Prussia after 1400, and even rarer in Livonia, and disappeared entirely soon after Tannenberg. The very last body of such non-German crusaders on record appears to have been a company of Burgundians who participated in a campaign against Poland in 1413.

Many of the Order's infantry were similarly provided by the retinues of crusading lords, others being recruited by the use of the crusading vow as a means of atonement or contrition. Of the latter category, large numbers enlisted with the Order itself and, along with mercenaries, were organised into units commanded by brother knights. Other infantry were provided by town militias of German burghers, or else by levies of native Prussians, Kurs (Curonians), Letts (Lettigallians, Semgallians and Selonians), Livs, and Estonians. Such troops had begun to diminish in importance during the early-15th century, but could still even then be found in sizeable numbers — a Livonian raiding party defeated in Samogitia in 1434, for instance, comprised 800 Kur militiamen alongside just 40 brother knights.

By about 1380 there were some 700 brethren in Prussia alone, and by 1400 there were probably some 1,600 brethren altogether in Prussia and Livonia under whom, at its greatest extent, the Order was able to raise considerable armies from its assorted reserves of manpower. For their initial attack on Gotland in 1398 they were able to muster 4,000 men, and when the island had to be recaptured from the Danes in 1404 the Hochmeister despatched an army of as many as 15,000 men. The greatest army ever assembled by the Order was inevitably that fielded at Tannenberg in 1410, which has been variously claimed as 30-80,000 men, including many volunteers and mercenaries as well as some 7-800 Prussian brethren (Livonia not being

represented at this battle)*. Polish accounts refer to the Order's losses on this occasion as 18,000 dead and 14,000 captured, a census of the latter group taken the next day indicating that they were comprised principally of the army's Slav elements, including thousands of Poles from Silesia, Pomerania, Kujavia and elsewhere, plus Bohemians, Moravians and Lusatians. Of the Teutonic Knights themselves, Desmond Seward in *The Monks of War* says 205 were killed, and Eric Christiansen in *The Northern Crusades* says 400. Sienkiewicz, however, relying on Eastern European sources, wrote in *The Teutonic Knights* that of 700 'white-cloaks' present at the battle only 15 were taken alive (though he fails to specify whether any actually escaped). Certainly it seems likely that most of the brethren were killed, since it is unlikely that the battle-flags of every squadron would have been captured otherwise.

Some further details of the composition of this army are to be found in a book of 1448 by Jan Dlugosz (see notes to figure 103), from which it would seem the army was organised in 50 squadrons or 'standards', confirmed by other accounts which put the Order's left wing at 14 squadrons, its right wing at 20, and its reserve at 16 squadrons. From Dlugosz's notes it is apparent that about a third of them were made up of adventurers and the Order's feudal vassals, while of the balance each was comprised of the brethren of an individual commandery plus its hired mercenaries and local men-at-arms. Only one squadron appears to have been made up entirely of brethren (that of the Marshal), since even the Hochmeister's division included German mercenaries. Dlugosz provides us with the strengths of just 7 of the squadrons, of which 2 are of German adventurers (60 and 80 lances strong); the others include those of the Bishopric of Warmia (Ermland), numbering 100 lances, and the Burgomeisters of Danzig (100 lances, including mercenaries and seamen) and Thorn (80 lances, including the town's own regular troops plus some foreign mercenaries). The strengths of only 2 of the Order's own squadrons are recorded, being those of the komtur of Mewe (80 lances) and the vice-komtur of Danzig (70 lances). Overall these figures therefore give an average strength of 80 lances per squadron, which would make the entire army some 4,000 lances strong; since we have already seen that in Prussia a lance comprised 3 mounted men, this must have put their cavalry strength at about 12,000 men (assuming that the archers/crossbowmen remained mounted), while it is known that their lances also included an unknown number of foot-soldiers (it probably being these who Dlugosz intends by his references in many places to 'the men of the town', i.e. militiamen; and in what other military role could Danzig seamen possibly serve on the battlefield if not as infantry?). Dlugosz also provides us with the strengths of 4 Livonian squadrons that fought at Nakel in 1431, two of which were of 100 lances, the others being considerably bigger at 200 and 300 lances. A later battle, at Swiecin near Lake Zarnowiec in 1462, provides us with rare details of the actual composition of the Order's armies in terms of troop types, telling us that on this occasion the army was comprised of 1,000 heavy cavalry, 600 light cavalry, 1,300 militia and 400 other infantry.

Artillery

The earliest reference to the use of artillery by the Teutonic Knights would appear to date to 1341, when Grand Duke Gediminas of Lithuania was killed by a cannonball fired from one of 2 fortresses built by the Order to blockade Vilnius. Cannon first accompanied a field-army during the *winter-reysa* of 1381, and before long individual commanderies had them (for example, Marienwerder by 1384). Reval in Livonia had as many as 32 cannon delivered c.1430, while 3 small Livonian commanderies visited by a traveller in 1442 are each said to have contained 6-8 guns. A field force of as few as 80 brethren and 300 other horsemen sent to assist Zygimantas Kenstutis of Lithuania's rival Svidrigiello in 1432 was accompanied by 'firearms', presumably artillery. The transport of their artillery was frequently by river, or along the coast of Livonia aboard Hanseatic ships.

The guns fielded by the Order at the Battle of Tannenberg were drawn from Marienburg. None of the sources give any idea of their number, other than to remark that there were 'many', but all seem to agree that they were ineffective, firing no more than one or two salvos (apparently because a shower had dampened their powder, so that it kept failing to ignite). Since their cannon were drawn up in front of the Order's battle array, the crews were apparently massacred in the first Lithuanian charge, and Sienkiewicz wrote that the Lithuanians captured the guns and hauled them away after the battle.

POLAND

A complete re-structuring of the Polish army was instigated by the last Piast king of Poland, Casimir the Great (1333-70), and the organisation thus arrived at persisted under his successors Louis I the Great, the

*In addition to these forces, a garrison of 300 men remained in Marienburg while the future Hochmeister Heinrich von Plauen, komtur of Schwetz, was left with a reserve of a further 2-3,000 men.

Angevin king of Hungary (1342-82), and the Lithuanian Grand Duke Jogailo, or Jagiello, who became King Vladislav II of Poland (1386-1434). Poland and Hungary were again briefly united under Vladislav III, King of Poland 1434-44 and of Hungary (as Laszlo IV) 1440-44, who was killed at the Battle of Varna.

The basis of military service was the *pospolite ruszenie*, by which the service of all freemen was obligatory by law. Its nucleus, as in the West, comprised the country's knighthood, which, though bearing a superficial resemblance to that of Western Europe, differed in being organised on a clan basis rather than a feudal structure. All its members were nominally equal, superior social status being conferred only on those of royal blood, or those whose personality or martial prowess set them above their fellows. The smallest military unit was the lance (*kopia*), comprised of a knight or man-at-arms and 2-5 mounted men plus some foot-soldiers. The mounted retainers were called *strzelcy*, best translated as 'shot-men' — i.e. archers, crossbowmen and, later, handgunners. They were recruited from among the hamlet and village elders (*wojt* and *soltys* respectively), who were obliged in turn to bring along 2-3 other men of their own, these providing the infantry element of the lance. Other elders themselves fought as infantry, commanding units of 10 men, thereby earning their title of *dziesietnik* or 'decurion'. The exact number of men in a lance depended on the knight's wealth, since he was expected to supply his lance with food for 6 weeks when fighting within the boundaries of the kingdom. Outside of the kingdom, however, he was paid by the crown, receiving in addition compensation for loss of men, horses and equipment in the king's service, and having his ransom paid by the crown if he was captured. Eventually this practice effectively crippled the Polish royal treasury following Vladislav III's campaigns of 1440-42 in Hungary, the crown thereafter becoming dependent on the whims of the nobility. Jan Dlugosz wrote that 'King Vladislav, during his campaign in Hungary, mortgaged nearly all the towns, castles, lands and villages, as well as the royal customs duties and other revenues.'

A varying number of lances went to make up a larger unit usually called a 'banner' or a 'standard', often referred to as a *rota*. Each of these was formed either from members of the same family or a related group of families, or from the men-at-arms of a specific province or district. Its strength therefore varied somewhat, between 50 and 120 lances, numbering from 150-600 or even 900 horsemen. There were 50 such banners at the Battle of Tannenberg in 1410. Each was commanded by a knight referred to in the Latin sources as a *capitaneus* (captain) or *ductore* (conductor, cf. Burgundian *conducteur*), but more popularly known as a *rotmistr* (rota-master) or *hetman* (a Czech word possibly derived from the German *Hauptmann*). Provincial banners were commanded by a *starosta* or marshal, often a duke or prince of royal blood. All commanders of banners were appointed by the king, though within the banner the *rotmistr* selected his own officers.

Infantry were similarly organised in rotas formed on a provincial basis, generally about 150-strong and usually commanded by a knight complete with his lance. The best-equipped infantry were of the town and guild militias, who provided the majority of the crossbowmen and pavisiers. However, infantry were not favoured on the battlefield and firepower was normally supplied instead by the *strzelcy* or by mercenary or auxiliary light cavalry, provided by Cumans, Wallachians (*Wolochy*), Hungarians and Lithuanians. After the union with Lithuania in the late-14th century (see below) Tartars also appeared; indeed, with the exception of the Cumans all of the above elements were present at Tannenberg, where Bessarabians and Serbs are also recorded. (Bessarabia was on the eastern frontier of Moldavia, and it is doubtless Moldavians that are intended since there were 400 Moldavian cavalry present at the siege of Marienburg only a few years later in 1422.) Such mercenary or auxiliary troops were maintained only in wartime, serving under their own officers under the overall command of a Polish knight holding the title of Marshal of Mercenaries. Some 2-3,000 mercenaries were hired for the Tannenberg campaign.

Overall command of the army was in the hands of the king, assisted by a sort of military council of some 8-12 knights. After these came the Grand Marshal (and, after the union, the Grand Marshal of Lithuania), then the *starostas* or marshals referred to above, the provincial voivodes, and the castellans.

In 1386 Poland was amalgamated with Lithuania by the marriage of Queen Jadwiga (1384-99) to Grand Duke Jogailo. This did not result in the overnight creation of a world super-power, as the sheer size of their combined territories might suggest, since the new king of Poland and his successors in Lithuania, Skirgailo (1387-96) and Vytautas (or Witold, 1392-1430), continued to pursue their own distinct and occasionally antagonistic policies for the next 50 years, until the death of Vytautas in 1430, just before he could be crowned king of Lithuania, and of Jogailo in 1434.

Artillery

Poland had gunpowder artillery by the second half of the 14th century, introduced from Germany and often served by Germans. However, they do not appear to have much used it in battle, tending to relegate it to

the defence or siege of fortresses. Certainly the Poles fielded some artillery at Tannenberg; the Teutonic Knights' guns that were captured in this battle were used at the subsequent siege of Marienburg and thereafter were assigned to the defence of various Polish castles.

LITHUANIA

The Lithuanian grand principality was first established in the 13th century by Mindaugas, one of 20 *kunigas* (kings) recorded in 1219, who had risen to predominance amongst the Lithuanian tribes by 1230, annexed Black Ruthenia in 1240, and was crowned King of Lithuania in 1253. Under Gediminas (1316-41) the united Lithuanian state was revived early in the 14th century, he and his son Algirdas (1342-77) further expanding its territories at Russian expense, defeating the Tartars at the Battle of Sinie Wody (Blue Water) in 1362/3 and absorbing most of what had once been the principalities of Kiev, Volhynia (Vladimir-Volynsk), Turov-Pinsk, Cherginov, Smolensk, Novgorod-Seversk and Polotsk by as early as c. 1360, so that a substantial part of Lithuania's population — perhaps as much as four-fifths — was actually Ruthenian and Russian. In addition the remnants of the Prussians, Jacwicz (Yatwingians) and Samogitians were assimilated following the Teutonic Knights' conquests in the 13th-14th centuries. Throughout the first half of this period, and in fact even after the union with Poland and well into the 15th century, most Lithuanians remained pagan, despite the fact that Mindaugas had been baptised as early as 1251, as was Jogailo in 1386 (though only because he thus became eligible for the Polish crown). Kings were cremated with their horses and great heaps of possessions for the afterworld even in the late-14th century, while perhaps a third of all the booty taken in battle was assigned to their gods by ritual cremation; in addition captured enemies were sacrificially burned alive, a fate that befell many Teutonic Knights, including a certain Marquard von Raschau as late as 1389. The very last pagan Grand Duke was Zygimantas Kenstutis (1432-40).

All Lithuanians were traditionally obliged to perform military service. Though there were some infantry the majority fought as light cavalry, and though their kings and boyars (*baiores* or *bajoren*) wore armour they nevertheless fought alongside the light cavalry of their tribe or family in mixed units, of which they usually formed the front ranks. These units, called 'banners' or 'standards' like those of the Poles by the beginning of the 15th century, were each about 200 or 250-strong (though some occasionally comprised as many as 3-800 men), made up of boyars and their retinues of kinsmen and upper-class peasants, collectively referred to as 'friends'. The retinue of the grand duke himself was organised on a semi-regular basis, being billeted on the local peasant community all year round so that it could be available for military service at very short notice; by the 15th century a substantial force might be maintained in this way, probably numbering about 3,000 men under Vytautas (1392-1430). At Tannenberg Vytautas even assigned one unit, under Zygimantas Kaributas (Zygmunt Korybut), to be King Vladislav's bodyguard. Other Lithuanians had to provide themselves with their own rations when on active service, which seems to have customarily been for a period of 4 or 5 weeks. The 14th century chronicler Petrus von Dusburg, a Teutonic Knight, noted that 'the king of the Lithuanians designated fixed numbers of troops to man fortresses, and after serving a month or longer on garrison duty they were replaced by others.' (The Teutonic Knights therefore always endeavoured to time their incursions so as to catch Lithuanian forces as they returned from their tour of duty.) The fortresses referred to were called by the name *garadas*, derived from the Slavic *gorod*.

One additional source of troops was provided by Tartar exiles settled in Lithuania. As early as 1299 3,000 cavalry had fled there from the Golden Horde, and at the end of the 14th century, following Vytautas' campaign down the Dnieper in 1397-98 and his defeat with Tokhtamysh at Worskla in 1399, several thousand more (a mixture of prisoners and partisans of Tokhtamysh's cause) were settled round Trakai and Novgorod-Litovsk. During the 15th century, when the Crim Horde was a vassal of Lithuania (1419-75), yet more migrated to Lithuania, Vernadsky describing these as 'Tartars, Nogays and Chuvashians'. 15th century contemporaries put the size of the Tartar contingent at Tannenberg as 300 in one instance and 30,000 in another, so it seems likely that they in fact numbered about 3,000; modern authorities, however, put their strength at only 1,000-1,500. On this occasion they were commanded by a certain Salhad or Jelal Eddin.

The largest Polish-Lithuanian army mustered during this period — inevitably that fielded at Tannenberg — numbered between 23,600 and 163,000 men according to contemporaries, but modern authorities put it at 35-60,000, comprised of 18-20,000 Polish cavalry, 2-4,000 or perhaps 10,000 Polish infantry, 11,000 Lithuanian cavalry, 1,000 or 1,500 Tartars (but, as indicated above, more probably about 3,000), plus Wallachians and Serbian cavalry, and a body of Lithuanian infantry put at 6,000 by the Polish historian S. M. Kuczynski, though he later revised his estimate to only 500. The Lithuanian cavalry were organised in 40 banners, the best-armoured of which were the 3 from Smolensk.

Artillery

Cannon were first introduced into Lithuania in 1382, being given to Grand Duke Jogailo as a present by the Teutonic Knights during one of their rare detentes. The Lithuanians were using these guns successfully by 1384 at the latest, when they were employed (along with trebuchets) in the siege and capture of the Teutonic Knights' fortress at Marienwerder. In 1385 Hochmeister Zöllner von Rothenstein was turned back from a river crossing by Jogailo's brother Skirgailo 'with innumerable bombards', and in 1388 was repulsed from Skirgailo's fort on the same river by what were presumably the same guns. Vytautas had as many as 15 large cannon in his fortress at Trakai, and a cannon foundry at Vilnius, and was probably the first Lithuanian commander to take artillery into the open field, as he did against Timur Kutluk at Worskla in 1399.

On the subject of Lithuanian artillery, Eric Chistiansen observes in *The Northern Crusades* that since guns 'could only be transported long distances by water, . . . the power upriver had the advantage of the power downriver when it came to sieges; the Lithuanians could get their cannon to the Order's forts quicker than the Order could haul its cannon to Lithuania.'

MUSCOVITE RUSSIA

The Russia of this period was a restless conglomeration of independent and semi-independent republics and principalities that, in the period from 1228 to 1462, were the scene of some 40 punitive Tartar expeditions, 90 dynastic wars and 80 invasions by Lithuanians, Poles, Teutonic Knights and Swedes. Amidst this endless turmoil, during the early part of the 14th century the Duchy of Muscovy began to replace strife-torn Vladimir as the country's political centre, managing to achieve ascendancy over all its rivals by aligning itself with the Golden Horde, which ensured the support of Mongol troops in its campaigns. Although Muscovy was thereby obliged to acknowledge its status as a tributary of the Golden Horde, relations between the Khan and Moscow's Grand Duke were nevertheless frequently strained, often resulting in armed conflict until, on the death of Khan Ahmed in 1481, Muscovy finally proclaimed its independence. Of the other major Russian states, Cherginov, Novgorod-Seversk, Kiev, Galicia and Smolensk were all satellites of or subject to the Lithuanian crown for much of this period. The huge territory of the Republic of Novgorod, of which Contarini wrote that it 'might raise a large army, but the men are worthless', became subject to Muscovy in 1471.

Although a general levy was available it was only possible to raise it in times of national emergency (Dmitri Donskoi used it to raise the army that fought at Kulikovo in 1380, for instance, as did Vasili I in the face of Tamerlane's invasion of 1395). This was because it required the willing co-operation of the nobility and a plethora of lesser princes in order to be effective, which co-operation was not generally forthcoming. For localised wars, therefore, the Grand Duke was obliged to depend on his own retinue, the *dvor* or court, which by this period was comprised of ducal retainers who received lands, hereditary by c.1340, in exchange for their service either for life or for a specified length of time. The nature of such land-grants changed somewhat in the latter part of this period (after the annexation of Novgorod), when they were no longer recognised as privately-owned land, but rather as state-owned with the holder being installed as a landlord. These grants were known as *pomest'ia*, and the holder was called a *pomestnik*, or *pomeschik*. The *dvor* was expanded considerably from the end of the 14th century onwards, particularly during and after the reign of Vasili II (1425-62), who probably had about 5,000 *dvoriane* by the end of his reign. In fact, by this date it had in effect become a standing cavalry army, commanded by its quartermaster-general (*okolnichii*, a post of Mongol origin first mentioned in Muscovy in 1350/1). Other senior posts in the *dvor* were those of *dvorskii* (major-domo) and master of the stables, the latter being held by a military officer who was responsible for the ducal stables, for horse-breeding, and supplying the army's horses.

The *dvoriane* and the *Deti Boyarskie* ('Boyar Sons', lesser retainers posted in the towns of the duchy) inevitably provided the nucleus of the Muscovite army, but in the field they were normally backed up by the retinues of the Grand Duke's brothers (who were liable to provide such service whenever called upon), plus vassal princes and the Muscovite boyars' own *dvors*, which could be considerable (two in Dmitri Donskoi's service in 1382 had retinues of as many as 1,700 and 1,300 men). All of these were cavalry, infantry being provided by city militias (only rarely including the rural peasantry) and cossacks, about whom more will be said below. The city militia or *Veche*, however, had declined considerably in the wake of the 13th century Mongol invasion, and was no longer of the same importance as it had once been, so that the post of *Tysiatsky* (commander of the militia — see *Armies of Feudal Europe*) was actually left vacant on the death of its last holder, Vasili Veliaminov, in 1374. The civic militia, now under the control of the *okolnichii*,

underwent something of a revival under Vasili II and Ivan III (i.e. in the period 1425-1505), often being called up for frontier duty and siege-work. The decimal organisation set out in *Armies of Feudal Europe* appears to have persisted throughout this period, with units of 10, 100 and 1,000 men.

In the field the army's commanders were traditionally chosen from among the princes and boyars according to status and seniority. The Grand Duke's own standing troops were led by an appointed general called a *vovoda* (i.e. voivode) if the duke himself was not with them, while the infantry element of the army was commanded by a subordinate voivode.

Tartar auxiliaries and Cossacks

Tartar auxiliaries could be found in Muscovite armies throughout much of this period. One 16th century chronicle mentions that when Tamerlane attacked Khan Tokhtamysh in 1395 three important Tartar chieftains then took service with Vasili I, while Tartar troops are frequently referred to in Muscovite armies during the troubled years of the mid-15th century. Each chieftain and his warband usually received a town and its district for their subsistence, by a system called *kormlenie*. Those of them who were descendants of the house of Genghis Khan were called *tsarevichi* ('tsar's sons').

The Cossacks too were of Tartar origin, their name being derived from a Turkish word (*quzraq*) meaning 'seceder' or 'adventurer', i.e. men who operated outside of the Khan's authority. They probably originated in the 14th century, but are only first mentioned in Russian sources in 1444, in the Riazan area, and in 1445 when they are found fighting for the Lithuanians. Serving as both infantry and cavalry under their own *atamans* (hetmans, or chieftains), they were at first chiefly used as border-guards — Josafa Barbaro, for instance, while travelling to Persia in 1474, recorded how Vasili II had in his service a 'Tartar' in command of '500 horsemen to guard the frontiers of his territory from the incursions of the Tartars.' They were organised in units called *druzhines*.

Artillery

Some authorities argue that Russia first encountered gunpowder artillery in 1376 during their siege of Great Bulgar on the River Volga, in the far north of the Golden Horde's domain. However, all that the relevant original source actually says is that 'thunder was thrown', and many Russian archaeologists understandably maintain that it is not cannon that are actually intended, but clay grenades such as have been found in the Volga region. Whatever the truth may be, it is undeniable that in 1382* a strong garrison left in Moscow by Dmitri Donskoi was equipped with *pushki* and *tiufiaki*, seemingly the first irrefutable evidence of the use of gunpowder artillery in Russia. Regarding the specific terminology used, it is interesting to note that *pushka* derives from the Bohemian word *puska* or its German equivalent *Püchse*, which tallies with one early Russian chronicle's comment that 'cannon arrived from Germany [*Nemetz*]'.

However, the use of the term *tiufiaki* is also interesting, since it is the same as the Turkish word *tufek* (see figure 7), which may therefore imply that artillery was introduced into Russia from both East and West simultaneously.

Although the first guns may very well have been imported from Bohemia or elsewhere, they were certainly being cast in Russia by the 15th century, and the evolution of artillery in Muscovy thereafter followed much the same course as that of Western Europe (which is hardly surprising since the majority of Russia's gun-founders and master gunners were Germans and Italians). Light, mobile guns called *pischali* (from the Bohemian *pištaly*) appeared in the first half of the 15th century (in Tver by 1408, and in Moscow by 1451), one later chronicle even claiming that they were used in the field against the Tartars as early as 1380. However, the Muscovites tended to use their artillery principally from fixed positions — i.e. in the defence of their cities — only rarely using them in sieges, and then usually ineffectively, and taking them on campaign even less, though some certainly accompanied Ivan III's army at the Ugra Fords in 1480. In 1481 his guns (actually, those from Pskov) achieved their only siege success of this period, by breaching the walls of the Teutonic Knights' fortress at Fellin in Livonia, which achievement may be connected with the first appearance in Russia at about that date of large, brass guns, the earliest surviving example dating to 1485.

The transport of artillery, along with the infantry and sometimes even the cavalry, was often achieved by boat, utilising Russia's complex of rivers. (This was a mode of transport also used by the Tartars, as, for instance, by Tokhtamysh against Moscow in 1381.)

THE GOLDEN HORDE

The origin of the Volga or Golden Horde, which was named after the gilded and gold-embroidered tent of

*Older works, pre-dating the discovery of this earlier reference, usually cite 1389 as the date of introduction.