

# Witch Hunter

## DARK PROVIDENCE

### 1689 for Dummies

While the diverse cultures of the World of Witch Hunter in 1689 have an extraordinary amount of differences, there is one important manner in which all of them are like each other, and different from most of those existing in our lifetimes. While there have been some significant technological advances in the years leading up to 1689, the rate of change is infinitesimally slower than it is today. The Industrial Revolution, in its time the most rapid and sweeping set of technological changes the world had yet seen, will not even begin for over 50 years. As a result, the people of seventeenth-century Earth had no reason to expect that their day-to-day jobs and lives would be significantly different than those lived by their great-grandfathers, or that their children's lives would be significantly different than their own. Obviously, this is a generalization; individuals moving to new colonies would obviously have different lives than their forebears, and most parents try to make their children's lives better than their own. But it is important to remember that the sense of inexorable progress that is commonplace in the twenty-first century was completely absent in the seventeenth.

#### Technology and Daily Life

The late seventeenth century is, in many ways, a world with one foot in the Middle Ages and one in the modern era. Gunpowder weapons are the primary weapons of the world's armies, but swords and pikes are still standard issue (and are very frequently used). Researchers have discovered the function of the human circulatory system and the structure of the lungs and eyes, but bloodletting is still a common medical treatment. The movable-type printing press has been operating for over 240 years in Europe, but the majority of Christian Europe still cannot read. Because the technology level in the *Witch Hunter* world is not easily summarized as "medieval" or "Victorian," a brief overview of various technological fields is provided below for your benefit.

#### Communications

As mentioned above, Johannes Gutenberg's movable-type printing press has been revolutionizing communication in Europe since the mid-fifteenth century; the technology had been invented in Korea more than two centuries earlier, but the thousands of characters in most Asian languages made it less revolutionary than it was in Europe. In addition to making the Bible and Classical texts more widely available and affordable, the printing press has made it feasible for significant texts to appear in languages other than Latin. For the first time, students and scholars could find and read translations of important works in their own languages.

Old traditions die hard, however, and in 1689, Latin is still the international language of scholarship. After Latin, French is the dominant modern intellectual language, and any serious scholar will speak both French and Latin in addition to his native tongue. German is also a significant written language among scholars, and is equally important in standardizing communications within the dialect-laden Holy Roman Empire itself. English is becoming more important as a language of learning, due in large part to the works of the Royal Society; Italian, on the other hand, is gradually losing the significance it gained during the early Renaissance.

While books are considerably cheaper than they were in the days before Gutenberg, they are still not household items by any means, and the majority of Christian Europe is still illiterate. There are enough readers, however, to make the production of political pamphlets a major occupation for many printers. The literate members of the desired audience will usually read the pamphlets to an enthusiastic group of like-minded, if illiterate, listeners. Most printers are also booksellers, printing for themselves the books they hope their customers will buy.

There are no regular newspapers in the sense we would recognize them now. Major cities (particularly Amsterdam, London, and Paris) have regular publications that chronicle official government activity and commercial notices, but these are generally sent to subscribers by post. There are no current newspapers with independently-written accounts of current events. Monthly (or less regular) journals are popular among intellectuals

throughout Europe, as a means by which philosophical, religious, literary, and political discussions can be carried on with educated, if not necessarily like-minded, individuals.

Postal services are generally well-established throughout Europe and even in some of the North American colonies. Indeed, the postal service has been a main motivator for the development of better-quality road networks between the towns and villages of Europe, since it has only recently become common for Europeans to travel more than a few miles from where they were born.

## Personal Hygiene

Personal grooming in Europe and European colonies is generally dry; water is not usually part of the process, though the hands and face are occasionally washed with water. Water, in fact, is often considered a potential disease vector among the uneducated, and is regarded with some suspicion. "Cleanliness," among the upper classes where such things matter, involves the use of cosmetics and frequent changes of clothing. Dental hygiene generally involves rubbing the teeth with a piece of dry fabric, among those who even care enough to take these steps.

Travelers generally bring their own knife and spoon when traveling, and sometimes a fork as well, though this is still considered rather effete in some areas (particularly England). The quality of one's personal flatware is seen as a direct reflection on the owner.

Gentlemen of quality are generally clean-shaven, usually by professional barbers; facial hair is considered a sign of poor breeding in Christian Europe and its colonies. It is, however, quite respectable in Muslim lands.

## Science and Medicine

Science, as we understand it in the twenty-first century, does not yet exist in the world of *Witch Hunter*. Scholars have only just begun examining the world by means of systematic, repeatable experiments, and recording their observations dispassionately, rather than trying to explain what they observed according to an existing religious or mystical paradigm. The "science" of the day is referred to as Natural Philosophy, and includes a hodge-podge of astronomy, physics, chemistry and alchemy (which are more or less the same art), biology, and botany. The concept that all matter is comprised of atoms, tiny objects which cannot be divided any further, is finally beginning to take precedence over the Aristotelian world-view in which all things are composed of fire, water, earth, air, and aether.

Mathematics is a greatly expanding field, with both Isaac Newton and Gottfried Leibniz having recently published their unified theories of calculus. Indeed, much of the scientific community in Europe is currently caught up in a major conflict between these two scholars regarding who "discovered" calculus first. Slide rules are common tools of mathematicians. Pendulum clocks are a few decades old, and quite popular among those who can afford them. Minute hands are just becoming commonplace on clocks, though they are not yet practical on pocket watches. Pocket watches are capable of chiming the hour, however.

Medicine is based on establishing or correcting the balance of the four fluids, or humors, in the body: blood, phlegm, melancholy (black bile), and choler (yellow bile). Each of these humors corresponds to certain organs, personality traits, elements, and diseases, and an excess or shortage in one humor will naturally lead to disease or other infirmity. Thus, most sickness (physical or mental) is treated by attempts to restore the balance of the humors, usually by bleeding, purging, induction of vomiting, and so forth. Anatomists have begun to develop a truer understanding of the human body's structure, but this has not yet translated to more effective medical treatments. Scholars in the Ottoman Empire have discovered the value of inoculation as a precaution against smallpox, but this knowledge has not yet spread to Christendom.

Mental illness is, at this time, basically untreatable. Most "lunatics" (the prevalent term of the period) must simply do their best to blend in or survive on the charity of neighbors. Attempts to exorcise the afflicted individuals are common, as are experimental medical treatments such as trepanation (the drilling of holes into the skull). Bethlem Royal Hospital in London (locally known as "Bedlam") is the world's first insane asylum, although it serves mostly as a place to keep lunatics off the streets; there is no serious or systematic treatment of those housed in Bedlam, and they are not considered "patients."

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## Travel

While many Europeans still never travel far from their birthplace, others literally go around the world. Land-based travel is generally done by on horseback by those who can afford it, and on foot by those who cannot. On the better roads found in or near major cities, carriage travel is possible, though expensive; stage-coaches run regular routes in and around London, for instance, and trips depart London for Liverpool, York, and other major English cities on a weekly basis. The roads outside London proper, like those in most of Europe, are in terrible condition; long-distance coach trips are only practical during summer, and generally average no more than three miles per hour, with the passengers often forced to walk for long stretches of the journey due to road conditions. In the New World, roads between settlements are far more dangerous, where they exist at all.

Sea travel is likewise heavily seasonal and dependent on the weather, but can be considerably faster if conditions allow it. The fastest sailing ships of the day, running before a favorable wind, can travel up to seventeen miles per hour; for journeys of any significant length, however, an average speed of six miles per hour is more usual. While this is still a vast improvement over land travel, it means that a journey from Liverpool to Boston will take a little over three weeks if all goes well.

Piracy is a significant threat in many parts of the world. The Mediterranean is seething with the Barbary pirates of the Ottoman Empire, and not a few ships from Christian lands have turned to piracy as well. The Barbary pirates tend to augment their loot by capturing and ransoming the crew and passengers of defeated vessels. In the New World, there are both freelance pirates and privateers, who have been formally charged by their government with the task of capturing enemy trade vessels to disrupt their economies. In recent years, however, the role of the privateer has been declining, replaced by larger national navies which include pirate-hunting among their duties. Freelance pirates still exist in the New World, but are more of a threat in isolated areas than on the well-patrolled major trade routes.

## Weapons and Armor

Flintlock firearms, both pistols and long arms, are the primary weapons of armies and private individuals alike. Over the past half-century, flintlocks have proven themselves to be far more reliable, efficient, and safe than earlier matchlock guns, though matchlocks are still in use in certain areas, since they are much more affordable and simpler to manufacture. Muskets (the standard military and hunting weapons) and pistols are smooth-bore guns; long arms with more accurate rifled barrels do exist, but they are extremely difficult to manufacture and thus extraordinarily rare and expensive. Sharpshooters are not commonly used in armies of the period, so only wealthy individuals would be likely to own such a weapon. Cannons and mortars see common use as siege weapons, and rockets also see a fair amount of use in large battles, particularly in Eastern Europe and Asia. The navy of the Ottoman Empire has even begun using aquatic rockets, effectively the world's first torpedoes.

Flintlocks are generally muzzle-loading weapons (though some breech-loading pistols with unscrewable barrels are available), firing shot or larger balls (or a mixture of both) via a charge of black powder. Organized militaries often issue their troops paper cartridges containing a musket-ball and a pre-measured charge of black powder. Even with these convenient cartridges, reloading a flintlock takes at least fifteen seconds for even the most experienced veterans, and those who expect combat often find it more effective to carry multiple weapons.

Despite the prevalence of firearms, their expense and slow rate of reloading mean that swords and other hand weapons are still commonly used as sidearms and every-day weapons. In addition to their musketeers, armies generally contain large numbers of pikemen, whose job is to protect the slow-reloading musketeers from cavalry. Musketeers often carry a bayonet to be inserted in the barrel of a musket after firing, turning the weapon into a makeshift spear, but these are not very effective weapons, so most musketeers still carry a sword or other weapon.

Heavy armor is fading from the battlefield, but is not completely gone. Armor, when worn, is generally effective against flintlock fire; indeed, most breastplates are tested by having a flintlock fired at them, and the resulting dent is often highlighted by engraving, as it proves the strength of the armor. Cavalrymen generally wear breastplates, backplates, and helmets, since their mounts can handle the additional weight, but infantry soldiers generally go unarmored. Kings, generals and commanders sometimes wear full suits of armor to protect them from musket fire while they survey the battlefield from a high (and vulnerable) position, but this practice is beginning to fade.

In most of Europe, men (and, rarely, women) of means achieve military rank by purchasing it. They are then responsible for recruiting and equipping their own units, which must meet certain minimum standards of size

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and quality. Armies, in general, must "live off the land" when traveling – this is a euphemism for "take all the food, supplies, and anything else that isn't nailed down from the local residents." Having an army travel through your homeland is usually devastating to the local crops and economy, even if the army is theoretically on your side. France has begun to develop slightly more sophisticated means of supply for her armies, but this is still very much a work in progress.

## Arts and Entertainment

Artistically and musically, Europe is deep in the Baroque period. Paintings and sculptures are intended to evoke emotion and passion, and are often Church-sponsored works on religious themes. The greatest painters of the era (Rembrandt, Caravaggio, Vermeer, and Velázquez among them) have been dead for some decades, and while a number of young painters are trying to fill these masters' shoes, no great ones have yet emerged.

Commercial (non-religious) theater has come into its own in Western Europe, particularly in England. The works of William Shakespeare (who died in 1616) are well-regarded, but his plays are more often studied on the printed page than actually performed; the plays of Ben Jonson, a contemporary of Shakespeare, are more frequently produced, but neither compares in popularity to the writing team of Francis Beaumont and John Fletcher. Opera, a relatively new art form, is hugely popular among the upper classes in all of Europe, although Venetian composers and librettists are by far the most highly regarded. Formal instrumental music primarily consists of concertos and sonatas; the large symphony orchestra has not yet appeared, though operas often require very large orchestras. In Germany, the next generation of the musically renowned Bach family has arrived, but not accomplished much yet; young Johann Sebastian is, of course, only four years old. King Louis XIV is passionate about the art of dance, and ballet is beginning to develop as a distinct art form in France.

The written novel is also developing as an art form, at least among those educated enough to read. Romances – epic tales of bravery and chivalry – are still the most popular form, more than 80 years after Cervantes brilliantly lampooned them in *El ingenioso hidalgo don Quijote de la Mancha*. Gradually, more realistic, satirical, and dark works are beginning to emerge. Many popular novels are stories of the real (and scandalous) relationships of famous people, with the names and locations thinly disguised; figuring out who is who in the latest novel is a popular pastime among the literate. However, religious texts still predominate; John Bunyan's allegorical *The Pilgrim's Progress* is the best-selling book in the English-speaking world (except for the Holy Bible, of course). Poetry is also a popular art form, practiced by amateurs and sold by professionals; John Milton's epic *Paradise Lost* is the most successful and well-known example.