Indeed, why do we collect old maps? There is one major answer. Enjoyment. Collections of old maps provide their owners with a great deal of enjoyment. There is enjoyment in chasing after a great specimen, in the joy of ownership, in the knowledge derived from study. As in all such pastimes, most collectors get more satisfaction the more they know about their subject. This is precisely why it is richly rewarding: one never grows out of it. The more one learns, the more there is to know and the more meaning and enjoyment one derives from the maps collected.

Although many collectors are attracted initially to a particularly beautiful map, beauty is not the only vector that transmits the map-collecting virus. At its core, map collecting is a matter of the heart, but the reasons for collecting maps are as varied as collectors themselves. Many people are drawn to maps made half a century ago, others to maps that show fanciful or mythical geography. Still others collect maps from a specific period or region that holds personal interest.

Map collecting is much like stamp collecting. Some stamp collectors put their stamps in an album and occasionally look at them; others pore over them, learning everything about their designers, subjects, reasons for issue, perforations, and watermarks. Some delight in acquiring current commemoratives; others fight it out in auction rooms for the upside-down airmail or the Graf Zeppelin or penny-black. It’s the same with map collectors. Some buy a few maps to display; others remodel their homes to hold their vast collections.

Does it cost a fortune to collect maps? Yes and no. It is much more difficult to spend a fortune on a good map collection than on comparably important Impressionist paintings, old master prints, or 18th-century American furniture. But it can be done. Collectors include heads of state, captains of industry, and individuals of great private means who have built, or are building, collections of staggering monetary value. There are also individuals of very modest means building collections of tremendous interest around themes or areas that are meaningful to them, but not necessarily spending a great deal of money. Modest collections may be every bit as difficult to assemble, and just as rewarding and enjoyable. If the collector does not chase fashion, eminently collectible maps can be found in lower price ranges. Novices often marvel that maps from the dawn of printing are available in the marketplace. Surprisingly, one to two hundred dollars is still the price range of many 16th-century maps, and one can find countless 19th-century maps in this range. Maps from the 20th century are rapidly becoming collectible. Some may even be hard to find because many dealers won’t stock such inexpensive items! It is always surprising what can be found at reasonable prices in a dealer’s drawer, obscure antique shop, or at a fair. Such quests are at the heart of the collecting experience. As with any collectible, prices change. As an example, prices of early decorative world maps from the Golden Age of cartography (15) have shot up and it is now not an arena for the faint of heart or pocket.
Willem Blaeu’s magnificent carte à figures map of the world (c. 1606) is considered the epitome of the mapmaker’s art in the Golden Age of cartography.

The frieze at top features the Roman mythological gods of the Sun, Moon, and five known planets. Panels at sides contain allegorical representations of the seasons and the elements. The vignettes along the bottom picture the seven wonders of the ancient world: the Hanging Gardens of Babylon, the Colossus straddling the harbor at Rhodes, the Pyramids, the Mausoleum of Halicarnassus at Cairo, the Temple of Diana, the Statue of Jupiter, and the lighthouse at Alexandria.
However, there are many world maps beyond the so-called trophy maps that are beautiful and cartographically interesting, and that can be collected on a modest budget. Clearly, you need not be prepared to spend huge amounts of money to pursue this interest. The cost of collecting can be easily tailored to your budget, and it is hoped that at least some of the maps illustrated in this book will whet the reader’s appetite for attractive, modestly priced maps. This is not an attempt to eschew maps costing thousands of dollars (and some of the maps illustrated in this book cost at least that much), but to emphasize that you can play in this arena at any price level and have a great deal of fun.

Need you be a scholar to collect maps? It has been said that maps provide a window into history, and that is certainly one of many things that intrigue collectors. But you need not be a scholar of history or cartography to enjoy the hobby. All you need is an interest in a place, time, or event, and an inquisitive nature.

The world of old maps seems confusing at first. There are so many maps, facts, prices, arcane terms, foreign languages, and different kinds of mapmakers that it is very hard for a beginner to make sense of it all. But clarity does eventually come, and you will soon understand this world. The reasons for different prices, the meaning of condition, and the importance of the mapmakers will all come together. That is the purpose of this book—to facilitate your journey into the world of antique maps, to give insight into the reasons why things are as they are, and to bring sensible order to the vast amount of information useful to collectors.
This chapter presents a basic map vocabulary, illustrated wherever possible. It is not all-inclusive, and throughout the remainder of the book additional terms will be introduced, expanding and building on the basic vocabulary and concepts introduced here. The glossary in Appendix B provides additional information.

The majority of maps available to collectors today are printed maps that were originally bound into books and atlases. Over the centuries some of these books suffered extensive damage from insects, rodents, moisture, smoke, etc. And if the book could not be repaired, it was taken apart to salvage the maps. While it is true that breaking up whole atlases was a somewhat acceptable practice in the past, it is now considered professionally unethical to take apart an intact, complete atlas.

Many terms used to describe maps come from the antiquarian book world. The printmaking processes (woodcut, engraving, lithography, etc.) will be discussed in Chapter 4. But first we need to be able to properly describe a map.

Printed maps do not generally extend out to the edge of the page, but are delimited by a border. Borders can be as simple as a line, but most old maps are framed in a decorative border. The outermost line is called the neatline. Between the neatline and the edge of the paper is the margin. If the map is an engraving there will be a platemark, or indentation in the paper, outside the neatline (A.1).

2 ANATOMY OF A MAP

2.1 A DOUBLE-PAGE MAP The major parts of the front surface, or recto, of a map, showing typical components, such as the neatline, border, margin, and centerfold, are diagrammed in this illustration. The title of the map is in the cartouche in the upper left, there is a distance scale in the lower right, and a compass rose indicates north.
Maps that are from atlases were usually folded in half to fit into the binding and therefore have a centerfold. This type of map is called a double-page map. Obviously there are also single-page and partial-page maps, but dealers will frequently describe a map as double-page to indicate that it is a large map with a centerfold.

We measure map size by measuring the actual map or image, not the entire sheet of paper. This is called the neatline size. Map sizes are sometimes given as folio, quarto, or octavo. Strictly speaking, these terms refer to the number of times a printed sheet of paper was folded to produce a book page, but they have come into general use to indicate approximate dimensions.

The front side of the sheet showing the map is called the recto and the back is called the verso. A map's verso often has text printed on it. In the map trade, the terms recto and verso are used in this way. The world of books is slightly different; the page on the right side of the open book is the recto whereas the page on the left side is the verso. However, map collectors use these terms without regard for the position the sheet originally occupied in the book or atlas.

On the verso there is often a binder’s guard or binder’s stub. This is a strip of paper glued to the verso next to the centerfold. The binder stitched through this strip to attach the map into the volume. Without such a guard, a map would have stitch holes in the centerfold, as is the case with some very early printed maps.

With the advent of the atlas, mapmakers struggled to display the area they were mapping within the confines of uniformly sized paper. Larger sheets could be employed only if they were folded several times. Sometimes part of the map overflowed the boundaries. If the overflow was small, the map would simply break through the neatline into the margin. If the overflow was too great to be accommodated by breaking into the margin, the alternative was to reduce the scale of the map or employ a flap, which could be opened to physically extend the map.

Platemarks can be seen through a microscope. They can also be seen with the naked eye, most readily under an oblique, or raking light. The area to the left of the arrows is the margin, and the arrows point to the platemark, which corresponds to the edge of the printing plate. The paper within the platemark is compressed and slightly lower than the paper in the margin. The arrowheads point to the printed neatline. This micrograph is of part of a map from about 1650. Note the fibrous nature of the paper.

The relationship between recto and verso is shown in this diagram of a double-page map from an atlas. The binder's stub is still in place, glued to one side of the centerfold on the map's verso.

The cartouche at bottom left contains an inset view of the entrance to the strait. Note that the compass rose orients the map with north at the bottom, rather than at top, which is now the conventional orientation for maps.

Hondius’s map of the Strait of Magellan exemplifies the style prevalent at the beginning of the 17th century. While the cartographic information is confined to the strait, the sheet is filled with large cartouches, a compass rose, a fleet of sailing ships, sea lions, and a menacing sea monster. The cartouche at bottom left contains an inset view of the entrance to the strait.

A tension arose between aesthetics and the practicality of showing the desired area at a reasonable scale and without too much blank space. Sometimes it was not possible to avoid leaving large empty areas, and the cartographer filled them with cartouches, vignettes (unbordered pictures), or inserts (map or view enclosed within a border that relates to the main map or further describes the region).
Even those with only casual interest soon see that old maps exist in a large variety of forms, with many differences in shape, subject, and appearance. In the pages that follow, we’ll survey a range of different kinds of maps. The earliest maps are often veiled in unfamiliar orientation, strange place names, and mythical landmasses. As exploration added cartographic precision, the features of Earth—continents, oceans, and islands—assumed recognizable shapes in their depictions. The format of the maps themselves also changed as cartographers developed (and discarded) many methods of showing the world’s features on flat sheets of paper. The struggle to show the unfolding cartographic knowledge of our spherical Earth on a flat surface resulted in a richness of map formats. As collectors, we come across so many different types of representations that it is sometimes difficult to place them in context.

Maps are representations or models of physical structures, usually Earth or parts of it, or the heavens and its stars, planets and extragalactic objects. Maps are most often flat representations, usually drawn or printed on paper. Sometimes they are three-dimensional, such as relief maps that show the relative heights of mountains and other terrain. Sometimes they attempt to mimic the actual object being mapped, such as a globe that represents Earth or another planet. Since this is a book on map collecting, we will discuss primarily the most widely collected form of maps—flat paper maps showing parts of Earth’s surface.

Whatever they attempt to show, be it the coastline of Greece or the distribution of smallpox in central Africa, maps purport to be representative of an independently verifiable reality. If a map that was made to be informative is not representative of something objectively perceived and verified, then it is not a good map. Here, of course, is a catch. In order to make this judgment about a map, we need to know why it was made and we need to understand the perception of reality and the technology that was available at the time the map was made. In other words, the social, cultural, and technological context in which the map was made becomes important to our understanding of it.

For example, there is a type of medieval European map called the T-O map because it appears as a large letter T circumscribed by a large circle, or letter O (3.1). If we just look at this map as a representation of geographic reality from our present cultural perspective, then it is a poor map indeed. However, if we perceive it as a representation of a cosmography, an intellectual system that was a combination of demonstrable reality and of belief, embodying a conceptual relationship as well as a geographic relationship, then we can understand the map. No longer is it inadequate in the modern sense, but it has greater meaning.

While we may be attracted to old maps because of cartographic errors and quaint geographical concepts, we can also marvel at their overall accuracy. Early maps were constructed without knowledge of technologies we now take for granted.
Even the instruments needed to accurately determine longitude at sea were not developed until the second half of the 18th century. Since the Age of Discovery, maps were plotted from data gathered under very difficult conditions, sometimes over the span of decades.

**Triangulation**

The use of triangulation to survey the countryside is demonstrated on this engraving from Alain Mallet’s 1702 treatise on mathematics _La Geometrie Pratique_.

Even the instruments needed to accurately determine longitude at sea were not developed until the second half of the 18th century. Since the Age of Discovery, maps were plotted from data gathered under very difficult conditions, sometimes over the span of decades.

**Triangulation**

A technique used to accurately locate geographical features on the surface of Earth. Gemma Frisius introduced the concept to Western Europe in the 16th century, and, up until very recently, all accurate terrestrial mapping was done by triangulation. Men traveling by foot, using transit, compass, level, and chain, measured the vastness of India, Siberia, and the New World. It is mind-boggling to think that surveyors using these few instruments, traveling through uncharted and often dangerous regions, achieved such great cartographical triumphs as determining the route of the Trans-Siberian railway or surveying the American West. Quite literally, giant triangles were plotted and measured all across our continent, from Atlantic to Pacific; coastlines, too, were triangulated, and ongoing surveys constantly refined these measurements.

**Map Projections**

Since paper maps are flat and Earth is approximately spherical, the flat map cannot represent Earth’s surface exactly. The mapmaker must distort, or transform, the spherical surface of the world to the planar one of paper. Representations of the curved surface of Earth or celestial sphere drawn on a flat surface are called projections.

If we consider how laborious these techniques are, then it is all the more surprising that mapping the world with any degree of accuracy was even remotely possible. After obtaining all these data, they had to be translated into a format that others could see and use. The resulting pictorial representations are, of course, maps. And the way maps look depends on the methods used to translate data to pictures.
Knowing who was involved in making a map, what it was intended to illustrate, and how it was made are all important to understanding it. In this chapter we will examine the different processes used to make maps and how to distinguish between them.

Making a map was a collaborative effort. Explorers and surveyors gathered the information. A cartographer compiled the information into geographic format. A block cutter, engraver, or lithographer prepared a printing block or plate. The map was printed by a printer and distributed by a publisher. Sometimes one individual performed more than one of these functions. For instance, Gerard Mercator was a cartographer, engraver, and publisher. But more than one individual prepared most maps, and that tends to cause confusion, especially when a map is attributed to a person whose name does not appear on the map, such as many of the maps from Abraham Ortelius’s Theatrum Orbis Terrarum.

In the map trade, sometimes there is little rhyme or reason for the way maps are credited. Some maps are attributed to the explorer or surveyor, some to the cartographer or engraver, and others to the publisher. It seems the most recognizable or famous name is the one chosen and there is often little consistency between dealers. For instance, John Smith’s map of Virginia was published in three different publications between 1612 and 1625 and several derivatives were published between 1618 and as late as 1819. While often referred to as simply Smith’s Virginia, one must also know the engraver or publisher to properly identify one of these maps. This is particularly important when comparing one map with another for purposes of valuation.

The term original map may also confuse a novice map collector. How can a printed map—essentially a copy—be an original? In the map trade, as well as the antique print trade, the term original refers to a print pulled from a plate or block that was made at a specific time in history. A reproduction, on the other hand, is a copy made by some other method at a later date. In order to fully understand this concept, it is useful to learn to distinguish the different processes used to make maps. This knowledge can help us separate originals from later reproductions and enables us to make judgments about a map’s technical quality and whether it is an early or late impression.

Manuscript Maps

A manuscript (abbreviated ms., or mss. for plural manuscripts) is anything written or drawn by hand. The earliest maps and navigational charts (portolans) were manuscripts. Explorers and surveyors also made manuscript maps, many as prototypes for maps that were later produced using a contemporary printing process. Military cartographers, civil engineers, and even schoolchildren made hand drawn maps (41).

Portolans and important explorer’s maps, especially those drawn while on expedition, can be very valuable and are rarely available in the current market. Unfortunately, many
manuscript maps are modern copies, some of which are meant to deceive. It takes a great deal of experience and knowledge to ascertain the authenticity of a manuscript map. They are best left to the expert and generally beyond the scope of this book.

Printed Maps

The invention of printing in 15th-century Europe was a revolution almost beyond comprehension. It made possible the production of virtually identical copies of an image and facilitated the relatively unrestricted circulation of information. It fundamentally changed the structure of society in Renaissance Europe.

In the case of maps, this meant that the same view of the world and its parts could be shared universally. From the practical standpoint of today's map collector or dealer, it means that we can compare the images of most maps. Most printed maps have a history; we know who made them, who printed them and who sold them. We can also compare their conditions, their colors, and when we discuss them, others know of what we speak because we are dealing with maps that other people have seen and with which they are familiar.

There are three general classes of printing. These three fundamentally different traditional ways of printing produce images with different characteristic qualities. By examining the lines that comprise an image, we can determine the process by which it was produced.

RELIEF

Pressing paper, using moderate pressure, against a raised inked surface such as type, a rubber stamp, a carved wooden block, or a stereotype plate forms the image. Letterpress, also a relief process, refers to text printed from movable type. In traditional relief printing, a map and any type on the same page can be printed in one operation.

INTAGLIO

This is the mechanical reverse of relief printing. The image is formed by cutting grooves in a metal plate. The plate is inked and the ink is wiped off the high, uncut parts of the plate leaving only the grooves filled with ink. Paper is pressed onto the plate, forcing the paper fibers into the grooves, where they take up the ink. The high, uncut parts of the plate, wiped free of ink, do not leave an image. Because of the high pressure required to force paper into the grooves, intaglio images require a special press. Accordingly, if an engraved map is to

PLANOGRAPHIC

Ink rubbed into engraved image and cleaned from flat surface

Paper pressed over inked image, leaving inked areas slightly raised

Image drawn on limestone or roughened metal with wax crayon or resin

Surface wet with water (ink clings to image and not to wet stone)

Paper pressed over inked image (paper remains flat)
This chapter is not intended to scare the inexperienced collector, but to provide information necessary to recognize reproductions. The antiquarian map world has been remarkably free of deliberate forgeries and, until fairly recently, forgeries have appeared infrequently enough not to present a serious threat to most collectors’ peace of mind. Not all copies are necessarily forgeries. There are legitimate reproductions made for the decorative market and there are facsimiles made for honest purposes. The problem is that the unsuspecting collector might come across one of these and not recognize it for what it is. The material in the last chapter showed how to identify the printing processes used to produce a map image. This information will enable you to differentiate most copies from the original.

A reproduction is a copy of a map made without the intent to deceive. It is simply a modern copy of an old map, often printed in a size different from the original. Reproductions can be purchased from poster shops, museum gift shops, and other places that sell interesting and decorative art. Antiquarian map dealers generally do not deal in reproductions. The sellers of most reproductions make no attempt to fool you, and common reproductions of the decorative sort are not easily confused with originals. These images are printed by modern techniques (usually offset lithography) on modern paper, often a coated stock that works better with modern techniques. Sometimes reproduction maps are printed on parchment-like paper that is supposed to mimic old paper.

A facsimile, on the other hand, is made with great attention to simulating the original and is designed to be as close to the original as possible. In some cases they are actually made from the original plate, which is called a restrike (5.1). Facsimiles are frequently commemorative pieces or copies of famous maps produced by a cartographic or historical society. In nearly all instances, there is some identifying characteristic, such as a page or plate number or an imprint in the margin, that identifies it as a facsimile. Although facsimiles are not made with the intent to deceive, they occasionally appear on the market either because someone unknowingly or unscrupulously represents them as the real thing.

A fake, counterfeit, or forgery is made specifically to deceive an unwary buyer. In order to succeed, a fake must be able to mimic the original, and this means it must be made with the same technology as the original. Carving a wood-block, engraving or etching a copper plate, or even producing a lithograph is a time consuming and expensive process. It is difficult to acquire large sheets of authentic paper from the 15th through the 18th centuries. One can make handmade laid paper that can simulate old paper, but, here again, it is a time consuming and expensive process. In order to make that effort worthwhile, a forger must either be able to sell the fake for a very high price or sell a large volume of them. Fortunately,
Condition describes the physical state of a map, specifying the wear, damage, and repairs it has acquired since it was printed. Condition is to a map what location is to real estate, or original finish to an antique chair: a major determinant of desirability, hence price. In this chapter we will discuss condition, how to recognize problems and restorations, and how these factors influence value. Keep in mind that while many of the finer points regarding condition are subjective, it is important to understand the relevance of various condition issues.

A map with original color and minor evidence of use, such as soil in the margins and a few creases, is a highly desirable map. One with narrow margins, a repaired centerfold, and obviously new, but attractive, color is also generally desirable, but will sell for less, in the same market, than the former. If there are other problems, such as margins trimmed to the platemark, inappropriate color, or unsightly stains, the map may become difficult to sell, even at a steep discount. Particularly damaging to the perceived desirability of a map are tears into the image (as opposed to tears in the blank margins) and loss of image. On the other side of the quality spectrum, a brilliant impression with wide, clean margins, fine original color, and no visible damage or repairs, can be sold for well above the market price of an average exemplar.

Such price sensitivity to condition is common in the world of maps, where a collector may have a choice of several exemplars on the market. For maps that are not particularly scarce, incrementally better condition can make a map significantly more desirable, hence expensive. On the other hand, a truly rare map, one that exists only in a few known exemplars and that might not appear on the market ever again, is less price sensitive to condition for obvious reasons.

Misunderstanding condition is common among novices, both collectors and non-specialist dealers. It takes experience to make a judgment about any given map; one needs to have seen many old maps and be familiar with the specific map in question. It is not uncommon to find maps in antiques shops that have a significant amount of foxing or other damage and be told, “Considering its age, it is in very good condition.” I have also discovered, over the years, that many beginners prefer foxed or age-toned material because, to their minds, “it looks old.” Those new to the hobby should examine as many maps as possible, in major dealer’s shops, at map fairs, in private or public collections. It is surprising just how good condition can be, and without this kind of knowledge the likelihood of minimizing condition problems is large. One need not eschew a map with condition problems or repairs, but one certainly should not pay a top price for it.
This is a difficult subject. Map prices often seem confusing and illogical to the novice. That is because the price of a map is only one part of a greater picture and is intimately related to many other factors that also need to be understood. In this chapter we will explore some of those interrelated factors that together determine desirability and influence the price of a map.

Market Influences

The nature of the market strongly influences map prices. This market comprises dealers, auctions, serious collectors, casual collectors, institutions, and people who buy maps as decorative items. Every buyer and seller creates a distinct but transient market. Since there can be wide price differences for the same map in different markets, we need to know something about each if we are going to understand the overall map market.

Maps of some areas of the world are collected more widely than others, due in part to demographics. Asia, particularly Japan and China, have seen healthy price increases as the interests of the well-educated, affluent population broadens. The same holds true for parts of the Middle East and, more recently, the former Soviet republics. Years ago it was difficult to sell maps of these regions, but they have developed a healthy market as a middle class emerged in those regions.

Some maps trade in a fairly well-defined price range that really is a consensus price. These are maps that have wide appeal and are bought and sold frequently enough to create an almost public market with a relatively narrow price range. In other instances, especially for the scarcer, more unusual, or little-known maps, a seller and buyer create a market for each transaction. A map is worth what the seller can get for it, which is the price an equally informed buyer agrees to pay when there is no forced sale. This sounds simplistic, but the consequences of this definition are important.

When analyzing prices, what we really need to know is a general price range for an item and the reasons for the price differences. There are no exact prices because there are no exact values. No two maps are exactly alike, and no two dealers or collectors place a map in exactly the same cultural context, which, as we have seen, determines part of the map’s value. Dealers sell not only maps but also their knowledge and expertise, which collectively make those maps meaningful. The dealer who has invested more time, money, and energy in building his knowledge and reputation can justify his price better than one who has little knowledge and investment. The point is that knowledge about the map and its place in cartographic history is extremely important. The seller’s credibility and knowledge undergird his ability to make a cogent argument for his perception of the value of a map, and hence create the market price.
What constitutes a collection? What do enthusiasts collect? We can generalize by observing that most serious collectors specialize, and the maps in their collections have some common theme or thread linking them into a coherent whole. Beginning collectors are usually more catholic in their interests, but in time they focus and become more specific.

In every area of map collecting, there are “must have” maps, which are considered germinal or essential maps. The beginning collector often starts by acquiring these, and then broadens and deepens the collection. In the early phases of developing a map collection, it is possible to generate a want list of maps, but as the collection matures, and the more obvious maps are acquired, one needs to branch out and seek more obscure items. Serious collectors will look through piles of maps at fairs or in dealers’ shops in hopes of finding the unusual map that adds breadth to a collection.

However, note also the truism that collectors acquire what can be collected. It does little good to lust after a Gutenberg Bible; one simply cannot obtain one. The same is happening in some parts of the map world. As older trophy maps either disappear from the market or become too expensive, collectors must shift their interest to the more available maps.

Beyond such blanket statements, there is an almost infinite variety of collections and collectors. There are people who simply want beautiful maps for decorative purposes, others who have scholarly interests, and still others with a mixture of interests. We will explore some of these collecting motives in this chapter. But keep in mind that we are just scratching the surface here; there are literally hundreds of ideas that could spark a collection.

Collections are frequently based on places people have traveled, lived in, or in which they have a specific interest. An invertebrate European traveler might assemble a wonderful collection of 16th-century city plans; a businessman might buy an antique map showing every place he has been on company business; a collector of oriental rugs might collect maps of the major rug weaving centers. The latter is exactly how the editors began their collection.

Many Americans are fascinated by their roots and collect maps of places from which their ancestors emigrated. It is, for example, possible to build a fascinating collection of beautiful maps of Ireland that go back to the 16th century. This could be accomplished for relatively little money, since even the great maps of Ireland (8.x) by Mercator and Blaeu cost relatively little compared to their counterparts of North America. Many