

Dating Photographs

1839 - 1903

Technical Background

The history of 19th century photographs can be divided into five distinct photographic technologies and their eras.

Photo Type	Appeared	Most Popular	Waned
Daguerreotype	1839	1842 - 1856	1857 - 1860
Ambrotype	1854	1855 - 1861	1862 - 1865
Tintype	1856	1860 - 1870	1872 - 1878*
Carte de Visite	1859	1860 - 1880	1880 - 1889
Cabinet Card	1866	1875 - 1900	1901 - 1903

* Tintypes were actually available well into the 20th century, but generally as a novelty produced at carnivals and other venues such as beach resorts.

While they do overlap in time, these technologies form the basis of dating photos of the 1800s with a high degree of accuracy.



Photograph Characteristics

The following table lists the characteristics you should look for when trying to identify and date old photographs.

Photo Type	Photo Characteristic
Daguerreotype	Is image shiny like a mirror?
	Can you only see image from an angle?
	Does back of image plate look like copper?
Ambrotype	Is image on a glass plate?
	Does image seem to have depth or 3D look?
Tintype	Is image on a blackened iron plate?
	Will a magnet attach to the plate?
Carte de Visite	Is image on a thin card about 2 3/8" x 4"?
Cabinet Card	Is image mounted on a card 4 1/4" x 6 1/2"?

Daguerreotype: 1839 - History Begins

1839 is recognized as the dawn of photographic history, even though many people were working on various techniques for nearly 30 years prior.

Louis Jacques Mande Daguerre, a commercial artist and theatre producer worked for 10 years improving upon a method pioneered by Niespece.

Louis Daguerre was a skilled promoter also. Realizing that maintaining financial control of the process would be nearly impossible once it was published, he persuaded the French government to grant him a pension for life in recognition of this breakthrough he was giving the world.

The Daguerreotype was the predominant means of photography until the late 1850s. By this time, less expensive, easier to produce Ambrotypes became popular. Virtually all serious Daguerreotype photography ceased by the mid-1860s.

Silver Mirror

This 1841 Daguerreotype is the oldest in the Phototree collection.



Daguerreotype - *The Mirror with a Memory*

Once the daguerreotype process was published in Paris in 1839, it spread rapidly. At the height of daguerreotype popularity in 1853, there were reportedly 86 studios in New York City.

Is it a Daguerreotype?

The daguerreotype is very easily detected, even by someone who has never seen one before. It exhibits the characteristics of a mirror at many angles.





Once you have determined that your image is a 'dag', several clues can help establish a date range. Most clues are evident by just looking at the image. Some may require taking the image out of the case. This is not recommended for the amateur or skittish. The image, case, or brass holder can be damaged easily.

Components of a Daguerreotype

The different parts of the daguerreotype each provide date clues. So it is important you understand the different pieces. The daguerreotype was typically placed under a mat, which was covered with a piece of glass. Usually the image, mat, and glass were then taped together around the edges. Beginning about **1847**, a brass frame called a 'preserver' wrapped around the taped assembly. This complete package was then placed into a wooden or thermoplastic case for protection and presentation.

An exploded and assembled view of a ca 1850 daguerreotype.



Timeline:

- Appeared: 1839
- Peaked: 1842-1858
- Waned: 1859-1862

Characteristics

- Silver coated copper plate
- Mirror-like surface
- Always cased

Common Sizes

- 1/6 Plate - 2 5/8" x 3 1/4"
- 1/9 Plate - 2" x 2 1/2"



Observable Characteristics

A few simple observations can help narrow the timeframe of an image.

- Shape and texture of mat
- Use of a preserver and its characteristics
- Type of case used to hold the daguerreotype
- And of course clothes and hair style of the subject

Mat Shape and Texture

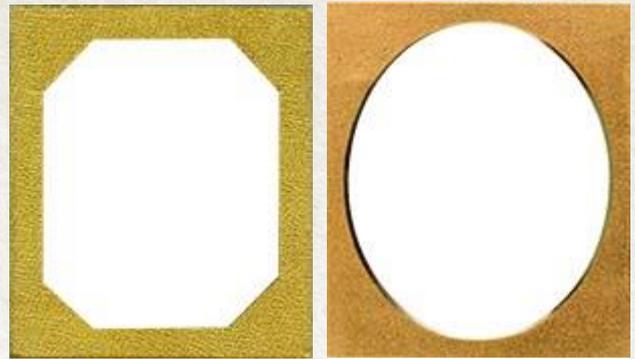
Mats give us some wonderful clues as to a daguerreotype's (and ambrotype's) original date. They changed significantly about three different times, with lesser evolutions along the way.

Early mats were very simple, heavy, and coarse. The earliest ones had a 'pebble-like' texture, and were usually octagon or oval up to about **1845**. About this time the finish was a little nicer, having a 'sandy' texture. Also, newer designs for the opening appeared. These included the nonpareil, acorn, elliptical, double elliptical, and some other variations.

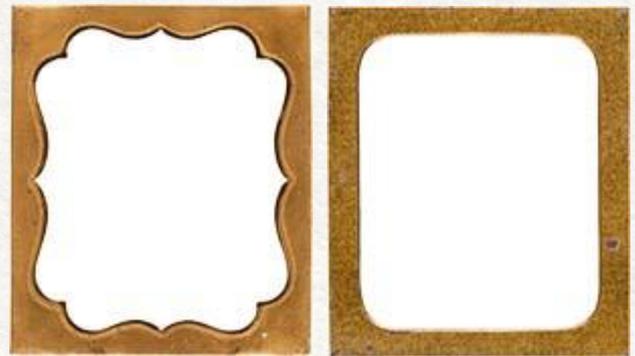
Beginning in the early **1850s**, the mats became smooth, with some engraving artistry, simple at first but more complex by the late 50s.

Then around **1859**, the mat material became much thinner and complex designs were stamped into the metal.

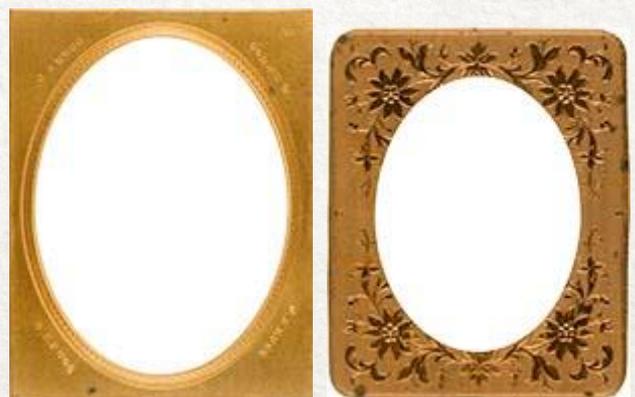
General Rule: The thinner mats and preservers date to late 1850s.



Octagon mat with pebble-like finish from early 1840s, and oval sandy finish from mid-1840s.



Nonpareil mat from mid-1840s and double elliptical from about 1850.



Early 1850s oval mat with etching and oval stamped mat from late 1850s with elaborate artwork.

Preserver or No Preserver?

The preserver was first used around **1847**, and it became a standard part of cased images. The preserver is a brass frame that wraps the glass, mat, and image. Early daguerreotypes were protected by only a mat and glass, and then placed in a case.

Early preservers were fairly plain, usually adorned with simple patterns. The preserver was prone to breaking at the corners. In about **1859**, preservers with reinforced corners and more elaborate artwork were introduced.

General Rule: An image with a preserver dates after 1847.

Wood vs Thermoplastic Cases

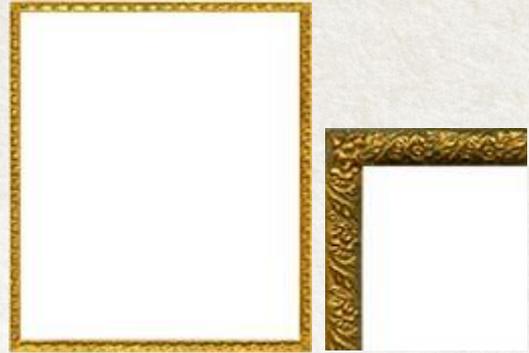
Early cases were usually leather-covered wood cases. They were lined with felt or sometimes silk. These were basically the only type of cases until the latter part of the 1850s.

Around **1856** a new composite made from saw dust and varnish was used to create the first plastic-like cases. This material was called thermoplastic, as the mixture was heated and then formed in dies. The cases themselves were called 'union cases', not in reference to the 'Union' side of the civil war, but the union of different materials that were used in the composite. These cases are not rare, but they did not dominate the daguerreotype market, probably due to price.

A thermoplastic case is recognized by its smooth plastic-like surface, one-piece construction (of each half) and brass hinges connecting the two halves. They are frequently broke or chipped as cases were brittle.

Note: These were used with daguerreotypes, ambrotypes, and tintypes

General Rule: Thermoplastic or Union case dates after 1856.



Mid-1850s Preserver, and close up of simple pattern.



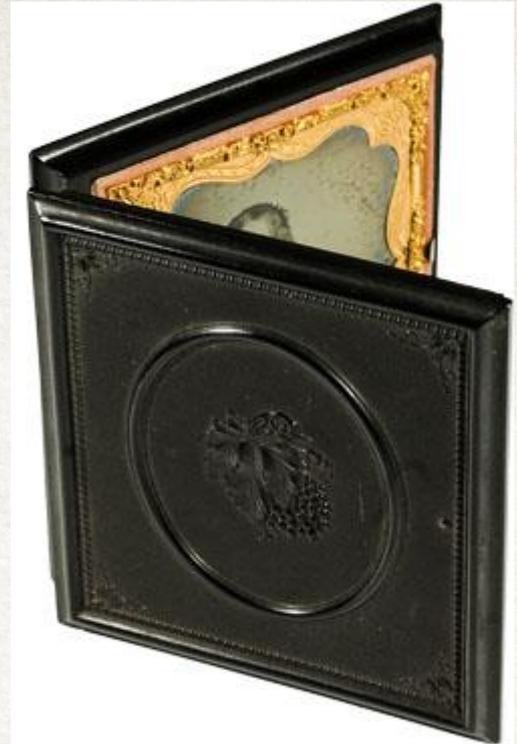
ca 1843 Daguerreotype with no preserver.



c. 1860 thermoplastic case

Clothes and Style

Clothes, hair styles, and personal appearance changed significantly throughout the life of the daguerreotype. The puritan-look of the early 1840s gradually gave way to some rather flamboyant styles of the late 1850s. The best way to understand is to view the wide variety of images in the gallery.



c. 1860 thermoplastic case: Note smooth surfaces.



Ambrotype: 1854 - Image on Glass

Various alternatives to the expensive and difficult Daguerreotype process were tried in the 1840s and 50s. In 1854 James Cutting, an American, patented a new process that produced a very attractive image on glass. A high quality piece of glass was treated with a light sensitive collodion, and then it was exposed in a camera. The developed image was a glass negative. The back of the glass was then coated with a black varnish, or sometimes a black mat was placed behind it, creating a 'positive' look.

During the early years of the ambrotype, the image side was turned face down, and a second piece of glass was glued to the back.

In the late 1850s, various colored glasses were used instead of clear glass, with ruby the favorite color. This produced a richer image and eliminated the need to blacken the back of the image glass.

The ambrotype's life span was historically short, seldom seen after the mid-1860s, yet it yielded a vast collection of beautiful images.

Glass Beauty

Many beautiful ambrotype images were created. Still fragile, they were always placed in cases.



Ambrotype - from the Greek word ambro meaning imperishable. Image on Glass

Dating ambrotype photographs is fairly easy for genealogists. It is a cased image like the daguerreotype, but it was short-lived. The ambrotype was only in popular production for about ten years. So, if this is part of your genealogy puzzle, you can be sure it was produced between 1855 and about 1865.

The ambrotype's life span was very short, wide-spread use was less than ten years, but produced a vast collection of beautiful images. While the name ambrotype was derived from the Greek word ambro, meaning imperishable, it was still a delicate, easily damaged photograph. One advantage it did possess over the silver daguerreotype was that it did not tarnish.

The ambrotype photograph was made by coating a piece of glass with a silver solution and exposing this to the image. The image is sometimes on the back of a glass plate and is sandwiched with another glass behind it. This was typical of early examples.



c. 1860 Ambrotype of Pretty Young Woman

Later images were developed on the front of a single plate of glass. The back of the glass was coated with a black lacquer or backed with black paper or cloth. This allowed the negative-looking bare image to appear as a positive.

The ambrotype was packaged in the same manner as the daguerreotype, encased with a mat, top glass, and preserver; and then placed in a case.

Is My Image an Ambrotype?

Identifying an ambrotype is fairly easy. While the ambrotype is typically cased like a daguerreotype, it does not exhibit the same look. It does not pass the *mirror* test. Rotating the image will not cause the image to reflect like a mirror or look like a negative. Note: Don't mistake the reflection of the cover glass to be the mirror look.

If the image is out of the case, you will be able to confirm the nature of the photograph. The ambrotype is developed directly on a plate of glass, not on silver-coated copper plate like the daguerreotype or the blackened-iron of the tintype.

SPECIAL NOTE: Do not try to clean the face (or image side) of an ambrotype. Even the softest camera lens brush will scratch the delicate surface. At best use compressed air to remove loose dust or particles. See the *Restoration* section for more.

Components of an Ambrotype

Photographers used many of the same pieces and methods for packaging an ambrotype as they did for the daguerreotype (see [Daguerreotype](#) page). Nearly all ambrotypes will have a preserver (if the packaging is original). This and other characteristics will help you in dating ambrotypes.

Timeline:

- Appeared: 1854
- Peaked: 1856-1860
- Waned: 1861-1866

Characteristics

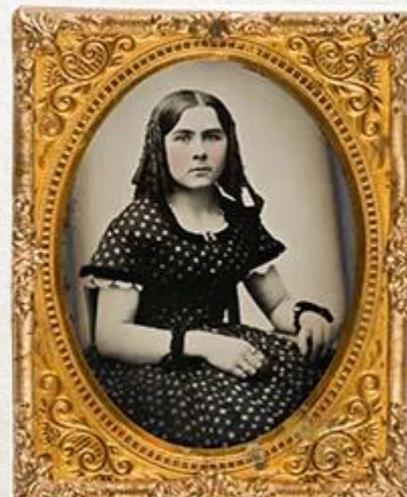
- Image on Glass
- Always in case (original photograph)
- Can be mistaken for tintype

Common Sizes

- 1/4 Plate - 3 1/4" x 4 1/4"
- 1/6 Plate - 2 5/8" x 3 1/4"
- 1/9 Plate - 2" x 2 1/2"



Simple mat and preserver - ca 1856



Ornate mat and preserver - ca 1861

Observable Characteristics

Mat Characteristics - Simple to Ornate

Mats, the brass inner frame that laid on top of the glass, experienced design evolutions that are datable. Smooth or finely textured surfaces adorned mats up to about **1859**. These may have included some very simple etching. Then, intricate designs began appearing, stamped into very thin mats. These are found until the demise of the ambrotype.

Preserver - Simple to Intricate

Along with mat designs becoming more ornate, the preserver also became more intricate, and delicate. Preservers before **1859** were usually plain along the edges, with a singular and simple design. From **1859** onward, the preserver exhibited elaborate designs, with bulges at the corners and in the middle of the edges.

Glass Types

There are three different glass examples in the ambrotype.

- Early images used two pieces of glass glued together. The image was sandwiched between them. This technique was used from **1855** to about **1857**.
- A single pane of glass was used almost exclusively from about **1858**.
- Ruby-colored glass was used (dark green also, but is very rare) beginning about **1858**. This eliminated the need to have a dark backing.



Tintype: 1856 - Images for the Masses

Patented in 1856 by Ohio chemistry professor Hamilton Smith, the tintype method was not particularly new, but an evolution from earlier experiments and existing commercial processes. Creating a tintype involved essentially the same processes as those used for ambrotypes, but the image surface, was iron instead of glass. Many collectors and traders often mistake one type of photograph for the other when the photographs are in cases.

The tintype, actually misnamed, is an iron plate that has been coated with a black lacquer. This lacquer (sometimes referred to as japan, from the substance's country of origin) provided a smooth tonal surface on which to develop the image and it prevented the iron from rusting. The tintype was more commonly known in its time as a ferrotype (ferrous being the name of iron from your chemistry class), and melainotype, a variation of the melano prefix meaning dark or black.

The tintype enjoyed the longest success of any 19th century photographic process in history. Even though its popularity was overcome by new paper images in the 1860s, it was still produced until the early 1900s. In the latter years tintypes were mostly produced as souvenirs at carnivals and side shows.

Durable, Inexpensive

This ca. 1870 tintype is created on iron that has been coated with a black enamel, and later brown or *chocolate* enamel as this picture shows.



Tintype - There is no *tin* in the tintype. It is a blackened iron sheet.

A Photograph for the Masses

The tintype photograph saw more uses and captured a wider variety of settings and subjects than any other photographic type. It's like the elderly grandfather that saw everything. It was introduced while the daguerreotype was still popular, though its primary competition would have been the ambrotype.

The tintype saw the Civil War come and go, documenting the individual soldier and horrific battle scenes. It captured scenes from the Wild West, as it was easy to produce by itinerate photographers working out of covered wagons.

It began losing artistic and commercial ground to higher quality albumen prints on paper in the mid-1860s, yet survived for well over another 40 years, living mostly as a carnival novelty.



ca 1870 Tintype

Is My Image a Tintype?

The tintype is very easy to identify if it is loose or in a simple sleeve. It is a thin iron sheet. However, it is frequently confused with an ambrotype if it is in a case. Earliest examples of tintypes were cased just like ambrotypes and daguerreotypes. Cases were used into the early **1860s**. But the price of the tintype was dropping so quickly, that the case was far more expensive than the actual photograph. Soon paper sleeves or envelopes replaced the case.

SPECIAL NOTE: Do not try to clean the face of a tintype. Even the softest camera lens brush will scratch the delicate surface. At best use compressed air to remove loose dust or particles. See the *Restoration* section for more.

Components of a Tintype

Very early examples of the tintype used the same pieces and methods for packaging used for ambrotypes. The mat and preserver characteristics described for ambrotypes is applicable to tintypes. See the ambrotype page.

Most tintypes are found today as loose pictures. Many of the paper envelopes and sleeves that originally held the pictures have not survived. The exception is the smaller images, 1/9th plates and gem sizes, that were taped into window-like holders. These became popular in the mid-**1860s**.

Tintype Characteristics

Packaging: Cases, Sleeves, Loose, or Albums

Tintypes were packaged in cases up to the very early **1860s**. Cartouche cards appeared in about **1863**. These were thin cards with a window, usually oval, cut out, with an ornate design printed simulating a picture frame. These were only popular for a few years and were seldom used after 1866.

Embossed window frames were popular during the civil war, first patented in **1865** and were used into the early **1870s**.

Timeline:

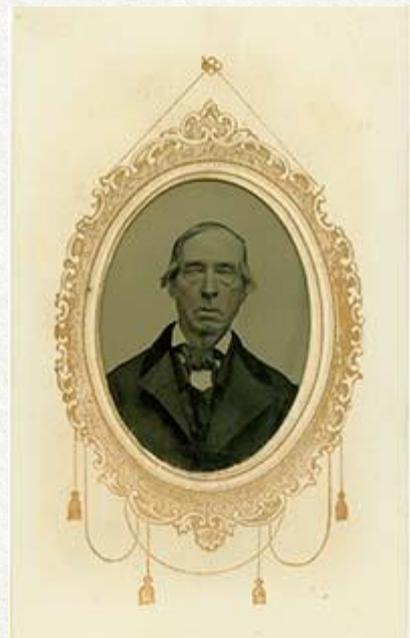
- Appeared: 1855
- Peaked: 1861-1871
- Waned: 1872-1900

Characteristics

- Image on iron plate
- Early examples in cases, mostly loose later
- *Chocolate* tintypes appeared in early 1870s

Common Sizes

- 1/4 Plate - 3 1/4" x 4 1/4"
- 1/6 Plate - 2 5/8" x 3 1/4"
- 1/9 Plate - 2" x 2 1/2"



Tintype in Cartouche paper sleeve - 1865

Carnival tintypes were popular throughout the **1890s**. These usually show people in festive or posed settings, and may be in a colorful sleeve.

Most tintypes are found loose today, because their paper sleeves have deteriorated or they were removed from albums.

Plate Size and Color

Brown or 'chocolate' plates as they were known were introduced in **1870**. They have a distinct hue, though some may be subtle as there were three different tints available.

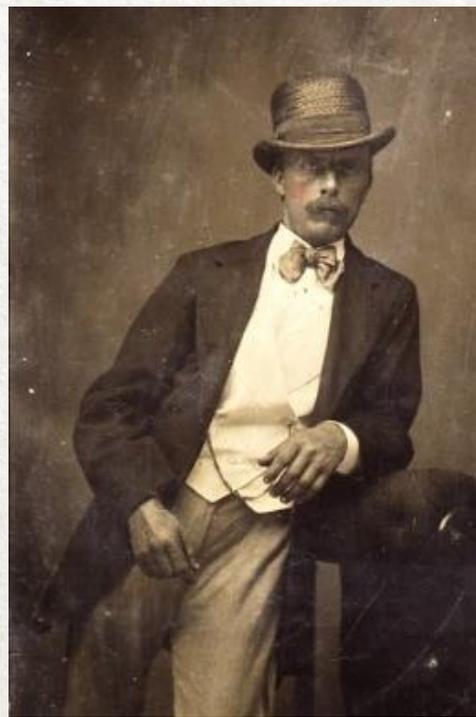
Clothes and Styles

Since the tintype lived a long and varied life, clothes and personal styles can be taken into account to help date a picture.

Browse through the broader category of the 1860s and 1870s also to see more personal styles, even though the image may be a CDV. The CDV and tintype overlapped during these eras as serious portrait photography.



Chocolate Tintype - ca 1886



Carte de Visite : 1859 - aka CDV

The term carte de visite translates to visitor card, though was seldom seen in everyday use. The *Photograph Manual: A Practical Treatise* published in 1862 referred to the format as carte de visite, but acknowledged that the common name was card portrait. This term was soon replaced by card picture, card photograph or simply card. The acronym CDV, seems to be a 20th century invention as no reference to it has been seen in 19th century books, advertisements or other works.

Following the evolutionary trend of earlier processes, the CDV was easier and more economical to produce than the tintype since the image was developed on paper. Thin high quality paper was coated with albumen, made from egg whites, and then sensitized with a silver solution. Albumen eventually yellows, which gave images the familiar sepia or brown-tone hue. While the photographic paper and card stock it was mounted on was not as durable as the tintype iron plate, the CDV was able to bring a higher quality image to the consumer. Plus the images looked more elegant and were easier to handle

First Paper Images

The CDV brought about the flourishing of inexpensive photographs for everyone.



Cartes de visite - First widespread use of paper photographs for portraits

Inexpensive Cartes de visite

The carte de visite changed consumer photography as much as the introduction of any other type of photograph. First, the image had a more natural appearance than the black-base of the tintype. And since the materials were cheaper and easier to work with, prices of photographs continued to fall.

However, the CDV (as it has come to be known) process was the first to employ a glass negative. Previous photographs were unique, one-of-a-kind pictures. But now, the consumer could buy several copies of a picture, and share them with friends and relatives. In **1870** an advertisement quoted six CDVs for \$1.00.

Assembling a collection of family photographs became a popular tradition. Photograph albums began appearing in the early **1860s**, starting a collecting activity that has lasted to the present time.



A classic 1862 CDV of a Civil War era woman in a hoop skirt.

Is My Image a Carte de Visite?

This is the easiest of early photographs to identify. The image was developed on a very thin sheet of paper, and then was glued to stiff card stock. Carte de visite, or CDV, actually denotes a size or format. Later photographs employed the same process, but have different names to describe their format. For example, early cabinet cards used the exact same process as the CDV, but were just larger.

So, a CDV is a specific size: 2 3/8" x 4 1/4". Note the size may vary up to 1/4", especially with early samples as the photographer may have cut his own card stock. But generally they were close in size, partly due to the standard size of album slots.

Carte de visite Characteristics

There are several carte de visite features which make dating the majority of them relatively easy – within a few years. The most accurate and fortunately the easiest features to identify are listed here in order of most importance:

- Card Thickness
- Card Corners
- Image Size on Card
- Card Borders
- Studio Props & Background

Card Corners

This is one of the easiest and most dependable dating techniques. Square corners dominated the cards until **1870**. Then rounded corners, much less susceptible to damage were introduced. Caution: Many square cards have been rounded through handling and wear. Look for even, sharp corners to decide if it was round or square. Also, some cards were hand trimmed by the owner, usually at an angle for easy placement in albums.

General Rule: Square is pre-1870

Image Size

Early camera and lens technology did not produce large, sharp images. A small picture was much more forgiving. Just as when any new technology is introduced, all photographers did not replace their equipment with the latest cameras at once. Therefore, overlap in dating pictures due to image size can occur. But combined with other features, this can be very helpful. One concept to keep in mind: Well-established photographers in large cities are most likely to be on the leading edge of technology.

Timeline:

- Appeared: 1859
- Peaked: 1863-1877
- Waned: 1877-1882

CDV Characteristics

- Image on thin paper, mounted on card stock
- Early cards very thin, became thicker about 1870, and even more about 1880
- Most exhibit the classic sepia tone

Common Size

- 2 3/8" x 4 1/4"



1864 CDV of boy with pull toy

- Image Size: Less than 3/4"
- .
- Image Size: About 1" 1860-1864
- .
- Image Size: Between 1 1/2" - 1865-1872
- 1/3/4" 1874-1910
- Image Size: Fills Complete Card . .
- .

General Rule: Smaller is older. Dime size is pre-1865

Borders

While a little riskier to use as a definitive dating technique, it is still worthwhile to know the border styles as they evolved, particularly in the later 1860s and early 1870s. The earliest CDVs had no border. In about **1862** a single thin line, sometimes two lines were used to outline the picture area. In **1864** two lines, a thin inner one and a thicker outer line, became popular. In the early 1870s, much thicker lines came into vogue, and then disappeared again later in the decade.

- No Borders 1860-1862
- Two thin lines 1862-1863
- One thin, one thicker line. 1864-1869
- Very Thick Border 1874-1880

General Rule: Thin borders pre-1868

Backgrounds

Until the late **1860s** the background was either void or consisted of only a chair, small table, or other object which the subject used to steady themselves. Around **1870** decorative backdrops and props were used, sometimes to the point of absurdity. Too many fences, rocks, and other decorations detracted from the phototgraph's subject.

General Rule: Elaborate props/background is post-1870



1879 CDV with oval image typical in the 1870s



Cabinet Cards: 1866 - Modern Elegance

The cabinet card was a larger, more refined version of the carte de visite. By the early 1880s it had nearly replaced all CDVs, and was the dominant portrait format until the end of the century.

This new format employed the same steps for making CDVs: still exhibiting the sepia look, but with an image area more than double the CDV. It was introduced in the late 1860s in England, but did not gain much attention in the U.S. until the mid-1870s. While it was a bigger image than the CDV, it did not offer much of a quality difference until the mid-1880s. That is when the effect of new photographic papers and camera improvements really became apparent.

Modern People and Looks

The 1890s allowed people to exhibit their personalities and have fun with photographs.



Cabinet Cards - Beginning of modern portrait photography

Cabinet Card was the Most Common Family Portrait

The cabinet card was made by using the same steps for creating CDVs, still exhibiting the sepia look. However, the cabinet card's image area was more than double the CDV. It was introduced in the late 1860s in England, but did not gain much attention in the U.S. until the mid-1870s. While it was a bigger image than the CDV, it did not offer much of a quality difference until the mid-1880s. That is when the effect of new photographic papers and camera improvements really became apparent.

Many cabinet card photographs from the 1880s and 1890s are exquisite pieces of artwork, exhibiting technical excellence and wonderful composition. This new size and improved clarity and colors provided the perfect media to showcase the grand styles of the gilded age.

Is My Image a Cabinet Card?

These are just as easy to recognize as CDVs. Though examples from the late 1890s show a wide variety of card stock, and some variation in sizes. Basically though, most cabinet cards are 6 1/2" x 4 1/4".



1892 Cabinet Card.

Timeline:

- Appeared: 1866
- Peaked: 1875-1895
- Waned: 1896-1900

Cabinet Card Characteristics

The cabinet card experienced many style changes and improvements during its lifetime. Dating them is quite easy. Some of the characteristics to look at include:

- Color of card
- Artwork and print on the card
- Card borders and edges
- The photographic paper
- Backgrounds, dress, and styles

Card Colors

Initially, cabinet cards were made from natural raw bristol board, both front and back. But in the mid-**1870s** the backs were coated with soft off-white or even light pastel ink. The two most advertised card colors were primrose (pale yellow) and pearl (rich off-white) though light pink, blue, and green can be found.

In the mid-**1880s** dark colored cards were introduced and used until the early 1890s. The most popular was a dark maroon and black. Green was a very attractive version, but examples are harder to find.

While the dark cards are not rare, they did not capture a large share of the marketplace, possibly because they were more expensive than standard colors. Compared to primrose or pearl cards noted earlier which were \$1.10 per hundred, maroon cards were \$1.20 and black were \$1.30 per hundred.

General Rule: Dark cards popular from 1885 to 1895

Imprints - Front and Back

Imprints are the text and artwork printed on the card. The front usually includes the studio or photographers' name and location. The back sometimes includes the same information, but more elaborate.

Front Imprint

Several style changes are easily datable. Artistic print means the typeface used is highly ornate cursive style.

Small, plain print	1866 - 1884
Artistic print	1882 - 1900
Foil stamped artistic print	1890 - 1900
Embossed artistic print	1894 - 1900

Characteristics

- Image on thin paper, mounted on card stock
- Early cards were sepia (brown tone), later photos were silver-like tones and rich blacks
- Edges can be beveled, gilded, or scalloped

Common Size

- 6 1/2" x 4 1/4"



ca 1887 cabinet card on dark green stock.



Back Imprint

The backside of the photograph became an elaborate advertisement for the photographer. The following trends have been observed:

Medium size (less than half the back)	1866 - 1890
Artwork covers nearly all the back	1888 - 1900

Note: The back was frequently left blank to reduce costs.

General Rule: The fancier, the later the date.

Card Borders

The borders (lines or artwork on the card) and the manner in which the card edges were cut or treated are some of the best known clues to dating the cabinet card. Characteristics to look for are:

Borders

None	1866 - 1900
Thick gilt border to card edge	1878 - 1886
Single thin line	1884 - 1900
Embossed patterns	1894 - 1900
Artistic underscore	1886 - 1896

General Rule: No single rule applies across all cards

Card Edges

Card edges experienced numerous changes during the latter 1800s. These included beveled edges, gilt treatment, and scalloped edges. Throughout the time however, plain straight cut edges could be found also. The simplest ones were the cheapest and there was always a market for them.

Plain cut	1866 - 1890
Beveled	1892 - 1900
Scalloped	1886 - 1900

General Rule: Most fancy edges are from the 1890s

1888 cabinet card shows a single artistic line below the image, used from about 1886 to around 1895.



1890 cabinet card with scalloped edges.



1895 cabinet card with rich soft tones.

Sources and Resources

PhotoTree - <http://www.phototree.com>

rootsweb - <http://freepages.family.rootsweb.ancestry.com/~victorianphotographs/>