Ways to digitize

1. FLATBED SCANNING: photo or document is scanned face down on a glass plate. Be sure your scanner supports the type of media you're digitizing. If you have negatives, slides, etc., you will need a scanner that has additional capabilities to scan film. Avoid office "all-in-one" printer/copiers and sheet-fed/document scanners to avoid damage to photos and to have better control of resolution and other settings. Many libraries have scanners available for the public to use.

2. COMBINATION OF CAMERA, COPY STAND, AND SUPPLEMENTAL LIGHTING: It is a great option for fragile photos, over-sized photos/documents, or photos that cannot be removed from their frames such as cased tintypes or ambrotypes. The setup requires photography knowhow and skills to set up and operate.

3. SMARTPHONE CAMERAS / APPS: Smartphone Cameras and their apps are not a replacement for flatbed scanning or digital cameras. They are inferior in nearly every sense except for one—convenience. They are helpful in situations where you may come across undigitized family documents or photos retained by other family members where they are agreeable for you to make a copy with your smartphone app. While inferior, it may be the only chance to make a copy for your records.

Naming files

Use a consistent naming convention for folders and files.

EXAMPLE:
YearMonthDate_Name_001.PNG/TIFF/JPG
(19640629-LeBlanc Wedding_001.png)

A Word About Storing Digital Files...
Good practices for a backup storage plan follows the 3-2-1 standard:
• 3 copies should be made
• 2 different kinds or brands of storage media mediums (Cloud storage, hard drives, flash drives, etc)
• 1 needs to be stored off site away from the other two

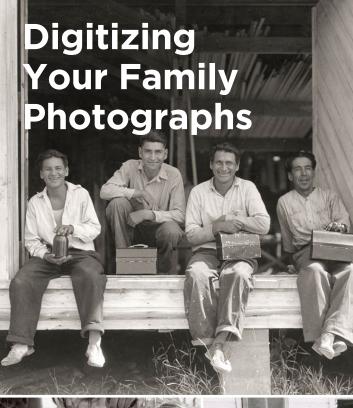**For questions about digitizing your family photographs, contact conservationhelp@mnhs.org.**

Find more detailed information on digitizing files.

mnhs.org/familyhistorycare

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Digitizing Your Family Photographs

Digitize in color

As a rule of thumb, **every photo you digitize should be in color.** Even when you're digitizing sepia and black & white photos, you'll get a better result when digitizing in color as color digital files record more detail and preserve as much quality as possible. Moreover, while you can turn colored digital files into grayscale, you can't do the reverse.

Resolution is important

When scanning prints (not negatives) of photos, **300 ppi** (pixels per inch) is fine in general. 300 ppi is needed for printing a picture at the same size as the original. However, if you want print out the file larger than the original size or for especially detailed or precious photos you may wish to scan at **600 ppi** which is doubling the size of the original to make sure you get all the details hidden in your prints (assuming the original photo is of high quality).

Digital file format for preservation

JPEG/JPG is not a good format for archiving because it compresses files by throwing away details of the picture data to make a smaller file size. You will always lose picture quality when saving, even if you save it at 100% quality. If you use JPEG, minimize the number of editing sessions to reduce quality loss. However, JPEG is one of the most used image file formats because of its virtually universal software/OS support.

TIFF is a lossless format standard used by museums for archiving, but it also creates huge file sizes and is not shareable on the web or digital devices. Many organizations use TIFF for their archive copy and JPEG for their access/web copy.

PNG offers many options of TIFF as well as built-in lossless compression and is more web/digital device compatible. It's not as widely supported especially by older Microsoft systems, but if space is at a premium, it will save you space over TIFF.

Resolution for common sizes of photos & documents

3.5″ × 3.5″ (Instamatic prints or Wallet size)
- Scanning @ 300 ppi creates a file large enough to print the original size of 3.5″ × 3.5″
- Scan @ 600 ppi to print 4″ × 6″ (cropped)
- Scan @ 960 ppi to print 8″ × 10″ (cropped)

4″ X 6″ (Standard current day printed photos)
- Scanning @ 300 ppi creates a file large enough to print the original size of 4″ x 6″
- Scan @ 600 ppi to print 8″ × 10″ (cropped)

5″ x 7″ (Greeting cards)
- Scanning @ 300 ppi creates a file large enough to print the original size of 5″ x 7″
- Scan @ 480 ppi to print 8″ × 10″ (cropped)
- Scan @ 730 ppi to print 11″ × 17″ (cropped)

8.5″ x 11″ (Standard documents)
- Scanning @ 300 ppi creates a file large enough to print the original size of 8.5″ X 11″

3.0625″ X 3.125″ (Polaroid)
- Scanning @ 300 ppi creates a file large enough to print the original size of 3.0625″ X 3.125″
- Scan @ 490 ppi to print 4″ × 5″ (cropped)
- Scan @ 780 ppi to print 8″ × 10″ (cropped)

> **Caution:** When editing, DO NOT overwrite your original file. When cropping and resampling your image for printing purposes, you should always save your original image for any future plans, because we do change our minds, but there's no going back. Always save such edits into a new file name.

Scanning is a great way to preserve and share the information, but there is no substitute for an original photograph. **PLEASE do not discard photos after digitizing.**

Resolution for common sizes of slides & negatives

35mm negatives or slides (135 Standard)
- Scanning @ 1270 ppi creates enough pixels to print to the size of 4″ × 6″ when rescaled to 300 ppi
- Scan @ 2700 ppi to print 8″ × 10″ (cropped)

26mm x 26mm (126 or Instamatic Film)
- Scanning @ 1633 ppi creates enough pixels to print to the size of 4″ × 6″ when rescaled to 300 ppi

13mm x 17mm (110 or Pocket Instamatic Film)
- Scanning @ 2700 ppi creates enough pixels to print to the size of 4″ × 6″ when rescaled to 300 ppi

60mm X 45mm/60mm/70mm/80mm/90mm (120 Film)
- Scanning @ 760 ppi creates enough pixels to print to the size of 4″ × 6″ when rescaled to 300 ppi
- Scan @ 1270 ppi to print 8″ × 10″ (cropped)

2.5″ x 4.5″ (116 & 616 Film)
- Scanning @ 480 ppi creates enough pixels to print to the size of 4″ × 6″ when rescaled to 300 ppi
- Scan @ 960 ppi to print 8″ × 10″ (cropped)

40mm x 30mm/40mm/60mm (127 Film)
- Scanning @ 760 ppi creates enough pixels to print to the size of 4″ × 6″ when rescaled to 300 ppi
- Scan @ 1270 ppi to print 8″ × 10″ (cropped)

For slides & negatives, scale for printing

Once scanning of the negative or slide is done, when printing the digital file, it will need to be rescaled to fit to the size of the desired print.

Cleaning preparation

Having a rubber rocket air blower/duster for photographs and PEC-PAD lint-free wipes for slides and negatives can be helpful for cleaning dust before digitizing if needed.