

Image File Types: Raster

There are three primary file types used for raster images (pixel-based) on the web:

1. **JPEG** (Joint Photographic Experts Group)
2. **GIF** (Graphics Interchange Format)
3. **PNG** (Portable Network Graphics)

Each has their own strengths and weaknesses.

JPEG images

- Most common format; most digital cameras save in this format.
- Highly compatible with good compression (small file sizes).
- Lossy compression: compression is accomplished by throwing away the “least important” bits of info. Can cause artifacts, small blocky elements.
- Optimized for photographs and tonal imagery.



Original



Compressed with Artifacts

GIF images

- Good for limited color images (solid colors). Only save 256 indexed colors.
- Uses Lossless compression.
- Able to save animated images.
- Poor implementation of transparency.



Posterization caused by limited colors



Animated GIF

PNG-24 images

- Displays millions of colors.
- Uses Lossless compression.
- Typically used for static images, but can be used for animations.
- Supports true transparency.
- Capable of saving tonal and solid color images, as well as transparency. However, creates larger file sizes.





JPEG (quality of 9): 754kb



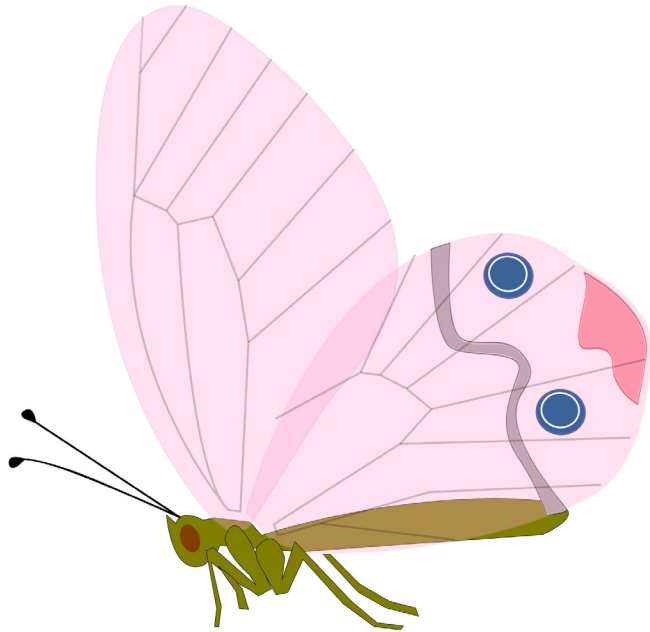
GIF: 1.1mb

File size comparison: photographic image

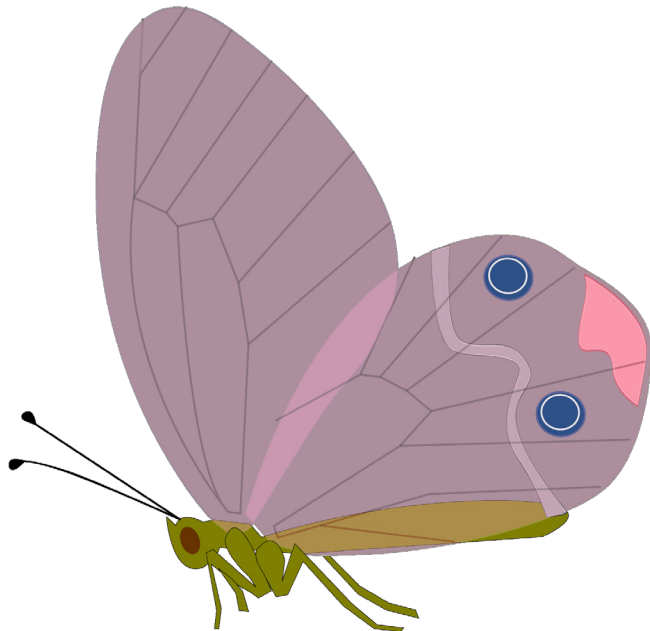


PNG-24: 5.8mb

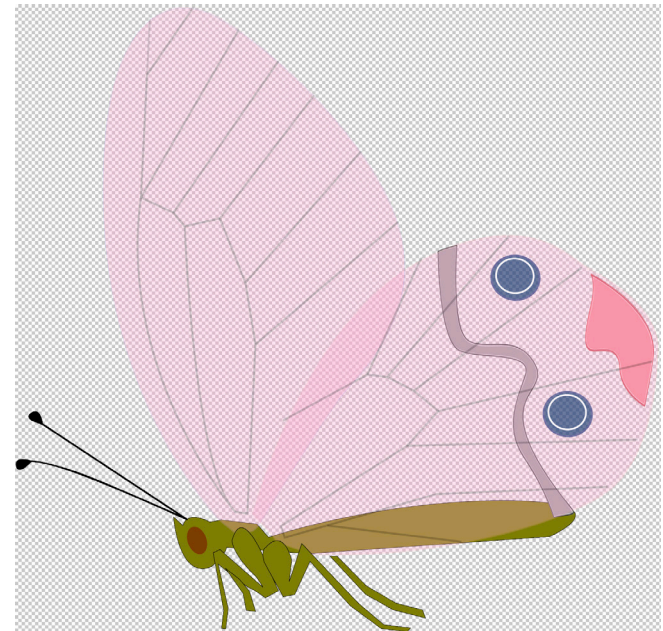
File size comparison: image with transparency



JPEG (quality of 9): 188kb

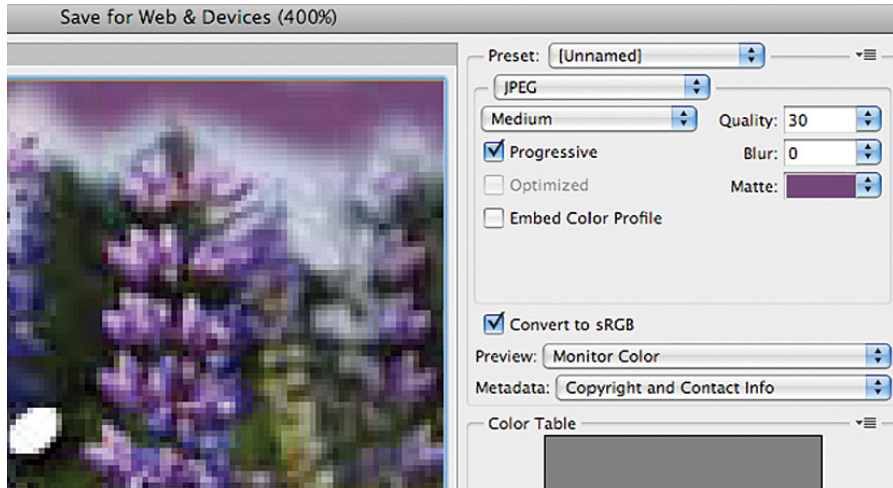


GIF: 70kb

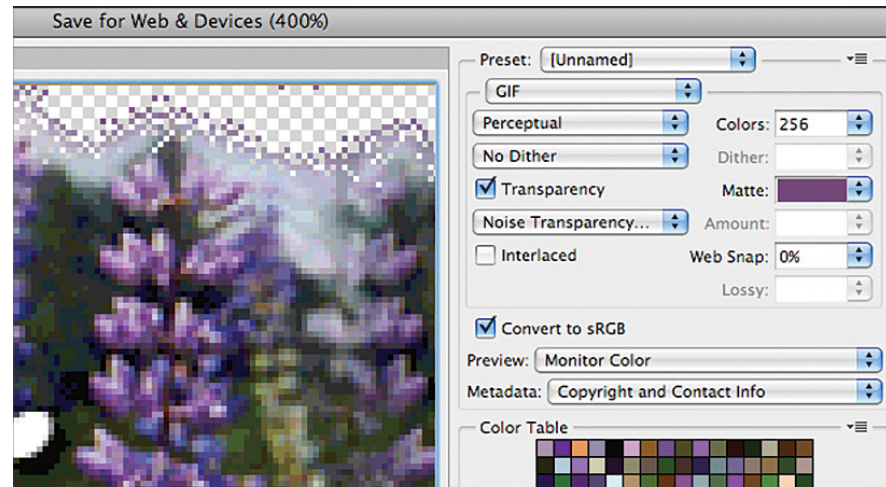


PNG-24: 250kb

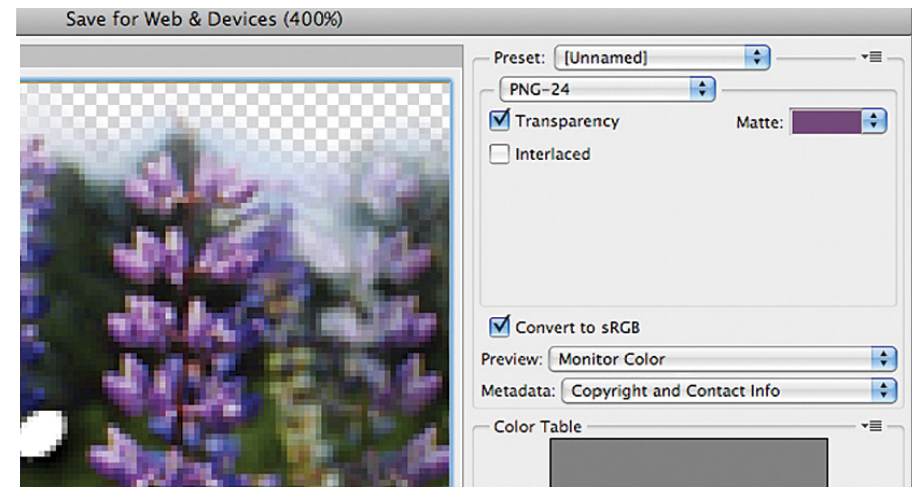
File formats: image with transparency



JPEG



GIF



PNG-24

Pick the right file format

JPEG

- photographic/tonal images

GIF

- solid colors

PNG

- anytime you have transparency