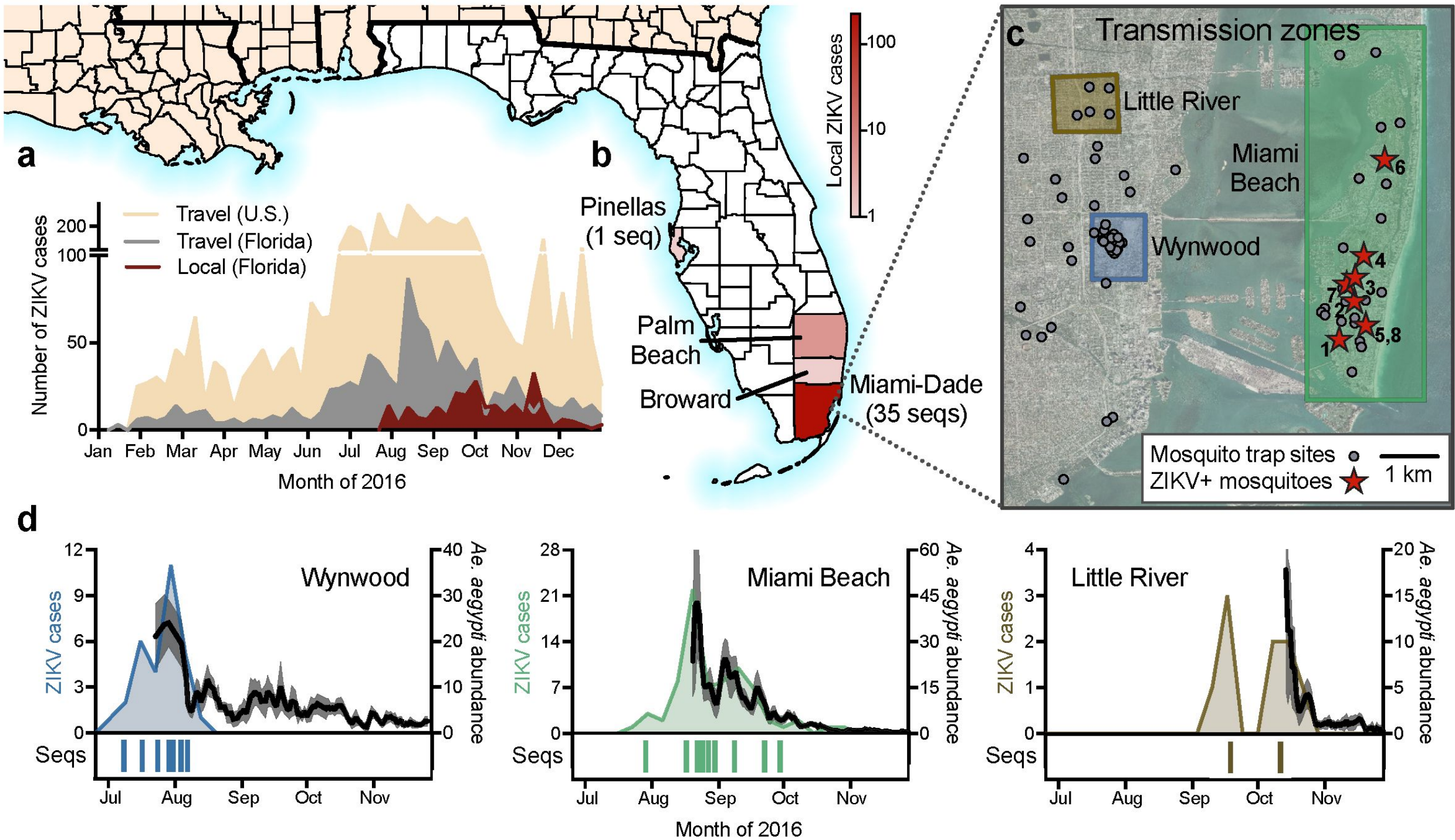
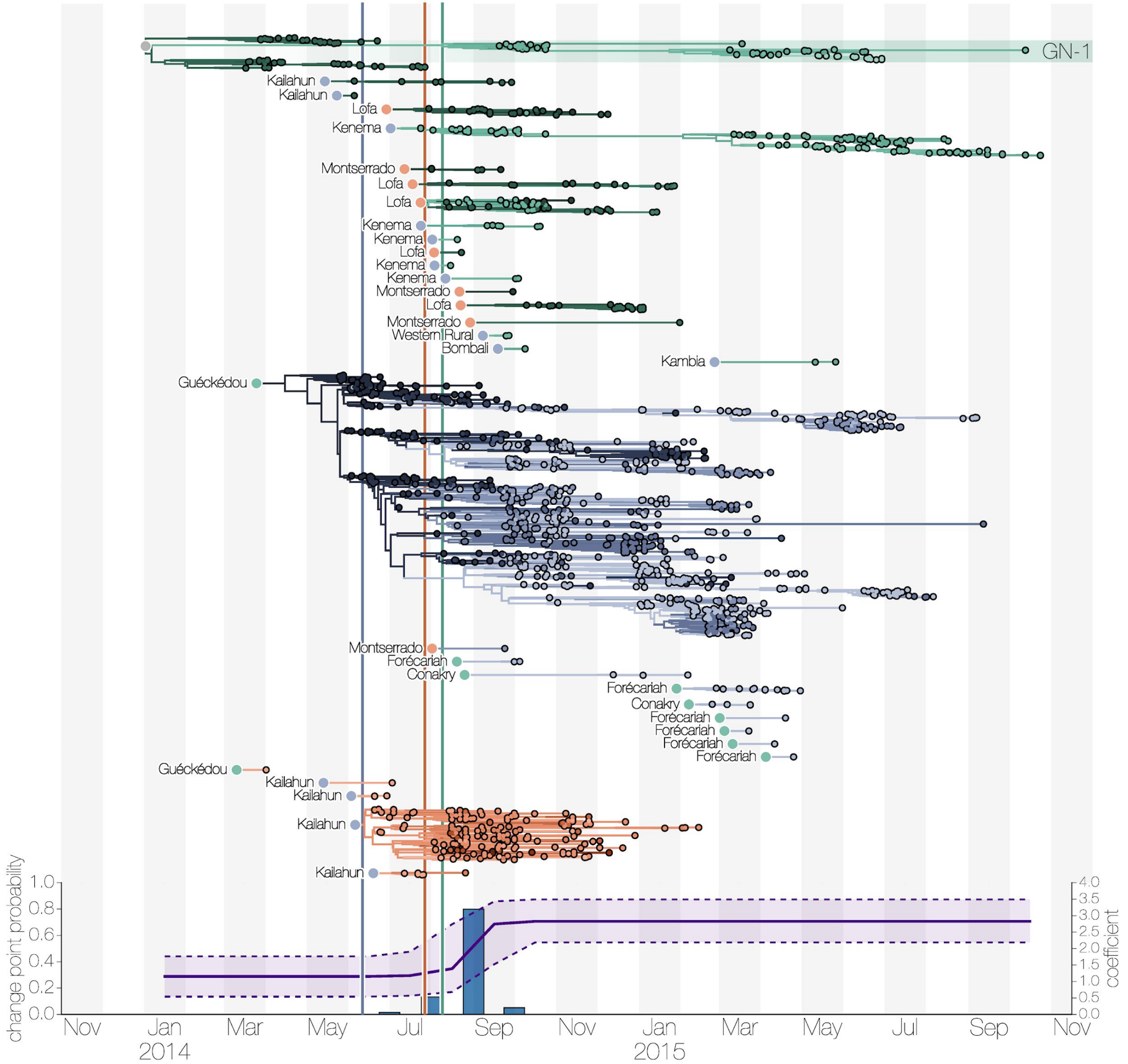


# Graphical Concepts

Spring 2022  
PCfB Class 8  
March 11, 2022



Grubaugh et al. 2017, Nature



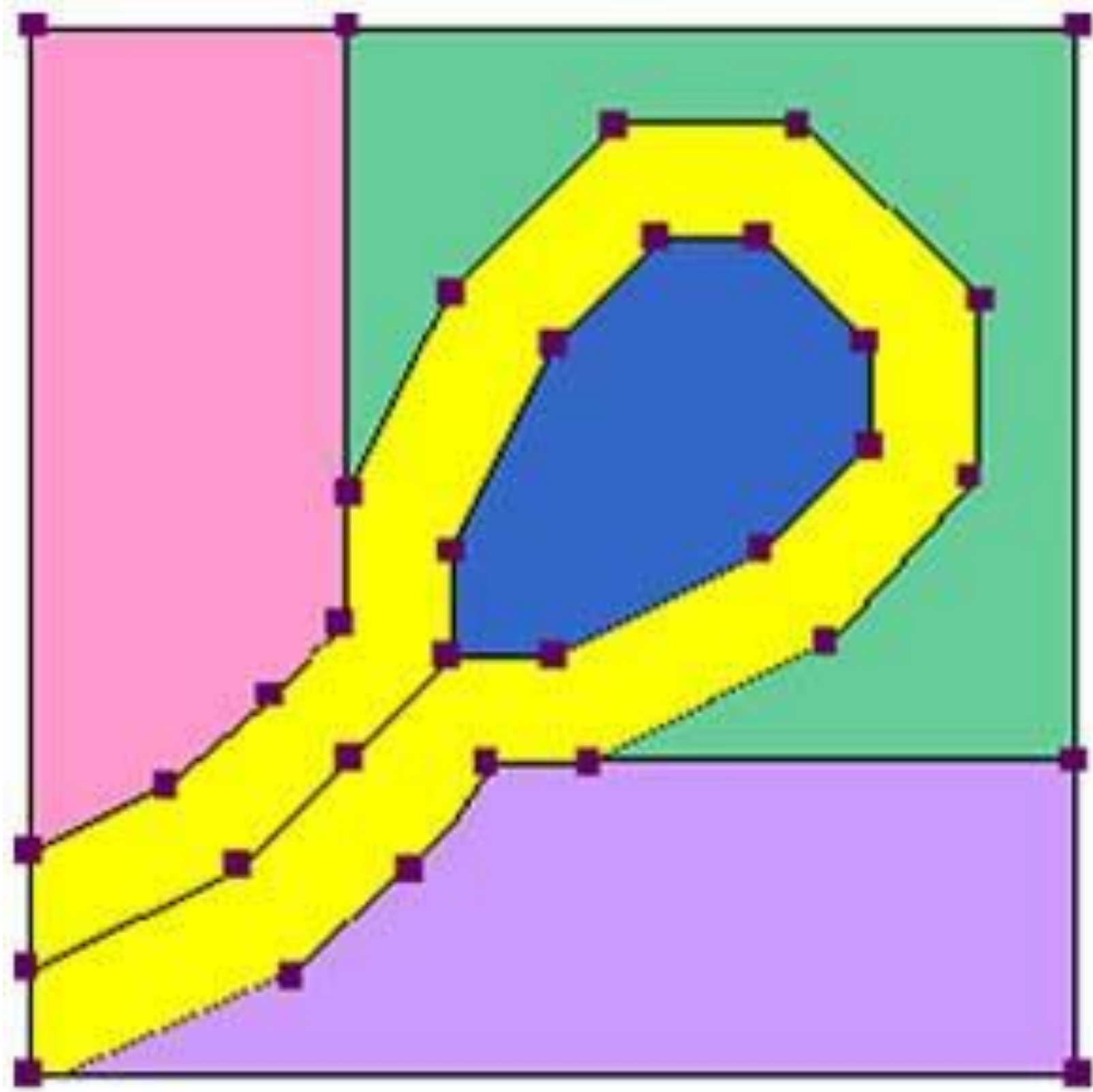
Dudas et al. 2017, Nature



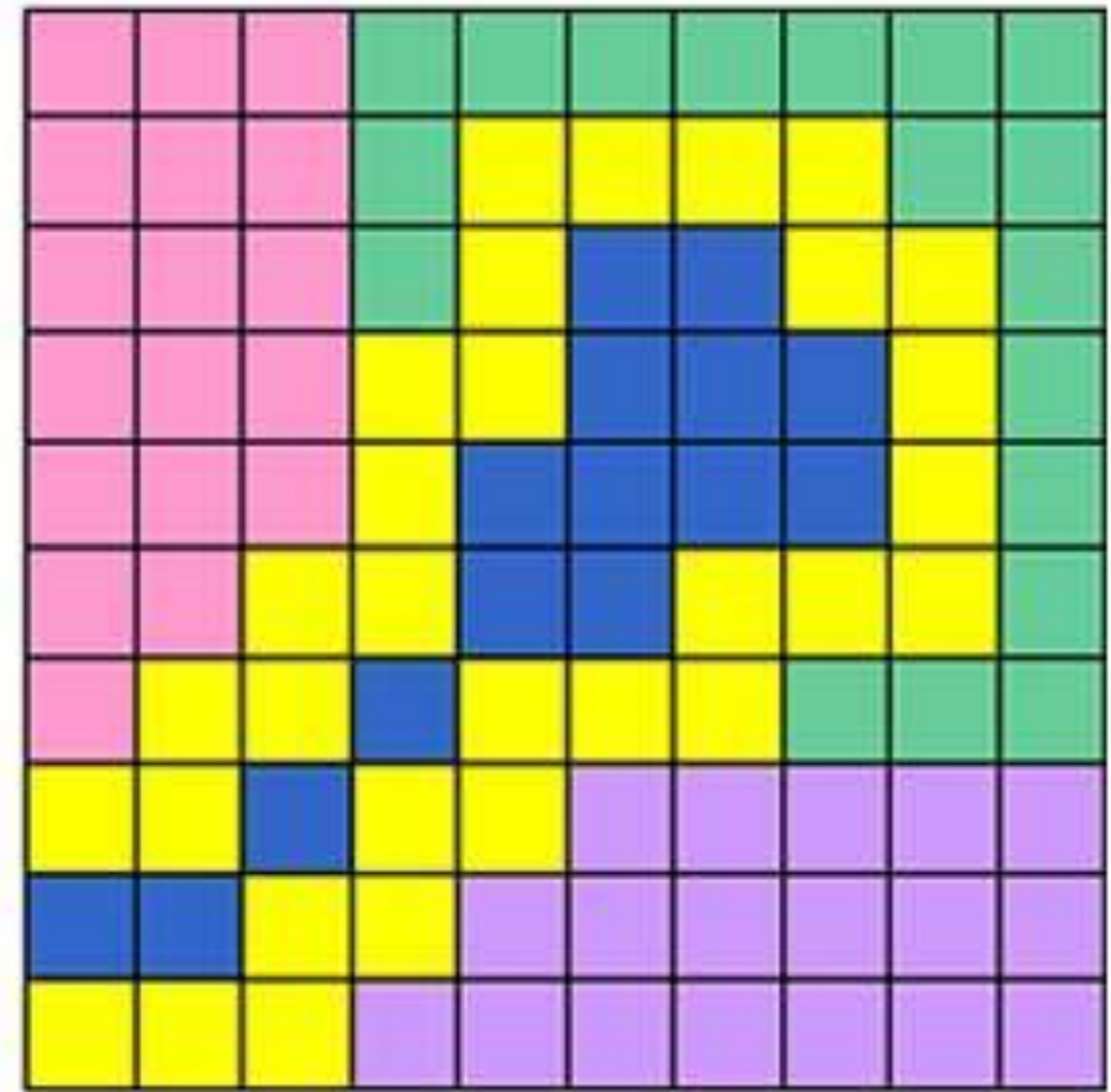
# Objectives

- Overview of graphical concepts
- Exposure to editing programs

# Types of digital images



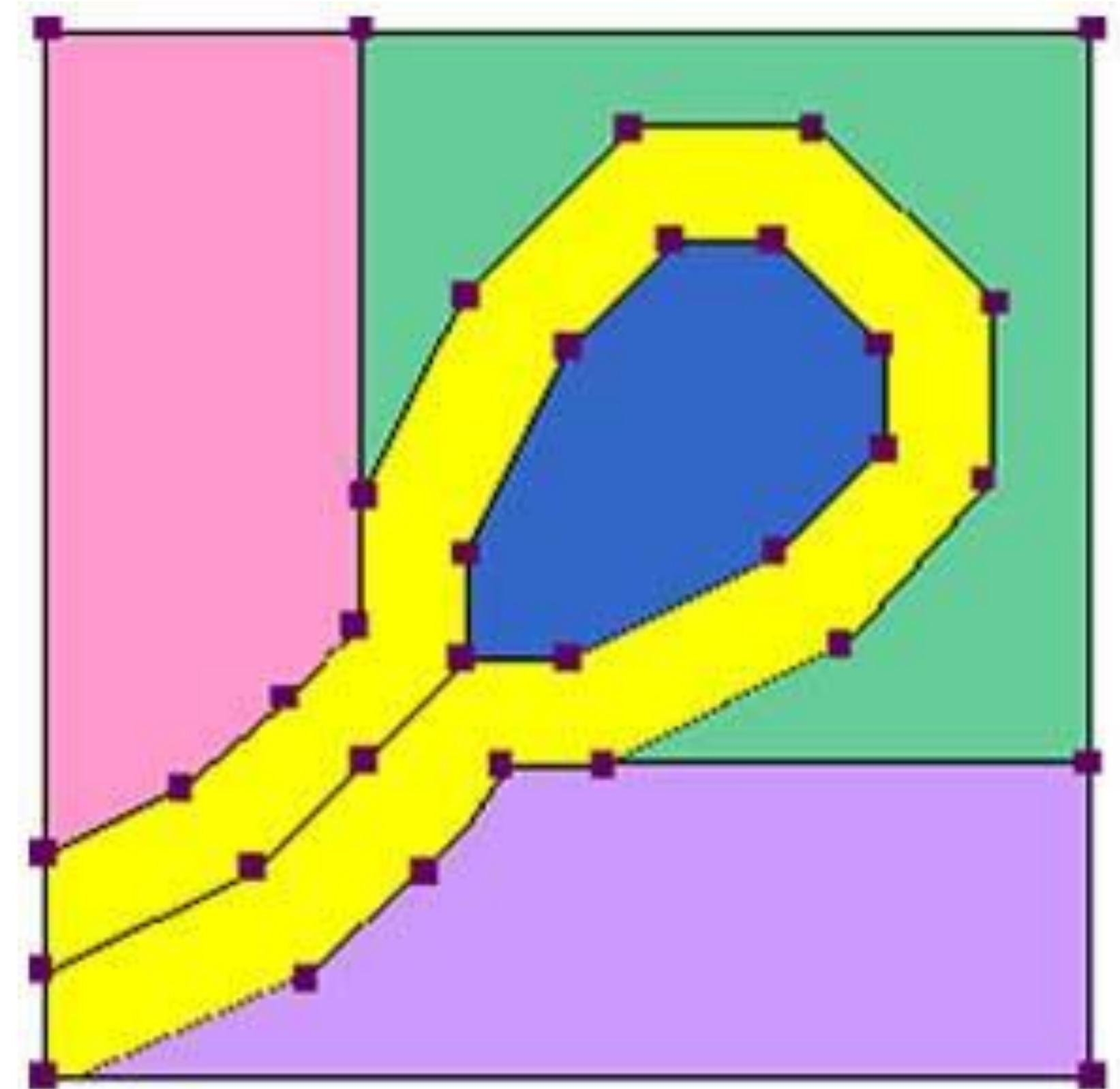
vector-based



pixel-based

# Vector-based images

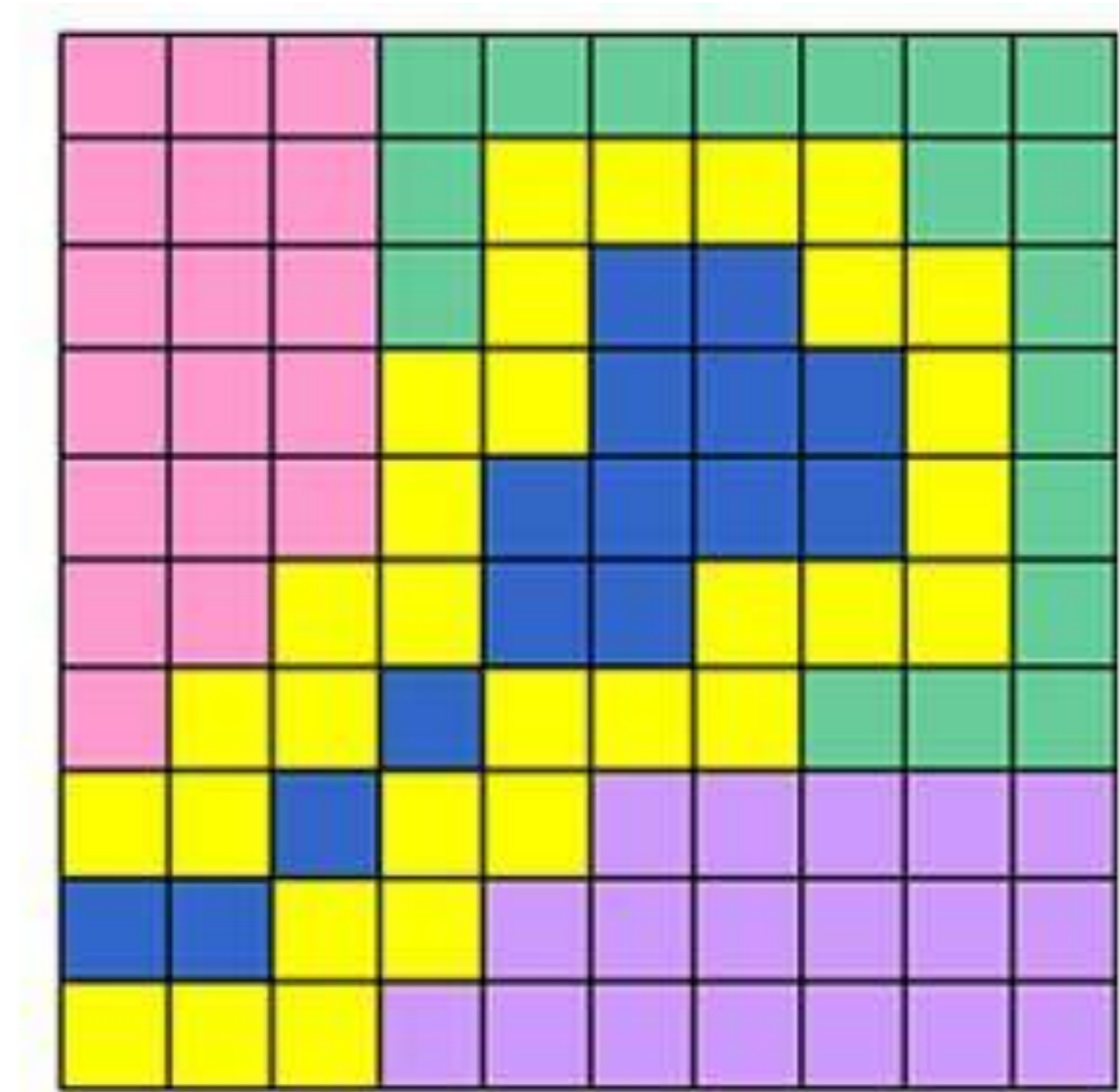
- Composed of independent shapes
- Each shape editable as a unit



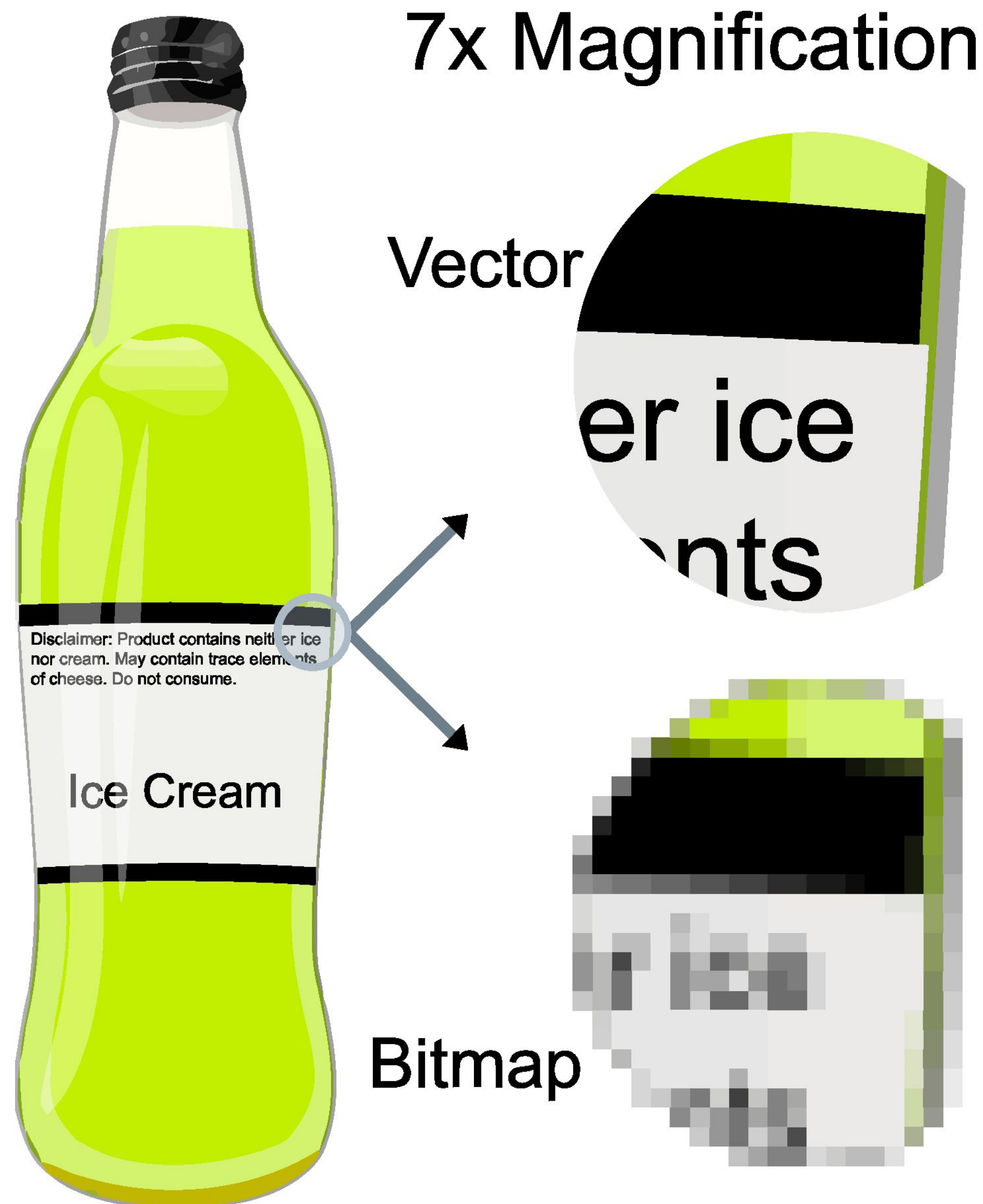


# Pixel-based images (raster)

- Composed of squares of different colors
- Only editable by changing the colors of individual squares



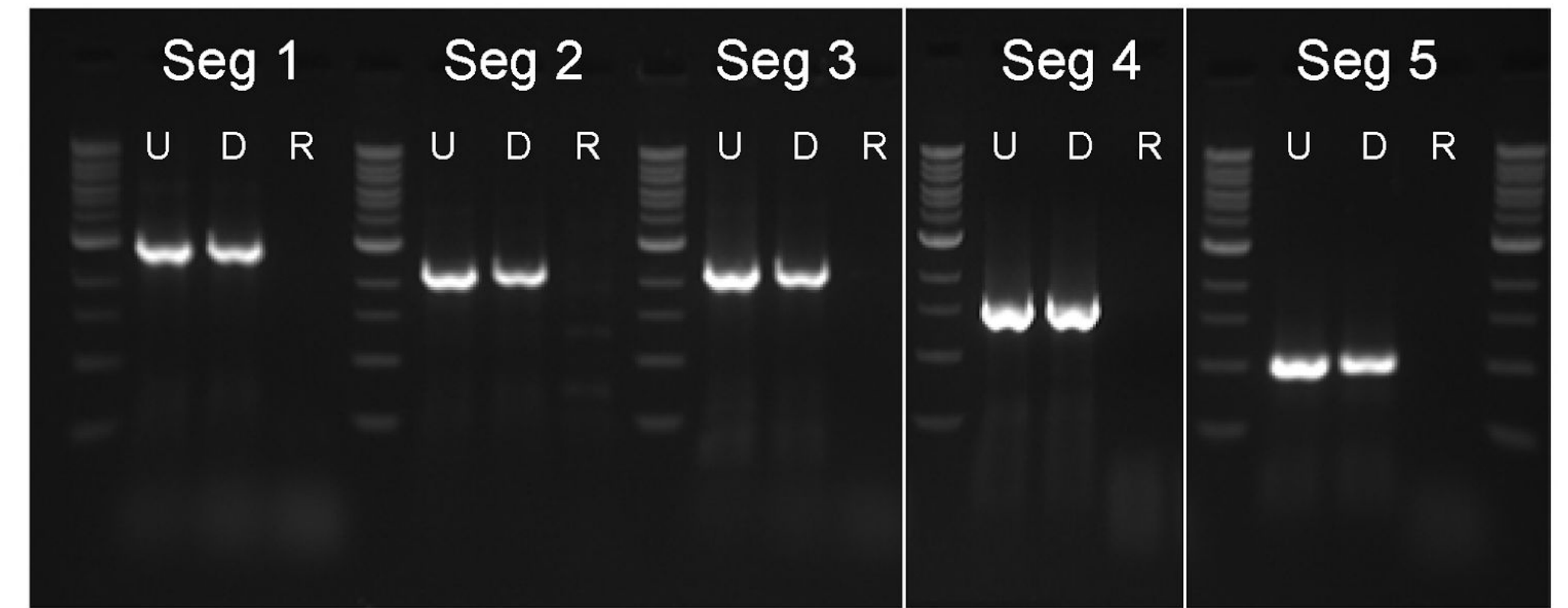
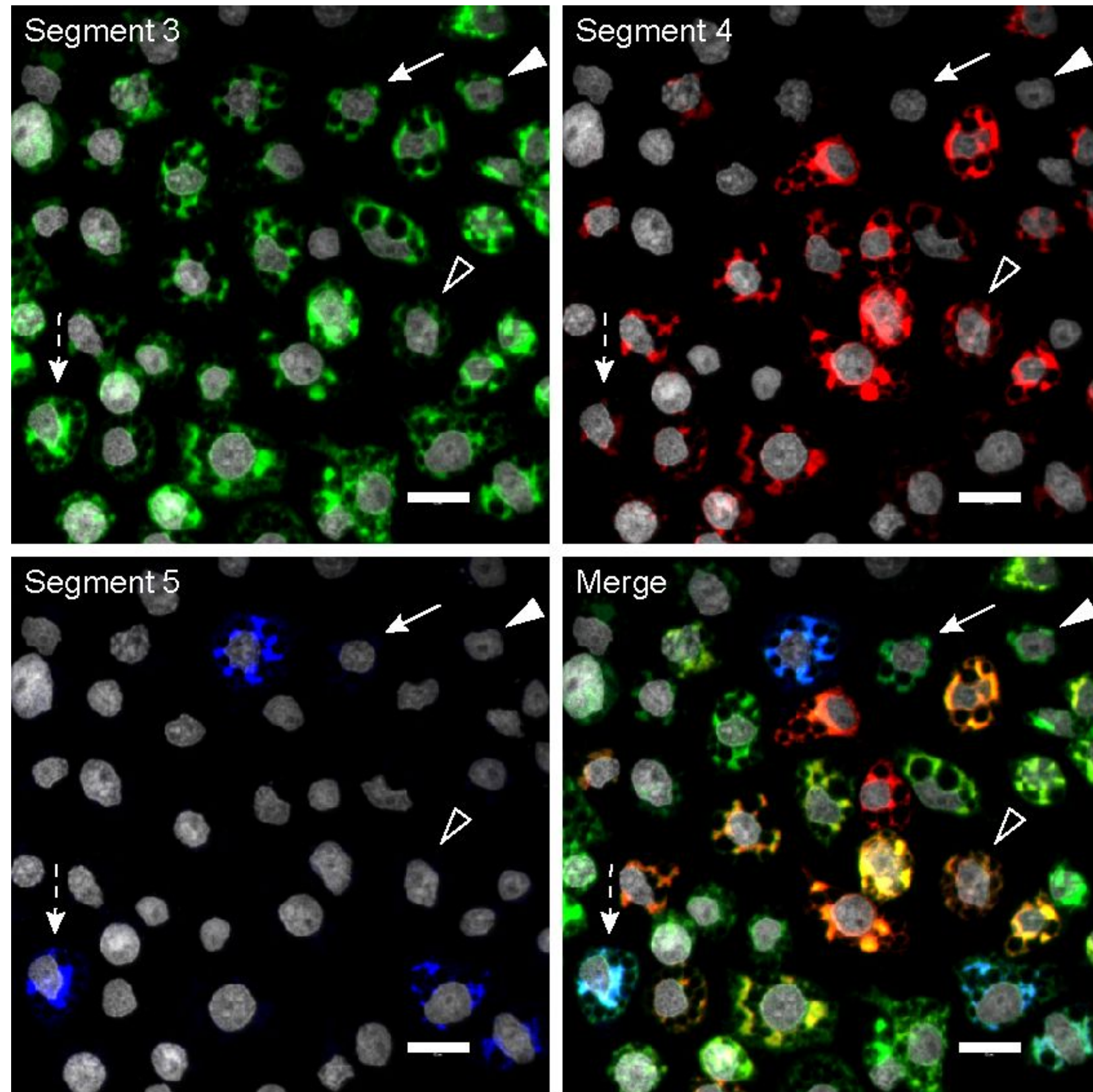
# Use vectors whenever possible!



- Maintain clarity at any size
- Easy to edit
- Can always convert to pixels
- Searchable

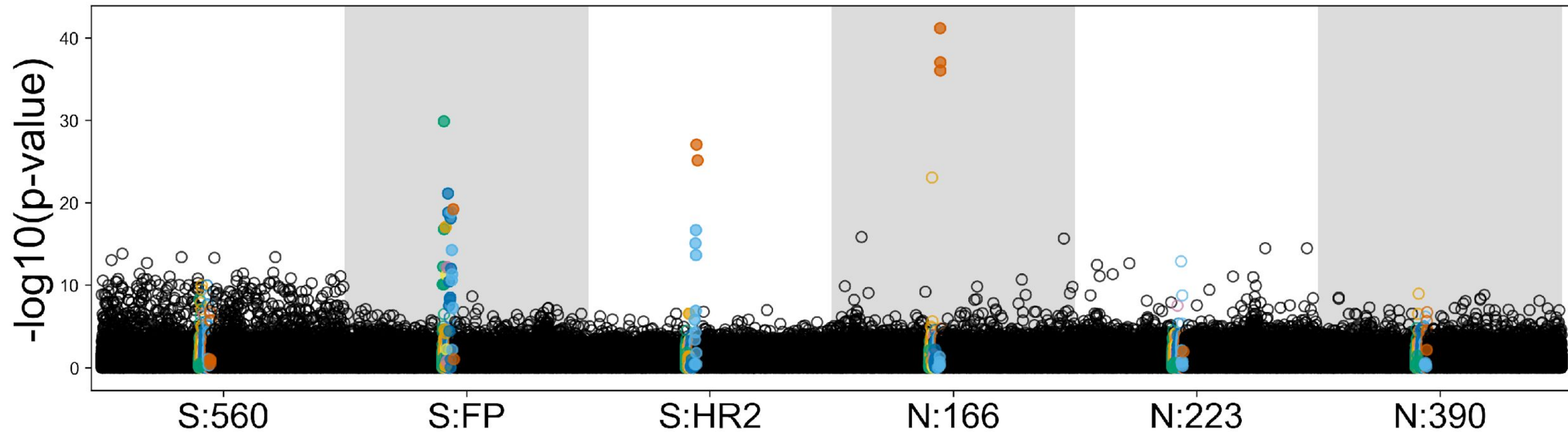


# 1st exception = photographs





# 2nd exception = complex figures





# How to generate vector images

- Draw images from scratch
- Trace a photograph
- Export from most programs

# Know your file formats!

**TIFF**

**PDF**

**AI**

**PNG**

**PSD**

**PS**

**SVG**

**GIF**

**EPS**

**BMP**

**JPEG**

**JPG**



# Working with vectors



**Adobe Illustrator**



**Inkscape**

# Working with pixels



**Adobe Photoshop**



**GIMP**



# Objective

Familiarize yourself with both  
vector-based and pixel-based  
graphics editing programs