BCEENET
BIOLOGICAL COLLECTIONS IN ECOLOGY AND EVOLUTION NETWORK

Installing ImageJ and Tools

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INTRODUCTION

ImageJ is an open-source tool provided by the National Institutes of Health. It is a useful tool for image analysis and is used by some of the BCEENET CUREs to analyze specimen images. Additional tools are also available to add specific functionalities.

System Requirements

Image J requires Java to run. Java will be bundled with your Image J download. Users will need to have 82 MB of storage space to download the program.

Related documents

Part 1- Installing ImageJ and Tools
Part 2- Measuring Wing Size using ImageJ
Part 3- Measuring Wing Spot Area using ImageJ
Part 4- Measuring Apex Melanization using ImageJ

This is the first part in this series. Your instructor may ask you to skip parts 3 or 4 or to complete them in a different order.

DOWNLOAD AND INSTALL IMAGEJ

1. Visit the ImageJ Download page
2. Find the section on the page that corresponds to your operating system (i.e. Windows, macOS)

For Mac users:

1. Download and unzip the file.
2. Drag ‘Image J’ into your applications
3. When you try to open the first time you may need to give your computer permission to run the application:
4. Click the apple symbol in your tool bar and navigate to **System Preferences >> Security & Privacy >> General**.

5. Click the button at the bottom of the window that says "**Open Anyway**".
6. You will get a message "ImageJ can't be opened because the identity of the developer cannot be confirmed". Click the button that says "**Open**".
7. To disable path-randomization (might cause issues with tool and macro installation), hold down the command (apple) key and drag 'Image J' onto your desktop. Then drag it back into your application folder.

For Windows users:

1. Download and unzip the file.
2. Open the ImageJ folder.
3. Double click on the ImageJ.exe application.

INSTALL THE VERSATILE WAND TOOL

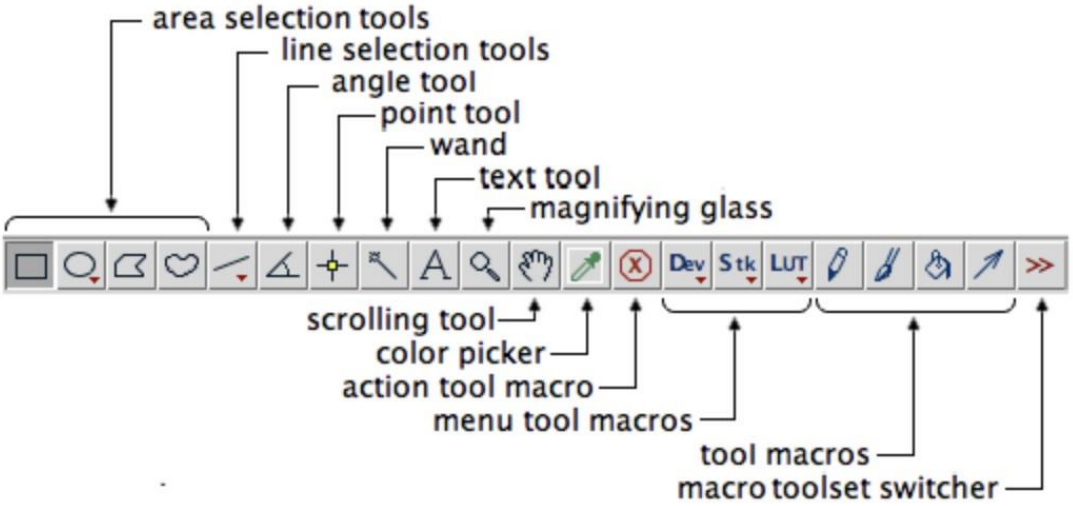
1. Navigate to: Versatile Wand Tool download page.
2. Click on the **Versatile_Wand_Tool.jar** to download it.
3. Open ImageJ.
4. Drag and drop the Versatile_Wand_Tool.jar file onto the ImageJ toolbar to install it.
5. Navigate to **Plugins>>Tools>>Versatile_Wand_Tool.jar** and click on it to add it permanently to your toolbar.
6. The new button shown below will appear in your ImageJ Toolbar.

INSTALL THE FIXED ANGLE MACRO TOOL

**Note: You must reinstall this macro every time you open ImageJ*

1. Download the *Fixed Angle Line Tool.ijm* file, provided by your instructor.
2. ***Do NOT click the file to open!!*** Save the file to a known location on your computer.
3. In ImageJ, navigate to **Plugins>>Macros>>Install** and locate the file.
4. Click **Open.**
5. The macro tool should install automatically and the new button shown below should appear in your ImageJ Toolbar.

IMAGEJ INTERFACE



- Area Selection Tools: allow you to draw a shape to enclose an area on the image
- Line Selection Tool: allows you to draw a line and take measurements
- Point Tool: selects single point
- Angle Tool: allows you to measure an angle
- Wand Tool: allows you to select areas based on a color
- Text Tool: allows you to add text
- Magnifying glass tool: allows you to zoom in and out. Double-click to zoom all the way out
- Scrolling Tool (hand): allows you to click and drag to navigate around the image
- Color picker tool (eye-dropper): allows you to obtain the **rgb code** of a color in the image • Macro tools and controls

*Any tools, such as the versatile wand tool, that you install will be added to the right side of the toolbar when you open them the first time.

ADDITIONAL RESOURCES

ImageJ User Guide

REFERENCES

ImageJ. (1997). National Institutes of Health. https://doi.org/10.1038/nmeth.2089