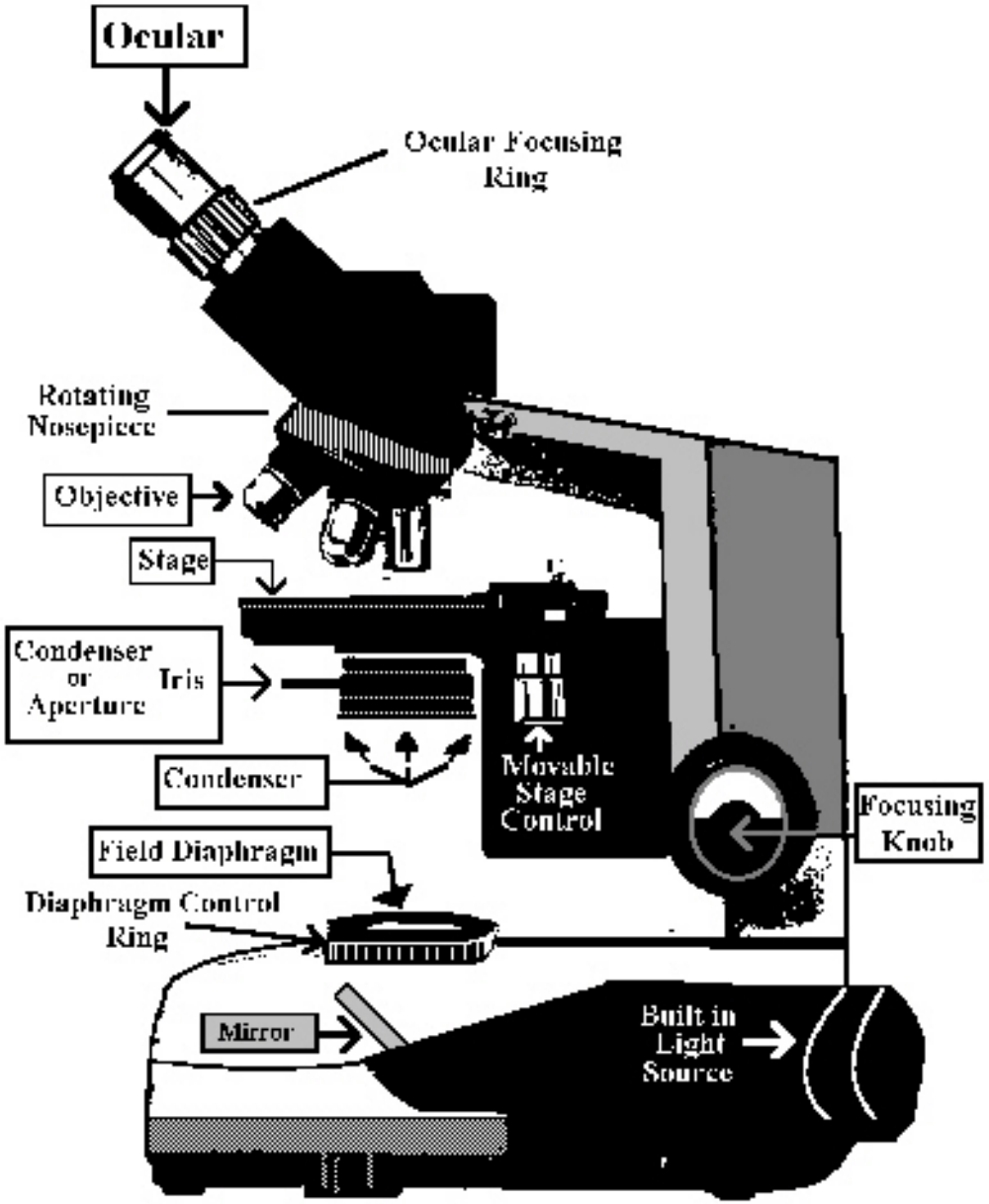
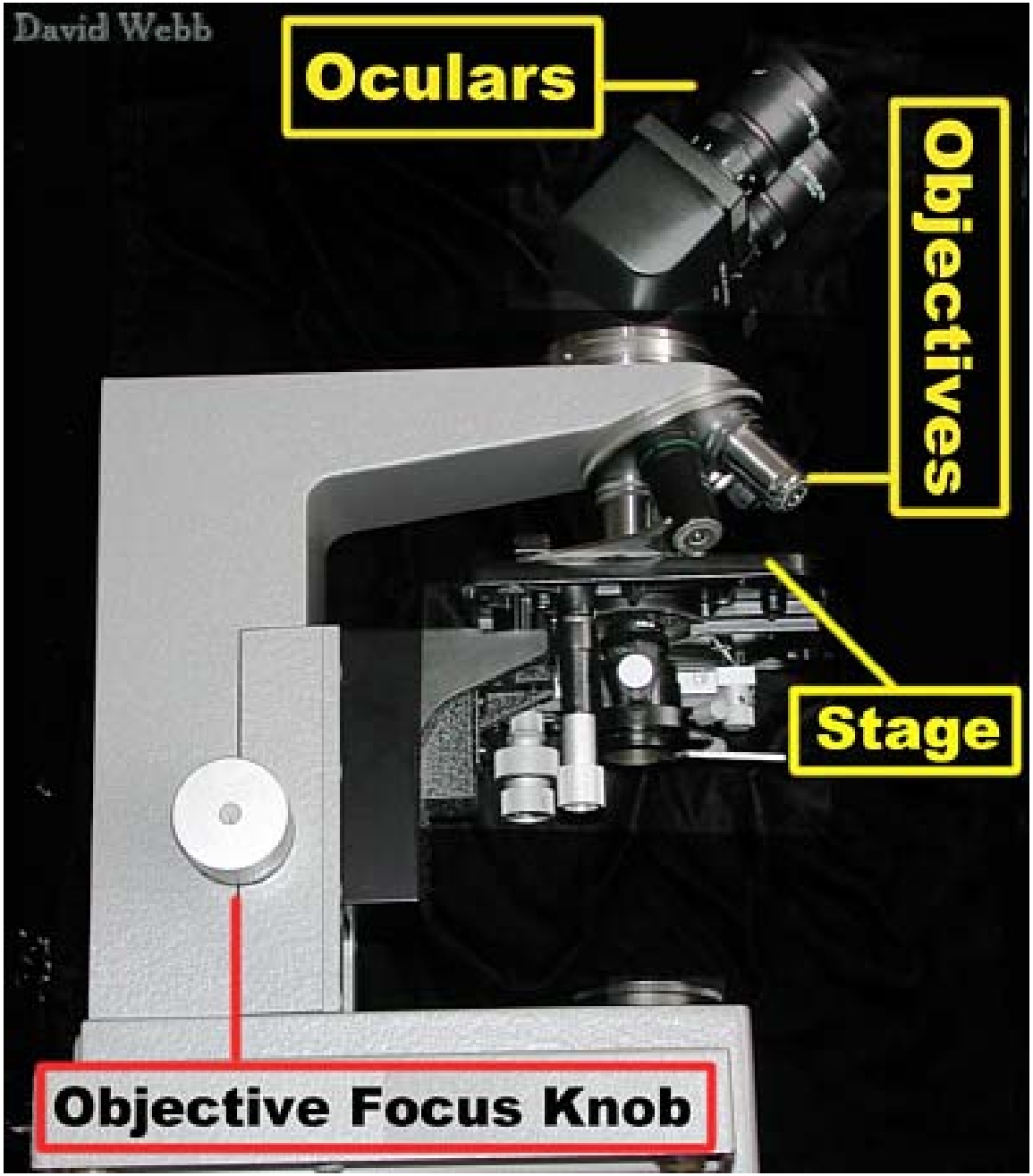
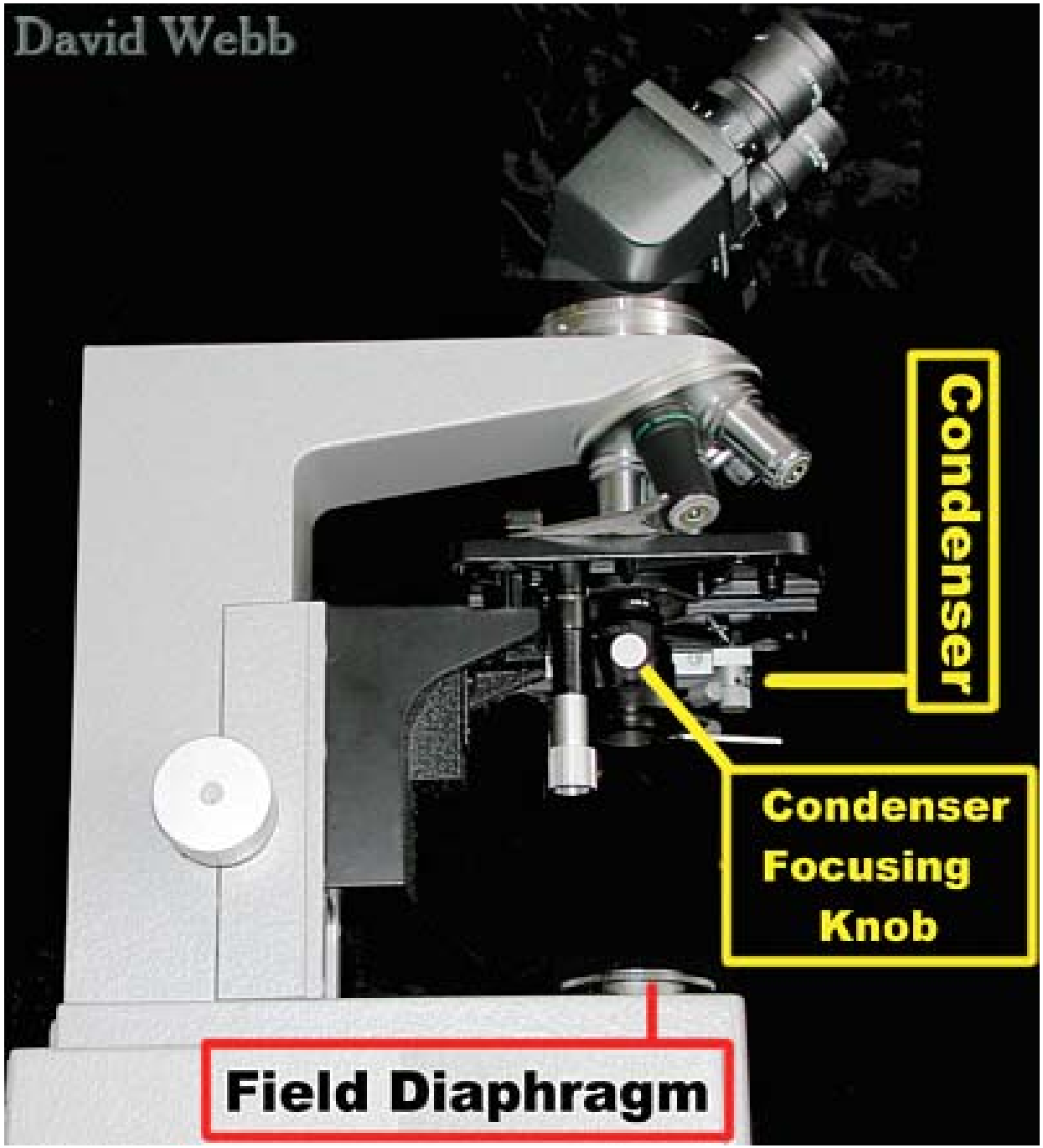
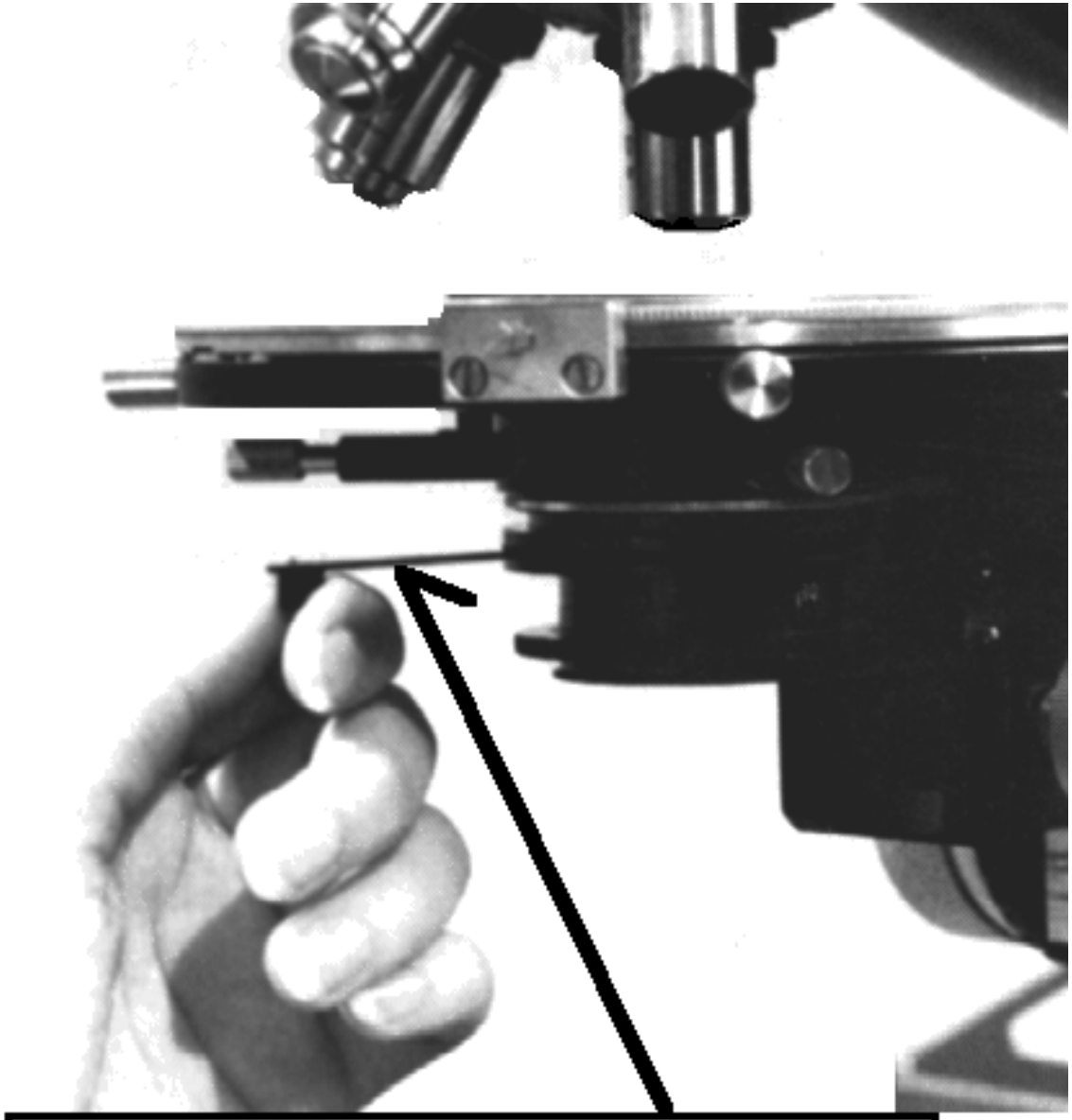
# Microscope Setup

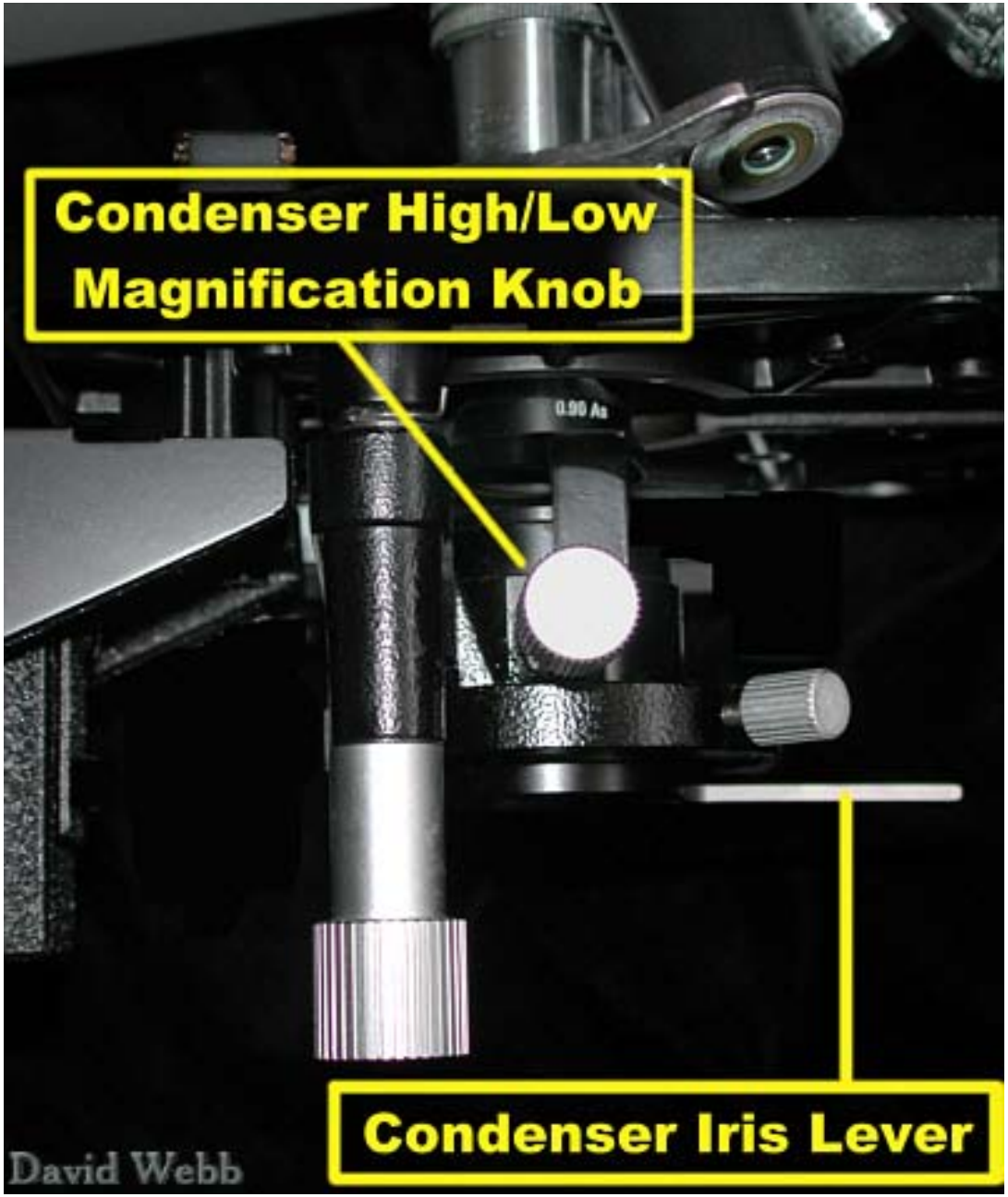


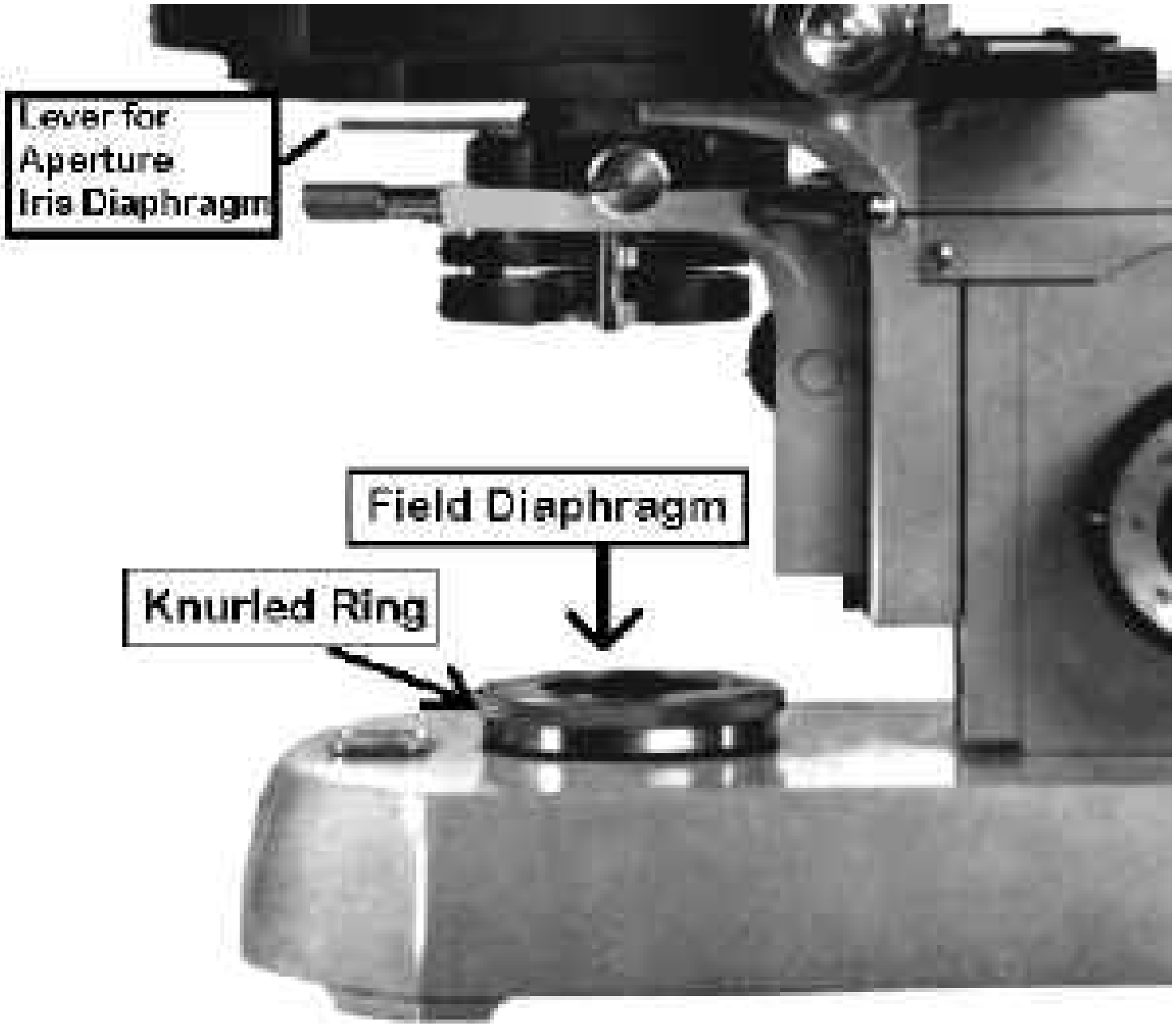

David Webb
Oculars
Objectives
Stage
Objective Focus Knob

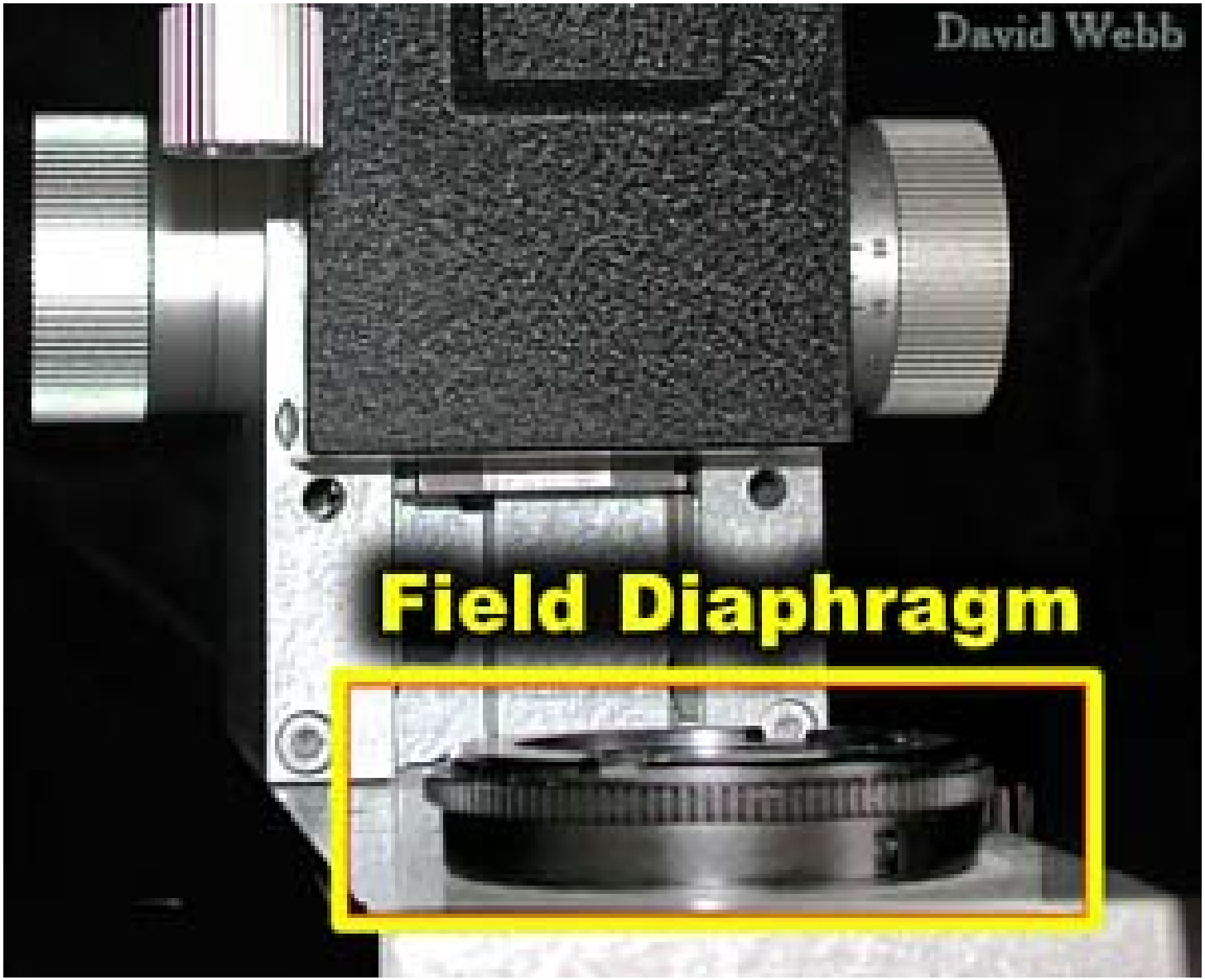

David Webb
Condenser
Condenser Focusing Knob
Field Diaphragm

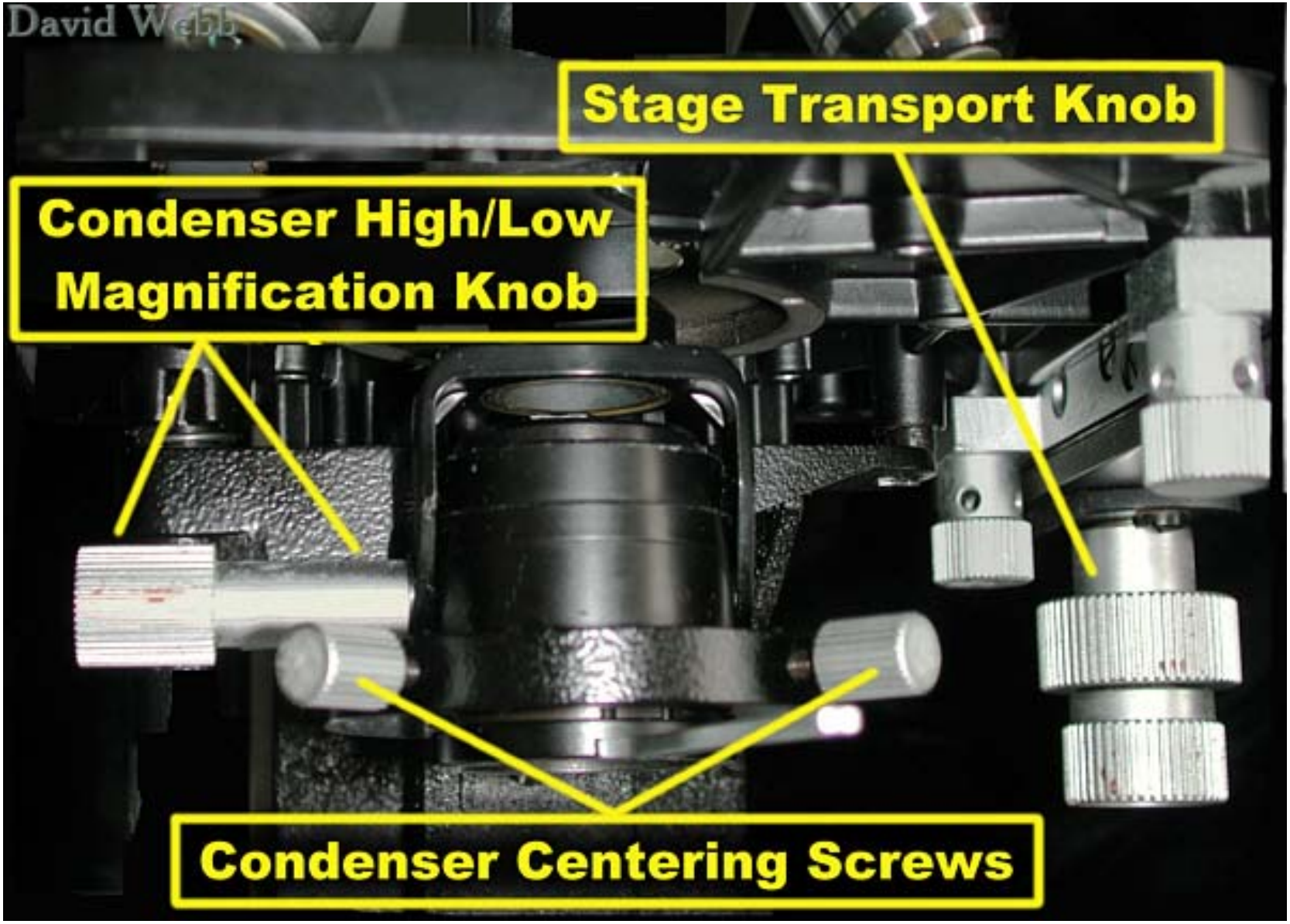


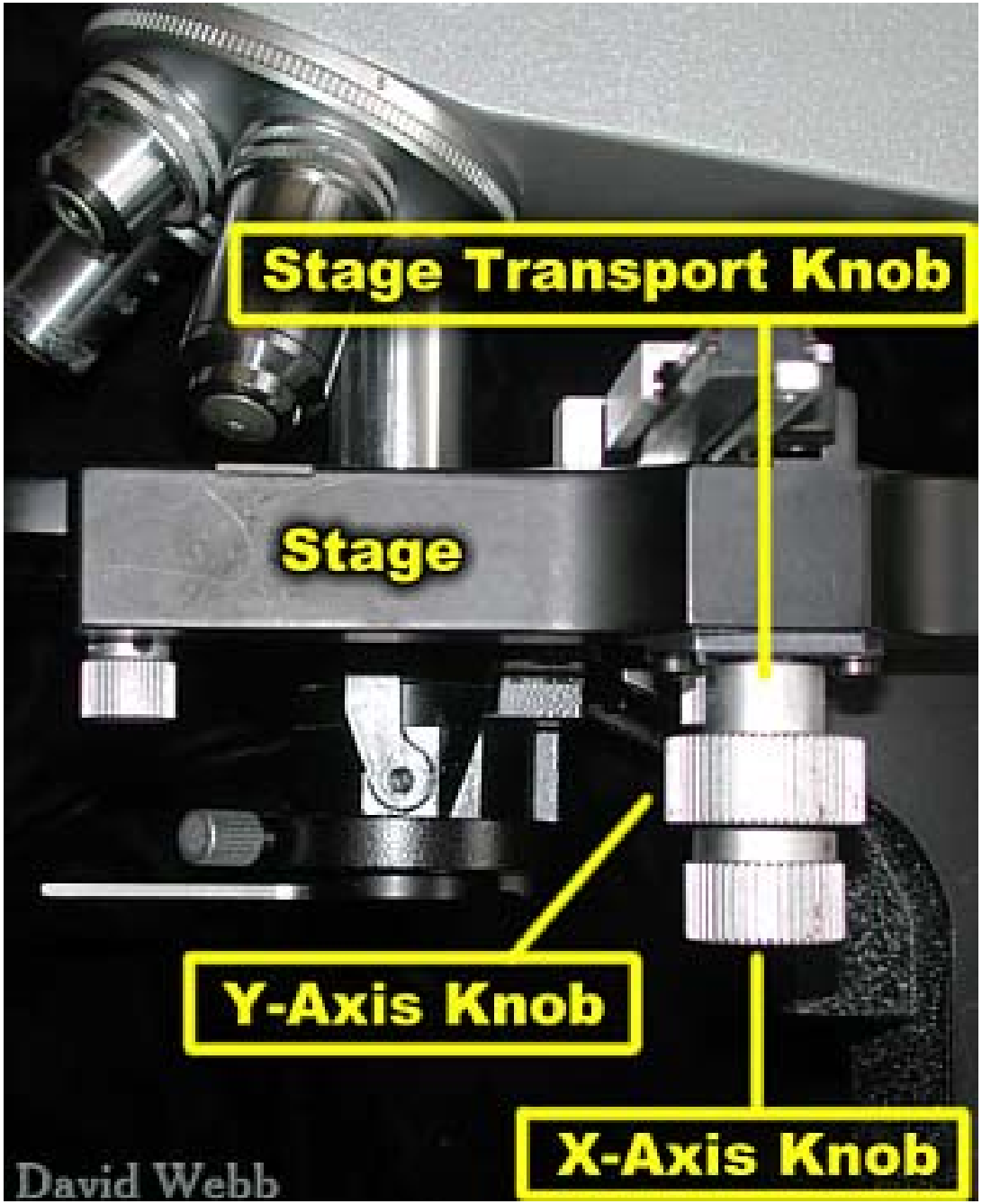
Adjusting the Condenser Iris Diaphragm


Condenser High/Low
Magnification Knob
Condenser Iris Lever
David Webb

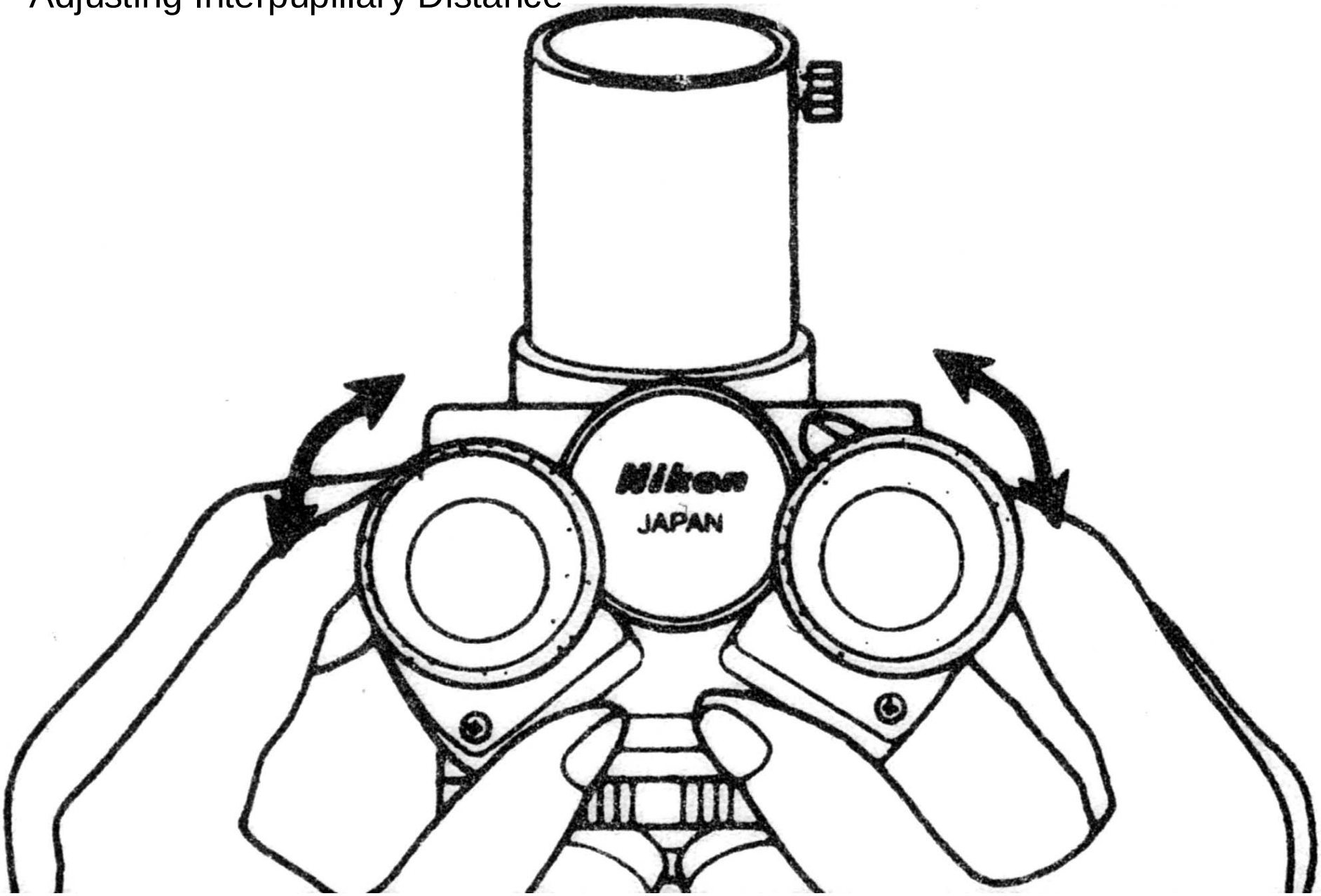

Lever for
Aperture
Iris Diaphragm
Field Diaphragm
Knurled Ring

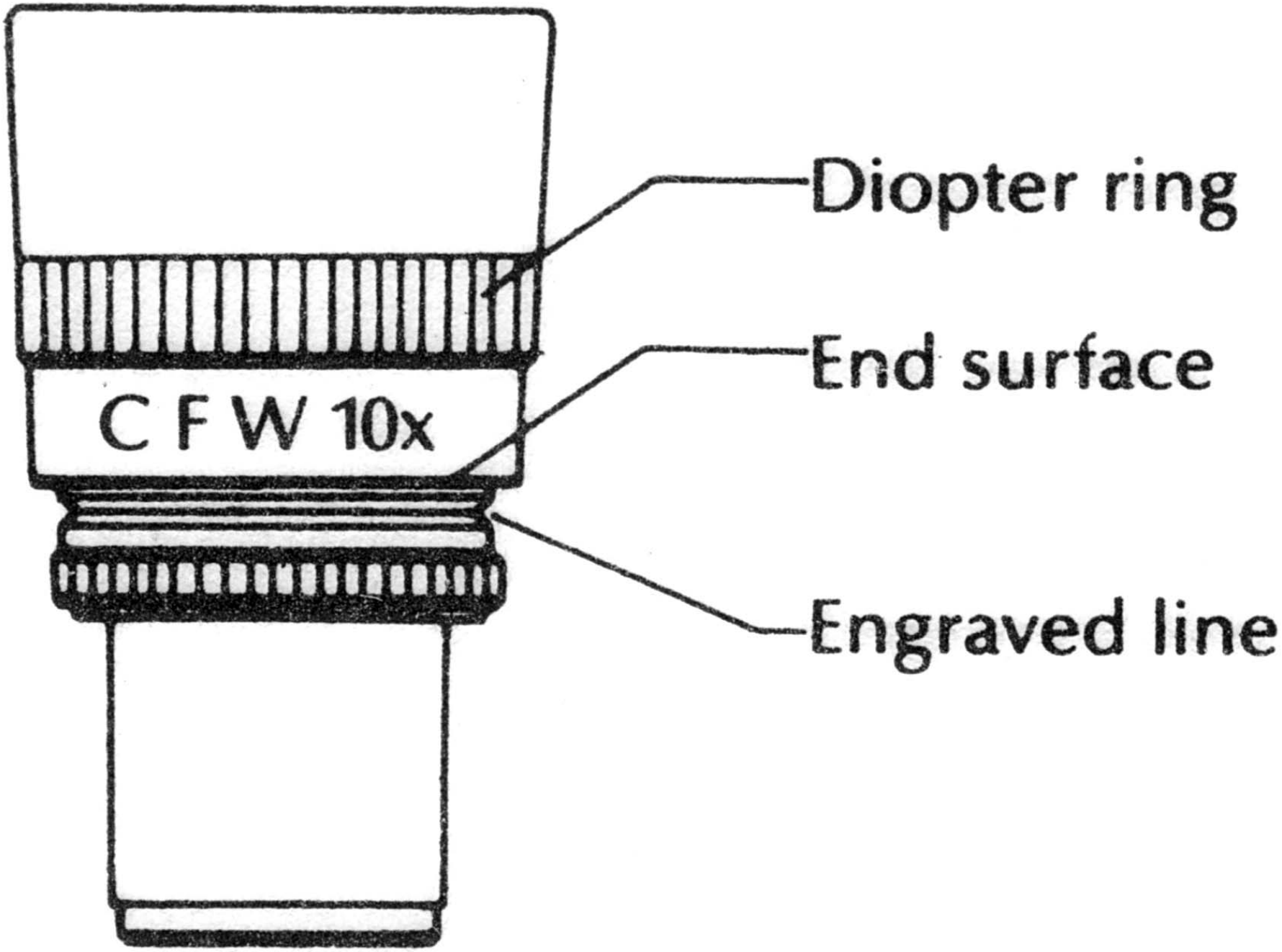

David Webb
Field Diaphragm


David Webb
Stage Transport Knob
Condenser High/Low
Magnification Knob
Condenser Centering Screws


Stage Transport Knob
Stage
Y-Axis Knob
X-Axis Knob
David Webb

Adjusting Interpupillary Distance



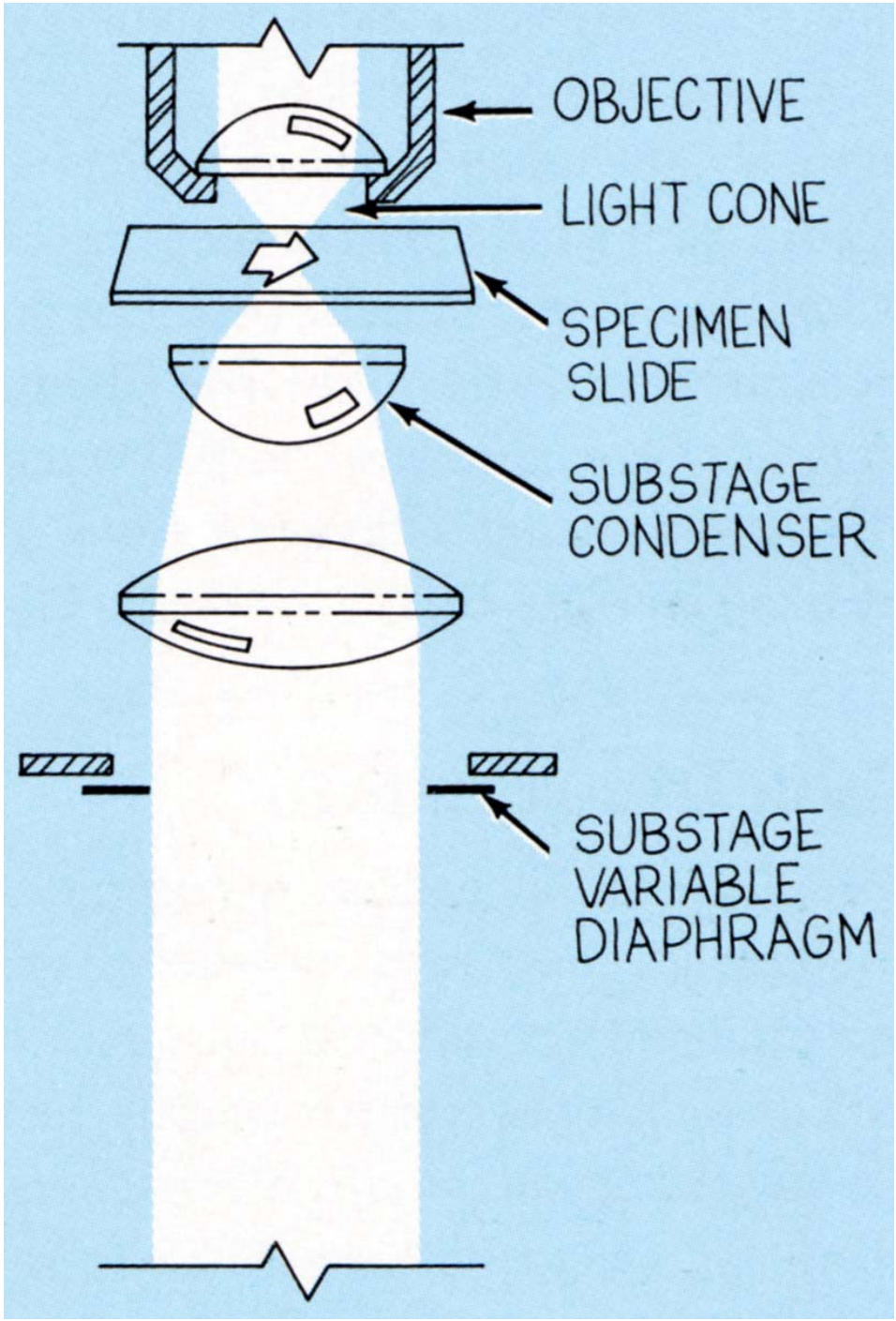

Diopter ring
End surface
C F W 10x
Engraved line

# KÖHLER

Developed by the German scientist, August Kohler (1866-1948)

1. Focus on the specimen. This step is most important.
2. Decrease the size of the diaphragm located nearest the light source (field iris) so that you can see its edges.
3. Bring the edges of the field iris into focus by raising or lowering the condenser focusing knob. Both the specimen and the iris should be in focus.
4. Center the image of the field iris using the condenser-centering knobs (usually facing you on the condenser)
5. Open the centered and focused field iris so the edges lie just beyond the field of view.
6. Adjust the condenser iris to increase or decrease image contrast. The optimum opening depends on the specimen. Never use this aperture to control light intensity.
7. Adjust light intensity with the light power supply or with neutral density filters (for color photography).

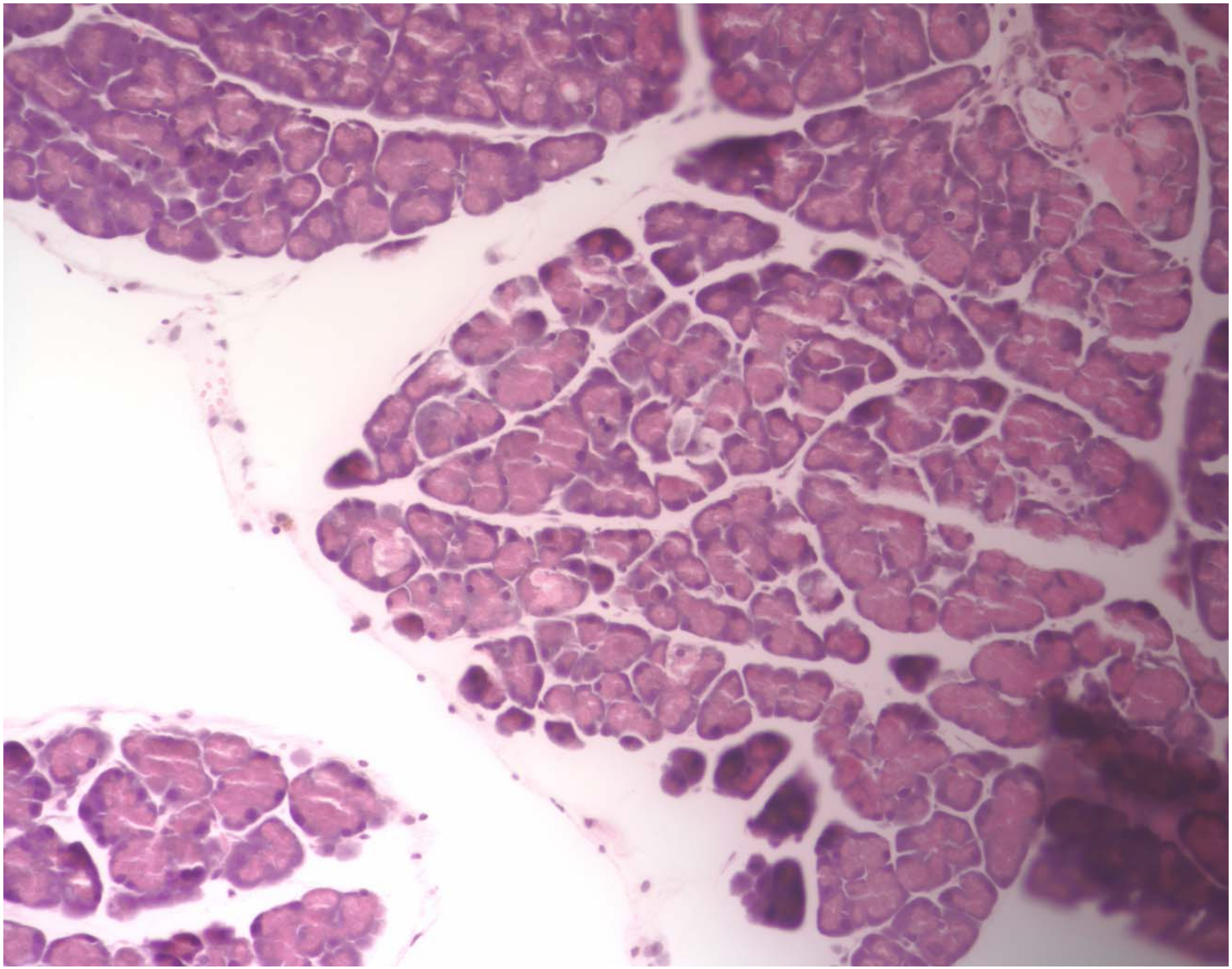
In a correctly adjusted Köhler illuminated microscope specimen contrast is obtained by adjusting the condenser diaphragm. Illumination intensity is varied by adjusting the Voltage to the light source or by placing neutral density filters in front of the illuminator.


OBJECTIVE
LIGHT CONE
SPECIMEN SLIDE
SUBSTAGE CONDENSER
SUBSTAGE VARIABLE DIAPHRAGM

STEP 1

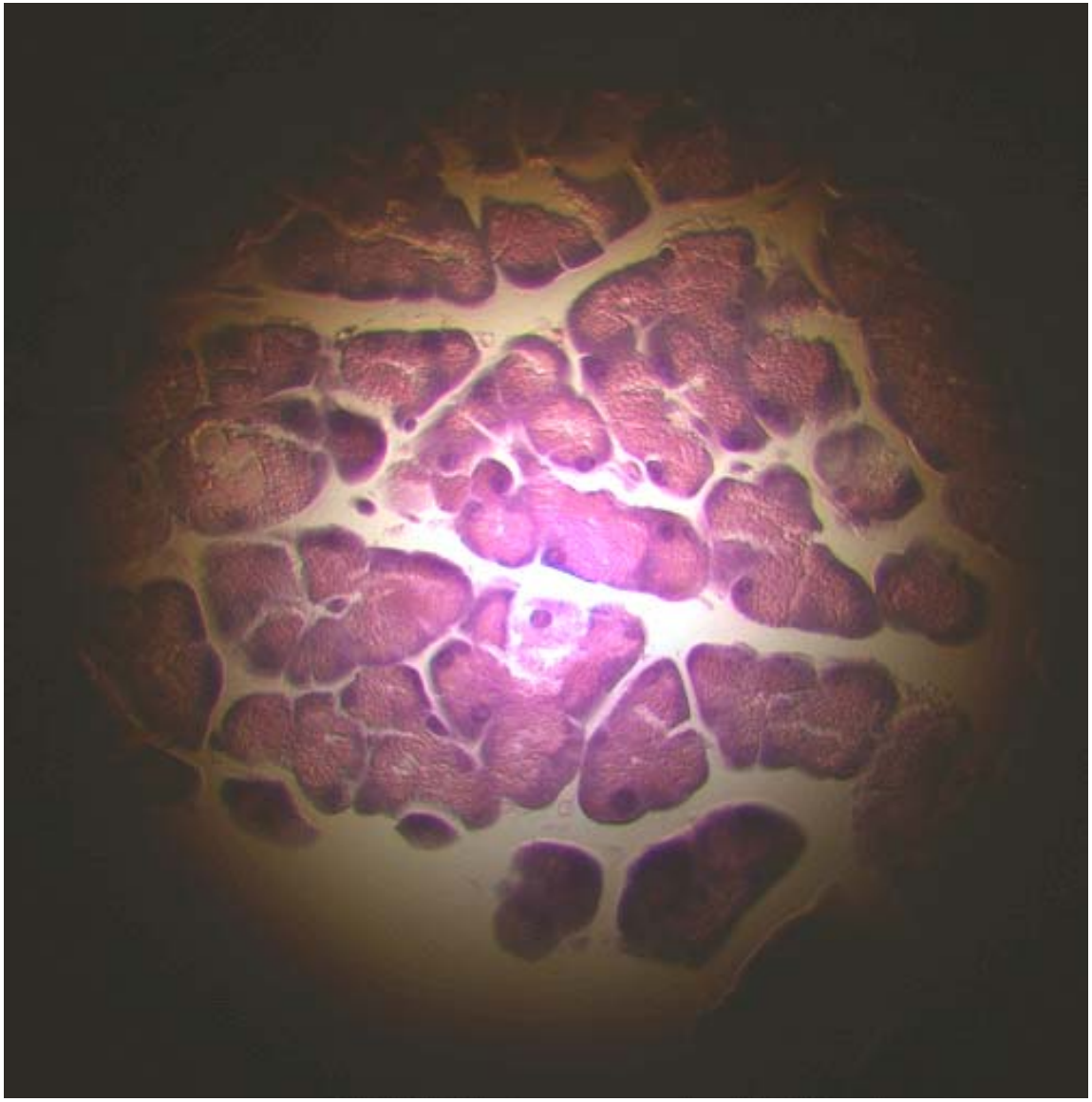
Focus your sample in brightfield.

(Note the dark shadow in the lower right)



STEP 2

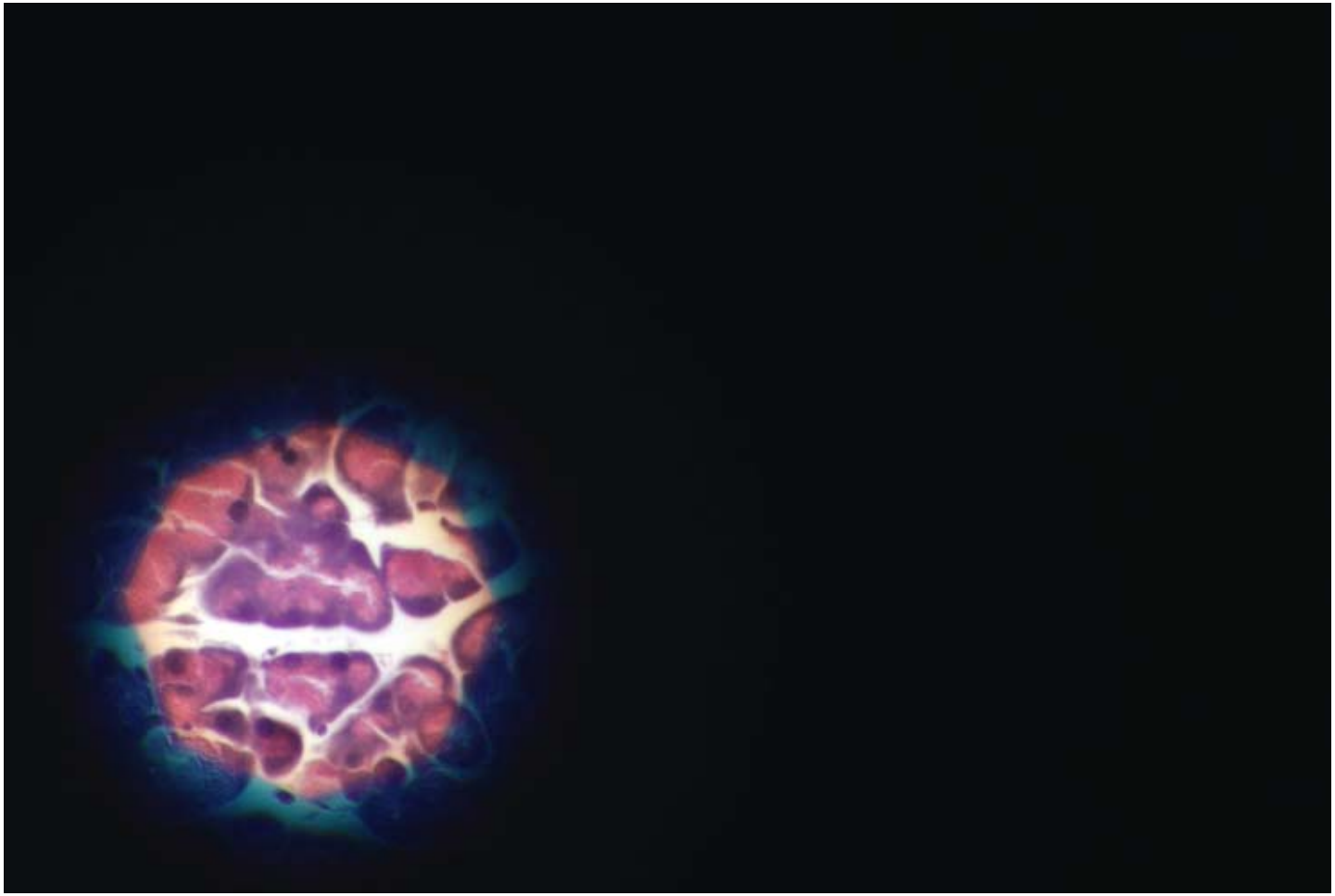
Close the field diaphragm so it looks something like this:



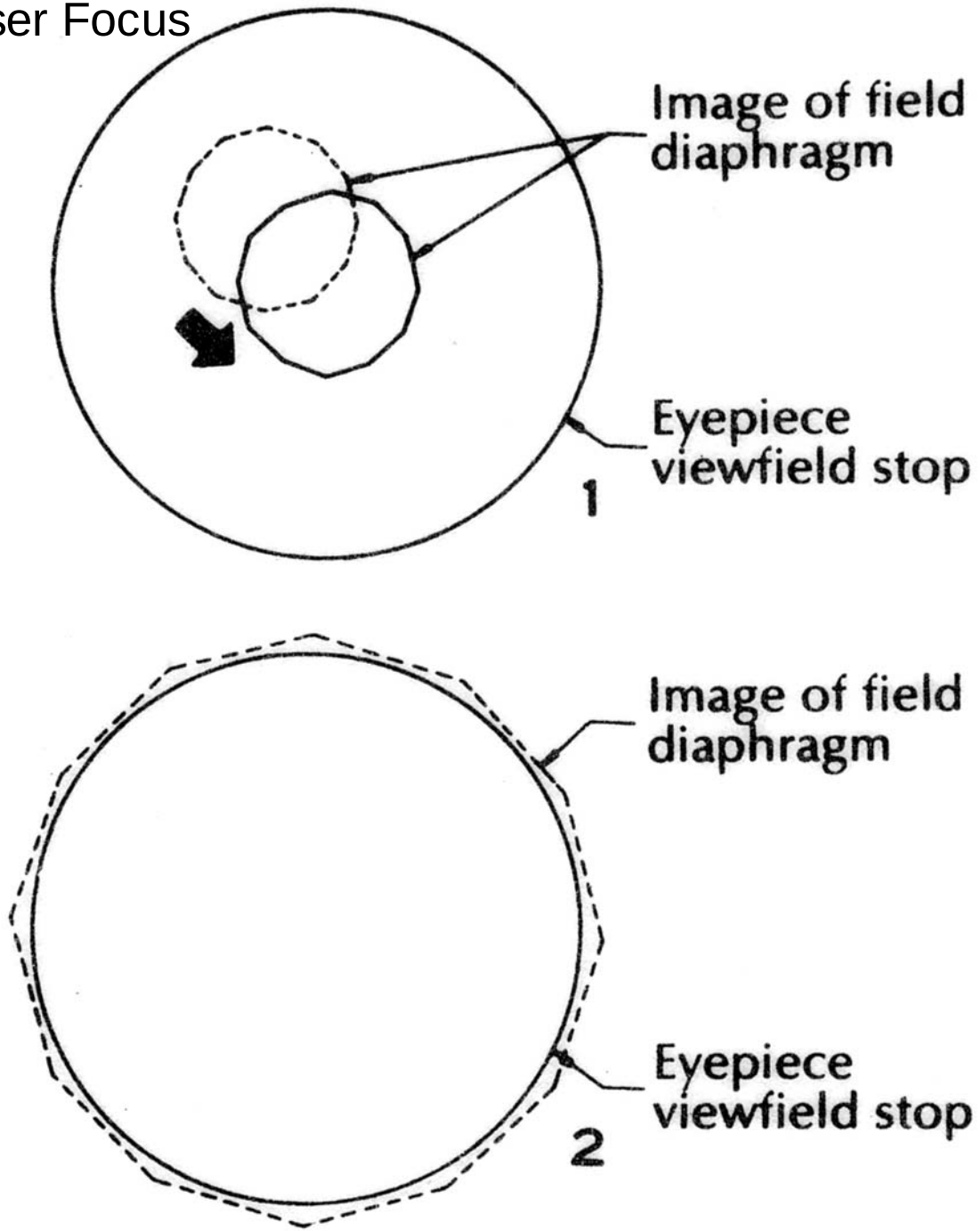
STEP 3

Focus the edge of the diaphragm by adjusting the condenser height, so it looks like this:

(if the image moves out of your field of view, skip to step 4, then come back to step 3)



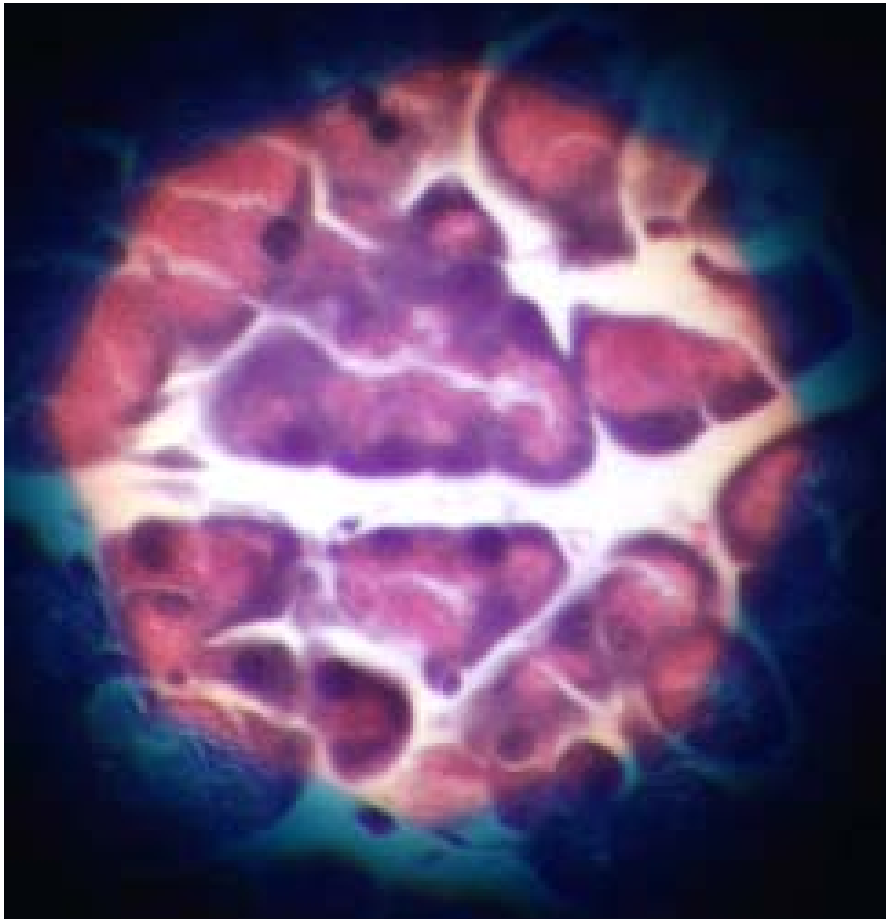
# Setting Condenser Focus



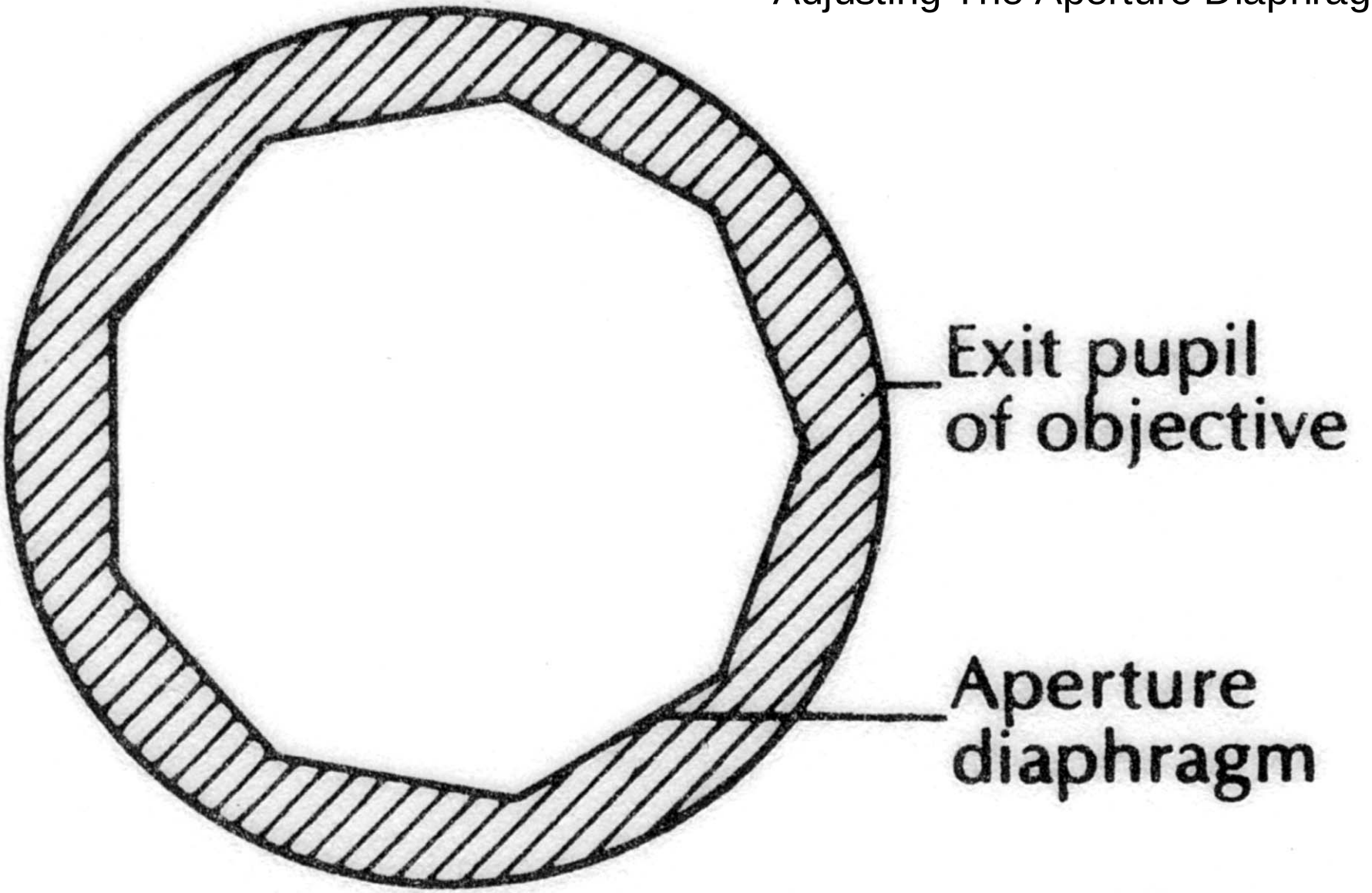
STEP 4

center the image using the two centering screws, so it looks like this:

(Note centered, crisp edge)



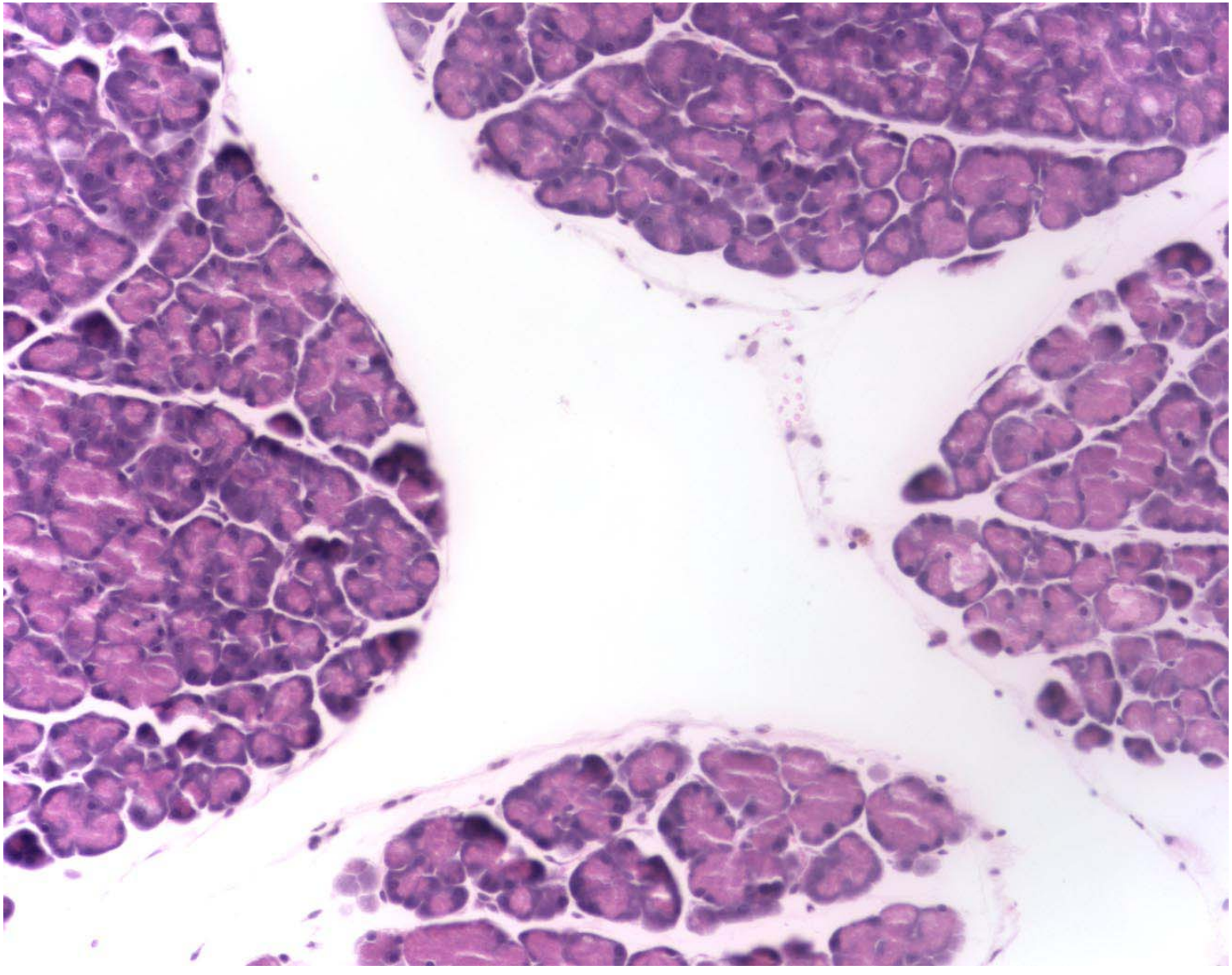
# Adjusting The Aperture Diaphragm

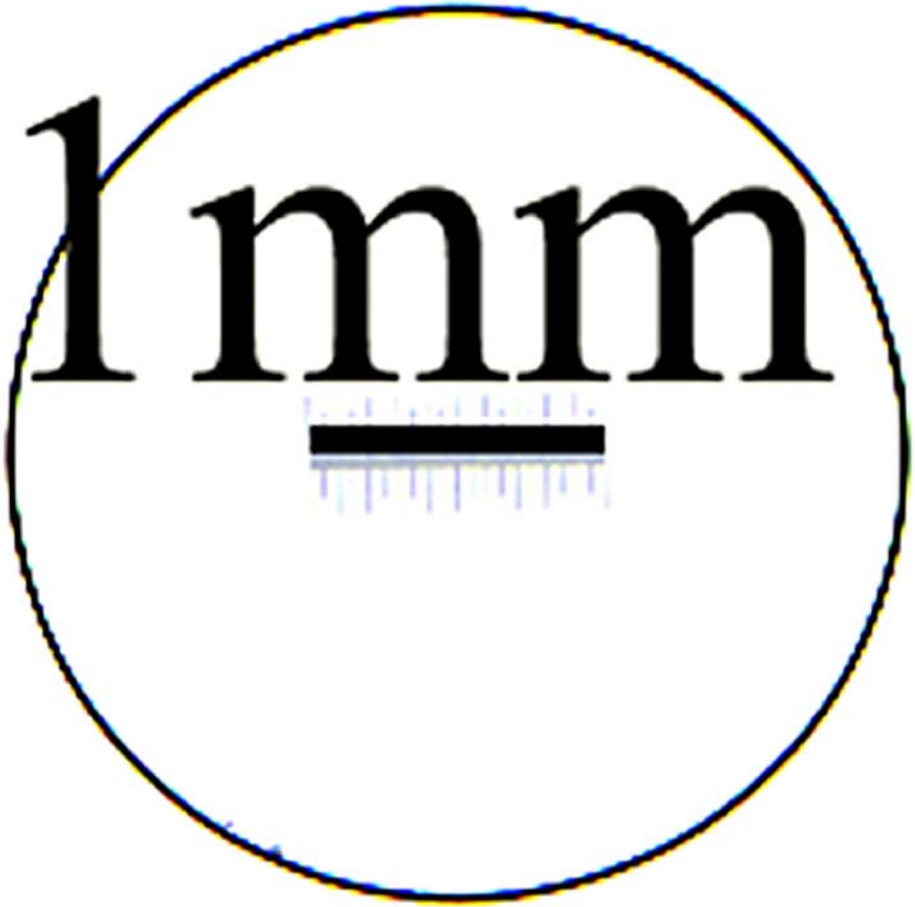


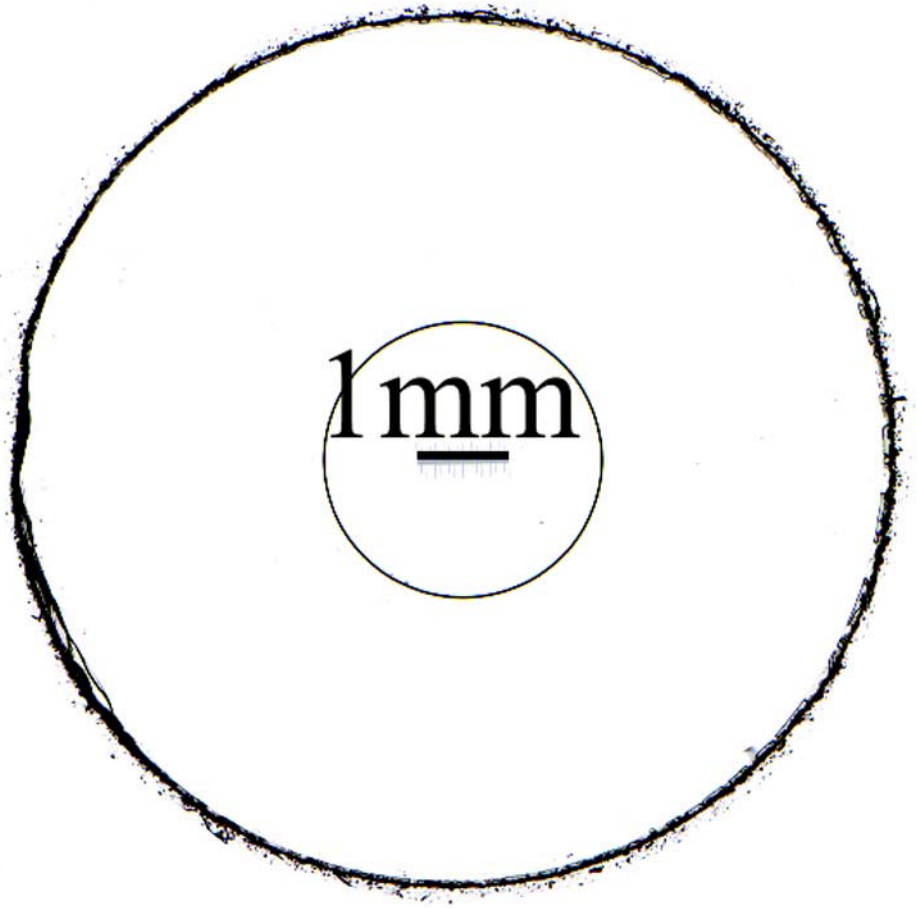

Size of the condenser aperture diaphragm

STEP 5

Open the field diaphragm until it is at the edge of the field of view. (Note that the shadow in step 1 is gone.)




1mm


1mm

# LINKS

http://www.emlab.ubc.ca/

http://www.nikonusa.com/usa_home/home.jsp

http://www.microscopyu.com/

http://www.mediacy.com/