

Imaging alcohol-preserved Arachnids using a Visionary Digital System



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**Photodocumenting voucher
specimens used in molecular
phylogenetic analysis**

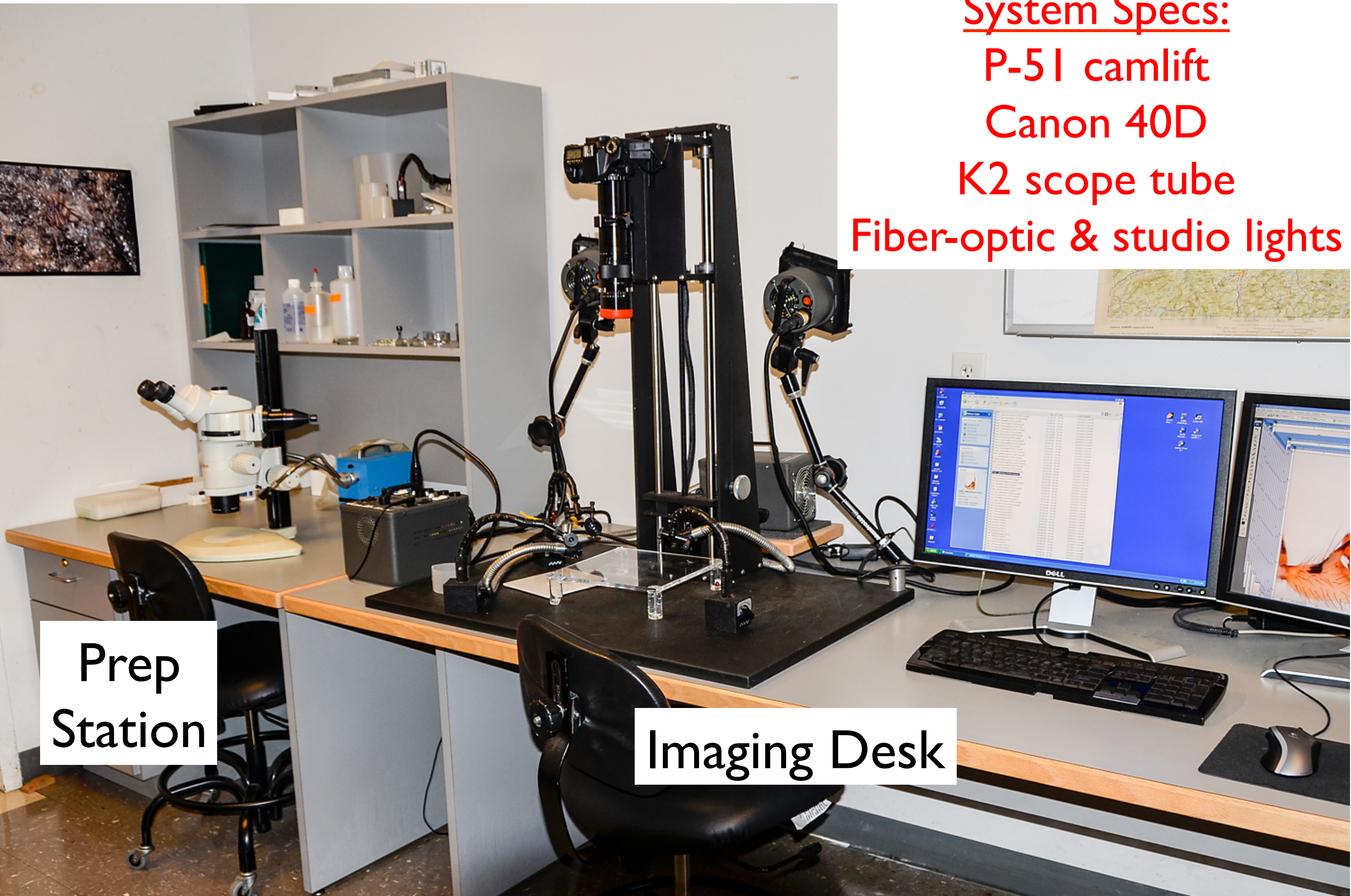
**Morphological images for
taxonomic revisions**

**Morphological images for online
identification tools, UG class
projects**

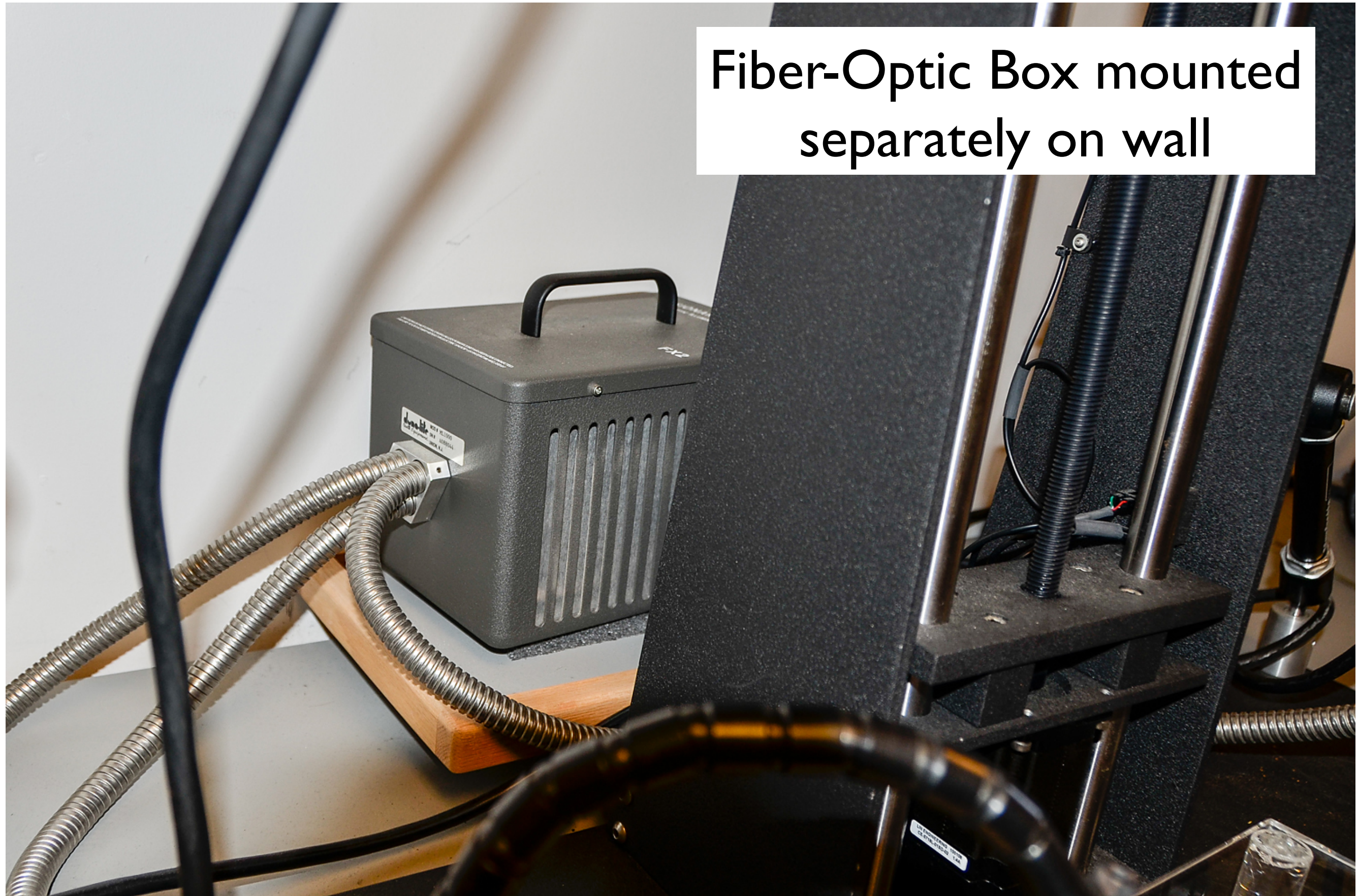
System Specs:
P-5 I camlift
Canon 40D
K2 scope tube
Fiber-optic & studio lights

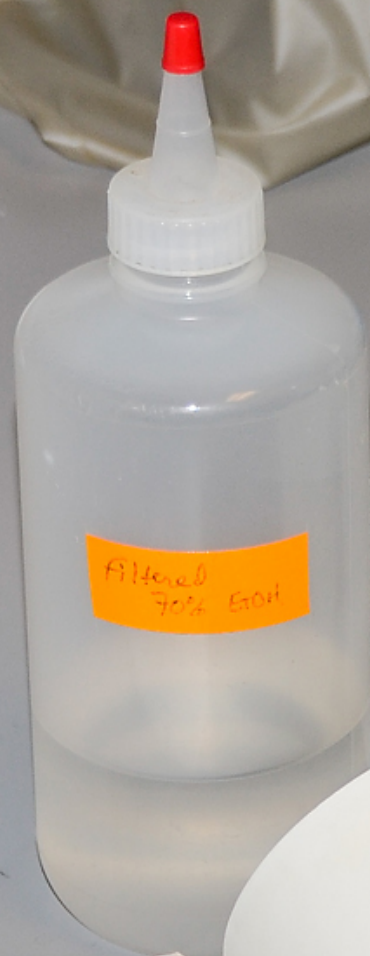
Prep
Station

Imaging Desk



Fiber-Optic Box mounted
separately on wall





Most specimens imaged
in *filtered* 70% EToH

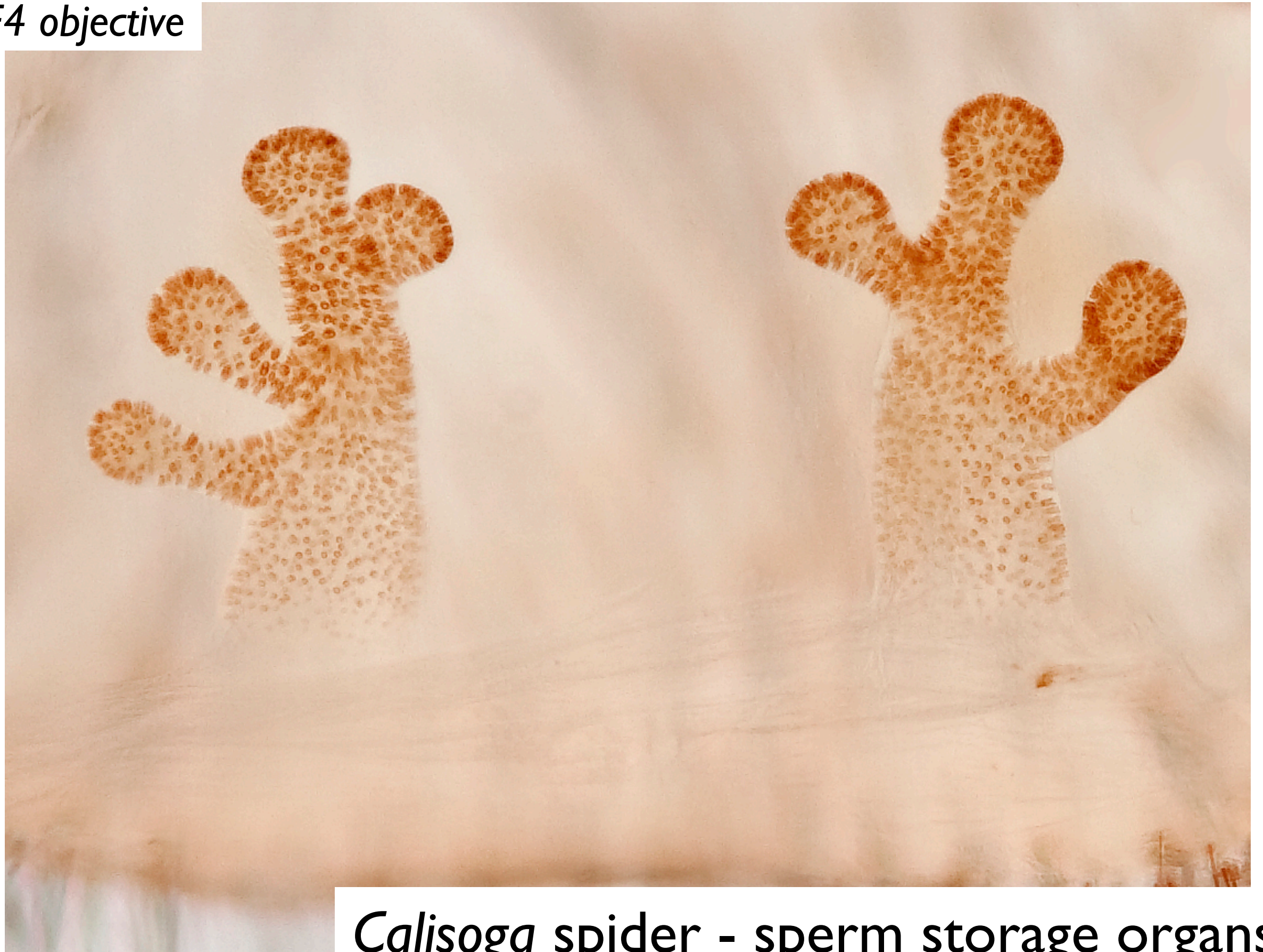
CF4 objective



0.5 mm

Aliatypus spider - sperm storage organs

CF4 objective



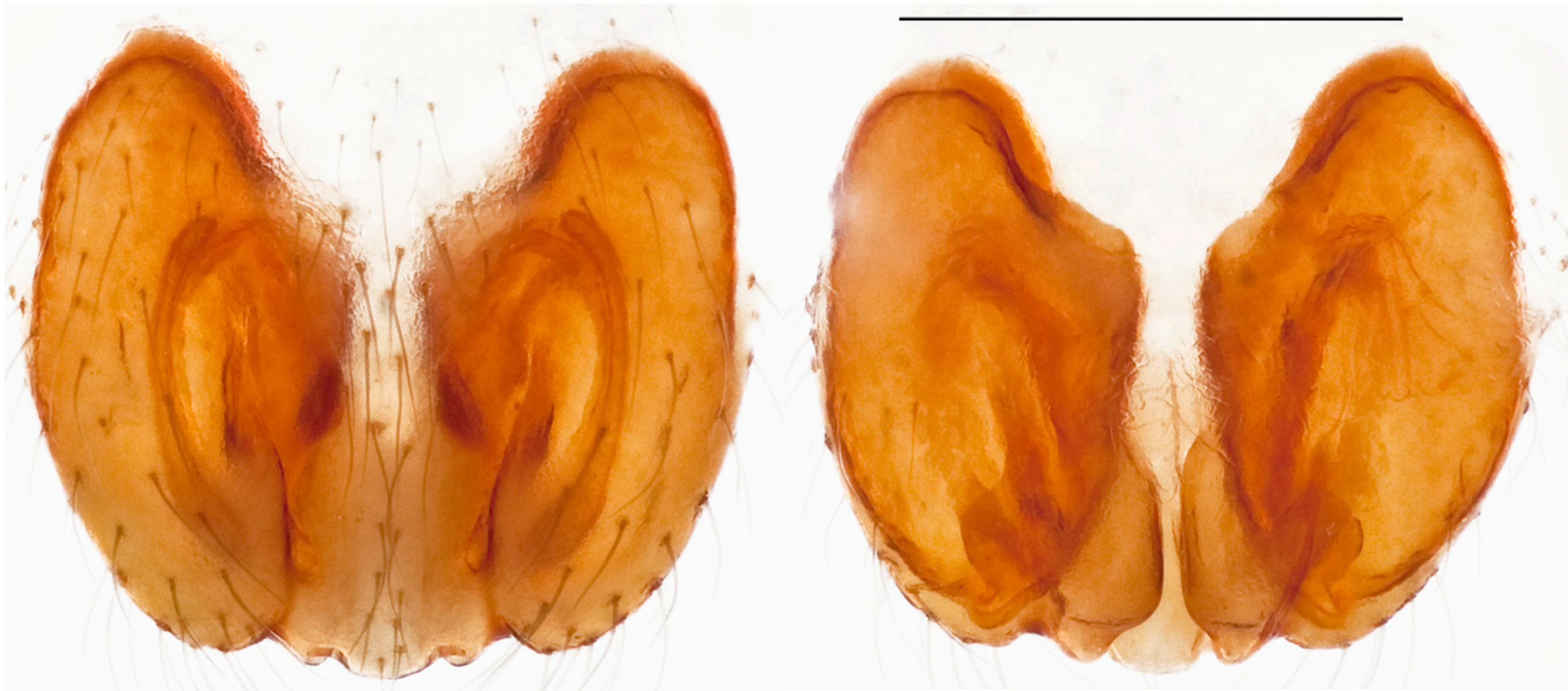
Calisoga spider - sperm storage organs

5X objective



Aliatypus spider - palpal bulb

0.5 mm



Nesticus spider - epigynum



Nesticus spider - palp

Specimens requiring clearing, or very small specimens/structures –
most imaged on depression slide



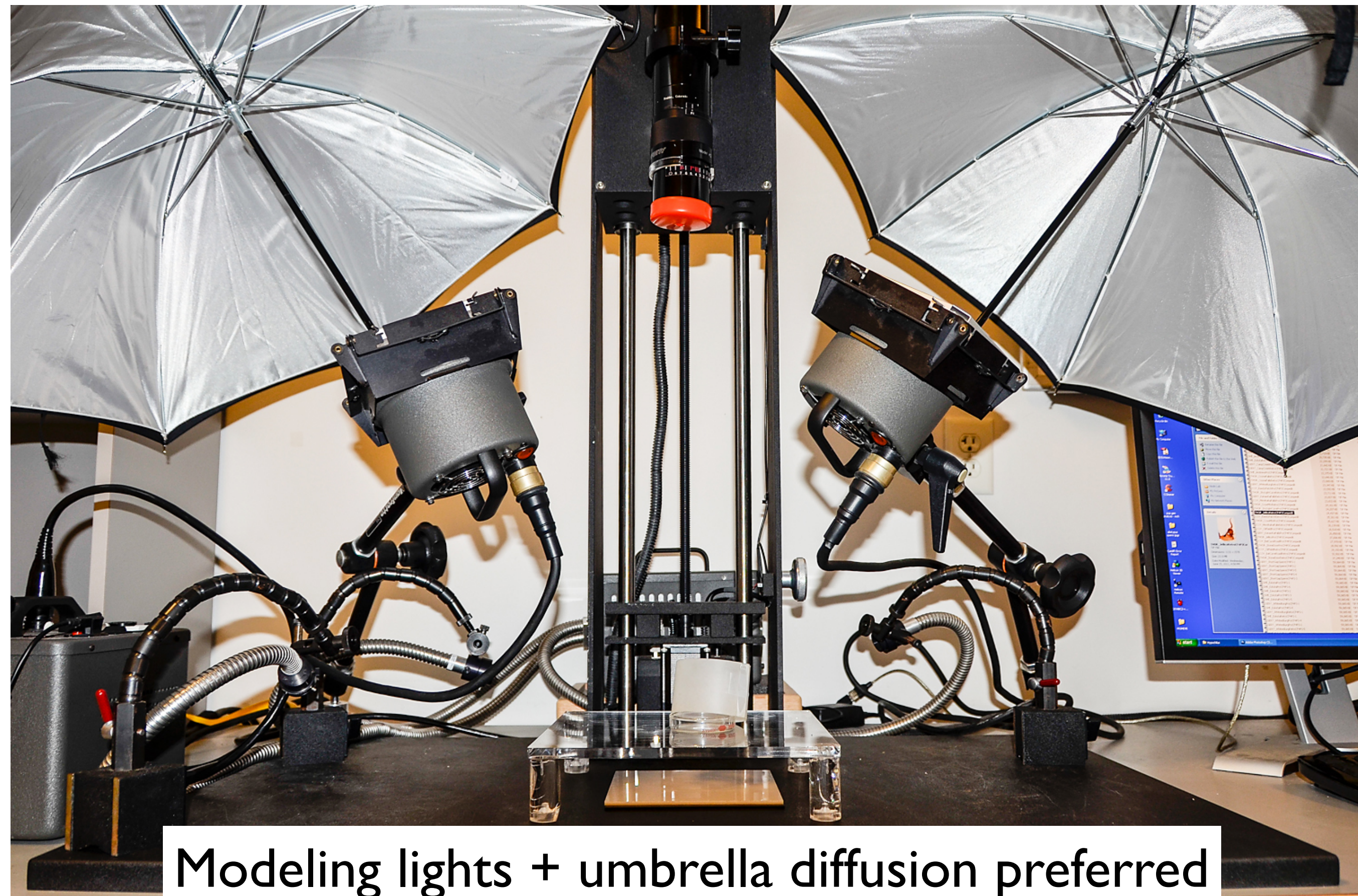
Left well – clearing fluid

Right well – KY + EToH

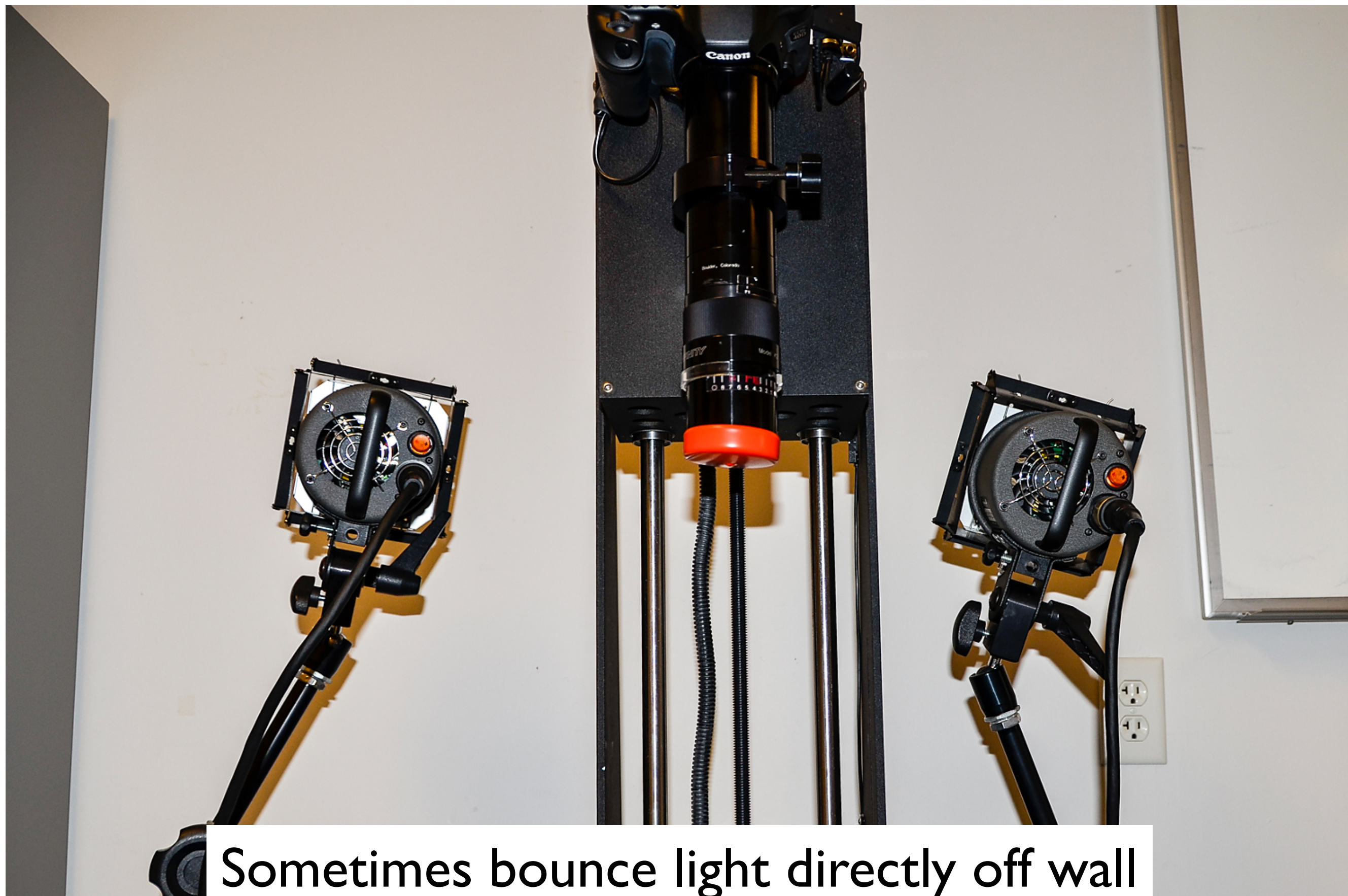


Prep
Station

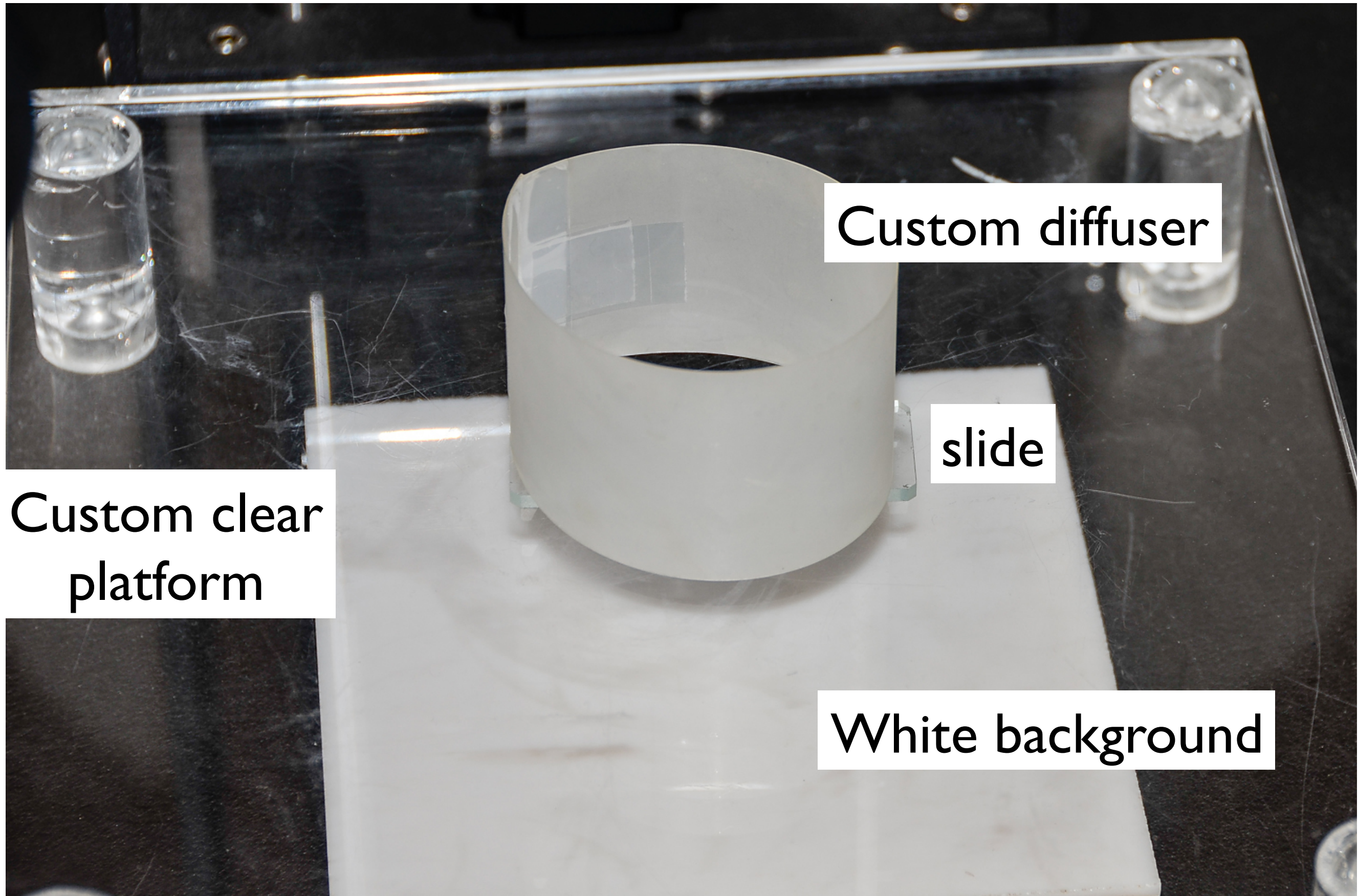
Imaging Desk



Modeling lights + umbrella diffusion preferred



Sometimes bounce light directly off wall



Custom diffuser

slide

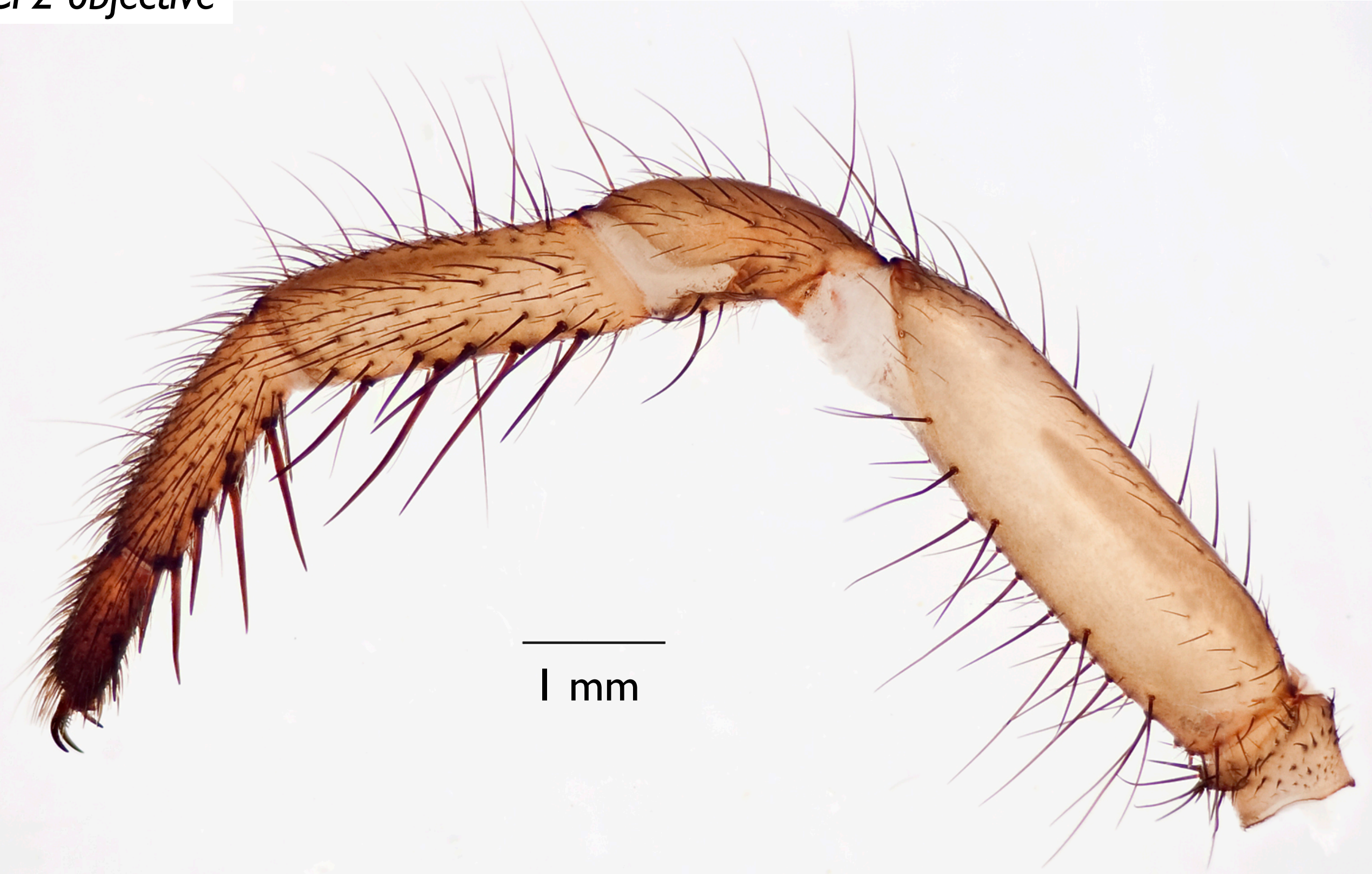
Custom clear
platform

White background

“Standard Sized” Arachnid Specimen



CF2 objective



Aliatypus spider - leg

CF2 objective



harvestmen

CF2 objective



1 mm

harvestmen



Custom clear
platform

Custom diffuser

dish

White background

On the Computer:

Multiple image slices taken – automated
using CAMLIFT software

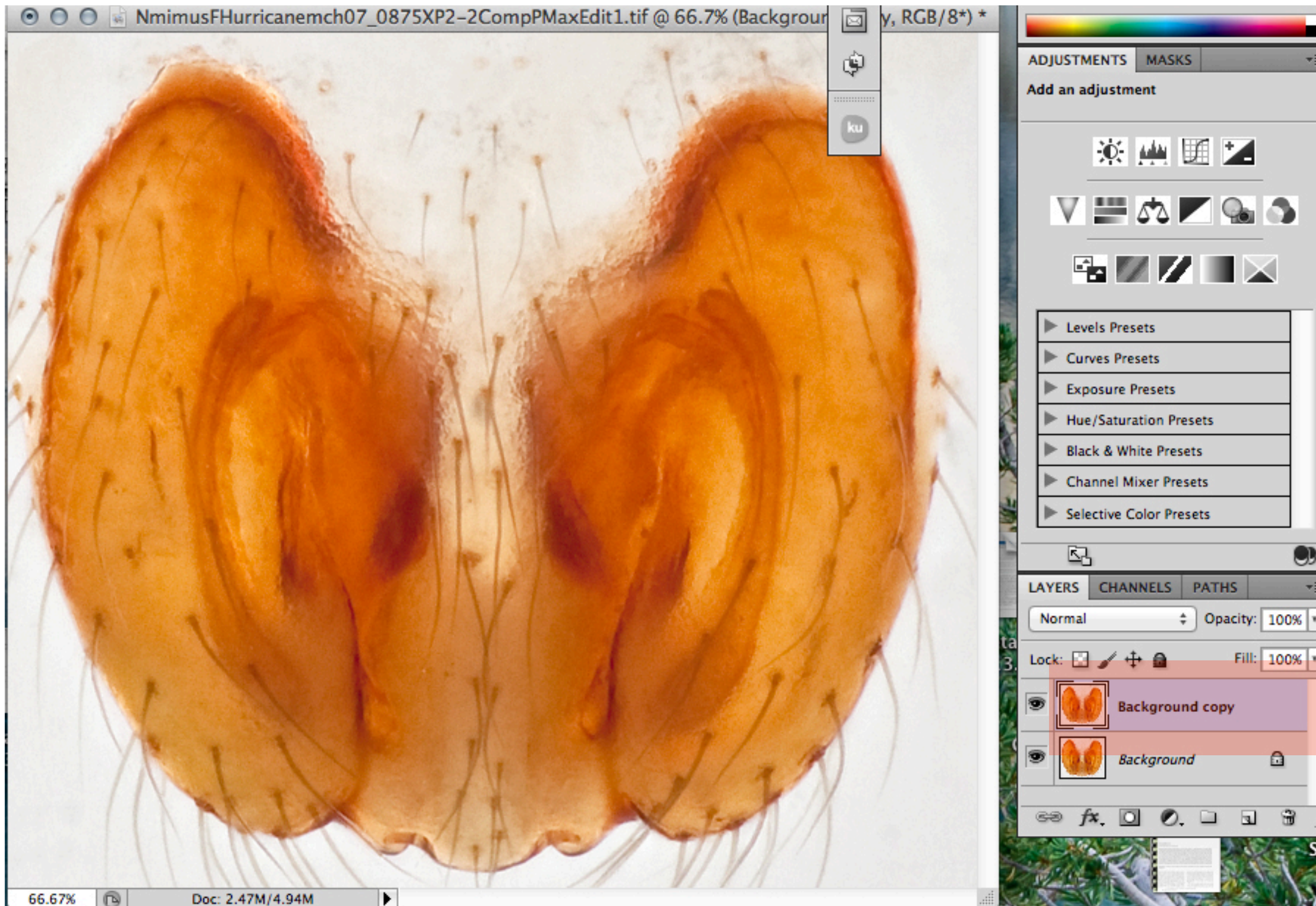
LR export to *Zerene Stacker*, PMAX
algorithm used to make high DOF
composite image, edited in PS

“standard” PS moves – levels, curves, SAT
layers, clean-up, sharpen

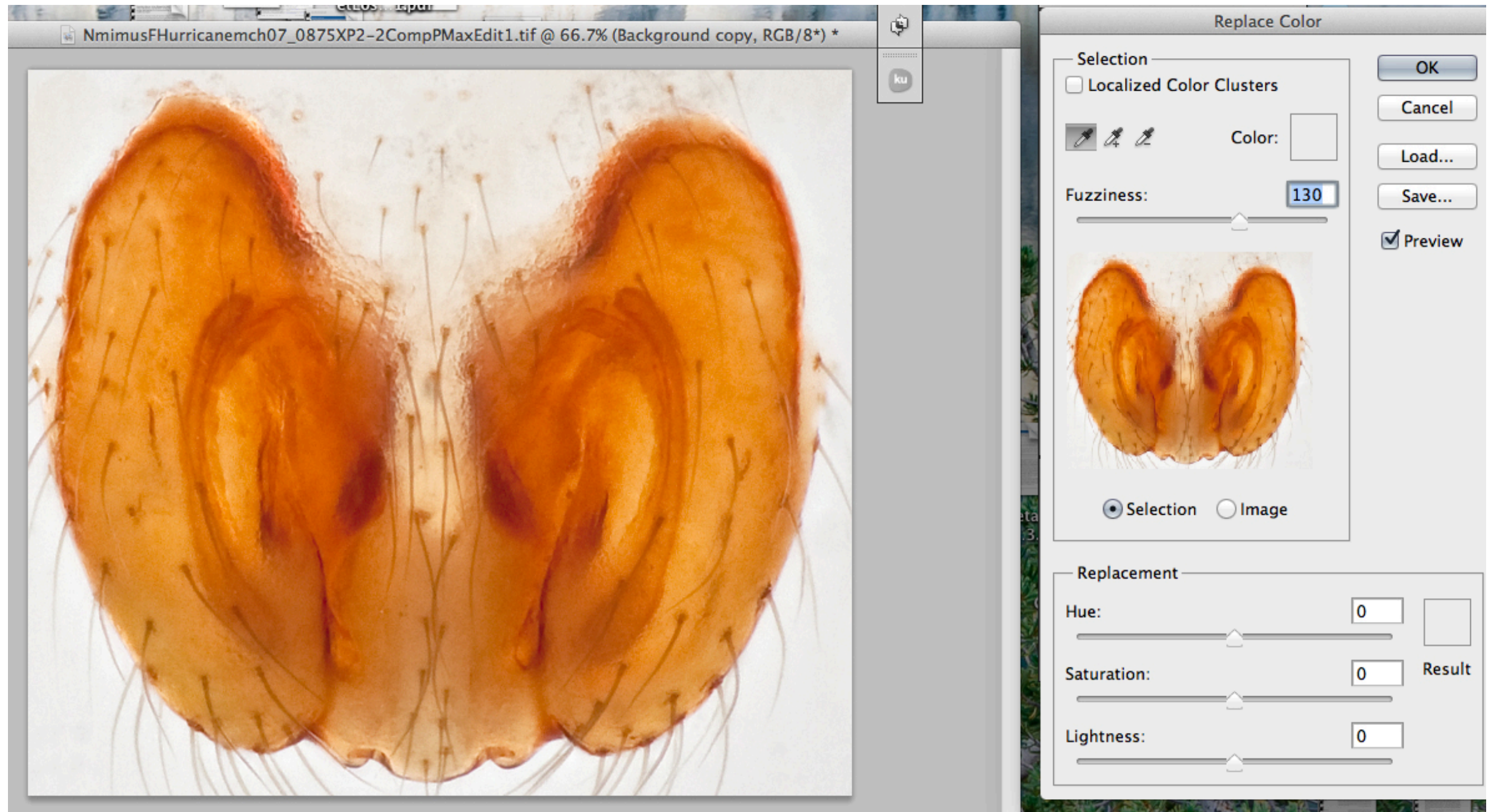
Adjusting Image Backgrounds in PS



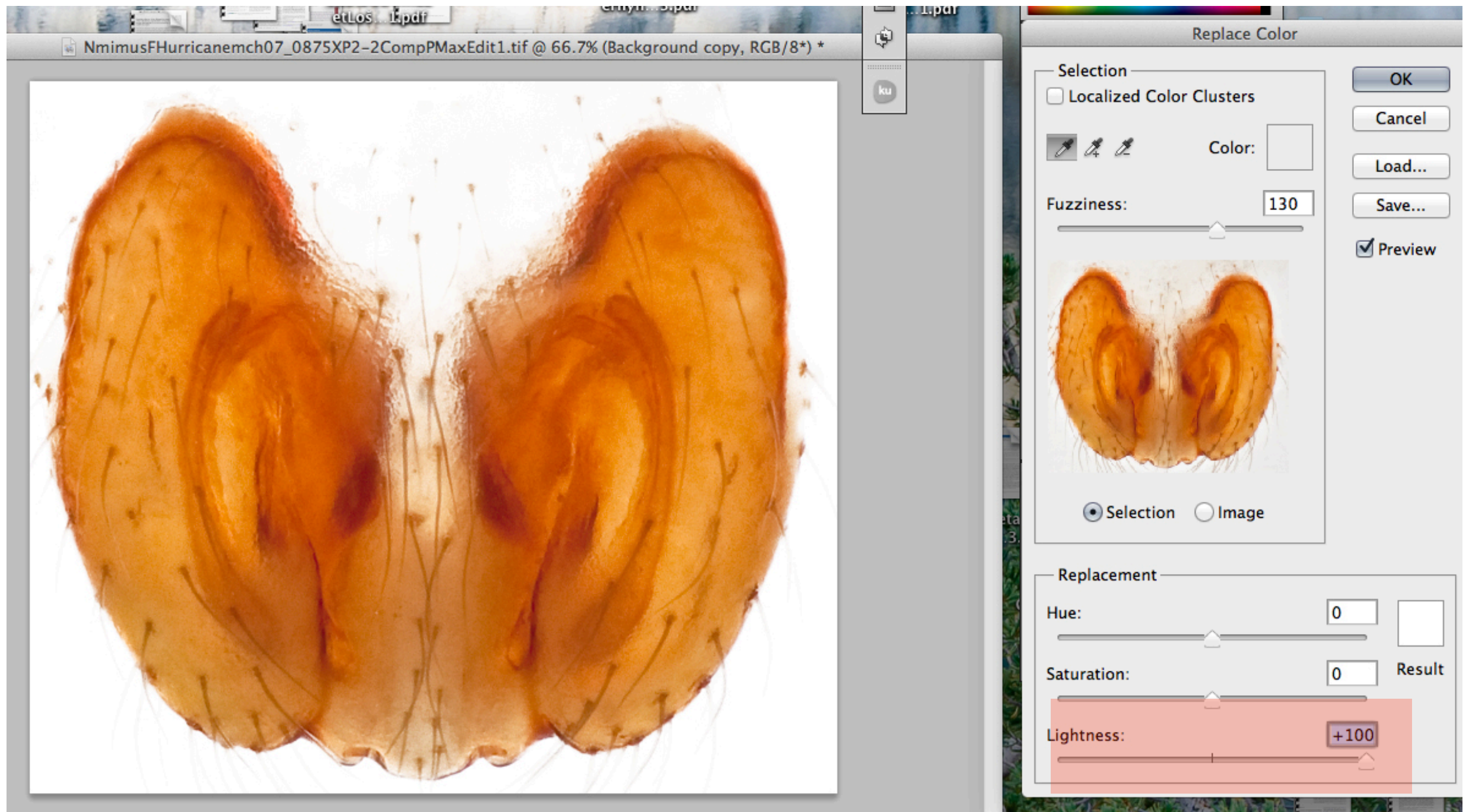
Start with flattened TIFF, **make background layer**



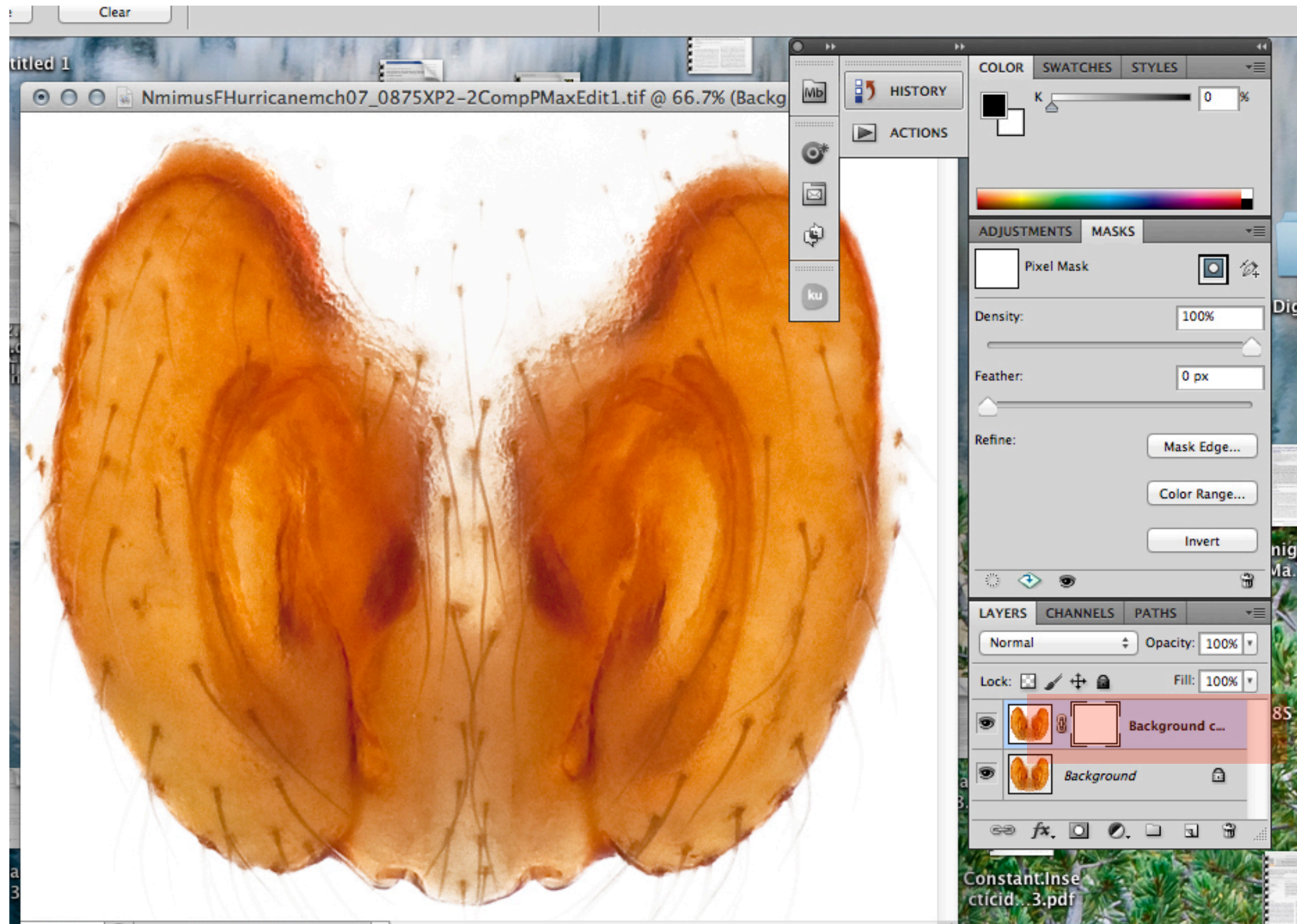
Replace Color Adjustment on BG layer



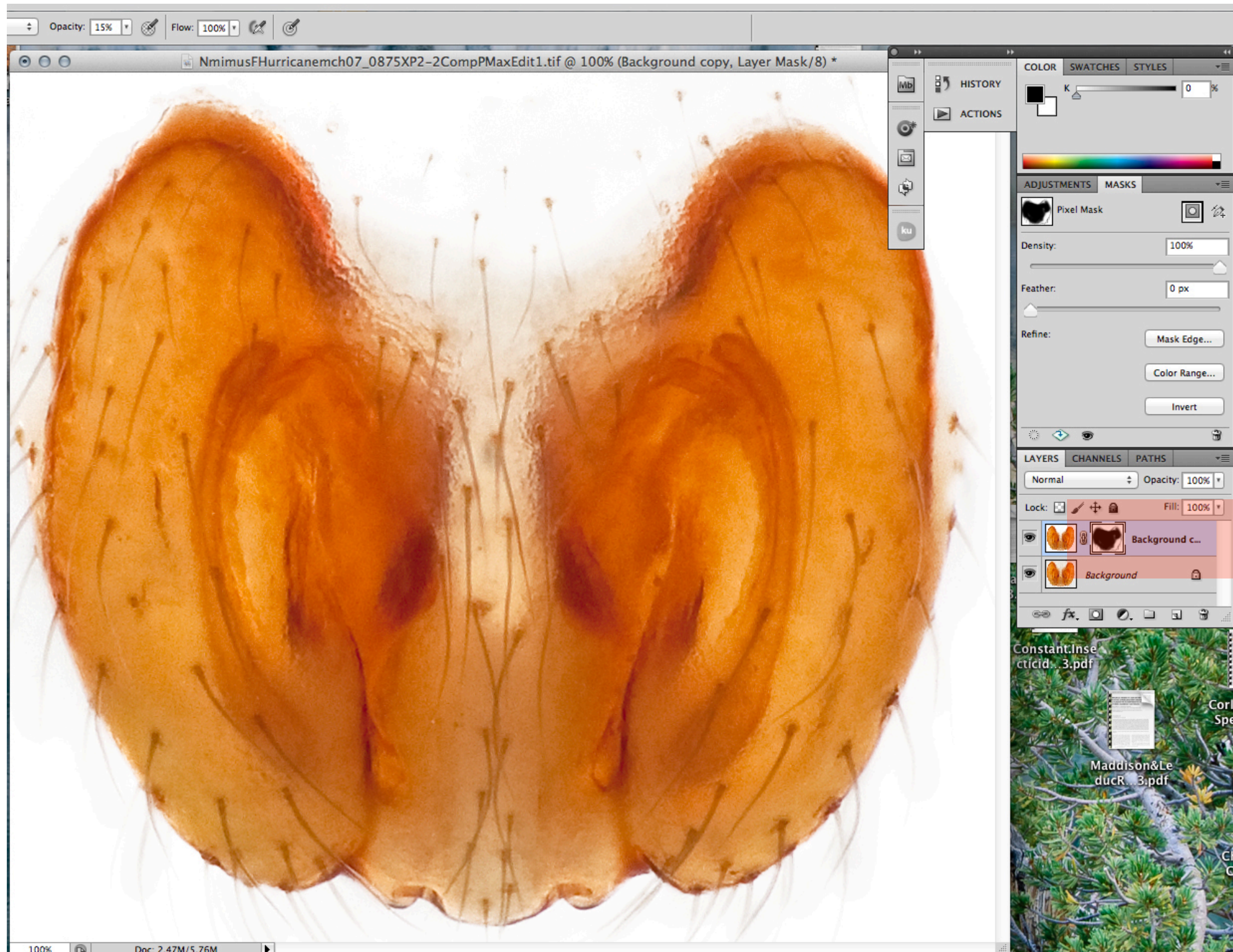
Lightness to 100%



Add Pixel Mask to lightened BG layer



“Paint” on mask, different opacities, adjusting brush size



Before



After

