

# The challenge of imaging small invertebrates

Sandra Brantley for the iDigBio  
Invertebrate Imaging Group



1 mm

Image: Matthew Leister



## Challenges

Small size of specimens (ex. pinned insects; spiders, centipedes, worms in alcohol)

Handling time is long, especially for alcohol preparations

Need structures on several sides of a specimen in order to make an ID

Damage due to handling

## Benefits

Facilitates identifications, fewer loans needed, so decreases damage/loss in the mail (especially for types)

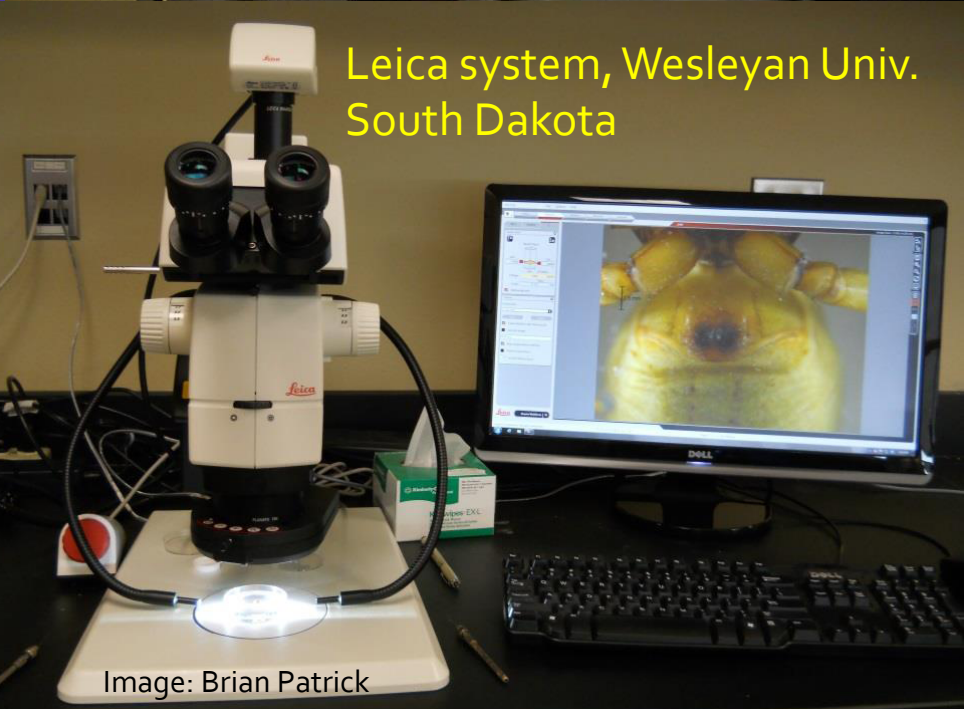
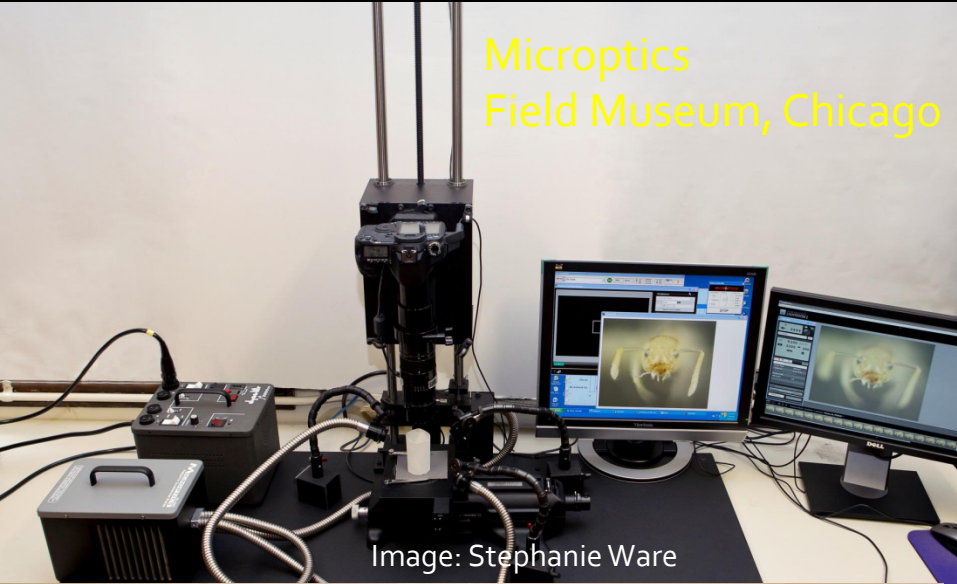
Makes the specimen available to many people at once when linked to databases

Gets holdings information out to many users – especially useful for small collections



AWare Systems for batch scanning of slides, Belgium

# Examples of commercial imaging systems



Do-it-yourself systems if you have in-house expertise, Univ. Michigan



Images: Mark O'Brien

Essig Museum of Entomology, UC Berkeley uses a scanner and PhotoShop scripts for batch processing of slides



Image: Peter Oboyski

Useful technology for our imaging challenges can come from unexpected sources, such as high-throughput slide scanning from pathology applications, and robotics for imaging whole drawers of insects or that can rotate around a given specimen.

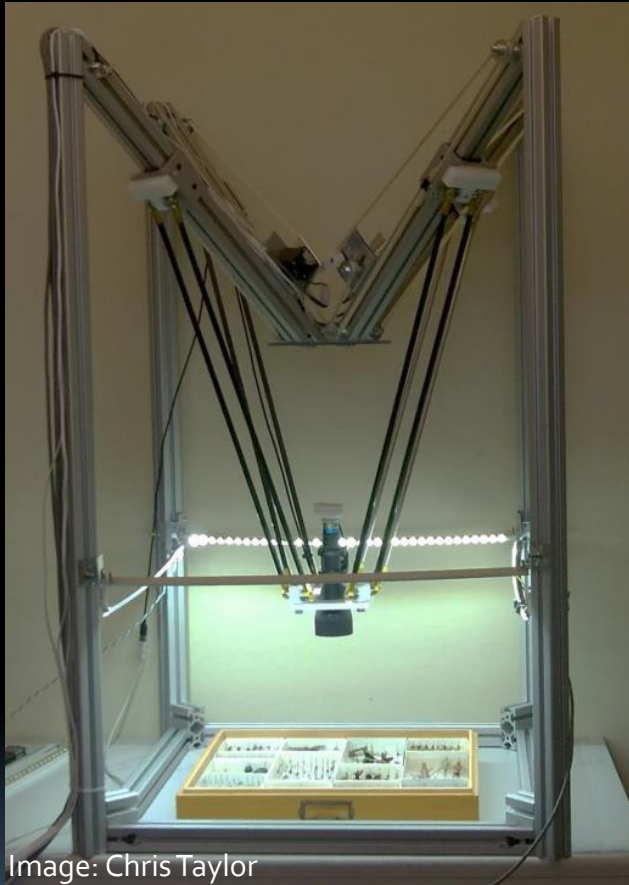


Image: Chris Taylor

GigaPan robot for  
whole-drawer imaging,  
U Illinois

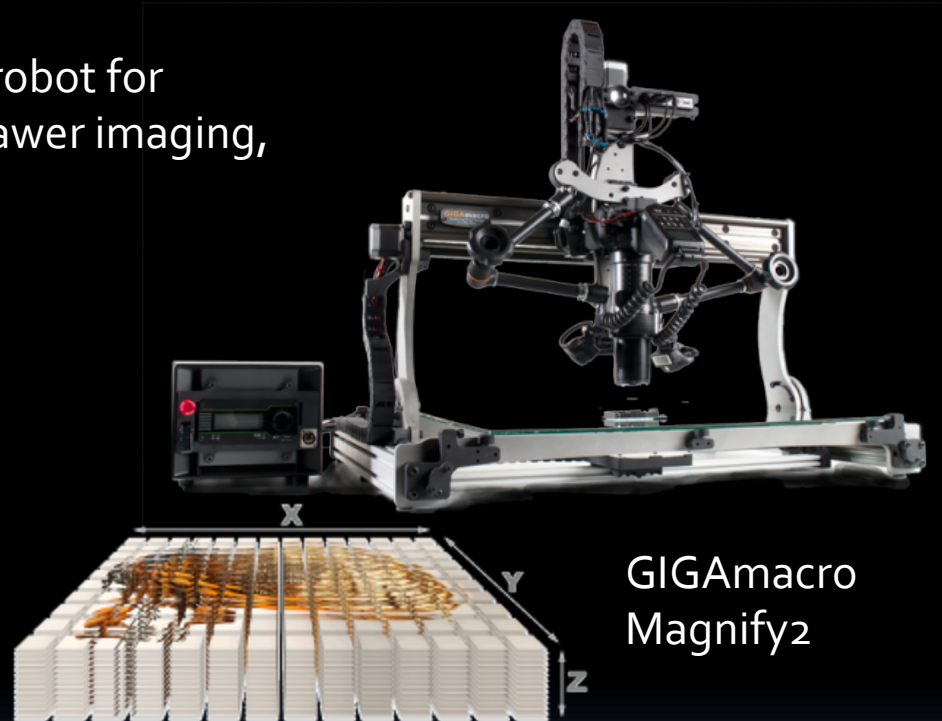


Image: GIGAmacro

GIGAmacro  
Magnify2

The downside is that cost is prohibitive for many museums; a possible fix is for a few institutions to buy imaging systems and charge others to take/process images.

Check iDigBio's wiki (<https://www.idgibio.org>) for webinars from the InvertImaging group and the calendar for upcoming workshops. Many thanks to the people from the institutions whose imaging setups are included here.