

Standardizing Snake Specimen Photography

A Budget-Conscious Approach



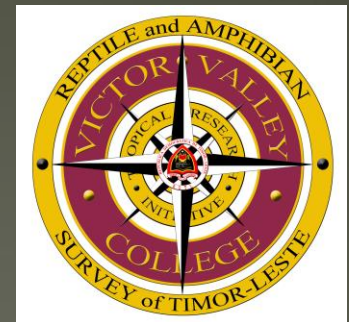
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USNM)

The Need



Pretty obvious, right?

- Obtain and curate data otherwise unavailable
- Reduce researchers' expenses
- “Instant access” to a specimen
- Increased value for a specimen
- Have a record of the specimen as it is now for eternity.



Issues

- Cost
- Data extraction
- Standardization
- International

What Are Common Approaches?

- * Don't deal with it, don't think about it, just push it along.
 - “Head-in-the-sand” approach; no work involved.
- * Have your own staff do it.
 - Workload increases, at the expense of other tasks.
 - Specialized knowledge required.
- * Hire others to do it.
 - Requires external funding, plus integration with own staff.
 - Specialized knowledge required
- * Let researchers do it.
 - They can be a pain, but have the knowledge and work for free
 - Requires integration with own staff.

How Could Researchers Do It?

- Necessity is the mother of invention.
- Take what you have and figure it out.
- Ensure that the image is able to answer your research question!
- Develop a standardized setup.
- Add ancillary images as warranted (e.g., malformations, parasites in situ, interesting patterns).
- Assume this is the last time anyone sees this specimen.

The Camera

- Simple
- Economical
- 10 MP resolution
- MUST HAVE manual focus
- two batteries and a charger



The Light Source

- Experiment, experiment, experiment
- Goose-neck illuminators work
 - check light intensity and light angle
- Some flashlights work
- Sometimes the camera flash works
- mix & match, sometimes the editing reveals the best shot



The Background

- Tired of damp cloths, uneven surfaces, non-unified backing?
- Go crocheting!
- Plastic crochet frame (less than \$20)
- Plain black t-shirt (less than \$5)
- beds down specimen, provides uniformity, eliminates wrinkles, works for anything up to 1800 mm



Ancillary Equipment

- Forceps (I like to bring my own stuff)
- brass-headed steel pins (to hold things open for photography, or to pin and identify a feature)
- a battery-operated fan (if fumes get to you)



Set Up With Space and Stability

- space for specimens and jars
- space for the “studio” including suitable lighting angle
- space for any additional specimen work (scale counts and measurements)
- stability, so that you don’t have to set up daily
- stability to avoid vibrations and to allow elbow support
- stability to ensure specimens and jars can be handled safely

Bernice P. Bishop Museum



PNG National Museum



University of Papua New Guinea



Snake Methodology • 1

- entire specimen, dorsal view



Snake Methodology • 2

- entire specimen, ventral view
- you'll be surprised how well you can work the ventral surface!



Snake Methodology • 3

- head, dorsal view



Snake Methodology • 4

- head, lateral view

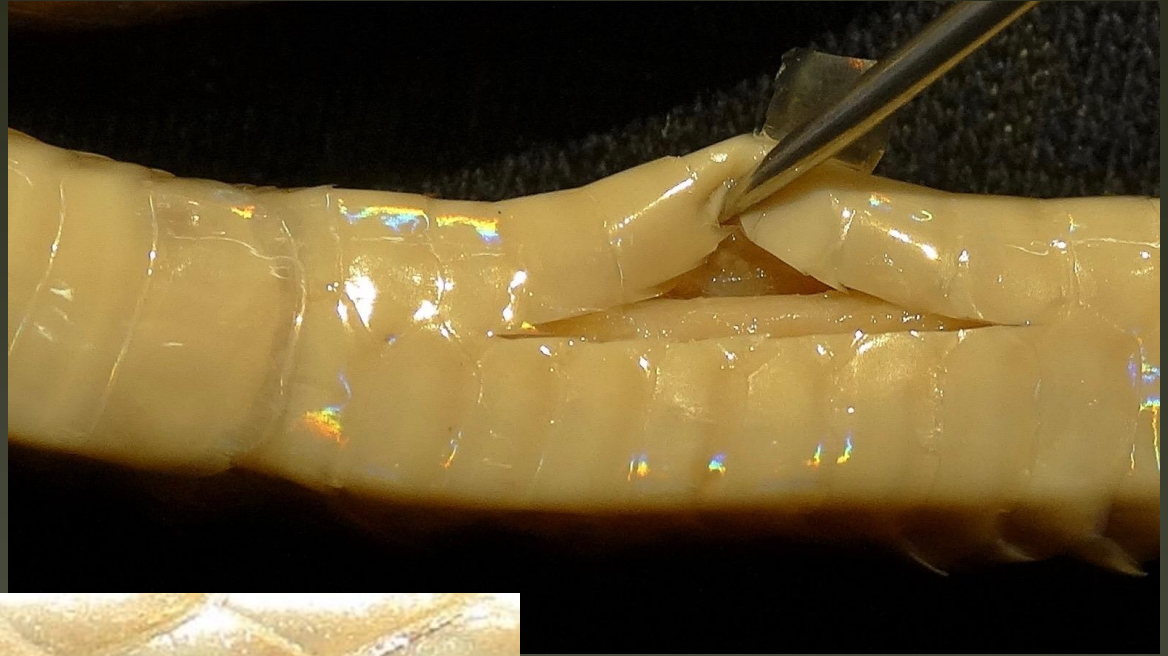


Snake Methodology • 5

- head, ventral view



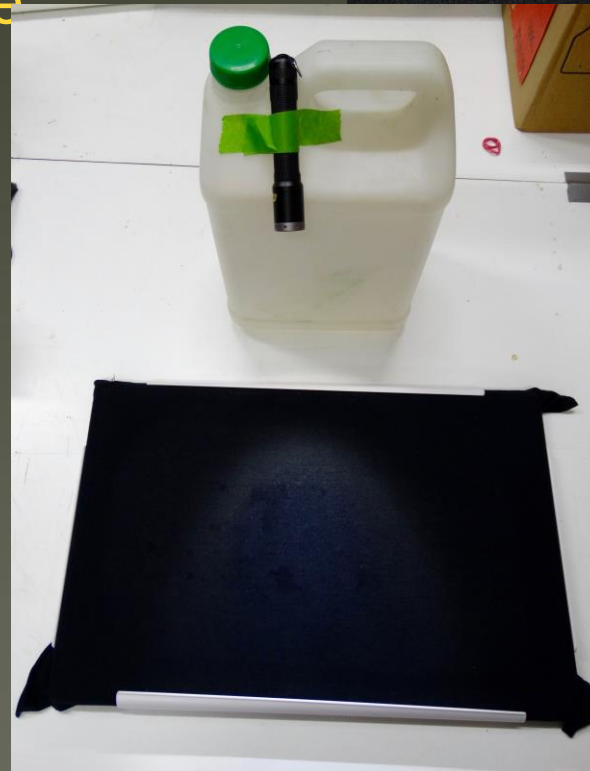
Snakes Part 6



➤ other views

Problems

- reflection
- poorly preserved specimens (e.g., twists and turns, rot, scale flaking)
- light source
- grip & strength





Acknowledgments

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