

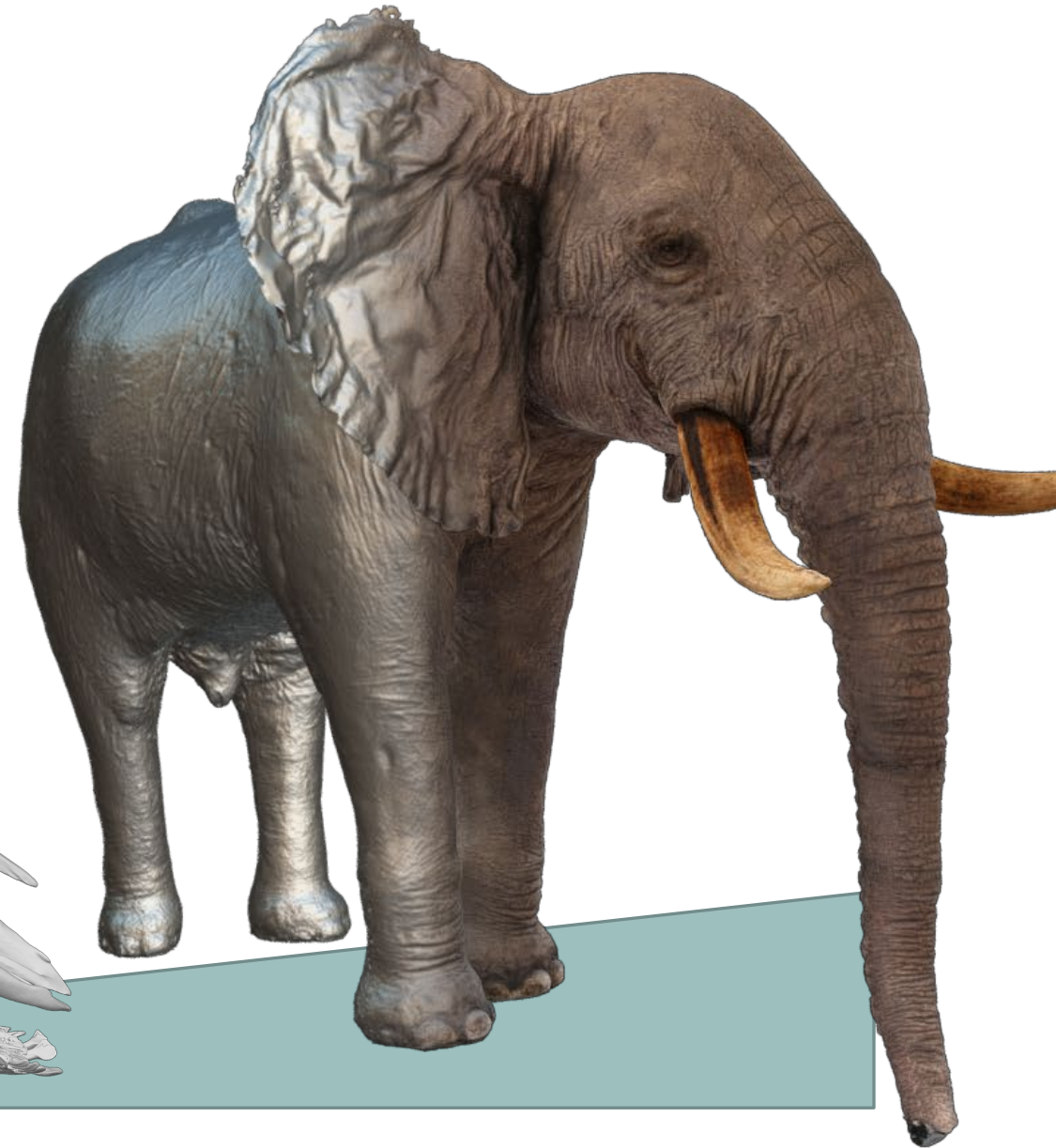
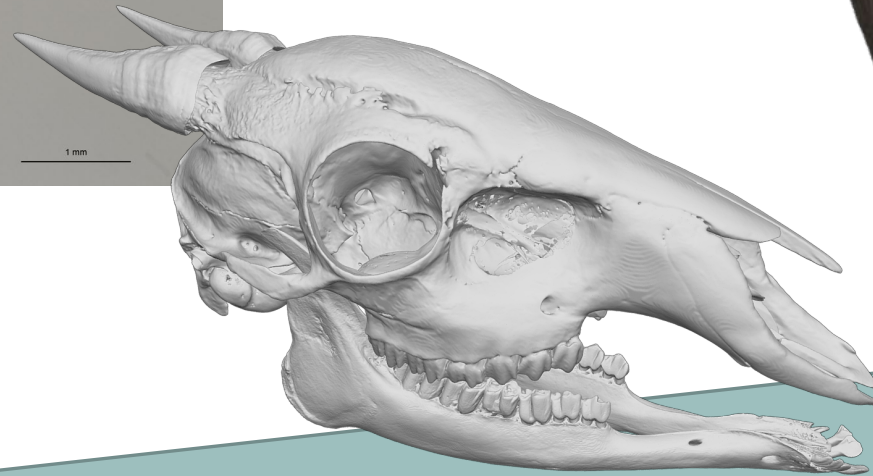
# DIGITIZATION OF THE COLLECTIONS

Aurore Mathys

Canathist  
April 2024

Images: A. Mathys, J. Brecko, A. Henrard, N. Andries, Y. Pollet

# LARGE DIVERSITY OF SIZE AND MATERIAL





# WHY DIGITIZE COLLECTIONS?

## A. Preservation



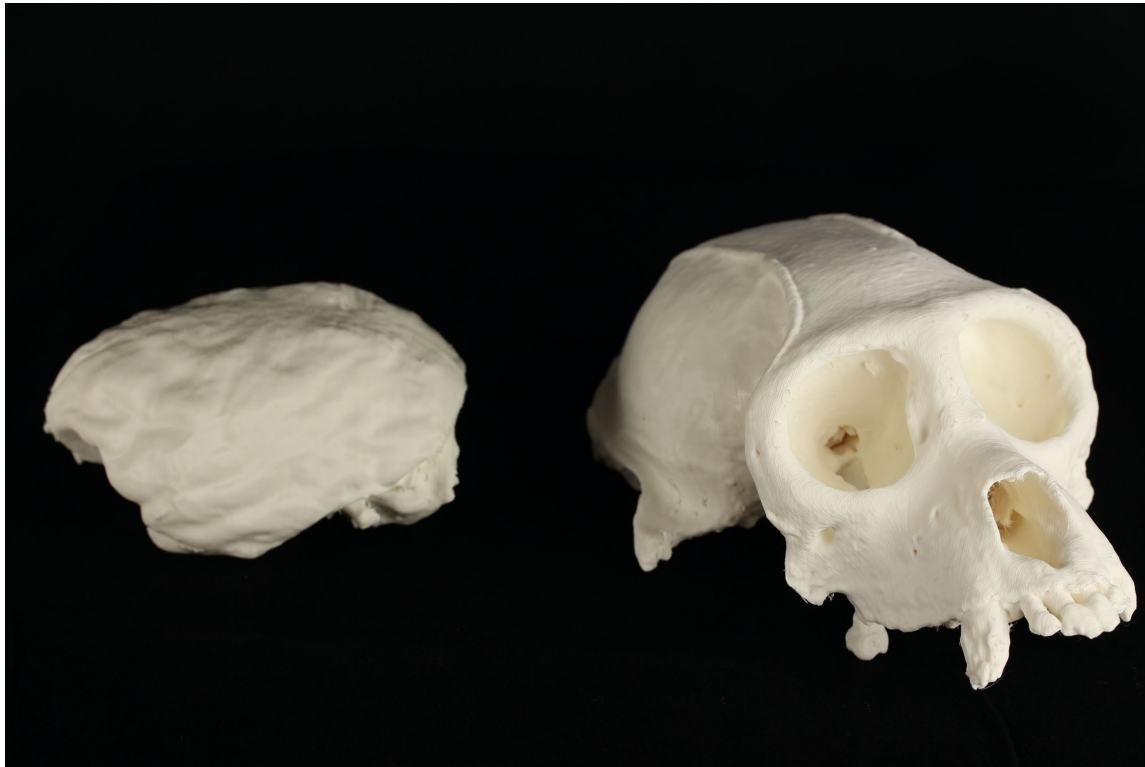
PATRICK CHAPPATTE, *Mosul Museum Devastated*, 2015. Published in *Le Temps*, Switzerland, February 28, 2015. © Chappatte 2015.



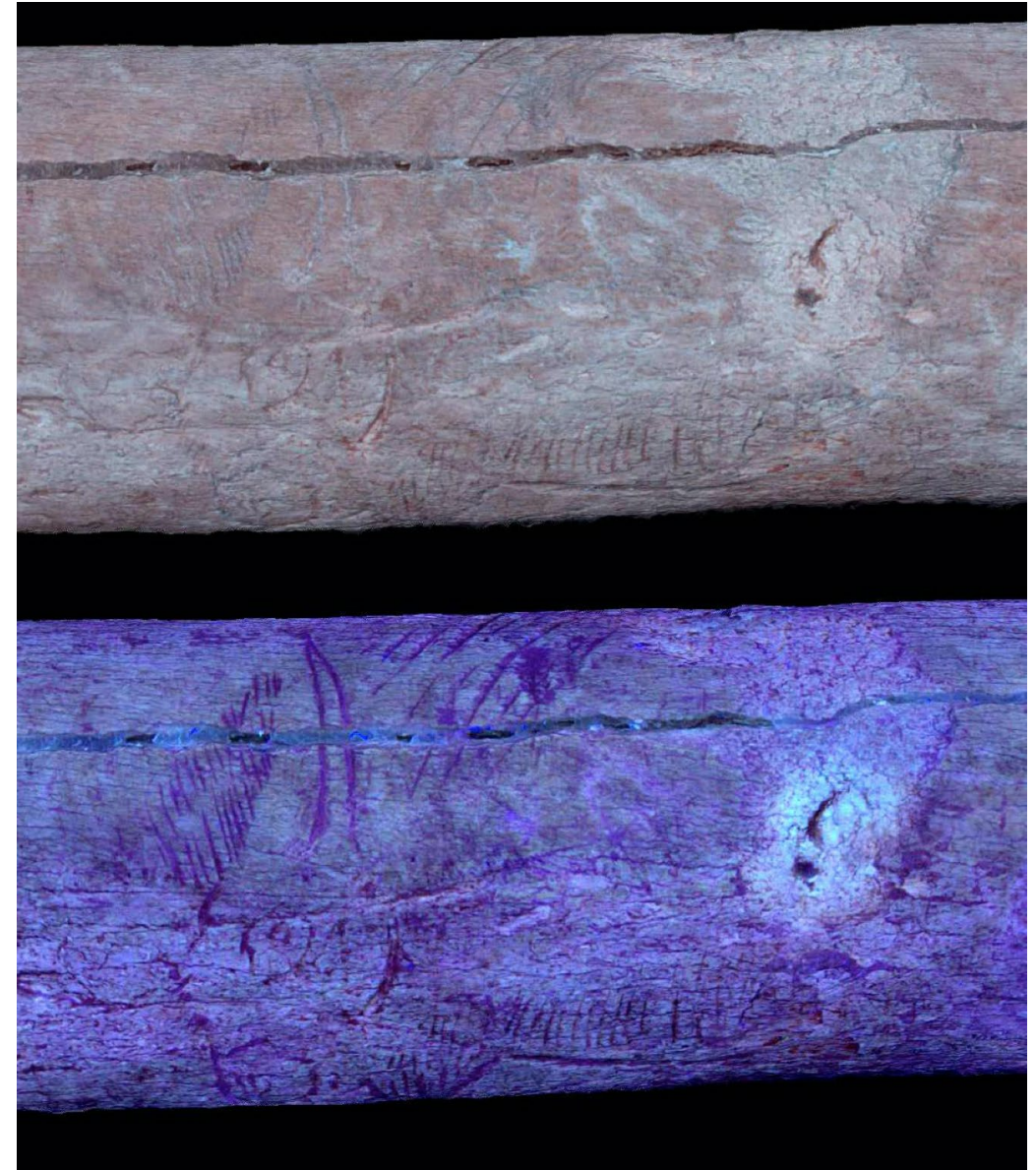
Wikipedia, Felipe Milanez 2018

# WHY DIGITIZE COLLECTIONS?

## B. Scientific studies



3D print of a skull and its virtually extracted brain. © RMCA

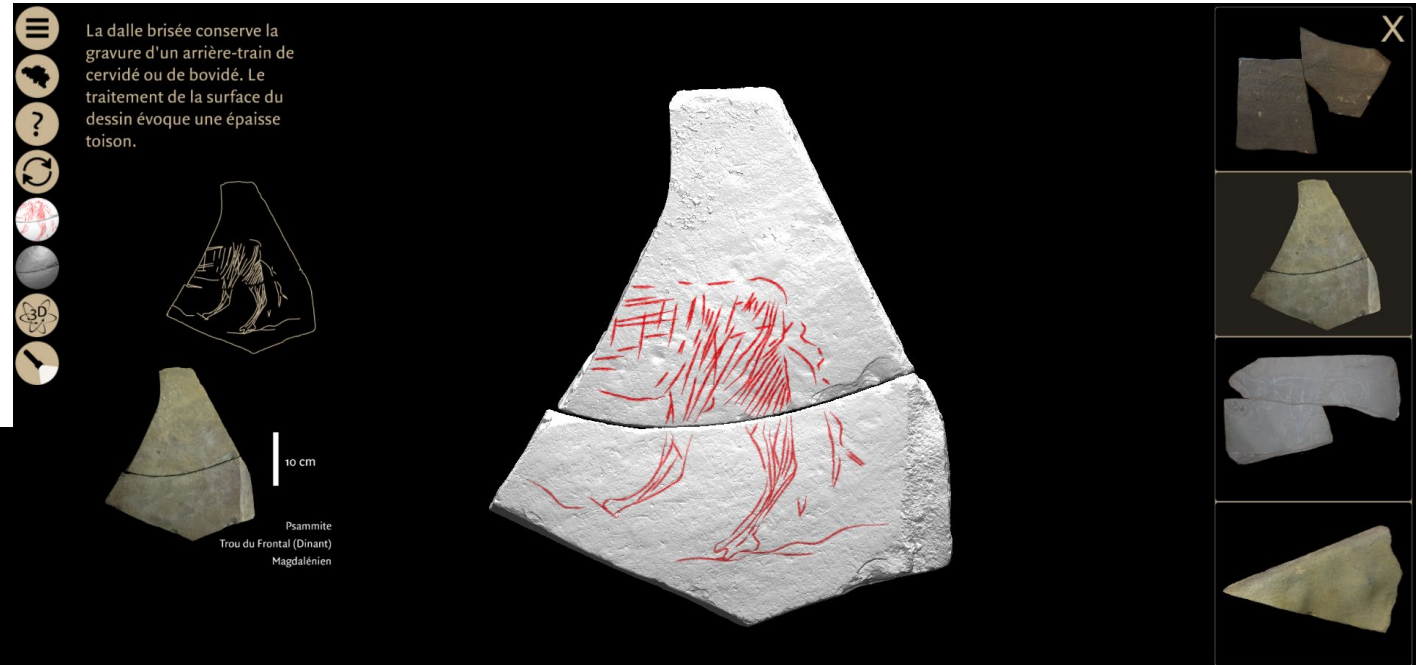
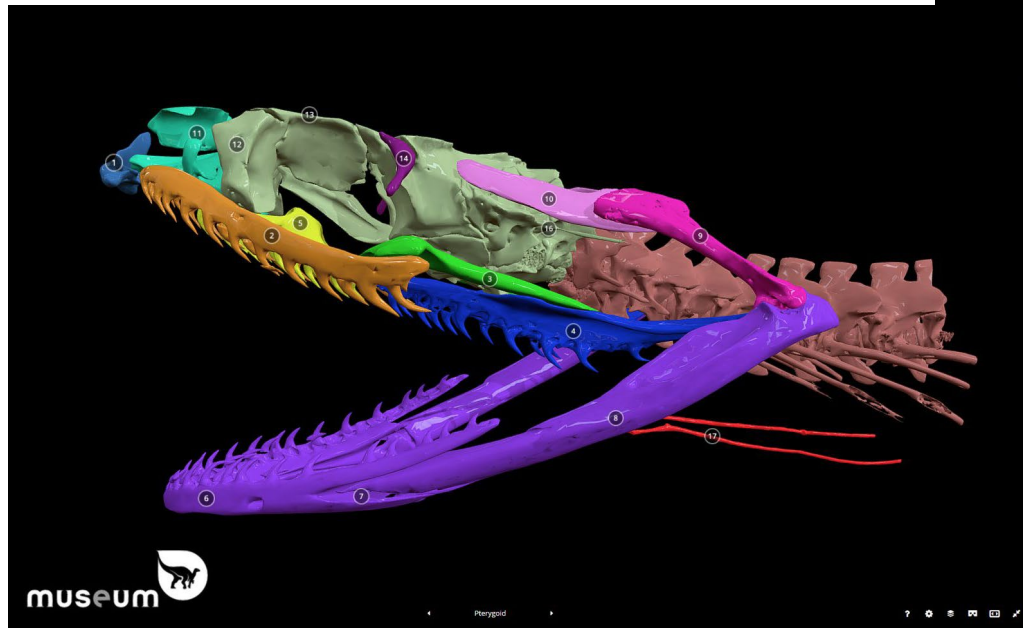


Multispectral digitization enhancing the visibility of the engraved auroch.

# WHY DIGITIZE COLLECTIONS?

## C. Dissemination

[Educational 3D model](#)



[Virtual museum of Belgian Paleolithic Art](#)

# REVIEW OF DIGITIZATION TECHNIQUES

**A. 2D/2D+**

**B. 3D surface scan**

**C. 3D of both external and internal  
structure**

# REVIEW OF DIGITIZATION TECHNIQUES

**A. 2D/2D+**

B. 3D surface scan

C. 3D of both external and internal structure



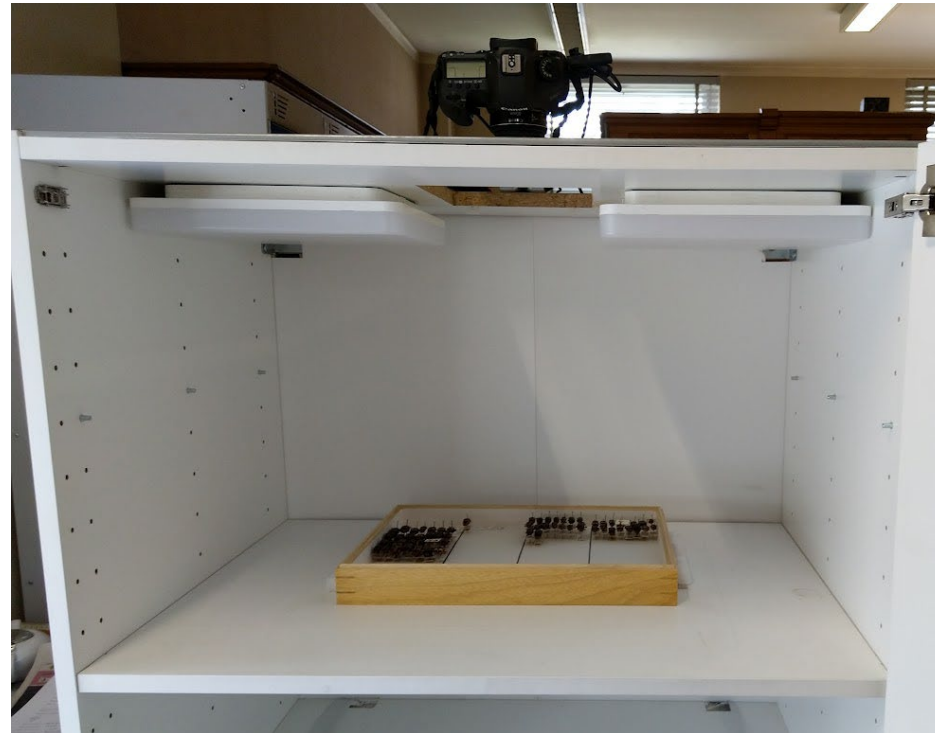
# 2D: COLLECTION DRAWERS

Pictures of entire boxes of specimens for inventory purposes

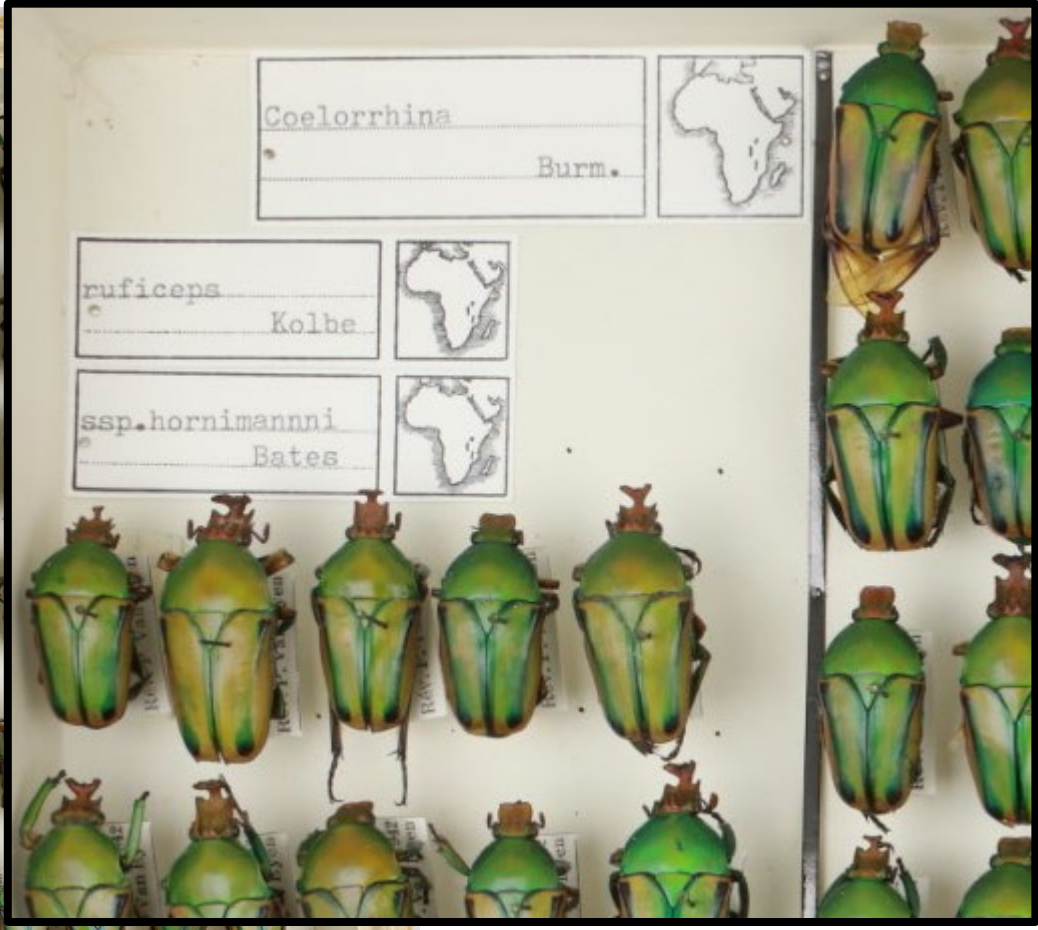
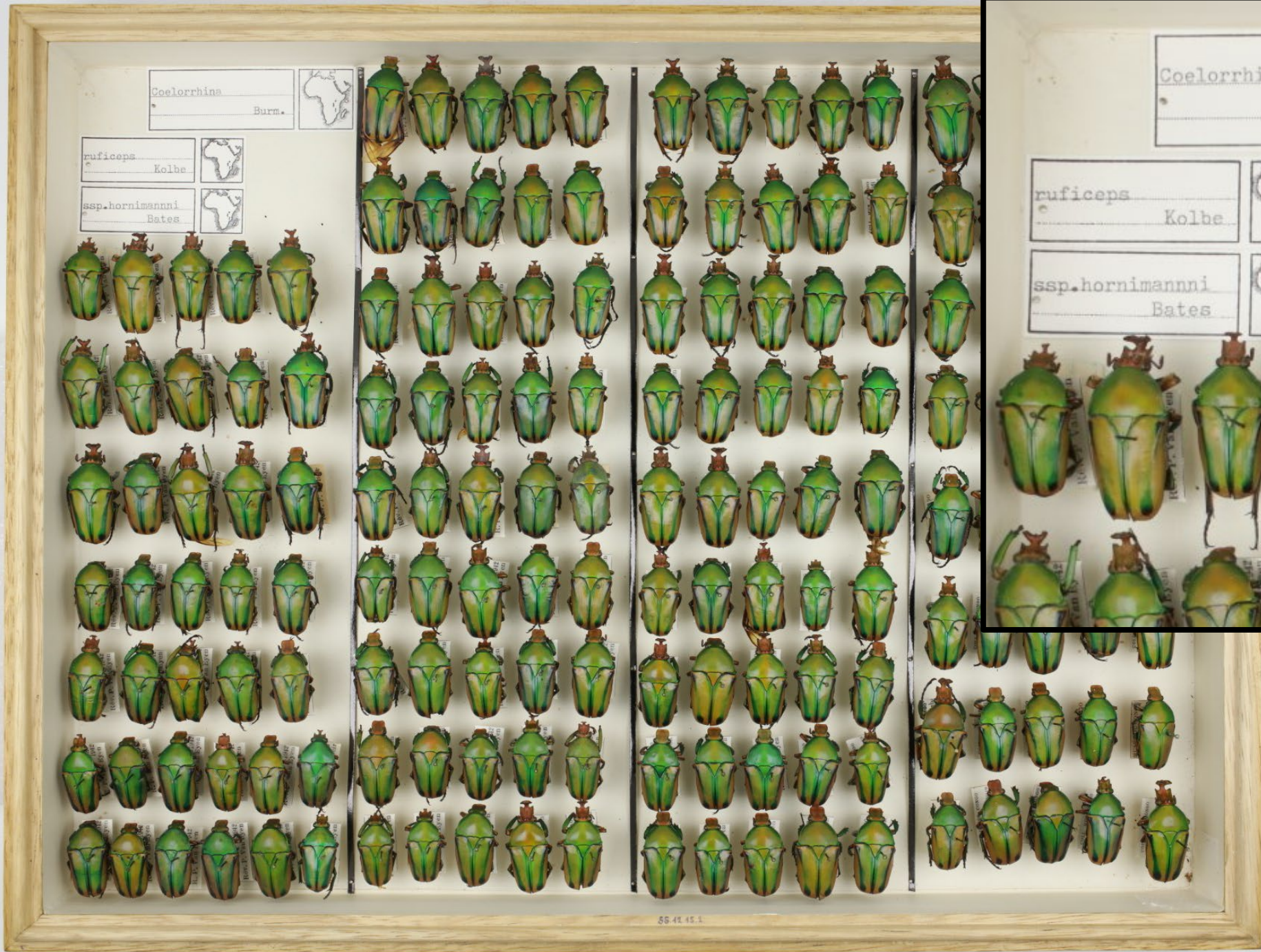
Using a Canon 5DsR with 50Mpx together with a 40mm allow to capture boxes with minimum deformation and high detail.

Setup cost: 3000€

Alternatively a smartphone with good photographic performance can also be used







# PICTURES OF THE BIRD COLLECTION MADE WITH A SMARTPHONE

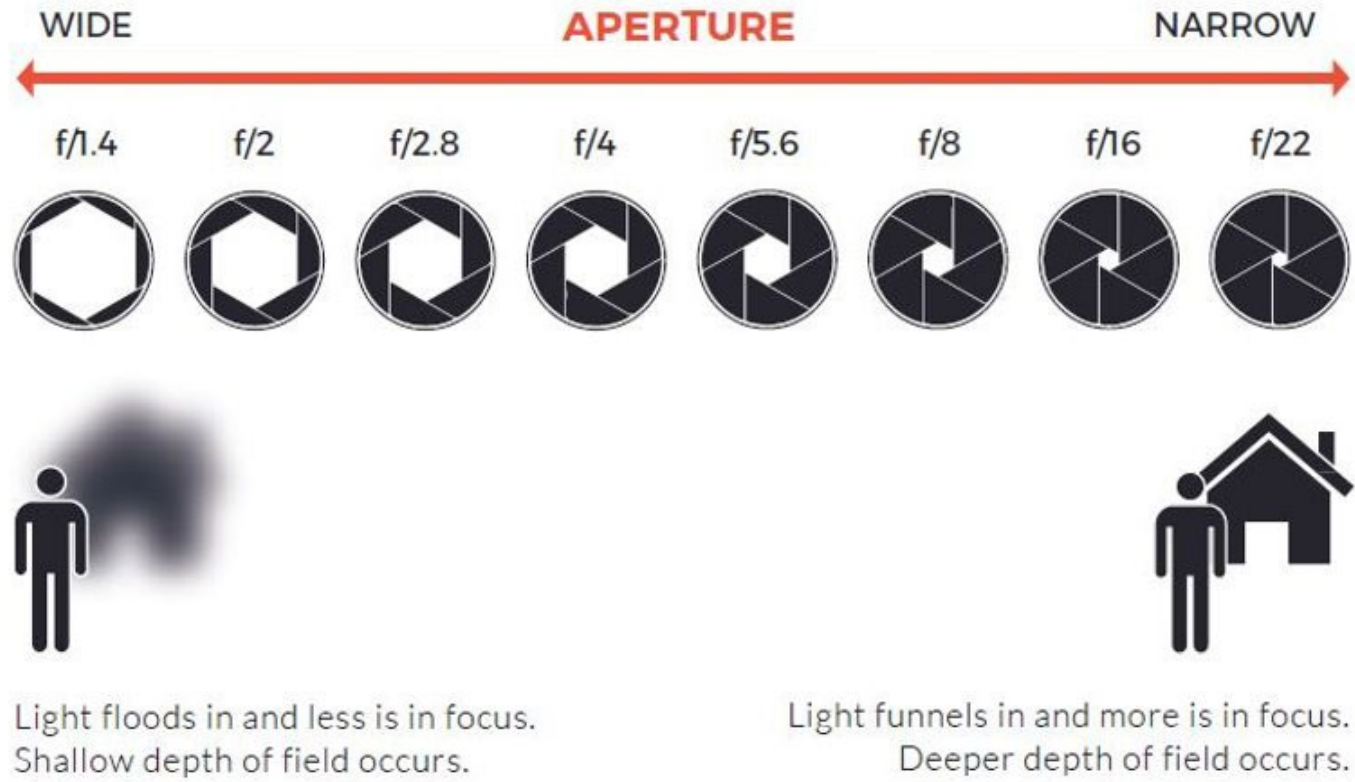


# 2D+: FOCUS STACKING

Allow to increase depth of field for photography of small specimens by recombining multiple pictures

Setup cost: depend on the lens used, 1500-3500€





# DEPTH OF FIELD AND ITS RELATION TO APERTURE

Narrow aperture (high F-stop) = good depth of field but lack of sharpness, low light

Wide aperture (low F-stop) = low depth of field, brighter

# 2D+: FOCUS STACKING



**Focus stacking: Comparing commercial top-end set-ups with a semi-automatic low budget approach. A possible solution for mass digitization of type specimens**

Jonathan Brecko<sup>1,2</sup>, Aurore Mathys<sup>1,2</sup>, Wouter Dekoninck<sup>1</sup>,  
Maurice Leponce<sup>1</sup>, Didier VandenSpiegel<sup>2</sup>, Patrick Semal<sup>1</sup>

<sup>1</sup> Royal Belgian Institute of Natural Sciences, Vautierstraat 29, B-1000 Brussels, Belgium <sup>2</sup> Royal Museum for Central Africa, Tervurensesteenweg, Tervuren, Belgium

<http://zookeys.pensoft.net/articles.php?id=4346>



2D+: FOCUS STACKING





# MICROSCOPIC SLIDE LABEL DIGITIZATION

Cost: 300€



# MICROSCOPIC SLIDE LABEL DIGITIZATION

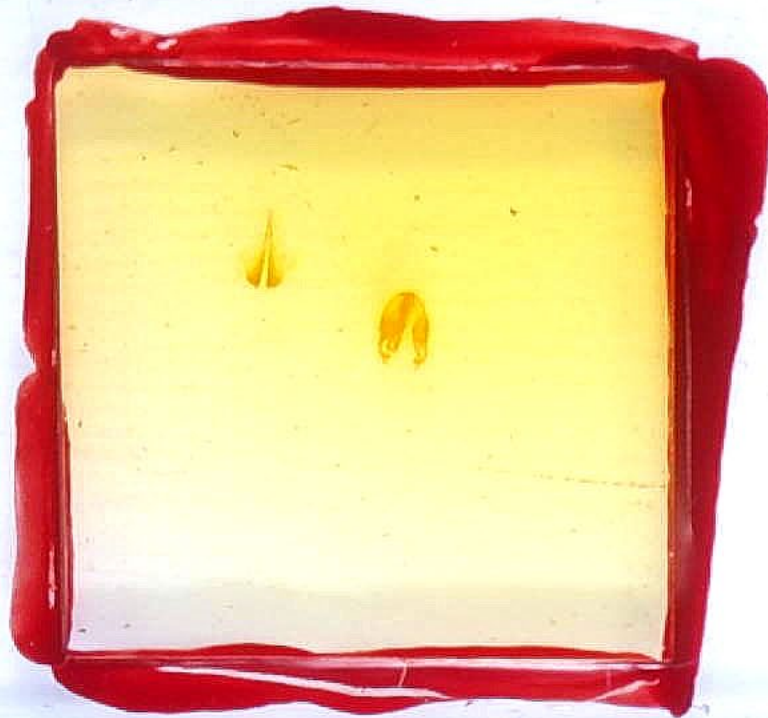
Mus. Cong. :

Ruanda:

Kiliga (Volcan  
Vishoke)

41. II. 1935

G. F. de Witte



Mus. Cong. 45-7

~~Diaprius~~  
Diaprius gess  
brunneus sp. n.

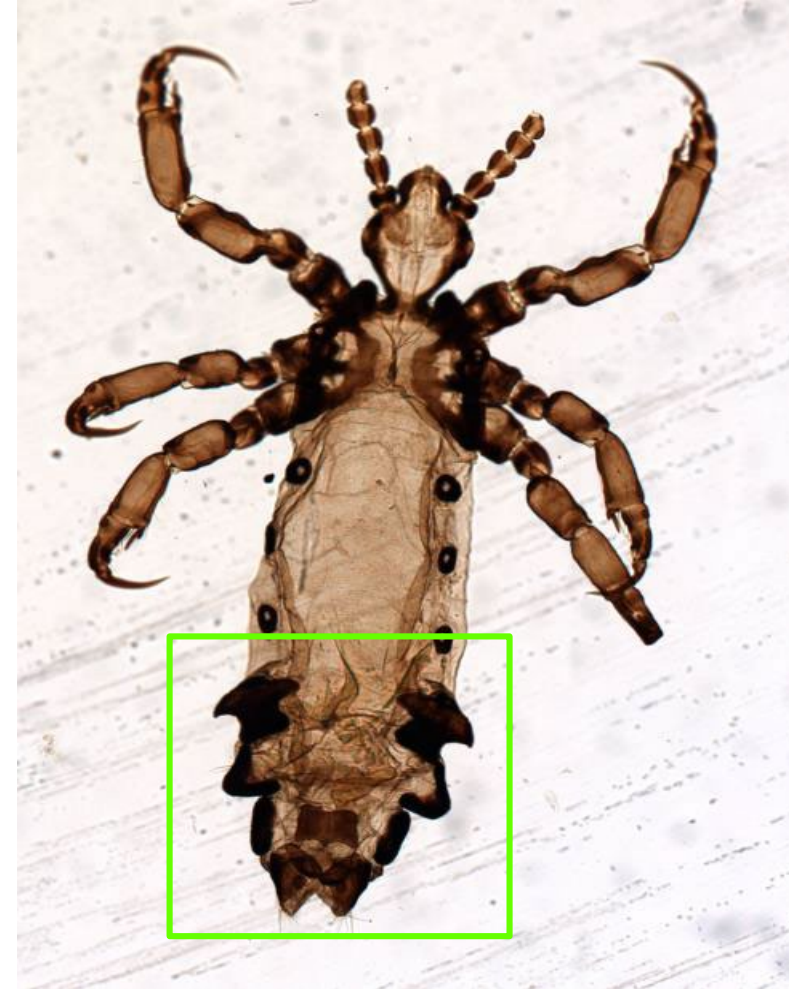
paratype ♂  
genitalia ♂ + aemula

prep. n° 13 sternite  
Benoit III - 1951

## 2D: Gigapan - Focus Stacking Microscope



Cost: 45 000€



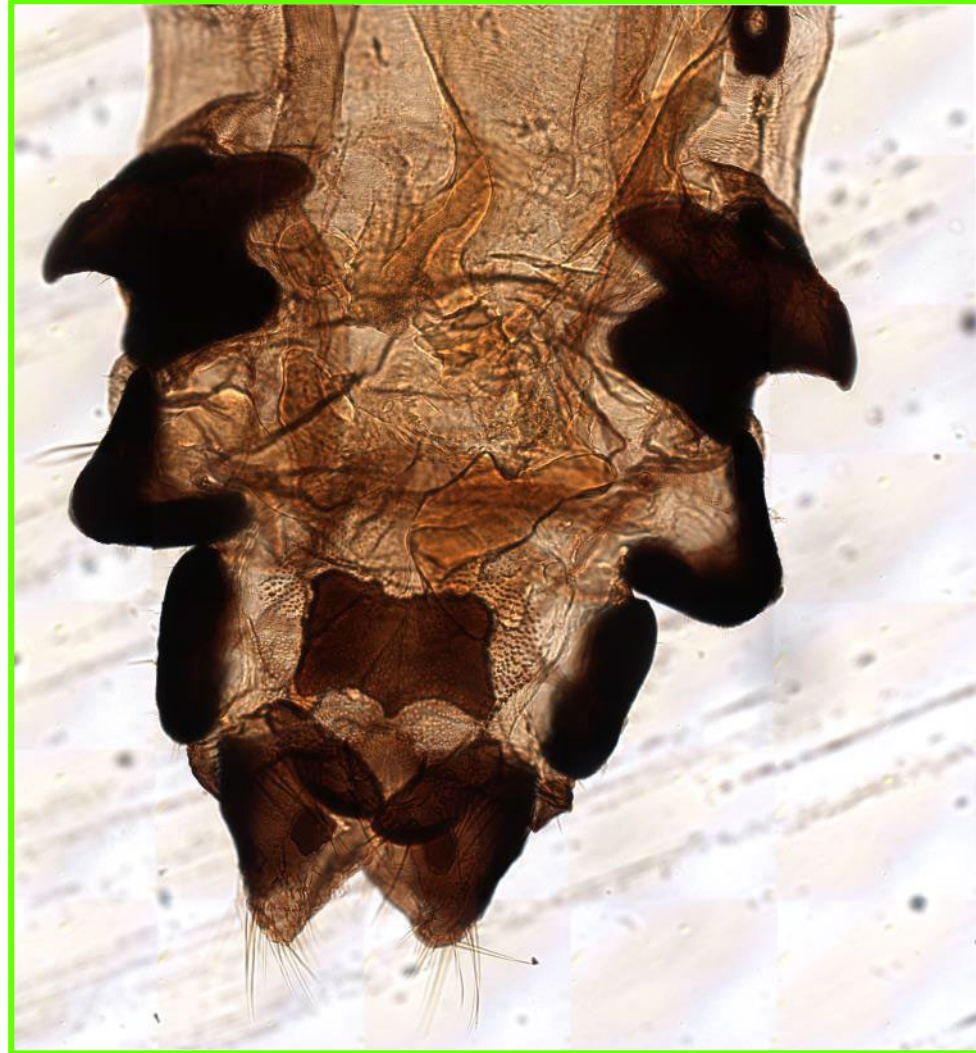
*Anoplura* sp., RMCA 2015

[Microscope](#) Focus Stacking 2D+

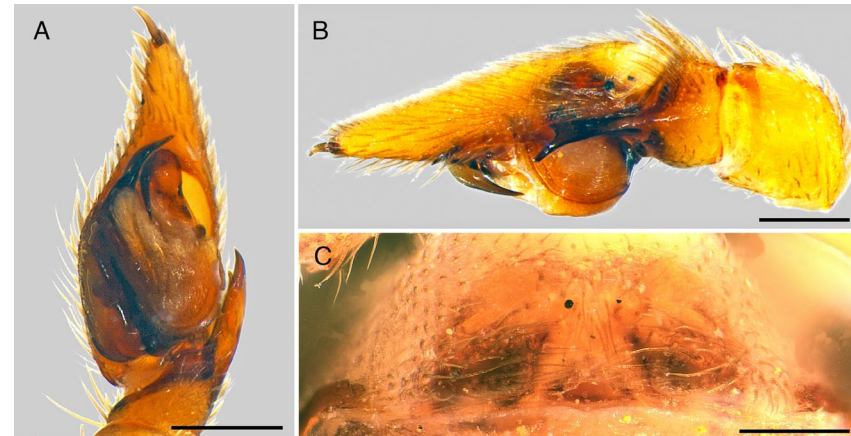
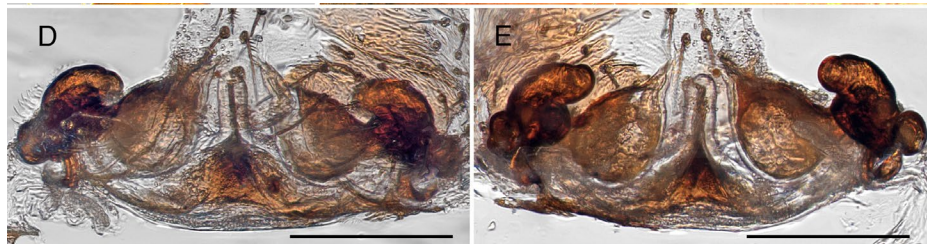
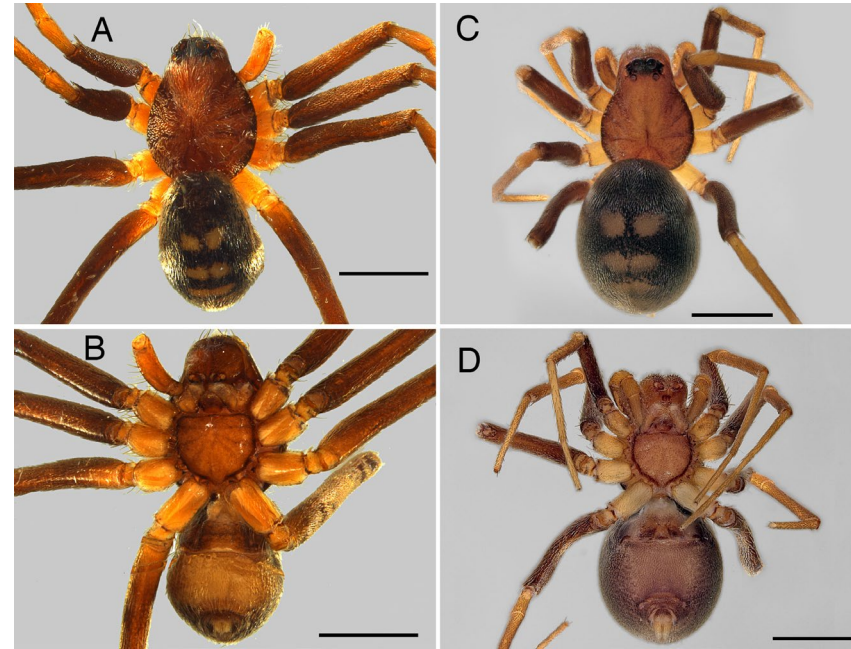
## 2D: Gigapan - Focus Stacking Microscope



*Anoplura* sp., RMCA 2015

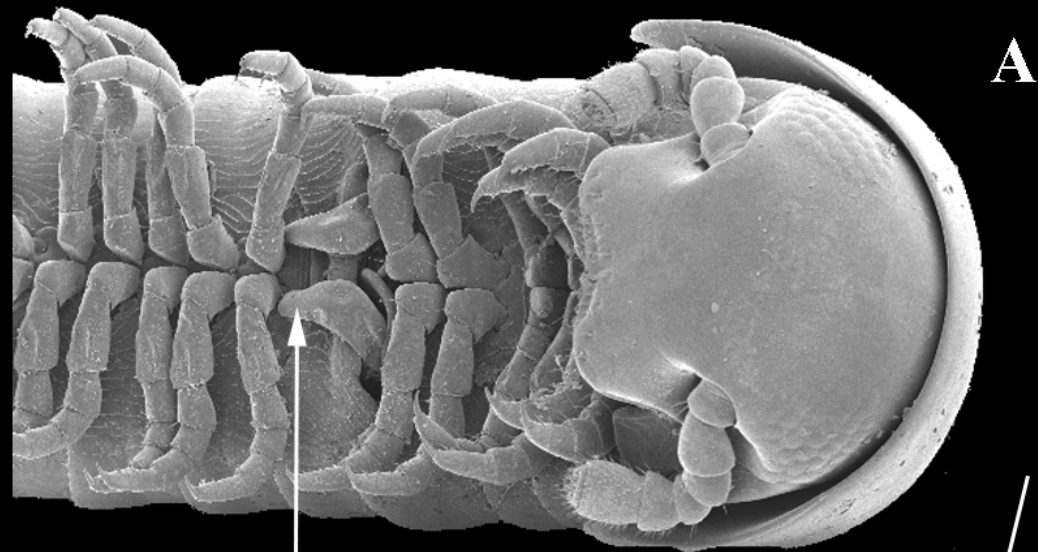
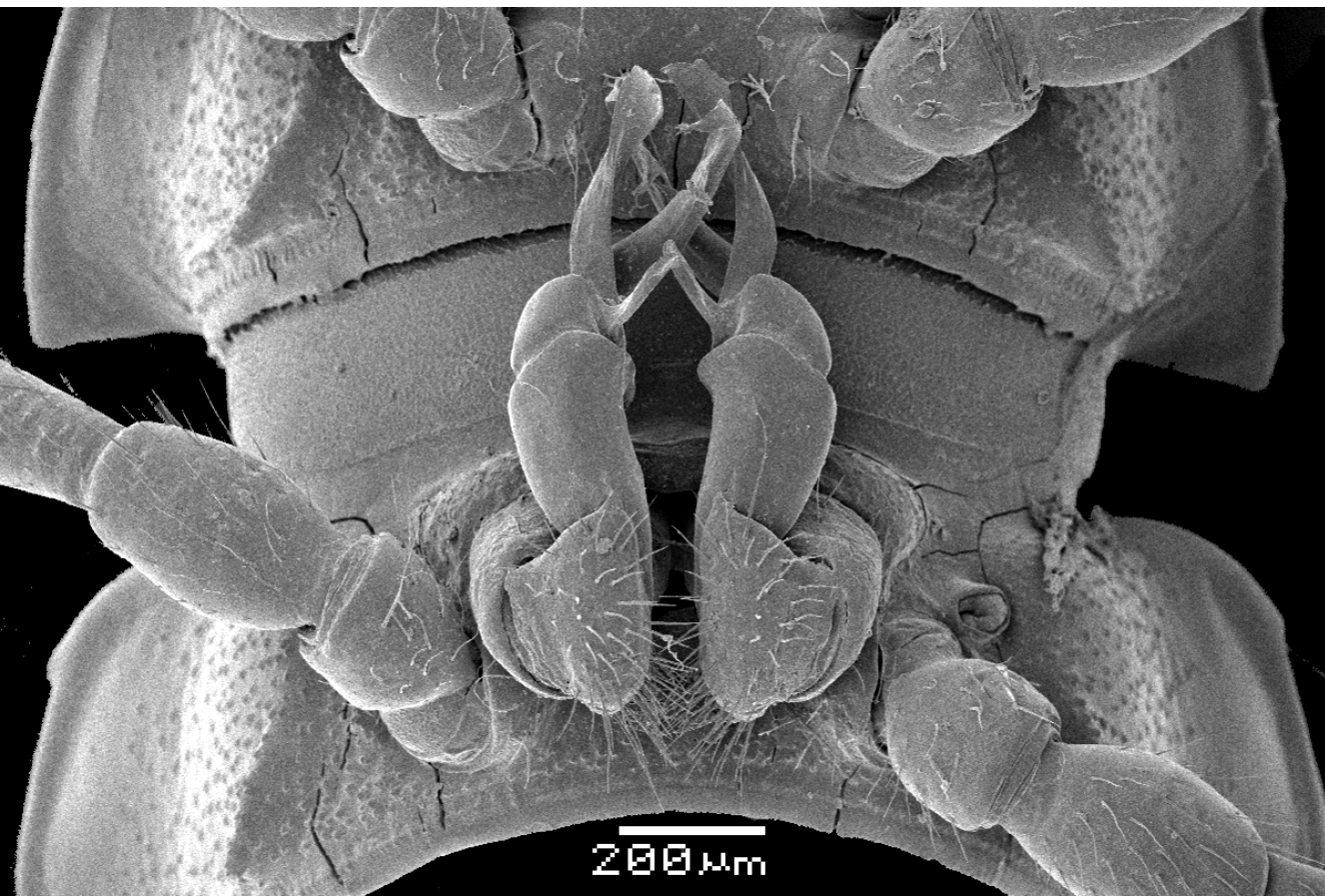


# 2D+: Leica - Focus Stacking Microscope



*Ranops robinae* sp. nov.

# 2D+: SCANNING ELECTRON MICROSCOPE (SEM)



**B**



**C**



**A**

1 mm

**B,C**

200 μm

# REVIEW OF DIGITIZATION TECHNIQUES

A. 2D+

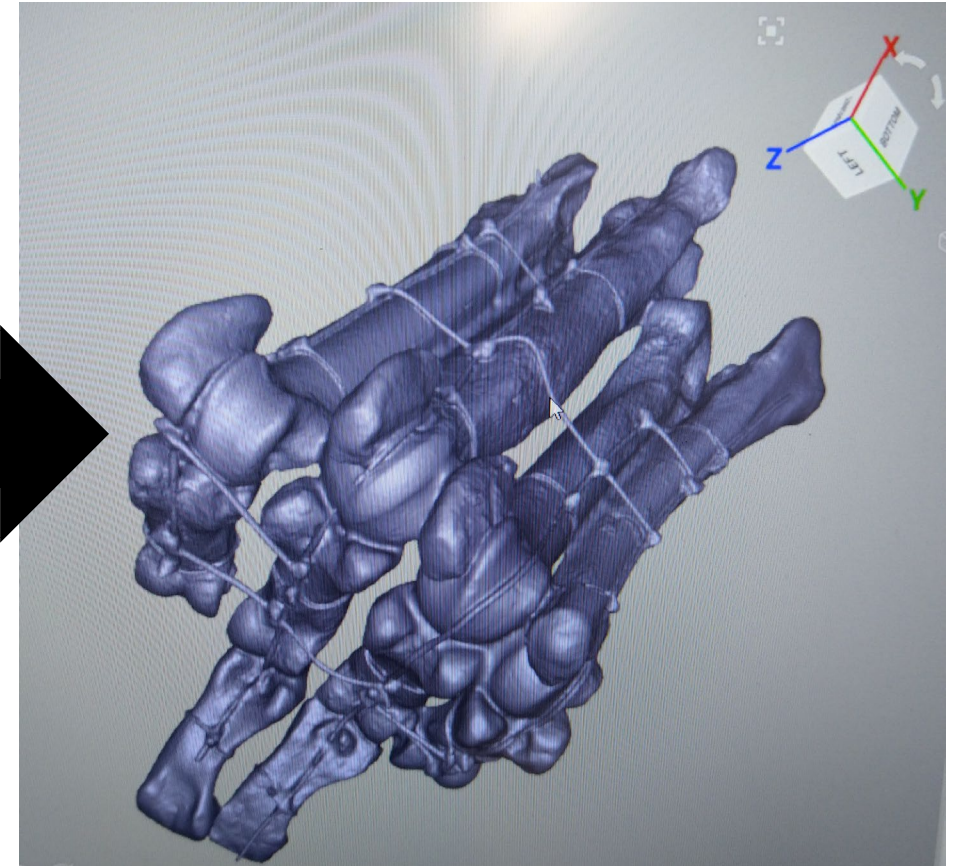
**B. 3D surface scan**

C. 3D of both external and internal structure

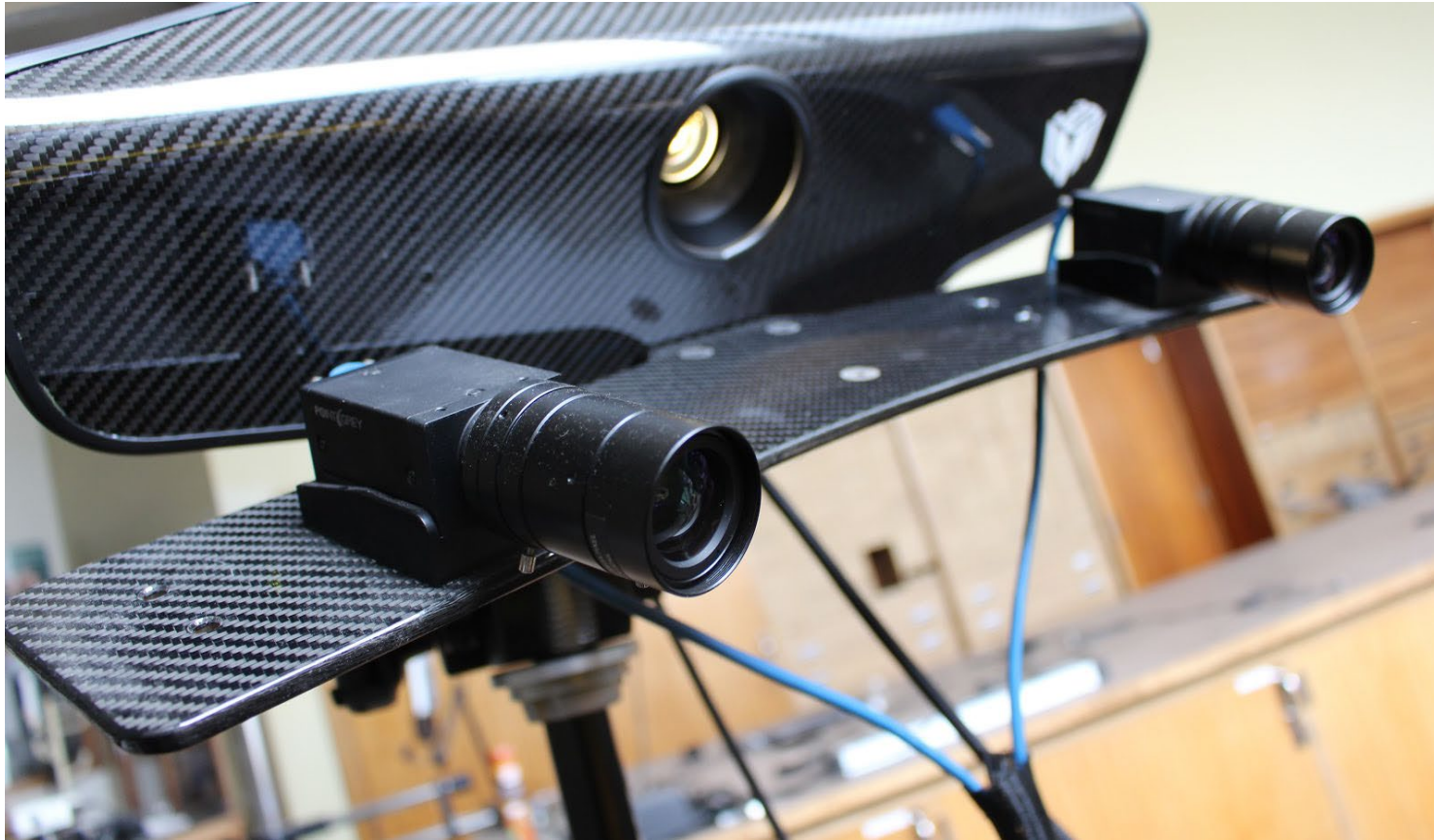
From this



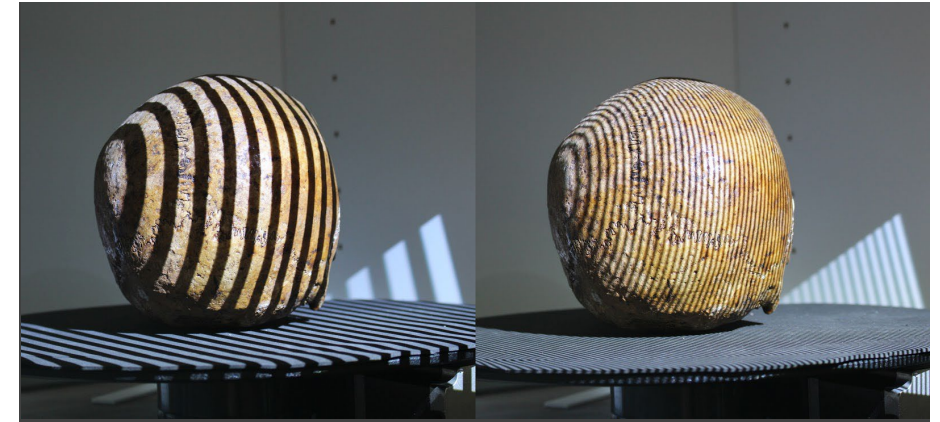
To this







## 3D SURFACE SCAN: STRUCTURED LIGHT



Projector + camera(s)

Projection of light pattern to  
obtain a 3D model

Poor to medium texture  
quality but good precision

Tripod or handheld

<http://collections.naturalsciences.be/projects-2/archive/workshop-24th-and-25th/videos/hdi-3>

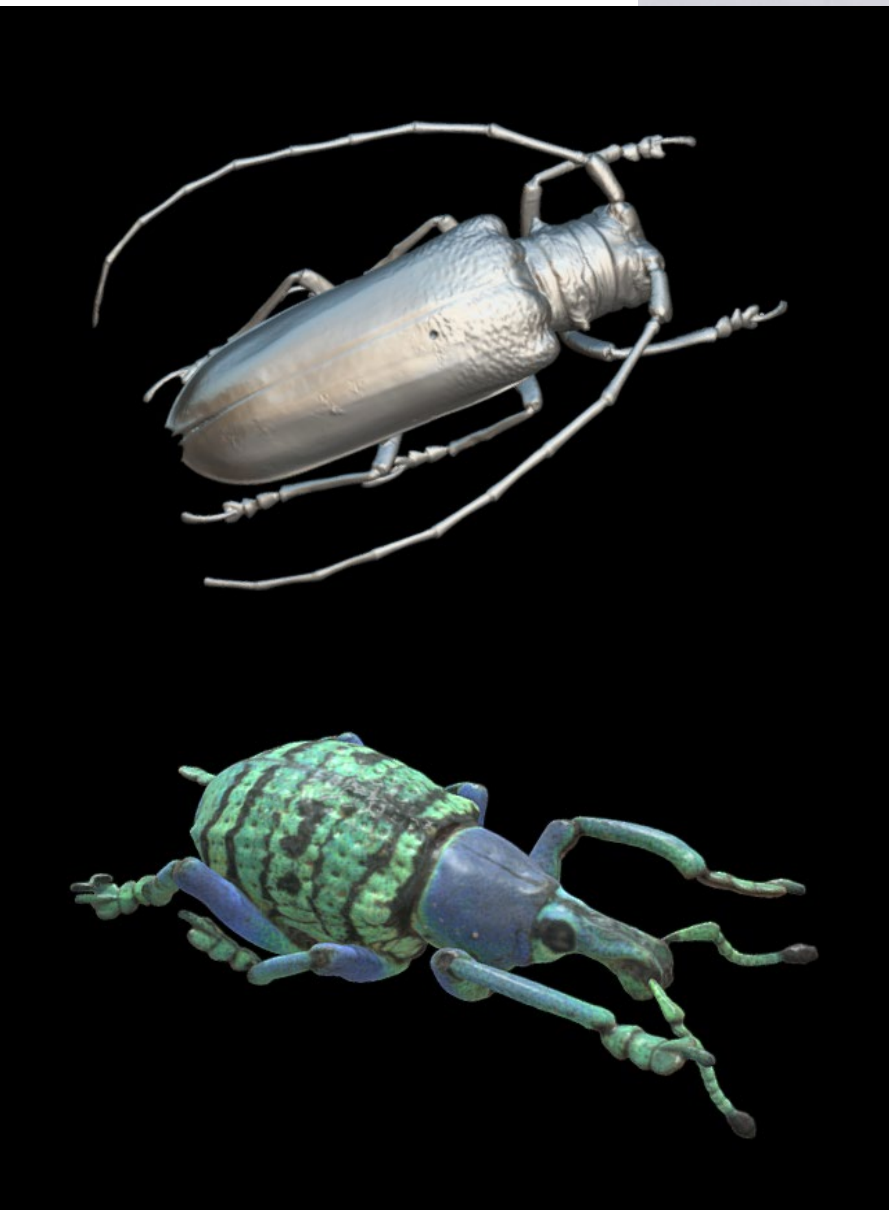


Handheld  
Medium sized objects: 10-50cm  
Accuracy: 50  $\mu$ m  
Cost: 20000€



ARTEC SPIDER

# ARTEC MICRO



Cost: 28000€

Small objects: 1-10 cm

Accuracy: 10-45  $\mu$ m



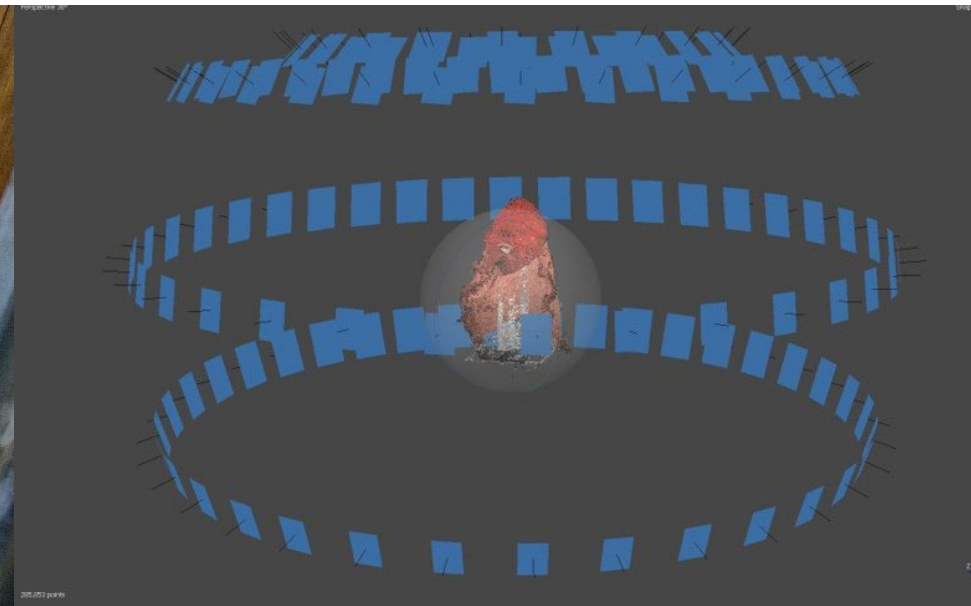
# 3D SURFACE SCAN: PHOTOGRAMMETRY

3D from photographs

Applicable to diverse scale: from a few centimeters to several kilometers

Affordable (cost dependent on the equipment, our setup is less than 3000€)

Easy to implement





**FOR THE VERY SMALL**

Focus stacking  
+  
photogrammetry



THE SMALL SIZE |



**THE MIDDLE SIZE**



**THE LARGE SIZE** |





**AND FOR THE VERY LARGE** |

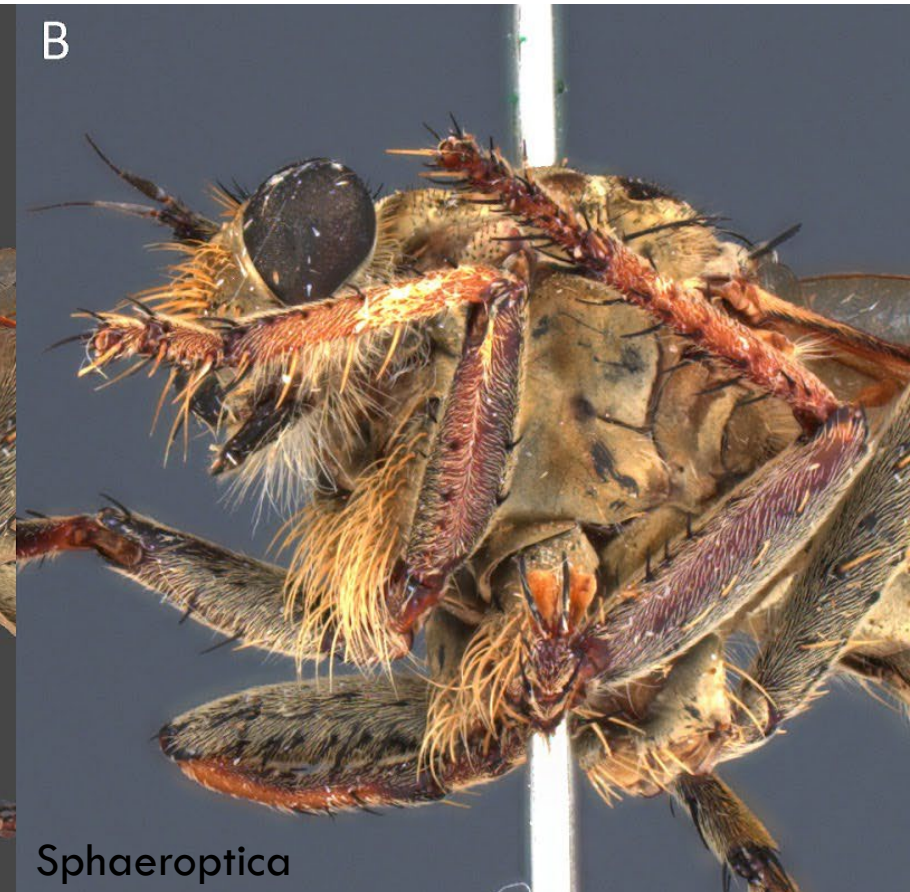
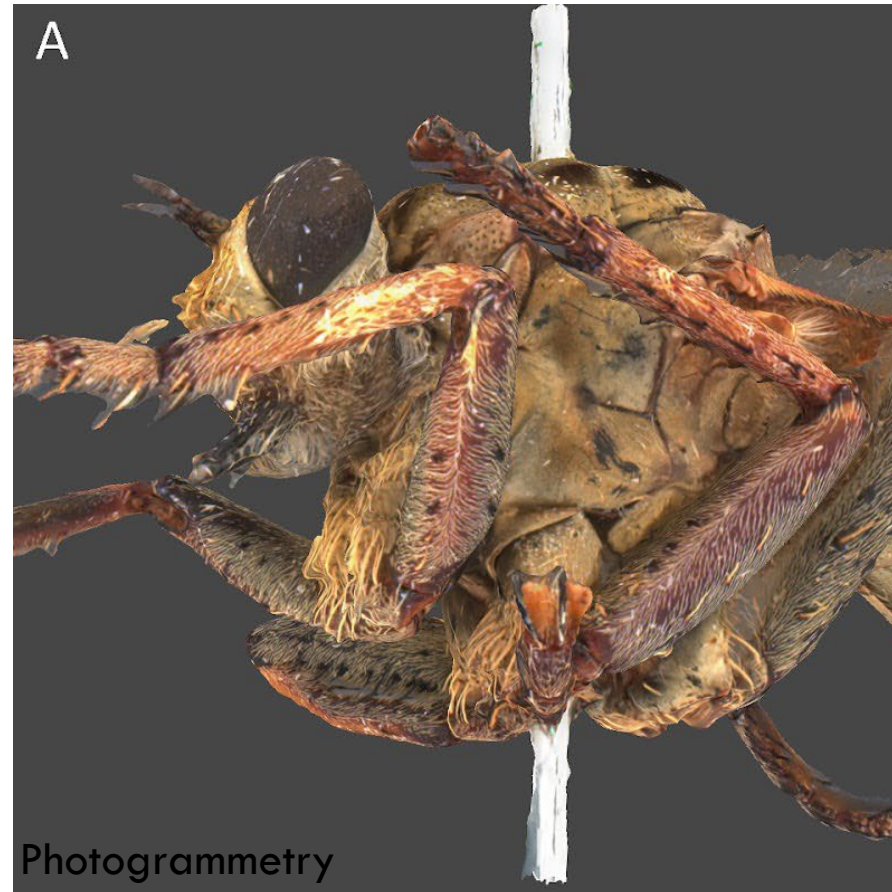


**FROM THE AIR** |

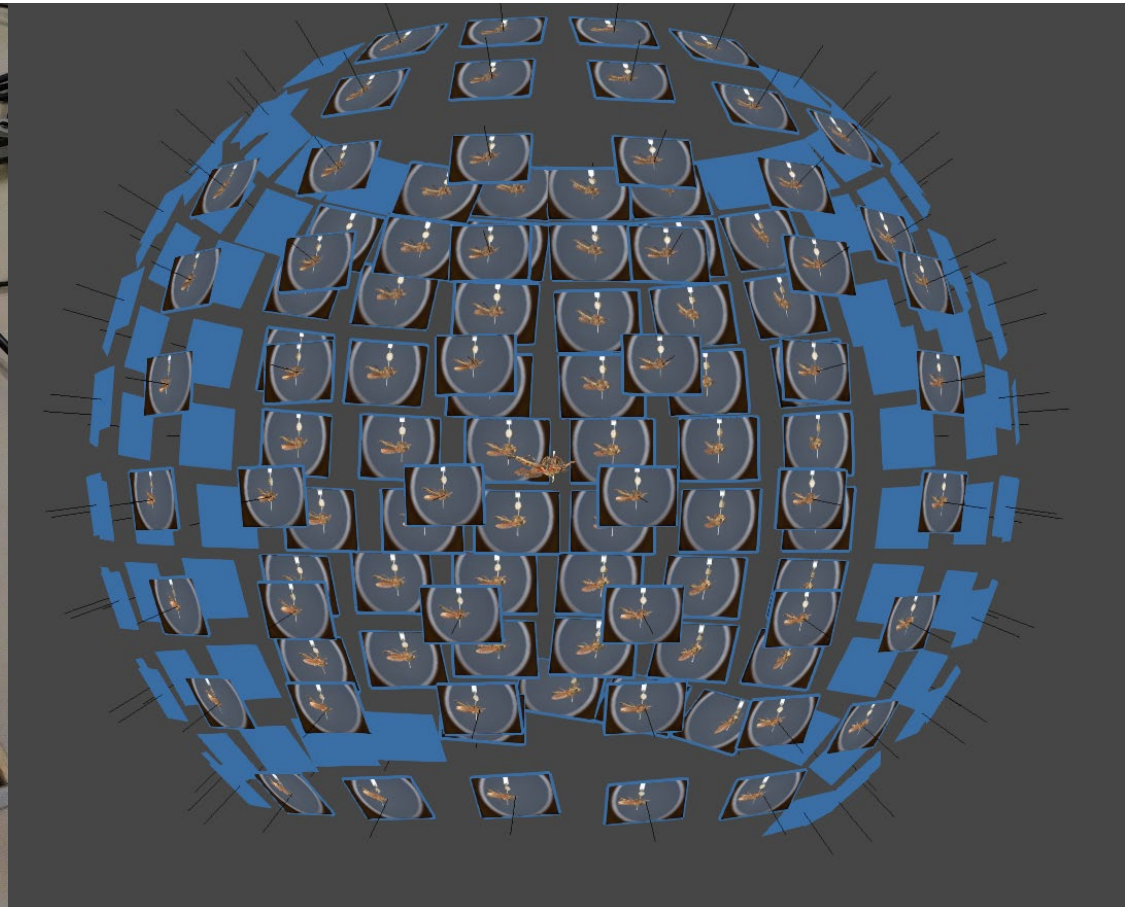
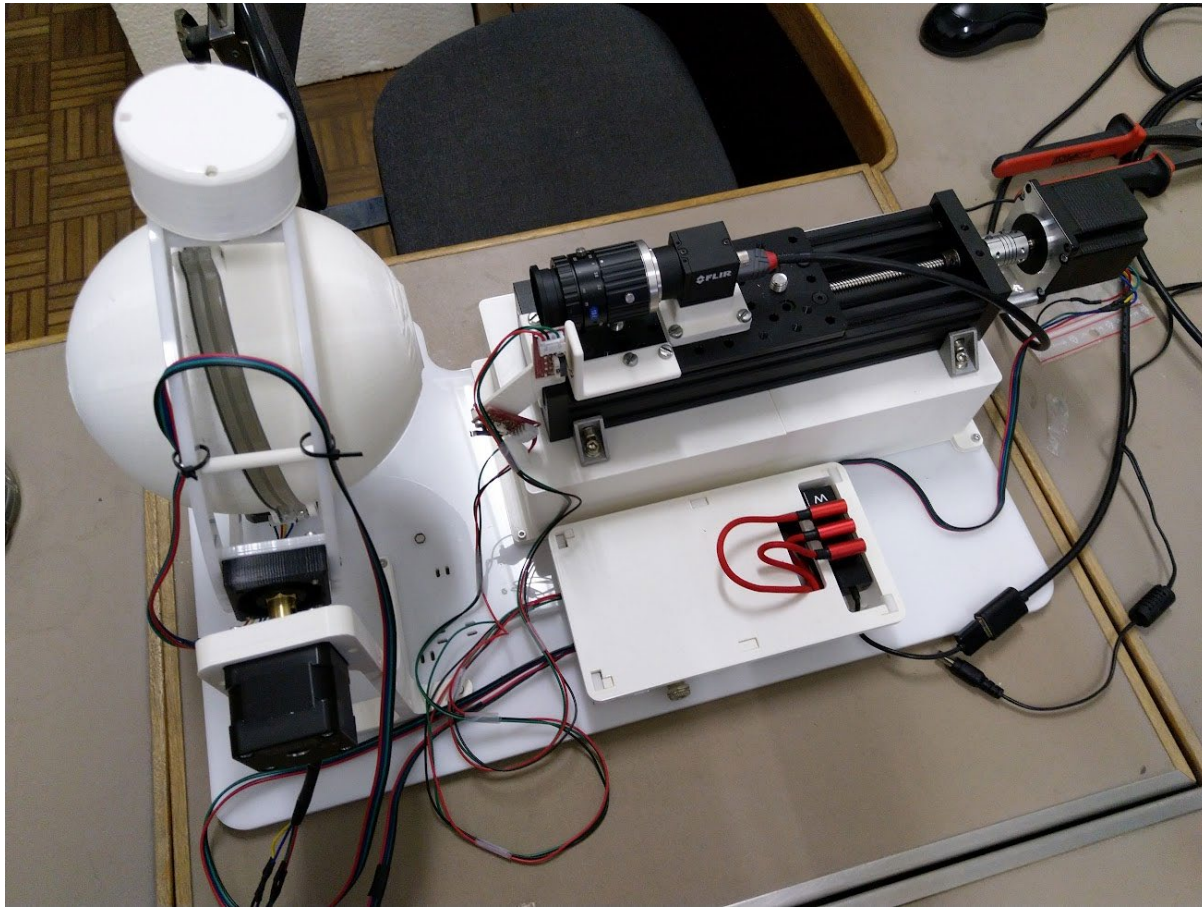
# SPHAEROPTICA + SCANT

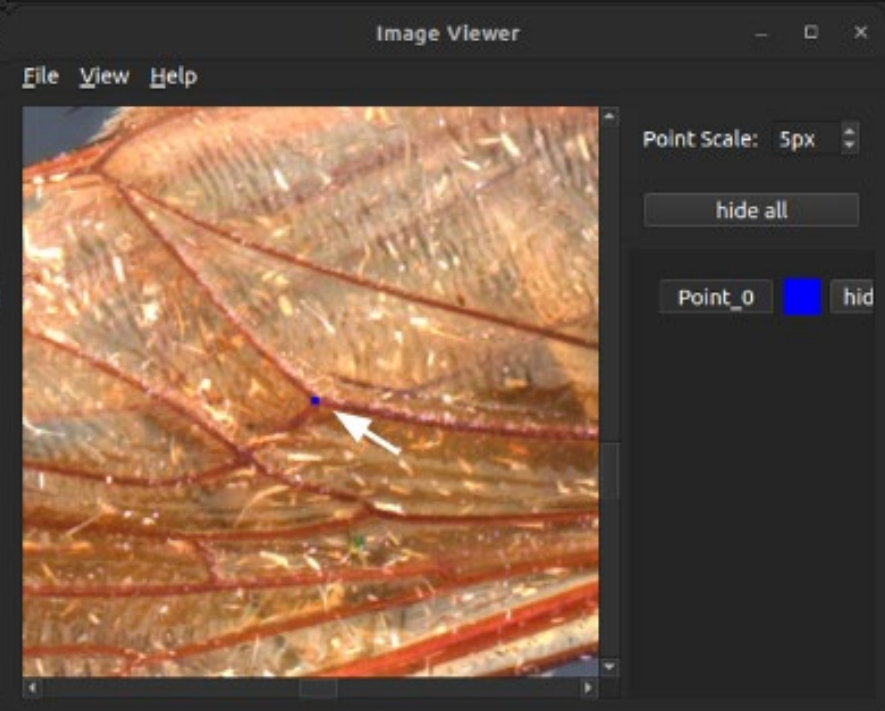
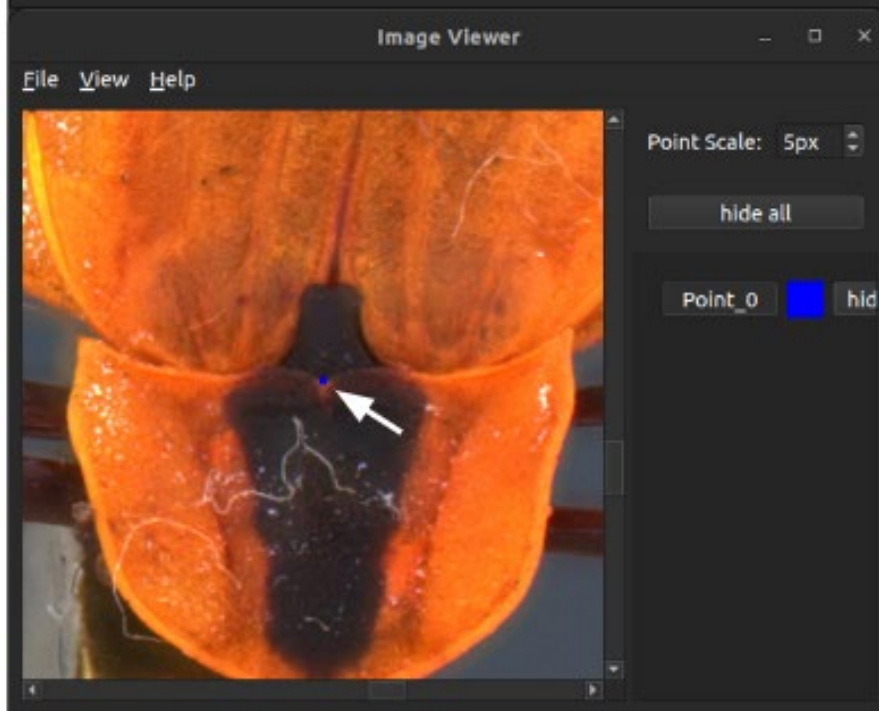
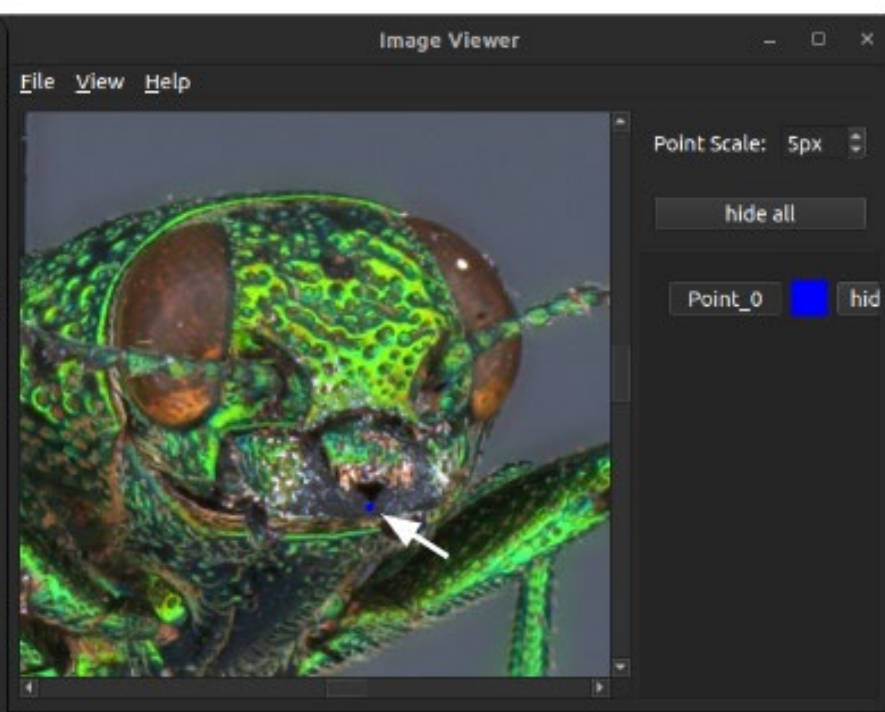
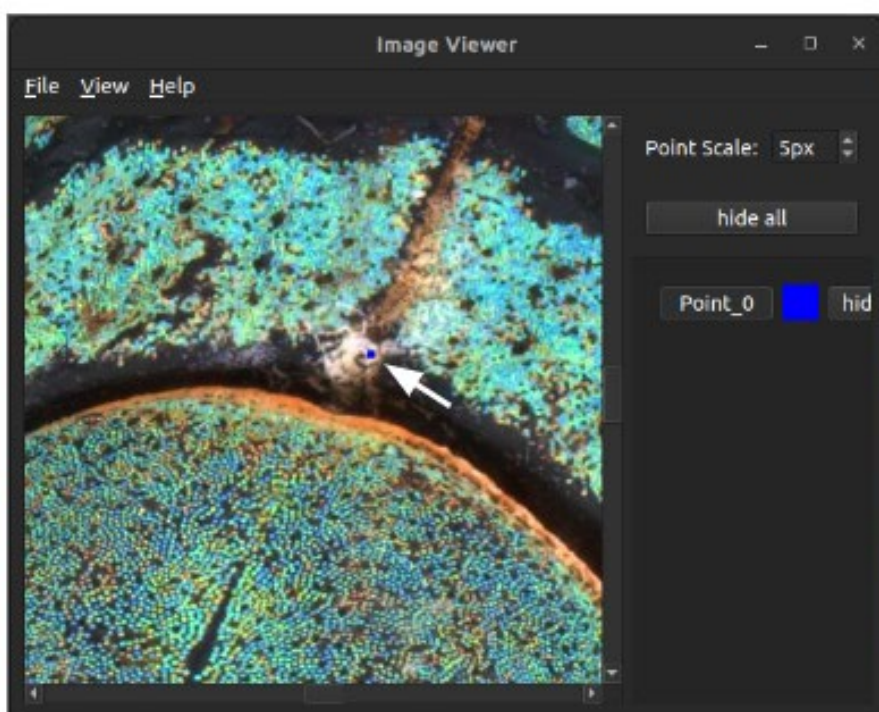
3D measurements on 2D pictures, ideal for transparent structures such as wings or to visualize setae

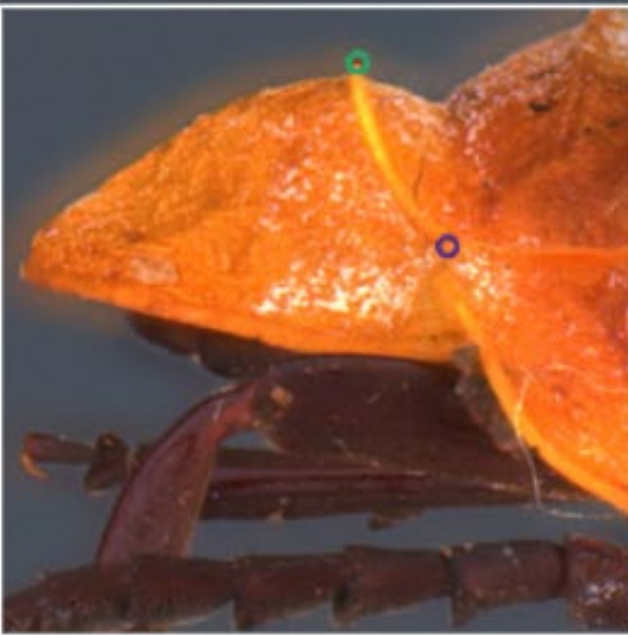
Cost: 1000-3500€  
(depending on camera and SfM software used => futur developpement toward all software open-source)



# SPHAEROPTICA + SCANT







Point Scale: 10px

hide all

Front ■ hide x

Back ■ hide x

L1 ■ hide x

R1 ■ hide x

L2 ■ hide x

R2 ■ hide x



|       |             |   |   |
|-------|-------------|---|---|
| Front | Blue        | ↺ | ✖ |
| Back  | Red         | ↺ | ✖ |
| L1    | Pink        | ↺ | ✖ |
| R1    | Purple      | ↺ | ✖ |
| L2    | Light Green | ↺ | ✖ |
| R2    | Dark Green  | ↺ | ✖ |

Add point

(-133,13)

Reset Factor

Distance : 0.0 MM

Export

# REVIEW OF DIGITIZATION TECHNIQUES

A. 2D+

B. 3D surface scan

**C. 3D of both external and  
internal structure**



# COMPUTED TOMOGRAPHY AND MICRO-COMPUTED TOMOGRAPHY

X-ray based technology

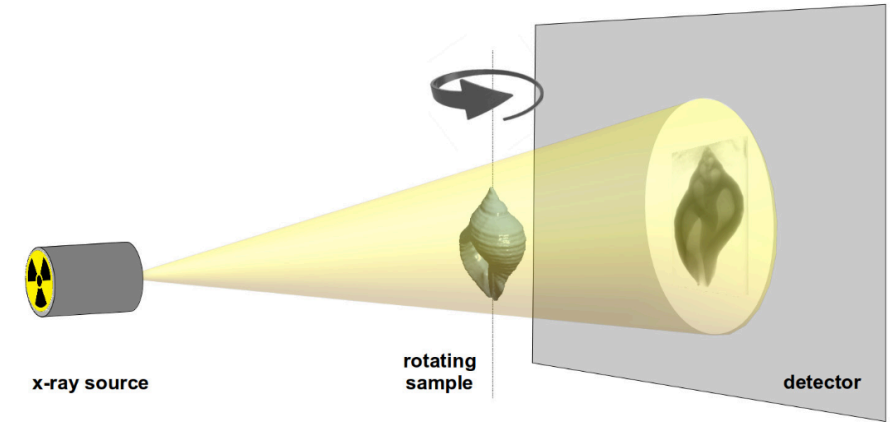


Fig. 1. Schematic overview of the image acquisition process. Image by the Hellenic Centre for Marine Research (HCMR) micro-CT lab.

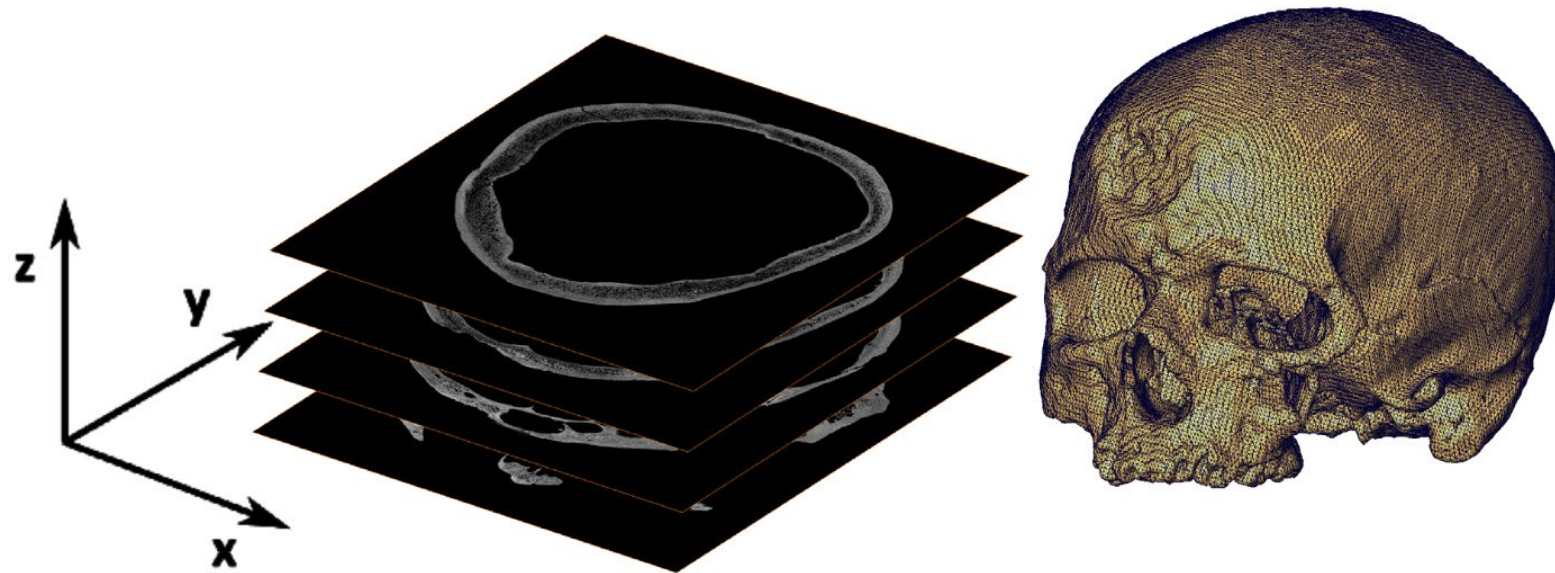


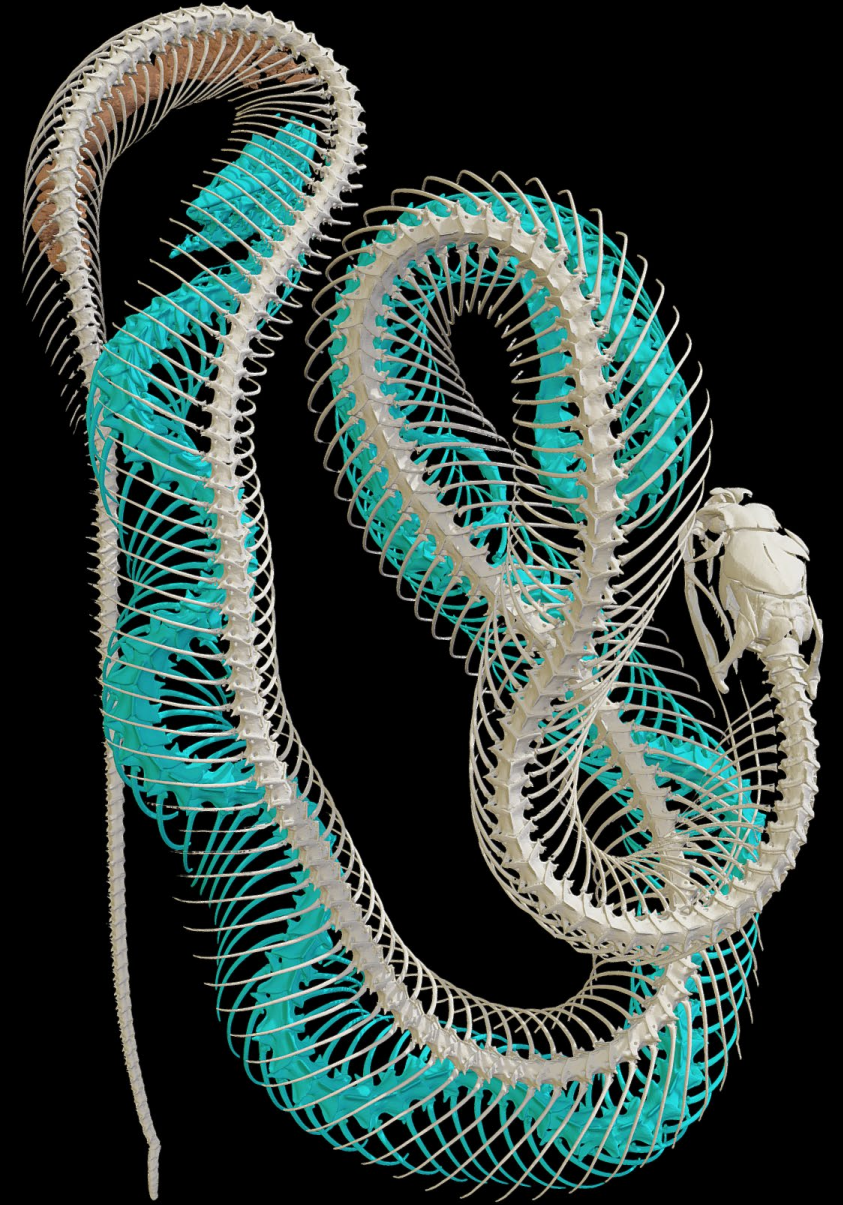
Fig. 6. Data processing from a stack of 2D images to a 3D model. Image by MNHN.

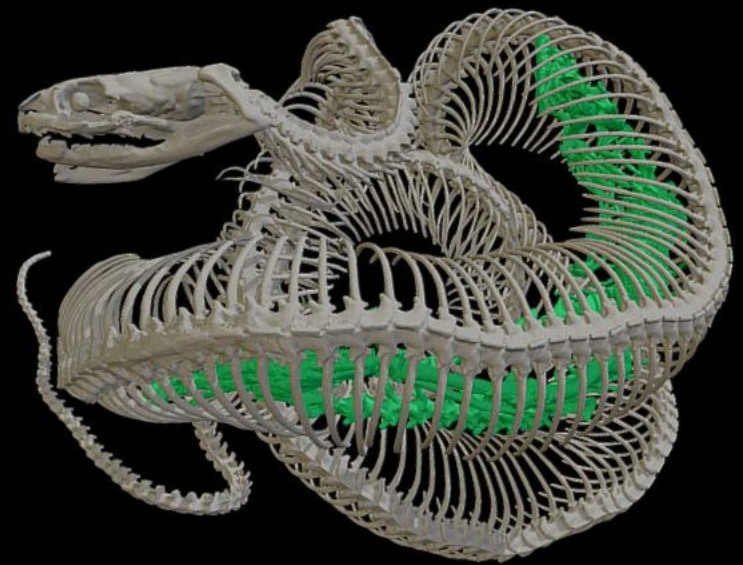
More information:  
Keklikolou *et al.* 2019.  
Micro-computed  
tomography for natural  
history specimens: a  
handbook of best practice  
protocols. *European Journal  
of Taxonomy*

DOI:  
[10.5852/ejt.2019.522](https://doi.org/10.5852/ejt.2019.522)

# MICRO-COMPUTED TOMOGRAPHY

0.5 mm to 20 cm







μCT

# ORTHANC CT 3D view

The screenshot displays the VolView software interface. At the top left, the 'kitware' and 'VolView' logos are visible. Below the logos, there are three tabs: 'DATA', 'ANNOTATIONS', and 'RENDERING'. The 'DATA' tab is active. In the center, there is a list of studies. The first study is 'Head^6\_Rochers (Adult)' with ID '20050210'. Below it, there is a 'Select All' option. A 3D view of a CT scan of a head is shown in a blue frame, with the label '[587]' and 'Rochers 0.6 U70u' below it. At the bottom left, there is a 'Sample Data' dropdown menu. On the right side of the interface, there are icons for file operations: a folder, a document, a window, a bell, and a gear.



Click to open local files.



Drag & drop your DICOM files.



Secure: Your data never leaves your machine.

# ORTHANC CT 3D view



DATA



ANNOTATIONS



RENDERING

[2]

Topogram 0.6 T20s



[729]

SKULL 1.0 H60s VOL



[729]

SKULL 1.0 H30s VOL



A



R



Slice: 257/512  
W/L: 4095.00 / 1023.50



Slice: 257/512  
W/L: 4095.00 / 1023.50



CT AAA



A



Slice: 365/729  
W/L: 4095.00 / 1023.50



# ORTHANC CT 3D view



DATA

ANNOTATIONS

RENDERING

## Measurements

**Ruler (ID = 14)**  
Length: 48.14mm

**Ruler (ID = 15)**  
Length: 139.60mm

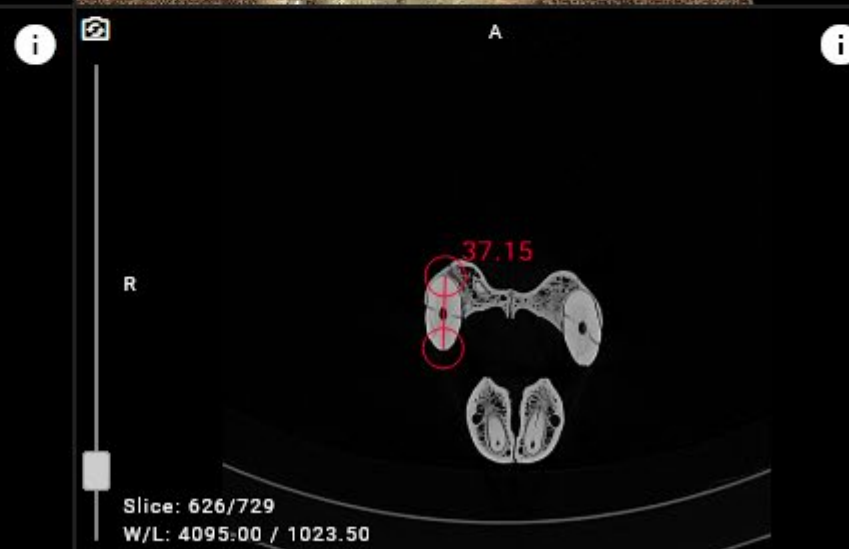
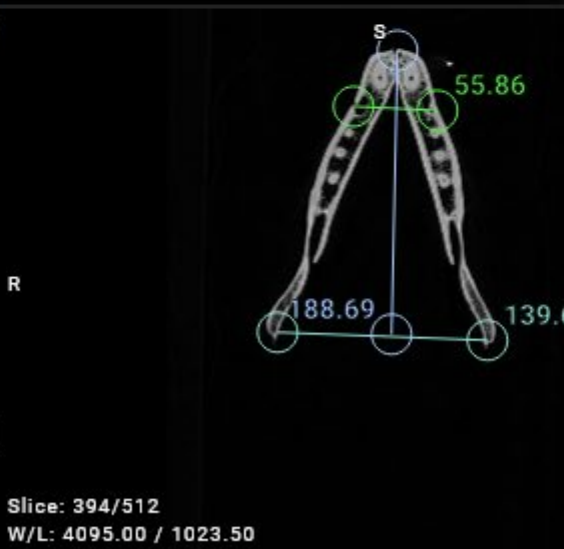
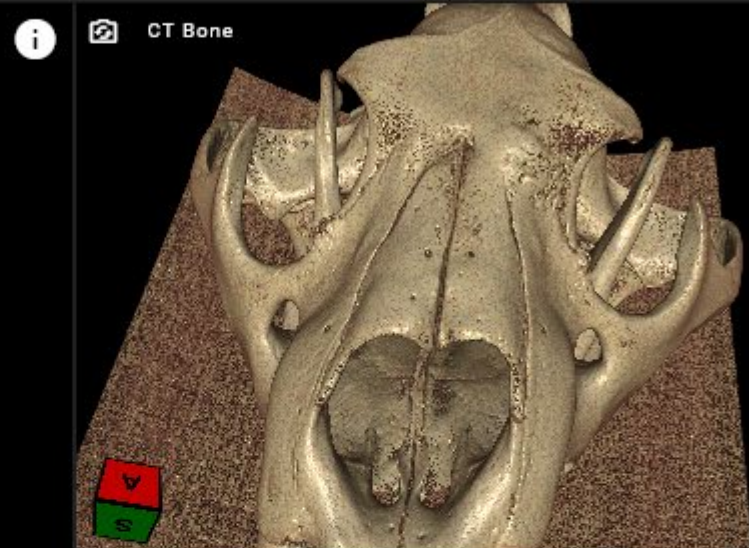
**Ruler (ID = 16)**  
Length: 37.15mm

**Ruler (ID = 17)**  
Length: 55.86mm

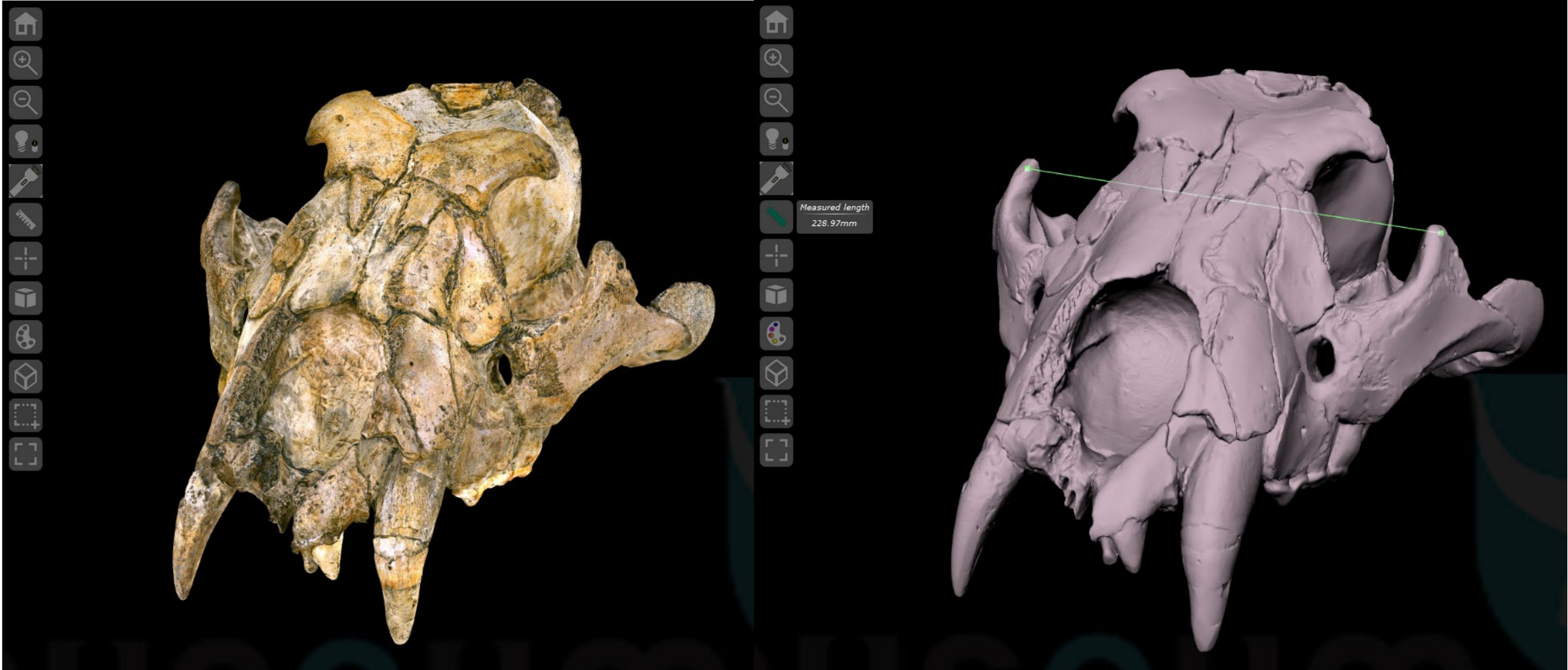
**Ruler (ID = 18)**  
Length: 188.69mm

## Labelmaps

Labelmap (ID = 9)



3DHOP view Panthera leo Texture Xnview (Virtualcollections)





## For more information:

Brecko, J., & Mathys, A. (2020). Handbook of best practice and standards for 2D+ and 3D imaging of natural history collections. *European Journal of Taxonomy*, (623).  
<https://doi.org/10.5852/ejt.2020.623>



European Journal of Taxonomy 623: 1–115  
<https://doi.org/10.5852/ejt.2020.623>



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ISSN 2118-9773

[www.europeanjournaloftaxonomy.eu](http://www.europeanjournaloftaxonomy.eu)  
2020 · Brecko J. & Mathys A.

### Collection management

[urn:lsid:zoobank.org/pub:A2A28A67-9FAE-4710-943E-AF1F7A4F1738](https://zoobank.org/pub:A2A28A67-9FAE-4710-943E-AF1F7A4F1738)

## Handbook of best practice and standards for 2D+ and 3D imaging of natural history collections

Jonathan BRECKO<sup>1,\*</sup> & Aurore MATHYS<sup>2</sup>

<sup>1,2</sup>Royal Belgian Institute of Natural Sciences, Scientific Heritage Service,  
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<sup>1,2</sup>Royal Museum for Central Africa, Biological Collections and Data Management,  
Leuvensesteenweg 13, B-3080 Tervuren, Belgium.

\*Corresponding author: [jbrecko@naturalsciences.be](mailto:jbrecko@naturalsciences.be)

<sup>2</sup>Email: [amathys@naturalsciences.be](mailto:amathys@naturalsciences.be)

<sup>1</sup>[urn:lsid:zoobank.org/author:7AC9797B-88EB-4844-86B9-C88DF7C06B2E](https://zoobank.org/author:7AC9797B-88EB-4844-86B9-C88DF7C06B2E)

<sup>2</sup>[urn:lsid:zoobank.org/author:0C719566-2901-471D-B88E-CE3EBB476172](https://zoobank.org/author:0C719566-2901-471D-B88E-CE3EBB476172)

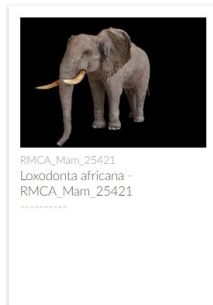
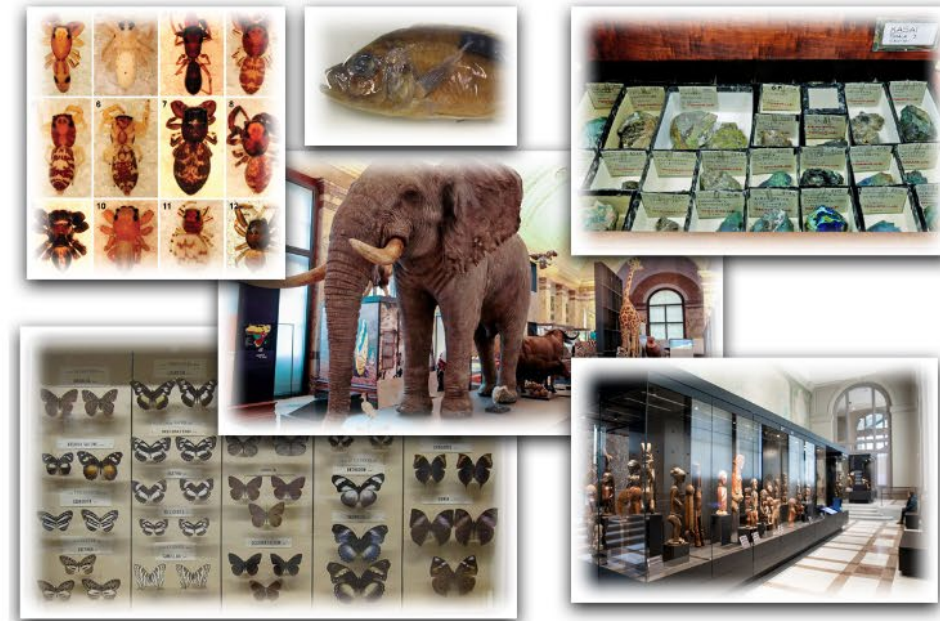
With contributions\* from Bernhard Ströbel, Michael Heethoff, Susan Stephan, Bernhard Schurian, Didier VandenSpiegel and Patrick Semal.

## Valorisation

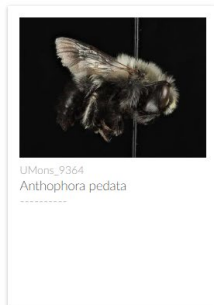


Welcome to Virtual collections!

You can browse through our digital collections and find detailed pictures, 3D models, sounds and videos of our collection items.



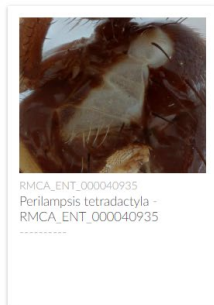
RMCA\_Mam\_25421  
Loxodonta africana -  
RMCA\_Mam\_25421



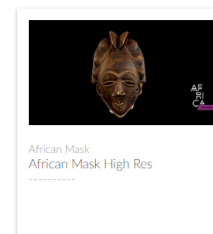
UMons\_9364  
Anthophora pedata



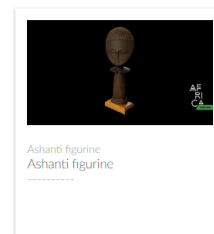
RMCA\_ENT\_000040936  
Capparimya savastani  
RMCA\_ENT\_000040936



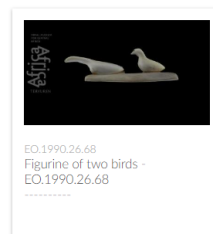
RMCA\_ENT\_000040935  
Perilampsis tetradactyla -  
RMCA\_ENT\_000040935



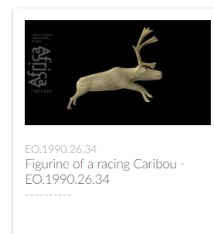
African Mask  
African Mask High Res



Ashanti figurine  
Ashanti figurine



EO.1990.26.68  
Figurine of two birds -  
EO.1990.26.68



EO.1990.26.34  
Figurine of a racing Caribou -  
EO.1990.26.34

FILTER BY

THEME

- Anthropology (171)
- Zoology (17255)

TYPE

- Allotype (417)
- Cotype (14)
- Holotype (1994)
- Lectotype (27)
- Neotype (49)
- Paralectotype (24)
- Paratype (1082)

### OBJECTS ADVANCED SEARCH

Enter your search terms in the fields below.

THEME: Zoology

IDENTIFIER: [ ]

KEYWORD: [ ]

TITLE: [ ]

PHYLUM: [ ] CLASS: [ ] ORDER: [ ] FAMILY: [ ] GENUS: [ ] SPECIES: [ ]

TYPE: - SEX: - LIFE STAGE: [ ]

UUID: [ ] MEDIA TYPE: - Boxes

DATE OF COLLECT RANGE (E.G. 1970-1979): [ ] COUNTRY OF COLLECT: rwanda

Reset

Search

### HELP

This form allows you to carry out an advanced search within our already inventoried collections.

You can search on multiple fields simultaneously. Furthermore, for the title, keywords and dates, it is possible to carry out a search on the basis of incomplete terms using an asterisk (\*).

Example: 'coal' will allow you to retrieve entries containing the term 'coal', 'coalfield', 'coalbox', etc.

On the results page, you can further refine your search using different filters.

Fields are displayed according to the chosen collection. If you want to see all fields, don't choose a collection.

### Description of the different fields

- Theme:** research based on the top-level collection.
- Identifier:** if you know the item's identifier.
- Keyword:** General field where you can enter a term to be searched everywhere.
- Title:** search in the words of the document title. You can write multiple title terms in any order; however, the search engine only considers whole words (no asterisk (\*)).
- Taxonomic fields :** Enter name of the taxon(asterisk (\*) allowed)
- Type:** Choose one of the taxonomic types in the list.
- Sex:** Choose one value in the list.
- Life stage:** Enter a value.
- Object type, Age, Materials, Ethnic group, Instrument family:** Enter a value (an integer for age).
- UUID:** if you know the UUID.
- Media type :** Choose one of the media types.
- Boxes :** Check Boxes if you want to limit your search to complete boxes
- Date of collect:** research based on a year or a range of years. Examples: '1974' (all documents dating from 1974), '1974-1979' (all documents in this range of years), '197\*' (all documents between 1970 and 1979), '19\*\*' (all documents between 1900 and 1999).
- Country of collect :** Enter name of the country (name may depend on the language).

SEARCH: Type: Zoology; Country of collect: rwanda



BE\_RMCA\_VER\_A,57846  
*Collius striatus kiwuensis* Reichenow, 1908  
 BE\_RMCA\_VER\_A,57846



BE\_RMCA\_VER\_A,44253  
*Collius striatus kiwuensis* Reichenow, 1908  
 BE\_RMCA\_VER\_A,44253



BE\_RMCA\_VER\_A,45533  
*Collius striatus kiwuensis* Reichenow, 1908  
 BE\_RMCA\_VER\_A,45533



BE\_RMCA\_VER\_A,45534  
*Collius striatus kiwuensis* Reichenow, 1908  
 BE\_RMCA\_VER\_A,45534



BE\_RMCA\_VER\_A,47858  
*Collius striatus kiwuensis* Reichenow, 1908  
 BE\_RMCA\_VER\_A,47858



BE\_RMCA\_VER\_A,56442  
*Collius striatus kiwuensis* Reichenow, 1908  
 BE\_RMCA\_VER\_A,56442



BE\_RMCA\_VER\_A,65387  
*Collius striatus kiwuensis* Reichenow, 1908  
 BE\_RMCA\_VER\_A,65387



BE\_RMCA\_VER\_A,53560  
*Halcyon senegalensis cyanoleuca* (Vieillot, 1818)  
 BE\_RMCA\_VER\_A,53560



BE\_RMCA\_VER\_A,56438  
*Caprimulgus europaeus unwini* Hume, 1871  
 BE\_RMCA\_VER\_A,56438



BE\_RMCA\_VER\_A,73908  
*Glaucidium perlatum* (Vieillot, 1817) BE\_RMCA\_VER\_A,73908



BE\_RMCA\_VER\_A,57888  
*Caprimulgus fossii welwitschii* Barboza du Bocage, 1867  
 BE\_RMCA\_VER\_A,57888



BE\_RMCA\_VER\_A,44291  
*Caprimulgus fossii welwitschii* Barboza du Bocage, 1867  
 BE\_RMCA\_VER\_A,44291

## FILTER BY

## THEME

Zoology (365)

## PERSON

Mikula O. (in the framework of Synthesys plus project) (17)

medisch Labo Astrida (1)

Aureliaan (Br.) (38)

Bastiaens, L. (4)

Bates, M. (3)

BioCol team (158)

Bozzelli (1)

[and 53 more](#)

## MEDIA

2D (658)

3D (1)

## COLLECTION

Amphibians and Reptiles (4)

Arachnida (2)

Birds (300)

Hymenoptera (2)

[and 3 more](#)

## TYPE

Allotype (8)

Holotype (24)

Paratype (6)

Specimen (139)

syntype (3)

## PHYLUM

Arthropoda (35)

CHORDATA (330)

## CLASS

AMPHIBIA (1)

Arachnida (2)

AVES (300)

Insecta (33)

## 24 RESULTS

SEARCH: Type: Zoology; Country of collect: rwanda TYPE: **HOLOTYPE**

FILTER BY

FAMILY

- Arctidae (1)
- Bethylidae (2)
- Bovidae (2)
- Ctenidae (1)
- Erebidae (1)
- Hyperoliidae (1)
- Muridae (1)

[and 7 more](#)

RMCA, ARA, 66567  
*Ctenus anahitaeformis* - RMCA, ARA, 66567



RMCA, Mam, 87.012-M-0001  
*Sylviotex vulcanorum* RMCA, Mam, 87.012-M-0001



RMCA, Mam, 17146  
*Cephalophus weynsi* RMCA, Mam, 17146



RMCA, Mam, 16588  
*Cephalophus weynsi* RMCA, Mam, 16588



RMCA, Mam, 96.038-M-2270  
*Dactylopsilus wardae* RMCA, Mam, 96.038-M-2270



RMCA, Vert, B.105145  
*Calypso plectus* Laurent, 1950 RMCA, Vert, B.105145



BF, RMCA, INS.Lep.045562  
*Colotis elgonensis basilewskyi* DE, RMCA, INS.Lep.045562



BF, RMCA, INS.Lep.045629  
*Mylothris hilana goma* DE, RMCA, INS.Lep.045629



BF, RMCA, INS.Lep.045733  
*Acraea ventura basilewskyi* Berger, 1956 DE, RMCA, INS.Lep.045733



BF, RMCA, INS.Lep.046094  
*Cynothea colarti wernerii* DE, RMCA, INS.Lep.046094



BF, RMCA, INS.Lep.046185  
*Pseudacraea delandesi rwandensis* DE, RMCA, INS.Lep.046185



BF, RMCA, INS.Lep.046336  
*Euphaedra harpalice dowsetti* DE, RMCA, INS.Lep.046336



BF, RMCA, INS.Lep.046336



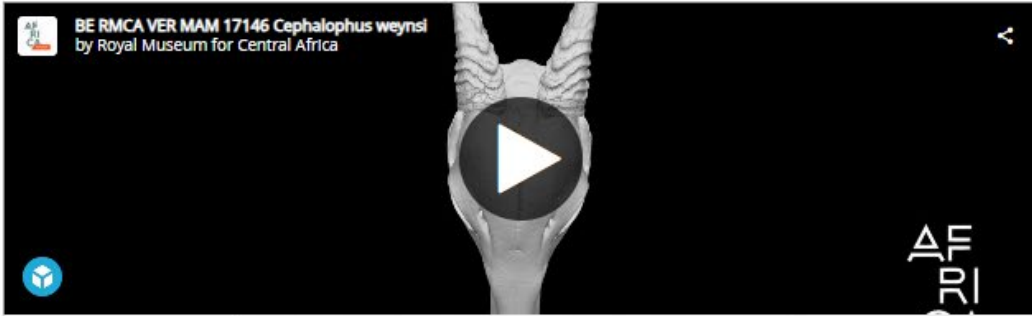
BF, RMCA, INS.Lep.046336



BF, RMCA, INS.Lep.046336



BF, RMCA, INS.Lep.046336



skull view



COMMENTS AND TAGS (0)

#### GENERAL INFORMATION

Mammals  
Cephalophus weynsi RMCA\_Mam\_17146

#### CODE:

RMCA Mam 17146

#### PERMANENT ID:

73ee0743-81fb-474d-8ed8-4ca526d746d4

#### RELATED PEOPLE

Lestrade ()  
Groves & Grubb ()

| LIFE STAGE | SEX  | AMOUNT |
|------------|------|--------|
| undefined  | Male | 1      |

#### TAXONOMY

##### PHYLUM

CHORDATA

##### CLASS

Mammalia

##### GENUS

Cephalophus

##### ORDER

Artiodactyla

##### SPECIES

Cephalophus weynsi

##### FAMILY

Bovidae

##### TYPE

Holotype

#### SAMPLING

| COUNTRY | COORDINATES     | LOCATION DETAILS |
|---------|-----------------|------------------|
| Rwanda  | [-2.6,29.73333] | Astrida          |

#### DATE

1 March 1940





BE RMCA VER MAM 17146 *Cephalopus weynsi*  
by Royal Museum for Central Africa



CEPHALOPUS





[Search](#) [Data management interface](#)

# Cephalopus weynsi

BE\_RMCA\_Vert.M.17146

> [Stable CETAF identifier \(permalink\)](#)

> [Image link](#)

Collection: **/Vertebrates/Mammalogy/**

Specimen number: **BE\_RMCA\_Vert.M.17146**

Taxonomical name: ***Cephalopus weynsi***

Class: ***Mammalia***

Order: ***Artiodactyla***

Family: ***Bovidae***

Begin of collecting period: **1/3/1940**

End of collecting period:

Collectors: **{Lestrade}**

Donator:

History of scientific identifications:

- **1974-xx-xx: *Cephalopus weynsi***

Zoological type: **Holotype**

Specimen count: **1**

Specimen count (males): **1**

Specimen count (females): **0**

Country: **Rwanda**

Locality:

- administrative area:
  - Country: **Rwanda**
  - Municipality: **Astrida**
- other:
  - Natural site: **bos**

Latitude: **-2.6**

Longitude: **29.73333**

[Show/Hide Map](#)

[Search](#) [Data management interface](#)

# Cephalopus weynsi

BE\_RMCA\_Vert.M.17146

> [Stable CETAF identifier \(permalink\)](#)

> [Image link](#)

Collection: **/Vertebrates/Mammalogy/**

Specimen number: **BE\_RMCA\_Vert.M.17146**

Taxonomical name: ***Cephalopus weynsi***

Class: ***Mammalia***

Order: ***Artiodactyla***

Family: ***Bovidae***

Begin of collecting period: **1/3/1940**

End of collecting period:

Collectors: **{Lestrade}**

Donator:

History of scientific identifications:

- **1974-xx-xx: *Cephalopus weynsi***

Zoological type: **Holotype**

Specimen count: **1**

Specimen count (males): **1**

Specimen count (females): **0**

Country: **Rwanda**

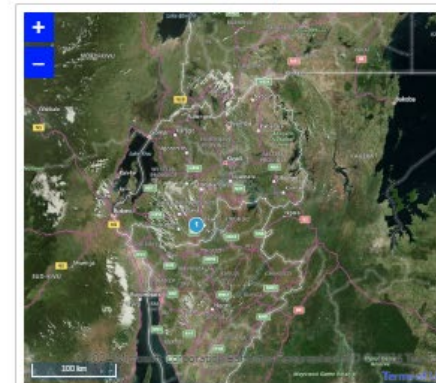
Locality:

- administrative area:
  - Country: **Rwanda**
  - Municipality: **Astrida**
- other:
  - Natural site: **bos**

Latitude: **-2.6**

Longitude: **29.73333**

[Show/Hide Map](#)



# UPLOAD DANS VIRTUALCOL

The screenshot shows the Microsoft Excel interface with the following content in the spreadsheet:

|    | A   | B                      | C | D |
|----|---|------------------------|---|---|
| 1  | 1. Export data from Darwin : pin specimens, save search and create a report with "Tab-delimited (Virtual collections)"  | Open DaRWIN            |   |   |
| 2  |   |                        |   |   |
| 3  | 2. Import file exported from Darwin :   | Get Darwin export file |   |   |
| 4  |   |                        |   |   |
| 5  | 3. Verify data on sheet "temp" (pay attention to Date format MM/DD/YYYY, view and view order). Add description if you have and change media info if you want. |                        |   |   |
| 6  |   |                        |   |   |
| 7  | 4. Save data in a new file for Virtual Collections:   | Save data              |   |   |
| 8  |   |                        |   |   |
| 9  | 5. Send photos to V.C. Server:  | Send photos            |   |   |
| 10 |   |                        |   |   |
| 11 | 6. Import data in V.C.:   | Open Import            |   |   |
| 12 |   |                        |   |   |

## Specimens Search

The Specimens Search dialog box contains the following elements:

- Valid label:** Radio buttons for  true,  false, and  both.
- Boolean Selector:** A dropdown menu currently set to "OR".
- Exact match:** An unchecked checkbox.
- Category Code:** A dropdown menu set to "All" and an adjacent text input field.
- Codes list:** A list of codes: `x RMCA_ARA_212796`, `x RMCA_ARA_212859`, `x RMCA_ARA_228639`, and `x RMCA_ARA_228644`.
- Fuzzy matching : UUID :** An unchecked checkbox.
- Add code:** A blue button with a plus sign.
- Please enter 1 or more characters:** A text input field at the bottom.



# UPLOAD DANS VIRTUALCOL

AutoSave Off Add media from Darwin to VC.xlsm Search Arnaud Henrard AH

File Home Insert Page Layout Formulas Data Review View Help

Clipboard Font Alignment Number Styles Cells Editing Analysis Sensitivity

|    | A   | B               | C           | D                                 | E              | F                                 | H    | J          | K            | L         | M       | N          | O               |                 |
|----|---|-----------------|-------------|-----------------------------------|----------------|-----------------------------------|------|------------|--------------|-----------|---------|------------|-----------------|-----------------|
| 1  | title   | code            | description | filename                          | related_object | media_info                        | view | view_order | phylum       | class     | order   | family     | genus           | species         |
| 3  | Acanthinozodium crateriferum Jocqué & Henrard, 2015 RMCA_ARA_220817 | RMCA_ARA_220817 |             | Acantcrater-220817-HT-M-hab-d.jpg |                | Acantcrater-220817-HT-M-hab-d.jpg |      |            | 1 Arthropoda | Arachnida | Araneae | Zodariidae | Acanthinozodium | Acanthinozodium |
| 4  | Acanthinozodium crateriferum Jocqué & Henrard, 2015 RMCA_ARA_220817 | RMCA_ARA_220817 |             | Acantcrater-220817-M-Palp-p.jpg   |                | Acantcrater-220817-M-Palp-p.jpg   |      | 2          | Arthropoda   | Arachnida | Araneae | Zodariidae | Acanthinozodium | Acanthinozodium |
| 5  | Acanthinozodium crateriferum Jocqué & Henrard, 2015 RMCA_ARA_220817 | RMCA_ARA_220817 |             | Acantcrater-220817-M-Palp-r.jpg   |                | Acantcrater-220817-M-Palp-r.jpg   |      | 3          | Arthropoda   | Arachnida | Araneae | Zodariidae | Acanthinozodium | Acanthinozodium |
| 6  | Acanthinozodium crateriferum Jocqué & Henrard, 2015 RMCA_ARA_220817 | RMCA_ARA_220817 |             | Acantcrater-220817-M-Palp-v.jpg   |                | Acantcrater-220817-M-Palp-v.jpg   |      |            |              |           |         |            |                 |                 |
| 7  | Acanthinozodium crateriferum Jocqué & Henrard, 2015 RMCA_ARA_243548 | RMCA_ARA_243548 |             | Acantcrater-243548-F-hab-d.jpg    |                | Acantcrater-243548-F-hab-d.jpg    |      |            |              |           |         |            |                 |                 |
| 8  | Acanthinozodium crateriferum Jocqué & Henrard, 2015 RMCA_ARA_243548 | RMCA_ARA_243548 |             | Acantcrater-243548-F-hab-l.jpg    |                | Acantcrater-243548-F-hab-l.jpg    |      |            |              |           |         |            |                 |                 |
| 9  | Acanthinozodium crateriferum Jocqué & Henrard, 2015 RMCA_ARA_243548 | RMCA_ARA_243548 |             | Acantcrater-243548-F-hab-v.jpg    |                | Acantcrater-243548-F-hab-v.jpg    |      |            |              |           |         |            |                 |                 |
| 10 | Acanthinozodium crateriferum Jocqué & Henrard, 2015 RMCA_ARA_243548 | RMCA_ARA_243548 |             | Acantcrater-243548-F-epi-v.jpg    |                | Acantcrater-243548-F-epi-v.jpg    |      |            |              |           |         |            |                 |                 |

File Edit View Transfer Server Bookmarks Help

Host: 193.190.223.23 Username: importvc Password: \*\*\*\*\* Port: 22 Quickconnect

Status: Connecting to 193.190.223.23...  
 Status: Using username "importvc":  
 Status: Connected to 193.190.223.23  
 Status: Retrieving directory listing...  
 Status: Listing directory /home/importvc  
 Status: Directory listing of "/home/importvc" successful  
 Status: Retrieving directory listing of "/home/importvc/import"...  
 Status: Listing directory /home/importvc/import  
 Status: Directory listing of "/home/importvc/import" successful

Local site: C:\data\projet Virtual collections\photos\photos papillons\Heterocera\Agaristidae\ Remote site: /home/importvc/import

| Filename        | Filesize  | Filety... | Last modified   |
|-----------------|-----------|-----------|-----------------|
| Agaristidae.xls | 18.432    | Micr...   | 09/21/20 08:24: |
| DSCN9716.JPG    | 1.126.960 | Irfan...  | 06/12/20 10:52: |
| DSCN9715.JPG    | 1.214.835 | Irfan...  | 06/12/20 10:52: |
| DSCN9714.JPG    | 1.164.157 | Irfan...  | 06/12/20 10:52: |

41 files. Total size: 45.233.485 bytes

| Filename     | Filesize        |
|--------------|-----------------|
| DSCN9716.JPG | 1.126.960 bytes |

1 file. Total size: 1.126.960 bytes

Server/Local file Direction Rem

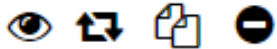
Queued files Failed transfers Successful transfers Queue: empty

# UPLOAD DANS VIRTUALCOL

RESULTS (2/4)

Editing Zoology:

Arachnida > Plexippus minor -  
RMCA\_ARA\_228611  
(RMCA\_ARA\_228611)



Created  
1 year, 7 months ago by  
CollectiveAccess Administrator

## Digitisation

2D

3D

+ Add Digitisation

## URL 3D

`nodels/plexippus-minor-holotype-male-palp-0f9bf245b6d04cbfbf58d0500a3f279e/embed`

Locale English

## Permanent ID

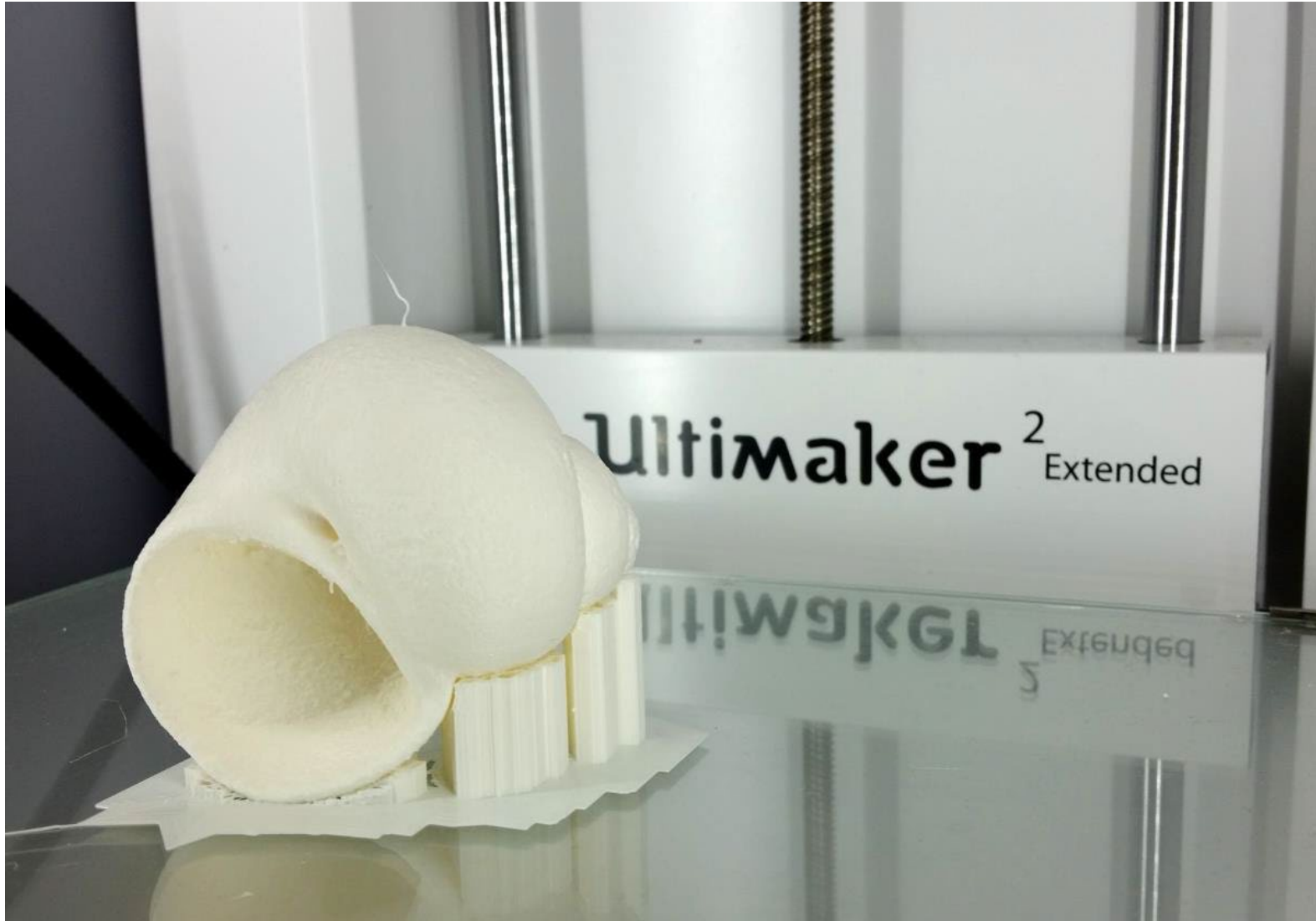
25484435-356a-49dd-8882-bf2706a71d2c

Locale English



3D PRINTING

## 3D printing



**QUESTIONS ?**

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