

Harvard ZEISS Xradia 520 Versa



Carl Zeiss X-ray Microscopy, Inc.

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Executive Summary

| Sample Name | Demo Objectives | Results |
|---|---|--|
| Cryptocellus (MCZ 124839) 3 x 10 x 6 mm | <ul style="list-style-type: none">• To image external and internal anatomy• To image<ul style="list-style-type: none">• leg 3• Head• Abdomen | Imaged the intact sample with 19, 7, 4.3, 1.5 and 1 $\mu\text{m}/\text{vox}$ resolutions at different ROIs. Results show clear images of features of the sample. |

ZEISS Xradia 520 Versa 3D X-ray Microscope

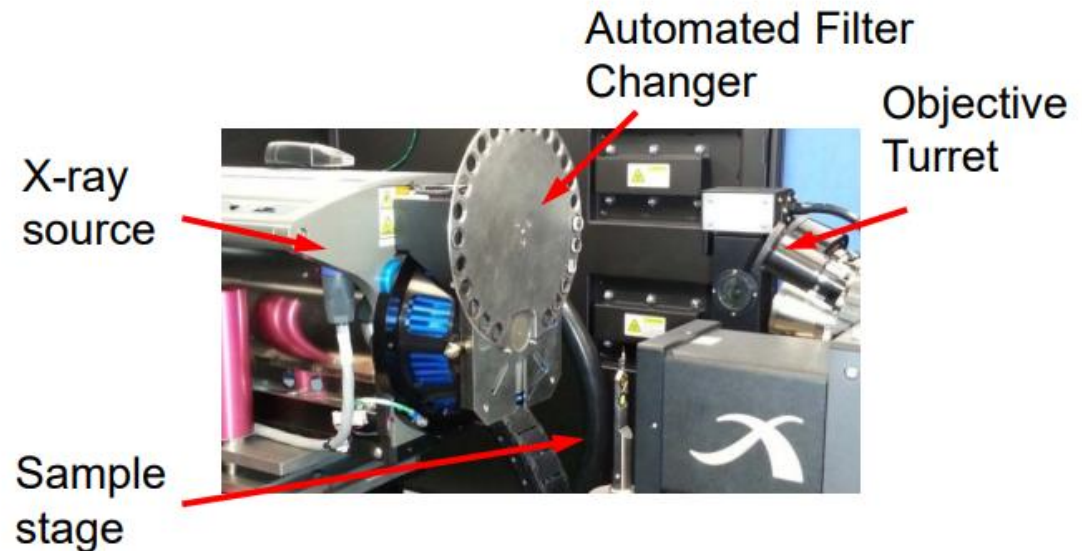


- Ideal solution for environmental analysis and *in situ* experiments
- Highly flexible imaging system
- High resolution imaging for relatively large samples



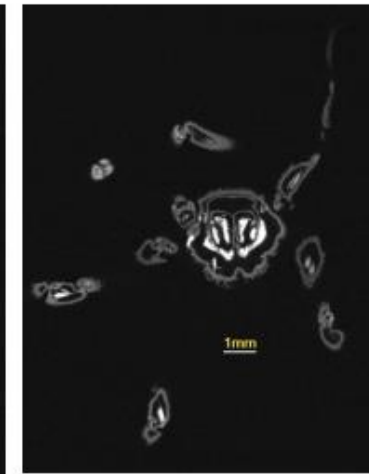
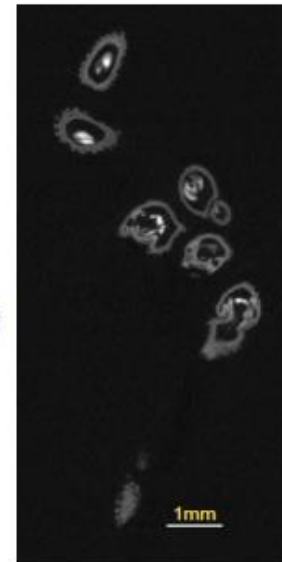
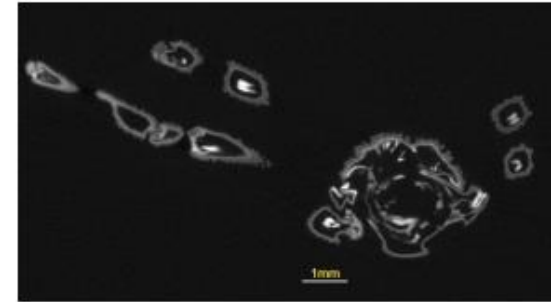
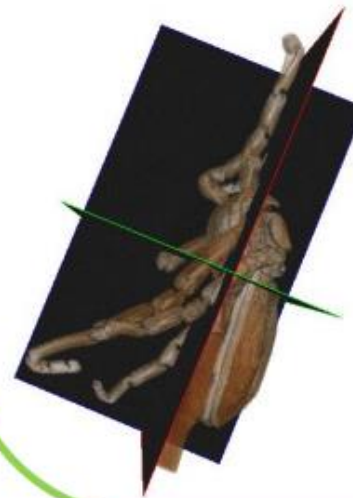
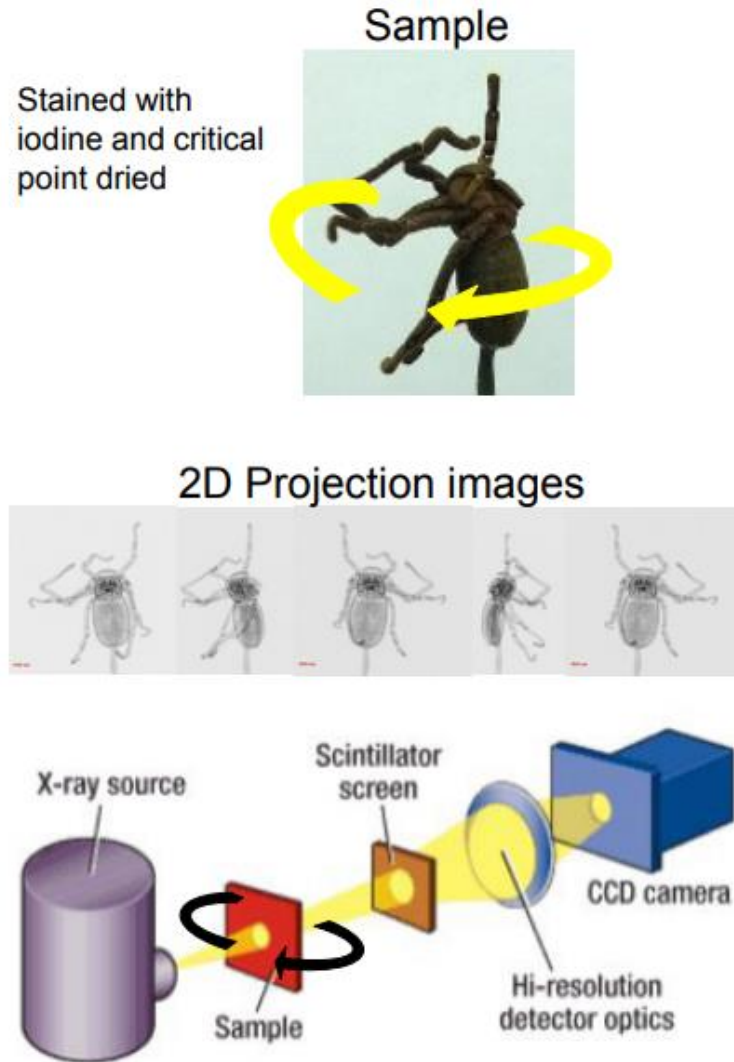
Highlights:

- **Highest resolution**
Across sample sizes
- **High image contrast**
Low to high Z materials
- **Versatility**
Highest res for *in situ*
Short or long scans



3D X-ray Tomography

2D Projection images are collected and backprojected to produce 3D volume

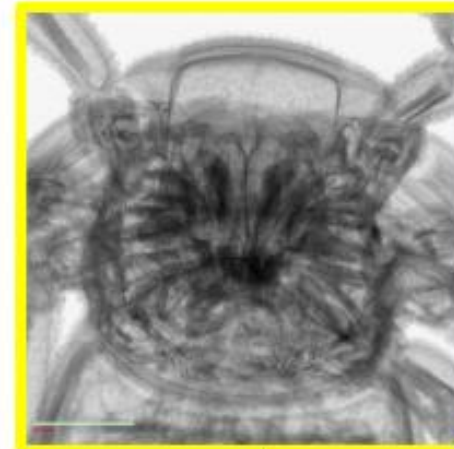
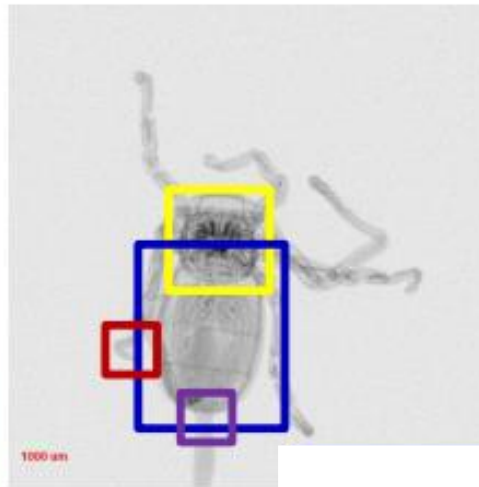


3D Reconstructed Volume

Harvard ZEISS Xradia 520 Versa Cryptocellus Scan Setup



| Scan | Voxel size (μm) | FOV (mm) | Energy/Power (kV/w) | Total scan time (hrs) |
|------|------------------------------|-----------|---------------------|-----------------------|
| Head | 4.3 | 4.3 x 4.3 | 50/4 | 1.25 |



Cryptocellus

Head 4.3 $\mu\text{m}/\text{vox}$ Scan

