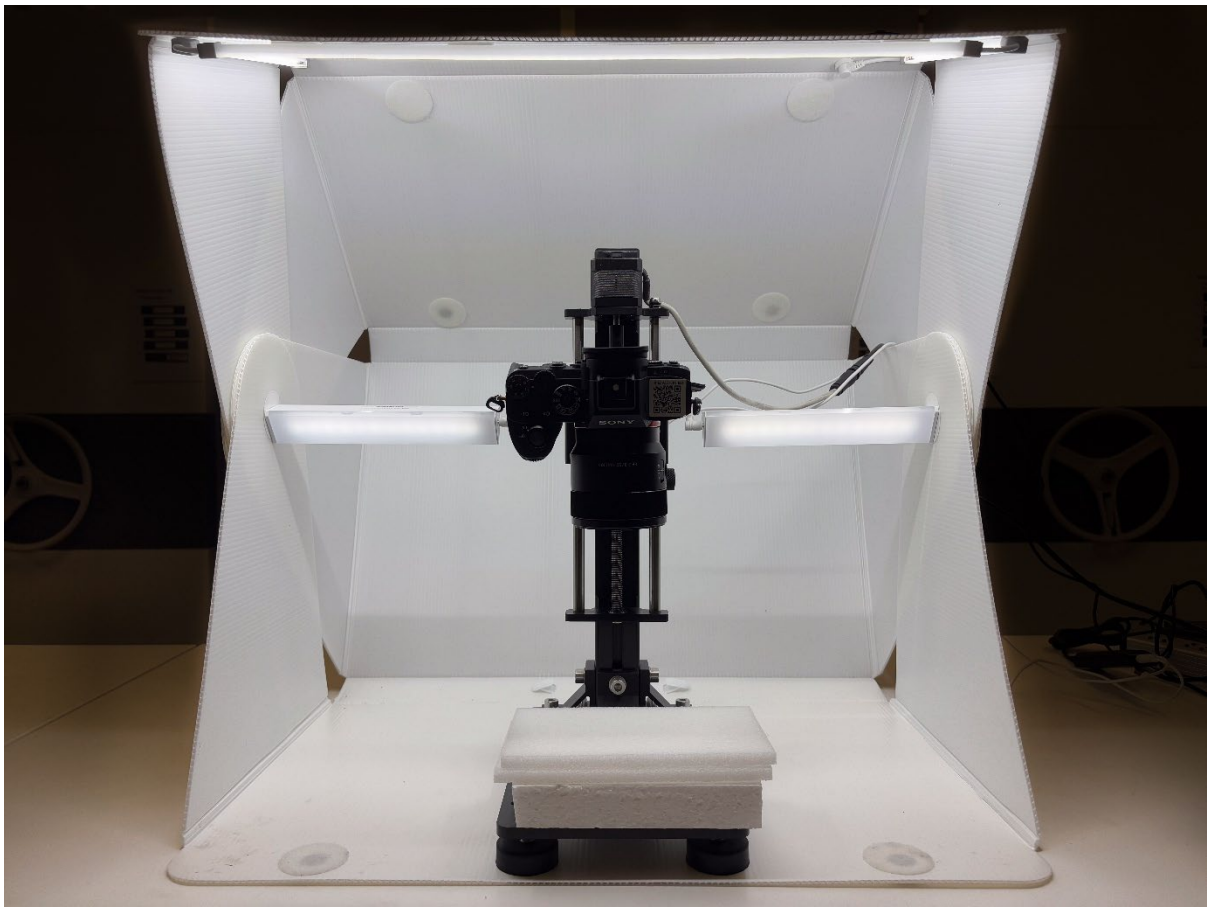
The SIGNIFY method: our setup

How does one image specimens or begin a digitisation project? Here, we share the SIGNIFY method, beginning with our digitisation setup.



Digitisation setup: Camera mounted on WeMacro Vertical Rail, inside a OrangeMonkie Foldio 3 25" Original All-In One Portable Studio (Orangemonkie, Inc, USA) and light bar attachments. (Photograph by SIGNIFY)

An important factor when choosing our equipment is portability. SIGNIFY is a mobile digitisation unit, and therefore, the equipment utilised needs to be lightweight and portable. All the equipment must fit in our luggage when we travel to partner institutions. Over time, we have learned that a highly flexible setup allowing easy assembly and dismantling works best.

Equipment specifications

Our portable workstation (Foldio 3 25" Original All-In One Portable Studio from Orangemonkie, Inc, USA) helps to create a well-lit environment. Within which, we utilise a vertical stand (Wemacro Rail Vertical stand (2.0) from Wemacro Rail, China), acting as the camera mount.

Concurrently, SIGNIFY utilises two different camera bodies:

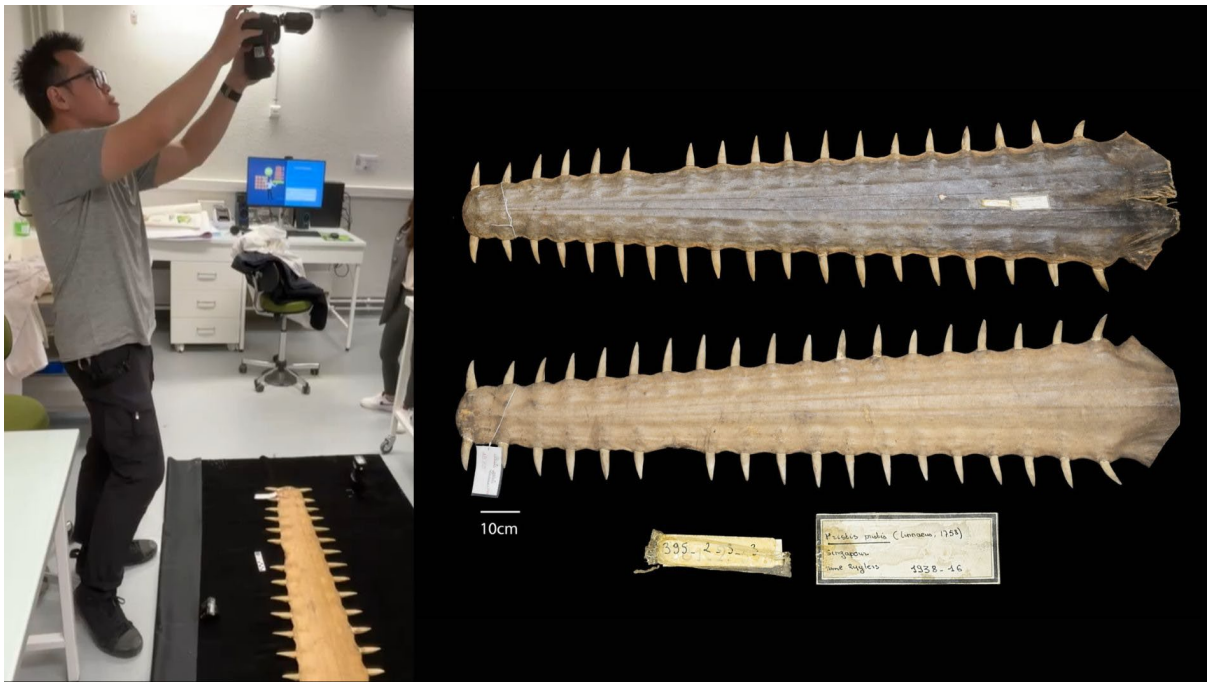
1. Nikon D850 digital single-lens reflex (DSLR) camera (Nikon Corporation, Japan)
    - mounted with Nikon AF-S Micro Nikkor 60mm f/2.8G or 105mm f/2.8 lenses
2. Sony full-frame mirrorless Alpha 7R (α7R) IV 35mm camera
    - mounted with Sony FE 24-50mm f/2.8 standard zoom GTM lens.

Additional equipment includes the Godox TT685II TTL Flash and Godox X2T TTL Wireless Flash Trigger. All images were shot in the native RAW format of the respective cameras (NEF for Nikon; ARW for Sony) to preserve details for downstream editing.

An extracted clip from MediaCorp Channel 8 television series *One Page at a Time* (Episode 23) featuring the SIGNIFY project and the imaging process. (Source: MediaCorp)

This setup has allowed the team to shoot specimens of a wide size range. For larger specimens that are unable to fit within the light box, the camera will be dismounted from the rail and attached to a tripod instead. By utilising flashes together with the camera, we can easily image larger specimens. The ease of switching between the vertical rail and standing tripod has allowed the team to image various specimens quickly and efficiently.

Here, we feature our different setups and the corresponding figure plate outputs:



(Muséum national d'Histoire naturelle, MNHN-IC-1938-0016)

(Oxford Museum of Natural History, ZC-B04349)

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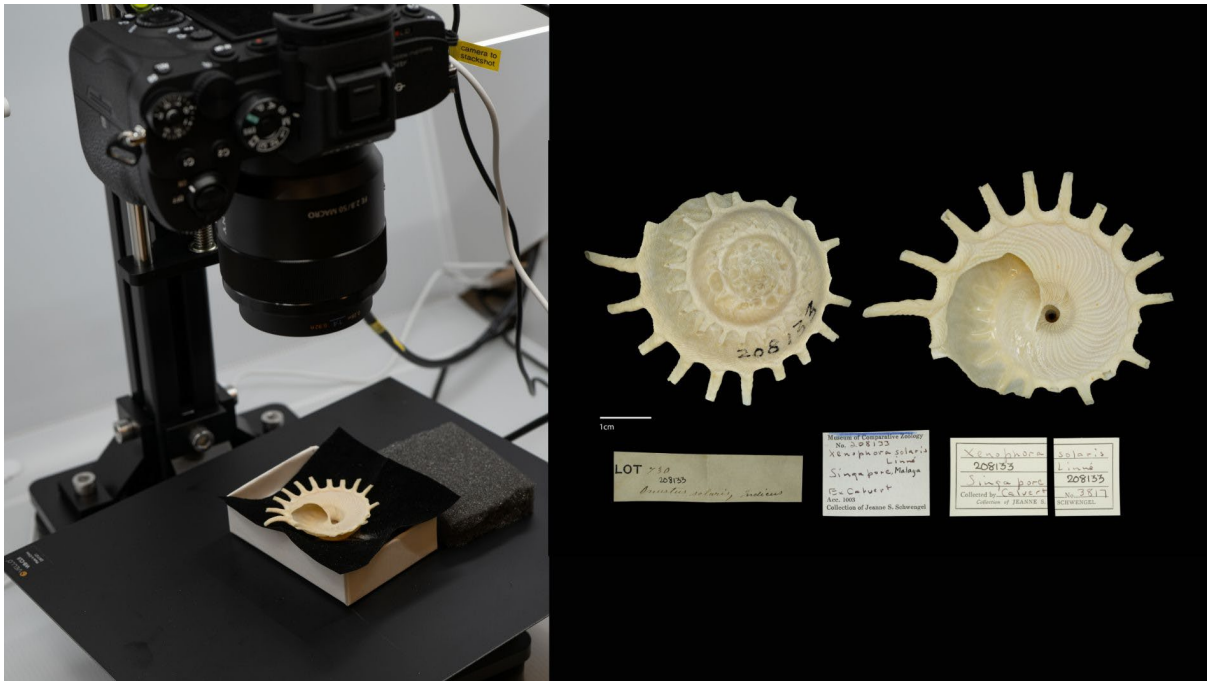
(Museum of Comparative Zoology, Harvard University, MCZ-54235)



(Museum of Comparative Zoology, Harvard University, MCZ208133)

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