

Orbyt Design - 3D Modeling, 3D Printed Jewellery & Sculpture

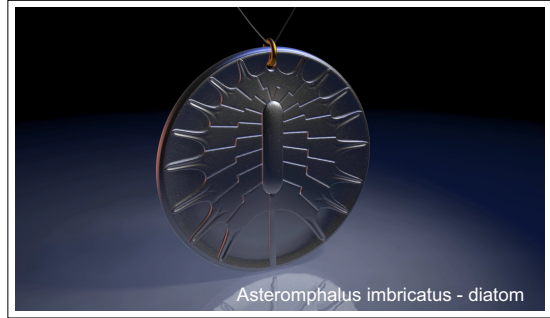
OrbytNZ is my Shapeways shop name - Orbyt Design is the name of my business - the 'NZ' is for New Zealand. Shapeways.com is like facebook for 3D printing, but actually fabricates & delivers real 3D printed products! Visit www.shapeways.com/shops/orbytnz to view examples of my work.

I work as a technician for the Architecture Department at Unitec - a technical institute in Auckland, which is New Zealand's largest & fastest growing city. As part of my job I run a Fabrication Laboratory which includes an ABS plastic 3D printer & a Laser Engraver/Cutter. For decades I've been evolving techniques to 3D model & create natural forms I've always admired.

Having developed 3D modeling skills over the last 25 years I randomly challenge myself to produce 3D models of usually organic forms - microflora & fauna including diatoms & radiolaria. Inspiration is sometimes derived from an online image search, or more often from browsing the plates of Ernst Haeckel's '*Kunstformen der Natur*' (Art Forms of Nature) which was originally published in the early 20th century in Germany. Prof Haeekel was the guy who coined the term 'Ecology' (among other things).

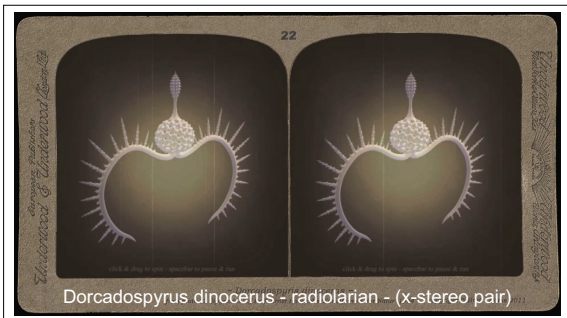


Navicula bulatta - diatom

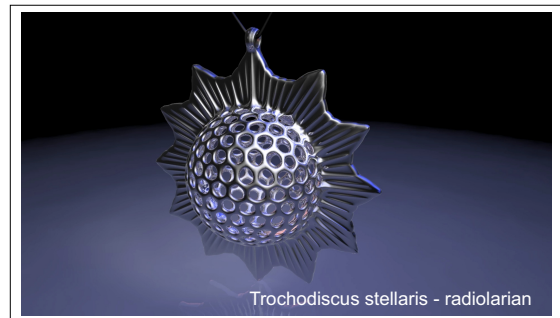


Asteromphalus imbricatus - diatom

The OrbytNZ Shapeways shop includes a number of microscopic organism models - the 3D printable ones. Some of the forms I've modeled have appendages which would be too fragile to practically print & then transport. Take note that the finish quality of the Shapeways.com 3D printing varies noticeably between different materials. The best results are from their expensive solid precious metals which I understand are printed in jewellers wax at very fine resolution, then lost wax cast, hand finished & polished to create very high quality jewellery. Some of the more inexpensive metals are 3D printed using a different process which is then electroplated with semi-precious & precious metals, but the detail in the original file is not as accurately reproduced - especially on the smaller objects with fine but shallow surface detail.

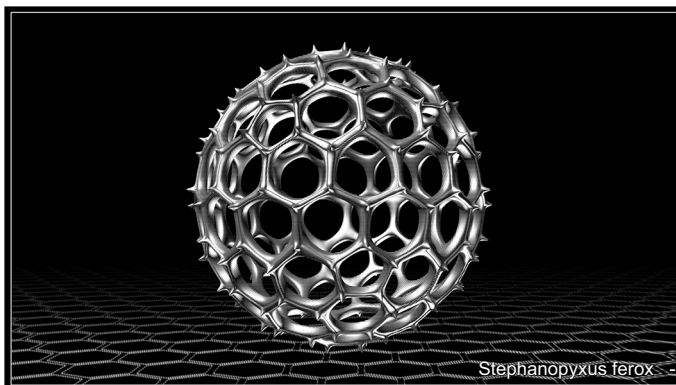


Dorcadospyrus dinoceris - radiolarian - (x-stereo pair)

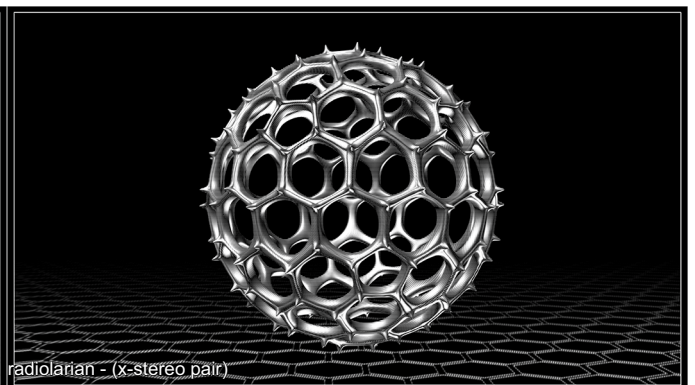


Trochodiscus stellaris - radiolarian

Stereoscopy is also an interest, so combining 3D modeling with stereo rendering is a logical extension of the digital sculpting. Mostly I like to render 'x-stereo pairs' - because they don't require glasses or any other form of 3D viewer. It does however require balanced eyesight (e.g. 20/20) & practice, to cross ones eyes while staring at the pair of images until a third 3D image occurs between the original two (which are transposed left to right - thus the 'x' for cross-eyed) The viewer then focuses on the center image to experience the stereoscopic 3D effect. This is known as 'free-viewing 3D' - & I have a few examples of x-stereo renders made to look like 19th century 'Holmes stereoscope' stereogram slides. www.youtube.com/watch?v=bpTAKcoLCE8. Click *fullscreen* & *HD* to the lower right of the youtube video window to view the best resolution, & stereoscopic depth.



Stephanopyxus ferox -



radiolarian - (x-stereo pair)

The orbytNZ youtube channel has animated HD renders of some of my 3D models - including a number of the radiolaria & diatoms. www.youtube.com/channel/UCeWFSbiCx5q51uP2bGIWmma. Information about the inspiration & the construction method behind each model is included below each youtube clip, & on the OrbytNZ Shapeways shop pages too.

I am available to work on custom 3D design, modeling & animation projects.

You can contact me either through Shapeways messaging or email orbyt@xtra.co.nz