

# Booklyn

Tom Burtonwood

Folium, 2014

**Origin:** Chicago, IL USA

**Medium:** -

**Dimensions:**

**Description:** The second fully 3D-printed book from Tom Burtonwood, produced during his 2014 residency at the Art Institute of Chicago. Signed and numbered limited first edition.

*Folium* is comprised of bas-reliefs with both text and braille descriptions of each page. Each page's relief is paired with a mould verso so that copies of the relief can be made directly from the book's pages.

UPDATE: 09/14/14

3D Printed Book of Bas Relief from The Art Institute of Chicago by Tom Burtonwood.

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Folium was produced at the Art Institute of Chicago between January and August 2014

by Tom Burtonwood as part of his Artist in Residence in the Ryan Education Center. Folium is a 3D Printed Book of Bas Relief from the museums collection spanning over two thousand years of human history. The title Folium is derived from the Latin for leaf and refers to the decorative leaves that allow each page to flex.

Folium features 3D scans produced using Autodesk's 123D Catch and Recap photogrammetry applications. These scans we edited in Netfabb Pro, cleaned up for 3D printing and combined with STL files generated in Autodesk's Tinkercad to create the "pages."

Each of the scans is printed with the positive and negative on the same page, allowing people to use malleable materials to create copies of all the pieces inside Folium. Simply undo the two securing bolts and slide the pages out. Detach from the flexible leaf if you choose. When finished simply reinsert and slide the bolt through and secure with the nut.

Each page is attached to a flexible leaf held in place by two 136mm long bolts and which are secured by two knurled nuts. The nuts and bolts are derived from "Knurled surface finishing library" an openSCAD library by aubenc ( <http://www.thingiverse.com/thing:9095> ) Each "leaf" should be printed in Ninjaflex, PolyFelx or a similar flexible thermoelastic polymer allowing the individual pages to flex and open like a "regular" book might.

Folium is designed with braille translations of the front cover, and the list of works to aid recognition for the low sighted and visually impaired. The braille translations were produced using nischi's openSCAD Braille Writer library ( <http://www.thingiverse.com/thing:36921> ) and jaqtikkun's openSCAD Braille numbers, 1-12 in Nemeth code with number sign ( <http://www.thingiverse.com/thing:274081> )



Folium is available from Thingiverse in addition to Github. Additionally the Tinkercad models have been made available.

Thingiverse: <http://www.thingiverse.com/thing:463657>

Tinkercad Spine: <https://www.tinkercad.com/things/bYiRizB2SV4-folium-12-page-spine>

Tinkercad Leaf: <https://www.tinkercad.com/things/7ZT1JQ5Ywbq-folium-decorative-leaf>

Tinkercad Page: <https://www.tinkercad.com/things/kVbAkJp3SCm-folium-page>

#### List of Works

1. Relief Plaque Depicting the God Horus as a Falcon, Late Period – Ptolemaic Period (664-30 B.C.)
2. Relief Plaque Depicting a Queen or Goddess, Ptolemaic Period (305-30 B.C.)
3. Relief Panel, first century A.D.
4. Buddha's Footprints, India, Andhra Pradesh, second century
5. Stamped Tile with Crouching Ascetics, fifth century
6. Architectural Panel with Parrots, Indonesia, Java, ninth century
7. Coronation Stone of Motecuhzoma II (Stone of the Five Suns), fifteenth century
8. Plaque with Portrait of George Washington, nineteenth century
9. Louis H. Sullivan, Felsenthal, Eli B., Store: Decorative Panel early twentieth century.

"[Folium](#)" is the working title for my next 3D printed book of bas-reliefs from The Art Institute of Chicago. This post is intended as a record of the design and prototyping process. A folium, in book making, refers to a thin leaf or plate – so it seemed like an appropriate title for the project.

I intend to use flexible filament like Ninja Flex or PolyFlex to articulate the pages – and to print the pages at roughly the same aspect ratio as a hard backed book. The goal is to have something that might sit on a shelf with other important tomes, Harry Potter, et al.

Update 06/25/14

New prototype: full size page dimensions 195mm x 130mm with spine, hinge and fasteners. Includes text and braille annotations, both require further optimization.

#### **Institutional Collectors:**

Metropolitan Museum of Art (MET)

Yale University; Robert B. Haas Family Arts Library

University of California at Irvine (UCI)

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