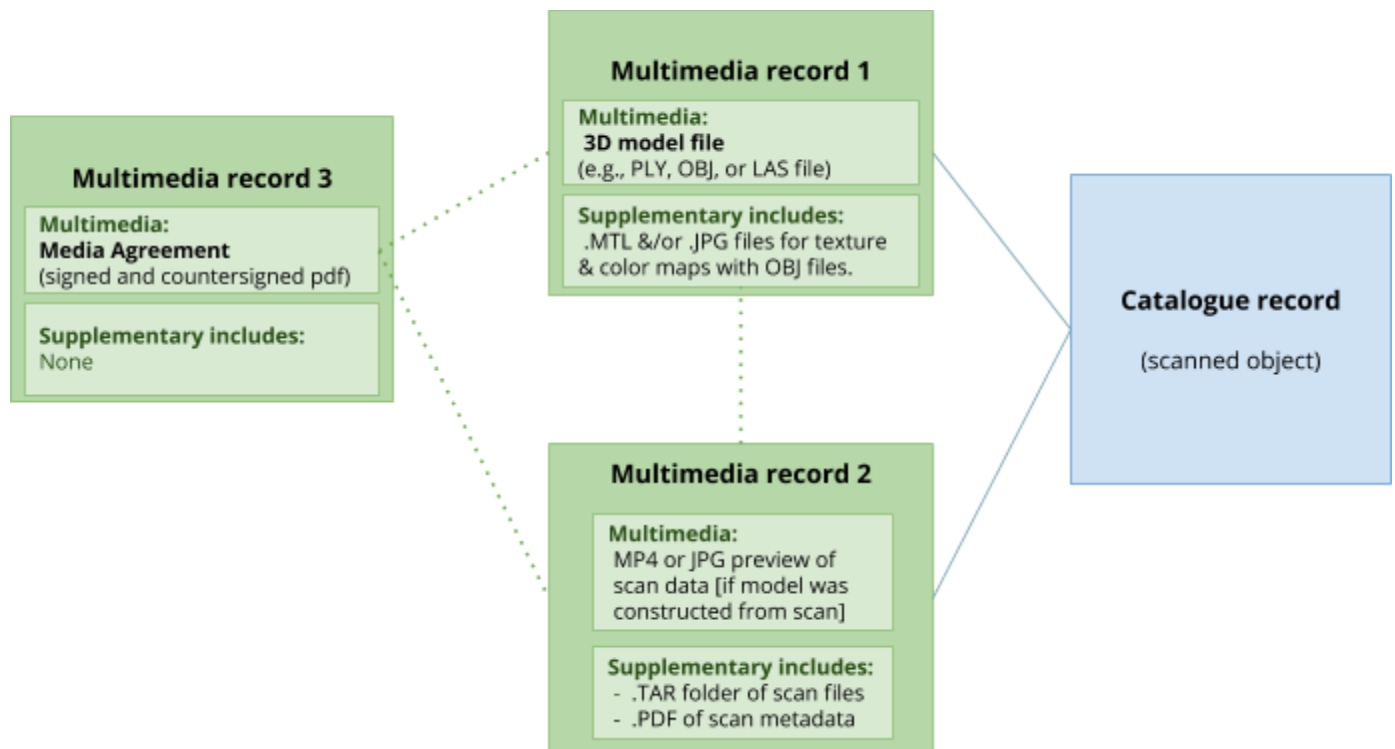


# How to Catalog a 3D Model (PLY or OBJ) in EMu



## Overview:

[I\) When can 3D Models be archived in EMu?](#)

[II\) Make a Multimedia Record for a 3D Model](#)

[Multimedia tab](#)

[Details Tab](#)

[Supplementary Tab](#)

[Associations Tab](#)

[Security Tab](#)

[Save the record.](#)

[III\) Attach Multimedia to the Scanned Object's Catalogue Record](#)

[IIIV\) Upload a public Model to a Field Museum project on MorphoSource](#)

[Specimen record located](#)

[PLY uploaded to MorphoSource](#)

[Document MorphoSource URL in EMu](#)



## I) When can 3D Models be archived in EMu?

A 3D model can be archived in EMu using methods described here if all of the following conditions are met:

- The model represents a Field Museum specimen or object or related data  
(e.g., *environmental reconstruction*)
- The model is owned by the Field Museum -- i.e., its copyright and license are documented.

## II) Make a Multimedia Record for a 3D Model

If the museum has rights to archive a 3D model, set up a Multimedia record for it like so:

### 1. Multimedia tab

On the **Multimedia tab**, fill in these fields:


*(Required)*

**Title** = Brief title, e.g. "[Specimen number or taxon] 3D model"

**Description** = A brief description of the 3D model.

**Creator** = Attach party record(s) for who constructed the model.

**Role** = "Digital Modeler" for creators of the model. Indicate role/s filled by any other creator/s.


Use existing values from the lookup list → 

**Multimedia [big white box]** -- Add the 3D model file (e.g., OBJ, PLY, or LAS file)

*(Optional, but If the scan is of an FMNH specimen/artifact this is required.)*

**Other #** = Any catalogue/inventory/other numbers related to the 3D model.


**Other # Source** = What type of number, e.g., "FMNH Catalogue Number" for specimen #s or "MorphoSource Media No."

- Use existing values from the lookup list → 

Multimedia (2) - Display

File Edit Select View Tools Tabs Multimedia Window Help

PF 15182 - PF 15182 *Lepisosteus bemisi* 3D model. [396.349 MB]. (application/x-unknown). 1704759



Title  
PF 15182 *Lepisosteus bemisi* 3D model

Description  
PF 15182 *Lepisosteus bemisi* 3D model constructed from photogrammetry image set

Resource Information

| Creator                 | Role            |  |
|-------------------------|-----------------|--|
| 1 John R. Wood : U. ... | Digital Modeler |  |

| Other #    | Other # Source       |  |
|------------|----------------------|--|
| 1 PF 15182 | FMNH Catalogue Nu... |  |

MIME Type: application MIME Format: x-unknown

Filename: FMNH\_PF\_15182\_L\_bemisi.obj

Multimedia Details Characteristics Supplementary Associations Objects Exhibit Objects

Display Item 1 of 4 kwebbink Admin emufmnh

## 2. Details Tab

On the **Details tab**, fill in these fields:

**Subject/Keyword** = “3D model”, and any other relevant short tags for the model.

**Date** = Date the model was produced

**Description (of Date)** = “Created” or other value from the lookup list.

**Resource Type** = Image | 3D model

**Rights** = Attach the Rights record for “© The Field Museum CC BY-NC” (Rights irn 46)

- Check first to make sure the museum owns the data.
- To license the data more strictly as “© Field Museum”, use Rights irn 36, but consider the [FMNH collections data norms](#)

**Source** = Collection from which objects were scanned.

Multimedia (2) - Edit

File Edit Select View Tools Tabs Multimedia Window Help

PF 15182 - PF 15182 *Lepisosteus bemisi* 3D model. [396.349 MB]. (application/x-unknown). 1704759

Subject/Keywords

|   |          |
|---|----------|
| 1 | 3D model |
| * |          |

Publisher

Other Contributor(s)

| Contributor | Role |
|-------------|------|
| *           |      |

Relation

Connection Details

| Connection ID | Connection Kind |
|---------------|-----------------|
| *             |                 |

Resource Details

| Date | Description  |
|------|--------------|
| 1    | 24 Jan 2018  |
|      | Date Created |

Source:

Resource Type: Image | 3D model

Language: \*

Coverage

Rights

(c) Field Museum of Natural History - CC BY-NC

Multimedia Details Characteristics Supplementary Associations Objects Exhibit Objects New

Edit Item 1 of 4 kwebbink Admin emufmnh

### 3. Supplementary Tab

On the **Supplementary tab**, add Supplementary files for the 3D model:

For example, OBJ geometry files can be accompanied by MTL and/or JPG files for texture/color mapping.

To upload a supplementary file:

- 1) Click the green plus near the lower-right of the tab.
- 2) Browse to the file, and upload it.
- 3) Save the Multimedia record to complete the upload.

For each supplementary file:

**Usage** = the file's intended/allowed uses. (e.g., "Research" and "Archival")

**Notes** = Further explanation on the file's purpose, requirements, or how to use it.

Multimedia (1) - Display

File Edit Select View Tools Tabs Multimedia Window Help

PF 15182 - PF 15182 Lepisosteus bemisi 3D model. [396.349 MB]. (application/x-unknown). 1704759

Supplementary Attributes

Identifier: FMNH\_PF\_15182\_L\_bemisi.mtl

Width (pixels): Height (pixels):

MIME Type: application MIME Format: x-unknown

File Size (bytes): 388

MD5 Checksum: b7594dc7aca8ea15812fc08953d41d6f

Supplementary Attributes

Usage: 1 Research 2 Archival

Notes: Material and texture map file associated with the main OBJ 3d model file, and containing references to JPG files for coloration.

Supplementary

| Identifier             | Usage        | MIME Type   | MIME Format | Width (pixels) | Height (pixels) | File Size (bytes) |
|------------------------|--------------|-------------|-------------|----------------|-----------------|-------------------|
| 1 FMNH_PF_15182_L_b... | Research,... | application | x-unknown   |                |                 | 388               |
| 2 FMNH_PF_15182_L_b... | Research,... | image       | jpeg        | 4096           | 4096            | 1660562           |
| 3 FMNH_PF_15182_L_b... | Research,... | image       | jpeg        | 4096           | 4096            | 2190978           |

Multimedia Details Characteristics Supplementary Associations Objects Exhibit Objects

Display Item 21 of 21 kwebbink Admin emufmnh

## 4. Associations Tab

On the **Associations** tab:

Attach related Multimedia records if any exist, e.g.:

In the “**Parent Media**” field, attach:

- Raw data used in the construction of this 3D model  
(e.g., CT or LIDAR scan dataset, or Photogrammetry image set)
  - [How to catalog CT Scans in EMu](#)
- Images derived from this 3D model should have this record as their “Parent Media.” They will then display in the “Child Media” field.

In the “**Related Media**” table, add:

- URL for published model hosted in an external repository (e.g., MorphoSource)
- Alternate versions of this Model
- Media Agreement (pdf)

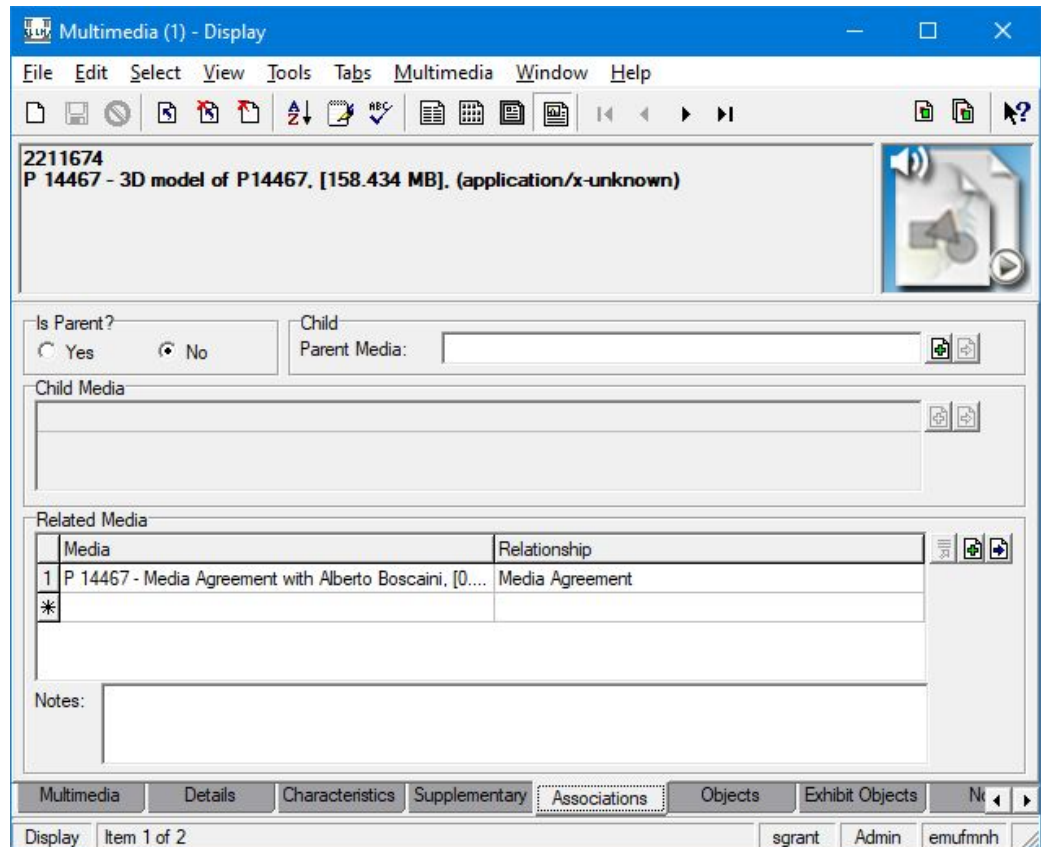
**Media** = Attach the related Multimedia record here

**Relationship** = What is the related media relative to this record? (e.g., Published URL, Media Agreement)

The screenshot shows the 'Multimedia (2) - Edit' window with the 'Associations' tab selected. The window title bar includes standard OS controls and the text 'Multimedia (2) - Edit'. The menu bar contains 'File', 'Edit', 'Select', 'View', 'Tools', 'Tabs', 'Multimedia', 'Window', and 'Help'. The toolbar has various icons for file operations and navigation. The main content area is divided into several sections:

- Parent Media:** A text field containing 'PF 15182 - PF 15182 Lepisosteus bemisi 3D model. [396.349 MB]. (application/x-unknown).' and a file icon button.
- Child Media:** A large empty text area with a file icon button.
- Related Media:** A table with two columns: 'Media' and 'Relationship'. It contains one row with the value 'PF 15182 URL for Lepisosteus...' and the relationship 'Published URL'. There is a plus icon button to the right of the table.
- Notes:** A large empty text area.

At the bottom, there is a tabbed interface with 'Multimedia' selected, and other tabs for 'Details', 'Characteristics', 'Supplementary', 'Associations', 'Objects', and 'Exhibit Objects'. The status bar at the very bottom shows 'Edit', 'Item 1 of 1', and user roles 'kwebbink', 'Admin', and 'emufmnh'.



## 5. Security Tab

On the **Security tab**, fill in these fields:

**Publish on Internet** = Yes (if ready/licensed to publish)

- **Check first to make sure the data is not embargoed.**

**Department** = [Name of Your Department]

## 6. Save the record.



### III) Attach Multimedia to the Scanned Object's Catalogue Record

### IIIV) Upload a public Model to a Field Museum project on MorphoSource

On MorphoSource.org:

#### 1) Specimen record located

- a) Cross-check OccurrenceID (UUID)
- b) Attached to relevant Main Field Museum Project
- c) Ownership of specimen record assigned to Field Museum Project

#### 2) PLY uploaded to MorphoSource

- a) Attach to specimen record
- b) Include/check citation text

#### 3) Document MorphoSource URL in EMu

- a) Set up a Multimedia record for the MorphoSource URL following these steps:  
<https://docs.google.com/document/d/18HEldcllrJTtFRa-sUOzKzuF6NJZ2m3Qpl7BCb3Vp3l/edit#heading=h.wlc5apvjsw76>
- b) Add the MorphoSource ark ID to the PLY Multimedia GUIDs