

# EMu Bibliography Module Rework Proposal

Presented by Smithsonian NMNH Informatics

## Background

Many users have been frustrated with the EMu Bibliography module as implemented for a very long time. NMNH has mocked up a reworked version of Bibliography. We focused on designing a tool based on defining what our needs were, consulting library and archives staff for current best practices, and building upwards, rather than focusing on current limits and constraints of EMu.

### Questions posed to our users: *What do you want Bibliography to do?*

- What are the pieces of information you need to get your job done and meet the needs of your department?
- In what ways do you need to extract or report on this information? Do you have a need to extract it in specific formats?
- In what ways would you like to be able to search this information?

The responses from users included focus on time and ease of getting data in and out of Bibliography, both hand entering and structuring imports and reports.

We met with Libraries staff to review current bibliographical best practices and workflows. As an example, the SI Libraries' Research.si.edu portal contains a relatively simple bibliographic submission page, with a limited number of reference types and fields to correspond to them, in a relatively flat structure.

The screenshot shows the 'Journal Article Data Entry' form on the Smithsonian Libraries website. The header includes the Smithsonian Libraries logo and navigation links for Home and Contact Us. A search bar is located at the top right. The left sidebar contains a menu with links to About, Bibliography Guidelines, Instructions for Submitting Data, Contribute Data (Smithsonian Staff Only), FAQ, Search Research Publications, Reports, Statistics, Departmental Coordinators, Report Errors, Smithsonian Digital Repository, and Home. The main content area is titled 'Smithsonian Research Bibliography - Journal Article Entry Form' and includes a sub-header 'Please enter the information requested below.' The form fields are: Primary Author (with a placeholder 'Enter: Lastname, Firstname'), Add more authors (a link to add additional authors), Journal Title, Article Title (with a note about italicized terms), Volume, Issue, First page - Last page, DOI (if known), URL (if known), and Publication Year. A checkbox at the bottom indicates 'This item is peer-reviewed.'

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Journal Article Data Entry

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### Smithsonian Research Bibliography - Journal Article Entry Form

Please enter the information requested below.

Primary Author:  Enter: Lastname, Firstname

[Add more authors](#) (Click to added additional authors)

Journal Title:

Article Title:

For *italicized* terms (scientific names, latin or foreign words), please use ^ at the beginning and end of the word/phrase.

Volume:

Issue:

First page:  - Last page:

DOI (if known):

URL (if known):

Publication Year:

☐ This item is peer-reviewed.

Based on user feedback and conversations with librarian colleagues, we are proposing to use the Bibliography module in a very different way. The new focus is designing bibliography to act only as a placeholder reference, so we do not need the same amount of detail as a dedicated bibliography resource. ***EMu would not be maintaining the authority record of the reference, but just needs enough data to act as a pointer and generate the necessary info to reach the authority record.***

We want Bibliography to be easier to use, so that users will be more willing to enter bibliographic data into EMu. In order to achieve that we are looking at alternative data models.

## A Fresh Approach

- Moving from a nested to a flat model
  - Simplifies data entry, imports, exports, and reporting.
- Tab switching based on the most common types of publications:
  - Journal Article
  - Book
  - Chapter
  - Citations of any of the above
  - Miscellaneous (all other types)
- Changing the publication types to lookup lists instead of parent/child attachments; journal and article would be two fields in one record.
  - All bibliographic data can be recorded within one record, no need to create nesting parents and children.
  - Record is created for the lowest level of detail needed.
- Fields that align with RIS format fields for streamlined importing and exporting between EMu and external programs such as EndNote or Reference Manager.
- Tools for easy export to XML

## Wider EMu Community Buy-In

NMNH Informatics first presented this idea to the wider EMu community at the 2016 User group, with positive feedback. The proposal was tweaked slightly with feedback, and discussed with users at other EMu institutions at the 2017 User group, including representatives of Yale Peabody, Field, National Museum of Health and Medicine, the LA County Natural History Museum, and Carnegie Museum of Art, who would agree to the proposed changes being included in the base EMu client.

## New Structure

The tab switching would be controlled by the existing *BibRecordType* field, based on the values “Article”, “Book”, “Chapter”, “Citation” and “Misc”.

All fields in these new tabs would map to the same back end columns, even though the displayed labels are different. Tab switching and the registry can display and hide applicable tabs as needed. This flattens the data structure somewhat, and will make it easier to report for values across bibliographic types. For example, reporting on the BibTitle field would return Title data for books, articles, and any Misc type resources, instead of having to report on each of those fields individually as in the current module.

As much as possible, we want these common fields to line up. In the case of titles, the lack of hierarchy may cause confusion with the level of title, so users need to be consistent and aware when querying and reporting:

- Book title and Journal title map to the same location
- Chapter, Article, Resource title and Title (Miscellaneous tab) map to the same location
- In search mode, an Also Search function can be put in place to search across both backend title fields

The new tabs were created based on a list from a survey of NMNH Bibliography users on their important and desired fields:

- Article Title
- Journal Title, full and abbreviated
- Author(s)
- Editor(s)
- Publication Date
- Publication City
- Series
- Volume
- Number
- Range of pages
- Plates and Figures
- Publisher (books)
- DOI linked field
- URL linked field
- ZooBank literature LSID

Most of the fields in bibliography are common across the various reference types and could be combined into unified back end fields (*ArtAuthors\_tab*, *JouAuthors\_tab*, *BooAuthors\_tab* combined into *BibAuthors\_tab* for example). The remaining reference type-specific fields could then be consolidated on a single tab, eliminating the hierarchical structure.

While self referencing to the Bibliography module would be eliminated, all other reference fields to other modules, in particular to Parties, would be retained.

As mentioned previously, this model treats the data in EMu Bibliography primarily as a finding aid. DOIs serve as an industry standard for quickly navigating to the authority source for a particular bibliographic resource. EMu's GUID grid can store DOIs and other resolvable GUIDs, eliminating the need to maintain high level of bibliographic details in EMu itself.

## Import and Export tools

A number of online libraries allow for XML downloads of article citations (for example, BioHeritage Library) which is a "native" language of the Emu import tool. We and other are interested in developing tools to automatically import this information, or get close to it, perhaps something with similar functionality to the upcoming GeoLocate tool, or some sort of script that could add mapped EMu column names to a specific XML format, or to convert RIS to XML or CSV (there looks to be some already existing tools that can help with this) after which the EMu Import tool can be used. We also propose creating an import tool based on DOI that would retrieve data from DOI links in RIS format, which could then be imported into EMu. This may be something that can be done using the Operations module, further investigation is needed. If Axiell decides to take on this development, we would love to see what is in the realm of possibility for such a tool or tools.

We would request Axiell to provide XML/CSV import templates for RIS and other identified standards. Since there are so many more RIS fields than EMu, and because of potential for badly formatted datasets, this gives the user a change to give a once over before importing.

## Field Mapping: EMu to RIS

Below is a preliminary mapping of the redesigned EMu fields to RIS formatting. Note that this is just the first pass, and the mapping will be refined as the designs are finalized.

Label name	Proposed EMu Column	RIS field	Comments
<b>Type</b>	BibRecordType	TY	
<b>Book Series</b>	BibSeries	T3	
<b>Journal</b>	BibBookJournalTitle	T2, (JF, JO?)	
<b>Article Title</b>	BibTitle	TI	
<b>Book Title</b>	BibBookJournalTitle	T2, (BT?)	
<b>Chapter Title</b>	BibTitle	TI	
<b>Title</b>	BibTitle	TI	
<b>Resource Title</b>	BibTitle		
<b>Reference Type</b>	BibReferenceType	TY	Need to work how how to have the 5 types for the tab switching, as well as the Other subtypes.
<b>Abbreviation</b>	BibAbbreviation	J2	
<b>Author</b>	BibAuthors_tab	A1, A2, A3,	
<b>Role</b>	BibRole_tab	x	No distinction of roles in RIS, all people can be listed as Authors. Editors will usually be on A2 line, though there also a ED tag.
<b>Volume</b>	BibVolume	VL	
<b>Pages</b>	BibPages	SP, EP	Need two page fields? Start Page and End page separately?
<b>Number</b>	Bib	IS?	Is this Issue
<b>Figures/Plates</b>	BibguresPlates	L4	
<b>Publication Date</b>	BibPublicationDates	DA	
<b>City</b>	BibPublicationCity	CY	
<b>Publisher</b>	BibPublishedBy	PB	
<b>ISBN</b>	BibISBN	SN	
<b>ISSN</b>	BibISSN	SN	
<b>Is Manuscript?</b>	BibIsManuscript		
<b>Source</b>	BibSource	IN	
<b>URL</b>	BibWebIdentifier	UR	
<b>GUIDs</b>	AdmGUIDType_tab+AdmGUIDValue_tab	DOI	Will need a string with AdmGUIDType_tab=DOI + the GUID value.
<b>Keywords</b>	BibKeywords_tab	KW	
		DP	Database Provider

Mapping resources:

<http://support.mendeley.com/customer/portal/articles/1006006-what-is-the-mapping-between-ris-files-and-mendeley->

[https://en.wikipedia.org/wiki/RIS\\_%28file\\_format%29](https://en.wikipedia.org/wiki/RIS_%28file_format%29)

[http://www.risinc.com/support/risformat\\_tags\\_01.asp](http://www.risinc.com/support/risformat_tags_01.asp)

<http://refdb.sourceforge.net/manual-0.9.4/c2166.html>

RIS and Formatting for other exports

- RIS fields can be used with BibTex markup
- RIS is used by: Endnote, RefWorks, Zetero, Mandalay, SRO/SIL

## Proposed revised tabs

### Article Tab

Journal	<input type="text"/>	Type	Article
Journal Abbr.	<input type="text"/>		
Article Title	<input type="text"/>		
Authors/Contributors	Roles	Manuscript	<input type="checkbox"/>
<input type="text"/>	<input type="text"/>	Et al.	<input type="checkbox"/>
<input type="text"/>	<input type="text"/>		
Volume	<input type="text"/>	Number	<input type="text"/>
Pages	<input type="text"/>	Figures/Plates	<input type="text"/>
Publication Date	<input type="text"/>	Actual Date	<input type="text"/>
Keywords	<input type="text"/>	Publisher	<input type="text"/>
<input type="text"/>	<input type="text"/>	City	<input type="text"/>
<input type="text"/>	<input type="text"/>	ISSN	<input type="text"/>

Article

A mockup of the redesigned Article tab. The Manuscript, and Keyword fields are new additions, and would also appear on most of the other tab types.

- Instead of linking to a separate Journal record, the appropriate journal can be selected or entered in a Journal lookup list.
  - Potentially include the Abbr. (Abbreviation) field values as a level of the *BibBookJournalTitle* Lookup list, so that the abbreviation can be auto entered when the name is selected. Both the Journal Names and abbreviations are fairly standardized.
- Manuscripts – The Manuscript checkbox can be used with the bibliographic resource is unpublished. This gives the option of flagging records so that Manuscript equals either “yes” or “no”, which will make querying for or excluding Manuscripts easier. When or if a particular manuscript is published, the rest of the data can be entered, and the Manuscript checkbox is unchecked, converting the record into a normal Article record.
- Et al. checkbox – when checked would list the first author followed by the et al. in the summary data. When unchecked, all authors will be listed. Can also be checked in lieu of listing all authors. Removal of automatic et al. for three or more authors allows all the names to be accessible via summary line searches if the unit so desires.
- A new Keywords grid would now appear on all the reference type tabs.

## Book Tab

Book Title	<input type="text"/>	Type	Book
Authors/Contributors	Roles	Manuscript	<input type="checkbox"/>
<input type="text"/>	<input type="text"/>	Et al.	<input type="checkbox"/>
<input type="text"/>	<input type="text"/>		
Book Series	<input type="text"/>		
Volume	<input type="text"/>	Number	<input type="text"/>
Publication Date	<input type="text"/>	Actual Date	<input type="text"/>
Keywords	<input type="text"/>	City	<input type="text"/>
<input type="text"/>	<input type="text"/>	Publisher	<input type="text"/>
<input type="text"/>	<input type="text"/>	ISBN	<input type="text"/>






Book

Similar to the Articles tab above, but including Book specific fields.

- Book series is now just a lookup field. The *Series* name will be added upon the first recorded instance. Users wishing to find all books in the series would simply query on the Series field; to find all book series the user would search for any Book record where *Series* had a value. They could then determine existing series using a sort report. This and the elimination of the linking of Journals to separate Articles will eliminate the need for the References tab in Bibliography.



## Chapter Tab

Chapter Title	<input type="text"/>	Type	Chapter 						
Book Title	<input type="text"/> 								
<table><tr><th>Authors/Contributors</th><th>Roles</th></tr><tr><td><input type="text"/></td><td><input type="text"/></td></tr><tr><td><input type="text"/></td><td><input type="text"/></td></tr></table>		Authors/Contributors	Roles	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Manuscript	<input type="checkbox"/>
Authors/Contributors	Roles								
<input type="text"/>	<input type="text"/>								
<input type="text"/>	<input type="text"/>								
		Et al.	<input type="checkbox"/>						
Volume	<input type="text"/>	Number	<input type="text"/>						
Pages	<input type="text"/>	Figures/Plates	<input type="text"/>						
Publication Date	<input type="text"/>	Actual Date	<input type="text"/>						
Keywords 	<input type="text"/> <input type="text"/> <input type="text"/>	City	<input type="text"/> 						
		Publisher	<input type="text"/> 						
		ISBN	<input type="text"/>						

Chapter

Again similar to the Articles tab above, continuing the flat structure. The Chapters tab expands on the Books tab by providing further detail when a specific chapter of a book is to be referenced.

- Additional fields for Chapter Title, Pages and Plates

## Citation Tab

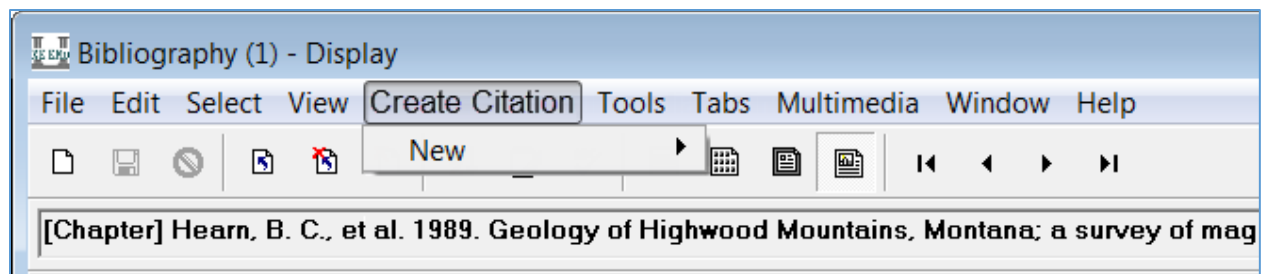
Citation Type	<input type="text" value="Book Chapter or Article"/>	Type	<input type="text" value="Citation"/>
Resource Title	<input type="text" value="Article or Chapter title"/>		
Journal/Book	<input type="text" value="Journal or book title"/>	Abbr.	<input type="text"/>
Authors/Contributors	Roles	Manuscript	<input type="checkbox"/>
		Et al.	<input type="checkbox"/>
Volume	<input type="text"/>	Number	<input type="text"/>
Pages	<input type="text"/>	Figures/Plates	<input type="text"/>
Publication Date	<input type="text"/>	Actual Date	<input type="text"/>
Keywords	<input type="text"/>	Publisher	<input type="text"/>
		City	<input type="text"/>
		ISSN/ISSB	<input type="text"/>
Citation		N	

The Citations Tab would provide the lowest level of granularity for bibliographic references.

- Single Citations tab for all Bibliographic record types.
- The *Citation Type* field seen here will have the same backend as the *Reference Type* one used by the Misc tab below. This list will need to be hierarchal below *Type*, so that when *Type*=Citation the *Ref Type*(citation type) = Book/Article/Chapter, while *Type*=Misc has *Ref Type* = Thesis/newspaper/etc.
- Citations would not be required when linking to Bibliographic references. If a unit or institution does not reference to the Citation level of detail, this tab could simply be hidden, and they would link Articles/Books etc. as their references.

## Citations Menu

The plan for Citation is to make a menu item that creates a new record from a Book/Chapter/Article record (and miscellaneous) and dittos all the fields. First the user would query for the resource to cite. From the menu, there would be a "Create Citation" button. This would create a new Bibliography record with a *Type* of "Citation" (potentially opening in a new EMu window), and ditto most of the data from the previous record. This would reduce redundant data entry for the Citation, and prevent accidental modification of existing Article, Book or Chapter records if a user was trying to cite them.



We want to emphasize that this would *just* be a ditto. In order to keep the flat structure within Bibliography, there will be no parent-child linking between Article, Book and Chapter records and their Citations. Citations from a particular reference can be found using the Title field, and when querying users can choose to include or exclude citations using the *Type* field.

- Since most fields will be dittoed, only *Pages* and *Figures/Plates* would need to be updated individually.
- If Citation is from a book, *Resource Title* will be null
- Similar references can be found by searching *Title*. Searching for citations vs non-citation records controlled by the *Type* field.

## Miscellaneous Tab

Ref Type	Website/Newspaper/Magazine/Thesis etc	Type	Misc
Title		Abbr.	
Source	<i>Institution, Publisher or periodical title</i>		
Authors/Contributors		Roles	
		Et al. <input type="checkbox"/>	
Volume		Number	
Pages		Figures/Plates	
Publication Date		Actual Date	
Keywords		URL	

Miscellaneous

The Miscellaneous tab can be used as a catch-all for the less frequently used bibliography types, including website, newspaper, thesis, etc.

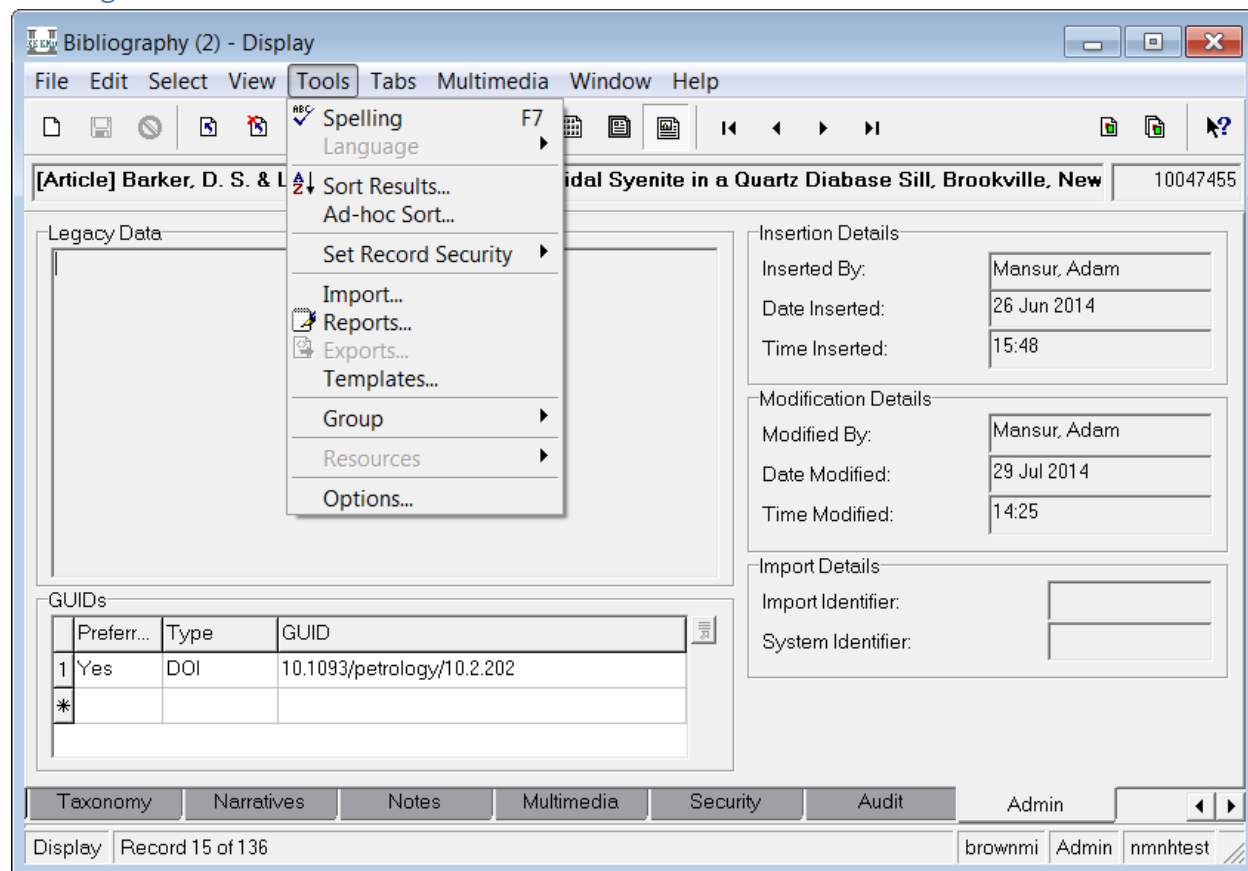
It has two title fields mapping to T1 and T2 of the RIS Format (As an example, Source/T2 for Newspaper/blog name and Title/T1 name of article, name of thesis, etc).

Ideally there should be some sort of active linking enabled on the URL field so that sites can be accessed directly from the link.

## Special cases

The combination of Book, Chapter, Article, Citation and Miscellaneous tabs are designed to handle the majority of bibliographic references encountered by museums and institutions. In many cases, special exceptions can still be handled by the aforementioned tabs. For example, a thesis can be treated as a book, and an article in a newspaper can be treated as any other article, with title of the newspaper acting as the Journal. Again, we are trying to look at this redesign from the perspective of “How much bibliography do we really need”, especially if bibliography in EMu is to act more as a finding aid to the repository of record for the references, and not act as an authority in and of itself.

## Existing Tab additions or modifications



### DOIs and other GUIDS on Admin tab

DOIs and LSIDs can be stored in the GUID grid on the Admin tab, according to their type. We can write the necessary xml to enable the *Resources* button for each type of ID so that they can be linked directly to the resolver. The concern is that we want to ensure the ability to both store GUIDs, while being able to easily link out to the associated resource.

NMNH Informatics proposes creating an import tool based on DOI that would retrieve data from DOI links in RIS format, which could then be imported into EMu. This may be something that can be done using the Operations module, further investigation is needed.

### Notes tab

Convert the text box notes tab to the Notes Grid found in Catalog and some other modules.

### References Tab

With the flat structure, the need for the references tab can be eliminated.

### Proposed Summary Data for revised module

Author String. Year. Chapter Title (if populated). "Title" (same field for misc, Chapter, Article records) . Book/Journal Title (same field for Book, Journal, and Source field on misc tab), Volume (if populated), Pages.