

Science in the Park:
Natural Resource Research in
Great Smoky Mountains National Park, 1963-1988

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Exhibit Purposes:

- To introduce the general public to the natural resource research that takes place in Great Smoky Mountains National Park, NC/TN
- To provide online access to natural resource research records for eligible GRSM staff

Exhibit Description:

In the Great Smoky Mountains National Park (GRSM) Archives, there is a collection of natural resource research permits from 1963-1988. These permits cover all natural resource research that took place in the park during those years. They contain information about who performed the research, their sponsoring institution, what was studied, when the research took place, and, in many instances, a general description of the project's findings.

This exhibit will provide users with the digitized records from this collection, an interactive timeline of research, and general descriptions of the research subjects. There will also be a private side for eligible GRSM staff to access restricted images and metadata.

Public vs. Private Sides of Omeka Exhibit:

- Though the majority of material will be available on the public side, GRSM staff will have access to additional restricted information on the private side.
- Private side functionality will be created using Omeka's user roles.
 - Eligible GRSM staff will be given a user status of "researcher" to allow access to any record or field marked "private."
- Private side will be accessible via the login page.
- Private side will have full access to all aspects of exhibit, both public and private.

Theme:

- As this would be a National Park Service exhibit, the theme would match official design standards of green, brown, black, ivory, and the NPS arrowhead as seen below.



Existing Plugins:

- Exhibit Builder 3.0
 - Used to create Omeka exhibit
- Neatline/ NeatlineSimile
 - Used to create integrated timeline
- Search by Metadata
 - Allows users to browse by specific metadata in certain fields
- Hide Elements
 - Designates certain fields to available only on the private side

Major Sections (Public Side):

Homepage:

- This is the primary webpage of the exhibit and will be the main entry point to the collection.
- It will contain a brief description of the exhibit, links to all the other webpages, example records, and a search engine for the entire site.

About the Collection:

- This webpage will contain basic information on the purpose and design of the exhibit, how to navigate the exhibit, the contents of the collection, the park archives, GRSM Resource Management and Science Division (creator of the records), and contact information regarding the collection.
- It will also provide links to the park website and NPSpecies (controlled vocabulary).

Timeline:

- Using Neatline and Neatline Simile, this webpage will contain an interactive timeline of all major research covered in the collection.
 - It will provide a date range for each research project.
 - As most projects are not continuous, repetitive entries are likely (see example below).
 - Each project will be referred to by the common name (not scientific).
 - For example, research on *Plethodon jordani* would be noted as “Red-Cheeked Salamander” with a date range of May 1969-June 1973 and April 1975-September 1978.

Research Topics:

- Using topical information produced by the GRSM Resource Education division, this page will contain links to individual general descriptions of the various natural resources being studied in the park (e.g. Black Bears, water quality, air quality, Balsam Woolly Adelgid).

FAQs:

- FAQ page will provide answers to questions such as the following:
 - “What are these records?”
 - “Where can see the originals?”
 - “Can I have a copy of any of these records?”
 - “Where can I find more information on one of these research projects?”
 - “Who can I contact if I have more questions?”

Browse:

- This standard Omeka webpage will allow users to browse all records in the collection.

Additional Resources:

- This webpage will provide bibliographic entries for additional resources (in print and online).
- It will also include information about related collections in the park archives.

Major Sections (Private Side):

Login:

- Accessible via a link at the top of each webpage, the login page will allow for GRSM staff to gain access to records, metadata, and maps that are unavailable to the general public due to various restrictions (e.g. archeological site coordinates, threatened/endangered species).
- Park archivist will provide login username to allow for verification of access credentials.

Individual Pages (Public Side):

Digitized Images:

- Each digitized record will be its own “item” containing the digitized image(s) and the accompanying metadata.
- If there are multiple parts to the image (e.g. multiple pages), all parts will be associated with one item and one set of metadata.

Metadata:

- Dublin Core, Omeka’s standard metadata schema, will be used for the general metadata associated with each item.
- Additional metadata will be discussed below under “New Plugin: Darwin Core Metadata Plugin.”

Links:

- Using the “Search by Metadata” plugin, the user can click on designated metadata fields and instantly search by that term in that specific field across all records.
- Tags using standardized vocabulary will contain the name of the researcher(s), associated institution, and general subject(s).
 - By clicking on one of these tags, users will be able to search all records for the corresponding tags.

Individual Pages (Private Side):

Additional Digitized Records Available:

- Any digitized records that are restricted in nature will be marked as “private” during upload to exhibit.
- These records will be available to eligible GRSM staff via the private side login.

Additional Metadata Available:

- As some records are public in nature but include restricted types of metadata (e.g. specific locations), some metadata fields will be marked as “private” during upload to exhibit.
- These fields will be available to eligible GRSM staff via the private side login.

New Plugin: Darwin Core Metadata Plugin

Justification:

- Scientific records include valuable information not covered in Dublin Core (Omeka’s standard metadata schema).
 - For example, “subject” cannot contain an organism’s common name and scientific name (including all levels of taxonomy).
- Based on Dublin Core, Darwin Core is a metadata schema developed specifically for scientific records and specimens.

Use:

- As Darwin Core contains numerous metadata fields, this plugin will focus on the record-level terms, specifically those under “Event/HumanObservation/MachineObservation” and “Taxon.”
 - Additional detail beyond these fields is not necessary for this collection.
 - Only applicable fields will be used with each exhibit item.
 - For example, MachineObservation will not be used if the record is comprised of a human observation.
- “Event/HumanObservation/MachineObservation” metadata fields to be included
 - event
 - humanObservation
 - machineObservation
 - eventID
 - fieldNumber

- eventDate
- startDateOfYear
- endDateOfYear
- habitat
- samplingProtocol
- fieldNotes
- “Taxon” metadata fields to be included
 - taxonID
 - scientificNameID
 - acceptedNameUsageID
 - scientificName
 - acceptedNameUsage
 - kingdom
 - phylum
 - class
 - order
 - family
 - genus
 - subgenus
 - vernacularName
 - taxonRemarks

Interaction with Existing Plugins:

- As Darwin Core is based on Dublin Core, all general metadata will be covered by pre-existing Dublin Core metadata set.
- Using “Search by Metadata,” the new metadata fields should become “clickable” thereby allowing users to search specific fields for specific terms.
 - For example, by clicking on “Ursus” in the “genus” field, the user will see a list of all bear research in the park.