

tDAR: the Digital Archaeological Record
Project- and Resource-Level Metadata Elements and Descriptions
Keith Kintigh
Version 5 - 2007-12-14¹

This document lists the metadata items that we will attempt to capture for projects and their associated information resources held or indexed by tDAR. A project represents the research outcomes of an intellectually coherent archaeological research effort. For example a project might be a single funded CRM (cultural resource management) excavation. The information resources tied to that project might include any number of separate database, document, and image resources (files). Databases (including spreadsheets), for example, might contain the results of laboratory analyses of different artifact classes. Document resources could include interim or final project reports, specialist reports, published articles, or even field notes associated with the project. Image files associated with a project could be site or feature maps, or excavation or artifact photos. All of these separate information resources are associated with the overarching project's metadata record.

Whereas the project metadata would include metadata that is shared by all of the associated information resources (such as temporal and spatial coverage), the resource-level metadata consists of resource-specific semantic information and file location and format metadata.² In cases where only a single resource (such as a report) is to be registered with tDAR, much of what is described here as project metadata (e.g., spatial and temporal coverage) would still be collected.

In the registration process, tDAR should give the user three options: a) register a project, and optionally any number of associated resources; b) register a resource with an already registered project (in which case we will need to seek out the proper project record; or c) register a single resource that is not part of something that would reasonably be called a project. Where there is a project, the user would be aware of the hierarchical character of the project and resource metadata record. Where there is no project, the registration process would appear to be a single level operation though what is being filled in will from the standpoint of the system include both project and resource-level metadata. Where there is no project and both project-level and resource-level element refinements are listed in this specification, the resource refinement would usually be used.

In cases where the boundaries of the project are not clear (for example: Would archaeological testing and data recovery [excavation] at the same site be one project or two? Is a in a multi-year, multi-institution academic excavation one project or several?) precisely what is delimited as a single project will be determined by the individual registering the resources, guided by the goal of most effectively representing the metadata associated with the resource while minimizing the effort needed for registration. From the standpoint of resource discovery it should make little or no difference.

In addition to the project- and resource-level metadata described in this document, tDAR, in its next development phase, will also collect and maintain much more detailed metadata that will document

¹ We will appreciate your review, both to see if this captures the information we would need for a straightforward search to identify relevant datasets, and also to see whether this specification of metadata at these levels could be improved to facilitate future interoperability with other systems. *In italics indicate queries on which we specifically seek input.*

² Note that ADS maintains Dublin Core metadata only at the project level, whereas the scheme envisioned here would in effect produce resource level dc metadata through a merging of the resource-specific dc metadata with project-level metadata propagated to the resource level. ADS uses PREMIS for resource level metadata (see <http://www.oclc.org/research/projects/pmwg/>). *Should we consider this as well?*

specific tables, columns, and values.

Where available, we have listed the Dublin Core (dc:) definition of each metadata element, the Archaeology Data Service (ads:) description of the same element from <http://ads.ahds.ac.uk/project/userinfo/catalogue.html#contents>³ (and the relevant GEON metadata element (if any) inferred from the resource registration screens.

1. Design considerations

- 1.1. The primary goals of this metadata collection are resource discovery and documentation of key resource characteristics.
- 1.2. tDAR, our NSF project, is concerned primarily with databases, but for expansion and use with the Mellon Foundation project we want to collect metadata that will also be well designed to cover text and images as well. In particular, metadata contained at these levels should be sufficient to construct a complete bibliographic citation for an information resource that properly credits the appropriate parties.
- 1.3. Initially, this metadata will be internal to tDAR. However, we design the metadata collection and storage with the intent that these metadata may, in the future, be exposed for remote harvesting, for example, under an Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH; see: <http://www.openarchives.org/OAI/openarchivesprotocol.html>). For compatibility with other initiatives, this metadata specification is organized around a subset of the Dublin Core (dc) recommended elements.
- 1.4. For internal purposes we have identified refinements of the Dublin Core recommended elements. During the resource registration process, tDAR will prompt for and internally maintain the element refinements separately, for example, for searching. However, for external harvesting they will be bundled together in the relevant dc element and internally tagged within the overarching dc field.
- 1.5. Because Dublin core essentially targets individual information resources rather than projects, from an external standpoint an individual resource's Dublin Core record would be displayed as the union of the resource-specific metadata with that of its parent project level metadata. Where metadata directed to a specific dc element is maintained by tDAR at both project and resources levels, the metadata elements at the different levels would be displayed as refinements of the overarching dc element. For example, the dc description element would have a project-level refinement, description.project, and a resource level refinement, description.resource.
- 1.6. Eventually, it should be possible to clone a set of project-level metadata for use in building a new project metadata record. This would facilitate the registration, for example, of closely related projects.
- 1.7. With the exceptions of elements listed as required (*please review this specification*) we will not require entry of these metadata elements, but we want to encourage as thorough an entry as possible by making the process as easy as possible.
- 1.8. We will attempt to maintain the distinction between not applicable and not recorded. To this end, for non-require elements the default should be a radio-button or check box that says "not recorded at this time." Next to it should be a different button that says "not applicable." Changing "not recorded" to "not applicable" would require action by the user. Of course, beginning to fill in any concrete metadata would clear both boxes. This means that users will be able to record a judgment that a given element is inapplicable as different than simply skipping the element.
- 1.9. There are obvious advantages and disadvantages to using controlled vocabularies for such things as culture names, period names, geographic names, and subjects. Controlled

³ See also <http://www.ahds.ac.uk/metadata/metadata-elements.htm> and an out of date description at http://www.ahds.ac.uk/public/metadata/disc_05.html.

vocabularies would make searching more precise and effective but require more effort on the part of the individual registering the resource and may introduce some ambiguity by forcing choices that do not fully capture a meaning. We have employed few controlled vocabularies in this specification. We hope to get around some of the disadvantages though the ontology-enabled searches.⁴

2. tDAR Project- and Resource-Level Metadata Elements

2.1. dc:title

- 2.1.1 **title.project** (project level) - Provide a descriptive (or formal) title for the project, if applicable, e.g., Cibola Archaeological Research Project. Please do not use acronyms. If one is registering, for example, a document that is not associated with a particular archaeological project, select n/a (in which case the resource title is required).
- 2.1.2 **title.resource** (resource level; required) - Provide a simple descriptive title for the data resource, e.g., Faunal Database from the Cibola Archaeological Research Project, New Mexico. For a document this would ordinarily be the title of the document.
- 2.1.3 Either the project or resource title, or both should be provided.
- 2.1.1. dc: A name given to the resource
- 2.1.2. ads: Indicate the title (and any alternatives) for the dataset.
- 2.1.3. geon: title

2.2. dc:identifier

- 2.2.1. **identifier.tdar** (resource level; generated) - Permanent tDAR identifier that would point to either an external or internal location. Although this identifier is generated, in registering a resource tDAR should ask if the resource is to be stored by tDAR, in which case the system will request an upload.
- 2.2.2. **Identifier.external** (resource level) - For resources stored outside tDAR, it will request the url of the resource.
- 2.2.3. dc: An unambiguous reference to the resource within a given context.
- 2.2.4. ads: Any project or reference numbers used by you or your organization to identify the dataset. text)
- 2.2.5. geon: File Name & Location for files that do not reside on the infrastructure server: Host Name; Port; Database Name; Web interface URL

2.3. **dc:subject** - a list of key words associated with the following element refinements (there will be no direct entry for "subject" standing alone) that describe the project and resource. Note that spatial and temporal coverage are specified elsewhere so they need not be identified in the keywords. Similarly, the resource type (e.g., image, database) is specified elsewhere and need not be included. In the full implementation these keywords, when possible, will tie into ontologies that will relate keywords to synonyms (including translations into other languages) or hierarchically superior terms (so that Basketmaker and Pueblo both get you Ancestral Pueblo). Initially tDAR will do simple keyword searches.

- 2.3.1. **subject.siteName.project** (project level; repeatable) - If the project is primarily focused on one or a few sites, list any site names or numbers (e.g., AZ Q:4:13(ASM); Hinkson Site). Select n/a if not applicable.

⁴We note that there are a number of available and relevant thesauri. For example, for subject, ADS suggests the RCHME thesaurus of Monument Types and the MDA Archaeological Object Name thesaurus. Another source might be the Art and Architecture Thesaurus. It seems to Kintigh: 1) that most US archaeologists are likely not familiar with any of these lists and for better or worse they are not probably inclined to use them; 2) that the range of possibilities for what we envision here is so vast that it would be an enormous project just to try to enumerate them, never mind get people to agree on them. *Other opinions?*

- 2.3.2. subject.culture.project** (project level; repeatable) - If the project is primarily focused on one or a few archaeological cultures, provide the culture names (e.g. Hohokam, Ancestral Pueblo).. This would not be controlled but we would enable the registration and use in searches of either standard or specialized culture name ontologies.
- 2.3.3. subject.material.project** (project level; repeatable) - Indicate the related material types for a project (e.g., architecture, ceramic, chipped stone, dating, ground stone, shell, faunal, botanical, metal, mineral, other (check all that apply). *We need an inclusive controlled list with a hierarchy of term provided through an associated ontology.*
- 2.3.4. subject.other.project** (project level; repeatable) - Other keywords that would help a user find the project e.g. (Chaco Outlier).
- 2.3.5. subject.siteName.resource** (resource level; repeatable) - If the resource (as distinct from the project) is primarily focused on one or a few sites, list any site names or numbers (e.g., AZ Q:4:13(ASM); Hinkson Site).
- 2.3.6. subject.culture.resource** (resource level; repeatable) - If the resource (as distinct from the project) is primarily focused on one or a few archaeological cultures, provide the culture names (e.g. Hohokam, Ancestral Pueblo). This would not be controlled but we would enable the registration and use in searches of either standard or specialized culture name ontologies.
- 2.3.7. subject.material.resource** (resource level; repeatable) - If the resource (as distinct from the project) is primarily focused on one or few classes of material (e.g., ceramic, chipped stone, ground stone, shell, faunal, botanical, dating, metal, mineral, other (check all that apply).
- 2.3.8. subject.other.resource** (resource level; repeatable) - Other keywords that would help a user find the resource as distinct from the project e.g. keywords associated with an article.
- 2.3.9. dc:** The topic of the resource.
- 2.3.10. ads:** Please suggest keywords for the subject content of the dataset. If possible, please use existing documentation standards (e.g. The RCHME thesaurus of Monument Types, the MDA Archaeological Object Name thesaurus) and indicate which standard you are following. If you use a documentation standard unique to your organisation, it would be extremely helpful if you could send a copy of it with your dataset.
- 2.3.11. geon:** subject; [Geochemistry, Geology, Geomorphology, Geophysics, Geoscience Education, ... Structure, Tectonics]
- 2.4. dc:description** - The description elements should provide a natural language summary of the resource and of the project that produced it. Like subject, this information will be entered in the element refinements, not in description directly.
- 2.4.1. description.project** (project level) - Provide a brief summary (suggested 200-300 words) of the main aims and objectives of the research project (or alternative process) from which the data collection arose.
- 2.4.2. description.resource** (resource level, required) - Please provide a brief summary description (suggested 200-300 words) of the content of the resource.
- 2.4.3. dc:** An account of the resource.
- 2.4.4. ads: description** - please provide a brief summary (max. 200-300 words) of the main aims and objectives of the research project (or alternative process) from which the data collection arose. Please provide a brief summary description (max. 200-300 words) of the content of the dataset.
- 2.4.5. geon:** description
- 2.5. coverage** Spatial and temporal coverage of the project. *(In a subsequent phase we need to elaborate this to deal with FGDC or ISO (19115) standards. See*

<http://ads.ahds.ac.uk/project/bigdata/>) tDAR collects this information as several different element refinements:

- 2.5.1. spatial coverage - Extreme N, S, E, and W coordinates describe a box that circumscribes the subject area; optionally, provide any number of political jurisdictions or geographic terms that describe the coverage. We should allow use of Google Maps to specify a box and return Long-Lat coordinates (this is already implemented in GEON searches and we should be able to reuse that code). We should also (at least by phase 2) allow entry as a utm box and convert to long/lat.
 - 2.5.1.1. **coverage.longLatBox** (project level; repeatable) - Enter the extreme E, W, N, and S coordinates either in Longitude/Latitude or UTM Coordinates (or extract them from a Google Maps window). For Longitude/Latitude enter in +/- decimal degrees. *Do we need datum & projection?* -90 (south latitude) to 90 (north latitude); -180 (west longitude) to 180 (east longitude) North America, for example, should be negative longitude and positive latitude.
 - 2.5.1.3. **coverage.geographicTerm** (project level; repeatable) - Enter any number of geographic or jurisdictional terms (e.g. city, county, state/province/department, country). *We certainly want to take advantage of some web resources here, but ideally this would ultimately be extensible by users via ontologies. Available resources include the Getty Thesaurus of Geographic Names (http://www.getty.edu/research/conducting_research/vocabularies/) and USGS Geographic Name Information System (<http://geonames.usgs.gov/pls/qnispublic/>).*
- 2.5.2. temporal coverage
 - 2.5.2.1. **coverage.calendarDate** (project level) - Range from xxxx (AD/BC) to yyyy (AD/BC) stored as - for BC and + for AD (there is no 0) e.g., for tree-ring dated or historic sites or calibrated radiocarbon dates.
 - 2.5.2.2. **coverage.bpDate** (project level) Range from xxxx to yyyy radiocarbon years BP or n/a for not applicable.
 - 2.5.2.3. **coverage.temporalTerm** (project level; repeatable) - Enter the names of periods (or phases) and sub-periods covered by the resource (e.g., Solutrean; Upper Paleolithic). This would not be controlled but we would enable the registration and use in searches of either standard or specialized temporal period name ontologies. *For tDAR purposes, if a temporal term can be tied to a chronological term ontology, we would want the most restrictive terms here and not the more general ones. Absent the ontologies, the hierarchically superior terms would be useful. We should think about this.*
- 2.5.3. dc: The spatial or temporal topic of the resource, the spatial applicability of the resource, or the jurisdiction under which the resource is relevant.
- 2.5.4. ads: Coverage - please give the current and contemporary name(s) of the country, region, county, town or village covered by the data collection. If names or administrative units were different during the time period covered by the data please record them separately. Please give the dates/period covered by the dataset.
- 2.5.5. geon:
 - 2.5.5.1. Spatial: a longitude-latitude box
 - 2.5.5.2. Temporal: a controlled list of geological terms, plus age ranges similar to proposed for tDAR.
- 2.6. **dc:type** (resource level; required, controlled) DCMIType values: {Dataset, MovingImage, Software, StillImage, Text, Service, Sound}? *Can we ignore the rest of the DCMIType values: Collection, Event, Image, InteractiveResource, PhysicalObject? To what extent can this be inferred from the format (MIME type) or file extension and not directly prompted. This usage is, evidently, inconsistent with ADS that uses this element differently. Do we want to capture the information the ADS captures (see below) perhaps as a refinement of dc:description?*
 - 2.6.1. dc:The nature or genre of the resource.

- 2.6.2. ads: Resource Type - is this dataset best described as primary data, processed data, an interpretation of data, or a final report? No updated to Collection, Collection.Heir, Dataset, Digital.Archive, Text.Aarticle, Text.Journal, Text, Thesis
- 2.7. **dc:format**
- 2.7.1. **format.access** - (resource level; required, generated) MIME Type of the resource <http://www.iana.org/assignments/media-types/> as it is stored and made available via tDAR. There will be a limited list of types that are specifically supported and stored (ASCII, GeoTIFF, JPG, OWL, PDF, PostgreSQL, OWL, Shapefiles, TIFF) and a broader list (including mainly other database formats) that tDAR can formally process when those resources are remotely accessed. In addition there will be a binary object type that is stored, described in metadata, and can be retrieved but whose content is not processed (such as EXE files) or refreshed. For these objects there would be a generic binary object type value. *Do we validate the non-database types in any way (does GEON?) or trust the file extension?*
- 2.7.2. **format.original** (resource level) - Datasets that are converted upon registration and archiving in tDAR will have their original format saved. At the moment we intend to maintain the original source file but make no guarantees about its future availability or usability). For these datasets, we would generate a type based on the conversion employed. For binary objects the original file type would be stored here.
- 2.7.3. dc: The file format, physical medium, or dimensions of the resource.
- 2.7.4. ads: Format - please indicate what format your data is saved in (e.g. WordPerfect 5.1, HTML, AutoCAD).
- 2.7.5. geon: Ascii, Excel, GMT Raster, GEOTiff, PDF, Relational Database {DB2, MySql, Oracle, PostgreSQL, SQL Server}, Shape File {Zipped Shape File}, Tool {Zipped Tool File}, WMS Service (URL), Web Service, WSDL (URL), Web URL (URL), net CDF, Ontology (Owl File)
- 2.8. **dc:language** - Language used in the data and metadata. Default could be English or could perhaps be inferred from the characteristics of the internet connection; ISO639-2 provides a standard list <http://www.loc.gov/standards/iso639-2/langhome.html>. For now shall we provide a few alternatives to show we are interested in accommodating an international community (e.g. French, Spanish, German, Italian, Portugese)
- 2.8.1. **language.metadata** (resource level; required) - Language used for the metadata
- 2.8.2. **language.resource** (resource level; required) - Language used by the resource
- 2.8.3. dc: A language of the resource. see <http://www.ietf.org/rfc/rfc3066.txt>
- 2.9. **dc:rights**
- 2.9.1. **rights.holder** (resource level; required; repeatable) - Provide the name and rights holder for the resource. It is unclear under US law under what circumstances a database can be copyrighted. The rights holder would be the institution or individual, if any, who would ordinarily be in a position to assert a legal right to the resource (whether or not this right, such as a copyright, has actually been asserted). If the resource was created during ones' work as an employee, the rights holder will normally be your employer. If this is a person, enter as: Surname(s), Given Names.
- 2.9.2. **rights.publicPrivate** (resource level; required) - This is independent of whether or not there is confidential information. Choose one of the following:
- 2.9.2.1. public - anyone with an account can view or download with the exception that resources with confidential.accessRights=yes will only be available to those with appropriate rights.
- 2.9.2.2. private (available only as permission is explicitly granted by individuals authorized to extend access rights)
- 2.9.3. **rights.confidentialInformation** (resource level; required) - Yes/No. Apart from its public/private status, the resource contains confidential information that must be restricted to qualified individuals as determined the tDAR governing body. This

applies notably to many archaeological site locations. This element will be made obsolete by column-level control over access in a subsequent implementation phase

- 2.9.4. rights.full** (resource level; repeatable) Userids (or group ids) of persons authorized to read/write/delete and extend or change access rights to the resource.
 - 2.9.5. rights.read** (resource level; repeatable) - If the resource is not public, list of additional userids or group ids that have read permission (Geon must already have a way to do this)
 - 2.9.7. rights.datePublic** (resource level; generated or required) - For already public resources public this is inapplicable. Otherwise a date in standard form that a resource will become public, understanding that resources marked as confidential will maintain that status once they are public. This date may be extended by the publisher but will not extend past the publisher's death unless special arrangements are made. Tentatively set for a maximum of 5 years in the future but changeable by those with full access rights to remain 5 years out. *Is 5 years appropriate?*
 - 2.9.8. dc:** Information about rights held in and over the resource.
 - 2.9.9. ads:** copyright - Provide the name of the copyright holder for the dataset. If the collection was created during your work as an employee, the copyright holder will normally be the employer under a contract of employment.
- 2.10.dc: creator** – These element refinements specify the names of the individuals and entities with intellectual responsibility for the project and the resource. They should include the information necessary to develop a citation for the resource that properly attributes credit. This can include names of the projects, individuals, and institutions, associated with the field work, relevant laboratory work, or development of the digital resource. We do not distinguish dc:creators from dc:contributors to the resource (in part because we haven't thought of any reasonable way to logically draw this distinction for the broad range of resources with which we are concerned). However, the dc:publisher (which may be the same as the dc:creator) is the entity that makes the resource publicly available. We store the person name/role refinements and institutional names/role as pairs to maintain their associations.
- 2.10.1. creator.person.project** (project level; repeatable) – An individual with responsibility for the overall project identified by role in the associated refinement. Enter as surname, given name. If there is no project skip to the resource-level entries.
 - 2.10.2. creator.personRole.project** (project level; repeatable; controlled) – The role of the individual in the project (e.g., {principal investigator, project director, field director, lab director, *what would the others be?*})
 - 2.10.2. creator.institution.project** (project level; repeatable) – An institution with responsibility for the overall project identified by role in the associated refinement. If there is a subdivision enter as institution, subdivision (e.g., University of Arizona, Arizona State Museum)
 - 2.10.4. creator.institutionRole.project** (project level; repeatable) – Role of the institution in the project (e.g., {sponsor, lead, collaborating, repository} *what would the others be?*)
 - 2.10.5. creator.person.resource** (resource level, repeatable) – name of the individual(s) responsible for the data collection, analysis, or creation of the digital resource. Enter as: Surname(s), Given Names.
 - 2.10.6. creator.personRole.resource** (resource level; repeatable, controlled) - we should have a controlled list of roles here that we can use to build citations., e.g. {primary author, secondary author, analyst, primary editor, secondary editor, *others?*}, We probably aren't ready to have the full list but should reserve space.?

- 2.10.7. creator.institution.resource** (resource level; repeatable) - name of the institution(s) responsible for the data collection, analysis, or creation of the digital resource, if different than the creator,institution.project.
- 2.10.8. creator.institutionRole.resource** (resource level; repeatable, controlled) - role of the institution in the creation of the resource, if different than the creator,institutionRole.project. *We should develop a controlled list.*
- 2.10.9.** Note the project name itself is recorded in title.project.
- 2.10.10.** dc: An entity primarily responsible for making the resource
- 2.10.11.** ads: List details about the creator(s), compiler(s), funding agencies, or other bodies or people intellectually responsible for the data collection. Information can include name, affiliation, address, phone, fax, email, or URL.
- 2.11.dc:publisher.** Information about the individual or entity that is making the resource available through tDAR. In general one should not be able to register a resource in someone else's name. However there needs to be a way for a resource to be registered, for example under the name of one's employer or institution. I suppose that in the user registration database we could maintain a field the contains who an individual is entitled to register a resource for, after having received authorization from that individual or institution. This is not an immediate concern for the pilot stage. (Note: dc:contributor refers not to the entity that conveys the resource to tDAR but to someone who collaborated with the "dc:creator" in developing the resource. What we want to get at is in publisher is who is making this available.) Store the contactName and contactEmail as pairs.
- 2.11.1. publisher.name** (resource level; required) - The individual or entity making the resource available in tDAR. This could default to the organization name associated with the individual doing the registration.
- 2.11.2. publisher.contactName** (resource level; required, repeatable) - The publisher's representative with respect to this resource. This could default to the user doing the registration. If an individual rather than that individual's institution is making the resource available the publisher name and contact name would be the same. Enter as: Surname(s), Given Names.
- 2.11.3. publisher.contactEmail** (required, repeatable)- The contact's email address.
- 2.11.4.** dc:An entity responsible for making the resource available.
- 2.11.5.** ads: List details about any organization which has published this data
- 2.11.6.** geon: contributor.
- 2.12.dc:date**
- 2.12.1. date.created** – (resource-level) date in a standard form that the resource was created (if known).
- 2.12.2. date.registered** (resource-level, generated) - date the resource was registered in tDAR (internally maintained--not prompted)
- 2.12.3. date.revised** (resource-level, repeatable, generated) - dates the resource was revised in tDAR (internally maintained). This should be a cumulative list.
- 2.12.4.** dc: Date of creation of the resource. A point or period of time associated with an event in the life cycle of the resource.
- 2.12.5.** ads: when the dataset was created, when the archaeological project was carried out, processing dates, or computerisation dates as appropriate.
- 2.13.dc:source** - Please identify the sources from which the resource was derived. If it was derived from one or more published or unpublished works, provide a bibliographic citation; if it represents or documents one or more physical collections of objects or documents, provide the institution name and collection name, accession numbers or other identifying information for the collection.
- 2.13.1. source.citation** (resource level; repeatable) - Provide a bibliographic citation for published or unpublished work that was used as a source for the resource.

- 2.13.2. source.collection** (resource level; repeatable) - Provide the institution or individual holding the source artifact or material collection along with accession numbers or other information identifying the specific collection.
- 2.13.3. dc:** The resource from which the described resource is derived.
- 2.14.dc:relation** – Please identify related information resources. This would include, for example articles reporting on an analysis of this data source. Also please identify any formal comparative collections that have been used in creating the resource.
- 2.14.1. relation.citation** (resource level; repeatable) - Include any number of bibliographic citations regarding the digital resource itself. Citations of written works that represent sources from which the resource is derived should appear under dc:source.
- 2.14.1.1. dc:** A bibliographic reference for the resource.
- 2.14.1.2. geon:** reference
- 2.14.2. relation.comparativeCollection** (resource level; repeatable) - If identifications were made using specific comparative collections, list them here.
- 2.14.3. dc:** A related resource.
- 2.14.4. ads:** if the data collection was derived in whole or in part from published or unpublished sources, whether printed or machine-readable, please give references to the original material. Please give details of where the sources are held and how they are identified there (e.g. by accession number). If the collection is derived from other sources please indicate whether the data represent a complete or partial transcription/copy and the methodology used for its computerisation. Please provide below full references to any publications about or based upon the data collection.
- 3. dc Elements in the Dublin Core Metadata Element Set not Included**
- 3.1. dc:contributor** - *I have not included this because it seems to me too hard to separate unambiguously from creator.*
- 3.1.1. dc:**An entity responsible for making contributions to the resource.
- 4. Terms and Conditions for Registered Users**
- 4.1. Terms and Conditions of Use** (click through on registration)
- 4.2.** Knowledge gained through the efforts of many researchers is shared through this site in order to encourage and facilitate archaeological research. Use of this information is subject only to the minimal conditions of a Creative Commons Attribution License (as adapted here) but applicable whether or not the data provided by this site are legally subject to copyright.
- 4.3.** You are free to copy or distribute this content or to use it in derivative works (e.g., to present / publish an argument based on analyses of these data).
- 4.4.** Under the following conditions:
- 4.4.1.** 1. You must accompany all uses and applications of this content with proper citation and attribution of relevant contributors.
- 4.4.2.** 2. For any re distribution of the raw data, you must clearly cite and attribute relevant contributors, and make clear to others the license terms of this work.
- 4.5.** I do not accept these terms. I accept these terms.
- 4.6** tDAR will not share email addresses with any other organization.