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| Coding of Answers to “Why Digitize Primary Source Materials” | |
| **COMPLETENESS (n = 30)** |  |
| General ( n = 9) | In some cases, there is information in the field notes that is not on the label - making the record of the specimen more complete. |
|  | Collection histories in field notes tell us very important things that may not be on specimen labels |
|  | Richer data than a label on a pin |
|  | The notes form a narrative |
|  | Digitized source materials, when linked to specimen occurrence records, may give critical information about the living organism that is not present on the specimen label. |
|  | Databases are limited in how the data are presented, whereas a source material will show the nature of the data. For instance notes appended to a page, on a sticky note, or scribbled in the margins won't always translate that well to a database. |
|  | Provide supplemental documentation to specimens |
|  | Augmenting primary collection information |
|  | Providing ancillary information not traditionally cataloged in collections - ancillary species, vegetation etc. Verbatim information. |
| Additional information changes the kinds of questions that can be addressed ( n = 6) | Record valuable information and evolving interpretation and understanding of (fill-in-the-blank) |
|  | 1) Collection histories in field notes tell us very important things that may not be on specimen labels; 2) Observations are often in those notes that are not in ledgers/labels that can be converted into needed data; 3) These are fodder more broadly for those interested in history of science. |
|  | Increase access for research and conservation (environmental change over time). |
|  | Allows sharing of primary source material for projects other than what the original intent may have been. |
|  | To tell the "rest of the story" behind data - to describe anomalous values, changes, trends, and observations that are not readily apparent by viewing the data alone. |
|  | Historical data |
| Format allows for new research techniques ( n = 5) | To prepare the material for analysis and manipulation using digital techniques |
|  | Help establish the way to conduct science with data reuse in mind-including context and what is important information to collect |
|  | Advance the state-of-practice to allow for research and innovation |
|  | They likely contain undiscovered knowledge about the organisms and ecologies they describe, and digitization makes computational mining and discovery of this knowledge possible. |
|  | Enhancement and improved usability-- To facilitate collection of crowd sourced enhancements such as transcription and markup, the results of which could support full-text searching or data mining. |
| Provides the context of the collecting event. (n = 10) | To tell the "rest of the story" behind data - to describe anomalous values, changes, trends, and observations that are not readily apparent by viewing the data alone. |
|  | Digitized source materials can give insight into collecting techniques, depth of observation and documentation of particular collectors |
|  | As an additional source of anecdotal data that may not be "hard" values, but does in fact represent useful information such as weather conditions during the collection, thoughts and ideas from the researcher about their reasoning for experimental design, explanations for changes in collection plans, etc. |
|  | Context - with many biological specimens already cataloged, providing access to digitized primary source material can provide context and support for those records. |
|  | Contextualization |
|  | Provide additional information about specimen collecting events; historical context. |
|  | Generally, to make more widely available surrogates of materials may provide evidence for the reconstruction of a past event (considering in this case "event" to include thoughts) |
|  | I think it is important to preserve as much information about a specimen and *why it is in the collection.* |
|  | They may be of biographical or historical significance. |
| **INCREASED ACCESS (n = 9)** |  |
| General (n = 4) | Increase points of access |
|  | Sharing/Accessibility: like specimens in a museum, these materials are hidden from view to most people--except usually even more so! |
|  | Easier/safer access for researchers |
|  | Allow utilization by other/multiple disciplines or industries |
| Allows researchers remote access which reduces costs and time. (n = 5) | May be helpful/convenient to researchers studying specimens. If digitizing a collection is going to replace museum research visits and save money then looking at a digitized specimen should including everything you would see if you visited the specimen in person. |
|  | Digitization of primary source materials improves access to said materials -- especially for groups of users that cannot physically visit the museums or archives that hold them |
|  | Access -- So that those who cannot afford to travel to view the original object may have access to the content |
|  | Accessibility - digital surrogates can be accessed by anyone with an internet connection. This allows researchers from around the world to access materials at no (or comparatively little) cost. |
|  | To create a copy for remote access |
| **PRESERVATION (n = 8)** | Preservation -- To reduce handling of unique materials by providing a way for people to access without handling the original |
|  | Preservation |
|  | Preservation: Long term archiving of materials that may otherwise be fragile and lost. |
|  | Preservation - By providing access to digital surrogates, wear and tear on materials is reduced. This is especially important for materials in fragile states (brittle paper). |
|  | Preservation of source material |
|  | Record information before its lost |
|  | Digitization of primary source materials will help preserve and make publicly available the provenance of biodiversity data in databases like GBIF -- which could make this data more reliable or trustworthy. |
|  | Recording data and information that is unavailable anywhere else as the location may no longer be accessible |
| **INCREASED ACCURACY AND/OR EFFICIENCY (n = 8)** |  |
|  | Allows one to "see" the original document from which the specimen label was made…Allows a researcher/collections specialist to verify data on a specimen label, esp. where one suspects mistakes |
|  | Checking of databased information. |
|  | Digitized source materials such as fieldbooks can be used to create or complete specimen occurrence records in an accurate and efficient manner. |
|  | Efficiency: By databasing field notes and images/etc., it makes databasing specimens go MUCH faster by reducing redundancy and increases accuracy by being tied to the original data. |
|  | Increased efficiency of cataloging |
|  | Digitized source materials can help to pinpoint collection locations more accurately than would be possible from specimen labels alone |
|  | Facilitate and/or improve georeferencing |
|  | Digitization of primary source materials will help preserve and make publicly available the provenance of biodiversity data in databases like GBIF -- which *could make this data more reliable or trustworthy*. |
| **COLLECTION MANAGEMENT (n = 5)** |  |
|  | Helpful to future collections manager as a way to preserve institutional memories. |
|  | Back up copies |
|  | Facilitate cross-referencing of primary source materials with physical objects in different collections (e.g., voucher in collection X, tissue in collection Y) |
|  | Establish relationships to collections |
|  | Facilitate cataloging of specimens, audio recordings, archival materials; capture data not recording on labels associated with physical objects |
| **ENGAGEMENT (n = 2)** |  |
|  | -To engage others in the scientific process and shed light on how data and why data are collected. |
|  | Engagement |
| **OTHER (n = 2)** | It is a non-derived type of information and, though there may still be errors, it will not be from someone else transcribing them. |
|  | Repatriation of data to local communities and developing countries |