Georeferencing for Paleo Listening Session: Summary of Challenges
January 2020

Prompt	Participant Response	Count
What are your biggest challenges **creating** georeference data for your paleo specimens?	lack of up-to-date [fine enough resolution or simply access to] geologic layers accessible digitally (as shapefiles)	11
	when I have a locality number from another institution but no text description of where that locality is	11
	lack of knowledge about local place names for collecting sites	10
	Names changing based on which European country was in control of the area at the time the specimen was collected vs present names	9
	Finding Resouces (time, funding, etc.) to georeference	7
	Lack of guidelines for how to treat administrative districts in foreign countries (e.g., France, Germany) with respect to dwc fields	5
	Non-digitized Resources (e.g. paper maps) that need geo-rectification	5
	Time. Many of our specimens have locality data down to county level or something like 3 miles south of Joilet. In the Midwest there are often just a few outcrops in a county. it would be awesome to have a resource with outcrops already mapped. I think Shanan Peters was working on something like this.	4
	Standards (does ours match others)	3
	Using geolocate to georeference Section, Township, and Range data. 1. the error radius provided doesn't encompass the entire section; 2. the point given doesn't always appear to be in the actual center of the section. Maybe this is a werid artifact? 3. Can't georef to a quarter section.	3
	Geologic Map layer in geolocate is not fully sufficient to georeference in some cases	2
	Geolocate and my browser settings do not get along and I can't find documentation at Geolocate to determine what i need to change regarding browser setting to make it work	1
What are your biggest challenges **managing** georeference data in your collection's database?	Dealing with variably formated legacy township and range data	10
	my georeferencing workflow doesn't talk to my CMS so I have to copy-paste coordinates and metadata into the CMS	6
	Storage for Digitized Geo-rectified Resources (e.g. from paper maps)	5
	My database can manage localities in a one-to-many way, BUT there is no way to "de-duplicate" existing identical records	3
	my database does not manage localities in a one-to-many way so for every specimen record I have to copy the locality information, including the georeferencing data	2
	I don't have any of the georeferencing metadata fields (like dwc:georeferencedBy, dwc:coordinateUncertainty) in my database, only a place for coordinates	1
	I can't keep track of verbatim coordinates	1
What are your biggest challenges **sharing** georeference data with aggregators like GBIF/iDigBio?	Knowing what level to share at (due to institutional policies or laws (e.g. specimens come from federal land)	8
	I don't have a good way to mask coordinates so that the fossil localities are safe	7
	Knowing what level to share at/to protect land of private citizens who gave only a particular researcher or institution permission to collect	7
	Lack of control of our IPT feed; we no longer have technical support or knowledge needed to add necessary georeference data fields.	4
	My collecting event information, including locality descriptions and georeferences, lives in a separate database than my specimen record information and I have to knit these two sources together every time I want to share data	3
	The concern for who is using the data and for what purpose as well as a concern for how the data might be manipulated	1
What are your biggest challenges **using** georeference data in your research?	Coordinate data does not include any metadata, like uncertainty	9
	Legacy records that do not appear to meet "current" georeferencing standards and perceptions but that ARE STILL IMPORTANT to help document occurance or absence of fossils in given stratigrapghy and/or age	7
	Scale of data (e.g. was it georeferenced on a 7.5 topo or a county map) as it it important in calculating error & not always recorded	7
	Coordinates for many legacy records in iDigBio and GBIF are garbage. Because of their vintage, most georerefencing fields are not completed such that these data are difficult to filter on the basis of things like error radius or georeferencing protocol, or date. Most legacy records belong to few institutions and so could be fairly efficiently corrected if there were interest. It should be noted that georeferencing standards and perceptions of research usability have changed of time.	2
Other	It would be useful to better understand how our different user bases may or may not use georeferenced paleo data.	5
	I usually plot my localities in an ARCGIS app installed on my desktop that I generate maps from, for curator research (Biofacies maps, for instance marking shorelines by plotting all localities from say "a certain biostrat zone from the Mesozoic" for instance). These maps are currently stored/backed up on ARCGIS owned servers. This is cause of great concern to me, I had queried our IT department about hosting the maps on our museum server, but it turns out that the institution doesn't have their own ARCGIS server. I think this is very important that we should have our own server to host the maps we generate using our georeferenced data, but the museum is not going to purchase a $30,000 server for a person of one. So, the question is: Does iDigBio host such maps? Where can one host such maps that are generated for research and can be beneficial to researchers. This is also about protecting confidential locality data. So may of us plot our localities on google earth, or share docs. on google etc. Free online apps used on public spaces generate metadata, that are backed up on several servers around the world and become a permanent record. Perhaps, we should first consider having our own server where large datasets can be backed up, stored, shared, etc. whether it is ARCGIS or some other free online georeferencing tool that we are using.	1