

Georeferencing Best Practices at the Yale Peabody Museum
Georeferencing Working Group
November 2010

This document provides best practices for recording georeference data in KE EMu that are to be followed by all curatorial Divisions at YPM. Divisions may also require specialized information that is unique to that discipline, for which community best practices should also be followed.

Guidelines for recording georeferences when in the field

Be sure that all staff, students, graduate students, postdocs and affiliates know what locality information is required for specimens and other material being deposited at the museum. The basic protocol is to be thorough, be careful, and be neat.

When recording locality data in the field, fixed reference points and context must be used. For example “hills outside of Cincinnati” in 1925 indicates an area that presently is well within the city limits. Even reference points considered “fixed” in the past (e.g., post offices, town halls) may be subject to changes in location.

GPS measurements must include the *datum* (this can be found in the GPS menu) and the *uncertainty*. GPS coordinates are best received as decimal latitude/longitude pairs. Note that the default from GPS units is often in UTM's, not decimal lat/long (UTM's also require a known datum to be useful).

Guidelines for recording georeferences in KE EMu

EMu Lat/Long tab **required** fields:

1. Latitude and longitude: enter the native value either in the Decimal or DMS fields (EMu will convert). Use negative coordinates for western longitudes and for southern latitudes.
2. Determiner methodology: this is a lookup list from which you can choose values (i.e., from Google Earth, from Topozone, from GPS unit).
3. Radius numeric: This defines the area of uncertainty in your latitude and longitude values. It is always expressed in *meters*, and represents the “radius of a circle drawn from the stated lat/long” for which there is a 100% probability that the actual lat/lon lies within that circle. The “uncertainty” value from a GPS reading is the (minimum) radius numeric for that reading.
4. Determiner: the person or party who determined the lat/long coordinates.
5. Date: the date on which the coordinates were obtained.
6. Datum: the most common values are generally WGS84 and NAD27. Datum is provided by GPS units and can be found on all topographic maps from all sources.

EMu Lat/Long tab **recommended** fields:

1. Description: (whenever applicable) relevant verbatim notes that establish context.
2. Radius verbatim: free-text field which can be used to clarify the radius numeric.

EMu Mapping tab fields that are **not recommended**:

1. UTM (Universal Transverse Mercator)
2. TRS (US Public Land System Survey)