Description of Tables:

**Reference**: Table of bibliographic references.

* Citation\_Key (Primary key) : a unique identifier for each entry.
* Authors: List of authors, separated by a space.
* Published: Boolean to describe whether the data are published.
* Journal: Journal of publication
* Year: Year of publication
* Volume: Obvious
* Issue: Obvious
* Pages: Pages
* Title: Obvious
* DOI: Obvious

**Sites**: Table that stores the details about each site. A site corresponds to distinct place. While being different in terms of locations and/or archives, several sites can be part of the same ‘group’, for instance SWP-3-1 and SWP-1-1 are different sites while being part of the SWP group. Similarly, when many cores are taken from a lake (*e.g.* the large East African lakes), the name of the site corresponds to the name of the core and the group is the name of the lake.

* Site\_ID (Primary key): A unique identifier for each site.
* Site\_Name: Specific name of the site (*e.g.* SWP-3-1 and SWP-1-1). Each site has a unique ID.
* Group\_Name: General name of the site (*e.g.* SWP or Lake Tanganyika). Can be the same as Site\_Name.
* Lon: Longitude of the site (in decimal degrees)
* Lat: Latitude of the site (in decimal degrees)
* Archive: Archive of the record
* Region: Region of system the site belongs to (*e.g.* Benguela Upwelling System, Kalahari)
* Country: Country of the site
* Altitude: Altitude of the site
* Terrestrial: Boolean to describe whether the site is terrestrial or marine.

**Chronology**: Table that stores different chronologies with all sort of information (uncertainties, calibration curve, model used).

* Chrono\_ID (Primary key): A unique identifier for each chronology.
* Citation\_Key (Foreign key): The reference to the original publication.
* Chronology: A JSON object with the data (the ‘best’ estimate)
* Uncertainties: A JSON object with the uncertainties (confidence interval or complete distribution)
* Model: The model used to fit the model (Bacon, Clam, Polynomials)
* CalibCurve: The calibration curve used to fit the chronology.

**Dataset**: A dataset object is linked to one site, one study, one chronology and one proxy. If two proxies are measured from the same core, this requires two different entries in this table.

* Study\_ID (Primary key): A unique identifier for each triplet ‘Site\_ID’ x ‘Citation\_Key’ x ‘Proxy’
* Site\_ID (Foreign key): The reference of the site of the dataset.
* Citation\_Key (Foreign key): The reference to the publication of the dataset.
* Chrono\_ID (Foreign key): A reference to a specific chronology from the Chronology table.
* Proxy: The nature of the proxy
* Dataset: A JSON object that stores the data themselves.

**C14**: Table that stores all the C14 dates. Dates must remain uncalibrated.

* LabCode (Primary key): A unique identifier
* Site\_ID (Foreign key): Reference to the site.
* Citation\_Key (Foreign key): Reference to the original publication.
* Age: Measured C14 age
* Error: Error associated to the measurement. One standard deviation.
* Year: Year of measurement
* Material: Dated material

Example with one midden from Seweweekspoort

(Chase et al., 2013)

**Reference**:

* Citation\_Key (Primary key) :Chase\_etal\_2013
* Authors: Chase Boom Carr Meadows Reimer.
* Published:True
* Journal: Quaternary Science Reviews
* Year: 2013
* Volume: 82
* Issue: NULL
* Pages: 199-205
* Title: Holocene climate change in southernmost South Africa: rock hyrax moddens record shifts in the southern westerlies
* DOI: 10.1016/j.quascirev.2013.10.018

**Sites**:

* Site\_ID (Primary key): Automatically generated integer.
* Site\_Name: SWP-1-1.
* Group\_Name: Seweweekspoort
* Lon: 21.4031499
* Lat: -33.40917716
* Archive: Hyrax midden
* Region: NULL
* Country: South Africa
* Altitude: 1100
* Terrestrial: True

**Chronology**:

* Chrono\_ID (Primary key): Automatically generated integer.
* Citation\_Key (Foreign key): Chase\_etal\_2013
* Chronology: A JSON object with the ‘best’ estimate
* Uncertainties: A JSON object with the 95% confidence interval
* Model: Clam
* CalibCurve: SHCal04

**Dataset**:

* Study\_ID (Primary key): Automatically generated integer.
* Site\_ID (Foreign key): The ID automatically generated for SWP-1-1
* Citation\_Key (Foreign key): Chase\_etal\_2013
* Chrono\_ID (Foreign key): The ID automatically generated for SWP-1-1 and Chase\_etal\_2013
* Proxy: d15N
* Dataset: A JSON object

**C14**:

* LabCode (Primary key): UBA-16698
* Site\_ID (Foreign key): The ID automatically generated for SWP-1-1
* Citation\_Key (Foreign key): Chase\_etal\_2013
* Age: 3067
* Error: 32
* Year: 2012
* Material: bulk hyrax midden