

Biological records geo-referencing

Thus, the necessity arises from:

To establish methodologies for the capture and organization of the information

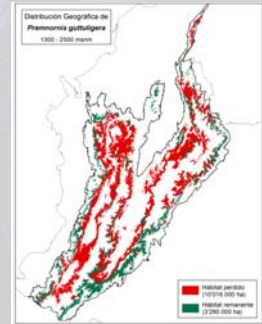


To develop protocols and standards for quality and geographic data capture

Biological records geo-referencing

With available information with the highest levels of precision the capacity to investigation could increase

These data can be [shared](#), be [interchanged](#) and [used for multiple purposes](#), it allows to [extend the knowledge](#)



Items

Biological records geo-referencing

Methods of geo-referencing

Standard for geo-referencing

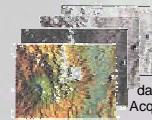
Gazetteer of Biological records localities

Results

Methods of geo-referencing



Information Organization



data basic Acquisition



geo-referencing methodologies Development



handling data and storage

Methods of geo-referencing

1. Historical biological records

Debug and standardizing the localities names

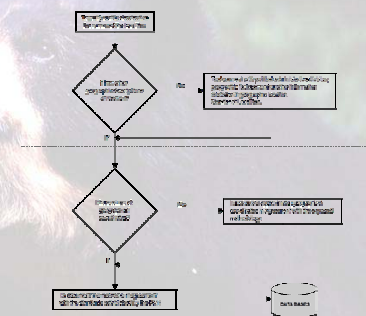
Geo-referencing the biological records, according with precision level

Metadata documentation

Load into the data base of the localities digital gazetteer

Methods of geo-referencing

Flow chart



Methods of geo-referencing

2. Geo-referencing of biological records in field

Identification and preparation of the cartography in the sampling zone

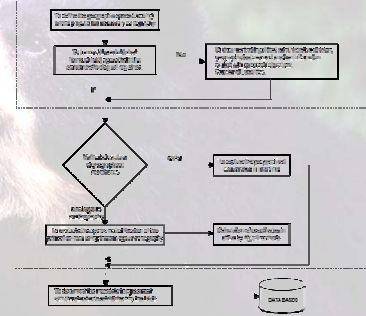
Method for the capture of coordinates: capture through the GPS
capture through the analogue cartography

Metadata documentation

Loading de localities digital gazetteer into the data base

Methods of geo-referencing

Flow chart



Methods of geo-referencing

1. Quality control of the geo-referencing

Sample selection

Locality revision

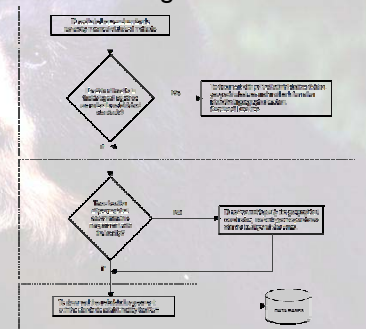
Revision of Geographical coordinates

Metadata documentation

Loading into the database

Methods of geo-referencing

Flow chart



Items

[Biological records geo-referencing](#)

[Methods of geo-referencing](#)

[Standard for geo-referencing](#)

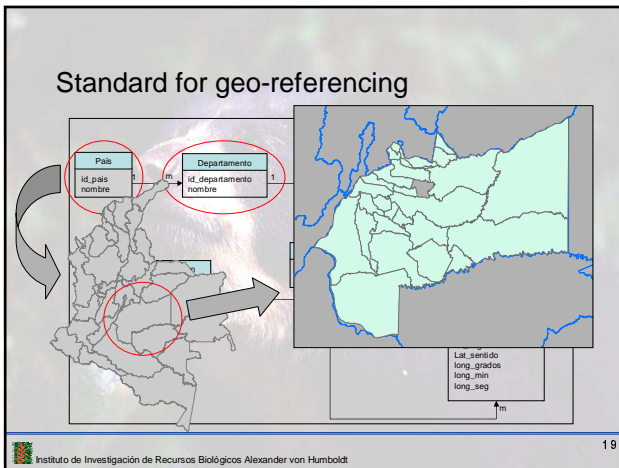
[Gazetteer of Biological records localities](#)

[Results](#)

Standard for geo-referencing

The creation of the standard was a work that begins with the construction of a conceptual model. This representation is based on geo-referencing methods.

Different kinds of entities, attributes and relationships was identified in agreement with the perspective that each user has on the handling of the data, its nature and its use through different application areas.



- ### Items
- Biological records geo-referencing
 - Methods of geo-referencing
 - Standard for geo-referencing
 - Gazetteer of Biological records localities
 - Results
- Instituto de Investigación de Recursos Biológicos Alexander von Humboldt 20

Gazetteer of Biological Records localities

Geographical Gazetteer: is an "geographical index or dictionary". Are simply assemblages of alphabetically-ordered listings of places or physical/cultural features. (Columbia Gazetteer of the World Online <http://www.columbiagazetteer.org/>)

Digital gazetteer of localities for biological records: is a dictionary or index of localities or collect places, where any type of biological record are capture. It contains coordinates and a description of the location

Instituto de Investigación de Recursos Biológicos Alexander von Humboldt 21

Gazetteer of Biological Records localities

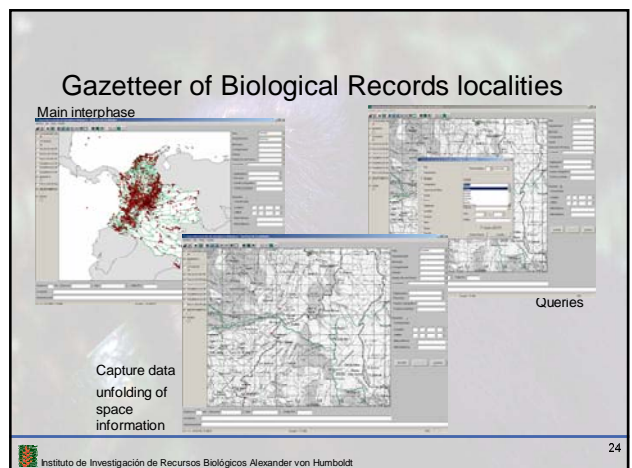
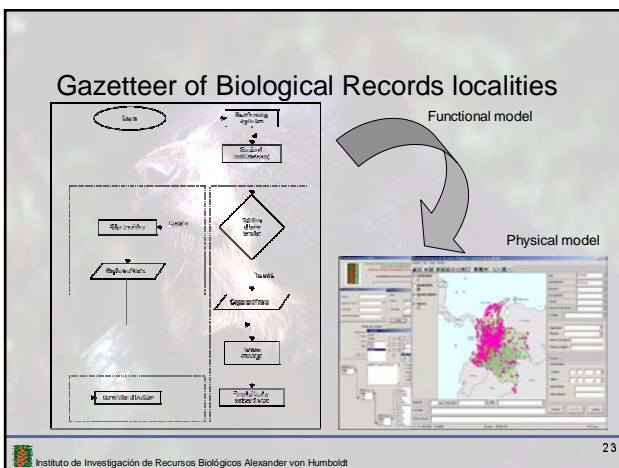
The gazetteers of localities are useful tools for the [handling of the geographic information](#)

They allow [to collect data of toponymy](#) in a clear and precise way

They allow [to organize, document and standardize](#) the information

It allows the [costs reduction](#), duplicity of efforts and the [interchange of data](#), thus the quality of the information becomes a decisive factor for its use

Instituto de Investigación de Recursos Biológicos Alexander von Humboldt 22



Gazetteer of Biological Records localities

Spatial Queries

Reports

Instituto de Investigación de Recursos Biológicos Alexander von Humboldt

25

Items

- Biological records geo-referencing
- Methods of geo-referencing
- Standard for geo-referencing
- Gazetteer of Biological records localities

Results

Instituto de Investigación de Recursos Biológicos Alexander von Humboldt

26

Results

An implemented methodology and a standard for capture of localities

An application and data base implemented, in where store to the compiled localities "Gazetteer"

Instituto de Investigación de Recursos Biológicos Alexander von Humboldt

27

Results

The development of the standard, allows to articulate the biological records with the Data Base of gazetteer to harness the analyses of:

- Determination of biological species
- To make models and distribution patterns of species
- To detect empties of biological information

Collection es 2003

Instituto de Investigación de Recursos Biológicos Alexander von Humboldt

28

Results

Red book of plants

Red book of birds

Empties of conservation

Instituto de Investigación de Recursos Biológicos Alexander von Humboldt

29

The future?

The design of new versions of the standard (and with it, the application) in order to accomplish with other user requirements

Increase the information analysis: the goal is to be able to made analysis more specialized such as biogeographical distribution and species distribution models. In order to increase the knowledge about the biological resources

Utilize data with models to develop scenarios for decision makers

Georeferencing in line

Instituto de Investigación de Recursos Biológicos Alexander von Humboldt

30

