



# GEBCO Gazetteer of Undersea Feature Names Enhancement Project: Part I

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# Background



- The GEBCO Gazetteer contains over 3,500 undersea feature names and is the internationally recognized authority on undersea feature names
- Historically managed by IHB with custom software:
  - No longer supported
  - Not geospatially enabled
- IHO DCDB migrated Gazetteer to Oracle tables
- Previous partial reviews:
  - BODC (2008-Geometry and hemisphere issues)
  - AWI (2008-Composite Gazetteer on Antarctica)
  - Yas Ohara (2011-Comparison of data across multiple versions)



# Project Objectives



- **Part I:**

- Identify and correct errors present in the 2011 version of the Excel Gazetteer spreadsheet and enhance/correct a limited number of feature geometries
- Make the database Gazetteer consistent with the latest version of the Excel Gazetteer
- Database tables are now the most accurate Gazetteer information available

- **Part II:**

- Correct remaining errors and inconsistencies in the Gazetteer spreadsheet and Oracle database tables
- Further enhance/correct existing feature geometries and add additional feature geometries
- Create web service to make the Gazetteer available to the public on the GEBCO website with user friendly interface



# Procedures



- **General Database Corrections:**

- Grammatical, spelling, capitalization, spacing and punctuation errors
- Attribute information (e.g., accreditation date)
- Hemisphere information
- Missing and extraneous names

- **General Database Enhancements:**

- Duplicate features and other database/spreadsheet inconsistencies noted and corrected
- Addition of secondary geometry fields (e.g., define a seamount as a seamount and a polygon)



# Procedures cont.



- **Geometry Corrections/Updates:**
  - 198 features enhanced with no changes to end points
  - 50 features with proposed geometry changes to be reviewed by SCUFN members
- **Project Part I Report:**
  - Detailed changes and identified issues
  - Links to viewers for reviewing proposed geometry changes
  - List of outstanding questions identified
- **Public Interface in development**



# Resources



- 2008 BODC report
  - Used largely for geometry updates
  - Also reported duplicate features, text errors, incorrect hemisphere information, and other miscellaneous issues
- Proposals by Ralf Krockner (AWI) for features included in the SCAR Composite Gazetteer on Antarctica
- SCUFN meeting reports
- Original feature proposals



# Text and General Field Updates



- Grammatical errors in “History” and “Remarks” fields
- Names in database “Proposer” and “Discoverer” tables cleaned and consolidated to be as simple as possible
- Accreditations were populated incorrectly throughout the database; updates were made to match the 2011 Excel spreadsheet
- Anomalous features corrected due to errors in SCUFN reports and confirmed by Michel Huet (56 such features)
  - e.g., action to delete “Adare Seamounts” accidentally omitted when the feature was changed to “East Adare Ridge” and “West Adare Ridge” at SCUFN21 (2008)



# Geometry Improvements



- Endpoints preserved, points added to better define shape
  - Also re-ordering of coordinates where necessary
- Many of these changes suggested by BODC
- Changes approved by Michel Huet (IHB)
- 198 features updated in the database





# Mid-Atlantic Ridge





# Other Geometry Changes



- Involves change in primary geometry
  - e.g., point -> line, point -> polygon, change of point location
  - 50 such features
- Many changes to Feature Coordinates proposed by Ralf Krockner, AWI (SCUFN21-09.2A and SCUFN21-09.2A: Comparison between the GEBCO Gazetteer and the SCAR Composite Gazetteer on Antarctica (CGA))
- Requires approval by SCUFN Sub-Committee
  - Geometry changes are currently preserved in “Reserve” state in the database
  - Links for feature viewing provided in NGDC report



# Chile Ridge





# Features Requiring Review



- 144 features (58 of which are defined by NGDC as “high priority”) have geometries requiring additional review and revision by SCUFN
  - No suggested changes for these features or suggested changes look incorrect
  - “High priority” features have serious geometry errors or require complete geometry re-definition
  - “Low priority” features have only slight errors (e.g., a seamount whose defined location is off from the summit)
- Almost one third of features (1045 total) do not have the appropriate geometry to best define their shape
  - e.g., ridges defined by a single point or an abyssal plain defined by a line
  - Part II of this project will address this issue
- Other misc. questions - duplicate features, etc. (26)

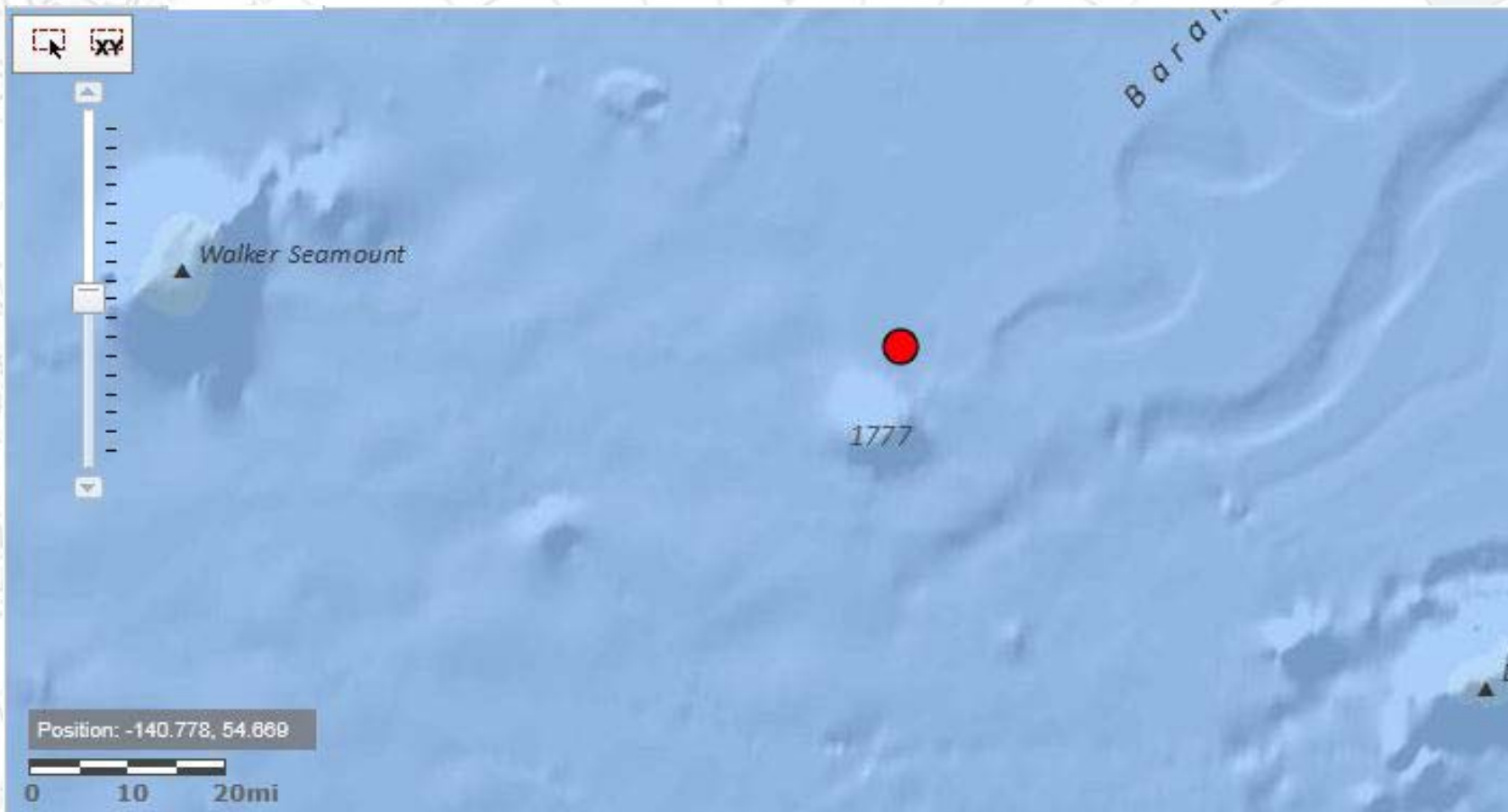


# High Priority – Dolmah Seamount





# Low Priority – Brown Seamount





# Secondary Geometries



- Allows for geographic definition using multiple shapes
  - e.g., banks and seamounts defined as points and polygons
- Added as a field in the feature tables
- Part I only added secondary geometries into new features
- Adding more secondary geometries will be a component of Part II of the review
- User interface will eventually show both geometries when zooming



# Next Steps for Part II Completion



- Requirements:
  - GEBCO and SCUFN commitment to finish this project
  - Resources/funding
- Set up a Google Docs page to discuss proposed geometry changes intersessionally among SCUFN members
- Develop management interface to database
- Post the Gazetteer as a web service accessible from the GEBCO website





# Public Interface



**Undersea Features Gazetteer - Mozilla Firefox**

File Edit View History Bookmarks Tools Help

http://www.ngdc.noaa.gov/gazetteer/

Most Visited Getting Started Latest Headlines

SCUFN SCUFN24-07... Current local... SCUFN SCUFN22 Terms and D... Under... Terms and D... Messenger E... https://1.htm Terms and D... CHESEAPEA...

**GEBCO**  
General Bathymetric Chart of the Oceans

General Bathymetric Chart of the Oceans

Menu Search Index

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Accreditation Authority

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Updated Since

BoundingBox

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Terrain Political Ocean More...

EUROPE ASIA NORTH PACIFIC OCEAN PACIFIC OCEAN NORTH AMERICA AFRICA INDIAN

Position: -9 383, 72.086

0 1000 2000mi

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**GEBCO**  
General Bathymetric Chart of the Oceans

General Bathymetric Chart of the Oceans

Menu Search Index

**Name**

- east Tiberian rise
- Eastward Knoll
- Eauripik Rise
- Ebro Escarpment
- Echo Bank
- Eclipse Seamount
- Ecuador Trench
- Edateku Seamount
- Edoras Bank
- Eel Canyon
- Eendracht Seamounts
- Eendracht Seamounts
- Egadi Valley
- Egas Moniz Hills
- Egeria Fracture Zone
- Eggvin Shoal
- Egiazarov Trough
- Eickelberg Seamount
- Eickelberg Ridge
- Eihuku Seamount
- Eirik Ridge
- Eistla Seamount

Details Map

Terrain Political Ocean More...

Basin Bay of Biscay Iberian Basin Corso-Ligurian Basin Tyrrhenian Sea Adriatic Sea Ionian

Spain Madrid Lisbon Algiers

Position: -18.141, 38.174

0 150 300mi

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Thank You