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SECOND UNITED NATIONS CONFERENCE ON THE STANDARDIZATION OF GEOGRAPHICAL NAMES London, 10-31 May 1972

Item 14 (c) of the provisional agenda

NAMES OF FEATURES BEYOND A SINGLE SOVEREIGNTY

UNDERSEA FEATURES

#### Addendum

Definitions of undersea terms 1/

Paper submitted by the Government of Canada\*

The reference numbers in this list are the same as those in the accompanying somewhat amended Glossary of Definitions of Undersea Terms with special reference to the following:

- 8a. GEBCO list of Nomenclature of Ocean Bottom Features published in the January, 1971 International Hydrographic Review (the Journal of the International Hydrographic Bureau). The text describes this as the list approved by the GEBCO Committee in Monaco in May 1964, coupled with a new French text prepared under the guidance of André Gougenheim, Chairman of the GEBCO Committee. It is assumed that this supersedes the previous GEBCO list, Reference 8.
- 12a. List of approved Designations in the Undersea Gazetteer published by the United States Board on Geographic Names (the BGN). It is assumed that this supersedes the previous BGN list, Reference 12.
- D/23-9-71 Decision of the Subcommittee on Undersea Features, 23 September 1971.
- R/30-11-71 Recommendation of the working group convened 30 November 1971 following a meeting of the Subcommittee on Undersea Features.

72-05169

<sup>\*</sup> Prepared by G.F. Delaney, Chief, Toponymy Division, Department of Energy, Mines and Resources; and Executive Secretary of the Canadian Permanent Committee on Geographical Names.

<sup>1/</sup> Including a number approved by the Subcommittee on Undersea Features, 23 September 1971, and a large number now recommended for the consideration of the Subcommittee.

#### Explanation of symbols

- # Indicates a definition given in this list which differs from that in the latest GEBCO list, Reference 8a above. The differences may be major or minor and they include cases where a synonym in the GEBCO list is being recommended for deletion.
- \* Indicates differences with respect to the use or non-use of synonyms in relation to the source from which the definition was taken, particularly Reference 8a, the GEBCO list.
- Indicates a rarely-used term. In each case, the term is defined in the BGN Undersea Gazetteer but does not appear as a designation in the Gazetteer because no names of such features had been approved by the BGN to the date of publication.
- + Indicates a suggested new term not included in current international lists including the GEBCO, Reference 8a, and the BGN Undersea Gazetteer, Reference 12a.

### INDEX OF REFERENCE SOURCES

- 1. International Committee on the Nomenclature of Ocean Bottom Features.

  Minutes of meeting at the International Hydrographic Bureau, Monaco,
  22 September 1952
- 2. Wiseman and Ovey. Deep-Sea Fesearch, 1953, vol. 1, pp. 11 to 16 (based on 1 above)
- 3. General Principles in Naming New Small Features.
  International Committee on the Nomenclature of Ocean Bottom Features,
  Monaco, 9-10 September 1954
- 4. Wiseman and Ovey. General Principles. Deep-Sea Research, 1955, vol. 2
- 5. Bathymetric Nomenclature adopted by the United States Board on Geographic Names (BGN), 19 July 1960
- 6. IHB Circular Letter 10, 1963: COMPARISON OF NOMENCLATURE:
  - (a) Of the International Committee on Nomenclature of the International Association of Physical Oceanographers (IAPO). Committee dissolved at Toronto in 1957 (Same as 1 and 2 above)
  - (b) Of the United States Board on Geographic Names, adopted at 62nd meeting, 19 July 1960 (Ref. 5 above)
- 7. Advisory Committee on Undersea Features of the United States Board on Geographic Names: Terms and Definitions adopted 27 June 1963
- 8. Nomenclature of Ocean Bottom Features: Based on a meeting of the Committee for the General Bathymetric Chart of the Oceans (the GEBCO Committee in May 1964)
- 8a. GEBCO Nomenclature as published in International Hydrographic Review, January 1971
- 9. CB Order 150: Names of Ocean-bed Features. Admiralty, 1969
- 10. Naming of Ocean-bed Features: Hydrographer of the Navy, London, July 1969. (This is apparently a selection from CB Order 150 above, with some minor differences)
- 11. Rhodes W. Fairbridge. Encyclopedia of Oceanography, 1969 (Definitions in 14)
- 12. Frederick M. Edvalson: Sea Floor Names in Principle and Practice, 1965.

  These terms and definitions are understood to have been first established by the U.S. Board on Geographic Names and to have been accepted in 1964 by the GEBCO Advisory Committee. Some difference may be noted, however, between references 8, 8a, 12 and 12a all based on the list accepted in 1964 by GEBCO

- 12a. List of definitions in U.S. Undersea Gazetter No. 111, published June 1969 by the Board on Geographic Names
- 13. Translations: Terminology of Submarine Relief. This was published in 1932 by the International Hydrographic Bureau. Several of the translations may not now be in use
- 14. Glossary of definitions of undersea terms based on Reference sources 1 to 12a above; compiled by J.C. Gillis of the Canadian Hydrographic Service

## RECOMMENDED DEFINITIONS FOR CONSIDERATION BY THE SUB-COMMITTEE ON UNDERSEA FEATURES

	TERM	PROPOSED DEFINITION OR NOTE	REFERENCE
	Abyssal Gap	Not recommended. See Gap	D/23-9-71
#	Abyssal Plain	Synonym for Plain	D/23-9-71
	Alee Basin	Not recommended. Use Basin	D/23-9-71
	Alluvial Apron	Not recommended	D/23-9-71
	Apron	Not recommended. See Archipelagic Apron	D/23-9-71
#	Arch	Not recommended. This term is given as a synonym for Rise in 8a and 12. Arch is used as a geological term; for example: Boothia Arch in the Arctic	D/23-9-71
<b>⊕</b>	Archipelagic Apron	A gentle slope with a generally smooth surface on the sea floor, particularly found around groups of islands or Seamounts	D/23-9-71 8, 8a, 12, 12a
		Another term for which an almost identical definition has been used is Continental Rise, a similar type of feature found on the seaward side of a Continental Slope	
#:	Bank	An area of positive relief generally occurring on a Continental (or island) Shelf	D/23-9-71
#	Basin	A closed depression of the sea floor more or less equidimensional in form and of variable extent	D/23-9-71
		The above is the definition in 8, 8a, 12 and 12a with the word "closed" added. There is general agreement that the presence of a Sill is an important feature of a Basin and this is the reason for the inclusion of the word "closed"	

	TERM	PROPOSED DEFINITION OR NOTE	REFERENCE
	Bench	Not recommended. See Terrace	D/23-9-71
	Borderland	Not recommended. See Continental Borderland	D/23-9-71
	Borderland Slope	Not recommended. Not used in any recent international list	D/23-9-71
#	Break	Not recommended. See Shelf Edge	D/23-9-71
	Caldron	Not recommended. Seems to refer to a particular type of Basin	D/23-9-71
+	Cap	Not recommended as an undersea generic term. It is used in the name Flemish Cap but the reason is lost in history. It has been suggested that when the Flemish sailors reached it on their return voyages, they may have said they had set their caps for home. The feature is regarded as part of the Continental Shelf. If used elsewhere, the term might apply to the top of an elevation as distinguished from the entire elevation	
#	Canyon	A relatively narrow, deep depression with steep sides, the bottom of which has a continuous slope	D/23-9-71
	Chain	Not recommended. See Seamount Chain	D/23-9-71
#	Channel	Not recommended. See Trough	D/23-9-71
	Cone	Not recommended. Not a synonym for Fan as apparently indicated in one list, although 8a gives Cône as the French form for Fan	
<b>⊕</b>	Continental Borderland	A region adjacent to a continent normally occupied by or bordering a Continental Shelf, that is highly irregular with depths well in excess of those typical of a Continental Shelf	8, 8a, 12, 12a

	TERM		PROPOSED DEFINITION OR NOTE	REFERENCE
+	Continental Margin		The whole edge of the continent including some of the shoreline right down to the deep ocean depths	Suggested definition
⊕#	Continental Rise		A gentle slope rising toward the foot of the Continental Slope	Suggested
			The definition in 8a, 12 and 12a is: A gentle slope with a generally smooth surface, rising toward the foot of the Continental Slope	
			Fecent information indicates that some Continental Rises may be not at all smooth. Note our comment on the similarity of this feature to Archipelagic Apron. It is possible the reference to a generally smooth surface should be deleted from that term also. Pending further information, it has been retained.	
⊕#	Continental (or island) Shelf		A zone adjacent to a continent (or around an island) and extending from the low water line to the depth at which there is usually a marked increase of slope to greater depth	8, 8a, 12, 12a
#	Continental (or island) Slope	v	The declivity seaward from a Shelf Edge to the beginning of a Continental Rise or to the point where there is a general reduction in slope	Suggested
			The above is considered clearer than the definition in 8a, 12 and 12a: The declivity seaward from a Shelf Edge into greater depth	
	Continental Terrace		Not recommended. This term has been used for the zone around the continents extending from the low water line to the base of the Continental Slope, but it is not in current lists. See Continental	

Margin

Depression

PROPOSED DEFINITION OR NOTE REFERENCE TERM Cordillera An entire mountainous system R/30-11-71 including all the subordinate Seamount Groups, interior Plateaus, and Basins Note: It is recommended that this term continue to be used only where it is already established. It is believed all features fitting this description have already been discovered. No effort should be made to change names such as Mid-Atlantic Ridge (Cordillera). There are four Cordilleras named in the EGN Undersea Gazetteer: Albatross Cordillera, Alpha Cordillera, Indian Cordillera and Nansen Cordillera. A Canadian chart shows one of these as Alpha Ridge and it is sometimes known as Alpha Rise Not recommended. Use Basin Crater Not recommended. Probably would Crest refer to the top of a Ridge or possibly of a Seamount Deep Not recommended. Use more definitive term Deep Sea Not recommended. Use Trough Channel Not recommended. Use Fan Deep Sea Cone Not recommended except where Deep Sea Fan already established; otherwise use Fan Not recommended. Use Terrace Deep Sea Terrace Deposits of sediments found R/30-11-71 Delta in the mouth of a river, in the ocean or a lake, which results in progradation of the shoreline

Not recommended. Use more

definitive term

	TERM	PROPOSED DEFINITION OR NOTE	REFERENCE
	Depth	Not recommended as an undersea term	
+	<u>Dome</u>	A roughly symmetrical upfold, the beds dipping in all directions more or less equally from a point	R/30-11-71
	Edge	Not recommended. Use Shelf Edge	
	Escarpment (Scarp)	An elongated and comparatively steep slope of the sea floor, separating flat or gently sloping areas	8*, 8a*, 12*, 12a*
		*Sea Scarp is also used as a synonym in 8, 8a, and 12. Reference 12a, the USBGN Undersea Gazetteer, uses no synonyms whatever, for any term. A quick examination of the Gazetteer appeared to indicate that Escarpment alone is used by the U.S. Board both as a name and as a designation	
	<u>Fan</u>	A gently sloping, fan-shaped feature, normally located near the lower termination of a canyon	8a, 12a
		Fairbridge uses the term Deep Sea Fan or Cone (with Cône Profond as the French version) but Cone is not given as a synonym in any other list in this study, including 8a which gives Cône as the French term for Fan. It had been listed as a synonym in the previous version of these "Proposed Definitions", but Bedford says Cone is definitely not synonymous with Fan	
#	Fracture Zone	An extensive linear zone of irregular topography of the sea floor, presumably produced by displacement in the earth's crust, and usually characterized by large Seamounts, steep-sided or asymmetrical Ridges, Troughs, or Escarpments	Suggested
		8a and 12 give: A linear extensive zone of unusually irregular topography of the sea floor, characterized by large Seamounts, steep-sided or asymmetrical Ridges, Troughs, or Escarpments	

	TERM	PROPOSED DEFINITION OR NOTE	REFERENCE
+	Furrow	A micro relief feature appearing as a long and narrow indentation of the sea floor, resulting from natural or artificial plowing action	R/30-11-71
		Note: The term micro relief is used here to refer to features too small to show up in the contouring on most charts. Fairbridge (ref. 11) uses Furrow for another type of feature, giving the definition: Valley or canal-like incision of the Shelf-edge, more or less normal to the latter	
20	Gap	A break in a Ridge or Rise	8, 8a, 9, 12
	Group	Not recommended. Use Seamount Group	
#	Gully	A small Valley	Suggested
		The definition in 8, 8a and 12 is: Small Valleys cut into soft sediments on the Continental Shelf or Continental Slope. It is suggested that Gully would be an appropriate term wherever small Valleys might occur. Gully is not listed in 12a	
	Guyot	Synonym for Tablemount. It is also given in 8a as the French form of Tablemount. Fairbridge says it was named by Hess after Arnold Guyot	
#	Hill	Not recommended although it is given in 8, 8a and 12 as a synonym for Knoll	
	<u>Hole</u>	Not recommended	
	Island Shelf	See definition coupled with Continental Shelf	

	1	1000 11	
	TERM	PROPOSED DEFINITION OR NOTE	REFERENCE
	Island Slope	See definition coupled with Continental Slope	
<b>:</b> #:	<u>Knoll</u>	A submerged elevation of rounded shape rising from the sea floor. The internationally accepted	R/30-11-71
		definition is: An elevation rising less than 500 fathoms or 1,000 metres from the sea floor and of limited extent across the summit	8*, 8a*, 12
		*The synonym, Hill, is added in 8, 8a and 12. It seems redundant	
		Note: The recommended definition gives no reference to size. The distinction between Seamount and Knoll is that a Seamount is usually volcanic origin and a Knoll is not	of
#⊕	Levee	An embankment bordering one or both sides of a Canyon or Valley	7 (amended)
		The definition in 8a and 12 is: An embankment bordering the sides of a Canyon or Channel. This seems to suggest both sides, which need not be the case. The definition in 12a reads: An embankment bordering one or both sides of a Seachannel or the low-gradient seaward part of a Canyon or Valley	
+	Median Rift	The central cleft of the mid- oceanic Ridge system	R/30-11-71
	Mid-Ocean Canyon	Not recommended except where already established. Otherwise use Trough	
#	Moat	An annular depression that may not be continuous, located at the base of an isolated elevation	Suggested
		The established definition is: An annular depression that may not be continuous, located at the base of many Seamounts or Islands	5, 6b, 7, 8a*, 8*, 12*, 12a
		*The synonym Sea-moat is used in 8, 8a, and 12, but not in the other sources	,

sources

	TERM	PROPOSED DEFINITION OR NOTE	REFERENCE
+	Moraine	A Ridge-like accumulation of debris built along the margin of a glacier	Suggested
	Oceanic Bank	Not recommended. Use Bank	R/30-11-71
+	Pass	A low part between elevations on a Ridge or between Seamounts	D/23-9-71
#+	Peak	A prominent elevation on a ridge	Suggested
	•	Peak is not recommended as a synonym for Seamount as given in 8, 8a and 12	
	Pinnacle	A sharp-pointed rock or reef in shallow water	Suggested
		This term is sometimes used on nautical charts for this type of feature. It is considered useful	
#	Plain (Abyssal Plain)	A flat, gently sloping or nearly level region of the sea floor	5, 6b, 7, 12a
		Reference 8, 8a and 12 do not give Abyssal Plain as a synonym. They give the following for Plain: A flat, gently sloping or nearly level region of the sea floor. (For example, abyssal plain)	
		The term Abyssal Plain has been widely used and appears on at least one recent Canadian chart. It is suggested it be retained as a synonym	
#	Plateau	An extensive flat or nearly flat area usually measured in tens of kilometres, which is at a relatively high level, dropping off abruptly on one or more sides to much lower topography	R/30-11-71
		The definition in 8a is: A comparatively flat topped elevation of the sea floor of considerable extent across the summit and usually rising more than 100 fathoms or 200 metres on all sides	/

	TERM	PROPOSED DEFINITION	REFERENCE
	Province	A region composed of a group of similar physiographic features whose characteristics are markedly in contrast with surrounding areas.  This term is rarely used in marine cartography. It appears only once as a designation in the USBGN Undersea Gazetteer	8, 8a, 12
	Range	Not recommended. See Seamount Chain	
#	Reef	An offshore hazard to navigation composed of rock or coral	Suggested
		The definition in 7, 8, 8a and 12 is: An offshore consolidated rock hazard to navigation with a least depth of ten fathoms or twenty metres or less	
#	Ridge	A long, narrow elevation of the sea floor with steep sides. The established definition is as above with three additional words "and irregular topography"	Suggested
+	Rift	Synonym for Median Rift	R/30-11-71
+	Rift Valley	Synonym for Median Rift	R/30-11-71
	Rise	A long, broad elevation that rises gently and generally smoothly from the sea floor	5, 6b, 7, 8*, 12*, 12a, 8a*
		*Both Arch and Swell are listed as synonyms for Rise in 8a and 12. The USBGN Gazetteer does not define any synonyms at all. Where it lists a name such as Truxton Swell, it shows "Rise" in the designation column.  See comments re: Arch and Swell, neither of which is recommended as a synonym	

	TERM	PROPOSED DEFINITION OR NOTE	REFERENCE
<u>#</u>	Saddle	A Pass that slopes downward in both directions from an elevated point somewhere near its centre	D/23-9-71
	Scarp	Synonym for Escarpment	w w
#	Seachannel	Not recommended. See Trough. This is a synonym for Channel which was "not recommended" in the Subcommittee's meeting of 23 September 1971	
	Seahigh	Not recommended. Use more definitive term	
	<u>Seaknoll</u>	Not recommended. Use Knoll	
<del>]].</del>	Sea-moat	Not recommended although it is used as a synonym for Moat in 8, 8a and 12. It is not used in several other sources which give Moat alone	
<u>-ji</u>	Seamount	An isolated or comparatively isolated elevation of the sea floor, of limited extent across the summit and presumably of volcanic origin	R/30-11-71
	¥	The definition in 8, 8a and 12 reads: An isolated or comparatively isolated elevation rising 1,000 metres from the sea floor, and of limited extent across the summit	
		Peak is given as a synonym for Seamount in 8, 8a and 12. It is now being recommended that Peak be defined as a separate feature	,
#	Seamount Chain	Several Seamounts in a line	R/30-11-71
		The definition in 8, 8a, 12 and 12a is: Several Seamounts in a line with bases separated by a relatively flat sea floor. The recommended definition is intended to apply to features formerly designated as eithe Seamount Chain or Seamount Range	r

	TERM	PROPOSED DEFINITION OR NOTE	REFERENCE
	Seamount Group	Several closely spaced Seamounts not in a line	R/30-11-71 8, 8a, 12, 12a
#	Seamount Range	Not recommended. Use Seamount Chain	R/30-11-71
		The definition in 8, 8a, 12 and 12a is: Several Seamounts having connected bases and aligned along a Ridge or Rise	
		There are nine Seamount Ranges listed in the BGN Undersea Gazetteer	
+	Seamounts	A group of Seamounts with or without definite alignment	R/30-11-71
*		Note: It is recommended that Seamounts be used as an interim generic subject to change on the basis or more complete information. An example is	
		Newfoundland Seamounts, approved on Chart 802. The USBGN has now accepted the term Seamounts, both as a generic and as a designation (letter from Dr. Burrill to Mr. Delaney, 5 May 1971)	
	Seapeak	Not recommended. Use Seamount	
#	Sea Carp	Not recommended although it is listed as a synonym for Escarpment in 8, 8a and 12. Scarp is also listed as a synonym in 8a and 12. Escarpment alone is listed in 5, 6b, 7 and 12a	
+	Shelf	Synonymous with Continental Shelf but can be prefixed to indicate a distinguishable portion of a Contiental Shelf based on a geographic name	Suggested (Bedford, p. 5)
		Examples: Scotian Shelf and Newfoundland Shelf, both widely recognized but not yet officially approved, and Northeast Newfoundland Shelf, approved on Chart 802	

TERM PROPOSED DEFINITION OR NOTE REFERENCE Shelf Break Not recommended. Use Shelf Edge. See comment re: Shelf Edge, below Shelf Edge The line along which there is a 8\*, 8a\*, 12, 12a marked increase of slope at the outer margin of a Continental (or Island) Shelf \*Shelf Break is given as a synonym in 8, 8a, and 12. Shelf Edge is given alone in 12a (in which it is indicated that the term is rarely used as a designation) and in 1, 2, 5, 6b and 7 in which variant definitions are given Shelf Terrace Not recommended. See Terrace Suggested An offshore hazard to navigation Shoal composed of unconsolidated contraction material The established definition in 7, 8, 8a, 12 and 12a is: An offshore hazard to navigation with a least depth of ten fathoms or 20 metres or less, composed of unconsolidated material D/23-9-71 Sill The low part of a Ridge or Rise separating Basins from one another or from the adjacent sea floor The definition in 8, 8a, 12 and 12a reads: The low part of the Ridge or Rise separating ocean Basins from one another or from the adjacent sea floor. The word "ocean" seems superfluous Sill Depth Not recommended as a generic although the term is useful. It refers to the greatest depth over a Sill Suggested Synonymous with Continental Slope Slope

but can be prefixed to indicate a

distinguishable portion of a Continental Slope based on a

geographic name

(Bedford,

p. 5)

TERM PROPOSED DEFINITION OR NOTE REFERENCE 8, 8a, 12, 12a A subordinate elevation, Ridge Spur or Rise projecting outward from a larger feature Strath Not recommended. See Trough Partly to meet Canadian objections to the term, the U.S. Board is recommending that Strath be deleted. They plan to modify the definition of Valley by dropping the criterion of a continuous slope to make it accommodate features they have previously designated as Straths. The important distinguishing criterion of a continuous gradient for Valley was retained at the 23 September 1971 meeting of the Canadian Subcommittee, and Channel was dropped. The definition approved for Trough is believed adequate to cover known features for which Strath has been used. Strath has never been approved by the Canadian Subcommittee Submarine Not recommended although given as a synonym for Canyon in 8, 8a and 12 Canyon Submarine Not recommended although given as a synonym for Valley in 8, 8a and 12 Valley Not recommended. Defined by Fairbridge Summit Height as the highest elevation on a Ridge or Rise Not recommended although given as a Swell synonym for Rise in 8, 8a, 12. Bedford does not agree it is a synonym for Rise because of the many diverse meanings that have been applied to it. They recommend it be not used

Tableknoll

Not recommended. Probably no need. Not in current international lists

Tablemount (Guyot)

A Seamount having a comparatively smooth, flat top

8, 8a, 12, 12a\*

\*The synonym is not used in 12a

Zone

	TERM	PROPOSED DEFINITION OR NOTE	REFERENCE
#	Terrace	A relatively flat horizontal or gently inclined surface sometimes long and narrow, which is bounded by a steep ascending slope on	Suggested
		one side and by a steeper descending slope on the opposite side	
		This term is not included in 8a but it is defined in 7 and 12a as: A bench-like structure bordering on undersea feature	
	Tongue	Not recommended. See Spur	
	*	A note in 12a indicates that Tongue is used once in the Undersea Gazetteer, where it designates	
ę		Catoche Tongue, a lateral protrusion from an Island Slope. The term has not been incorporated in the BGN list of standard terms and designations. It is not in 8a nor in the other lists of definitions consulted	
	Trench	A long, narrow and deep depression of the sea floor, with relatively steep sides	D/23-9-71 8, 8a, 9, 10 12, 12a
n.	Trough	A long depression of the sea floor, wider and shallower than a Trench, which may or may not be open-ended	D/23-9-71
		The definition in 8, 8a, 9, 10, 12 and 12a is: A long depression of the sea floor normally wider and shallower that a Trench	
#	Valley	A relatively shallow, wide depression with gentle slopes, the bottom of which has a continuous gradient	D/23-9-71
		Please see comments under Strath	
		Not were also Head Track Tone	

Not recommended. Use Fracture Zone