

Summary of changes applied to each 'Arctic Canada Biostrat' column of the 2010 Canada datapack, highlighting some of the quality control applied to data incorporated into the 2020 version of the Canada datapack.					
Dataset (2010 Canada datapack)	New name	Source	Action(s)	Comment(s)	
Arctic Canada Cenozoic Biostrat					
1) Cenozoic Foram and Nannofossil mixed Zones					
Cenozoic Scale	-	Harrison et al. 1999b	Deleted	Redundant/obsolete reference scheme	
2) Beaufort-Mackenzie Basin					
Foraminifera	Upper Jurassic-Cenozoic foraminifer zones	Harrison et al. 1999b	Renamed, expanded and revised, formulas updated	Revised by McNeil (pers. comm. 2019) and expanded to include Cretaceous and Upper Jurassic zones. Source data (McNeil in Dixon, 1996) now available as events. Ages now tied to 'Master' reference schemes (stages)	
Dinoflagellates	Dinoflagellate zones (LEGACY)	Harrison et al. 1999b	Renamed, formulas updated	Kept for 'historical' value. Source data (McIntyre in Dixon, 1996) now available as events. Ages now tied to 'Master' reference schemes (stages). Taxonomy updated following Fensome et al. (2019)	
3) Western/Arctic Canada					
Pollen, Spores	Western/Arctic Canada pollen & spores zones (Upper Cretaceous-Cenozoic)	Harrison et al. 1999b	Formulas updated	Ages now tied to 'Master' reference schemes (stages)	
Arctic Canada Jurassic Biostrat	(now "Western/Arctic Canada Jurassic Biostrat")				
1) Ammonite Zones					
Jurassic Subboreal/Boreal Ammonite Zones	-	Harrison et al. 1999a	Deleted	Redundant/obsolete reference scheme	
Boreal Zones	-	Harrison et al. 1999a	Deleted	Redundant/obsolete reference scheme	
Ammonites (Harrison)	Ammonites (Sverdrup Basin)	Harrison et al. 1999a	Updated, renamed, formulas updated	Ages now tied to 'Master' reference schemes (sub-boreal [Hettangian – Callovian] and boreal [Oxfordian – Tithonian] ammonite zones)	
Ammonites (Poulton)	Ammonites (Northern Yukon region)	Poulton et al. 1993	Updated, renamed, formulas updated	Ages now tied to 'Master' reference schemes (sub-boreal [Hettangian – Callovian] and boreal [Oxfordian – Tithonian] ammonite zones)	
Yukon Ammonites		Poulton 1987	Deleted	Data now incorporated into new 'Ammonites (Northern Yukon region)' column	
2) Bivalve Zones					
Bivalves (Harrison)	Bivalves (Sverdrup Basin)	Harrison et al. 1999a	Renamed, formulas updated	Ages now tied to 'Master' reference schemes (boreal ammonite zones)	
Bivalves (Poulton)	Bivalves (Northern Yukon region)	Poulton et al. 1993	Renamed, formulas updated	Ages now tied to 'Master' reference schemes (boreal ammonite zones)	
Wrangelia Bivalves	-	Aberhan et al. 1998	Deleted	Fragmented information; not within GEM regions of interest	
Stikinia Bivalves	-	Aberhan et al. 1998	Deleted	Fragmented information; not within GEM regions of interest	
Western Interior Bivalves	-	Aberhan et al. 1998	Deleted	Fragmented information; not within GEM regions of interest	
3) Foram Zones					
Foraminifera (Harrison)	Foraminifers (Sverdrup Basin)	Harrison et al. 1999a	Renamed, formulas updated	Ages now tied to 'Master' reference schemes (sub-boreal [Hettangian – Callovian] and boreal [Oxfordian – Tithonian] ammonite zones)	
4) Dinoflagellate Zones	(now "Dinoflagellates")				
Dinoflagellates (Harrison)	Dinoflagellate zones (Sverdrup Basin, LEGACY)	Harrison et al. 1999a	Renamed, formulas updated	Kept for 'historical' value. Source data (Davies, 1983) now available as events. Ages now tied to 'Master' reference schemes (sub-boreal [Hettangian – Callovian] and boreal [Oxfordian – Tithonian] ammonite zones)	
Dinoflagellates (Poulton)	Dinoflagellate zones (Northern Yukon region, LEGACY)	Poulton et al. 1993	Renamed, formulas updated	Kept for 'historical' value. Ages now tied to 'Master' reference schemes (stages). Taxonomy updated following Fensome et al. (2019)	
Arctic Canada Devonian-Cambrian Biostrat					
Multiple	-	Multiple	Deleted	Pre-Mesozoic data, not included in 2020 Canada datapack	
Abbreviation:					
GEM: Geo-mapping for Energy and Mineral Program					

Canadian Biostratigraphy and Stratigraphic sections (Arctic to Central)

and Arctic Island Transect

Converted to GTS2020 age model and updated (Oct 2020) by Geol. Surv. Canada

NOTE: Canada's geologic survey is changing their Lexicon webpages; therefore links might be broken.

Biostratigraphic data included in the 2020 Canada datapack (Details in GSC Bulletin 609)

Dataset	Source	Comments
Western/Arctic Canada Triassic Biostrat		
	WCSB/Sverdrup Basin ammonoid zones	Golding & Orchard (this report), Tozer 1994, Bucher 2002, Ji & Bucher 2018
	WCSB/Sverdrup Basin conodont zones	Golding & Orchard (this report)
Western/Arctic Canada Jurassic Biostrat		
Ammonite zones		
	Ammonites (Sverdrup Basin)	Poulton (this report)
	Ammonites (northern Yukon region)	Poulton (this report)
Bivalve zones		
	Bivalves (Sverdrup Basin)	Harrison et al. 1999a
	Bivalves (northern Yukon region)	Poulton et al. 1993a
Foraminifer zones		
	Foraminifers (Sverdrup Basin)	Harrison et al. 1999a
Dinoflagellates		
	Dinoflagellate zones (Sverdrup Basin, LEGACY)	Harrison et al. 1999a
	Dinoflagellate events (Sverdrup Basin)	Davies 1983
	Dinoflagellate zones (northern Yukon region, LEGACY)	Poulton et al. 1993a
Western Arctic upper Jurassic-Cenozoic Biostrat		
Beaufort-Mackenzie Upper Jurassic-Cenozoic Foraminifers		
	Upper Jurassic-Cenozoic foraminifer zones	Fowler 1996, Hedinger 1996, McNeil 1996a, b, c, 1997, McNeil (pers. comm., 2019)
	Cenozoic calcareous benthic foraminifers	McNeil 1996c, 1997
	Cenozoic agglutinated benthic foraminifers	McNeil 1996b, 1997
	Upper Jurassic & Cretaceous benthic foraminifers	Fowler 1996, Hedinger 1996, McNeil 1996a, 1997
Beaufort-Mackenzie Cretaceous-Cenozoic dinoflagellates		
	Dinoflagellate zones (LEGACY)	Harrison et al. 1999b
	Dinoflagellate events	McIntyre 1996a,b,c, Fensome et al. 2019
Western Arctic Cretaceous-Cenozoic palynology		
	N. Richardson Mountains dinocyst events (Valanginian)	McIntyre & Brideaux 1980
	N. Richardson Mountains spores events (Valanginian)	McIntyre & Brideaux 1980
	Horton River dinocyst and acritarch events (Aptian-Albian)	Brideaux & McIntyre 1975
	Horton River spores and pollen events (Aptian-Albian)	Brideaux & McIntyre 1975

		WIS pollen & spores (Upper Cretaceous-Paleocene)	Braman & Sweet 2012	Ages tied to 'Master' reference schemes (series/stages)
		Western/Arctic Canada pollen & spores zones (Upper Cretaceous-Cenozoic)	Harrison et al. 1999b	Ages now tied to 'Master' reference schemes (stages)
		Eastern Arctic Mesozoic-Cenozoic Biostrat		
		Jurassic-Cretaceous boundary dinocyst events	Fisher & Riley 1980	Data (events) entered by Bujak. Events recorded over Arctic & Eastern Canada, Greenland and NW Europe. Ages tied to 'Master' reference schemes (stages/substages and Sub-Boreal ammonite zones)
		Labrador-Baffin Seaway palynoevents	Nøhr-Hansen et al. 2016	Ages tied to 'Master' reference schemes (series/stages)
		Offshore Arctic Mesozoic-Cenozoic palynology (Bujak data)		
		Bujak Arctic zones	Bujak (unpublished data)	Unpublished data by JPB, established mostly from Arctic Canada and Alaska offshore well data. Details to be provided in CAPE (see text). Ages tied to 'Master' reference schemes (series/stages)
		Bujak Arctic subzones	Bujak (unpublished data)	Unpublished data by JPB, established mostly from Arctic Canada and Alaska offshore well data. Details to be provided in CAPE (see text). Ages tied to 'Master' reference schemes (series/stages)
		Bujak Arctic dinocyst and algal events	Bujak (unpublished data)	Unpublished data by JPB, established mostly from Arctic Canada and Alaska offshore well data. Details to be provided in CAPE (see text). Ages tied to 'Master' reference schemes (series/stages). Taxonomy updated following Fensome et al. (2019)
		Bujak Arctic spores, pollen and fungi events	Bujak (unpublished data)	Unpublished data by JPB, established mostly from Arctic Canada and Alaska offshore well data. Details to be provided in CAPE (see text). Ages tied to (1) Bujak Arctic (sub)zones, and (2) 'Master' reference schemes (stages and Sub-Boreal ammonite zones)
		Arctic Cenozoic climate (Bujak data)		
		Bujak Arctic climatic events	Bujak (unpublished data)	Unpublished data compiled and entered by JPB. Data represent global (northern hemisphere) events. Ages tied to 'Master' reference schemes (series/stages)
		Abreu & Anderson 1998 climate events	Abreu & Anderson 1998	Data (events) entered by JPB. Data represent global events. Ages absolute (i.e., not updated).
		Bujak Arctic SST	Bujak (unpublished data)	Unpublished data by JPB, established mostly from Arctic Canada and Alaska offshore well data. Details to be provided in CAPE (see text). Ages tied to 'Master' reference schemes (stages)

Abbreviations:

WCSB: Western Canada Sedimentary Basin
FO: First occurrence
LO: Last occurrence
WIS: Western Interior Seaway
SST: Sea-surface temperature
CAPE: Circum-Arctic lower Paleozoic to Cenozoic palynological events project

Lithostratigraphic data included in the 2020 Canada datapack

The datasets "Canadian Arctic Islands lithostratigraphy", "Northern Canada lithostratigraphy" and "Central Canada lithostratigraphy" are based on Canada DNAG volume regional charts (Trettin 1991a, b, c; Stott 1993a, b, c).

Dataset	Data column	Source
New Canadian lithostratigraphic data (GEM-focused)		
	Sverdrup Basin Mesozoic lithostratigraphy	
	Mesozoic stratigraphy of the Sverdrup Basin	Hadlari et al. 2016 (fig. 2)
	Cretaceous lithostratigraphy of Sverdrup Basin and Western Arctic	
	Ringnes Islands & Axel Heiberg Island	Bringué et al. 2018 (fig. 2.1) & references therein
	Banks Island	Bringué et al. 2018 (fig. 2.1) & references therein
	Horton-Anderson Plains	Bringué et al. 2018 (fig. 2.1) & references therein
	Richardson Mountains (Northern Aklavik Range)	Bringué et al. 2018 (fig. 2.1) & references therein
	Snake, Peel, Arctic Red and Hume Rivers	Bringué et al. 2018 (fig. 2.1) & references therein
	Labrador-Baffin Seaway Cretaceous and Cenozoic lithostratigraphy	
	Labrador margin	Dickie et al. 2011, Nøhr-Hansen et al. 2016 (fig. 3)
	SE Baffin Island	Nøhr-Hansen et al. 2016 (fig. 3)
	Bylot Island	Nøhr-Hansen et al. 2016 (fig. 3)

Canadian Arctic Island transect suite		
Ellef Rignes Island strat		
Ellef Rignes-Sutherland Transect	Dewing & Embry 2007	
Sutherland O-23		
Sutherland-Helena transect	Dewing & Embry 2007	
Helena Island		
Helena-E. Bathurst transect	Dewing & Embry 2007	
Bathurst Island strat		
Cornwallis Island transect	Dewing & Embry 2007	
Between Cornwallis and Somerset islands		
Somerset-Brodeur transect	Dewing & Embry 2007	
NW Baffin Island		
North Baffin - Melville transect	Dewing & Embry 2007	
Canadian Arctic Islands lithostratigraphy		
Banks - Baffin Islands (South Arctic transect)		
Banks - Victoria region		
NW Banks Island	Trettin 1991a	
Central Banks Island	Trettin 1991a	
SE Banks Island	Trettin 1991a	
Victoria and Stefansson Islands	Trettin 1991a	
Prince of Wales Island	Trettin 1991a	
Lancaster Region (South)		
W. Somerset Island	Trettin 1991a	
E. Somerset Island	Trettin 1991a	
N. Baffin Island	Trettin 1991a	
Baffin Region		
Bylot Island	Trettin 1991a	
Foxe Plain		
Foxe Basin	Trettin 1991a	
Devon - Southern Ellesmere Island		
Lancaster Region (Devon Island)		
Devon Island	Trettin 1991a	
Southern Ellesmere Island		
SW Ellesmere	Trettin 1991a	
Fram Fiord	Trettin 1991a	
W. Makinson Inlet	Trettin 1991a	
E. Makinson Inlet	Trettin 1991a	
Bache Pen.	Trettin 1991a	
Melville - N. Devon Island		
Sverdrup Lowland (East)		
Prince Patrick Island	Trettin 1991a	
Eglinton Island	Trettin 1991a	
Parry Upland		
Melville Island - NW	Trettin 1991a	
Melville Island - Central	Trettin 1991a	
Melville Island - NE	Trettin 1991a	
Cameron Island	Trettin 1991a	
Bathurst Island - W	Trettin 1991a	
Bathurst Island - Central	Trettin 1991a	
Bathurst Island - E	Trettin 1991a	
Cornwallis Island - N	Trettin 1991a	
Cornwallis Island - S	Trettin 1991a	
Grinnell Peninsula - E	Trettin 1991a	
Mackenzie-Axel Heiberg		
Sverdrup Lowland		
Mackenzie, Brock, and Borden Islands	Trettin 1991a	
Lougheed Island	Trettin 1991b	
King Christian and Ellef Ringnes Islands	Trettin 1991b	
Ellef Ringnes Island	Trettin 1991b	
Amund Ringnes Island	Trettin 1991b	
Cornwall Island	Trettin 1991b	
Graham Island (Sverdrup Lowland)	Trettin 1991b	
Axel Heiberg Island		
AxH South	Trettin 1991b	
AxH Central West	Trettin 1991b	
AxH Northwest	Trettin 1991b	
AxH East	Trettin 1991b	
AxH North	Trettin 1991b	
S. Ellesmere - NE Ellesmere		
Bjorne Peninsula and South	Trettin 1991b	
Svendsen Peninsula (Central Ellesmere	Trettin 1991b	
Raanes Peninsula	Trettin 1991b	
Western Fosheim Peninsula (Central	Trettin 1991b	
Eastern Fosheim Peninsula	Trettin 1991b	
South of Caledonian Bay	Trettin 1991b	
Caledonian Bay (Central Ellesmere Island)	Trettin 1991b	

	Copes Bay to Carl Ritter Bay	Trettin 1991b	
	SW Judge Daly Promontory (Central)	Trettin 1991b	
	SE of Ella Bay (Central Ellesmere Island)	Trettin 1991b	
	Head of Ella Bay	Trettin 1991b	
	Saint Patrick Bay (Central Ellesmere Island)	Trettin 1991b	
N. Ellesmere Transect			
	Central Ellesmere Island		
	Blue Mountains	Trettin 1991b	
	Western Svarfjord Peninsula	Trettin 1991b	
	Van Hauen Pass (Central Ellesmere Island)	Trettin 1991b	
	Head of Hare Fiord (Central Ellesmere)	Trettin 1991b	
	Ooblooyah Bay (Central Ellesmere Island)	Trettin 1991b	
	East of Mouth of Tanquary Fiord	Trettin 1991b	
	Northern Ellesmere Island (Central)		
	McKinley Bay (Central Ellesmere Island)	Trettin 1991c	
	Head of Tanquary Fiord (Central)	Trettin 1991c	
	Henrietta Nesmith Gl. (Central)	Trettin 1991c	
	Lake Hazen (Central Ellesmere Island)	Trettin 1991c	
	Northernmost Ellesmere Island		
	Head of Emma Fiord	Trettin 1991c	
	Kleybolte Peninsula	Trettin 1991c	
	South of Phillips Inlet	Trettin 1991c	
	Head of Yelverton Inlet	Trettin 1991c	
	Wooton Peninsula to SE of Milne Inlet	Trettin 1991c	
	M'Clintock Gl. (Northern Ellesmere Island)	Trettin 1991c	
	M'Clintock Inlet	Trettin 1991c	
	Head of M'Clintock Inlet	Trettin 1991c	
	Head of Disraeli Fiord (Northern)	Trettin 1991c	
	E. of Disraeli Fiord to Markham Fiord	Trettin 1991c	
	C. Columbia to C. Nares (Northern)	Trettin 1991c	
	NW. of Clements Markham River	Trettin 1991c	
	Crescent Gl. To Clements Markham Inlet (Northern Ellesmere Island)	Trettin 1991c	
	Feilden Peninsula, Parry Peninsula,	Trettin 1991c	
	NW of Piper Pass (Northern Ellesmere Island)	Trettin 1991c	
Northern Greenland			
	Kane Basin - Independence Fiord Region		
	Inglefield Land	Trettin 1991c	
	Washington Land	Trettin 1991c	
	Petermann Gl.	Trettin 1991c	
	Western North Greenland (South)	Trettin 1991c	
	Southern Peary Land - Independence Fiord	Trettin 1991c	
	Danmark Fiord	Trettin 1991c	
	N. Greenland Region		
	Western North Greenland (North)	Trettin 1991c	
	Northern Peary Land	Trettin 1991c	
Northern Canada lithostratigraphy			
	Canadian Arctic and Mackenzie Area		
	Romanzoff Uplift/Babbage Depression	Stott 1993a	
	Yukon Coastal Plain/Rapid Depression	Stott 1993a	
	West Richardson Trough White Uplift	Stott 1993a	
	East Richardson Trough White Uplift	Stott 1993a	
	Mackenzie Delta	Stott 1993a	
	Campbell Uplift (Inuvik)	Stott 1993a	
	Anderson Basin (Anderson Plain)	Stott 1993a	
	Brock Inlier (Melville Hills)	Stott 1993a	
	Coppermine Homocline	Stott 1993a	
	Northern Yukon and Mackenzie Fold Belt		
	Northern Yukon Fold Complex		
	Kandik Basin (Kandik River)	Stott 1993a	
	Eagle Fold Belt (Eagle Plain)	Stott 1993a	
	Bonnet Plume Basin	Stott 1993a	
	Eastern Ogilvie Arch (Eastern)	Stott 1993a	
	Yukon Mackenzie Fold Belt		
	Frontal Mackenzie Mountains (Snake River)	Stott 1993a	
	Mackenzie Arch (Arctic Red River)	Stott 1993a	
	Mackenzie Synclinorium (Mountain River)	Stott 1993a	

		Northern Franklin Mountains (Norman Wells)	Stott 1993a	
		Keele Arch (Fort Norman)	Stott 1993a	
		Great Bear Basin (Western Great Bear)	Stott 1993a	
	Central Yukon to Yellowknife			
		Misty Creek Embayment (Twitya River)	Stott 1993a	
		Sekwi Mountain	Stott 1993a	
		East Glacier Lake Nahanni	Stott 1993a	
		Frontal Mackenzie Mountains	Stott 1993a	
		Franklin Mountains (Cap Mountain)	Stott 1993a	
		Bulmer Lake Arch (Bulmer Lake)	Stott 1993a	
		Great Bear Plain Lac La Martre	Stott 1993a	
	Southern Northwest Territories			
		Selwyn Basin (Flat River)	Stott 1993a	
		Southern Mackenzie Fold Belt	Stott 1993a	
		Tathlina Arch (Trout Lake)	Stott 1993a	
		Hay River Platform (Hay River Pine)	Stott 1993a	
	Central Canada lithostratigraphy			
	Northern British Columbia-Alberta			
	Northern BC Rocky Mountain Fold Belt			
		Gataga High (Gataga River)	Stott 1993b	
		Roosevelt Graben (Mount Churchill)	Stott 1993b	
		MacDonald Platform (Summit Lake)	Stott 1993b	
		Liard and Scatter Rivers	Stott 1993b	
	Northern BC Interior Platform			
		Zama Lake	Stott 1993b	
	Middle British Columbia-Alberta			
	Middle BC Rocky Mountain Fold Belt			
		Western Rocky Mountains (Ware Map Area)	Stott 1993b	
		Eastern Rocky Mountains (Halfway Map)	Stott 1993b	
		Peace River Arch/Embayment (Pine Pass)	Stott 1993b	
	Middle BC Interior Platform			
		Peace River Plains (Fort St. John)	Stott 1993b	
		Hay River Basin (Fort McMurray)	Stott 1993b	
	Middle Alberta- Sask.			
		Front Range (Narraway River)	Stott 1993b	
		Swan Hills	Stott 1993b	
		Cold Lake	Stott 1993b	
		Cumberland House	Stott 1993b	
	Lower Mid Alberta- Sask.			
	Lower Mid Alberta Rocky Mountain Fold Belt			
		Mount Robson Syncline (Mount Robson)	Stott 1993b	
		Eastern Main Ranges (Jasper)	Stott 1993b	
		Western Alberta Ridge (Roche Miette)	Stott 1993b	
		Eastern Alberta Foothills (Brule)	Stott 1993b	
	Lower Mid Alberta Interior Platform			
		Edmonton	Stott 1993b	
		Lloydminster	Stott 1993b	
		Saskatoon	Stott 1993b	
		Lake Winnipegosis	Stott 1993b	
	Southern Alberta- Sask.			
	Southern Alberta Rocky Mountain Fold Belt			
		Western Rocky Mountains (Stanford-)	Stott 1993b	
		Main Ranges Basin (Kickinghorse River)	Stott 1993b	
		Main Ranges Platform (Spray River)	Stott 1993b	
		West Alberta Arch/Front Range (Exshaw)	Stott 1993b	
		Western Alberta Foothills (Turner Valley)	Stott 1993b	
	Southern Alberta Interior Platform			
		Calgary Drumheller	Stott 1993b	
		North Williston Basin (Moose Jaw Regina)	Stott 1993b	
		Eastern Platform (Lake Manitoba)	Stott 1993b	
	Far Southern Alberta- Manitoba			
	Far Southern Rocky Mountain Fold Belt			
		Fernie Basin (Elko Fernie)	Stott 1993c	
		Front-Ranges Foothills (Waterton)	Stott 1993c	
	Far Southern Interior Platform			
		Sweetgrass Arch (Cypress Hills)	Stott 1993c	
		West Williston Basin (Maple Creek)	Stott 1993c	
		Central Williston Basin (Big Muddy)	Stott 1993c	
		East Williston Basin (Brandon)	Stott 1993c	
	Hudson Platform			

	Bell Arch (Southampton Coats and	Stott 1993c	
	Northern Hudson Bay	Stott 1993c	
	Central Hudson Bay	Stott 1993c	
	Northern Hudson Bay Lowland	Stott 1993c	
	Central Hudson Bay Lowland	Stott 1993c	
	North James Bay Lowland	Stott 1993c	
	Central James Bay Lowland	Stott 1993c	
	South James Bay Lowland	Stott 1993c	
West St. Lawrence Platform/Lowland			
	Michigan Basin (Windsor Sarnia)	Stott 1993c	
	Alegheny Basin (Western Lake Erie)	Stott 1993c	
	Michigan Basin (Maitoulin Island)	Stott 1993c	
	Algonquin Arch	Stott 1993c	
	Allegheny Basin (Niagara Peninsula)	Stott 1993c	
Central St. Lawrence Platform/Lowland and Laurentian Highlands			
<i>(and outliers within Superior and Grenville Provinces)</i>			
	Lake Timiskaming and Ottawa Valley	Stott 1993c	
	Pembroke-Arnsprior Outlier Ottawa and	Stott 1993c	
	Montreal	Stott 1993c	
	St. Hyacinthe	Stott 1993c	
	West Lac St. Jean-Chicoutimi Outlier	Stott 1993c	
	Nicolet-Yamaska	Stott 1993c	
East St. Lawrence Platform/Lowland			
	N. Shore and Mingan Island Anticosti Island	Stott 1993c	
	Gulf of St. Lawrence	Stott 1993c	
	Port Au Port Peninsula	Stott 1993c	
	Southeast Labrador Strait of Belle Isle	Stott 1993c	
	Canada Bay	Stott 1993c	
Abbreviations:			
	Gl.: Glacier		
	C.: Cape		
	Mtns: Mountains		