

General Index

This excludes references to place names and stratigraphic unit names as these are covered in separate lists. Pages numbers in *italics* refer to Figures and Tables

- abbreviations in names 7
- Abeløya 83
- acritarchs 233–4, 248
- Admiralty 16
- Admiralty chart 16
- Adriabukta folding (HSDT) 33
- aerial photography 18
- aeromagnetic survey 422–3
- Agardhbukta Lineament 344
- Albert I Land 299–300
- Albian–Aptian events 382
- ammonite zonation 369–71, 354, 378
- AMOSEAS 20
- amphibolites 123, 165, 283–4
- Amundson, R. 19
- Andrée Land–Dickson Land Terrane (ADLT) 32, 33, 147–8, 285, 301
- anhydrite 67, 310, 454
- Anisian environments 358
- anoxia, Early Siberian 260
- anoxic facies 356–7
- angiosperms 11
- annelid worms
 - fossil 379
 - living 10
- anthracite 227, 450
- aplite dykes 106, 142
- Aptian–Albian events 382
- Arc of Meridian Project 16
- Arc of Meridian Surveys 76, 96
- Archean 151, 229
- Arktikugol 13
- arthropods
 - fossil 293, 394
 - living 10,
- Artinskian events 333
- Asselian Sakmarian events 332–3
- Atomfjella antiform 27, 124
- Atomfjella arch 123
- Atomfjella Complex 123
- augen gneiss 283
- Austfjorden tectonothermal event 33
- Austfonna 96
- Axel Heiberg Island 36

- Backlund, H. G. 18, 76
- baked sediment 85
- Balliolbreen Fault 112, 305
- Baltica 253–4, 287
- Bangenuken anticline 27
- Bangenuk granitoid 124
- Barents craton/Barentsia 108, 287
- Barents Sea 5, 8, 209, 350, 368
- Barents shelf 7, 424, 427–8
 - petroleum potential 20
 - structural elements 26
- Barents, W 16
- Barentsburg 13, 388
- Barentsøya
 - biostratigraphy 89–91
 - ice cover 436
 - igneous bodies 91
 - lithic units 87–9, 350
- Barentsøya Edgeøya Platform Terrane (BEPT) 32, 36
- barite 454
- Barremian events 382
- basalts 76, 84, 85

- basement
 - Bjørnøya 219–20
 - sequences 32
 - structures 27
- see also* proto-basement
- Bashkirian–Moscovian events 330–1
- basic igneous petrography 76
- basic layers 106
- Bathonian transgression 363
- Bathonian–Tithonian events 381–2
- bathymetric chart sheet lines 14
- bathymetry 7–8, 420
- bay ice 8
- Bear Island *see* Bjørnøya
- belemnites 371–2, 378–9
- bentonite 454
- Berriasian stage 369
- Berzeliustinden 203
- Bibliography of Svalbard 20
- Billefjorden Fault Zone (BFZ) 26, 70, 129, 146–7, 285, 301–3, 303–5, 316, 409
- Billefjorden Lineament 53, 363
- Billefjorden Trough 70, 315, 344
- biota
 - living 10
 - fossil
 - Paleogene 393–4
 - Jurassic–Cretaceous 378–80
 - Triassic 353–6
 - Carboniferous–Permian 324–8
 - Devonian 291–6
 - Silurian 272
 - Cambro-Ordovician 260–4
 - Vendian 248–9
 - Pre-Vendian 231–5
- birds 10
- Biskayerfonna Horst 149
- Biskayerfonna–Holtedahlfonna Horst 148
- Biskayerfonna–Holtedahlfonna terrane (BHFT) 32, 33, 148–50, 230, 285, 300–1
- bivalves 294, 372, 379, 394
- Bjørnøya 212
 - biota
 - Cambro-Ordovician 260
 - Vendian 248
 - coal 450
 - cover sequences 36
 - lithic units 210, 257
 - Paleozoic 212–19
 - pre-Vendian 231
 - Triassic 212–13, 350, 361
 - palinspastic reconstructions 269
 - structure 219–22
 - tectonic setting
 - Cambro-Ordovician 266
 - Silurian 280
 - volcanic rocks 252
- Bjørnøya Basement Terrane (BØBT) 32, 34
- Bjørnøya Basin 315–16
- Bjørnøya Platform Terrane (BØPT) 32, 36
- Black Carbonate Pelite (BCP) 167
- Blomstrand, C. B. 16
- Blomstrandhalvøya graben-syncline 27
- Blomstrandhalvøya Basins 150–1, 300
- Bonnia-Holmia* faunas 259, 264
- bornite 189
- Botniahalvøya 103
- Botniahalvøya unconformity (NAWT) 32
- Botonian–Toyonian faunas 259, 264

- boudinage 276, 288
- boundary faults 316
- brachiopods 272, 327, 379
- Breibogen Fault 48, 148, 301, 305
- Breibogen Fault Zone 26, 316
- Brentskardhaugen Bed 58, 363, 373, 374
- Brøggerhalvøya structure 168
- Bruce, W. S. 16
- bryophytes
 - fossil 394
 - living 11
- bryozoans 327–8, 355
- Byrd, R. 19

- ¹³C plot 249
- calc-alkalic basites 106
- calcite 189
- Caledonian (Ny Friesland) Orogeny 33, 34, 36, 151, 192, 219, 288
 - structures 204
 - vergencies 278, 280
- Calypsobyen coal 388
- Calypsostranda Basin 180, 449
- Cambrian
 - basal unconformity 266
 - early diastrophism 266
 - lithic units 116–17, 192
 - time scale 259, 260
 - see also* Cambro-Ordovician
- Cambridge Arctic Shelf Programme (CASP) 22
- Cambridge University expeditions 18, 389
- Cambridgebreen Shear Zone 129, 305
- Cambro-Ordovician
 - biotas 260–2
 - correlation within Svalbard 262–4
 - palinspastics 268–70
 - sedimentary environments 264–6
 - tectonic environments 266–8
 - tectonothermal events 270–1
 - terraces 268–70
- Carnian environments 358–60
- Carboniferous
 - biota 324–8
 - economic deposits 310, 450
 - history of research 310
 - lithic units 312–14
 - Bjørnøya 212, 215–17
 - Central Basin 66–73
 - Spitsbergen, NE 77, 112
 - Spitsbergen, NW 134–5
 - Spitsbergen, SW 183–7
 - lithostratigraphic scheme 313
 - palinspastics 335
 - sedimentary environments 318–23
 - structural frame 314–16
 - tectonic control of sedimentation 328–32
 - time scale 316
- Cenomanian–Maastrichtian events 382–3, 386
- Central basement terranes 32, 33–4
- Central Basin
 - coal 449
 - geomorphology 48
 - lithic units 48–72, 390–1
 - structural development 73–4, 409
 - structural setting 48, 344
- Central Basin Terrane (CBT) 32, 35
- Central East Greenland Province 38
- Central Spitsbergen 73–4
- Central Svalbard terranes 38

- Central Province (Vendian) 254–5
 central terrane palinspastics 268–70
 central terranes (SW Spitsbergen) 199–200
 Central vent volcanics (Quaternary) 423
 Central West Fault Zone 48, 316
 Centralwestern Spitsbergen *see* Spitsbergen
 chalcocite 189
 chalcopyrite 154, 189, 197, 454
 Challinor's sections 389–90, 400, 402–8
 charts, hydrographic 14
 Changxingian stage 351
 chromium-rich dolostone 158
 chronometric scale 26–7, 29, 30
 chronostratic scale 25–6
 Chydeniusbreen granite 113
 cirripedes 379
 claims 11
 climate records 444–5
 glacial 436
 Jurassic–Cretaceous 380–1
 Vendian 249
 coal 37, 47, 51, 72, 73, 216, 217, 310, 363
 coal fields 50, 51, 154, 389
 coal mining 11, 209
 coccoliths 372, 379
 Colesbukta well 58, 451, 452
 collisional orogeny 288
 compressional tectonics 38
 conchostraca 294
 conodonts 354
 continental drift 21, 37–8
 continental shelf 12
 convection polygon 433
 convergence, tectonic 38
 Conway, Sir Martin 5, 16, 189, 340
 copper minerals 454
 corals 272, 327, 379
 covellite 189
 cover sequences 21
 Bjørnøya 220–2
 NE Spitsbergen 112
 cover terranes 32, 35–6
 Cretaceous
 age estimation 371–2
 biotas 372, 378–80
 climates 380–1
 coal 363, 450
 history 363
 igneous activity 363–5, 377–8
 lithic units 52, 374–7
 sedimentary environments 382–3
 sedimentary sequences 386–7
 stratal scheme 366
 stratigraphy 366–8
 structural frame 365
 tectonic environments 383
 time scale 371–2
 cryoturbation 433
 crystalline rocks *see* igneous *also* metamorphic
- Danskøya Basin 153
 daylight 8
 decoupling in transpression/transtension 410
 de Geer, G. 16, 18, 340, 388, 389
 deformation events 151–2
 delta complexes 58, 87
 desiccation cracks 434
 Devonian
 biostratigraphy and correlation 289–91
 biota 291–5
 coal 450
 history 289
 isotopic ages 291
 lithic units 135–42, 187–8, 212, 217–18
 sedimentary record 296–9
 sequence of events 306–9
 tectonics 299–303
 time scale 289
 dextral transpression/transtension, Paleogene
 410–11
 diamictites 21, 100, 118
 Dickson Land 62
 dinoflagellates 380, 394
 dinosaurs 20
 footprints
 carnosaur 55
 Iguanodon 20, 58, 380
 Dirksodden Nappe 129
 Dirksodden Thrust 129
 discontinuities (faults and unconformities) 23, 26
 discovery of Svalbard 5, 11
 dolerites 76, 106, 112
 dolostone 31, 67, 70, 158, 163, 169–70, 265
 Dragon Oil p.l.c. 94
 Duvefjorden Complex 104, 108
 Duvefjorden granites 106
 dykes and sills 76, 106, 112, 113, 377–8
- East Spitsbergen Basin 315
 East Greenland aulacogen 242–3
 East Spitsbergen current 8
 East Svalbard terranes 38
 East Svalbard Vendian Province 254
 Eastern basement terranes 32–3
 Eastern Svalbard Platform (ESP) 32, 75–7, 315, 344
 Barentsøya 86–91
 Edgeøya 86–91
 Hopen 91–3
 Kong Karls Land 83–6
 NE Spitsbergen 77–80
 SW Nordaustlandet 80–3
 Tusenøyane 86–91
 echinoderms
 fossil 279, 379
 living 10
 eclogite 165
 economic geology
 coal mining 449–51
 metalliferous mining 453–4
 non-metalliferous mining 454
 petroleum 451–2
 Edgeøya 86–7
 biostratigraphy 89–91
 ice cover 436
 igneous bodies 91
 lithic units 87–8
 oil exploration 93–5
 Edgeøya–Barentsøya monocline 344
 Ediacara biota 167
 Ediacara epoch 244
 Edmonds, J. M. 18
 Eidembreen tectonics 34, 36, 154, 169, 266–8
 Eifelian–Givetian events 308–9
 Ellesmere Island 253, 255, 306
 Ellesmerian (M'Clintock) orogeny 38, 270–1
 ellipsoids, deformed 112
 Ellsworth, L. 19
 Emsian events 308
 environmental regulations 12–13
 Eoarchean 28
 Eocene events 415–17
 Eolusletta Shear Zone 130
 escape tectonics 38, 277
 evaporites 67, 70
 exploration history 16
 exploratory wells 89, 93–5, 451–2
 extension 38
- Fairbairn, P. E. 18
 Falcon, N. L. 18
 Famennian events 309
 faults 172–3
 boundary 316
 lineaments 26
 major zones 25, 27
 strike-slip 38, 303, 306
 dextral 173–4, 390
 sinistral 204
 fauna, living 10
 feldspathite 31, 283
 ferns *see* pteridophytes
 Festningen section (Festungs Profil) 18, 49, 62, 343
 Finnmarkian phase 36
 fish
 fossil 137, 138, 291–3, 295, 353, 394
 living 10
 fission track analysis 398
 fjords 4, 48
 Fleming, W. L. S. 18
 flint concretions 70
 flora *see* plants
 Floraberget anticline 27
 flower structure 177
 flowering plants 11
 fluid springs 424–6
 fold and thrust front 48
 fold-thrust belt 400
 foraminifers 326–7, 372, 379
 Forlandsundet Basin 175–6
 coal 449
 origin 176–7
 Forlandsundet Graben 268
 Paleogene 157–8, 388, 391, 399, 402–9
 Forlandsundet Graben Terrane (FSGT) 32, 34
 formation, stratigraphic 29
 Frasnian–Famennian events 309
 Frebold, H. 18, 363
 freeze-thaw processes 433–4
 frozen ground 10
 fuchsite 158
- galena 189, 197, 210
 Garwood, E. J. 16, 18
 gastropods
 fossil 328, 379, 394
 living 10
 geochemistry 102, 126–7
 geographical nomenclature 5
 geological maps
 outcrops
 Neogene–Quaternary 419
 Paleogene 50, 389
 Jurassic–Cretaceous 364
 Triassic 341
 Carboniferous–Permian 311
 Devonian 290
 Silurian 273
 Cambro-Ordovician 258
 Proterozoic 228, 245
 regions
 Bjørnøya 211
 Central Basin 47, 54, 55, 56, 58
 Nordauslandet 101
 Oscar II Land 58, 156
 Prince Karls Forland 156
 Spitsbergen NW 133, 139
 Spitsbergen SW 181
 geomorphology 48, 431–4
 geotectonic interpretation 37
 Givetian events 308–9
 glacial dynamics 441–2

- glacial episodes
 Cenozoic 429–31
 Vendian 249–51
- glacial geophysics 436
- glacial hydrological structure 438–41
- glacial sedimentation, submarine 431
- glacier flow, fast 441
- glacier mass balance 444
- glaciers 9, 437
- glaciers and climate change 444–5
- glacio-fluvial sediments 432
- glaucophane schist 165, 266
- gneisses 143–4, 281
- gold 454
- golden spike 26
- graben cover sequences 37
- granites 105, 106, 112–13, 143, 281–3
- grasses, living 11
- gravel extraction 454
- gravity survey 423
- Greenland 247
 Carboniferous–Permian sediments 336
 Devonian tectonics 306
 Silurian 275
 Vendian 253, 254–5
- Gregory, J. W. 16, 18
- Grenvillian 36, 151, 453
 magmatism 104, 106
- grey granites, foliated 142
- Griesbachian stage 351
- Gripp, K. 18
- group, stratigraphic 29
- groups
 Adventdalen 52–9, 83–6, 182, 365
 Akademikerbreen 119
 Andrée Land 135–8, 257, 292
 Aust Torellbreen 196, 199
 Billefjorden 71–3, 77, 112, 161–2, 186–7, 312, 314
 Bjørnøya 212, 216–18, 257
 environments 318–20
 Bjørnøya 212, 219, 248, 257
 Brennevinsfjorden 103
 Buchananisen 158, 391, 396
 Bullbreen 162–4, 257, 272
 Calypsostranda 180, 391, 397
 Celsiusberget 102
 Comfortlessbreen 165, 257
 Conglomeratfjellet 231
 Deilegga 192, 193, 196
 Eimfjellet 192, 193, 196, 231, 239
 Ferrier 167–8, 230
 Finnlandveggen 124–5
 Franklinsundet 102, 232
 Geikie 167
 Gipsdalen 66–71, 77, 82, 112, 159–61, 184–6, 214–16, 312, 314, 320–3
 Gotia 248
 Gotiahalvøya 100
 Grampian 167, 274
 Harkerbreen 122–4
 Isbjørnhamna 192, 194, 196, 231, 239
 Kapp Hansteen 103
 Kapp Lyell 189, 199
 Kapp Toscana 365
 age 59
 biostratigraphy 351
 formations 59–63, 81, 87–8, 158, 182, 183, 212, 213, 340, 345, 348–50
 Konglomeratfjellet 189–91, 199
 Kongsvegen 166, 230
 Krossfjorden 144, 144–5, 230
 Lågneshukta 188
 Magnethøgda 191, 196, 230, 239
- Nordbukta 191, 199, 231
- Oil Shales 87
- Oslobreen 99–100, 116–17, 257
- Peachfya 167
- Planetfjella 121–2
- Polarisbreen 117–18, 248, 257
- Red Bay 5, 138–40, 292, 296–8, 308
- Roaldtoppen 102, 232
- St Jonsfjorden 165–6
- Sassendalen 59–63, 81, 88–9, 112, 159, 183, 212, 213, 340, 345, 346–8, 351, 356
- Scotia 167, 248
- Siktefjellet 140–2, 274, 292, 296–8
- Sofiebogen 192, 195, 196, 198
- Sofiekammen 192, 195, 196, 198, 257, 261
- Sorkapp Land 192, 194, 196, 198, 257, 261
- Tempelfjorden 63–6, 77, 81–2, 112, 159, 183–4, 212, 213–14, 312, 313, 323–4
- Van Mijenfjorden 48–50, 50–1, 51–2, 155, 389
- Veraneren 119–21
- Werenskiöldbreen 196
- Ymerdalen 210, 212, 218–19
- Grumanbyen coal 388
- Grumantbyen 13
- GSSP (global stratigraphic section and point) 26, 244, 317, 351
- Guadelupian events 333–4
- Gulfaksbreen anticline 27
- gypsum and gypsiferous rocks 67, 310, 454
- Gzelian events 331–2
- Haakonian 36, 141, 151, 307–8
- Hageman, J. T. H. 18
- half-graben 289
- Halvandalen 134
- Halvotenpiggen 134
- Hamberg, A. 18
- Hammerfest Basin 368
- Hannabreen Fault (Rabotdalen–Bockfjorden Fault) 26, 149
- Haraldknuttane 134
- Hazen Föld Belt 36
- Hecla, H.M.S. 16, 113
- Hecla Hoek Complex 16, 113
 basement 113–16
 fabric 129
 nappes 116
 shear zones 129
 structure 128–9
- Heclahuken anticline 27
- Heer, O. 16
- Heer Land 55
- Hellwaldfjellet 77–9
- high pressure metamorphic rocks 158, 164
- highland ice 10
- Hinlopenstretet Islands 4, 79
- Hinlopenstretet synclinorium 27
- history of names of islands 7
- Hoel, A. 17, 18
- Holocene 443–4
 geomorphology 431–4
 heatflow 421
 history 418
 seafloor spreading 421
 seismicity 421
- Holtedahl, O. 17, 18, 310
- Holtedahl Geosyncline 247
- Hopen 91–3, 452
 oil exploration 93–5
 radio-station 13
- Hopen Platform Terrane (HOPT) 32, 36
- Horn, G. 18
- Hornemantoppen Batholith 142, 150
- Hornsund Fault Zone 48, 222–3
- Hornsund High 63
- Hornsund Supergroup 192, 194–5, 198, 257
- Hornsund terrane (HSDT) 32, 33
- Hornsundian diastrophism 192, 266
- Hornsundian unconformity (HSDT) 33
- hotsprings *see* fluid springs
- hunting 11
- hydrocarbons *see* petroleum geology
- hyperite 76, 363
- Iapetus Ocean 21, 224, 255–6, 269, 271, 287, 288
- ice bergs 8, 442–3
- ice caps 445
 map 437
- ice core record of climate change 445
- ice cover 10, 437
- ice mass dimensions 436–8
- ice–ocean interaction 442
- idaite 189
- igneous rocks 76, 105–6, 112–13, 132–4, 142–3, 377–8
see also dykes and sills; plutonic activity; volcanic activity
- Iguanodon* 20, 58, 380
- impact structure 382
- indentor tectonics *cf.* transpression 277
- Induan environments 356
- Inner Hornsund Trough 316
- Innuitian Orogeny 36, 306
- Instrumentberget granitoid 124
- International Geological Congress 20
- International Polar Year 18
- International Stratigraphic Lexicon 20
- invertebrates (*see also* named groups)
 fossil 293–4
 living 10
- iron minerals 454
- Isachsen, G. 16
- islands map 4
- isostatic rebound, glacial 431
- isotopic ages 28, 29, 105–6, 113, 134, 142, 194, 235–6, 274–5, 291, 393
- Italia 19
- jadeite 165, 266
- Jarlsbergian diastrophism 192, 204–5, 266
- Jarlsbergian tectonism 36
- Jarlsbergian unconformity (HSDT) 33
- Juvdalskampen-thrusting 53
- Johanson, B. 18
- Jurassic
 biotas 378–80
 coal 363, 450
 climates 380–1
 history 363
 lithic units 52, 58, 366–8, 372–4
 magmatism 363–5, 377–8
 regional sedimentation 386–7
 sedimentary environment 381–2
 sedimentary sequence 386
 stratal scheme 366
 structural frame 365
 tectonic environment 383
 time scale 368–71
- Kaffiøyra Complex 158, 175, 268
- Kapp Linné radio station 13
- Kapp Mineral 189
- Kasimovian-Gzelian events 331–2
- Keilhau, B. M. 16 1.9, 210, 363
- Kings Bay Coalfield 154, 391
- Kings Bay Kull Comp. A/S (KBKC) 13
- Kinnvika syncline 27
- Kluftdalen syncline 27

- Knipovich lineament 222–3
 Knipovich Ridge 48
 Koch, L. 19
 Kollerbreen zone 151
 Kong Karls Land 83–6, 350, 436
 Kong Karls Land Platform Terrane (KKPT) 32, 36
 Kongsfjorden–Hansbreen Fault Zone 26, 62, 200, 305, 316
 Kongsøya 83
 Kontaktberget granites 105
 Krossfjorden anticline 27
 Krosspynten 135
 Kulling, O. 18, 96–7, 99
 Kungurian–Guadelupian events 333–4
 Kvitbreen syncline 27
 Kvitøya 97
 ice cover 436
- La Recherche* 16, 189
 Ladinian environments 358
 Lågøya 232
 Lågøya syncline 27
 lamprophyres 113, 135
 lands of Svalbard 7
 Laponiahelvøya granites 105
 Laponiafjellet granite 105
 Late Cretaceous hiatus 48
 Late Permian hiatus 48
 late tectonic plutons 105
 latitude 8
 lavas 76, 84, 85, 112, 134
 lawsonite 165, 266
 layered gneisses 144, 281
 lead minerals 454
see also galena
 Lexique stratigraphique International 31
 lineaments 25
 lithic code 29
 lithospheric contraction/expansion 43–4
 lithospheric motions 38–40
 lithostratigraphy *v.* lithic code 29
 Little ice age 436
 Llandeilo 28, 259, 260
 Llanvirn 28, 259, 260
 Lochkovian events 308
 Lomfjorden Fault 53, 112
 Lomfjorden (Agardhbukta) Fault Zone 26, 79, 316, 409
 Lomonosovfonna pluton 113
 Lomonsov conjecture 309
 Lomonsov Ridge 108–9
 Longyear Airport 13
 Longyearbyen 11, 13
 coal 388, 449
 Lopingian 29, 351
 Loven, S. L. 16
 Lovén syncline 27
 Lovénøyane Basin 150, 300
 Lyngbreen sequence 199
 Lyutkevich, Ye. M. 18
 Maastrichtian events 382–3, 386
 mafites 283–4
 magnetostratigraphy 418, 420, 421
 main fold belt, W. Nordenskiöld Land 201
 mammals, living 10
 map projection 14
 maps *see* geological *also* ice caps
 marble mining 454
 marine influences 8
 marine temperatures, Mesozoic 43
 Martin, A. R. 16
 Mathieson 18
- M’Clintock or Ellesmerian affinity 38, 154, 270–1, 468
 Mefonntoppene rocks 199
 member, stratigraphic 29
 Mesoproterozoic 28
 Mesoproterozoic 28
 Mesozoic 158–9, 182–3
 metamorphic complexes
 Hecla Hoek 128–9
 Northern Nordaustlandet 104–5
 NW Spitsbergen 143–4
 Prins Karls Land 174
 Stubendorffbreen Supergroup 131
 metamorphism 174–5, 220, 280–1
 microbial mats 232, 233
 Middle Hornsund Terrane (MHDT) 285
 migmatites of NW Spitsbergen 143–4, 281
 military neutrality 11
 Millarodden mining camp 189
 Mimer Valley phase 309
 mineralization 154, 180, 189, 197, 199, 210, 220
 mineralogy 165, 361
 mining *see* economic geology
 Mining Inspector 11
 mining settlements 388
 Miocene plateau lavas 134
 Mississippian 310, 328–30
 Mitrahelvøya 300
 Mitrahelvøya syncline 27, 151
 Mjølneir (impact) structure 382
 molluscs
 fossil 294, 354–5
 living 10
 Monaco, Prince of 5, 16
 Monacobreen phase/diastrophism 150
 monchiquite 135
 moraines 431, 443–4
 mosses 11
 Motalafjellet 169
 Moffen Island 427
 Mushamna 13
 Myklegardfjellet Bed 374
 mylonites 283
- nannofossils 379–80
 Nathorst, A. G. 5 16, 18, 310, 340, 363, 388
 Nathorst Land 57–8, 62, 191, 201, 401–2
 national parks 12
 nature reserves 12
 Neoproterozoic 28
 Neocomian events 382
 neodigenite 189
 Neogene
 geomorphic sequence 429
 history 418
 lithic units 132
 magnetic anomalies 418–21
 magnetostratigraphy 420
 marine sedimentation 426–7
 plate motions 418
 shaping of Svalbard 428–9
 time scale 418
 uplift and erosion 427–8
 volcanism 423–4
 Neoproterozoic 28, 151, 189–91, 198–9
 Newtontoppen granite 113
 Nilsson, T. 18
 niviation 433
 Nobile, U. 19
 Nordaustlandet Eastern Terrane (NAET) 32, 284
 Nordaustlandet Platform Terrane (NAPT) 32, 35
 Nordaustlandet Western Terrane (NAWT) 32–3, 284
- Nordaustlandet 7
 northern
 age determinations 106–7, 235
 biotas 248, 263
 Devonian thermal regime 291
 history of research 96
 ice cover 436
 igneous bodies 105–6, 282–3
 metamorphic complexes 104–5
 stratal succession 96–104, 232, 257
 structure 107–8
 tectonostratigraphy 238
 terranes 276
 southwestern 80–3
 Nordbreen Nappe 129
 Nordbreen Thrust 129
 Nordenskiöld, A. E. 5, 16, 76, 96, 210, 310, 340, 388
 Nordenskiöldkysten 188
 Nordenskiöld Land 53, 58, 188–9, 200–1, 400, 401
 Nordenskiöldkysten Terrane (NDKT) 32, 34
 Nordfjorden Block/High 62, 63, 315, 344, 409
 Nordhamna radio-station 13
 Nordkapp anticline 27
 Nordkapp granite 105
 Norge, (airship) 19
 Norges Svalbard og Ishavs Undersøkelser 19
 Norian environments 358–60
 Norskebanken 153
 Norske Finna 94
 Norsk Polarinstittutt 11, 15, 19–20, 21, 22, 96
 North Basin Terrane (NBT) 35
 North East Greenland Province 37–8
 North Greenland Pearya Province 37–8
 Northern Platform 316
 Northwest Spitsbergen Terrane (WNWT) 32, 33, 144
 Northwest Wedel Jarlsberg Land Terrane, (WJNT) 32, 34
 Norwegian Hydrographic Office 11
 Norwegianization of names 7
 Ny-Ålesund 13
 Ny-Ålesund coal field 154, 157, 388, 450
 Ny Friesland 7
 age determinations 235–6
 biotas 262–3
 plutonic activity 36, 112–13, 281–4, 291
 stratal succession 98, 232, 257
 tectonostratigraphy 237–8
 topographic surfaces 111
 unconformity surface 110
 volcanic activity 423–4
 Ny Friesland (Caledonian) Orogeny 33, 36, 192, 276–8, 306–7
 Ny Friesland Eastern Terrane (NFET) 33, 284
 Ny Friesland Western Terrane (NFWT) 33, 284
- oblique motions 38
 ocean basins 7
 Odell, N. E. 18
 official publications 13–15
 offshore geology 152–3, 209–10
 oil exploration 93–5
 oil seeps 425
 oil shales 340
 Olav V Land 77, 110
 Olav V Land Platform Terrane (OVPT) 32, 35–6
 Old Red Sandstone Province 289
 Olenekian environments 357
 Oligocene events 417
 omphacite 267
 oncolites 232, 248
 oolites 58

- Ordovician
 biotas 260–2
 correlation within Svalbard 262–4
 lithic units 116–17, 162–5, 192, 212, 218–19
 palinspastics 268–70
 sedimentary environments 264–6
 tectonic environments 266–8
 tectonothermal events 270–1
 time scale 259, 260
- Orvin, A. K. 18, 20
- Oscar II Land 155, 156
 age determinations 236
 biotas 264
 Mesozoic 59, 62, 158–9
 Paleozoic 159–65, 257
 Proterozoic 165, 230
 structure 168–71
 tectonic setting 239, 266, 285, 399–400, 400–1
 volcanics 251
- Oscar II Land Terrane (OIILT) 32, 34
- ostracodes 294
- Oxford University expeditions 18, 77, 96
- Øyrlandet Basin 180–1, 390, 391
- Palaeoplysina* build-ups 67
- Palaeo-Hornsund–Bjørnøya Fault Zone (PHBFZ)
 344
- palaeoclimates 40–3
 palaeogeography 335–9, 384–5
 palaeolatitudes 43
 palaeomagnetic studies 43
 palaeostress history 175–6
 Paleoproterozoic 28
- Paleocene events 415–16
- palaeotemperatures *see* paleoclimate
- Paleogene
 age estimates 391–3
 biota 391, 393–4
 coal 449–50
 correlation 391–3
 history of research 388–90
 isotopic ages 393
 lithic units
 Central Basin 48–52, 390–1, 394–5
 Central Western Spitsbergen
 Forlandsundet Graben 157–8, 391, 395–6
 Kings Bay coal field 154–7, 391, 396–7
 offshore 397
 South Spitsbergen 180–1
 regional tectonic sequence 413
 structural frame 390
 structure 207, 399, 409, 410
 west Spitsbergen graben 402–9
 western basement 399–400
 tectonic sequence 410–13
 thermal degradation 398
 time scale 391
- Paleoproterozoic 28
- Paleozoic setting
 Oscar II Land 159–65
 SW Spitsbergen 183
- palinspastic reconstructions 41, 42, 268–70, 284–8, 335
- Parry, W. E. 96, 310
- patterned ground 432–3
- Pearya 38, 253, 255, 269–70, 270–1
- pegmatite 106, 142, 377
- Pennsylvanian 310
see also Kasimovian–Gzelian
- pereletok 10
- permafrost 10, 432–3
- Permian
 biota and biostratigraphy 89–91, 324–8
 history 310
- lithic units 312–14
 Bjørnøya 212, 213–15
 Central Basin 63–6
 Spitsbergen, NE 77, 112
 Spitsbergen, NW 134–5
 Spitsbergen, SW 183–7
 lithostratigraphic scheme 313
 palinspastics 335
 sedimentary environments 323–4
 structural frame 314–16
 tectonic control of sedimentation 332–4
 time scale 316–18
- petroleum geology 93–5, 227, 451–2
- Petunian 151
- Phipps, C.J. 16
- phosphorite and phosphates 16, 265, 340, 363, 454
- pingo formation 434
- place names of Svalbard 7 111, 155, 180
- Planetfjella schists 129–30
- plants
 fossil
 Paleogene 391, 393–4
 Jurassic–0.5Cretaceous 380
 Triassic 355–6
 Carboniferous 326
 Devonian 294–6
 living 11
- plate tectonic motions 38–40
see also palinspastic reconstructions
- plateau lavas 134, 423–4
- platform sequence 222
- Pleistocene
 volcanic activity 132–3
see also Quaternary
- plesiosaur 86
- plowmarks, glacial 431
- Plurdalen-1 well 89, 93–5, 274, 451, 452
- plutonic activity 105–6, 112–13, 142–3, 281–3
- Polar Ocean Basin 7
- political history 11
- polygons 433–4
- potash horizon, Cambrian 264
- Pragian–Emsian events 308
- pre-Vendian
 biotas 231–5
 correlation 239–40
 lithic units 117–27
 palinspastics 240–3
 provinces 241–2
 unit names 227
 terranes
 central 230
 eastern 229
 western 230–1
- Precambrian
 chronometric scale 27
 hydrocarbons 227
 isotopic ages 235–6
 time scales 229
- precipitation 8
- Pretender Fault 62, 150
- Pretender Lineament 151, 344
- Princess Alice (yacht) 16
- Prins Karls Forland 155, 156
 biota 264
 lithic units 166–8
 structure 171–5
 tectonic setting 268, 285, 399
 volcanics 251
- Prins Karls Forland Terrane (PKFT) 32, 34
- prokaryotes 233
- Proterozoic
 Nathorstland 189–94
 Nordenskiöld Land 188–9
- Oscar II Land 165–6
- Sørkapp Land 197–9
- Wedel Jarlsberg Land 189–94
see also pre-Vendian *also* Vendian
- protists
 multicellular 234–5
 unicellular 233–4
- proto-basement 236–7
 deformation 205, 305
 terranes and subterrane
 East 237–8
 North Central 238–9
 South Central 239
 West 239
- protolith 31
- provinces 37–8
- provinces, tectono-stratigraphic 25
- pteridophytes
 fossil 394
 living 11
- Pyramiden 13
- pyrite 189, 197
- pyrrhotite 197
- Quaternary
 geomorphic sequence 429
 history 418
 marine sedimentation 426–7
 time scale 418
 uplift and erosion 427–8
 volcanism 423–4
- Queen Elizabeth Islands 360
- Rabotdalen–Bockfjorden Fault 149
- Raddedalen-1 well 93–5, 89, 274, 451, 452
- raised beaches 432, 434
- rank, stratigraphic 31
- Raudberget granites 113
- Raudfjorden Basin 149
- Raudfjorden Fault 150, 300
- Raudfjorden Fault Zone 26, 305
- Ravn, J. P. J. 18
- reef build-ups 310
- Rekvika Nappe 129
- Rekvika Thrust 124, 129
- reservoir rocks 310, 363
- Rhaetian 351, 356, 360–1, 381
- Richarddalen Complex 145, 149, 230
 age determinations 236
 tectonostratigraphy 238–9
 tectonothermal events 291
- Richarddalen Orogeny 33
- Richardvatnet anticline 27
- Rijpdalen granites 104, 106
- Rijpfjorden granites 106
- Rinkian 36
- rock glaciers 432
- Rozycki, S. Z. 18
- Sabine, Sir Edward 16
- Sabine Land 61–2
- sabkhas 71
- St Jonsfjorden Trough 315, 344
- Salterella* 262
- Sandford, K. 18
- Save Söderbergh, G. 18
- scaphopods 379
- scientific serials, official 15
- Scoresby, W. 16
- Scotiadalen Fault Zone 172

- Scottish Spitsbergen Syndicate 18
 Scottish Vendian 253
 Scythian environments 356–7
 sea level changes 7, 434–5
 sea ice 8–10
 sector boundary 11–12
 sectors for description in this work 23
 seismic stratigraphy 421
 sequence stratigraphy 37
 serpentine 164, 267
 settlements 4, 13
 Shell Oil Company 20
 Sigurdfjellet volcanic core 132
 sills and dykes 106, 112, 113, 377–8
 Silurian
 biostratigraphic correlation 272–4
 igneous activity 281–3
 isotopic ages 274–5
 metamorphism 280–1
 palinspastics 284–8
 petrogenesis 280
 sedimentation and tectonics 275
 tectogenesis 275–80
 tectonic vergences 280
 time scale 272
 Sjødanovfjellet faunas 262
 Sjubrebanken 152–3
Skrifter om Svalbards og Ishavet 18
 SKS, Committee on the stratigraphy of Svalbard 31
 Slakli faunas 261–2
 Smeerenburgian (Caledonian) Orogeny 33, 36, 142, 151, 307
 Snøfjella syncline 27
 snow cover 10
 soil polygons 434
 solid geology *see* geological maps
 Sørkapp Basin 224
 Sørkapp Land
 biotas 260
 lithic units 55–7, 63, 182–3, 230, 231, 257
 structure 205–8
 tectonic setting 286, 400, 402
 volcanic rocks 252
 Sørkapp-Hornsund High 316
 Sørlifjellet 134
 source rocks 310
 South Eastern Svalbard Terrane 285
 Southern basement terrane 32
 Southern Basin Terrane (SBT) 35
 Southwest Basin 344
 Southwest Wedel Jarlsberg Land Terrane (WJST) 32, 34
 Sparreneset syncline 27
 sphalerite 189, 197
 Spitsbergen tectogenesis 169–71
 Spitsbergen 436
 basins classified 315
 central basin
 coal 449
 geomorphology 48
 lithic units 48–72, 390–1
 structural development 73–4, 409
 structural setting 48, 344
 central western
 lithic units 154–68
 structure 168–77
 northeastern
 cover rocks 112
 geological setting 110–12
 lithic units 77, 116–27
 metamorphic rocks 113–16, 128–31
 plutonic rocks 112–13
 tectonic environment 266
 northwestern
 cover rocks 134–5
 fault zones 305
 offshore geology 152–3, 410
 Paleozoic units 135–45, 275, 278–9
 Proterozoic 230
 structure 145–52
 volcanic rocks 132–4, 423
 southern and southwestern
 biostratigraphic correlation 260–2
 lithic units 180–99, 230
 structure 200–7
 tectonism 266, 279–80
 western 275
 Spitsbergen Basin 35–6, 315, 136, 344
 Spitsbergen Treaty 5, 11–13, 18
 Spitsbergian (West Spitsbergen Orogeny) 5, 7, 50, 151–2, 154, 169–70, 388
 springs with gas, Holocene 424
 Stappen High 224
 Stensjö, A. E. 18
 Stepanov, D. L. 18
 stone circles 433
 stone uplift 433
 stone walking 433
 Storøya 97, 107
 stratigraphic conventions and names 31
 strike-slip motions 38, 303, 306
 dextral 173–4, 390
 sinistral 204
 stromatolites 58, 248, 232, 379
 structural elements of Svalbard 25, 27, 128
 Sturtian 450
 submarine outcrop studies 76, 222–4
 subsidence 43–4
 subterranean 32–6
 suffixes 7
 sulphates *see* anhydrite; barite; gypsum
 sulphide minerals 179, 180, 189, 197, 201, 453–4
 summit envelope 8
 supergroup, stratigraphic 29
 supergroups
 Bünsow Land Supergroup 48, 63–73, 134–5, 159, 183–7, 257, 312–14
 Hinlopenstretet Supergroup 99–100, 116–18, 257
 Liefde Bay Supergroup 135–42, 292
 Lomfjorden Supergroup 118–21, 232
 Murchison Bay Supergroup 100–3, 232
 Nordenskiöld Land Supergroup 47
 Stubendorffbreen Supergroup 121–8, 131
 surging, glacier 441
 Sutorfjella conglomerate 34, 167, 268, 274
 Svalbardian events 18, 33, 36, 151, 309
 Svalbardian stage 318
 Sveagruva 13
 Sveagruva coal 388
 Sveanor syncline 27
 Svenskøya 82, 83
 Sverdrup, H. V. 20
 Sverrefjellet volcanic cone 132

 talite 10
 talus cores 432
 tectonic map 182
 tectonic synthesis 175, 176–7, 177–8
 tectono-stratigraphic sequences 31
 temperatures, summer and winter 8
 terrane, composite 38
 terranes, allochthonous 21, 37–8
 terranes, descriptive 32–6
 Terre Glacée Russe 77
 Tertiary Basin *see* Central Basin
 thematic maps 15

 thermal contraction 434
 thorium 454
 tillites 18, 100, 118, 188
 time scales and time frame 25–9
 Tithonian stage 348–9
 Toarcian events 381
 topography and topographic maps 6, 7–8, 14, 111, 155, 180
 Torell, D. M. 5 16, 388
 Torell Land 55, 57
 Torellian 34, 36, 192
 tourism 12
 trace fossils 65, 137, 138, 380, 394
 transpression 38, 50–1, 168, 303
 transpressive shear 130–1
 transtension 50–1, 303
 transverse Mercator projection 14
 Treaty of Sévres (1920) 5
 tree trunks, fossil 84
 Triassic
 biostratigraphic correlation 89, 351–3
 biota 353–6
 climates 362
 economic deposits 340, 450
 environments 356–61
 history of research 340
 initial boundary 351
 lithic units 59, 77, 112, 212–13
 magneto-stratigraphic correlation 353
 palaeolatitudes 362
 regional sedimentation 362
 rock units 344–50
 structural frame 343–4
 tectonic framework 361–2
 time scale 350–1
 trilobites 328
 Trollfjorden–Komagev Fault 287
 Trygghamna–Lappdalen 170–1
 Tunheim 13
 turbidites 87
 Tusenøyane 4, 86–7
 biostratigraphy 89–91
 igneous bodies 91
 lithic units 87–9
 Tyrrell, G. W. 18

 unconformities 25
 underplating 288
 uplift 44, 427–8, 431
 uplift stones 433
 Upper Atlantic Layer 8
 uranium 454

 Varanger Epoch 21, 244
 sequence 199
 tillites 21, 188
 Vegardbreen thrust 171
 Vendian
 biostratigraphy 246
 biota 248
 climates 249
 correlation 246–8
 environments 249
 glacial 21, 249–51
 tectonic 252
 volcanic 251–2
 international correlation 252–4
 lithic units 212, 219
 palinspastics 254–6
 paleolatitude 256
 time scale 244–6
 vergence, Caledonian 219
 vergence, tectonic 172

- Versailles Treaty 11, 16
 vertebrates, fossil 353–4, 379, 380
 see also dinosaurs; fish
 Vestbakken volcanic province 223
 Vestfonna 96
 Vestgötabreen Complex 164–5, 231, 257
 Veteranen Line 26
 Veteranen syncline 27
 Viking exploration 5
 Vimsodden–Isbjørnhamna Terrane 192
 Vimsodden–Kosibapasset Fault (VKF) 194
 Visean events 328–30
 vitrinite reflectance 175, 398
 Vogt, T. 18
 volcanic activity
 Mesozoic 365
 Neogene 132, 134, 423–4
 Pleistocene 132–4
 Tertiary 223
 Vendian 251–2
- weather 8
 Wedel Jarlsberg Land 195–6
 age determination 236
 lithic units 62–3, 189–91, 195–6, 230, 231, 257
 structure 201–5
 tectonics 239, 279, 286, 401–2
 terranes (WJNT; WJST) 32
 volcanic rocks 251–2
 wells, exploratory 93–5, 451–2
 Werenskiöldian 36, 192
 West Spitsbergen Basin 315
 West Spitsbergen current 8
 West Spitsbergen Fault Zone 48, 316
 West Spitsbergen Orogen 48, 177–8, 389, 403–8, 453
 northern segment 177–8
 Wedel Jarlsberg Land 201–5
 western zone 63
 West Spitsbergen Orogeny 5, 7, 50, 151–2, 154, 169–70, 388
- West Svalbard terranes 38
 Western basement terranes 32, 34
 Western Basin 344
 Western Basin Terrane (WBT) 32, 35
 Western Northwest Terrane 144, 150–1, 285
 western terranes, SW Spitsbergen 199
 whaling 11, 13
 Wilhelmøya 4, 75, 77–9
 Wilkins 19
 Wiman, C. 18
- Yermak Plateau 152, 388
- Zechstein 310
 zircon ages 36, 105, 114, 124, 151, 220, 235, 236, 398
 zinc 454