Index

Page numbers in italic, e.g. 42, refer to figures. Page numbers in bold, e.g. 53, signify entries in tables.

<table>
<thead>
<tr>
<th>Index Term</th>
<th>Page Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abadeh</td>
<td>42, 44</td>
</tr>
<tr>
<td>Abarkoh Basin fluvial megafan (Iran)</td>
<td>41–43, 58</td>
</tr>
<tr>
<td>depositional model 57–58, 57</td>
<td></td>
</tr>
<tr>
<td>geological and tectonic setting</td>
<td>42</td>
</tr>
<tr>
<td>geomorphology and hydrology 44–46</td>
<td></td>
</tr>
<tr>
<td>drainage nets 46</td>
<td></td>
</tr>
<tr>
<td>satellite images 44</td>
<td></td>
</tr>
<tr>
<td>simplified map 45</td>
<td></td>
</tr>
<tr>
<td>sedimentary facies and distribution</td>
<td>53</td>
</tr>
<tr>
<td>medial-distal-fan facies 48, 49, 52–57, 52, 54, 55, 56, 57</td>
<td></td>
</tr>
<tr>
<td>proximal-fan facies 46–52, 47, 50, 51, 52</td>
<td></td>
</tr>
<tr>
<td>study methods 43–44</td>
<td></td>
</tr>
<tr>
<td>accommodation space 169–184</td>
<td></td>
</tr>
<tr>
<td>Aigüero fan</td>
<td>188</td>
</tr>
<tr>
<td>description 189, 190</td>
<td></td>
</tr>
<tr>
<td>main depositional process 189</td>
<td></td>
</tr>
<tr>
<td>synsedimentary deformation 202</td>
<td></td>
</tr>
<tr>
<td>Aix en Provence 218</td>
<td></td>
</tr>
<tr>
<td>Al Rams 86</td>
<td></td>
</tr>
<tr>
<td>Albarraclín River 70, 75, 76, 80</td>
<td></td>
</tr>
<tr>
<td>Alborz 42</td>
<td></td>
</tr>
<tr>
<td>alluvial fans, overview 1–2</td>
<td></td>
</tr>
<tr>
<td>dynamics of Quaternary fans 2–3</td>
<td></td>
</tr>
<tr>
<td>future directions 4</td>
<td></td>
</tr>
<tr>
<td>processes 2</td>
<td></td>
</tr>
<tr>
<td>sedimentary sequences 3–4</td>
<td></td>
</tr>
<tr>
<td>Alluvial Fans conference, Sorbos, Spain 1</td>
<td></td>
</tr>
<tr>
<td>Andean Ranges (Argentina), Quaternary telescopic-like alluvial fans 69, 76–81</td>
<td></td>
</tr>
<tr>
<td>alluvial segments, genesis 73–74, 79</td>
<td></td>
</tr>
<tr>
<td>general distribution 69</td>
<td></td>
</tr>
<tr>
<td>Mendoza River area 70, 70, 71, 72</td>
<td></td>
</tr>
<tr>
<td>Quebrada del Toro area 71–73, 77, 78</td>
<td></td>
</tr>
<tr>
<td>San Juan River area 70–71, 70, 72, 73, 74, 75, 76</td>
<td></td>
</tr>
<tr>
<td>longitudinal profiles, variability 74–76, 80</td>
<td></td>
</tr>
<tr>
<td>Amisí fan 188</td>
<td>188</td>
</tr>
<tr>
<td>description 190</td>
<td></td>
</tr>
<tr>
<td>main depositional process 189</td>
<td></td>
</tr>
<tr>
<td>Antofagasta 9, 97, 98, 99, 101</td>
<td></td>
</tr>
<tr>
<td>Apfelberg Formation</td>
<td></td>
</tr>
<tr>
<td>sedimentology 209</td>
<td></td>
</tr>
<tr>
<td>Apfelberg fan 211–212, 213, 214</td>
<td></td>
</tr>
<tr>
<td>Rachau fan 209–211, 210, 211, 212</td>
<td></td>
</tr>
<tr>
<td>stratigraphic–structural setting 207–209, 208</td>
<td></td>
</tr>
<tr>
<td>Aquitaine Basin 188</td>
<td></td>
</tr>
<tr>
<td>Arc Basin 217–218</td>
<td></td>
</tr>
<tr>
<td>Argentina, luminescence dating of alluvial fans in intramontane basins 153, 163–166</td>
<td></td>
</tr>
<tr>
<td>see also telescopic-like alluvial fans of the Quaternary geological, geomorphic and climatic setting 154–156 facies description 156 field photographs 155 study area 154 OSL methodology 158 sampling protocol 156–158, 157 dosimetry 159</td>
<td></td>
</tr>
<tr>
<td>study results 160–163</td>
<td></td>
</tr>
<tr>
<td>dose recovery tests 160</td>
<td></td>
</tr>
<tr>
<td>equivalent dose data 162</td>
<td></td>
</tr>
<tr>
<td>equivalent dose distribution 164–165</td>
<td></td>
</tr>
<tr>
<td>luminescence data 161</td>
<td></td>
</tr>
<tr>
<td>Ash Slough 175</td>
<td></td>
</tr>
<tr>
<td>Atacama Desert 11–12, 13, 96, 96, 97</td>
<td></td>
</tr>
<tr>
<td>rainfall 14</td>
<td></td>
</tr>
<tr>
<td>Atacama Fault Zone (AFZ) 97–99, 97, 99, 106, 111</td>
<td></td>
</tr>
<tr>
<td>Aurelien, Mount 218</td>
<td></td>
</tr>
<tr>
<td>Berenda Slough 175</td>
<td></td>
</tr>
<tr>
<td>Bimont 222</td>
<td></td>
</tr>
<tr>
<td>Bolea fan 188</td>
<td></td>
</tr>
<tr>
<td>description 191</td>
<td></td>
</tr>
<tr>
<td>main depositional process 189</td>
<td></td>
</tr>
<tr>
<td>British Columbia (Canada), forested fans 25, 38 study area 25–27, 26 study methods 27–28 adventitious roots 27, 30, 35 boulders wedged between trees 27, 34, 35 buried trees 27, 29, 35, 37 log retaining walls 27, 33, 35 log steps 27, 33, 35 recent sediment splays 27, 28 soil reinforcement 27, 31, 35 tree holes 27, 30, 35 tree scars 27, 32, 35 woody dykes 27, 32, 35 study results 28–38, 34, 35 high-volume forest stand 36 low-volume forest stand 36 trees growing on sediment 37 Budapest 62 Buena Vista sub-basin 170 Buena Vista Valley 118 Buenos Aires 70 Burns Lake fan 26 Calaveras River fan 171, 172 Canada see British Columbia (Canada), forested fans Carpathian Mountains 61 Carson River 118 Catalan Range 188 Cerro Blanco 77, 78 Cerros de Puriactis 10 Chile see climatic controls on alluvial-fan activity; flow events on hyper-arid alluvial fans Chorrillos 78 Chowchilla 175 Chowchilla River fan 171, 172, 175 gradients 176 schematic cross-section 177 sediment supply and stream discharge 180–182 Clan Alpine Mountains 118 climatic controls on alluvial-fan activity (Coastal Cordillera, northern Chile) 95–96, 114–115</td>
<td></td>
</tr>
</tbody>
</table>
climatic controls on alluvial-fan activity (Coastal Cordillera, northern Chile) (cont.)
climate, geology and geomorphology 96–99
climate zone distribution 96
geological map 97
principal watersheds, topography and drainage patterns 98
satellite image 100
topographic cross-sections 99
coastal alluvial fans
age 103
depositional processes 101–103
distribution 99
drainage basin characteristics 99, 102, 104–105, 106, 107
field photographs 108
study area 101
surface morphology 99, 108
comparison between coastal and western Central Depression alluvial fans 113
controls on alluvial-fan systems 113–114
Western Central Depression alluvial fans
age 108–113
depositional processes 108
distribution 103
surface morphology 106
climatic environments 1, 3
aridity
Abarkoh megafan 45–46
Argentina 154–155
Great Basin, Nevada, USA 117
Provence, France 219
Sparta Basin 134–135
Wadi Al-Bih 86
climatic change 2, 3, 169
palaeoclimates 201–202
paraglacial conditions 29
climatic reconstruction 65–66
Cobija 98
Cold Springs fans 118, 119
morphology 120–121, 121, 122
Conchola 98
controlling factors
base level control 2, 3, 125–126
fan aggradation 196–197
Tuolumne River fluvial fan 178–179
climatic control 2, 3, 117
Coastal Cordillera (Chile) 95–96, 114–115
Ebro Basin 201–202
Spartan piedmont (Greece) 133–134, 145–147
tectonic control 2, 217–219, 232–236
Fohnsdorf intramontane basin (Austria) 207, 212–215
Great Basin (Nevada, USA) 117
Sajó–Hernád alluvial fan (Hungary) 61, 62, 67
Spartan piedmont (Greece) 133–134, 142–143, 145–149
Costes Chaudes, Les 222
coupling/buffering role of fans 1
Danube River 62
dating of fan sediments and surfaces 3
cosmogenic dating 3, 108
luminescence dating (TL/OSL) 143, 153, 156–158, 163–166
OSL methodology 158
OSL results for Argentina 160–163, 164–165
radiocarbon dating 3, 64–66
relative dating 3
by correlation 119–120
soil development 118–119, 136–138, 174
soils as sequence bounding surfaces 4, 182–184
U/Th dating 3
debris cones 1, 2, 88
debris-flow deposits 101
deformed sediments (synsedimentary deformation) 202–203, 230–231
depositional processes 9, 101–103, 108, 189, 199–201
debris flows 101, 197, 211
forested fans 27–29
Quebrada Tambore 18–19, 22
flash floods and flood sediments 9–10, 14, 16, 19–23, 41–43, 58
hyperconcentrated floods 103
sheetfloods 2, 14–17, 73–77, 103
depositional/sedimentary models 57–58, 67, 204–205, 214, 235
coarsening-up sequences 3
correlation of fan deposits 192–193
fluvial evolution 62–64
formation of External Sierras thrust in Ebro Basin 194–196
river style changes 64–66
Dehshir 42, 43
Desatoya Mountains 118
discharge to sediment load ratio (Q:Q) 134
Dixie Hot Springs fans 118
Dixie South fans 118
Dixie Valley fans 118, 119
morphology 121–124, 123
Dixie, Lake 119
Donezko Thrust 10
drainage basin characteristics
Abarkoh Megafan, Iran 46
British Columbia 29
Coastal Cordillera, Chile 95–99, 99–102, 103–106
Quebrada Tambore, Chile 12
drainage reorganization 4, 103
Ebro Basin (Spain), Tertiary alluvial fans at northern margin 187, 204–205
correlation of fan deposits 192–193
deformation features
deformation timing and controls 204
post-depositional deformation 203–204, 203
synsedimentary deformation 202–203, 202
defositional facies 197
controls on deposition processes 199–201
debris-flow deposits 197, 199
rock falls 197
summary 198
waterlain deposits 198–199, 200
description of fan bodies 189
Agüero fan 189, 190
Aníes fan 190
Bolea fan 191
Ebro Basin between Linás and Aníes 190
Linás fan 190
Murillo fan 189–190, 191
Nuño fan 191–192, 193
Riglos fan 190, 191
Roldán fan 192, 194
San Julián fan 191, 193
exhumation 204
fan aggradation and base level 196–197
fan spacing and basin-margin structure 197
palaeoclimate 201–202
relationship to other facies 201
tectonostratigraphic setting 188
regional tectonics 187–188
stratigraphy 188–189, 189
thrust front formation and basin-margin topography 194–195, 195
basin-margin relief 195–196
Edwards Valley 118, 119
Eiger 62
Eghlid 42
Esfahan 42
Etoile Range 218
Falla del Carmen 103–106, 111
Fallon 118
fan dynamics 10, 18, 62–64, 145–149
fan morphology 13, 62–64, 69, 86, 125–126
fan gradients 2, 90, 104–105, 127, 136, 176
fan profiles 16, 74–76, 80, 137
fan segments 73–74, 79, 133
fan sediments
facies 46–57, 137, 156, 197–200, 223–230
sedimentary sequences 13–14, 108, 109, 139–140, 144, 157, 230
Fohnsdorf Basin 209–215, 210, 211, 213
fan settings 85
mountain-front fans 2, 86–88, 117, 133, 153
tributary junction fans 69–78, 86–88
fan styles 88, 125–126
backfilled fans 2
confined/unconfined fans 2, 88
prograding/telescopic fans 88
stacked fans 88
flash-flood sedimentation in arid lands (Abarkoh Basin fluvial megafan, Iran) 41–43, 58
depositional model 57–58, 57
glacial and tectonic setting 42
geomorphology and hydrology 44–46
drainage nets 46
satellite images 44
simplified map 45
sedimentary facies and distribution 53
medial-distal-fan facies 48, 49, 52–57, 52, 54, 55, 56, 57
proximal-fan facies 46–52, 47, 50, 51, 52
study methods 43–44
flow events on hyper-arid alluvial fans (Quebrada Tambores, Chile) 9–10, 19–23, 23
climatic 11–12, 13
rainfall 14
grology and structure 10, 11, 12
geomorphology of fan catchment and depositional areas 12–13
Late Pleistocene–Holocene flow conditions 14–16
Late Pleistocene–Holocene sedimentology 13
bedded sheetform gravel with couplets 13–14, 17
channelform gravels 14, 17
sheetform massive gravel 14, 17
Quaternary sediment provenance and calibre 13, 15, 16, 17
recent deposits from 2001 flood 16–18
stage 1 – fluvial channel cutting 18
stage 2 – mudflow 18, 22
stage 3 – fluvial channel flushing 18
reconstruction of 2001 flood 18–19, 19, 20, 21, 22
fluvial megafans 41
fluvially dominated fans 2, 14, 17, 61–67, 169
Fohnsdorf Miocene intramontane basin (Austria), source area and tectonic control on alluvial-fan development 207, 212–215
clast composition data 215
geological and palaeogeographical overview 207, 208
heavy mineral composition 215
sedimentology 209
Apfelberg fan 211–212, 213, 214
Rachau fan 209–211, 210, 211, 212
stratigraphic-structural setting of Apfelberg Formation 207–209, 208
forested fans, hydrogeomorphic processes (British Columbia, Canada) 25, 38
study area 25–27, 26
adventitious roots 27, 30, 35
boulders wedged between trees 27, 34, 35
buried trees 27, 29, 35, 37
log retaining walls 27, 33, 35
log steps 27, 33, 35
recent sediment splays 27, 28
soil reinforcement 27, 31, 35
tree holes 27, 30, 35
tree scars 27, 32, 35
woody dykes 27, 32, 35
study results 28–38, 34, 35
high-volume forest stand 36
low-volume forest stand 36
trees growing on sediment 37
France see tectonic and environmental processes in Upper Cretaceous–Palaeocene alluvial fans
Fresno 174
Fresno River fan 171, 172
Gatico 97, 98, 99, 101
Gerlach 118
Gerlach fans 119
morphology 124–125, 124
Ghavkhoni 42
Ghavkhoni–Abarkoh–Sirjan depression 42, 43
Great Basin (Nevada, USA), differential effects of base-level, tectonic setting and climatic change in Quaternary alluvial fans 117, 128–130
fan morphology and relation to base level 125–126
fan morphology
Cold Springs fans 120–121, 121, 122
Dixie Valley fans 121–124, 123
Gerlach fans 124–125, 124
schematic classification 125
Downloaded from https://pubs.geoscienceworld.org/books/chapter-pdf/41995529781862394995_backmatter.pdf by guest
Great Basin (Nevada, USA) (cont.)
fan morphology (cont.)
Stillwater fans 120, 121, 122
fan morphometry 126–128, 127, 127, 129
study area 117–119, 118, 119
study methods 119–120
Great Hungarian Plain 62
Greece see Spartan piedmont (Greece), role of climate and tectonics in Quaternary fan development
Guara Formation 196, 196
Guarga Thrust 194–195
Hajduszoboszlo 62
Hambast Mountains 42, 43, 44
Hanford 174
Hernód River 61
Hornitos 97, 98, 99, 107
Huesca 188
Humboldt Current 96, 96
Hungary see river style changes controlled by climate and tectonics
hyper-arid regions 9
climate 11–12, 13
rainfall 14
hyperconcentrated flow deposits 103
sedimentary log 109
Iberian Cordillera 188
ignimbrite thrust 10
Ingeniero Maury (IM) 77
Jaíchal River 70–71, 76
Kamares fan 135
average fan gradient 136
average redness rating and iron concentration 141
axial-surface and trench profile 138
lithostratigraphy 139
mineral magnetic data 142–143
Kaweah River 170
Kaweah River fan 171, 172
Kazincbarcika 62
Kern Lake sub-basin 170
Kings River 170
Kings River fluvial fan 169, 171, 172
geomorphology and sequence development 173–178
gradients 176
interpreted soil surveys 174
schematic cross-section 177
Knittelfeld 208
Kopeh Gagh 42
Lahontan, Lake 118, 119
lake sediments 79–81
Llnás fan 188
description 190
main depositional process 189
Llano de la Paciencia 10
lobe deposits 101–103
luminescence dating of alluvial fans in intramontane basins (NW Argentina) 153, 163–166
geological, geomorphic and climatic setting 154–156
facies description 156
field photographs 155
study area 154
OSL methodology 158
sampling protocol 156–158, 157
dosimetry 159
study results 160–163
dose recovery tests 160
equivalent dose data 162
equivalent dose distribution 164–165
luminescence data 161
Madera 175
Makran unit 42
Marseille 218
megafans 1, 2, 41, 61–62
Mejillones 97, 101
Melton ratio 28, 35
Mendoza 71
Mendoza River 69
tributary alluvial fan 70, 70, 71, 72
Merced River 170
Merced River fan 171, 172
Mesozoic 62
Michilla 97, 98
Miskolc 62
Modesto 175
Mokelunne River 170
Mokelumne River fan 171, 172
morphometry and depositional style of Late Pleistocene alluvial fans (Wadi Al-Bih, northern UAE and Oman) 85–86, 87, 93
fan morphometry 88
drainage basin area–fan area relationship 88–89, 89
drainage basin area–fan gradient relationship 89–90, 90
fan area–fan gradient relationships 90–91, 90, 91
residuals from regressions 91–93, 92
role of drainage basin slope 90
fan styles 88
location map 86
sample fans 88
study aims and methods 87–88
morphometry and morphometric analysis 2, 4, 172
drainage basin area–fan area relationship 88–89
drainage basin area–fan gradient relationship 89–90
fan area–fan gradient relationships 90–91
fans with forests 28–35
Quaternary alluvial fans 126–130
Wadi Al-Bih 85–87, 93
mountain front fan 88
Murillo fan 188
description 189–190, 191
main depositional process 189
post-depositional deformation 203
Musandam Mountains 86
Mystras fan 135
lithostratigraphy 144
sediment ages 143
North Hungarian Mountains 62
North Menelaion fan 135
North Xilocambion fan 135
INDEX

average fan gradient 136
average redness rating and iron concentration 141
axial-surface and trench profile 138
lithostratigraphy 140, 144
mineral magnetic data 142–143
sediment ages 143
Nuendo fan 188
debris-flow deposits 199
description 191–192, 193
main depositional process 189

Oman see morphometry and depositional style of Late Pleistocene alluvial fans

pluvial lakes 118–119
Polgar 62
pollen analysis 65–66
preservation potential 1, 4
Prince George 26
Prince Rupert 26
Puna 77
Punta de Vacas 71
Punta del Tastil (PT) 77
Punta Tames 97, 98
Pyrenean Axial Zone 188

Quaternary alluvial fans, differential effects of base-level, tectonic setting and climatic change (Great Basin, Nevada, USA) 117, 128–130
fan morphology and relation to base level 125–126
fan morphology
Cold Springs fans 120–121, 121, 122
Dixie Valley fans 121–124, 123
Gerlach fans 124–125, 124
schematic classification 125
Stillwater fans 120, 121, 122
fan morphology 126–128, 127, 127, 129
study area 117–119, 118, 119
study methods 119–120
Quaternary alluvial fans, roles of climate and tectonics (Spartan piedmont, Greece) 133, 149
climate and tectonics as triggers of fan sedimentation and incision
development phases, initial 145
development phases, mid–148
development phases, late 147, 148
development phases, later 148–149
climate 145
initial development phases 146
relationship between faulting and location 145
tectonic activity 142–143
fan evolution
average redness ratings and iron concentrations 141
axial-surface and trench profiles 138
gEOchrolologies 140–142
lithostratigraphies 139–140, 144
mineral magnetic data 142–143
morphology and longitudinal profiles 137
sediment ages 143
sediments and facies types 137–140
surface soils 137
Sparta Basin 134–136, 135
morphological maps 136
study methods 136–137
average fan gradients 136
tectonic and climatic contexts of fan evolution 133–134
Quaternary fluvial fans, factors controlling sequence development (San Joaquin Basin, California, USA) 169–170, 184
basin sequences 182–183
summary of subsidence rate and sediment supply effects 183
comparison with fan sequences in other areas 183–184
influence of controls on accommodation space 178
basin subsidence and local base level 178–179
gEomorphology and stratigraphy 179–180
sediment supply and stream discharge 180–182
sequence stratigraphy
accommodation space 172–173
gEomorphology and sequence development 173–178, 174, 175, 176, 177
study area 170–172
age relationships of exposed surfaces 171
areas covered by fluvial fans 172
physiographical map 170
Quebrada de Humahuaca 154, 155
Quebrada de Purnamarca 154, 155
Quebrada del Toro 154, 155
tributary alluvial fan 71–73, 77, 78
Quebrada Mejillones 98, 101
Quebrada Tumbores alluvial fan system (Chile) 9–10, 19–23, 23
climate 11–12, 13
rainfall 14
gEology and structure 10, 11, 12
gEomorphology of fan catchment and depositional areas 12–13
Late Pleistocene–Holocene flow conditions 14–16
Late Pleistocene–Holocene sedimentology 13
bedded sheetflow gravel with couplets 13–14, 17
channelform gravels 14, 17
sheetflow massive gravel 14, 17
Quaternary sediment provenance and calibre 13, 15, 16, 17
recent deposits from 2001 flood 16–18
stage 1 – fluvial channel cutting 18
stage 2 – mudflow 18, 22
stage 3 – fluvial channel flushing 18
reconstruction of 2001 flood 18–19, 19, 20, 21, 22
Rachau fan 209–211, 210, 211, 212
clast composition data 215
heavy mineral composition 215
Ras Al Khaimah 86
Reno 118
Riglos fan 188
debris-flow deposits 199
description 190, 191
depositional process 189
river channel styles 61–67
river style changes controlled by climate and tectonics (Sajó–Hernád alluvial fan, Hungary) 61–62, 62, 67
chronology and fluvial evolution 62–64, 63
gEomorphological map 63
river style changes, phase description 64–66, 64
Énekes-ér meander 65
Nemesbikk meander 66
Roldán fan 188
description 192, 194, 200
main depositional process 189
Roques Hautes 222
Rosario River 77
Sacramento Basin 170
Sainte Baume Range 218
Sainte Victoire Range 218, 221
Sajó River 61, 62
Sajó–Hernád alluvial fan (Hungary) 61–62, 62, 67
chronology and fluvial evolution 62–64, 63
geosynchrnological map 63
river style changes, phase description 64–66, 64
Énekes-ér meander 65
Némesbikk meander 66
Salta 77
San Antonio de Los Cobres 77
San Joaquin Basin (California, USA), factors controlling sequence development on Quaternary fluvial fans 169–170, 184
tributary alluvial fan 70–71, 70, 72, 73, 74, 75, 76
San Julián fan 188
description 191, 193
main depositional process 189
Sanadaj–Sirjan belt 42
Sanger 174
Sassito River 70
Sasso River 70, 74
satellite imaging/remote sensing 11, 44, 99
Seckau Basin 208
sediment provenance 13–17, 215
clast composition 215
clast size 9, 16
heavy mineral composition 215
sedimentary basins 4
Ebro Basin 197
Fohnsdorf Basin 207–209
Provence 217–218, 232–237
San Joaquin 178–179, 182–183
sequence stratigraphy 4, 169–178
accommodation space 169–184
sheetflood deposits 103
Shiraz 42
Sicarras Subandinas 77
Sierras Pampeanas 77
Sirjan 42
slope gap 2
Smithers fan 26
South Parorion fan 135
average fan gradient 136
average redness rating and iron concentration 141
axial-surface and trench profile 138
lithostratigraphy 139
mineral magnetic data 142–143
South Pyreneal Thrust Zone 188
Spain see Ebro Basin (Spain), Tertiary alluvial fans at northern margin
Spartan piedmont (Greece), role of climate and tectonics in Quaternary fan development 133, 149
climate and tectonics as triggers of fan sedimentation and incision
development phases, initial 145
development phases, mid- 148
development phases, late 147, 148
development phases, later 148–149
climate 145
initial development phases 146
relationship between faulting and location 145
tectonic activity 142–143
fan evolution
average redness ratings and iron concentrations 141
axial-surface and trench profiles 138
geostratigraphies 139–140, 144
mineral magnetic data 142–143
morphology and longitudinal profiles 137
sediment ages 143
sediments and facies types 137–140
surface soils 137
Sparta Basin 134–136, 135
morphological maps 136
study methods 136–137
average fan gradients 136
tectonic and climatic contexts of fan evolution 133–134
St Johns fan 135
average fan gradient 136
average redness rating and iron concentration 141
axial-surface and trench profile 138
lithostratigraphy 139, 144
mineral magnetic data 142–143
sediment ages 143
St Saviours fan 135
average fan gradient 136
average redness rating and iron concentration 141
axial-surface and trench profile 138
lithostratigraphy 140, 144
mineral magnetic data 142–143
sediment ages 143
stacked fan 88
Stanislaus River 170
Stanislaus River fan 171, 172
Stillwater fans 119
morphology 120, 121, 122
Stockton Arch 170
synsedimentary deformation 202–203, 230–231
INDEX

Taygetos Range 135
tectonic and environmental processes in Upper Cretaceous–Palaeocene alluvial fans (Provence, France) 217
alluvial-fan development and implications for basin-margin evolution 232, 232
forcing factors 236–237
tectono-sedimentary evolution 232–236, 234, 235
architecture of northern basin margin 220–223, 221, 222, 223, 224, 225
facades distribution and growth structures
distribution of alluvial-fan deposits 229–230, 230
evidence for growth structures 230–232, 231
lithofacies associations 223–229, 226–227, 228
general overview
stratigraphic record 219–220, 219
tectonic setting 217–219, 218

tectonics, control of river style changes (Sajó–Hernád alluvial fan, Hungary) 61–62, 62, 67
chronology and fluvial evolution 62–64, 63
geomorphological map 63
river style changes, phase description 64–66, 64
Énekes–ér meander 65
Nemesbikk meander 66

Tectonics, influence on alluvial fan development
Fohnsdorf Miocene intramontane basin (Austria) 207, 212–215
clast composition data 215
geological and palaeogeographical overview 207, 208
heavy mineral composition 215
sedimentology 209–212, 210, 211, 212, 213, 214
stratigraphic–structural setting of Apfelberg Formation 207–209, 208
Great Basin (Nevada, USA) 117, 128–130
fan morphology and relation to base level 125–126
fan morphology 120–125, 121, 122, 123, 124, 125
fan morphometry 126–128, 127, 127, 129
study area 117–119, 118, 119
study methods 119–120

Spartan piedmont (Greece) 133, 149
climate and tectonics as triggers of fan sedimentation and incision 142–148
fan evolution 137–142, 138, 139–140, 141, 142–143, 144
Sparta Basin 134–136, 135, 136
study methods 136–137, 136
tectonic and climatic contexts of fan evolution 133–134
tectonic settings
Abarkoh Megafan 42
basin margins 197, 220, 232–236
Ebro Basin 187–189, 194–196
Fohnsdorf Basin 207–209
telescopic fan 88
telescopic-like alluvial fans of the Quaternary (Andean Ranges, Argentina) 69, 76–81
alluvial segments, genesis 73–74, 79
general distribution 69
Mendoza River area 70, 70, 71, 72
Quebrada del Toro area 71–73, 77, 78
San Juan River area 70–71, 70, 72, 73, 74, 75, 76
longitudinal profiles, variability 74–76, 80
Terrace fan 26
Tertiary alluvial fans (Erbo Basin, Spain) 187, 204–205
correlation of fan deposits 192–193
deformation features
deformation timing and controls 204
post-depositional deformation 203–204, 203
synsedimentary deformation 202–203, 202
depositional facies 197
controls on deposition processes 199–201
debris-flow deposits 197, 199
rock falls 197
summary 198
waterlain deposits 198–199, 200
description of fan bodies 189
Agüero fan 189, 190
Aniés fan 190
Bolea fan 191
Ebro Basin between Linás and Aniés 190
Linás fan 190
Murillo fan 189–190, 191
Nueno fan 191–192, 193
Riglos fan 190, 191
Roldán fan 190, 194
San Julián fan 191, 193
exhumation 204
fan aggradation and base level 196–197
fan spacing and basin-margin structure 197
palaeoclimate 201–202
relationship to other facies 201
tectonostratigraphic setting 188
regional tectonics 187–188
stratigraphy 188–189, 189
thrust front formation and basin-margin topography 194–195, 195
basin-margin relief 195–196
Tholonet, Le 222
thresholds 4, 153, 163–166
critical power 2, 134, 154, 180–182
timescales 4
modern processes 16–19, 28–38, 57–58
Quaternary fans 62–67, 76–81, 93, 163–166, 172–178
Tisza River 61, 62
Tiszaujfiros 62, 62
Tocopilla 97, 98, 99, 100
Tokaj 62
tributary alluvial fans 69
Mendoza River area 70, 70, 71, 72
Quebrada del Toro area 71–73, 77, 78
San Juan area 70–71, 70, 72, 73, 74, 75, 76
tributary junction fan 88
Truckee River 118
truncated ‘toe trimmed’ fan 88
Tulare Lake sub-basin 170, 174
Tuolumne River 170
Tuolumne River fan 171, 172, 175
basin subsidence and local base level 178–179
geomorphology and stratigraphy 179–180
gradients 176
schematic cross-section 177
Turlock 175
USA see Great Basin (Nevada, USA), differential effects of base-level, tectonic setting and climatic change in Quaternary alluvial fans; Quaternary fluvial fans, factors controlling sequence development (San Joaquin Basin, California, USA)

Uspallata 71

Wadi Al-Bih (northern UAE and Oman), morphometry and depositional style of Late Pleistocene alluvial fans 85–86, 87, 93

fan morphometry 88

fan area–fan gradient relationships 90–91, 90

residuals from regressions 91–93, 92

role of drainage basin slope 90

fan styles 88

location map 86

sample fans 88

study aims and methods 87–88

wet/dry fans 2

Yazd 42

Zabol-Baluch 42

Zagros belt 42, 43
Alluvial fans are important sedimentary environments. They trap sediment delivered from mountain source areas, and exert an important control on the delivery of sediment to downstream environments, to axial drainages and to sedimentary basins. They preserve a sensitive record of environmental change within the mountain source areas. Alluvial fan geomorphology and sedimentology reflect not only drainage basin size and geology, but change in response to tectonic, climatic and base-level controls. One of the challenges facing alluvial fan research is to resolve how these gross controls are reflected in alluvial fan dynamics and to apply the results of studies of modern fan processes and Quaternary fans to the understanding of sedimentary sequences in the rock record. This volume includes papers based on up-to-date research, and focuses on three themes: alluvial fan processes, dynamics of Quaternary alluvial fans and fan sedimentary sequences. Linking the papers is an emphasis on the controls of fan geomorphology, sedimentology and dynamics. This provides a basis for integration between geomorphological and sedimentological approaches, and an understanding how fluvial systems respond to tectonic, climatic and base-level changes.

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Cover illustration:
Tributary junction alluvial fans in the Musandam Mountains, Oman.
Photograph by Adrian Harvey