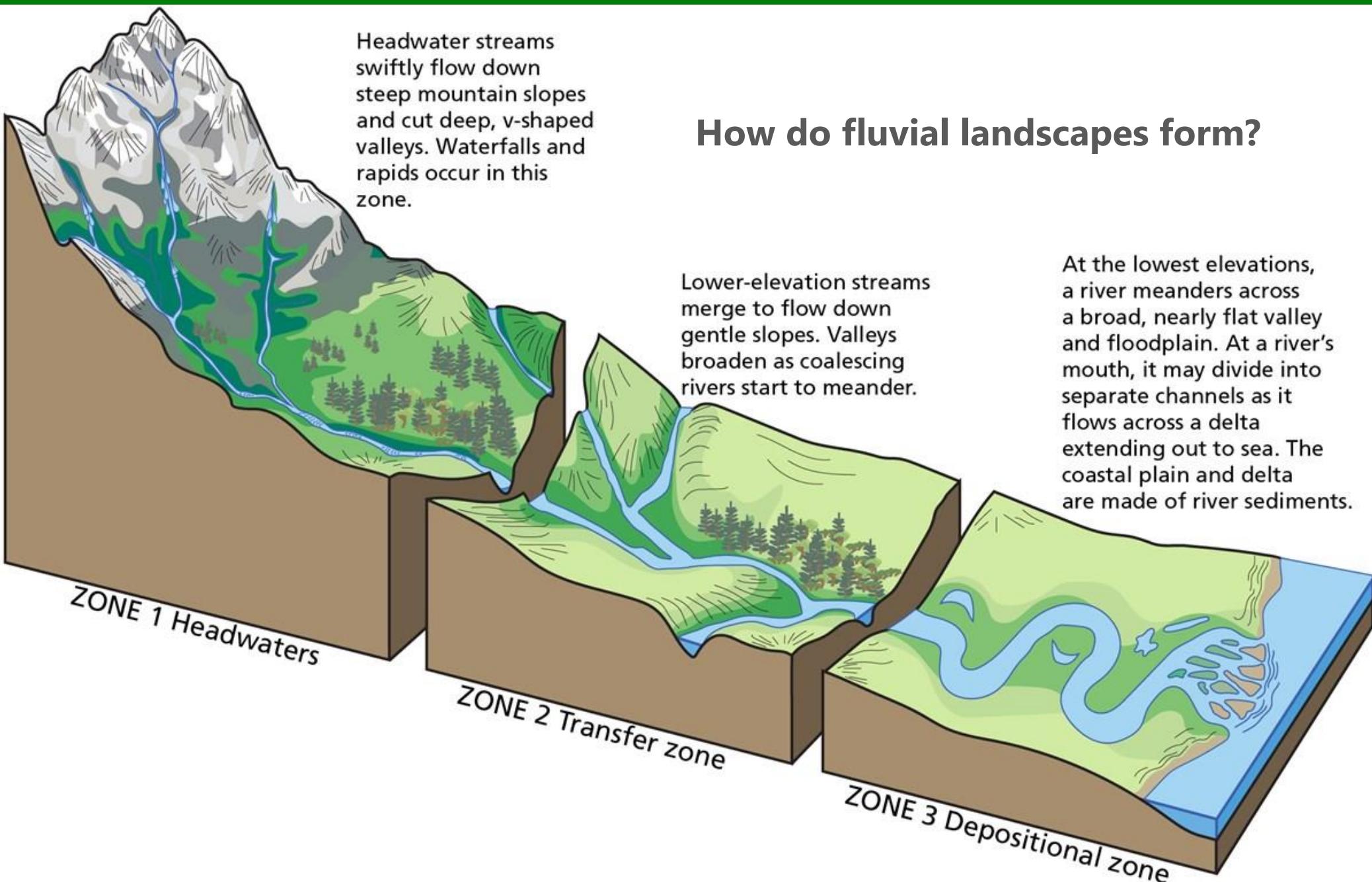




# Landscape Evolution

*Fluvial Landscapes*



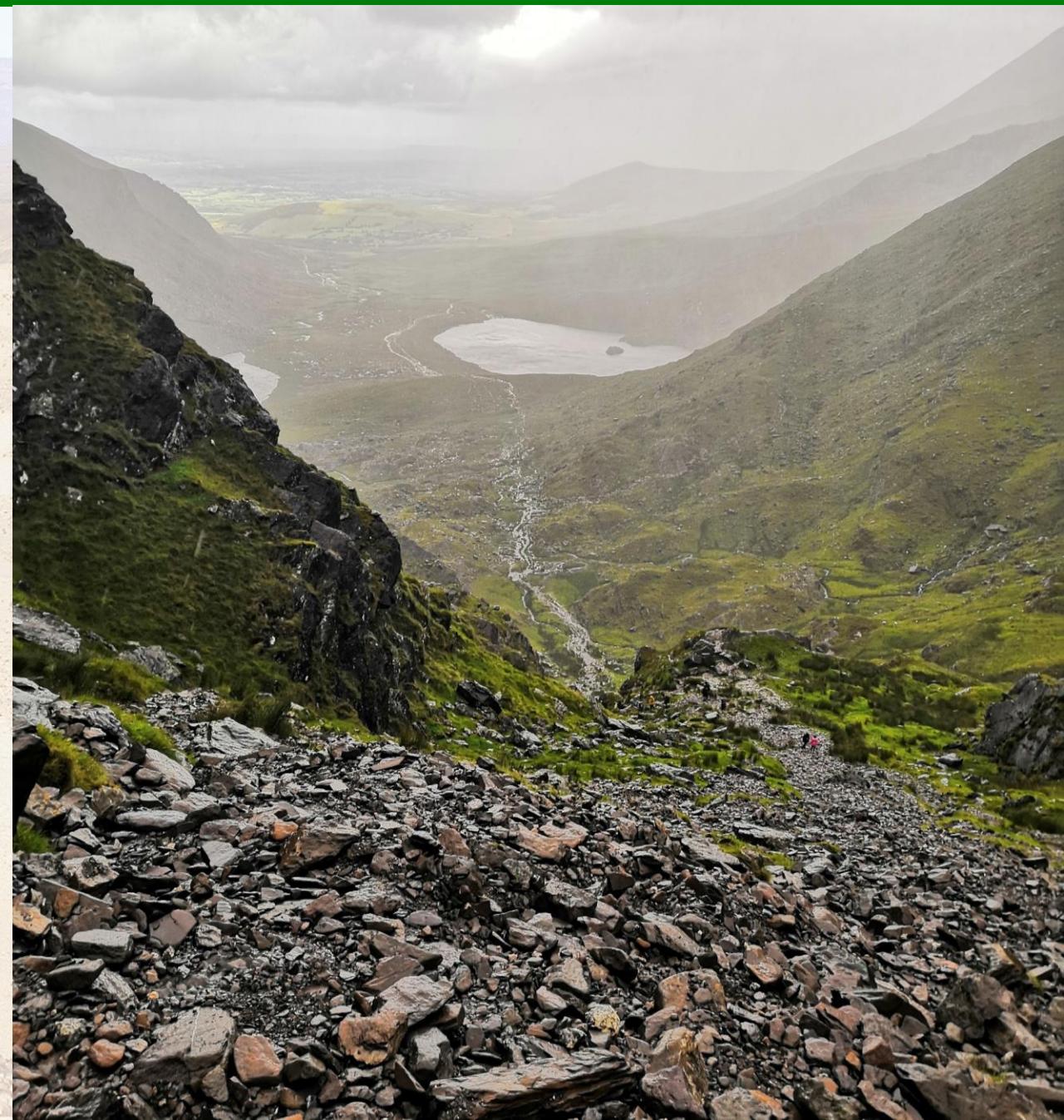
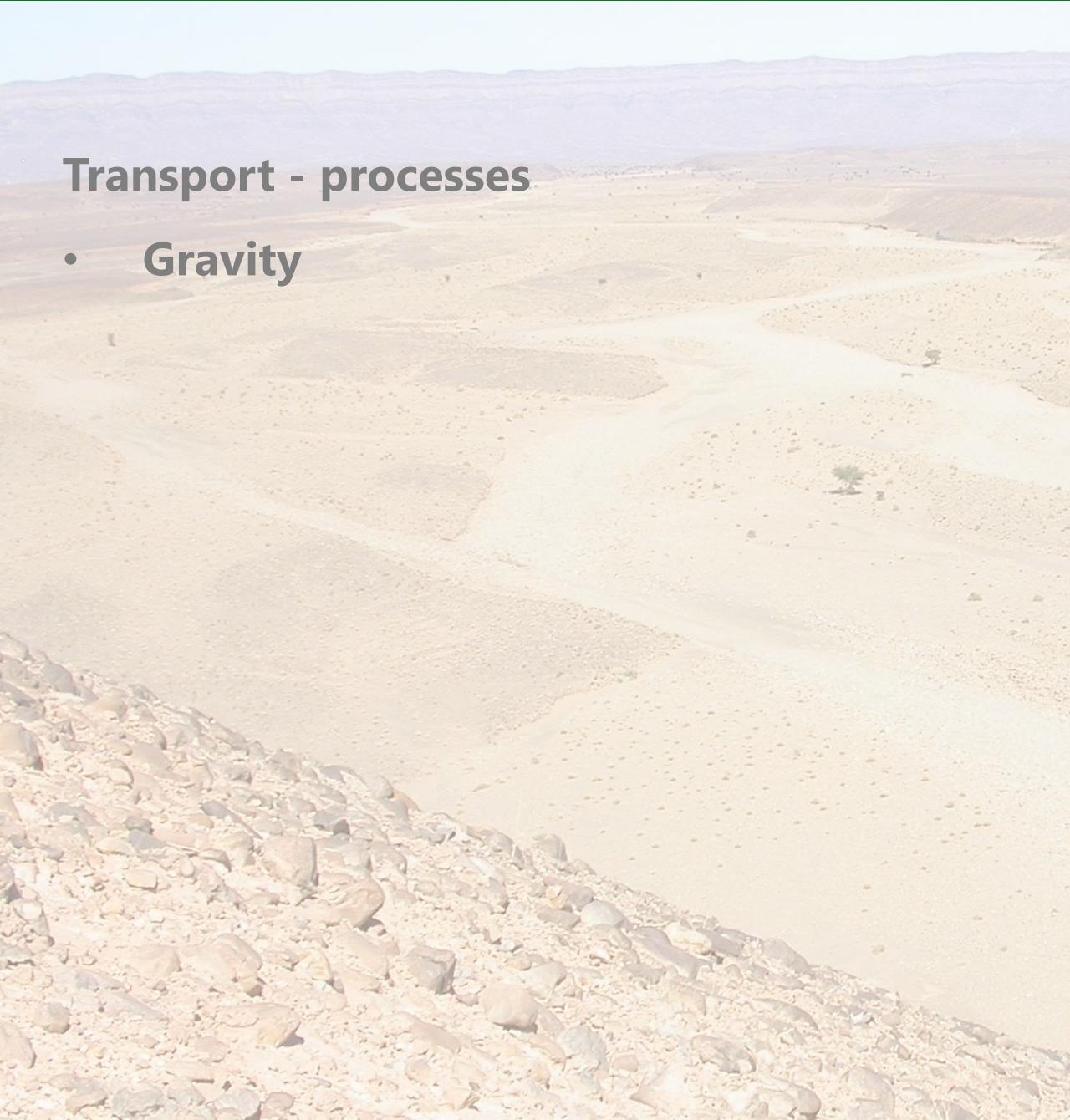
# Weathering

- Mechanical weathering
- Chemical weathering
- Biological weathering



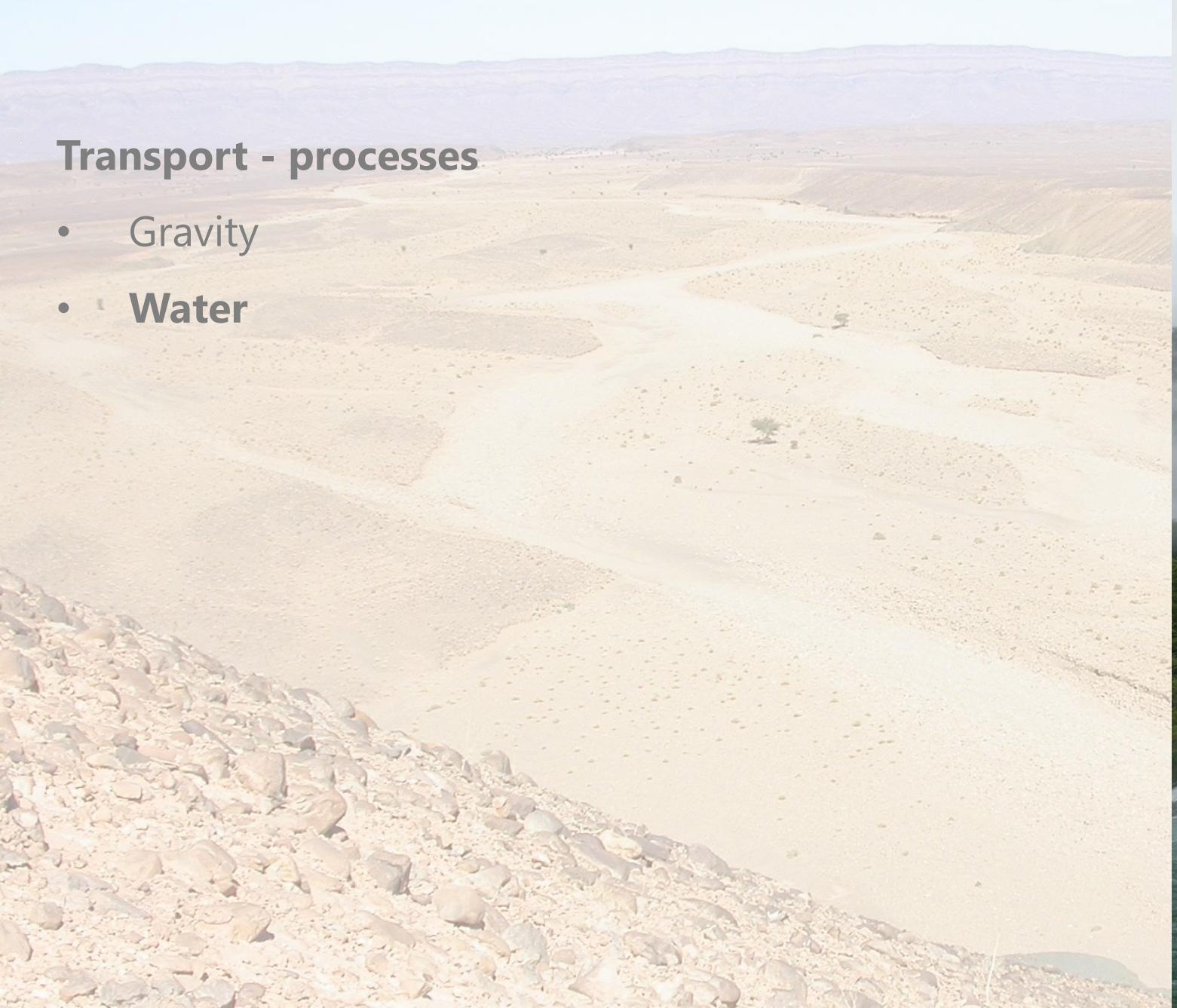
## Transport - processes

- Gravity



## Transport - processes

- Gravity
- Water



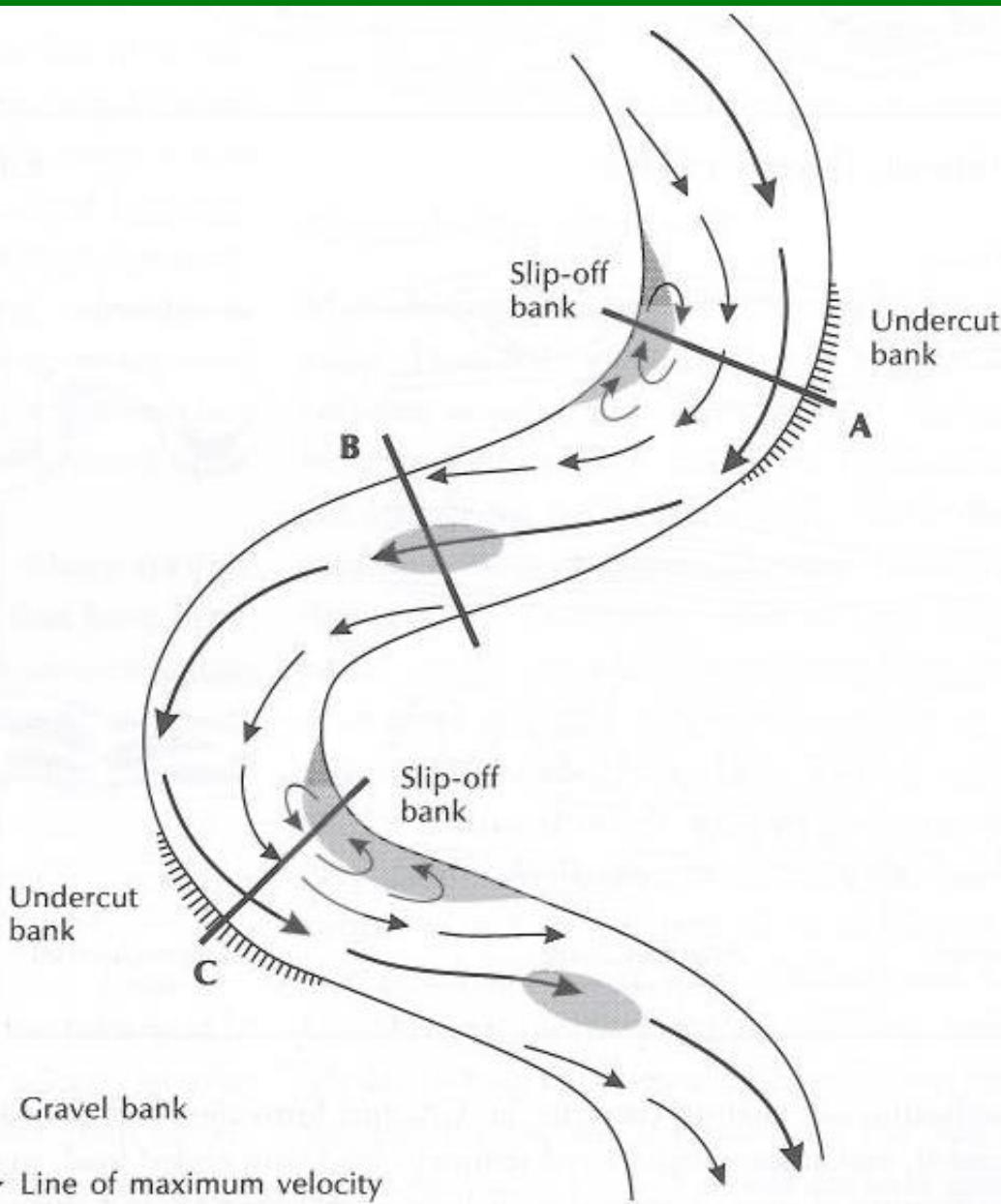
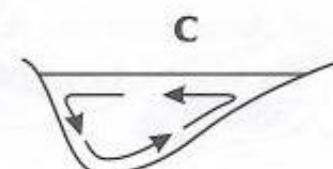
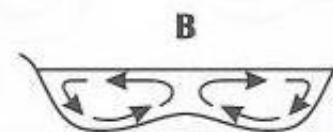
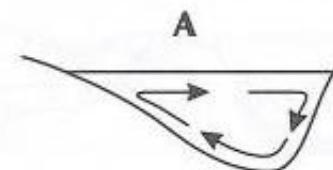
### Meandering Rivers | Nant Ffrancon Valley, Wales



## Meandering Rivers

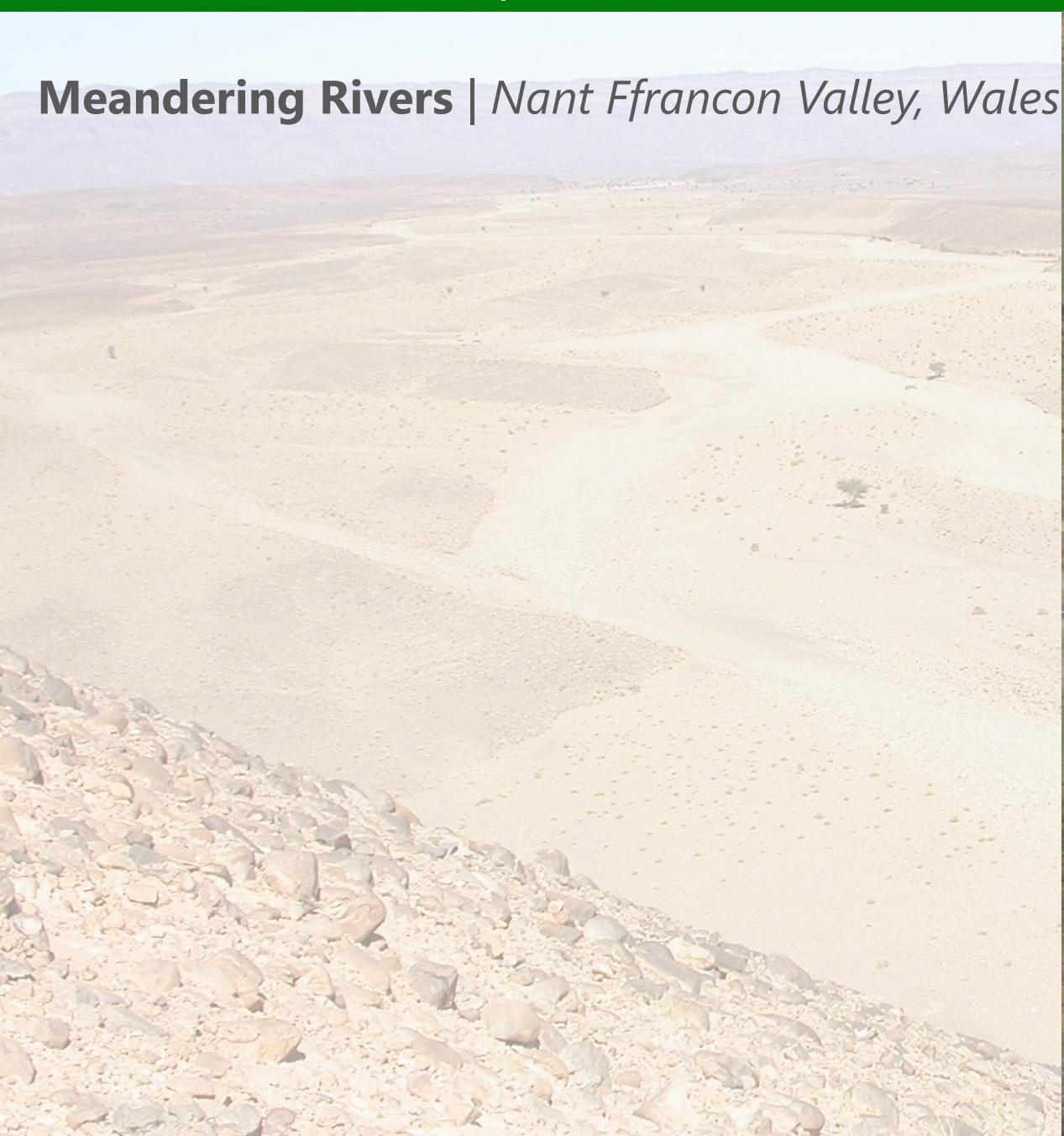


Cross-sections



Water flow in a meandering channel.

## Meandering Rivers | Nant Ffrancon Valley, Wales

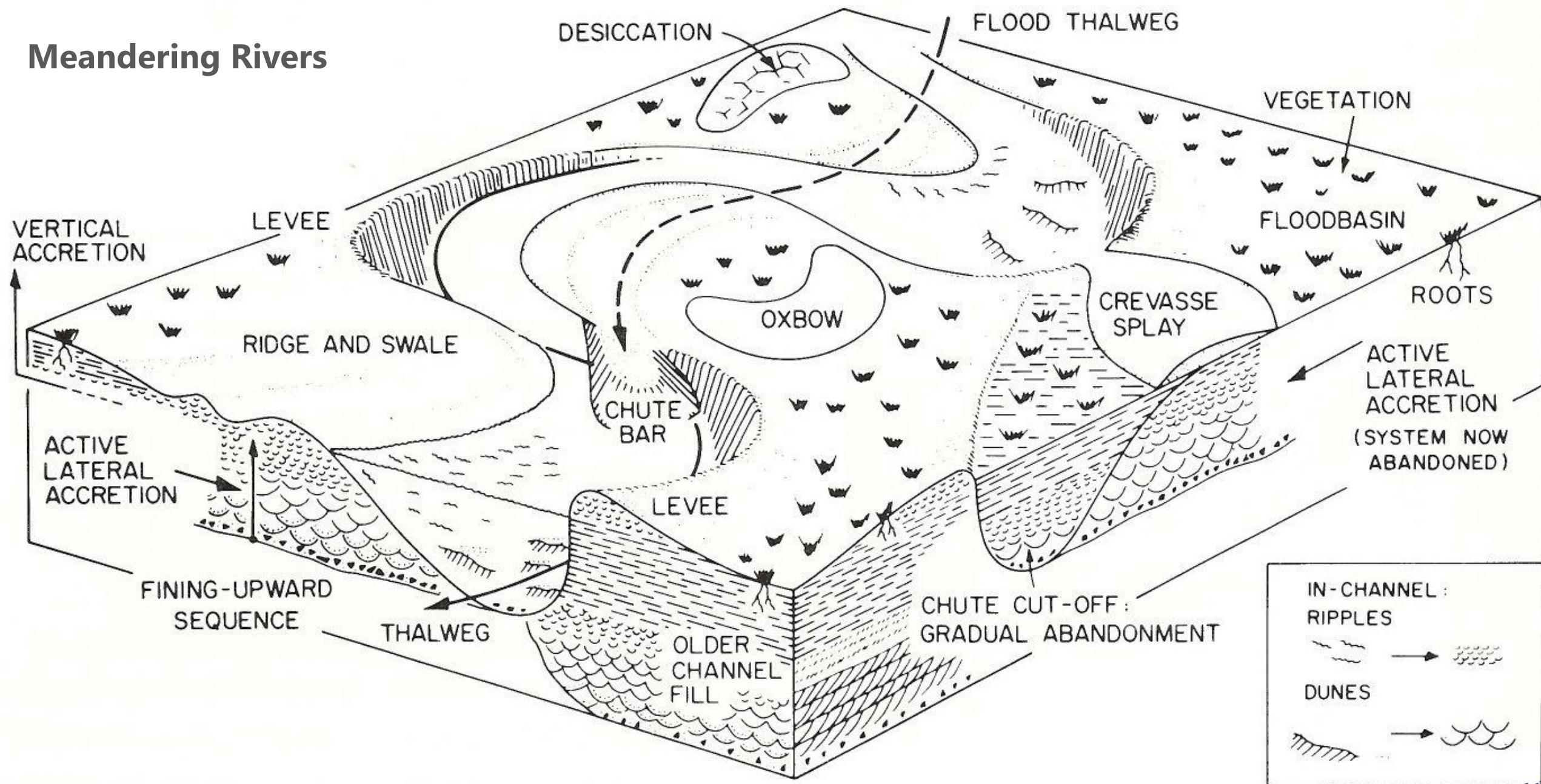




Meandering Rivers | Austerdola, Norway



## Meandering Rivers



### Meandering Rivers | Austerdola River, Norway



Bar

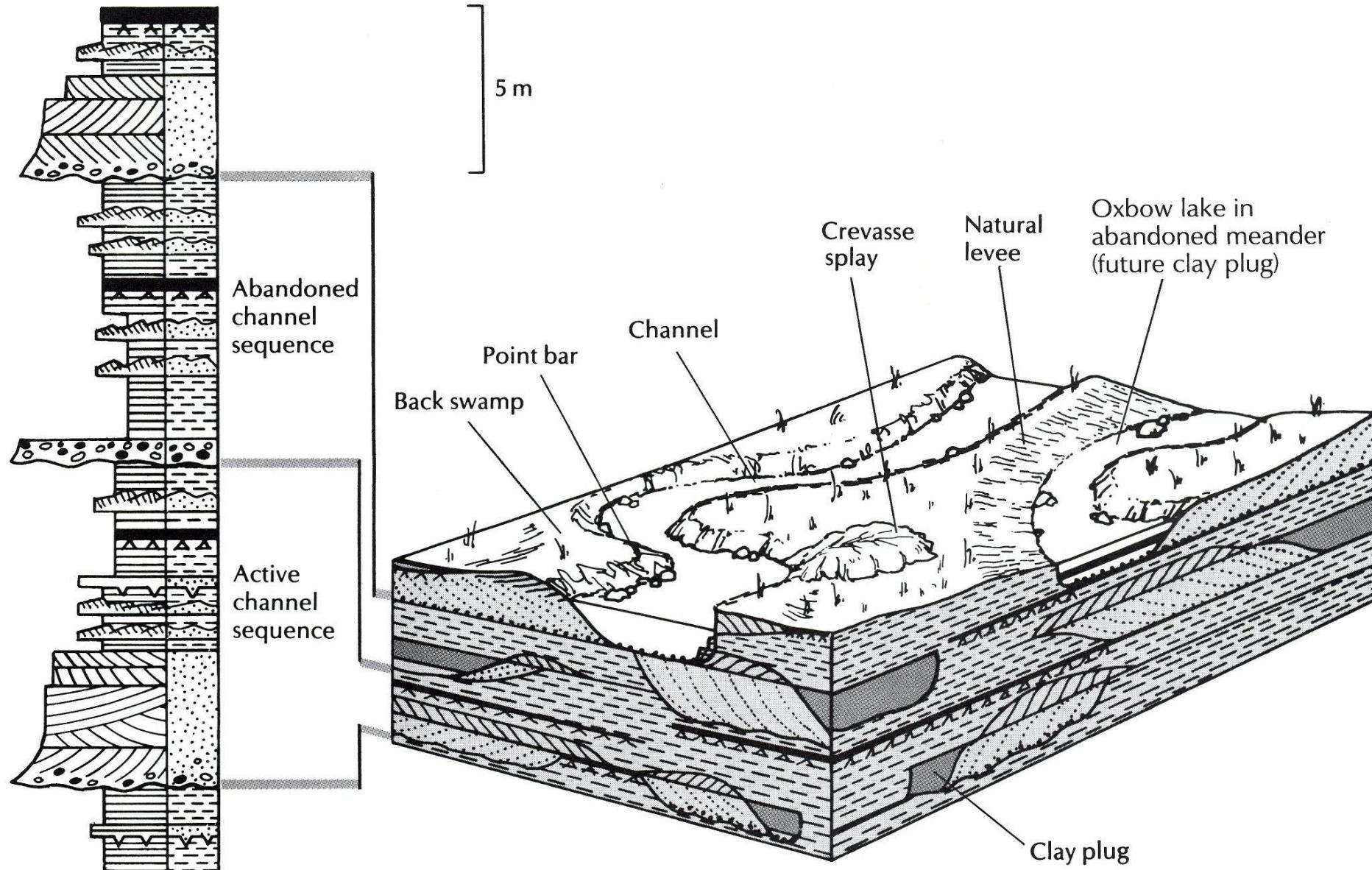
Chute

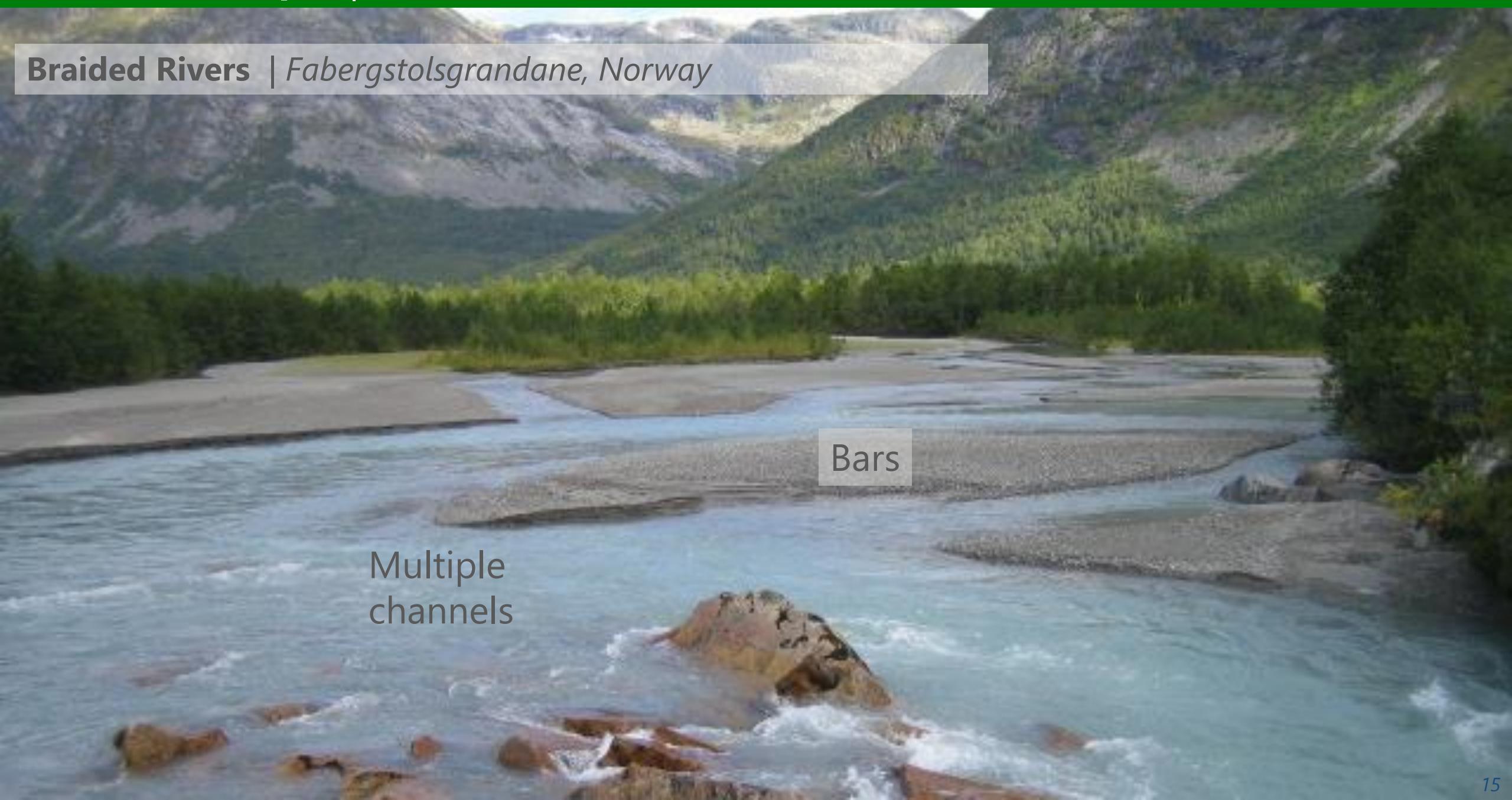
## Meandering Rivers | River Derwent, Cumbria, England



Post-flood bar

## Meandering Rivers



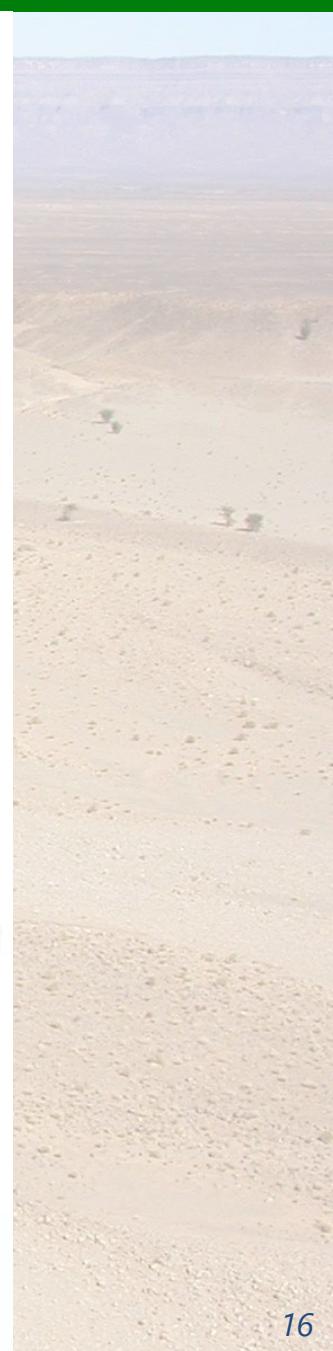
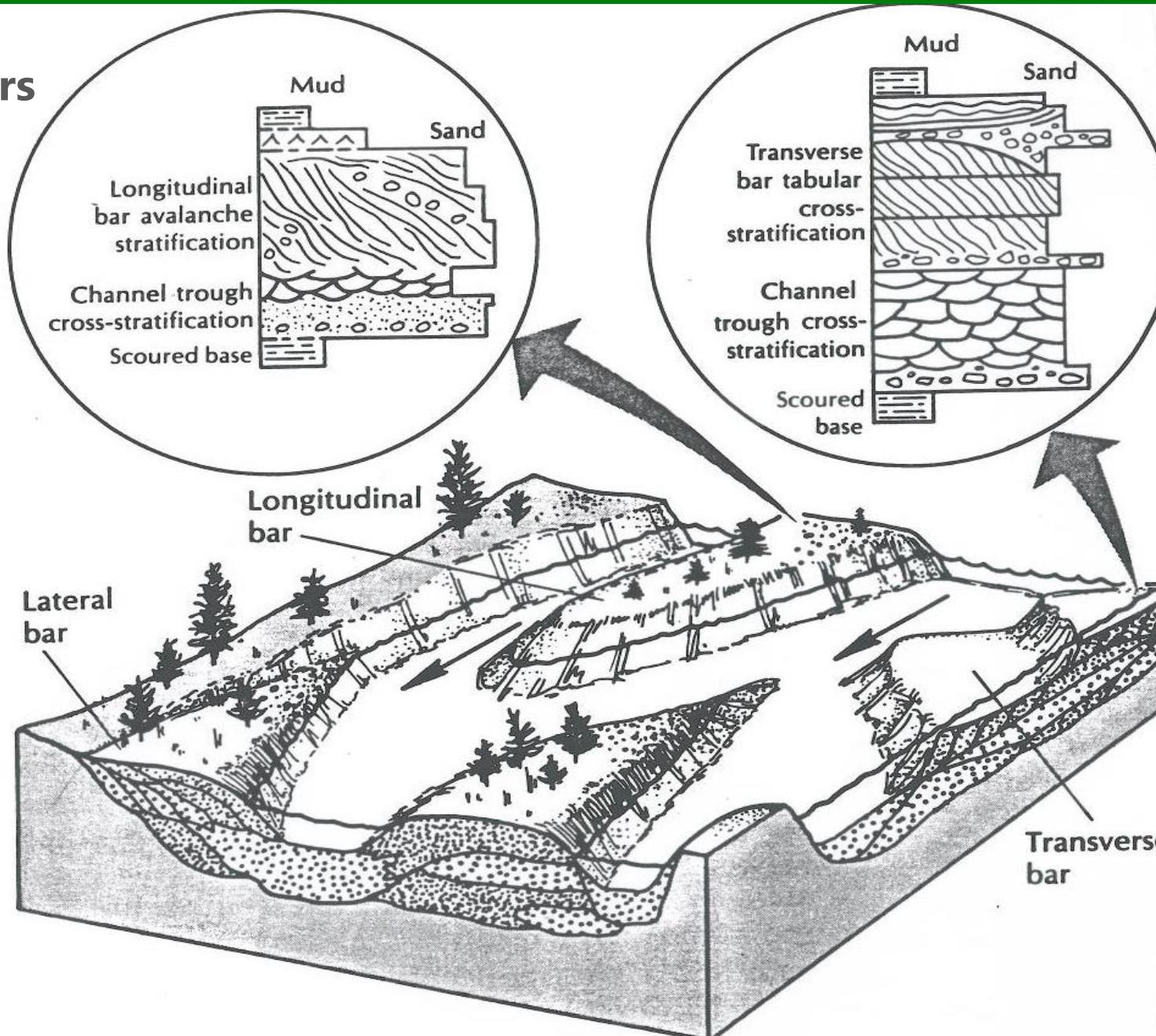


Braided Rivers | *Fabergstolsgrandane, Norway*

Bars

Multiple  
channels

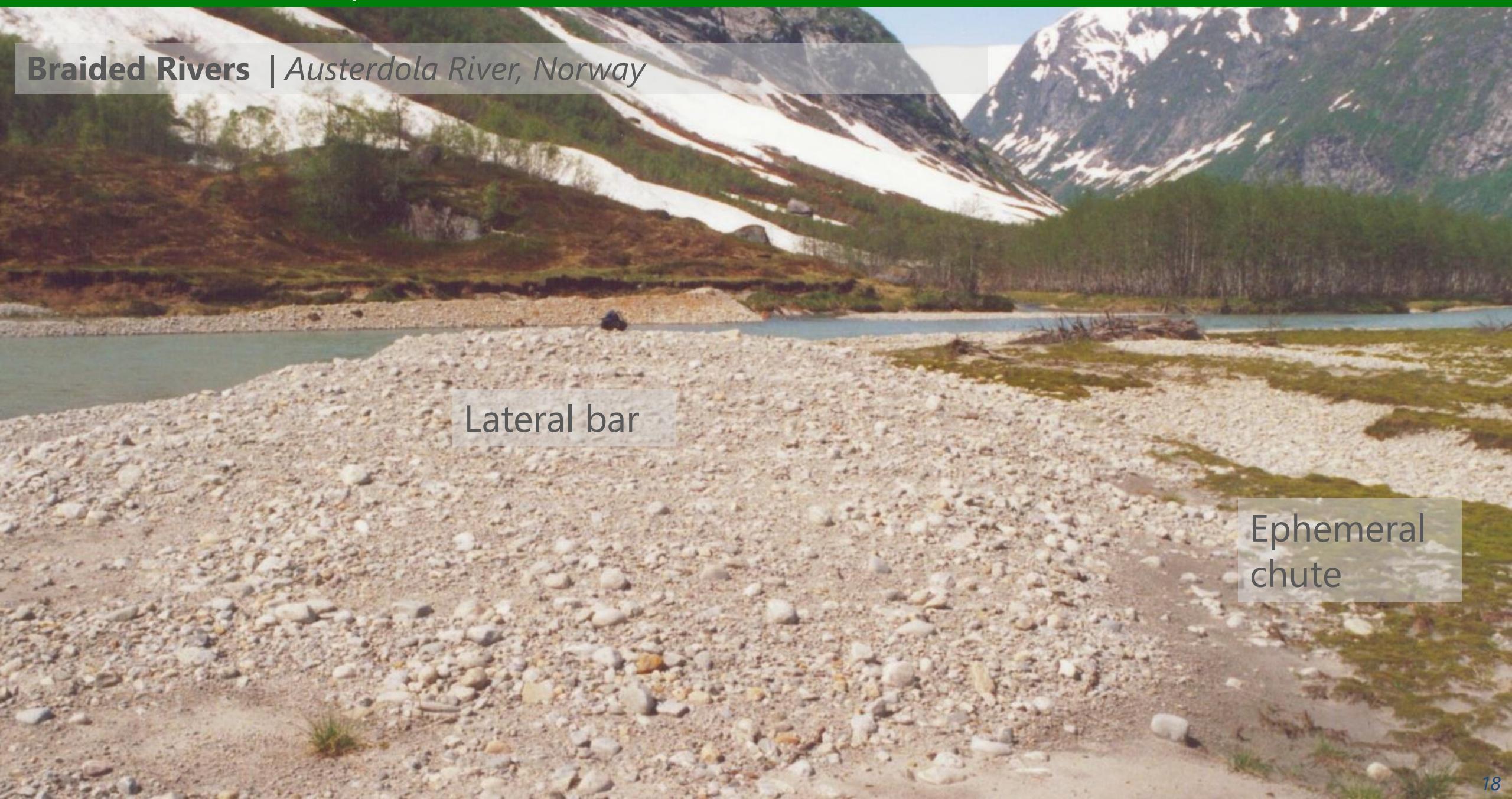
## Braided Rivers



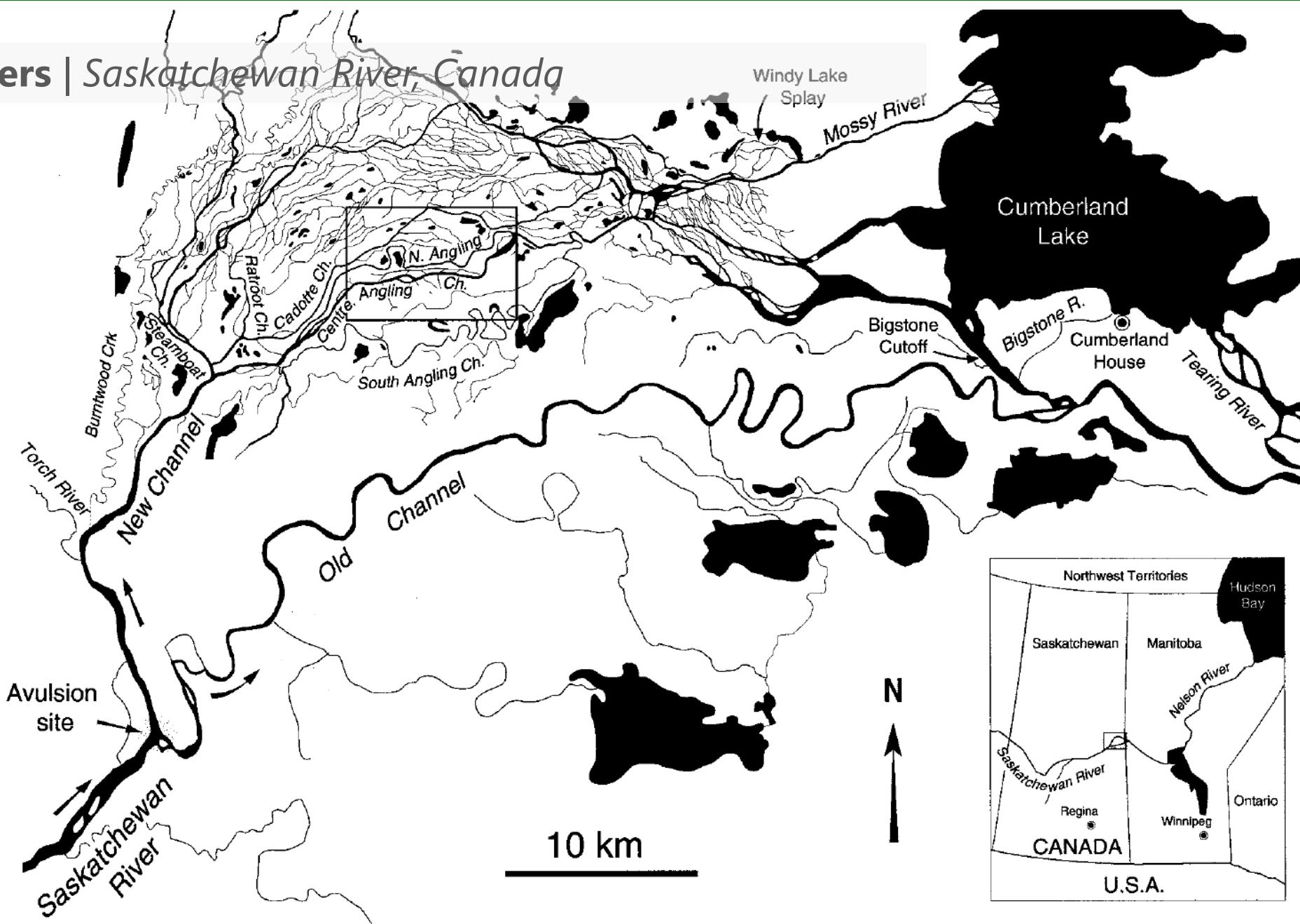
Braided Rivers | *Austerdola River, Norway*

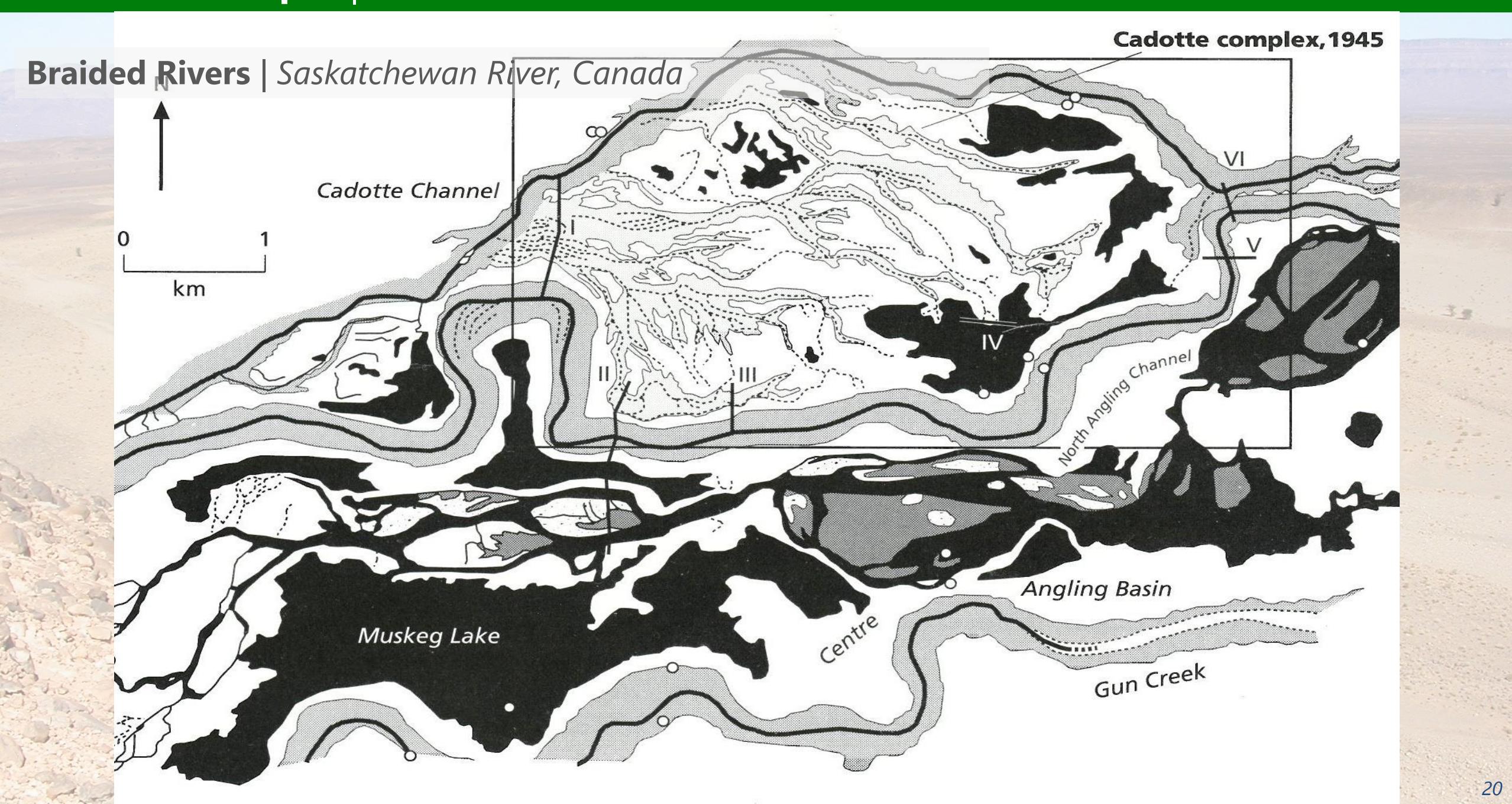
Flood debris on longitudinal bar

## Braided Rivers | Austerdola River, Norway

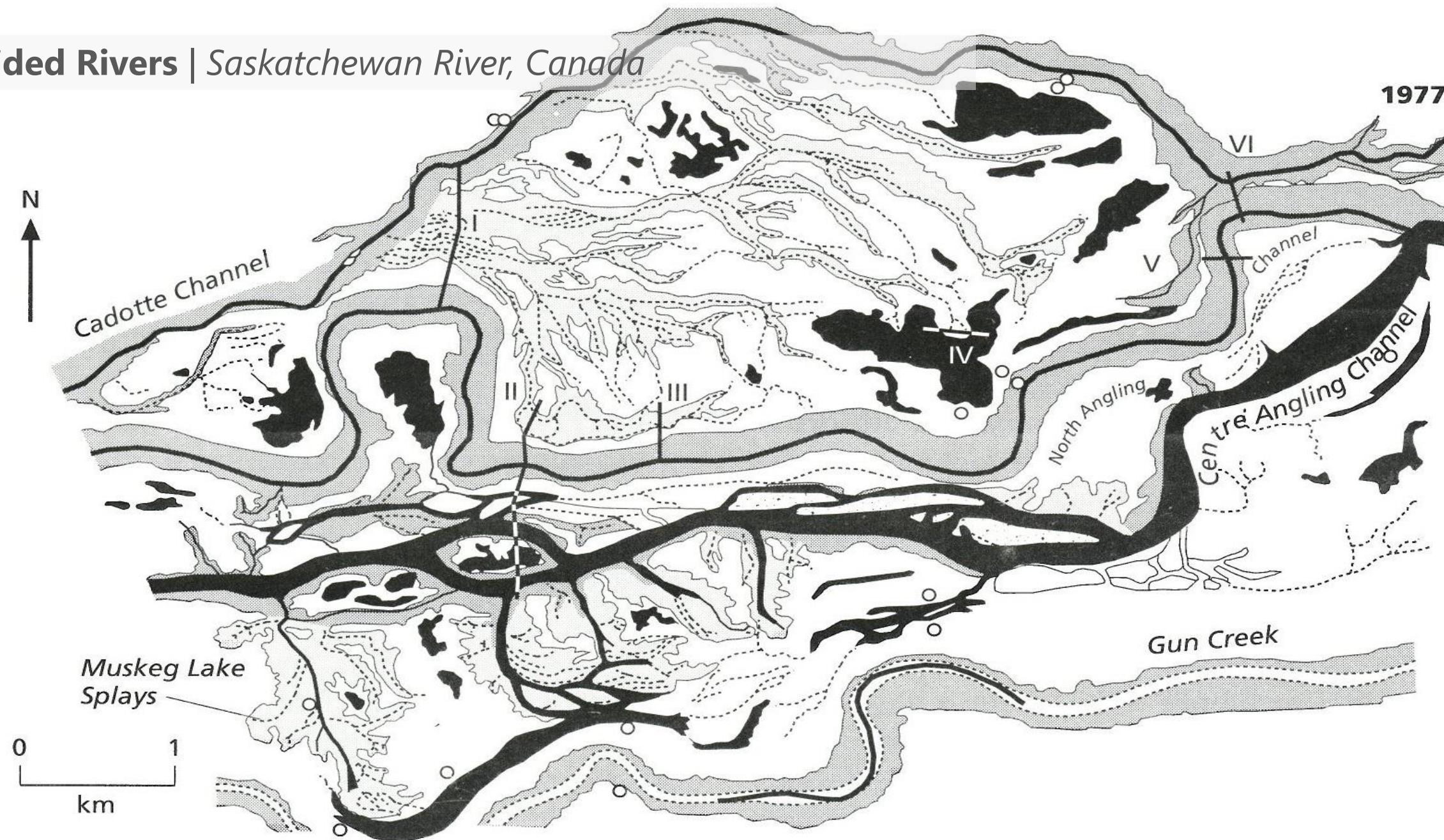


## Braided Rivers | Saskatchewan River, Canada



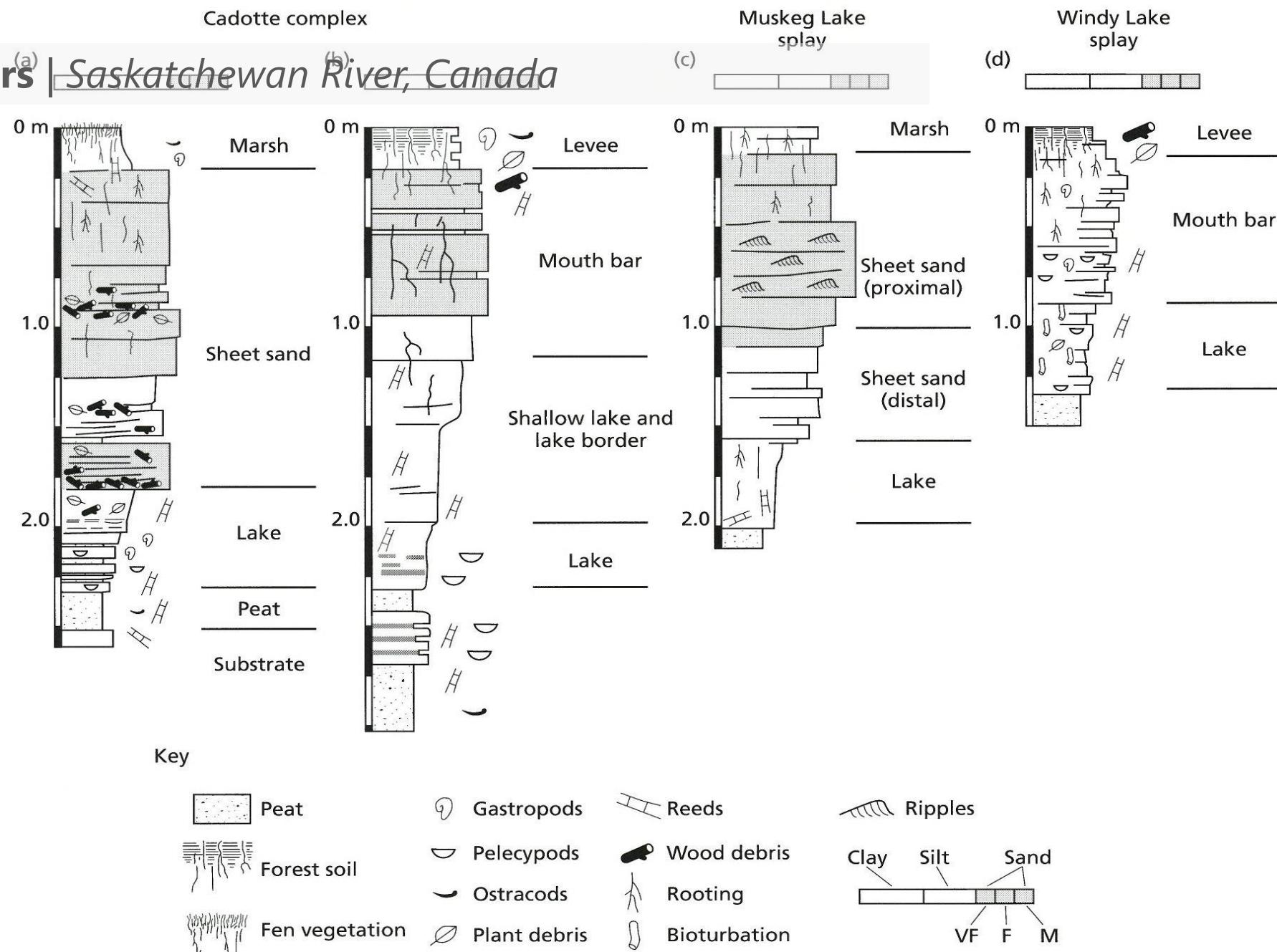


## Braided Rivers | Saskatchewan River, Canada



### Braided Rivers | Saskatchewan River, Canada

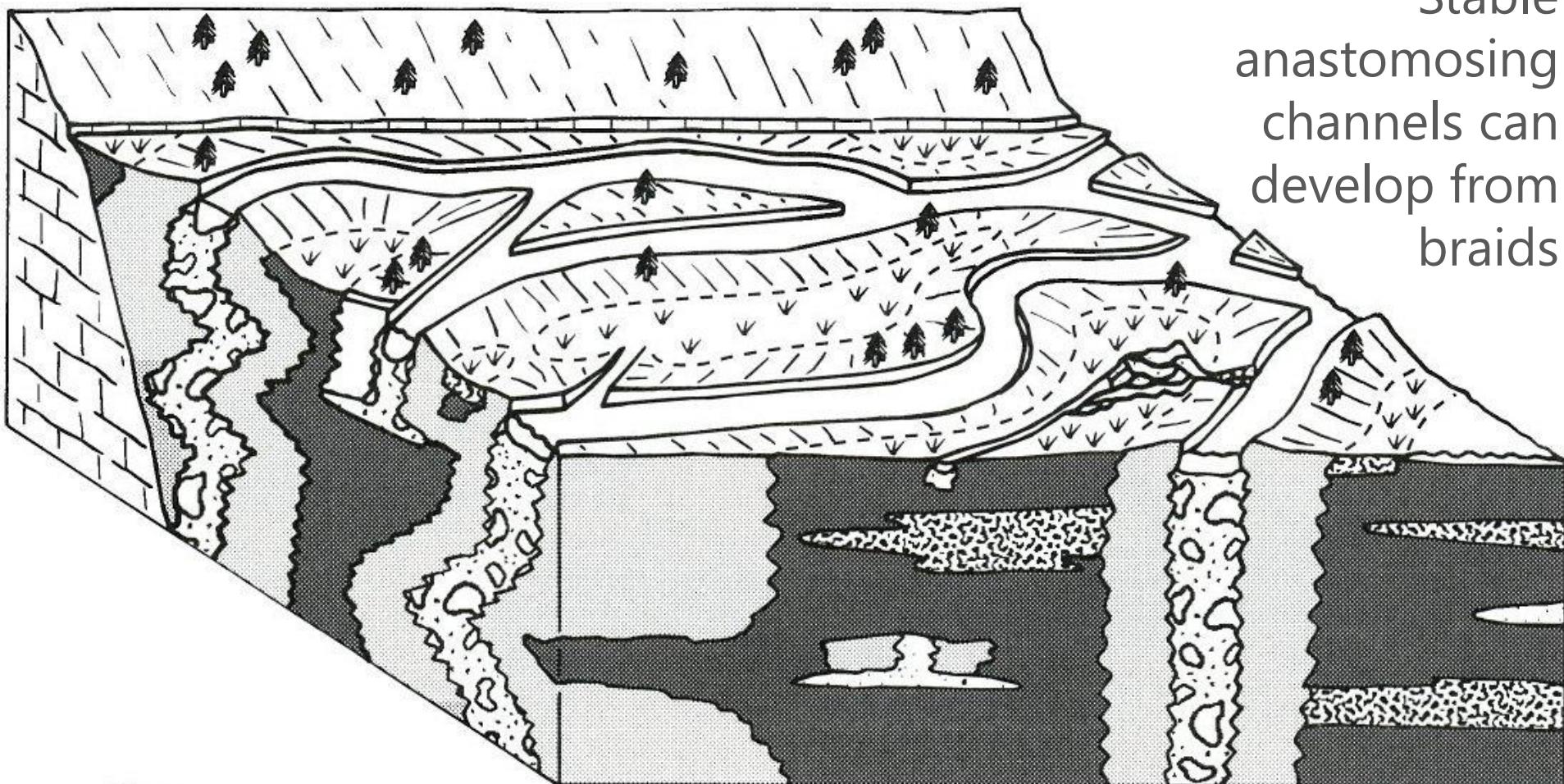


Braided Rivers <sup>(a)</sup> | Saskatchewan River, Canada

Braided Rivers | Fell Sandstone, Howick, England



## Braided Rivers



Stable anastomosing channels can develop from braids

### Key

Gravel

Peat

Sandy silt

F. - C. sand

Bedrock

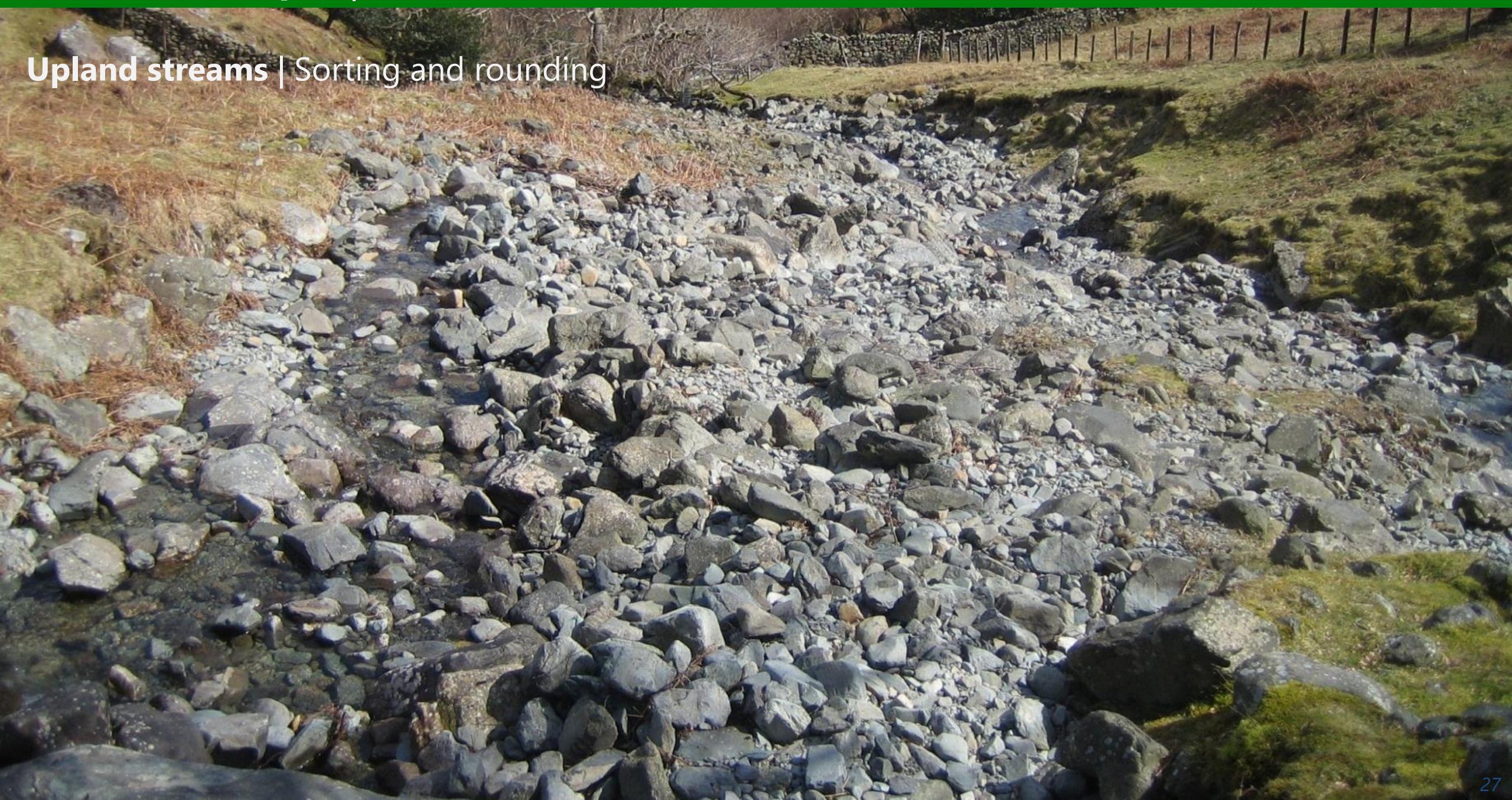
Mud, silty mud

Organic contents variable

**Upland streams** | Coarse angular sediment



### Upland streams | Sorting and rounding



## Suspended sediment | Langedola River, Norway

Glacial  
meltwater

Snow  
meltwater

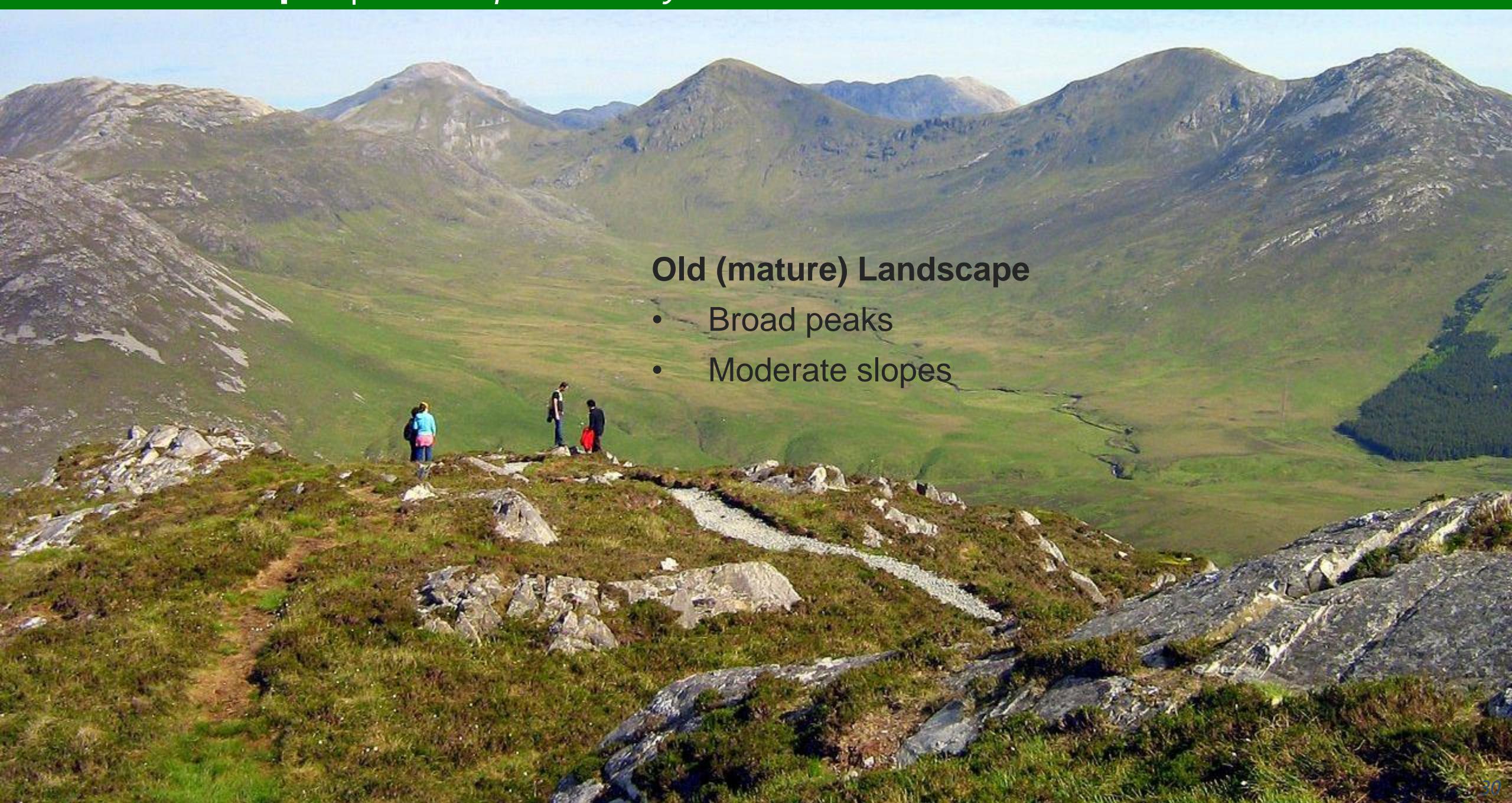
## Young Landscape

- Sharp peaks
- Steep slopes



## Old (mature) Landscape

- Broad peaks
- Moderate slopes



### Davisian model

*Nature is...  
a bit more  
complicated*

