

## Subglacial Landforms II

### GES- 441

#### **Eskers**

Four types

- 1) tunnel fills- conduits
- 2) open channel fills
- 3) segmented tunnel (long beads)
- 4) fans (short beads)

Sinuuous ridges up to 50-60 m high, may be several hundred km long  
May be of uniform height or consist of beads connected by low ridge  
May be braided or multicrested  
More or less parallel with ice flow  
Associated with Rogen moraines in places

Tunnel fill eskers - most well-known kind.

R-channels filled with pressurized water controlled by ice-surface topography - can go over divides

Open-channel

Generally shorter and straighter, must flow downhill, may start at a lateral channel, generally thought to occur where there is low closure rate, can have antidune bedforms

Segmented eskers may reflect pulsed retreat, may produce fans where the tunnel discharges into water.

*Esker Composition -*

Sorted silt, sand, gravel, boulders – may be unsorted

Stratified or massive

May have cyclic sequences of coarse material over scoured bed fining upward

Also fines outward - result of side-wall melting

Anticline features or arched bedded



*Esker.*



*Esker sediments, Madison, Maine.*