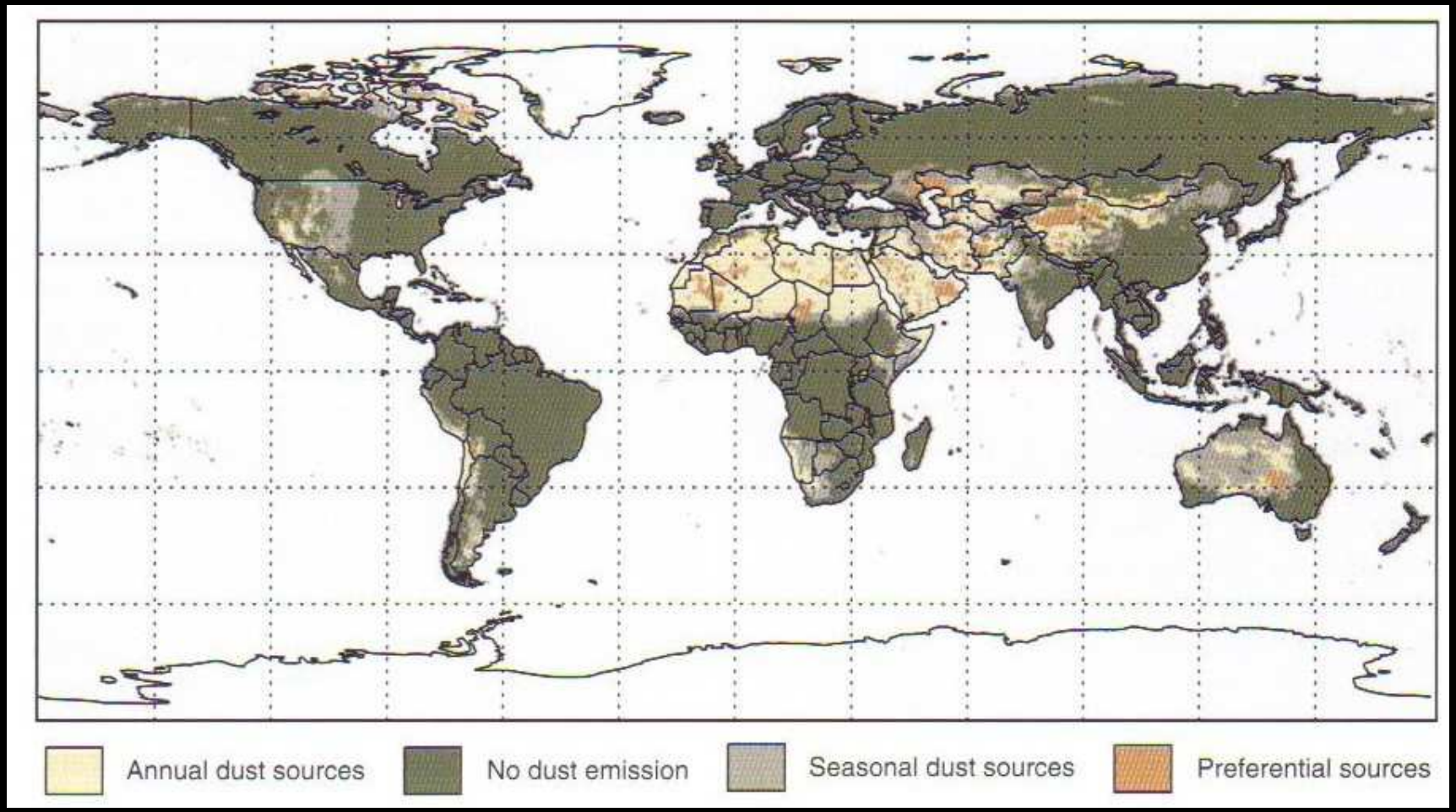
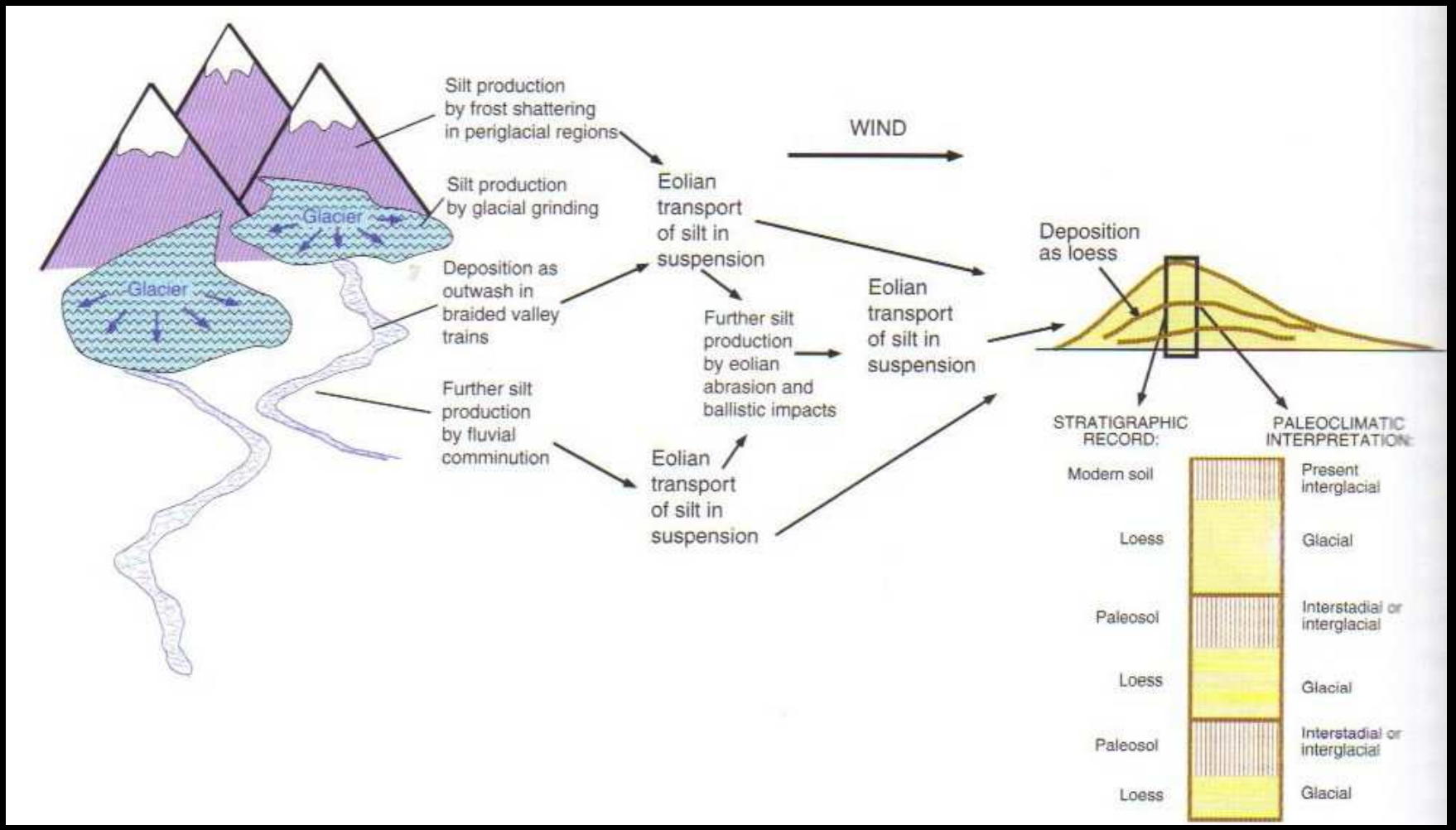

Modern soil
Peoria Loess (last glacial)
Farmdale Geosol (interstadial)
Roxana Silt (loess)
Sangamon Geosol (last interglacial)


Annual dust sources
No dust emission
Seasonal dust sources
Preferential sources


Silt production by frost shattering in periglacial regions
Silt production by glacial grinding
Glacier
Glacier
Deposition as outwash in braided valley trains
Further silt production by fluvial comminution
WIND
Eolian transport of silt in suspension
Further silt production by eolian abrasion and ballistic impacts
Eolian transport of silt in suspension
Eolian transport of silt in suspension
Deposition as loess
STRATIGRAPHIC RECORD:
PALEOCLIMATIC INTERPRETATION:
Modern soil
Present interglacial
Loess
Glacial
Paleosol
Interstadial or interglacial
Loess
Glacial
Paleosol
Interstadial or interglacial
Loess
Glacial

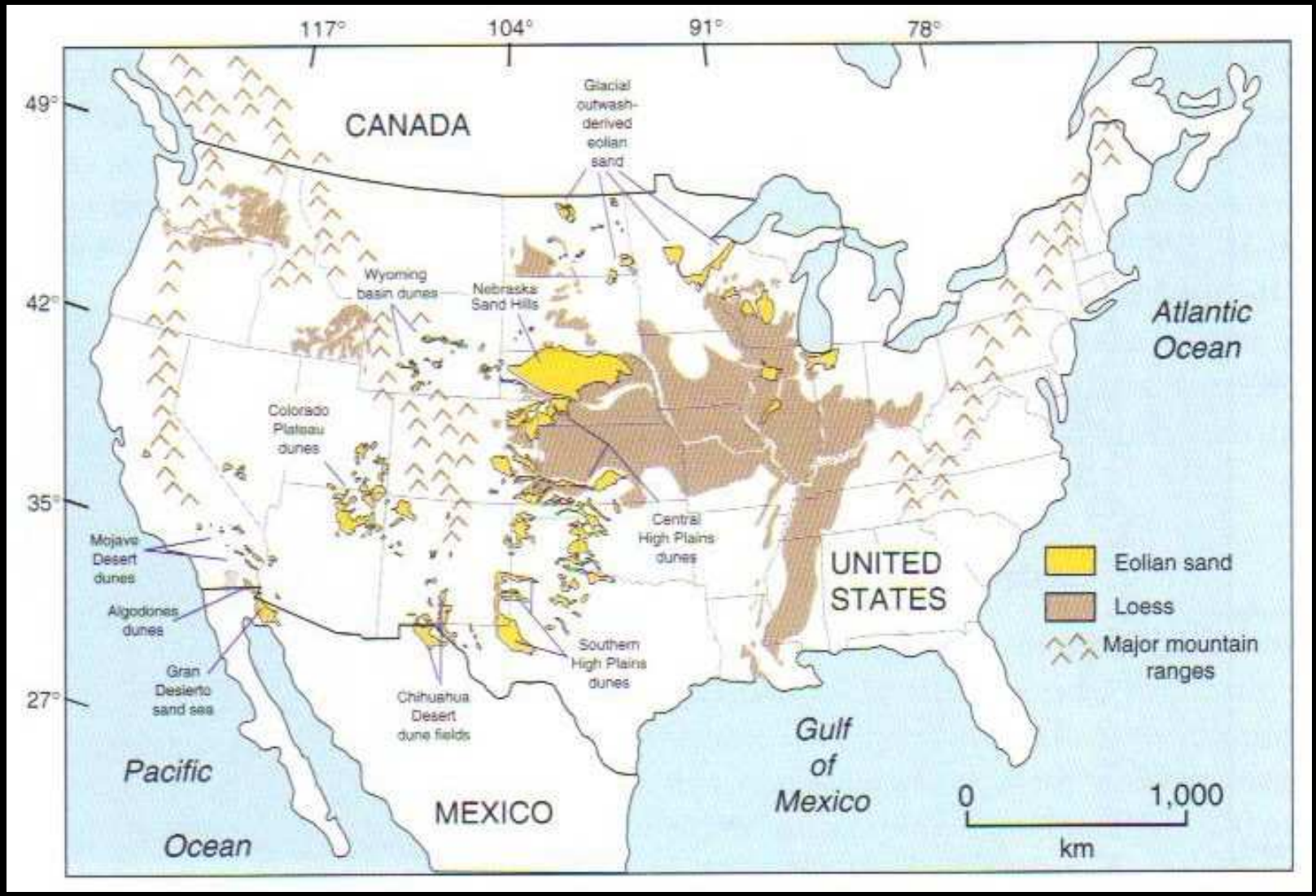
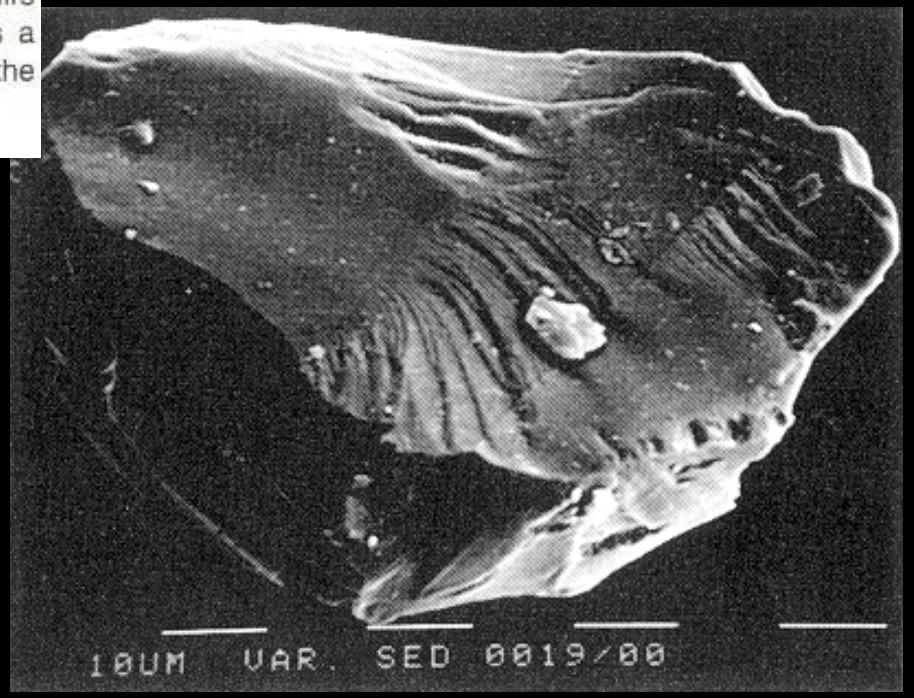
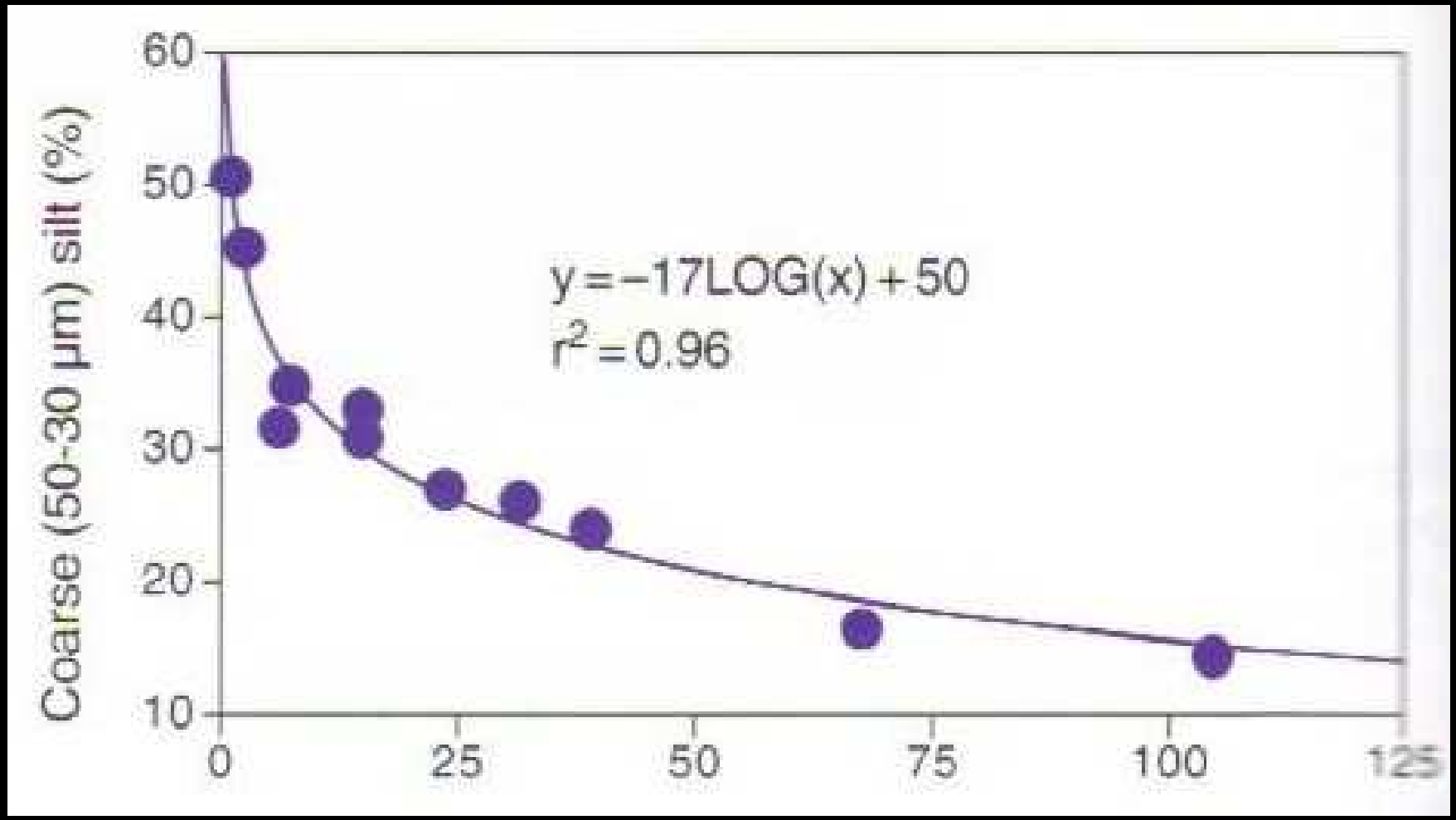

117°
104°
91°
78°
49°
42°
35°
27°
CANADA
Glacial outwash-derived eolian sand
Wyoming basin dunes
Nebraska Sand Hills
Colorado Plateau dunes
Central High Plains dunes
Mojave Desert dunes
Algodones dunes
Gran Desierto sand sea
Chihuahua Desert dune fields
Southern High Plains dunes
UNITED STATES
MEXICO
Atlantic Ocean
Gulf of Mexico
Pacific Ocean
Eolian sand
Loess
Major mountain ranges
0
1,000
km

Figure 3 Loess plateau ca. 2,000 m a.s.l. in the Western Pamirs piedmont.

Figure 1 High mountain periglacial zone in the Eastern Pamirs where abundant moraine and glaciofluvial material serve as a source of clayey and silty sediments, which become a part of the system of fluvial runoff in mountain valleys.




Coarse (50-30 µm) silt (%)
60
50
40
30
20
10
0
25
50
75
100
125
y = −17LOG(x) + 50
r² = 0.96

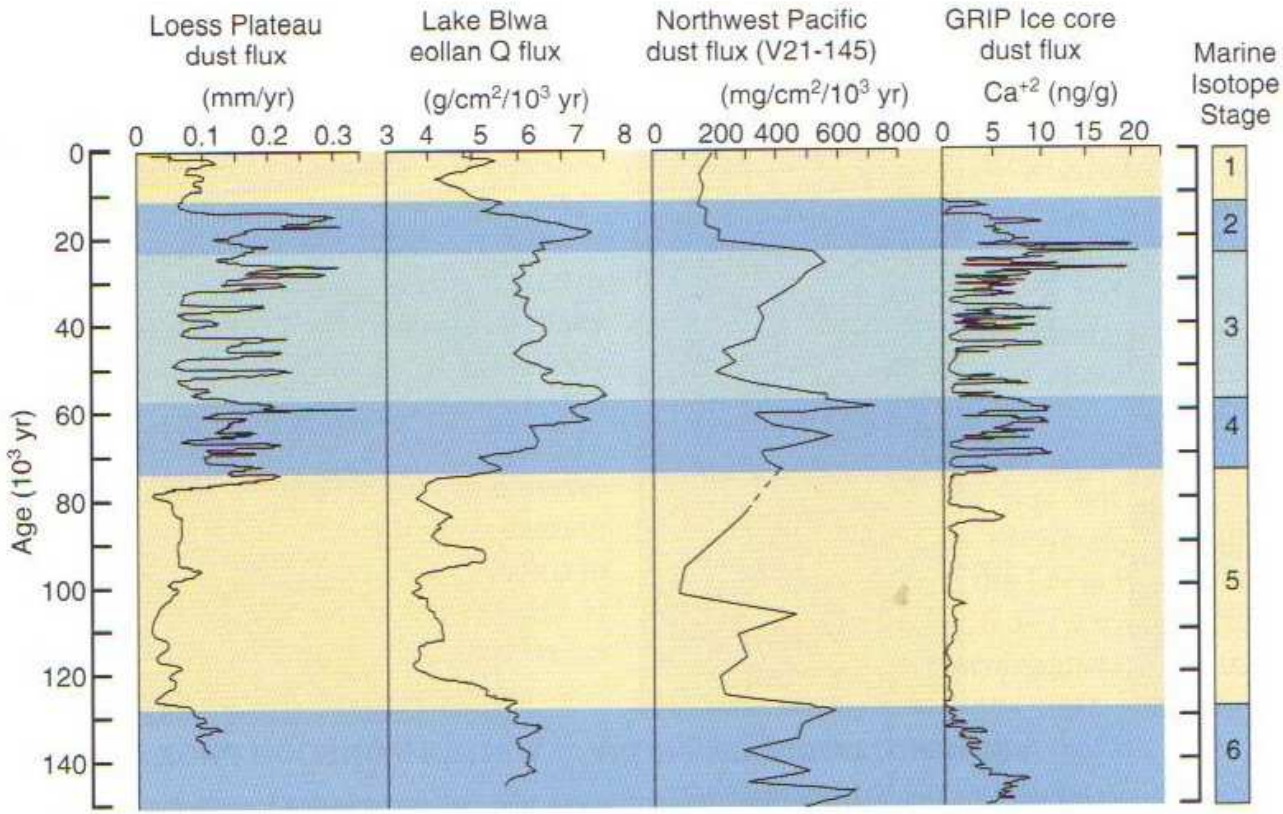


Figure 9 Variations in dust flux during the last ca. 150,000 yr along a transect from the Loess Plateau to Japan (Xiao *et al.*, 1997), the North Pacific Ocean (Hovan *et al.*, 1991), and the Greenland Ice Sheet (Greenland Ice-Core Project Members, 1993). Intervals of greatest and least dust flux are similar among these records, but obvious differences in detail likely reflect differences in the parameters that were measured, the spacing of samples, and chronological uncertainties, (after Porter, 2001; Figure 9).

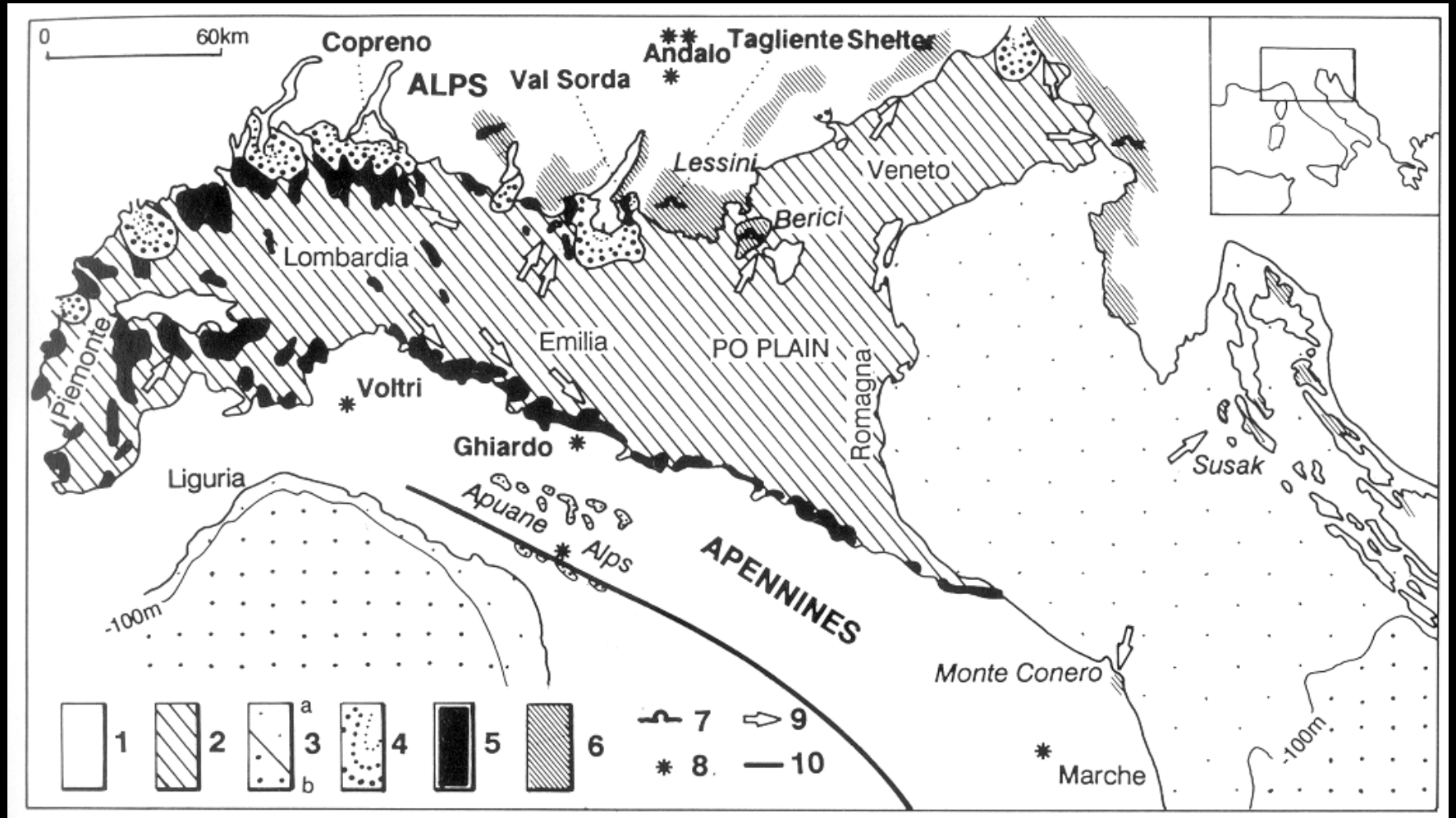


Fig. 3. Distribuzione dei depositi eolici nell'Italia settentrionale. 1) rocce pre-quaternarie; 2) piana alluvionale del tardopleistocenica ed olocenica; 3) l'attuale superficie marina; a - profondità inferiore a m 100; b - profondità superiore a m 100; 4) sistemi morenici prealpini ed appenninici; 5) depositi loessici su terrazzi fluviali, fluvioglaciali e su morene; 6) depositi loessici su plateau carsici; 7) loess contenuti in grotte o ripari; 8) loess su superfici di erosione; 9) direzione dei venti dominanti durante la sedimentazione del loess; 10) probabile limite sudoccidentale dell'area interessata a sedimentazione loessica.