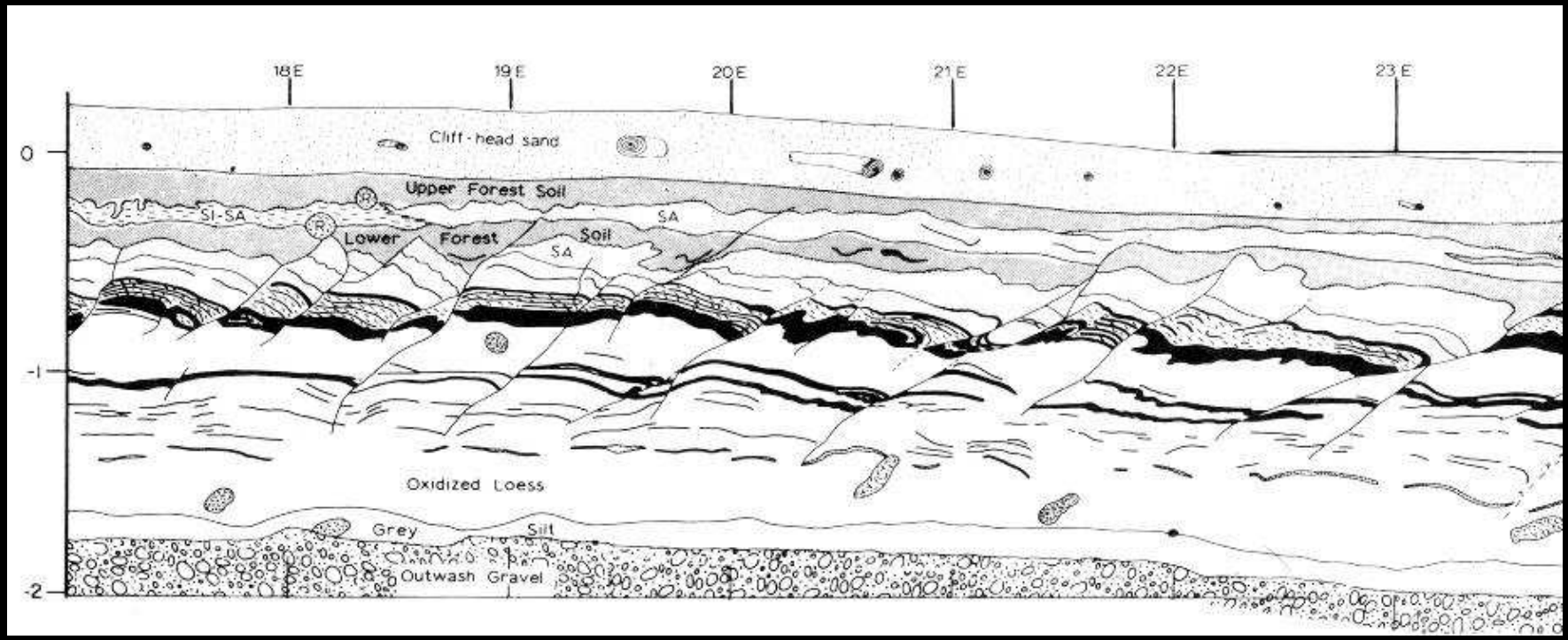

18E
19E
20E
21E
22E
23E
0
-1
-2
Cliff-head sand
Upper Forest Soil
SI-SA
Lower Forest Soil
SA
SA
Oxidized Loess
Grey Silt
Outwash Gravel

Schiffer, Butzer, Archaeology as Human Ecology

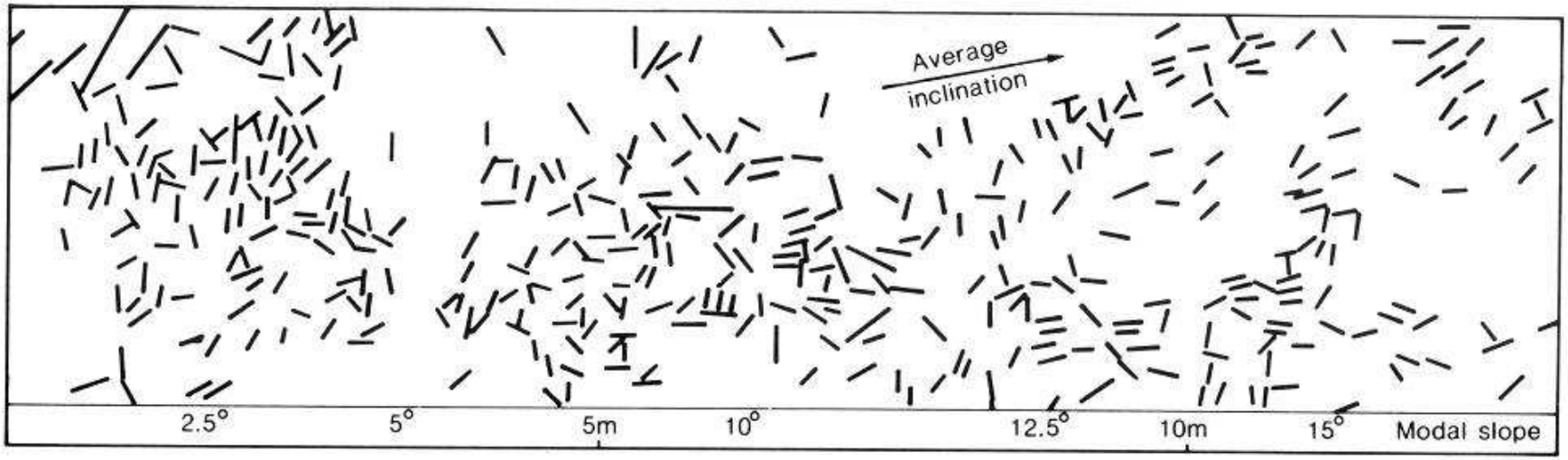
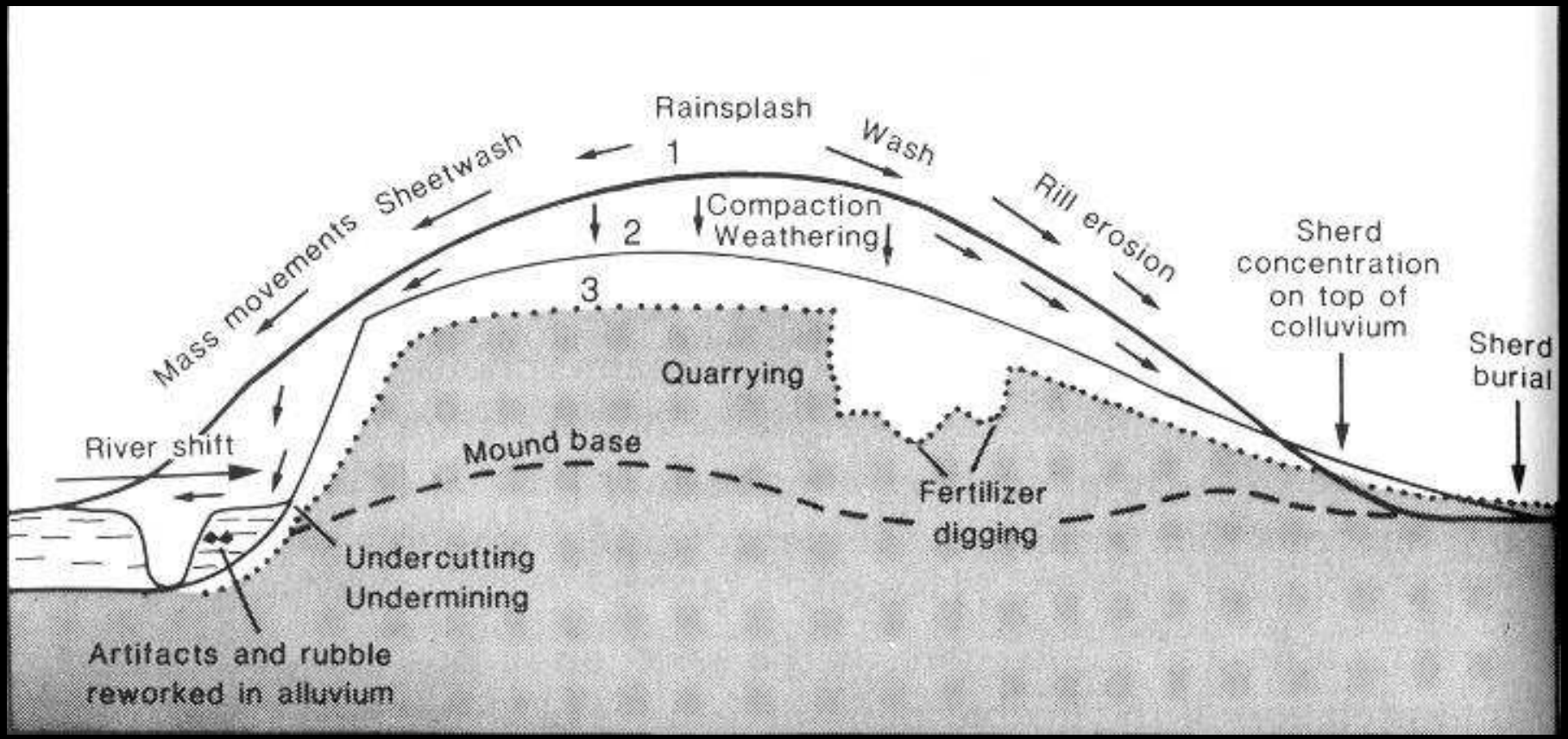
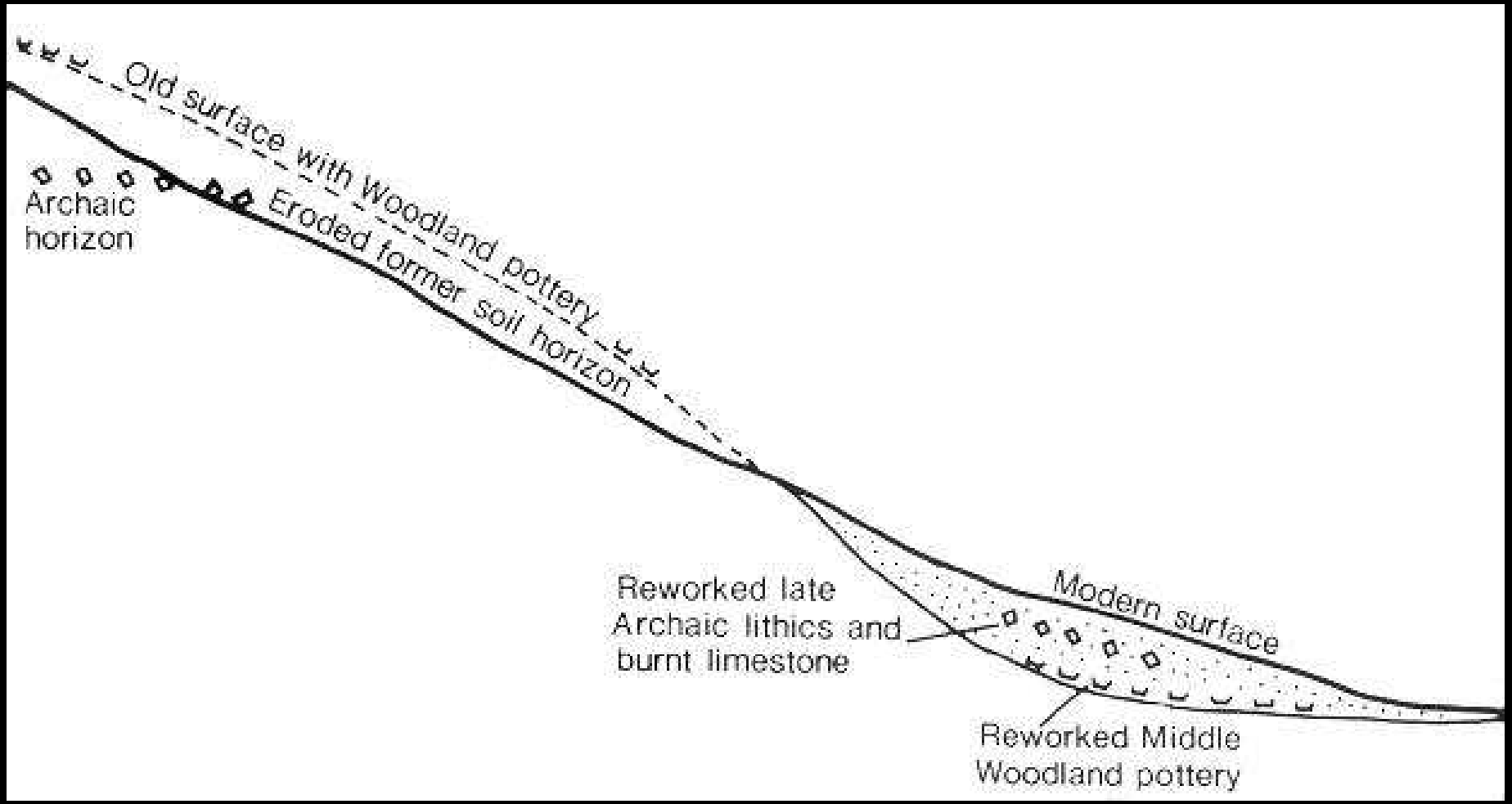
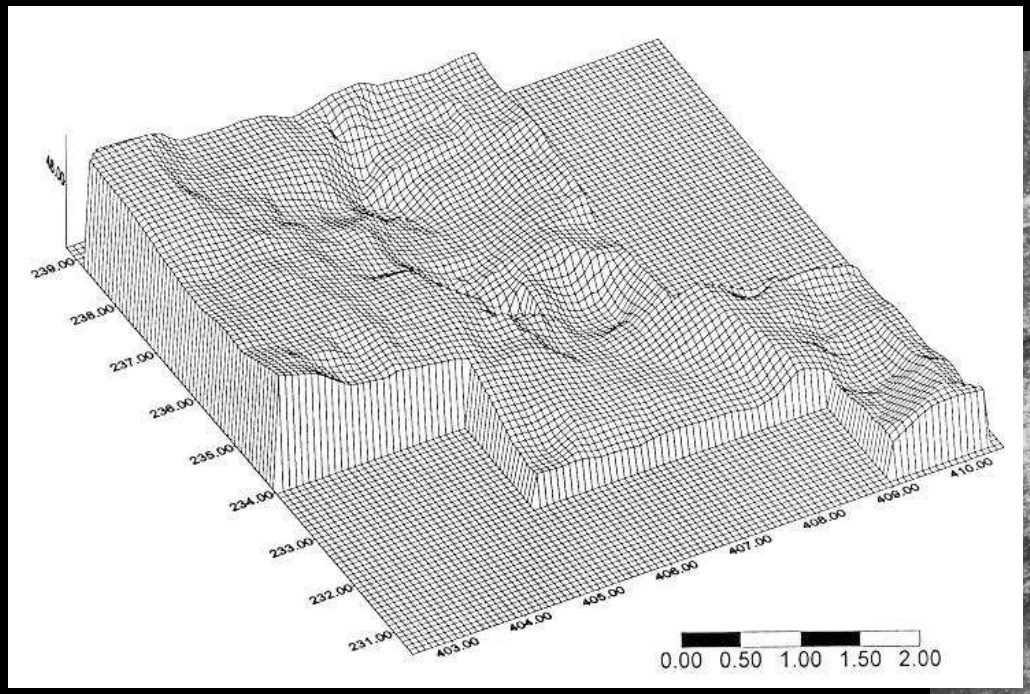
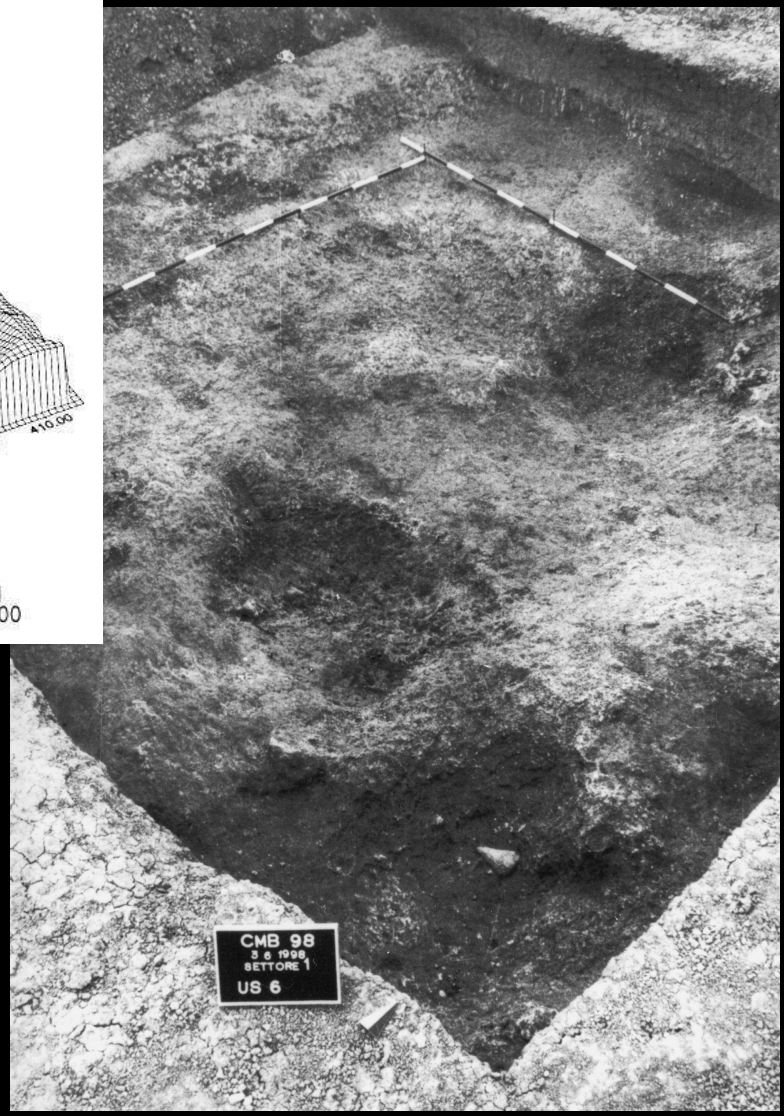


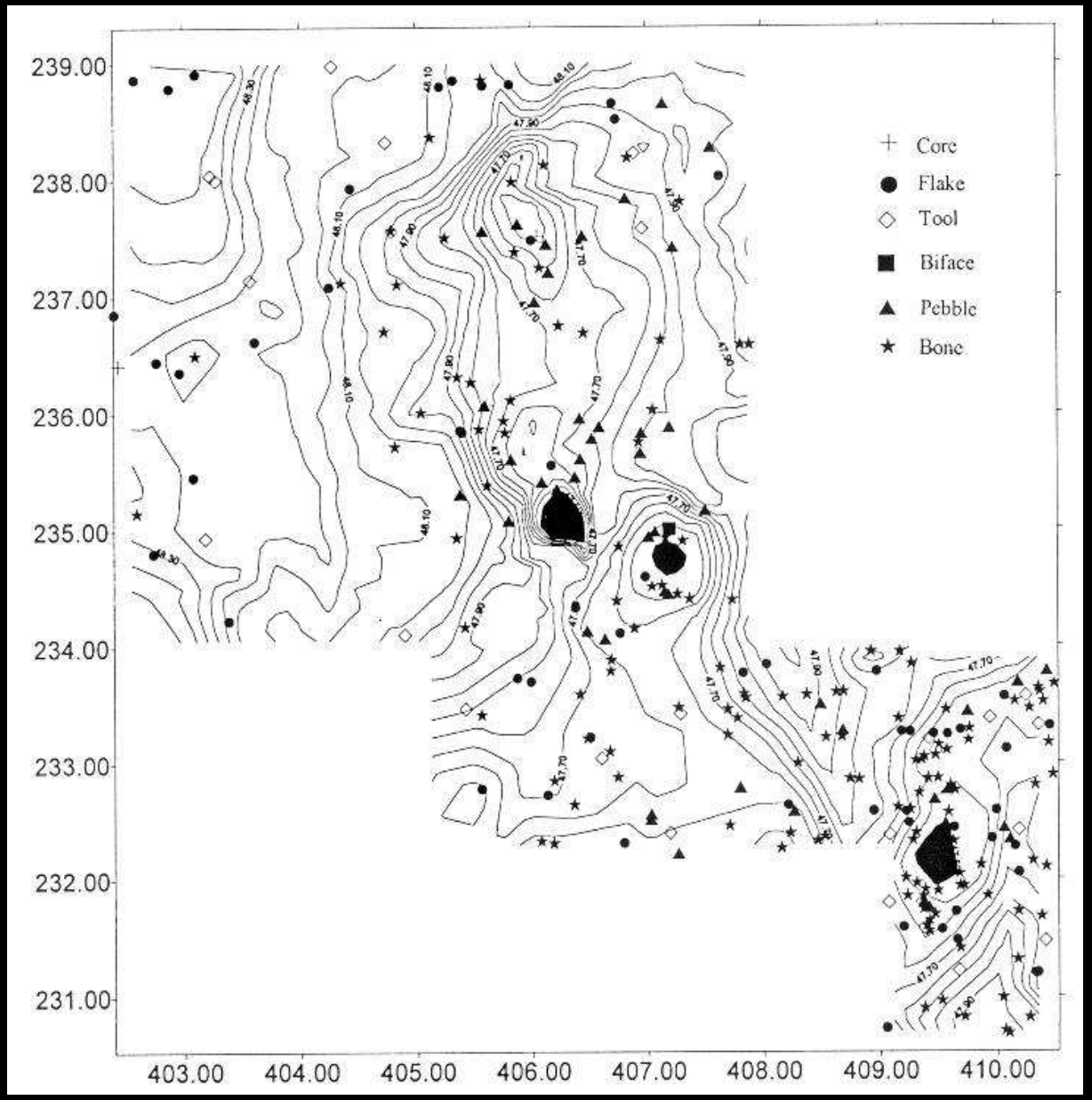
Figure 7-4. Orientation of rocks (> 10 cm major axis) according to slope. Plan view of the lowest archaeological levels, Acheulian site of Torralba, Spain (1,100 m) (composite, not to scale, and generalized). Mid-Pleistocene soil frosts arranged stones into rings on level ground and garlands on intermediate slopes, with diffuse downslope orientation on steeper gradients.


Rainsplash
1
Wash
Rill erosion
Sherd concentration on top of colluvium
Sherd burial
Mass movements
Sheetwash
Compaction
Weathering
2
3
Quarrying
River shift
Mound base
Fertilizer digging
Undercutting
Undermining
Artifacts and rubble reworked in alluvium


Old surface with Woodland pottery
Archaic horizon
Eroded former soil horizon
Reworked late Archaic lithics and burnt limestone
Modern surface
Reworked Middle Woodland pottery


239.00
238.00
237.00
236.00
235.00
234.00
233.00
232.00
231.00
403.00
404.00
405.00
406.00
407.00
408.00
409.00
410.00
0.00 0.50 1.00 1.50 2.00


CMB 98
5 6 1998
SETTORE 1
US 6


239.00
238.00
237.00
236.00
235.00
234.00
233.00
232.00
231.00
403.00
404.00
405.00
406.00
407.00
408.00
409.00
410.00
Core
Flake
Tool
Biface
Pebble
Bone

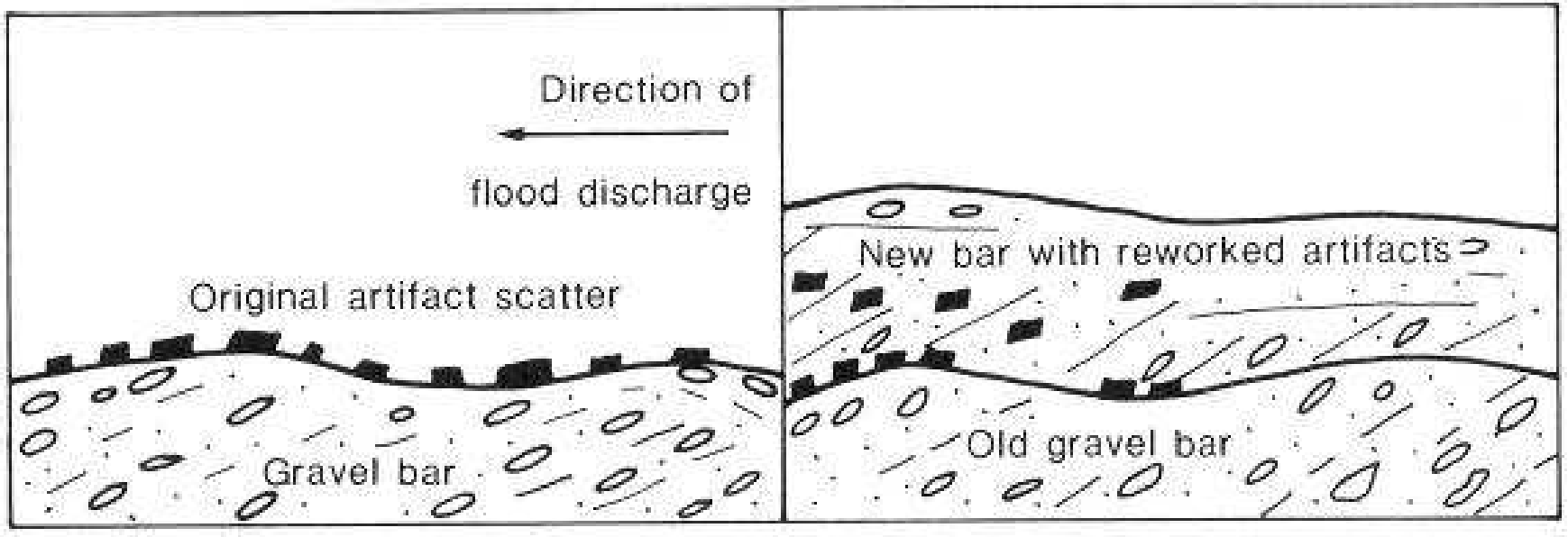


Figure 7-1. Dispersal and secondary bedding of gravel-bar workshop site.

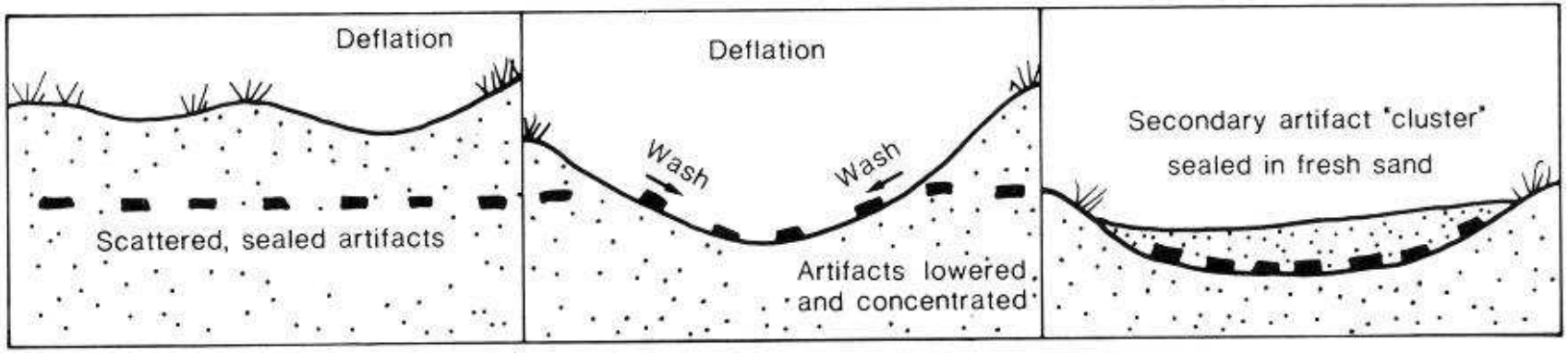
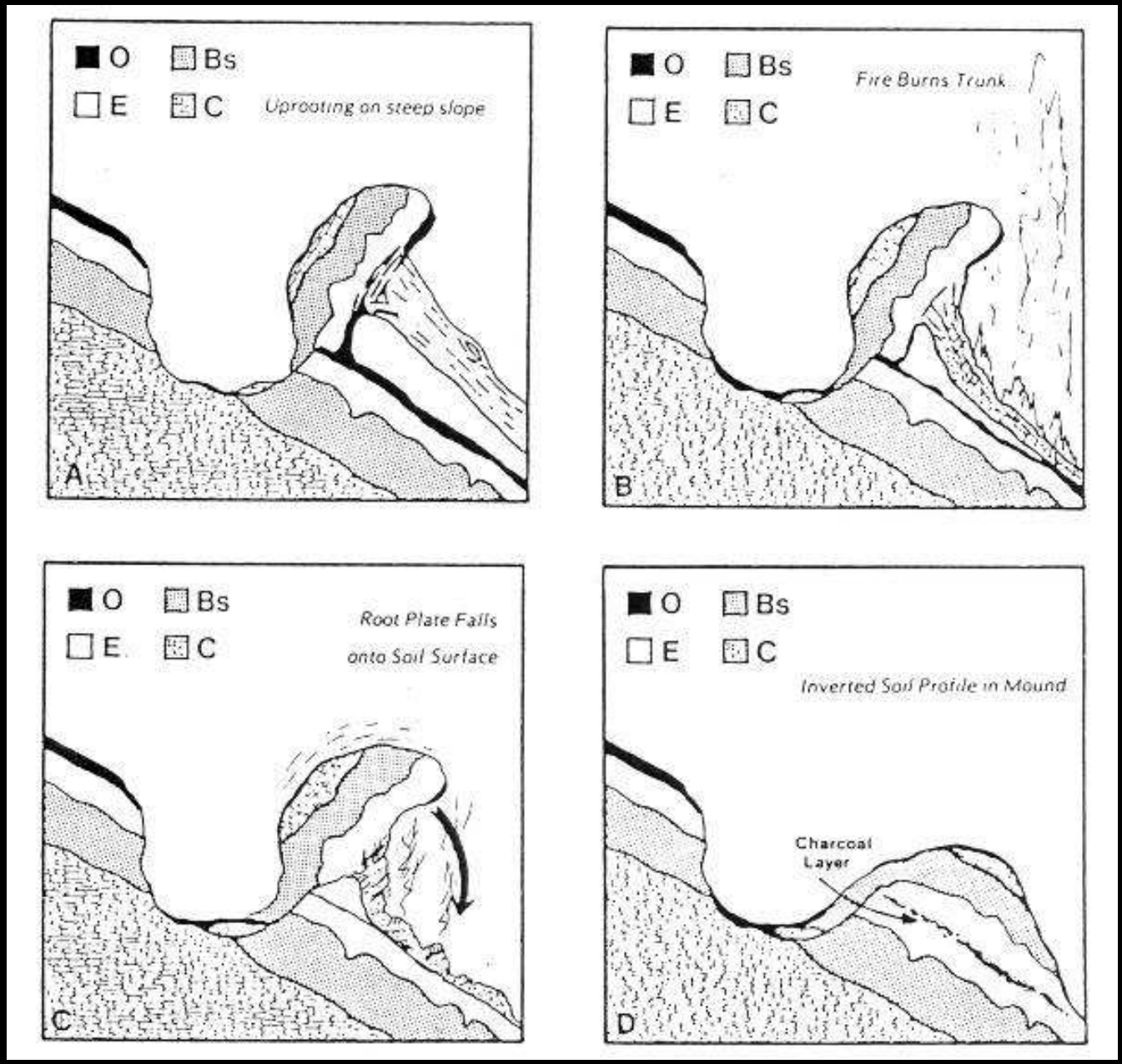
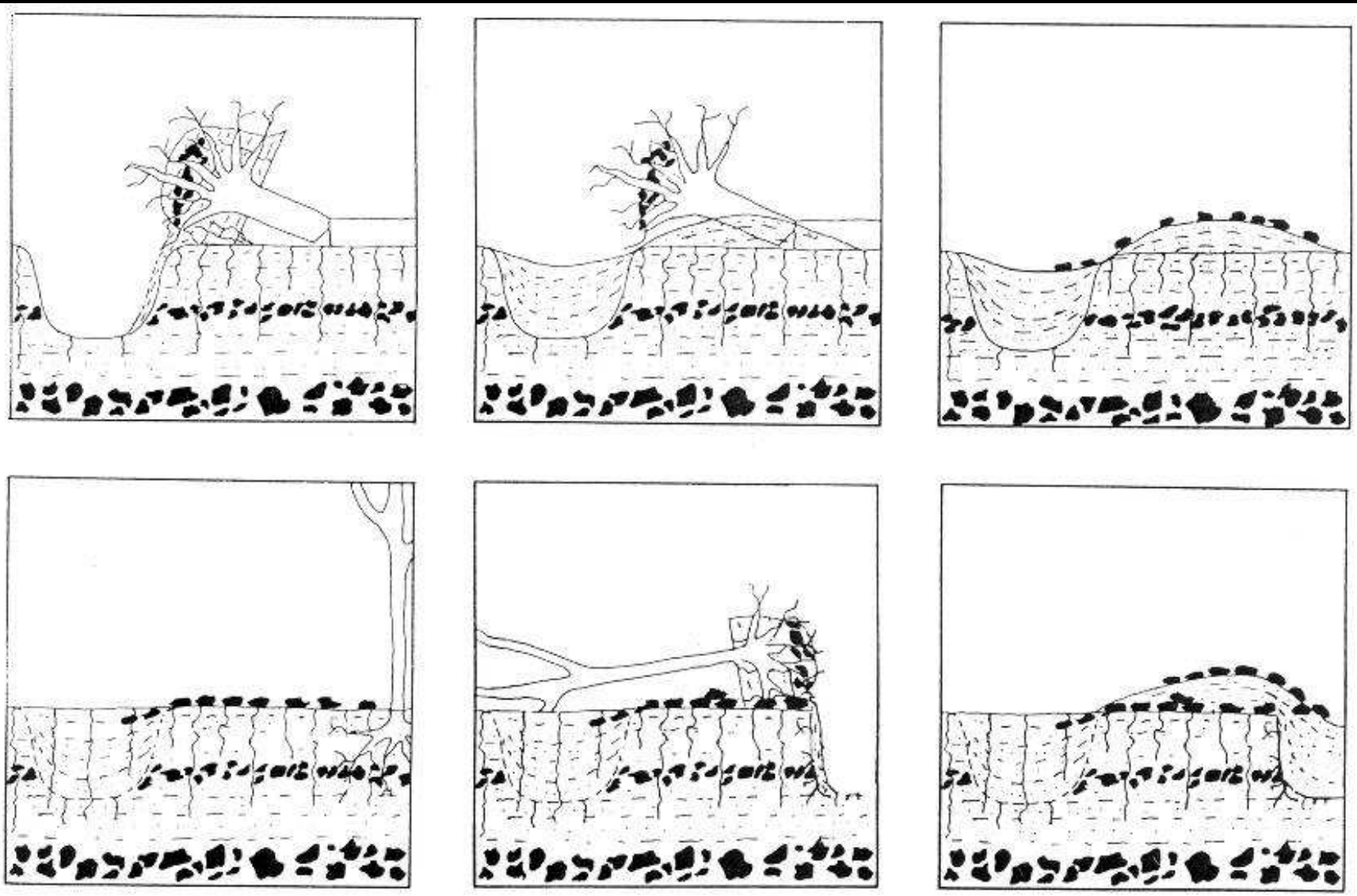
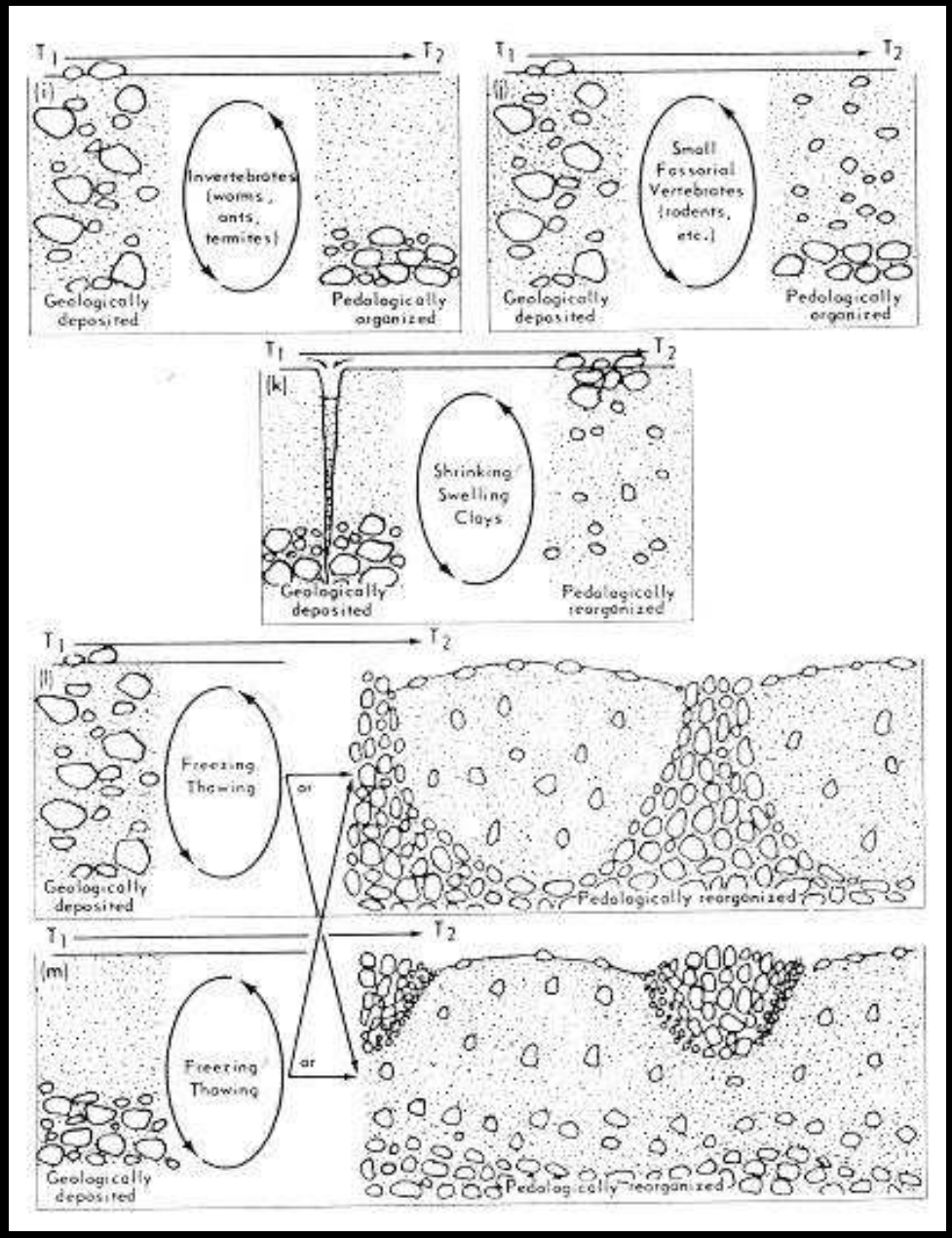
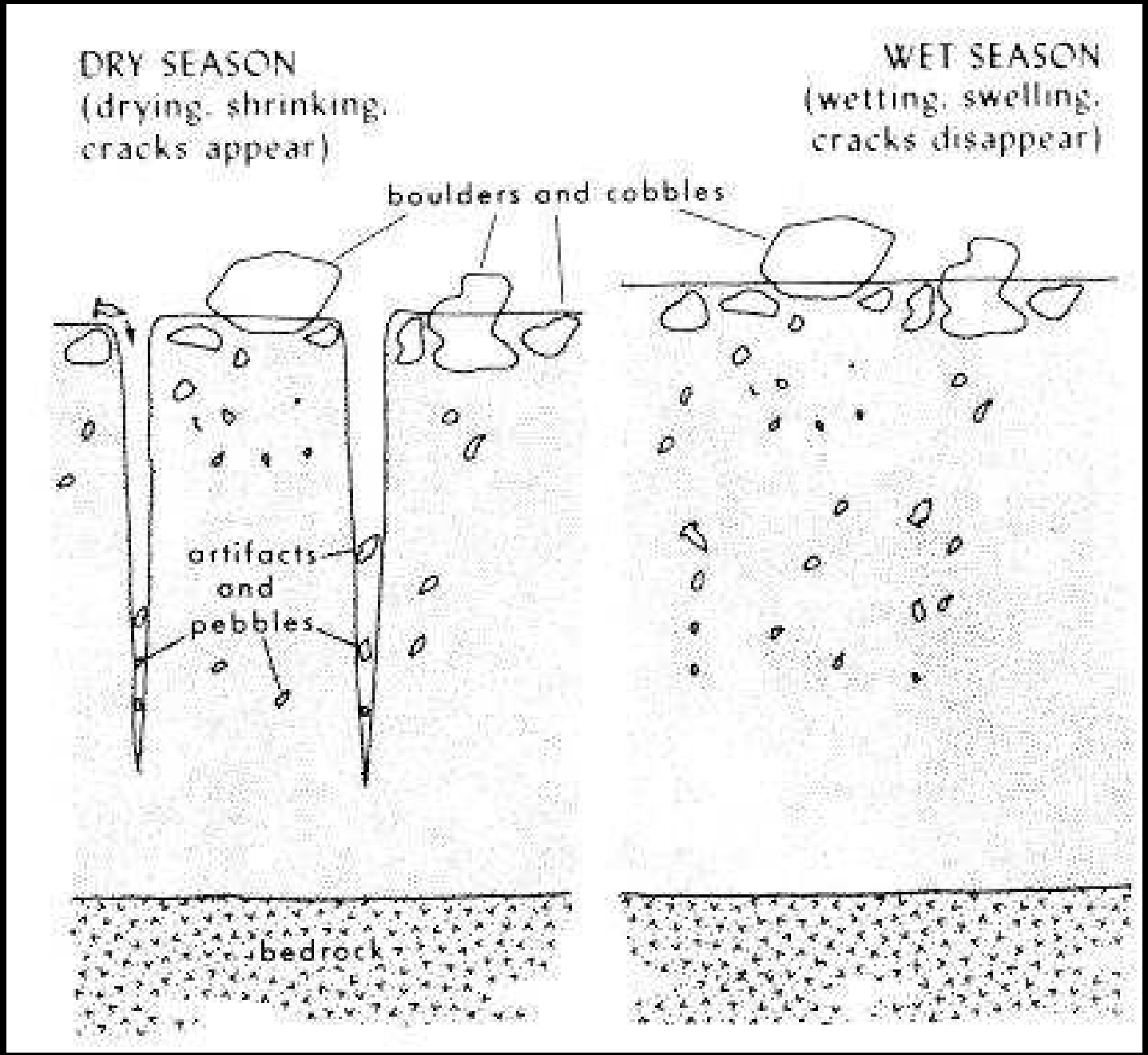


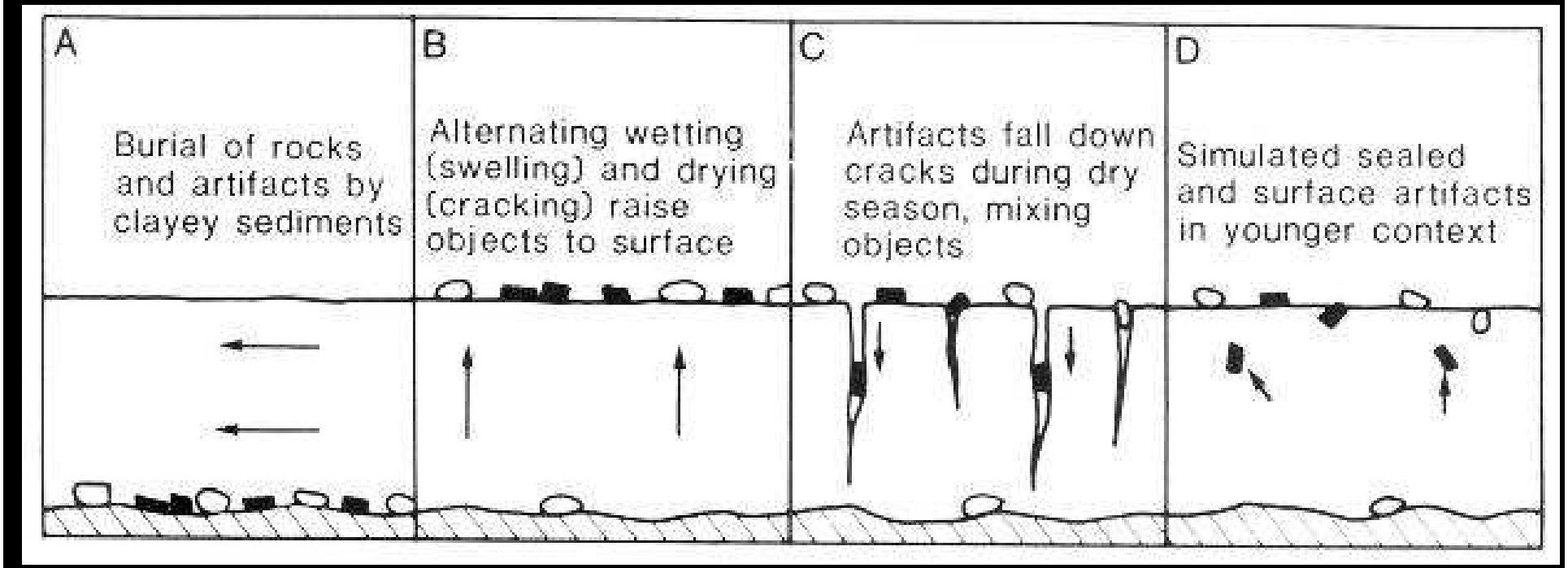
Figure 7-5. Potential blowout deflation, with secondary concentration of artifacts in sealed, simulated cluster.

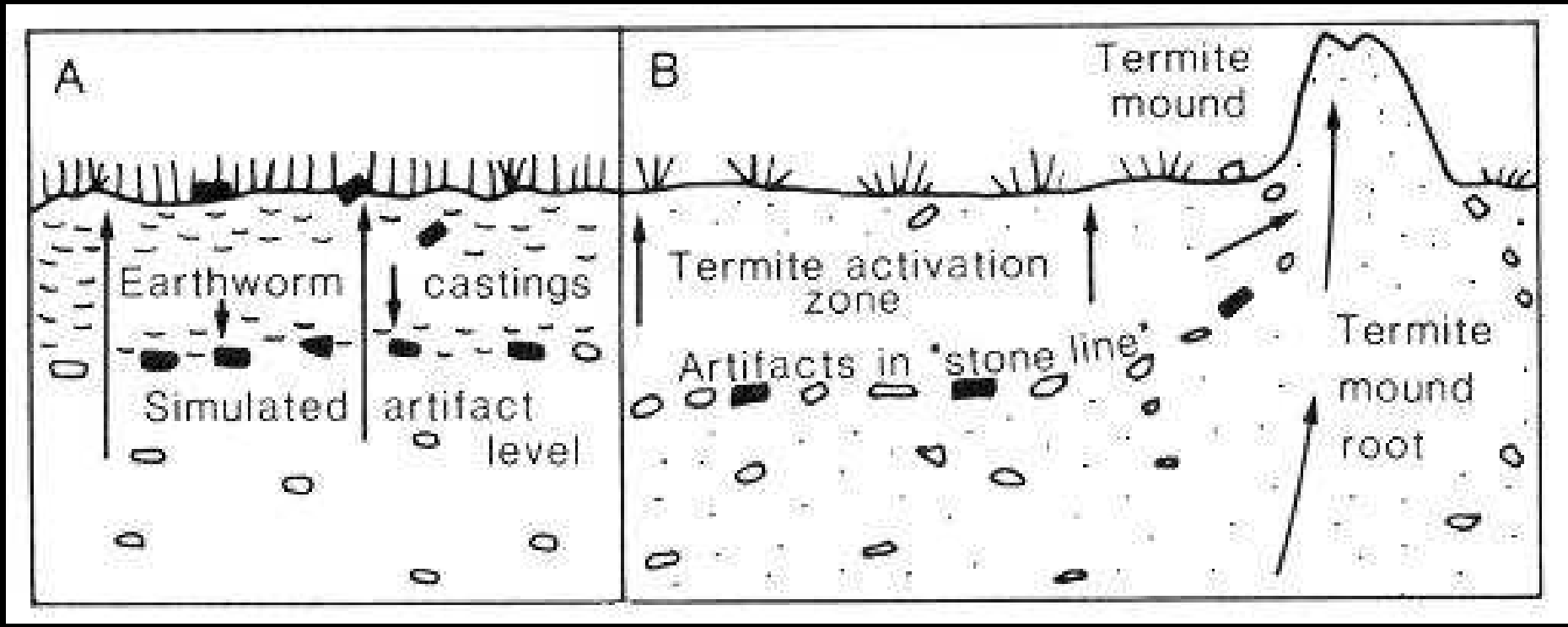

O
Bs
E
C
Uprooting on steep slope
A
O
Bs
E
C
Fire Burns Trunk
B
O
Bs
E
C
Root Plate Falls
onto Soil Surface
C
O
Bs
E
C
Inverted Soil Profile in Mound
Charcoal
Layer
D

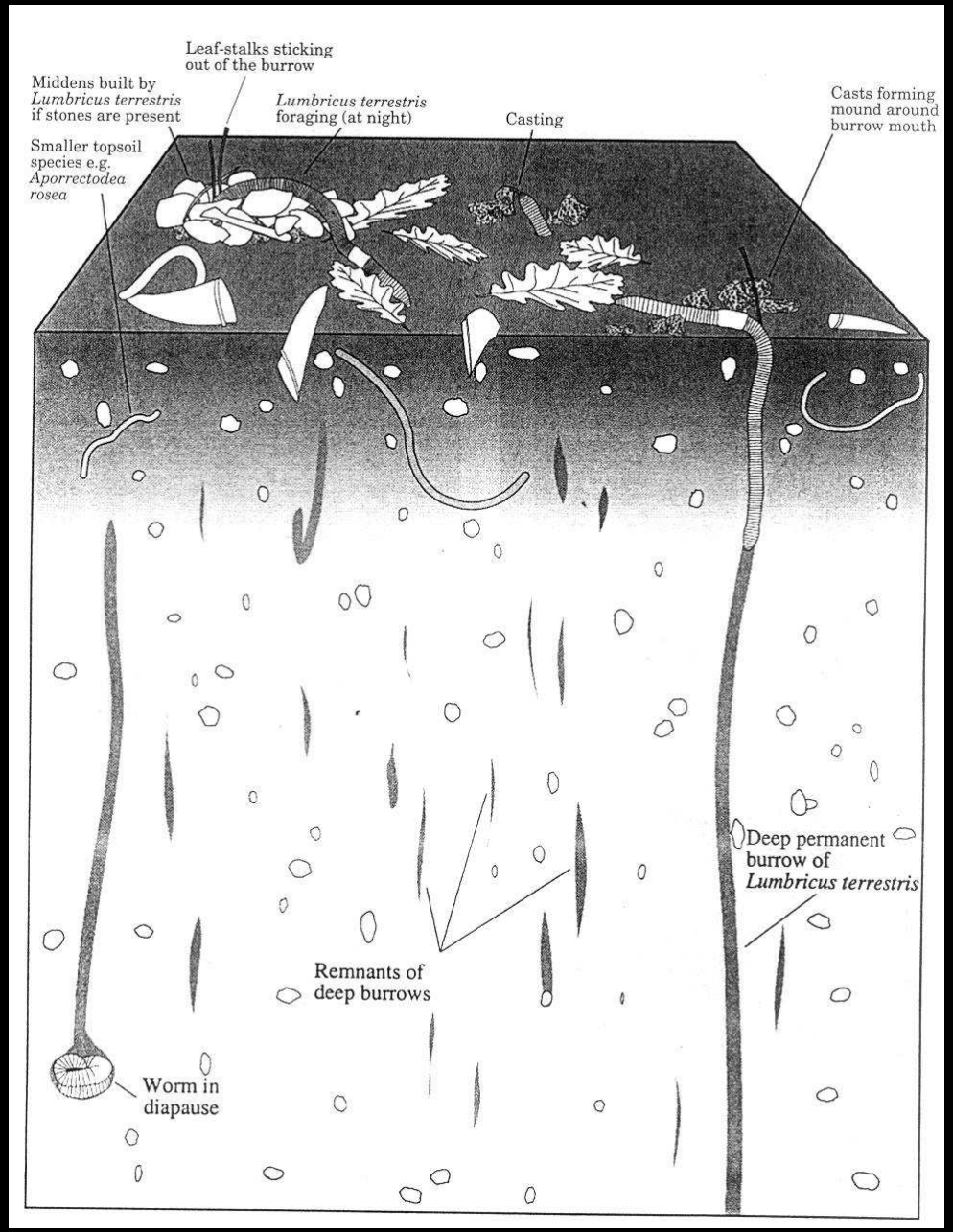


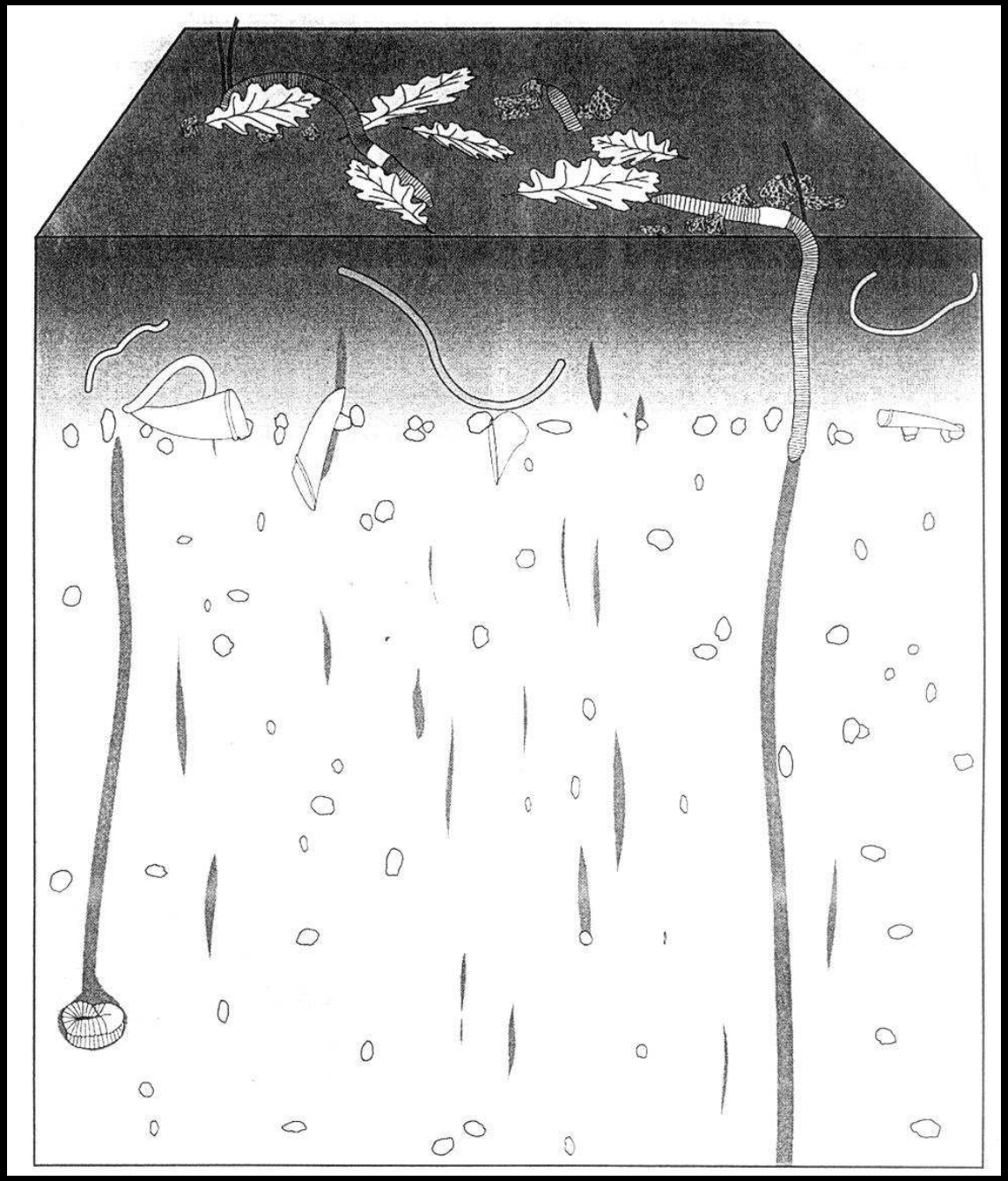

T1
T2
(i)
Invertebrates (worms, ants, termites)
Geologically deposited
Pedalogically organized
(j)
Small Fossorial Vertebrates (rodents, etc.)
Geologically deposited
Pedalogically organized
(k)
Shrinking Swelling Clays
Geologically deposited
Pedalogically reorganized
(l)
Freezing Thawing
or
Geologically deposited
Pedalogically reorganized
(m)
Freezing Thawing
or
Geologically deposited
Pedalogically reorganized

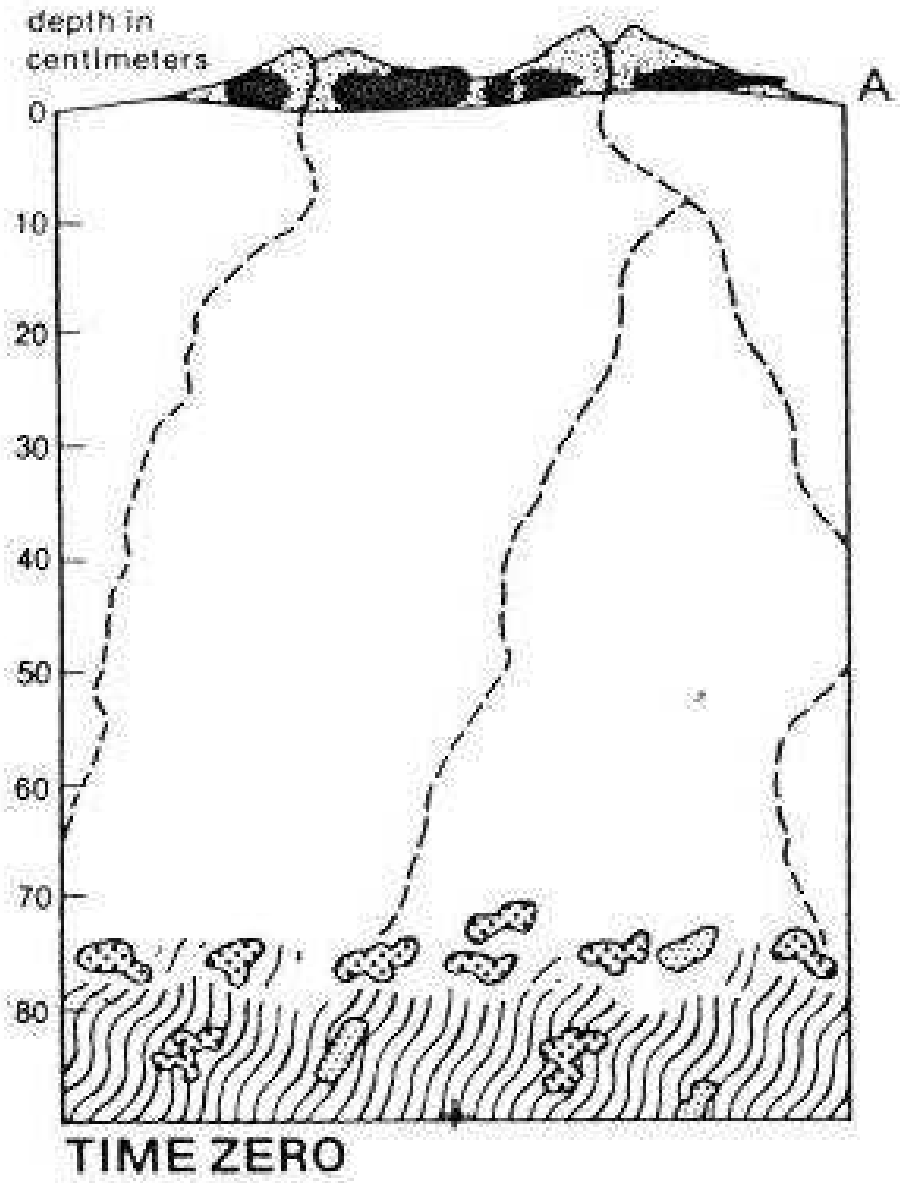

DRY SEASON
(drying, shrinking,
cracks appear)
WET SEASON
(wetting, swelling,
cracks disappear)
boulders and cobbles
artifacts
and
pebbles
bedrock


A
Burial of rocks and artifacts by clayey sediments
B
Alternating wetting (swelling) and drying (cracking) raise objects to surface
C
Artifacts fall down cracks during dry season, mixing objects
D
Simulated sealed and surface artifacts in younger context


A
B
Termite
mound
Earthworm
castings
Termite activation
zone
Artifacts in "stone line"
Termite
mound
root
Simulated
artifact
level


Leaf-stalks sticking out of the burrow
Middens built by *Lumbricus terrestris* if stones are present
Lumbricus terrestris foraging (at night)
Casting
Casts forming mound around burrow mouth
Smaller topsoil species e.g. *Aporrectodea rosea*
Deep permanent burrow of *Lumbricus terrestris*
Remnants of deep burrows
Worm in diapause





Artifact assemblage A

Artifact assemblage B

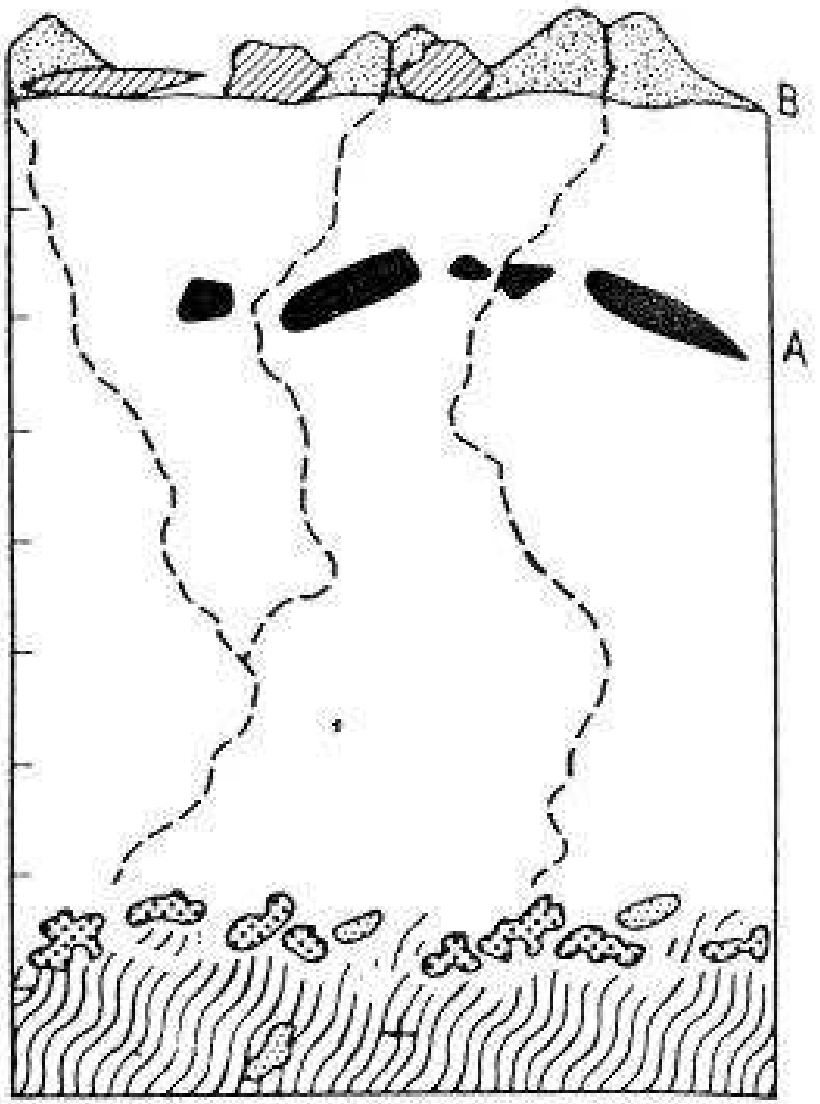
Artifact assemblage C

Pumice D

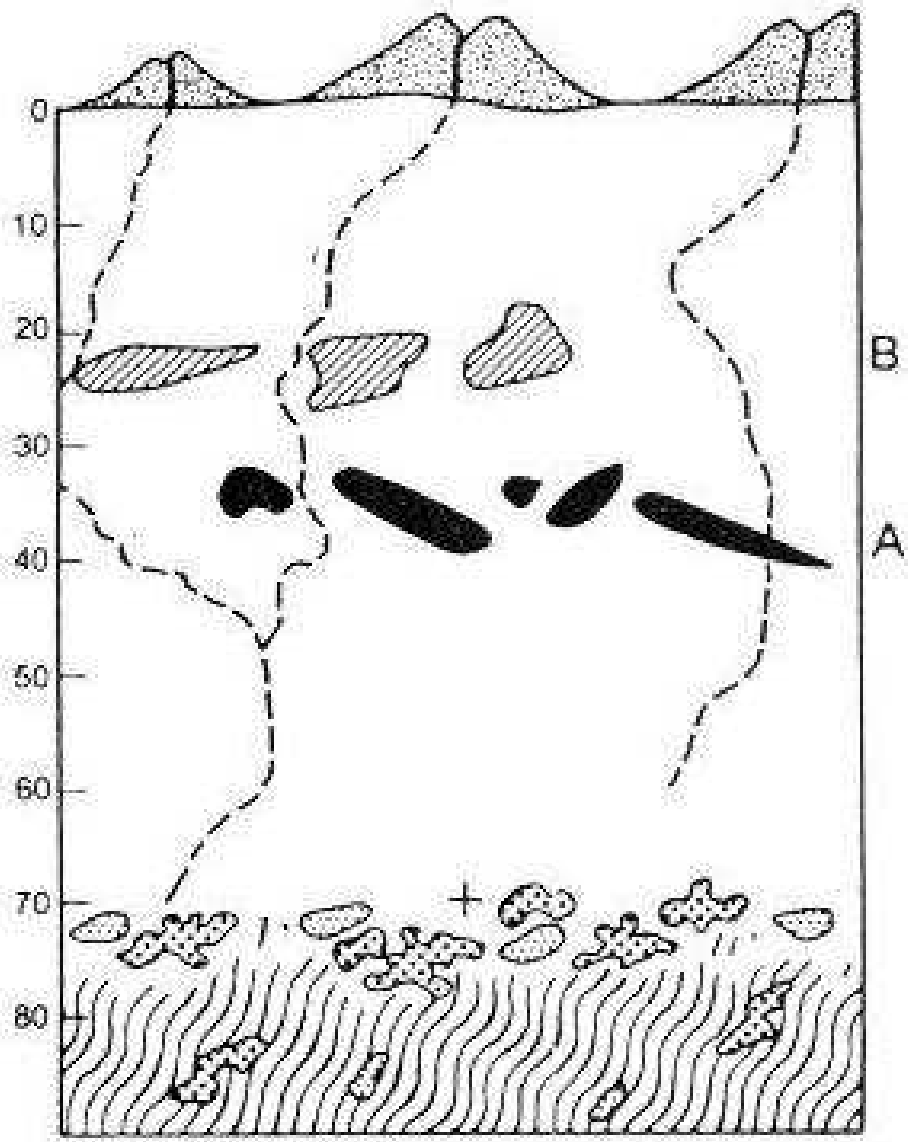
Iron-manganese concretions precipitate in subsoil and weathered bedrock

Quartz gravels released from bedrock by weathering and downwasting

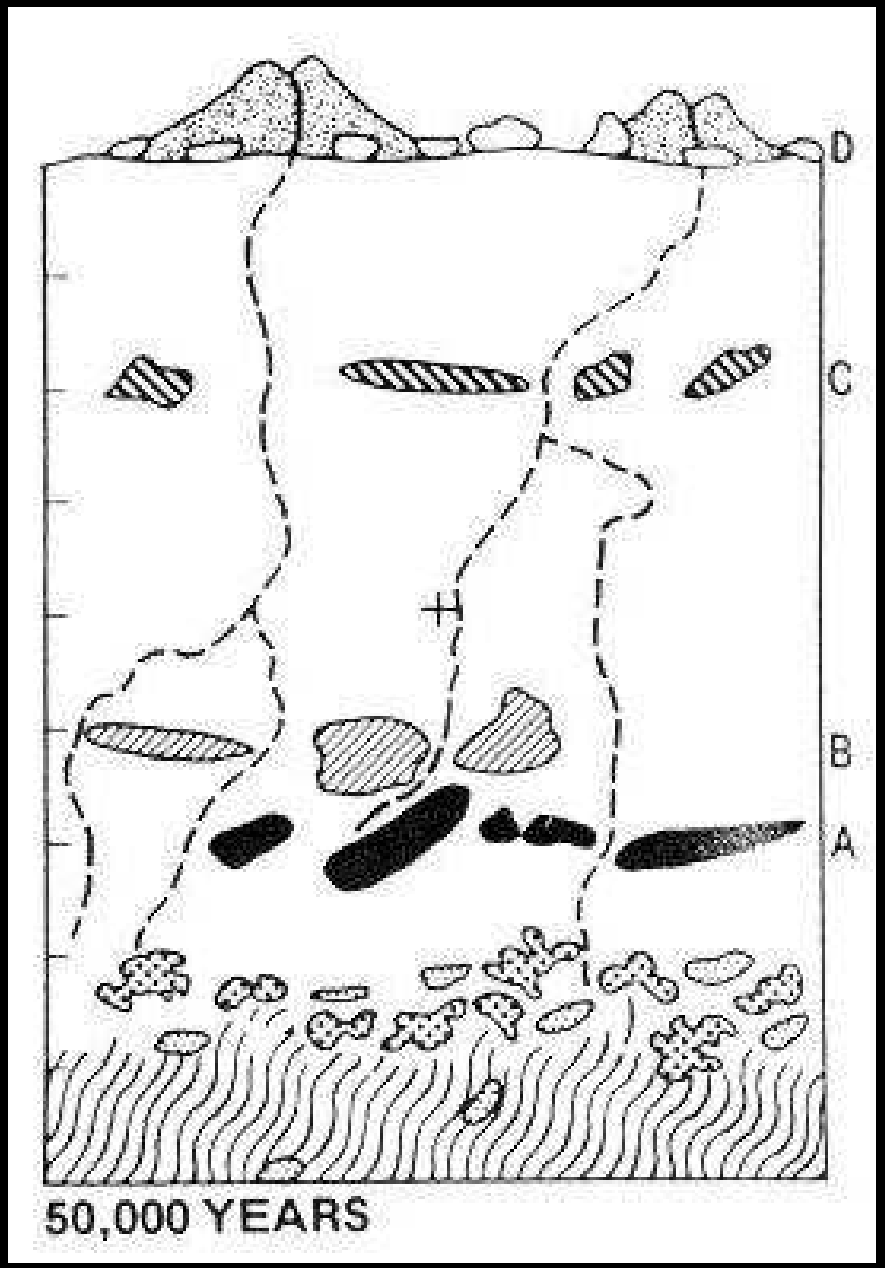
Weathered granite gneiss bedrock

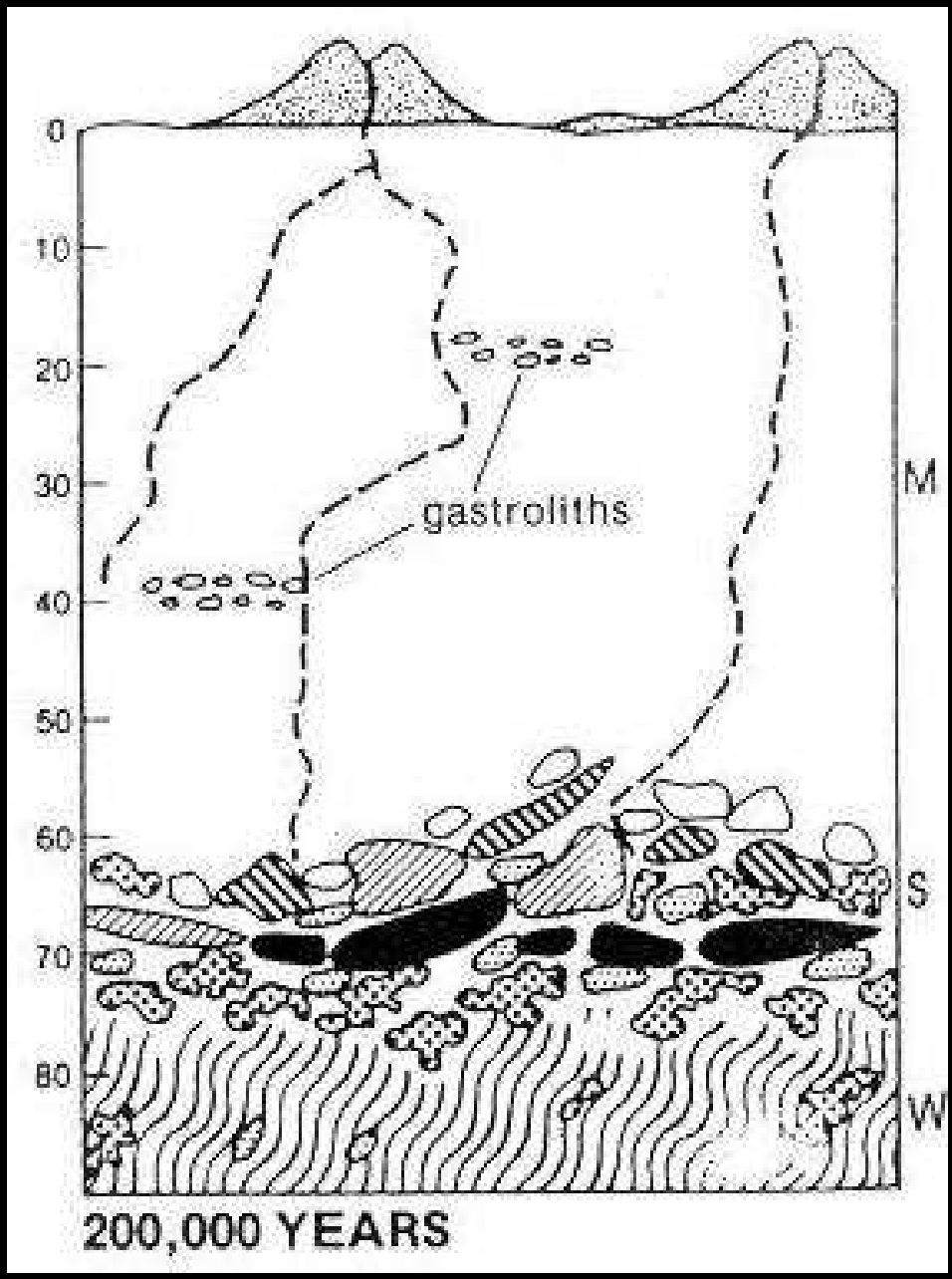


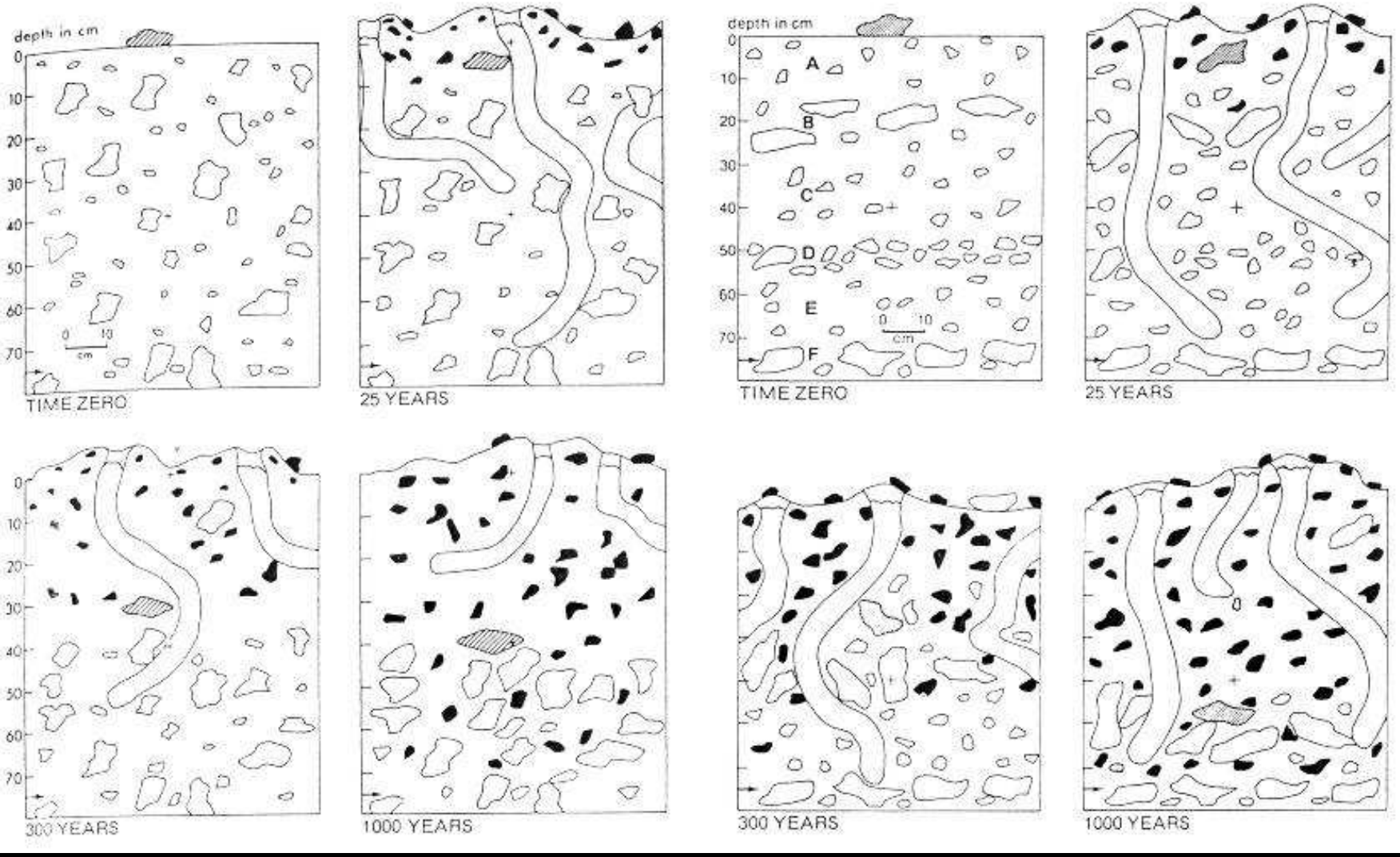
5000 YEARS

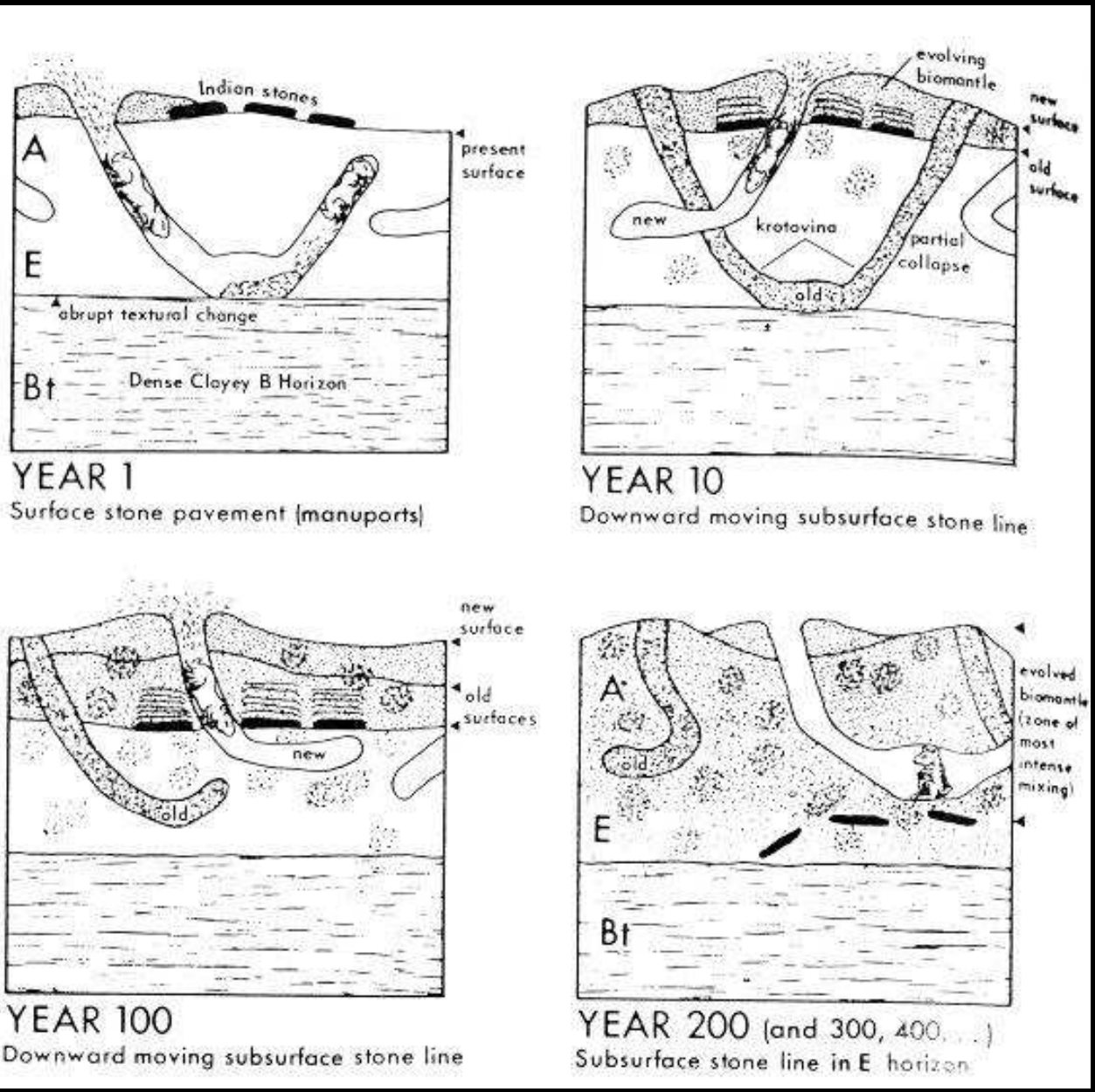


20,000 YEARS


D
C
B
A
50,000 YEARS


0
10
20
30
40
50
60
70
80
gastroliths
M
S
W
200,000 YEARS


depth in cm
0
10
20
30
40
50
60
70
0 10
cm
TIME ZERO
25 YEARS
A
B
C
D
E
F
TIME ZERO
25 YEARS
300 YEARS
1000 YEARS
300 YEARS
1000 YEARS


Indian stones
present surface
A
E
abrupt textural change
Bt
Dense Clayey B Horizon
YEAR 1
Surface stone pavement (manuports)
evolving biomantle
new surface
old surface
new
krotovina
partial collapse
old
YEAR 10
Downward moving subsurface stone line
new surface
old surfaces
new
old
YEAR 100
Downward moving subsurface stone line
A
old
E
Bt
evolved biomantle (zone of most intense mixing)
YEAR 200 (and 300, 400. . .)
Subsurface stone line in E horizon

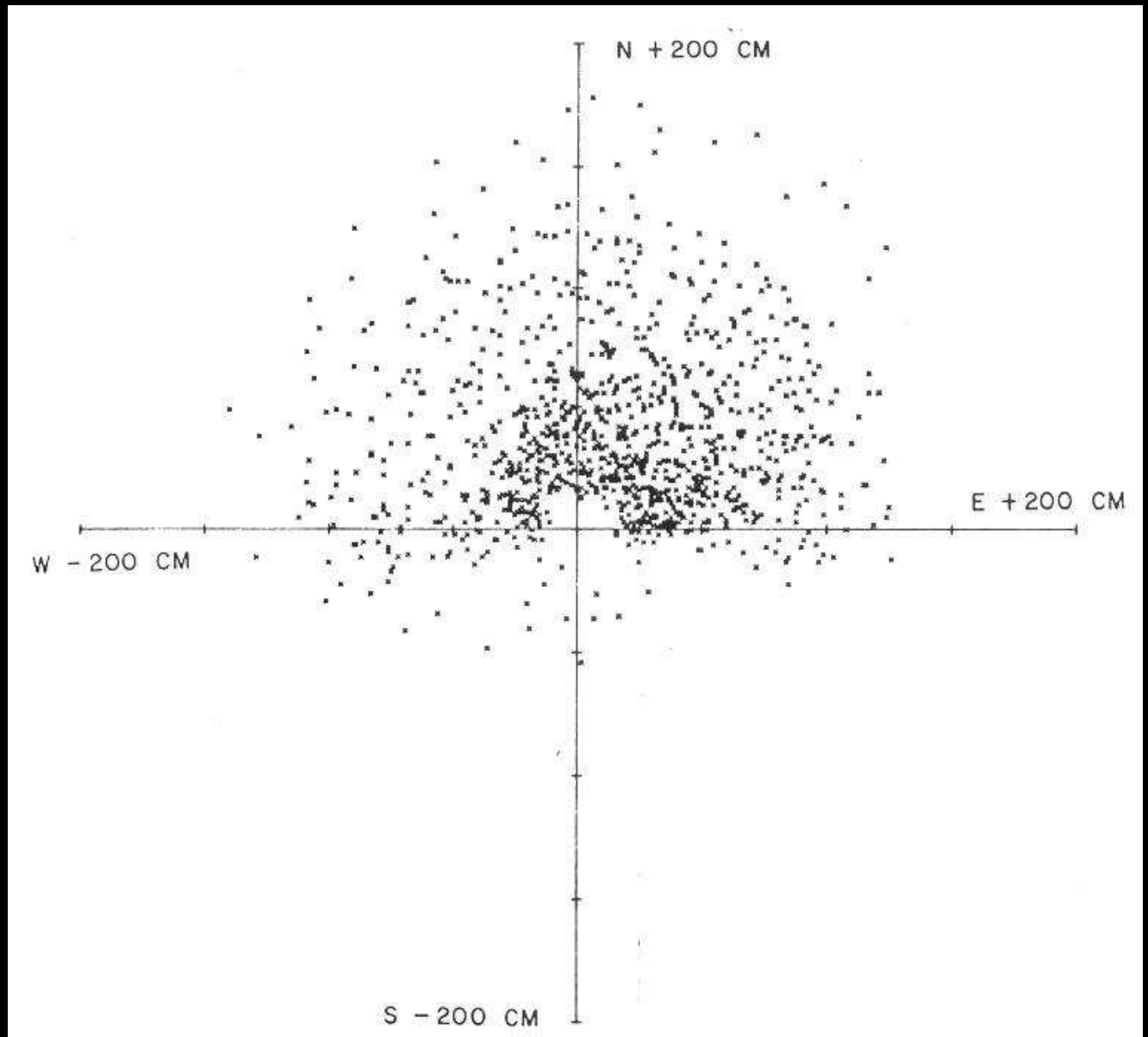


Figure 7. Flake scatter created by a modern-day flintknapper while producing an argillite biface.

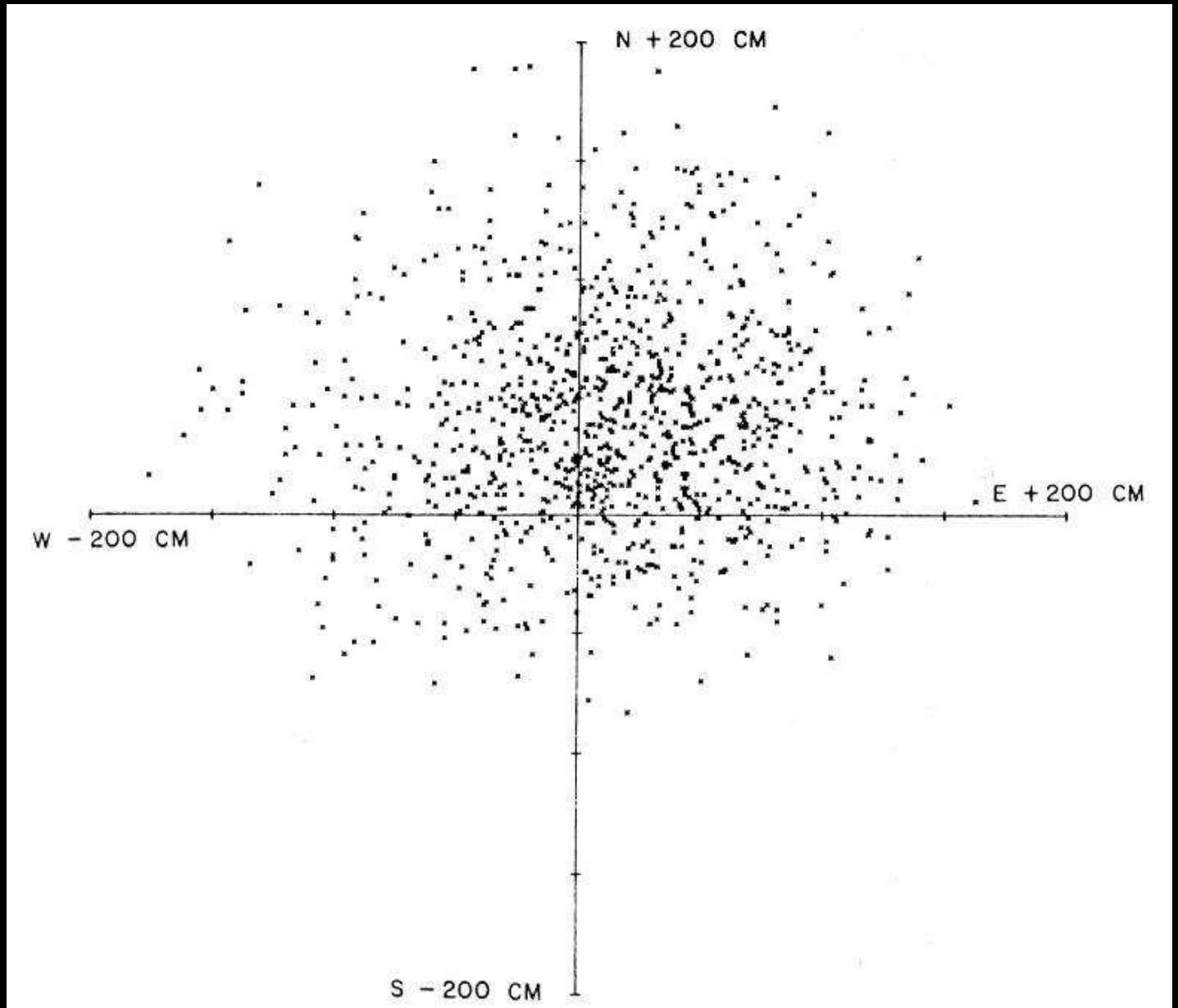


Figure 8. Simulated flake scatter 100 years after production by modern-day flintknapper.

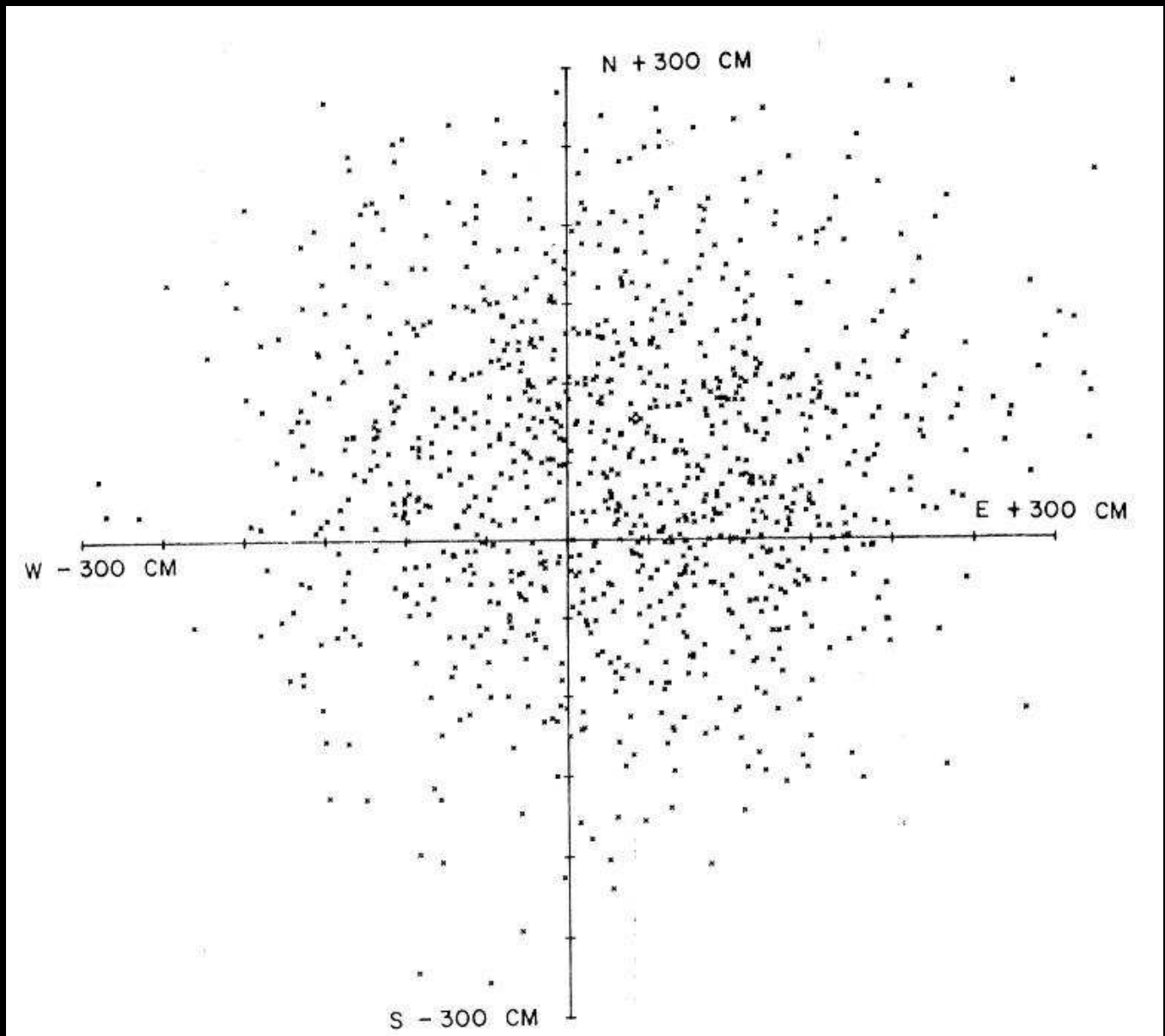
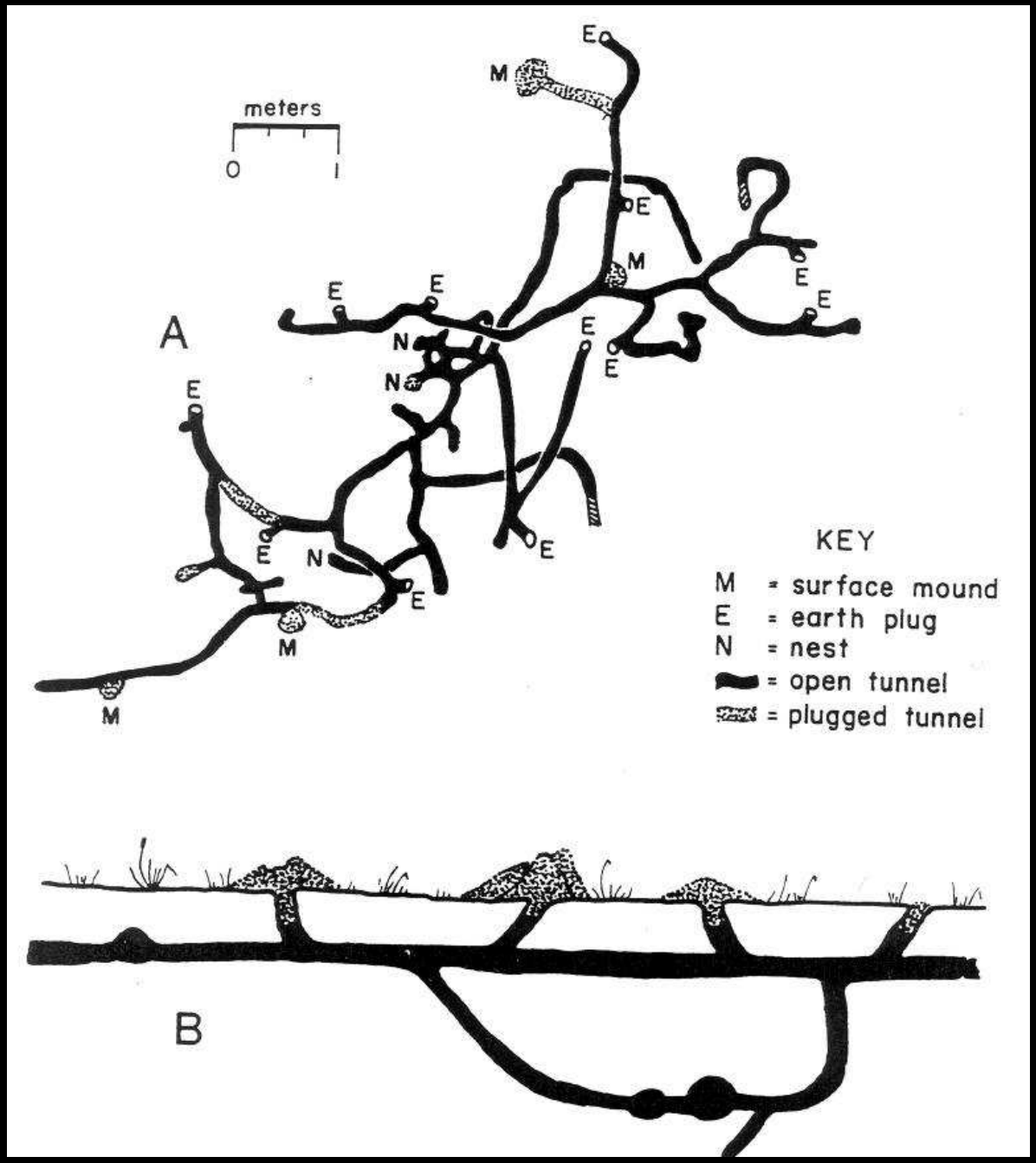


Figure 9. Simulated flake scatter 1,000 years after production by modern-day flintknapper. Note change in scale from Figures 7 and 8.


meters
0
1
A
B
KEY
M = surface mound
E = earth plug
N = nest
= open tunnel
= plugged tunnel

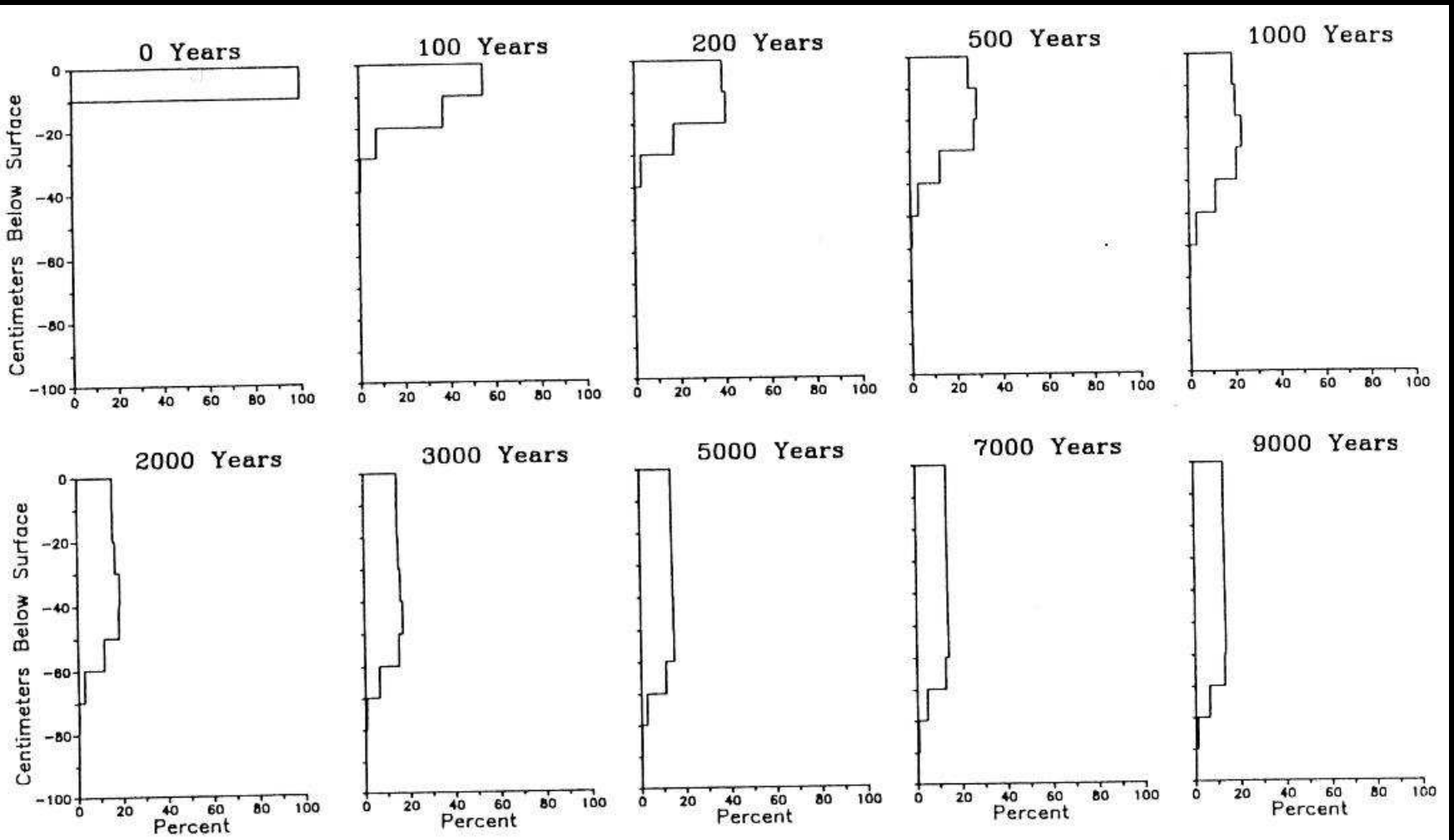


Figure 2. Simulated vertical distribution of small artifacts (<6 cm) over various time intervals.

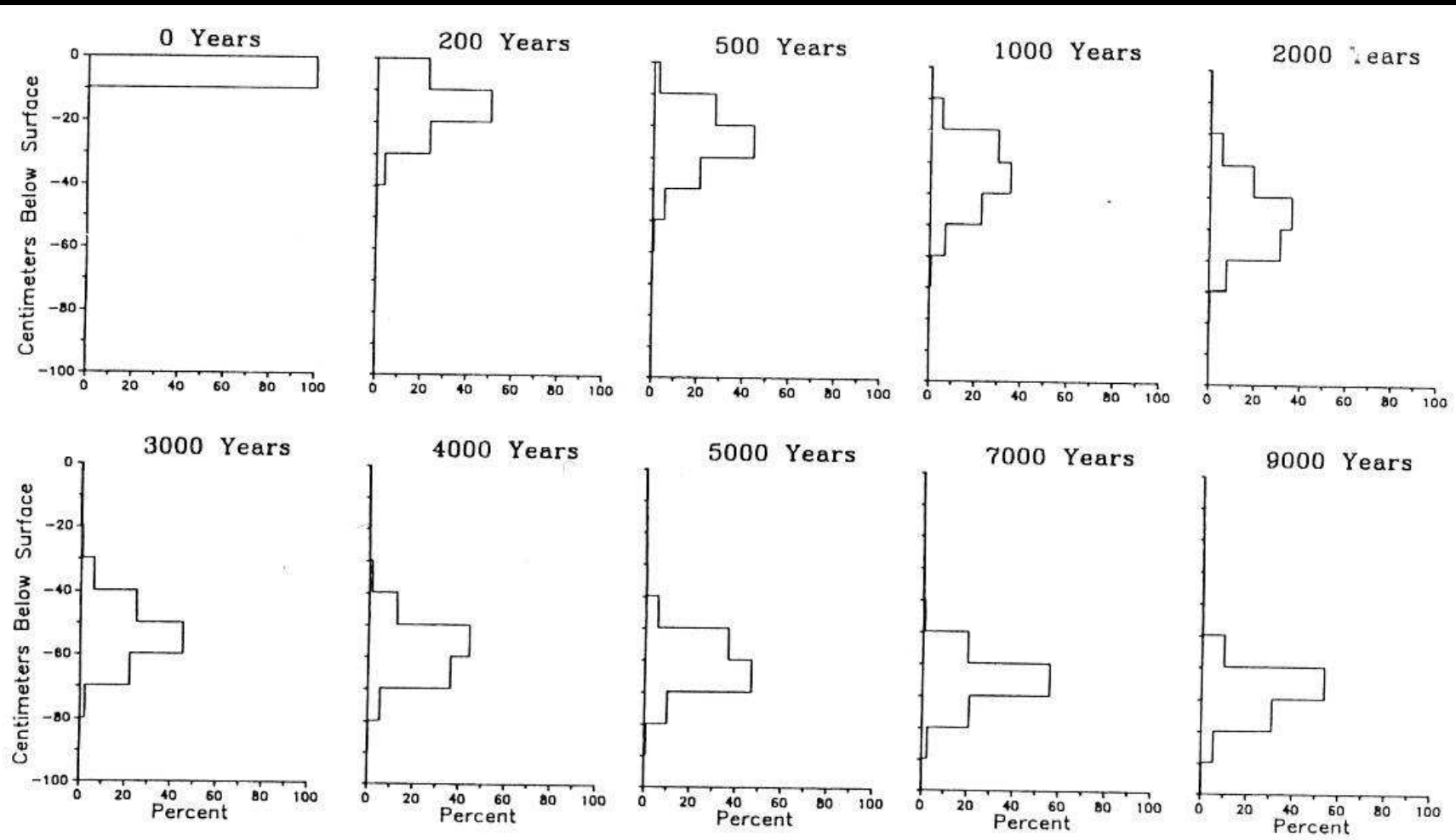
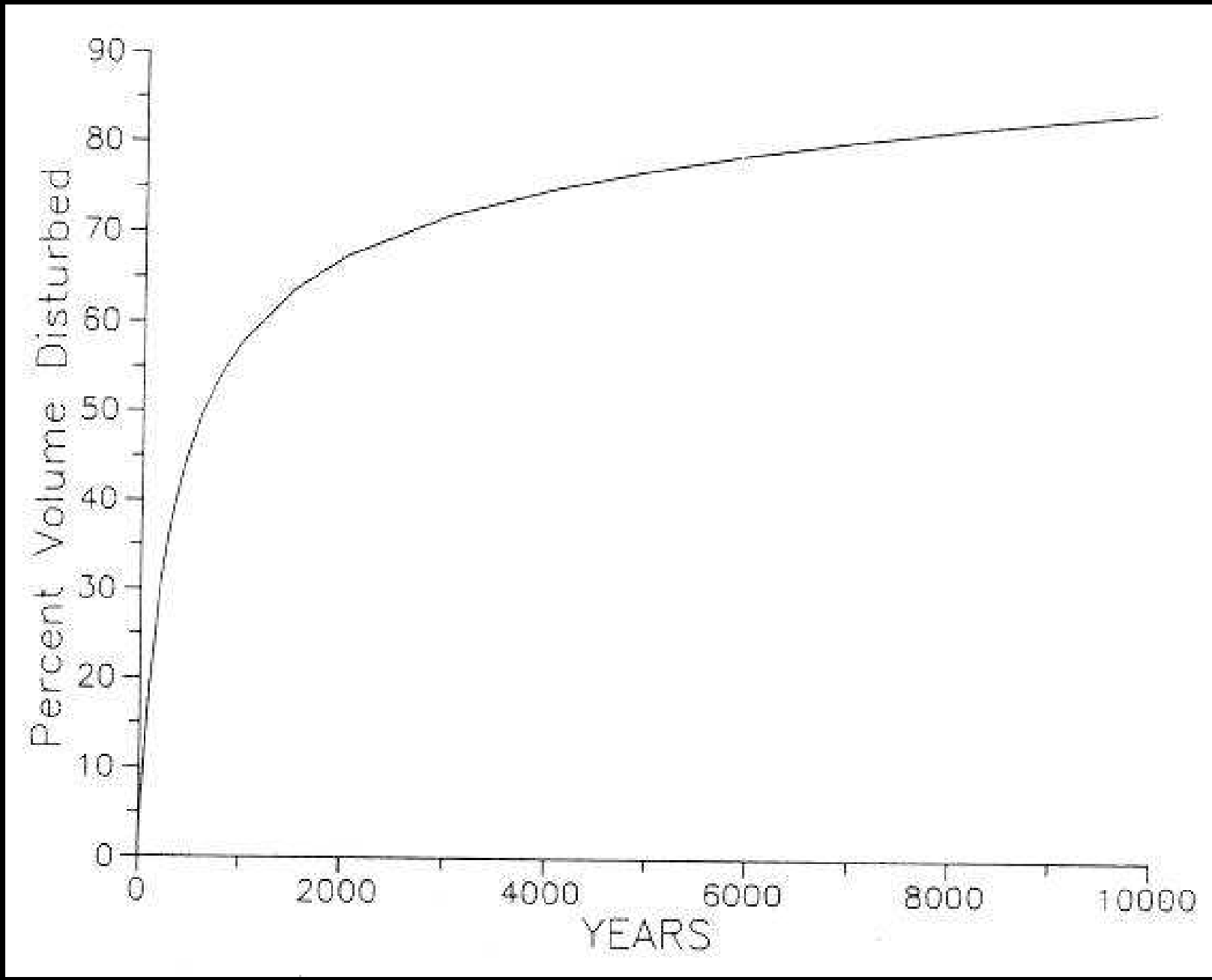
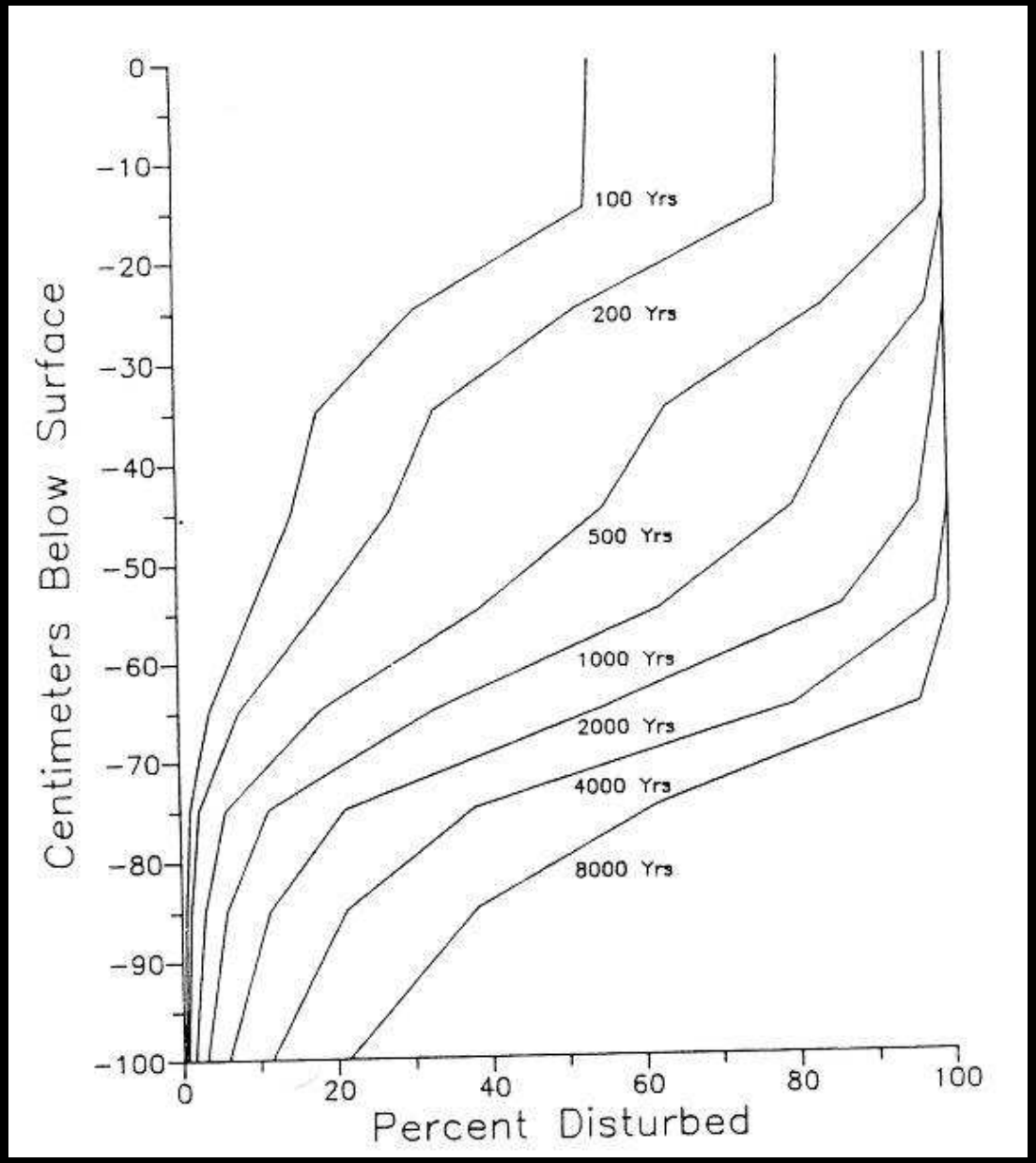
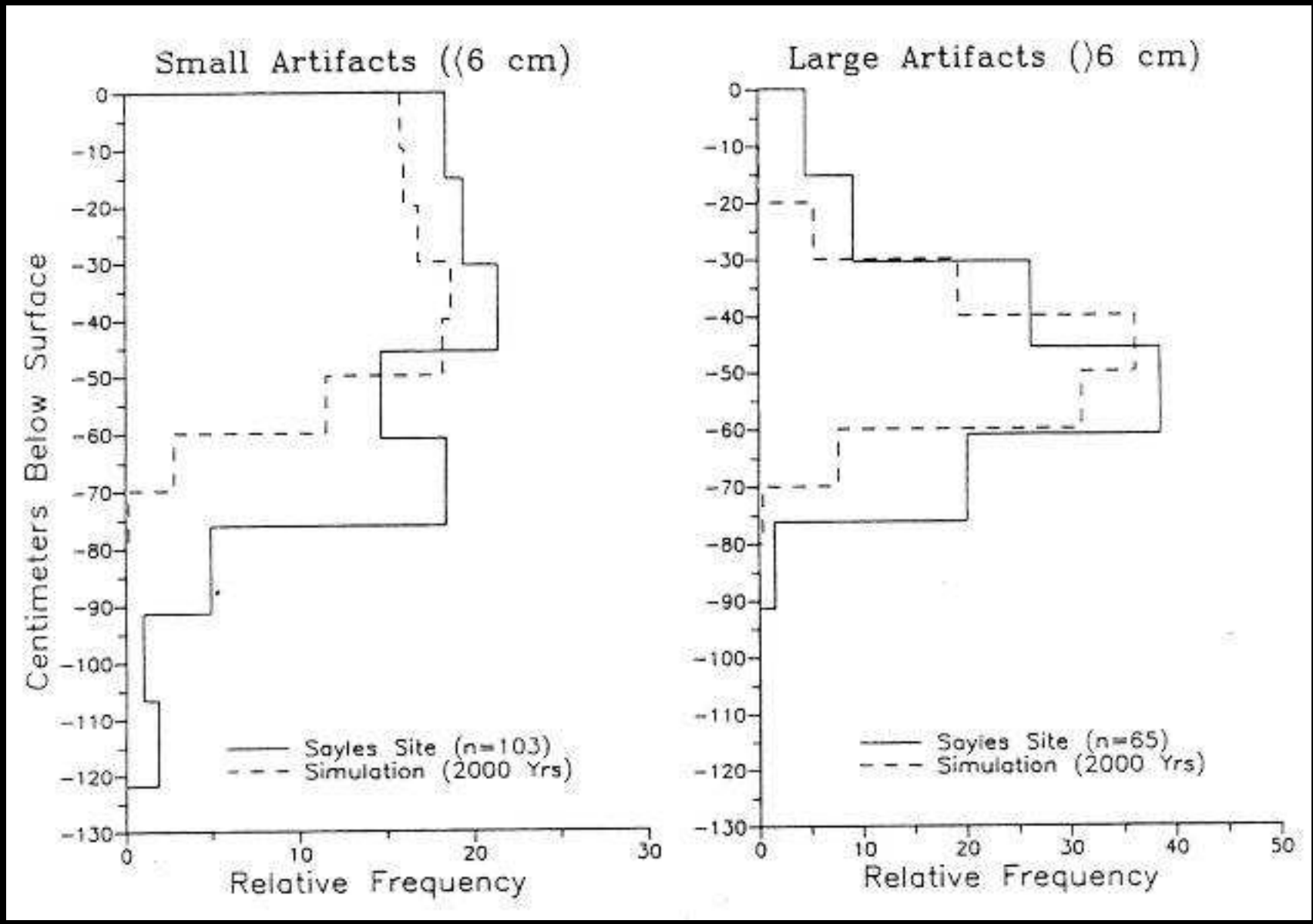
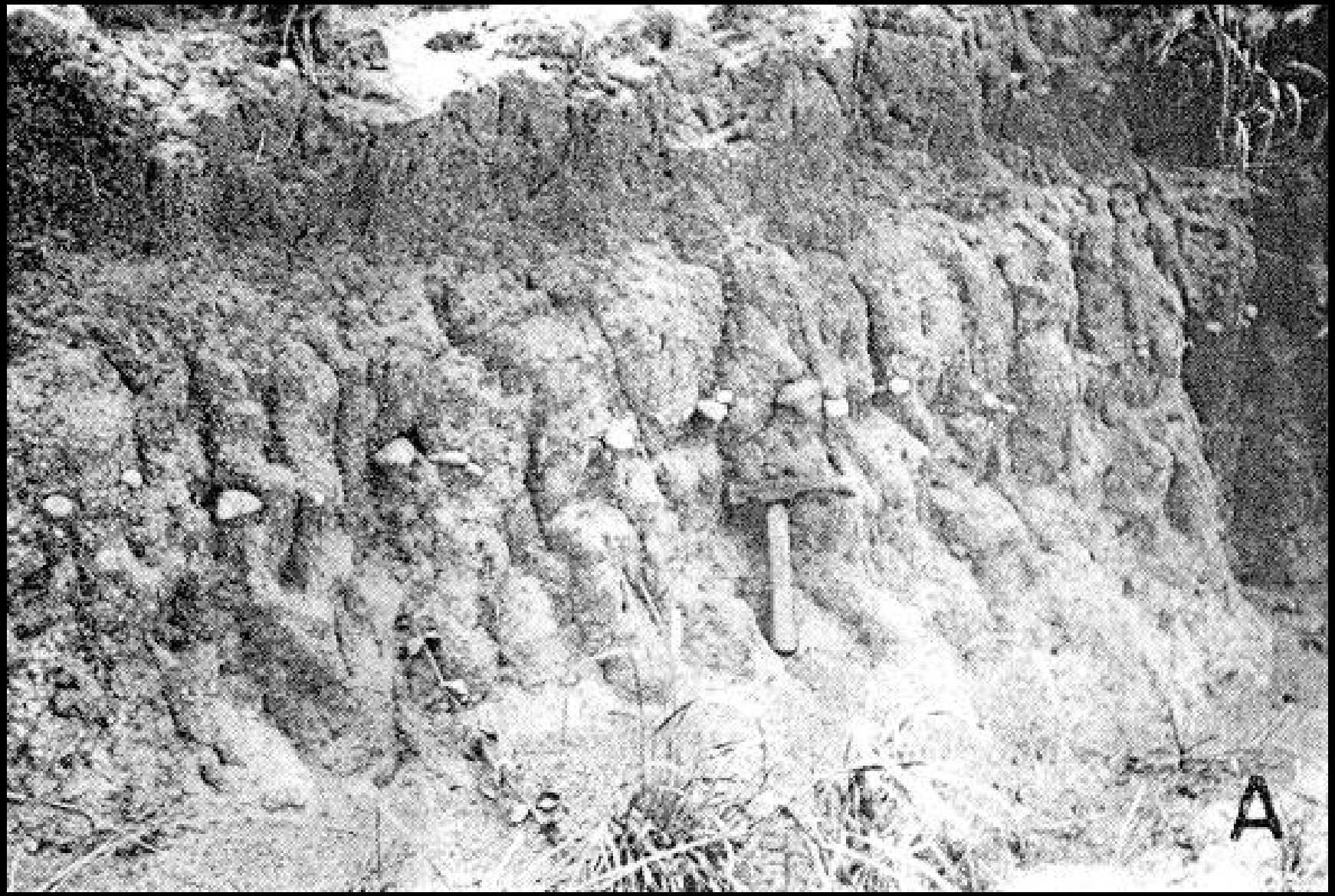


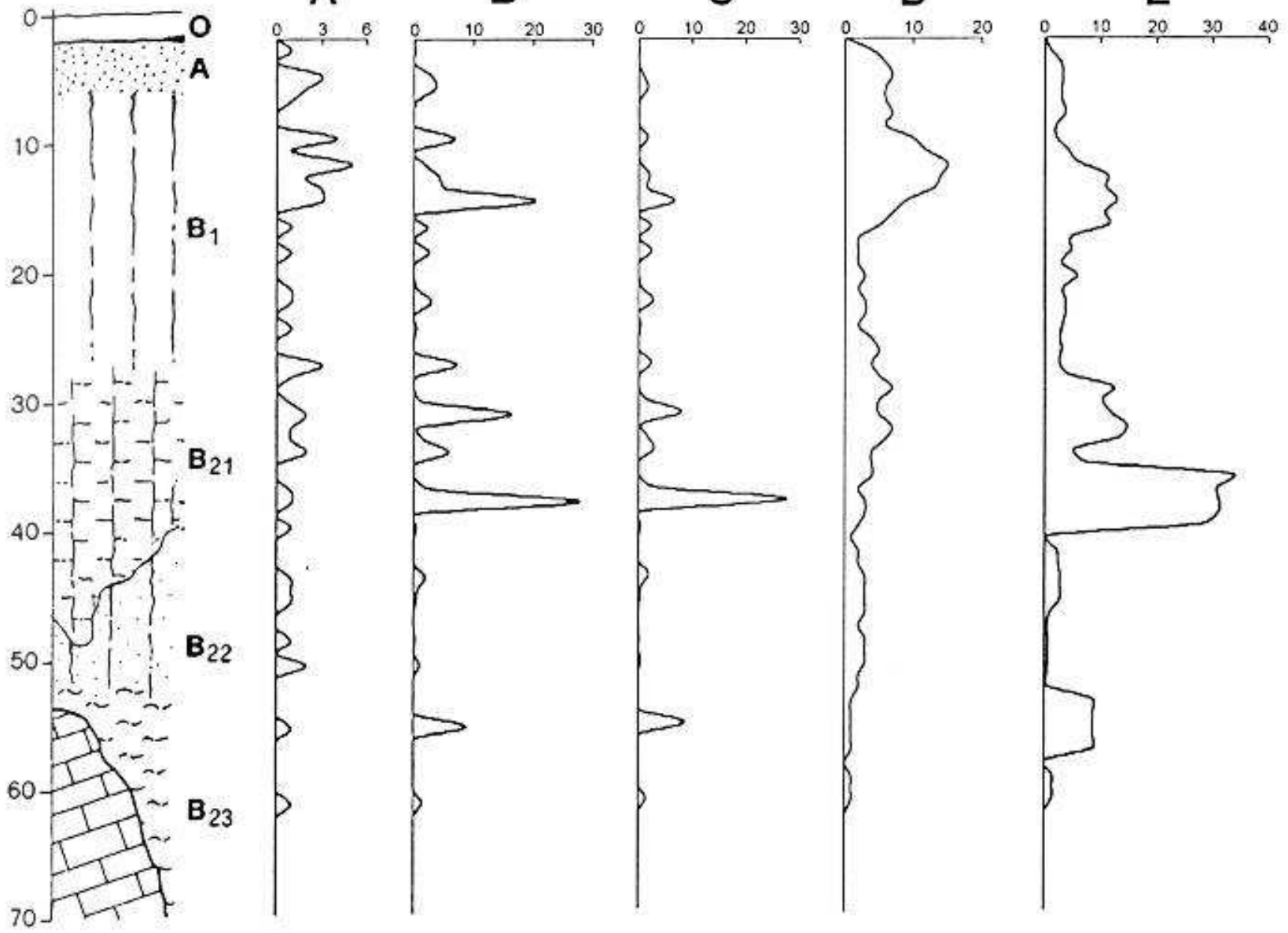
Figure 3. Simulated vertical distribution of large artifacts (>6 cm) over various time intervals.


Percent Volume Disturbed
90
80
70
60
50
40
30
20
10
0
0
2000
4000
6000
8000
10000
YEARS


0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
Centimeters Below Surface
100 Yrs
200 Yrs
500 Yrs
1000 Yrs
2000 Yrs
4000 Yrs
8000 Yrs
0
20
40
60
80
100
Percent Disturbed


Small Artifacts ((6 cm)
Centimeters Below Surface
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
-110
-120
-130
0
10
20
30
Relative Frequency
Sayles Site (n=103)
Simulation (2000 Yrs)
Large Artifacts ()6 cm)
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
-110
-120
-130
0
10
20
30
40
50
Relative Frequency
Sayles Site (n=65)
Simulation (2000 Yrs)


A


0
10
20
30
40
50
60
70
O
A
B1
B21
B22
B23
A
0 3 6
B
0 10 20 30
C
0 10 20 30
D
0 10 20
E
0 10 20 30 40

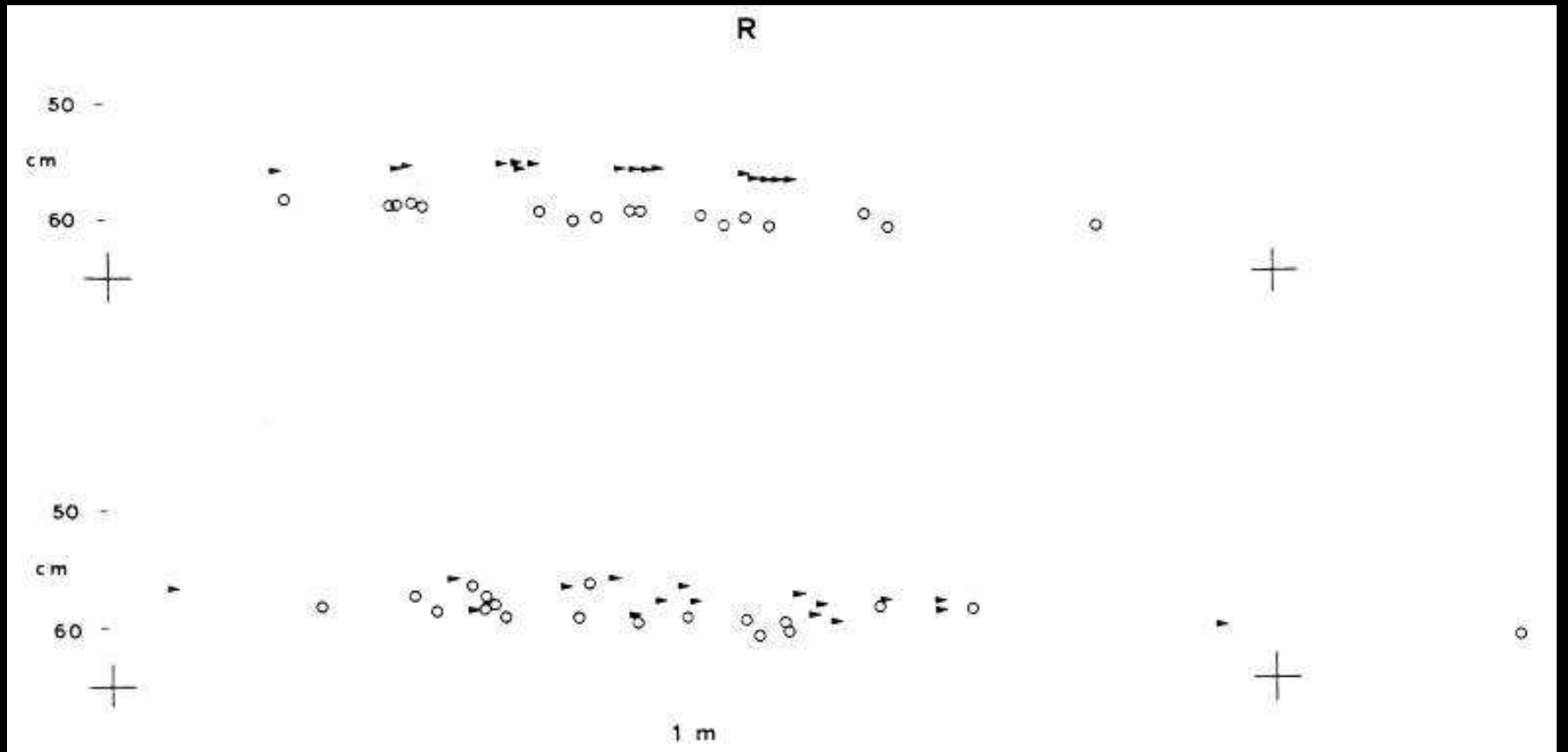


Fig. 2 - Déplacements verticaux dans le carré R, niveaux supérieur et inférieur. Haut : avant piétinement ; bas : après piétinement. Le niveau inférieur, recouvert de 3 cm de sable, a été piétiné pendant 20 jours. On a alors mis en place les objets du niveau supérieur et continué le piétinement pendant 16 jours.

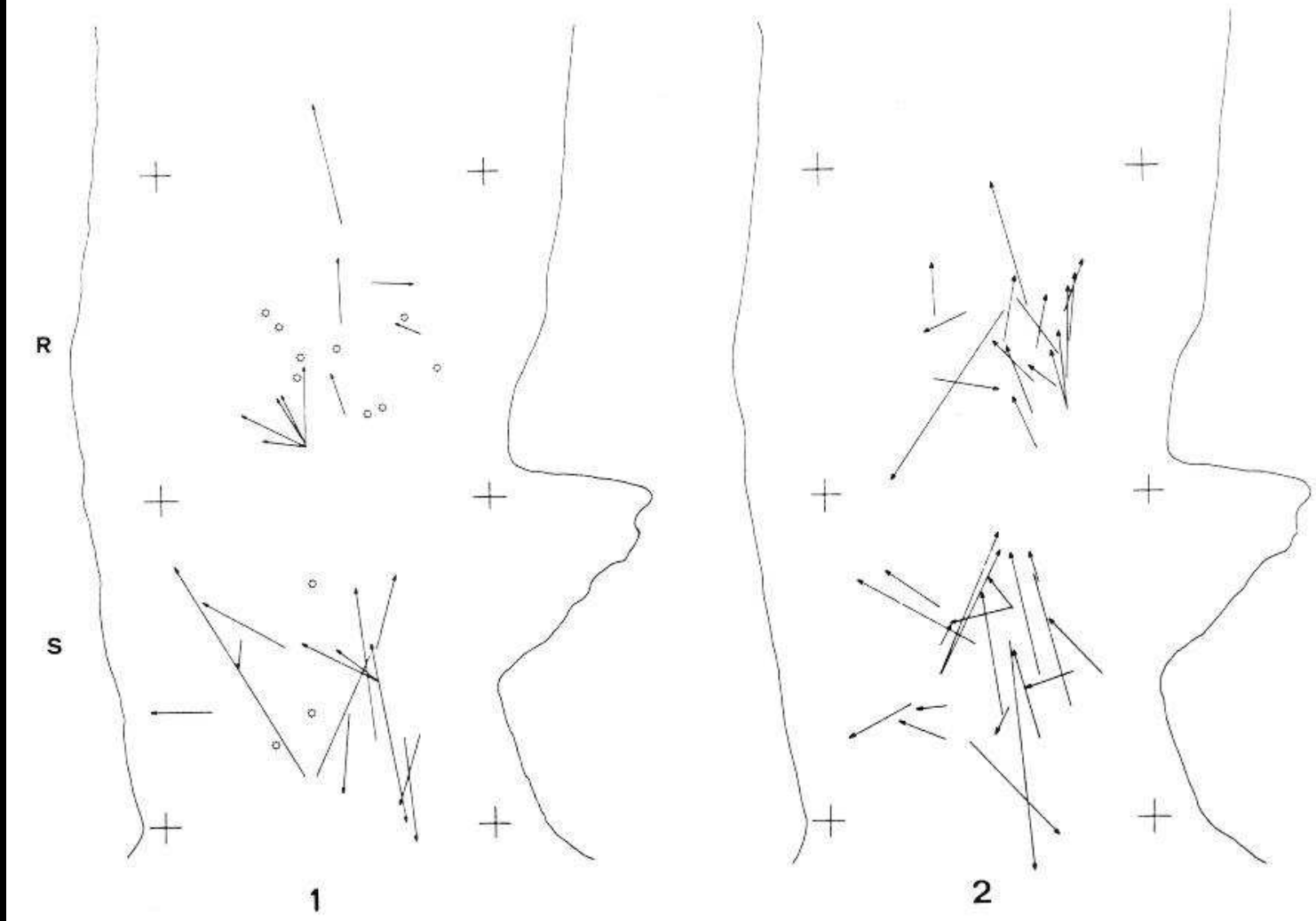


Fig. 3 - Déplacements horizontaux dans les carrés R et S, dans le passage à l'entrée de la grotte.
1. Carrés R et S, niveaux inférieurs, recouverts respectivement par 3 et 2 cm de sable ; après 36 jours de piétinement.
2. Carrés R et S, niveaux supérieurs, non recouverts ; après 16 jours de piétinement.
Les flèches indiquent le sens et l'importance des déplacements horizontaux. Les astérisques représentent les objets n'ayant subi aucun déplacement horizontal.