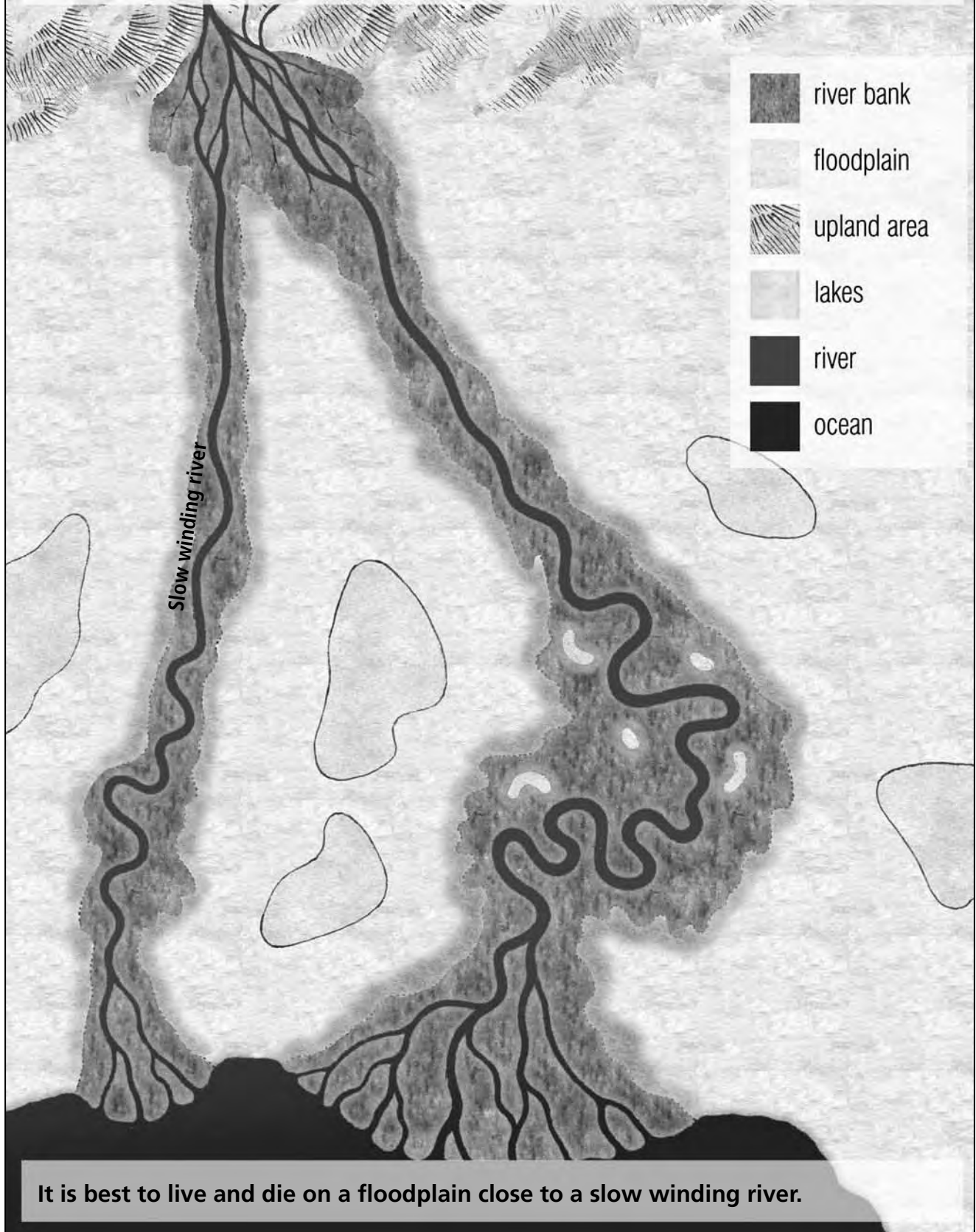


THE PROCESS OF BECOMING A FOSSIL

STEP 1

If you want to become a fossil:

LIVE IN A LOWLAND AREA such as a coastal floodplain or rift valley, where sand and mud sediments are constantly accumulating.

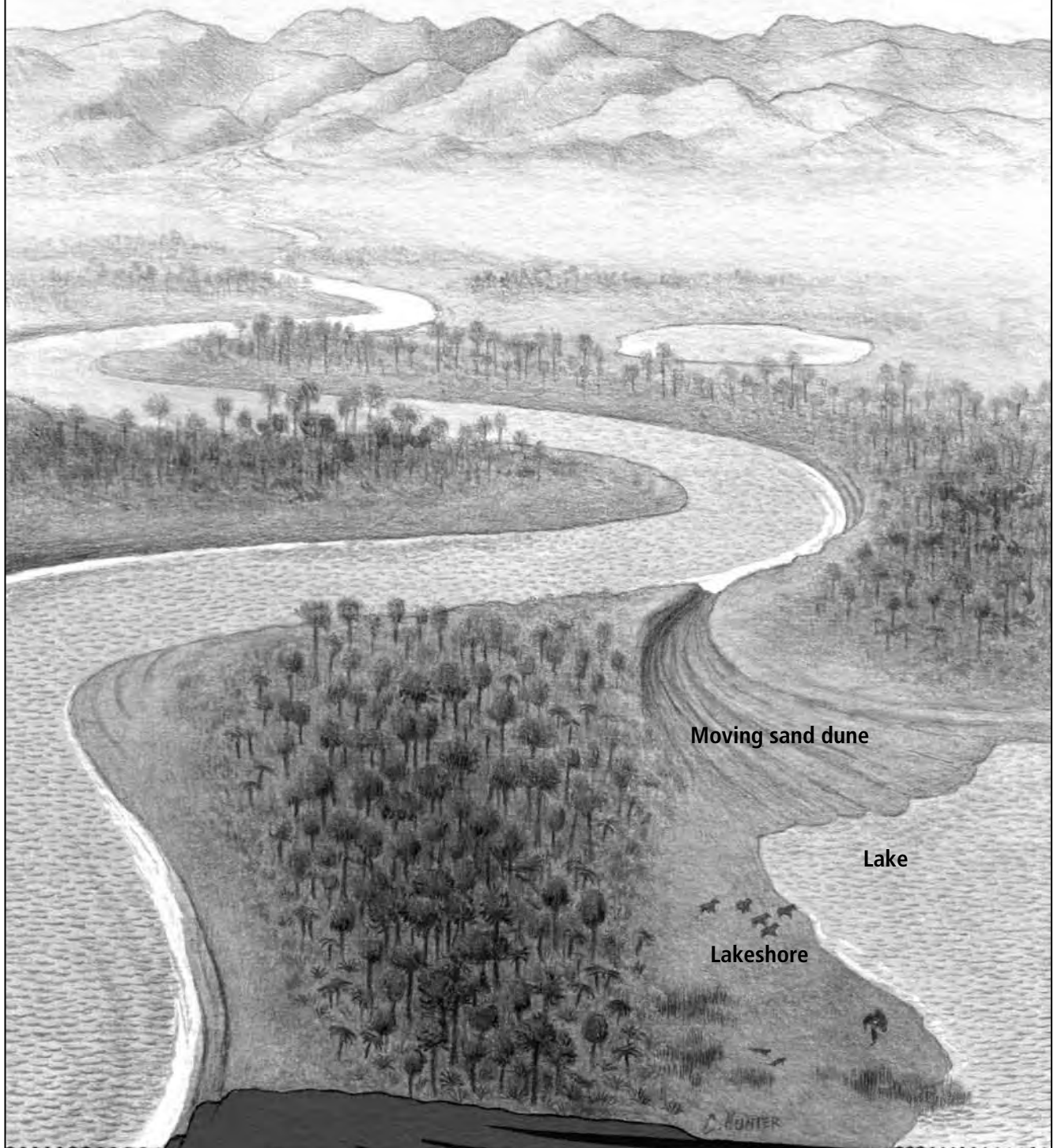


The process of becoming a fossil

STEP 2

If you want to become a fossil:

DIE IN A PLACE WHERE YOU GET BURIED by sand or mud without being swept away by strong currents.



It is best to die on a lakeshore or in front of a moving (migrating) sand dune.

The process of becoming a fossil

STEP 3

If you want to become a fossil:

AVOID BEING EATEN especially by a big scavenging bone-cruncher.



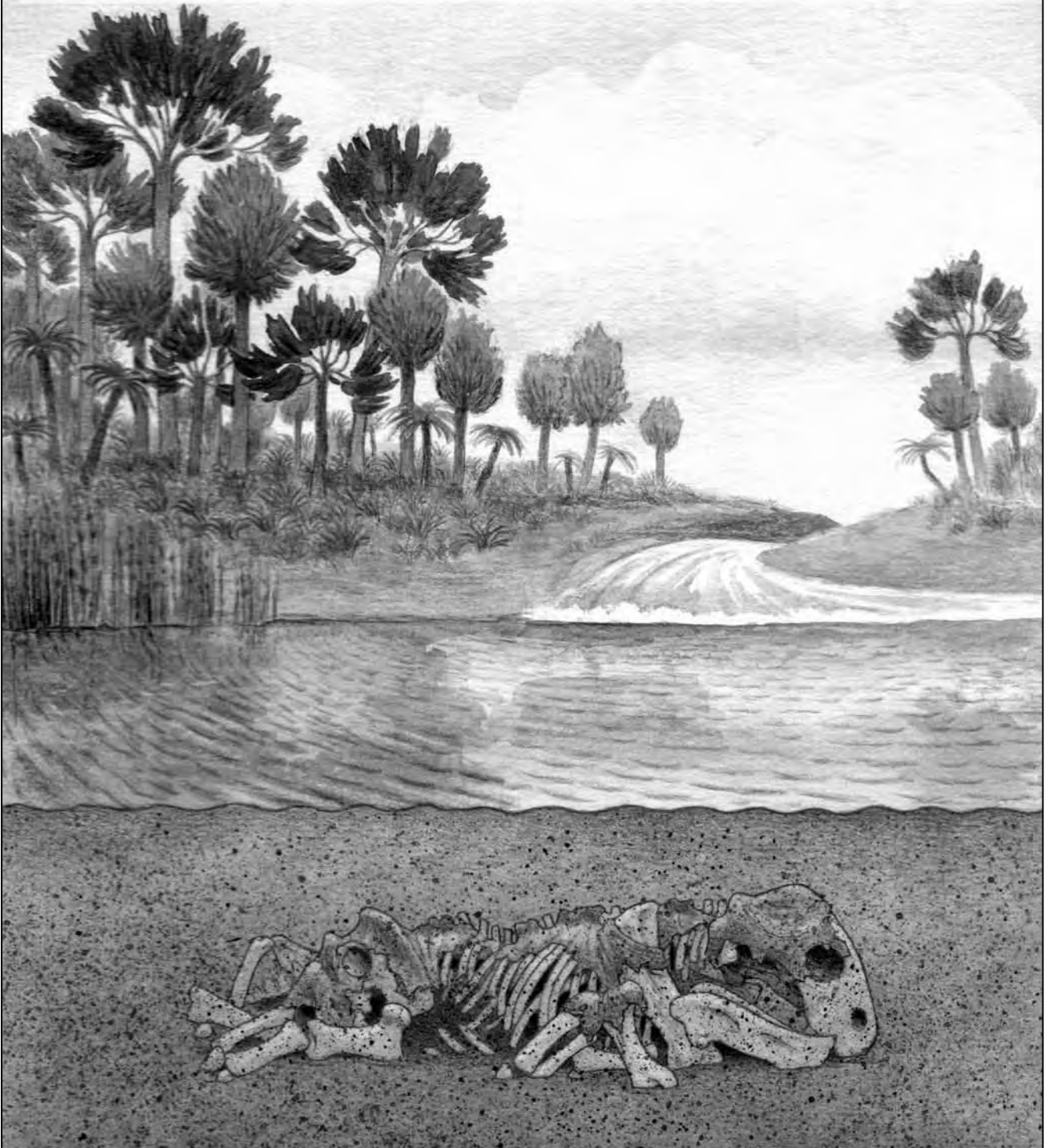
It is best to die in an underground burrow that big scavengers can't get to.

The process of becoming a fossil

STEP 4

If you want to become a fossil:

GET BURIED QUICKLY. Silt from a flooding river, or windblown sand will cover your bones in time. Otherwise your bones will disintegrate (break up) in the sun within 5 years.



It is best to die and get buried immediately in a collapsed burrow, or by sinking into quicksand.

The process of becoming a fossil

STEP 5

If you want to become a fossil:

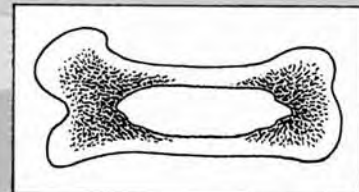
YOUR BONES MUST BECOME MINERALIZED as soon as possible, preferably within 50 000 years after being buried.



Mineralization (fossilization of bones) is a very slow process that happens as the skeletons get buried deeper and deeper. Sometimes this takes as long as a million years. Most fossils go through these stages:

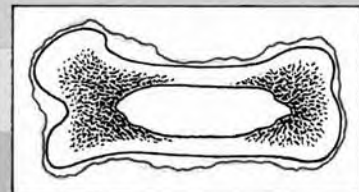
DECOMPOSITION

About 2 metres underground bacteria have rotted away all the organic matter surrounding the bone including the collagen from within the bony material itself. This leaves the bone weak and easily crushed.



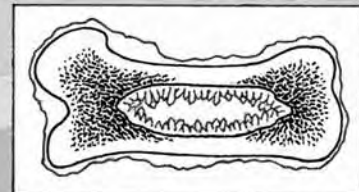
NODULE FORMATION

About 3.5 metres down dissolved minerals (calcium and iron) may come out of solution in layers around the bones to form a hard nodule. This will protect the bones from getting crushed any further.



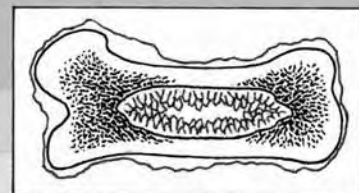
CAVITY FILLING

About 5 meters deep the ground water begins to deposit tiny crystals of silica in all the holes in the bones left when the marrow, nerves and blood vessels rotted away- this stage is known as petrification.



REPLACEMENT

About 10 metres underground the pressure and temperature is high enough to dissolve the actual bone material itself and replace it molecule for molecule with silica dioxide. When this process is complete the bones have become fossils.



It is best to get enclosed in a hard layer of limestone in the soil. This will stop your bones from getting flattened as they get buried deeper and deeper.

The process of becoming a fossil

STEP 6

If you want to become a fossil:

FINALLY GET UNCOVERED AND DISCOVERED – preferably by an experienced fossil finder (palaeontologist).

