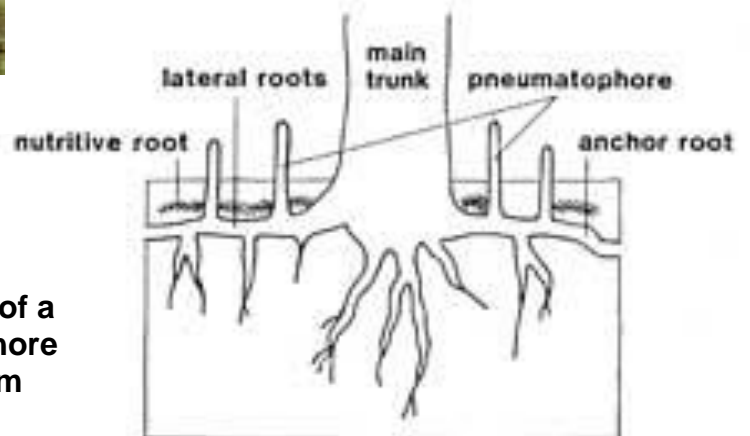
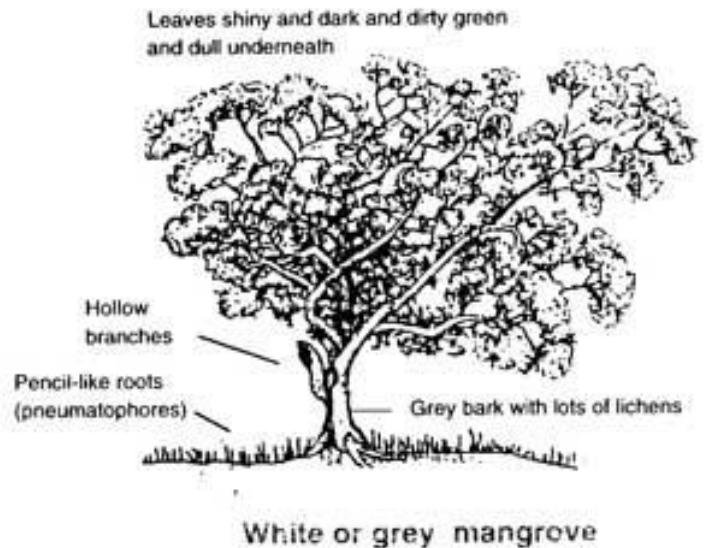
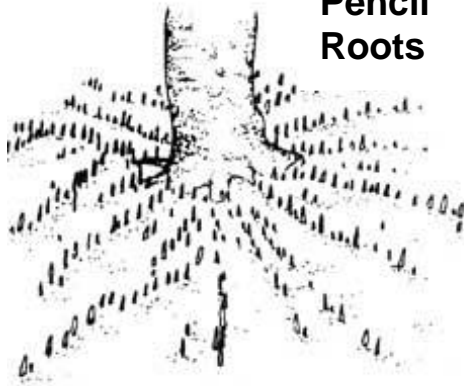


## Pencil Roots (Peg Roots)

Grey mangroves, Mangrove Apple and Cedar Mangrove grow furthest out to sea. They have **pencil roots (peg roots)**, known as **pneumatophores**, growing vertically up from their underground roots. The roots are ten to twenty centimetres high and are exposed to the air at low tide. Pneumatophores originate from horizontal underground lateral roots and grow vertically through the soil surface to allow the mangrove to breathe.



### Pencil Roots



An example of a pneumatophore root system