Salt Tolerance

The ability of mangroves to grow in a saline environment is quite amazing. The saltiness of soil water poses problems to growth in terrestrial plants. Mangroves grow well in soil with a high salt content because they are able to deal with high salt levels.
They have adapted to their environment in order to survive, grow and reproduce.
Mangroves share specialised attributes for growing with excess salt

Salt Excluders

Rhizophora, Ceriops, Sonneratia, Avicenni, Osbornia, Bruguiera, Excoecaria, Aegiceras and Acrostichum

have an ultrafilter in their roots, where by water is taken up and up to 90% of salt is filtered out.
The remaining salt is deposited in the tissues of the older leaves and this makes the leaf appear fat and turgid.
The salt is removed when the leaf is shed.

Salt Excretors

Avicennia, Sonneratia, Aegiceras and Aegialitis

These plants absorb water in that contains small quantities of salt Through their roots.
The salt is later concentrated and removed by secretion through special leaf glands.
The ability of these mangroves to excrete salt can be demonstrated by floating a leaf upside down in a bowl of salty water.
The salt excreting glands are most numerous on the under surface of the leaf. In a few hours glistening crystals of salt will coat the leaf.

Some mangroves that can grow in fresh water (***Bruguiera and Rhizophora)*** have germinated and flowered regularly in pots of sand watered only with fresh water. These plants usually cannot compete successfully with the true terrestial plants.
Therefore a clear boundary can be found for any mangrove community.