

Artful adaptation

This plant we find everywhere along the coast of Greenland. If you look closely at it, you see that the branches are woody. It is a small tree! In the Arctic it is only rarely developed to a larger tree, but appears to be a creeping growth in the shelter of the bare rocks or covering the large, dry mountain moors.

Salix arctica, or the arctic willow, grows across the tundra and rocky moorland. Arctic willow is the northernmost woody plant in the world and can be found in North Greenland.

The arctic willow is often seen as a low shrub that in the high mountain normally only is 10-15 inches tall. *Salix arctica* can be recognized by the round, shiny green leaves with long, silky, silvery hair. The little tree has male and female flowers on separate plants. The female plant is red in colour, while the male plants are yellow-coloured.

This small tree lives under extreme climatic conditions, and it grows only slightly each year. However, the arctic willow can still survive for many years. In East Greenland researchers have found a tree that had reached an age of 236 years.

The arctic willow has developed many adaptations to the harsh climate. In the growing season in the summer it tries to keep the insects away, and to fight the insects, the tree has developed a pesticide. The tree can survive in the permafrost, because it has developed a shallow root system.

The long hair of the leaves protect the plant against the cold weather. The hair is translucent, so the light rays from the sun pass through, while some of the infrared radiation is trapped, almost like in a greenhouse.

The arctic willow is a stunted little tree, but its adaptation to the Arctic is quite artful!



Salix arctica, June 2008