

***Tamarix nilotica* – a flood tolerant desert plant**

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Wadi Allaqi is the most extensive drainage system in the Nubian Desert in Egypt. When the Aswan High Dam was built, and Lake Nasser filled in 1967-72, water entered the mouth of the wadi, which thus became part of the lake. About 80 km of Wadi Allaqi was inundated and remained under water for several years. When the level of the lake fell in the 80's, the water receded some 40 km, and deposited silt on the wadi bed was exposed. In 1996 the lake level began to rise again and additional 15 km of the wadi was inundated. From a total of 100 km of the wadi that is affected by the lake only 40 km is permanently inundated. The rest of the wadi is periodically inundated.

Tamarix nilotica quickly established itself in the wadi Allaqi after the water fell in the 80's and a new ecosystem replaced the extrem arid ecosystem. *Tamarix* is the dominant plant in the downstream, flooded part of the Wadi and forms monospecific stands. It is a multiform species, varying from a shrub to a tree of 5-8 m height. With the new rise of the water the *Tamarix* stands are inundated between September and March. For *Tamarix* the environmental situation changes dramatically from submerged in winter to the extrem hot desert situation in summer. The eco-physiological response of *T. nilotica* to the inundation was investigated at the Wadi Allaqi Experimental Station.

Growth rates of inundated *Tamarix* shrubs were monitored in the period from March to September 1997. Shrubs were partly covered by water of depths varied from 0.4 m to 1.2 m above ground for several months until May. Inundated branches died, but new sprouts were growing after water retreated. There was an increase in the height of each shrub during the inundation period from March to May. Growth and photosynthesis was not affected by the high water level. The desert shrub *Tamarix nilotica* is well adapted to survive long periods of flooding.