

## **BIOGEOGRAPHY OF SAND DUNES IN THE HAMBANTOTA AREA**

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Sand dunes are confined to dry and arid areas and have vegetation communities consisting of several successive stages called 'psammoseres'. Sand dunes of Sri Lanka are primarily restricted to the non-eroding dry zone coastal areas of the northwest and the southeast where air humidity is low enough for the Aeolian transport of sea sand.

The present study was carried out (Nov. 2002- Aug. 2003) in the coastal sand dunes of *Bundala National Park* near the *Koholankala Saltern, Hambantota* with the objective of studying the structure, composition and zonation of vegetation.

It was done by studying vegetation along parallel transects that were more or less perpendicular to the elongated dune system. Voucher specimens collected were identified at the National Herbarium, Peradeniya. A prismatic compass was used to determine the orientation of the dunes and slope measurements were done by means of an Abney level. A diameter tape was used to make plant dbh measurements. The presence of animals was also recorded both by direct and indirect observations.

The study area being in the arid zone of Sri Lanka has the necessary climatic conditions for the development of sand dunes. The dunes are shaped by the wind in a NE-SW direction.

Three vegetation zones conforming to the area's geomorphologic conditions were identified. The first zone is about 80m wide with low grasses and herbaceous plants (up to 60 cm tall). The second zone is more stabilized and is about 40 m wide. It has both shrubs and stunted trees reaching a maximum height of 1.8 m. The third zone is a fixed habitat with more trees and shrubs, some of them reaching 5 m in height. Elephants, monkeys and hares interact with the vegetation. The vegetation is being encroached by an invasive cactus (*Opuntia Dilleni*) and a woody plant (*Prosopis Juliflora*) locally known as *Lunu Andara*.

Further studies on these fragile coastal dune vegetations of Sri Lanka will be of both academic and applied value.