The vegetation of Northern and Southern Oman

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Introduction

The Sultanate of Oman is a developed oil producing country in the Arabian Peninsula. Until now little has been known about the flora of Oman. In the last 30 years there have been scientific studies, such as "The Oman Flora and Fauna Surveys" in 1977 by Mandaville, and others by Cope 1988 and Ghazanfar 1992. However none of the university libraries neither in Goettingen nor in Kassel have these books in stock. But I found a flora analysis of the Oman Capital Area by Kürschner and Frey in 1986 and an overload of general background information about Vegetation of the Arabian Peninsula.

General characteristics of the Oman

Geography

Oman is located in the southeast corner of the Arabian Peninsula on the Tropic of Cancer between 16°38' and 26°20' North latitudes and longitudes ranging between 51°50' and 59°35' East. The topography of the Oman is one of the most magnificent in the Arabian Peninsula with its mountain ranges in the North and South, sand dunes and large salt flats in the Central, rugged coasts and placid beaches along the 1,800 Km coastline.

Climate

The Geography of the Sultanate results in a wide variety of climatic conditions. In general three climate zones can be found.

North

The North is characterised by a subtropical climate with hot summers and mild winters with winter rains. The annual rainfall in Muscat (see figure i) is 106mm with an average temperature of 27, 5°C. The elevated areas, like the Jebel-al-Akhdar Mountains, have a rain average ranging from 250mm to 400mm per year.

South

The South has a tropical climate with hot and humid summer and warm winter. The monsoon season from June to September can bring rainfall from 100mm to 400mm. Salalah (see figure ii) is located on the coast and just in front of the southern mountains.

Central

The central is an all season dry desert with an annual rainfall of less then 50mm. Thumrayt (see figure iii) has a rainfall of 35mm per year. The temperature can reach over 45°C per day in the summertime.

Zonobiome

The Zonobiomes are climate zones corresponding to the largest vegetation units. They are linked with the climate zones by Walter and you could also refer to them as biogeographic zones. They are subdivided into subzonobiomes and those into individual biomes. The Oman is a transition region between the Paleotropic and Holartic Kingdoms and belongs to the subtropical, aride zonobiome. The North is situated in the Omano- Sindian regional subzone (OS), a subtropical dry zone; where else the South is located in the Eritro- southern Arabian

regional subzone (EA), a tropical zone; and the Central in the Saharo– Arabian regional subzone (SA).

Flora

The following paragraphs will be listing the significant Flora of the North, South and Central Oman.

North

The North can be separated into four different vegetation areas (see figure iv).

First there are the foothills and the mountain ranges. The foodhills are characterised by shrub and dwarf- shrub, like the Commiphora myrrha (see figure v) - Euphorbia larcica (see figure vi) community type which can be found frequently in xeromorphic, semi-desert shrub lands. The high mountain ranges of the Hajar mouintains with its colder temperature even the conifer trees, like Juniperus exelsa (see figure vii), are growing. The mountain plateau at the Jebel Akhadar (3000m) is also referred to as the green mountain and has Mediterranean-like vegetation. Because of this mild climate, pomegranate, figs, apricots, pistachios, walnuts, almonds and grapes can be planted there.

Secondly, the costal plain, like the large lowland Al-Batinah, are covered by xeromorphic woodlands. These so-called pseudo savannas consisted of various acacia species (A. charenbergiana, A. tortillas) and other xeromorphic plants. They are dependent on groundwater and because of the sinking groundwater level just remnants of these thorn woodlands can be found today.

The third vegetation area is an area of costal- and eolian sand dunes. These sand dunes are scarcely vegetated by psammophytic (see figure viii) vegetation.

Fourthly, Depressions with salt marshes and mangroves are placed on the coast. With one species (Aviencennia mariana (see figure ix) the mangroves are represented in patches not just in the north, but also along the whole coast of the Sultanate.

South

The southern coastal region and the hills catch just enough of the summer monsoon to support a rich, unique tropical forest (see figure x). There are even some irrigated plantations with coconut palm (see figure xi), banana (see figure xii), Papaya (see figure xiii) and mangoes trees. The Mountains far off the sea get less rain and because of its dry tropical climate the tree Frankincense (Boswellia sacra (see figure xiv)) can be found in the Dhofar. In a wadi next to the Jebel Samham Mountains Baobab (see figures xv and xvi) trees, a typical tree species from east Africa, are growing. This wadi is the only place on the Arabian Peninsula where they are present.

Central

The Central mainly consists out of sand, rock and salt deserts. Several Grass species and some shrubs are growing there. The Ghaf-tree (Prosopis spicigeradie (see figure xvii)) and (Prosopis cineraria (see figure xviii)) with its long roots reaching the ground water and holding the sand is a typical flora of this region.

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Microsoft Encarta Weltatlas: Version 98. Redmond, Wash. : Microsoft Corporation, 1997.

Internet resources:

Climatabellen: http://deutsch.oman.travel/index.php

Salalah (south coast)





i) http://deutsch.oman.travel/index.php

ii) http://deutsch.oman.travel/index.php



iii) http://deutsch.oman.travel/index.php



Map 2 Physiographic units and climatic conditions in the study area (explanations in the text).

iv) Kürschner, H, Frey, W., 1986



v) http://www.e-ssentialoils.com/images/ plantsoftheworld/commiphoramyrrha1.jpg



vii) http://balaklava.russian-women.net/images/ photoalbum/balaklava/medium/mv_Nic31308.jpg



vi) http://www.ead.ae/TacSOFT/environment/ main/Euphorbia-larica.jpg



viii) http://www.ameinfo.com/images/news/1/ 21941-ghaf.jpg





ix) Astaller, M.





x) http://www.mobot.org/gradstudents/olson/dhofar.jpg xi) http://www.bigislanddan.com/coconut-palms.jpg



xii) http://www.spiritoftrees.org/folktales/ meade/banana_trees.jpg



xiii) http://www.cs.ust.hk/~taicl/photo/ hongkong/large/papaya.jpg



xiv) http://www.biologie.uni-rostock.de/ wranik/socotra/pictures/8.6.JPG



xv) http://image.guardian.co.uk/sys-images/ Travel/Pix/gallery/2002/11/22/baobab.jpg



xvi) http://toursaa.com/pic.aspx?i=9167

xvii) http://static.flickr.com/32/ 49096632_39de086a63_m.jpg



xviii) http://www.ameinfo.com/images/news/ 1/21941-ghaf.jpg