

Ecohydrology of a seasonal cloud forest in Dhofar

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Abstract. Cloud forests usually grow in the moist tropics where water is not a limiting factor to plant growth. Here, for the first time, we describe the hydrology of a water limited deciduous cloud forest in the Dhofar mountains of Oman. This ecosystem is under significant stress due to land degradation from camel feeding on tree canopies. Our experimental field observations and numerical experimentation suggest that cloud immersion contributes to creating an ecological niche for a drought deciduous forest biome within an otherwise desert environment. Cattle feeding may lead to irreversible destruction of one of the most diverse Arabian ecosystems.