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Worldview Worldview Geo eye

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(Miyamoto *et al.*, 2001,2004)

(Jia *et al.*, 2004)

(Nogami *et al.*, 2001)

(Vierling *et al.*, 2006) .

(Sky Cam, 2009)

(Hardin & Jackson, 2005)

(*Sentaurea virgata*)

(Blumenthal *et al.*, 2007) .

(Lee & Work, 1992)

(Wundram & Loffler, 2007)

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(Piwowar *et al.*, 1993) .

(Foran & Cellier, 1980)

Halocnemum strobilaceum

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.(Khatir-Namani, 1385)

.(Royan, 1389)

/ SONY DSC-W110

Halocnemum strobilaceum

Halostachys

Aeluropus Aeluropus lagopoides L. caspica

Salsola torkomanica, littoralis,

(Reza-Shateri, 1388)

.(Royan, 1389)

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SONY DSC-W110

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	(Telephoto)
f/ /	(Aperture)
f/ /	Aperture (Telephoto)
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Quick bird Worldview Geo eye

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(knapp et al., 1990)

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Study of Flight Height and Spatial Resolution of Aerial Photography in Estimating Canopy Cover Percentage of Shrub Lands

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Abstract

Remote sensing and aerial photographs are used to produce medium to small scale images. However, for detailed information especially to estimate rangeland vegetation canopy cover there is a need to larger scale images. It is therefore necessary to study the technical applicability of different devices such as short range light airplanes, kites, gliders and balloons. In this research, we focused on suitable flight height for rangeland vegetation canopy cover estimation using large scale balloon images in Incheh Broon area where we conducted field tests in September 2010. The balloons ascended to heights of 5, 10, 25, 50 and 100 m and higher. Using the taken images, vegetation canopy covers were estimated and compared with those obtained from field measurements. Results show that there is no significant difference between field and image estimation of canopy cover for heights lower than 100 m. We therefore suggest using balloon images acquired from up to 100 m height for estimating rangeland vegetation canopy cover.

Keywords: Remote Sensing, Balloon, Large scale aerial photography, Canopy cover percentage, Shrub land