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pH

(PCA)

(PCA)

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...

(Gypsids)

/ (Salids)

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Halocnemum strobilaceum

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Seidlitzia

Aeluropus littoralis rosmarinus

Atriplex veruciferum

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pH EC

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Alphen and Romero

Smith and Robertson



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(

Weak Aridic

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pH

Fabaceae *Chenopodiaceae* *Poaceae*
Asteraceae

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(

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...

(eigenvalue)

()

()

(EC)

()

pH PW 9527

EC

EYELA 2000

pH

Walkley & Black

()

EDTA

()

(USDA 2003)

Fine loamy gypsic thermic Typic :

Clayey gypsic thermic Calcigypsid

GypsicAquisalids

(PCA)

PC-ORD

PCA

(ver. 4.7)

PCA

(eigen vector)

(eigen value)

sp.

Sasp.)Halocnemum strobilaceum-Salsola

Halocnemum strobilaceum (Hast-

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)

+

() *Salsola sp.*

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Seidlitzia rosmarinus:

Principal Component Analysis

	<i>Hordeum</i>	<i>Zigophyllum fabago</i>
<i>Tamarix sp.-</i>		<i>morinum</i>
<i>Nitraria schoberi (Tasp.-Nisc)</i>		
<i>Aeloropus littoralis:</i>	<i>Seidlitzia</i>	
<i>Halocnemum Artemisia sieberi</i>	<i>Haplophyllum glaberrimum</i>	<i>rosmarinus</i>
<i>Hordeum Salsola crassa strabilaceum</i>	<i>Haplophyllum</i>	(Hagl-Sero)
<i>.Chenopodium album morinum</i>		<i>glaberrimum</i>
		<i>Seidlitzia rosmarinus</i>
	<i>Lycium</i>	:
		<i>Artemisia sieberi ruthenicum</i>
	<i>Ducrosia sp.</i>	<i>Zigophyllum fabago</i>
	<i>Hyosiamus niger</i>	<i>Eryngium bungei</i>
		<i>Scariola orientalis,</i>
	<i>Astragalus spp.</i>	<i>Eremurus sp.</i>
	<i>Alhagi</i>	<i>Annual Grasses</i>
		<i>Salsola sp. camelorum</i>
		<i>Anchusa sp. Halocnemum strabilaceum</i>
	<i>Salsola rigida-</i>	
		(Sari-Peau) <i>Petrophyrum aucheri</i>
		<i>Salsola rigida</i>
		() <i>petrophyrum aucheri</i>
		:
		<i>Ziziphora tenuis, Artemisia sieberi,</i>
		<i>Acanthophyllum sp., Peganum harmala,</i>
		<i>Stipa barbata, Echinops robustus ,</i>
		<i>Centaura depressa, Astragalus glacanthus,</i>
		<i>Scabiosa sp, Cousinia sp., Allysum</i>
		<i>strigosum, Hordeum morinum, Noea</i>
		<i>mucronatha Lotus corniculatus,</i>
		<i>Eremopyrum sp. , Bromus tectorum,</i>
		<i>Onopordon acanthium, Tavatenia sp.,</i>
		<i>Scariola orientalis,...</i>

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Hagl-Sero HaSt-Sasp.

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Halocnemum

strobilaceum

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Sari-Ptau

Tasp.-Nisc

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Aeloropus sp.

) *Halocnemum sp.*

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Halocnemum strobilacei

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(Ph.D)

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Soil-vegetation relationships in saliferous and gypsiferous soils in winter rangelands (Eshtehard)

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Abstract

Saliferous and gypsiferous aridisols are among the vast extension soils of rangelands in arid and semi-arid regions of Iran. Vegetation cover with low density is representative of special physicochemical characteristics of these soils. The aim of the present study was to identify gypsophilous and halophilic plants and also to investigate plants distribution related to physicochemical characteristics of saliferous and gypsiferous in Eshtehard winter rangelands. Vegetation sampling was conducted in the key area based on randomized-systematic pattern, and data including canopy cover and density along transects in each plot were determined. After determination of plant types, the soil profiles were excavated and soil samples collected. Based on the standard methods, physicochemical characteristics, including soil texture, electrical conductivity in saturated extract, soil reaction, organic carbon content, gypsum and equivalent calcium carbonate percentage, soluble anions and cat ions were determined. Multivariate method of principal component analysis (PCA) was used to analyze the collected data. The results showed that the vegetation distribution pattern was mainly related to soil characteristics such as salinity, texture, chloride, soil reaction, gypsum and gravel percentage.

Key words: saliferous and gypsiferous soils, principal component analysis, cover, physicochemical characteristics, Eshtehard