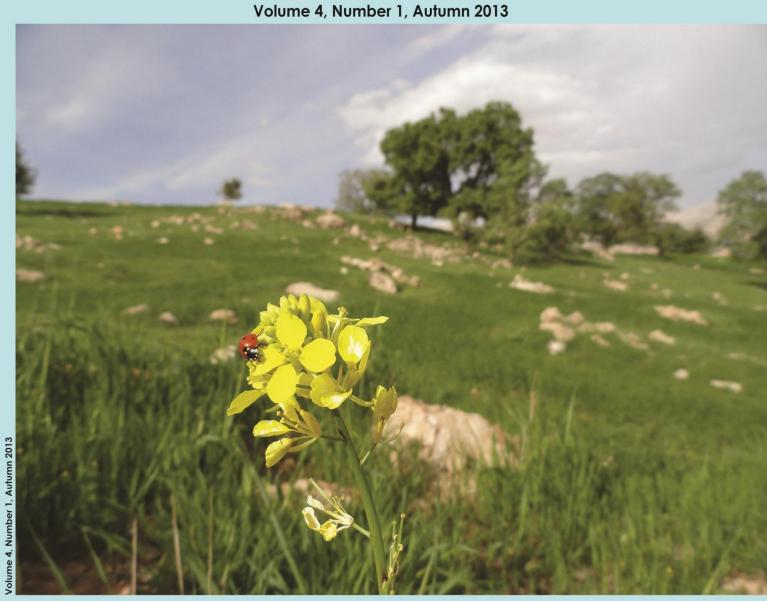




# **Journal** of Rangeland Science



## THE OUARTERLY PEER REVIEW PUBLICATION

## Journal of Rangeland Science (JRS)

## **Editor-in-Chief**

Assistant Professor Ali Ariapour, Department of Natural Resources, Islamic Azad University,

Boroujerd Branch, Lorestan, Iran

Tel.: +986623518038 Fax: +986623518038

Emails: aariapour@iaub.ac.ir aariapour@gmail.com aariapour@yahoo.com

## **Chief Editor**

Professor Ali Ashraf Jafari, Research Institute of

Forests and Rangelands, Iran Tel.: +982144580276-85 Fax: +982144580277 Email: aliashrafj@gmail.com

### **Editorial Board**

(Members are listed alphabetically)

Alaba Olufunmilavo; Professor

Ariapour, Ali; Assistant Professor Islamic Azad University, Boroujerd Branch, Iran

Arzani, Hossein; Professor

Farahpour, Mahdi; Associate Professor

Research Institute of Forests and Rangelands, Ira

Feldman, Susana; Professor

Jafari, Ali Aashraf; Professor Research Institute of Forests and Rangelands, Iran

Jafari, Mohammad; Professor

Mehrabi, Hamid Reza; Assistant Professor

Islamic Azad University, Boroujerd Branch, Iran Mesdaghi, Mansoor; Professor

Ferdowsi University of Mashhad, Ire Mohseni Saravi, Mohsen; Professor

Safaiian, Nosratollah; Professor

Shokri, Maryam; Professor

Zhanhuan Shang; Associate Professor

## Editorial Advisory Board (This Volume)

(Members are listed alphabetically)

Ajorlo, Majid; Assistant Professor

University of Zabol, Iran

Amiri, Fazel; Assistant Professor

Islamic Azad University, Boshehr Branch, Iran

Arasto, B.; Assistant Professor

id Beheshti, Irai

Chaichi, Mohammad Reza; Professor

Dehshiri, Mohammad Mehdi; Assistant Professor

Islamic Azad University, Boroujerd Branch, Iran

Gholami, N.; Assistant Professor

Jafari, Ali Aashraf; Professor Research Institute of Forests and Rangelands, Iran

Jafari, Mohammad; Professor

Jouri, Mohammad Hassan; Assistant Professor

Islamic Azad University, Nour Branch, Iran

Hamidian, Aidin; Associate Professor Research Institute of Forests and Rangelands, Iran

Sadeghinia, M.; Assistant Professor

Ardakan University, Iran

## **Botanical Editor**

Dehshiri, Mohammad Mehdi; Assistant Professor Islamic Azad University, Boroujerd Branch, Lorestan, Iran

## **Cover Designer**

Karami, Elahe; M.Sc. Range Management Engineering Islamic Azad University, Boroujerd Branch, Lorestan, Iran

## **Design and Typesetting**

Asgari, Marzieh; M.Sc. Range Management Engineering Islamic Azad University, Boroujerd Branch, Lorestan, Iran

Kheradmand, Golnaz; M.Sc. Range Management Engineering Islamic Azad University, Boroujerd Branch, Lorestan, Iran

## **English Text Editor**

Zandi, Ehsan; Assistant Professor

Research Institute of Forests and Rangelands, Iran Parsa, Samira; Islamic Azad University, Boroujerd

Branch, Lorestan, Iran

Sadr, Azita; Islamic Azad University, Boroujerd

Branch, Lorestan, Iran

Journal of Rangeland Science (JRS)

P. O. Box: 518, Boroujerd, Lorestan, Iran

**Postal code**: 6915136111

**Tel:** +986623518038 **Fax**: +986623518023

Emails: rs@iaub.ac.ir, rangelandscience@yahoo.com rangelandscience@gmail.com, info@rangeland.ir

pISSN: 2008-9996, eISSN: \*\*\*\*-\*\*\*

(Published in Iran) **Impact Factor: 0.022** 

Web Site: www.rangeland.ir

**Indexed In:** 

1- ISC: http://.isc.gov.ir 2- SID: <a href="http://www.sid.ir">http://www.sid.ir</a>

We acknowledge with thanks the financial support of Islamic Azad University Boroujerd Branch, Iran.

Photo by: Marzieh Asgari

M.Sc. Rangeland Management Engineering, Islamic Azad

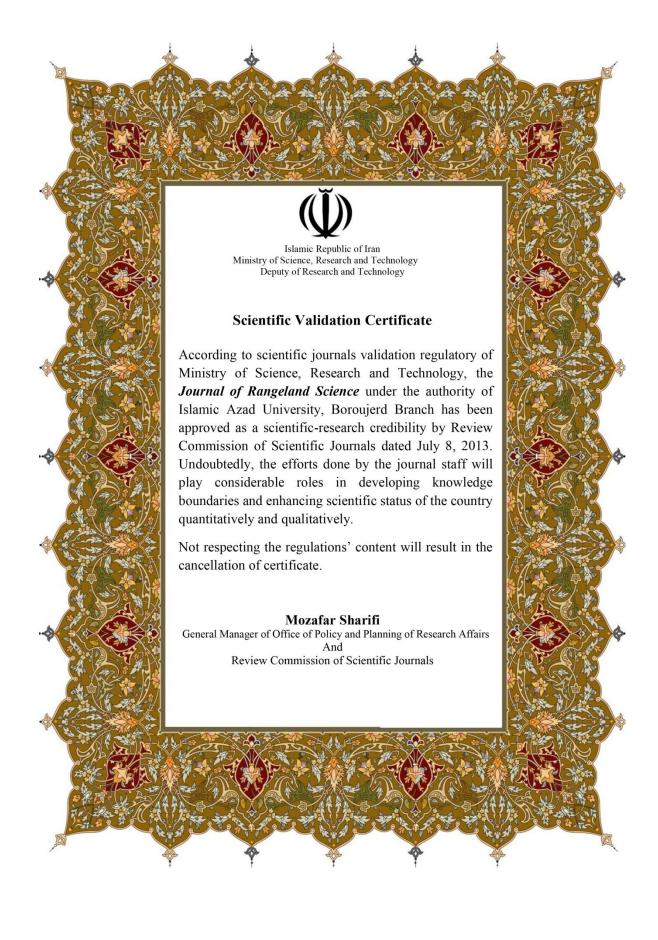
University, Boroujerd Branch, Iran

Location of Photo: Vark Waterfall, Khoramabad, Lorestan,

Iran 2013

Certified by: Central Organization of Islamic Azad University; No. 87/450866; 88/12/3 Certified by: Ministry of Culture and Islamic Guidance; No. 90/10402; 90/04/27 "Scientific-Research" rank granted by: Islamic Azad University; No. 85-86; 90/11/10

The Ministry of Sciences, Research and Technology of I.R. Iran has approved the Scientific-Research grade of this journal through the approval letter No. 3/18/65490; 92/05/06 Dated



# Let's work together to publish the knowledge and science to serve better the Rangelands

## Aims and Scope

Journal of Rangeland Science (JRS) is a national scholarly refereed research journal which aims to promote the theory and practice of rangeland science, innovation, engineering and management. A broad outline of the journals' scope includes: peer reviewed original research articles, case and technical reports, reviews and analyses papers, short communications and notes to the editor, in interdisciplinary information on the practice and status of research in rangeland science, both natural and man made. The main aspects of research areas include, but are not exclusive to: Rangeland Ecology, Eco-physiology of Rangeland Plants, Socio-Economic Factors of Basin, Rangeland Hydrology, GIS and Rangelands, Biodiversity Conservation, Natural Resource Sustainability, Modeling and Decision Support Tools in Natural Resource, Analysis and Assessment of Rangeland, Rangeland Development and Improvement, Grass and Forage Production. Management and Utilization, Soil and Water Conservation.

### Vision and Mission

Journal of Rangeland Science (JRS) publishes original, peer-reviewed and technical rangeland articles since autumn 2010 to serve that rangeland science, engineering and management through the publication of timely and reliable information. JRS is an integral partner with the scientific and technical communities, delivering superior information products and services that foster communication. It builds insights and enables individual and collective advancement in rangeland research. To provide rangeland scientific information and the general public with descriptions of timely, contemporary advances in rangeland issues for use in improving rangeland protection, JRS tries to conserve the natural resources.

Serial: 4-1

Number of Copies: 1000

## **CONTENTS**

# Volume 4, Number 1, Autumn 2013 (Papers are listed based on date of acceptance)

Estimation of Vegetation and Land Use Changes Using Remote Sensing Techniques and Geographical Information System (Case Study: Roodab
Plain, Sabzevar City)
Effects of Salinity and Drought Stresses on Seed Germination and Seedling Growth of Desert Wheatgrass Agropyron desertorum
Detection of Land Use Changes for Thirty Years Using Remote Sensing and GIS (Case Study: Ardestan Area)
Investigating the Effects of Soil Factors on Biodiversity in Plant Communities of Karvan Rangeland (Case Study: Isfahan Province, Iran)
Diversity of Plants and Animals in Mountain Ecosystems in Tajikistan
Assessment of Climatic Drought and Its Economic Effects (Case Study: South Khorasan Province)
Vulnerability Analysis of Flood in Rangelands Using Multi Criteria Decision Analysis and Geographic Information System (Case Study: Gilard Basin, Damavand, Iran)
Study on the Environmental Factors Contributing to Distribution of <i>Thymus kotschyanus</i> in Taleghan Basin, Iran

## THE QUARTERLY PEER REVIEW PUBLICATION Journal of Rangeland Science (JRS)

(Published in Iran)

Editor-in-Chief Chief Editor pISSN: 2008-9996
A. Ariapour A. A. Jafari eISSN: \*\*\*\*-\*\*\*\*

### **CALL FOR PAPERS**

- High quality print out journal on glossy paper
- Online submission and reviewing
- Online status inquiry
- Rapid evaluation and publication
- Immediate publication on the net
- Providing a hard copy
- Article processing is free of charge



The Journal of Rangeland Science (JRS) is currently accepting manuscripts for publication. JRS publishes high-quality articles, in English, in all areas of Rangeland Science as follows:

Journal of Randon A. Number 1. Asilven 2013

Impact Factor: 0.022

- Rangeland Ecology
- Eco-physiology of Rangeland Plants
- Seed Science and Technology
- Socio-Economic Factors of Basin
- Rangeland Hydrology
- GIS and Rangelands
- Remote Sensing
- Ecosystems Modeling
- Mathematical and System Modeling
- Sustainable Development Studies
- Modeling of Alternative Futures
- Global Environmental Change and Ecosystems Management
- Carbon Capture and Storage
- Satellite Applications in the Natural Resource Management
- Natural Resource Restoration and Ecological Engineering
- Habitat Reconstruction
- Biodiversity Conservation
- Climate Change and Impact
- Use and Conservation of Rangeland Resources

- Forage Quality
- Medicinal Plants
- Landscape Degradation and Restoration
- Ground Water Remediation
- Natural Resource Sustainability
- Natural Resource Systems Approach
- Modeling and Decision Support Tools in Natural Resource
- Monitoring and Analysis of Natural Resource Contaminant
- Storm-Water Management
- Relationship between Animal and Rangeland
- Analysis and Assessment of Rangeland
- Rangeland Development and Improvement
- Ly-farming
- Utilization Systems of Rangeland
- Soil and Water Conservation
- Sociology of Plant
- Law and Regulation of Rangeland
- Quality and Nutrient Valuable of Rangeland Plants
- Erosion and Sediment in Rangeland