



GOVERNMENT DR. SHYAMA PRASAD MUKHERJEE SCIENCE & COMMERCE COLLEGE, BHOPAL

SECTOR-H, RAJHARSH COLONY, KOLAR, BHOPAL, PIN CODE:- 462042

Affiliated to Barkatullah University, Bhopal (M.P.)

Contact No: - 0755-2551837, Email-ID: - heghscbho@mp.gov.in

Website: - <http://gscbhopal.in>



2017-18

3.3.1 Number of research papers published per teacher in the Journals notified on UGC website during the last five years

S.n.	Title of paper	Name of the author/s	Department of the teacher	Name of journal	Year of publication	ISSN number	Link to the recognition in UGC enlistment of the Journal /Digital		
							Link to website of the Journal	Link to article / paper / abstract of the article	Is it listed in UGC Care list/Scopus/Web of Science/other, mention
1	DYE-Yielding Arboreal Species of Sehore District of Madhya Pradesh	Dr. Kirti Jain	Botany	Flora and Fauna	2017-18	2456-9364	<a href="http://floraandfona.org.in">flora and fauna (floraandfona.org.in)</a>	<a href="http://floraandfona.org.in/abstract232/abstract2325.aspx">http://floraandfona.org.in/abstract232/abstract2325.aspx</a>	UGC listed
2	Pharmacognostic and Physicochemical Standardization of Nigella Sativa and Allium cepa Seeds	Dr. Kirti Jain	Botany	UK Journal of Pharmaceutical and Biosciences	2017-18	2347-9442	Journal: UK Journal of Pharmaceutical and Biosciences (oaji.net)	<a href="http://www.pharmabiosciencejournal.com/index.php/pbj/article/view/2012">http://www.pharmabiosciencejournal.com/index.php/pbj/article/view/2012</a>	Index Copernicus (ICV: 51.64 point), Chemical Abstracts Service (CAS)
3	Phytochemical Analysis of Allium Cepa Allium Sativum And Aloe Vera	Dr. Kirti Jain	Botany	European Journal Of Biomedical And Pharmaceutical Sciences	2017-18	2349-8870	<a href="https://www.ejbps.com/">https://www.ejbps.com/</a>	<a href="https://www.ejbps.com/ejbps/abstract_id/3496">https://www.ejbps.com/ejbps/abstract_id/3496</a>	Index Copernicus , Indian Science Publications ,
4	Physicochemical characterization of Nigella sativa L. and Allium cepa L. seeds	Dr. Kirti Jain	Botany	International Journal of Botany Studies	2017-18	2455-541x	International Journal of Botany Studies I Web of Science (botanyjournals.com)	<a href="https://www.botanyjournals.com/archives/2018/vol3/issue2/3-2-25">https://www.botanyjournals.com/archives/2018/vol3/issue2/3-2-25</a>	UGC Listed

5	Evaluation of Phytochemical and Antioxidant Activity of <i>Tridax procumbens</i> Extract	Dr. Kirti Jain	Botany	UK Journal of Pharmaceutical and Biosciences	2017-18	2347-9442	Journal: UK Journal of Pharmaceutical and Biosciences (oaji.net)	<a href="https://1library.net/document/zx97kooz-evaluation-phytochemical-antioxidant-activity-tridax-procumbens-extract.html">https://1library.net/document/zx97kooz-evaluation-phytochemical-antioxidant-activity-tridax-procumbens-extract.html</a>	Index Copernicus (ICV: 51.64 point), Chemical Abstracts Service (CAS)
6	Production of Herbal Cosmetic for Hair Care: Highly Commercially Used Plant <i>Lawsonia inermis</i>	Dr. Kirti Jain	Botany	Scholars Academic Journal of Pharmacy (SAJP)	2017-18	2347-9531	(saspublishers.com)	<a href="https://saspublishers.com/media/articles/SAJP-71-1-3.pdf">https://saspublishers.com/media/articles/SAJP-71-1-3.pdf</a>	Index Copernicus
7	Effect of Metal ions on the Dilute Acid Pretreatment of Lignocellulosic Biomass	Dr. Kirti Jain	Botany	Current Trends in Biotechnology and Pharmacy	2017-18	0973-8916	Current Trends in Biotechnology and Pharmacy (abap.co.in)	<a href="https://indianjournals.com/ijor.aspx?target=ijor:ctbp&amp;volume=12&amp;issue=1&amp;article=011">https://indianjournals.com/ijor.aspx?target=ijor:ctbp&amp;volume=12&amp;issue=1&amp;article=011</a>	NAAs, Copernicus
8	Common fixed point theorem under sub compatibility and sub sequentially continuous mappings in menger spaces by using Implicit relation	Dr. Naval Singh	Mathematics	IOSR-JM	2017-18	2319-765	IOSR Journal (iosrjournals.org)	<a href="https://www.iosrjournals.org/iosr-jm/papers/Vol13-issue4/Version-2/N1304029299.pdf">https://www.iosrjournals.org/iosr-jm/papers/Vol13-issue4/Version-2/N1304029299.pdf</a>	cross ref
9	Common Fixed Point Theorems in Cone metrics spaces under General Contractive Conditions	Dr. Naval Singh	Mathematics	Scientific Publications of The State University of Novi Pazar	2017-18	2217-5539	SCIndeks - Časopis (ceon.rs)	<a href="https://www.researchgate.net/publication/324310582_Common_fixed_point_theorems_in_cone_metric_spaces_under_general_contractive_conditions">https://www.researchgate.net/publication/324310582_Common_fixed_point_theorems_in_cone_metric_spaces_under_general_contractive_conditions</a>	No
10	Some fixed point theorems for a pair of mappings under the rational inequality in complex valued b-metric space	Dr. Naval Singh	Mathematics	<i>International Journal Of Mathematics and Appl</i>	2017-18	2347-1557	Home (ijmaa.in)	<a href="http://ijmaa.in/v6n1-a/99-106.pdf">http://ijmaa.in/v6n1-a/99-106.pdf</a>	scribd

11	Common fixed point result for generalized contraction under the rational expressions in complex valued metric spaces	Dr. Naval Singh	Mathematics	International Journal of Science Research in Mathematics & Statistical Sciences	2017-18	2348-4519	<a href="https://isroset.org/journal/IJSRMSS/index.php">https://isroset.org/journal/IJSRMSS/index.php</a>	<a href="https://www.isroset.org/journal/IJSRMSS/full_paper_view.php?paper_id=1007">https://www.isroset.org/journal/IJSRMSS/full_paper_view.php?paper_id=1007</a>	Mathematical Reviews (USA).
12	Hybrid pair of mapping and common fixed point theorems in ordered cone metric spaces over Banach algebras.	Dr. S.K.Malhotra	Mathematics	Int. Journal of Adv. Sci Res. And management vol 3 (2)	2017-18	2455-6378	<a href="http://ijasrm.com/">http://ijasrm.com/</a>	<a href="https://www.researchgate.net/publication/324482696_Hybrid_pair_of_mappings_and_common_fixed_point_theorems_in_ordered_cone_metric_spaces_over_Banach_algebras">https://www.researchgate.net/publication/324482696_Hybrid_pair_of_mappings_and_common_fixed_point_theorems_in_ordered_cone_metric_spaces_over_Banach_algebras</a>	SIS
13	Some fixed point and common fixed theorems in cone metric spaces over Banach algebras endowed with a graph	Dr. S.K.Malhotra	Mathematics	Journal of comp. and mathe. sci	2017-18	0976-5727	<a href="http://www.compmath-journal.org/">http://www.compmath-journal.org/</a>	<a href="http://compmath-journal.org/download/S-K-Malhotra-P-K-Bhargava-and-Satish-Shukla--/CMJV09I03P0186.pdf">http://compmath-journal.org/download/S-K-Malhotra-P-K-Bhargava-and-Satish-Shukla--/CMJV09I03P0186.pdf</a>	Others
14	common fixed point theorem in cone metric spaces over Banach algebras	Dr. S.K.Malhotra	Mathematics	Theory and application of mathematics and computer science	2017-18	2067-2764	<a href="https://www.uav.ro/applications/se/journal/index.php/tamcs">https://www.uav.ro/applications/se/journal/index.php/tamcs</a>	<a href="https://uav.ro/applications/se/journal/index.php/TAMCS/article/view/177">https://uav.ro/applications/se/journal/index.php/TAMCS/article/view/177</a>	index coper.
15	A comparative study of Hermite Lagrange and Birkhoff interpolation and regularity	Dr. Anita Mandloi	Mathematics	International journal of mathematics trends and technology volume 55 number	2017-18	2231-5373	<a href="http://www.ijmtjournal.org/">http://www.ijmtjournal.org/</a>	<a href="https://www.ijmtjournal.org/2018/Volume-55/number-7/IJMTT-V55P566.pdf">https://www.ijmtjournal.org/2018/Volume-55/number-7/IJMTT-V55P566.pdf</a>	google scho.
16	Wavelet analysis of ionospheric anomalies prior to the low latitude earthquake	Dr. Harsha Jalori	Physics	Int. Journal of Science Tech. & Manag	2017-18	2394-1537	<a href="http://www.ijstm.com/">http://www.ijstm.com/</a>	<a href="http://www.ijstm.com/images/short_pdf/1495360611_L1092ijstm.pdf">http://www.ijstm.com/images/short_pdf/1495360611_L1092ijstm.pdf</a>	Google scholar
17	Statistical analysis of geomagnetic storms	Dr. Harsha Jalori	Physics	Journal of adv. And scholarly res. In allied education	2017-18	2230-7540	<a href="http://ignited.in/IJASRAE#:~:text=Aim%2F%20Scope-,Journal%20of%20Advances%20and%20Scholarly%20Researches%20in">http://ignited.in/IJASRAE#:~:text=Aim%2F%20Scope-,Journal%20of%20Advances%20and%20Scholarly%20Researches%20in</a>	<a href="http://ignited.in/p/303484">http://ignited.in/p/303484</a>	UGC, Index coper.

18	current status and diversity of ophidians ( reptila : squamala : serpents ) in bhopal., Madhya Pradesh, Central India	Dr.Rajni Raina Wanganeo	Zoology	Int.J Curr-Microbiol. Appsci	2017-18	ISSN: 1384-1390	Welcome to International Journal of Current Microbiology and Applied Sciences (IJCMAS)-Kanchipuram	<a href="https://www.researchgate.net/publication/317018972_Current_Status_and_Diversity_of_Ophidians_Reptilia_Squamata_Serpents_in_Bhopal_Madhya_Pradesh_Central_India">https://www.researchgate.net/publication/317018972_Current_Status_and_Diversity_of_Ophidians_Reptilia_Squamata_Serpents_in_Bhopal_Madhya_Pradesh_Central_India</a>	CAS
19	Range extension of Cyrtopodion himalayanus Duda and sahi, 1978 ( Reptila Sauria ) in Jammu and Kashmir from District Doda Northern India	Dr.Rajni Raina Wanganeo	Zoology	Amphibian and Reptile Conservation	2017-18	online ISSN: 1083-446X	Amphibian & Reptile Conservation (amphibian-reptile-conservation.org)	<a href="https://images.app.goo.gl/6MHtfnJw8L8SMrEr7">https://images.app.goo.gl/6MHtfnJw8L8SMrEr7</a>	scopus
20	Reptilian diversity and distributions in the Doda District of Jammu and Kashmir, India	Dr.Rajni Raina Wanganeo	Zoology	Reptiles and Amphibians	2017-18	2332-4961	Reptiles & Amphibians (ku.edu)	<a href="https://images.app.goo.gl/6aCxYVqohWNn4D4C9">https://images.app.goo.gl/6aCxYVqohWNn4D4C9</a>	UGC Care
21	observations of argror Agamas, Laudakia agrorensis ( Stoliczka 1872 Sauria: Agamidae) in the Doda District, Jammu And Kashmir India	Dr.Rajni Raina Wanganeo	Zoology	Reptiles and Amphibians	2017-18	2332-4962	Reptiles & Amphibians (ku.edu)	<a href="https://journals.ku.edu/reptilesandamphibians/article/view/14238">https://journals.ku.edu/reptilesandamphibians/article/view/14238</a>	UGC Care
22	“Water Quality Assessment Of Shahpura lake (District Bhopal, M.P.) Using Benthic Macro-invertebrates	Dr. Mukesh Dixit	Zoology	Flora and Fauna	2017-18	2456-9364 (Online) 0971-6920 (Print)	<a href="http://www.floraandfona.org.in/asp_file/archieve.aspx">http://www.floraandfona.org.in/asp_file/archieve.aspx</a>	<a href="http://floraandfona.org.in/abstract241/abstract24125.aspx">http://floraandfona.org.in/abstract241/abstract24125.aspx</a>	UGC

2017-18

Flora and Fauna  
An International Research Journal of Biological Sciences  
Journal recognised by DST New Delhi (NAAS RATING 4.55)

Home Current Issue Archives Instructions to Authors Search About Us Online Submission

About Journal  
Picture Gallery

Site has been launched for better service to the

FLORA AND FAUNA ISSN 2456-9364(Online) 0971-6920(Print)

2017 Vol.23 No.2 PP 283-287

**DYE-YIELDING ARBOREAL SPECIES OF SEHORE DISTRICT OF MADHYA PRADESH, INDIA**  
**ARCHANA SHUKLA\* AND KIRTI JAIN**

Department of Botany,  
Govt. Science & Commerce College, Benazeer,  
BHOPAL (M.P.) INDIA  
\*Corresponding Author : Email : sheoshekhar@gmail.com

**ABSTRACT**

Dye-yielding arboreal species of Sehore district, of Madhya Pradesh (India) is very rich in biodiversity as well in forest cover. The study is based on extensive survey, information and specimen collection and review of concerned relevant literature. The indigenous or local people of this area use different colours obtained from plants for variety of purposes. The study will help to assess the availability of dye-yielding plants in Sehore district and their ethnical uses. It will also help in understanding the socio-cultural and socio-economic life of the rural folks, help in preservation of this wealth of traditional

Pharmaceutical and Biosciences Journal  
Exploring Scholarly Fraternity  
ISSN: 2582-0540

HOME / ARCHIVES / VOLUME 5, ISSUE 6, NOVEMBER-DECEMBER 2017 / ARTICLES

**Pharmacognostic and Physicochemical Standardization of *Nigella sativa* and *Allium cepa* Seeds**

Published Dec 24, 2017  
<https://doi.org/10.20510/rukgbr/5/6/166567>

Download PDF

Statistic

Month	Count
Aug	1
Oct	5
Dec	2
Feb	4
Apr	5
Jun	8
Jul	1

Volume 5, Issue 6, November-December 2017

**Arif Ahmad Rather**  
Department of Botany, Govt. Science and Commerce College, Benazeer, Bhopal (M.P.)-462001, India

**Kirti Jain**  
Department of Botany, Govt. Science and Commerce College, Benazeer, Bhopal (M.P.)-462001, India

**Abstract**

Standardization is the code of conduct in order to ensure the proper identification, authentication and also for the standardization of crude herbal drugs. The quality of herbal drugs is the sum of all factors which contribute directly or indirectly to the safety, effectiveness and acceptability of the product. Towards authentication and quality assurance of medicinal plants, pharmacognostic, physicochemical studies of *Nigella sativa* and *Allium cepa* seeds were performed. The macroscopic and physicochemical parameters like ash value, loss on drying, foaming index, swelling index, extractive values and fluorescence analysis were carried out as per WHO guidelines. The findings of Pharmacognostic and physicochemical studies can be used as markers in the identification and standardization of *Nigella sativa* and *Allium cepa* seeds as a herbal remedy and also towards monograph development on the plant. Further it assists in validating this raw material for use in herbal formulations in the upcoming era.

EJBPS | ABSTRACT - Windows Internet Explorer  
 https://www.ejbps.com/ejbps/abstract\_id/3496

European Journal of Biomedical and Pharmaceutical Sciences  
 ( An ISO 9001:2015 Certified International Journal )

An International Peer Reviewed Journal for Pharma, Medical & Biological Science  
 An Official Publication of Society for Advance Healthcare Research (Reg. No. : 01/01/01/31674/16)  
 actory, Proquest, UK (In Process), Research Bible, Fuchu, Tokyo, JAPAN, International Society for Research acti

HOME ABOUT US INSTRUCTION TO AUTHOR CURRENT ISSUE MANUSCRIPT SUBMISSION PROCESSING FEES  
 TRACK YOUR ARTICLE ARCHIVE CONTACT US

ISSN 2349-8870  
 IMPACT FACTOR : 6.044  
 ICV - 77.3

FRI, JULY 22 2022 | 12:52:31 PM  
 Login | Register

**Abstract**

**PHYTOCHEMICAL ANALYSIS OF ALLIUM CEPA, ALLIUM SATIVUM AND ALOE VERA**

Sangeeta Mahale\*, Kirti Jain, Bharti Jain and Padmakar Tripathi

Impact Factor : 6.044




Done, but with errors on page. Internet | Protected Mode: On 100% 12:52 22-07-2022

(PDF) Physicochemical characteri... Physicochemical characterization... Google

botanyjournals.com/archives/2018/vol3/issue2/3-2-25

INTERNATIONAL JOURNAL OF BOTANY STUDIES

HOME EDITORIAL BOARD ARCHIVES INSTRUCTIONS INDEXING CONTACT US



Submit Your Article: botany.article@gmail.com

CERTIFICATE

VOL. 3, ISSUE 2 (2018)

Physicochemical characterization of *Nigella sativa* L. and *Allium cepa* L. seeds

Authors: Arif Ahmad Rather, Kirti Jain, Shazia Tabasum

Abstract: The core aim of this paper is to report the isolation and characterization of *Nigella sativa* L. and *Allium cepa* L. seed oil. The oil extraction was done by the Hydraulic press. The hydraulic press is equipped with a hydro-electric power connected to a jack screw which compresses the sample inside a metallic cylinder surrounded by a resistance controlled by a thermostat. The oil yield was the ratio between the mass of oil extracted and the mass of the sample. The viscosity of *Nigella sativa* L. and *Allium cepa* L. was 28.32±0.56 and 21.36±1.06 respectively. The Specific gravity of *Nigella sativa* L. and *Allium cepa* L. was 0.83±0.19 and 0.61±0.92. The Acid value of *Nigella sativa* L. and *Allium cepa* L. was 3.05±1.63 and 2.73±2.11. The % free fatty acid, saponification values, unsaponification values and peroxide value of oil was also computed. The present work carried out to suggest exploring of title plants for chemical constituents and pharmacological action.

Journal List

SEARCH

INDEXING

RJIFACTOR

CiteFactor

https://www.botanyjournals.com/contact Download | Pages: 72-74 12:57 22-07-2022

# Evaluation of Phytochemical and Antioxidant Activity of *Tridax procumbens* Extract

7 11 Download (0)

Delight customers with faster and easier customer service

OPEN

1 / 7

UK Journal of Pharmaceutical and Biosciences Vol. 5(6), 41-47, 2017

RESEARCH ARTICLE



UK Journal of Pharmaceutical and Biosciences

Available at [www.ukjpb.com](http://www.ukjpb.com)



ISSN: 2347-9442

## Evaluation of Phytochemical and Antioxidant Activity of *Tridax procumbens* Extract

Dr Pooja Singh<sup>1</sup>, Dr Kirti Jain<sup>2</sup>, Dr Swati Khare<sup>3</sup>, Dr Padma Shrivastav<sup>1</sup>

<sup>1</sup>Govt. PG College, BHEL, Bhopal (M.P.)-462016, India

<sup>2</sup>Govt. Science and Commerce College, Benazir, Bhopal (M.P.)-462001, India

<sup>3</sup>Maharani Laxmibai, Govt Girls PG Autonomous College, Bhopal (M.P.)-462016, India

### Article Information

Received 21 August 2017

Received in revised form 23 Dec 2017

Accepted 24 December 2017

### Keywords:

*Tridax procumbens*

Phytochemical

Antioxidant Activity

Flavonoids

Corresponding Author:

E-mail : [puji.singh86@yahoo.in](mailto:puji.singh86@yahoo.in)

Mob.: xxxxxxxxx

### Abstract

Oxidative stress and impaired antioxidant system have been implicated in the pathophysiology of diverse disease states. The polyphenol and flavonoids are used for the treatment of various diseases triggered by oxidative stress. *Tridax procumbens* have been used as indigenous medicine for a variety of ailments. In the present study, it was planned to investigate the phytochemical and *in vitro* antioxidant activity of the ethanol, methanol and aqueous extracts of *Tridax procumbens* leaves. The ethanol, methanol and aqueous extracts of *Tridax procumbens* leaves were prepared and performed its phytochemical analysis. The *in vitro* antioxidant activity namely DPPH, total polyphenol content, total flavonol content and reducing power assay were performed. The qualitative chemical test exhibited the presence

## Production of Herbal Cosmetic for Hair Care: Highly Commercially Used Plant

*Lawsonia inermis*Dr. Pooja Singh<sup>1\*</sup>, Dr. Kirti Jain<sup>2</sup>, Dr. Swati Khare<sup>3</sup>, Dr. Padma Shrivastav<sup>1</sup><sup>1</sup>Govt. PG College, BHEL Bhopal (M.P.)-462016, India<sup>2</sup>Govt. Science and Commerce College, Benazir, Bhopal (M.P.)-462001, India<sup>3</sup>Maharani Laxmibai, Govt Girls PG Autonomous College, Bhopal (M.P.)-462016, India

## Original Research Article

## \*Corresponding author

Dr. Pooja Singh

## Article History

Received: 15.12.2017

Accepted: 20.12.2017

Published: 30.1.2018

## DOI:

10.21276/sajp.2018.7.1.1



**Abstract:** In the present era Herbal Science has emerged as a major focus for trade as there has been a worldwide acceptance of herbal products. However new innovations and an increased willingness to adopt new techniques are required for wider acceptance of such herbal products globally. Synthetic dyes are easily available and have created a comfortable niche in today's ever-growing market. However, a huge market for herbal products exist which needs attention. The present study is the production of herbal cosmetic for hair care by using other antioxidant plant and found that the formulation of heena and beetroot is found to be the best hair colour as compare to heena and indigo as beet root contain highly antioxidant properties.

**Keywords:** Formulation, antioxidant herbal, synthetic dye, cosmetic etc.

## INTRODUCTION

India has a rich heritage of using medicinal plants in traditional medicines such as Ayurveda, Siddha and Unani besides folklore practices. *Lawsonia inermis* syn. *Lawsonia alba* (Henna) is a sole species in the genus in the family Lythraceae. Henna has been found to exhibit Antibacterial, Antifungal and Dermatological properties. It is useful in coloring of skin, scalp and nails etc. Henna has also shown antidiarrhoeal, diuretic, emmanagogue and abortifacient prophetically and is found to be practically non-toxic. *Lawsonia Inermis* as a Natural Dye of Various Therapeutic Uses has reviewed Jiny Varghese K, Silvipriya KS, Resmi Jolly C [1] that hair care plant is reported to possess immunomodulatory, antiviral, antibacterial, antifungal, nootropic, antifertility, hepatoprotective, tuberculostatic activity, antimutagenic, analgesic and anti-inflammatory, anticarcinogenic and antioxidant properties.

## Current Trends in

## Biotechnology and Pharmacy

## Journal Home

## Current Issue

## Archive / Issues

## TOC

## Prev Article

## Next Article

## Registration

## Editorial Board

## Author

## Guidelines

## News &amp; Events

## Subscribe TOC

## Alerts

## Article Submission

Current Trends in Biotechnology and Pharmacy

Year : 2018, Volume : 12, Issue : 1

First page : ( 103) Last page : ( 107)

Print ISSN : 0973-8916, Online ISSN : 2230-7303.

## Effect of Metal ions on the Dilute Acid Pretreatment of Lignocellulosic Biomass

Khan Abdul Majid<sup>1\*</sup>, Sahay Sanjay<sup>2</sup>, Jain Kirti<sup>1</sup>, Gothalwal Ragini<sup>3</sup><sup>1</sup>Department of Botany, Government Science and Commerce College, Benazeer, Bhopal (MP) India<sup>2</sup>Department of Botany, Government Postgraduate College, Bhaora, Dist. Rajgarh (MP) India<sup>3</sup>Department of biotechnology and bioinformatics centre, UTD, Barkatullah University, Bhopal\*For Correspondence- [mamk\\_khan300@yahoo.com](mailto:mamk_khan300@yahoo.com)

Online published on 2 November, 2018.

## Abstract

Economically feasible, sustainable and nonpolluting ways for ethanol production has become important due to limited petroleum supply and associated environmental consequences of burning fossil fuel. Three experimental lignocellulosic materials viz., *Hyptis suaveolens*, wheat straw and *Ailanthus exelsa* wood were taken to subject them to dilute acid pretreatment in presence of selected metals. Metals Zn and Ca were found general inhibitors of release of hemicellulosic sugars. *A. exelsa* wood was found to be more sensitive to metals in the release of hemicellulosic sugars during pretreatment by dilute acid method. Metals were also found to interfere with the utilization of sugar and ethanol fermentation by the yeast.

## Keywords

Pretreatment, metal ion effect, lignocellulose.

PDF



## **Common Fixed Point Theorem under Sub Compatibility and Sub Sequentially Continuous Mappings in Menger Spaces by Using Implicit Relation**

Dilip Kumar Gupta<sup>1\*</sup> Naval singh<sup>2</sup>

<sup>1</sup>Department of Mathematics , People's College of Research & Technology Bhopal (M.P.) India

<sup>2</sup>Department of Mathematics ,Govt. Science & Commerce College , Benazeer Bhopal (M.P.) India

\*Corresponding author: Dilip Kumar Gupta

---

**Abstract:** In this paper we establish Common fixed point theorem for six mappings in Menger spaces by using implicit relation under the notion of sub compatibility and sub sequentially continuity.

**Keywords:** Menger space, Compatibility, Sub compatibility, Reciprocal continuity, Sub sequentially continuity, Common fixed point.

**AMS Subject Classification:** 47H10, 54H25

---

Date of Submission: 13-07-2017

Date of acceptance: 05-08-2017

---

### **I. Introduction**

In 1942, K. Menger [16] introduced the notion of probabilistic metric space (briefly, PM-space) as a generalization of metric space. Such a probabilistic generalization of metric spaces appears to be well adapted for the investigation of physical quantities and physiological thresholds. It is also of fundamental importance in probabilistic functional analysis. The development of fixed point theory in PM-spaces was due to Schweizer and Sklar[23, 24].

In 1972, V. M. Sehgal and A. T. Bharucha-Reid [25] initiated the study of contraction mappings on probabilistic metric (briefly, PM) spaces. Since then there has been a massive growth of fixed point theorems using certain conditions on the mappings or on the space itself. Sesa [26] introduced weakly commuting maps in



**ThermoFisher**  
SCIENTIFIC

**Pluripotent Stem Cell Resource Handbook**

Trusted methods for every step of the PSC workflow

[Home](#) > [Geometry and Topology](#) > [Metric Space](#)

Article

PDF Available

## Common fixed point theorems in cone metric spaces under general contractive conditions

January 2017 · Scientific Publications of the State University of Novi Pazar Series A Applied Mathematics Informatics and mechanics 9(2):133-149

DOI:10.5937/SPSUNP1702133C

### Authors:



**Om Prakash Chauhan**

Jabalpur Engineering College, Jabalpur, ...



**N. Singh**




**Deepak Singh**


National Institute of Technical Teachers' ...




**Lakshmi Narayan Mishra**

Vellore Institute of Technology, Vellore 63...



 [Download full-text PDF](#)

 [Read full-text](#)



# Some Fixed Point Theorems for a Pair of Mappings Under the Rational Inequality in Complex Valued b-Metric Space

Garima Gadkari<sup>1,\*</sup>, M. S. Rathore<sup>2</sup> and Naval Singh<sup>3</sup>

<sup>1</sup> Department of Mathematics, Mahakal Institute of Technology, Ujjain, Madhya Pradesh, India.

<sup>2</sup> Department of Mathematics, SBS College, Ashta, Madhya Pradesh, India.

<sup>3</sup> Department of Mathematics, Government Science and Commerce P.G. College, Benazeer, Bhopal, Madhya Pradesh, India.

**Abstract:** In this problem we improve a common fixed point theorem for a pair of mappings under the rational inequality and obtain sufficient conditions for existence and uniqueness in complex valued b-metric spaces.

**Keywords:** Common fixed point, Complex valued b-metric space, Cauchy sequence, Coincidence point, Weakly compatible mappings.

© JS Publication.

## 1. Introduction

Fixed point theory is one of the fundamental theories in nonlinear analysis, which has various applications in different branches of mathematics. The famous Banach contraction principle states that if  $(X, d)$  is a complete metric space and  $A : X \rightarrow X$  is contraction mapping (i.e.  $d(Ax, Ay) \leq kd(x, y)$  for all  $x, y \in X$ , where  $k$  is a non-negative real number such that  $k < 1$ ), then  $A$  has a unique fixed point. Many researchers have carried out fixed point results for b-metric spaces. The concept of b-metric space as a generalization of metric spaces, this has been introduced by Bakhtin [2] in 1989. The most utilization of metric spaces in the nature enlargement of functional analysis is enormously. Several researchers



### Full Paper View

[Go Back](#)

#### Common Fixed Point Results for Generalized Contraction under the Rational Expressions in Complex Valued Metric spaces

Garima Gadkari<sup>1</sup>, M.S. Rathore<sup>2</sup>, Naval Singh<sup>3</sup>

Section: Research Paper, Product Type: Isroset-Journal  
Vol.5, Issue.6, pp.282-293, Dec-2018

**CrossRef-DOI:** <https://doi.org/10.26438/ijrms/v5i6.282293>

Online published on Dec 31, 2018

Copyright © Garima Gadkari, M.S. Rathore, Naval Singh. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

View this paper at [Google Scholar](#) | [DPI Digital Library](#)

[XML View](#) | [PDF Download](#)

#### Main Menu

[Call for Paper](#)

[Paper Submission](#)

#### Impact Factor

Year : 2016

Impact Factor : 1.021

ISSN : 2348-4519 (Online)

URL : [Click Here](#)

#### Journals Contents

[Current Issue](#)

[Special Issues](#)

# Hybrid pair of mappings and common fixed point theorems in ordered cone metric spaces over Banach algebras

S.K. Malhotra<sup>1</sup>, P.K. Bhargava<sup>2</sup> and Satish Shukla<sup>3</sup>

<sup>1</sup> Department of Mathematics, Govt. Science & Commerce College  
Benazeer, Bhopal (M.P.) India

<sup>2</sup> Govt. Girls College, Shivpuri (M.P.) India

<sup>3</sup> Department of Applied Mathematics, Shri Vaishnav Institute of Technology & Science,  
Gram Baroli, Sanwer Road, Indore (M.P.) 453331, India

## Abstract

The purpose of this paper is to establish some coincidence and common fixed point results of hybrid pair of a single-valued and a set-valued mapping on an ordered cone metric spaces over Banach algebras. Our results extend, generalize, and unify several known fixed point results on cone metric spaces equipped with a partial order. Some examples are presented which verify the significance of the results proved herein.

**Keywords:** Cone metric space; point of coincidence; common fixed point; partial order.

## 1. Introduction

Let  $(X, d)$  be a metric space. Denote by  $CB(X)$ , the

$$d_H(T(x), T(y)) \leq \lambda d(x, y), \forall x, y \in X.$$

Then  $T$  has a fixed point in  $X$ .

Huang and Zhang [27] defined cone metric spaces and convergent and Cauchy sequences in cone metric spaces in terms of interior points of the underlying cone. Some basic versions of the fixed point theorems in cone metric spaces can be found in [27].

The concept of commutativity of two mappings and several of its weaker forms, like compatibility, weak compatibility, R-weak commutativity etc. have been extended in their corresponding set-valued forms. For the pair of a single-valued and set-valued mappings (hybrid pair), similar concepts have been introduced and studied by several authors, see, e.g., [2,3,30,31,33,37].

Wardowski [10] for a cone metric space  $(M, d)$

## Some Fixed Point and Common Fixed Theorems in Cone Metric Spaces over Banach Algebras Endowed with a Graph

S. K. Malhotra<sup>1</sup>, P. K. Bhargava<sup>2</sup> and Satish Shukla<sup>3\*</sup>

<sup>1</sup>Department of Mathematics,  
Govt. Science & Commerce College, Benazeer, Bhopal (M.P.) INDIA.

<sup>2</sup>Govt. Girls College, Shivpuri (M.P.) INDIA.

<sup>3</sup>Department of Applied Mathematics,  
Shri Vaishnav Institute of Technology & Science,  
Gram Baroli, Sanwer Road, Indore (M.P.) 453331, INDIA.

\*corresponding author

(Received on: February 4, 2018)

### ABSTRACT

In this paper, we introduce the notion of weakly connected pair of mappings and prove some fixed point and common fixed point theorems for a pair of weakly connected mappings on cone metric spaces over Banach algebras which is endowed with a graph. Our results generalize the result of Altun *et al.*<sup>9</sup> in cone metric spaces over Banach algebra.

**Keywords:** Cone metric space;  $c$ -sequence; pair of weakly connected mappings; common fixed point.

### 1. INTRODUCTION

The study of  $K$ -metric and  $K$ -normed spaces (cone metric spaces) were introduced in the mid-20th century<sup>3,12,15,16</sup>. Huang and Zhang<sup>14</sup> defined convergent and Cauchy sequence in cone metric spaces in terms of interior points of the underlying cone. Some basic versions of the fixed point theorems in cone metric spaces can be found in<sup>14</sup>. Inspired with the results proved in<sup>5,21,22,23</sup>, recently, Liu and Xu<sup>7</sup> introduced the notion of cone metric spaces over Banach algebras. The benefit of such notion is that we can use a vector instead of a constant in contractive conditions. The fixed point results thus obtained cannot be derived by their usual metric version, as shown by an example in<sup>7</sup>.

Ran and Reurings<sup>2</sup>, and Nieto and Lpez<sup>11</sup> investigated the existence and uniqueness



## A Common Fixed Point Theorem in Cone Metric Spaces over Banach Algebras

S.K. Malhotra<sup>a</sup>, P.K. Bhargava<sup>b</sup>, Satish Shukla<sup>a,\*</sup>

<sup>a</sup>Department of Mathematics, Govt. Science & Commerce College, Benazeer, Bhopal (M.P.) India.

<sup>b</sup>Govt. Girls College, Shivpuri (M.P.) India.

<sup>c</sup>Department of Applied Mathematics, Shri Vaishnav Institute of Technology & Science, Gram Baroli, Sanwer Road, Indore (M.P.) 453331, India.

---

### Abstract

In this paper, a common fixed point theorem for four mappings in cone metric spaces over Banach algebras is proved without assuming the normality of underlying cone. The results of this paper unify, generalize and extend some

*International Journal of Mathematics Trends and Technology (IJMTT) – Volume 55 Number 7 - March 2018*

## A comparative Study of Hermite, Lagranges and Birkhoff Interpolation and Regularity.

Dr. Anita Mandloi

Associate Professor, Department of Mathematics, Govt. Science & Commerce College, Benazeer Bhopal,

Affiliated to Barkatullah University Bhopal (MP), INDIA

Address - B200, Fortune Pride Extn. Mahakali Society, Trilanga, Bhopal(MP)INDIA-462039

**Abstract**— The object of the present paper to compare the different type of interpolation and their regularity.

**Keywords**— Interpolation, polynomials, regularity, Interpolation matrix, nodes.

### I. INTRODUCTION

In recent years, the emergence of computer and computational capabilities has greatly encouraged the researchers to focus their study in the area of approximation theory. Interpolation is an area in which we consider the problem of approximating a given function by a class of simpler functions mainly polynomials. Roughly saying: A polynomial  $p(x)$  is called an interpolating polynomial if the value of  $p(x)$  and/or its certain derivatives coincide with those of given function  $f(x)$  and/or its same order derivatives at one or more points called nodes. In case of Lagranges interpolation matching at derivatives is not required whereas the Hermite interpolation involves matching of the interpolating polynomial and the given function at consecutive order of derivatives.

### II. INTERPOLATION AND REGULARITY

Birkhoff interpolation considers the case of approximation with possible gaps in the order of derivatives. Birkhoff interpolation is a generalization of the Hermite case, obtained by relaxing the requirement of consecutive derivatives at the nodes when this is done, even the existence of an interpolant becomes questionable. For example, there is no quadratic  $p(x)$ , satisfying  $p(-1)=p(1)=0$ ,  $p'(0)=1$  on the other hand, there is a unique quadratic satisfying  $p(-1)=y_1$ ,  $p(0)=y_2$ ,  $p(1)=y_3$  for any reals  $y_1, y_2, y_3$ . The basic problem of Birkhoff interpolation then, is to determine those configuration of derivatives which

# WAVELET ANALYSIS OF IONOSPHERIC ANOMOLIES PRIOR TO THE LOW LATITUDE EARTHQUAKE

Harsha Jalori<sup>1</sup>, Shivali Verma<sup>2</sup>, Harleen Kaur<sup>3</sup>

<sup>1</sup>Department of Physics, Government Science and Commerce College, Benazir, Bhopal, (India)

<sup>2</sup>Department of Physics, Oriental College of Technology, Bhopal(M.P) (India)

<sup>3</sup>Department of Physics, Barkatullah University, Bhopal. (M.P) (India)

## ABSTRACT

Total electron content (TEC) is one of the ionospheric parameter which show abnormal behavior after, before and co earthquake duration. On 10 January 2012, at 18:36 UT a M7.2 earthquake of depth 20.5 km struck at the off west coast of Northern Sumatra (2.452°N, 93.209°E). Erstwhile to these seismic events, the ionospheric TEC was deliberate by an integrated wavelet analysis method (IWAM). IWAM is a mixture of Continuous Wavelet Transform (CWT) and Cross Wavelet Transform (XWT) method. The purpose of CWT is to identify TEC anomalies whereas XWT targets at spotting ionospheric perturbations by instituting the vigorous relationship between the anomaly variability of TEC and geomagnetic index for the same period of observations. Also this anomalous behavior by the global ionosphere maps (GIMs). The results obtained by IWAM revealed that many inconsistencies appeared few days before this earthquake.

**Keywords:** (inconsistencies, TEC, GIM, GPS, earthquake)

## I. INTRODUCTION

Shakings of earth are one of the awful outcomes of nature. The question of earthquake forecast is still irrefutable. The changes in the ionosphere can be utilized to obtain early information about an impending earthquake [1-6]. Variations in the ionospheric parameters like TEC have been examined by many research works. [7-16]. earthquake ionospheric incongruities resulting from GPS TEC 15 days earlier and later each of the 20 (M>6.0) earthquakes in Taiwan from September 1999 to December 2002 [17]. A drop in TEC was

## Published in Journal

Journal of Advances and Scholarly  
Researches in Allied Education  
[JASRAE] (Vol:15/ Issue: 12)  
DOI: 10.29070/JASRAE

## Authors:

Anoop Parsai\*

## Subjects:

Multidisciplinary Academic Research

Year: Dec, 2018

Volume: 15 / Issue: 12

Pages: 1035 - 1039 (5)

Publisher: Ignited Minds Journals

Source:

E-ISSN: 2230-7540

DOI:

Published URL:

<http://ignited.in/p/303484>

Published On: Dec, 2018

## Article Details

## Statistical Analysis of Geomagnetic Storms during Solar Cycle 23 & 24 |

Original Article

— Anoop Parsai\*, in *Journal of Advances and Scholarly Researches in Allied Education* | *Multidisciplinary Academic Research*

[Download PDF](#)

[View HTML](#)

### ABSTRACT:

A geomagnetic storm is a global disturbance in Earth's magnetic field usually occurred due to abnormal conditions in the interplanetary magnetic field (IMF) and solar wind plasma emissions caused by various solar phenomenon. A study of 220 geomagnetic storms associated with disturbance storm time (DST) decreases of more than -50 nT to -300 nT, observed during 1996-2007, the span of solar cycle 23 24. We have been analyzed and studied them statistically. We find yearly occurrences of geomagnetic storm are strongly correlated with 11-year sunspot cycle, but no significant correlation between the maximum and minimum phase of solar cycle-23 24 have been



# Sign Up For Free

Delight customers with faster and easier customer service Freshdesk

[Home](#) > [Asia](#) > [Geoscience](#) > [India](#)

Article

PDF Available

## Current Status and Diversity of Ophidians (Reptilia: Squamata: Serpents) in Bhopal, Madhya Pradesh, Central India

May 2017 · [International Journal of Current Microbiology and Applied Sciences](#) 6(5):1384-1390

DOI:[10.20546/ijcmas.2017.605.149](#)

Authors:



**Amit Manhas**

Govt. College Suthaliya, Rajgarh



**Rajni Raina**



**Ashwani Wanganeo**

Barkatullah University

Download citation

Copy link

Download full-text PDF

Read full-text

[References \(13\)](#)

[Figures \(1\)](#)

Figures



ResearchGate

**Discover the world's research**

- 20+ million members
- 135+ million publications

Official journal website:  
[amphibian-reptile-conservation.org](http://amphibian-reptile-conservation.org)



*Amphibian & Reptile Conservation*  
12(1) [General Section]: 49–51 (e156).

## Range extension of *Cyrtopodion himalayanus* Duda and Sahi, 1978 (Reptilia: Sauria) in Jammu Province of State Jammu and Kashmir from District Doda, Northern India

<sup>1</sup>Amit Manhas, <sup>2</sup>Rajni Raina, and <sup>3</sup>Ashwani Wanganeo

<sup>1</sup>Research Scholar, Department of Environmental Sciences and Limnology, Barkatullah University Bhopal, Madhya Pradesh, INDIA <sup>2</sup>Professor, Department of Zoology, Govt. Science and Commerce (Benazir) college, Bhopal, Madhya Pradesh, INDIA <sup>3</sup>Professor, Department of Environmental Sciences and Limnology, Barkatullah University Bhopal, Madhya Pradesh, INDIA

**Abstract.**—Documented are new distributional records of the poorly-known Gekkonidae *Cyrtopodion himalayanus* from the Doda region of Jammu and Kashmir State (India) based on specimens collected in three localities of the Doda region (Village Nai-Bhallara, Village Chagsoo, and Village Zazinda). Presented are notes on the morphology and coloration of the species in Doda, as well as photographs and a map indicating the known localities of *Cyrtopodion himalayanus*. This record represents an extension range of 60–80 km from the earlier reported locality of the species. The species *Cyrtopodion himalayanus* is the sole representative of the group *Cyrtopodion*, documented four decades ago from Kishtwar town of District Kishtwar (formally under District Doda) in the state of Jammu and Kashmir.

**Keywords.** Gekkonidae, new distribution, Kishtwar, reptiles, visual encounter survey, morphology

Citation: Manhas A, Raina R, Wanganeo A. 2018. Range extension of *Cyrtopodion himalayanus* Duda and Sahi, 1978 (Reptilia: Sauria) in Jammu Province of State Jammu and Kashmir from District Doda, Northern India. *Amphibian & Reptile Conservation* 12(1) [General Section]: 48–51 (e156).

Copyright: © 2018 Manhas et al. This is an open-access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License, which permits unrestricted use for non-commercial and education purposes only, in any medium, provided the original author and the official and authorized publication sources are recognized and properly credited. The official and authorized publication credit sources, which will be duly enforced, are as follows: official journal title *Amphibian & Reptile Conservation*; official journal website <[amphibian-reptile-conservation.org](http://amphibian-reptile-conservation.org)>.

Received: 18 March 2017; Accepted: 05 July 2017; Published: 17 July 2018

### Introduction

The state of Jammu and Kashmir includes three main ar-

There was no information regarding reptilians from Jammu province until Sahi (1979), who has conducted an extensive survey of Jammu and Kashmir state for the heretiles and reported 76 species. He stated that the

## Reptilian Diversity and Distributions in the Doda District of Jammu and Kashmir, India

Amit Manhas<sup>1</sup>, Rajni Raina<sup>2</sup>, and Ashwani Wanganeo<sup>1</sup>

<sup>1</sup>Department of Environmental Sciences and Limnology, Barkatullah University, Bhopal, Madhya Pradesh, India (amitmanhas1306@gmail.com)

<sup>2</sup>Department of Zoology, Government Science and Commerce College (Berasia), Bhopal, Madhya Pradesh, India

Reptiles are important components of Earth's ecosystems; consequently, documenting current distributions is critical in light of changing land-use patterns and climatic conditions, the resultant declines in habitat abundance and quality, and the increasing risk of extinction facing many species (Gibbons et al. 2000; Stuart et al. 2008). Of the approximately 10,700 species of reptiles (Uetz et al. 2018), 518 species (34 turtles, 3 crocodilians, 279 snakes, and 202 lizards) in 28 families occur in India (Aengals et al. 2011). Herein we present the results of a reptilian diversity survey we conducted in the Doda District of Jammu and Kashmir, India from March to mid-June in 2014 and 2015. The Doda District is in the eastern part of the Jammu Region (33°08'N, 75°3'E) in the outer Himalayan Range and has an average elevation of 1,107 m asl.

Previous work in the state (using current taxonomy instead of the historical names used in the various reports) began with Fenton (1910), who recorded vernacular names for snakes that included the Himalayan Pitviper (*Gloyobius himalayensis*), Levantine Viper (*Macrovipera lebetina*), and the Oriental Ratsnake (*Ptyas mucosa*). Das (1966) indicated that the reptiles of Kashmir were representative of Palearctic elements. Sharma and Sharma (1975) recorded 18 species of snakes from the state. Duda and Sahi (1977) listed four species of turtles (Indian Roofed Turtle, *Pangubona recta*; Brown Roofed Turtle, *Pangubona swinhonis*; Indian Flap-shelled Turtle, *Lissemys punctata*; Ganges Soft-shelled Turtle, *Nilssonius gangetica*) that had not been reported previously from Jammu (the record of *P. swinhonis* was the first from northwestern India). Duda and Sahi (1978) described a new gekkonid species (Himalayan Bent-toed Gecko, *Crotodactylus himalayensis*) from the Doda District.

The first extensive herpetological survey by Sahi (1979) listed seven species of turtles, 23 species of lizards, and 35 species of snakes from the state. Sahi and Duda (1982) described six little-known species of lizards, of which the Asian Snake-eyed Skink (*Ablepharus panjshirica*) was new to India and the Fan-throated Lizard (*Sitona himalayensis*), the Bushy Snakehead Lizard (*Chalcides indiana*)

(1985) presented a checklist and keys to amphibians and reptiles of Jammu and Kashmir, and in 1986 they described the affinities and distributions of the reptiles, noting that three agamid species in the genus *Liasis* were of Palearctic origins, whereas two species of geckos in the genus *Hemidactylus* and an agamid in the genus *Coleles* were Oriental species. Verma and Sahi (1995) studied the Indian Monitor (*Varanus bengalensis*) and concluded that it warranted protection in the state.

Ali et al. (2004) indicated that venomous snake-bite cases were common during the summer, reporting 360 Saw-scaled Viper (*Echis carinatus*) bites, as a result of which 62 patients developed acute renal failure within 24 hours to two weeks of envenomation. Sharma and Kour (2005) described the karyology of four species of snakes (Common Sand Boa, *Eryx conicus*; Indian Cobra, *Naja naja*; Russell's Viper, *Daboia russelii*; Saw-scaled Viper, *Echis carinatus*). Chowdhary (2010) recorded nine species in five families of aquatic reptiles from the Rajouri District. Manhas et al. (2015) presented the first record of the Himalayan Wolfsnake (*Lycodon macrodon*) from the Doda Region, and Manhas et al. (2016) listed 16 species of reptiles in nine families from the city of Jammu. Manhas et al. (2018a) presented observations of the high-elevation Agur Agama (*Liasis agorensis*) and Manhas et al. (2018b) recorded new distributional records of the Himalayan Bent-toed Gecko (*Crotodactylus himalayensis*) from the Doda region.

A critical assessment of the above review clearly indicates that not much is known about the reptilian fauna of the Doda region of J and K State, India. Consequently, creating a comprehensive list of reptiles and their distributions was a worthwhile and necessary endeavor.

### Methods

Because of the area's mountainous nature, we divided the study area into five surveying stations (Fig. 1): (1) Nai-Bhallara (33°05'20.69" N, 75°42'30.24"E; elev. 1,693–2,328 m), (2) Village Chagsoo (33°07'33.77"N, 75°40'11.50"E; elev. 1,007–1,360 m), (3) Village

## Reptiles & Amphibians

Current Archives Editorial Team Submissions Announcements About ▾

Search

Home / Archives / Vol. 25 No. 1 (2018): Reptiles & Amphibians / Notes

### Observations of Agur Agamas, *Laudakia agorensis* (Stoliczka 1872) (Sauria: Agamidae), in the Doda District, Jammu and Kashmir, India

#### Amit Manhas

Department of Environmental Sciences and Limnology, Barkatullah University  
Bhopal

#### Rajni Raina

Department of Zoology, Government Science and Commerce College

#### Ashwani Wanganeo

Department of Environmental Sciences and Limnology, Barkatullah University  
Bhopal

DOI: <https://doi.org/10.17161/randa.v25i1.14238>

Make a Submission

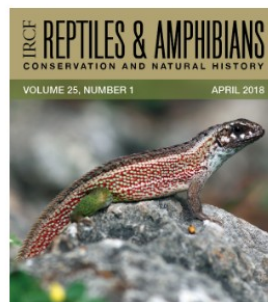
#### Information

For Readers

For Authors

For Librarians

Open Journal Systems





ISSN 2456-9364(Online) 0971-6920(Print)

# Flora and Fauna

[Login](#) | [Free Registration](#)

An International Research Journal of Biological Sciences  
Journal recognised by DST New Delhi (NAAS RATING 4.55)

[Home](#)

[Current Issue](#)

[Archives](#)

[Instructions to Authors](#)

[Search](#)

[About Us](#)

[Online Submission](#)



[About Journal](#)

 [Picture Gallery](#)

concerned community.



FLORA AND FAUNA

ISSN 2456-9364(Online) 0971-6920(Print)

2018 Vol.24 No.1 PP 126-134

## WATER QUALITY ASSESSMENT OF SHAHPURA LAKE, BHOPAL (M.P.) INDIA USING BENTHIC MACRO-INVERTEBRATES

M. ANIECE WANI\* AND MUKESH DIXIT

Department of Zoology,  
Govt. Benazeer Science and Commerce College,  
BHOPAL (M.P.) INDIA

\*Corresponding Author :

Email: mohdaniece@gmail.com.

[View Full Paper](#)

### ABSTRACT

Shahapura Lake is manmade perennial situated in Bhopal (M.P.) India. The main source of water to this lake is rain water and sewage water from residential colonies. Samples were collected and analyzed to check the pollution status of Shahapura Lake. Present study deals with quantitative and qualitative analysis of macro-zoobenthic invertebrates of the lake together with the assessment of physicochemical parameters. The water quality was assessed by using BMWD