Novel Research Anthology on Literature, Feminism & Social Studies

Dr.Ratnakar D B

NOVEL RESEARCH ANTHOLOGY ON LITERATURE, FEMINISM & SOCIAL STUDIES

Dor. Pinley's Copy

ISBN 978-93-90146-06-2

Editor Dr. Ratnakar D Bala

Published by

International Multidisciplinary Research Foundation, India

NOVEL RESEARCH ANTHOLOGY ON LITERATURE, FEMINISM & SOCIAL STUDIES

ISBN 978-93-90146-06-2

Copyright 2020, IMRF PUBLICATIONS International Multidisciplinary Research Foundation Ratna Prasad Multidisciplinary Research & Educational Society Andhra Pradesh, India.

All rights reserved.

No part of this book may be reproduced in any form of print & electronic means without the written permission of the copyright owner.

December 2020 Print

Published by

International Multidisciplinary Research Foundation Ratna Prasad Multidisciplinary Research & Educational Society # 1-90, Near VTPS Main Gate, Ibrahimpatnam, Vijayawada, A.P., India

DISCLAIMER

The authors are solely responsible for the contents of the papers compiled in this volume. The Publishers or editors do not take any responsibility for the same in any manner. Errors, if any, are purely unintentional and readers are requested to communicate such errors to the editors or publishers to avoid discrepancies in future.

Typeset & Printing by

IMRF INTERNATIONAL PUBLISHING HOUSE,

1-90, Near VTPS Main Gate, Ibrahimpatnam, Krishna Dt, AP India Website : <u>www.imrfedu.org</u> | Email: <u>info@imrf.in</u> Mobile : 09533421234

CONTENTS

Chapter: 1	1
THEME OF EXILE IN SELECTED POEMSOF LAKSHMI GILL, HIMANI BANNERJI AND SURJEET KALSEY	
- Dr. Toshimenla	
Chapter: 2	6
ARTICULATING THE SOCIO PSYCHO PLIGHT OF WOMEN IN THE SELECTED NOVELSOF SHASHI DESHPANDE	
- Dr. Nancy	
Chapter: 3	12
RESISTING REPRESSION: A STUDY OF BAMA'S KARUKKU	
- Dr. MadhumitaBasu	
Chapter: 4	17
APPLIED LINGUISTICS IN TEACHING ENGLISH	
- Tirzah Samson	
Chapter: 5	24
INNOVATIVE APPROACH TO CREATIVE WRITING: TEACHING PRACTICAL CRITICISM PROSE	
- Dr. Pinky Sagolsem	
Chapter: 6	29
PROFESSIONAL QUALITY OF LIFE AND ITS PSYCHOSOCIAL CORRELATES	
- Dr. HarguneetKaur, Dr. AnuradhaBhandari	
Chapter: 7	41
HARMONIZING PSYCHOLOGICAL DISORDERS IN THE COURSE OF PANDEMIC	41
- SwapnaJangamashetti, PavniRandeo	
Chapter: 8	45
COMPARISON OF DIETARY DIVERSITY AND NUTRIENT ADEQUACY OF OVERWEIGHT AND NON-OVERWEIGHT ADOLESCENTS	45
- Dr. Jisha A Prabha, Dr.K.S. Kumari	
Sovel Research Anthology on Literature Femipicm & Societ State	

ISBN 978-93-90146-06-2

Chapter: 5

INNOVATIVE APPROACH TO CREATIVE WRITING: TEACHING PRACTICAL CRITICISM PROSE

Dr. Pinky Sagolsem

Introduction: "Practical Criticism as its very title suggests, tries to study how the principles of art have been practiced in a given work of art. In theoretical criticism, we discuss, usually, the principles of art, e.g., what is art? What is good art? How many kinds of art are there?. etc.etc. But in the practical criticism of a work of art, ...we try to examine how the components...have been used and whether they have been used properly so as to give ...an adequate form" (Rukhaiyar 1) . According to V.S. Seturaman, C.T. Indra and T. Sriraman Practical criticism, otherwise called applied criticism or even descriptive criticism, may be defined as an attempt to explicate particular poems or passage of prose bringing out what is implied in the choice and arrangement of words, images, etc,., describing precisely what one feels about them and 'placing them'. The guiding principles, theoretical and evaluative, are often not stated, though they must be at work helping and guiding the reader in his interpretation and evaluation. Otherwise he will have no sense of direction or objectivity (pp 3). From these two definitions of practical criticism one can come to a simpler understanding of what is actually a practical criticism and that is practical criticism deals with an insightful study of the working principles of art in a given work of art. Theoretical criticism mainly discussed on the type of art, the value of the art and the types of the art from whereas practical criticism mainly deals with the components of the work of art.

The tracing of the origin of practical criticism is not an easy task as one cannot pin point the origin of it. But it can always associate its origin with Dr. I.A Richard. It can be said that practical criticism starts in the classroom of Dr. Richard. Dr. Richard's observed that the students, their main aim being just passing the exam simply use some adjectives to qualify the



IMRF Publications #1-90 Near VTPS Main Gate Ibrahimpatnam, Krishna Dt, AP Ph : +91 9618777011



ADENUO SHIRAT LUIKHAM

Luna. Bisous. Poesy.

First published in India by PenThrill Poems & Illustrations © Adenuo Shirat Luikham, 2019 All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, without the prior permission in writing from the copyright owner and the publisher.



ISBN: 978-81-940182-2-3

₹300

PenThrill Publication House Billy Graham Road Kohima, Nagaland. penthrill@gmail.com https://www.facebook.com/PenThrillPublicationHouse



MONTHLY VARIATION OF TOTAL EARTHWORM POPULATION IN A SUB-TROPICAL FOREST ECOSYSTEM OF MOKOKCHUNG DISTRICT IN NAGALAND

LILONGCHEM THYUG*., L. N. KAKATI., VETHSELO DOULO., LIRIKUM AND RUOKUOVIKHO DOMINIC Nagaland University, HQ: Lumami- 798601 e-mail:achemthyug@yahoo.com

KEYWORDS Epigeic Endodeic Anecic Moisture content

Received on : 15.08.2019

Accepted on : 22.11.2019

*Corresponding author

INTRODUCTION

ABSTRACT

Amynthas corticis, Amynthas sp.1, Perionyx sp., Drawida sp., Eutyphoeus festivus, Eutyphoeus sp.no.1 and Eutyphoeus marmoreus belonging to three families Megascolecidae, Moniligastridae and Octochaetidae were recorded. However, Amynthas sp.1 was recorded only in the forest ecosystem. The total earthworm density at 0-10 cm in the natural forest ecosystem was maximum in the month of September (88 m⁻²) and minimum in December (22 m⁻²). In the fallow ecosystem, the density fluctuation indicated two peak months *i.e.* June (43.98 m⁻²) and September (64.76 m⁻²). While, in the plantation ecosystem, it recorded maximum in the month of September (57.43 m⁻²) and minimum in December (13.43 m⁻²) at 0-10 cm layer. Among the three sites, reserve forest recorded the highest annual earthworm population density (609.68 Nos. m⁻²) followed by plantation (386.1 Nos. mÉ²) and fallow (356.56 Nos. m²) respectively. Moisture content, Soil temperature and Nitrogen content showed high positive significant relationship in the reserve forest (r = 0.39, P < 0.05; r = 0.49. P < 0.01; r = 0.35, < P0.05), fallow (r = .0.68, P < 0.01; r = 0.79, P < 0.01; r = 0.40, P < 0.05) and plantation (r = 0.39, P<0.05; r=0.51, P<0.01; r=0.37, P<0.05) sites respectively.

Considering the role of earthworm in soil genesis and preservation of soil fertility the great philosopher Aristotle (4th BC) called them "Intestines of earth". Infact, the functional role of earthworms in soil formation, its turnover and organic matter incorporation has also been very well documented by Darwin (1881) in his classical publication "The formation of vegetable mould through the action of worms". Normally earthworms are present in the top 30-40cm layer of soil which is usually moist and have plenty of organic matter. They rarely come out to surface, so they feed mainly on almost decomposed organic matter and soil (Chaudhuri et al., 2008, Blakemore 2010).

Earthworms are scientifically classified as animals belonging to the order Oligochaeta, class Chaetopoda, phylum Annelida ,with about1,800 species of earthworms grouped into five families and distributed all over the world. They have different tolerance to the environmental stress, therefore earthworm species may be diverse within different areas (Edwards 2004). According to their ecological status, earthworms can be classified into epigeic, anecic, and endogeic. Epigeic earthworms live on the ground surface and feed on litters. Anecic earthworms build vertical burrow where one end is opened into the surface. Meanwhile, endogeic earthworms build their burrow in the ground. Climatic status, as well as biotic factors, has been observed to strongly influence the richness and distribution of earthworms (Werner et al., 2005). The number and biomass of earthworms vary significantly among the sites and among the seasons, thus indicating that climate and soil physicochemical characteristics play a major role in earthworm communities (Najar & Khan, 2011). Different physico-chemical factors such as soil texture, soil moisture, food, pH, temperature, soil depth, organic content, carbon, nitrogen, phosphorus, potassium and calcium were reported to be highly responsible for the distribution, abundance, diversity and biomass of the earthworms (Phillipson et al., 1976; Lavelle, 1983; Baker et al., 1993). Furthermore, the fecundity of earthworms is found to be greatly influenced by moisture (Edwards and Lofty, 1972). Soil moisture has a key influence on earthworm abundance and diversity even though other soil properties such as texture, pH and organic matter content may also be important (Edwards and Bohlen, 1996). Blanchart and Julka (1997) have also shown that higher numbers of earthworms are found during wet periods. Whereas some studies on earthworms in India like in Orissa and Garhwal Himalaya has been done by Mishra and Dash (1984) and Joshi et al. (2010) respectively, informations on the ecology of earthworms are still fragmentary and insufficient (Ganihar,, 1996; Chaudhuri, and Bhattacharjee, 1999). While certain works on earthworm population distribution pattern is available from other part of north-east India (Halder, 1999; Lalthanzara et al., 2011; Haokip and Singh, 2012; Dey and Chaudhuri, 2013; Jamatia and Chaudhuri, 2017), there is paucity of such information in Nagaland. In view of that, an effort has been made in this paper to present the variation pattern of earthworm population density and the possible impact on soil fertility in Mokokchung District of Nagaland.

MATERIALS AND METHODS

Earthworms were collected from each site consisting of nine

locations by digging nine 25 x 25 x 30 cm monoliths at regular monthly interval and hand sorting the worms following Anderson and Ingram (1993) and these were preserved in 4% formalin for further identification. Preserved worms were identified with the help of available keys (arrangement of setae, location and size of clitellum, location of genital openings, shape and number of spermathecae, location of gizzard and prostrate gland (Julka, 1988). Density of earthworms was calculated as the number of individuals present per meter square. Soil temperature was recorded every month at 0-10 cm depth using soil thermometer. Moisture was determined by gravimetric method monthly at 0-10 cm depth and was expressed as a percentage of the weight of the sample after oven drying at 105°Cfor 24 hours. From soil monolith where earthworm was sampled a mixture of soil was collected and brought into laboratory, air dried (bigger lumps crushed) and sieved through 2 mm sieve and stored for subsequent chemical parameters analysis. The analyzed soil chemical parameters include pH (1:2 soil water solution), total nitrogen (N) using Kiheldahl digestion method (Anderson and Ingram, 1993), Phosphorus (Bray and Kurtz, 1945 for acidic soil and Olsen et al., 1954 for alkaline soil), organic carbon (Walkley and black, 1934) and Potassium by flame photometer (130) method using ammonium acetate as an extractant. Graphical representation, Correlation coefficient (r) and one way ANNOVA in relation to earthworm density with various soil chemical properties was analysed using ORIGIN Pro 2016.

Description of study sites

The present study was conducted from November, 2014 to October 2015 in three different sites of acontiguous subtropical hill forest ecosystem characterised with gentle to steep slopes viz. Reserved forest (site I), Plantation (site II) and fallow area (site III) respectively located in Mingkong area which is about 10 km away from Mokokchung town. These sites lie at 29° 15′–30° 15′ North latitude and 77° 55′– 78° 30′ East longitude and altitude ranges from 1400 to 1600 m above MSL. The site I is a natural mixed reserved forest with common tree species of Atrocarpus chaplasha, Castanopsis tribuloides,, Iteamacro phylla, Elaeocarpus floribundus, Ficus semicordata, Schima wallichii, Kydia calycina, Macarang adenticulata, Firmiana colorata, Mallotus tetracocccus, Trema orientalis, Sapium eugeniifolium. Shrubs like Tephrosia candida, Vernonia volkameriifolia, Pavetta indica, Styrax serrulata, Abroma augusta, Leeamacro phylla, Crotalaria cytisoides are quite common in the study area. The site is protected from various biotic interference since 1950 having an area of (275.32) hectares. The site II i.e. plantation area is dominated by Daubanga grandiflora. Grasses like Digitaria sp., Panicum sp., Saccharum arundinaceum intermixed with Musa markkuana is common in this study area with infrequent biotic disturbances. Site III is Jhum fallow land since 2004 with infrequent tree species like Macaranga denticulata, Mallotu stetracoccus, Sapium baccatum, Bischofia javanica, Ficus hirta, Ficus semicordata, Schima wallichii. Shrubs flora is dominated by Mussa endaroxburghii, Rubus indotibetanus, Melastoma malabathricum etc. Climbers are guite common and dominated by Dioscore apentaphylla, Smilax perfoliata, Thunbergia grandiflora, Thunbergia coccinea, Paederia scandens etc. Grasses like Saccharum arundinaceum, Themada villosa intermixed with Digitaria sp., and Panicum sp. are guite common in the area.

The climate of the area is monsoonal with warm moist summer and cool dry winter. The year is divisible into three season's viz. summer, rainy and winter. The month of March and October are the transitional months between winter and summer and rainy and winter season respectively. The mean maximum air temperature varied from 25.64°C (January) to 30.8°C (May) and mean minimum air temperature varied from 5.68°C (January) to 23.03°C (July). Minimum monthly rainfall occurred in January (22.5mm) and maximum in July (203mm). The area received an average annual rainfall of 1001.6 mm. Relative humidity was recorded to be maximum in the month of August (83.21%).

RESULTS AND DISCUSSION

Altogether seven earthworm species *viz*. Amynthas corticis, Amynthas sp.1, Perionyx sp., Drawida sp., Eutyphoeus festivus, Eutyphoeus sp.no.1 and Eutyphoeus marmoreus belonging to three families were recorded from the reserve forest(site 1), fallow(site 2)and plantation (site 3) ecosystems in the subtropical hilly forest ecosystem of Mokokchung.Three

Table 1: Co	rrelation and regr	ession analysis between	Density of total earth	worm and soil parameters	(reserved Forest ecosystem
-------------	--------------------	-------------------------	------------------------	--------------------------	----------------------------

Variable	Soil	r	df	Y	t	р	Variability
	layers						(%)
Soil temp.	0-10	0.49	35	13.795 + 0.626 X	3.27	< 0.01	24.1
	20-Oct	0.19	35	17.726 + 0.529 X	0.82	>0.05	1.9
Soil moisture	0-10	0.39	35	34.572 + 1.305 X	2.44	< 0.05	14.9
	20-Oct	0.05	35	29.936 + 0.212 X	0.29	>0.05	0.2
Bulk density	0-10	-0.5	35	1.190 – 0.011 X	-3.39	< 0.01	25.2
	20-Oct	0.03	35	1.201 – 0.004 X	-0.19	>0.05	0.1
Soil Ph.	0-10	0.2	35	5.278 + 0.310 X	1.19	>0.05	4
	20-Oct	0.17	35	5.270 + 0.069 X	1.02	>0.05	3
Nitrogen (N)	0-10	0.35	35	320.206 – 4.825 X	-2.15	< 0.05	12
-	20-Oct	-0.34	35	261.970 – 8.351 X	-2.13	< 0.05	11.8
Phosphorus (P)	0-10	0.24	35	18.198 + 0.325 X	1.44	>0.05	5.7
-	20-Oct	-0.35	35	16.640 – 0.790 X	-2.16	< 0.05	12.1
Potassium (K)	0-10	-0.08	35	132.356 – 1.117 X	-0.45	>0.05	0.6
	20-Oct	-0.08	35	83.020 – 2.054 X	-0.48	>0.05	0.7
Carbon (C)	0-10	0.05	35	2.360 + 0.006 X	0.28	>0.05	0.2
	20-Oct	-0.06	35	1.675 – 0.015 X	-0.35	>0.05	0.3



Figure 1: Monthly variation of soil physical properties in reserved forest ecosystem



Figure 2: Monthly variation of soil physical properties in Fallow ecosystem



Figure 3: Monthly variation of soil physical properties in Plantation ecosystem

species belonged to Megascolecidae family (Amynthas corticis, Amynthas sp.1 and Perionyx sp.), one species Drawida sp. belonged to Moniligastridae family and three species Eutyphoeus festivus, Eutyphoeus sp.no.1 and Eutyphoeus marmoreus belonged to Octochaetidae family. Excepting Amynthas sp.1 which was recorded only in the reserved forest ecosystem, all the remaining six species were common in the three sites. Some Perionyx sp. like Perionyx sansibaricus (Michaelsen), Perionyx excavatus (Michaelsen) and Drawida sp. like Drawida calebi (Gates) and Drawida willsi (Michaelsen) have also been reported by Sinha *et al.* (2013).

It was observed that the variation of earthworm density and diversity in all the three study sites were found to be affected by several microclimatic or abiotic factors of the soil ecosystem. Similarly, Kumari and Sinha (2012) emphasized that anthropogenic interference have a detrimental impact on earthworm biomass and density and further reported 16% higher population density in grassland habitat compare to cropland where land management has been done for long period of time. Among the abiotic factors the soil physicochemical factors such as soil moisture content, soil temperature, bulk density and nutrient content *viz*.total nitrogen and phosphorus have been found to play an important role in the variation of population structure and species diversity of earthworms of the study sites.

In the present investigation, the maximum soil moisture content were found during monsoon season and gradually decreased during pre-monsoon and winter season (Figure 1, 2 & 3). The population density also showed similar trend with highest population density during monsoon season (Fig. 7) wherein moisture was also highest. Monthly variation in the total number of earthworms showed similar pattern in the maximum and minimum points as indicated in Figure 7. The total earthworm population at 0-10 cm in the natural forest ecosystem showed maximum count in the month of September (88 m⁻²) and minimum in the month of December (22 m⁻²). However at 10-20 cm laver, the maximum count was in the month of may (19.55 m^{-2}) with nil records in four months *i.e.* January, July, August and September. Overall, two peaks were observed *i.e.* one in September (88 m⁻²) and the other in May (72.1 m⁻²). Population size of earthworms varies to a great extent in different habitats and different geographical regions.

In the fallow ecosystem, total earthworm population fluctuation indicated two peak months *i.e.* June (43.98 m⁻²) and September (64.76 m⁻²).But at 0-10 cm soil depth September (63.54 m⁻²) and October (42.74 m⁻²) were the two peak months. At 10-20 cm soil depth, November, May and June recorded identical count of 2.44 m⁻² while there was no recordings in the months of January, February, march, April, July and August. Further, the months of September, October and December recorded a similarity of 1.22 m⁻² total earthworm count at 10-20 cm soil layer.

In the plantation ecosystem, total earthworm population recorded maximum in the month of August with 57.43 m⁻² and the minimum was in December with 13.43 m⁻² at 0-10 cm layer. At 10-20 cm, maximum record was in May (11 m⁻²) with nil count in the months of November, January, February, April, July, August and September. Overall two peak months were observed in the month of August (57.54 m⁻²) and September (57.43 m⁻²) respectively. Annually, reserve forest recorded the highest earthworm population density (609.68 Nos. m⁻²) which was followed by plantation (386.1 Nos. m⁻²) and fallow (356.56 Nos. m⁻²) respectively.

The importance of soil moisture content in relation to population of earthworm in India were reported by Dash and Senapati (1980), and by others Julka (1986a and b), Bhadauria

Table 2 : Correlation and regression analysis between Density of total earthworm and soil parameters (Fallow ecosyst	tem)
----------------------------------------------------------------------------------------------------------------------	------

4	Soil	r	df	Y	t	р	Variability
	layers						(%)
Soil temp.	0-10	0.79	35	15.818 + 0.990 X	7.51	< 0.01	62.4
	20-Oct	0.18	35	19.478 + 1.813 X	1.06	>0.05	3.2
Soil moisture	0-10	0.68	35	19.478 + 3.287 X	5.48	< 0.01	46.9
	20-Oct	0.03	35	26.535 + 0.664 X	0.15	>0.05	0.1
Bulk density	0-10	-0.47	35	1.179 – 0.015 X	-3.1	< 0.01	22.1
	20-Oct	-0.13	35	1.164 – 0.054 X	-0.73	>0.05	1.6
Soil Ph.	0-10	0.13	35	5.269 – 0.020 X	0.74	>0.05	1.6
	20-Oct	0.06	35	5.464 + 0.097 X	0.37	>0.05	0.4
Nitrogen (N)	0-10	0.4	35	252.157 – 4.979 X	-2.51	< 0.05	15.6
	20-Oct	-0.07	35	215.967 – 5.876 X	-0.38	> 0.05	0.4
Phosphorus (P)	0-10	0.38	35	14.817 + 1.023 X	2.42	< 0.05	14.7
	20-Oct	-0.07	35	15.325 – 0.964 X	0.39	>0.05	0.4
Potassium (K)	0-10	-0.02	35	153.455 – 0.328 X	-0.11	>0.05	0
	20-Oct	0.07	35	94.339 + 4.544 X	0.43	> 0.05	0.5
Carbon (C)	0-10	0.06	35	2.111 + 0.011 X	0.37	>0.05	0.4
	20-Oct	-0.13	35	1.720 – 0.133 X	-0.77	>0.05	1.7

Table 3: Correlation and regression analysis between Density of total earthworm and soil parameters (Plantation ecosystem)

Variable	Soil	r	df	Υ	t	р	Variability
	layers						(%)
Soil temp.	0-10	0.51	35	17.106 + 0.627 X	3.41	< 0.01	25.5
	20-Oct	-0.03	35	20.161 – 0.146 X	-0.15	> 0.05	0.1
Soil moisture	0-10	0.39	35	31.150 + 1.473 X	2.5	< 0.05	15.5
	20-Oct	-0.17	35	31.233 – 2.156 X	-0.98	> 0.05	2.7
Bulk density	0-10	-0.3	35	1.165 – 0.008 X	-2.31	< 0.05	14.7
	20-Oct	0.1	35	1.209 + 0.010 X	0.59	> 0.05	1
Soil Ph.	0-10	0.16	35	5.441 + 0.024 X	0.92	> 0.05	2.4
	20-Oct	0.19	35	5.279 + 0.111 X	1.11	> 0.05	3.5
Nitrogen (N)	0-10	0.37	35	294.953 – 12.614 X	-2.31	< 0.05	13.6
	20-Oct	-0.03	35	215.360 – 2.612 X	-0.17	> 0.05	0.1
Phosphorus (P)	0-10	0.31	35	14.849 + 1.278 X	2.15	< 0.05	12.8
	20-Oct	-0.17	35	14.210 – 1.394 X	-1.02	> 0.05	3
Potassium (K)	0-10	-0.35	35	139.157 – 9.662 X	-2.15	< 0.05	11.9
	20-Oct	0.44	35	66.956 + 42.237 X	2.83	< 0.01	19.1
Carbon (C)	0-10	0.14	35	2.170 + 0.035 X	0.83	> 0.05	2
	20-Oct	0.39	35	1.693 + 0.341 X	2.47	< 0.05	15.2





and Ramakrishnan, (1989 and1991). Blanchart and Julka, (1997) have also recorded higher number of earthworm during wet periods. The present investigation also correspond to these reports. Conforming to Fragoso et al. (1993) and Fragoso and Rojas (1994), Sinha et al. (2013) also reported from the study of biodiversity of earthworm in Uttarakhand that native species are dominant in natural ecosystem whereas in disturbed



Figure 5:Monthly variation of soil nutrients in Fallow ecosystem

habitat such as agro-ecosystem and artificially managed landscape peregrine species dominate over native population of earthworms. Similarly, even in the present investigation the reserve forest showed maximum presence of earthworms. Among the different edaphic factors studied soil moisture content was found to play the most important role in the fluctuation patterns of the earthworm population. In the present



Figure 6: Monthly variation of soil nutrients in Plantation ecosystem



Figure 7. Monthly fluctuation of total earthworm in different sites.

investigation moisture content also showed high positive significant relationship with the population density of total earthworms in the reserve forest (r = 0.39, P < 0.05), fallow (r = .0.68, P < 0.01) and plantation(r = 0.39, P < 0.05) at 0-10 cm soil layer (Table 1, 2 and 3) indicating the importance of moisture for growth and survival of earthworm population. Rainfall together with relative humidity during rainy season leads to the increased in earthworm's population. Low rainfall and moisture content in winter season almost certainly decreased the population of earthworm which was clearly revealed from the result of the present investigation. Earthworm's population density is the result of the interaction of a number of factors of which moisture is of greater importance (Valle et al 1997). Dash and Patra (1977) reported that the other important factor affecting population density is temperature, and the temperature tolerance of earthworms depends to a great extent on soil moisture. The total earthworm density also showed high positive significant relationship with soil temperature in reserve forest (r = 0.49.P < 0.01), fallow (r=0.79, P<0.01) and plantation (r=0.51, P<0.01) at 0-10 cm soil layer complementing with previous records.

The soil organic C, N, P and K showed similar fluctuation pattern in all the study sites. High gain of soil organic carbon, N, P, and K may be due to higher decomposition rate of litter and availability of all superior micro-climatic conditions which might have enhanced the decomposition process during rainy period. The higher population density of earthworms in reserved forest as compared to fallow and plantation ecosystem may also be attributed to the consistent sustenance of organic C, N, P and K content in the reserved forest which had a direct influence on the availability of food sources of earthworms. Nitrogen content showed positive significant relationship with total earthworm density in the reserve forest(r = 0.35, < P0.05), fallow (r=0.40, P<0.05) and plantation (r=0.37, P<0.05) ecosystems. The nitrogen or % organic carbon in soils greatly influences the distribution of earthworms and soils with low nitrogen content do not support earthworm population (Kale and Krishnamurthy, 1981). This was line with the present result. With phosphorus it showed an insignificant relationship at 0-10 and a negative significant relationship (r = -0.35), P<0.05) at10-20 cm soil layer in the reserve forest. However in the plantation (r = 0.31, P < 0.05) and fallow (r = 0.38, P<0.05) ecosystems, phosphorus showed a positive significant relationship at 0-10 cm layer. At 10-20 cm soil layer in the plantation ecosystem, a very high positive significant relationship (r = 0.44, P < 0.01) was observed with total earthworm density even though no significant relationship could be observed at 0-10 and 10-20 cm soil layer in the fallow and plantation ecosystems.

ACKNOWLEDGEMENT

The authors would like to thank Dr.J.M.Julkha for identifying the earthworm species and the soil and water conservation department, Kohima for technical aide in soil sample analysis.

REFERENCES

Anderson, J. M. and Ingram, J. S. I. 1993. Tropical soil biology and fertility: a handbook of methods. Second edition. CAB International, the Cambrian News, Aberstwyth, United Kingdom. P.221.

Baker, G. H., Barret, V. J., Gerdner-Grey, R. and Buckfeild, J. C. 1993. Abundance and life history of native and introduced earthworms (Annelida: Megascolecidae and Lumbricidae) in pasture soils in the mount lofty ranges, south Australia. *Transaction of the Royal Society of South Australia*. 117:47-53.

Bhadauria, T. and Ramakrishnan, P.S. 1989. Earthworm population dynamics and contribution to nutrient cycling during cropping and fallow phases of shifting agriculture (jhum) in north east India. *J. Applied Ecology.* **26:** 505-520.

Bhadauria, T. and Ramakrishnan, P.S. 1991. Population dynamics of earthworms and their activity in forest ecosystem of north east *India. J. Tropical Ecology.* **7:** 305-318.

Blakemore, R.J. 2010. Cosmopolitan Earthworms – an Eco-Taxonomic Guide to the Peregrine Species of the World. 4th ed. Yokohama (JP): *VermEcology*. pp. 839.

Blanchart, E. and Julka, J. M. 1997. Influence of forest disturbance on earthworm communities in Western Ghats, South India. *Soil Biology and Biochemistry*. 29: 303-306.

Bray, R. H. and Kurtz, L. T. 1945. Determination of total, organic, and available forms of phosphorus in soils. *Soil science*. 59(1): 39-46.

Chaudhuri, P.S. and Bhattacharjee, G. 1999. Earthworm resources of Tripura. *Proc. Nat. cad.Sci.* India, 69(B) II: PP.159-170.

Chaudhuri, P.S., Nath, S., Paliwal ,R. 2008. Earthworm population of rubber plantations (Hevea brasiliensis) in Tripura, India. Trop Ecol. **49:**225-234.

Dash, M.C. and Patra, U.C. 1977. Density, biomass and energy budget of tropical earthworm population from a grassland site in Orissa, India. Rev. Ecol. Biol. Sol. 14: 461-471.

Dey, A. and Chaudhuri , P. S. 2013. Quantifying earthworm species richness in the pineapple and mixed fruit plantations of West Tripura, India. *Eur. J. Soil Biol.* 59: 31-35.

Dash, M.C. And Senapati, B.K. 1980. Cocoon morphology, hatching and emergence pattern in tropical earthworms. *Pedobiologia*. 20: 316-324.

Edwards, C.A, Bohlen, P.J. 1996. Biology and Ecology of Earthworms, Chapman and Hall, U.K.

Edwards, C.A. 2004. Earthworm Ecology. 2nd ed. Boca Raton (US): CRC Press. pp. 424.

Edwards, C. A. and Lofty, J. R. 1972. Biology of Earthworms. Chapman and Hall, London.

Fragoso, C. and Rojas, P. 1994. Soil biodiversity and land management in the tropics. The case of ants and earthworms. In: Transactions of the 15th World Congress of Soil Science. Vol. 4a. Commission III, ISSA, Acapulco, pp. 232-237.

Fragoso, C., Barois, I., Gonzalez, C., Arteaga, C. and Patron, J. C.1993. Relationship between earthworms and soil organic matterlevels in natural and managed ecosystems in the Mexican tropics. In :Soil Organic Matter Dynamics and Sustainability of TropicalAgriculture. K. Mulongoy and R. Merckx (Eds). *Wiley-Sayce Co-Publication*, U.K. pp. 231-239.

Ganihar, S. R. 1996. Earthworm distribution with special reference to physiochemical parameters. Proceedings of the Indian National Science Academy. 62: 11-18.

Halder, K.R.1999. Earthworm. In: State fauna series 4, Fauna of Meghalaya part 9.Calcutta: *Zoological survey of India*. pp. 393-439.

Julka, J.M. 1986a. Earthworms resources in India. In: Proc. Nat. sem. Org. Waste Utiliz. Vermicomp. Part B. Worms and Vermicomposting, Sambalpur University, Orissa, pp. 1-7

Julka, J.M. 1986b. The Earthworms Ecology and Systematics, Zoological Survey of India.

Julka, J. M. 1988. The fauna of India and the adjacent countries. Megascolecidae: Octochaetidae (Earthworms) Haplotaxida, Lumbricina:Megascolecida Octochaetidae xiv, Zoological Survey of India, Calcutta, pp. 400. Miscellaneous Publication. Occ. Pap. 92 Grafic Printall, Calcutta, India, pp. 1-105. Kale,R.D. and Krishnamoorthy,R.V. 1981. Litter preferences in the earthworm Lampito mauriiti. *Proc. Indian Acad. Sci.* 90:123-128.

Kumari,M. and Sinha,M. P. 2012.Impact of tillage and soil management on population density and biomass of a Megascalecid earthworm Lampito Mauritii.*The Bioscan.* **7(3)**: 513-516.

Lalthanzara, H., Ramanujam, S. N., Jha, L. K. 2011. Population dynamics of earthworms in relation to soil physico-chemical parameters in agro-forestry systems of Mizoram, India *.J. Environ. Biol.* 32: 599-605.

Lavelle, P. 1983. The structure of earthworm communities. In: Earthworm ecology from Darwin to vermiculture. (Eds: Satchell,J.E.) Chapman and Hall,London,pp. 449-466.

Mishra, P.C. and Dash, M.C. 1984. Population dynamics and respiratory metabolism of earthworm population in sub tropical dry woodland of western Orissa, India. *Trop. Ecol.* 25: 103-116.

Najar, I. A. and Khan, A. B. 2011. Earthworm communities of Kashmir Valley, India. *Tropical Ecology*. 52(2): 151-162.

Olson, S.R., Cole, C.V., Watanabe, F.S L.A. Dean, L.A. 1954. Estimation of Available Phosphorus in Soils by Extraction with Sodium Bicarbonate United States Department of Agriculture (USDA), Washington, D.C.

Phillipson, J., Abel, R., Steel, J. and Woodell, S. R. J. 1976. Earthworms and the factors governing their distribution in an English beech wood. *Pedobiologia*. **16**: 258-285.

Sinha, M. P., Srivastava, R. and Gupta, D. K. 2013. Earthworm biodiversity of Jharkhand: Taxonomic description. *The Bioscan.* 8(1): 293-310.

Valle, J.V., Moro, R.P., Gravin, H.M., Trigo, D. and Cosin, D.D.J. 1997. Annual dynamics of earthworm. Hormogaster disae (Oligochaeta, Hormogastridae) in Central Spain. *Soil Biology and Biochemistry*. 29: 309-312.

Walkley, A. and I.A. Black. 1934. An examination of the Degtjareff method for determining organic carbon in soils: Effect of variations in digestion conditions and of inorganic soil constituents. *Soil Sci.* 63:251-263.

Werner, U., Adam, C. and Lwona, P. 2005. Earthworm activity in semi-natural and farmland soils, Pol. Agri. Univ., Vol-8, pp. 3-12.

Reflection



Editor : Dr. Abdul Kader Ahmed Sub-Editor : Ronia Parbin **Reflection:** This book is a collection of miscellaneous Research papers and articles on multifarious disciplines on a wide range of contemporary issues edited by Dr. Abdul Kader Ahmed and published by Young Publication.

Editor : Dr. Abdul Kader Ahmed Sub-Editor : Ronia Parbin

Published by:

Young Publications Barpeta Road, Simlaguri Baksa-781313 (Assam) E-mail : youngpublicationsbprd@gmail.com Cont.: 9678955765/9859572724

Distributor:

Shivam Books, Book Bazar, M. N. Road, Panbazar, Guwahati, Assam- 781001

ISBN: 978-81-938714-9-9

Edition : 2020

Price: ₹ 300.00

Printed At : Design Space Bamunimaindam, Guwahati.-21

Disclaimer: The Publisher and the Editorial Board are not responsible for the authenticity of articles published here. Responsibility lies with individual paper writers. All papers have been published in the original form.

CONTENTS

Concept of Environmental Education

Dr. Abdul Kader Ahmed/1

Religion and Environment with Special Reference to Nagaland Dr. Lanukumla Ao/14

Problems of Secularism in India

Dr. Abu Sayem Siddiquee/23

Reinventing Democracy in a Multi-religious Secular State: Exploring the Contested Waves of Religion and Politics in India

Dr. Dhrubajyoti Das/32

Dignity of Women in Islam

Lieutenant Dr. Shahjahan Ali/40

"Zaynab" The First And Origin Arabic Novel: A Critical Study Safiqul Islam/52

The Relevance of Islamic Education in the Modern World: A Study

Dr. Imrul Hussain/61

Multiple Cultures

Mazeda Ahmed, Shamsul Alam/66

Impact of Sufism in India With Special Reference to Shah Waliullah Dehlawi (Ra)

Zahidul Islam Mollah/73

A Concise Discussion on Muslim's Condition in India During Nineteenth Century : With Special Reference to Education Shahidur Rahman/86

Virtual Education amidst Covid-19: It's Adoptability and Challenges for Indian Higher Education

Mr. Abhijit Dakuah/100

Pace Eduction : What, Why, and How Ronia Parbin/119

Religion and Environment with Special Reference to Nagaland

Dr. Lanukumla Ao Don Bosco College,Kohima. Nagaland

Introduction

Man is an integral part of nature. Any impact on nature, therefore, has influence on man. Nature flourishes, man flourishes too. If nature gets destroyed, man is bound to be destroyed. This implies that man's perspective of the sanctity of nature is involved in his perspective of the sanctity of his own nature. Modern man's domination by secularism raises the question as to what degree this secularist perspective, having eroded the traditional sacred view of nature, has led to the present worldwide environment crises on earth. Interestingly, although the destruction of the sacred quality of nature by modern man dominated by a secularist perspective is directly responsible for the worldwide environment crises, the vast majority of the human species, whether participating directly or indirectly in the havoc wreaked upon the natural environment, still live within a world in which religion is still highly regarded (see Love: 2008). Therefore, the role of religion in the solution of the existing crisis between man and nature



ISBN	: 97	8-81	-939	3714	9.9
		Ш			
				Ш	

Designed by 50NU, Ph.: 9101627779

Novel Research Anthology on Literature, Feminism & Social Studies

Dr.Ratnakar D B



NOVEL RESEARCH ANTHOLOGY ON LITERATURE, FEMINISM & SOCIAL STUDIES

Dor. Pinley's Copy

ISBN 978-93-90146-06-2

Editor Dr. Ratnakar D Bala

Published by

International Multidisciplinary Research Foundation, India

NOVEL RESEARCH ANTHOLOGY ON LITERATURE, FEMINISM & SOCIAL STUDIES

ISBN 978-93-90146-06-2

Copyright 2020, IMRF PUBLICATIONS

International Multidisciplinary Research Foundation Ratna Prasad Multidisciplinary Research & Educational Society Andhra Pradesh, India.

All rights reserved.

No part of this book may be reproduced in any form of print & electronic means without the written permission of the copyright owner.

December 2020 Print

Published by

International Multidisciplinary Research Foundation Ratna Prasad Multidisciplinary Research & Educational Society # 1-90, Near VTPS Main Gate, Ibrahimpatnam, Vijayawada, A.P., India

DISCLAIMER

The authors are solely responsible for the contents of the papers compiled in this volume. The Publishers or editors do not take any responsibility for the same in any manner. Errors, if any, are purely unintentional and readers are requested to communicate such errors to the editors or publishers to avoid discrepancies in future.

Typeset & Printing by

IMRF INTERNATIONAL PUBLISHING HOUSE,

1-90, Near VTPS Main Gate, Ibrahimpatnam, Krishna Dt,AP India **Website : <u>www.imrfedu.org</u> | Email: <u>info@imrf.in</u> Mobile : 09533421234**

chapter: 1	1
THEME OF EXILE IN SELECTED POEMSOF LAKSHMI GILL, HIMANI BANNERJI AND SURJEET KALSEY	
- Dr. Toshimenla	
Chapter: 2	6
ARTICULATING THE SOCIO PSYCHO PLIGHT OF WOMEN IN THE SELECTED NOVELSOF SHASHI DESHPANDE	
- Dr. Nancy	
Chapter: 3	12
RESISTING REPRESSION: A STUDY OF BAMA'S KARUKKU	
- Dr. MadhumitaBasu	
Chapter: 4	17
APPLIED LINGUISTICS IN TEACHING ENGLISH	
- Tirzah Samson	
Chapter: 5	24
INNOVATIVE APPROACH TO CREATIVE WRITING: TEACHING PRACTICAL CRITICISM PROSE	
- Dr. Pinky Sagolsem	
Chapter: 6	29
PROFESSIONAL OUALITY OF LIFE AND ITS PSYCHOSOCIAL CORRELATES	
- Dr. HarguneetKaur, Dr. AnuradhaBhandari	
Chapter: 7	4
HARMONIZING PSYCHOLOGICAL DISORDERS IN THE COURSE OF PANDEMIC	
- SwapnaJangamashetti, PavniRandeo	
Chapter: 8	4
COMPARISON OF DIETARY DIVERSITY AND NUTRIENT ADEQUACY OF OVERWEIGHT AND NON-OVERWEIGHT ADOLESCENTS	
- Dr. Jisha A Prabha, Dr.K.S. Kumari	

CONTENTS

Novel Research Anthology on Literature, Feminism & Social Studies

ISBN 978-93-90146-06-2

Chapter: 1

THEME OF EXILE IN SELECTED POEMS OF LAKSHMI GILL, HIMANI BANNERJI AND SURJEET KALSEY

Dr. Toshimenla

Introduction: A writer begins as an individual, though not necessarily on a personal note. On reflection and during discourse one becomes conscious of elements like identity, region, the state or the nation and of cultural difference and acceptance. A sensitive individual has an inherent capacity to absorb the otherness of things, even the otherness of alien culture and negotiated a space within the literary agenda of a growing multicultural society. Many diasporic writers are naturally challenged by a multiplicity of affiliation, and they are compelled to examine the value of "root" and "home." Salman Rushdie in *Imaginary Homelands* talks of the sense of loss experienced by exile and immigrants and their urge to reclaim what was lost. He says that a writer in his own position are "hunted by some sense of loss, some urge to reclaim, to look back, even at the risk of being mutated into pillars of salt" (10). Indeed, in Rushdie's view the immigrant has become the central or defining figure of the twentieth century dramatizing the sense of alienation. Similarly, in *The Location of Culture*, Homi Bhabha describes the diasporic condition through the "disjunctive temporality" which refers to both here and elsewhere; the space of the present location and the remembrance of the past.

Diasporic Indians have been acclaimed in many fields be it medicine, social sciences, humanities, etc gaining international recognition. It often said that 'the sun never sets in Indian diaspora'. Their stories, interwoven with individual themes, amount to a subtle representation of multicultural lifestyles. Following through with their customs, and making time to follow and observe their tradition diasporic writers at times reminiscence about the past. According to Bhikhu Parekh, the Indian Diaspora is one of the most varied experiences, representing "half a dozen religions ... seven different regions of India ... nearly a dozen castes"



IMRF Publications #1-90 Near VTPS Main Gate Ibrahimpatnam, Krishna Dt, AP Ph : +91 9618777011