

Economic Development in India
Problems and Prospects

N.P. Abdul Azeez



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Book Chapter

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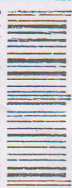
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Rupee Free Fall

Impact on Indian Economy

C. SIVA MURUGAN AND O.Y. SHIRLY

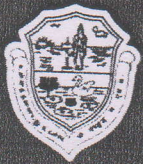
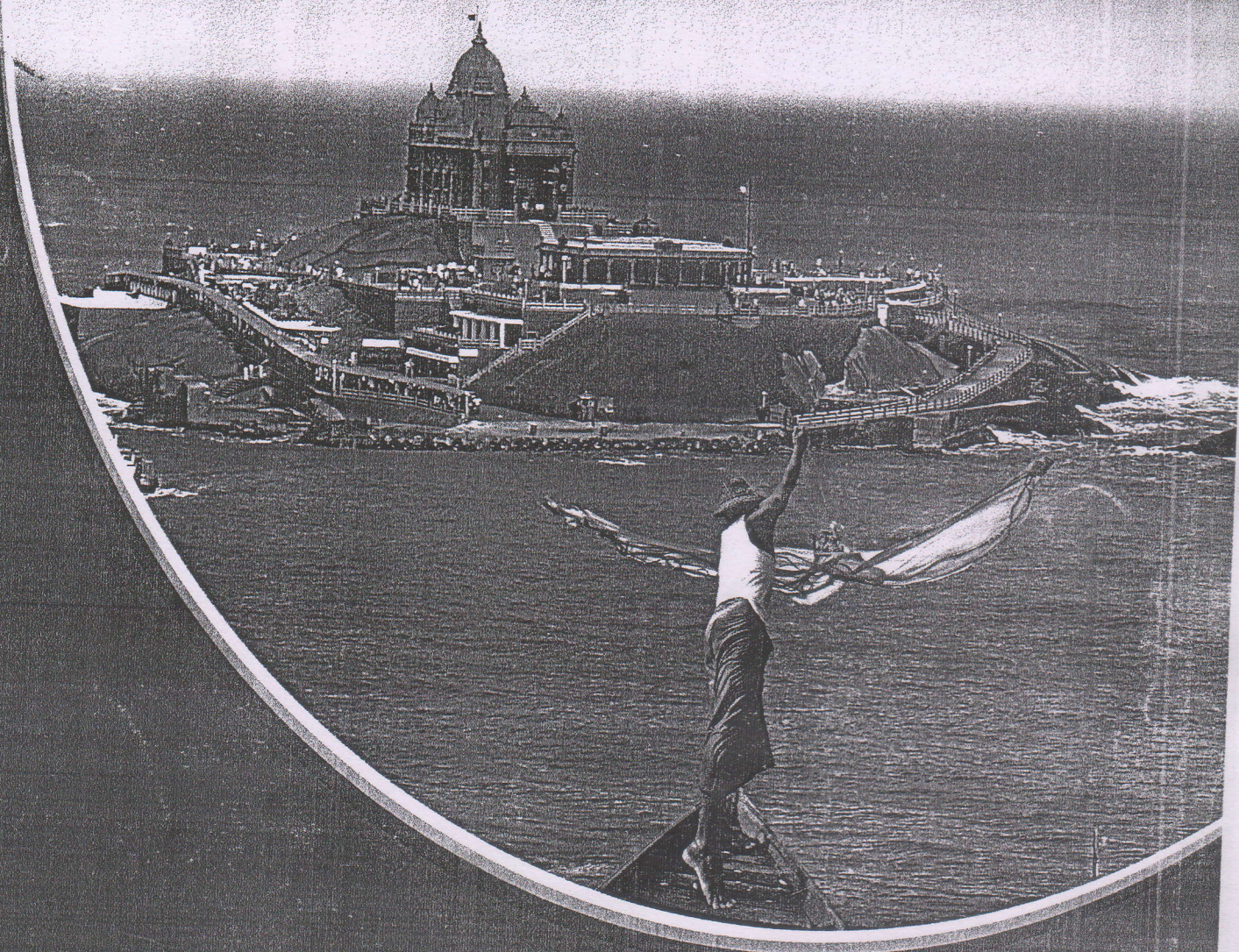
1. INTRODUCTION

The rupee continues to tumble against dollar and touches a new low every day. In spite of a series of stringent measures taken by Reserve Bank of India (RBI), the fall of Indian currency continues unabated against the mighty dollar. A recent Deutsche Bank research note says that the rupee may slide to 70 to the dollar, although some revival is expected by the end of the year. To restrict the outflow of foreign currency, RBI had, however, on August 14 announced stem measures, including curbs on Indian firms investing abroad and on outward remittances by resident Indians. A sustained fall in the value of the rupee would make the going harder for India, which is growing at its slowest speed since 2003, as it would worsen the Current Account Deficit (CAD) and endanger the fall in inflation as imports become costlier. A weakening rupee has adverse macro and micro and micro consequences. The former, through increased inflation via costlier imports and the latter through stress on repayment obligations of companies with external debt. Even the presumed

Marine Fish Economy In India

Editors

Dr. P. BALAMIRTHAM, Dr. C. SIVAMURUGAN



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AN ECONOMIC ANALYSIS OF MARINE FISHING IN KERALA

O.Y.Shirly

Introduction

India has a significant marine fisheries sector which is considered as an important source of occupation and livelihood for at least 3 million people in the coastal communities of India over, 3,600 fishing villages along the Indian coast line. The development has been witnessed in fisheries sector due to the innovative and efficient fishing practices, government policies, developments on the harvest and post-harvest infrastructure and technologies, and the increased demand for fish products in the domestic as well as Indian markets.

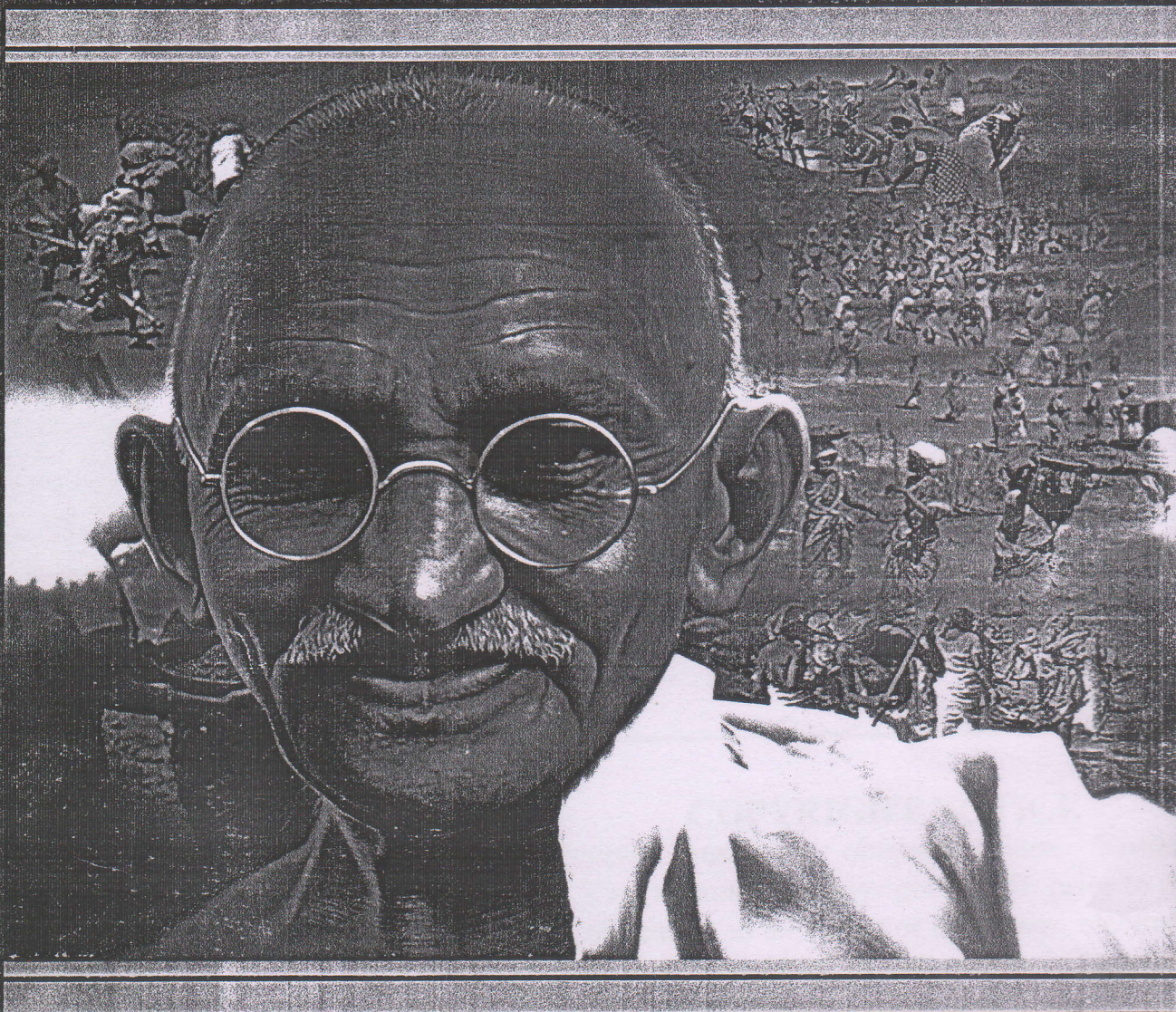
Small scale fish workers belonging to the sector obtain their livelihood from fishing, and small scale trading activities. Total fishermen population in India is about 3.57 million of which 0.81 million are active fishermen. Total fish production in India increased from 0.73 million tonnes in 1950 to 7.85 million tonnes in 2009-2010. Increased demand for seafood has led to the modernisation of the craft and capacity of the vessels, shift towards multiday fishing operation and motorisation of the traditional fishing vessels to increase the efficiency. India is blessed with rich fishery resources comprising of nearly 2,163 species of fin fishes and 1,000 species of shell fishes. Around 200 species of commercially important fin fishes and shell fishes contribute to the marine fishery of the country. Major groups belonging to the pelagic realm are sardines, mackerel, anchovies, carangids, Bombay duck, ribbon fishes, seer fishes, tunas and demersal realm is enriched with sharks, rays, sciaenids, perches, silver bellies, lizard fishes, cat fishes, and crustaceans such as penaeid and non-penaeid shrimps, crabs and lobsters and cephalopods. Distribution and abundance of these species vary from region to region.

Marine Fish in Kerala- an Overview

Fishing is a means of livelihood is an old age occupation. In the epic Brahmanas, Vishnu took the form of a fish (Matsya Avathar) to save Manu from danger. During the Rigvedic periods mention is made about a fishing caste called 'Kaivarta' which belonged to the lower ladder in society. In biblical times the religiosity of Christianity has been interwoven with the tales of fisher folk of those times.



MGNREGP-CHALLENGES, PROBLEMS AND REMEDIES



EDITOR

Dr.P. BALAMIRTHAM

POST GRADUATE & RESEARCH DEPARTMENT OF ECONOMICS,

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**MGNREGP AND EMPLOYMENT OPPORTUNITIES IN
THIRUVANANTHAPURAM DISTRICT**

Dr. SHIRLY O.Y.

Introduction

Mahatma Gandhi National Rural Employment Guarantee Act is an Indian Job guarantee scheme, enacted by legislation on August 25, 2005. It aims at enhancing the livelihood security of people in rural areas by legally guaranteeing at least 100 days paid employment in every financial year to adult members of any house hold willing to do unskilled manual work related to Public work. Covering all the 626 districts of the entire country. It is the largest social welfare programme anywhere in the world. Therefore, India has a rich experience in the implementation of both employment generation programmes and asset distribution schemes. Now a day the largest public employment programme the world has ever seen is a trouble. In 2013-14, 74 million individuals in 48 million house hold in rural India were employed under MGNREGP. The government of India has now imposed a cap on the release of funds to individual states two major proposals that are being seriously considered. On is to restrict the scheme to indentified backward blocks in the country and, two, to after the ration of expenditure between wages and material in favour of the latter. All these add up to essentially dismantling the demand-driven character of MGNREGA and reducing the amount of employment that can be generated every year. If that were to indeed happen it will be a great disservice to the tens of millions of the poor and marginalized who have benefited from this guarantee of up to 100 days of work for a rural house hold. True, MGNREGA has been neither an unqualified nor a universal success. But we should not deny that it has been moderate success in providing employment support to the rural poor.

Back ground and coverage of MGNREGA

MNREGA is a flag ship programme of government of India. The Act was notified initially in 200 most backward districts of the country. The programme aims at enhancing livelihood security of the rural poor. The choice of works suggested in the Act address causes of chronic poverty like drought, deforestation, soil erosion, So that the process of employment generation is on a sustainable basis

Objectives of the study

1. To study the social protection for the people living in rural areas a through providing employment opportunities.
2. To trace the recent development of MGNREGA,
3. To understand the different types of works carried out though MGNREGA and their contribution to agriculture
4. To study the employment status of the respondents.
5. To alter suggestion for the betterment of the respondents.

Need of the study

Even after the 60 years of independence rural poverty and employment are the serious threat to the development of the Indian Economy. The survey highlighted that there is a highest unemployment rate for rural areas among Indian states. The survey also shows that the unemployment rate was very high among females compare to males. The study examines the performance of MGNREGP in Kalikad Grama Panchayat. It helps to know whether this programme helps to overtake the problem of unemployment.

Methodology

The data for this study were collected from both primary and secondary sources. Primary data had been obtained through personal interview method. Secondary data had been collected from the district administrators, journals published records of this panchayat and websites.

MGNREGA in Kerala

A State Employment Guarantee Council (SEGC) is to best up by every state government under section 12 of MGNREGA the SEGC shall advice the state government on the implementation of the scheme, and evaluated and monitor it. In Kerala, the programme started in 2006 in two districts(a) Wayanad and (b) Palakkad, two backward districts in the state) was extended to all the districts by 2008. Kerala's emphasis on decentralization of power and planning process has ensured that panchayat raj. Institutions play the pivotal role in planning and implementation is in the hands of village panchayat. Majority of the MGNREGS participants in the state were engaged in works for improving road connectivity (56.4%) flood control and protection (35.5%), clearing irrigation canals and channels(26.6%) renovation of traditional water bodies (22.6%) and water conservation and harvesting (19.4%). MGNREGA in the state is being extended to forestry operations, involving Yansamrak Shana Smithies (VSS), Economic development committees (EDC) and Kudumhasree, Kerala is a state with about 9.35% of people live under poverty in rural areas.

MGNREGA statistics in Kerala till 2014

Employment provided to household

Person days(in lakhs)	9,31,221
Total	318.68
SCs	53.77(16.87%)
STs	17.85(5.58%)
Women	281.36(88.29%)
Others	247.11(77.54%)
Total fund	587.69crores
Expenditure	471.85crores

The above table relates MGNREG Statistics for Kerala. The total fund allocated for the implementation of the scheme is 587.69 crores; of which 471.85 crore have been spent. Each of which group in employment provided to house hold under NREG scheme course about 9,31,221 that women constitute 88.29% of total.

समकालीन मलयालम और हिन्दी लेखिकाओं के उपन्यासों में चित्रित नारी मनोविज्ञान : तुलनात्मक अध्ययन

डॉ. कविता डी. के.



समकालीन मलयालम और हिन्दी उपन्यास की एक प्रमुख प्रवृत्ति के रूप में महिला लेखन को लिया जा सकता है। समकालीन युग में नारी मुक्ति आन्दोलन और नारी के जीवन स्तर को ऊपर उठाने की चर्चाएँ बृहत्तर हो गयीं तो उसका असर उपन्यास लेखन में भी पड़ने लगा। नारी कई गुणों से संपन्न है। वह कई प्रकार से समाज को प्रभावित करने में समर्थ है। समाज में जो प्रगति आती है वह नारी के द्वारा ही संभव होती है। साहित्यकार को मनोविज्ञानवेत्ता ही होना चाहिए। जिस प्रकार प्रत्येक व्यक्ति के लिए शारीरिक स्वास्थ्य आवश्यक है। मनुष्य अचिरत मनःशान्ति चाहता है जो एक आत्मिक सुख मान है। यह सुख मनोविज्ञान द्वारा प्राप्त हो सकता है। नाटक और उपन्यास तभी सफल होते हैं जब कि साहित्यकार उनमें मानव की सुक्ष्मताम पावनाओं का स्पर्श करता है। समकालीन मलयालम और हिन्दी उपन्यास साहित्य के पात्र मनोविज्ञान से अत्यधिक प्रभावित होकर आए हैं। आज भी नारी जीवन श्रेयस्कर नहीं बना है। इसलिए लेखिकाओं ने अपने उपन्यासों में नारी-जीवन की समकालीन स्थितियों से नारी को परिचित कराने तथा नारी मुक्ति को लक्ष्य करके उनसे यथासाध्य कार्य कराने की कोशिश की है।

समकालीन मलयालम और हिन्दी लेखिकाओं के उपन्यासों में चित्रित नारी मनोविज्ञान : तुलनात्मक अध्ययन

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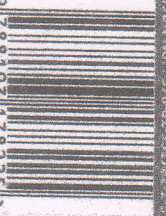
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भूमिका

मानव जीवन एवं व्यवहार का हर पहलू मनोविज्ञान से कम या বেশ प्रभावित होता है। साहित्य सामाजिक जीवन का दर्पण होता है। इसलिए साहित्य में चित्रित पात्रों के व्यवहार में भी मनोविज्ञान के विभिन्न तत्व प्रकट होते हैं। मनुष्य का दिमाग अत्यंत विकसित है और भाषा नामक सशक्त माध्यम के जरिए संश्लेषण का निर्वाह किए जाने के कारण उसके सामाजिक एवं पारिवारिक व्यवहार में हर पल वैयक्तिक, सामाजिक एवं परिस्थितिजन्य कारणों से बदलाव आता रहता है। मानव मस्तिष्क में मनोवैज्ञानिक प्रक्रियाएँ उसके जन्म से ही शुरू होती हैं। इस प्रक्रिया के विभिन्न पहलुओं एवं आयामों के संबंध में वैज्ञानिक अध्ययन - विश्लेषण 19वीं शताब्दी में यूरोप में ही हुआ था, लेकिन एक विज्ञान के रूप में इसकी पूर्णता बीसवीं शताब्दी में हुई जब सिगमंड फ्रायड नामक वैज्ञानिक ने आधुनिक मनोविज्ञान की स्थापना करके मनोविश्लेषण के क्षेत्र में एक नया अध्याय खोल दिया। फ्रायड ने काम सिद्धांत के आधार पर मानव मनोग्रंथियों के विभिन्न रूपों का विवरण प्रस्तुत किया। उनका सिद्धान्त एकदम मौलिक और क्रांतिकारी है और मानव मन एवं व्यवहार से संबंधित अब तक की धारणाओं को उन्होंने पूर्ण रूप से गलत स्थापित किया। फ्रायड के बाद एडलर और युंग जैसे विद्वानों ने भी इस क्षेत्र में महत्वपूर्ण योगदान दिया। तब से लेकर अब तक साहित्य में भी पूर्ण रूप से मनोवैज्ञानिक पात्रों की सृष्टि होने लगी। अंग्रेजी, हिन्दी, मलयालम आदि कई भाषाओं में मनोवैज्ञानिक उपन्यासों, कहानियों, नाटकों आदि की रचना शुरू होने लगी और इस दृष्टि से साहित्य में उपन्यास, कहानी आदि की अलग शाखाएँ भी पैदा हुईं।

प्रस्तुत ग्रंथ, 'समकालीन मलयालम और हिन्दी लेखिकाओं के उपन्यासों में चित्रित नारी मनोविज्ञान : तुलनात्मक अध्ययन' में हिन्दी और मलयालम की लेखिकाओं के उपन्यासों में चित्रित नारी पात्रों के मनोविज्ञान का विश्लेषणात्मक अध्ययन किया गया है। और इसमें यह भी अध्ययन किया गया है कि मनोवैज्ञानिक सिद्धांतों का अनुप्रयोग करने में दोनों भाषाओं की लेखिकाएँ किस हद तक सकल हुई हैं। ग्रंथकर्त्री ने दोनों भाषाओं की लेखिकाओं द्वारा अपने उपन्यासों में चित्रित नारी पात्रों के मनोवैज्ञानिक व्यवहारों की तुलना भी प्रस्तुत की है।

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उपन्यासों में चित्रित नारी मनोविज्ञान का विस्तृत अध्ययन प्रस्तुत किया गया है।

‘सामकालीन मलयालम और हिंदी के प्रतिनिधि लेखिकाओं के उपन्यासों में चित्रित पात्र : मनोवैज्ञानिक विश्लेषण’ शीर्षक पाँचवें अध्याय में दोनों भाषाओं की लेखिकाओं द्वारा चित्रित प्रमुख पात्रों का आधुनिक मनोवैज्ञानिक सिद्धांतों के विभिन्न पहलुओं के आधार पर विश्लेषणात्मक अध्ययन प्रस्तुत किया गया है।

अंत में “उपसंहार” शीर्षक के अंतर्गत समस्त अध्ययन का सार-संक्षेप प्रस्तुत करते हुए अध्ययन का निष्कर्ष निकाला गया है। इस शोध प्रबंध में इन्हीं अध्यायों एवं उपसंहार के अलावा शुरू में विषय संवाद तथा विषय सूची और अंत में संदर्भ ग्रंथ सूची भी दी गयी है।

प्रस्तुत ग्रंथ केरल विश्वविद्यालय के हिंदी विभाग के भूतपूर्व प्रोफेसर और संप्रति अनुवाद परिशीलन केंद्र, केरल विश्वविद्यालय के मानद निदेशक प्रोफेसर डॉ. एन. सुरेश जी के पाण्डित्यपूर्ण निर्देशन में तैयार किया गया है। अतः उनके प्रति मैं सदा आभारी रहूँगी। और इस ग्रंथ की पूर्ति में जिन गुरुजनों, विद्वानों, साधियों ने प्रत्यक्ष या परोक्ष रूप से मेरी सहायता की है उन सबके प्रति मैं आभारी रहूँगी।

सविनय

डॉ. कविता डी. के.

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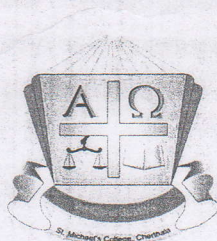
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Structural Characterization of manganese monoxide (MnO) nanoparticles by Combustion synthesis and its dielectric studies.

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Abstract

A simple auto igniting combustion method is employed to synthesize the manganosite MnO nanocrystals. In the aforementioned method, $MnCl_2 \cdot 4H_2O$, the starting material, is dissolved in double distilled water and then it is mixed with citric acid followed by combustion using a hot plate at $250^\circ C$ in a ventilated fumehood. The synthesized material possesses cubic structure with an average crystallite size of 43nm. The band located at 479 cm^{-1} is ascribed to the stretching mode of the Mn^{2+} cations in the cubic co-ordination confirms the crystal structure. The chemical composition was obtained by EDX analysis and confirmed the presence of Mn and O in the sample. The morphology of the nanocrystals shows spherical shape of MnO particles and they are agglomerated to form large sized structures. Dielectric constant, loss factor, DC conductivity and AC conductivity of the nanomaterial at different temperatures were studied with respect to frequency

Introduction

During the past decade, manganese oxides have attracted considerable research interest due to their distinctive physical and chemical properties and potential applications in catalysis, ion exchange, battery technologies and electrodes, molecular adsorption, energy storage and so on [1-5]. Particularly, nanometer sized manganese oxides are of great significance in that their large specific surface areas and small sizes may bring novel electrical, magnetic and catalytic properties than that of bulk materials. Different oxides of Manganese (eg: MnO_2 , Mn_2O_3 , and Mn_3O_4) have been synthesized through various methods. Manganese monoxide



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Higher Education in Kerala-An Overview

Dr. N. S. Vincent Joy, Assoc. Professor
Dept. of Political Science
Christian College, Kattakkada
Thiruvananthapuram, Kerala (State)

Higher education is the mechanism through which the social mobility and development of a state has been framed and formed. It provides the means for human resource development, generating employment opportunities, modernizing society, technical progress of the nation and ultimately as a source of political power. Kerala, once a model state for development (Kerala model of development) now faces acute crisis in terms of performance on many of its parameters - the per capita income, educational and health status. The educational sector especially in higher education, the exceeding politicization of administration of the campus, communalization and commercialization of education, mushrooming growth of self financing private colleges, and disregard for the appointments in higher education have affected the performance of the sector.

Access to Higher Education

Kerala, southernmost state in India, is known for many peculiarities in the field of education, like hundred percent literacy, highest percentage in student enrollment, lowest rate of dropout, higher number of girl student in enrollment than boys. The SC & ST student's enrollment in higher education and their literacy rate are higher than such students of other states in India. The 2011 census data on education released by the Registrar General and Census Commissioner shows that 24 per cent of population of the state is students. Of the total 3.34 crore population, student strength is 79.96 lakhs on which male students are 40.93; female students 39.02 lakhs and college going students 9.84 lakhs. The significant aspect noted in the college going students is that more women are attending the college than men- 4.97 lakhs women against 4.46 lakhs men are attending the classes of higher education.

The last two decades witnessed a mushrooming of large number of Universities and colleges in Kerala. In the State, fourteen Universities owned by the State (with their affiliated colleges of all streams), institutions owned by the Central Government like Central University at Kasargod, Off Campus of Aligarh Muslim University at Malappuram, the IISER (Indian Institute of Science Educational Research, Thiruvananthapuram), IIM (Indian Institute of Management, Calicut), NIT (National Institute of Technology, Calicut), IIT (Indian Institute of Technology, Palghat), Sree Chithira Thirunal Institute of Medical Science (Thiruvananthapuram) etc creating opportunities and catering the needs of higher education facilities in Kerala. Apart from

P-10: CALLUS INDUCTION AND REGENERATION FROM *PREMNA GLABERRIMA* [WIGHT.] DURING IN VITRO CULTURE

S Mahesh¹ and Laija S Nair²

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Axenic culturing of endangered angiosperms is now accepted as a viable form of germplasm conservation, as much as in situ conservation. In fact where the gene pool is restricted or otherwise difficult to maintain, in vitro methods assume paramount importance. In the present study *Premna glaberrima* a rare member of the genus and as yet unexploited one was selected for in vitro manipulation. Nodal and internodal explants from hard wood cuttings maintained in the green house were selected as explants. A two-step sterilisation protocol involving 1% Mancozeb, which is a surface fungicide, followed by .5% HgCl₂ for 3 minutes. This was followed by further treatment using 10% Sodium di chloroisocyanurate (NaDCC) for 30 minutes followed by washing in double distilled water before inoculation. This combination of sterilants was found to be most successful in reducing visible fungal contamination. Inoculation was followed by incubation of the explants at 23+- 20C, and 16hrs of light using fluorescent lamps. Murashige & Skoog media supplemented with 3mg/l BAP and .5mg/l NAA were found to be most productive in caulogenic initiation. Caulogenic initials developed, elongated and initiated leaf primordia within 27 days on average. Plantlets 30 days old were removed from culture and subcultured in MS media with .5mg/L to 3mg/L NAA to induce rooting. Rooting was maximal in media supplemented with 3mg/L NAA. Further studies are warranted to standardise rooting and weaning of plantlets, for future reintroduction schemes.



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AN *IN VITRO* ANALYSIS OF THE ANTI-PROLIFERATIVE EFFECT OF *ANDROGRAPHIS ELONGATA* ON HeLa CELL LINE

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ABSTRACT

Andrographiselongata (Vahl) T. Anderson or Mullurinjii is an endemic medicinal plant. The plant is usually used against many ailments in old Travancore. It is also used for veterinary medicine. Due to the over exploitation, this plant is disappearing from natural habitat. The plant part is used in the treatment of snake bite, diabetes, cough, skin diseases. The main objective of this study is to identify the scientific basis of this plant used in traditional practices. In this study we analyze the anti-proliferative effect of the leaves of *A. elongata* on HeLa cell line. The anticancer effect of the methanol leaf extract was evaluated *in vitro* by employing MTT assay. For evaluation HeLa cell line was treated with the various concentrations of methanol leaf extract. The extract showed dose dependent anti-proliferative activity. The result showed an IC₅₀ value of <100 µg/ml in HeLa cell line. The MTT assay results confirmed the cytotoxicity of the plant.

Keywords: *Andrographiselongata*, HeLa cell line, MTT assay, cytotoxicity

INTRODUCTION

Cervical cancer is both the fourth-most common cause of cancer and the fourth-most common cause of death from cancer in women in the world. About 70% of cervical cancers occur in developing countries. It is the most common cause of cancer death in undeveloped countries. The widespread use of cervical cancer screening programs and early detection reduced the rates of cervical cancer and death. In India also, cervical cancer is the leading cancer among women. The main factors responsible for this disease were early age of marriage, multiple sexual partners, multiple pregnancies, smoking, use of oral contraceptives. Cervical cancer is caused by a virus called Human Papilloma Virus (Das *et al*, 2000). In the traditional system of medicine, plants and its products are used as a remedy for various ailments (Liu and Wang, 2008).

HeLa cell line

In medical research, the most famous immortal cell line known as HeLa was developed from cervical cancer cells of a woman named Henrietta Lacks.

MATERIALS AND METHODS

Plant Material

The leaves of *Andrographiselongata* (Vahl) T. Anderson were collected from Parassala of Thiruvananthapuram district. The plant was identified with the help of different standard texts and flora (Gamble, 1936).

Preparation of methanol leaf extract

The phytochemicals present in the plant material was extracted by soxhlet apparatus. Methanol was used as a solvent. About 1Kg of plant material was weighed and dried under the shade for 10 days. The root, stem and leaves were separated from the whole plant. The dried materials (root, stem and leaves) were powdered and 50 gm of powdered sample of leaves was packed in a thimble and kept in soxhlet apparatus. The solvents used were siphoned by 2 times. The whole apparatus was kept over a heating mantle and heated continuously for 8 hrs at boiling point. The extracts were concentrated to dryness and weighed, the residues were transferred to a pre weighed sample bottles and stored in a desiccator for further studies (Harborne, 1973).

Cell line used

The human cervical cancer cell line (HeLa) was obtained from National Centre for Cell Science (NCCS)

HISTOLOGICAL CHANGES ASSOCIATED WITH HEAVY METAL ACCUMULATION IN *LIZA PARSI* (HAM, 1822) WITH SPECIAL REFERENCES TO OVARIES.

Razeena Karim, L.* and Sherry Williams, J.

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ABSTRACT

Heavy Metals are one of the most important toxicant which destroys the aquatic ecosystem. Their natural effects are carcinogenic and mutagenic. The present study showed the concentration of heavy metals (Fe, Cu, Zn and Pb) in the ovary of *Liza parsi* from two sites of Ashramudi lake, the Ramsar site. The heavy are found to be accumulated more in the site 2 than in site1. The study also demonstrates the histological changes associated with the accumulation of toxic heavy metals in the ovary; there by its reproductive defects. The histological changes in the ovary of the *Liza parsi* includes enlargement of oocytes, degeneration of egg envelope, appearance of atretic follicles, scattering of nuclei etc.

Key words : Heavy Metals, *Liza parsi*, Accumulation, Atresia, Reproductive defects

INTRODUCTION

Aquatic environment is highly diversified ecosystem and is very crucial for the survival of life on earth. In the last decades, contamination of aquatic systems by heavy metals has become a worldwide problem. Heavy metals may enter aquatic systems from different natural and anthropogenic sources, including industrial or domestic wastewater, application of pesticides and inorganic fertilizers, storm runoff, leaching from landfills, shipping and harbour activities, geological weathering of the earth crust and atmospheric deposition (Yilmaz,2007). In natural aquatic ecosystems, metals occur in low concentrations. As they cannot be degraded, they are deposited, assimilated or incorporated in water, sediment and aquatic animals and thus, causing heavy metal pollution in water bodies. Metals entering the aquatic ecosystem can be deposited in aquatic organisms through the effects of bioconcentration, bioaccumulation via the food chain process and become toxic when accumulation reaches a substantially high level. In fish, which is often at the higher level of the aquatic food chain, substantial amounts of metals may accumulate in their soft and hard tissues (Isvad and Usmani,2011). One of the most valuable sources of protein food source the growing human population has increased the need for food supply. Being a good protein source the demand for fish and shellfish products also increased (Bahansaway et al, 2009). The real importance of fish in human diet is not only in its content of high-quality protein, but also to the two kinds of omega-3 polyunsaturated fatty acids: eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). Fish also contain vitamins and minerals which play essential role in human health. Since diet is the main route of exposure to heavy metals, and fish represent a part of human diet, it is not surprising that polluted fish could be a dangerous dietary source of certain toxic heavy metals (Bogut, 1997). The present work therefore highlights the accumulation of heavy metal in *Liza parsi* and histological changes due to accumulation with special reference to ovary.

MATERIALS AND METHODS

Study area: The Kollam district is situated in 80° 50' North latitude and 76°35' East longitude. Ashramudi wetland, the Ramsar site is an estuary, which lies in the Kollam district. Two sites from the Ashramudi Lake was selected for the present study and each site is about 10-12 km away from the bar mouth (Neeedakkara). The 1st site (Perumon), where anthropogenic influx is less and found to be comparatively less polluted. The site II (Kureepuzha), which is adjacent to the waste

dumping site of Kollam district, is considered to be one of the most polluted sites of Ashramudi wetland.

Sample preparation

Liza parsi (Ham, 1822) belonging to family Mugilidae was collected from two sites Ashramudi lake during the period from December 2010 to November 2011. For the analysis of Metals the ovary from the fish were carefully taken and placed in separately pre-weighed acid clean flasks, dried at 80 °C using an oven, digested on a hot plate using HNO₃ and perchloric acid in ratio 2:1, completely digested till all the materials get dissolved samples were filtered through a resistant filter paper (Whatman Filter paper No.40) and filtrate made up to known volume (20ml) distilled water. Content of heavy metal is estimated using Atomic Absorption Spectrophotometer (AAS). For histological studies a piece ovary were fixed in Bouin solution dehydrated in alcohol embedded in paraffin and sections 5-7µm thick were prepared. Sections were stained haematoxylin and eosin and slides were examined by microscope.

RESULT

Accumulation of heavy metal in ovary

The average Concentration of heavy metals in ovary of *Liza parsi* from two sites Ashramudi lake was shown in Fig-1. The mean concentration of copper in Site 1 was 7.8 ± 1.4, while in site 2 it was 15.17 ± 3.9. The concentration of Iron in site 1 and site 2 are 66.47 ± 15.0 and 136 ± 50.0 respectively. The mean concentration of Zinc was found to be 87.55 ± 9.2 in site 1 and 104.1 13.9 in site 2. The accumulation of Lead was found to be 2.91 ± 1.5 in site 1 and 19.21 ± 3.3 in site 2. The most dominant heavy metal accumulated was found to be Iron, followed by Zinc, Copper Lead. It was noted that the second site namely Kureepuzha showed a higher concentration of all heavy metals examined throughout the study period. Site 1 also showed the accumulation of the metals but it was found to be lesser comparable to site 2.

Histological changes

Ovaries of fish from site 1 showed atypical histological picture similar to that of a normal ovary with a number of oocytes showing various stages of maturation. (Fig 2 and 3). Histological studies the ovary of site 2 reveals the effect of heavy metals like enlargement of oocytes (Fig 4,5 and 6) and degeneration of egg envelope (Fig 4,5,6) appearance of atretic follicles (Fig 4,5 and 6), scattering nuclei (Fig 4,5,6) etc.

Fig.1 Pictomicrograph of T.S. of ovary of *Liza parsi* showing normal histopathological details. It did not show any pathological lesions in any fish from site 1 X 100.



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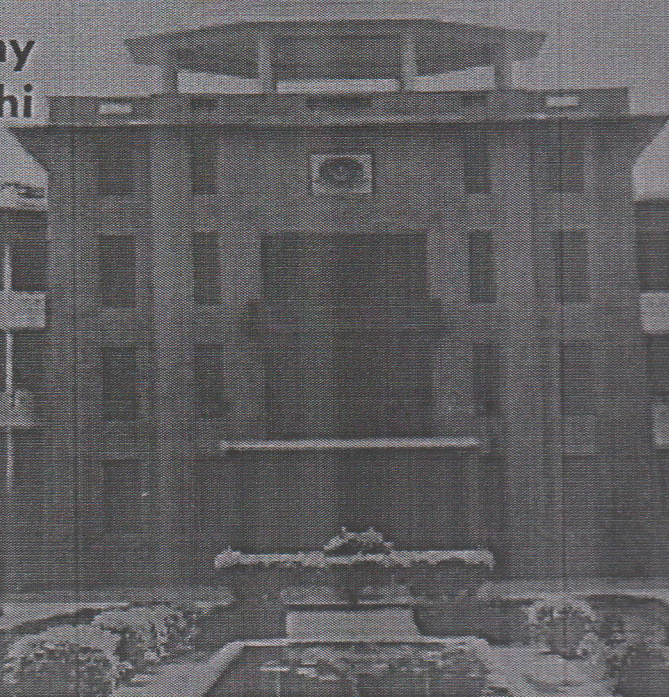
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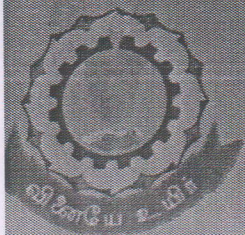
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To Reach the Unreached

2017

Creating an Academic Library Web Site using Word Press

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Abstract

This paper examines the concept of creating a Library Web site, its purposes and the process of creating a Library Web site for extending library service. It also discusses the financial difficulties often encountered in academic library and the suggestion for planning. Library Web site here means electronic service of resources. It is a process in which materials (hard copies) are made available in electronic form using a website. The major purposes are: to enhance access and improve preservation of library materials. A number of challenges are encountered in the process of creating an online library archive. These include human and technical effort. It was concluded that creating a Library Web site is an essential task in modern day libraries, especially in academic field because of the current challenges. The need is to go digital, that is, provide online services.

Keywords: *Academic Library, WordPress, Website*

Introduction

Today library is a hub of intellectual life. Libraries are complex institutions with multiple roles and a host of related operations and services developed over the years. Yet their fundamental purpose has remained the same: to provide access to trustworthy, authoritative knowledge. It is a place set apart to contain books, periodicals, and other material for reading, viewing, listening, study, or reference, as a room, set of rooms, or building where books may be read or borrowed. Libraries are changing faster. This traditional concept of library is being redefined from a place to access books to the one which houses the most advanced media. Everything in and around the library is changing such as services, technologies, organizational constructs, etc. As digital technology has pervaded every aspect of our civilization, it has set forth a revolution not only in how we store and transmit recorded knowledge, historical records, and a host of other kinds of communication but also in how we seek and gain access to these materials¹.

Digitization in libraries

The effective management of change is fundamental to a successful and productive organization. Libraries are now surrounded by networked data that is connected to a vast ocean of Internet-based service. Increasingly librarians serve as instructional designers, collaborating in delivering online learning environments, and as collaborators in the classroom, developing and applying metrics to assess information literacy learning outcomes². Information and Communication Technology (ICT) has enormously increased the capabilities of library services, creating options for networking to provide access to vast stores of electronic information, for more sophisticated library housekeeping systems, and for greater bibliographic access through services³.

Library website: Now-a-days, it is difficult for academic library in India to successfully achieve this process. has to be handle carefully for smooth. Libraries are the repositories of

B-09

A study on histopathological changes in the gonads of an estuarine fish *Liza parsia* (Ham, 1822)

*Razeena Karim L**

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Abstract

*Heavy Metals are one of the most important toxicant which destroys the aquatic ecosystem. Their natural effects are carcinogenic and mutagenic. The present study showed the concentration of heavy metals (Fe, Cu, Zn and Pd) in the gonads of *Liza parsia* from two sites of Ashtamudi lake, the Ramsar site. The heavy metals are found to be accumulated more in the site 2 than in site1. The study also demonstrates the histological changes associated with the accumulation of toxic heavy metals in the gonads thereby its reproductive potential. The histological changes in the gonads of the *L. parsia* include enlargement of oocytes, degeneration of egg envelope, appearance of atretic follicles, scattering of nucleoi etc.*

*Key words: Heavy Metals, *Liza parsia*, Accumulation, Atresia, Reproductive defects*

Introduction

In the last decades, contamination of aquatic systems by heavy metals has become a worldwide problem. Heavy metals may enter aquatic systems from different natural and anthropogenic sources, including industrial or domestic wastewater, application of pesticides and inorganic fertilizers, storm runoff, leaching from landfills, shipping and harbour activities, geological weathering of the earth crust and atmospheric deposition (Yilmaz,2007). In fish, which is often at the higher level of the aquatic food chain, substantial amounts of metals may accumulate in their soft and hard tissues (Javad and Usmani, 2011). Since diet is the main route of exposure to heavy metals, and fish represent a part of human diet, it is not surprising that polluted fish could be a dangerous dietary source of certain toxic heavy metals (Bogut, 1997). The present work therefore highlights



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Structure, Morphology and Optical Properties of SrAl_4O_7 Phosphors by Sol-Gel Method

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2. Assistant Professor, Department of Chemistry, All Saints' College, Thiruvananthapuram, India

Abstract

In this paper, monoclinic SrAl_4O_7 phosphor with different weight percentage of aluminium was synthesized by low temperature sol-gel method. The prepared samples were characterized by X-ray diffraction (XRD) analysis scanning electron microscopy (SEM) and Photoluminescence emission spectra (PL). The XRD analysis showed that SrAl_4O_7 have monoclinic structure. The average size of the particles lies between 50-90nm. It was found that PL emission was obtained at 395 nm, 520 nm, 790 nm corresponding to blue, green and IR region of the spectrum, respectively.

Keywords: XRD, FTIR, SEM, sol-gel method, Photoluminescence.

Introduction

Alkaline earth metal oxides combined with aluminium oxide are of great interest in material science because of use as long duration photoluminescence and thermoluminescence pigments. They have potential use as refractory oxides in the steel industry and binder materials in the cement industry [1]. Many efforts have been made to discover host materials as well as activators with high performance for phosphor applications. Sol-gel method represents an attractive and easy alternative method to conventional synthesis method, such as ceramic firing [2-4], precipitation [5, 6], or ion exchange on supported oxides [7]. The sol-gel process is an efficient technique for the preparation of phosphors due to the good mixing of starting materials and relatively low reaction temperature resulting in more homogeneous products than those obtained by direct solid state reactions. With sol-gel technique, a low temperature (950 °C) has been reported for the successful preparation of MAI_2O_4 powders [8].

Electrochemical Studies on the capacitive behaviour of nanob - MnO₂ prepared by Modified Combustion technique

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Nanoparticles of manganese dioxide are prepared by an auto igniting combustion technique. Structural, morphological, optical, and electrochemical properties are investigated. The X-ray diffraction studies reveal that MnO₂ possesses phase pure tetragonal structure with space group of P_{cab}. The average particle size of the as-prepared nanoparticles obtained from both the Scherrer formula and high resolution transmission electron microscopy is <<30 nm. EDAX confirms the composition of MnO₂. The optical band gap calculated from Tauc's Plot is 3.25 eV. Electrochemical tests reveal that the sample has a high specific capacitance (320 F/g at 0.25 A/g) and good rate capability, which can be attributed to its porous structure. The capacitance retention reaches 89% after 1000 cycles at a current density of 3 A/g. The results show that manganese dioxide may have great potential applications in supercapacitor material.

Keywords: Combustion synthesis, supercapacitor, pseudo-capacitance, charge-discharge process

Introduction

Electrostatic capacitors have been used as energy storage elements for nearly a century, low energy density values have traditionally limited them to low power applications as components in analogue circuits or as short-term memory backup supplies. Recent developments in manufacturing techniques and the ability to construct materials of high surface-area and electrodes of low resistance have the

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Chapter - 2

Insights into Insulin Responses in Fishes

Bindulekha D.S

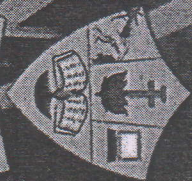
Abstract

Although considerable study has been made of the action of insulin, since its discovery in 1922, very little is known concerning its behaviour with respect to the lower vertebrates especially in fishes. Any study related to the physiological action of insulin must generally include also a study of the blood sugar of the animal or animals concerned. But it is interesting that if we make a study of the blood sugar of a representative number of different types of teleost fishes, we can find that not only is there an extremely wide variation in the percentage of sugar among different species, but that there is also considerable variation among individuals of the same species. Though the concept of insulin in vertebrates is not new; an involvement of insulin in various physiological processes in fishes is still under discussion. Therefore, the analysis of the physiological responses to insulin would offer mechanistic understanding of insulin actions in fishes.

Keywords: Insulin, Fish, Metabolism, Insulin Receptor, IGF

Introduction

Fishes, the most diverse group of vertebrates, exhibit a range of diverse characteristics which makes them one of the most successful groups of animals in the aquatic environment. Fish live in an environment that is considerably different from that encountered by terrestrial vertebrates and have evolved elaborate life history patterns involving morphological, physiological and behavioral adaptations in order to adjust to the vast array of gaseous, thermal, osmotic and other conditions presented in their environments. They exhibit a high degree of heterogeneity in anatomy, physiology, reproductive strategy, behaviour, and ecology (Lagler *et al.*, 1977; Janz, 2000). Among fishes, teleosts are the most numerous species of fish (approximately 96% of all fish species) and these diverse groups of vertebrates (Fabacher and Little, 2000) are considered as the most evolutionary advanced fish (Reid *et al.*, 1998). They possess highly adaptive



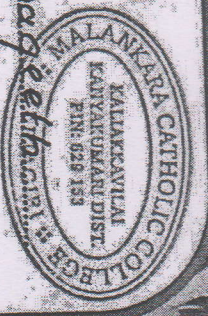
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He/She has presented a paper titled... **Differences between western culture and other culture in China**... **Ms. S. P. Sangeetha**..... **The nature of the individual and his judgement**.....

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Geethu T Mohan

the many results of this is dieting which becomes a normative obsession for women who embark on this journey to become beautiful while they already are, because beauty was never a universal phenomenon. It differs from person to person and on what is one's version of being beautiful is. Ideals are unnatural and hard to fulfil. There is some progress today, as there are women of colour and plus size models in the fashion industry. But this is a partial progress and there is a long way to go. Real progress is overthrowing all oppressive standards. This paper seeks to show how the beauty myth is still at work and brings to spotlight several of the advertisements and re-reads them critically.

15. Difference Between Western Culture and Other Cultures in Chinua Achebe's Essay *The Nature of the Individual and his fulfilment*

S. P. Sangeeth, Principal, Pushpageeth TTI, Kattakada, TVM, Kattakada, TVM, Kerela

Chinua Achebe has been called as "the father of modern African writing". He provided a 'blueprint' for African writers of succeeding generation. He was awarded the Commonwealth Poetry Prize, an Honorary Fellowship of the American Academy of Arts and Letters. According to Chinua Achebe, every human culture, either now or in the past, has confronted, the two realities of social man – individuality and his membership of a group. When the west was ready to enthrone individualism as a consequence of its peculiar political and economic evolution there was Biblical authority ready at hand; in the book of Ezekiel in the Old Testament, we find the collective responsibility supersede by a new morality based on individual accountability. "The soul that sinneth, it shall die" said the prophet (Ezek 18:4). Chinua Achebe takes a poised stance in advocated a correct balance between individual and communal aspects in culture. He points out that even the Igbo culture that favors the hierarchal communal culture gives importance to individuals. Chinua Achebe recommends that an ideal culture should embrace both individual freedom and safeties of the society these two are inseparable and lose its sense in isolation. The culture that needs to excel should strike a clever balance between these two realities, individual freedom and social responsibility.

16. Assorted Lives: A Postfeminist Reading of She Writes: A Collection of Short Stories

N. Thamizhini, Assistant Professor, Department of English, Thiruvalluvar University, Vellore

Change is one thing constant and leaves nothing in its constant state of existence. Evolution is the natural law which makes irrevocable imprints on the historical scale. Society which is in its constant state of flux makes it difficult for its subjects to fathom its depths. The metamorphosed societal structures propels the cultural tendencies of people towards refinement. The impinging effect of these mutated cultural structures on the individuals and in turn it's effect on the society at large becomes a necessary topic of discourse. The dichotomic disputes between the male and the female human species has turned interminable by various feminist doctrines. It becomes a need of the hour to consider the change in the attitude of modern day women to study the health of the society. Women have made a progressive shift from feminism to post feminism; providing opportunities for every individual to voice. *She Writes: a collection of short stories*. The twelve short stories are bound to the limits of three specific themes. This paper intends to give a post feminist reading of the stories that are set against different cultural contexts with in India reasserting the space provided by post feminism for individuals to voice and choose. Women's cultural production is seen as central to consciousness raising and hence leading to social change.

17. 'Palia' and their Archetypal Footprints on the Cultural Trails of Kachchh

Kushal Dilip Dave, Research Scholar, KSKV Kachchh University, Bhuj-Kachchh, Gujarat

This paper focuses on the common information of Palia of Kachchh and the archetypal elements related with them. From Harappan Civilization to the era of Jadeja ruler, the region of Kachchh has a bland of vivid cultures within it. The historical evidence of Sindhu Civilization, the rule of Shishupal (The brother in Law of Lord Shree Krishna), the rule Yadava - Kathi dynasties and the close contact with the region of Sindh(Pakistan) can be seen clearly in the scriptures and archaeological expeditions. Kachchh is the largest district of India (a princely state before Independence) and situated in the State of Gujarat but this region is very much different, geographically and culturally, from the rest of the state. Kachchh, Kathiawar and Sindh (Pakistan) have one such unique feature in their culture and that is Palia .The Palia or Khambhi is a type of a memorial which mostly



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T. B. PREMJIITH KUMAR

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