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INFESTATION OF FUR MITES ON *MUS MUSCULUS* IN MAHARASHTRA, INDIA.

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ABSTRACT

Two species of fur mites namely *Myobia musculi* Schrank, 1781 and *Myocoptes musculus* Koch, 1844 were reported from rearing cages of Swiss albino mice, *Mus musculus* Sonai, District. Ahmednagar, Maharashtra.

Key Words: Mite, Rearing cage, Mice.

Introduction:

Most of the acarological research in India has been focussed on plant and soil acari and comparatively less attention has been paid to undertake research of parasitic mites on rodents, which are not easily visible to naked eyes. Adult and larval stages of fur mites, *Myobia musculi* (Schranck), and *Myocoptes musculus* (Koch) have been recorded from different countries and are commonly found as ectoparasites of house mouse (Gambles, 1952).

Fur mites complete their life cycle on fur, but they move down on skin for feeding on epidermal cells. Those are often found on dorsal surface of the host, particularly on head, neck or flank (Bino Sundar et al., 2017). Of these, *Myobia musculi* causes severe lesions like pyoderma and ulceration on neck, head, and flank of mice, while *Myocoptes musculus* cause infections like erythema, alopecia, traumatic dermatitis, pruritis (Baker, 2007).

Materials and Methods

During present investigation, husk samples were collected from mice rearing cages, at Sonai, Nevasa tehsil, District. Ahmednagar during June to October 2019 and 2020. The husk samples were collected at 9.00 AM, and placed in sampling bottle. Mites were then separated by simple pick-up method

(Jogdand, 2007). Those were then moistened with 4% lactic acid for 23 days and mounted on clean slide with glycerin jelly. The slides were dried, observed under compound microscope, photographs were taken and measurements of specimens were recorded. Mites and their immature stages were identified following Gambles (1952), Watson (1960), Smith (1955), Domrow (1992), Baker (2007) and Bochkov (2010).

Result and Discussion:

Total 132 specimens of mites were collected (Table 1), of which 93 specimens were belonging to *Myocoptes musculus* (family *Myocoptidae* Gunther, 1942; *Astigmata*, *Canestrini*, 1891) and 39 to *Myobia musculi* (family *Myobiidae* Megnin, 1877; *Prostigmata* Kramer, 1877).

Egg, nymph and larval stages of *Myobia musculi* and octopod and hexapod larval stages of *Myocoptes musculus* were collected. The adult body size of males *Myocoptes musculus* ranged from 174-192 μm in length and 153-170 μm in width, while that of females from 310-354 μm in length and 164-199 μm in width.

Adult males of *Myobia musculi* ranged from 252-291 μm in length and 152-178 μm in width, and that of females ranged from 334-372 μm in length and 180-202 μm in width. In both species of fur mites, female specimens were larger than male (Tables 2 and 3).

Table 1. Mite species occurring in a rearing cage of Swiss albino mice.

Family	Species	Total	F	M	Octopod	Hexapod	T
Myocoptidae (Astigmata)	<i>Myocoptes musculus</i>	93	54	21	8	7	3
	-	-	F	M	Nymph	Larva	-
Myobiidae (Prostigmata)	<i>Myobia musculi</i>	39	13	11	9	6	-

Explanations: F female; M male; T- Tritonymph.

Table 2. Measurements (μm) of *Myocoptes musculus*.

Sr. No	Body size of male		Body size of female		Body size of larva Hexapod		Body size of larva Octopod	
	Length	Width	Length	Width	Length	Width	Length	Width
1	192	170	354	199	155	85	208	135
2	186	162	325	184	148	79	174	116
3	185	168	310	164	168	100	210	136
4	174	156	321	181	150	77	214	140
5	180	153	330	188	157	85	178	119
Range	174-192	153-170	310-354	164-199	148-168	77-100	174-214	116-140

Table 3. Measurements (μm) of *Myobia musculi*.

Sr. No	Body size of male		Body size of female		Body size of nymph		Body size of larva	
	Length	Width	Length	Width	Length	Width	Length	Width
1	271	173	351	200	291	185	180	121
2	252	152	350	186	287	181	189	128
3	291	178	372	202	280	176	188	124
4	268	155	334	180	284	179	176	117
5	281	169	349	184	277	169	197	149
Range	252-291	152-178	334-372	180-202	277-291	169-185	176-197	117-149

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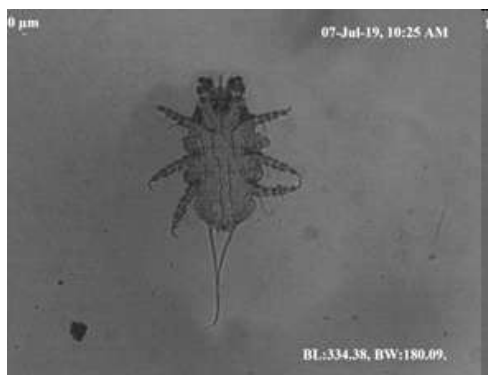


Fig. 1. *Myobia musculi*. Adult female



Fig. 2. *Myobia musculi*. Adult male

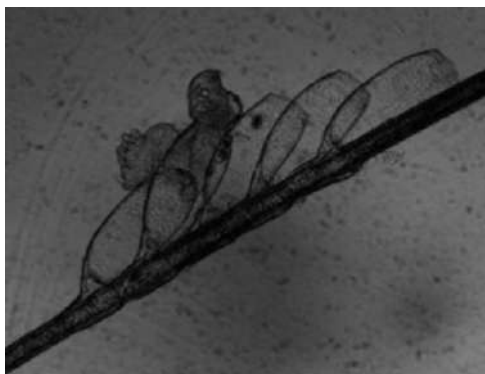


Fig. 3. *Myobia musculi*. Eggs



Fig. 4. *Myobia musculi*. Nymph

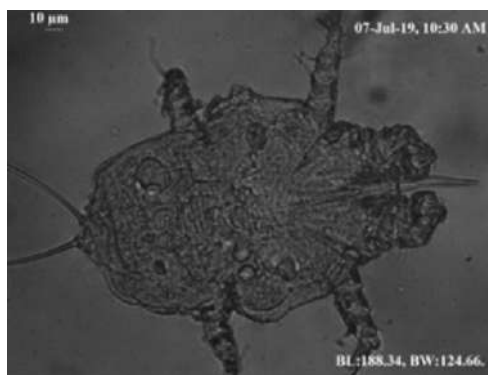


Fig. 5. *Myobia musculi*. Larva female

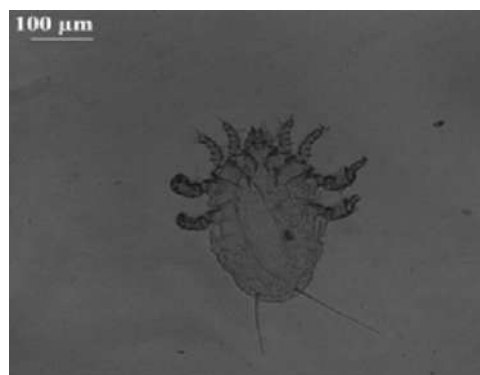
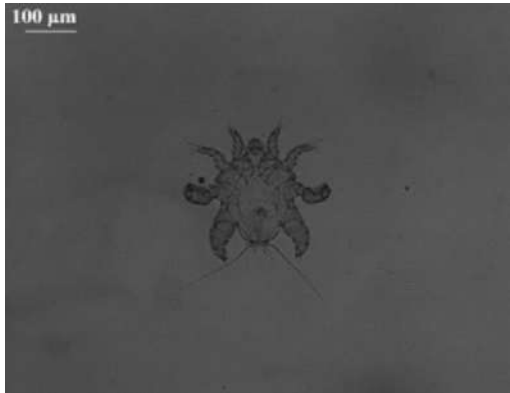
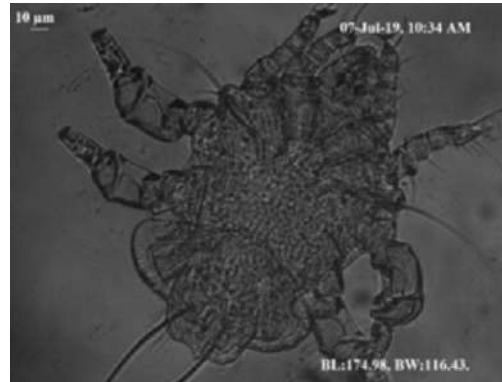


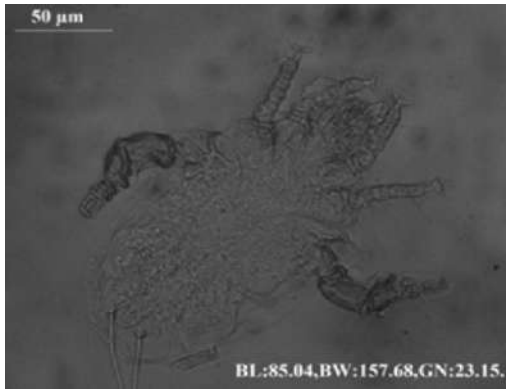
Fig. 6. *Myocoptes musculus*. Adult female



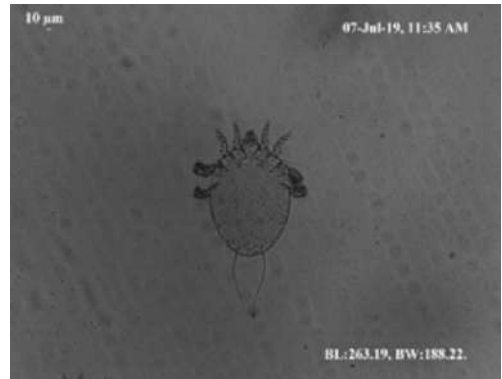
**Fig. 7. *Myocoptes musculus*.
Adult male**



**Fig. 8. *Myocoptes musculus*.
Octopod stage**



**Fig. 9. *Myocoptes musculus*. Larva,
Hexapod stage**



**Fig. 10. *Myocoptes musculus*.
Tritonymph stage**



A REVIEW ON CURRENT STATUS OF RESEARCH ON INSECTS ASSOCIATED MITES

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ABSTRACT:

This paper shows the current status of studies on insect (order: Coleoptera) associated mites' special reference to phoresy from different areas of the world and states of India. Phoresy is a phenomenon of symbiotic association in which transfers of one individual using another animal from one habitat to another. Mites are small microscopic ubiquitous animals that inhabit almost all habitats on earth, while living in these all diverse habitats they greatly adapted to interact with other biotic as well as abiotic components in an ecosystem. Abiotic components like temperature, humidity, and rainfall show an effect on the occurrence of mites as well as host insects in their habitat. Mites show different modes of association with insects like Phoretic (dispersal), Parasitic (hematophagous), Predation and Fungivorous. A coprophagous beetle also plays an important role to maintain and increase the sustainable development of an ecosystem. Dung beetles are feeds and complete their life cycle using cattle dung and they are very easily available transport vehicles in dung manure for phoretic mites. Some mites show morphological adaptation for phoresy. In India, there is very limited research has been conducted on insect associated mites due to its microscopic size as well as sporadic in their habitat thus we initiated a study on phoresy from Ahmednagar, Maharashtra. Some research work in India from West Bengal, Tamil nadu, and Maharashtra were reviewed and at the world level from Canada, Australia, Saudi Arabia, Europe, Malaysia, Turkey, Arizona, Indonesia, Germany, Poland, etc., were studied. This paper revealed that very little research work has been conducted in India as compare to other countries.

Key words: - Mites, Phoresy, Inhabit, Habitat, Biotic, Ecosystem, Sustainable.

INTRODUCTION:

Mites are microscopic arthropods usually less than 1 mm in length placed in class Arachnida which also encompasses ticks, scorpions, spiders, etc. It was suggested that 500,000-1000,000 species of mites exists on earth but out of these only 45000 species named (Hofstetter *et al.*, 2017). Perhaps due to their tiny size, their research study was ignored. But from the last few decades researchers actively showing interest in mites study due to knowing their important role in all ecosystems. Some parasitic and other groups of mites, directly and indirectly, recycle material in the dung and detritus ecosystem along with association with other invertebrates in the same ecosystems. The

study of mites as a bioresource for conservation and sustainable development of an ecosystem has gained worldwide recognition (Jogdand 2007). Most of the predatory mites have adapted to live in habitat association with mammalian dung and many times these mites transfer to another same habitat by the phenomenon phoresy using coprophilous insects that have the same habitat (Krantz 1983). The larvae and adults of dung beetles (Coleoptera: Scarabaeidae) are Coprophagous which feed on the excrement of various mammals (Masan 2009). Mites of family Macrochelidae are biological control agents for synantropic flies thus because of this reason interest has recently

been renewed in microchelid mites (Cicolani 1992).

There is a huge variety among phoretic association especially with dispersal mites (Mesostigmata, Astigmata, etc.) and their beetle hosts. Phoresy is a phenomenon of symbiotic association in which transfers of one individual using another animal from one habitat to another. During this phenomenon, the carried animal is known as phoretic or phoront stops feeding as well as reproduction, phoresy results in dispersal from unsuitable habitat to suitable ones (Bahrami 2011). In the case of phoretic mites most easily available, arthropod hosts to transfer in different ecosystems are beetles (Insecta: Coleoptera), to do that they are morphologically adapted for attachment to the body surface of beetles. They exploit and distributed on different areas of the body of hosts for attachment such as on elytra, wings, thorax, legs, head, and ventral surface. Some species of mites attach themselves using permanent organs such as modified chelicerae (females of Macrochelidae), claws and pulvilli of legs (deutonymphs of Parasitidae) or ventral suckers (hypopodesin e.g. Histiostomatidae, Carpoglyphidae, Acaridae) and claspers (hypopodes in Glycyphagidae) and anal pedicle in deutonymphs of Uropodina mites (Bajerlein 2013). The parasitic mites are one of the threats to other invertebrates like honeybees, one of the best examples is *Varroa destructor* a mesostigmatid mite which is an important enemy of *Apis mellifera* and other honeybees.

Immature stages of some nematodes have particular structures that enable them to attach their hosts for dispersal. Some macrocheles mites act as a vehicle for these phoretic nematodes. (Ramsay 1970).

Insect associated mites research at India and the world level.

A review of literature concerned, there is very less research on insect associated mites has been done in India, whatever work has been done in different parts of India are from south India specifically in Tamil Nadu by (Ramraju, K and Mohanasundaram 1996, 1999, 2001) and from east India specifically in West Bengal by Das & Gupta (2013); Roy et al., (2016) and Sarangi et al., (2010). Honey bee associated parasitic mites have been reported from different states of North India from Haryana and Punjab (Bhaskar & Putatunda 1989), (Putatunda 1996), (Putatunda & Kapil 1988, 1990); Jammu and Kashmir (Abrol and Putatunda 1995), (Prasad 1947), (Kapil et al 1985), (Putatunda and Abrol 2003), (Kotwal et al 2013). In West India, water mites associated with Odonata insects by (Andrew et al., 2015) in Nagpur, Maharashtra. Other than above literature no any other literature was found from west-central India, West India, North India, North-East India, and Central India on insect associated mites.

Research on Insects associated mites especially with coleopteran insects have been more conducted from different parts of world such as New York State (Axtell 1963), (Mollin and Hunter 1964); South Africa (Krantz 1981); Italy (Cicolani 1992); Germany (Schwarz and Muller 1992), (Nehring et al., 2017); Poland (Bajerlein and Bloszyk 2004); Austria (Moser et al., 2005); Colorado (Grossman and smith 2008); Slovakia (Masan and Halliday 2009); Saudi Arabia (Negm and Alatawi 2011); Iran (Bahrami et al., 2011); Abu Dhabi, UAE (Al deeb 2012); Finland (Penttinen et al., 2013); Egypt (Metwally et al., 2014); Czech Republic (Hava 2015); Malaysia (Dilipkumar et al., 2015); Russia (

Vinarski and Korallo-vinarskaya 2016); Indonesia (Hartini and Dwibadra 2017); Arizona, USA (Hofstetter et al., 2017); Brazil (Souza et al., 2018) etc.

RESEARCH METHODOLOGY:

For the study of mites associated with the insects, several host insects (Order: Coleoptera) were collected from the agricultural field, grazing livestock and other possible areas in the Ahmednagar district. Host insects were collected during all seasons of a year at night time using insect net, night traps as well as directly by hands and forceps in the light source from the study area. Insects were attracted to light source among them coleopteran insects were collected separately in sterilized sampling bottles. All developing stages, as well as adults of coleopteran insects, were collected. Sampling bottles were labeled with the name of collector, date, time, location, humidity and temperature. Insects were brought to the laboratory a fresh and examine immediately the different parts of the body such as head, thorax, legs, elytra, regions between thorax and abdomen under Stereo binocular dissecting microscope. Mites from the insect body were separated using fine camel brush which was moistened in 4 % lactic acid and also by brushing the entire body of an insect in a clean Petri dish. Mite infested insect was put in a glass vial having Ethyl alcohol (70 %) and the vial was shaken well to detach mites from the insect body (Negm, 2011).

CONCLUSION:

The study of insect associate mites has gained worldwide recognition due to its Phoretic (dispersal), Parasitic, Predation and Fungivorous role in almost all ecosystems. As literature

reviewed, in India less attention has been paid to this microscopic research and need uplift these studies. Hence we started this study which is lagging.

Our study is ongoing in Maharashtra, from 2018, to observe the phoretic mite diversity, ecology, host specification, population dynamics, and environmental dynamics. Till today total of 58 individuals of beetles (Coleoptera; Scarabaeidae etc.) were collected with associated 734 specimens of phoretic mites. These collections need an investigation to study their identification and ecology which is in process.

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Figure1. Mites attached ventrally to *Omorgus sp.*

SCOPE OF RESEARCH IN YOGA

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Abstract:

Regular practice of asanas, pranayama and meditation can help such diverse ailments such as diabetes, blood pressure, digestive disorders, arthritis, atherosclerosis, chronic fatigue, asthma, varicose veins and heart conditions. Laboratory tests have proved that yogi's increased abilities of consciously controlling the autonomic or involuntary functions, such as temperature, heart beat and blood pressure. Research into the effects of yogic practices on HIV is currently underway with promising results. The Asanas or the postures will help in keeping the muscles, nerves and joints to perform in a benefitting manner and tone up all the internal organs to function effectively without creating fatigue. The Pranayama which is systematic and rhythmic respiration helps to relax the physical and mental organs of the body and keeps every cell oxygenated which helps in metabolism. A lot of research is conducted in Yoga for the prevention of the following; Asthma, Respiratory Problem, High B.P., Back Pain, Arthritis, Weight Reduction, Cancer etc.

Keyword: Yoga

Introduction:

There is a great need of yoga and yogic practices to be taught and also to practice yoga, to overcome physical, mental and physiological problems. My paper largely deals with the mental aspects, as it is the current need. I urge upon the August body to see that yoga to be made simple rather than complex through research for the following reasons. Development of science and technology in the recent years has made man's life fast, busy and full of tensions. The pressure on the muscles has been largely taken away by the machines, but the pressure on the nerves has greatly increased. This has resulted in what are called stress disorders or the psychosomatic disorders. Our mind and body are capable of bearing the load of tension to a certain limit. If tension continues beyond that limit, then the balance of the psycho-physiological processes is disturbed, and that results into various symptoms of mal-adjustment the mind expresses the tension in the form of impulses that flow from the brain to various muscles of the body. If these muscles continue to make an impact on the glands and organs, this will give rise to the malfunctioning of the organ or glands concerned. Unless and until the mind be relieved of the tension prevailing in it, the disorder of the organs concerned can't be rectified. The most important benefit of yoga is physical and mental therapy. The aging process; which is largely an artificial condition, caused mainly by autointoxication or self-poisoning, can be slowed down by practicing yoga.

Regular practice of asanas, pranayama and meditation can help such diverse ailments such as diabetes, blood pressure, digestive disorders, arthritis, atherosclerosis, chronic fatigue, asthma, varicose veins and heart conditions. Laboratory tests have proved that yogi's increased abilities of consciously controlling the autonomic or involuntary functions, such as temperature, heart beat and

blood pressure. Research into the effects of yogic practices on HIV is currently underway with promising results. The Asanas or the postures will help in keeping the muscles, nerves and joints to perform in a benefitting manner and tone up all the internal organs to function effectively without creating fatigue.

The Pranayama which is systematic and rhythmic respiration helps to relax the physical and mental organs of the body and keeps every cell oxygenated which helps in metabolism. A lot of research is conducted in Yoga for the prevention of the following; Asthma, Respiratory Problem, High B.P., Back Pain, Arthritis, Weight Reduction, Cancer etc.

Asthma:

Studies conducted at yoga institutions in India have reported impressive success in improving asthma. It has also been proved that asthma attacks can usually be prevented by yoga methods without resorting to drugs.

Respiration Problems:

Patients who practice yoga have a better chance of gaining the ability to control their breathing problems. With the help of yogic breathing exercises, it is possible to control an attack of severe shortness of breath without having to seek medical help. Various studies have confirmed the beneficial effects of yoga for patients with respiratory problems.

High Blood Pressure:

The relaxation and exercise components of yoga have a major role to play in the treatment and prevention of high blood pressure (hypertension). A combination of biofeedback and yogic breathing and relaxation techniques has been found to lower blood pressure and reduce the need for high blood pressure medication in people suffering from it. Pain

Management: Yoga is believed to reduce pain by helping the brain's pain centre regulates the gate controlling mechanism located in the spinal cord and the secretion of natural painkillers in the body. Breathing exercises used in yoga can also reduce pain. Because muscles tend to relax when you exhale, lengthening the time of exhalation can help produce relaxation and reduce tension. Awareness of breathing helps to achieve calmer, slower respiration and aid in relaxation and pain management.

Back Pain

Back pain is the most common reason to seek medical attention. Yoga has consistently been used to cure and prevent back pain by enhancing strength and flexibility. Both acute and long-term stress can lead to muscle tension and exacerbate back problems. Arthritis Yoga's gentle exercises designed to provide relief to needed joints had been Yoga's slow-motion movements and gentle pressures reach deep into troubled joints. In addition, the easy stretches in conjunction with deep breathing exercises relieve the tension that binds up the muscles and further tightens the joints. Yoga is exercise and relaxation rolled into one - the perfect anti-arthritis formula. Weight Reduction Regular yoga practice can help in weight management. Firstly, some of the asanas stimulate sluggish glands to increase their hormonal secretions. The thyroid gland, especially, has a big effect on our weight because it affects body metabolism. There are several asanas, such as the shoulder stand and the fish posture, which are specific for the thyroid gland. Fat metabolism is also increased, so fat is converted to muscle and energy. This means that, as well as losing fat, you will have better muscle tone and a higher vitality level.

Psychological Benefits Regular

Yoga practice creates mental clarity and calmness, increases body awareness, relieves chronic stress patterns, relaxes the mind, centres attention and sharpens concentration. Self-Awareness Yoga strives to increase self-awareness on both a physical and psychological level. Patients who study yoga learn to induce relaxation and then to use the technique whenever pain appears. Practicing yoga can provide chronic pain sufferers with useful tools to actively cope with their pain and help counter feelings of helplessness and depression. Mental Performance A common technique used in yoga is breathing through one nostril at a time. Electroencephalogram (EEG) studies of the electrical impulses of the brain have shown that breathing through one nostril results in increased activity on the opposite side of the brain. Some experts suggest that the regular practice of breathing through one nostril may help improve communication between the right and left side of the brain. Studies have also shown that this increased brain activity is associated with better performance and doctors even suggest that yoga can enhance cognitive performance. Mood Change and Vitality Mental health and physical energy are difficult to quantify, but virtually everyone who participates in yoga over a period of time reports a positive effect on outlook and energy level. Yogic stretching and breathing exercises have been seen to result in an invigorating effect on both mental and physical energy and improved mood. Spiritual Benefits When you achieve the yogic spirit, you can begin knowing yourself at peace. The value of discovering one's self and of enjoying one's self as is, begins a journey into being rather than doing. Life can then be lived practicing "yoga off the mat". More research should be done in the following areas; Education The very essence of yoga lies in attaining mental peace, improved concentration powers, a relaxed state of living and harmony in relationships. All the above benefits will help the students in their academic achievements. Reasons for introduction of Yoga for students Lack of physical activity, Carrying School Bags, Disability, Mental Pressure, Obesity etc.

Sports: Though Yoga is considered as one of the effective stress busters through pranayama and relaxation techniques it is not taken seriously by majority of the sportspersons as a training component. Reviews and literatures show that Yoga helps in enhancing the vital capacity but again coaches and the trainers give little importance to it.

Conclusion

Researchers should focus on the needs and urgency of the society. This will automatically create demand which will popularize the yogic culture.

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Record of intramural mite *Liponyssoides Muris Hirst, 1913* (Acari: Mesostigmata: Dermanyssidae) on host swiss albino mice *Mus musculus* from, India

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Abstract

This study has been carried out to investigate the mites present in Swiss mice rearing cage and observed the impact of changes in meteorological parameters such as humidity, temperature, and rainfall on the mite population during the monsoon, winter, and summer season. Fortnightly collection and examination of the husk of Swiss albino mice rearing house for one year from 1st June 2018 to 31st May 2019 have been attempted from an educational complex, at Loni, District Ahmednagar, Maharashtra. A total 176 specimens of mites have been collected, screened, and classified into one genus of parasitic mites, *Liponyssoides muris* Hirst, 1913 (Mesostigmata: Dermanyssidae). This interesting study reported the first record of *Liponyssoides muris* from India except for Madras for the first time as a parasite of Swiss albino mice *Mus musculus*.

Keywords: investigate, impact, meteorological parameter, fortnightly

Introduction

Laboratory experimental animals like mice, rats, etc. have been used in biomedical research for various aims. From the 20th-century laboratory mice and rats, etc. have been started to use as experimental models in biomedical research^[1] The intramural ecosystem in animal houses will provide suitable habitat to this Acari fauna so that they can survive and flourish. Having a proper well maintained hygienic conditions in these animal houses, despite these animals have been seen to be infected by ectoparasites like mites.

Different meteorological parameters like temperature, humidity, rainfall, etc., play an important role in maintaining mite populations in their respective habitat. Temperature is one of the most important meteorological parameters which is directly related to the amount of moisture, the atmosphere can hold. Humidity is the amount of water vapour, the gaseous state of water in the air, and relative humidity represents a percentage of water vapour in the air which is relative to humidity maximum amount of water vapour, that changes when the air temperature of the atmosphere changes. During summer conditions as the air temperature increases, relative humidity decreases. When temperature decreases, the relative humidity increases^[3]

At present, the study of mites associated with laboratory mice, rats, and other small rodents in India and other countries is less attended. Hirst 1913 & 1914, first time reported the *Liponyssoides muris* and other parasitic mites found on *Mus rattus*, *Mus norvegicus*, and *Arvicanihis niloticus* in Egypt, later from Madras, India on *Mus rattus* and from Ceylon, Colombo on *Mus rattus*, from Arabia on the rat species. Similarly, it was reported on *Rattus rattus*, from Leopoldville, Belgian Congo^[13], on different rodents from Thailand^[2], on *Funambulus pennanti* Northern Palm Squirrel from Nepal^[14], on murine rodent from Rangoon, Burma^[18], on the Asian house rat, *Rattus tanezumi* from Yunnan Province, China^[18], on *Rattus rattus* from Mangrove forests of Qeshm Island, Iran^[4]

Materials and Methods

The husk has been collected from mice rearing cages at an educational complex from Loni, Rahata tehsil, District-Ahmednagar, Maharashtra, India. Two rearing cages were screened from the mice house every time, in which two mice of the same age and size were present in each cage. For each sampling single alternative cage has been selected. Husk samples include bottom corn beat husk were present in the cage. The husk samples from the mice rearing house have been regularly collected fortnightly during morning time (9.00 AM) manually in clean and labeled sterilized sampling bottles. Mites have also been collected from four corners of the cage and rearing stands by brushing the cage dust with a smooth camel brush. The sample has been examined by taking husk which was spread uniformly in a clean and sterile Petri dish and observed under a Stereo binocular dissecting research microscope with illumination. The influence of environmental parameters on the population of *Liponyssoides muris* has been determined by carrying out the correlation coefficient analysis with the help of SPSS software. The meteorological data on maximum temperature, minimum temperature, maximum relative humidity, minimum relative humidity, rainfall was measured during the study using mini temperature humidity meter HD-303 and averaged for simple correlation analysis.

Isolation, Clearing, and Mounting

Mites have been separated from the husk by using a simple pickup method^[9] The mites were picked up from the sample by using a fine needle, moistened in 4% lactic acid. Ingested blood in the mites has been removed by minute puncturing. Isolated mites have been made clear and transparent by keeping them in 4% lactic acid for 2–3 days. The clearing period depends on the thickness of the cuticles of mites. When cleared, mites were mounted in such a way that the ventral side facing up on a clean slide at a center in a drop of melted glycerin jelly, and a clean cover slip was placed on the mite with sufficient pressure from above so that all

body parts get extended. Slides were dried at N.T.P and preserved as permanent slides for further studies.

Photographs and Identification

The photographs and measurements of specimens were taken using a Leica trinocular research microscope with an attached camera. For SEM analysis, mites were cleaned and cleared in washing for 15 min in 0.05 % HCl or 4% lactic acid. They were then dehydrated by washing for 10 min in a graded series of ethanol alcohols (40 %, 50 %, 60 %, 70 %, 80 %, and 90 %) and finally by 3 x 15 min washes in absolute alcohol ^[5, 15] The mite has been identified following the description, and diagrams of Hirst, 1913 & 1914 and other authentic literature.

Result and Discussion

Total 176 specimens of single species of mite have been collected and studied during this study from an educational complex, at Loni, Rahata tehsil, District-Ahmednagar Maharashtra, revealed *Liponyssoides muris* mite species for the first time from India except for Madras, which is found in parasitic association with laboratory Swiss mice. Recently the genera *Dermanyssus muris* included in the genus *Liponyssoides* of the family Dermanyssidae ^[16, 17] This species is found to feed on the blood of mice and recorded in colonies on corners of rearing cages. Although environmental parameters in the animal house were maintained at a constant range by an air conditioner, the impact of extramural and intramural environmental parameters on the population of *Liponyssoides muris* in three different seasons i.e. monsoon, winter, and summer is observed and studied during this study. The high population load of *Liponyssoides muris* has been recorded during monsoon when humidity is increased and the temperature is moderate followed by winter and summer. A large number of gravid females and eggs have also been obtained during the monsoon. From this observation, it is very clear that increased humidity during monsoon is found favourable for an increase in the mite population and plays a deterrental role in the population dynamics of mites during different seasons.

Taxonomic Account

Order: Mesostigmata Canestrini

Family: Dermanyssidae Kolenati

Liponyssoides muris Hirst, 1913

Dermanyssus (*Liponyssoides*) *muris* Hirst, Bull. ENT. Res., 1913, 4(2):120.

Dermanyssus muris Hirst, Bull. ENT. Res., 1914, 5(3): 216.

Specimens examined

57 females, 41 males, 40 protonymph, and 38 deutonymph from Swiss albino mice *Mus musculus* rearing cage, at Loni, 19.57°N, 74.46 ° E, Ahmednagar district, Maharashtra, India.

Distribution

Previously, *Liponyssoides muris* has been recorded from Egypt, Arabia, Ceylon, and Foemosa, (Madras) India (Hirst, 1913 & 1914), from Leopoldville, Belgian Congo (Lavoipierre 1946), from Thailand (Domrow, 1963), from Rangoon, Burma (Telford *et al.* 1980), from Yunnan

Province, China (Huang *et al.* 2013), from Mangrove forests of Qeshm Island, Iran (Eslami *et al.* 2018).

Remark

This species has never been described since the first original description by Hirst, 1913 & 1914 on *Mus rattus* from Egypt. The species is recorded here for the first time from India except Madras (No any literature available) on host Swiss albino mice *Mus musculus* in the laboratory.

External Morphology

The color of freshly collected mites was red or white depending on when recently blood meal has been taken. Life cycle consists of four developmental stages i.e. egg, protonymph, deutonymph, and adult. Male specimens (Fig. 7) are smaller than female specimen, adult gravid female mite (Fig. 2) attains a length and width of about 1539.20 × 1327.93 μm and male 961.07×702.07 μm.

Gnathosoma of female (Fig. 3) measures 305.10 × 195.18 μm in length and width, pedipalp with five segments, chelicera long, fused and whip like in almost all stages except male, female chelicera measures about 439.64 μm in length.

Idiosoma of this species is oval and covered with a long simple type and almost equal length setae. In both adult male and female individuals have a single dorsal plate and in female with J1-J5 and j1-j6 chaetotaxy, the ventrally sternal plate (Fig. 4) bears three pairs of setae st1, st2, st3, genito-ventral plate present posterior to the sternal plate, and becomes narrower at posterior and wider at anterior. Pairs of platelets situated posterior to fourth coxae in both males and females. Male with a holo-ventral shield with an anal plate in it. The anal plate (Fig. 6) 209.33 × 181.59 μm bears one paired setae and one single setae of almost equal lengths. Paired anal setae inserted at a level with the middle of the anus. Legs with five segments, anterior margin of coxae of the second leg has spur (22.74 μm in length) in all stages.

Protonymph (Fig. 5) of this mite measures 684.69 × 590.08 μm, two dorsal shields, first dorsal shield elongated and tail like posteriorly, Posterior second dorsal shield roughly crescent like with 2 simple setae. Four pairs of platelets present parallel to the posterior end of the dorsal shield.

Relationship between population and weather factors.

The correlation analysis indicated a highly significant positive correlation between the average number of mites and maximum extramural relative humidity ($r = 0.888$); minimum extramural relative humidity ($r = 0.879$); average extramural relative humidity ($r = 0.885$). Besides this positive and considerable significant correlation between the average number of mites and humidity inside the rearing house ($r = 0.726$) and rainy days ($r = 0.459$). Temperature (Maximum, Minimum, and Average), rainfall, and mean temperature inside the rearing house had a negligible significant effect on the population of mites. Coefficient of determination ($r^2 = 0.788$), ($r^2 = 0.772$) and ($r^2 = 0.783$), explains that about 78.85%, 77.26%, and 78.32% variation in the population of mites was accounted due to the variation in the maximum, minimum and mean extramural relative humidity respectively. Similarly, ($r^2 = 0.527$) explains that about 52.70% variation in the population of mites was accounted due to the variation in the mean intramural relative humidity.

Table 1: Monthly occurrence of *Liponyssoides muris* in relation to weather factors in study area.

Months	Average number of mites	Temp, max °C	Temp, min °C	Average temp °C	RH max %	RH min %	Average RH %	Temperature inside the house	Humidity inside the house (%)	Rainfall in mm	Rainy days
June	8	35.6	24.2	29.9	72	55	64	27	45	177	4
July	9	33.8	23.3	28.55	82	66	74	26	64	25	2
Aug	14	31.5	22.1	26.8	88	71	80	25	73	73	3
Sept	20	30	20.1	25.1	86	66	76	24	64	30	2
Oct	19	30.8	20.4	25.6	76	62	69	27	45	0	0
Nov	8	26.6	17.2	21.9	58	41	50	22	34	32	2
Dec	5	24.9	14.1	19.5	53	39	46	22	42	0	0
Jan	4	22.33	14.6	18.46	45	41	43	23	42	0	0
Feb	2	27.5	20.4	23.95	38	31	35	23	38	0	0
Mar	0	33.5	24	28.8	36	31	34	24	37	0	0
Apr	0	35.2	25.1	30.15	24	20	22	27	20	0	0
May	0	36.8	25.2	31	23	20	22	28	23	0	0

Table 2: Correlation co-efficient between mite and weather parameters.

Weather Parameters		Correlation co-efficient (r)	Coefficient of determination (r ²)	Coefficient of variation (%)
Temperature °C	Maximum	-0.102	0.010	1.04
	Minimum	-0.102	0.010	1.04
	Average	-0.180	0.011	1.16
Mean temperature (°C) inside the house (Intramural)		0.041	0.001	0.16
Relative Humidity%	Maximum	0.888**	0.788	78.85
	Minimum	0.879**	0.772	77.26
	Average	0.885**	0.783	78.32
Mean relative Humidity % inside the house (Intramural)		0.726**	0.527	52.70
Rainfall (mm)	Total	0.252	0.063	6.35
Rainy days	Total	0.459	0.210	21.06

** Significant at P= 0.01 level



Fig 1: Egg of *Liponyssoides muris*

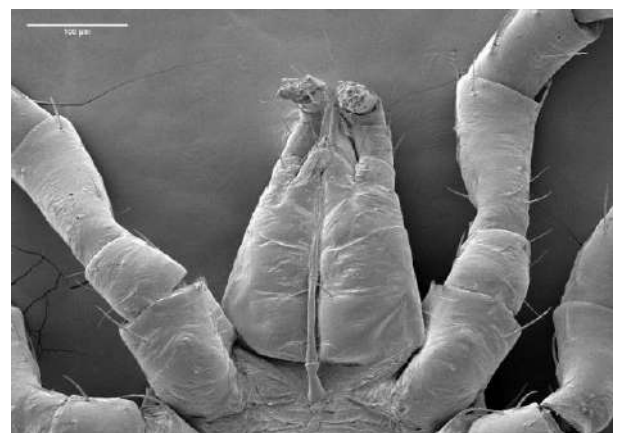


Fig 3: Gnathosoma of *Liponyssoides muris* Female

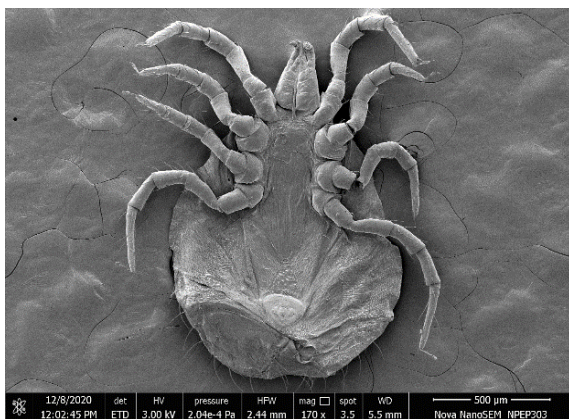


Fig 2: SEM picture of *Liponyssoides muris* Ventral view of Female.

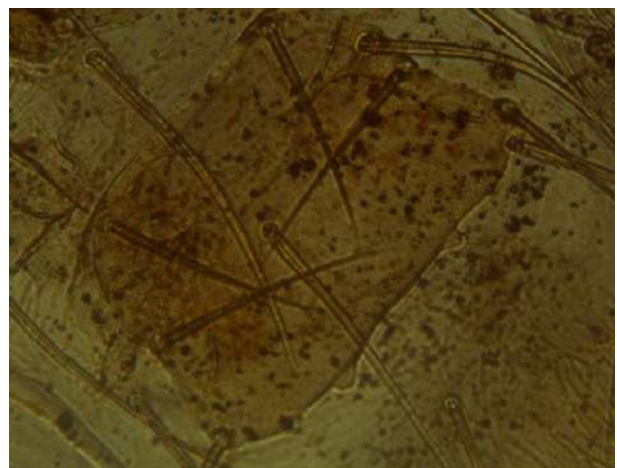


Fig 4: Sternal plate of female

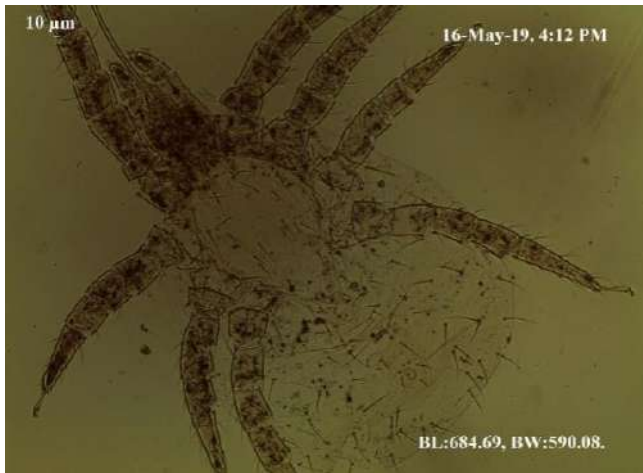


Fig 5: *Liponyssoides muris* Ventral view of Protonymph

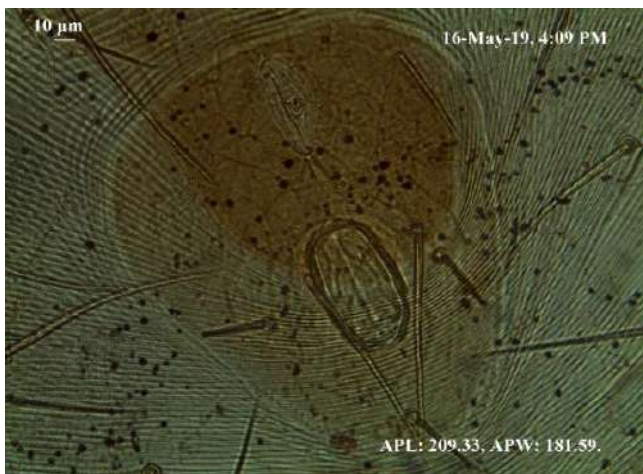


Fig 6: Anal plate of *Liponyssoides muris* Female



Fig 7: *Liponyssoides muris* Ventral view of male

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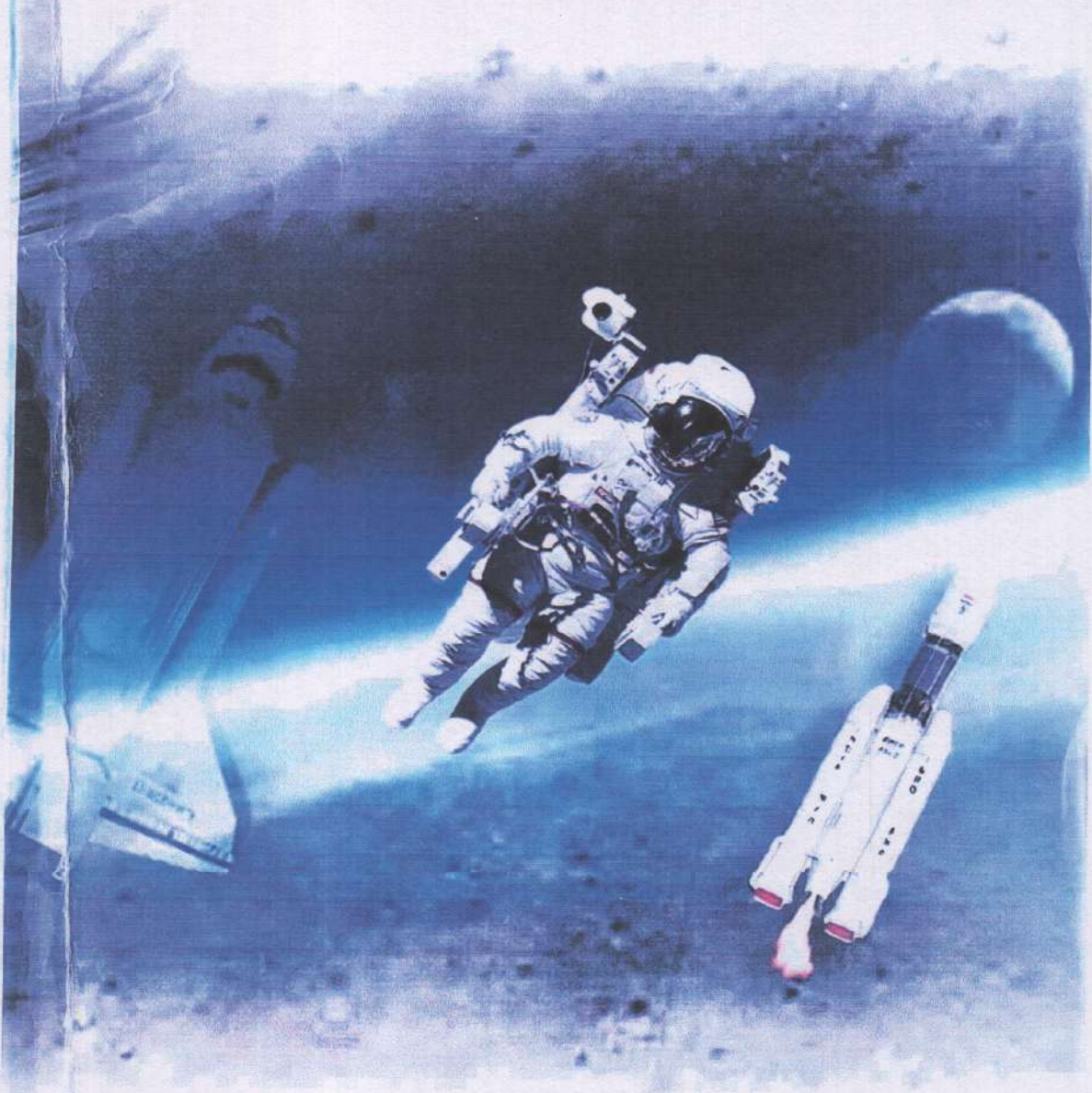
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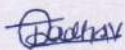


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37	फॉस उपन्यास के संघर्षशील किसान स्त्री पात्र	प्राजकता पवार यादव	161-164
38	ग्रामीण एवं शहरी हाई स्कूल स्तर के विद्यार्थियों का विज्ञान विषय में उच्च मानसिक योग्यता का उनके शैक्षिक विकास पर पढ़ने वाले प्रभाव का तुलनात्मक अध्ययन	डॉ. संगिता सराफ मोनिका चौबे	165-168
39	भारतीय वाङ्मय में नाट्यशास्त्र का महत्व एवं वैशिष्ट्य	डॉ. अंशुमान बल्लभ मिश्र	169-171
40	महानगरीय सभ्यता के बीच टूटते जीवन मूल्यों का चित्रण - 'नरक मसीहा'	डॉ. सुनीता नारायणराव कावळे	172-175
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42	विधवा उपन्यास की त्रासदी : तापसी	डॉ. कामिनी तिवारी	181-184
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44	नारी विमर्श का एक नया अध्याय: शकुंतिका	डॉ. गिरीष एस. कोळी	188-191
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48	अनामिका की कविताओं में सामाजिक बोध	डॉ. जगदीश बन्सीलाल चव्हाण	204-207
49	गुप्तोत्तर कालीन भूमि पद्धति (मध्यप्रदेश के 7 वीं सदी से 13 वीं सदी तक के विशेष संदर्भ में)	डॉ. (श्रीमति) पप्पी चौहान	208-212
50	हिन्दी की राष्ट्रीय काव्यधारा में माखनलाल चतुर्वेदी का योगदान	डॉ. कांबळे आशा दत्तात्रय	213-216



 डॉ. ~~मीना~~ बोर्वणकर

शोध निर्देशक

अध्यक्ष : हिंदी विभाग

आवासाहेब गरधारे महाविद्यालय, पुणे

36

"पीटरपौल एक्का के उपन्यासों में चित्रित आदिवासी समस्याओं का समाजशास्त्रीय अध्ययन"

प्रा. एकनाथ गणपती जाधव

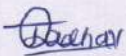
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साहित्य समाज का दर्पण होता है। साहित्यकार समाज में रहने वाला व्यष्टि है। उनके साहित्य में समष्टि का लेखा-जोखा आना स्वाभाविक है। साहित्यकार अपने परिवेश एवं परिस्थितियों का वर्णन अपने साहित्य में करता है। स्वाभाविक रूप से जिस समाज एवं देश काल में वह रहता है उसकी सामाजिक, आर्थिक एवं धार्मिक परिस्थितियों का समावेश साहित्य में अनायास ही अभिव्यक्त हो जाता है। प्रस्तुत शोध आलेख पीटरपौल एक्का के उपन्यासों में चित्रित आदिवासी जीवन की समस्याओं का अध्ययन करना मुख्य केंद्र रहा है। सामाजिक विषमता एवं आर्थिक शोषण, बेरोजगारी, विस्थापन, नारी शोषण, आर्थिक व्यवस्था, नशाखोरी, भूख एवं दिक्कूयों का बढ़ता हस्तक्षेप आदि मुद्दों के माध्यम से आदिवासी समस्याओं की स्थिति, गति, परिणाम एवं कारण को समाजशास्त्रीय दृष्टि से अध्ययन करना अत्यंत आवश्यक है।

विवेच्य उपन्यासों में आदिवासियों का दिक्कूयों एवं सरकारी अफसरों द्वारा शोषण हुआ है। उपन्यास में आदिवासियों का आर्थिक, मानसिक एवं शारीरिक शोषण अधिक मात्रा में हुआ है। सुब्बाराव जालसिंह, चैतूसिंह, जर्मीदार, साहूकार, ठेकेदार, व्यापारी एवं व्यवस्था ने आदिवासियों का शोषण किया है। 'मोहन घाटी' उपन्यास में नारी, वस्तुएं, श्रम आदि का शोषण हुआ है। 'जंगल के गीत' में लगान, वेठ बेगारी, घर के पशु-पक्षी एवं वस्तुओं को छीना गया है। 'पलाश के फूल' में श्रम, जमीन, घर की नारी आदि का शोषण हुआ है। 'सोन पहाड़ी' उपन्यास में आदिवासी प्राकृतिक संपदा से संपन्न क्षेत्रों में रहते हैं फिर भी वह अपने भूख को मिटाने के लिए अनाज से भरी गाड़ी को लूटते हैं? यह क्यों और किस कारण? "(एक तो गरीबी, अशिक्षा, ऊपर से साहूजी का शिकंजा, लाला की दारू का जलवा, सब तो खून चूसने ही वाले हैं)" (पलाश के फूल-39)

बदलती जीवन शैली, दिक्कूयों का हस्तक्षेप, व्यवस्था की गलत नीतियों के परिणाम आदिवासियों में बेरोजगारी बढ़ रही है। 'मौन घाटी' में वन कानून, पारंपरिक व्यवसाय पर पाबंदी आदि कारणों से बेरोजगारी बढ़ी है। 'पलाश के फूल' में आदिवासी विकास योजना की विफलता एवं आदिवासियों की वास्तविकता का चित्रण हुआ है। जंगल का रक्षक अपनी भूख के लिए पेड़ काटते हैं। 'सोन पहाड़ी' में राज्य-राष्ट्र निर्माण के लिए बना कोकिला परियोजना का डैम आदिवासियों की बढ़ती बेरोजगारी को रोक नहीं सका है। "हर दिन वहां कुछ लोगों को इलाका छोड़ते देखता लोग रोजी-रोटी की तलाश में घर छोड़े अनजानी दिशाओं में चल पड़े थे एक अंतहीन भटकावा" (सोन पहाड़ी - 31)

आधुनिकीकरण एवं राज्य-राष्ट्र निर्माण के नाम पर आदिवासियों को अपनी संस्कृति, जल, जंगल, जमीन एवं अस्तित्व से जबरदस्ती से विस्थापित किया जा रहा है। 'मौन घाटी' में दिक्कूयों का बढ़ता हस्तक्षेप एवं बदलती जीवन शैली के कारण बेरोजगारी की समस्या बड़ी है।



डॉ. मीला बोवणकर

शोध निर्देशक

अध्यक्ष : हिंदी विभाग

आबासाहेब गरवारे महाविद्यालय, पुणे

पुरखों की विरासत से उन्हें बेदखल किया है। यह विस्थापन के कारण है। 'जंगल के गीत' में बदलती परिस्थिति एवं जीवन शैली के कारण आदिवासियों का विस्थापन हुआ है। "जंगल के पेड़ काटे जा रहे हैं..... अब वह धूमकुडीयां रह गया था, ना पेलो।" (जंगल के गीत 194)

'पलाश के फूल' में जंगल पर पाबंदी, अकाल, सरकारी नीतियों की विफलता, दिक्कतों की शोषण वृत्ति आदि कारणों से आदिवासियों को विस्थापित होना पड़ा है। 'सोन पहाड़ी' डैम से प्रभावित आदिवासी खेती से वीट भट्टी के मजदूर बन गए हैं। उन्हें जाति एवं संस्कृति से विस्थापित किया है। आदिवासियों में मातृसत्ताक संस्कृति के कारण महिला अपने परिवार एवं समाज के लिए काम करती है। कार्य करते समय उसका दिक्कतों एवं अफसरों द्वारा शारीरिक एवं मानसिक शोषण हुआ है। 'मौन घाटी' में जाल सिंह, मनसुख, हरिया आदियों ने संध्या, आयती, सुधा, जलयारी आदि स्त्री पात्रों का शोषण किया है। शोषण गरीबी, मजदूरी एवं धोखे से किया है। 'पलाश के फूल' में दिक्कतों से रतिया आया एवं सड़क पर मजदूरी का काम करने वाली कुंवारियां शोषित है। यह शोषण पैसों के बल पर, मजदूरी, धोखा एवं बदले की भावना से किया है। 'सोन पहाड़ी' में डैम के ठेकेदार एवं दिक्कतों ने फूलमती एवं अन्य स्त्रियों का शोषण किया है। आदिवासी शरीर की रक्षा के लिए भूख से मरना पसंद करता है। "हरिया, जाल सिंह, मनसुख, सुब्बाराव जंगल के एक ही दरिंदे थे। उनके चक्रव्यूह में जाने कितनी मासूम जाने गई थी।" (मौन घाटी 30)

आदिवासी मूलतः पर्वत पहाड़ एवं जंगलों में निवास करता है। प्राकृतिक धन संपदा से संपन्न क्षेत्रों में रहने वाले आदिवासियों के जीवन में अधिक परिवर्तन आया है। मानव निर्मित एवं प्राकृतिक कारणों से आदिवासियों के जीवन में आर्थिक दुरावस्था आयी है। 'मौन घाटी' में साहूकार, व्यापारी, सामाजिक बुराइयां एवं अकाल के कारण आर्थिक दुरावस्था है। 'जंगल के गीत' में लगान, अकाल, जंगली प्राणी एवं दिक्कतों के कारण आर्थिक दुरावस्था है। उन्हें जिंदा रहने के लिए कंदमूल एवं फल को खाना पड़ता है। 'पलाश के फूल' में अकाल, जंगल पर पाबंदी, स्थायी रोजगार का अभाव एवं ठेकेदार, व्यापारी के हस्तक्षेप से यह समस्या आदिवासियों में आयी है। इस स्थिति को वे नियति मानकर जीते हैं। "मजदूरी ना मिले तो जीवन कैसे चलेगा इधर तो एक साल से बर्षा भी ठीक हो नहीं रही थी।" (पलाश के फूल 23)

'सोन पहाड़ी' में जल, जंगल, जमीन का छीनना एवं सरकारी ऑफिसर की अकर्मण्यता का दुष्परिणाम आदिवासियों को झेलना पड़ता है। भूख एवं दरिद्रता उनके जीवन का हिस्सा बन गया है। आदिवासियों में बूढ़े बुजुर्ग द्वारा नशा करना एक परंपरा रही है। आज यह नशा का परंपरा से आगे बढ़कर उनके जीवन का हिस्सा बन गई है। जिसके दुष्परिणाम व्यक्ति, परिवार, समाज का बिखराव, जल, जंगल, जमीन एवं संस्कृति से बिखराव यह सब नशा के कारण हुआ है। दिक्कतों का हस्तक्षेप इनके लिए एक समस्या है। 'मौन घाटी' में मनसुख के दारु की दुकान से आदिवासियों का विवेक खत्म होता है। धामन यह पात्र दारु के लिए अपने ही लोगों को मारने के लिए तैयार होता है। 'जंगल के गीत' में धार्मिक उत्सव एवं खुशियों के समय बूढ़े बुजुर्ग शराब पीते हैं। किशन के दारु की दुकान से आदिवासियों में नशा की आदत पड़ गई है। युवकों के प्रयास से इस दुकान को बंद किया जाता है। 'पलाश के फूल' में सरजू एवं अन्य आदिवासी हीरालाल की दुकान के कारण नशा करते हैं। वे व्यक्ति, परिवार, समाज से भटके हुए एवं शोषण का शिकार हुए हैं। "यह आदिवासी घर खेत खलिहान सब बेच देंगे पर पिंघे जरूर।" (पलाश के फूल 39)

आदिवासियों के जीवन में दिक्कूयों का हस्तक्षेप, व्यापारियों के व्यापार ने उन्हें प्रभावित किया है। जल, जंगल, जमीन, आकाल, भ्रष्ट व्यवस्था, बेरोजगार, शिक्षा का अभाव आदि कारणों से आदिवासियों में भूख की समस्या है। 'सोन पहाड़ी' में आदिवासी बच्चे मडुवे की रोटी के लिए एक दूसरे पर झपटते हैं। भूख से मंगल की मृत्यु होती है। भूख के कारण आदिवासी अनाज की गाड़ी को लूटने के लिए मजबूर होते हैं। "भूख क्या नहीं कराता है औरतें बच्चे मर्द, जवान सब टूट पड़े हैं थे।" (सोन पहाड़ी 136)

उपन्यासों में आदिवासी जीवन की सामाजिक, आर्थिक, राजनीतिक एवं सांस्कृतिक परिस्थितियों में दिक्कूयों का बढ़ता हस्तक्षेप एक चिंता का विषय है। व्यापार एवं कार्य करने आए दिक्कूयों ने आदिवासी क्षेत्र को प्रभावित कर वे सबसे शक्तिशाली बने हैं, इस बढ़ते हस्तक्षेप से आदिवासियों की स्थिति चिंतनीय है। 'जंगल के गीत' में दिक्कूयों ने आदिवासियों के हर कार्य में हस्तक्षेप किया है। सामाजिक बुराइयों का फैलाव इनके कारण हुआ है। सामाजिक, आर्थिक एवं राजनीतिक हक में दिक्कूयों का हस्तक्षेप रहा है।

'पलाश के फूल' वस्तुओं की क्रय-विक्रय, श्रम एवं नारी के कार्य आदि जगह पर वह हस्तक्षेप करते हैं। 'सोन पहाड़ी' में आधुनिकीकरण एवं विकास योजना के नाम पर सामाजिक एवं आर्थिक क्षेत्र में हस्तक्षेप करने का वे एक भी मौका छोड़ते नहीं हैं। आदिवासियों के अनगिनत समस्याओं के मूल में दिक्कूयों का बढ़ता हस्तक्षेप ही सबसे बड़ा कारण रहा है।

आदिवासियों के जीवन में अनेक समस्या है। समस्या का मूल कारण मानव निर्मित अधिक एवं नैसर्गिक कम रहा है। आधुनिकीकरण के नाम पर राज्य-राष्ट्र निर्माण में जल, जंगल, जमीन के हस्तांतरण में बढ़ता दिक्कूयों का हस्तक्षेप, सरकारी नीतियों की असफलता, शिक्षा का अभाव, अकाल, पशु पक्षी से खेती का नुकसान आदि कारणों से उनके जीवन में समस्या आयी है। आदिवासी इन अनगिनत समस्याओं से घिरा है; वहां जिंदा रहने के लिए छटपटा रहा है। उसे मजबूरन विस्थापन को स्वीकारना पड़ता है। उनकी भूख से मृत्यु होती है। काम करने की जगह खी एवं पुरुषों का शोषण होता है। व्यक्ति, परिवार एवं समाज की स्थिति में नकारात्मक परिणाम इस कारण रहा है। आदिवासियों में लड़ाकू वृत्ति रहती है किंतु यह वृत्ति अनेक समस्याओं के सामने बिखरती हुई दिखाई देती है। उपन्यासों में शोषण का विरोध करने वालों ने समाज को दिशा दिखाने का काम किया है। नारियों ने अपने कार्य एवं व्यक्तित्व से परिवार एवं समाज को प्रभावित करती हैं। उन्हें वह बचाना चाहती है; और लड़ना आवश्यक है यह संदेश भी देती है। आदिवासियों में शिक्षा का अधिक प्रचार-प्रसार करना आवश्यक है। स्थायी रोजगार के लिए प्रयास करना आवश्यक है। जल, जंगल, जमीन का हस्तांतरण करते समय सरकारी खामियों को दूर करना चाहिए। पारंपरिक व्यवसाय को नए स्वरूप के व्यवसाय के साथ जोड़ना चाहिए। सामाजिक प्रबोधन कर उन्हें बुराइयों से बचाना आवश्यक है। दिक्कूयों को नारी की ओर देखने का दृष्टिकोण बदलना आवश्यक है। संविधानिक अधिकार के लिए उन्हें प्रबोधन करना अत्यंत आवश्यक है। आदिवासी विकास योजना की खामियों में सुधार आवश्यक है। हाशिए पर के समाज को मुख्य धारा में लाने के लिए उपयुक्त कार्य करना समय की मांग है।

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Regional politics and the Naxalite movement

Dr.Gokul Mundhe

Introduction :

Naxalism has been in vogue in the socio-political arena of India since 1967. Within a few days, the movement spread to many parts of India. Although this extremist revolutionary group of Maoist communists is not of an all India nature, its existence

Considering the group's movements, actions, and its socio-political philosophy, which were influential in some parts of India, the movement was not insignificant, but it certainly gained importance as a new political and national challenge. The struggle of the Maoist revolutionaries started in the rural area of 'Naxalbadi' in the northern part of West Bengal, hence the name 'Naxalite Movement'. From there the movement spread to other parts of India. Initially, the movement played an aggressive role in the interest of the farmers. The Indo-China War of 1962 split the Communist Party of India. From this emerged two groups, the Communist Party of India (CPI) and the Communist Party of India-Marxist (CPIM). Two such groups emerged.

The Mawlawadi policy of the Communist Party of India was not accepted by a large section of the party. It exploded further at a party convention in Andhra Pradesh. The party leadership rejected the extremist group's statement. As a result, Jyoti Basu, Ranadive, etc. left the party and formed a more bitter party called the 'Marxist Communist Party'. When the new party ran in the 1967 elections, it "abandoned the path of revolution and adopted the parliamentary path." So Charu Majumdar, Kanu Sanyal, Vinod Mishra, Mahadev Mukherjee etc. left the party and announced a new Maoist (Leninist) party. The movement formed from this party later came to be known as the 'Naxal Movement'.

The center of this new revolutionary party was in the 'Naxalbadi' area of North Bengal. From then on, this terrorist group came to be known as 'Naxalite group'. The name Naxalism had no such philosophical meaning. (गारेगोविंद, 2003) But this struggle of the Naxalites took the form of an armed struggle against injustice, oppression and exploitation. From this, the killing of tyrant landlords, inactive rulers, corrupt government officials and the police began to be carried out by this extremist group and a new platform of terror was established by this movement. Later, the movement gained its influence in the Siliguri subdivision of Darjeeling district in West Bengal and at the foothills of the Himalayas. 207 Sq. Km. This area covers a total of 60 villages. Most of the settlements are of Santhal, Oraon, Munda and Rajvanshi tribes. In May 1967, the Naxalbari branch of the Marxist Communist Party overthrew the Central Party and staged an armed uprising. This was the beginning of the Naxalite uprising. His proclamations of 'armed revolution to power' and 'Mao-Tse-tung is our leader' and the proximity of the Chinese border drew the attention of all countries to the Naxalite uprising. The ideology behind this uprising is known as Naxalism. In 1968, a similar tribal uprising took place in the Srikakulam area of Andhra Pradesh. In April 1969, Uttar Pradesh, Bihar, Punjab, Kerala etc. The Marxist-Leninist Communist Party, an independent party, was formed by uniting the existing Naxalite groups in the states. The main thrust of this movement was the conquest of power by the peasants through armed struggle in the rural areas. He was strongly opposed to the parliamentary system as well as to mass organizations and mass movements. Charu Majumdar was the main ideologue of this party. The main principles of Naxalism were Mao-Tse-Tung and China's complete allegiance to the Communist Party and the revolution in India according to Mao's ideology. In the third phase, the Naxalite movement set up a 'red base' in the rural areas to destroy class enemies. (Dasgupta, Biplab, 1974)

For this, the tribal settlements of Parvatipuram in Srikakulam in Andhra Pradesh and P. The uprisings took place in Debra and Gopiballavpur in Bengal.

Extermination of class enemies actually means killing of landlords and police assistants. His so-called 'guerrilla squads' began to operate independently of his political party-organization.

Later, in the 1970's, he started a program of raiding schools and destroying them, boycotting exams and destroying statues of eminent leaders. He later adopted a policy of eliminating class enemies in the cities as well. According to this policy, many unarmed policemen, small businessmen and political opponents (mainly Marxist Communist Party workers) were killed. In some parts of Calcutta, they set up their 'liberation zones' and expelled all opponents. The movement was taken over by a group of students and social activists. After 1970, the movement split. Naxals from Uttar Pradesh-Bihar withdrew from the party. The Naxalites in Srikakulam denounced the party leadership and prominent leaders like Sushil Roychowdhury in Bengal became disillusioned and distanced themselves from Charu Majumdar.

Naxalism is commonly known as Maoism in India. His ideology is Marxist-Leninist and fanatical Maoist, but in reality the Naxalite system is very different from Mao's people's war strategy. In particular, the award of Jan Sanghatana and Jan Andolan. They did not follow Mao's formulas, such as forming a united front with the secondary enemy against the main enemy, mingling with the people like fish in water. In terms of party organization, he tried to build a decentralized party organization by abandoning Lenin's principle of 'democratic centralization'. In fact, Charu Majumdar was opposed to any kind of decentralized organization and working in a committee manner. The complete boycott of the parliamentary system was not in line with Marxism and the Communist Party's policy. Also, the personal killing of class enemies does not fit into the Marxist-Leninist or Maoist policy. It becomes purely personal terrorism. In Russia and China, guerrillas are controlled by political parties, with Mao insisting that guns should be controlled by the party, but Charu Majumdar kept his troops out of the party. This is the opinion of many scholars. And there are no facts in it.

That is, in the late 60's the agitation against the started landlords had ignited. This movement came to be known as 'Naxalism'. We see this movement taking shape in Andhra Pradesh in the 70's. Naxal groups also clashed with each other. Thus ended the Naxalite uprising.

Thought differences of the Naxalite movement:

Naxalism is commonly known as Maoism in India. He is a Marxist-Leninist and a staunch Maoist. But in reality the Naxalite tactic was very different from Mao's tactic of people's war. In particular, they did not follow Mao's formulas in rewarding mass organizations and people's movements, forming a united front with the secondary enemy against the main enemy, mingling with the people like fish in water. In terms of party organization, he tried to build a decentralized party organization by abandoning Lenin's principle of 'democratic centralization'. In fact, Charu Majumdar was opposed to any kind of decentralized organization and working in a committee manner.

The complete boycott of the parliamentary system was not in line with Marxism and the Communist Party's policy. Also, the personal killing of class enemies does not fit into the Marxist-Leninist or Maoist policy. It becomes purely personal terrorism. (Dasgupta, Biplab, 1974) In Russia and China, guerrillas are controlled by political parties. Mao insists that the party should have control over guns. Many scholars have commented on this movement. By refusing to form peasant unions and by opposing economic struggles, he undermined one of the basic tenets of Marxism-Leninism. Three or four major groups of Naxalites are operating in different regions. He is trying to bring harmony among all the Naxalites by reorganizing his party, the Communist Party (Marxist-Leninist).

Some questions about the Naxalite movement

1) Does Naxalism (Maoist, Marxist-Leninist) have any socio-political philosophy?

- 2) Naxalism is said to increase due to inequality, inequality, extortion, exploitation, lack of administration. How exactly do these factors contribute to the rise of Naxalism?
- 3) Is there any difference between Naxalites and other separatists, terrorists and gangsters who say that their goal is to make a revolution through gunshots?
- 4) How exactly is the Naxalite movement funded?

Visual effects of the Naxalite movement:

In many parts of the country, Naxal activists are openly running a parallel judiciary. The Naxalite movement is driven by hatred of the established system and rulers. The failure of the government to allocate land to the landlords, the exploitation of tribal laborers, the inaction shown by the government in times of calamities like drought and floods are bound to make people hate the government and create animosity towards the Naxalites. (Lokstta, 2020) This has increased the influence of Naxals in many districts. In the meantime, the capitalists, the monopolists, the big merchant urban elites, the neo-colonialists, The role of the Naxalites changed and their front shifted to the urban areas

Naxalism and urban areas:

Rahul Pandita's book 'Hello Bastar - The Untold Story of India's Maoist Movement' is useful. How the tribals lived in the forest of Bastar. How the rulers, landlords, forest officials exploited the Bastar tribes. In this book, the author gives a detailed account of how the Maoists built their stronghold in Abujamad in the forest of Bastar, relying on the penal policy of this place. In many megacities like Mumbai, Pune, Nashik, Delhi, Bangalore, the Naxals have tried to convince the Naxalites that Maoism is useful as a solution to the growing apathy, slums, growing dissatisfaction among workers in the unorganized sector, huge wealth on the one hand and huge poverty on the other. The urban agenda has to be called the 'core area' of this book. (Pandita's Rahul) While constantly raising the issue, the author also considers how the domestic situation is conducive to the spread of Naxalism and what needs to be done to curb it. Another book-like example of this urban Naxalism is 'India After Naxalbari: Unfinished History' (The book is written by Bernard D'Mello about his old colleague Gautam Navlakha. The monstrous movement started by the Bharatiya Janata Party-led government and the pro-Hindu 'Nationalist' movement for cultural orthodox ideology seems to have no limits. It is frightening for the government to support the pro-Hindu movement and participate in its activities.

The Indian state, which regularly targets Muslims, oppressed national groups and the Maoists, has used the terror of its system to gain control over "necessary" enemies. This has created a category called 'Urban Naxalism'. According to the government's classification, 'urban Naxals' have so far included lawyers, human rights activists, poets, writers, journalists and professors, and 'active members' of the (Maoist) Communist Party of India. The homes or offices of these 'urban Naxalites' and some others who were wanted by the government were raided. Some media outlets in collusion with the established system in India have started harassing the arrested persons on the news channels by blatantly accusing them. And they were branded as 'traitors' invisible enemies of the nation', and 'people who support the Maoists and pose a serious threat to Indian democracy. (D'Mello, 2018) Among these "invisible enemies of the nation" and "serious threats to Indian democracy" is Gautam Navlakha, a well-known journalist for the Economic and Political Weekly. Navlakha joined EPW in the early 1980s. Rajni Desai, M.S. Navlakha worked with some of the best journalists in India like Prabhakar and Krishna Raj. Navlakha started his career in the 1990s through the Jammu and Kashmir Coalition of Civil Society. (D'Mello, 2018)

He slammed the Indian state's attempt to cover up its horrific human rights record in the state. His writings highlighted various aspects of enforced disappearances and subsequent deaths in fake encounters, as well as the legal protections afforded to military and police officers. The falsity of Indian democracy was exposed in Kashmir

Conclusion

In the last few years, the Naxalite movement's base has not grown much. At present, the CPI (Maoist), the largest Naxalite party, is facing a leadership challenge. Many great leaders have been killed, some senior leaders like Kobad Gandhi are in jail. Many have surrendered. Many of the leaders in the first panel are old. Therefore, the Naxalite movement is struggling to find a way out of this dilemma. The government, on the other hand, has been aggressively trying to bemoan the movement. Therefore, it is very difficult for him to move towards urban areas while maintaining the mass base is the biggest problem. The government is fully aware of this. The government is fully aware of this. So it is not a form of urban naxalism but a propaganda of the ruling system. This is the opinion of some experts. There is a strong possibility that there is a strategy behind this propaganda. Part of this strategy is to hold the Naxalites responsible, to defame the democratic movement, to defame the ideology, to label those who express their views in a democratic way as urban Naxalites. Doubts are currently being raised in the political arena that the cause of urban Naxalism will be put forward to impose a state of emergency on the country once again to avoid elections by creating a critical situation in the socio-economic field. Narhar Kurundkar has said, There is no such thing as urban or rural Naxalism.

The Naxalite movement is not just a matter of law and order, it is a political movement. It means building a system based on inequality and building an egalitarian state system through class struggle. Many scholars, including As Kurundkar, have an opinion. However, for this change, only a scientific fight, killing innocent people and committing acts of terrorism will be an unconstitutional way in the state process with a parliamentary democracy.

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Disparity in Literacy and Sex Ratio of Ahmednagar District

Dr. Shivaram Korade

Dr. Jyotiram More

Abstract

The present paper examines the gender disparity in Ahmednagar district based on literacy and sex ratio using secondary data. We found that literacy rate in study area has been 75.3 percent in 2001, which has increased to 79.05 percent in 2011. The sex ratio has observed as 940 in 2001 and 939 in 2011 showing no improvement in one decade. Further, the disparities regarding the both in rural and urban have been identified in the study area as in the state and country. Obviously urban sex ratio is higher than that in rural area, i.e. 942 and 938 respectively according to the 2011 census. However, the study has revealed that there is reduction in gender disparities from 2001 to 2011 though marginally. The paper attempts to discuss the causes for the same.

Keywords: Gender, Sex ratio, Literacy, Rural, Urban, Disparity Index.

I. Introduction

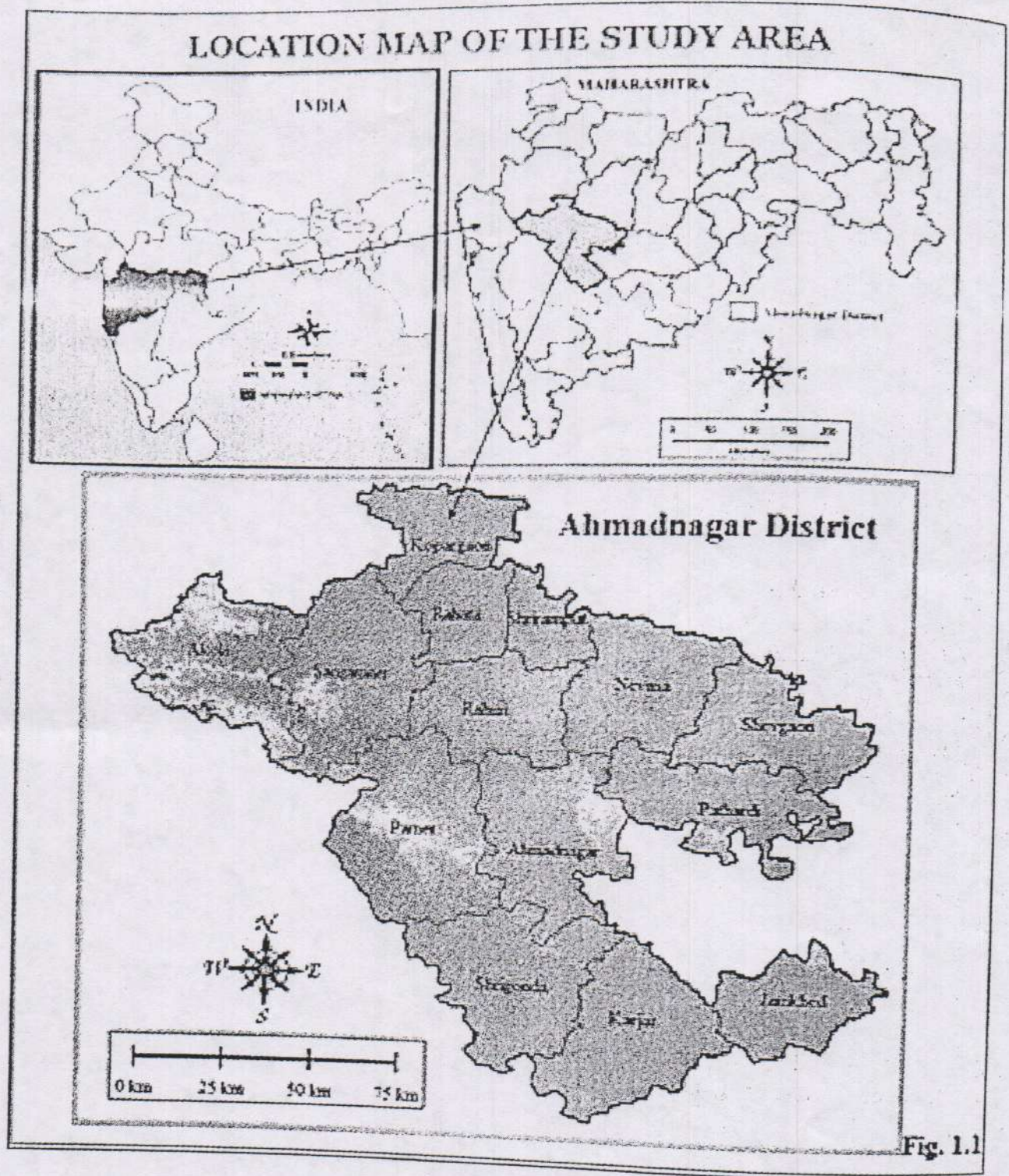
Literacy has long been considered as one of the significant demographic indicators of socio-economic development as it is instrumental in improving productivity of an individual and for society as well (Schultz, 1961). Literacy alters perceptions, attitude and behavior as it generates awareness and builds personality in such a way that development and welfare of the community and in turn the nation may be promoted (Sengupta and Guha, 2002). The spill over benefits of education might be of greater than the direct financial benefits. This is mainly because education stimulates not only present generation but the generations to come. A number of studies have highlighted the significant role that women's education plays in the development of society and the associated problems of girls' education. Girl's education affects the economic well-being of a country including Gross National product, per capita income, female participation in work force, self-employment, participation in the informal sector and market and home production (Mishra, 2002). According Sengupta and Guha, (2002) women's education is instrumental in reducing fertility and infant and child mortality rates in improving the enrolment. Musmade (2011) has considered literacy and sex ratio as the factors along with other indicators to understand levels of human resource development at village level.

II. Objectives

The main objective of this study is to analyze tehsil wise gender disparities in literacy and sex ratio of Ahmednagar district during 2001 to 2011 to understand the cause and effect relationship with at micro level.

III. Study Area

Ahmednagar is the native district of the first author and hence selected for the present exercise. The district is situated partly in the upper Godavari basin and partly in the Bhīma basin occupying a somewhat central position in Maharashtra state. It extends from 18° 02' to 19° 09' North latitudes and from 73° 09' to 75° 05' East longitudes covering about 17412 sq. km. geographical area which is 5.5% of the state. The rural area encompasses 16945.73 Sq. Km. while urban 466.27 Sq. Km. The total population is about 4543159 (2011) with a density of 266/sq km and literacy, 79.05%.



Urbanization in the district is as low as 20.09%. The sex ratio of Ahmadnagar district has been 939 and literacy rate, 79.05 percent. Ahmadnagar district has 14 tehsils namely Nagar, Rahuri, Shrivardha, Nevasa, Shevgaon, Pathardi, Jamkhed, Karjat, Shrivardha, Parner, Akola, Sangamner, Shrivardha, Shrivardha, Shrivardha, Karjat, Jamkhed, Pathardi, etc. The district has a great deal of disparity of levels of development owing to some irrigated tracks in Shrivardha, Kopergaon, Rahata, Rahuri, Sangamner, tehsils and dominance of rain fed agriculture in Karjat, Parner, Jamkhed, Pathardi, etc. It becomes interesting query about disparity regarding literacy and sex ratio.

IV. Database And Methodology

The present research work is based on secondary data obtained from district census handbook and statistical abstracts of Ahmednagar district. Other various sources of secondary data have been utilized such as internet, books and research article. Literacy rate has been computed for the population above 6 years. For the measurement of male female disparity in literacy, the Sopher's Disparity Index (1974) modified by Kundu and Rao (1983) has been employed. Using simple ratio technique sex ratios at tehsil level have been obtained. Bar graphs have been used for underlining the disparity at gross level. The computational work has been based on following simple formulae:

$$1) \quad \text{Literacy Rate} = \frac{\text{Number of Literates}}{\text{Total Population above 6 yr}} \times 100$$

2) David Sopher's Disparity Index:

Sopher's Disparity Index (Sopher DIs, 1974) is a well-accepted measurement technique to identify the disparity between the groups. Here, disparity between rural and urban areas has been computed using the following formula (Kundu and Rao, 1986; Mulimani and Pujar, 2015; Biswas, 2016).

$$DI = \text{Log}(X2/X1) + \text{Log}(100 - X1)/(100 - X2) \dots \text{if } X2 \geq X1$$

Where, DI = Disparity Index

X2 = Percentage of Male Literates, X1 = Percentage of Female Literates,

Disparity Index technique is useful in measuring relative disparity between two variables. The value of DI is zero in case of perfect equality. If the value is more disparity is greater (Raju, 1991; Biswas, 2016). The present study has applied similar formula to compute disparity index in sex ratio on the basis of spatial variation in rural and urban areas.

Results And Discussion:

V. Disparity in Literacy of Ahmednagar District

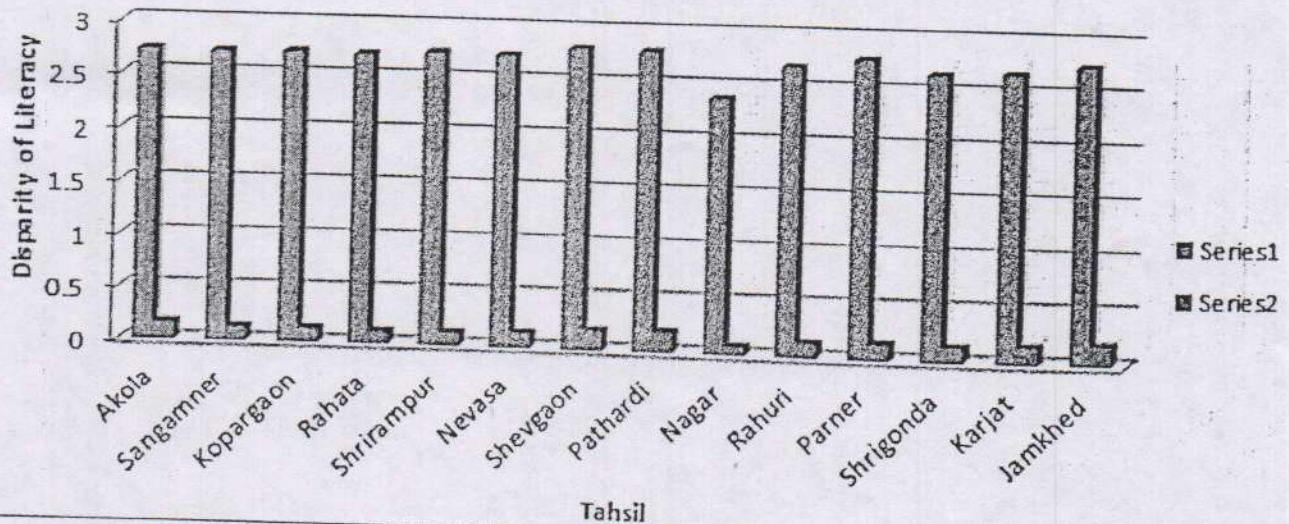
Ahmednagar district has literacy rate 79.05% in 2011 and 75.3% in 2001. The male-female disparity has been observed to be 0.4205 in 2001 and 0.2772 in 2011. The table (Table No.1) depicts that the literacy rate in the study area varied from a minimum of 72.62% in Jamkhed tehsil to a maximum of 86.34% in Nagar tehsil of the district. The male literacy is 86.07 percent while female, 69.35% in 2011. It shows a wide gap of 16.72%. Maximum male literacy has been observed in Nagar tehsil (91.47%) while minimum (82.31%) in Jamkhed tehsil. The previous census has recorded a maximum literacy (91.8%) in Nagar tehsil and minimum (80.7%) in Jamkhed. This means that backward character of Jamkhed tehsil has not been changed in the decade. It is interesting to observe that disparity in male female literacy has decreased by 1.52% from 2001 to 2011 because of increase in literacy rates in the backward tehsils. Highest disparity of male-female literacy has been observed in Shevgaon tehsil (0.19%) because of wide gap from male to female literacy. This kind of phenomenal increase in disparity may be attributed to migration of educated males in the town. Lowest disparity has been observed in Nagar tehsil (0.09%) indicating the signs of balanced demographic development in male and female. It may be interesting to note that decadal increase in female literacy is about 4% while in male is less than 1% in the tehsil.

Table - 1 Disparity of Literacy, 2001-2011

Sr.No	Tehsil	Male 2001	Female 2001	Total 2001	Disparity of Literacy	Male 2011	Female 2011	Total 2011	Disparity of Literacy
1	Akola	82.1	57.6	70.0	2.73	84.09	65.5	74.85	0.17
2	Sangamner	85.8	64.9	75.5	2.72	87.58	71.98	79.96	0.14
3	Kopergaon	85.2	63.3	74.6	2.73	87.58	71.68	79.84	0.14
4	Rahata	87.5	68.5	78.2	2.72	88.72	75.13	82.08	0.12
5	Shrirampur	87.7	67.8	78.0	2.75	89.27	74.8	82.12	0.13
6	Nevasa	84.7	62.3	73.8	2.74	86.53	70.05	78.51	0.15
-	Shevgaon	83.1	56.5	70	2.82	84.15	63.42	73.94	0.19
8	Pathardi	83.3	57.1	70.4	2.81	84.98	63.85	74.74	0.20
9	Nagar	91.8	76.8	84.6	2.39	91.47	80.09	86.34	0.09
10	Rahuri	85.5	65.1	75.6	2.70	87.42	71.65	79.74	0.14
11	Parner	83.9	59.2	71.5	2.78	84.23	66.78	75.64	0.16
12	Shrigonda	83.6	62.8	73.4	2.66	84.09	67.88	76.25	0.15
13	Karjat	82.2	59.5	71.2	2.68	82.57	64.98	74.11	0.17
14	Jamkhed	80.7	54.3	67.8	2.76	82.31	62.26	72.62	0.19
	Total	84.7	64.3	75.3	2.67	86.07	69.35	79.05	0.15

Source: Compiled and Computed from Census Data

Disparity of Literacy 2001 and 2011



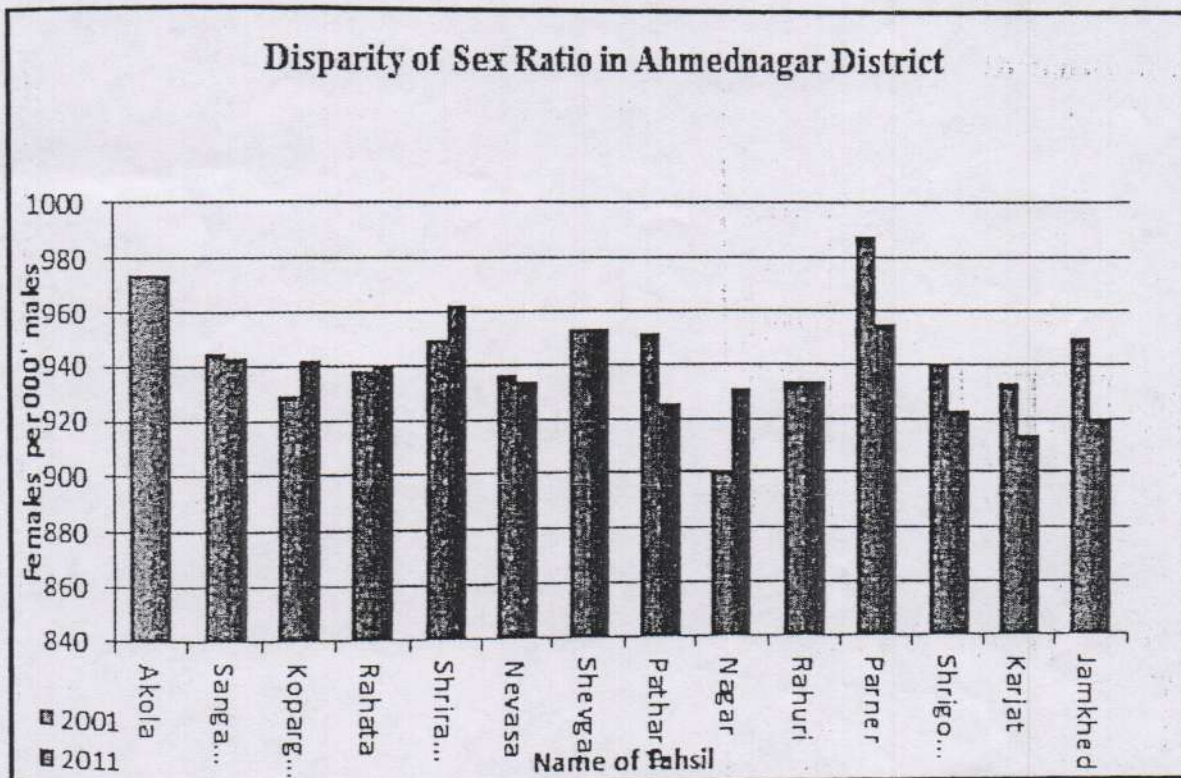
VI. Disparity in Sex Ratio of Ahmednagar District

Sex ratio is one of the important demographic factors that indicate the status of women in a particular society. A social system with higher sex ratio itself shows the higher status of women (Melorose, Perroy, & Careas, 2015).

Table - 2 Sex Ratios in Rural and Urban of District, 2001-2011

Sr.No	Tahsil	Total 2001	Rural 2001	Urban 2001	Total 2011	Rural 2011	Urban 2011
1	Akola	974	974	-	974	976	918
2	Sangamner	945	951	921	943	942	950
3	Kopargaon	929	931	926	942	936	965
4	Rahata	938	941	917	940	942	932
5	Shrirampur	949	941	963	962	950	991
6	Nevasa	937	937	-	934	934	0
7	Shevgaon	953	953	-	953	953	0
8	Pathardi	951	937	906	926	927	913
9	Nagar	901	934	881	931	929	932
10	Rahuri	934	937	926	934	934	933
11	Parner	988	988	-	955	955	0
12	Shrigonda	939	939	933	923	921	940
13	Karjat	933	933	-	914	913	928
14	Jamkhed	949	952	940	920	911	955
	Total	940	948	908	939	938	942

Source: Compiled from Census



The sex ratio of the district in 2011 has been recorded as 939 females per thousand males are higher than the sex ratio of Maharashtra state (929). For understanding spatial variation the tehsil wise information is tabulated (Table No. 2) and also represented using bar chart. The census data have shown that the highest sex ratio (988) has been observed in Parner tehsil and the lowest (901) in Nagar tehsil. The tehsil wise sex ratios have been compiled in the table (Table No. 2). So far as decadal

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जागतिकीकरणाचा भाषा व साहित्यावरील प्रभाव
 वैश्वीकरण का हिंदी भाषा और साहित्यपर प्रभाव
Impact of Globalization on Language & Literature

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एकोणिसाव्या शतकामध्ये जागतिकीकरण, खाजगीकरण आणि उदारीकरण याचा मोठा प्रभाव मराठी कवितेवर पडलेला दिसून येतो. नवी शिक्षणपध्दती, औद्योगिक संस्कृती, उध्वस्त शेतकरी, गरीब – श्रीमंत दरी, जागतिकीकरणाचे चांगले वाईट परिणाम भौतिक सुधारणा, बदलते राहणीमान, बदलत्या चालीरिती व परंपरा, खोडेगाव आणि शहर यातील बदलते अर्थकारण या सर्वांचे दर्शन दर्शन मराठी कवितेमधून आपणास घडते.

शोधनिबंधाची मर्यादा लक्षात घेता निवडक कवींच्या कवितासंग्रहातून मराठी कवितेतून जागतिकीकरणाचे एक दर्शन घडविण्यासाठीच हा शोधप्रपंच आहे.

जागतिकीकरणामुळे आणि प्रचंड महागाईमुळे अलिकडे पती आणि पत्नी दोघेही कामावर जातात. त्यामुळे आईची माया, प्रेम मुलांना मिळत नाही. त्यावेळी मुलगाच केविलवाणे आईला म्हणतो आहे आई माझ्यासाठी वेळ देशील का? सुरेखा येवले या कवयित्रीच्या 'आईची शाळा' हा कवितासंग्रह आहे. या कविता संग्रहातील ही कविता वाचकांच्या मनावर परिणाम करणारी पुढील कविता आहे.

आई, तुझे ऑफिस

माझी शाळा

दिवस भरत आपण

भेटतो किती वेळा!

तुला तरी आठवते का

तुझ्या कुशीत घेतलेस

सांगना किती वेळा?

कधी कधी वाटते

बंद व्हावे तुझे ऑफिस

बंद व्हावी माझी शाळा

पूर्वीच्या काळी माता मुलाला क्षणभरही विसरत नाव्हती. बाळापासून दूर जात नव्हती. पण अर्थकारणामुळे आजची आई नोकरी निमित्त ऑफिसला जाते. परिणाम मुलाला मातृप्रेम मिळत नाही. मायलेकरांचा प्रेमाचा झरा कोरडा तर पडत नाही ना? याला कारण वाढते जागतिकीकरणातील बदल आहेत. आणखी एका कवितेत आईची मम्मी कसी झाली याचे वर्णन आहे.

माझे पप्पा आजीला

आई म्हणायचे

मला आई म्हणायला

खूप खूप आवडायच



मी मम्मीकडे गेलो
मम्मी तुला मी आई म्हणू का?
मम्मी माझे केस कुरवाळत
म्हणाली लाडक्या माय सन

तू इंग्रजी शाळेत शिकतोस
तू जर मला आई म्हणाला
तर पालक सभेत मला
होईल रे शरमायला

भारतीय संस्कृतीने आईला 'मातृदेवो भवं' म्हटलेले आहे. आई हा संस्कार आहे. परंतु आज सुशिक्षित माता आपल्या मुलाने आपणास आई म्हणण्या ऐवजी मम्मी म्हणावे असा आग्रह धरतात. मुलगा इंग्रजी शाळेत शिक्षण घेत असतो. खरे तर या जागतिकीकरणामुळे आईची मम्मी झालेली आहे. त मम्मी ही नवी संस्कृती उभी राहत आहे. पण आईला मम्मी म्हणने मराठी संस्कृतीमध्ये सजणे योग्य अयोग्य हा चिंतनाचा विषय आहे.

जागतिकीकरणामुळे इंग्रजी ही ज्ञानभाषा झालेली आहे. महाराष्ट्राच्या मराठीला शाळेमध्ये मराठी साजरा करून मराठीत बोलावे असा हुकूम मुख्याध्यापकांना काढावा लागत आहे.

शाळेत एकदा
मराठी दिन साजरा
करायचा ठरला
दिवसभर शुध्द
मराठीतच बोलायचं
असा हुकूम हेडमास्तरांनी सोडला.



मराठी भाषेमध्ये शुध्द बोलणे हे आता इंग्रजी भाषेच्या अतिक्रमणामुळे कठीण होवून बसले आहे. मराठी बोलणे हे आता मायबोली समोर आव्हान आहे. हे या व्यक्तितासंग्रहातील सर्वच कवितांमधून ज राहते.

'जीवनाचे गूढ' हा कवी राम मालू यांचा कविता संग्रह आहे. जागतिकीकरणाचे वारे वाहण्या 3 ग्रामीण भागामध्ये एकत्र कुटूंब पध्दती होती. पुढे पाश्चात्य संस्कृतीचे वारे आले. आणि गुण्या गो नांदणारी एकत्र कुटूंब पध्दती विभक्त झाली. माणसाच्या भोजनाच्या पध्दती बदलल्या, संसाराची स्वप्ने बट माणसे भौतिक सुखाला जास्त महत्व देऊ लागली 'आपला संस्कार' या कवितेत राम मालू म्हणतात

फास्ट फुड खायला खूप येते मजा
घालवतो बाहेर आपला हा पैसा
आवडते बायकोला छोटी मोटार
मुलीला कधी सतार कधी गिटार
एकीकडे बांधकामाचा मोठा खर्च
वरून मुलांच्या शिक्षणाचा तो मोठा खर्च



त्यातच खाण्या पिण्याचा रोजचा खर्च

करु तरी कसा कमी आसला खर्च

संसारामध्ये पूर्वी गरजा कमी होत्या. अन्न, वस्त्र आणि निवारा या तीनच मुलभूत गरजा होत्या. भौतिक सुधारणांमुळे आज जीवन जगण्याच्या पध्दती बदलल्या आहेत. चंगळवाद आणि चोखंदळवाद आला आहे. घरी जेवण्यापेक्षा बाहेर हॉटेलमध्ये जेवणाची नवी परंपरा रुजू पहात आहे. राहण्यासाठी माडी, दारात गाडी, गोल साडी असणारी पत्नी आज प्रत्येकाला हवी आहे. त्यामुळे उत्पन्नापेक्षा खर्च जास्त होत आहे. मनुष्य कर्जाच्या ओझ्याखाली गरज नसताना दुःखी जीवन जगत आहे.

जागतिकीकरणामुळे ताबडतोब श्रीमंत होण्याची वृत्ती वाढीला लागलेली दिसते. कष्टाने पैसा कमावण्याकडे धनदांडग्यांचा कल वाढलेला कसा दिसतो याचे दर्शन कवी राम मालू 'भ्रष्टाचार' कवितेतून घडवितात.

काल जसा जसा बदलत गेला

माणूस हा अप्पलपोटी झाला

मनी पैशांचा लोभ हा वाढला

माजली चोरी खून बलात्कार

समाजात सर्वत्र हा प्रकार

देशात पसरला भ्रष्टाचार

सदाचाराने वागणारी माणसे आता जागतिकीकरणाच्या दुनियेत दुराचाराने वागताना दिसून येतात. काळ बदलला की, माणूस बदलला हा एक मोठा चिंतनाचा विषय आहे. पण माणूस मात्र आज सार्थी आणि अप्पलपोटी झाला आहे. कष्टापेक्षा वाममार्गाने पैसा कसा मिळेल. या वाटा तो शोधत आहे. पैसासाठी चोरी करीत आहे. ती चोरी लपविण्यासाठी प्रसंगी माणूसच माणसांचा खून करीत आहे. श्रीरामचंद्र, शिवाजी महाराजांच्या आणि संत तुकाराम महाराजांच्या या भूमीत माता - भगिनींवर बलात्कार होत आहेत. माणूस पाषण हृदयी बनला आहे. कोटयावधींच्या भ्रष्टाचार होत आहे. अलिकडे माणूस कसा राक्षसाप्रमाणे जागतिकीकरणामध्ये वावरत आहे याचे दर्शन कवी राम मालू यांच्या सर्वत्र कवितांमधून दिसत आहे.

कवी अरुण सावळेराम नरसाळे यांचा 'ऋतुराज' कविता संग्रहामध्येही जागतिकीकरणाचे भारतीय संस्कृतीवर कसे परिणाम होत आहेत. याचे वास्तव दर्शन हा कवितासंग्रह वाचताना घडते. 'बदलती भारतीय संस्कृती' ही कविता याचे उदाहरण म्हणून सांगाता येईल.

काकणांची किनकिन आता ओसरत चालली

कुंकवाची जागा टिकली घेऊ लागली.

नऊवारी जाऊन सहावारी आली

डोईवरचा पदर खांद्यावरी आला.

पाश्च्या त्यांच्या अनुकरणात

अन भारतीय स्वातंत्र्याच्या स्वैराचारात

आप्तजनही गेले सारे विस्मरणात



परंपरागत भारतीय संस्कृतीची जागा आता जागतिकीकरणामुळे आधुनिक बदलत्या भारतीय र घेतलेली आहे. नऊवारी साडी, डोक्यावर पदर, कपाळाला रुपायाएवढे सौभाग्याचे लेणे असणारे कुंकू स्त्री आता आधुनिक विज्ञान युगामध्ये वावरत आहे. आता तिच्या डोईवरचा पदर सहावार साडी अ खांद्यावर आलेला आहे. तर कपाळावर कुंकूवाएवजी टिकली आलेली आहे. भारत माता स्वतंत्र कर देशभक्तांनी रक्त सांडले. तो देशभक्तांचा त्याग व त्यांचे कार्य या जागतिकीकरणातील माणसे विसारून आहेत. याचे दर्शन या 'ऋतुराज' कवितासंग्रहात कवी अरुण नरसाळे यांनी घडविलेले आहे.

कवी अरुण सातपुते यांचा 'अरुणोदय' या काव्यसंग्रहातील कवितांचा मागोवा घेतला असता म सिमेंटच्या जंगलात नसून चंद्रमौळी झोपडीत सापडते याचे वर्णन झालेले आहे. या दृष्टीने त्यांची 'म कविता वाचकांचे लक्ष वेधते.

माणूसकी

सिमेंटच्या बंगल्यात नव्हती

त्यातील कळसूत्री बाहुल्यातही नव्हती

ती होती गरीबांच्या चंद्रमौळी झोपडीत

फक्त त्यांच्याच जवळ होत

एक अनमोल रत्न

माणूसकी!

'माणूसकी' नावाच एक अनमोल रत्न जीवापाड जपणारा माणूस मात्र चंद्रमौळी झोपडीत राहतं माणूसकी न जपणारा माणूस मात्र सिमेंटच्या जंगलात राहतो. हे विदारक वास्तव कवी सातपुते 'अरुणोदय' या कविता संग्रहात आपणास अनुभववयास मिळते.

कवी बाबासाहेब बांडे यांचा 'मृदांजली' कवितासंग्रहात जागतिकीकरणामध्ये 'चंगळवादी' संस्कृत रूजत चाललेली आहे याचे विदारक सत्य वाचावयास मिळते.

धनीकही पिसाळले

धनासाठी धडपड

दंग चंगळवादात

नाही दुबळ्यांची चाड

जादूटोणा मंत्रतंत्र

उपासना कर्मकांड

ढोंग करी मायेस्तव

बुवा पंडीत प्रकांड

चंगळवादी संस्कृतीचे स्तोम कसे माजलेले आहे याचे दर्शन या कवितेत घडते. माणूस पिस कुत्र्याप्रमाणे धनासाठी धडपड करित आहे. दीनदुबळ्या लोकांच्या मुखात अन्न नाही याचा कोणीही विच नाही. गुंड लोक आणि भोंदू लोक गरीब श्रमजीवी लोकांचे शोषण करित आहेत. वैज्ञानिक प्रगती झ समाजातील भोंदू बाबांची मक्तेदारी हटली नाही. जादूटोणा मंत्रतंत्र करणारे देवऋषी मठाधिपती झाले स्त्रियांवर भूरळ घालून बलात्कार करित आहेत. याचेही दर्शन घडविणाऱ्या करिता कवी बाबासाहेब ब रचलेल्या आहेत.



१९७५ नंतर ग्रामीण कविता समृद्ध करणारे कवी म्हणजे इंद्रजीत भालेराव भालेरावांनी शेतकऱ्यांच्या कष्टाचे मोल होत नसल्यामुळे स्वार्थी व नफेखोर वर्गा विरुद्ध गोफण हाती घेतलेली आहे. शेतकऱ्यांनी आता लढायला शिकले पाहिजे असे ते म्हणतात.

शीक बाबा शीक लढायला शीक
कुणव्याच्या पोरा आता लढायला शीक
लाजरेपणा बुजरेपणा बाजारात ईक
घेऊ नको फाशी बाबा खाऊ नको ईख
मागमाग नको पुढ सरायला शीक
आत्महत्या नको हत्या करायला शीक

जागतिकीकरणामध्ये शेतकऱ्यांनी आता आत्महत्येची पळवाट काढण्यापेक्षा जे आपणावर अन्याय करतात. त्यांची हत्या करावयास शिकले पाहिजे. तरच शेतकऱ्यांना जगता येणार आहे. असा स्पष्ट शब्दात ईशारा दिलेला आहे.

समारोप :-

१९९० नंतर मराठी कविता जागतिकीकरणाचे सर्व विषय घेऊन समृद्ध झालेली आहे. नवनवीन कवींनी कवितेचे हे दालन समृद्ध केलेले आहे. जागतिकीकरण, औद्योगिकीकरण, खाजगीकरण, उदारीकरण, बदलते समाजजीवन याचे वास्तव दर्शन मराठी कवितेने घडविलेले आहे.

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Psycho-Social Constraints of Maharashtra Men Participation in Games and Sports

Lokhande Dadasaheb Murlidhar ✉

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Abstract

National school-based Youth Risk Behavior Surveys (n=55,734). Logistic regression analyses were conducted to test for significant linear time trends among the total student population and demographic subgroups (gender, race/ethnicity, and grade). Although PE enrollment in the total student population did not change from 2009 (48.9%) to 2010 (48.8%), the prevalence of students who attended PE daily, and the prevalence of students who were physically active >20 minutes in an average PE class both decreased significantly among nearly all demographic subgroups. The prevalence of students who were physically active >20 minutes in daily PE classes increased from 34.2% in 2010 to 21.7% in 2015 ($p<0.001$). To reverse current trends, high schools should implement daily PE classes that emphasize participation in lifelong health-related physical activity for all students.

Keywords:

Physical Education & Sports, Trends in Health

Introduction

Pupils from primary school through junior colleges are required to have 2 hours of PE every week, except during examination seasons. Pupils are able to play games like football, badminton, captain's ball, and basketball during most sessions. Unorthodox sports such as touch ball, fencing, and skateboarding are occasionally played. In more prestigious secondary schools and in junior colleges, sports such as golf, tennis, shooting, and squash are played. A fitness exam, is conducted in every school once every year to assess the physical fitness of the pupils. Pupils are given a series of fitness tests (Pull-ups/Inclined pull-ups for girls, standing broad jump, sit-ups, sit-and-reach and 1.6 km for primary [10-12 year-olds]/2.4 km for secondary and junior college levels [13-18 year-olds]). Students are graded by gold, silver, bronze or fail. NAPFA for preenlistees serves as an indicator for an additional 2 months in the country's compulsory national service if they attain bronze or fail. Pupils from primary schools to secondary schools are expected to do 2 periods or 1 hour of PE throughout the year except a week before examination. In most secondary schools, games like badminton, sepak takraw, football, basketball and tennis are available. Pupils are allowed to bring their own sports equipment to the school with the authorization of the teacher. In most secondary schools, physical exams are rarely done, but schools record pupils' height, weight

and number of pushups they can do. Students ranging from Kindergarten to High School have PE integrated with their curriculum. Kindergarten until Grade 3 of Elementary students have gymnastics, starting from Grade 4 of Elementary School, students will be introduced into traditional martial arts Pencak Silat and some team games such as badminton, tennis, soccer, futsal, rounders, basketball, etc. Starting from Junior High School, Both gender are separated during PE class. PE find its place in extracurricular forms, where students can specialize themselves in one kind of sports they choose. Sport Festival can be held during vacuum period, usually after examination. At this time students can compete each other by bringing own class' flag. Some universities such as ITB include PE in curriculum for freshmen. Many games such as Basketball, volleyball, cricket, tennis, badminton, kho kho, kabaddi etc are played. Several drills and physical training are taught.

Physical education programme in high school and senior secondary school

In our country, majority of the schools have Physical Education teachers at the secondary level (Classes 6-10) and physical education is not taught at the primary level whereas Sport and Play is one of the most distinctive features of early childhood. Some fitness experts say, physical education has not lived up to its name in school curriculum. Our traditional physical education classes provide too little activity for few students only to participate and it offers little or no guidance for maintaining a healthful lifestyle. Only Two HPER (Health Physical Education and Recreation) periods in a week, are not sufficient for the high school and senior secondary school students. Rather, every day thirty minutes moderate physical activities with two days high intensity activities programme should be introduced in both high school and senior secondary school. The amount of physical activity for the children and students has declined in and out of school in recent years. The school students have become more overweight and less fit. To help reverse that trend, physical education classes should be revamped so there is less emphasis on team sports and more on lifelong fitness activities. The physical education programs like fitness, health awareness, and lifelong exercise habits should be emphasised in their course curriculum apart from competitive sports programme. Physical education not only contributes to create healthy individual but also a healthy society. Sports culture can best contribute in the nation building process. Compared to other countries, India still has a long way to go in physical education and

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Recommendations

All the schools, colleges and universities authorities should encourage physical education and they should also provide exclusive programme for health, fitness, recreation and wellness.

All the physical education teachers working in the school, college and universities must be encouraged and awarded for their excellent job. Qualified physical education teachers and coaches should be appointed in the education institutes and more programs on fitness and health should be promoted apart from coaching and training. The National Physical Efficiency Scheme which was prevalent during 1958 to 1978 should be revived and introduced for boys, girls, men and women of all different ages. Latest infrastructure and clear cut plans should be introduced in schools to popularise physical education and sports activities among children. The government needs to play an important role by allocating appropriate budget for physical education and sports in India and proper implementation of it. A monitoring council is required consisting of Physical education and sports professionals to monitor the physical education programme of every school. The mindsets of the people also needs to change, so that physical education classes are not considered as a burden on children but rather a way out to perform well in the academics and an important component for the all round development of children. Every school should conduct a seminar for all the parents in the topic importance of health, fitness and wellness.

The future of physical education: we must change now

The following are some recommendations for change which we can make NOW:

1. We must adopt the philosophy that physical education is- for all people, regardless of ability. We must recognize that skills and fitness are important only as they help students to become fully functioning healthy individuals.
2. We must put every effort into requiring elementary school physical education in every school (with a qualified physical education teacher). If physical education is important at any level it is most important here. The 1990 goals for the nation support this contention. We must become activists on this issue.

3. At the middle, junior, and senior high school level we must provide problem solving courses in fitness which teach all students to become good fitness and exercise consumers. Such courses must be based on personal needs, interests and abilities (Corbin, 1978).
4. We must modify middle, junior, and senior high school programs to allow students to make personal choices of skills and activities. For too long our students have been turned off to activities which they know they will never do after they get out of school. We need to ask students what they want to learn.
5. We must modify classes so that longer periods allow longer dressing time to allow students to have time to dry their hair and get ready for the remainder of the school day. We must put an end to the military type locker room. Many locker room experiences are what produce feelings about physical education. As adults we would not put up with common dress codes and locker room policies. Why should we ask kids to? Would you join a health club which was run like many physical education classes?
6. We must realize that physical education does not stop after the school years. Those who will work in fitness centers, hospitals and other similar settings are teachers even though they will not teach in schools. They are NOT exercise scientists or exercise physiologists as they would like to call themselves! If we do not teach these professionals to realize that they are teachers who must meet the needs of their clients, we will lose out to less qualified "exercise" enthusiasts.

Benefits of Physical Education

We know that physical activity can benefit participants in many ways. These benefits are not however, natural by-products of random participation. Physical education programs must be designed specifically to reach selected objectives. Some of the beneficial outcomes which can

Psycho-Social Constraints of Maharashtra Men Participation in Games and Sports

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Study of Acari (Arthropoda: Arachnida) fauna from rodent cages in Pune, Maharashtra, India.

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ABSTRACT

The study has been carried out to revealed and investigate the acari (Arthropoda: Arachnida) fauna from rodent rearing cages in Pune (M.S). The impact of changes in environmental parameters like humidity, temperature, and rainfall in three different seasons on the population of mites has studied. The sampling sites were selected from an educational complex, Pune, which is having the well maintained hygienic rearing houses (Laboratory rat house) for biomedical research in the educational complex. Fortnightly regular study has been carried out for one year, from February 2018 to January 2019.

The present study revealed that two different species of mesostigmatid mites *Echinolaelaps echidninus* (Berlese) and *Laelaps nuttalli* (Hirst) of the family Laelaptidae were reported from rat rearing cage. Out of these two mite species, *Laelaps nuttalli* (Hirst) is reported first time on laboratory rat from Pune, Maharashtra and new to Intramural House Dust Mite (HDM) record of Maharashtra. The impact of change in environmental parameters on this rat mite population in three different seasons i.e. monsoon, summer, and winter were recorded during the study. High population load of *Echinolaelaps echidninus* (Berlese) and *Laelaps nuttalli* was recorded during monsoon followed by winter and summer.

KEY WORDS: Acari, Fauna, Fortnightly, Population, Intramural, Impact, Environmental.

Introduction

Parasitic mesostigmatid mites often inhabits wild rodent populations, these mites are also seen to be flourished with laboratory animals and show an effect on the development of these animals in intramural laboratory conditions. The spiny rat mite *Echinolaelaps echidninus* are the parasites of the brown rat, *Rattus norvegicus* and the mite *Laelaps nuttalli* are found as a parasite on both rats i.e. brown rat, *Rattus norvegicus* as well as on black rat *Rattus rattus* throughout the world¹⁴.¹⁵. The mite *Laelaps nuttalli* also found on the bat in Malaysia¹. Research on mites associated with rodents is very less attended in India due to its microscopic size and sporadic. Two different species of fur mites, *Myocoptes musculus* and, *Chirodiscoides caviae* were reported in laboratory rodents from Chennai, India³.

The tropical rat mite *Ornithonyssus bacoti* recorded from domestic and pre domestic rodents for the first time from Nilgiris, Tamil Nadu, India². The study on ectoparasites of laboratory animals in Maharashtra is also sporadic, the mite fauna of rat houses were observed and studied for the first time from Pune and first reported *Echinolaelaps echidninus* from the same sampling site of Pune. (M.S.)^{17, 18}.

House dust mites are one of the allergenic mites which cause allergic diseases in sensitive persons. As per the revised resent review, 68 species of HDM were reported from India¹⁴. 20 species are from Maharashtra state¹². Newly added report of 07 species from Pune, Maharashtra, changed the previous Indian record from 68 to 75 species, the record of Maharashtra from 20 to 27 of dust mites¹¹. 23 species of HDM were reported from Karnataka¹³, 17 species from Kerala⁴.

Materials and Methods

Well constructed hygienic laboratories have been used to rearing the laboratory rats for biomedical studies, these animals are also seen to be infested by ectoparasites such as mites. Husk samples (8 to 10 gm) from rearing cages were collected fortnightly in clean and sterilized sampling bottles. These sampling bottles were labeled with the date, time and name of sample collector, etc. freshly collected husk sample was brought to the research laboratory and examined. The sample was examined by taking one gm husk which was spread uniformly in a thin single layer in a clean and sterile Petri dish and observed under Stereo binocular dissecting microscope. Mites were separated from dust by using a simple pickup method⁷. The mites were picked from the sample by using a fine needle and sometimes fine camel brush which was moistened in 4% lactic acid and transferred in cavity glass slide having 4% lactic acid. When they were made clear in lactic acid, they were mounted keeping the ventral side facing up on clean glass slide at the center in a drop of melted glycerin jelly. Then the slides were pressed on filter paper to remove excess glycerin jelly to made slide clear. Then all slides were dried at N.T.P, labeled properly with date, location, source, etc. The photographs and measurements of specimens were taken using a Leica binocular research microscope with an attached camera.

The mite specimens were identified busing Hirst (1925), Strandtmann and Mitchell (1963), Hughes (1976), and other available authentic literature.

Morphology

The adult female of *Laelaps nuttalli* is oval and measures about 657 µm in length and 452.99 µm in width, mostly body covered by a simple type of setae. Ventrally, *L. nuttalli* has three main plates, anterior sternal plate, genitoventral plate in middle and posterior anal plate with anal opening. The anterolateral corner of the sternal plate directed between I and II coxae, and posterior-lateral corners directed between II and III coxae, also it has three pairs of long setae namely st1, st2, and st3. Genitoventral plate lying between sternal and anal plate started from coxae III and extended posterior, it has four pairs of long setae namely gv1, gv2, gv3, and gv4. The anal plate is separated by genitoventral plate by a short distance. It has one paired and one unpaired setae at posterior end of plate which is longer than paired setae. Peritreme runs anterior towards the coxae I from the stigma which is present between coxae III and IV. The legs attached to ventrally on idiosoma and divided into six segments. I and II legs are much wider than the remaining III and IV. Leg IV is longer than I, II and III.

The adult female of *Echinolaelaps echidininus* is oval and measures about 1022.56 µm in length and 800.48 µm in width, mostly body covered by a simple and long type of setae. Ventrally, *E. echidininus* also has three plates, at anterior sternal plate, genitoventral plate at the middle and posterior anal plate with anal opening. Sternal plate is as long as wide and has three pairs of long setae namely st1, st2, and st3. Genitoventral plate is wider at posterior from coxae IV towards the anal plate and it has 4

pairs of setae. The anal plate is also separated by genitoventral plate by a short distance and has one paired and single unpaired setae which is longer than paired setae and situated posterior end of the anal opening. Peritreme runs anterior towards the I coxae from the stigma which is present between coxae III and IV. The legs attached to ventrally on idiosoma and divided into six segments. Leg I and IV are longer than legs II and III.

Results and discussion

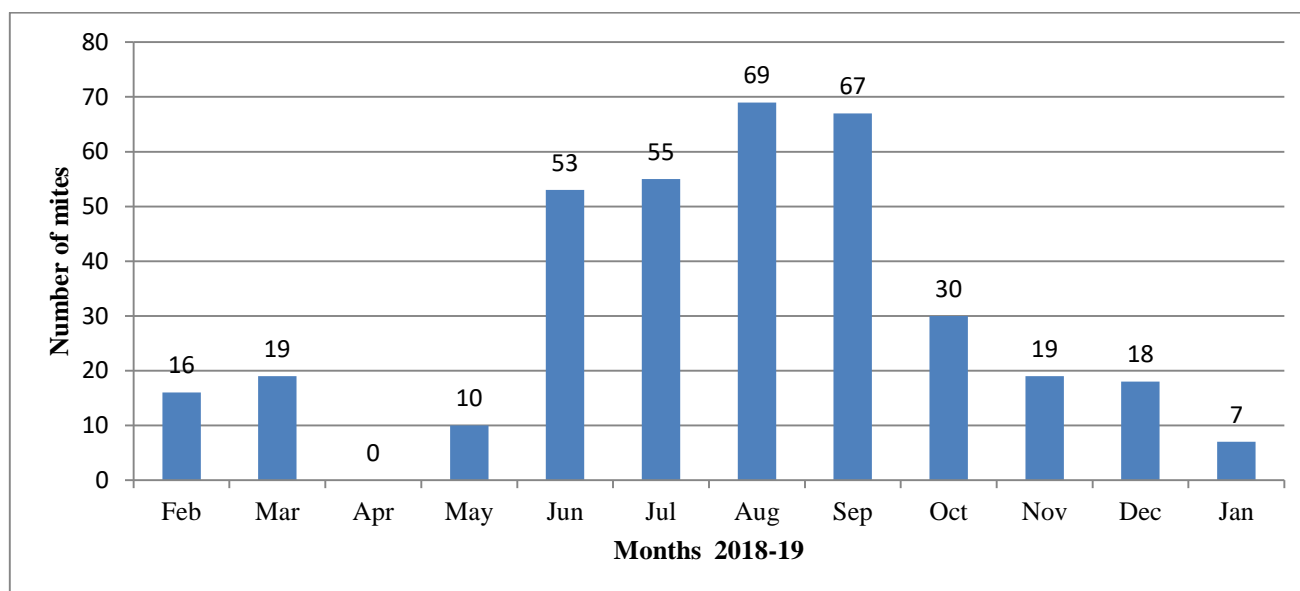
A total of 363 specimens of rat mites were collected and studied from an educational complex, Pune, MS, India. They have been identified as *Echinolaelaps echidininus* (Berlese) and *Laelaps nuttalli* (Hirst) of family Laelaptidae from rat cage. Although environmental parameters in the animal house were tried to keep at the constant range, the impact of extramural environmental parameters on the population of rat mites during three different seasons was observed and studied. A high population of *Echinolaelaps echidininus* (Berlese) and *Laelaps nuttalli* was recorded during monsoon (244) when humidity is high and the temperature is moderately followed by winter (74) and summer (45). A large number of gravid females also obtained during monsoon.

Laelaps nuttalli (Hirst) is reported first time on laboratory rat from Pune, Maharashtra and new to Intramural House Dust Mite (HDM) record.

Male specimens of both mite species need more investigation, such as SEM (Scanning Electron Microscopy) for their identification and description to be studied further.

Table 1. Seasonal contribution of rat mite (2018-19).

Season	Months	Total load of mites	Number of mites / gm of sample
	February	14	02
Summer	March	17	02
(45 mites)	April	00	00
	May	09	01
	June	47	06
Monsoon	July	49	06
(244 mites)	August	61	08
	September	60	07
	October	26	04
Winter	November	17	02
(74 mites)	December	16	02
	January	06	01

Figure-1: Monthly Contribution of rat mites 2018-19 (Graphical Representation).**Table-2: Weather data recorded during the study from Pune 2018-19.**

Months	Max. Temp	Min. Temp	Average Temp	Max RH %	Min RH %	Average RH %	Rain fall. mm
Feb	32	19.2	25.6	32	29	30.5	00
Mar	34	23	28.5	32.5	28	30.25	0.7
Apr	37	24.2	30.6	36	32	34	5.4
May	37.2	25.6	31.4	49	45	47	6.8
June	29.9	24	26.95	75.9	71	73.45	185.6
July	26	22	24	84	81	82.5	486.6
Aug	25	22	23.5	86	82	84	268.9
Sept	28	21	24.5	78	73	75.5	58.7
Oct	29	23	26.0	52	47	49.5	33.8
Nov	28.1	21	24.55	48	45	46.5	20
Dec	23.2	16.9	20.05	43	39	41	00
Jan	25	17	21	41	38	39.5	00

Figure 2. *Echinolaelaps echidninus*. Female, ventral



Figure 3. *Laelaps nuttalli*. Female, ventral



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मराठवाड्याची धाराशिव लेणी एक प्राचीन वारसा

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गोषवारा:

प्राचीन काळात दक्षिण भारतात विशेष करून महाराष्ट्रात सातवाहन, वाकाटक, राष्ट्रकुट व चाल्युक्य ह्या सत्ता होत्या हे संशोधनातून व त्यांनी निर्माण केलेल्या पुरातत्वीय साधनातून सिद्ध होते. या सत्तांच्या उदार धोरणामुळे कला, साहित्य, व स्थापत्य या क्षेत्रात विशेष प्रगती केलेली दिसून येते. वाकाटक साम्राज्याच्या काळात सहाव्या शतकात स्थापत्य कलेच्या अविष्कार म्हणजे बालाघाट डोंगरात खोदलेली धाराशिव लेणी होय. ही लेणी मराठवाड्यातील बौद्ध स्थापत्य शैलीची साक्ष देते. या लेण्यामध्ये बौद्ध, जैन व हिंदू लेणी पहावयास मिळतात. बौद्ध लेणी ह्या भव्य असून तेथे दगडात कोरलेले कमानदार प्रवेशद्वार आहे. प्रवेशद्वाराच्या दोन्ही बाजूस द्वारपालकोरलेले आहेत. मुख्य दालन मोठे असून तेथे बौद्ध भिखूसाठी निवारा गृहे कोरलेली आहेत. जैन लेण्यात अनेक खोल्या असून गर्भगृहात भगवान पार्श्वनाथ तीर्थंकर यांची भव्य प्रतिमा आहे. करकंडचरिऊ नामक जैन ग्रंथात या लेण्यांचे वर्णन आढळते.

मुख्य शब्द :

सातवाहन, वाकाटक, चाल्युक्य, लेणी, करकंडचरिऊ(करकण्डुचरित), विहार,बौद्ध लेणी, जैन लेणी

प्रस्तावना :

पर्वत रांगातील कठीण खडक खोदून तयार केलेली गुहागृहे वा प्रस्तरालये म्हणजे लेणी होय. नाशिकजवळच्या पांडव लेण्यातील लेखात 'लेण' हा शब्द प्रथम आलेला दिसतो. 'एतच्च लेण महादेवी महाराज मातामहाराज पतामही ददाति...', 'लेण' हा शब्द संस्कृत 'लयन' म्हणजे 'गृह' या शब्दावरून आला आहे. लेण्यांना गुहा, गुंफा, शैलगृहे, शिलामंदिरे, प्रस्तरालये अशी अन्य नावेही आहेत. गुहांची ठिकाणे डोंगरकपारीत नैसर्गिकरीत्या तयार झालेली असतात किंवा मानवाने डोंगर खोदून ती तयार केलेली असतात. लेणी ही संज्ञा सामान्यपणे मानवनिर्मित गुहांना वापरली जाते.

प्राचीन काळातील लेणी आणि समृद्ध व्यापारीमार्ग यांचे घट्ट नाते होते हेइतिहासकारांनी केलेल्याविविध संशोधनावरून आज सिद्ध झाले आहे. सातवाहन काळापासून महाराष्ट्रातील लेणी खोदकामास सुरवात झाली व त्या पूर्णत्वास राष्ट्रकुट, वाकाटक व चाल्युक्यांच्या काळात आल्या. आजच्या मराठवाड्यातील प्रतिष्ठान(पैठण), तेर, भोकरदन, प्रतिष्ठान (पैठण), तेर ही नगरे सातवाहन काळात प्रसिद्ध होती तर राष्ट्रकुट काळात लातूर, कंधार, वेरूळ, नांदेड, धाराशिव(उस्मानाबाद),पैठण देवगिरी धाऊर, अंबाजोगाई ही शहरे प्रसिद्ध होती. कलेच्या क्षेत्रात लातूर, वेरूळ, कंधार व धाराशिव (उस्मानाबाद) ही नगरे प्रसिद्ध होते. प्राचीन काळात मराठवाड्यातील नगरे व्यापारीदृष्ट्या समृद्ध होती तसेच या व्यापारी नगरातून विविध प्रकारच्या वस्तू माल पश्चिम किनाऱ्यावरीलभडोच, शूर्पारक (नाला सोपारा), कल्याण, चौल आदी बंदरातून व्यापार परदेशात चालत असे. पश्चिम किनाऱ्यावरील बंदरामार्फत परदेशाशी होणाऱ्या या व्यापारामुळे व्यापार्यांची भरभराट होत होती. व्यापार्यांनीदिलेल्या देणग्या आणि राजाश्रयामुळे महाराष्ट्रात प्राचीन काळी अनेक लेणी खोदली गेली. त्यामुळे प्राचीन संपन्न बंदरे, व्यापारी मार्ग, बाजारपेठा, राजधान्या यांच्या परिसरात या लेण्या मुख्यत्वे करून आढळतात. या लेण्यांचा धार्मिक कार्यासाठी आणि व्यापारी मार्गावरील विश्रंती स्थाने म्हणून उपयोग केला जात होता. व्यापार्यांनी दिलेल्या दानातून या लेण्यांचा दैनंदिन खर्च चालत असे, अशी परस्पर पूरक व्यवस्था समाजातल्या या दोन्ही घटकांच्या सोयीची त्या काळात केली होती.

मराठवाड्याची धाराशिव लेणी:

प्राचीन काळात पैठण, तेर (तगर) या नगरामधूनपश्चिम बंदराकडे जाणारा व्यापारी मार्ग धाराशीव (म्हणजे आजचे उस्मानाबाद) या शहरातून नाणेघाट (जुन्नर) मार्गे भडोच, शूर्पारक (नाला सोपारा), कल्याण, चौल आदी बंदरात व्यापारी मार्गाने जात असे. या व्यापारी मार्गावर धाराशीव शहराजवळ सहाव्या शतकात बालाघाट डोंगरांगेत धाराशिव लेणी कोरण्यात आली आहे. बालाघाट डोंगर रांगेत कोरलेली लेणी ही धाराशीव लेणी म्हणून प्रसिद्ध आहेत. या लेण्यांमध्ये बौद्ध, हिंदू, जैन या धर्मातील एकूण ११ लेणी या डोंगर रांगेत कोरलेल्या आहेत. याशिवाय येथे एक समाधी मंदिर आहे. त्याच्या बांधकाम शैलीवरून ते पेशवे काळात सतराव्या शतकात बांधलेले असावे.



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उस्मानाबाद शहरापासून ८ कि.मी. अंतरावर धाराशीव लेणी आहे. जेथे रस्ता संपतो तेथून लेण्यांपर्यंत खाली उतरण्यासाठी पायऱ्या बांधलेल्या आहेत. पायऱ्या उतरायला सुरुवात केल्यावर डाव्या बाजूला एक ठळक पायवाट दिसते. या पायवाटेने पुढे गेल्यावर ठरावीक अंतरावर धाराशीव लेण्यांमध्ये बौद्ध, जैन आणि हिंदू लेणी कोरली आहेत त्याचे दर्शन होते, त्यांची माहिती पुढीलप्रमाणे सांगता येईल:

अ) बौद्ध लेणी :

येथे सात बौद्ध लेणी असून पहिल्या लेण्यात सामग्री आढळते. दुसरे लेणे मुख्यतः वाकाटक शैलीतील कोरलेले आहे यात आहे. हे लेणे भव्य असून त्याला दगडात कोरलेले कमानदार प्रवेशद्वार आहे. प्रवेशद्वाराच्या दोन्ही बाजूस व्दारपाल (वीर) कोरलेले आहेत. मुख्य दालन ८० चौरस फूट लांब इतके मोठे असून तेथे बौद्ध भिखवुंसाठी १४ निवारा गृहे कोरलेली आहेत. गाभाऱ्यात पद्यासन अवस्थेतील बुद्ध मूर्ती आहे. तिसरे लेणे पहिल्या लेण्याप्रमाणेच आहे. बाकी लेणी जैन सदृश्य दिसतात हि लेणी अगोदर बौद्ध लेणी होती नंतरच्या काळात त्याच लेण्यांमध्ये जैन लेणी कोरली आहेत. आत गेल्यावर उजव्या बाजूला दगडात कोरलेल्या स्तुपाचे अवशेष पाहायला मिळतात.

ब) जैन लेणी:

बुद्धाचे स्तुपाचे अवशेष पाहून पायऱ्या चढून पुढे सात जैन लेणी आहेत. लेण्यात प्रवेश करताना ओवरीच्या खालच्या बाजूस भार्गव कोरलेले पाहायला मिळतात. लेण्याची रचना ओवरी, सभामंडप, त्याच्या दोन्ही बाजूला असलेले विहार आणि गर्भगृह अशी रचना आहे. आज ओवरी नष्ट झालेली आहे. दुसऱ्या लेण्यात आठ स्तंभ आणि पाच प्रवेशद्वारे आहेत. दोन्ही बाजूस २२ खोल्या असून गर्भगृहात भगवान पार्श्वनाथ तीर्थंकर यांची भव्य प्रतिमा आहे. करकंडचरिऊ (करकण्डुचरित) नामक जैन ग्रंथात या लेण्यांचे वर्णन आढळते. सभामंडप २० खांबांवर तोललेला आहे. या खांबांवर खूप सुंदर नक्षीकाम असावे असे दिसून येते. लेण्याची दुरुस्ती करताना ते नष्ट झाले असावेत. आता फक्त उजव्या बाहेरच्या कोपऱ्यातल्या खांबांवर नक्षीकाम पाहायला मिळते. सभामंडपाच्या दोन्ही बाजूला ७ खोल्या आहेत.

क) हिंदू लेणी :

बालाघाट डोंगर रांगात सुरुवातीला ३ हिंदू लेणी पाहायला मिळतात. ही हिंदू लेणी अलीकडच्या काळात कोरल्या असाव्यात त्यातील दुसऱ्या लेण्यात रामायण, महाभारत आणि हिंदू पुराणातल्या कथांवर आधारित शिल्पपट कोरलेले पाहायला मिळतात. नंतरच्या काळात या लेण्यासमोरच मराठा सरदाराचे समाधी मंदिर आहे. त्याची रचना मराठेशाहीतील वाड्याप्रमाणे आहे. गाभाऱ्यात शंकराच्या पिंडीची स्थापना केलेली आहे. गाभाऱ्याच्या दोन्ही बाजूस कमानदार ओवऱ्या आहेत. गाभाऱ्यासमोर असलेल्या दारातून आणि कळसातून फक्त पिंडीवर प्रकाश पडेल अशी योजना केलेली आहे. मंदिरासमोर वीरगळ आणि तीन समाध्या आहेत. महाराष्ट्रात अनेक ठिकाणी लेण्यातल्या मूळ मूर्तींना आज वेगळ्याच देवतेच्या नावाने पुजलेले जाते असे पाहायला मिळते.

धाराशीव लेणी बौद्ध की जैन असा वाद आहे, त्यावर दोनी पक्ष दावा करतात. जेम्स बर्गस यांनी महाराष्ट्रातील १२०० लेण्यांवर संशोधन केले आहे. या संशोधनातून त्यांनी असा निष्कर्ष काढला की, धाराशीव लेणी इ.स. ५ व्या शतकात बौद्ध लेणी होती. त्यांच्या मते १२ व्या शतकात त्यातील काही बौद्ध लेणी ह्या जैन लेण्यांमध्ये परावर्तित केल्या गेल्या आहेत हे लेण्यातील कोरीव कामातून दिसून येते.

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