Bioresources Awareness & Management of Urban Wastes

National Seminar
6 & 7 Nov. 2004

ABSTRACTS

BIPIN BIHARI COLLEGE
JHANSI U.P.
A faunastic survey of trematode parasites of fishes were worked out in the urban and suburban area of Jhansi City. The fishes showed infection in the alimentary canal, liver, lungs, gills and fins. The infected fishes showed symptom of nodule formation and the necrosis of body tissues. The infected edible fishes loose their market value.

Extensive collagen deposition were observed in the area of attachment of the Parasites and on epithelium lining. The capsules were harboured by the immature; worms forming a new microhabitat of the parasites. Hence it is of paramount importance to study the fish fauna of Bundelkhand Region.

**WATER SUPPLY IN ARMY AREA OF BABINA CANTONMENT**

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The water supply is operated in the army area of Babina Cantonment through two pump houses, No 6 & No 93, both have under ground storage tank of 6 lakh and 14 lakh gallons water. The entire supply can be divided into Old KLP (Key Location Plan), New KLP and yard area. The water supply is 8.3 lakh gallons to Old KLP area, 5.2 lakh gallons to New KLP area and 1 lakh gallons to yard area with the total supply of 14.5 lakh gallons water per day.

Involving a manpower of about 42 to 44 persons per day with an average expenditure of about Rs.1,10,000 per month. Water purification and treatment technique is performed at BABINA WATER SUPPLY where after sedimentation, chlorination is done to remove pathogenic organisms. In the test performed by us, we found residual chlorine in higher quantity and some times water was found having higher quantity Total Dissolve Salts (TDS). The coliform count was found in the standard limits from this water, it appears that the supply is quite suitable except that it required lower addition of chlorine (Cl) as its addition results in the formation of Trihalomethon, which is injurious to health.
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RECORD OF PHYLLODISTOMUM VACHIOUS DAYAL, 1949 FROM FRESHWATER FISH EUTROPICHTHYS VACHA (HAM.) AT JHANSI

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B.B. College, Jhansi U.P.

Five specimens of Phyllodistomum vachius Dayal, 1949 collected from urinary bladder and ureter of a freshwater fish Eutropiichthys vacha (Ham.) from river Betwa at Jhansi are recorded herein.

MATERIAL AND METHODS

Worms were fixed in 70% alcohol under presence of a cover slip, stained in Haematoxylin, dehydrated and mounted in Canada balsam. Camera Lucida diagram was made and measurements were taken with the help of an occulometer.

*Phyllodistomum vachius* Dayal, 1949

(Figs. 1 & 2)

Body spatulate, 0.124-1.48 mm X 0.86-0.96 mm, anterior part narrow and elongated, 0.46-0.55 mm X 0.32-0.39 mm, posterior part expanded and nearly circular. Oral sucker oval, 0.16-0.20 mm X 0.19-0.20 mm; ventral sucker equal, slightly larger or smaller to oral sucker, 0.18-0.20 mm. Pharynx absent, oesophagus tubular 0.09-0.12 mm, bifurcates into two intestinal caeca extending upto hind region of body.

Testes lobed, intercaecal, post equatorial, irregular; right testis, 0.11-0.12 mm X 0.05-0.07mm. Cirrus sac absent. Ovary lobed, pre-testicular, 0.05-0.08 mm X 0.07-0.1mm, situated just behind right vitelline gland. Receptaculum seminis absent. Vitelline glands two, lying behind ventral sucker, one on each side of body. Right vitelline gland slightly lobed, present just above ovary, 0.04-0.06 mm X 0.08-0.09 mm; left vitelline gland, 0.06-0.07 mm X 0.05-0.06 mm. Eggs spherical, nonoperculated, 0.01mm X 0.01mm. Genital pore median, just behind intestinal bifurcation. Excretory bladder sigmoid, with terminal excretory pore.
DISCUSSION

Dayal (1949) described *P. vachius* from the urinary bladder of *E. vacha* at Lucknow. This appears to be another record of the species from type host but from different locality.

REFERENCE

17th Annual Conference of Purvanchal Academy of Sciences (PAS)

February, 19 – 20, 2008

Abstracts

Organized by Department of Mathematics

K. S. Saket P.G. College, Ayodhya – Faizabad (U.P.), India
Toxicity of Cypermethrin (4% EC, 10% EC and 25% EC) on the Fresh Water Fishes, Channa punctatus of Bundelkhand Region

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The present investigation is aimed to study the toxic effect of highly active synthetic pyrethroid insecticides, Cypermethrin 4% EC (Profex Super), 10% EC (Dhanuka Super Killer-10) and 25% EC (Sunthrin-25) on fresh water fishes, Channa punctatus. To estimate the correct LC50 two exploratory and one definitive test were conducted. In first exploratory test two concentrations (lower and higher) were taken to find out supposed mortality between 0% to 100%. In second exploratory test four ascending series of concentrations were taken to get narrow range of concentrations. Five fishes were exposed to each concentration in both experiments. On the basis of second range finding test (definitive test) seven different concentrations were selected and ten fishes were exposed to each concentration. The mortality was recorded after a period of 24, 48, 72 and 96 hours and dead fishes were removed when observed. The concentrations from the definitive test were employed to determine LC50 values by plotting a dose response curve between percent mortality and concentrations of Cypermethrin. After plotting a graph for toxicity determination, it has been found that 24, 48, 72 and 96 hours LC50 values of Profex Super were 0.021 ml/liter, 0.176 ml/liter, 0.146 ml/liter and 0.012 ml/liter respectively, where as for Dhanuka Super Killer-10, 0.0144 ml/liter, 0.0120 ml/liter, 0.0098 ml/liter and 0.0084 ml/liter respectively and 0.0102 ml/liter, 0.0092 ml/liter, 0.0080 ml/liter and 0.0065 ml/liter respectively for Sunthrin-25.

A New Digenean Trematode Dactylostomum cuchia from Fresh Water Fish Amphipnous cuchia of Matatila Dam, Jhansi (U. P.) India

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While working on helminth fauna of economically important fishes of Bundelkhand region Jhansi, the author collected ten specimens of genus Dactylostomum. Out of seven Amphipnous cuchia only two fishes were found infected with seven specimens of Dactylostomum. These collected digenean were fixed in 70% alcohol, stained in with aceto alum carmine, cleared in clove oil and mounted in Canada balsam. These parasites are described here in as new forms. Dactylostomum cuchia n. sp. is characterized by short pedunculated ventral sucker with four dactyls, position of genital pore, size of excretory bladder, extension of vitelline follicles as well as size of body.
Population Diversity of Helminth Parasites Present in Fresh Water Fishes Near and Around District Jhansi, Bundelkhand Region

Jagmohan Sen, S. Shaheen and S. F. Siddiqui
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The present communication deals with the population diversity of helminth parasites in fresh water fishes from different places of district Jhansi, Bundelkhand region during 2006 to 2007. A total 342 helminth parasites were recovered from 360 fishes. Collected parasites were of i.e. Cestoda, Trematoda and Nematoda. This report summarized the data, percentage of incidence, intensity, density and index of infection of helminth parasites of fresh water fishes during 2006 to 2007 with effect of environmental factors.

First Report of *Brugia malayi* (Brug, 1927) Buckley 1960 from District Jalaun (U. P.) India

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**Department of Zoology, T. R. Y. S. Mahavidyalaya, Moth, Jhansi (U. P.)

Bundelkhand is backward area of Uttar Pradesh. Population of this area lives under poverty, due to lack of hygienic knowledge, most of the people suffered from different diseases which cause ill health. In which Filariasis has been a major public health problem in India next to malaria. It leads into irreversible chronic manifestations, which are responsible for social stigma, besides causing considerable economic loss and severe physical disability to the affected individuals.

Morpho-Taxonomic Status of a New Species of Caryophyllidean Cestode, *Pseudobilobulata murrhaensis* sp. Nov. from *Clarias batrachus* (Linn.) from Bundelkhand

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Twelve fresh water cat fishes, *Clarias batrachus* (Linn.) were collected from local pond of village Murraha, Tehsil – Palera, District – Tikamgrah (M. P.) for study of cestode infection after thoroughly examination we obtain four alike cestodes from their intestines. Morphological studies of the cestodes revealed them to belong the genus, *Pseudobilobulata* Srivastav and Lohia (2002) at the family Capingentidae Hunter (1930); order Caryophyllidea Beneden in Olsson (1893).
National Seminar on
"Biodiversity & Human Welfare"
(29 - 31 December, 2008)

Department of Zoology, Gauhati University
Guwahati 781 014, Assam, India
Sponsored by
DST, DBT, CSIR, NEC, MoEF, UGC, NVBDCP, CSB, BRPL, NRL & AARANYAK
lines. The indoor residual spray (IRS) and impregnation of bed nets was done in order to minimize the man mosquito contact. The above investigations reveal that there exists a strong need to educate the tribal communities and to make them aware about the medical facilities available for them.
Keywords: Malaria, Plasmodium falciparum, tribal, tripura, vector, susceptibility, mortality.

412. ON TWO DIGENETIC TREMATODES BUCEPHALUS VACHAI SP. NOV. FROM EUTROPICHTHYS VACHA (HAM.) AND DACTYLOSTOMUM BARUASAGERII SP. FROM AMPHIONUS CUCHIA (HAM.) OF BARUASAGAR DAM, DISTRICT JHANSI, BUNDELKHAND REGION.
Jag Mohan Sen & S.F. Siddique
Department of Zoology, Bipin Bihari P.G. College, Jhansi

The present investigation is study on helminth fauna of economically important fishes of Bundelkhand region, Jhansi. Twenty five specimens of Eutropichthys vacha (Ham.) and Amphionus cuchia (Ham.) were collected from Baruasagar Dam, Jhansi. After thoroughly examined, only two fishes of Eutropichthys vacha (Ham.) and one fish of Amphionus cuchia (Ham.) were found infected with five specimens of genus Bucephalus and two specimens of genus Dactylostomum. These collected digenetic trematode kept in normal saline and fixed in 70% alcohol, stained in aceto alum carmine, cleared in clove oil and mounted in Canada balsam. These parasites are described here as new species. Bucephalus vachaii n.Sp. is characterized by the aspinosebody, absence of tentacles, tubular esophagus, larger pharynx, position of testis parallel to cirrus sac, anterior testis is smaller than posterior testis, small tubular ovary small, sac like pre equatorial intestine. Dactylostomum barusagarei. Sp. Is characterized by short pedunculated ventral sucker with two dactyls, ventral sucker larger than oral sucker, both oral and ventral sucker are present at same level, in tension of sac like vesicular- seminal is ventral sucker to intestinal bifurcation lying in parenchyma, the position of genital pore below the intestinal bifurcation and excretory bladder long and sac like.
Keywords: 70% alcohol, Aceto alum Carmine, Eutropichthys vacha, Amphionus cuchia

413. SEASONAL OCCURRENCE AND INFESTATION INTENSITY OF NEOECHINORHYNCHUS RUTILI MULLER, A FISH PARASITE IN CHANNA PUNCTATUS STUDIED IN THE PONDS OF GAUHATI UNIVERSITY AQUACULTURE CAMPUS
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The present paper deals with an intestinal parasite of fish, Neoechinarhynchus rutili Müller (also known as “spiny headed worm”), which is observed in the intestinal part of Channa punctatus. The seasonal fluctuation of its infestation in the intestine of the host fish species is studied during September 2007 to October 2008. Marked seasonal variation in the abundance of parasite is observed during the study. Altogether 210 numbers of C. punctatus were dissected (20 nos. in a month) and 46.7% of fish (98 in numbers) were found infected by the parasite in association with some other helminthes parasites represented by Cestode, Trematode and Nematode. The characterization of the disease known as “acanthocephalosis” caused by this parasite in the fish body is also recorded during their high infestation. The paper exposes its importance, which will help in monitoring of the fish health leading to better understanding of economics of fresh water fish culture practice in Assam.
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Abstracts

Organized by Department of Mathematics
T. D. Postgraduate College, Jaunpur (U.P.), India
Studies on Seasonal Haematological Variations in Fresh Water Fish
*Channa punctatus* (Bl.) Infected with Trematode Parasite of Different Water Bodies of Bundelkhand Region, Jhansi

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Department of Zoology, Bipin Bihari P.G. College, Jhansi

The present investigation carried out seasonally from Mar 2006 – Feb 2008, is an attempt to study the impact of trematode parasitism on fish haematology of different water bodies of Bundelkhand region, Jhansi. Very scanty work has been done on the haematology of fishes which were very important source of high quality of protein food for human being specially heart patient. But the presence of trematode in the fishes, causing harm to fish protein and great loss of blood supply which may also lead to anaemia. For different haematological parameters, *Channa punctatus* were collected from different water bodies of Bundelkhand Region, Jhansi. These fishes were kept in the laboratory aquarium for the study. For haematological investigation, blood samples were collected from all fish hosts in vials containing EDTA and were properly labeled. The results showed a significant decrease from 14.7 – 12.8 g for Hb%, further decrease from 3.86 x 10^6 mm^3 -3.22 x 10^6 mm^3 for RBC. However, a significant increase in WBC count was observed with mean increase from 2.9 x 10^3 mm^3 -3.3 x 10^3 mm^3. decrease of PCV values 42 – 39, increase ESR values 1.2 – 1.5, increase of MCH values 38.08 – 40.82, and increase of MCV values 105.82 – 115.38. The haematological manifestations of the infected fish are suggestive of anaemia and immunological response of the fish.

Study of an Interesting Tapeworm from Edible Fish of Bundelkhand

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During the Cesto – Piscian survey of Bundelkhand region of Uttar Pradesh. We come across this very important District Chitrakoot. This is also important from religious point of view due to Lord Ram Chandra i.e. Chitrakoot. The village Rajapur (Tulsi Ghat) of the Tehsil Karwi, was visited by our team in October 2007 and collected various species of the local fishes but one of the cal fish *Heteropneustes fossilis* (Bloch.), yielded one medium moving helminth parasite. The unsegmented tapeworm was preserved in 5% formiln. After laboratory examination, we reach on the conclusion that it fall under genus *Sudhaena* which is different from other species reported so far we provisionally accommodate this worm as *Sudhaena chitrakooti* n. sp.