

Analysis of heavy metal concentration in the lower stream reaches of Periyar river, Kerala

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ABSTRACT

The present study focused on the lower reaches of Periyar which is highly polluted area. Water samples, Sediment samples and Fish samples were taken for physico-chemical analysis and heavy metals study for the period of January 2009 to December 2009 at four different stations of the river. Water quality parameters like Depth, Transparency, Temperature, P^H , Dissolved oxygen, Carbon-dioxide, alkalinity, salinity, nitrite, nitrate, phosphate, silicate and ammonia; the concentration of five heavy metals Viz. cadmium, copper, lead, zinc and chromium was studied during the period.

***Spirulina* : on earthquake affected NIDDM patients**

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ABSTRACT

Spirulina platensis (Ramgah Lake Isolate, Jaipur) was administered to Non Insulin Dependent Diabetes Mellitus (NIDDM) patients of earthquake affected Halvad-Gujarat. 189 patients falling in the age group of 15-60 yrs., belongs to both the genders were administered with *spirulina*; 2g/d⁻¹ over a period of 60 days, Haemoglobin, red blood corpuscles, high density lipoproteins were increased and Erythrocytes, triglycerides, total cholesterol, low density lipoproteins and very low density lipoproteins were reduced in the blood serum of diabetic male and female patients. Protein, albumen globulin and enzyme contents did not vary significantly. But overnight fasting blood glucose and postprandial blood glucose exhibited a remarkable reduction in serum of NIDDM patients. Hypoglycaemic impact of *Spirulina* is well documented.

Fresh water phytoplankton from Gadhinglaj Tahsil of Kolhapur district, Maharashtra, India

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ABSTRACT

The present paper reports 299 phytoplankton taxa belonging to 8 classes namely, Cyanophyceae, Chlorophyceae, Euglenophyceae, Dinophyceae, Xanthophyceae, Chrysophyceae, Chloromonadineae and Bacillariophyceae from 7 selected sites of Gadhinglaj Tahasil.

Evaluation of inhibitory effect of chitosan coated silver nanoparticles synthesized by *Spirulina platensis* against biofilm of *Pseudomonas aeruginosa*

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ABSTRACT

Silver nanoparticles synthesized by biomass of *Spirulina platensis* coated with chitosan was evaluated against biofilm of *Pseudomonas aeruginosa*. The nanoparticles were synthesized by dried biomass of *Spirulina platensis* and the synthesized purified particles were characterized by UV-Vis spectrophotometry and SEM. The UV-Vis spectroscopy revealed the formation of silver nanoparticles by yielding the typical silver plasmon absorption maxima at 430nm and SEM micrograph indicates the uniform spherical particles with the size range of 45-60nm.. The synthesized nanoparticles were coated with chitosan adopting standard methods and the coated particles were evaluated against inhibitory effect of biofilm of *Pseudomonas aeruginosa* by spectrophotometric biofilm inhibition assay which reveals that the tested concentration of chitosan coated silver nanoparticles highly inhibited biofilm and the biochemical composition mainly total carbohydrate and protein of biofilm matrix were highly reduced.

Coccal Green algae from Bitang-cho Lake (a high altitude lake in Easter Himalaya)

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ABSTRACT

Many regions of Eastern Himalaya are phycologically unexplored. During the systematic investigations on the phytoplankton biodiversity of Eastern Himalaya the authors visited Bitang-cho Lake, Sikkim, India. It is a high mountain lake situated in East Sikkim district having an altitude of about 13,700 ft. above the sea level. Enormous range of phytoplankton diversity was recorded of which coccal green algae represented 16 taxa belonging to 9 genera viz. *Ankistrodesmus* (1), *Elakatothrix* (1), *Kirchneriella* (1), *Oocystis* (1), *Pediastrum* (2), *Radiococcus* (1), *Scenedesmus* (6), *Selenastrum* (2) and *Tetrallantos* (1). All are recorded for the first time from the Bitang-cho Lake. Except *Pediastrum tetras* (Ehrenberg) Ralfs and *Scenedesmus bijugatus* (Turpin) Kützing all are also new record for Sikkim state. *Elakatothrix viridis* (Snow) Printz and *Pediastrum tetras* (Ehrenberg) Ralfs var. *excisum* (Rabenhorst) Hansgirg are being recorded for the first time from India.

Study of phytoplankton and physico-chemical characteristics of brackish water of Tiruchendur, Tamil Nadu

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ABSTRACT

Present study deals with the phytoplankton and physicochemical characteristic of brackish water of Tiruchendur during December 2011 to February 2012. Physicochemical parameters like temperature, pH, DO, salinity, EC, hardness, alkalinity, TDS, chloride, nitrate and sulphate were studied from which phytoplankton samples were collected. The total number of phytoplankton 44 species was identified. These species represent Cyanophyceae, Chlorophyceae, Euglenophyceae, Chrysophyceae, Dinophyceae and Bacillariophyceae.

Some Bacillariophyceae from Nepal, including a new record

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ABSTRACT

A study was conducted to document the Bacillariophyceae in the water bodies in Sagarmatha National Park and Buffer zone, Nepal. Twenty two (22) species having 16 genera of class Bacillariophyceae were identified. Among them, one species *Cymbella lanceolata* was found new to Nepal. This species was collected from running water bodies at Lobuche, Pheriche and Thamo between 3700-4600m altitudes.

Ecology of the Fauna associated with Floating vegetation in different village Ponds in Thrissur District, Kerala

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ABSTRACT

The quality of life linked with the quality of environment; hence the biological components of fresh water depend solely on physico chemical condition. Analysis of physico chemical parameters is therefore essential, as it has great bearing on system. The data presented in the paper thus presents varied parameters of pond ecosystem in relation with the fauna of floating vegetation which provides information of pond ecological characteristics. Present study focused on the three different ponds (Pond I, Pond II and Pond III) in Nattika Panachayath at Thrissur district, Kerala. Pond II is highly polluted system comparing with Pond I and Pond II. The physico chemical parameters of pond II do not meet the basic requirements of an aquaculture system, so we can't use this as fish culture pond.

Freshwater Prawn genus : *Macrobrachium* diversity from lakes in Kancheepuram District, Tamil Nadu, India

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ABSTRACT

Kancheepuram district is situated on the North East coast of Tamil Nadu. The Palar river is the most important river running through the district. This district abounds in varieties of freshwater bodies such as tanks, lakes, perennial and seasonal ponds contributes to a local freshwater aquaculture. The genus *Macrobrachium* Bate tends to be very complicated group among the genera under family Palaemonidae and order Decapoda. The genus *Macrobrachium* represented from lakes in Kancheepuram district have 6 species namely *M. lamarrei*, *M. malcolmsonii*, *M. nobilii*, *M. scabriculum*, *M. canarae* and *M. rude*. Present paper deals with the diversity of freshwater prawn genus *Macrobrachium* from lakes in Kancheepuram district.

Freshwater prawn *Macrobrachium* spp. potentials of Thamiraparani river for aquaculture in Tamil Nadu

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ABSTRACT

Freshwater prawn farming is more lucrative than fish farming. Freshwater prawns are important in the capture and culture fisheries scene and are extensively distributed in freshwater and estuaries of the world mostly in tropical and sub tropical belts. Freshwater prawn will help us to increase our prawn production which will fetch valuable to reign exchange for our country and will provide more employment opportunities for the rural people. A report on the prawn fishery of the perennial river Thamiraparani. The river Thamiraparani originates as Agastyamalai (Pothigai hills) on the eastern slopes of the western ghats at an altitude of 2000 M and it confluences with the Bay of Bengal at Gulf of Mannar after traversing a distance of 120 kms. Thamiraparani river has been considered as the second perennial river of Tamil Nadu. This river basin has been known to contain more potentials of freshwater prawns. Four stations are fixed in Thamiraparani River Basin for prawn collection. Environmental factors is an important, one which controls all the biological reactions of the aquatic organism. This basin is highly benefitted by the North-east monsoon (October to December) with a high record of 434.33mm. of rainfall. The average temperature minimum and maximum is found to be 22.49°C and 34.84°C respectively. The availability of prawns is dependent only in and after monsoon periods. In this basin totally 8 species are collected. The present paper deals with the distribution pattern of the freshwater prawn and their seasonal availability is discussed.

Fresh water phytoplankton and filamentous algae from Khanapur and Atpadi Tahsils of Sangli district of Maharashtra, India

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ABSTRACT

The parameters such as pH, EC, Hardness and Alkalinity of the aquatic environment have been studied for 8 sites in Sangli district. Phytoplankton samples were also collected from these sites. The total number of phytoplankton and filamentous algae (17) goes to 191 species. These species represent Cyanophyceae (12), Chlorophyceae (66), Euglenophyceae (16), Dinophyceae (7) and Bacillariophyceae (73).

Cyanobacteria from Khumbu region (Mt. Everest) including a new record for Nepal

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ABSTRACT

A study was conducted to document the cyanobacteria in the water bodies at Sagarmatha National Park and Buffer zone, Nepal. Total, nine taxa under 6 genera of class Cyanophyceae were identified. Among them, one species *Oscillatoria insignis* Skuja was found to be new to Nepal. This species was collected from running waterbodies between 2nd Gokyo and 3rd lake at altitude of 4700 msl.