clay and mudstone resemble interchannel tidal flats.

A detailed study of sedimentary facies, palaeoflow, textural parameters and systematics of ichnofauna is in progress and the results shall be communicated in due course.

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**IN VIVO RECOVERY OF ACETYLCHOLINESTERASE ACTIVITY FROM METHYL PARATHION INDUCED INHIBITION IN THE FRESHWATER TELEOST, CYPRINUS CARPIO**

R. Nagaratnamma and R. Ramamurthi
Department of Zoology, Sri Venkateswara University, Tirupati 517 502, India.

Inhibition of Acetylcholinesterase (AChE) in fish by the organophosphate (OP) compounds is well

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**Figures A–C.** A(i) *Planolites* Nicholson, 1873. (ii) *Skolithos* Haldemann, 1840, (iii) *Thalassinoides* Ehrenberg, 1944. B. Pipe-like tubes of *Skolithos* sp. C. En mass occurring burrows of *Skolithos* sp.

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Environment. The *Cruziana* ichnofacies indicates a shallow sublittoral zone, below wave base, to slightly quieter off-shore conditions of moderately low energy environments. Chamberlain and Clark interpreted *Cruziana* ichnofacies as indicative of shallow marine environment.

Thus, the palaeoecological data on ichnogenea *Skolithos*, *Planolites* and *Thalassinoides* are indicative of littoral marginal marine environment for the deposition of Bhuj Formation. Coarse to medium, channel-shaped sandstone bodies with oppositely oriented cross-bedding forests may correspond to sandy tidal channel facies, whereas associated fine sandstone,
AChE can be reversed by an interruption in the application\(^1\)\(^2\). Due to the lacunae present in the literature concerning the recovery phenomenon particularly in edible fish, the present study has been undertaken to study the recovery aspect of AChE activity in brain and gill tissues of common carp, *Cyprinus carpio* exposed to methyl parathion (MP) with special reference to time taken for recovery.

Details of maintenance of fish, *C. carpio* and determination of lethal concentration are already described\(^5\). After exposing the fish to 12mg/litre (i.e. LC\(_{50}\)/48 hr) of MP for 48 hr AChE activity of brain and gill tissues was measured by the method of Metcalf\(^7\). After 48 hr of lethal exposure the survived fish were transferred to clean water (containing no pesticide) and AChE activity was again measured after 1, 2, 3, 4 and 5 days. The protein content of the tissues was estimated by the method of Lowry et al\(^6\).

Figure 1 shows a progressive recovery of AChE activity in gill and brain of *C. carpio* from MP induced inhibition after transfer to clean water. The recovery was more rapid in gill. Gill AChE activity recovered to normal on the 4th day while brain AChE reached normal level on the 5th day (figure 1). Recovery of AChE activity was also observed in vertebrates like fish and mice\(^3\)\(^4\)\(^5\) and invertebrates like housefly, *Musca domestica*\(^4\) and crab, *Oziotrephusa senex senex*\(^9\). Deyosphorylation and resynthesis of the fresh enzyme were attributed\(^4\) to the complete recovery of ChE noticed in *M. domestica* exposed to Malathion. In addition biodegradation and/or rapid excretion of pesticide and transfer of the treated fish to clean water may enable the enzyme to recover from the inhibition. The present study which is preliminary in nature revealed the rapid recovery of AChE in the common carp and it is being followed by experiments to assess the nature and extent of recovery in tissue structural integrity and other aspects of metabolism.

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**MONONCHUS SINENSIS** N. SP.  
(NEMATODA: MONONCHIDAE) FROM INDIA

G. R. SONI AND H. S. NAMA  
Department of Zoology, University of Jodhpur, Jodhpur 342 001, India.

During helminthological investigations in fruits and vegetables, *Mononchus sinensis* n. sp. hitherto unpublished was found in the soil around roots of lemon plant (*Citrus sinensis*). It is characterized by tandem caudal glands and absence of cuticular pieces near vulva besides size of the buccal cavity.

*Mononchus sinensis* n.sp. (Figure 1: A-D)

Measurements:

Female (*Holotype*):  
- \(L = 1.39\) mm; \(a = 20\), \(b = 4.5\); \(c = 7.9\); \(v = 124\)\(_{50}\) 11.2

Female (*Paratypes* \(n = 2\)):  
- \(L = 1.37-1.40\) mm;  
  - \(a = 19.6-20\); \(b = 4.5-4.6\); \(c = 7.8-8.1\);  
  - \(v = 10.5-11.9\) 50-50.2\(_{89}\) 13.2

Body slender, transparent, tapering gradually towards the head and the tail. Lip region rather truncate, slightly offset. Amphid cup-shaped with aperture about \(3\)\(_{m}\) wide, situated a short distance (2.5\(_{m}\)) in front of the dorsal tooth apex. Stoma elongated.