known[1,2]. AChE can be reversed by an interruption in the application[3-5] 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[6]. 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[8].

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[5] and invertebrates like housefly, *Musca domestica*[4] and crab, *Oziotelphusa senex senex*[9]. Dephosphorylation 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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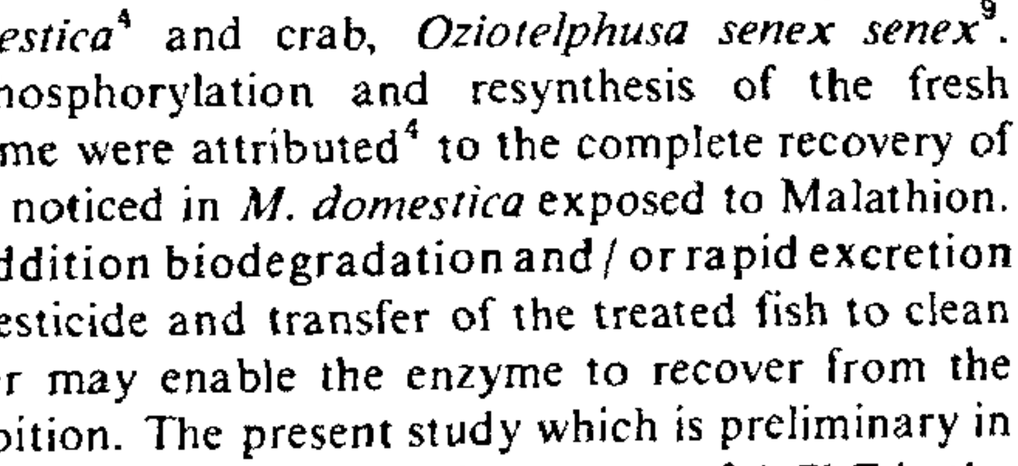

Figure 1. *In vivo* recovery of AChE activity from methyl parathion induced inhibition in *C. carpio* after transferring to clean water.

7 August 1982

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

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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\,3\,13\,6}$50-50.2$^{9\,5\,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 3μ wide, situated a short distance (2.5μ) in front of the dorsal tooth apex. Stoma elongated,

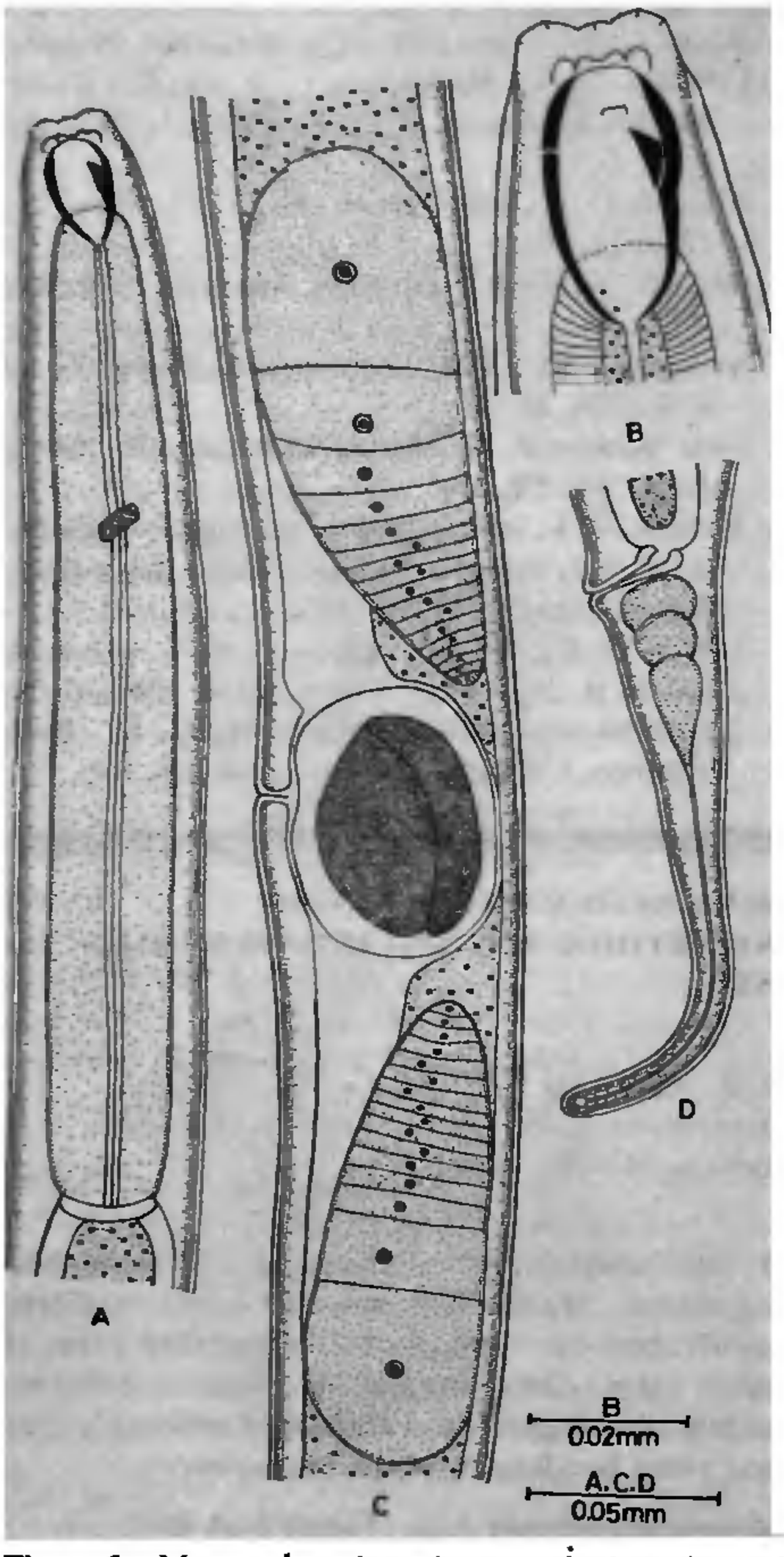

Figure 1. *Mononchus sinensis* n. sp. **A.** Anterior end of female **B.**Head end **C.**Vulvar region **D.**Tail end.

cylindrical measuring 32-34 × 17-18μ in size. Dorsal tooth prominent, directed forward with apex at 25% of stoma length. Subventral plates smooth except near the posterior end, each having a pair of foramina. Posterior third of stoma buried in anterior portion of oesophagus hence, forming a collar around stoma posteriorly. Oesophagus 300-310μ long, stout, musculo-glandular, almost cylindrical with a slight swelling posteriorly. Nerve ring at 105-107μ from the anterior end. Openings of five oesophageal glands visible (only in one female), situated behind the nerve ring. The opening of dorsal oesophageal gland lies at 2/5th (123μ); of first pair of subventral at about 3/4th (232μ) and of second pair of subventral at 9/10th (270-275μ) of the oesophageal length from anterior end. Oesophago-intestinal junction nontuberculate. Intenstine broad, opaque with thin granular walls and a wide lumen. Rectum 19-22μ long, cuticular walls of the rectum thick and bulbous near its junction with posterior end of the intestine. Caudal glands tandem. Tail conoid, ventrally curved, 170-180μ long.

Ovaries amphidelphic, reflexed, anterior 138-147μ and posterior 124-127μ. Oocytes arranged in a single file. Anterior and posterior uteri join to open into a thick tubular, muscular vagina with a narrow lumen. Vulva equatorial with no glands. Egg 72 × 50μ.

Male: Unknown.

Type habitat and locality: Collected on November 19, 1979 from the soil around roots of lemon plant (*Citrus sinensis*) from Nagaur, Rajasthan.

Type specimens: Deposited in the Department of Zoology, University of Jodhpur, Jodhpur.

Differential diagnosis: The *Mononchus sinensis* n. sp. comes closer to *M. truncatus* Bastian[1] and *M. aquaticus* Coetzee[2] but differs from former in having tandem caudal glands and size of buccal cavity (32-34 × 17-18 *vs* about 40 × 20μ) and from later in absence of cuticular pieces near vulva. It further differs from *M. niddensis* Skwarra and *M. maduei* Schneider as quoted by Jairajupuri[3], in body length (1.37-1.40 *vs* over 2.5 mm). It can further be distinguished from *M. acutarius* Eroshenko[4] by caudal glands (tandem *vs* grouped); from *M. fusiformis* Eroshenko[6] by absence of a pore of caudal glands, and from *M. superbus* Mulvey[5] by smaller size of body as well as buccal cavity.

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