known. AChE can be reversed by an interruption in the
time required to recover.

Details of maintenance of fish, C. carpio and
determination of lethal concentration are already
already described. After exposing the fish to 12mg/litre (i.e.
LC50/48 hr) of MP for 48 hr AChE activity of brain
and gill tissues was measured by the method of
Metcalfe. 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.

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 and invertebrates like housefly, Musca
domestica and crab, Oziotolphusa senex senex.

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

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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. heretofore
unpublished was found in the soil around roots of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; 
vL = 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 = 139 139 50-50.2 132

Body slender, transparent, tapering gradually
towards the head and the tail. Lip region rather truncate,
slightly offset. Amphid cup-shaped with aperture about 3 µ wide, situated a short distance (2.5 µ) in
front of the dorsal tooth apex. Stoma elongated,
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. Intestine 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 X 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 Bastian1 and M. aquaticus Coetzee2 but differs from former in having tandem caudal glands and size of buccal cavity (32-34 X 17-18 vs about 40 X 20μ) and from later in absence of cuticular pieces near vulva. It further differs from M. niddensis Skwarra and M. madui Schneider as quoted by Jairajpuri3, in body length (1.37-1.40 vs over 2.5 mm). It can further be distinguished from M. acutarius Eroshenko4 by caudal glands (tandem vs grouped); from M. fusiformis Eroshenko5 by absence of a pore of caudal glands, and from M. superbis Mulvey6 by smaller size of body as well as buccal cavity.

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