I. INTRODUCTION AND AIM OF WORK

Widespread contamination of the environment due to increased and frequently indiscriminate usage of pesticides during the last two decades has aroused much concern over the possibility of their adverse biological activity As it is very difficult to produce an ideal pesticide acting selectively on a predetermined species , pesticides affect all the organisms not only those against which they are directed .

Noxious effects of these chemical compounds on water environment are apparent in the disturbances in water ecosystems , among which the most visible sign is the death of fishes (***Kolaczkowski , 1970)*** and their food chain (***Bringmann & kuhn , 1960 , Konig , 1964 , and Breiting 1966)*** .

The grass carp , *Ctenopharyngodon idella* val, is an indigenous fish in eastern China ***(Nikolsky , 1954 and Fischer & Lyakhnovich , 1973)*** . It has been introduced worldwide (***Kuronuma , 1968 ; Inaba et al, 1957 ; Nikolsky and Aliev , 1974 and Tsuchya , 1979)*** especially as a possible biological control of water weeds (***Sneed , 1971 ; Opuszynski , 1972 ; Buck et al. , 1975 ; and Zon & ZonderwiJk , 1976)*** .

The grass carp was introduced to Egypt since 1976 for culture and weed control (***El- Gharably et al, 1978 ; Dubber et al., 1978 ; Khattab et al., 1981 ; and El- Gharably et al.1982)*** .

The insecticide carbaryl (Sevin) is a representative of the widely used group of pesticides , the carbamates ***(Hayes , 1975)*** . Although it was reproted to exist for only three days in the tissues of some fishes ***(Sundarm and Szeto , 1987)*** due to rapid elemination of its residues ***(Szeto & Holmes ; 1982 and Sundaram & Szeto , 1985)*** , its toxic effect seems to be evident ***(Lejczak , 1977)*** . The effect of sevin on the molecular and cytogenetic levels has been reported ***(Smalley et al. 1968 ; Weil et al.,1972 and Boseila et al.,1979)*** . Such effect may be due to its conversion to the mutagenic nitroso - derivatives ***(Uchiyama et al. ,1975)*** or due to its incorporation as a nucleotide analogue in the nucleic acid precursors ***(Boseila et al., 1979)*** .

Since the effect of Sevin on fishes is controversial , this work has been designed to investigate the response of the economically important fish , the grass carp , to this insecticide . The study is aimed also to reveal its effect on the tissues and blood forming elements and to pave the way for cytogenetic studies on this subject .