

ABSTRACT

THE CONCENTRATIONS OF Σ DDT AND TOTAL PCB IN OTTERS (*Lutra lutra*) FROM SWEDEN DURING 1968-1994

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The Swedish population of Eurasian otters (*Lutra lutra*) declined dramatically during the 1970-1980s. Among other things, chemical pollution such as PCB was suggested to be the cause of the European otter population decline. In Sweden, otters were once widespread and common, but declined dramatically in numbers and distribution during 1970-1980s, in both southern and northern parts of the country. High concentrations of PCB were measured in otter tissues and experimental studies indicated that mustelids were highly sensitivity to PCB.

Between 1968-1994 125 otters found dead were analysed for concentrations of total PCB and Σ DDT. Most of them were killed in traffic accidents or drowned in fishing gear but some were died from unknown causes. The highest concentrations of total PCB and Σ DDT were found in otters from the south where otters are very rare. This was true for the 1970s and is still true for the 1990s. The lowest concentrations were found in the remote northern districts of Sweden where otters were found during the entire study period, although as isolated groups during 1980s. The frequency of young otters (juveniles and subadults) is higher among otters from northern Sweden, an observation that indicates a more healthy and reproductive population.

As otter populations increase PCB concentrations decrease. Dieldrin was never a serious problem in Sweden and for mercury available data does not indicate a decrease of environmental concentration during recent time. In southern Sweden PCB concentrations are still high and indications of population recovery are weak.