SMITHSONIAN INSTITUTION
1730 N STREET, N.W. PHONE 202-381-5511
WASHINGTON, D.C. 20036

ZUH-3425

NOTICE OF RESEARCH PROJECT

SUPPORTING AGENCY:

INTERIOR DEPARTMENT
BUREAU OF SPORT FISH. & WLF.
FISHERY RESEARCH DIVISION

AGENCY'S NUMBER(S):

FR 2221-6

TITLE OF PROJECT:

BIODEGRADATION OF PESTICIDES IN A FRESHWATER ECOSYSTEM - INTERACTION BETWEEN MICROORGANISMS AND PESTICIDES

PRINCIPAL INVESTIGATOR, ASSOCIATES AND DEPARTMENT/SPECIALTY:

BT JOHNSON FISH PESTICIDE RES LAB

RECIPIENT INSTITUTION:

U.S. DEPT. OF INTERIOR
BUR. OF SPORT FISH. & WILDLIFE
ROUTE #1
COLUMBIA, MISSOURI 65201

PERIOD FOR THIS NRP:

7/70 TO 6/71
FY71 FUNDS $17,277

SUMMARY OF PROJECT:

Degradation of polychlorinated organic compounds by representative organisms from various levels of an aquatic community are investigated. Under controlled laboratory conditions microorganisms, algae, protozoa, crustacea and insects are exposed to environmental levels of both labeled and non-labeled toxaphene and chlordan. Exposure periods are varied in accordance with the organisms investigated. Degradation products are identified and characterized utilizing thin-layer and gas chromatography, infrared and mass spectroscopy, and autoradiography. Potential degradation pathways are postulated. The influence of non-pesticidal polychlorinated biphenyl compounds (PCBs) alone and in combination with chlorinated pesticides is investigated.

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