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Health Physics. Vol 36 (March). pp. 283-287
Pergamon Press Ltd. 1979. Printed in Great Britain

**RADIATION EFFECTS OF TRITIATED
SEAWATER ON DEVELOPMENT
OF THE GOOSE BARNACLE,
*POLLICIPES POLYMERUS***

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Abstract -- Barnacle embryos were reared in Millipore cytology monitors containing approximate tritiated water (HTO) concentrations of background plus 0, 10^{-5} , 10^{-4} , 10^{-3} , 10^{-2} , 10^{-1} , and 10^0 $\mu\text{Ci/ml}$. After 32 days the cultures were fixed and the numbers of larvae counted. A "molting index," the percentage of larvae that molted at least once, was used to evaluate the effects of HTO on normal development. Effects were observed at concentrations as low as 7×10^{-6} $\mu\text{Ci/ml}$, and were exponentially related to HTO concentration. Factors affecting sensitivity and possible environmental implications are discussed.