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2. Your abstract should be of the informative type, containing: (a) A sentence statement of the study's specific objective, unless this is given by the title; (b) brief statement of methods, if pertinent; (c) a summary of the results obtained; (d) a statement of the conclusions. *It is NOT satisfactory to state:* "The results will be discussed."

3. Each Abstract Form submitted MUST BE SIGNED by a member of the Society to which the abstract is sent.*

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DISRUPTION OF OSMOREGULATION IN MARINE ADAPTED EELS (Anguilla rostrata) AND KILLIFISH (Fundulus heteroclitus) BY DDT AND A POLYCHLORINATED BIPHENYL (PCB) MIXTURE. Louise S. Merkens*, Ralph H. Janicki*, and Wm. B. Kinter. Mt. Desert Island Biol. Lab., Salisbury Cove, Me. 04672.

Ability to osmoregulate was followed in eels (100 g) placed in 15 C sea water (2 liters) with 0.1% ethanol and 1 ppm DDT [1,1,1-trichloro-2,2-bis (p-chlorophenyl) ethane] which is lethal by 10 hr. At 6 hr plasma milliosmolality averaged 462 ± 10 SE (5 fish) compared to 358 ± 10(5) for ethanol controls. Much of this rise was due to Na; ppm $^{14}$C-DDT in gut and gill averaged 7 ± 1(6) and 22 ± 2(6). In isolated gills incubated 1 hr in 15 C oxygenated sea water, $^{22}$Na space was increased 45% ($P<0.01$) by 50 ppm DDT solubilized with 0.5% N,N-dimethylformamide (DMF). Using gill homogenate and our assay procedure (Science 173: 1146, 1971), Na,K-ATPase was inhibited 38% ($P<0.01$) by 50 ppm DDT solubilized with 5% DMF. These and our previous intestinal data support the view that DDT inhibits Na transport in the primary osmoregulatory organs of marine teleosts. Finally, experiments with killifish (10 @ 5 g) in 15 C sea water with 0.1% ethanol (2 liters) demonstrated roughly equivalent lethality (24 hr) for 0.25 ppm DDT and 75 ppm Aroclor 1221 (industrial PCB mixture provided by Monsanto Co.); 6-hr exposure to these levels increased plasma milliosmolality from 365 ± 3 (6 samples, each from 3-5 ethanol control fish) to 389 ± 9(8) and 396 ± 7(9), respectively, suggesting similar mechanisms of toxicity for these types of environmental contaminants. (Supported by NIH Grants AM06479 and GM00293.)

4. Your entire abstract, including title, author(s), sponsor if any, location where work was done, text and acknowledgments must be within the rectangle outlined above. See reverse side for sample abstracts and full instructions.

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6. MAILING ADDRESS OF FIRST AUTHOR

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