marine balance. Perhaps the most outspoken critic of the Canal Commission's proposal to build a sea-level channel is Lamont Cole, an ecologist at Cornell University. He objects to linking the oceans without long-term breeding experiments on what he believes may be genetically different marine populations; he warns that marine life is highly sensitive to even the most minute temperature differentials. On the question of atomic energy, Cole feels that present expertise is not sufficient to prevent dangerous radioactive isotopes from contaminating water and land and eventually upsetting the food chain. "I think this is the most irresponsible suggestion that I can remember since Admiral Byrd's senile proposal to blow ice caps off Antarctica," he says.

Ecologists will face numerous problems in their efforts to secure an intensive canal bioenvironmental research program. For one thing, an economy-minded Congress indicated last spring that it was not entirely sympathetic with the Canal Commission's financial problems. An extension of the commission's reporting date by a year and a half and an increase of $6.5 million were granted only after considerable debate.

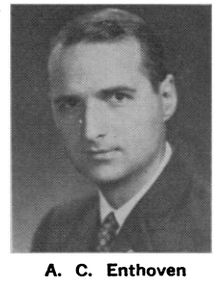
Another problem is that of possible conflicts of interest. The AEC, for example, is charged with promoting the peaceful uses of atomic energy, yet it is also responsible for insuring that safe radioactivity levels are maintained. Thus far there has been little interest shown by any agencies other than AEC and the Smithsonian in canal bioenvironmental research.

Not all of the problems relating to the canal are ecological. Another issue of interest to scientists is the question of the nuclear test ban treaty. If the U.S. Government decides to use atomic energy to build the canal, the present international nuclear test ban treaty, which prohibits nuclear explosions which would cause radioactivity to be present beyond a nation's territorial limits, would have to be changed. Some U.S. officials believe the U.S. could obtain Soviet consent if, in exchange, the U.S. would agree to allow the Russians to use atomic energy to build harbors in the Baltic. But this, of course, is speculation.

There are also vested political considerations involving the Canal Commission, evidenced by a comment from Canal Commission executive director Sheffey: "They [scientists] are interested in research, whereas we are interested in tactical problems." While political, engineering, and legal interests are represented on the five-member Canal Commission, there is no spokesman for scientific interests per se. Sheffey admits that some government officials take the view that "research is nice to have, but not very important," and he adds, "we can't be certain of the biological implications, until after the canal is built anyway—regardless of how much research is done now." Sheffey does not view the potential environmental consequences of a canal as particularly serious. "The possibilities of any serious disruptions to nature are very remote," he says, "and the potential threat to biota is so insignificant that it doesn't merit spending a lot of money on it." Sheffey also added, "it is obvious that Wallen and other Smithsonian scientists adopt the policy of taking an alarmist view to attract attention, and they tacitly admit it."

On the other hand, scientists feel that planning for the canal provides an opportunity to collect and analyze invaluable ecological data through extensive research. "I think its sole justification should be science. . . . This is a tremendously interesting once-in-5-million-years experiment," Wallen says. A lot of ecologists also seem to feel that the planning stages for the new canal provide a classic opportunity for scientists to do what they can to see that man does not manipulate his environment on a major scale without assessing the consequences.—MARTI MUELLER

APPOINTMENTS



A. C. Enthoven

R. W. Peterson

Alain C. Enthoven, assistant secretary of the Defense Department for Systems Analysis, to vice president for economic planning of Lytton Industries. . . . **Russell W. Peterson**, director of the research and development section of the development department of E. I. du Pont de Nemours & Co., to governor of Delaware. . . . **Adolf R. Hochstim**, a staff scientist at the Institute for Defense Analyses, to director of the newly formed Research Institute for Engineering Sciences at Wayne State University. . . . **Charles E. Lindley**, head of the department of animal husbandry at Mississippi State University, to dean of the college of agriculture there. . . . **Bayard R. Hand**, director of product and market planning for Fairchild Camera and Instrument Corporation, to vice president of finance for Research Corporation, which is a foundation for the advancement of science. . . . **Panayotis G. Katsoyannis**, head of the division of biochemistry at the Medical Research Center of Brookhaven National Laboratory, to chairman of the department of biochemistry at Mt. Sinai School of Medicine of the City University of New York. . . . **LeRoy W. Nittler**, acting director of the seed investigations department at Cornell University's New York State Agricultural Experiment Station, to head of the department; also at the station, **Robert M. Gilmer**, acting head of the department of plant pathology, to head of the department. . . . **J. Haworth Jonte**, associate professor of chemistry at the South Dakota School of Mines and Technology, to chairman of the department of chemistry. . . . **James Parkhouse**, chairman of the department of anaesthetics at the University of Manitoba, to postgraduate dean of medicine at the University of Sheffield, England. . . . **Benjamin E. Clark**, head of the department of seed investigations at the U. S. Department of Agriculture, to assistant director of Cornell University's New York State Agricultural Experiment Station. . . . **Robert N. Kreidler**, a vice president of the Alfred P. Sloan Foundation, to executive vice president of the foundation. . . . **Gerald P. Murphy**, assistant professor of urology at Johns Hopkins School of Medicine, to assistant director for clinical affairs at Roswell Park Memorial Institute; he succeeds **William H. Wehr** who has retired. . . . **P. D. McTaggart-Cowan**, president of Simon Fraser University, to executive director of the Science Council of Canada. . . . **Birgit Vennesland**, professor of biochemistry at the University of Chicago, to director of the Max Planck Institute for Cell Physiology in Berlin. . . . **Wallace P. Rowe**, head of the viral oncology section in the Laboratory of Viral Diseases at the National Institute of Allergy and Infectious Diseases, National Institutes of Health will keep this position and also become chief of the laboratory.