posed by the budworm, the work in Canada emphasizes the need for long-term, integrated approaches to such large-scale and fundamental biological problems. One technique for analyzing certain aspects of the potential effects of ionizing radiation is outlined here. Installations such as that at Brookhaven, established within major vegetation types, with their control ecosystems, provide one type of model. A second type of model has been provided by chance at Rongelap Atoll and on neighboring atolls in the Pacific, and at the White Oak Lake Bed at Oak Ridge, Tennessee. Similar models must now exist in the Russian Arctic. The partially shielded Lockheed reactor in Georgia has provided a most useful model of an irradiated ecosystem. Use of these models as they become available, in conjunction with experiments involving mineral cycling and the effects of internal emitters not only on organisms but on populations and ecological systems as well, will provide at least an understanding of what is happening to the environment, if not the wisdom to control it (*30*).

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News and Comment

Administration Sees No Ground for Jubilation as Missile Episode Is Brought to a Calm Conclusion

The administration is not encouraging any cheering over its success in thwarting the Soviet missile gambit in Cuba.

For one thing, the strong medicine that the United States employed in Cuba could have distant and unforeseen side effects, and jubilation is therefore considered to be premature. No matter how Khrushchev may euphemize the incredible events of the past two weeks, he, in effect, dismantled some of his own political and military prestige when he agreed to dismantle his Cuban missile launchers; it is not unreasonable to assume that he is looking to recoup his losses, and the administration is eager to refrain from any words that may irritate him toward accomplishing that quest.

Furthermore, the administration desires to make it clear, especially to American audiences, that it successfully responded to the Soviet threat, not with a bludgeon, but with carefully measured words and a minimum application of force. Thus it was no accident that the Navy employed binoculars, rather than a boarding party, to inspect the first Soviet-owned vessel—a tanker—that crossed the quarantine line. A Defense Department spokesman explained that an external examination had satisfied the Navy that the vessel was not carrying prohibited material. It would seem that this was more of an educated guess than a substantiated conclusion, but it had the merit of keeping armed American naval personnel from forcing their way onto to what is legally the equivalent of Soviet soil. When an actual boarding did take place, it was on a Lebanese vessel under charter to the Soviets. In this fashion, the highly provocative fact of the quarantine was tempered through judicious execution, and the Soviets cooperated by reversing the course of those vessels whose cargoes fell under the ban.

Although "hard-liners" are now praising the administration for taking the advice they were giving all along, the response employed in Cuba was quite different from what the jingoists were recommending. From the onset of the crisis, the administration set a course aimed at *convincing* the Soviets that the U.S. would use force to achieve the removal of the missile launchers if the Soviets did not remove them first. To get this idea across, it had to come perilously close to employing

force, since the Soviets seem to take comfort in the notion that U.S. talk and determination are really two different things. But throughout the perilous week between Kennedy's address to the nation and Khrushchev's announcement that he would withdraw the missiles, the administration did not lose sight of the thin line between its educational program for the Soviet leader and the actual employment of military force. Thus, it made no secret of the vast military buildup in the Caribbean area, or the dispersion of a large number of Strategic Air Command bombers, and it publicized a number of other military steps; some of these measures were no doubt difficult to conceal but they probably could have been kept out of the press upon request from the President or the Department of Defense, if the administration had felt it was in its interest to build up a secret knockout punch.

Its actual interest, it is now clear, was to convince Khrushchev that it was prepared for, and irrevocably committed to, the prompt removal of Soviet missiles from Cuba, preferably in packing crates but through military action if necessary. To the chagrin of the press, the Defense Department now acknowledges that it successfully deployed the nation's news media for this purpose, much as it deployed its military forces for use if the message did not get across to Khrushchev. In a remarkably frank statement early this week, Arthur Sylvester, the Pentagon's chief press officer, said in effect that the flow of news was deliberately manipulated throughout the crisis to serve the administration's purposes. In response to reporters who complained that the restrictions on information exceeded those of World War II and the Korean conflict, Sylvester stated, "In the kind of world we live in, the generation of news by the government becomes one weapon in a strained situation." He added, "The results, in my opinion, justify the methods we used." And he praised the press for having behaved "magnificently," a pat on the back that is not particularly appreciated by editors and reporters confronted by the conflict between the obligations of a free and responsible press and government officials' conception of the national interest. A few newspapers had learned of the quarantine plan prior to Kennedy's speech and voluntarily withheld publication, thus exercising choice; but in the main, opportunities to behave magnificiently or otherwise were severely restricted, since the Pentagon, the White House, and the State Department spoon-fed information as they saw fit, and little else was to be had, especially about events in the Caribbean.

One indication of the manner in which the administration employed the press for its purposes is the fact that at a number of Pentagon "background" briefings, reporters from Tass, the Soviet news agency, set side by side with American newsmen. Thus, if American reporters were slow in relaying the message of Khrushchev, they were amply backed up by their Soviet colleagues.

Although Kennedy's address emphasized the military potency of the Cuban missile emplacements, a multitude of ingredients went into the decision that their presence was intolerable, and perhaps the military factor was not the greatest of these. The short flight time from Cuba to American targets offered the Soviets a cheap way around the costly and laboriously constructed warning net that faces north and effectively undercut the 15-minute warning time that is built into much of American strategic planning. Cuban placements also offered greater accuracy for pinpointing hardened bases. However, in view of what the administration has recently been saying about the size, dispersion, and invulnerability of much of the American deterrent force, it is difficult to see how Cuban sites, no matter how extensive, could reduce the American deterrent to a point where the Soviets could rationally conclude they had turned the odds in their own favor. America's Polaris submarine force, which is considered to be immune to a surprise blow, is reported to have 144 intermediate-range missiles on station; the Air Force keeps a substantial number of nuclear-laden aircraft aloft at all times; and the hardened bases, though subject to highly accurate bombardment from nearby Cuban emplacements, could be expected to have at least a few survivors to respond to an attack. Thus, if it is fear of punishment that is restraining the Soviets, they did not seriously reduce the basis for that fear by placing missiles in Cuba.

They did, however, raise the question of Kennedy's willingness to play with fire, a matter on which they seem to be bound by some incredibly obtuse notions derived principally from last year's abortive Cuban invasion. Khrushchev is reported to have remarked on several occasions that Kennedy's performance in that fiasco demonstrated his unwillingness to risk all-out war to protect American interests. This view has been repeated by Soviet diplomats in Washington, one of whom recently asked me, "How can anyone possibly believe that the United States would risk having its cities destroyed just to keep its present position in Berlin?" When it was pointed out that the administration had bound itself to this goal solemnly and as irrevocably as words can bind, the reply was, "Yes, but your government can't possibly be serious."

Thus, at issue when Soviet missile emplacements began to crop up was Kennedy's earlier assurance that he would take action if the Cuban military build-up should prove to be other than defensive. In addition, even if this pledge had not been issued, there was the question of what conclusion the Soviets would draw if the United States refrained from a direct response to the conversion of Cuba into an offensive base. And, further, there was the question of how NATO, which has its own share of doubts about U.S. willingness to abide by its pledges, would react to American acquiescence to a provocative Soviet move clearly aimed at American security. If the administration's response had been a soft one, NATO could justifiably have increased its doubts about how the U.S. would respond when European interests were threatened. In his address, Kennedy referred to this problem of credibility when he said that the Soviet move into Cuba cannot be accepted "if our courage and our commitments are ever to be trusted again, either by friend or foe."

He also touched on a point that has received relatively little attention—namely, that the Soviet missiles in Cuba not only were a military peril but also constituted a violation of what might very loosely be called a tacit arms-control agreement between the two major nuclear powers.

"Nuclear weapons are so destructive and ballistic missiles are so swift," he stated, "that any substantially increased possibility of their use or any sudden change in their deployment may well be regarded as a definite threat to peace.

"For many years," he continued, "both the Soviet Union and the United

States, recognizing this fact, have deployed strategic nuclear weapons with great care, never upsetting the precarious status quo which insured that these weapons would not be used in the absence of some vital challenge. . . . [this] sudden, clandestine decision to station strategic weapons for the first time outside of Soviet soil . . . is a deliberately provocative and unjustified change in the status quo which cannot be accepted. . . ."

It has been argued that the United States is not playing the game according to Kennedy's prescriptions when it stations Polaris submarines off the Soviet coast, but fundamental to the issue here is the fact that the *Polaris*, secure under water, need not have a nervous finger on the button. If missiles must exist, the Polaris type is probably the safest variety for both East and West. On the other hand, the soft Cuban emplacements, like all soft emplacements, put a premium on getting off the first shot and therefore are more likely to be attended by nervous fingers. Furthermore, while the Soviets hopefully took Castro's disturbed state of mind into account when planning security measures for the emplacements, the presence of nuclear-tipped missiles within walking distance of the Cuban leader did not contribute to the administration's peace of mind.—D. S. GREENBERG

Tobacco: Public Health Service Names Group To Study Effects on Health

The Public Health Service this week announced the membership of the special committee that will conduct its inquiry into the relationship between smoking and health.

Since some half-dozen politically potent southern states have an annual $7 billion stake in tobacco, the PHS, with the White House looking on carefully, has gone to exceptional lengths to avoid any contention that the committee members may have prejudged the issue. In line with this, it was announced at the outset that "scientists who have already taken a strong public position pro or con will not be chosen."

The committee, comprising ten members, was drawn from a list of 150 scientists submitted last July by federal agencies, voluntary health organiaztions, and the tobacco industry. The final selection was made by Surgeon General Luther L. Terry after each organizaiton had been given the opportunity to eliminate nominees "for whatever reason." According to a PHS announcement, the committee will hold its first meeting on 9 and 10 November. The first phase of the study, to be completed "by next summer," will consist of "a comprehensive review of all available data on smoking and other factors in the environment that may affect health." A subsequent phase "will concern recommendations for action."

The committee members and their specialties are as follows:

Stanhope Bayne-Jones, former dean of Yale Medical School (1935–40), who has since served on various medical advisory bodies—nature and causation of disease in human population Bayne-Jones will also serve as special consultant to the committee staff.

Louis Fieser, professor of organic chemistry, Harvard—chemistry of tobacco smoke.

Emmanual Farber, chairman, pathology department, University of Pittsburgh—experimental and clinical pathology.

Maurice H. Seevers, chairman, pharmacology department, University of Michigan—pharmacology of anesthesia and habit-forming drugs.

Leonard M. Schuman, professor of epidemiology, University of Minnesota School of Public Health—health and its relationship to the total environment.

Charles LeMaistre, medical director, Woodlawn Hospital, and professor of medicine, Southwestern Medical College, Dallas—internal medicine, infectious diseases, preventive medicine.

Jacob Furth, professor of pathology, Francis Delafield Hospital, New York —cancer biology.

Walter J. Burdette, head of surgery, University fo Utah School of Medicine—clinical and experimental surgery, genetics.

John B. Hickman, chairman, department of internal medicine, University of Indiana—internal medicine, physiology of cardiopulmonary disease.

William G. Cochran, professor of statistics, Harvard—mathematical statistics, special application to biologic problems.

The committee is occupying quarters in the National Library of Medicine, Bethesda, Md., and has a staff consisting of a medical coordinator, a statistician, and an information officer.

Announcements

The International Atomic Energy Agency has agreed to assist in the establishment of a **Middle East Regional Radioisotope Center for the Arab States** in Cairo, for training in the application of radionuclides in medicine, agriculture, and research. The agreement, to become effective upon the participation of four Arab countries, stipulates that the United Arab Republic convert its National Radioisotope Center in Dokki, Cairo, into a regional center; make available free of charge certain facilities and equipment; and contribute financially toward the costs of the center. Thus far, Iraq, Kuwait, Lebanon, Libya, and Tunisia have pledged contributions; IAEA is arranging for additional financing under the United Nations expanded technical assistance program.

The U.S. Public Health Service plans to establish a **salt-water pollution research laboratory** in Kingston, R.I., to develop standards for marine-water uses. Studies at the $1,715,000 facility will include measures of protection against toxic pollutants, effects of pollution on aquatic life, criteria for radioactive wastes and other pollutants, and effects of distribution by water currents in bays and harbors.

Manuscripts, letters, photographic material, or memories of the late **Albert A. Michelson** (1852–1931), physicist and first American Nobel laureate in science, are being solicited by his daughter for use in the preparation of his biography. (Dorothy M. Stevens, 209 E. 72 St., New York 21)

Meeting Notes

An international **arms control** symposium will be held from 17 to 20 December in Ann Arbor, Michigan. The symposium, co-sponsored by the University of Michigan and the Bendix Corporation, is intended to provide a current summary of the status of arms control and disarmament. Emphasis will be placed on basic and applied research necessary in the political, social, and physical sciences to provide an adequate system for the formulation, verification, and compliance with possible agreements for international arms control and disarma-