

NPS Science Support Staff Announces IPM Training Videotapes

By Donna Vermeire

The NPS Science Support Staff in Washington, D.C. (WASO) recently completed, through an Inter-agency Agreement with The Environmental Protection Agency, four training videotapes that will introduce the concepts of integrated pest management (IPM) to maintenance and resource management personnel, as well as meet the goals of training for pesticide applicators. Designed to be used in formal IPM training courses, the videotapes also can be presented at staff meetings and park safety training events. It's an easy-to-learn-from method in the growing library of the Science Support Staff's educational materials on IPM.

In the late 1960s and 1970s, accumulating evidence of environmental hazards, health risks, and rising costs associated with indiscriminate use of pesticides sparked policies and programs designed to curb the more harmful practices. These programs now include regulatory actions, training and certification programs to improve application safety, and research and demonstration projects in integrated pest management. In 1980, the NPS initiated its Servicewide IPM program; its goal was to minimize risks and costs while maximizing effectiveness. To implement IPM strategies in the National Parks, the Science Support staff began the videotape project.

Gary Johnston, IPM Coordinator and project officer, identified four subject areas for videotape treatment — pesticide applicator safety, the detection of wood-inhabiting insects by structural inspection, subterranean termite biology, and crack and crevice treatment for cockroach management. Technical experts included William E. Currie of EPA and Dr. Harry B. Moore of North Carolina State University.

The scripts were written and produced by the author and videotaped by EPA's Audio-Visual/Television crew in the summer and fall of 1986. Three tapes were mastered on high quality 3/4 inch industrial format; the Crack and Crevice tape was done on broadcast-quality Super 1/2 inch betacam. They were shot on location at National Mall, Rock Creek Park, Great Falls Park, Fire Island NS, Morristown NHP, Hampton NHS, Big Cypress National Preserve, Grand Canyon NP, and the buildings and maintenance yard of the National Capital Region. The Employee Development Division coordinated the videotape programs.

Pesticides, by design, are biologically active and toxic, and pose potential risks to human beings. Those who handle pesticides are the primary group at risk. However, pesticide residues in food and drinking water can be transferred to human tissues, where the chemicals may accumulate, so misuse or indiscriminate use can affect park visitors and users as well. Furthermore, longterm effect on "non-target populations" is also a serious possibility; pesticides can reach unintended victims. Therefore, the first videotape was *Pesticide Applicator Safety*. The IPM strategies include reducing the amount of pesticide per application, reducing the number of applications, using protective clothing and equipment, and training users in safe handling and application. It stresses substituting less toxic chemicals or non-chemical techniques, acute and chronic poisonings, accurate reading of the pesticide label and material safety data sheets, and pro-

ductive clothing and equipment.

Many NPS historic wooden structures are vulnerable to insect attack and bio-deterioration, yet their historic fabric cannot always be treated with chemicals. Preservation depends on prevention, replacement, and repair of damaged wood. Therefore our second videotape developed *Structural Inspections — A Way of Managing Wood-Inhabiting Insects* to educate all who play an inspector's role on how to prevent deterioration of wood. The program follows Dr. Harry Moore of N.C. State University, an entomologist and author of "Wood-Inhabiting Insects in Houses," in an inspection of an NPS wooden structure. At the Ford Mansion in Morristown, N.J., we focused on individual insect problems by cutting away to examples of wood deterioration at other National Parks. The tape deals with learning how to identify different types of insect damage to wood, sources of infestation, insects that do the most damage to wooden structures — the subterranean and drywood termites, wood-boring beetles, carpenter ants, and carpenter bees, and the importance of integrating IPM techniques that render a structure less susceptible to insect attack.

Intelligent prevention and control of any insect pest is based on an understanding of its biology and habits. Thus, in our third videotape *Subterranean Termite Biology*, we establish the relationship of prevention and control procedures to termite biology and habits. This tape uses edited footage of insect photography from two previously produced tapes, Dr. F. E. Wood's "Subterranean Termites" and Shell International Chemical's "Thief in the Dark."

The final videotape to be released this year will be *Crack and Crevice Treatment for Cockroach Management*. It follows a pesticide applicator and trainee as they treat an NPS food-handling operation and an office for cockroaches, focusing on the IPM techniques of sanitation, caulking as a mechanical control, site monitoring, and a low toxic pesticide treatment with a boric acid dust.

These four new videotapes and the previously produced *IPM in the Parks*, bring to five the number of video programs being used by the Science Support staff in its education and training efforts. "IPM in the Parks," developed in 1985, embodies the Park Service's IPM philosophy. Its enthusiastic reception in the field made possible the development of the other four programs.

These tapes were intended for internal distribution and training. However, they may have an impact on the pesticide industry, if numerous phone calls and requests from a wide and diverse audience is any indication. At a recent EPA/USDA National Workshop on Pesticide Applicator Certification and Training, the videotapes were screened nightly for Government, industry and environmental audiences. A large number of requests followed these showings. We are in the process of finding a mechanism for distributing the programs externally. However, copies of the tapes are available on 1/2 inch VHS for NPS users. Contact the regional training offices, WASO Science Support Staff, and Regional IPM Coordinators.

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