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CONTROLLING PESTICIDE USE
RESEARCH PROGRAM REORGANIZED



U.S. ENVIRONMENTAL PROTECTION AGENCY

WORLD OF POISONS

On farms and orchards across America the sun-drenched days of June spur many field plants and fruit trees into their final weeks of urgent growth.

Nature's pulse beats at its highest. Pastures are lush. Green fields promise another bumper yield of food and fiber crops.

It's also a time when billions of the most successful animals on earth—insects—are munching and sucking on the crops man is so carefully nurturing.

So begins another round in the endless battle between man and pest.

This issue of EPA Journal examines EPA's role in controlling the poisons that are still the main weapons in this struggle. An over-all view of the Agency's pesticides program, which also covers rodenticides, fungicides, weed killers and disinfectants as well as insecticides, can be found on Page 2.

Insects began flourishing on this planet some 250 million years ago, long before one-million-year old man made his appearance. Scientists have sometimes speculated that the insects may outlive man.

One of the oldest insects is the cockroach. While dinosaurs and thousands of other species of life perished, while man-made civilizations rose and fell, the cockroach marched on.

Today one of the research projects EPA is helping to fund is a search for more information about the natural enemies and habitat of the roach which could be used to curb growth of this ancient pest.

In his effort to protect food and fiber crops from the voracious appetites of pests, man has learned that after a while insecticides become ineffective, especially if they are used heavily. Through genetic selections, pests develop resistant strains and a particular poison formula no longer works.

While chemical poisons have apparently been

successful in halting the spread of the plant-eating giant African snail in Florida, the Gypsy Moth, which has caused millions of dollars worth of damage by its gluttonous consumption of tree leaves in its caterpillar stage, is still slowly spreading its territory despite the fact that it has for years been doused with chemicals, including DDT.

A promising approach which might frustrate the pest's adaptability is called Integrated Pest Management. It selects the most appropriate weapons from the arsenal, including improved chemical pesticides, attractants or repellants, biological controls (natural parasites and predators), growth regulators, disease- and pest-resistant crops.

The Integrated Pest Management program, recognizing that more than 95 percent of the hundreds of thousands of species of insects are either beneficial or neutral to man, avoids indiscriminate slaughter.

Meanwhile, two recent incidents in the West reported by Region IX in the Around the Nation department, Page 7, illustrate the dangers of the use, availability and transport of toxic pesticides.

In Phoenix, Ariz., a man was hospitalized in critical condition after drinking a quart of the highly toxic herbicide, paraquat, in what was believed to be an attempted suicide.

A truck carrying a shipment of Lannate L, a toxic insecticide, blew a tire in Los Angeles, overturned and caught fire. Eighty-two persons were sickened by the escaping fumes, including 11 who required intravenous injections of atropine.

Yet the need for effective weapons in the war against plant-eating and disease-carrying insects is pressing.

EPA's role in this battle is to help ensure that man in his zeal to eliminate the pests doesn't destroy himself and leave earth to the insects.

EPA JOURNAL



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Cover: The Gypsy Moth, *Porthetria dispar*. In its caterpillar stage it strips trees of their leaves and has caused enormous damage to forests on the East Coast. It was given the name "Gypsy" because the female often lays its eggs on vehicles such as camper trailers and so the young get a free ride to new territory.

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Inspection Service, USDA

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Ernest Bucci

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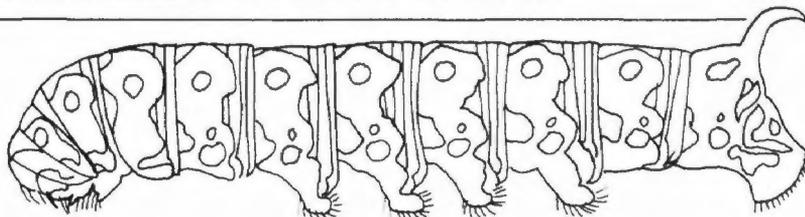
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STRIKING A BALANCE IN PESTICIDE USE

By EDWIN L. JOHNSON

Deputy Assistant Administrator
For Pesticide Programs



Just about all of us are users of pesticides of one kind or another. When we grow roses, plant vegetable gardens, disinfect our kitchens and bathrooms, or stalk household insects and other pests, there is often a pesticide product in our hands. When the word "pesticide" is mentioned, many people visualize swooping crop dusters and giant spray rigs, which are common instruments of pesticides application on the farm. But what the homeowner doesn't realize is that his own home is probably a veritable arsenal of pesticide products too.

Look under the sink or in the tool shed — there may be several products which control pests. Weed killers, insecticides, disinfectants, fungicides, and rodenticides are all pesticides. Even common cleansers which claim to "kill germs" are pesticides. Look again at the products around your home. If they have an EPA registration number, they are pesticides and as such have been registered by EPA's Office of Pesticide Programs.

Certainly, concern about the ubiquitous presence of synthesized chemicals in the environment contributed impetus to the formation of the Environmental Protection Agency in 1970. Pesticides are very much a part of the chemical load introduced in the environment each year. Particularly since the publication of Rachel Carson's book "Silent Spring" in 1962, the public has become aware of, and has demanded adequate protection from the harmful effects of pesticide application. Our job in the Office of Pesticide Programs is to so regulate pesticide products that the benefits of their use may be continued but public

and environmental protection is afforded as well.

Certainly we recognize that pesticides are necessary tools in man's endless combat with disease and hunger. Ever since our ancestors progressed from nomadic hunting to crop cultivation and domestication of animals, we have been at odds with the pests and parasites which compete for our food sources. Today, pesticides manufacturing, formulating, and sales are major industries. In recent years, 1.3 billion pounds of pesticide active ingredients have been produced and approximately one billion pounds of the same have been used annually in this country. The use breakdown is: 55 percent by the agricultural sector, 30 percent by industrial, institutional, and government users, and 15 percent by home and garden users. Thus, any action regulating pesticide use must be based on a careful assessment of its effect on all activities in which pesticides represent an important, beneficial input against the potential adverse effects on man and the environment.

Interestingly enough, pesticides, unlike most air and water pollutants, are intentionally released into the environment, where their acknowledged benefits are expected to take place. These benefits have been important to agricultural production, to public health and sanitation, to protection of capital investments and natural resources, and to the enhancement of human well being. We have all benefited tremendously from the health improvements and increased crop yield which pesticides have made possible in the past thirty years.

But the last 15 years have taught us that pesticides can have their adverse effects too: that some of these substances are acutely toxic to animal and plant life; that others can and do persist for years, even decades, in the environment; that they are carried by land, air, and water to destinations far from the site of original application; that they accumulate in the food chain; and that they are potentially harmful to man if improperly used. Federal and state control of pesticides increasingly has been concerned with retaining the major benefits of pesticides to society while minimizing adverse effects.

Federal regulation of pesticides began in 1910 with the passage of the Federal Insecticide Act. This Act gave the Government the authority to remove from the market those insecticides which were found to make misleading or fraudulent claims. The Act was not a comprehensive regulatory measure, but there was not much to regulate at that time. Synthetic organic chemical pesticide development did not become significant until World War II, when research was devoted to the synthesis of substances to protect human health in areas under Allied control.

In the wake of the research of the 1940's, the chemical pesticide industry boomed. With the arrival of more and more pest control agents in the marketplace, stronger regulatory measures were needed. In 1947, the Congress passed the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). For the first time, all pesticides shipped in interstate commerce had to be first registered by the Federal Government. Registration was contingent upon two fac-

tors: 1) that the product would be efficacious when used as directed, and 2) that its use would pose no undue harm to non-target life when label directions and precautions were followed. The Act further provided that the Government could cancel, or in cases of an imminent hazard to the public welfare, suspend the registration of any pesticide which failed to continue to meet the criteria for registration in light of current scientific knowledge. This Act was the first major step in protecting the public against the potential adverse hazards of pesticide use. The authority for administering this Act was transferred from the U.S. Department of Agriculture to EPA in 1970.

TOLERANCE

Another step in protecting the consumer was taken in 1954 when the pesticide amendment to the Federal Food, Drug, and Cosmetic Act was passed. This amendment provided that a tolerance, or allowable residue level, must be established for all pesticides used on food or feed crops. Tolerance levels are based on data demonstrating: 1) that the product, when used as directed, would result in residues at or below the proposed tolerance level, and 2) that the level is acceptable for consumption.

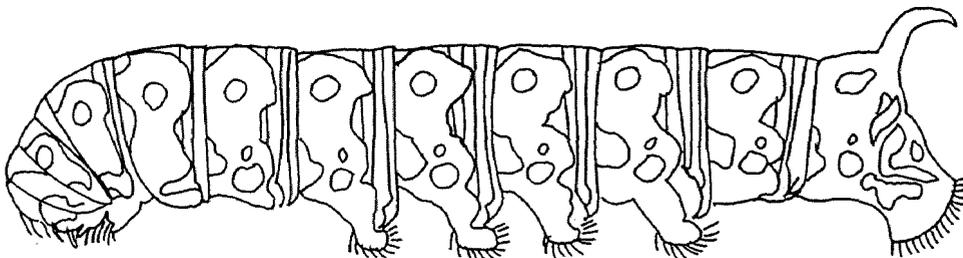
The determination of an acceptable residue level is based on extrapolation to man of tests on experimental animals in conjunction with considerations of metabolic data, dietary intake, and probable exposures. The Food and Drug Administration originally was empowered to establish and enforce tolerances. The first responsibility was transferred to EPA in 1970 but FDA continues to enforce tolerances on foods prior to marketing, and the U.S. Department of Agriculture does the same for meat and poultry.

The Federal Insecticide, Fungicide and Rodenticide Act served us well for many years. However, as our knowledge of the long-term and acute adverse effects of pesticides in the food chain and environment grew, more sophisticated regulatory approaches were needed. Congress responded to this need in 1972 with the passage of the Federal Environmental Pesticide Control Act, which significantly amended the 1947 Act. Because this legislation is so important to the comprehension of current EPA policies and procedures in the pesticide area, I will describe briefly the main provisions of the Act and their implications.

First it's essential to understand the thinking of the Congress at the time the

1972 amendments were passed. The House Agriculture Committee report on the bill said:

"The Committee found that the greatest need for revision of existing laws to be in the area of strengthening regulatory control on the use and users of pesticides, speeding up procedures for barring pesticides found to be undesirable, streamlining procedures for making valuable new measures, procedures, and materials broadly available; strengthening enforcement procedures to protect against misuse of these



biologically effective materials; and creating an administrative and legal framework under which continued research can produce more knowledge about better ways to use existing pesticides as well as developing alternative materials and methods of pest control . . ."

The old Act was changed from a labeling to a regulatory program. This is an important development. EPA does not simply examine labels, it regulates pesticide use. That means *all* aspects of use, including application, storage, disposal, and so on. Our activities under the amended Act are of course separate and distinct from those of the U.S. Department of Agriculture which responds to pest problems.

We are not in the business of pest control, but act rather as the Federal *regulator* of the products used in pest control.

In other words, if your pea patch is being chewed up by a nefarious six-legged creature, you should ask Agriculture what to do about it. Agriculture will make recommendations based on its assessment of local conditions and the available registered products for the desired control.

Under the Act as amended, we retain the basic registration and labeling authorities of the original law. The amended Act, however, further provides that all pesticide products, including those in intra-state commerce, be subject to the registration requirements. The only specific regulatory authority, short of a ban, available under the 1947 Act was the requirement for approved label instructions.

The 1972 amendments give the Agency tremendous additional flexibility through the authority to classify pesticides for restricted or general use, require that restricted pesticides be used only by certified applicators (or under any other conditions deemed appropriate by the Administrator), and enforce against misuse. Authority to conduct research on pesticides, a national pesticides monitoring plan, civil as well as criminal penalties in higher amounts, registration of pesticide manufacturers, authority to regulate storage and dis-

posal of pesticides, and a higher degree of public participation through requirements for Federal Register publication of registration activities, are among the other important new provisions of the current Act.

Since October 1972, we have been developing regulations to implement these amendments. The Act established a timetable for implementation over a period of four years — a task to which we are now devoting most of our resources.

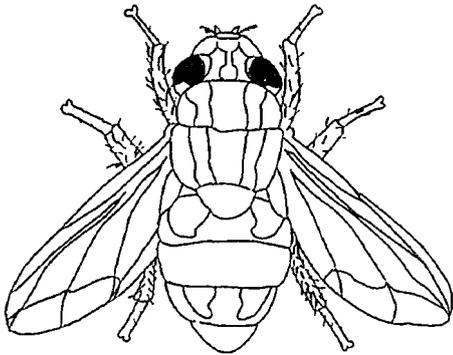
Regulations regarding the classification of pesticides have been proposed, and should be ready shortly. Standards for certification of applicators have been published, as have regulations pertaining to state plans for certification. Final regulations to implement the section addressing experimental use permits were promulgated in late April. In the development of all these important regulations, we have made a great effort to obtain comments and views from interested members of the public and user groups prior to formal proposal. The high degree of participation, both through written comments and through one- and two-day meetings, has been of invaluable assistance in achieving a good dialogue between the Agency and those most affected by our regulatory decision making. We believe sound regulations have been achieved.

RISK

As the 1972 amendments made explicit, regulation of pesticides is based on a balancing of the risk and benefit of each proposed use. Pesticides, by definition, are capable of

harming some forms of life, and cannot be considered "safe" in any absolute sense. A major concern must be whether benefits derived from the use of any given pesticide justify the potential risk to human or other non-target life, and how such risk can be mitigated. The Administrator is required to determine whether a pesticide can perform its intended function without "unreasonable adverse effects on the environment" at the time a product is registered. "Unreasonable adverse effects" are defined as "...Any unreasonable risk to man or the environment, taking into account the economic, social, and environmental costs and benefits of the use of any pesticide."

This basic standard guides our regulatory decisions under the Act, be they on registration and classification, or suspension and cancellation. The business of risk and benefit balancing is a complex one, often controversial, and there are no magic formulas in this balancing act. It is no small task to weigh the known and trusted benefits of a widely used insecticide, for instance, against the probable long-range human or ecological health effects.



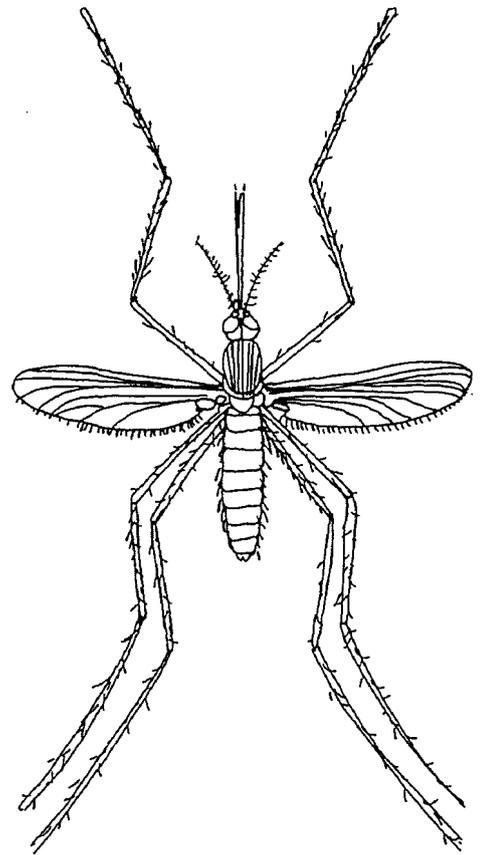
We are often criticized by the agricultural community or pesticide industry for halting the use of a convenient product, thus forcing farmers to use substitutes less convenient or more acutely toxic in the short run, on the basis of a suspected long-term effect. "Can you prove to me that DDT will cause adverse effects in man?" ask critics of our 1972 decision to cancel the overwhelming majority of DDT product registrations. The Agency believes the more pertinent question is, "Can we afford to take the chance with the health of our population or our wildlife when we have evidence of DDT's persistence, mobility, and bioaccumulation in the food chain?" Especially if alternatives, though less convenient, are available? How do you measure the potential long-term risk to human health against the proven benefit in agricultural production of a pesticide chemical?

COMPLEX

The answers are never easy. And because they are so complex, the Agency desires to base its decisions on the fullest possible public record. Cancellation is, therefore, often initiated in order to trigger the Act's public hearing process for aggrieved registrants. Hearings were held in the case of DDT, are currently ongoing in the case of mercury, mirex, and aldrin/dieldrin, and will be held in the case of chlordane and heptachlor. Comments have been solicited regarding many other pesticide chemicals which have suspected adverse effects. We believe that because public health and welfare are at stake in the major pesticide-related decisions of the Agency, the public should have optimum opportunity to participate in the decision-making process.

As I noted earlier, the new Act has changed our regulatory approach to registering pesticides, and has vastly broadened our scope of responsibilities. We are now a bit beyond the half-way point in implementing the amendments, but we have a great task ahead. For example, we must between now and October 1976 reregister and classify for either general or restricted use those 30,000 or so products currently registered, and register some 15,000 products currently being shipped in intrastate commerce. This is on top of our normal workload of approximately 15,000 actions per year. Certainly the size of the congressional mandate provides an unprecedented challenge to the Office of Pesticide Programs, and we are committed to translating the concepts and ideals of the amended Act into a viable reality.

We have had many inquiries about the practical ramifications of pesticide classification. "The idea sounds reasonable," we are told, "but just what does it mean to me?" Homeowners ask "Will I be able to tend my flowers or grow my vegetable garden or treat my baseboards without becoming certified?" I assure you that the homeowner will have a most adequate selection of pesticides from which to meet his pest control needs. Only those products which may pose an "unreasonable adverse effect" without regulatory requirements beyond label instruction will fall into the restricted category. The homeowner is well protected since he will have at his disposal all general use pesticides, but the most hazardous products will not be permitted for use by an untrained, though well meaning, backyard gardener. -



Almost all pesticide accidents are avoidable. Tragically enough, approximately 70 percent of the pesticide case reports received by poison control centers across the nation involve children under five years of age. Usually, these accidental poisonings were the result of adult carelessness.

We are attempting to drastically reduce this ugly statistic. Obviously, the general/restricted classification will be a great asset in this effort. More than that, however, we are currently developing regulations in cooperation with the Consumer Product Safety Commission regarding child-resistant packaging. In addition, we have worked with our Office of Public Affairs on two pamphlets directed to the homeowner, explaining standard safety precautions everyone should take, and the role of the Agency in protecting the public's interest in pesticide use. We plan to further extend our efforts in educating pesticide users in the future.

It may sound simple to say that people should read the label before using a pesticide product. Sadly enough, homeowners tend to become complacent about the presence of pesticides in their environments because the products are so commonplace. Many people read only far enough to see what a product is supposed to control, and then will impetuously fling the contents in their gardens. The consumer can protect himself and the environment if he follows four basic steps:

1) Read the directions for use thoroughly. Use only the amount directed, at the place and time directed, and for the purpose directed. A tendency of our society is to sing the "if one is good, two are better" song — thus one tablespoon of concentrate weed killer is called for but two will do twice the job. This is a risky misconception, and can destroy the entity one is trying to protect. In short, using a pesticide in variance with label directions is not only illegal, but may also pose a danger to the user, people in the vicinity, pets, other beneficial life, and to environmental resources such as air, soil, and water.

2) Read the precautions. Precautions are introduced by one of three signal words "caution," "warning," or "danger-poison." Those in the highest order of toxicity are accompanied by the skull and crossbones. "Danger-poison" denotes those products which are most hazardous, with those in the "warning" category less potentially harmful, and those labeled "caution" the least. All pesticides warn the user to "keep out of reach of children;" in fact, it is best to lock such products out of children's range.

3) Observe the ingredient statement and first aid statement if supplied. These are invaluable if an accident does occur. A copy of the label should always be taken to the physician in such instances.

4) Store the product in a safe place and in the original container. Never, never transfer a pesticide to a soft drink bottle or any other container, especially one attractive to children.

These new approaches to pesticide regulation are indicative not only of the apprehensions about the overuse and misuse of pesticide chemicals, but also demonstrate the need for a better regulatory tool to meet the increasingly sophisticated attitudes in pest control. Pest control is a dynamic field, and we must be able to respond to the needs of a changing technology. The Agency received over 130 applications for ex-

perimental use permits last year, and we expect that number to double in the next year. We desire, of course, to implement experimental use permit regulations which will meet the needs of the research community and at the same time protect environmental interests. A great deal of research on new techniques is being done in universities, land grant colleges, experimental stations, and in the private sector.

The most encouraging movement is a concept called Integrated Pest Management (IPM). This approach strives to utilize both natural and chemical control options in a manner which will optimize the benefits of each. A variety of techniques most suited to a particular problem are employed to maximize yields of food and fiber in an environmentally and economically sound manner. It is an inter-disciplinary approach, based on the knowledge of each pest's habits and life cycle, its environment, and its natural enemies.

These techniques include:

Breeding crops resistant to pests or plant disease,

Cultural treatments (plowing under, rotation of crops, timing of harvest, etc.),

Scouting, the techniques of physically inspecting plants by workers trained to determine the kinds and amounts of insects and diseases likely to be present, and the economic threshold at which treatment becomes necessary,

Biological controls (natural parasites and predators),

Insect growth regulators or other means of altering the development or reproduction of pests,

Attractants or repellants,

Conventional chemical pesticides.

Many of these techniques are not new. They are, however, practices which have been overlooked in the past 30 years or so because of increasing reliance on chemical pesticides. But the growing awareness of the detrimental aspects of pesticide use has inspired a renewed interest in these techniques, and a number of important contributions have been made by pest management

consultants both alone and in concert with Government agencies. Currently, the National Science Foundation, the USDA, and EPA are supporting research in 10 universities in order to gain greater understanding of the principal insect pests and their inter-relationships with the environment. Many states match Federal funds, and the present research effort in terms of dollars is approximately \$200 million.

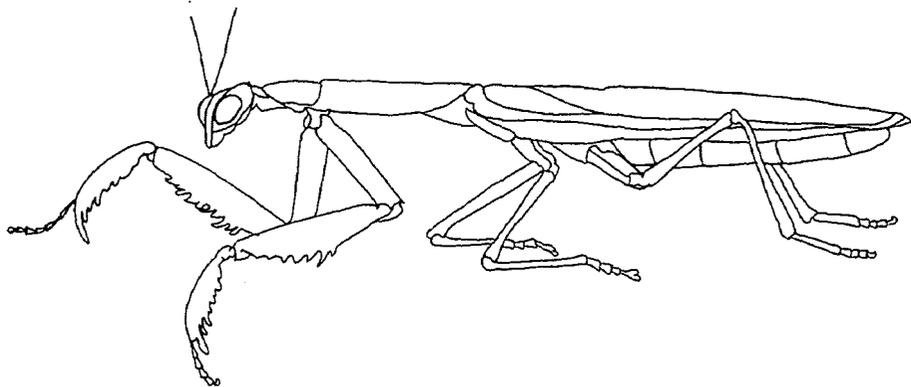
ACCEPTANCE

An outgrowth of interest in Integrated Pest Management has been the initiation of programs aimed at winning farmer acceptance and use. The Department of Agriculture began direct support of a pest management program in 1971 and is now involved in 39 projects in 29 States. Our Office of Public Affairs recently completed an excellent film entitled "Man Is Responsible To The Earth" which documents the success of a scouting program conducted in Washington State and Idaho in response to a weevil infestation. This film will be distributed through our Regional offices and the Cooperative Extension Service, and we hope that it will increase farmer interest in IPM techniques.

EPA recently registered the first insect growth regulator, or so-called "juvenile hormone." These hormones when applied at the appropriate time in the life cycle prevent an insect from ever reaching the adult stage, and thus preclude reproduction. Much work is also being done in exploring insect viruses to determine possible use in future pest control programs. Because these techniques result in the minimization of chemicals introduced in the environment, they are promising both from an ecological and an economic standpoint.

All in all, the fields of pest control and pesticides regulation are exciting and challenging. What we are doing in pesticides regulation may have even wider implications when, and if, the Toxic Substances Act is passed by Congress. The precedents set in pesticides will likely affect the future control of all toxic chemicals.

The Agency is faced with many difficult decisions today, and pesticide control is but a part of the over-all effort to fulfill our vital mandate to sustain and protect our natural resources. We believe it is an important part of that mission, and are confident that the amended pesticides Act, when fully implemented, will prove equal to the task of effecting the judicious and intelligent use of pesticide chemicals.



WHAT'S HAPPENING IN PESTICIDE REGULATION

An interview with A. E. Conroy II,
Director, Pesticides Enforcement Division.

Q. *What is the Agency doing to detect unsafe or ineffective products?*

A. The first line of defense is the premarketing clearance or the registration process whereby a manufacturer or producer submits his data to the Agency and the Agency makes a determination as to the safety and efficacy of that product.

The second line of defense is the regional Pesticide Enforcement Safety Officer who visits the users, the sellers, and the producers, looking for products that are not registered.

Products that are registered are collected and sent to the EPA enforcement laboratories where they are analyzed. If it is determined that the product is unsafe or ineffective, EPA has the authority to stop sale and use of that product.

We have the power of seizure, under the U.S. Attorney, to remove the product from the market place. But it is our policy to request a manufacturer to voluntarily recall any product that is deemed unsafe or ineffective. We have used this policy over 400 times in the past three years, and in all but two instances the manufacturers have complied with our request.

In those two instances the Agency then went through the court proceeding of getting authority to go in and examine books and records and issuing multiple seizures around the country.

Q. *One of the major provisions of the amended Pesticides Act makes misuse of a pesticide illegal. What constitutes a misuse?*

A. There has been some confusion within the industry and by pesticide users as to the meaning of the words "inconsistent with the label." The Enforcement Division is now developing policies that will be published in the Federal Register and made available to the public to clarify some of this confusion.

We hope to issue statements concerning the meaning of label language, and other issues that are brought to our attention.

Q. *What is the Agency doing to detect incidents of misuse?*

A. The Enforcement Division has developed a program, a response-oriented program, to receive reports of pesticide misuse and respond to them on a case-by-case basis within the regions.

The primary way we hope to receive this information is through the establishment of a toll-free telephone that will be available nationwide to those who are affected by pesticide misuse.

We are also entering into a series of cooperative agreements with other Federal agencies to share information relating to incidents of pesticide misuse. We hope to investigate these, to gather evidence for enforcement actions, and also to make the public more aware of their responsibilities under the new law.

Q. *How many enforcement actions are taken during the year?*

A. First let me go back in the history of pesticide enforcement. Our predecessor agency took only three enforcement actions in some 15 years before the functions were transferred to EPA in 1970. John Quarles, then Assistant Administrator for Enforcement, gave us a mandate to stop writing warning letters and to proceed with criminal prosecution, whenever such action was warranted.

In less than two and a half years, we initiated more than 500 criminal actions.

With the 1972 amendments to our basic Act the civil penalty procedure was instituted, and we have initiated another 500 civil actions and collected over \$1.5 million in penalties.

That's a lot of numbers and a lot of money, but it doesn't really tell the story. Our real objective was to *increase industry compliance with the law*. In this regard EPA's aggressive pesticide enforcement attitude, dictated by Mr. Quarles, has been an unqualified success.

The first people we prosecuted were people who had shipped nonregistered pesticides. Some 30 percent of the products that we picked up were not registered. They hadn't come to the Agency for determination of safety and efficacy.

As a result of prosecuting those 500 criminal cases and publishing the results in notices of judgment, and in newspapers and press releases around the country, the detection rate of non-registration violations has dropped 70 percent in the current fiscal year.

Q. *What penalties can be imposed if a violation is discovered?*

A. The punitive sanctions under the statute are a notice of warning under Section 9 (c), a civil penalty procedure under Section 14, or a criminal penalty procedure.

Notices of warning are sent out for minor violations. Criminal penalties are used in the most egregious violations, where we cannot bring about compliance either by warnings or by the civil penalty procedures.

The civil penalty program instituted in May of 1972 is now the backbone of the enforcement effort. The size of the penalty ranges up to \$5,000 per violation depending upon the size of the business, the seriousness of the violation, and the ability of the firm to stay in business.

The civil penalty procedure is an educational type of enforcement; we say a firm is "paying its tuition" to learn the ropes.

Criminal penalties are the most serious sanction, and we have only used them twice since the '72 amendments started. One was a case where misuse of a pesticide by an operator who should have known better resulted in the death of a three-year-old boy. The criminal penalty was not only a fine, but 30 days in jail.

Q. *Does EPA do anything to make sure we don't eat food contaminated with pesticides?*

A. Under a cooperative agreement between EPA and the Food and Drug Administration that was signed in April, we give them any evidence we have of a pesticide misuse that may have contaminated food or feed products, for their followup investigation and possible seizure of violative foods.

Q. *Does EPA work with the States in enforcement of pesticide laws?*

A. The thrust of our enforcement program for fiscal 1976 is to establish agreements whereby EPA and the States would work together to enforce State laws and the Federal law.



consent agreement

Gulf Oil Company—U.S. has formally agreed to install air pollution control equipment at its gasoline loading facilities in New Haven, Conn., by Sept. 30, Region I Administrator John S. McGlennon has announced. After conferences with regional officials and the Connecticut Department of Environmental Protection, the firm agreed to a specific compliance schedule for reducing emissions of hydrocarbon vapors at the plant. New Haven is in an air quality control region where levels of unburned hydrocarbons frequently exceed the national standards established by EPA to protect public health.

air violation

Region I has issued a notice of violation to Monsanto Polymers and Petrochemicals Co, Indian Orchard, Mass., charging excessive emissions of particulate matter into the air. The firm's resin spray dryer is spewing particles at the rate of 32 tons per year, the notice said. To comply with Massachusetts and EPA regulations, this should be reduced to four tons a year or less. Monsanto is one of the largest sources of particulate pollution in the Springfield, Mass., area, where air quality standards are frequently exceeded. Regional officials are working with the State and the company on methods of bringing the spray dryer into compliance.

new york air plans

Region II Administrator Gerald M. Hansler recently issued the first orders requiring New York City and State to carry out the 1973 State air cleanup plans. The orders call for:

- Increasing bus service and establishing preferential bus lanes.
 - Equipping gasoline trucks with devices to limit pollutant emissions.
 - Inspection of autos, trucks, and taxis to insure that emission control systems are working properly.
 - Teaching mechanics to repair emission control systems.
 - Increasing average traffic speed—now 10¼ miles per hour on arterial routes in Manhattan and 5 mph on local streets—by at least 10 percent. Vehicles pollute more at such slow speeds.
 - Improving enforcement of parked car towaways to speed traffic flow.
- Other administrative orders being considered involve reduction of business district parking space, limits on taxi cruising, after-hours delivery of goods, and tolls on the Harlem and East River bridges.

con ed smoke

Violations notices have been sent to the Consolidated Edison Co. for smoke emissions exceeding Federal and State standards at seven of the firm's electric generating plants in New York City.

deadlines missed

Maryland, Virginia, and the District of Columbia have failed to set up inspection and maintenance programs for auto emission control devices, as required by Federal and State air quality regulations. Region III Administrator Daniel J. Snyder said EPA believes that air quality standards cannot be met in the Baltimore and Washington metropolitan areas without vehicle inspections at least once a year and mandatory repair and retesting for vehicles that fail. All three jurisdictions were to have submitted compliance plans to EPA 14 months ago and to have adopted regulations last June. Although none of these deadlines has been met, Mr. Snyder said, all three jurisdictions are making some progress: Virginia recently passed legislation providing for a voluntary inspection program in northern Virginia, the D.C. City council is considering such a program, and Maryland has authorized an "in depth" investigation. Regional officials planned meetings with representatives of each jurisdiction last month to determine how best to implement the required programs.



escambia bass

The water quality of Florida's Escambia Bay—formerly notorious for massive fish kills—continues to improve under strict cleanup regulations. An EPA team, stationed at Pensacola by Region IV Administrator Jack E. Ravan to monitor enforcement actions, recently stocked the Bay's headwaters with a million striped bass fry.

"So far they are doing nicely," said Dr. Paul Fore, fishery biologist, "and we have every expectation that they will continue to thrive."

Striped bass can live in both fresh and brackish water. The little bass were placed in streams that empty into the Escambia River and thence into the Bay. Shrimp have returned to the Escambia Bay ecosystem, Dr. Fore said, but not yet in sufficient quantity to attract commercial fishermen.

wetlands

A recent Federal court ruling has cleared the way for solving some of the controversy over protecting coastal wetlands, an especially acute issue in Florida, according to Regional Administrator Ravan. Judge Aubrey E. Robinson Jr. in Washington, D.C., ruled that developers of coastal wetlands that are above mean high tide level must obtain permits from the Army Corps of Engineers. The Corps, which has authority to issue dredge and fill permits, had contended that its authority ended at the high tide mark. "We feel Congress provided authority to protect these irreplaceable lands (above high tide and inland swamps) in 1972 when amendments were added to the Federal Water Pollution Control Act," Mr. Ravan said.

monoxide levels high

Region V Administrator Francis T. Mayo has initiated formal action to enforce regulations designed to reduce carbon monoxide levels in the air of downtown Chicago. Levels as high as twice the EPA primary standard were observed in the area last year, with violations occurring about one day in five. Data published by medical researchers indicate that Chicago citizens have carbon monoxide blood levels among the highest in the Nation. Mr. Mayo's action, taken under the Clean Air Act, requires the City, Cook County, and the Illinois Secretary of State to report on their efforts to implement a transportation control plan to curb auto emissions in the three-square-mile area of the central city.

water reuse

The second National Conference on Water Reuse was held last month in Chicago, sponsored by EPA's Technology Transfer program and the American Institute of Chemical Engineers. Its theme was "Water's Interface with Energy, Air, and Solids." Regional Administrator Mayo spoke on EPA's work in complete reuse of water at the opening session. Kenneth H. Suter, of the Technology Transfer Program, was cochairman. Many other EPA people spoke, read technical papers, and took part in panel discussions.

nine towns cited

Nine Illinois communities were cited recently for failing to apply for Federal grants. Wastewater discharge permits had been issued to the towns, said Regional Administrator Mayo, on condition that they apply for funds to build needed sewage treatment plants. The towns of Lockport, DeKalb, Romeoville, Lansing, Homewood, Canton, Rantoul, Pekin, and Peru were ordered to make application within 30 days through the Illinois EPA.

underground first

Administrator Russell E. Train is expected to rule soon on the first petition—under the new Safe Drinking Water Act—to have an underground water source declared the sole supply of drinking water for an area.

The area is south central Texas, including the City of San Antonio. The underground source is the Edwards aquifer, a well-defined limestone formation about 175 miles long and from 5 to 25 miles wide. It has a storage capacity of nearly three million acre-feet. It supplies water to San Antonio, five large military installations, 16 smaller cities, and many farms and ranches. More than a million people get their water from artesian wells drilled into the Edwards aquifer or from its spring flow into rivers. The petition was filed by the Sierra Club, the League of Women Voters, and Citizens for a Better Environment in San Antonio. The period for public comment ended May 6, and at the time of this writing no public hearing had been scheduled.

The Safe Drinking Water Act provides that after the Administrator designates an aquifer as a sole source, no Federal financial aid may be given for "any project which the Administrator determines may contaminate such aquifer . . . so as to create a significant hazard to public health."



permit conviction

In what is believed to be the first criminal conviction for violating the discharge permit provisions of the Federal Water Pollution Control Act, an Iowa bottling firm was recently fined \$5,000, with all but \$600 of the fine suspended. The Mahaska Bottling Co., Oskaloosa, Iowa

pleaded guilty to two counts of discharging untreated process water into a tributary of Little Muchakinock Creek in violation of its permit. The company had been indicted by the Grand Jury of the Federal District Court in Des Moines.

special delivery

When nearly \$4 million in EPA grants for municipal sewage facility construction was awarded in Region VII recently, the checks were delivered personally to the city's mayor or his designee. Regional Administrator Jerome H. Svore said, "Personal presentations of large grant awards has been our practice . . . to insure that there are no losses or delays in mail handling." Regional officials delivered \$1.2 million to Manhattan, Kan.; \$1.1 million to Springfield, Mo.; and \$1.52 million to Des Moines, Iowa.

pesticide fires

How to fight fires involving pesticides is the subject of a new slide lecture produced by Region VII Pesticides Branch, Audio Visual Department, and Public Affairs Office.

The show was described in a recent issue of "Fire Engineering," a national trade publication for firefighters, and inquiries from 28 states and Canada have been received. Public Affairs just completed a movie of the lecture and this too will be made available for distribution to firefighters for training purposes.



spill seminar

How to prevent spills of oil and hazardous materials and what to do about them if prevention fails was the focus of a seminar in Salt Lake City, Utah, May 28-29.

Sponsored by EPA's Region VIII, Utah's Bureau of Environmental Health and Division of Wildlife Resources, and the Rocky Mountain Oil and Gas Association, the sessions pulled together the latest information on spills: contingency plans, legislation, industry problems, aerial surveillance, groundwater contamination, disposal, etc.

Up-to-date information and cooperation

among government agencies and industries is very important in Region VIII, an area of intensive petroleum, chemical, and radiological activities, according to Regional Administrator John A. Green. Spills have not been unusual in the past, and the increasing pace of energy resource development raises the odds on future occurrences. The Region has held similar meetings in Denver, Colo., and Casper, Wyo., and is making plans to hold one in Montana.



pesticide perils

The deadliness of pesticides was dramatized by two recent events in Region IX.

In Phoenix, Ariz., a man drank a quart of highly toxic paraquat in what was believed to be an attempted suicide. He was transferred to San Francisco for special treatment, but at the time of this writing little hope was held for his recovery.

In Los Angeles, a truck carrying a shipment of Lannate L, a toxic insecticide, blew a tire, overturned, and caught fire. Eighty-two persons were affected by the fumes, 11 requiring intravenous injections of atropine. A possible further tragedy was averted when firemen, cleaning up after the fire, realized in the nick of time that they shouldn't hose the spilled pesticide into a drain that eventually reaches the city's water supply.

While these incidents could not have been prevented by EPA, they highlight the dangers of the use, availability, and transport of toxic chemicals.



auto inspections

The State of Washington has not developed a schedule for starting the mandatory vehicle inspection programs required to reduce carbon monoxide in the air in Seattle and Spokane. Region X Administrator Clifford V. Smith has formally notified the State's attorney general that the State's plan for spot-checking and voluntary inspection would not suffice to bring the two cities into conformance with the national air quality standards.

"Under the requirements of the Clean Air Act," Mr. Smith said, "we are not able to accept an inspection and maintenance program unless that program will become mandatory at some specific time."

To achieve the standard for carbon monoxide, he said, the Seattle area must reduce its levels by 55 percent, and Spokane by 50 percent, from those prevailing in 1971.

Evidence collected by EPA shows that emission control systems on motor vehicles—including late models with factory-installed devices—are often not maintained. In Seattle last year 714 cars were checked in a one-day program sponsored by the State Department of Ecology and the League of Women Voters, and nearly 57 percent had excessive emissions of carbon monoxide.





HOW DO YOU CONTROL THE PESTS IN YOUR GARDEN?

Olga Berroyer, Accountant in Charge, National Environmental Research Center, Las Vegas, Nevada: "I am an enthusiastic and long-time cultivator of roses and I have done testing of new rose varieties for Jackson & Perkins, one of the largest rose growers in the world. I use a variety of methods to control garden pests, but whenever possible I prefer to utilize natural controls.

"The big insect problem in the Las Vegas area is aphids. They have appeared on my rose bushes already. If the infestation is not too heavy, I spray with water, and usually that will clean them off. The praying mantis is a fantastic plant house-keeper and has an enormous appetite for aphids and other pests. If I'm driven to it I will use one of the chemical rose dusts, but as sparingly as possible.

"Two other natural methods: in cultivating my beds I use material from the compost pile, which not only fertilizes but keeps down insects as well; planting chives and other members of the onion family amongst the flowers is also effective in warding off pests."



OLGA BERROYER



DR. ROBERT B. DEAN

Dr. Robert B. Dean, Science Advisor, Advance Waste Treatment Laboratory, Cincinnati: "My method of controlling pests has changed in the time I have been with the Environmental Protection Agency. I use much less insecticide. About the only pest I really go after are the moles which invade my garden from the woods nearby. I occasionally use 2, 4-D to get rid of dandelions in my lawn, but I do this selectively because I don't want to lose my clover with its nitrogen fixing ability. I interplant marigolds with my vegetables because they help keep insects out. I also plant squill among my flower bulbs. Squill is a pretty blue flowered bulb that is a natural repellent and is sometimes used to make rat poison. It helps to keep moles out of my garden. Squirrels eat my crocus bulbs and I have about given up on crocuses because I also like squirrels."

Diana Dutton, Assistant Regional Counsel, Region VI, Dallas, Tex.: "I raise tomatoes, spinach and onions on some property at a house I have on Lake Texoma, about 70 miles north of Dallas. I just go there on weekends and my biggest problem is with animals—deer, raccoons, and armadillos. I have built a fence and that has helped some. I also have used dried blood to discourage animal invasions. I think the smell is supposed to repel deer and other animals if you put the dried blood on your garden. Pouring the dried blood around the garden seemed like an awfully gory thing to do and it may be more ritualistic than anything else but it may have helped some. I think really the only way to keep the animals out would be to stay there all the time. I don't believe the armadillos eat any of our crops but they're just obnoxious to have around because they're always digging big holes. I don't want to trap these animals and we get enough to eat so we just live with the problem."

Richard E. Thomas, Research Soil Scientist, Robert S. Kerr, Water Research Center, Ada, Okla: "I have a small garden in my back yard. I use a lot of compost on the garden and this helps provide good, healthy plants. I use pesticides sparingly and pick off harmful insects by hand whenever I see any. I raise tomatoes, cucumbers, lettuce, radishes and squash. I usually share my cucumbers and tomatoes with turtles who invade the garden. If the weather is dry and their food supply is short the turtles start coming into my garden. I take care of these turtles by carrying them away and hope they don't come back."

Dr. Richard J. Thompson, Chief of Analytical Chemistry Branch, Quality Assurance and Environmental Monitoring Laboratory, Research Triangle Park, North Carolina: "I have over an acre of land where I had planted an 80-tree orchard, including apple, pear, peach, plum and nut trees. But I also had five goats and the goats got to the trees before I could get a fence up. Goats are browsing animals and will eat any type of vegetation, including bark, leaves and young tree shoots. These goats are peculiar animals and they pretty well cleaned up on me by debarking and debudding the orchard trees as far as they could reach. I started out with goats because my wife wanted an organic lawn mower. Then big goats have little goats and you're stuck with them because your children say 'Daddy, you don't eat your friends.' I don't really need an insecticide nearly as much as I need a goaticide."

Charles Reese, Conservationist-Agronomist, Pesticide Programs, Headquarters: "I have a relatively small garden at my home in Shepherdstown, W. Va. If I see caterpillars on my plants, I usually pick them off or dust them with lime. The lime makes the plants dry and gritty for bugs to eat. Lime dusting also seems to discourage rabbits. I use very little pesticides. I'll tolerate a little damage and eat a vegetable that has a few bite marks on it. Growing vegetables is a hobby for me and I'm raising plants for market. However, if you have a phobia about insects you have to get out there and kill everything that moves. There are people like that. I find that the praying mantis is good to have around your garden because he is pretty good at eating other insects. If nothing else works, I sometimes spray my plants with soap and water to knock the insects off. But my approach wouldn't be practical for a large farming operation because the cost of labor would be excessive."



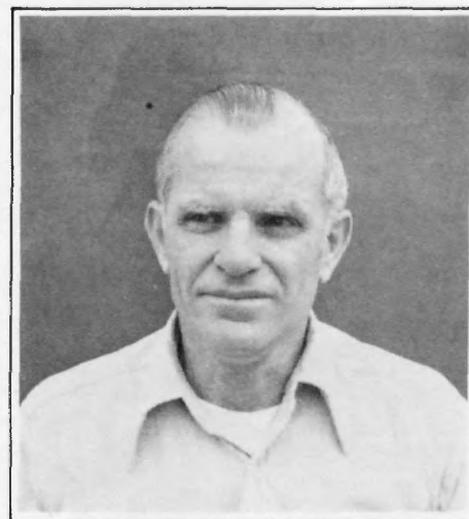
DR. RICHARD J. THOMPSON



CHARLES REESE



DIANA DUTTON



RICHARD E. THOMAS

GUARDING BIG SKY COUNTRY

As new power plants are built in southeastern Montana to be fueled with coal stripmined nearby, EPA scientists are monitoring their effects on grassland ecology: soil, plants, and animals. The four-year study by the National Ecological

Research Laboratory at Corvallis, Ore., began last year to gather "baseline" information on conditions before the start of power production. This spring the researchers are also artificially "stressing" one-acre plots of land

with various air pollutants. Objective of the study is to help industry and State and Federal officials minimize ecological damage from new energy production, according to the Laboratory Director, Dr. Norman R. Glass.



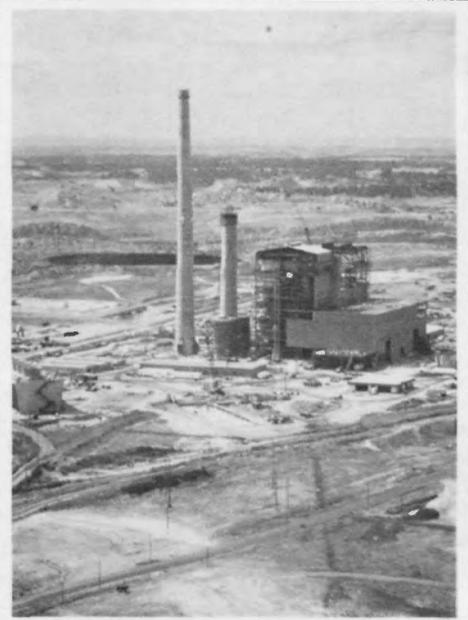
Sunset comes to the Montana grasslands.



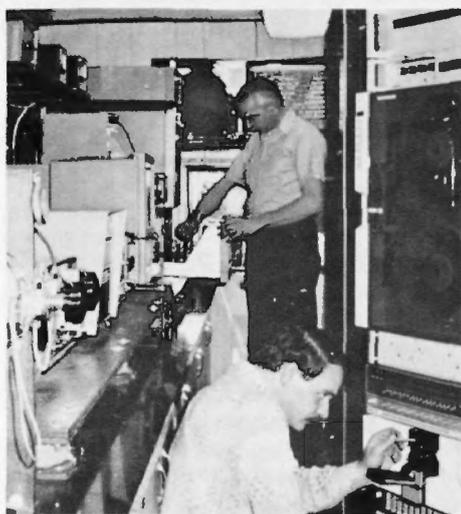
Like furrows of Paul Bunyan's plow are these spoil piles left from stripping 25 years ago. New Colstrip power plant construction has just begun (*extreme left center*) in this photo taken in 1973.



Dragline bucket scoops earth and rock "overburden" to expose the coal. New stripmined land in Colstrip area will be restored to meet Montana's exacting standards after the coal has been dug.



This 350-megawatt power plant near Colstrip, Mont., photographed while under construction, is scheduled to start operation soon. Another plant of the same size is being built. Two more larger ones have been proposed.



In this mobile laboratory fitted with more than \$80,000 worth of scientific gear, EPA's Arthur Vallier, foreground, and James Miller can analyze meteorological conditions and air quality virtually anywhere in the Colstrip area.



Hawk's eye view of the Montana strip mine shows wide, flat seam of black coal which is being dug by heavy machinery and hauled away by trucks.

Research and Development Reorganized

A major reorganization of EPA's Office of Research and Development announced last month by Administrator Russell E. Train will consolidate the office's 24 field laboratories into 15 units and streamline their management and lines of authority.

"This new organization will simply and clearly define the lines of authority in ORD," Mr. Train said. "Our research effort in EPA is an essential ingredient in the development of environmental regulations and programs. Environmental science is a relatively new field. This field, and our programs, require the best talent and organization that we can put together, and it's important that our research be closely aligned with our legislative and administrative objectives."

"We anticipate that fewer than 80 of the nearly 1,800 permanent ORD personnel will be asked to transfer to a new location," Mr. Train said, adding that under the new organization "a significantly larger portion" of EPA's research people can devote their energies to scientific and technical work.

Under the new organizational structure, instead of 24 laboratories, reporting through four National Research Centers (NERCs) to four Deputy Assistant Administrators and 12 program area managers in headquarters, there will be 15 consolidated field units, each reporting to one of four headquarters offices, headed by Deputy Assistant Administrators.

Dr. Wilson K. Talley, Assistant Administrator for Research and Development, explained that the new structure "streamlines and simplifies both program planning and program implementation." Headquarters activities will be focused on long-range planning and program review, while the laboratories, in addition to participating in the planning process, will be responsible for resource management and program implementation.

A new top position, Associate Assistant Administrator, will be established.

Dr. Talley said that this post and other

key positions in the new structure will be filled later in accordance with Federal and Agency personnel regulations.

Meanwhile, to facilitate the transition to the new organization Dr. Talley has detailed the following individuals to provide supervision in the posts listed below:

Acting Deputy Assistant Administrator for Monitoring and Technical Support—Albert C. Trakowski, Jr.

Acting Deputy Assistant Administrator for Energy, Minerals, and Industry—Stephen J. Gage.

Acting Deputy Assistant Administrator for Air, Land, and Water Use—Thomas A. Murphy.

Acting Deputy Assistant Administrator for Health and Ecological Effects—Delbert S. Barth.

Acting Director, Office of Special Projects—John L. Buckley.

Acting Director, Office of Financial and Administrative Services—Alan Neuschatz.

Acting Director, Office of Planning and Review—Phyllis A. Daly.

"We expect to complete the reorganization by June 30," Dr. Talley said, "and to start Fiscal 1976 organized to achieve more efficient and effective use of our resources, and to be more responsive to Agency needs and national environmental concerns."

Under the new structure there will be four laboratories each in Cincinnati, Ohio, and Research Triangle Park, N.C., one in each of the four new program areas. The former NERCs and local laboratories at Corvallis, Ore., and Las Vegas, Nev., are now single laboratories whose missions will be focused under the Office of Health and Ecological Effects and the Office of Monitoring and Technical Support, respectively.

The primary mission of agency laboratories in Athens, Ga., and Ada, Okla., will be to implement the program of the Office of Air, Land, and Water Use. Laboratories at Duluth, Minn; Narragansett, R.I., and Gulf Breeze, Fla., will be

working in the ecological effects research area.

The reorganization continues the consolidation and integration of research activities that started five years ago when EPA was created from various Federal agencies and "inherited" some 42 laboratory and field operations with distinctly different types of management, Dr. Talley explained. These were later reduced to three large units, the NERCs, two of which, in North Carolina and Cincinnati, had administrative offices as well as laboratories.

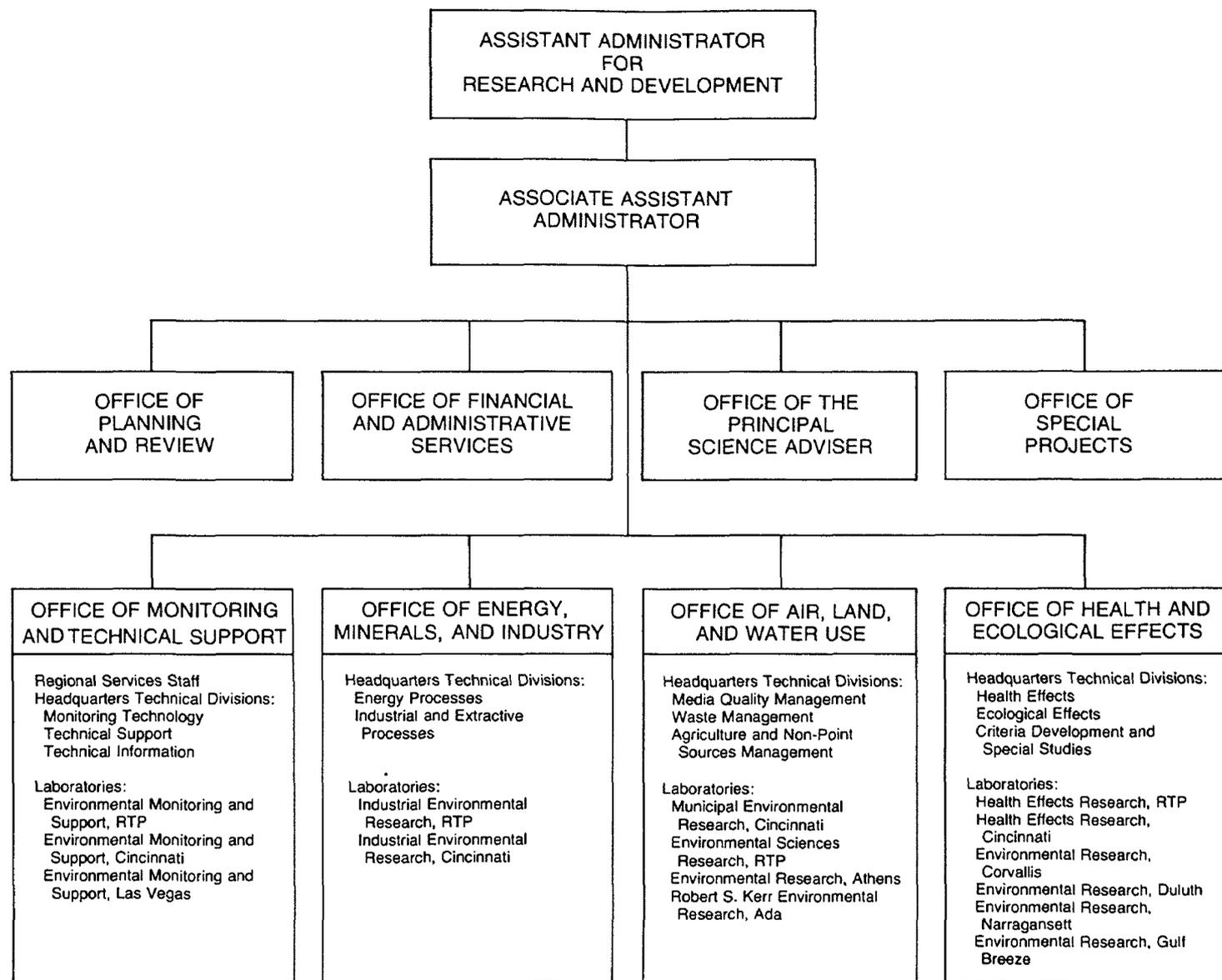
The third, in Corvallis, had laboratories reporting to it from locations across the country. Later a fourth Center was created in Las Vegas. Each NERC had a "theme" or program area in which to concentrate. Although some groups and functions were moved to better fit the Centers' "themes," the planned movements were never completed, Dr. Talley said, and each Center had laboratories and programs involved in most areas of EPA research.

The elaborate planning system that evolved to administer these laboratories developed several flaws, Dr. Talley said. It tended to concentrate on details and did not aggregate them to appropriate decision levels, and it was ill-suited for the two areas of EPA's greatest research concern: short-term technical assistance and support, and long-term studies of health and ecological effects.

Moreover, several groups at headquarters, in addition to program managers, also gave direction to the Centers, or to individual laboratories, or to both. Thus the lines of authority and accountability were confused, and timely, responsive research impeded.

The new organization was developed within the following constraints, according to Dr. Talley:

1. Minimum disruption of ongoing research and development programs,
2. Minimum geographic displacement of individuals, and
3. Clear lines of authority and responsibility.



The approximate resources for each of the new laboratories in FY75 terms are:

Office of Monitoring and Technical Support—

Environmental Monitoring and Support Laboratory, Research Triangle Park, \$5 million

Environmental Monitoring and Support Laboratory, Cincinnati, \$3 million

Environmental Monitoring and Support Laboratory, Las Vegas, \$5 million

Office of Energy, Minerals, and Industry—

Industrial Environmental Research Laboratory, Research Triangle Park, \$3 million

Industrial Environmental Research Laboratory, Cincinnati, \$15 million

Office of Air, Land, and Water Use—

Municipal Environmental Research Laboratory, Cincinnati, \$20 million

Environmental Sciences Research Laboratory, Research Triangle Park, \$22 million

Environmental Research Laboratory, Athens, Ga., \$6 million

Robert S. Kerr Environmental Research Laboratory, Ada, Okla., \$8 million

Office of Health and Ecological Effects—

Health Effects Research Laboratory, Research Triangle Park, \$28 million

Health Effects Research Laboratory, Cincinnati, \$6 million

Environmental Research Laboratory, Corvallis, \$11 million (includes the Arctic Environmental Research Station)

Environmental Research Laboratory, Narragansett, R.I., \$6 million

Environmental Research Laboratory, Gulf Breeze, Fla., \$3 million

Environmental Research Laboratory, Duluth, Minn., \$6 million

ACCENT TRAINING FOR BETTER JOBS AND PAY

Seven EPA employees are working to qualify themselves for higher grades and pay under a program called ACCENT (Aid to Careers of Competent Employees in Need of Training), sponsored by the Personnel Management Division and the Office of Civil Rights.

Three are working at EPA headquarters in Washington, three in Regional Offices, and one at a Research Center (see adjoining photos).

They began their one-year trials in newly created paraprofessional posts at various times from October through March. Each continues at his or her present grade level (ranging from GS-4 to GS-7) for a year of on-the-job training—plus college or other higher education courses geared to their career needs and paid for by EPA. Then the trainees are expected to be qualified for permanent appointment at one or two grade levels higher, and with more opportunity for advancement than they had before.

The program is a pilot effort to encourage "upward mobility"—career advancement—among Agency employees, said Charles S. Barden Jr., director of the Personnel Management Division. Mr. Barden and Carol M. Thomas, director of the Office of Civil Rights, last summer negotiated a two-year agreement with the Civil

Service Commission, which provides for structured on-the-job training to be substituted for a portion of normal qualification requirements to help EPA employees move up various career ladders.

Seven job slots were created for the first year of ACCENT (an acronym coined by Jean Lightfoot of the Civil Rights Office). These jobs were advertised under merit promotion procedures last August at Washington and the four field locations that agreed to take part in the program. About 60 persons applied in Washington, many for more than one post, and 28 applied in the field.

ACCENT is unique among EPA's upward-mobility and training programs in that it virtually assures the successful participant of a permanent job in the office involved. During the year of training the job is outside that office's "position ceiling" and is supported by Personnel Management and Civil Rights funds. Thereafter, if the trainee proves satisfactory, he or she will be given a regular position in the program or regional office.

Plans are being made to expand the program in fiscal 1976, Mr. Barden said. "We are trying to enhance the skills of competent, strongly motivated employees and to improve our work climate and morale. ACCENT is a step in this direction."



Donaldson Shumpert, grants clerk/assistant in the Region IX Office, San Francisco, was a supply clerk when he was chosen last November for the ACCENT program. "It's very interesting; there are changes every day," he says. "It keeps your mind working, and I hope it will give me a chance to move up." Mr. Shumpert has been taking Civil Service courses in effective writing, speed reading, and administrative correspondence, and these will be followed by other academic courses chosen with the advice of the Region's Personnel Division.



Alan Basler, working as purchasing agent in Region VII, Kansas City, since March, was formerly a supply clerk. "My goal has been to get into purchasing and procurement work," he says, "ever since my three years in the Navy doing similar work. In this job I have to use judgment in getting quotations and negotiating contracts." Mr. Basler is learning Federal procurement procedures on the job and was scheduled to take a five-day Civil Service course in Atlanta in May and a two-day course in Denver in June.



Athena Lalikos, consumer safety technician in Region X, Seattle, since November, used to work in the Graphics Section. Now she drives a half-ton pickup truck throughout the Region, inspecting pesticide producers, blenders, and packers and gathering samples for laboratory analysis. "I enjoy this work very much," she says, "and I will soon be taking some extension courses in agriculture and pesticide monitoring at one of the state universities."

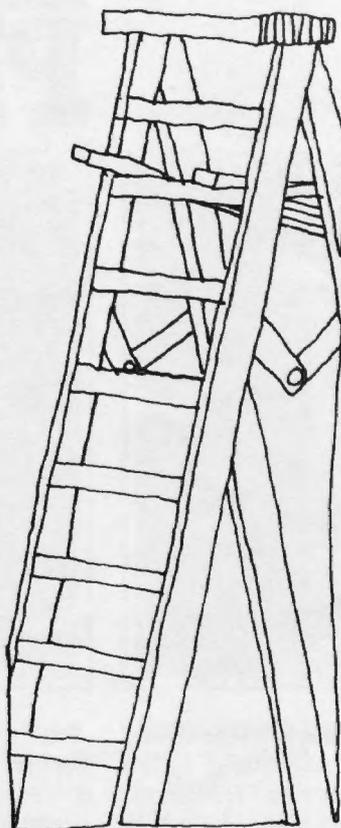


Carole Cumiford, accounting technician since November at the National Environmental Research Center, Corvallis, Ore., used to be a secretary on the staff of the director of administration. "I love this new job," she says, "and I'm learning everything I can about financial management." She is taking three classes a week in accounting at Linn Benton Community College, Albany, Ore., and has taken two short courses in bookkeeping and government records given by the Civil Service Commission in Portland and Seattle. She hopes to be eligible to take the Civil Service professional accountant test later this year and eventually to get into budget work.

HOTLINE TO REPORT PESTICIDE MISUSE



Larry Dempsey, environmental assistant since December in the Air Pollution Control Division, Office of Research and Development, Washington, used to be a secretary in the Office of the Administrator. Working on pollution control technology "has opened new doors to me," says Mr. Dempsey, "especially the work involving cooperative research with the Soviet Union and the Economic Committee of Europe." He is taking evening courses in mathematics and physical science at Southeast University and later will study management statistics and public administration there.



Candace Williamson, editorial clerk/assistant in the Publications Section, Office of Research and Development, Washington, since December, had been a correspondence control clerk in the Office of Noise Abatement. She edits technical reports and likes the work very much. "I read everything I can, and I enjoy writing," she says. "They are sending me to school: biology at Northern Virginia Community College, and English and writing courses given by Civil Service Commission. Most of the technical papers I edit have to do with biology. Most of them do need editing and clarification."



Shirley LeaCraft, statistical assistant in the Office of Pesticide Programs, Washington, since January, was formerly a secretary in the Office of Enforcement. She is taking courses in mathematics, statistics, and automatic data processing given by the Civil Service Commission and the Department of Agriculture's Graduate School. "This work won't confine me," she says, "and it may open up other doors. I am primarily interested in budget work."

The EPA is supporting and publicizing a toll-free telephone number which can be called to report cases of pesticide misuse resulting in human illness or death, livestock or pet loss, property or other environmental damage.

This toll-free telephone program is funded by the Pesticide Enforcement Division, EPA, through a grant to the National Farmworker Information Clearinghouse, Austin, Texas. The Clearinghouse is a non-profit organization funded by the Department of Labor to gather and disseminate information to farmworkers and farmworker organizations.

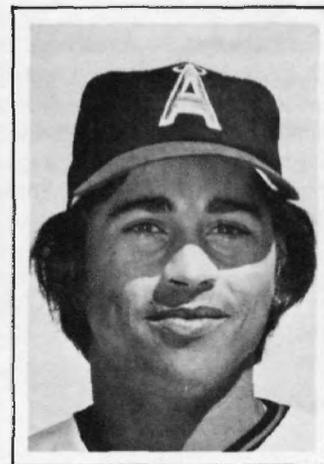
The telephone will be staffed by members of the Clearinghouse in a Washington, D.C. office. Seven days a week, during the times when people are most likely to call, someone will be on hand to answer all calls. At other times, the calls will be recorded and transcribed the next workday.

The campaign to publicize the telephone number, 800-424-1173, will try several approaches. A major part of the publicity has been the development and recording of six public service radio announcements, in English and in both Mexican and Puerto Rican Spanish. In the hopes of making the spots more effective, the help of Spanish-speaking professional baseball players Orlando Peña and Winston Llenas of the California Angels has been enlisted in recording three of them. All six spots are being sent to rock-and-roll, country, and Spanish stations across the country.

In the past, information concerning pesticide accidents and incidents resulting from misuse has been sketchy and unsubstantiated, severely hampering EPA's efforts to understand and answer the needs in regulating pesticides. With the help of this toll-free number, EPA hopes to document pesticide incidents. When warranted, reports will be investigated by the Regions to confirm the accuracy of the information received and to ensure that appropriate enforcement action is taken by the Agency.



Orlando Peña



Winston Llenas

PEOPLE



Kathie Libby, formerly Coordinator in Personnel's Headquarters Training Operation, recently was appointed to the newly created position of Women's Program Officer in the Personnel Management Division. As a result of the reorganization of the Office of Civil Rights, the operational aspects of the Equal Employment Opportunity and Women's programs were transferred to the Personnel Management Division. Ms. Charlie Swift continues as the Federal Women's Coordinator in the Office of Civil Rights.



Steadman M. Overman has been named Assistant Director for Legislation, Office of Legislation, replacing David A. Schuenke, who is leaving the Agency to take a committee counsel position with the House of Representatives. Mr. Overman is a Public Health Service Officer and came to EPA with the PHS environmental programs when the Agency was formed in 1970. He has been directly involved with developing environmental legislation for the past 12 years. Mr. Overman was born in Milledgeville, Ga., in 1925 and was graduated from Georgia Institute of Technology. His graduate degrees include a master's in public health from the University of North Carolina, and bachelor's and doctor's in law from the Capital University Law School, Columbus, Ohio. He is a member of the bars of Ohio, the District of Columbia, and the U.S. Supreme Court. With the PHS he was stationed in Georgia, Washington State, Ohio, and Washington D.C. Before coming to the Nation's capital in 1963, he was assistant chief of legal affairs for the Ohio Department of Health. He is married, has three children, and lives in Springfield, Va.



Patti Pride has been named Assistant Director for Congressional Affairs, Office of Legislation, replacing Steven Stockmeyer, who left EPA to become Deputy Director for Congressional Affairs at the Energy Research and Development Administration. Ms. Pride has been a congressional liaison officer with EPA since September, 1973. Before that she did similar work for the Cost of Living Council and she has served on the staffs of three members of Congress. She is a native of Portland, Ore., and was graduated from the University of Missouri, with a bachelor's degree in journalism and a master's in English.

James M. Conlon has been named Director of the Air and Hazardous Materials Division in Region V, Chicago. He had been Acting Director since January. Mr. Conlon, who has been with the Region since December, 1970, had served as acting regional representative of the Radiation Office and Director of the Hazardous Materials Control Division. Previously he had worked for the Bureau of Radiological Health in Oklahoma, Rockville, Md., and Chicago. Mr. Conlon, who is 36 years old, has a bachelor's degree in chemistry from Illinois College, Jacksonville, Ill., and a master's degree in civil engineering from the University of Oklahoma, Norman, Okla.

Bruce C. Jordan, since October an environmental protection specialist on the director's staff, Office of Air Quality Planning and Standards, Durham, N.C., was recently given the Air Force's Meritorious Civilian Service Award. Mr. Jordan was cited for his work as a research analyst in modeling and evaluating training programs of the Air Force's Tactical Aid Command at Langley Air Force Base, Va., from August 1972 through September 1974.

Daniel Bench, Office of Air and Hazardous Materials, Region VIII, Denver, is training for another attempt in August to climb the seventh highest mountain in the Western Hemisphere, Nevado (snowy) Hauscaran in Peru, 22,205 feet above sea level.

Two years ago Mr. Bench and four companion mountaineers were forced to turn back just above the 21,000-foot level, after three of the party suffered from oxygen deficiency. They will try this year, again without oxygen equipment, following a different, less strenuous route, he says. To build up his lung power, he runs three or four miles a day in Denver's mile-high altitude.



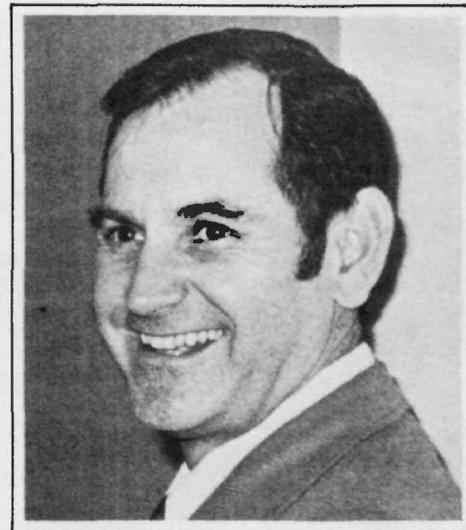
Gerald M. Hansler, Region II Administrator, New York, was EPA's delegate to the third session of the United Nations Environmental Program's Governing Council, which met in Nairobi, Kenya, April 17 to May 2. Christian Herter Jr., Deputy Assistant Secretary of State for Environmental and Population Affairs, headed the U.S. delegation, which also included representatives from the Council on Environmental Quality, the National Oceanographic and Atmospheric Administration, and the Department of Housing and Urban Development. Maurice Strong of Canada heads the U.N. program, which fosters international cooperation in environmental controls and scientific exchange.

Henry L. Longest has been appointed Director of the Water Division in Region V, Chicago. He had been Chief of the Water Programs Branch in Region III, Philadelphia, since 1973. Before that he was a sanitary engineer for EPA and its predecessor Agency, the Federal Water Quality Administration, in Charlottesville, Va. He also has worked for the Army Corps of Engineers, E.I. duPont deNemours and Co., and the U.S. Air Force Civil Engineering Division, with a tour of duty in Vietnam. He is 37 years old and has a B.S. in civil engineering from the University of Maryland. He is a registered professional engineer.



Terry Rader, program support center supervisor for the National Environmental Research Center, Corvallis, Ore., likes to "get out" at least once a month by skydiving two to four times from a hired aircraft. "Free fall is the most enjoyable part of the jump," she says. "It gives me a keen awareness of myself . . . and everything around me. I would recommend skydiving to anyone, but particularly to women. It has given me a great deal of confidence . . . It doesn't require any real physical prowess, but rather mental strength in battling your own fears." In two years, since she started jumping as a student at Oregon State University's Experimental College in Corvallis, Ms. Rader has jumped 108 times. The equipment cost, she says, is comparable to good skiing gear: \$600 to \$700 for brand new chutes (one in reserve), jumpsuit, boots, and helmet. To be ferried aloft, usually five jumpers at a time, costs \$3 for the first 3,000 feet of altitude and 50 cents for every 500 feet thereafter.

David Fierra has been named Chief of the Surveillance Branch in Region I, replacing Myron Knudson who is now Director of the Surveillance and Analysis Division in Dallas. Mr. Fierra is presently Chief of Region I's Permit Development Section. He holds a B.S. degree from the University of Massachusetts and a masters from Northeastern University. He is married, the father of three children, and resides in Ipswich, Mass.



William E. Mathis was recently appointed director, Contracts Management Division, replacing Edward Rhodes, who resigned to take a post in the Department of Health, Education, and Welfare. Mr. Mathis, 45, had been assistant director for Resources and Procurement at NASA's Goddard Space Flight Center, Greenbelt, Md. During 14 years with NASA, Mr. Mathis held a number of financial management and program support posts and was executive officer for Goddard's spacecraft tracking operations. He previously served eight and a half years with the Central Intelligence Agency. A native of Centerville, Tenn., he earned a master's degree at Benjamin Franklin University in Washington. He is married to the former Rita Ann Dobson. They have three children.

Matthew J. Robbins, equal opportunity specialist in the Region IV Office of Civil Rights and Urban Affairs, recently won a master's degree (his second) in public administration at the University of Georgia. He continued working while commuting to classes in Athens, 75 miles away from Atlanta, and earned a 4.0 grade average. As the son-in-law of John McKenna, associate athletic director of Georgia Tech, Georgia's arch rival, Mr. Robbins faced a dilemma in choosing which team to root for.



POISONS STOP SNAIL

A recent example of the effective use of chemicals to control pests was the halting of the spread of giant African snails in southern Florida.

The Department of Agriculture's Animal and Plant Health Inspection Service has reported that the infestation of this voracious plant feeder in southern Florida has been checked.

Considered to be the world's worst mollusk pest, the giant African snail can grow a shell up to 10 inches long and may weigh a pound.

Equipped with thousands of rasping teeth and a fierce appetite, the snail can consume a head of lettuce at one sitting. It also attacks ornamental trees, shrubs, flowers, and vegetables.

It was checked in Florida by spraying infested properties with carbaryl and using corn meal baited with metaldehyde calcium arsenate on neighboring areas.

After the poisoning program halted the snail, the Department of Agriculture lifted last April emergency regulations imposed in 1969 to prevent the pest from spreading out of southern Florida.

The king-sized pest was introduced into Florida in 1966 by an eight-year-old North Miami boy who had brought back three from Hawaii as a present for his grandmother, according to the National Geographic Society news service.

The grandmother was touched but not overjoyed and the snails were released.

By 1969 the snails had multiplied so alarmingly that the Department of Agriculture banned shipments

out of the Miami area of anything that might harbor the pest.

Owners of infested homesites in Florida often complained about the smell of snails that died after wandering into window air conditioners or were smashed by the whirring blades of suburban lawnmowers.

In addition to being a city and suburban nuisance, the giant snail posed a threat to agriculture and human health. If allowed to spread, it could have been particularly costly to Southern nurserymen and vegetable growers. The snail can also be an intermediate host to rat lungworm, a parasite transmissible to man.

Because the snail needs calcium to build its shell, it often fed on house paint, leaving behind unsightly trails of slime and excrement.

These pests have a tremendous reproductive capacity and every snail has both male and female organs. Once mated, each snail will lay 600 to 1,000 eggs in a lifetime.

All of the 100,000 snails destroyed in Florida in the past six years were descendants of the three brought from Hawaii by the child.

The giant snail—*Achatina fulica*—has, with man's help, spread devastation far beyond its original home on the east coast of Africa.

An English naturalist and traveler took the snails to India in the mid-19th century.

African snails then spread to Southeast Asia, China, Formosa, and other Pacific islands, eating their way round the world.

news briefs

PUBLIC HEARINGS SET ON CONSTRUCTION GRANTS

Public hearings are slated this month on proposals to change the law under which EPA assists communities in building sewage treatment facilities. The proposals include reducing the Federal share of funding (now 75%) and limiting such aid to serve only present populations. The hearing schedule: Atlanta, Ga., June 9; Kansas City, Mo., June 17; San Francisco, Calif., June 19; and Washington, D.C., June 25.

QUARLES URGES BETTER PROGRAM TO CONTROL TOXIC SUBSTANCES

Deputy Administrator John R. Quarles, Jr., warned recently that "in a world where the threat from toxic substances is constantly growing, we are literally surrounded by time bombs, but we have not begun an effective program to detect and defuse these hazards." He was speaking to the Manufacturing Chemists Association in Washington.

CINCINNATI MANAGEMENT TEAM WINS PRESIDENTIAL AWARD

A team headed by William J. Benoit was honored last month with a Presidential Management Improvement Award "for effecting a quiet revolution" in the administration of EPA's Cincinnati operations. Over a two-year period, the citation said, the 10-person team brought "unification and order" out of "fragmentation and disarray," while improving services and introducing innovative techniques now being used throughout the Agency. Other team members were Brian C. Burns, Joseph A. Castelli, Kerrigan G. Clough, Morton H. Friedman, Willis E. Greenstreet, Edward J. Nime, Richard A. Pohlkamp, Richard A. Ruhe, and Jean Wilkinson.

BECK HEADS WATER PLANNING AND STANDARDS

Eckardt C. Beck, 32, has been appointed Deputy Assistant Administrator for Water Planning and Standards. He succeeds Lillian Regelson, who accepted an Intergovernmental Personnel Act assignment in December to become Senior Staff Scientist at George Washington University, Washington, D.C. Mr. Beck was formerly Deputy Commissioner of Connecticut's Department of Environmental Programs.



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OIL SENSOR PROTECTS TEXAS WATERWAY

The Nation's first automatic oil spill detector — an outgrowth of EPA-supported research — is guarding the Houston Ship Channel at Houston, Texas, 24 hours a day.

Owned by EPA and set up in cooperation with the U.S. Coast Guard, the detector is designed to give early warning of an oil spill, before environmental damage and cleanup costs become excessive.

It works by shining an invisible beam of infrared light on the water below and setting off an alarm when oil of any kind — even a thin film — appears, according to Donald R. Jones, Oil and Special Materials Control Division, who is EPA's project officer for the sensor's development. It works equally well in daylight or dark, in rain or fog, and under any wave conditions.

The device has been installed since March on a Coast Guard dock at Houston, about 30 feet above water level, for a trial period of about six months, said Wallace Cooper, chief of Region VI's Oil Spill Response Team in Dallas. Mr. Cooper and Coast Guard officials chose the Houston Ship Channel location at the request of Division headquarters in Washington.

The large number of industries and oil handling facilities along the channel make it a likely place for oil spills. The detector will later be moved farther down the channel so that even more potential spills will be covered, said Mr. Cooper.

The Coast Guard has purchased seven of the infrared devices for installation in the New York harbor area.

They cost about \$15,000 apiece, and auxiliary equipment such as recorders and various types of alarm systems can add \$2,000 to the cost of each unit. They are expected to be very useful for

the continuous monitoring of industrial docks, oil loading areas, and other places where oil can be spilled on water, Mr. Cooper said. First installations will probably be in harbors and estuaries, where the Coast Guard is responsible for spill surveillance and cleanup enforcement, he said, but they are expected to be useful also on inland lakes and waterways, where EPA has responsibility.

Research and development on the infrared oil slick detector started about three years ago at Texas Instruments, Inc., Dallas, under a \$250,000 contract from EPA, Mr. Jones explained. Later the Coast Guard took over the Federal funding of final development and testing of prototypes. The Water Pollution Control Act Amendments of 1972 require EPA and the Coast Guard to develop the technology of oil spill surveillance.

The devices are built by Rambie, Inc., of Irving, Texas, under license from Texas Instruments. Dr. Guy Rambie, head of the firm, was a leader in the original TI project. The Rambie sensor can be mounted from 10 to 100 feet above the water to be monitored. It sends a narrow beam of infrared light

vertically to the water and receives and measures the reflected light at two different wavelengths and electronically compares them. The ratio of the two kinds of light reflected from water is different from that reflected from hydrocarbons (oil). The difference triggers the alarm. Since a comparison and not the total light is involved, the system can operate under widely varying conditions of light and weather.

EPA's oil spill specialists at headquarters and in Region VI are considering working with the manufacturer to modify the sensor so it can scan a larger area. This might involve having the infrared beam "sweep" back and forth across a stretch of water instead of being fixed in one place, and having the beam reflected to many receivers instead of one, Mr. Jones said.

EPA also underwrote research by the Baird-Atomic Corporation, Bedford, Mass., on an ultraviolet sensor, using fluorescent lights. Other research is under way, supported by the Coast Guard, on detection systems that use laser light, airborne radar scanners, and sensitive electronic vapor detectors.

Houston Ship Channel flows through industrial areas.

