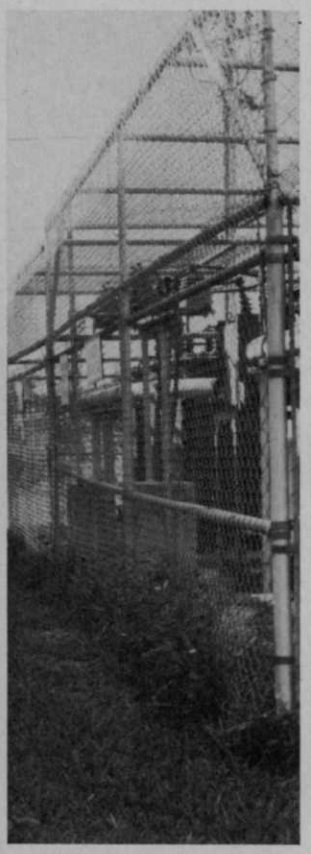

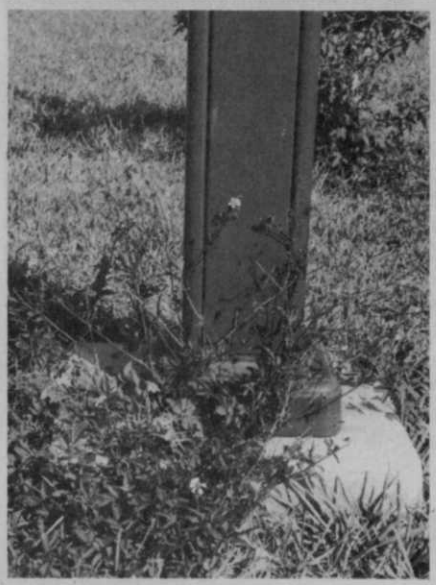

The Navy's Role In Weed Control

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One of the most frequent questions asked of me is, "Why does the Navy need an entomologist?" or, more specifically, Special Assistant for Applied Biology. I have found that the relationship is best explained by pointing out that the Navy shore stations, including reserve centers, directly support the fleet.

Being autonomous and military, with biology problems unique to the military and with security problems at most stations, requires experts who are thoroughly familiar with the military way to solve the problems, well versed in the entire field of applied biology, and able to communicate with the cognizant personnel.

The photos above and at left look like the scenes around an average city. All these areas need chemical weed control. Yet they are also typical of the needs of the Navy. All photos here are "OFFICIAL PHOTOGRAPH U.S. NAVY".

These shore stations range in size from one-building-on-an-acre reserve centers to large public works centers, air stations and ammunition depots. An example of the size involved in one of the larger activities is the following inventory: 44,967 acres (72 sq. miles); 2,206 buildings (9, 055,651 sq. ft. floor space); a 625 acre lake and 69 stocked ponds; 51.2 miles of electrical lines; 194 miles of standard gauge railroad; 404 miles of road system; 38.6 miles of boundary fence; 6.1 miles of sidewalk.

From this it can be seen that this is a good sized military "city," with all of the inherent problems of an autonomous locality.

It is my job to train and certify the on-board personnel conducting pest control operations and to advise them on pest control problems and programs in the 12 state jurisdiction. I work out of the southern division, Naval Facilities Engineer-

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THE NAVY'S ROLE IN WEED CONTROL

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ing Command, Charleston, South Carolina, known as an engineering field division (EFD). We accomplish the planning, design and construction of public works and public utilities. We also direct and administer the maintenance and/or operation of family housing facilities, utilities, and transportation.

When I wear my weed control hat, I provide professional consulting service on the control of undesirable vegetation on improved or semi-improved land, usually involving herbiciding, and chemical or mechanical control in unimproved areas. Our office or Applied Biology has the responsibility for herbicide application, including approval of requisitions for herbicides and application equipment, and the preparation of technical portions of contract specifications. This includes the consultation and liaison on problems involving pesticide toxicity, handling or storage of materials, and the guidance of related station application operations for maximum efficiency, economy and safety in applying herbicides.

To cite an example of the need for my review and approval of herbicide requisitions, one station submitted a requisition for 10,000 gallons of a material containing less than 2% active ingredient, the rest being petroleum oil, and costing $47,500. Not only would the material not have accomplished the desired results, but the petroleum oil would have produced the environmental pollution and fire hazard they were trying to avoid. Furthermore they had no hydraulic equipment to apply it. The recommendation had been made by persons not trained in weed control, and neither our advice nor that of their own well-trained and certified pest control crew had been sought before submitting the requisition. We came back with a recommendation for a much more effective and safer material, effecting a many thousands of dollars savings, and for which they had the proper application equipment on hand.

Our second line of defense is the Department of Defense requirement that all pest control work be reported each month to us for review and submission to the Armed Forces Pest Control Board.

The man with the hoe and brushhook is gradually being replaced in Navy weed control by the man who is qualified to apply herbicides. With chemical control, personnel can select a material which will prolong results, thus reducing their labor costs.

Each year more maintenance supervisors are being made aware of the substantial improvement potential in weed control by chemical means and fund it in their annual budget. During a recent fiscal year, we approved 2,570 gallons and 527,-128 pounds of herbicide concentrates for application in the Sixth and Eighth Naval Districts, but through our insistence on trained, certified persons to use and apply these materials judiciously, we can be justifiably proud of the Navy pesticide safety record.

Here are some of the ways the Navy is involved in weed control:

1. To prevent damage to asphalt pavements. As with any municipality, we have many parking lots, tennis courts and sidewalks that are expensive to maintain unless a bare ground material is incorporated in the base course. In addition, we have such unique features as drill fields and airfield runways that require similar treatment. We select the most appropriate herbicide for the particular job from among the many products on the market.

2. To eliminate the fire hazards. Areas we keep free of this hazard include: ammunition, lumber and fuel storage areas, around power poles and communication lines, and under wooden bleachers in noncultivated areas. In this regard, we are not very different from similar situations in industrial areas in the civilian community.

3. To improve visibility. This is of vital importance around airfield guidelights, as well as utility lines and antennas. Our annual on-site reviews are stressing this important application to airfield commanding officers.

4. To reduce mosquito breeding areas in drainage ditches, sewage oxidation ponds and lakes. There have been considerable man-hour savings in mosquito fogging and spraying operations through good aquatic weed control programs, with the additional benefit of opening up such areas for recreation.

5. To improve turf for appearance and durability. With the increasing emphasis on recreation and land use, the Navy is right up in the forefront in maintenance of lawns, golf courses and athletic fields. Our land-based sailors are being provided more recreational facilities on base, and the family housing areas are receiving more emphasis on landscaping. With some of our stations supporting more than 1,500 family housing units, we have had to go contract for some kinds of pest control. The occupants have certain responsibilities in this area, but we discourage their use of any but the lowest percentage pesticides.

6. To maintain the health and welfare of personnel. Weeds that cause allergies or dermatitis must be controlled. In the far western part of our area, we are concerned with the control of scrub vegetation around the perimeter of stations that may harbor such pests as rattlesnakes, scorpions and tarantulas.

7. To conserve underground water in dry riverbeds by mechanical means. Again in the far west, we have what is known as phreatophytes, or "pump" plants, which take more water from the ground than they need. Through the process of transpiration, plants such as salt cedar, willow, sycamore, tules, bermudagrass and alfalfa appreciably lower the water table.

At a large Marine desert camp, where water supply is critical, units involved in the training effort of operating bulldozers clear enough plants and trees from the creeks and river beds to effect an annual ground water savings of 652,000 gallons (2 acre-feet) for each acre cleared. Recent tests using selective herbicides have shown promise in the control of phreatophytes in dry river beds.

8. To reduce the number of man-hours in trimming grass around sprinkler heads, fireplugs, and other mowing obstructions, and chemically edging lawns. At four Naval activities on the West Coast, approximately $12,500 per year are saved in labor alone by chemically treating around 15,700 sprinkler heads on an average of four times a year. Plant growth inhibiters are now being tried experimentally at some activities. If these show promise, station personnel can further reduce maintenance costs of lawns.

From the foregoing, I think it can be seen that we in the Navy are not too much different from our civilian community counterparts in the complexity of our weed control problems and in our solutions. Perhaps the big difference is our "fish-bowl" image and our sincere desire to save the taxpayer dollars through a minimum of manpower effort with a maximum of results. □