DEPARTMENT OF THE ARMY
US ARMY CENTER FOR HEALTH PROMOTION AND PREVENTIVE MEDICINE
ABERDEEN PROVING GROUND, MD 21010-5403

PEST MANAGEMENT BULLETIN

The *Pest Management Bulletin*, a quarterly publication of the U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM) Entomological Sciences Program, is devoted to keeping installation pest management and preventive medicine personnel informed and up-to-date in the rapidly changing field of pest management.

IN THIS ISSUE

This Bulletin is designed to keep you informed. Therefore, your comments and suggestions are welcome. If you have a problem, a solution, or a personal observation about any aspect of pest management, please send it to us. Write to the following address: Commander, US Army Center for Health Promotion and Preventive Medicine, ATTN: MCHB-TS-OEN (*Pest Management Bulletin*), 5158 Blackhawk Road, Aberdeen Proving Ground, MD 21010-5403, or call us at DSN 584-3773 or commercial (410) 436-3773.

http://chppm-www.apgea.army.mil/ento

DEPLOYMENT PEST MANAGEMENT

We have added a new section to our World Wide Web page. It is titled Deployment Pest Management. While still under construction, this site is designed to provide military entomologists with information vital to them in planning for deployment. The site includes Pre-Deployment planning now and, in the future will include, such topics as, Pesticide Usage Reporting and Retrograde Cargo issues. You may visit this site at: http://chppm-www.apgea.army.mil/ento/deployment/deployment.htm. If you have any suggestions or additions to this topic, please contact us at: Mail to Kenneth Olds.

WESTNILE VIRUS UPDATE

The following table is a summary of West Nile information through 16 August 2001. It is summarized from various sources, including ProMed Mail, DOD West Nile Surveillance Program and other media sources.

2001 West Nile Virus-Positive Results

	Humans	Equines	Wild Birds	Sentinel Chickens	Mosquito Pools
Connecticut			11		4
District of Columbia			22		
Florida	2	23	29	1	
Georgia		1	35		
Louisiana			1		
Maryland			137*		1
Massachusetts			45		
New Hampshire					
New Jersey			249	1	101
New York	1		103		20
Ohio			1		
Pennsylvania			1		
Rhode Island			6		4
South Carolina					
Virginia			2		
DOD			2		

* Maryland has ceased the testing of dead birds collected in Baltimore.

The two WNV confirmed-positve dead birds have been found on DoD supported installations or activities. One dead crow, confirmed positive for WNV was found at the U.S. Soldiers, Sailors, and Airman's Home (USSAH) in Washington, DC and one dead blue-jay, confirmed-positive for WNV, was found at Eglin Air Force Base, FL.

HANTAVIRUS AND RODENTS

Hantaviruses that affect the lungs, causing severe illness or death, were first recognized in the four corners area of the southwestern United States in 1993. At that time, only one hantavirus, Sin Nombre virus (SNV), carried by the deer mouse, *Peromyscus maniculatus*, was identified. Since that time, eight more hantaviruses were recognized in North America, with many more in Central and South America. Four different hantaviruses that cause Hantavirus Pulmonary Syndrome (HPS) in humans are now found in the United States, but the vast majority of the human illness and death are from (SNV). There have been approximately 282 cases of HPS occurring in 31 states. The majority of these cases have occurred west of the Mississippi River. The hantaviruses in the United States have probably been present for millions of years, but, because of the low numbers of human infections, they were not recognized. Infection from a hantavirus is not a common event, but the consequences are so severe that precautions should always be taken when trapping and handling rodents or disturbing or cleaning up rodents droppings, urine, or nesting materials. Infection with the virus occurs when rodent contaminants are aerosolized and breathed into the lungs. Ingestion of rodent's contaminants can also cause infection, but breathing contaminated air is the primary route. If left untreated, HPS is almost universally fatal; those individuals treated for HPS have a 50-60 percent chance of survival. The recognition of the hantaviruses in the Americas has changed forever the way we deal with rodents and their contaminants.

Many rodents invade buildings and structures and leave behind droppings, urine deposits, and nesting materials. Domestic rodents such as house mice, Norway rats, and roof rats do not carry the hantaviruses that cause HPS, nor do squirrels, chipmunks, woodrats, voles, or most of the mice in the genus *Peromyscus*. The deer mouse, mentioned above carries SNV which has been responsible for more than 90 percent of all the hantavirus cases in the last 9 years. This mouse is found throughout North America except along the East coast and the Gulf Coast states. The white-footed mouse, *Peromyscus leucopus*, which is found along the upper East Coast and in the northern part of the Gulf Coast states, carries New York virus that also infects humans. Black Creek Canal virus is found in cotton rats, *Sigmodon hispidus*, in Florida, and Bayou virus is found in rice rats, *Oryzomys palustris*, in Louisiana; these two hantaviruses also infect humans.

Hantavirus infections are usually acquired indoors where rodent contamination is present. While most people think of buildings, indoor environments can also include conexes and milvans, and the inside of military vehicles where mice may have left contamination in the cabs, heater vents, glove boxes, and engine compartments. Although rodent droppings found outdoors may contain the viruses, wind currents and the reduced amount of droppings found at any one location reduce the chance of human contact. Care should be taken when handling rodents or cleaning up rodent contamination. When mice are caught on glue boards or snap traps, the following disposal procedure can be used. Spray mouse

and trap with disinfectant until wet. Turn the bag inside out. With hand inside the bag, pick up the mouse and trap together. Invert the bag over hand and seal the bag. Wrap the bag in newspaper and place it in a dumpster or garbage can. Spray the area where the trap was removed with a light amount of disinfectant and let dry. If gloves were worn to pick up the trap, spray the outside of the gloves with disinfectant. Remove the gloves and wash hands with soap and water. Rodent droppings, when present, should be sprayed with disinfectant and then removed; dry rodent droppings should never be swept or vacuumed since aerosolization of the virus is increased. When light contamination is found (eg. less than 20 droppings), the area can be sprayed with disinfectant and wiped up with wet paper towels. The towels and droppings can be placed in a plastic bag and disposed of in a dumpster or garbage can. Gloves should be worn during cleanup and the gloved hands should be washed with soap and water when done. For more extensive rodent contamination, coveralls, gloves, and a respirator with N-100 (HEPA) cartridges should be worn in most cases. A more detailed description of cleanup procedures and personal protective clothing and equipment can be found in the Armed Forces Pest Management Board Technical Information Memorandum No. 41, Protection from Rodent-borne Diseases with Special Emphasis on Occupational Exposure to Hantavirus, found at the Board's website: http://www.afpmb.org/.

Rodent control is the best preventive measure for reducing hantavirus infections indoors. Exclusion and trapping will reduce rodents, thereby minimizing the amount of contamination from their presence. If buildings cannot be adequately rodent-proofed, then baiting and trapping should be used to reduce the number of rodents. Except for facilities where food is available, the rodents must exit and reenter the facility to eat. Anticoagulant bait stations should be placed inside the building on either side of entry doors. Heavy contamination usually indicates a large or continuing infestation; place additional bait stations on the outside of the building next to the entry doors. When placing bait station outdoors, precautions need to be made to prevent spillage or removal of the bait. Stations that have internal rods on which the anticoagulant is suspended significantly reduce spillage. Since the bait may also be attractive to domestic or wild animals other than rodents, the traps should be secured. Fastening the stations to the ground with stakes or rebar can do this. Another method of securing traps is to glue them to the tops of concrete paving stones. The pavers are approximately 8" x 12" x 1", cost less than one dollar, and are commonly found at local home improvement stores. The bait station can be glued to the top of the paver using Liquid Nails or other strong bonding adhesives. Once completed, the bait station/paver combination can be easily moved by the pest controller but remains difficult for animals to disturb. This setup also works well when bait station placement is required on cement floors, driveways, or aprons where rods or stakes are impractical.

RODENT AND RODENT-BORNE DISEASE SURVEY IN KOREA

USACHPPM-Pacific has supported the Preventive Services Division (PSD) of the 18th Medical Command (MEDCOM) in

conducting rodent and rodent-borne disease surveys at seven separate 8th US Army training areas over the past year.

The 18th MEDCOM PSD entomology consultant initiated a rodent surveillance program in November 2000 and contracted with a local Korean university to screen captured rodents for Hemorrhagic Fever with Renal Syndrome (HFRS) (Hantaan and Seoul viruses), Scrub Typhus, Murine Typhus and Leptospirosis. The rodent/disease survey project became a multi-discipline cooperative program between: US Army (18th MEDCOM PMS, Charlie Company 703rd FSB, 5th MED DET, 38th MED DET, 154th MED DET, and CHPPM-PAC); US Air Force (DET 3, Air Force Institute for Environmental Safety, Occupational Risk Analysis (AFIERA) and Korean organizations (Department of Microbiology, College of Medicine, Korea University). Trapping sites were selected through out the peninsula based on guidance from the rodent experts at Korea University and the Entomology Consultant, Preventive Services Directorate, 18th MEDCOM, and coincide with areas where US Army and Republic of Korea (ROK) soldiers conduct heavy ground-based training and would most likely come in contact with rodents or their habitats.

Historically, rodent-borne diseases were a serious threat during the Korean War. However, no characterizations of rodent location, rodent population dynamics or disease infection rates within rodent populations have been conducted at/near US military installations and training sites. The Korean National Institute of Health reports 200-300 cases of HFRS, >1000 cases of Scrub Typhus and up to 100 cases of Leptospirosis annually. While few United States Forces Korea (USFK) personnel are infected annually current conditions may rapidly change due to political instability or resumption of hostilities in the area. Information about rodent distribution and the prevalence of infectious agents within rodent populations provides a valuable health threat assessment to USFK personnel and can lead to early diagnosis and interventions that will reduce morbidity/mortality.

A summary of disease rates and high threat areas is presented below. Trapping efforts focused on collecting the primary KHFRS reservoir *Apodemus agrarius*, the Striped Field Mouse (Photo). Rodents were collected quarterly and surveyed for disease. Based on high trapping efficiency, current rodent populations were unusually high when compared with historical records. Disease incidence among rodent populations varied widely between sample sites (HFRS <10 - 70%; scrub typhus 50 –80%) within the same sample period. Also, rodent disease rates varied seasonally by site throughout the year. Two cases of HFRS were diagnosed in US personnel during CY2000. Both cases were suspected to have been contracted from training sites with >40% HFRS rodent infection rates.

Information gathered in this survey was used to advise commanders of the risk (or reduced threat) of disease transmission during training events at the selected sites. Continued surveillance is scheduled for FY 2002 to further characterize these disease threats.

Striped Field Mouse, *Apodemus agrarius*

Trapping Crew at the EFMB Training Site

POC: CPT Anthony Schuster, 011-81-311-763-4478/FAX 011-81-311-763-8597.

SCHOOL IPM

On June 19th, 2001, the U.S. Senate approved an amendment to the Better Education for Students and Teachers Act (H.R. 1). The amendment reflects an agreement between the National Coalition Against the Misuse of Pesticides (NCAMP) and the National Pest Management Association (NPMA).

The amendment requires each state to develop a school pest management plan, which school districts must implement and a certified applicator must oversee. At a minimum, the plan would prohibit a pesticide application in any room that is occupied by student and staff in the school. It will also require schools to be vacant 24 hours after certain high-volume pesticide application, such as baseboard spraying and fogging.

The bill is expected to be signed into law this summer and would take effect on October 1. Then each state will have 12 months to adopt a school pest management plan. Once that plan is adopted, it must be implemented into school districts within 12 months.

Once the plan is implemented, the school officials must notify parents and staff at the beginning of the year, at the midpoint of the year and at the beginning of the summer vacation. Some of the requirements include:

- A summary of the requirements and procedures under the school pest management plan.
- A description of any potential pest problems the school may experience and the procedures that would be used to address those problems.
- The contact information of the Office of Pesticide Programs of the Environmental Protection Agency (EPA).

The schools must also establish a registry of parents and staff who wish to be notified 24 hours prior to any application. The notification must include:

- The trade name, common name and EPA Reg. No. of the product.
- A description of each location where the pesticide will be applied
- The date and time of application.
- All information supplied to the school by EPA, such as potential health hazards associated with exposure to the pesticide.
- The purpose of the application.
- The contact information of the Office of Pesticide Programs of the Environmental Protection Agency (EPA).

A sign must be posted the day before the application and must stay up 24 hours after the application.

To view the school pest management amendment to H.R. 1, go to:
http://www.pctonline.com/features/feature.asp?ID=198&SubCatID=54&CatID=9

COUNTY MAPS FOR ENDANGERED SPECIES

Although the EPA Office of Pesticide Programs has included endangered species considerations in its risk assessments for many years, the Endangered Species Protection Program (ESPP), as an entity, started in 1988. This is a largely voluntary program at the present time and relies on cooperation between the U.S. Fish and Wildlife Service (FWS), EPA Regions, States, and pesticide users.

Under this program, the States, through the County Extension Agents, are responsible for providing county maps for locations of endangered species within that county. Based on these maps, pesticide usage will be restricted or prohibited in these areas.

EPA now has maps for about 20 states. These maps may be found at: http://www.epa.gov/espp/usa-map.htm. The information at this site is similar to what the EPA expects to distribute once the Endangered Species Protection Program is in effect. The limitations on pesticide use are not law at this time, but are being provided now for your use in voluntarily protecting endangered species from harm due to pesticide use.

IT'S IN THE NEWS

Tick-Borne Disease -- USA Today reported on 31 May on a family of five who run a campground in PA. For two years, the 38-yr-old mother complained of multiple, seemingly unrelated symptoms to 8 specialists and underwent a CT scan, ultrasounds, X-rays and 3 (negative) Lyme disease blood tests. She AND the other 4 family members were EACH ultimately diagnosed with Lyme disease AND ehrlichiosis AND babe-

siosis. The mother ALSO had human parvovirus and her 12-yr-old, Ryan, ALSO had Rocky Mountain spotted fever. The father ended up needing a pacemaker. The mother is currently taking 19 medications.

Tularemia – USA -- State health officials have confirmed a case of tularemia, or "Rabbit Fever," in a 4-year-old Newton [a western suburb of Boston, Massachusetts] boy and suspect 2 more cases of the rare bacterial infection. All 3 cases have been traced to Martha's Vineyard [an island vacation spot off the coast of Massachusetts]. The boy apparently contracted the illness when he was bitten by a tick while visiting the island, said health officials. He is being treated with antibiotics. The 2 other suspected cases, which were apparently contracted by breathing soil dust, are more serious because they involved pneumonia.

3rd Case Of Tularemia Reported -- The rare bacterial disease called tularemia has not loosened its grip on Martha's Vineyard, where this week a third case was confirmed by public health officials for this season.

An outbreak of the disease last year struck 15 people on the island, one of them fatally. Most of the victims have been landscapers.

Public health officials have stressed that generally people who come to the Vineyard are not at high risk for getting tularemia. Most of those who have fallen ill have worked outdoors. Of this year's 3 cases, one was a farmer, and another a landscaper. The other was a child.

But the persistence of the disease makes it a medical mystery for the record books, especially since most of the cases are the pneumonic form, probably caused by people breathing in airborne particles contaminated by the bacteria.

No other place in the country has ever experienced an outbreak of pneumonic tularemia. Last summer marked the Vineyard's second outbreak, the first one taking place back in 1978, when 15 people were stricken.

"What we're seeing is a continuing transmission of the bacteria at levels that are exposing people to the pneumonic form [of tularemia]," said Dr. David Dennis of the Centers for Disease Control and Prevention, whose researchers left the island this week.

For the CDC, it was the third trip in less than a year. They were joined by a Harvard School of Public Health team, and together, they cast a wide net in the search for clues to why a disease that usually infects only one or 2 people a year has a foothold here.

They drew blood samples from more than 100 landscapers, captured several hundred dog ticks and trapped about 50 rodents, common carriers of the disease.

Already, one rabbit has tested positive for tularemia.

[Byline: Chris Burrell]

TULAREMIA - USA (UTAH, WYOMING): ALERT -- PROVO — Utah County officials are asking the public to be on the alert after two local men were definitively diagnosed with tularemia or "rabbit fever."

Both men had been hunting recently and were probably exposed to the rare bacterial disease the first part of July [2001], said Dr. Joseph Miner, Utah County Health Department executive director. One was bitten by deer flies while camping in Pinedale, Wyoming, and the other reported handling a rabbit that may have been ill.

The disease, with fewer than 300 cases reported in the United States each year, is potentially fatal and is usually spread through contact with infected wild rabbits, ticks or deer flies. Muskrats and beavers also can contract and spread tularemia.

Symptoms include the development of an ulcer at the site of the bite within 3 to 10 days followed by swelling of the lymph nodes nearest the site and headache, fever, malaise, and/or pneumonia.

The antibiotic most often used to treat tularemia is Streptomycin, a drug not commonly prescribed for strep and staph infections, so victims may lose time in getting effective treatment if not accurately diagnosed promptly. [Streptomycin is no longer manufactured in the USA. - Mod.JW]

Miner said the 2 men who became ill went for several weeks without being properly diagnosed because the disease is so rare. Both are now responding to the antibiotic treatment.

However, Miner said it's essential the public be aware that the disease exists and report any suspected cases to either the state health department (801-538-6191) or to Utah County (801-370-8724).

Tularemia, along with plague, botulism, brucella and anthrax, is one of the 5 infections considered most likely to be used as a bioterrorism weapon through the air or water supply. "In light of this, it's extremely important that health-care professionals and the public notify us as soon as possible if any of these are suspected," Miner said.

It's also important to wear protective gloves or goggles when skinning or handling wild game and to thoroughly cook the meat before eating.

(By Sharon Haddock)

New Termite Found in Florida -- A new termite, described as "ant-like in appearance," has been identified in Dania Beach by Rudolf Scheffrahn, a University of Florida entomologist, who says the pest nests and forages at or above the soil surface. By contrast, typical subterranean termites build nests below ground and look whitish in color.

The species is *Nasutitermes costalis*, and it's the first time this type of termite has ever been found in the continental United States.

Although it's not as destructive as the Formosan "super termite" now spreading throughout the Southeast, the new wood-feeding pest is capable of causing widespread damage in aboveground structures.

Results Of West Nile Virus Tests Give PCOs Black Eye – In an interview broadcast on National Public Radio on June 11, 2001, Dr. Ward Stone from the New York State Five Rivers Environmental Center reported that more birds in New York are dying of overexposure to pesticides than West Nile Virus. According to Dr. Stone, after testing more than 80,000 birds, 1,263 birds had died of West Nile Virus and 1,953 birds died from pesticides such as chlorpyrifos and diazinon

An industry spokesman, Allen James, president, Responsible Industry for a Sound Environment, stated, "Pesticides can be detected in such low levels in both animals and humans – levels too low to cause any harm. What the researchers *really* determined was that they could detect pesticides in birds. But that does not mean pesticides killed them.
http://www.pctonline.com/Features/feature/.asp?ID=200
(PCT Online, 6/25/2001)
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USAEC Pest Management "Homepage" is Officially Up on-line -- The pest management program portion of USAEC's Conservation Program Homepage - is now officially on-line. The objective is to make this site as close to a "one-stop-shopping" center for pest management regulatory and "best practices" information. The site may be found at:
http://aec.army.mil/prod/usaec/eq/conserv/pest.htm

Researcher: Hotels Hosting Bedbugs --
The Associated Press

GAINESVILLE, Fla. -- A University of Florida researcher says America's luxury hotels are increasingly playing host to some unwelcome guests: bedbugs.

Phil Koehler, an urban entomologist with the university's Institute of Food and Agricultural Sciences, said Tuesday that the blood-feeding insect is being found more frequently in cities that have an influx of international tourists.

Infestations have been reported in hotels and motels, and, Koehler noted, not just seedy ones.

"Bedbugs are associated in the public's mind with filthy living conditions, but that's not the case," Koehler said. "They can be brought into any environment and are very good at hiding, so even upscale hotels can have infestations."

Pest-control companies have reported a tenfold increase in bedbug service calls in Florida since 1999.

According to pest-control experts, increased tourism has contributed to the problem because bedbugs are transported in luggage from overseas.

The United States had a record 51 million international tourists in 2000, up from 48 million in 1999 and 43 million in 1995, according to Commerce Department figures. Nearly 20 percent of international visitors last year came to Florida.

Another explanation for the resurgence of bedbugs is that bug exterminators no longer indiscriminately spray poisonous chemicals, pest-control experts said.

"When you suppress insects such as cockroaches in a targeted manner with insect baits, it allows for other parts of the insect ecosystem to rise up," said Mel Whitson, technical manager for Steritech Group Inc., a Charlotte, N.C.-based environmental safety company.

Adult bedbugs are about the size of a small ladybug and are flat, oval and wingless. They are brown unless engorged with a meal, when they turn a mahogany red.

Adults feed regularly but can live six months without eating.

Harold Harlan, senior entomologist with the National Pest Management Association in Dunn-Loring, Va., said that although bedbugs can harbor about 20 human pathogens, they do not transmit diseases.

COURSES FOR DOD CERTIFICATION

Appendix A lists the DoD certification and re-certification classes being offered. If you are interested in any of these courses, please contact the referenced POCs.

Visit: http://www.afpmb.org/pubs/courses/courses.htm

UPCOMING EVENTS

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September, October, November, December

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January, February, March, April, May, June, July, August, September, October, November, December

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January, February, March, April, May, June, July, August, September, October, November, December

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January, February, March, April, May, June, July, August, September, October, November, December

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SEPTEMBER

5 September - 8 September 2001. **National Urban Forest Conference**, Washington, DC. Contact: Kasey Russell (304) 345-7578, email: kaseyrussell@citynet or visit their website at www.americanforests.org/trees_cities_sprawl/conference/contact.html

9 September - 14 September 2001. **3RD EUROPEAN VERTEBRATE PEST MANAGEMENT CONFERENCE**, Kibbutz Ma'ale Hachamisha, ISRAEL. Contact: Ortra Ltd., PO Box 9352, Tel Aviv 61092, ISRAEL. E-mail: <vert@ortra.co.il>. Fax: 972-3-683-4455. Phone: 972-3-683-4444. Website: ortra.com/vertebrate/.

10 September - 12 September 2001. **British Society for Parasitology 12th Malaria Meeting**, University of Leeds, U.K. Contact: Judith Smith (j.e.smith@leeds.ac.uk) or visit the website at: http://www.parasitology.org.uk or www.abdn.ac.uk/bsp

10 September - 12 September 2001. **ROYAL ENTOMOLOGICAL SOC. ANNUAL MEETING**, Aberdeen, Scotland, UK. Contact: A.J. Mordue, A.J.Mordue@abdn.ac.uk

11 September - 14 September 2001. **Environmental Health Congress Exhibition**, Bournemouth International Centre. Contact: CIEH, Tel: 020 & 7928 6006.

12 September - 14 September 2001. **PCT Dialogue**, Wyndham Palace, Orlando, FL. Contact: Maria Miller, 800-456-0707 or www.pctdialogue.com

12 September - 15 September 2001. **6th INTERNATIONAL CONFERENCE ON THE ECOLOGY AND MANAGEMENT OF ALIEN PLANT INVASIONS**

(EMAPi) 2001, Leicestershire, UK. Contact: L.E. Child, Centre for Environmental Studies, Loughborough Univ., Loughborough, Leicestershire LE11 3TU, UK. E-mail: L.E.Child@lboro.ac.uk>. Phone: 44-(0)1-509-222558.

13 September - 14 September 2001. **Missouri Pest Control Association (MPCA) Management Meeting**, Radisson Hotel, Branson, MO. Contact: 800-848-MPCA

16 September – 21 September 2001. **General Pest Control Residential Training**, Warwick University Coventry, England. Contact: British Pest Control Training, 1 Ground Floor, Gleneagles House, Vernon Gate, Derby, DE1 1UP, 01332 294288 or email enquiry@bpca.org.uk

16 September - 21 September 2001. **Third International Congress of Vector Ecology**, Barcelona Spain. Contact: rct@rct-congresos.com or phone (34) 93 415 69 38.

17 September - 21 September 2001. **FIRST INTERNATIONAL SYMPOSIUM ON BIOLOGICAL CONTROL OF ARTHROPODS**, Honolulu, HI, USA. Purpose: to bring together biological control practitioners from around the world to promote and address international issues relating to arthropod biological control. Contact: R. Van Driesche, Dept. Entomology, Univ. of Massachusetts, Amherst, MA 01003, USA. Phone: 1-413-545-1061. E-mail: <vandries@fnr.umass.edu>. Website: ww.isbca.ucr.edu.

19 September 2001. **Insect Identification**, Warwick University, Coventry, England. Contact: British Pest Control Training, 1 Ground Floor, Gleneagles House, Vernon Gate, Derby, DE1 1UP, 01332 294288 or email enquiry@bpca.org.uk

OCTOBER

2 October - 3 October 2001. **2001 - A Pest Odyssey**, London, UK. Contact: English Heritage & Science Museum, Tel: 020 7233 4200.

5 October 2001. **Hawaii Pest Control Association's (HPCA's) Annual Technician Learning Conference**, Honolulu, HI. Contact: Tim Lyons, HPCA 808-533-6404.

21 October - 24 October 2001. **JOINT ANNUAL MEETING, ENTOMOLOGICAL SOCIETIES OF CANADA and ONTARIO**, Niagara Falls, ON, CANADA. Contact: C.S. Dupree, Dept. of Environ. Biol., Univ. of Guelph, Guild, ON N1G 2W1, CANADA. E-mail: CSDupree@evbhort.uoguelph.ca. Phone: 1-519-824-4120.

28 October - 31 October 2001. **Pest Management '01**, Hyatt Regency, New Orleans, LA. Contact: NPMA, 703-573-8330 or http://www.pestworld.org.

NOVEMBER

6 November - 9 November 2001. **International Conference, Environmental Risk Assessment of Pesticides and Pesticide Management in Developing Countries**, Kathmandu, NEPAL. Contact: A. Herrmann, K-IPM Conf., Inst. of Geog. and Geoecol., Tech.

Univ. Braunschweig, Langer Kamp 19c, D-38106 Braunschweig, GERMANY. E-mail: ipmktm@tu-bs.de. Fax: 49-531-391-8170 Web: www.tu-bs.de/institute/igg/physhyd/conference.html.

12 November - 15 November 2001. **BRIGHTON CROP PROTECTION CONFERENCE 2001**, Brighton, UK. Contact: The Event Organization, 8 Cotswold Mews, Battersea Square, London SWll 3RA, UK. E-mail: <eventorg@event-org.com>. Fax: 44-171-924-1790. Website: <www.BCPC.org>.

13 November -14 November 2001. **PESTICIDE BEHAVIOR IN SOILS AND WATER**, Brighton, UK. Research symposium in conjunction with BCPC 2001 (above).

21 November 2001. **PestTech 2001**. National Motorcycle Museum, Birmingham, UK. Contact: NPTA, Tel: 0115 952 4333.

DECEMBER

2 December - 5 December 2001. **Ohio Pest Control Association 55th annual meeting**, Wyndham Hotel, Dublin, OH. Contact: April Snyder, 614-221-1900 or april@assnoffices.com.

3 December-9 December 2001. **2ND AFRICAN ACAROLOGY SYMPOSIUM**, Nairobi, KENYA. Theme: "Novel Approaches to Tick and Mite Management in the New Millennium." Contact: M. Knapp, ICIPE, PO Box 30772, Nairobi, KENYA. E-mail: <MKnapp@icipe.org>. Fax: 254-2-860110.

9 December – 13 December 2001. **Entomological Society of America (ESA) Meeting**, Town and Country Resort Hotel and Convention Center, San Diego, CA. Contact: ESA, (301) 731-4535 or visit the website at http://www.entsoc.org

9 December – 14 December 2001. **General Pest Control Residential Training**, Warwick University Coventry, England. Contact: British Pest Control Training, 1 Ground Floor, Gleneagles House, Vernon Gate, Derby, DE1 1UP, 01332 294288 or email enquiry@bpca.org.uk

12 December 2001. **Insect Identification**, Warwick University, Coventry, England. Contact: British Pest Control Training, 1 Ground Floor, Gleneagles House, Vernon Gate, Derby, DE1 1UP, 01332 294288 or email enquiry@bpca.org.uk

13 December - 14 December 2001. **Missouri Pest Control Association (MPCA) Annual Conference**, Tan-Tar-A, Osage Beach, MO. Contact: 800-848-MPCA.

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FEBRUARY

10 February - 13 February 2002. **WEED SCIENCE SOCIETY OF AMERICA ANNUAL MEETING**, Reno, NV, USA. Contact: WSSA, J. Lancaster, PO Box 1897, Lawrence, KS 66044, USA. E-mail: <jlancaster@allenpress.com>. Fax: 1-913-843-1274. Phone: 1-913-843-1235.

17 February – 20 February 2002. **American Mosquito Control Association's Annual Meeting**, Adam's Mark Hotel, Denver, CO. Contact: AMCA, 318-474-2723.

MARCH

24 March - 26 March 2002. **INTERNATIONAL IPM CONFERENCE**, Toronto, CANADA. Contact: M.E. Appleby, OMAFRA, 95 Dundas St., R.R.#3 Brighton, ONT K0K 1H0, CANADA. E-mail: <margaret.appleby@omafra.gov.on.ca>. Fax: 1-613-475-3835. Phone: 1-613-475-5850.

APRIL

3 April - 5 April 2002. **The Society for Veterinary Epidemiology and Preventive Medicine Annual Conference**, Robinson College, Cambidge, England. Contact: Alasdair JC Cook, +44 (0)1932 357997 or e-mail a.j.cook@vla.maff.gsi.gov.uk

JULY

7 July - 10 July 2002. **4th International Conference on Urban Pests**, Charleston, SC. Contact: Dr. ICUP webpage at http://entweb.clemson.edu/urban/ICUP2002.htm
22 July - 26 July 2002. **5th International Conference of Hymenopterists**, Friendship Hotel, Beijing, China. Contact: sea@panda.ioz.ac.cn or visit the website at http://www.ioz.ac.cn/zcd/

AUGUST

SEPTEMBER

8 September -13 September 2002. **11TH INTERNATIONAL CONGRESS OF ACAROLOGY**, Merida, MEXICO. Contact: J.B. Morales-Malacara, XI ICA Secretary, Lab. de Acarologia, Dept. de Biologia, Fac. de Ciencias, Univ. Nacional Autonoma de Mexico, Coyoacan 04510 DF, MEXICO. E-mail: <JBMM@hp.fciencias.unam.mx>. Fax: 52-5-622-4828. Phone: 52-5-622-4923.

12 September - 13 September 2002. **ROYAL ENTOMOLOGICAL SOC. ANNUAL MEETING**, Cardiff, UK. Contact: H. Jones, Jonesth@cardiff.ac.uk
NOVEMBER

17 - November - 21 November 2002. **ENTOMOLOGICAL SOCIETY OF AMERICA ANNUAL MEETING**, Fort Luderdale, FL. Contact: ESA, 9301 Annapolis Rd., Lanham, MD 20706-3115, USA. Fax: 1-301-731-4538. Phone: 1-301-731-4535. E-mail: <esa@entsoc.org>. Website: <www.entsoc.org>.

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OCTOBER

26 October - 30 October 2003. **ENTOMOLOGICAL SOCIETY OF AMERICA ANNUAL MEETING**, Cincinnati, OH, USA. Contact: ESA, 9301 Annapolis Rd., Lanham, MD 20706-3115, USA. E-mail: <esa@entsoc.org>. Fax: 1-301-731-4538. Website: <www.entsoc.org>. Phone: 1-301-731-4535.

NOVEMBER

November * **BRIGHTON CROP PROTECTION CONFERENCE 2003**, Brighton, UK. Contact: The Event Organization, 8 Cotswold Mews, Battersea Square, London SWll 3RA, UK. E-mail: <eventorg@event-org.com>. Fax: 44-171-924-1790. Website: <www.BCPC.org>.

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* No date **ANNUAL MEETING, SOCIETY OF NEMATOLOGISTS**, Ithaca, NY, USA. Contact: W. Brodie, USDA-ARS, Dept. of Plant Path., 334 Plant Science, Cornell Univ., Ithaca, NY 14853, USA. E-mail: <BBB2@cornell.edu>. Fax: 1-607-255-4471. Phone: 1-607-272-3745.

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JULY

24 July - 28 July 2004. **AMERICAN PHYTOPATHOLOGICAL SOCIETY ANNUAL MEETING**, Spokane, WA, USA. Contact: APS, 3340 Pilot Knob Road, St. Paul, MN 55121-2097, USA. E-mail: <aps@scisoc.org>. Fax: 1-612-454-0766. Website: <www.scisoc.org>.

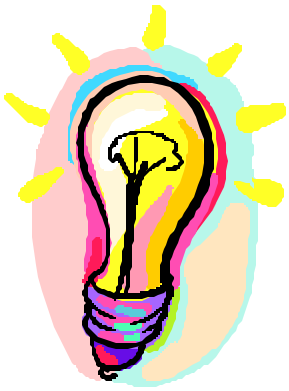
NOVEMBER

7 November - 11 November 2004. **ENTOMOLOGICAL SOCIETY OF AMERICA ANNUAL MEETING** Salt Lake City, UT, USA. Contact: ESA, 9301 Annapolis Rd., Lanham, MD 20706-3115, USA. Fax: 1-301-731-4538. E-mail: <esa@entsoc.org>. Website: <www.entsoc.org>.

DOD STOCK LISTED PESTICIDES

The updated list of DoD Stock listed pesticides can be found in Appendix B. Please note that changes are listed in bold. The most current list can always be found on the AFPMB web page at: http://www.afpmb.org/standardlists.htm

ON THE LIGHTER SIDE



MORE BUMPER STICKERS

I don't suffer from insanity, I enjoy every minute of it.

I used to have a handle on life, but it broke.

Don't take life too seriously, you won't get out alive.

You're just jealous because the voices only talk to me.

I'm not a complete idiot ... some important parts are missing.

Out of my mind. Back in five minutes.

As long as there are tests, there will be prayer in public schools.

The gene pool could use a little chlorine.

Change is inevitable, except from a vending machine.

It IS as BAD as you think, and they ARE out to get you.

I took an IQ test and the results were negative.

Consciousness: that annoying time between naps.

Ever stop to think, and forget to start again?

APPENDIX A
DOD CERTIFICATION COURSES

AIR FORCE COURSES

1. For information on the following courses, contact Ms. Haris Georges, 366 TRS/TRRT, 727 Missile Road, Sheppard AFB, TX 76311-2254, DSN: 736-3538, Fax: 736-3345. Classes are conducted at Sheppard AFB, TX. Quotas are obtained through the Unit or MAJCOM Training Managers.

Pest Management Certification - J3AZR3E453-003 is a four-week training course that meets the basic requirement for initial certification training under DoD 4150.7-M, Plan for Certification of Pesticide Applicators of Restricted Use Pesticides. Achievement of the minimum passing scores satisfies the formal training and testing requirement for initial certification in the core phase of pest control and pest control Category 3, Ornamental and Turf; Category 5, Aquatic; Category 6, Right-of-Way; Category 7, Industrial, Institutional, Structural, and Health-Related; and Category 8, Public Health. This course DOES NOT satisfy the OJT and correspondence course requirements for certification. All DoD personnel who have held DoD certification in one or more pest control categories but cannot meet the requirements for triennial recertification, according to DoD 4150.7-M, are eligible to attend. Personnel who possess current certification are NOT eligible to attend this course.
APR 9 - MAY 4, 2001
AUG 20 - SEP 17 2001

Pest Management Recertification - J3ARR3E453-002 is a one week course that meets the basic requirements for recertification training under DoD 4150.7-M, Plan for Certification of Pesticide Applicators of Restricted Use Pesticides. Achievement of the minimum passing scores satisfies the formal training requirements for recertification in the core phase of pest control and pest control Category 3, Ornamental and Turf; Category 5, Aquatic; Category 6, Right-of-Way; Category 7, Industrial, Institutional, Structural, and Health-Related; and Category 8, Public Health. Students are allowed to return to duty after testing in only the core phase and in the categories in which they hold initial certification. Only DoD personnel who require triennial recertification to apply restricted use pesticides are eligible to attend. Personnel should be within one year of expiration of their DD Form 1826.
SEP 17 - 21, 2001

2. For information on the following course, contact Capt Armando Rosales, USAF School of Aerospace Medicine, Brooks AFB, TX 78235-5123, Tel: (210) 536-3734, DSN Prefix 240, e-mail: <armando.rosales@brooks.af.mil>. Information is also available on the WWW at: <http://wwwsam.brooks.af.mil/web/eh/html/bugs.htm>.

Operational Entomology Course (OEC) - #B30ZY43M3-000 is a two-week training course that builds individual capabilities to perform surveillance and control for disease vectors that significantly impact military missions during war or operations other than war. Emphasis is placed on preventing vector-borne disease morbidity and mortality. Instruction includes vector biology, vector-borne disease, surveillance techniques, risk assessment, and control strategies. The OEC provides academic instruction, practical exercises, and field experience. Additional details can be obtained from the USAFSAM/PH Web page at: <http://wwwsam.brooks.af.mil/web/eh/entomology/usafento.htm>.

The OEC is evaluated for 64 CME credits for officers and four CCAF credits in biology for enlisted personnel. Prerequisites: Students must fully qualify for worldwide deployment and have no medical condition limiting full participation in the field portion of the course. The course is open to active duty, ANG, and AFRC personnel with AFSCs of 4E0X1, 4S0X1 (SEI 496), 3E4X3, 43H3, 43M3, 48A3, and 48P3, or their DoD equivalents, and other personnel with consent of the faculty. Priority is given to active duty personnel assigned to mobility positions or from installations with a high risk of vector-borne disease. Enlisted personnel must be E-4 or higher. Officers must be fully qualified in their AFSC and have a minimum of one year of service. ECL 80 SA.

Special Requirements: The uniform for military students is BDUs, coveralls for civilians. Individuals allergic to bee stings or other venomous arthropods should bring an anaphylaxis emergency kit. The training office or student must provide the Course Supervisor, DSN 240-3734, with a telephone contact for the student.
SEP 10 - 21, 2001

3. For information on the following courses, contact Ms. June Brewer, 910 AW, YARS, Vienna, OH 44473-0910, Tel: (330) 609-1111/1178, Fax: (330) 609-1616, DSN Prefix 346. Information is also available on the WWW at: <http://www.afrc.af.mil/units/910aw/aerial-spray(PUBLIC)/AERIALSPRAY/index.htm>.

Aerial Application of Pesticides (Certification) - #AAP-01 is a one-week course that addresses the tenets and methodologies for aerial application of pesticides, with an emphasis on operational aspects and military applications. The primary scope of the course includes general principles, legal aspects, contracts, map types and preparation, spray system calibrations, aerial spray math, DoD spray systems, meteorological ef-

fects, occupational health and safety, operations and mission support, disease control, pilot's view, private applicator's view, environmental aspects, computer modeling, swath and droplet characterization, pesticide monitoring, public relations, contingency wartime usage, spill prevention and containment, and other pertinent operational issues involving the use of aerial spray. The course features guest lecturers from the U.S. Army, U.S. Navy, U.S. Department of Agriculture, private applicator firms, and other government agencies. It is offered once each June.

ARMY COURSES

1. For information on the following courses, contact SSG Kerry McKinley, Academy of Health Sciences, U.S. Army, ATTN: MCCS-HPM, Fort Sam Houston, TX 78234-6100, Tel: (210) 221-6801/6733, DSN Prefix 471, E-mail: <kerry.mckinley@amedd.army.mil>. Classes are conducted at Fort Sam Houston, TX.

Pest Management Certification Course (6H-F12/322-F12):

Recertification (6H-F13/322-F13)
SEP 10 - 14, 2001

2. For information on courses in Germany, contact CPT(P) Dwight Rickard, USACHPPM-EUR, CMR 402, APO AE 09180, Tel: 49-6371-86-8540/44, DSN: 486-8544. Classes are conducted at the USACHPPM-EUR, Landstuhl, Germany.

3. For information on courses taught at the Environmental Training Center, contact Ms. Gail Boeff, ATTN: ATZR-BT, Fort Sill, OK 73503-5100, Tel: (580) 442-2111, Fax: (580) 442-5722, DSN Prefix 639. The Environmental Training Center at Fort Sill, OK, conducts a variety of environmental, natural resources and occupational health courses.

NAVY COURSES

1. For information on the following courses, contact HM2 Whalen, NDVECC, Naval Air Station Jacksonville, Box 43, Jacksonville, Florida 32212, Tel: (904) 542-2424 ext 3029, Fax: (904) 542-4324, DSN Prefix 942. Unless noted otherwise, classes are conducted at the Disease Vector Ecology and Control Center, NAS Jacksonville, Jacksonville, FL.

Pesticide Applicator Training (Core) (B-322-1070), Instruction for Initial Certification: MAR 5 - 12, 2001

SEP 10 - 17, 2001
MAR 4 - 11, 2002

Plant Pest and Vegetation Management (B-322-1071), Initial Certification for Categories 2, 3, 5 & 6:
MAR 13 - 16, 2001
SEP 18 - 21, 2001
MAR 12 - 15, 2002

Arthropod and Vertebrate Pest Management (B-322-1072), Initial Certification for Categories 7 & 8:
MAR 19 - 28, 2001
SEP 24 - OCT 3, 2001
MAR 18 - 27, 2002

Recertification (B-322-1074)
FEB 21 - 22, 2001
APR 10 - 11, 2001
NOV 6 - 7, 2001
APR 9 - 10, 2002

Operational Entomology Training (B-322-1077), designed for A/D & Reserve PMTs, EHOs, Entomologists, Epidemiologists & others assigned
to PM units:
MAY 7 - 18, 2001
OCT 15 - 26, 2001
FEB 4 - 15, 2002
MAY 6 - 17, 2002

Medical Entomology and Pest Management Technology (Reserve Training) (B-322-1050):
FEB 5 - 16, 2001
JUN 4 - 15, 2001
JUL 16 - 27, 2001
FEB 4 - 15, 2002
May 6 - 17, 2002

2. For information on the following courses, contact HM1(SW) Compton, NDVECC, 19950 Seventh Ave., NE, Suite 201, Poulsbo, WA 98370-7405, Tel: (360) 315-4450, Fax: 4455, DSN Prefix 322, E-mail: <postmaster@ndvecc.navy.mil>. Unless otherwise

noted, classes are conducted at the Navy Disease Vector Ecology and Control Center, Bangor, WA.

Pesticide Applicator Training (Core) (B-322-1070), Instruction for Initial Certification:
SEP 10 - 17, 2001

Plant Pest and Vegetation Management (B-322-1071), Initial Certification for Categories 2, 3, 5 & 6:
SEP 18 - 21, 2001

Arthropod and Vertebrate Pest Management (B-322-1072), Initial Certification for Categories 7 & 8:
SEP 24 - OCT 3, 2001

Recertification Course (B-322-1074), Category 8:
FEB 6 - 9, 2001
JUL 17 - 20, 2001
DEC 11 - 14, 2001

Operational Entomology Training (B-322-1077), Recertification in DoD Category 8 is available as part of the course. Note: Reservists who have attended CIN: B-322-1050 and whose certification has not expired may attend this course.
JUN 18 - 29, 2001*
*Camp Pendleton

Shipboard Pest Management (B-322-1075): NDVECC(B)
MAR 7, 2001
JUN 6, 2001*
JUN 13, 2001
JUL 11, 2001
SEP 5, 2001
OCT 24, 2001*
OCT 31, 2001
* Ingleside, TX

APPENDIX B
DOD STOCK LISTED PESTICIDES

Please see the AFPMB site for the most current listing of DoD Stock Listed Pesticides: http://www.afpmb.org/pubs/misc/pest012001.htm

LIST OF STANDARD PESTICIDES AVAILABLE TO DOD COMPONENTS AND ALL FEDERAL AGENCIES (JANUARY 1, 2001)

NSN 6840-	Item (Alternative Trade Name)	Unit Package	AAC*	Price	Unit Issue	Users
00-063-3981	Algaecide, Copper Sulfate, 80.16% pentahydrate, crystal (Cuprose)	50-lb bag	L	----------	BG	A,F
00-282-0971	Fungicide, Wood Preservative, copper naphthenate mixture (COP-R-NAP)	5-gal co	D	**185.16**	CO	A,N,F,M
01-209-6298	Fungicide, Wood Preservative, copper naphthenate mixture (COP-R-NAP RTU)	5-gal co	L	---------	CO	A,N
01-360-4741	Fungicide, Methylisothiocyanate (MITC-FUME) ***RESTRICTED USE PESTICIDE***	18 tubes	L	---------	CO	A,N,F,M
01-457-6588	Fungicide, Methyl Azoxystrobin, 50% (Heritage)	(6) 1-lb. cont.	J	2100.00	BX	A,N,F,M
00-392-7593	Herbicide, Bromacil, 21.9% lithium salt of bromacil, liquid (Hyvar X-L)	(2) 2.5-gal co	D	**326.84**	BX	A,N,F,M
00-181-7106	Herbicide, Bromacil, 40.8%, water soluble liquid (Bromax-4L)	5-gal drum	D	**713.14**	DR	A,N,F
01-408-9079	Herbicide, Bromacil, 40.8%, wettable powder (Hyvar X)	(12) 4-lb bags	H	**1086.59**	BX	A,N,F,M
00-684-8975	Herbicide, Chlorate-Borate mixture, 30% sodium chlorate, 68% sodium metaborate tetraahydrate, granular (Monobor Chlorate)	50-lb bag	Z	**61.83**	BG	A,N,F
01-005-7523	Herbicide, Diquat, 35.3%, water soluble liquid (Reward)	1-gal co	D	**120.95**	GL	F
00-815-2799	Herbicide, Diquat, 35.3%, water soluble liquid (Reward)	(2) 2.5-gal co	D	**604.31**	BX	A,N,F
01-341-9346	Herbicide, Diuron, minimum 80% diuron, granular	25-lb bag	D	**124.82**	BG	A,N,F
00-001-7710	Herbicide, Diuron-Bromacil mixture, 40% bromacil, 40% diuron, granular (Krovar I DF)	6-lb bag	D	**73.39**	BG	A,N,F
01-108-9578	Herbicide, Isopropylamine salt of glyphosate, 41%, water soluble liquid (Roundup Pro)	(2) 2.5-gal co	D	**268.75**	BX	A,N,F
01-388-0142	Herbicide, Isopropylamine salt of glyphosate, 41%, water soluble liquid (Roundup Pro)	30-gal drum	D	**1521.53**	DR	A,N,F
01-356-8893	Herbicide, Isopropylamine salt of glyphosate, 41%, water soluble liquid (Rodeo)	(2) 2.5-gal co	D	**592.54**	BX	A,N,F,M
01-377-7113	Herbicide, Isopropylamine salt of glyphosate, 0.96%, water soluble liquid (Roundup Ready-to-Use)	24-oz pump spray bottle	D	**5.53**	BT	F
01-399-0673	Herbicide, Isopropylamine salt of glyphosate, 0.96%, water soluble liquid (Roundup Dry Pack)	25 pkg.	D	**80.57**	BX	A,N,F,M
01-356-8902	Herbicide, Isopropylamine salt of imazapyr, 27.6% (Arsenal)	(2) 2.5-gal co	D	**1570.16**	BX	A,N,F,M
01-318-7417	Herbicide, Oryzalin, 40% (Sulflan A.S.)	1-gal bot	L	---------	GL	A,N,F,M
00-145-0013	Herbicide, Prometone, 25% prometone, emulsifiable concentrate (Pramitol 25E)	5-gal can	D	**99.34**	CN	A,F
01-319-2890	Herbicide, Tebuthiuron (Spike 80W)	4-lb bag	L	---------	BG	A,N,F,M
01-457-6576	Herbicide, Tebuthiuron-Diuron, 1% Tebuthiuron, 3% Diuron (Spraykil SK-13)	40 lb. container	D	**93.47**	CO	A,N,F,M
00-577-4194	Herbicide, 2,4-Dichlorophenoxy-acetic acid (2,4-D), oil miscible/water emusifiable liquid (low volatile ester form)	(2) 2.5-gal co	H	**113.72**	BX	A,N,F,M
00-664-7060	Herbicide, 2,4-Dichlorophenoxy-acetic acid (2,4-D), water soluble liquid (amine salt form)	(2) 2.5-gal co	H	**103.57**	BX	A,N,F,M
01-377-7110	Herbicide, 2,4-Dichlorophenoxy-acetic acid (2,4-D), 0.4%, water soluble liquid (amine salt form) (Weed-	24-oz pump spray bottle	D	**6.50**	BT	F

	B-Gon)					
00-753-4963	Insect Repellent, clothing application, 75% DEET, 25% ethanol	2-oz bottle	V	**1.45**	BT	A,N,F,M
01-278-1336	Insect Repellent, clothing application, aerosol (Permethrin Arthropod Repellent)	(12) 6-oz cans	D	**40.21**	BX	A,N,F,M
01-284-3982	Insect Repellent, personal application, (3M/EPA 58007-1)	(12) 2-oz tubes	D	**35.94**	BX	A,N,F,M
01-334-2666	Insect Repellent, clothing application, 40% permethrin, liquid (2-Gal sprayer)	(12) 151-ml bot	D	**170.73**	BX	A,N,F,M
01-137-8456	Insect Repellent, personal application, 3% benzocaine, 10% precipitated sulfur (Chigg-Away)	188-ml bot	D	**2.85**	BT	A,N,F,M
01-288-2188	Insect Repellent, personal application & sunscreen, 20% DEET/SPF15 (Sunset)	(12) 2-oz tubes	D	**48.40**	BX	A,N,F
01-452-9582	Insect Repellent, personal application & sunscreen, 20% DEET/SPF15 **(**Sunset)	320 packets	D	**357.36**	BX	A,N
01-345-0237	Insect Repellent, clothing application, permethrin (IDA)	12 kits	D	**42.64**	BX	A,N,F,M
00-142-8965	Insect Repellent, personal application, 30% DEET (Cutter Insect Repellent Stick)	(12) 1-oz sticks	D	**31.19**	BX	A,N,F
00-145-0016	Insecticide, Aluminum phosphide, 55 % tablets (Phostoxin/Fumitoxin) *****RESTRICTED USE PESTICIDE*****	100 tablets	D	**21.27**	CN	A,N,F
00-442-5698	Insecticide, Aluminum phosphide, 55 % tablets (Phostoxin/Fumitoxin) *****RESTRICTED USE PESTICIDE*****	1660 pellets	D	**28.45**	BT	A,N,F
01-377-7049	Insecticide, *Bacillus thuringiensis*, 10% (Bactimos Briquets)	100 Briquets	D	**75.21**	BX	A,N,F,M
00-180-6069	Insecticide, Baygon, 1% propoxur, liquid (Roach and Ant Spray)	1-gal can	V	**11.23**	GL	A,N,F,M
01-287-3938	Insecticide, Boric Acid, aerosol (Perma-Dust)	(12) 9 oz cans	D	**59.00**	BX	A,N,F
00-932-7297	Insecticide, Carbaryl, 80%, water dispersible powder (Sevin 80S)	(5) 10-lb bags	H	**275.28**	BX	A,N,F
01-104-0887	Insecticide, Carbaryl, 42.6%, liquid (Carbaryl 4L)	(2) 2.5-gal co	D	**168.20**	BX	F
01-033-4481	Insecticide, Carbaryl, 5%, dust (Sevin 5% dust)	(12) 4-lb bags	D	**160.91**	BX	A,N,F
01-313-7359	Insecticide, Cyfluthrin (Tempo 2EC/Tempo SC Ultra)	(12) 240-ml bot	D	**517.78**	BX	A,N,F,M
01-383-6251	Insecticide, Cyfluthrin (Tempo 20WP)	(288) 9.5-g pack	D	**411.40**	BX	A,N,F,M
01-390-4822	Insecticide, Cypermethrin (Demon WP)	1-lb jar	D	**65.60**	LB	A,N,F,M
01-431-3345	Insecticide, Deltamethrin (Delta Dust)	1-lb co	D	**11.48**	LB	A,N,F,M
00-753-5038	Insecticide, Diazinon, 2%, dust	20-lb co	D	**34.58**	CO	A,N,F,M
00-782-3925	Insecticide, Diazinon, 47.5%, emulsifiable concentrate	1-gal can	D	**42.00**	GL	A,N,F,M
00-142-9438	Insecticide, Dichlorvos, 20% (plastic strips)	48 strips	D	**198.86**	BX	A,N,F,M
01-412-4634	Insecticide, D-Phenothrin, 2%, aerosol	12-oz can	D	**5.75**	CN	A,N,F,M
01-067-2137	Insecticide, D-trans Allethrin and Resmethrin, 0.15% and 0.2% minimum, respectively, aerosol **(Kill Zone House & Garden Insect Killer Formula 3)**	12-oz can	D	**1.90**	CN	A,N,F,M
01-122-2651	Insecticide, Dursban, 42% chlorpyrifos, emulsifiable concentrate (Dursban 4E)	1-gal can	D	**114.16**	GL	N,F,M
01-338-6003	Insecticide, Dursban, 20% chlorpyrifos, microencapsulated (Empire 20)	1-pint co	D	**26.02**	PT	A,N,F,M
01-270-9766	Insecticide, Dursban, 42.8% chlorpyrifos, emulsifiable concentrate (Dursban TC/CYREN PRO Termite Conc.)	(4) 1-gal co	D	**204.39**	BX	A,N,F,M
00-402-5411	Insecticide, Dursban, 42% chlorpyrifos, emulsifiable concentrate (Dursban 4E)	5-gal can	D	**509.63**	CN	A,N,F,M
01-203-6161	Insecticide, Dursban, 19.36% chlorpyrifos, liquid (Mosquitomist 1.5 ULV)	5-gal can	D	**293.02**	CN	A,N,F,M

01-338-2487	Insecticide, Dursban, 0.5% chlorpyrifos, aerosol (Engage)	(12) 20-oz cans	D	**77.72**	BX	A,N,F,M
01-412-4361	Insecticide, Dursban, 20% chlorpyrifos, emulsifiable concentrate (Dursban Pro)	1-pint co	Z	**12.35**	PT	A,N,F,M
01-087-6672	Insecticide, Ficam, 76% bendiocarb, wettable powder (Ficam)	1-lb jar	D	**83.35**	LB	A,N,F,M
01-183-7244	Insecticide, Fly Bait, 1% methomyl (Apache/Golden Malrin)	5-lb can	D	**19.50**	CN	A,N,F,M
01-287-3913	Insecticide, Hydramethylnon (Amdro Fire Ant Bait)	(24) 6-oz bot	L	---------	BX	A,N,F,M
01-398-6799	Insecticide, Hydramethylnon (Siege Gel Bait)	4-30 gm reservoirs	D	**31.36**	BX	A,N,F,M
01-424-2494	Insecticide, Fenoxycarb {Logic (Award Brand of Logic)}	25-lb bag	J	**256.24**	BG	A,N,F,M
01-224-1269	Insecticide, Fipronil, cockroach, large size (Combat Quick Kill)	8 bait stations/ box/ 12 boxes	D	**88.67**	PG	A,N,F,M
01-180-0167	Insecticide, Fipronil, cockroach, regular size (Combat Quick Kill)	12 bait stations/ box/ 12 boxes	D	**73.71**	PG	A,N,F,M
01-471-5650	Insecticide, Fipronil (Maxforce Roach Killer Bait Gel)	4-30 gram reservoirs/box	D	**24.46**	BX	A,N,F,M
01-298-1122	Insecticide, Fipronil (MaxForce Ant Bait)	96 stations	D	**58.02**	PG	A,N,F,M
01-318-7416	Insecticide, Hydroprene, emulsifiable concentrate (Gentrol IGR)	(10) 1-oz bot	D	**53.75**	BX	A,N,F,M
01-457-6580	Insecticide, Imidacloprid, 5% granular (Merit 0.5 g)	30 lb. bag	J	50.00	BG	A,N,F,M
01-428-6646	Insecticide, Lambda-cyhalothrin, 9.7% (Demand CS)	(8) 8 oz bottle	D	**295.60**	BX	A,N,F,M
01-431-3357	Insecticide, Lamda-cyhalothrin (Demand Pesttab)	40 tablets	D	**71.42**	CO	A,N,F,M
00-655-9222	Insecticide, Malathion, 57.0%, emulsifiable concentrate, class 1	1-gal co	D	**42.07**	GL	A,N,F,M
00-685-5438	Insecticide, Malathion, 57.0%, emulsifiable concentrate, class 1	5-gal can	D	**135.27**	CN	A,N,F,M
00-926-1481	Insecticide, Malathion, 95%, liquid, grade B	54-gal drum	D	**1842.68**	DR	A,N,F,M
01-169-1842	Insecticide, Malathion, 95%, liquid, grade B	5-gal can	D	**203.24**	CN	A,N,F,M
01-424-2495	Insecticide, Methoprene (Altosid XR Briquets)	220 Briquets	D	**714.50**	BX	A,N,F,M
01-424-2493	Insecticide, Methoprene (Altosid SR-20 Liquid Larvicide)	(2) 2.5-gal co	J	**5162.78**	BX	A,N,F,M
01-426-5472	Insecticide, N-ethyl perfluorooctane sulfonamide (Advance Dual Choice)	36 stations	D	**29.16**	PG	A,N,F,M
01-270-9765	Insecticide, Naled, 85%, liquid (Dibrom)	30-gal drum	J	**3556.99**	DR	A,N,F
00-597-6111	Insecticide, Naphthalene, ball form	1-lb box	D	**5.09**	LB	A,N,F,M
01-467-0994	Insecticide, Nithiazine, Fly Strips (Quikstrike), 2 strips per package	(12) Pkg./box	D	**197.06**	BX	A,N,F
00-174-1825	Insecticide, P-Dichlorobenzene, crystal/flake	100-lb drum	J	**441.68**	DR	A,N,F
00-174-1824	Insecticide, P-Dichlorobenzene, crystal **GSA**	1-lb can	J	**3.83**	LB	A,N,F,M
01-318-7415	Insecticide, Propetamphos, 50% (Catalyst)	(8) 3.2-oz bot	D	**34.15**	BX	A,N,F,M
01-104-0780	Insecticide, Pyrethrins, 3% pyrethrins with synergists, liquid (ULV fog concentrate)	1-gal bot	D	**97.17**	GL	A,N,F,M
00-459-2443	Insecticide, Pyrethrins, or d-phenothrin, aerosol (Wasp Freeze/Wasp Stopper II Plus)	(12) 12-oz cans	D	**52.86**	BX	A,N,F,M
00-823-7849	Insecticide, Pyrethrin, aerosol (PT 565 Plus XLO)	(12) 12-oz cans	D	**118.02**	BX	A,N,F
01-359-8533	Insecticide, Resmethrin (Scourge)	5-gal can	D	**390.92**	CN	A,N,F

01-457-6583	Insecticide, Spinosad, 11.6% (Conserve SC)	1 gal cont.	J	**313.39**	GL	A,N,F,M
01-474-7751	Insecticide, Sumthrin -Piperonyl Butoxide ,10%-10%, (Anvil 10+10 ULV)	(2) 2.5-gal/box	D	**800.00**	BX	A,M,F,N
01-474-7706	Insecticide, Sumthrin -Piperonyl Butoxide, 10%-10%, (Anvil 10+10 ULV)	250 gal co	D	**37087.50**	CO	A,N,F,M
01-424-3132	Insecticide, Temephos (Abate 4E)	2.5-gal co	J	**755.62**	CO	A,N,F,M
01-467-1029	Mosquito Larvicide and Pupicide (Agnique MMF)	(2) 2.5-gal co	Z	**167.00**	BX	A,N,F
01-431-3352	Rodent Indicator Bait Blocks (Census Bait Blocks)	285 blocks	D	**56.90**	CO	A,N,F,M
00-089-4664	Rodenticidal Bait, Anticoagulant, 0.005% diphacinone	40 blocks	D	**52.69**	BX	A,N,F,M
00-753-4973	Rodenticidal Bait, Anticoagulant, 0.005-0.0055% diphacinone, pellets	5-lb can	V	**9.36**	CN	A,N,F
01-151-4884	Rodenticidal Bait, Anticoagulant, 0.005% broadiolone (Maki), pellets	11-lb can	D	**30.25**	CN	A,N,F,M
01-426-4808	Rodenticidal Bait, Anticoagulant, 0.005% brodifacoum (Talon-G), pellets	10-lb can	D	**40.44**	CN	A,N,F,M
01-435-9320	Rodenticidal Bait, 2% zinc phosphide (ZP Rodent Bait) *****RESTRICTED USE PESTICIDE*****	(250) 7.5-g pkg.	J	**40.06**	CO	N
00-753-4972	Rodenticide, Anticoagulant, concentrate 0.106% sodium salt of diphacinone (LIQUA-TOXII**)**	50 pouches	D	**265.28**	BX	A,N,F,M
01-435-9318	Rodenticide, 10% zinc phosphide (ZP Tracking Powder) *****RESTRICTED USE PESTICIDE*****	(4) 500-g bot	J	**35.09**	BX	N

+User Code A=Army, N=Navy, F=Air Force, M=Marines SOS (DSCR-Richmond)=S9G

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