



MOSQUITOES & OTHER PEST OPERATIONS ON MILITARY INSTALLATIONS

**United States Army Center for
Health Promotion and Preventive
Medicine – South
(USACHPPM – South)**

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Entomological Sciences Division

- Train pest management and preventive medicine (public health) personnel
- Provide pest management consultations
- Arthropod identification
- Vector-borne disease analysis
- Vector-borne disease risk assessments



SUBORDINATE COMMANDS

USACHPPM MAIN

USACHPPM-EUROPE
Landstuhl, Germany

USACHPPM NORTH
Ft. Meade

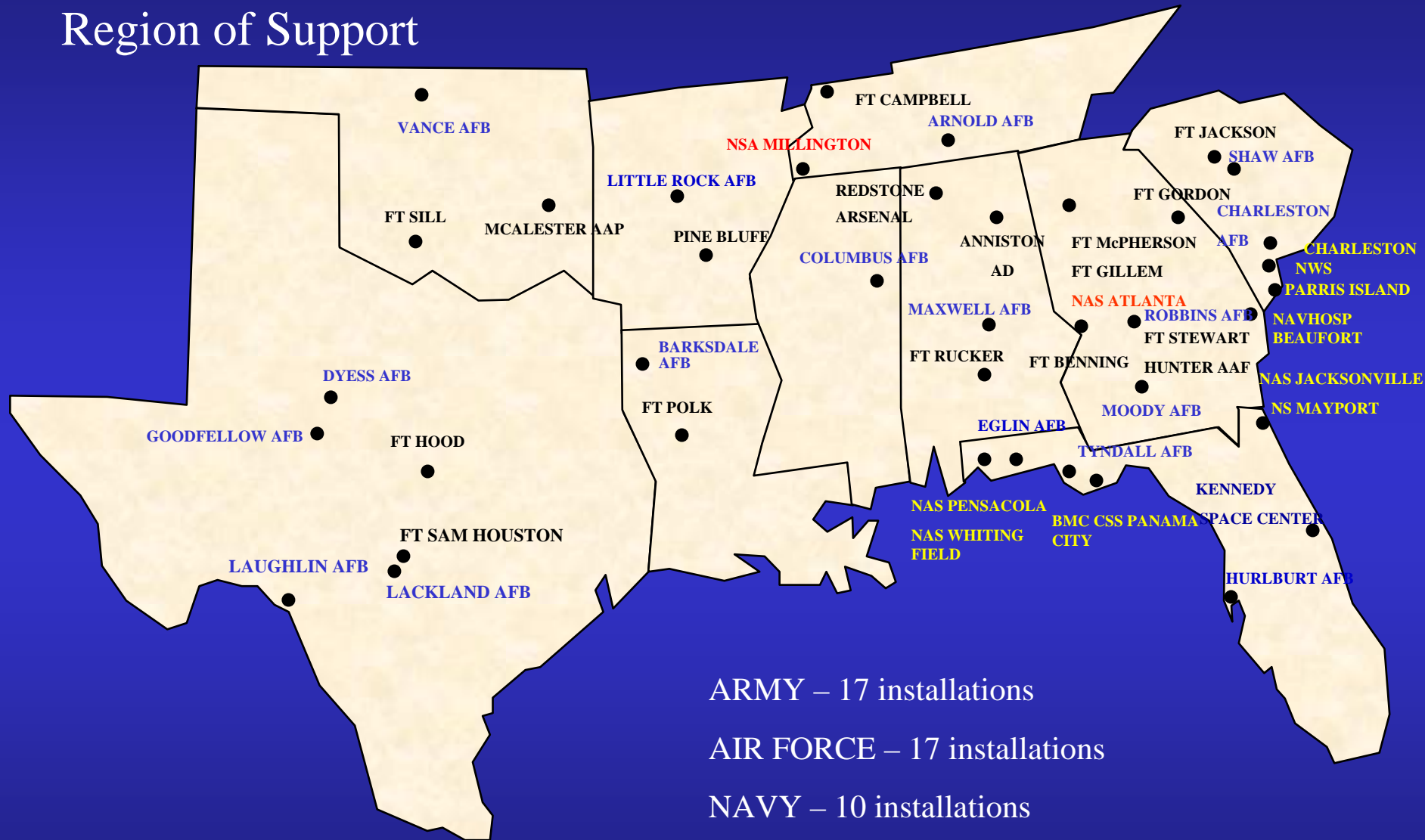
USACHPPM WEST
Ft Lewis, WA

USACHPPM-PACIFIC
Camp Zama, Japan

USACHPPM SOUTH
Ft. McPherson
Atlanta, GA



USACHPPM-SOUTH Region of Support



Key Installation Pest Management Personnel

- Preventive Medicine (Public Health)
- Installation Pest Management Coordinator
- Certified Pest Controllers (Contractors or Gov)
 - Forestry; Ornamental & Turf; Aquatic; Right-of-Way; Industrial, Institutional & Structural; and Public Health
 - Nuisance and Wildlife Damage Control
- Pest Control Contract Inspectors
- Golf Course Manager/Greenskeeper
- Natural Resources
- Veterinary Services
- Animal Control

SURVEILLANCE

Larval Surveys

Adult Surveys

- Battery-operated light traps
- Aspirators
- Gravid traps

Sentinel chickens



The Purpose of Mosquito Surveillance



Assess health threat



Identify and monitor mosquito populations



Share trap count information with pest controllers to improve control operations



Evaluate effectiveness of control programs



Locate mosquito breeding sites

Key Elements of a Surveillance Plan



Establish liaison with local and state regional health departments and abatement organizations.



Establish response protocol and a WNV response team in the event of a positive mosquito pool or bird. Alert local government agencies.

USACHPPM's Role in Mosquito Surveillance

Support Army and DoD installations in maintaining a mosquito / arbovirus surveillance program through:



Training personnel and on-site assistance

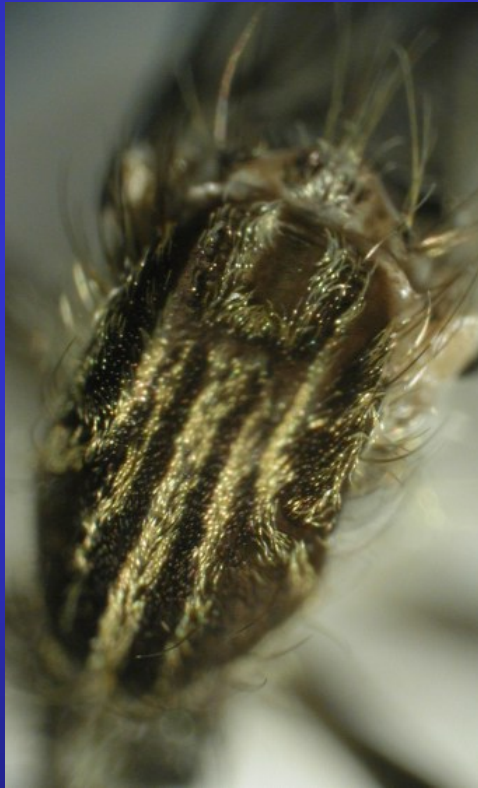


Creating work plan guidelines for surveillance and assisting with West Nile Virus action plans



Laboratory analysis of mosquito specimens for disease pathogens, primarily West Nile virus.

Ochlerotatus japonicus



CONTROL

Source Reduction

Larvicides

Adulticides

Residual Sprays

Thermal fogging

ULV Cold fogging



Laboratory Procedures

LightCycler



Mosquito Identification

To species

Pooling: 1-25 specimens

RNA Extraction

Use MagNA Pure Total
Nucleic Acid Isolation Kit

RT-PCR

Use Qiagen QuantiTect
Probe RT-PCR kit

Diverse Pest Operations on Military Installations

- Other health-related pests
- Lawn & ornamental
- Structural
- Forestry
- Aquatic
- Wildlife Damage
- Agricultural Leases



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Wild Ducks

1322





ALBION

INSECT MONITORING TRAP
DETECTOR

ALBION





Rodent Control

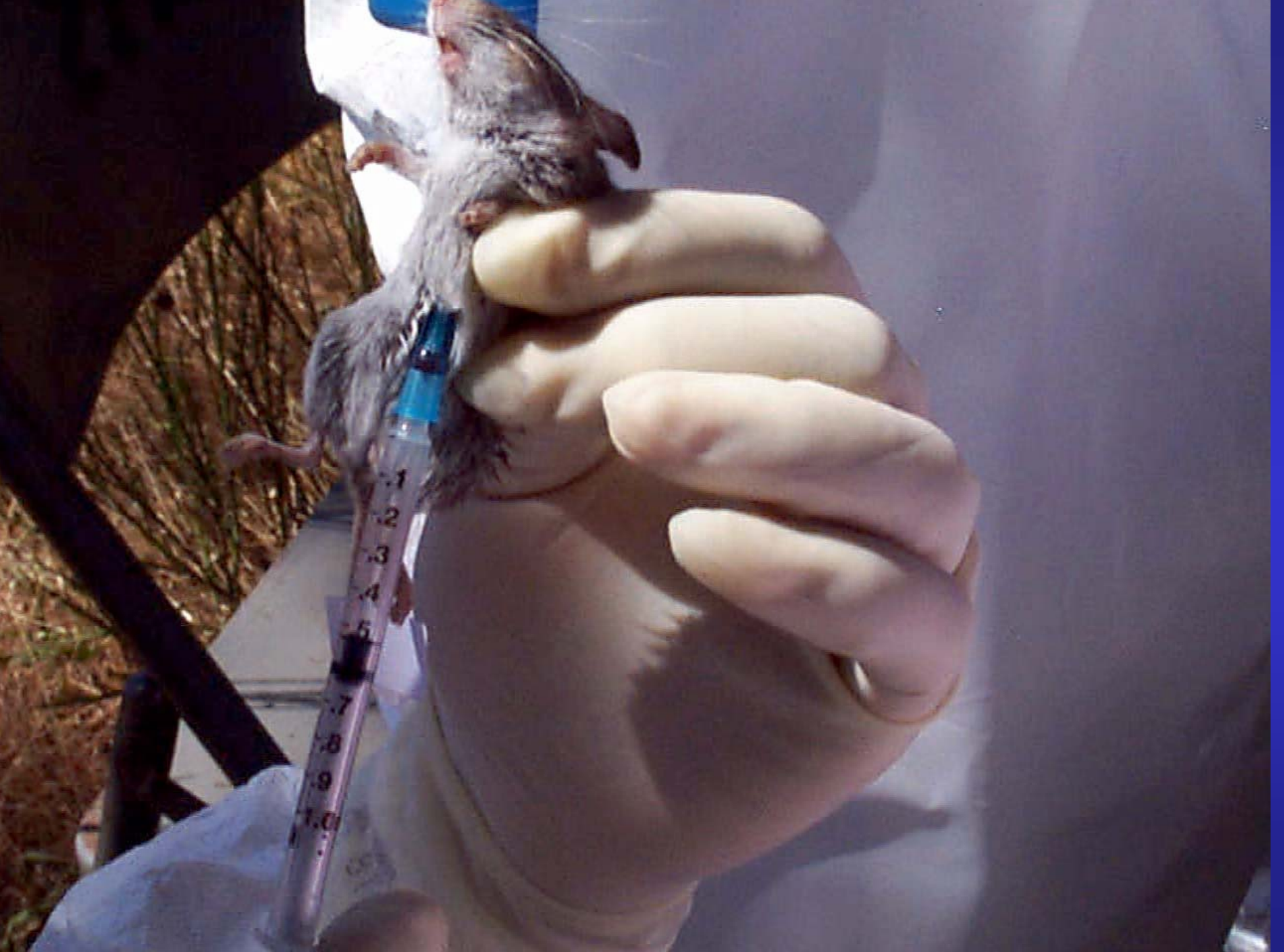


Rodent harborage & food sources



















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Y BROTHERS
DEARING, GA.













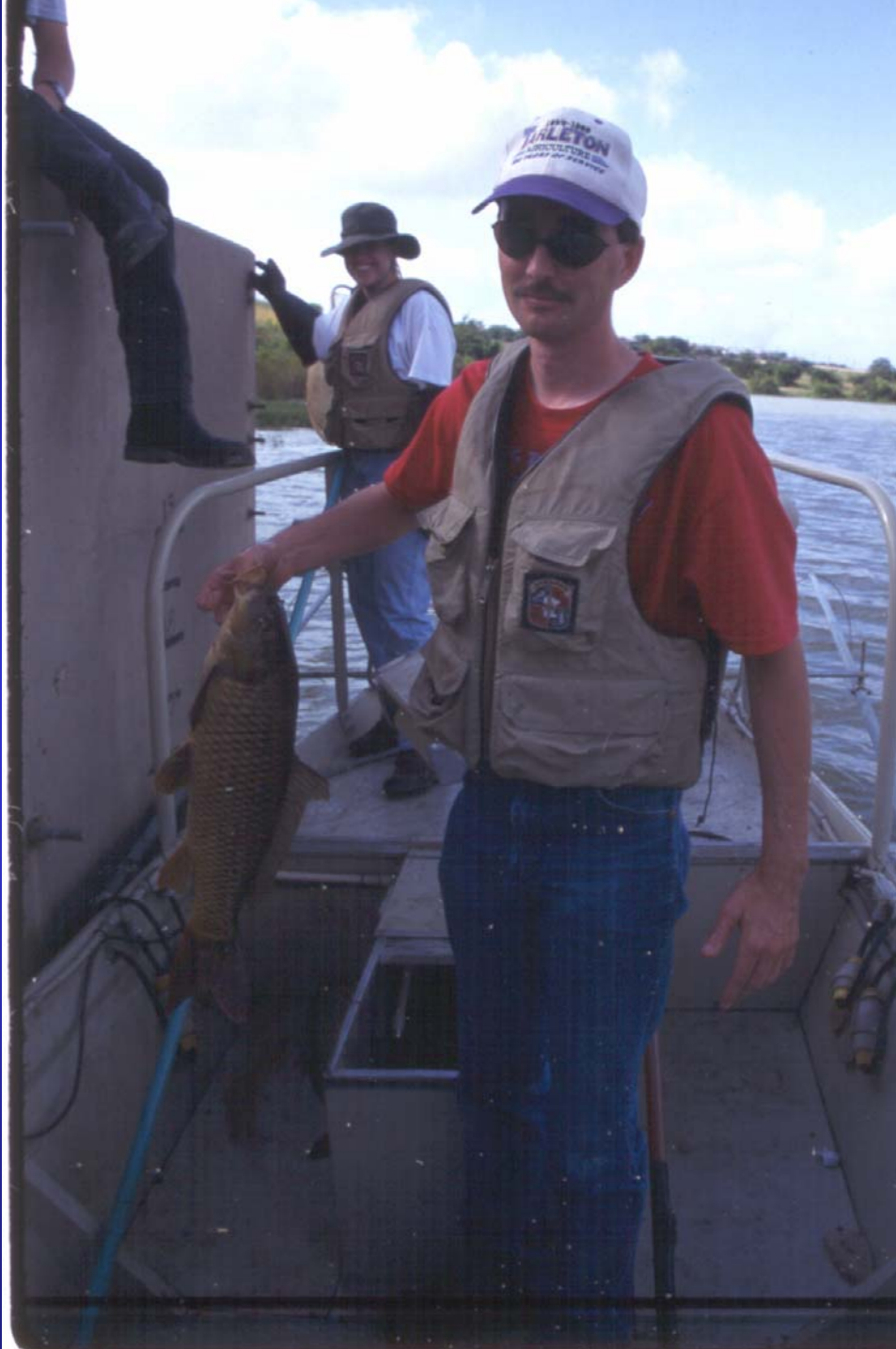




Wildlife Euthanasia

- CO2 Chamber Example













Questions?