Evaluating Efficacy of the BG Lure Attractant Using Three Mosquito Trap Designs in the City of Alexandria, Virginia

Mid-Atlantic Mosquito Control Association
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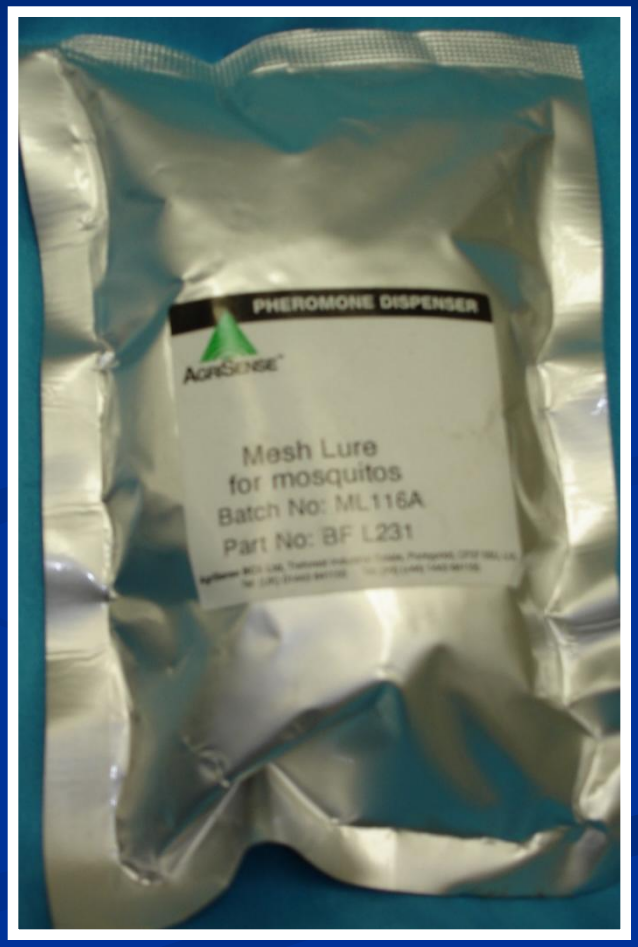
City of Alexandria

Location in Proximity to the Washington DC Metropolitan Area and Mid-Atlantic States

OBJECTIVE

- To compare efficacy of the BG Lure in attracting adult *Aedes albopictus* (Asian Tiger mosquitoes) using three different routine surveillance trap types.
  - BG Sentinel Trap
  - CDC Light Trap
  - Fay-Prince Trap



Human Skin Odor in a Pouch

- BG Lure mimics the scent of human skin and releases a mixture of several compounds for up to five months.

  - Lactic Acid
  - Fatty Acids
  - Ammonia

BG-Sentinel Trap (BG)

- Developed by BioGents GmbH (Germany)
- Attractant:
  - BG-Lure
  - CO_2 (dry ice)
- Collapsible
- 12V battery

Fay-Prince Trap (FP)

- Developed by the U.S. Centers for Disease Control, Technical Development Laboratory
- Attractant:
  - BG-Lure
  - CO_2 (dry ice)
- 6V battery

CDC Light Trap

- Developed by the U.S. Centers for Disease Control
- Attractant:
  - BG-Lure
  - CO_2 (dry ice)
  - Light
- 6V battery

Study Site

Alexandria, VA →

← **Cameron Knolls Community**

Trap Locations

Trap Locations

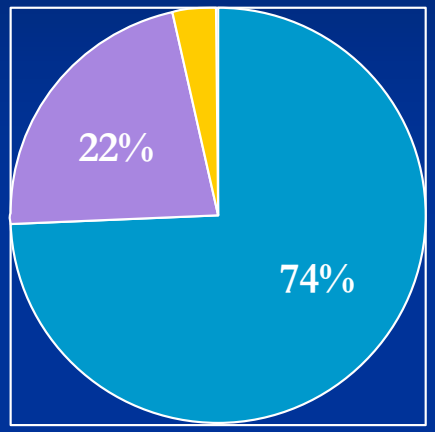
Trap Rotation

- Clockwise rotation
- 24 hr run time
- Each trap, at each location, once per week

	Day 1	Day 2	Day 3
Location 1	BG	FP	CDC
Location 2	CDC	BG	FP
Location 3	FP	CDC	BG

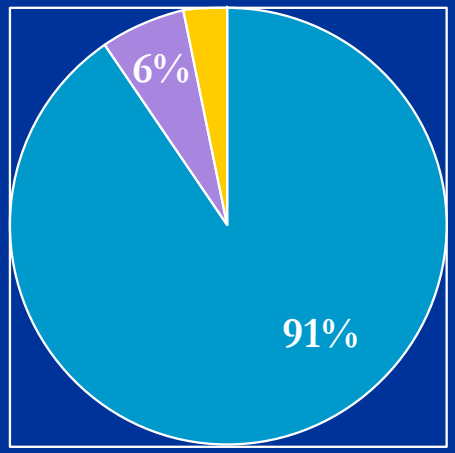
Results: Top Three Mosquito Species

CDC

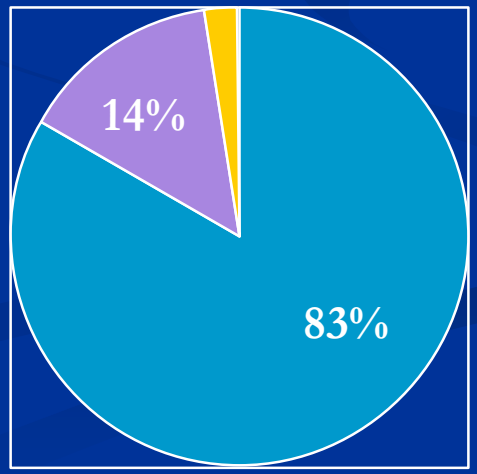


- *Ae. Albopictus*
- *Cx. Restuans/pipiens*
- *An. punctipennis*

Fay-Prince

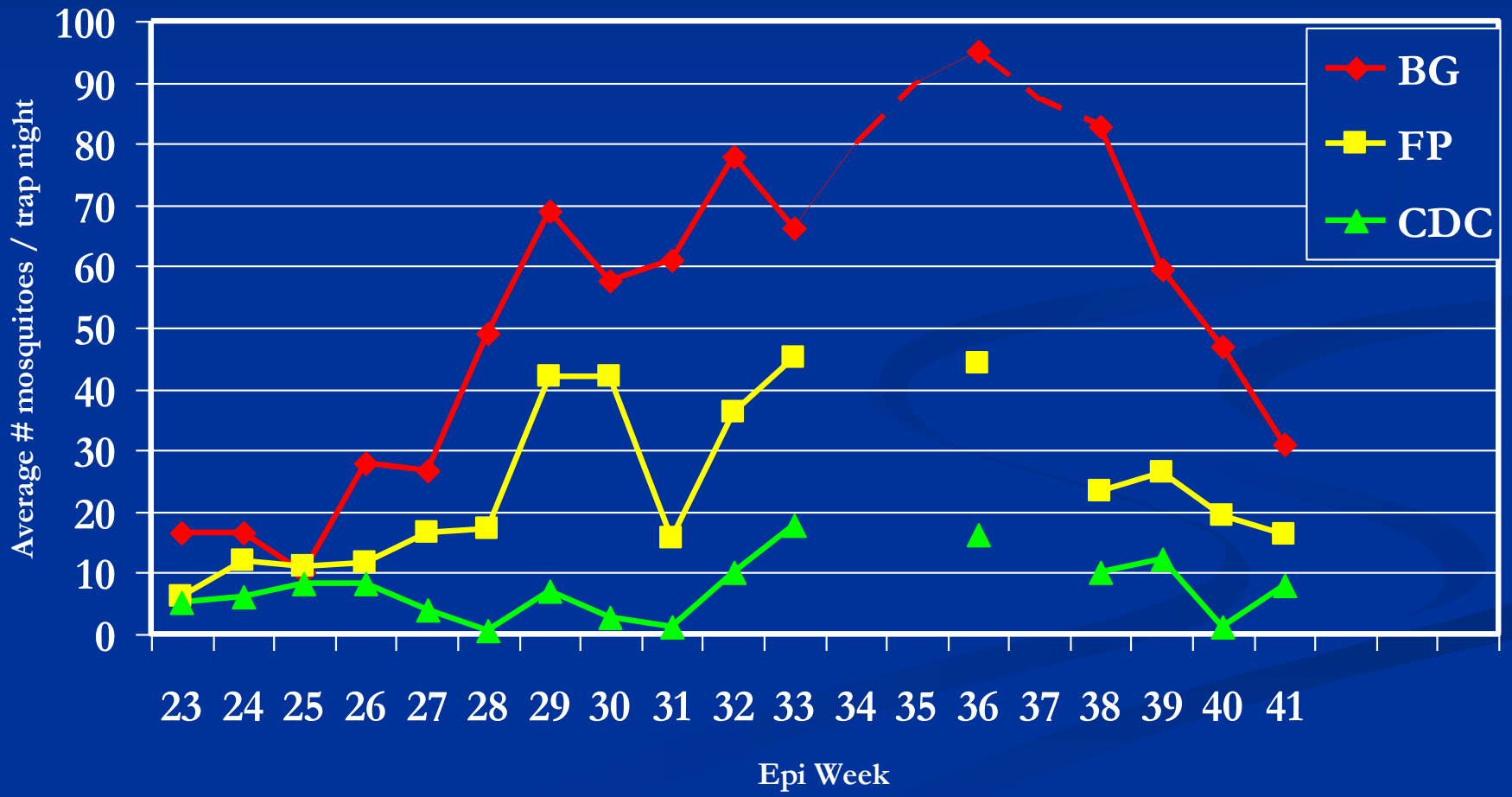


BG

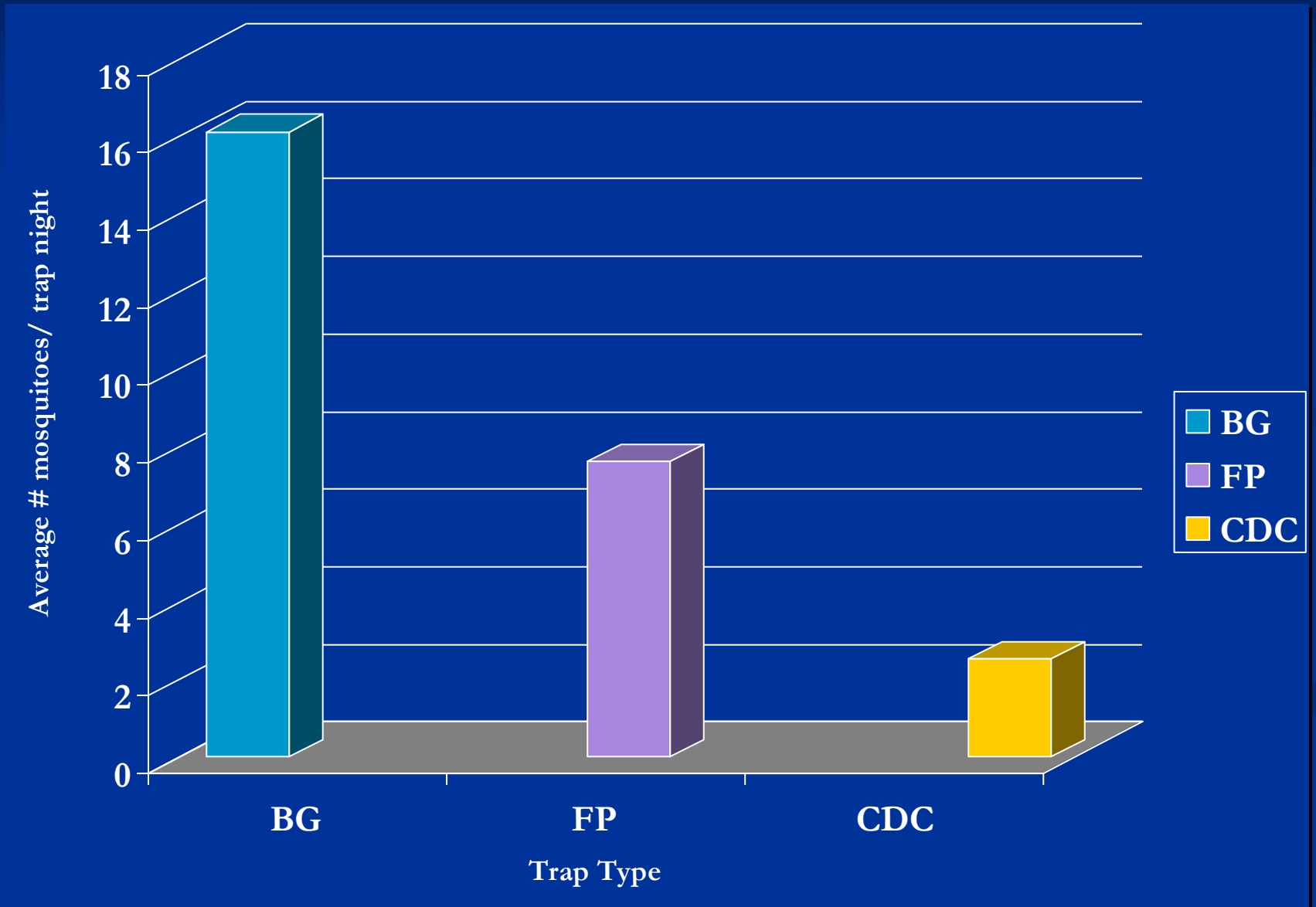


Aedes albopictus

Results: Average *Aedes albopictus* in the BG – FP – CDC

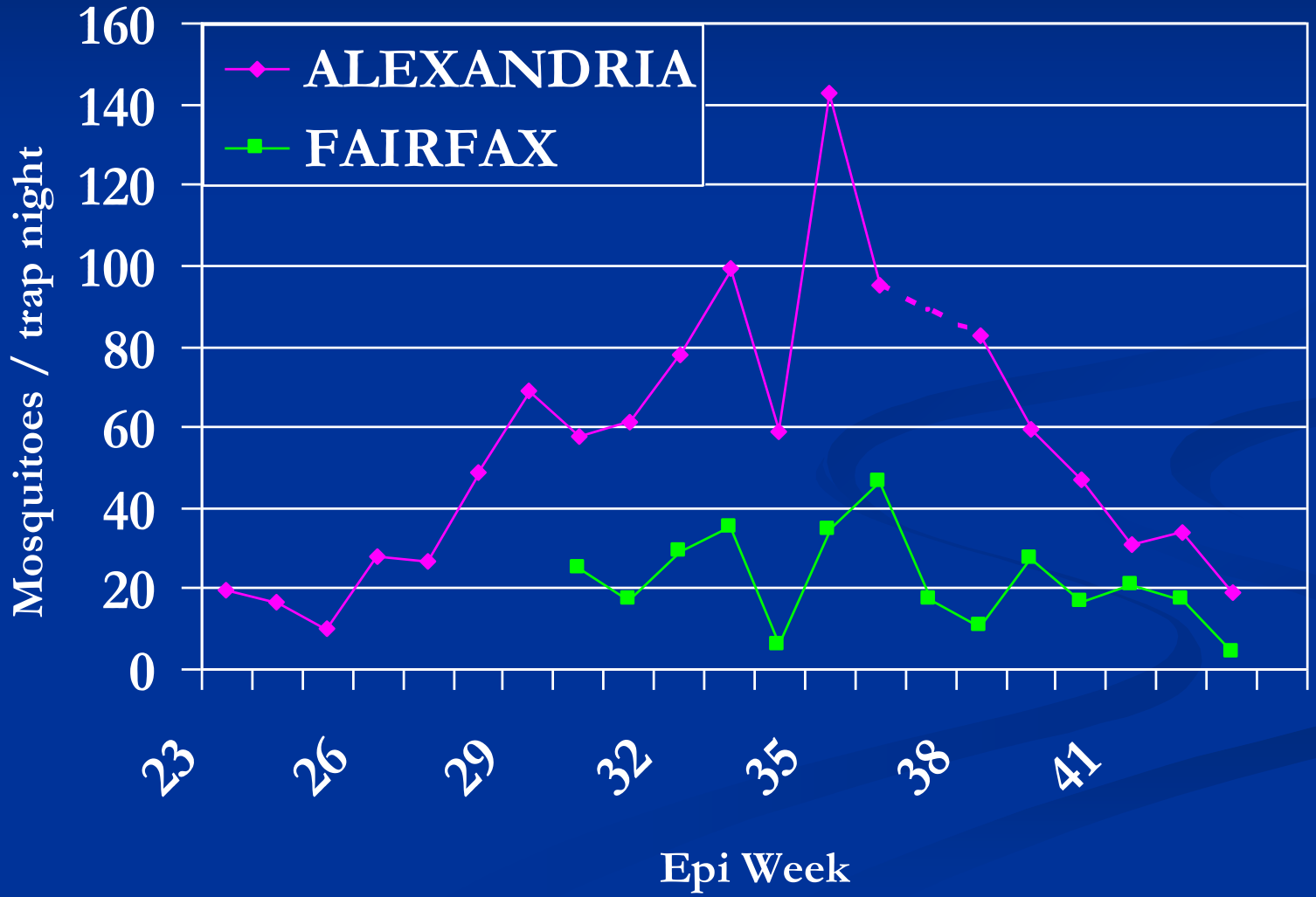


Results: Total *Aedes albopictus* per trap BG – FP – CDC

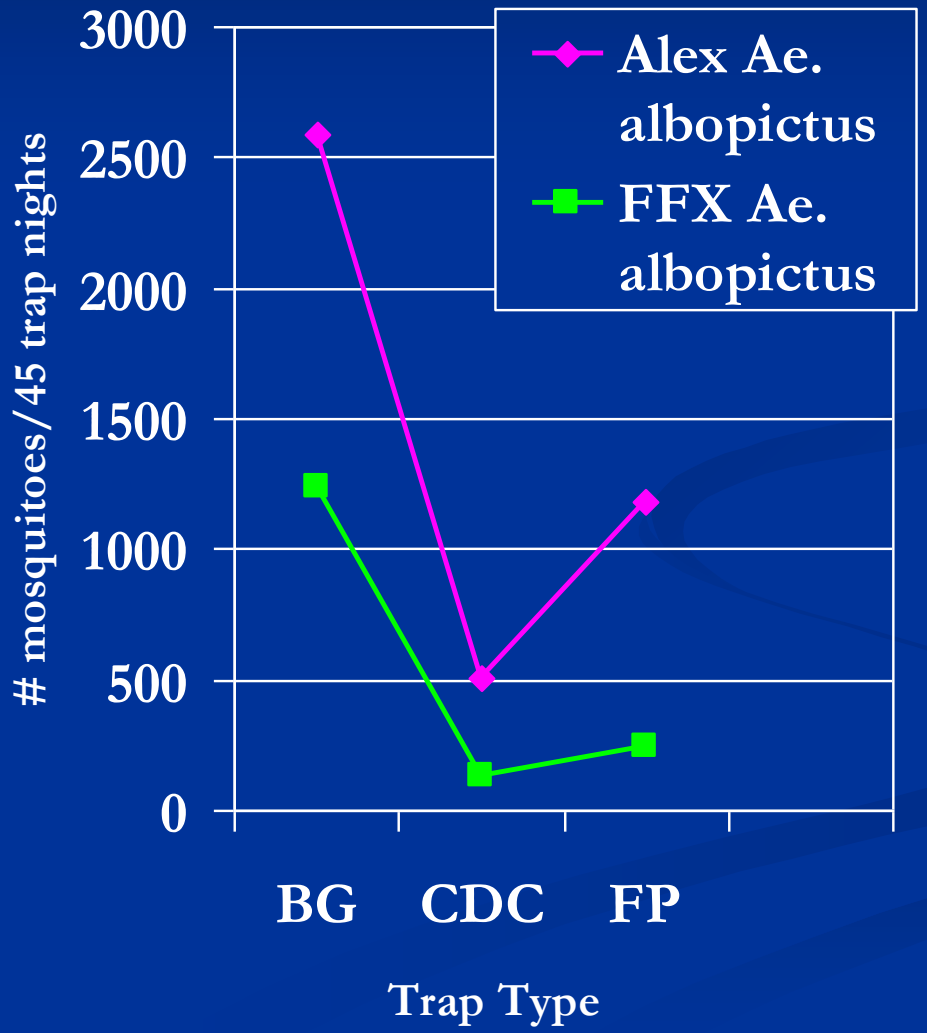


Results: Total number of *Aedes albopictus* collected per location

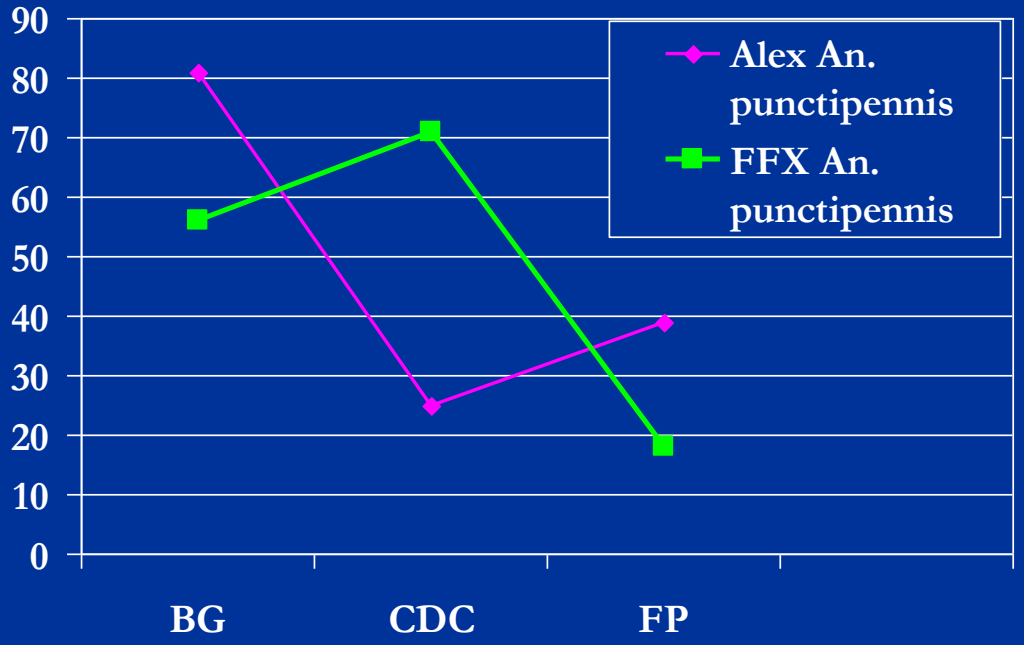
Aedes albopictus collected in the BG sentinel traps in Urban vs. Semi-urban environments in Northern Virginia, 2007

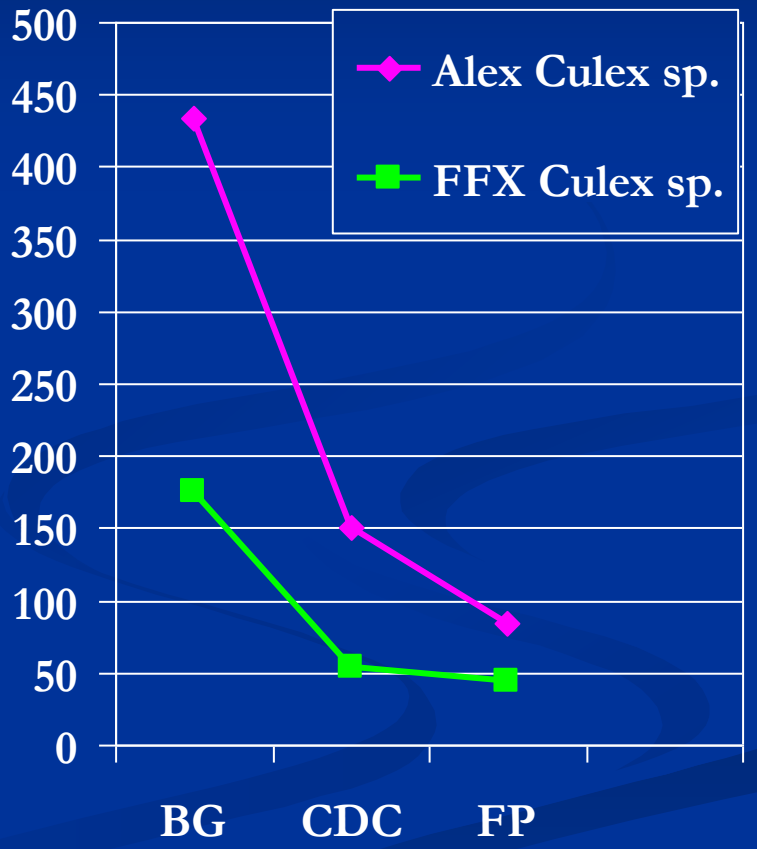


Number of *Ae. albopictus* trapped in Alexandria vs. Fairfax 2007 season



Number of *An. Punctipennis* and *Culex sp.* trapped in Alexandria vs. Fairfax, 2007





Number of Mosquitoes based on 45 trap nights

Conclusions

- BG trap is statistically significant* in catching a higher average number of Aedes albopictus
- BG trap design may provide better dispersal of lure compounds than the FP or CDC traps
- Overall, the BG trap worked superior at the chosen location

*(P<.05)

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