New World Screwworm in the Florida Keys

FAD Investigation – 16FL0012

- Contact from biologist at National Key Deer Refuge (September 29, 2016)
- Severe fly infestation with aggressive myiasis
  - Over 20 deer had been euthanized for myiasis
  - Big Pine Key & No Name Key
- Original case – July 4, 2016 in deer
  - motor vehicle related injury
- Larvae sample shipped to NVSL
  - high priority investigation
National Key Deer Refuge

- Administered by US Fish and Wildlife Service
- Endangered Key Deer reside on multiple keys
  - ~800-1000 deer; residing on ~20 keys
  - Reside on Refuge and freely wander into urban/residential areas
  - Significant urban/wildlife interface
- 2016 fawn crop was good and survival was good
  - Fawning season (Mid March – Late May)
National Key Deer Refuge

- Government and Private lands mixed over multiple keys
- Multiple Species on endangered list
  - Many are insects
  - Including Bartram's Hairstreak butterfly

Photo credit: USFWS
Epi Information for Key Deer

• Deaths (July – September 2016)
  – July = 4
  – August = 7
  – September = 20
  – Male = 25
  – Female = 5
  – Unknown = 1

Key Deer bucks had started rut by August
Additional Epi Information

• Dog with severe myiasis from Big Pine Key (July 2016)
• Pig with severe myiasis from Big Pine Key (July 2016)
• Dog with moderate myiasis from Big Pine Key (August 2016)
• NONE REPORTED TO SAHO BY EXAMINING VETERINARIANS

16FL0012

• On October 3, 2016, the U.S. Department of Agriculture confirmed the presence of New World Screwworms in samples collected from a wildlife refuge in Big Pine Key (Monroe County) tested positive for the parasite.

• New World Screwworms are fly larvae (maggots) that can infest livestock and other warm-blooded animals, including people.

• Florida’s endangered Key deer population, which only exists in the Keys in Florida, has already suffered losses due to this infestation. Rapid and thorough response efforts are imperative to save this endangered species and prevent further spread to people and animals.
Incident – *FL NWS BPK 2017*

- Unified Command – USDA and FDACS
- Joint IMT deployed to Florida Keys
  - Multi-agency
- Declaration of Agricultural Emergency
- Controlled Animal Movement from Monroe County
  - Key Largo Interdiction Station
Disease Surveillance Branch

- Office of Agricultural Law Enforcement Interdiction
- Veterinary Support Interdiction
- Animal Inspection Station
  - Key Largo on US 1; Mandatory inspection of all animals
    - Treatment required for all livestock
    - Companion Animals with wounds, close examination

Incident – FL NWS BPK 2017
Disease Surveillance Branch

- Outreach and Investigation
  - Toll-free Hotline 24 hr/day; 7 days/week
  - Investigation of reports of myiasis
  - Website: www.freshfromflorida.com/screwworm
  - Resources for vets, public, pet stores, groomers, marinas, grocery stores, etc
  - Public meetings
  - Posters
Disease Management Branch

- Sterile Fly Release Task Force
  - USDA ARS, USDA IS, COPEG Subject Matter Experts
  - Aerial and Ground Assessment for release sites
  - Enhanced surveillance – Liver bait/nets
  - Trapping to assess the Sterile Fly Release Activities

- US FWS Refuge Operations
  - Euthanasia and Disposal of infested Key Deer
Sterile Fly Releases

- Shipments from Panama on Monday & Thursday
- Releases on Tuesday and Friday
- ~2.5 M flies per release
- 7 release sites on Big Pine Key
- 2 release sites on No Name Key
- 4 release sites on Torch Keys (3 keys)
- Aerial surveillance/release sites selected
  - Adjacent keys
Sterile Fly Release Sites

Summary Data

• 3 confirmed positive cases
  – BPK – Key Deer & Pig
  – NNK – Dog

• 5 Presumptive Positive Autochthonous* premises
  – BPK – Key Deer (>90), Dogs (2), Pig
  – NNK – Key Deer (>5)

*Autochthonous = contracted from area where NWS is reported
Other Activities

• Extensive outreach to Florida veterinarians
• All reported cases of myiasis or heavy fly infestation of concern on mainland peninsula are investigated
• Submissions from 7 investigations on mainland
  – All negative for NWS
  – Flies – 2; Sheep & Pig premises
  – Maggots – 5; Alpaca, Cat, Calf, Rabbit, WTD

THANK YOU!
QUESTIONS?

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