

## AMMI: Multi-agency Database of Wildlife Animal Health Events in New York City

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## Background

- Animals as sentinels of disease
- Wildlife health event defined as a cluster of illness and/or death among wild animals
- Large bird die off in 2004 identified gaps in ability for NYC to investigate the event



## Partner Agencies

- Task force created to coordinate investigations of future events using resources from several NYC agencies
- NYC Department of Health and Mental Hygiene
- NYC Department of Parks and Recreation
- Wildlife Conservation Society
- NYPD Emergency Services Unit
- NYS Department of Environmental Conservation
- NYS Department of Agriculture and Markets
- NYS Department of Health



## AMMI

- Animal Morbidity and Mortality Investigations (AMMI)
- Purpose
  1. Record all wildlife health events
  2. Track those that are investigated
  3. Facilitate information sharing
- Microsoft Access® database used in 2006 which evolved into web-based reporting system in 2007



## Methods

- How are wildlife health events identified?
  - Public
  - Partner agencies
- What do we investigate?
  - Large clusters
  - Unique single animal
- How do we investigate?
  - Contract with Cornell University
  - Contract with consultant company



The screenshot shows the AMMI web-based reporting system interface. At the top, it says "EDEN Environmental Data Exchange Network". Below that, it says "AMMI DATA Animal Morbidity and Mortality Investigations". There is a "Most Recent Events" section with a table of events. The table has columns for ID, Date, Last updated, City/Agency, Species, Date of incident, Location, and Animal Type. The table contains 10 rows of data.

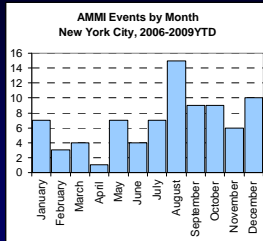
ID	Date	Last updated	City/Agency	Species	Date of incident	Location	Animal Type
85	8/28/2008	8/28/2008	Brooklyn Department of Health	House Sparrow	8/28/2008	Brooklyn	single bird
84	8/27/2008	8/27/2008	Animal Abandonment	Unknown	8/27/2008	Manhattan	single bird
83	7/23/2008	7/23/2008	Animal Abandonment	Unknown	7/23/2008	Manhattan	single bird
81	7/9/2008	7/9/2008	Animal Abandonment	Unknown	7/9/2008	Queens	single bird
82	7/9/2008	7/9/2008	Animal Abandonment	Unknown	7/9/2008	Manhattan	single bird
79	6/28/2008	6/28/2008	Animal Abandonment	Unknown	6/28/2008	Queens	single bird
80	6/28/2008	6/28/2008	Animal Abandonment	Unknown	6/28/2008	Queens	single bird
78	6/25/2008	6/25/2008	Animal Abandonment	Unknown	6/25/2008	Queens	single bird
77	5/28/2008	5/28/2008	Animal Abandonment	Unknown	5/28/2008	Manhattan	single bird
75	5/28/2008	5/28/2008	Animal Abandonment	Unknown	5/28/2008	Manhattan	single bird

## Results

Borough	2006	2007	2008	2009*
Bronx	0	1	4	2
Brooklyn	4	6	2	2
Manhattan	0	6	5	5
Queens	5	5	10	7
Staten Island	1	8	5	4
<b>Total</b>	<b>10</b>	<b>26</b>	<b>26</b>	<b>20</b>

\*Year to date (through September 2009)

Type of Animal	Number of Events	Tested N (%)
Birds	75	34 (45)
Fish	1	0
Raccoon/other terrestrial animals	4	4 (100)
Multiple animals	2	0
<b>Total</b>	<b>82</b>	<b>38 (46)</b>

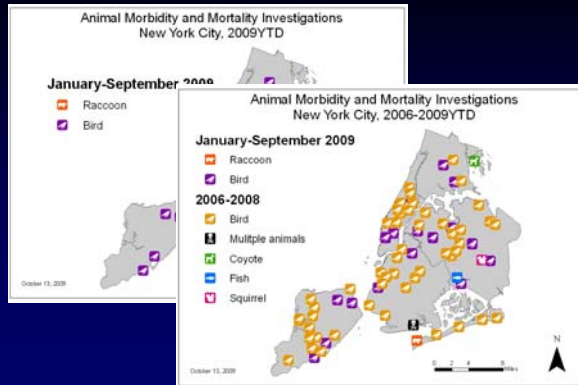


## Results of Interest

MONTH/YEAR	SPECIES	RESULTS	REPORTING AGENCY
9/2006	Starlings	Avitrol® poisoning	NYPD and DOHMH
1/2008	Bird – unknown species	Styrofoam found in esophagus likely caused obstruction, leading to starvation	DEC
8/2008	Squirrels	Positive for toxins, likely cause of death due to bromethalin toxicity	DOHMH
8/2008	Crow	West Nile Virus positive	DOHMH
1/2009	Owl	Severe chronic pyogranulomatous air sacculitis. WNV negative	NYC Parks
5/2009	Red-tailed hawk	Trauma	NYC Parks
5/2009	Raccoon	Canine Distemper Virus	National Parks Service
6/2009	Geese	Too decomposed to test, hypothesized to be pesticide poisoning	DOHMH



## Results



## Discussion – Lessons Learned

- Pros
  - Vastly improved communication between agencies
  - Events now being documented
  - Able to rule out human health concerns
  - Ability to identify potential animal health concerns
  - Disseminate information to others
- Cons
  - Reporter fatigue – not all events entered
  - Unable to identify exact cause of illness in many instances because of limited monetary resources and vast testing panel
  - Not agency mandated involvement



## Discussion

- Producing quarterly reports to encourage participation
- Annual meeting of partners
- Future directions
  - Email alerts of new events
  - Live mapping on web interface



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## Contact Information

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