

# 2019 Click Beetle Survey Results

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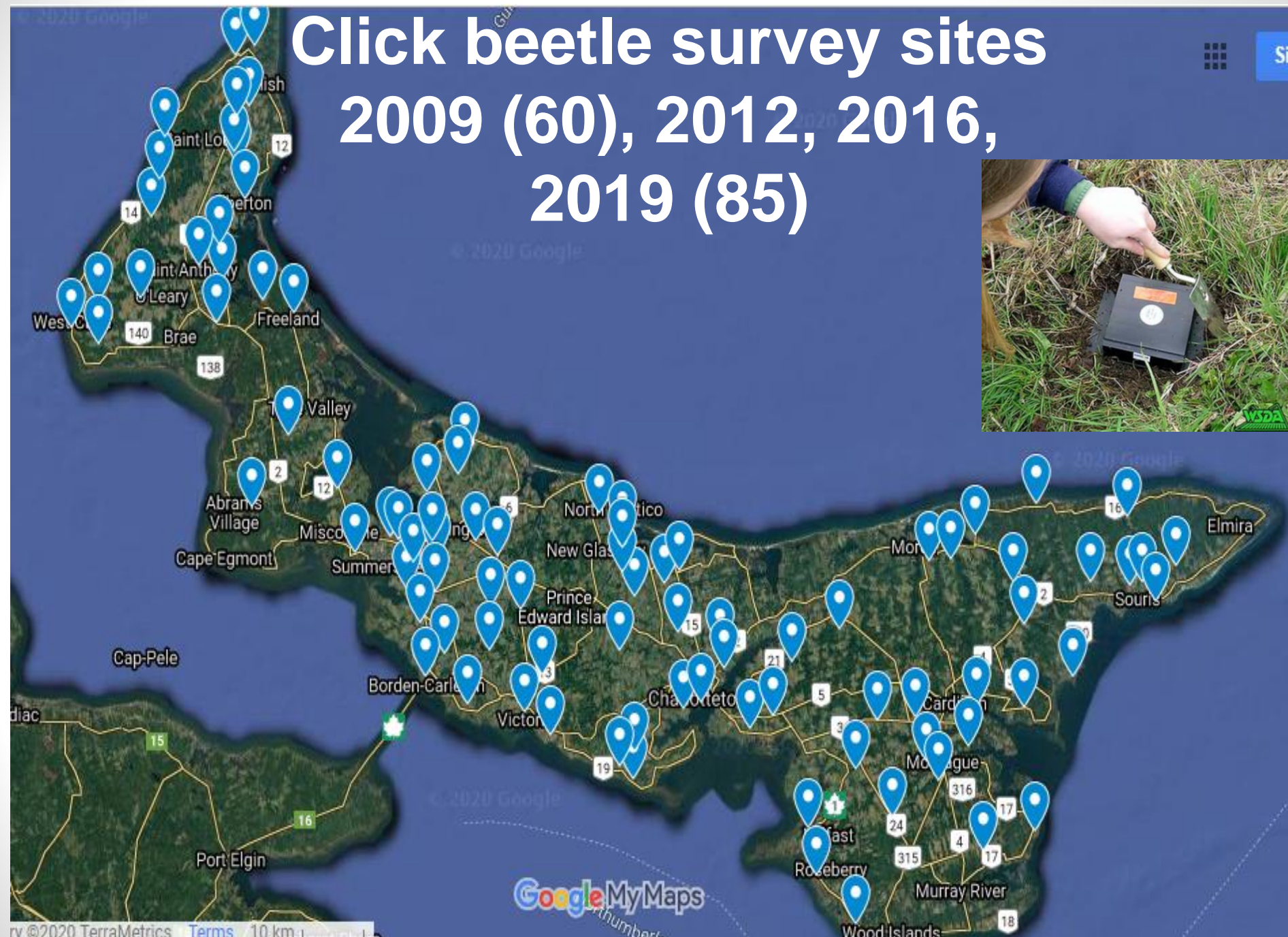
Natasha Mosher-Gallant

Canadian Horticultural Council Cluster Funding

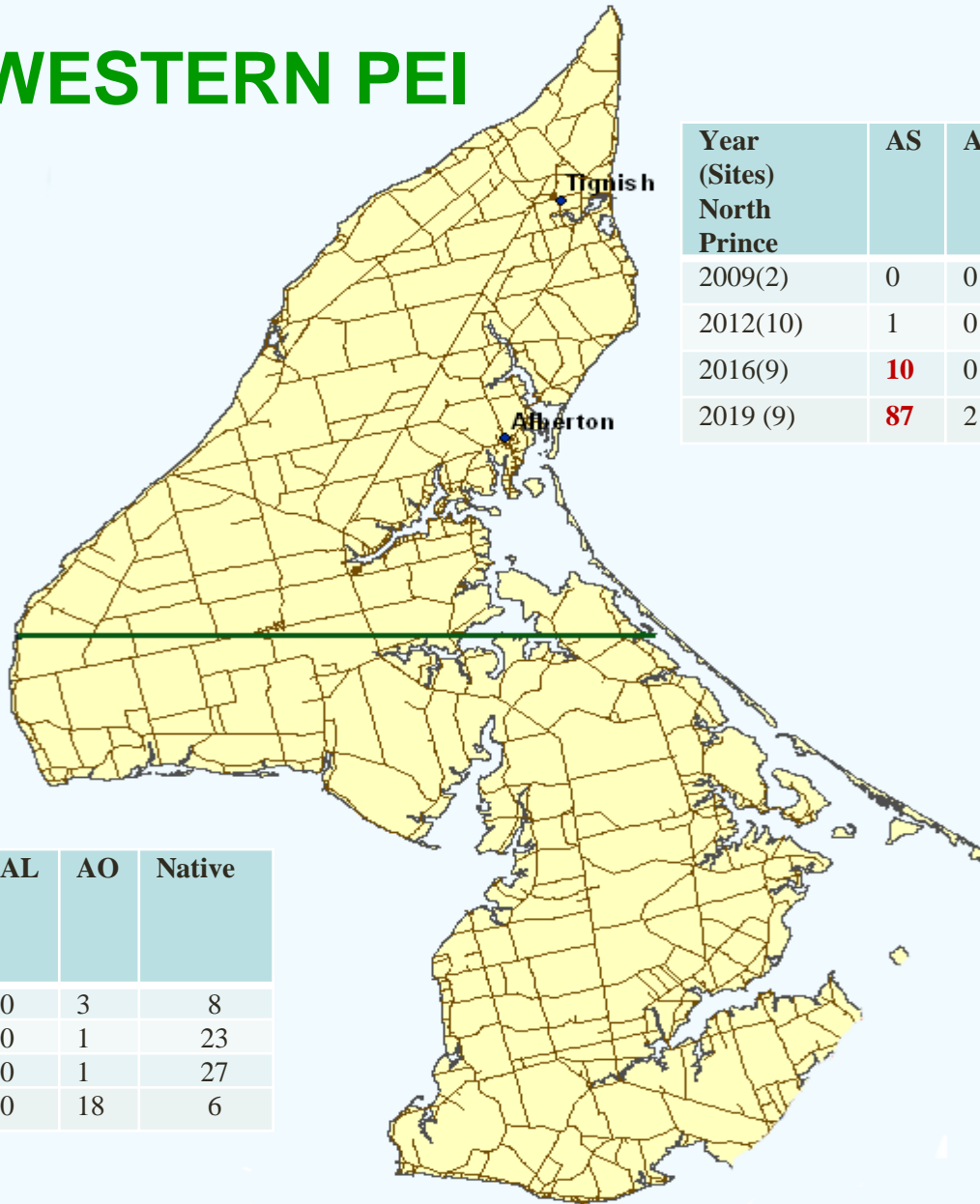
# Methodology

- 85 sites
- Three traps per site
- Pheremone-baited traps
  - *Agriotes lineatus*, *Agriotes obscurus*, ***Agriotes sputator***
- Traps set first week of May
- Weekly collections
- Last collection July 4<sup>th</sup> (due to late spring)
- Specimens sorted, counted and data tabulated by Mary Smith

# Click beetle survey sites 2009 (60), 2012, 2016, 2019 (85)



# WESTERN PEI

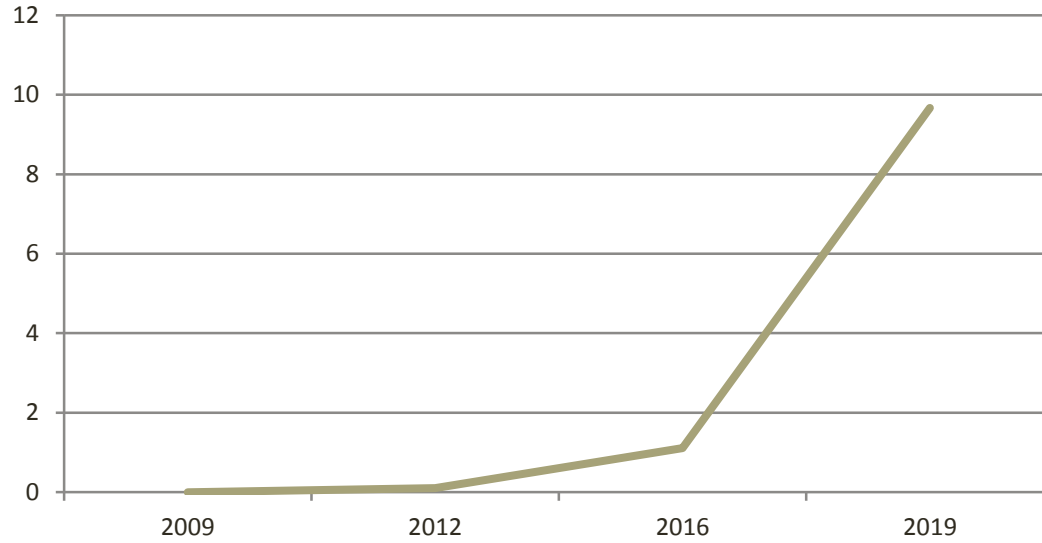


Year (Sites) North Prince	AS	AL	AO	Native
2009(2)	0	0	0	0
2012(10)	1	0	2	18
2016(9)	<b>10</b>	0	6	17
2019 (9)	<b>87</b>	2	14	7

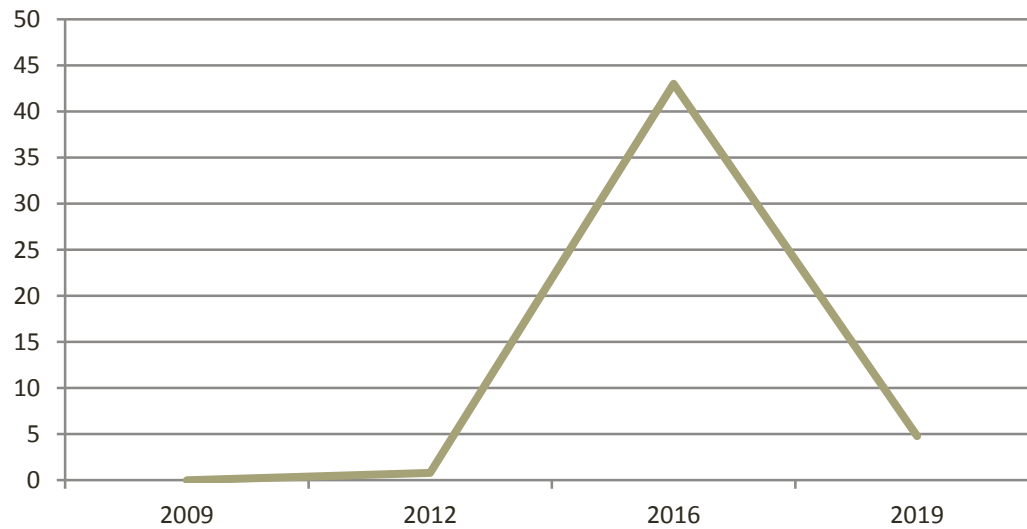
Year (Sites) South Prince	AS	AL	AO	Native
2009(6)	0	0	3	8
2012(9)	7	0	1	23
2016(9)	<b>387</b>	0	1	27
2019 (9)	<b>43</b>	0	18	6

# AGRIOTES SPUTATOR TRENDS

## Avg/trap N Prince



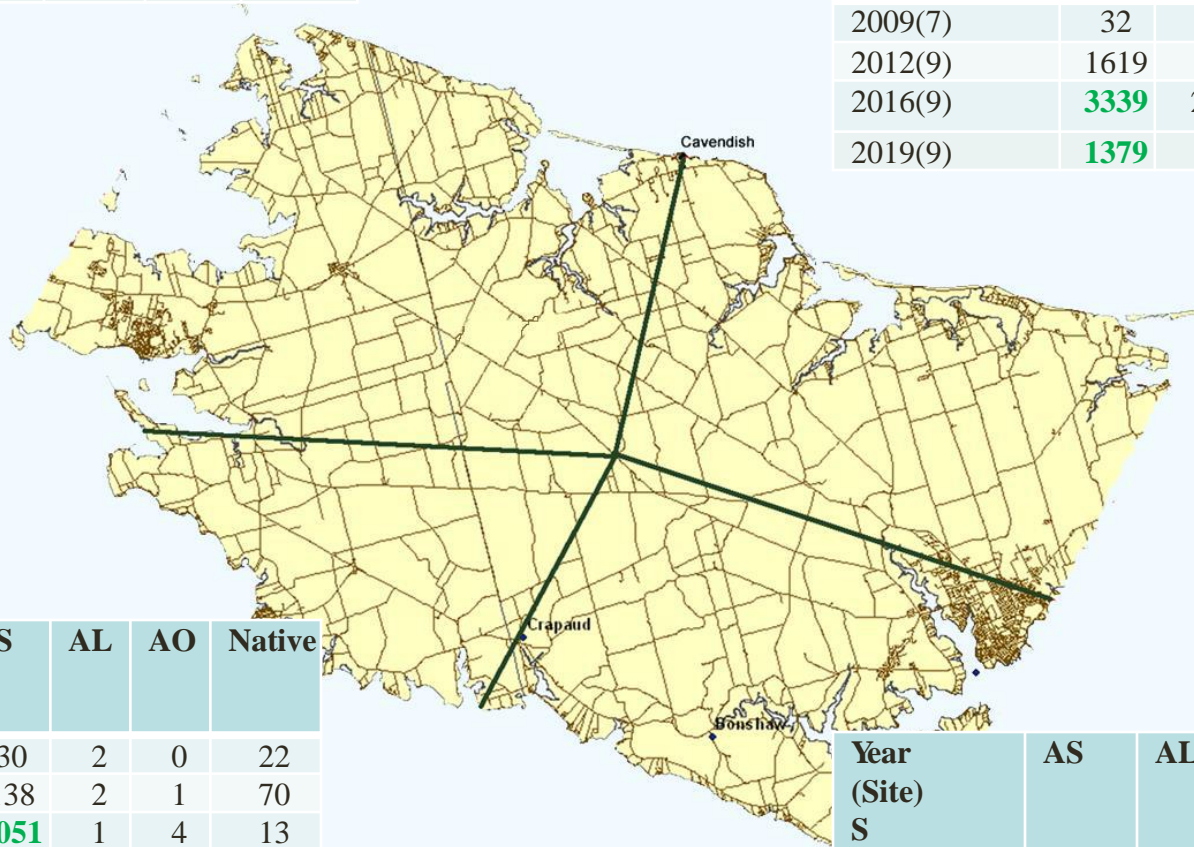
## Avg/trap S Prince



# CENTRAL PEI

Year (Sites) NW Central	AS	AL	AO	Native
2009(11)	89	5	9	47
2012(15)	1254	3	51	88
2016(15)	3537	1	12	31
2019 (15)	3441	4	19	11

Year (Site) NE Central	AS	AL	AO	Native
2009(7)	32	17	18	20
2012(9)	1619	14	551	15
2016(9)	3339	228	1695	61
2019(9)	1379	57	78	4

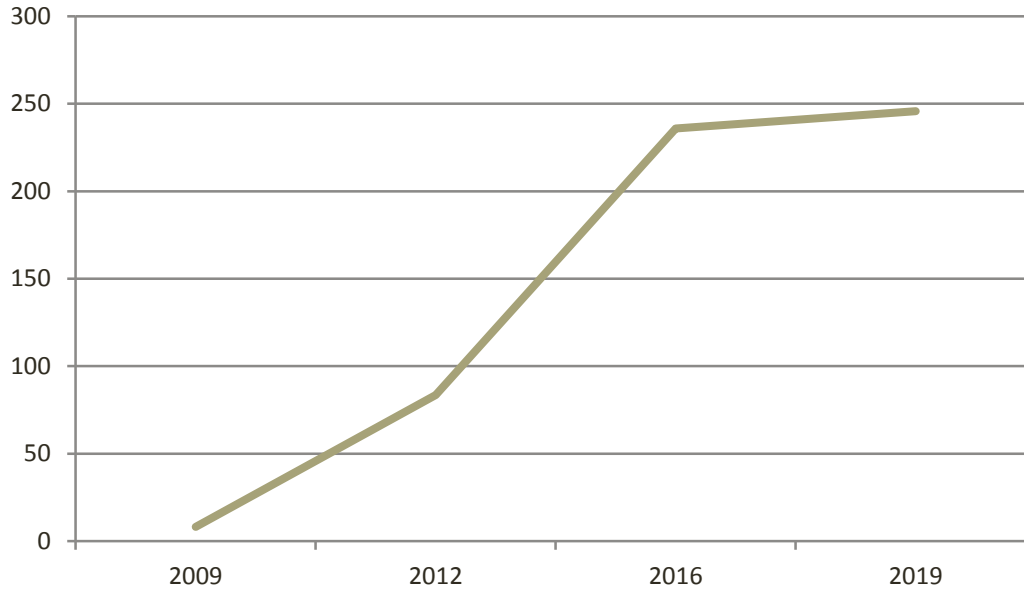


Year (Sites) SW Central	AS	AL	AO	Native
2009(8)	30	2	0	22
2012(5)	138	2	1	70
2016(7)	2051	1	4	13
2019(5)	202	2	13	9

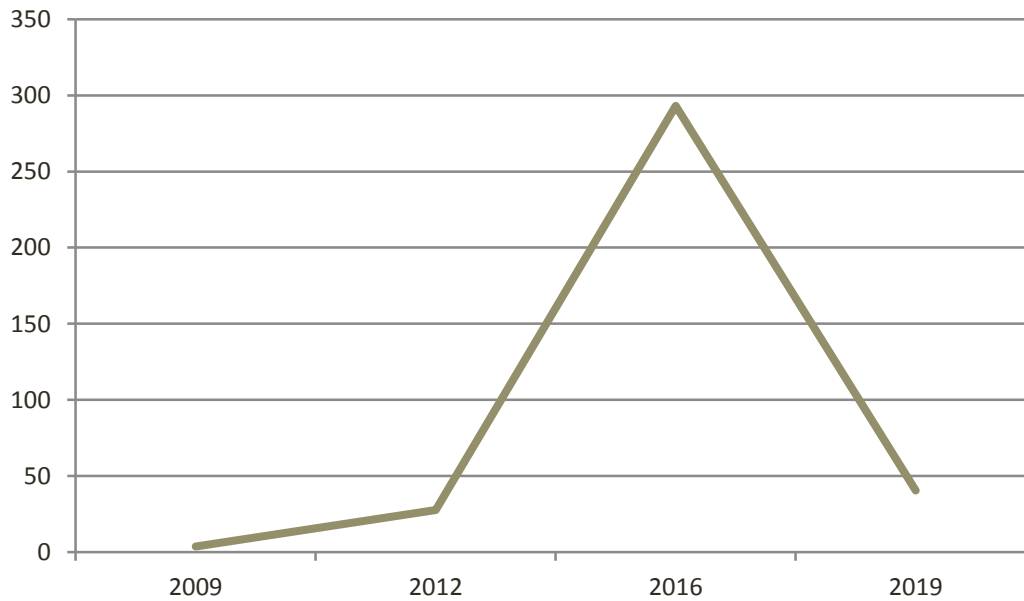
Year (Site) S Central	AS	AL	AO	Native
2009(4)	124	1	0	23
2012(8)	3891	0	1	39
2016(8)	14411	11	5	6
2019(8)	7054	19	4	13

# AGRIOTES SPUTATOR TRENDS

## Avg/trap NW Central

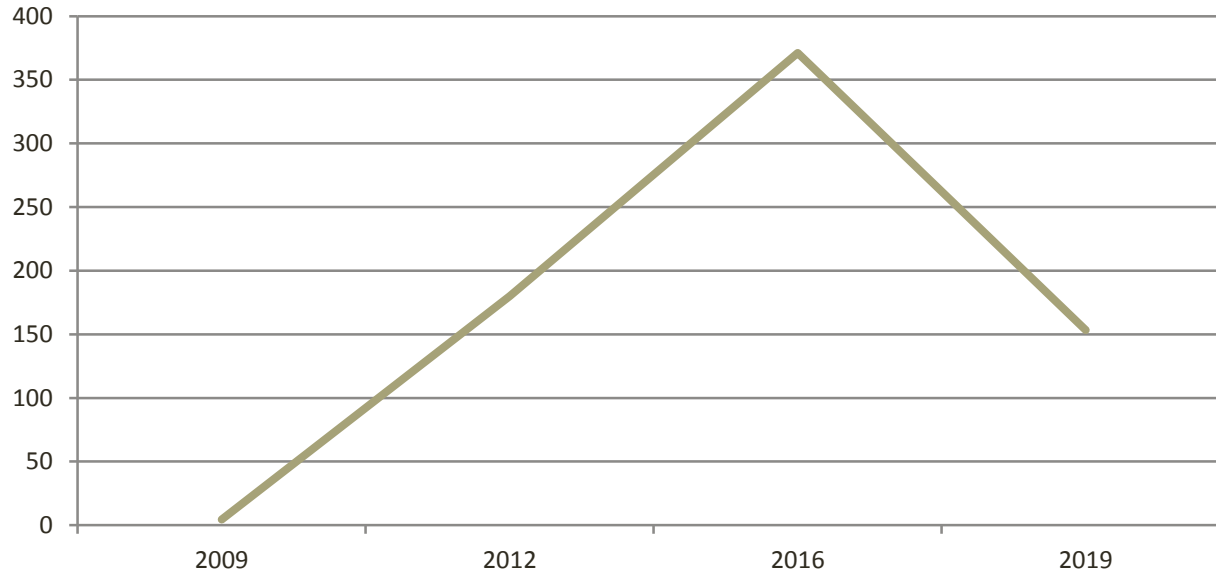


## Avg/trap SW Central

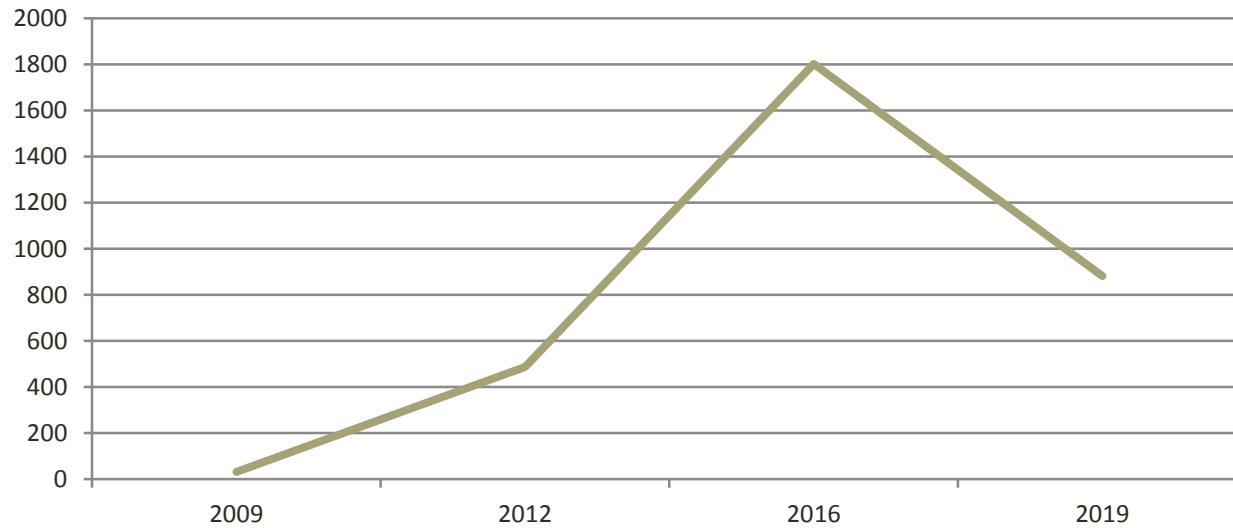


# AGRIOTES SPUTATOR TRENDS

## Avg/trap NE Central

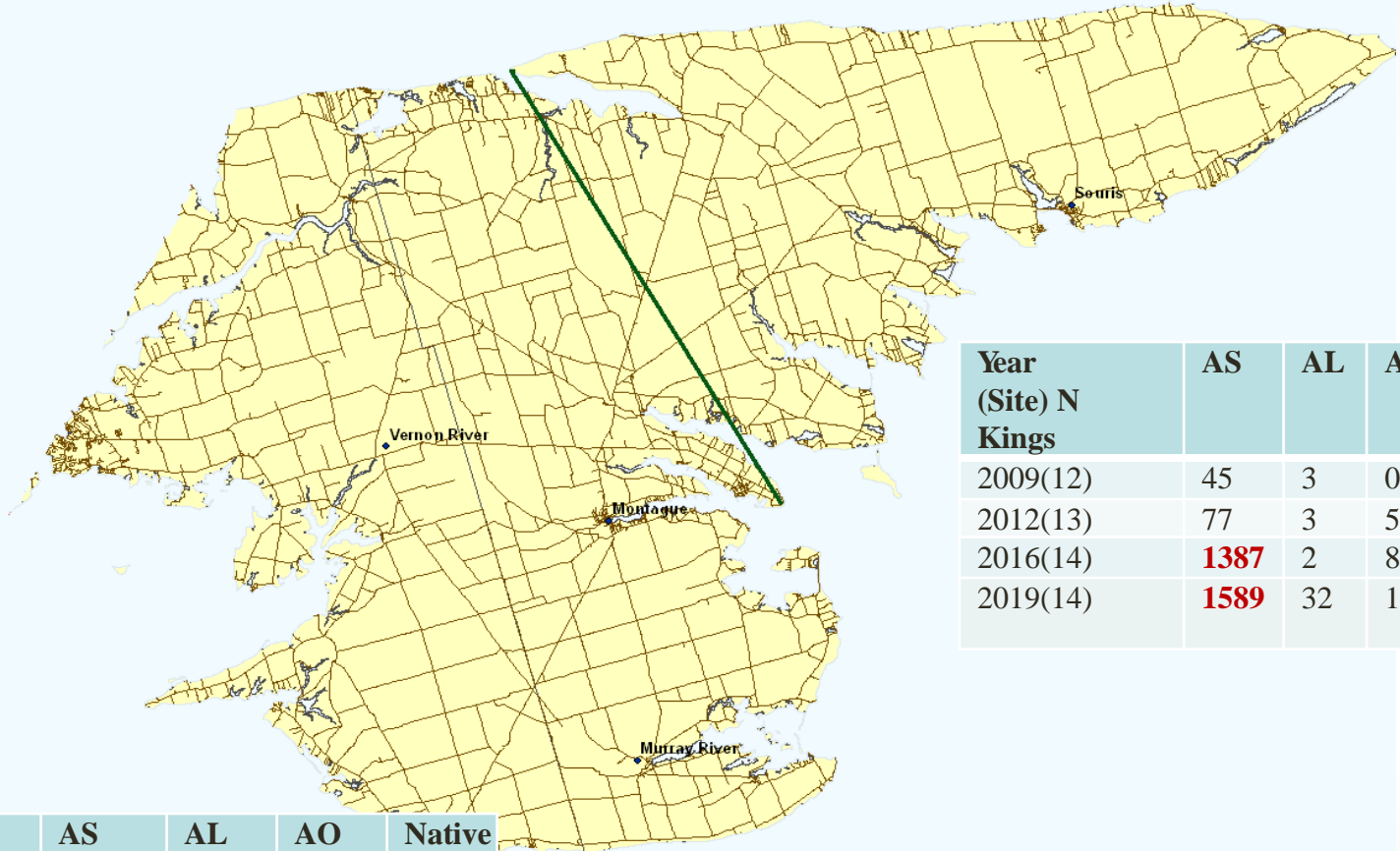


## Avg/trap S Central





# EASTERN PEI

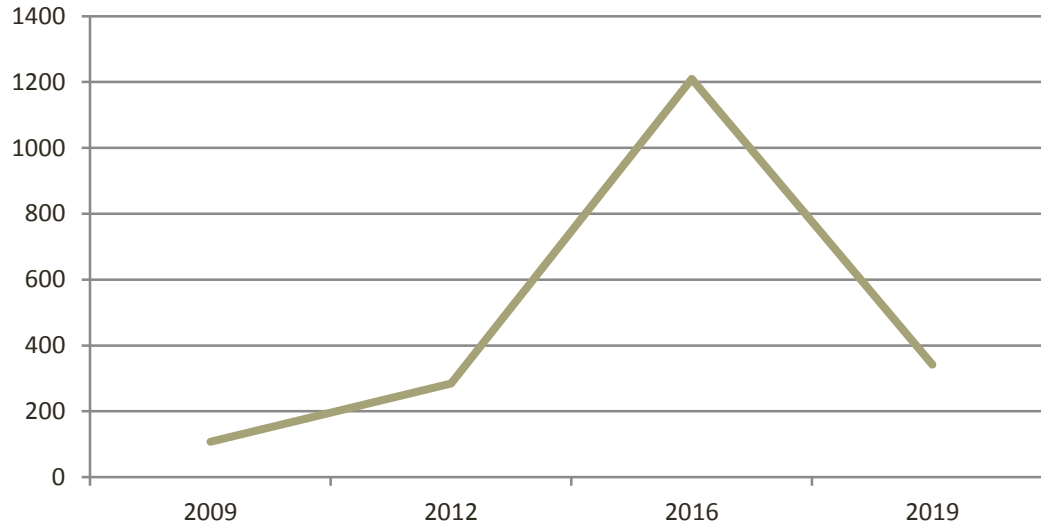


Year (Site) N Kings	AS	AL	AO	Native
2009(12)	45	3	0	20
2012(13)	77	3	5	66
2016(14)	<b>1387</b>	2	8	65
2019(14)	<b>1589</b>	32	17	49

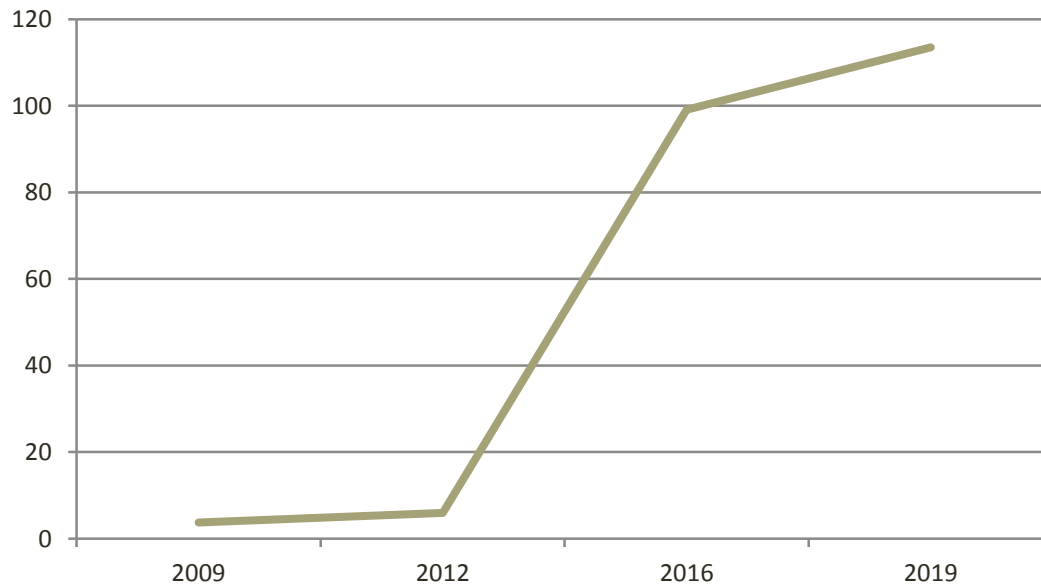
Year (Site) S Kings /SE Queens	AS	AL	AO	Native
2009(10)	1072	4	4	1
2012(16)	4546	47	34	37
2016(16)	<b>19351</b>	195	134	128
2019(16)	<b>5464</b>	477	63	16

# AGRIOTES SPUTATOR TRENDS

## Avg/Trap S Kings SE Queens



## Avg/trap North Kings



# Agriotes obscurus/lineatus

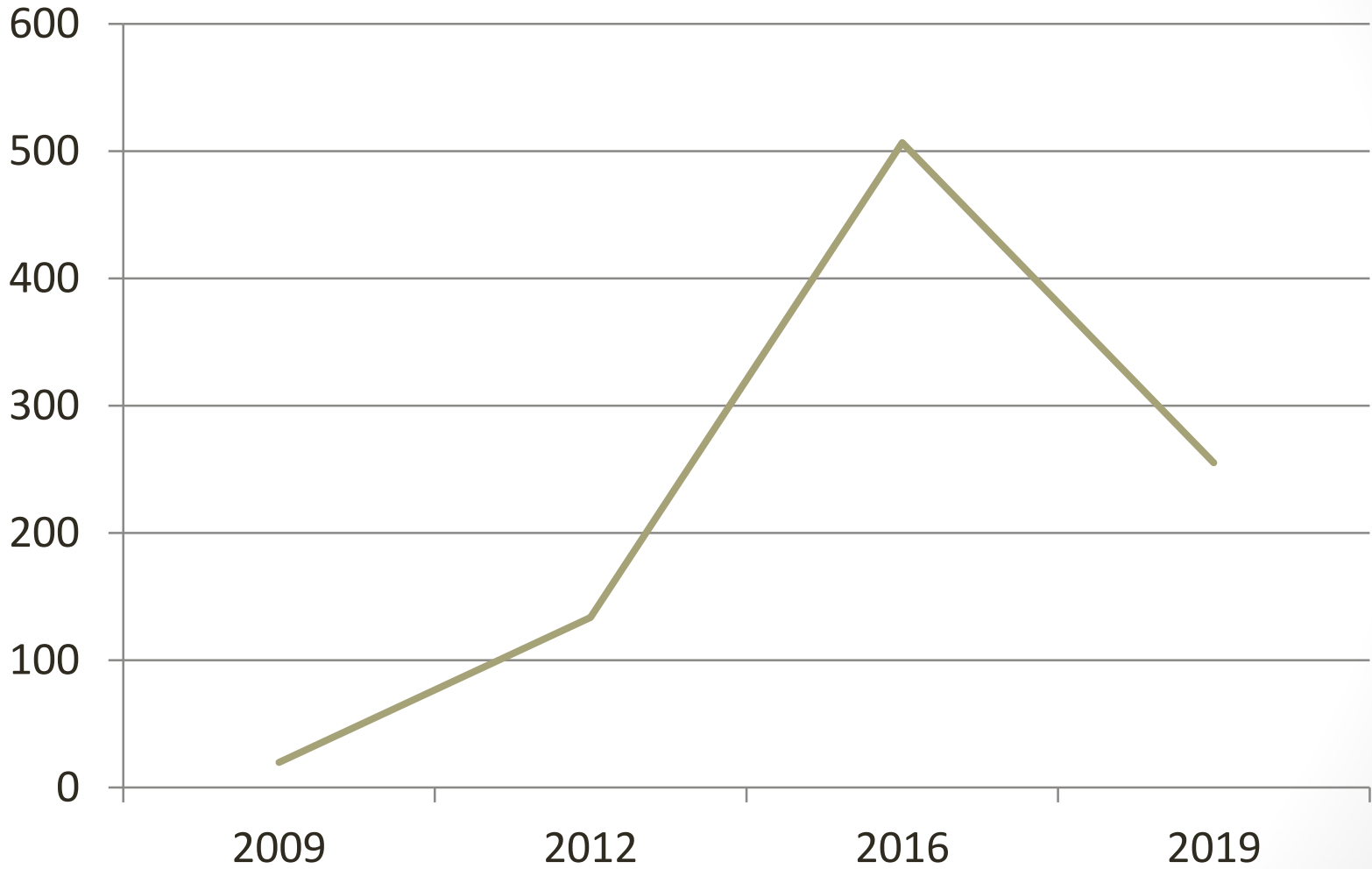
- Agriotes obscurus & Agriotes lineatus - most sites had less than 20 of each.
- NE Central, SE Queens & S Kings had somewhat larger numbers, but mostly declining.
- Native species declining across the Island.

# Comparison of Ranges per Trap

Range	2009	2012	2016	2019
<b>0</b>	6	5	2	1
<b>1-10</b>	34	43	18	24
<b>11-50</b>	17	16	16	23
<b>51-100</b>	1	5	13	6
<b>101-500</b>	2	7	16	23
<b>501-1000</b>	0	5	10	6
<b>&gt;1000</b>	0	4	12	4

# AGRIOTES SPUTATOR TREND

## Island Avg/Trap



# Key Findings

- Total number of Click beetles trapped has decreased from **47,095 in 2016** to **24, 216 in 2019**.
- Agriotes sputator make up 96% of all click beetles trapped in 2019.
- Only four traps had 1000+ beetles, compared to twelve in 2016.
- Although numbers mostly decreased since 2016, still an increase over 2012.
- Causation of trends not determined.



Thank you!