



Florida Tick-Borne Disease Surveillance March 23 – April 18, 2012

Tick-borne disease surveillance in Florida includes confirmed and probable cases of *Ehrlichia chaffeensis* or human monocytic ehrlichiosis (HME), *Anaplasma phagocytophilum* or human granulocytic anaplasmosis (HGA), Rocky Mountain spotted fever (RMSF) and other spotted fever rickettsiosis (SFR), and Lyme disease using national case definitions. The following cases have been reported from March 22, 2012 to April 18, 2012 .

Florida acquired HME: Two cases with exposure in Leon County were reported. Case county of residence were Leon (1) and Brevard (1).

Florida acquired RMSF / SFR: One case with exposure in Lake County was reported. Case county of residence was Sumter.

Florida acquired acute Lyme disease: Two cases, one with exposure in Alachua County and the other in Hillsborough County were reported. Case county of residence was Hillsborough (2).

Non-Florida or unknown acquired acute Lyme disease: Two cases, one with exposure in Puerto Rico and the other in Oklahoma were reported. Case county of residence was St. Lucie (1) and Palm Beach (1).

Year to Date Tick-Borne Disease Summary

Florida acquired HME: Three cases with an onset date in 2012 have been reported. All 3 cases have exposure in Leon County. Cases were reported by Leon (2) and Brevard (1).

Non-Florida or unknown acquired HME: No cases with an onset date in 2012 have been reported.

Florida acquired HGA: No cases with an onset date in 2012 have been reported.

Non-Florida or unknown acquired HGA: No cases with an onset date in 2012 have been reported.

Florida acquired RMSF / SFR: One case with an onset date in 2012 has been reported. The case was reported by Sumter County but was exposed in Lake County.



Non-Florida or unknown acquired RMSF/ SFR: One case with an onset date in 2012 was reported from Jackson County. Exposure location was not determined.

Florida acquired acute Lyme disease: Six cases with an onset date in 2012 have been reported. Cases were exposed in Alachua (1), Hillsborough (1), Putnam (1), Seminole (1), St. Lucie (1), and Volusia (1) counties. Florida counties reporting these Lyme disease cases include: Hillsborough (2), Putnam (1), Seminole (1), St. Lucie (1), and Volusia (1).

Non-Florida or unknown acquired acute Lyme disease: Three cases with an onset date in 2012 have been reported. Locations of exposure: Oklahoma, Pennsylvania, and Puerto Rico. Florida counties reporting these cases include: Palm Beach (1), Pasco (1), and St. Lucie (1).

Year to Date Tick-Borne Diseases by Geographic Location

2012 Cases of Tick-borne Infections Exposure Location			
Location	# of cases	Location	# of cases
Florida	10	Pennsylvania	1
Undetermined	1	Puerto Rico	1
Oklahoma	1		

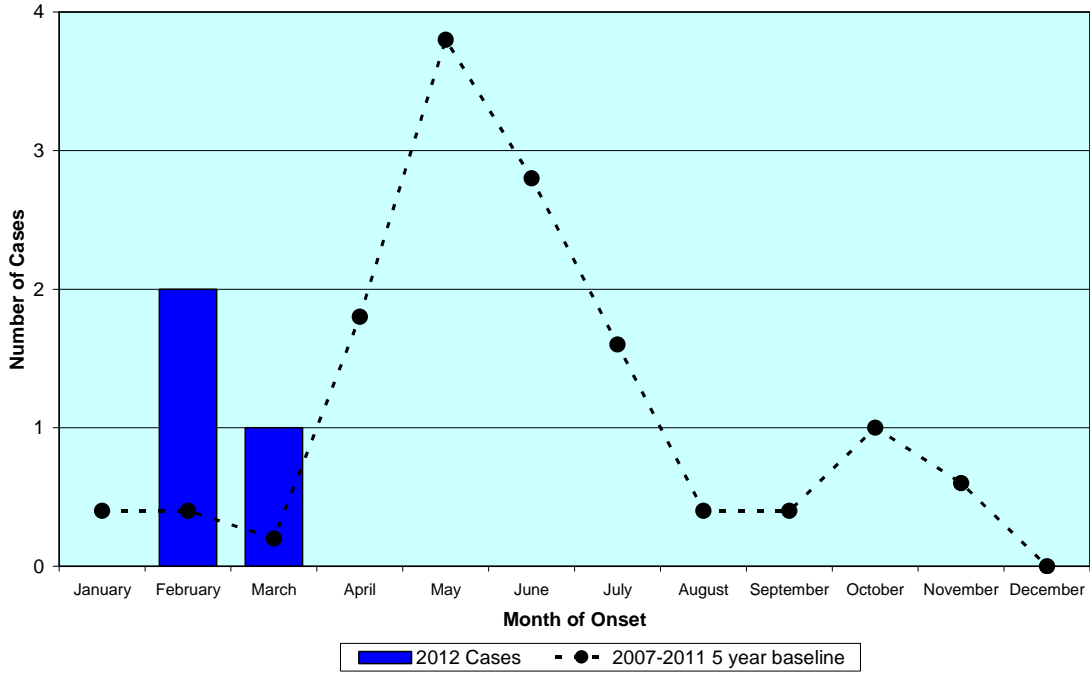
Year to Date Tick-Borne Disease Cases by County

Tick-Borne Disease Activity by County of Exposure									
Disease	HME		HGA		RMSF/SFR		Acute LYME		Totals
	FL	Non-FL	FL	Non-FL	FL	Non-FL	FL	Non-FL	
Origin	FL	Non-FL	FL	Non-FL	FL	Non-FL	FL	Non-FL	All
Alachua	0	0	0	0	0	0	1	0	1
Hillsborough	0	0	0	0	0	0	1	0	2
Jackson	0	0	0	0	0	1 (U)	0	0	1
Lake	0	0	0	0	1	0	0	0	1
Leon	3	0	0	0	0	0	0	0	2
Palm Beach	0	0	0	0	0	0	0	1 (I)	1
Pasco	0	0	0	0	0	0	0	1 (I)	1
Putnam	0	0	0	0	0	0	1	0	1
Seminole	0	0	0	0	0	0	1	0	1
St. Lucie	0	0	0	0	0	0	1	1 (I)	2
Volusia	0	0	0	0	0	0	1	0	1
Totals	3	0	0	0	1	1	6	3	14

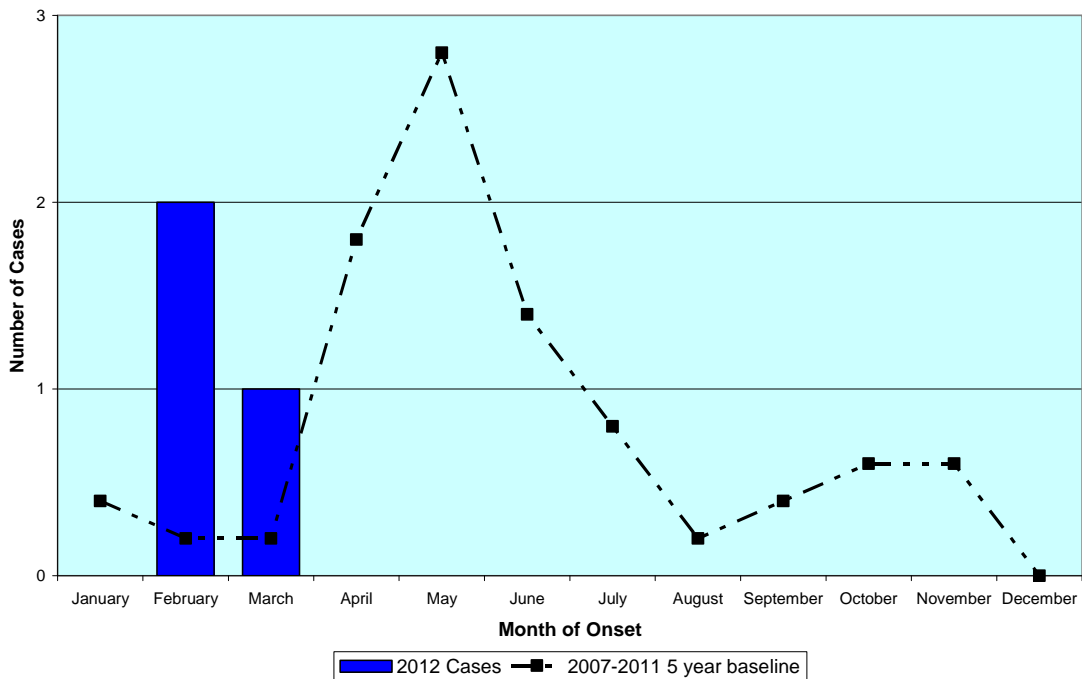
Legend: FL = Florida acquired, Non-FL=Non-Florida or unknown origin, I=imported, U=Unknown

Monthly Tick-Borne Disease Summary

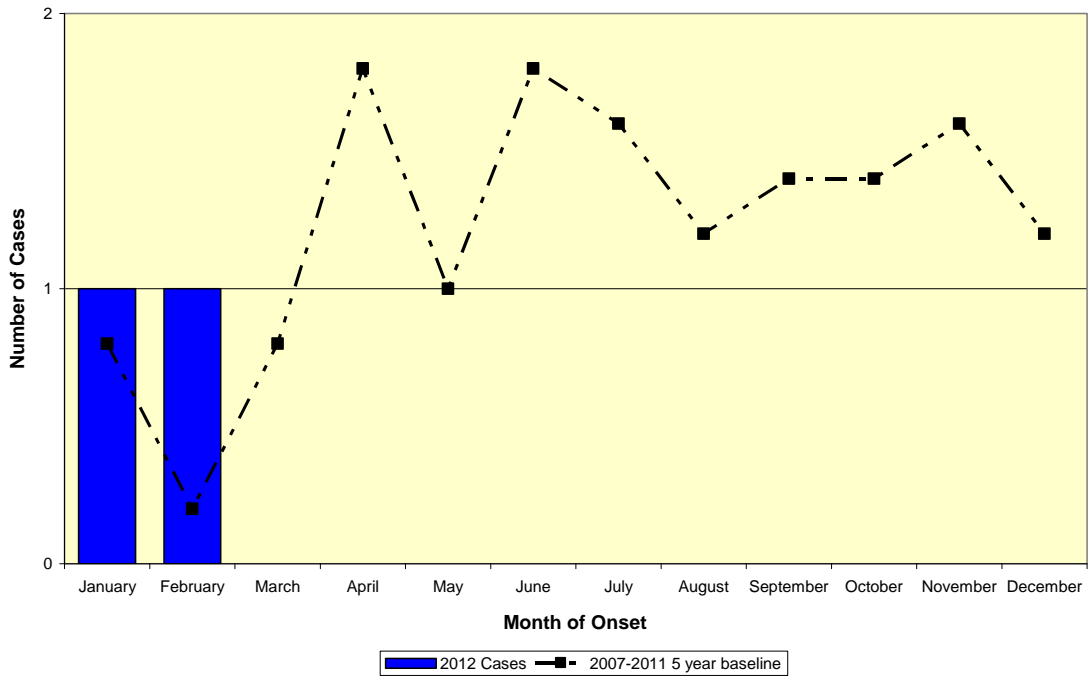
Total *Ehrlichia chaffeensis* / HME Cases By Month



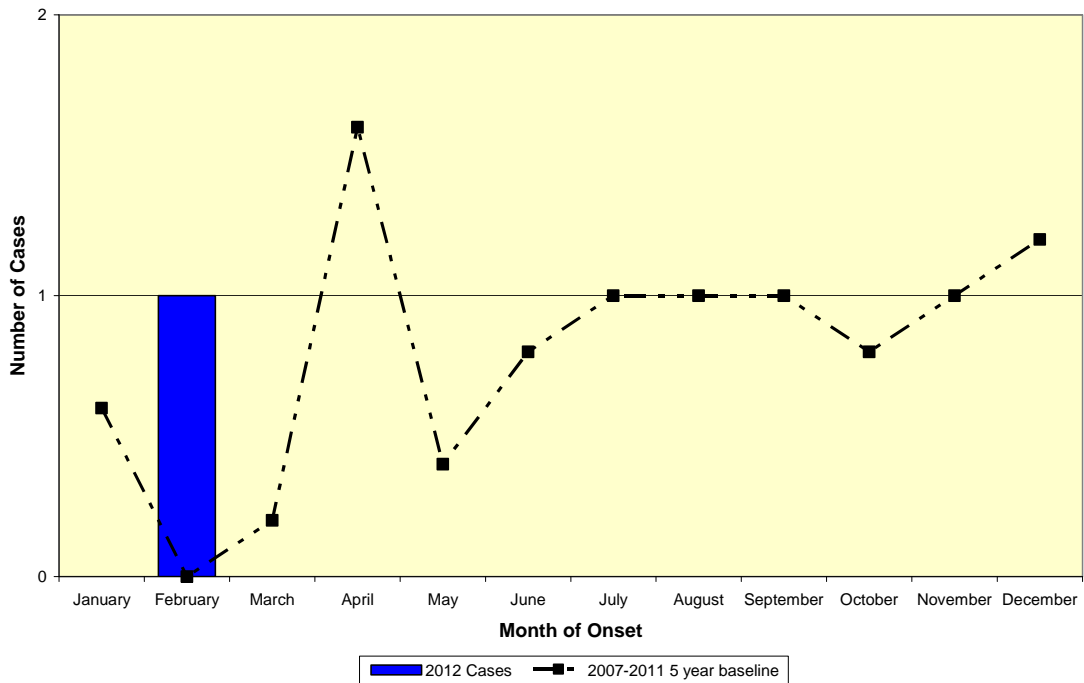
Florida Acquired Cases of *Ehrlichia chaffeensis* / HME By Month



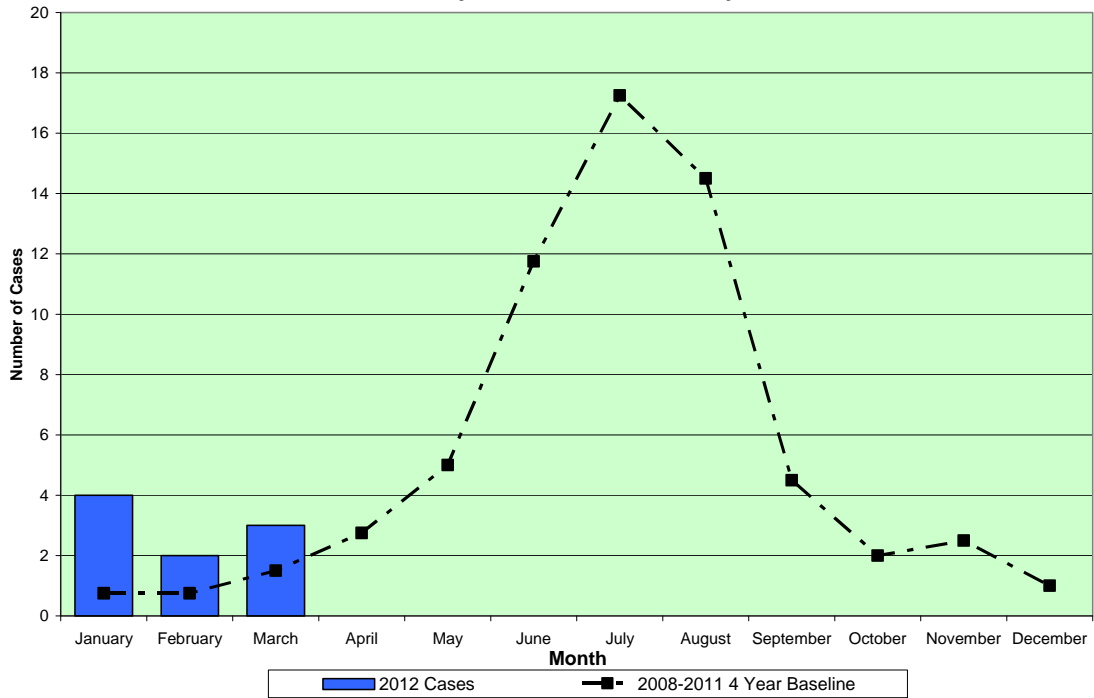
Total RMSF / SFR Cases By Month



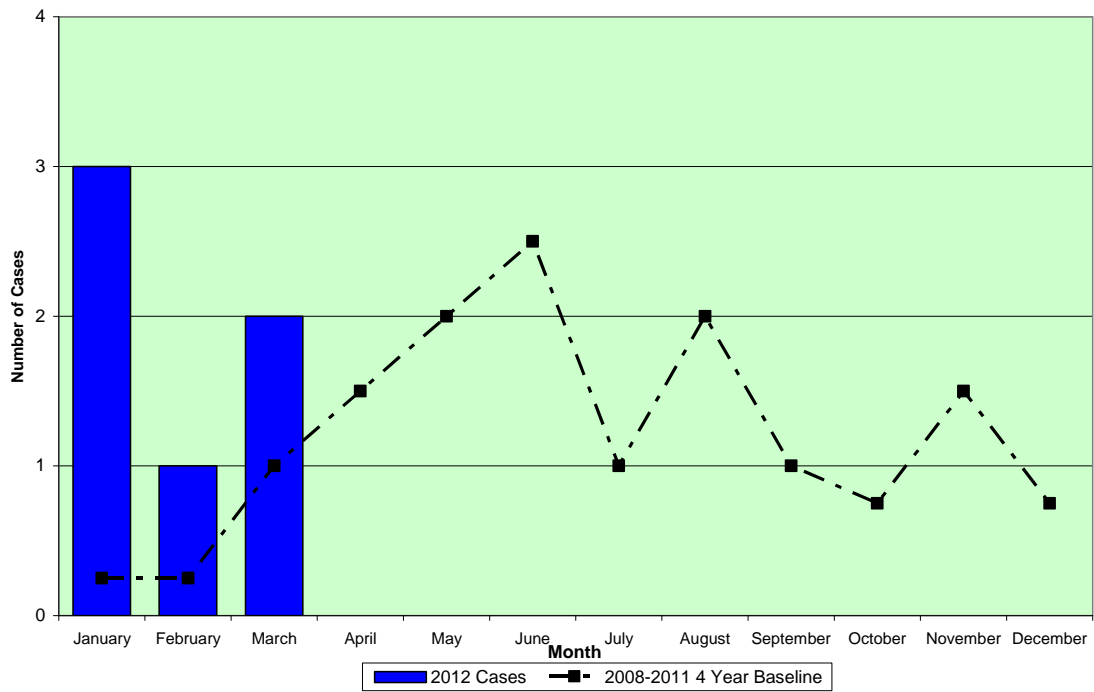
Florida Acquired Cases of RMSF / SFR By Month



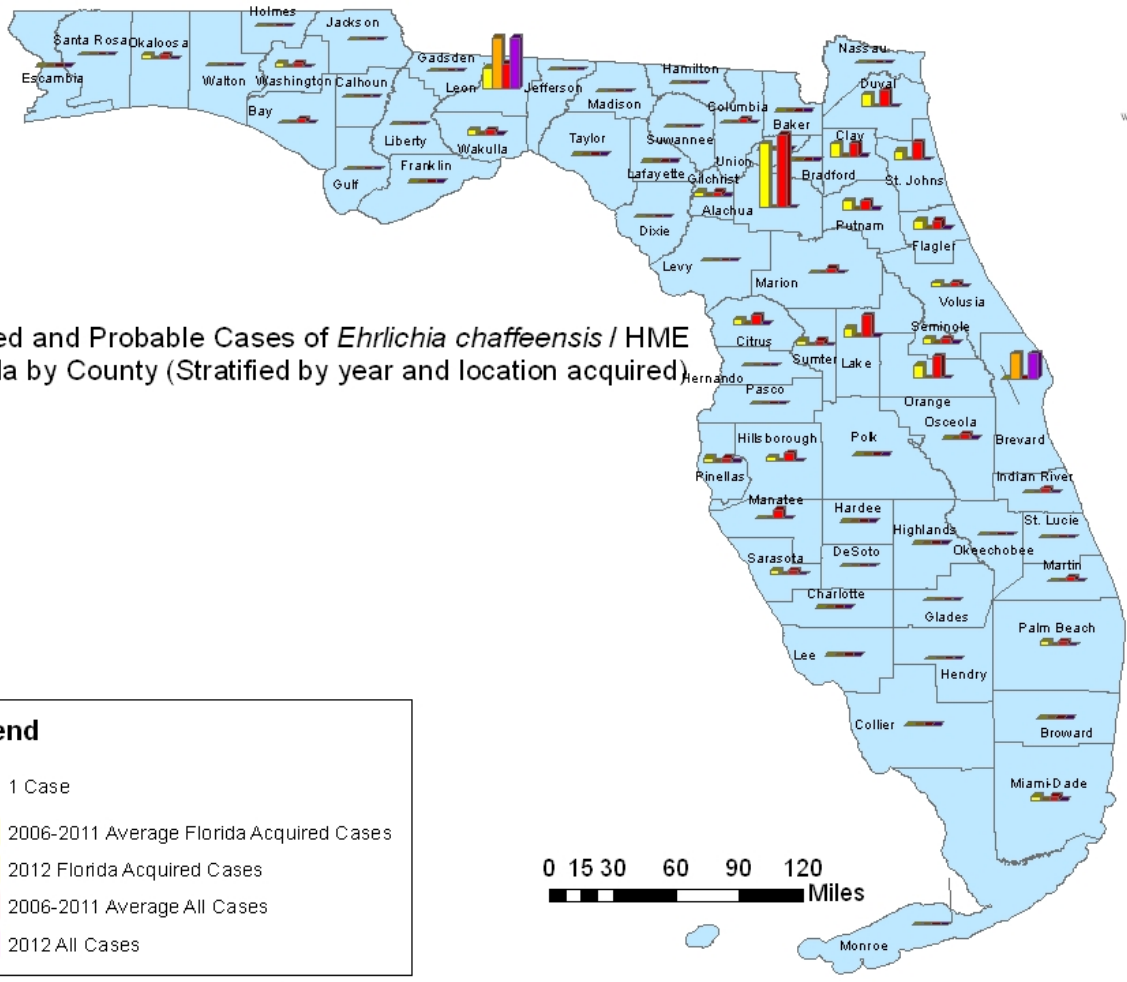
Total Acute Lyme Disease Cases By Month



Florida Acquired Acute Cases of Lyme Disease By Month



Maps of Tick-Borne Disease Cases by County

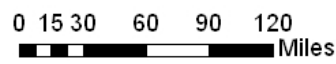


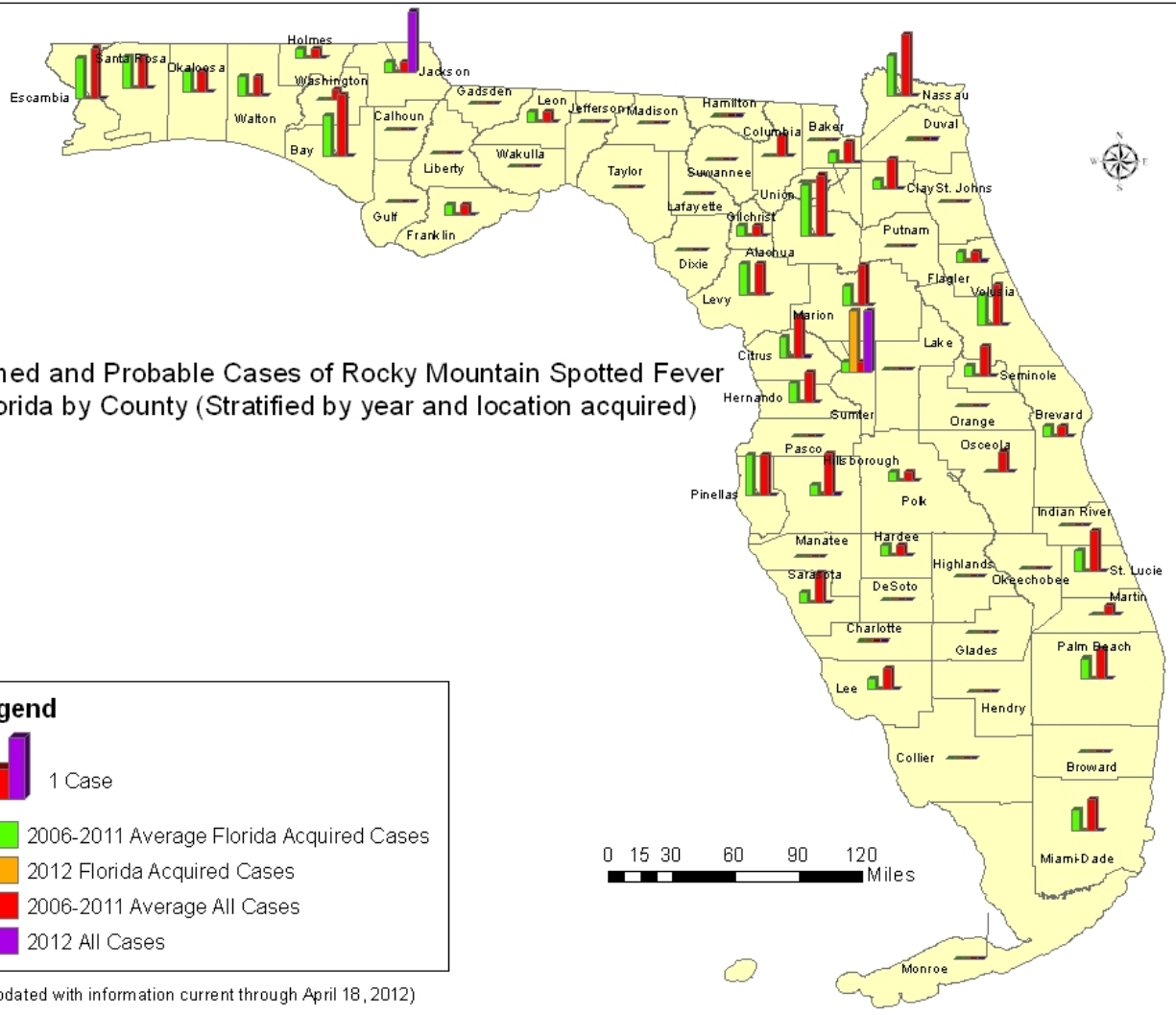
Confirmed and Probable Cases of *Ehrlichia chaffeensis* / HME in Florida by County (Stratified by year and location acquired)

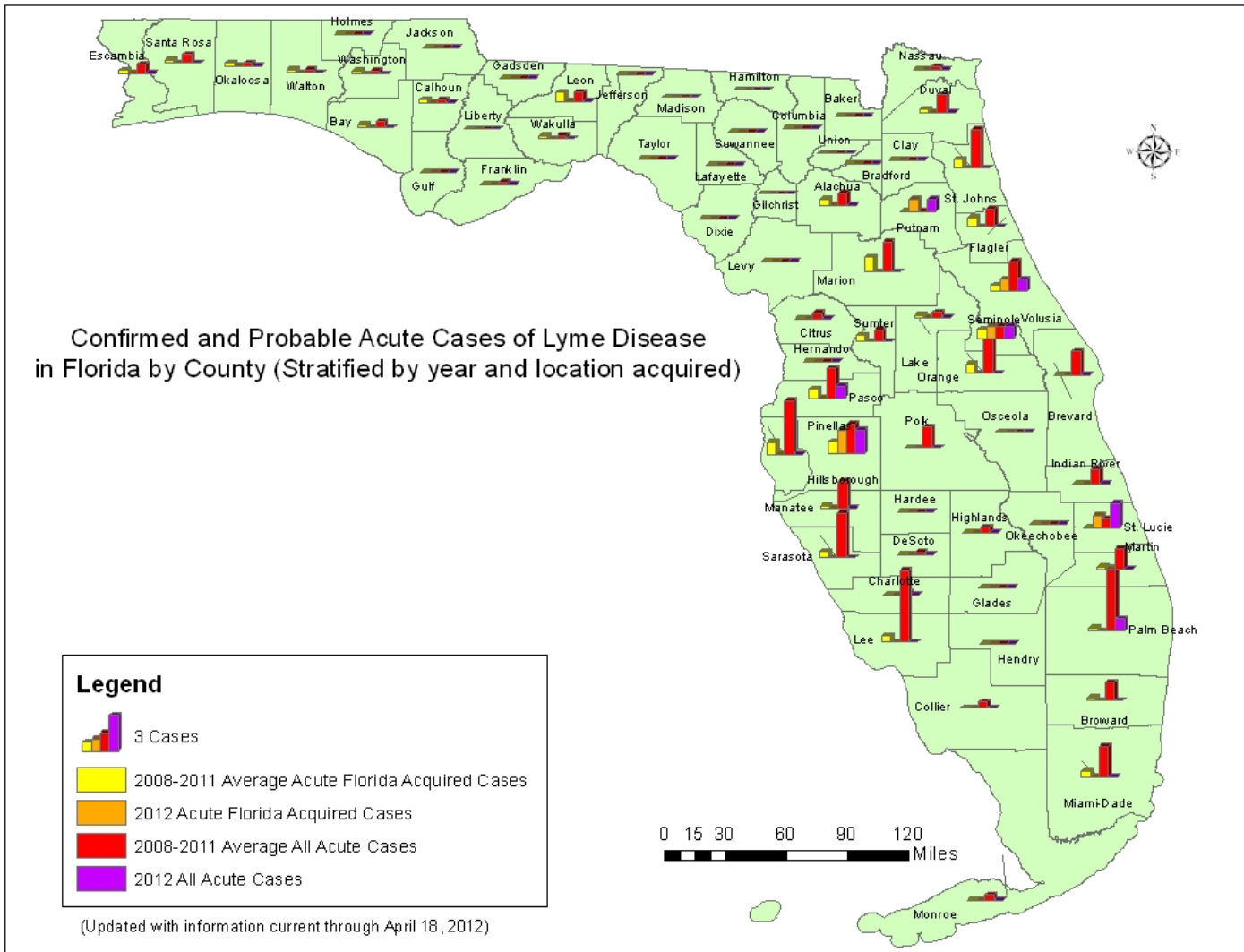
Legend

- 1 Case
- 2006-2011 Average Florida Acquired Cases
- 2012 Florida Acquired Cases
- 2006-2011 Average All Cases
- 2012 All Cases

(Updated with information current through April 18, 2012)







Special Tick-Borne Disease Topic: Ehrlichiosis/Anaplasmosis: What's the Difference?

With the start of spring, the number of tick-borne illnesses start to increase. Although any of the Florida tick-borne illnesses can occur year round, ehrlichiosis is most common in spring and early summer. Species of bacteria that may cause ehrlichiosis in Florida include *Ehrlichia chaffeensis* and *E. ewingii*. A new *Ehrlichia* that can cause human illness, *Ehrlichia muris*-like, has also recently been identified in the Midwestern US and is not well characterized. Another type of closely related bacteria present in Florida is *Anaplasma phagocytophilum*; infection in people is referred to as anaplasmosis. Infection with these tick-borne bacteria can result in severe infections characterized by an acute febrile illness with headache, muscle ache, or fatigue within 2 weeks of a bite from an infected tick. Although rash can be seen, particularly in children, it is less common in adults.

The bacteria causing ehrlichiosis and anaplasmosis have different tick vectors. *Ehrlichia* infection is typically spread through a bite of the lone star tick, which is more prevalent in the southeastern United States. *Anaplasma phagocytophilum* is transmitted by the same tick species as Lyme disease and is most common in the northeast and Midwestern US. Both diseases can have severe symptoms that result in hospitalization. Both of these infections can be prevented by taking tick-borne disease prevention measures including avoiding direct contact with ticks, using repellants such as DEET and permethrin (use according to product label), and removing ticks from your body quickly. While most tick bites do not result in infection, persons who develop a febrile illness within 2 weeks of a tick bite or after spending time in tick habitat should immediately consult with their health care provider and be sure to mention possible recent exposure to ticks. Early treatment decreases risk for severe illness and complications. For more information on tick prevention measures visit: http://www.myfloridaeh.com/medicine/arboviral/Tick_Borne_Diseases/Prevention.html

Spotlight on a Tick-Borne Disease Resource

The Centers for Disease Control and Prevention recently released a new interactive map for Lyme disease in the United States. This website allows for site visitors to view the distribution of reported Lyme disease cases on an annual basis from 2001 to 2010. The website can be found at the following link: <http://www.cdc.gov/lyme/stats/maps/interactiveMaps.html>



Acknowledgements and Data Sources

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For more surveillance information, please see the DOH website at:

[http://www.doh.state.fl.us/Environment/medicine/arboviral/Tick Borne Diseases/Tick Index.htm](http://www.doh.state.fl.us/Environment/medicine/arboviral/Tick_Borne_Diseases/Tick_Index.htm)

Data is provided by county health departments, Department of Health Bureau of Laboratories-Jacksonville, private health care providers and laboratories. Tallies are organized into those where exposure to the infected tick most likely occurred: in Florida or a total case count which includes cases with exposures in and outside Florida as well as cases that exposure location was not definitively determined. This report is in large part designed to increase awareness of current tick disease transmission so the report focuses on cases acquired in 2011. Acute Lyme cases include patients with symptoms of less than 30 days duration, without late clinical signs such as intermittent arthritis. Reporting is inherently delayed as most testing for tick-borne illness is based on antibody testing which can take 2-4 weeks to form and generally requires an acute and convalescent serum sample to be definitive.