



Florida Tick-Borne Disease Surveillance October 2 – October 15, 2011

Tick-borne disease surveillance in Florida includes confirmed and probable cases of *Ehrlichia chaffeensis* or Human Monocytic Ehrlichiosis (HME), Rocky Mountain spotted fever (RMSF) or spotted fever rickettsiosis (SFR), and Lyme disease cases using national case definitions. Please note that this week's report includes a data source related to veterinary tick-borne diseases.

Florida acquired HME: no new cases to report from October 2 – October 15.

Non-Florida or unknown acquired HME: no new cases to report from October 2 – October 15.

Florida acquired Rocky Mountain Spotted Fever no new cases to report from October 2 – October 15.

Non-Florida or unknown acquired Rocky Mountain Spotted Fever: no new cases to report from October 2 – October 15.

Florida acquired acute Lyme disease: no new cases to report from October 2 – October 15.

Non-Florida or unknown acquired acute Lyme disease: 6 new cases: 1 case in Bay County (onset March 2011), 1 case in Lee County (onset August 2011), 1 case in Miami-Dade County (onset July 2011), 1 case in Palm Beach County (onset August 2011), 1 case in Polk County (onset June 2011), and 1 case in Sarasota County (onset August 2011).

Year to Date Tick-Borne Disease Summary

Florida acquired HME: 9 cases of *E. chaffeensis* / HME with an onset date in 2011 have been reported in individuals as being acquired in Florida. Florida counties with HME cases include: Alachua (2), Duval (1), Gilchrist (1), Leon (3), Miami-Dade (1), and Orange (1).

Non-Florida or unknown acquired HME: 4 additional cases of *E. chaffeensis* / HME with an onset date in 2011 have been reported in individuals as being acquired outside the state of Florida or of an unknown origin. Florida counties reporting these cases include: Alachua (1), Duval (1), Flagler (1), and Leon (1).



Florida acquired HGE: 1 case of *A. phagocytophilum* / HGE with an onset date in 2011 has been reported in an individual as being acquired in Florida. Florida counties with HGE cases include: Alachua (1).

Non-Florida or unknown acquired HGE: As of September 24, 2011 there have been no reported cases of *A. phagocytophilum* / HGE with an onset date in 2011 reported in individuals as being acquired outside the state of Florida or of an unknown origin.

Florida acquired Rocky Mountain Spotted Fever: 5 cases of Rocky Mountain Spotted Fever with an onset date in 2011 have been reported in individuals acquired in Florida. Florida counties with Rocky Mountain Spotted Fever cases include: Escambia (1), Hernando (1), Levy (1), Miami-Dade (1), and Pasco (1).

Non-Florida or unknown acquired Rocky Mountain Spotted Fever: 1 case of Rocky Mountain Spotted Fever with an onset date in 2011 has been reported in an individual as being acquired outside the state of Florida or of an unknown origin. Florida counties reporting these cases include: Marion (1)

Florida acquired acute Lyme disease: 11 cases of acute Lyme disease with an onset date in 2011 have been reported in individuals acquired in Florida. Florida counties with Lyme disease cases include: Flagler (1), Hillsborough (1), Lee (1), Leon (2), Manatee (1), Marion (1), Pinellas (1), Sumter (2), and Volusia (1).

Non-Florida or unknown acquired acute Lyme disease: 42 additional cases of acute Lyme disease with an onset date in 2011 have been reported individuals as being acquired outside the state of Florida or of an unknown origin. Florida counties reporting these cases include: Alachua (1), Bay (1), Brevard (2), Broward (2), Collier (1), Hillsborough (2), Lee (4), Manatee (1), Marion (1), Martin (1), Miami-Dade (1), Nassau (1), Orange (2), Palm Beach (7), Pasco (3), Pinellas (3), Polk (3), Sarasota (1), St. Lucie (1), Sumter (2), and Volusia (2).

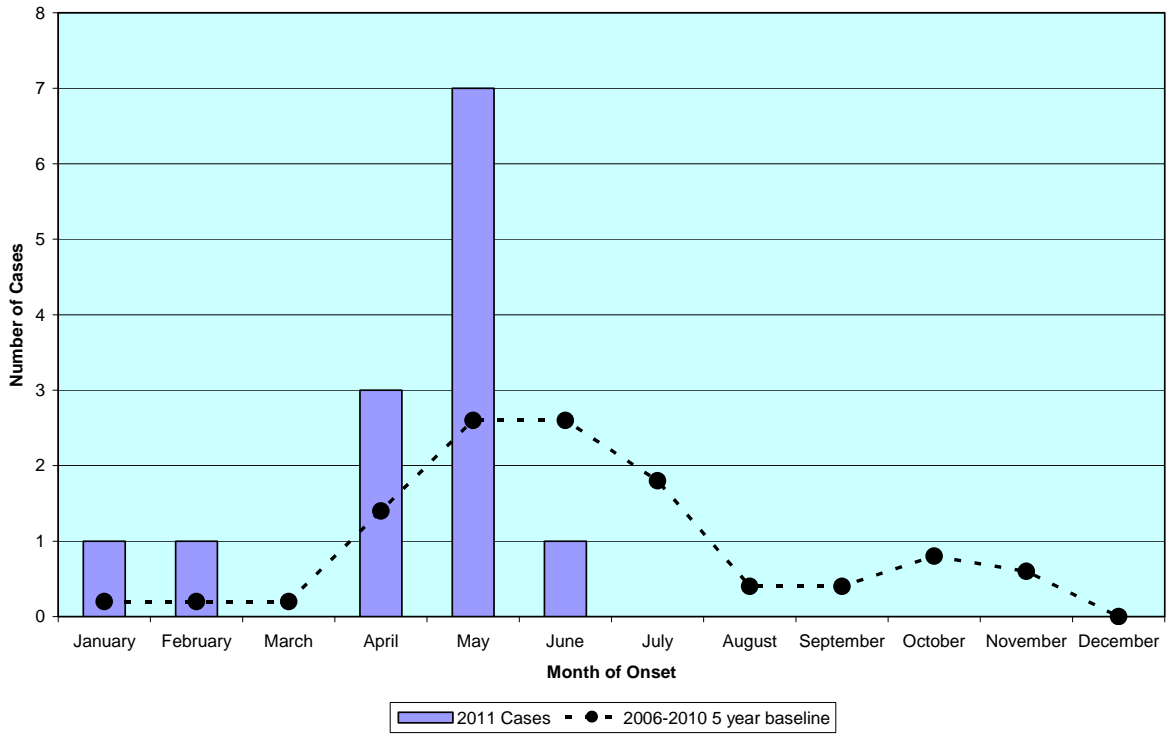
Year to Date Tick-Borne Disease cases by County

Tick-Borne Disease Activity							
Disease Origin	HME		RMSF		Acute LYME		Totals All
	FL	Non-FL	FL	Non-FL	FL	Non-FL	
Alachua*	2	1 (U)	0	0	0	1 (I)	3
Bay	0	0	0	0	0	1 (U)	1
Brevard	0	0	0	0	0	2 (I)	2
Broward	0	0	0	0	0	2 (I)	1
Collier	0	0	0	0	0	1 (I)	1
Duval	1	1 (I)	0	0	0	0	2
Escambia	0	0	1	0	0	0	1
Flagler	0	1 (I)	0	0	1	0	2
Gilchrist	1	0	0	0	0	0	1
Hernando	0	0	1	0	0	0	1
Hillsborough	0	0	0	0	1	2 (I)	3
Lee	0	0	0	0	1	4 (I)	5
Leon	3	1 (U)	0	0	2	0	6
Levy	0	0	1	0	0	0	1
Manatee	0	0	0	0	1	1 (I)	2
Marion	0	0	0	1 (U)	1	1 (I)	3
Martin	0	0	0	0	0	1 (I)	1
Miami-Dade	1	0	1	0	0	1 (I)	3
Nassau	0	0	0	0	0	1 (I)	1
Orange	1	0	0	0	0	2 (I)	3
Palm Beach	0	0	0	0	0	7 (I)	7
Pasco	0	0	1	0	0	3 (I)	3
Pinellas	0	0	0	0	1	3 (I)	4
Polk	0	0	0	0	0	3 (I)	3
Sarasota	0	0	0	0	0	1 (U)	1
St. Lucie	0	0	0	0	0	1 (I)	1
Sumter	0	0	0	0	2	2 (I)	4
Volusia	0	0	0	0	1	2 (I)	3
Totals	9	4	5	1	11	42	72

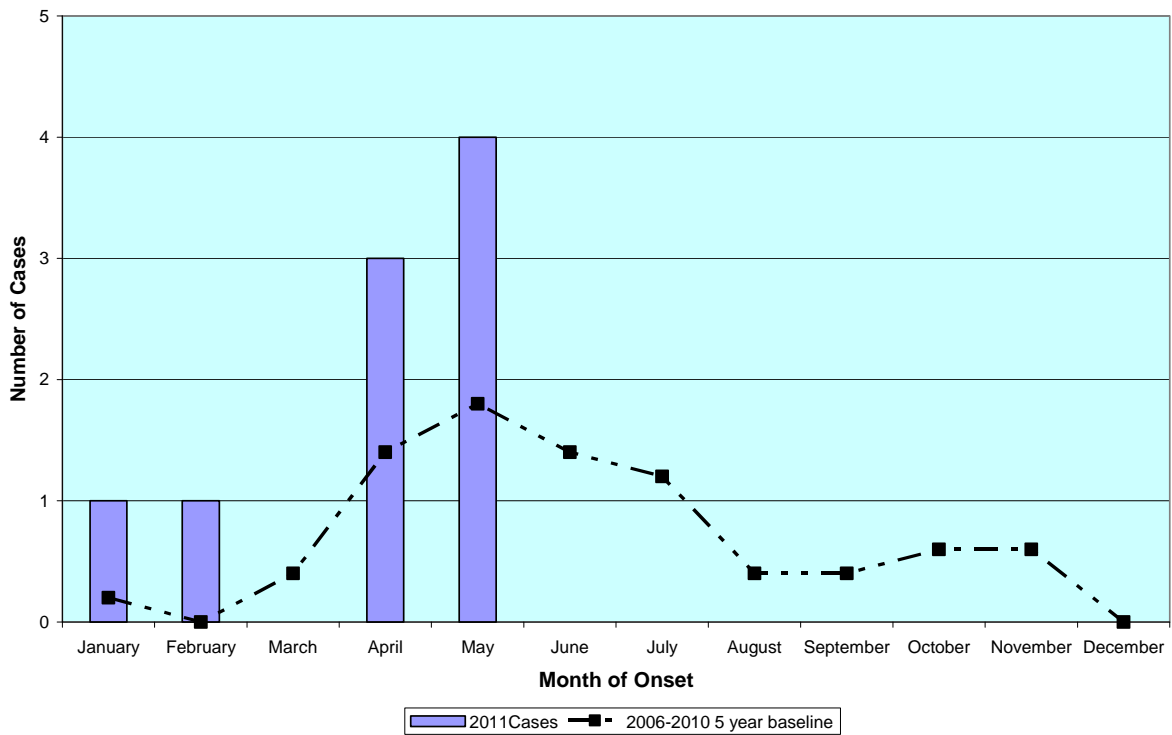
Legend: HME = human monocyte ehrlichiosis, RMFS = Rocky Mountain Spotted Fever
 FL = Florida acquired, Non-FL=Non-Florida or unknown origin, I=imported, U=Unknown
 * Alachua county also reports 1 case of *A. phagocytophilum* / HGE.

Monthly Tick-Borne Disease Summary

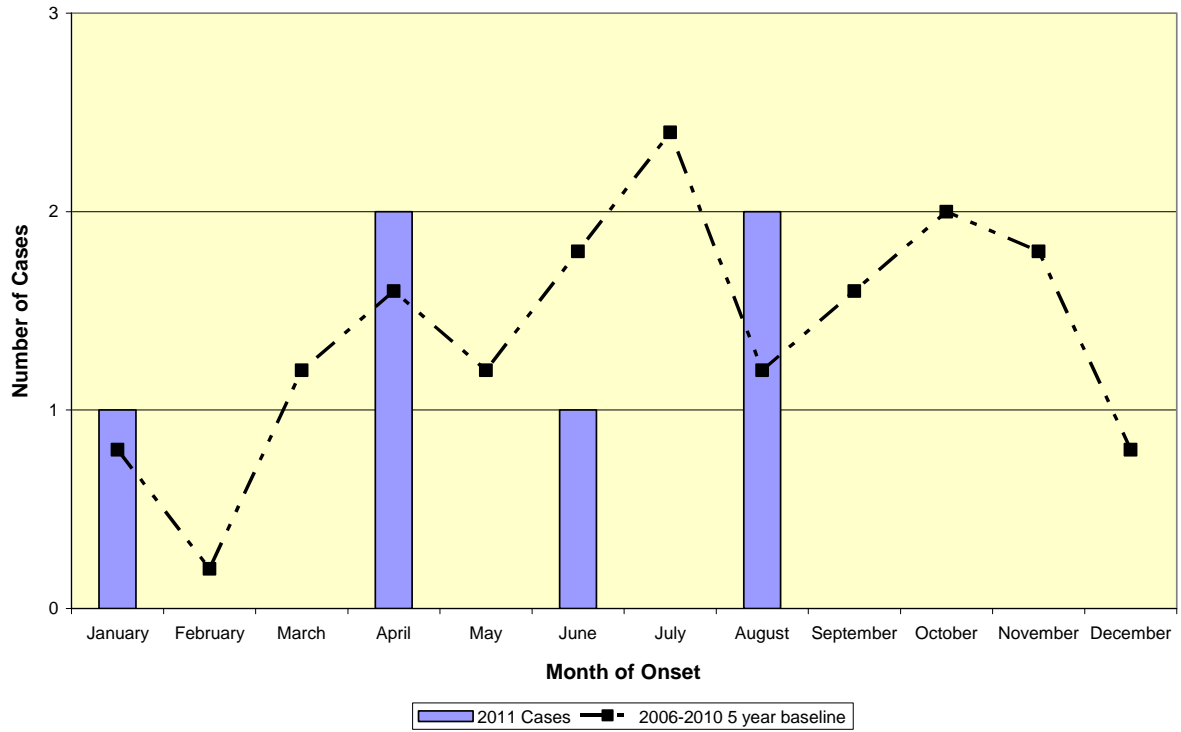
Total *Ehrlichia chaffeensis* / HME Cases By Month



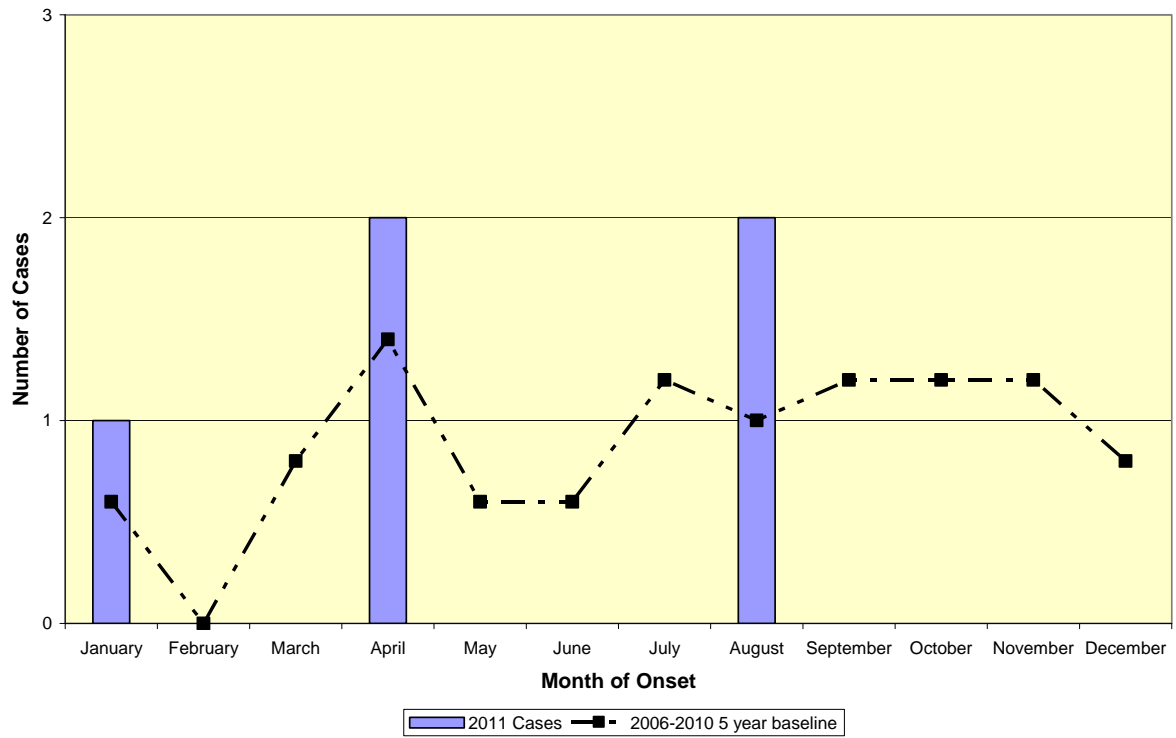
Florida Acquired Cases of *Ehrlichia chaffeensis* / HME By Month



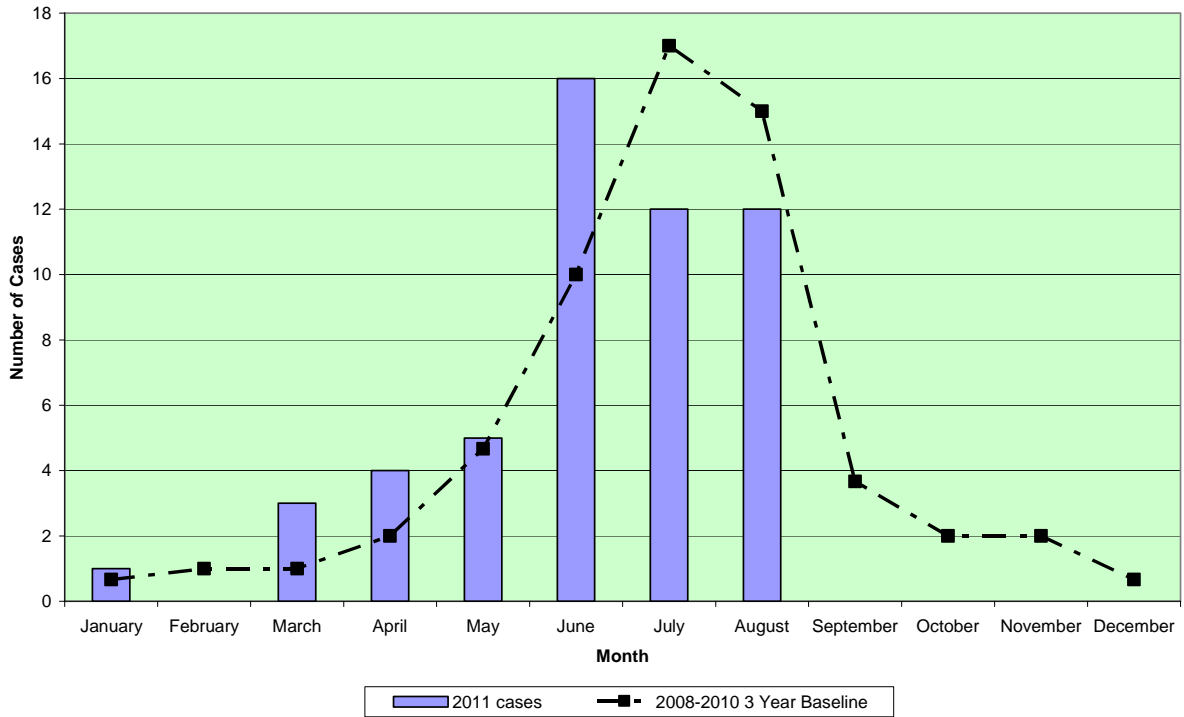
Total Rocky Mountain Spotted Fever Cases By Month



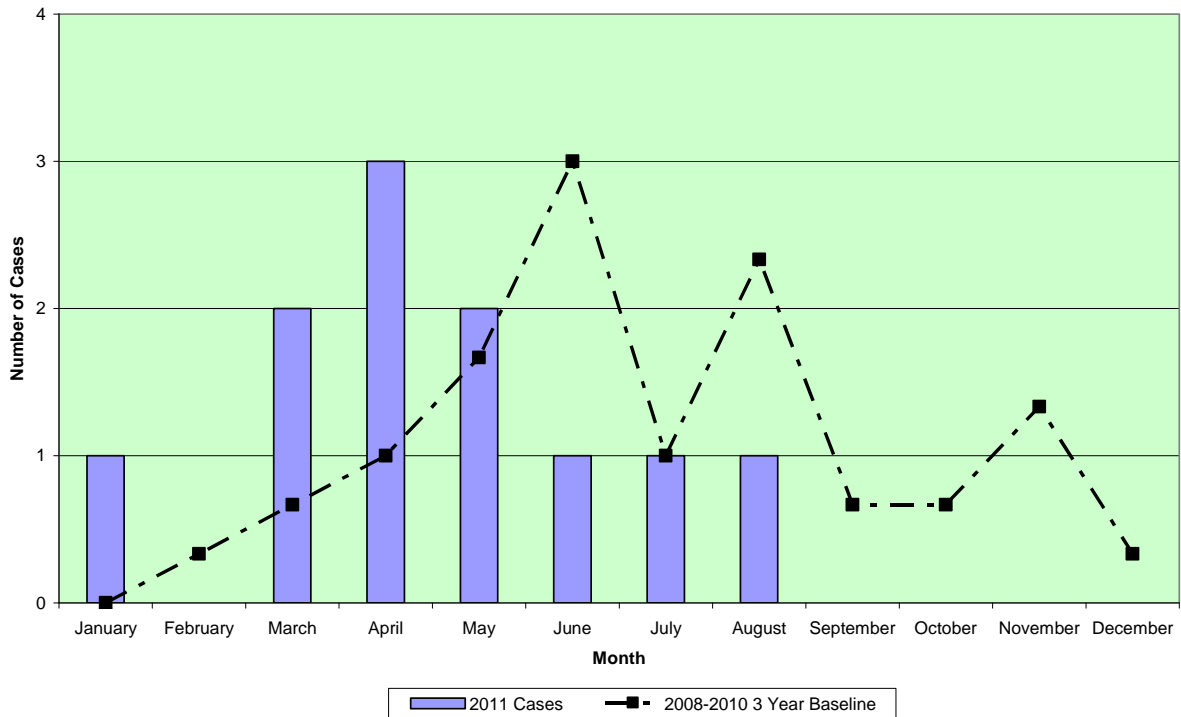
Florida Acquired Cases of Rocky Mountain Spotted Fever By Month



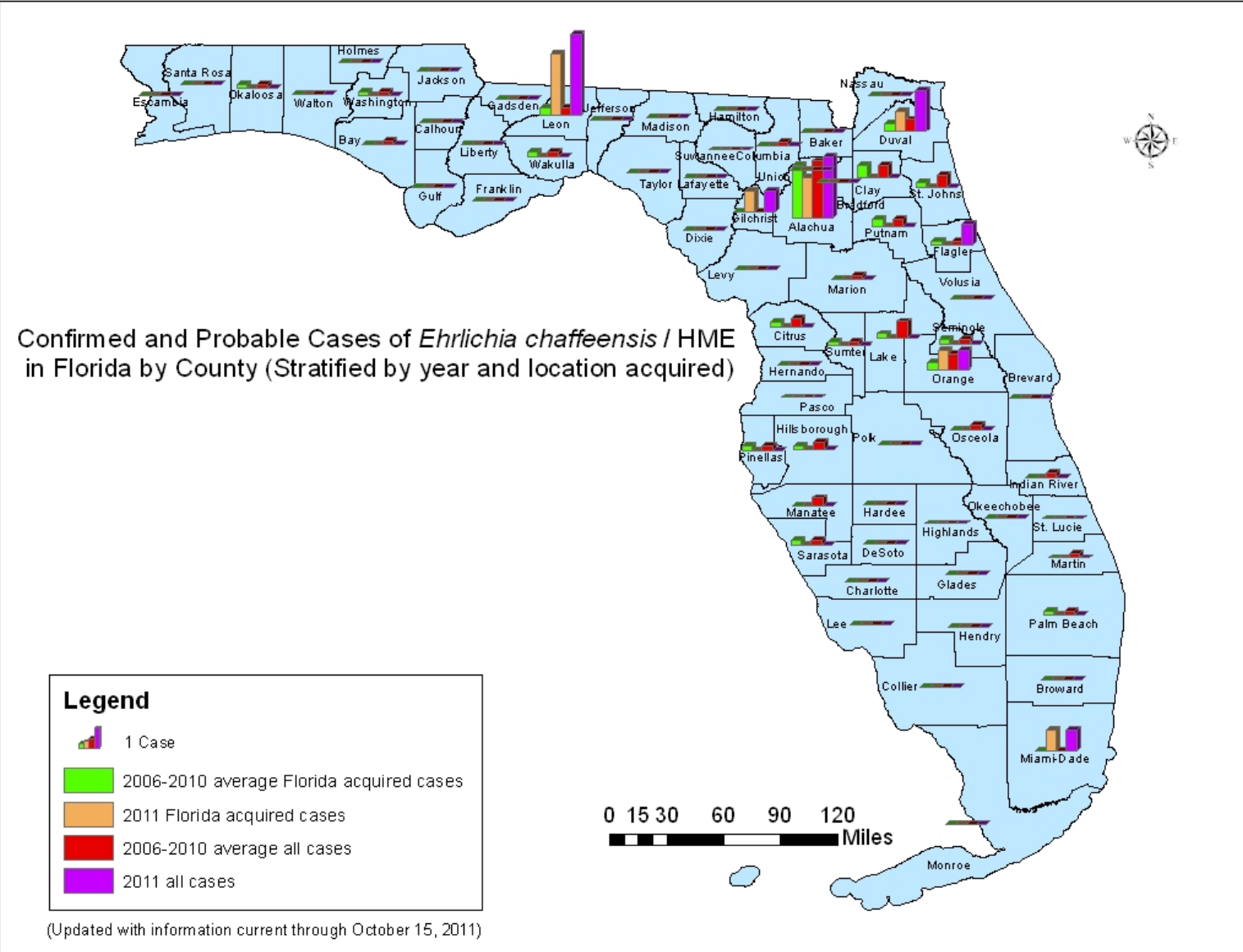
Total Acute Lyme Disease Cases By Month

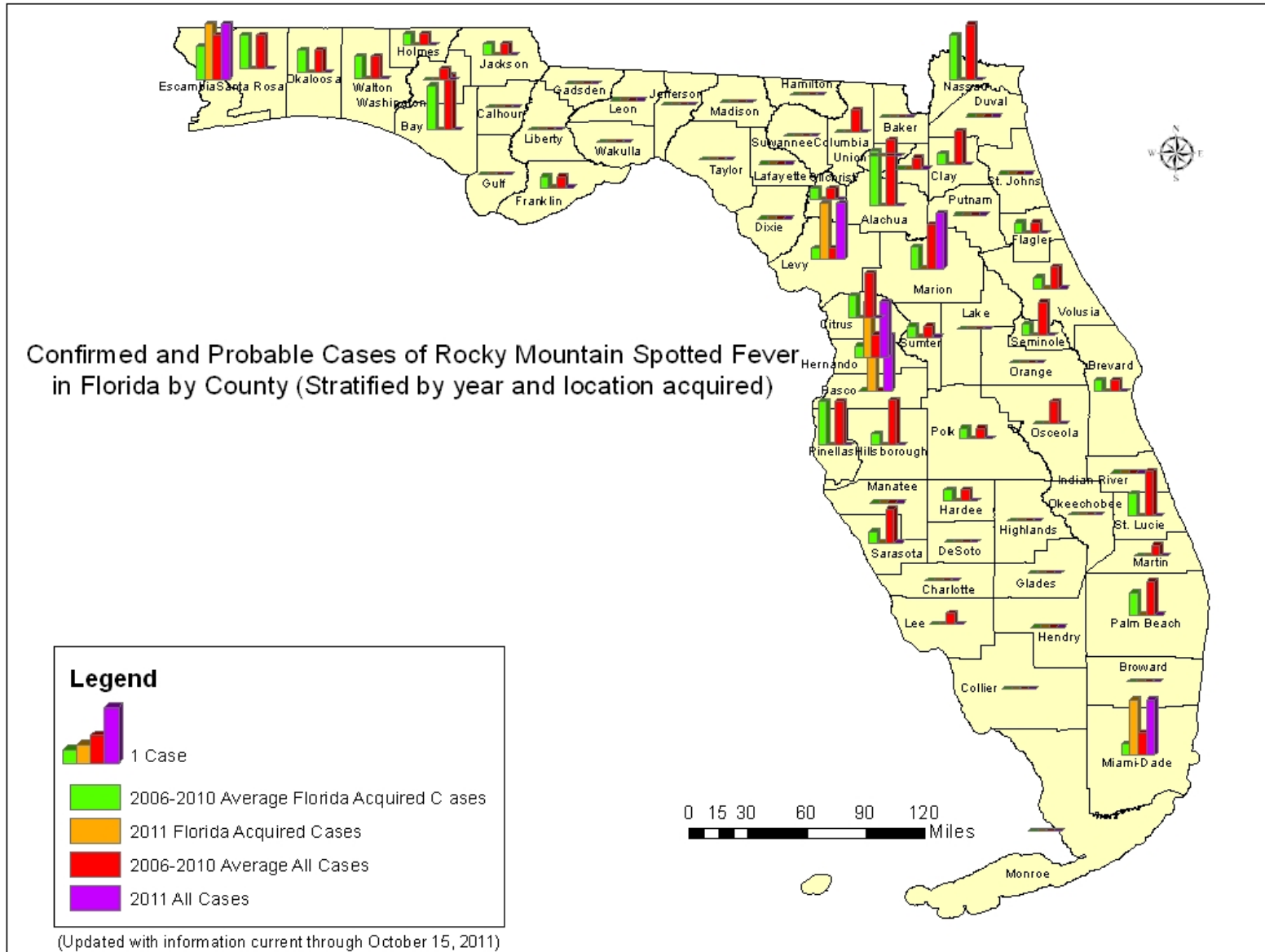


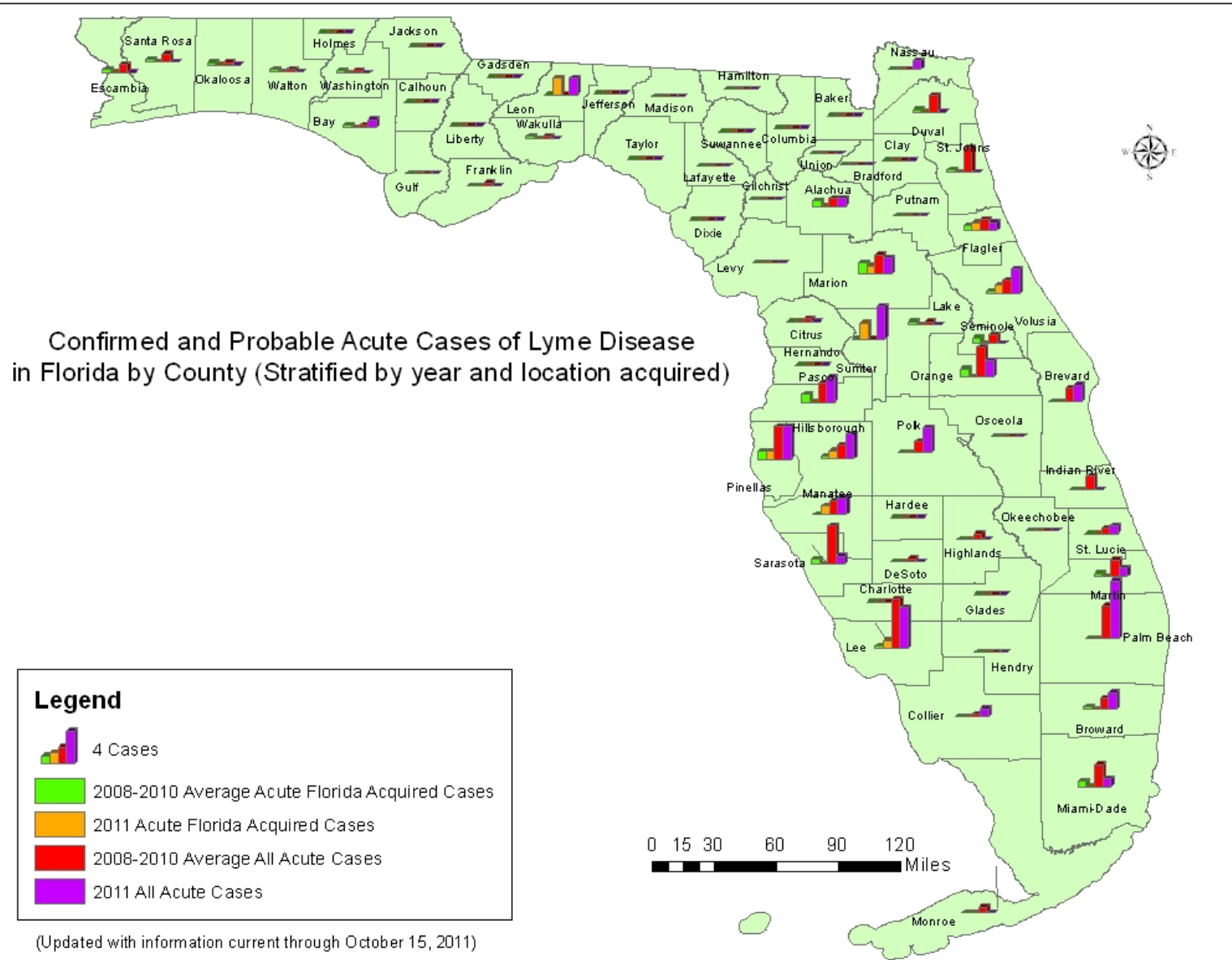
Florida Acquired Acute Cases of Lyme Disease By Month



Maps of Tick-Borne Disease Cases by County







Special Tick-Borne Disease Topic: *Babesia* in Florida

Babesia spp. are a group of intracellular protozoan parasites with over 100 different species. Nine of these species are known to parasitize humans resulting in babesiosis. *Babesia microti* is the most commonly reported and pathogenic of the strains found in the United States. Like Lyme disease *B. microti* is commonly transmitted through the black-legged deer tick, *Ixodes scapularis*. Thus, babesiosis is endemic in many states where Lyme disease is frequently diagnosed. Currently, Florida has not had any locally acquired babesiosis cases via tick transmission; however, Florida cases have been acquired through blood transfusions. The distribution of *Babesia* infections continues to expand, and new species that can cause illness in people are also being identified. Although *B. microti* is not considered endemic in Florida the vector, *I. scapularis*, and a primary food source for the adult tick, the white-tailed deer, are present. Currently in Florida, babesiosis is not a reportable disease except in outbreak situations.

Babesia infections are often asymptomatic or associated with mild nonspecific symptoms. Common clinical and laboratory findings include: fever, chills, myalgia, fatigue, malaise, anorexia, headache, nausea, vomiting, hemolytic anemia, thrombocytopenia, and a low white blood cell count. Risk groups for severe and possibly life threatening disease include people who are immunocompromised, asplenic, or elderly. The incubation period for babesiosis varies from 1 week to several months depending on mode of transmission. Direct tick transmission generally results in a shorter incubation period than infections acquired via transfusion. *Babesia* is usually diagnosed through identification of intracellular parasites observed in blood smears, and can be mistaken with malaria (*Plasmodium sp.*). Treatment includes clindamycin plus oral quinine for 7 to 10 days or Azithromycin and Atovaquone for 7 to 10 days.

Veterinary babesiosis: *Babesia* has been identified in Florida wildlife populations and in domesticated pets. For example, *Babesia* species other than *B. microti* have been identified in Florida wildlife populations including a new *Babesia* species in Florida panthers. *Babesia canis* is endemic in Florida greyhounds with the brown dog tick, *Rhipicephalus sanguineus* being the primary vector. *Babesia gibsoni* is often associated with American Staffordshire terriers, American pit bull terriers, and dogs in contact with these breeds. Bites and fighting are suspected to be important routes of transmission for *B. gibsoni*.

Veterinary Tick-Borne Disease Resources

In an effort to improve and broaden the resources available for tick-borne disease reporting, information regarding veterinary surveillance for tick-borne disease will be included. The importance of having veterinary data can be very useful in determining human disease risk as in many instances the vectors, agents, reservoirs, and environments for the human tick-borne pathogens are similar to those of the animal tick-borne pathogens. The following website provides interactive maps for tick-borne disease and parasites in dogs and cats to the county level for 2009 and 2010: <http://www.capcvet.org/maps/index.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.