



TICKS: BLOOD-SUCKERS AND DISEASE TRANSMITTERS

NANCY C. HINKLE
DEPARTMENT OF ENTOMOLOGY
UNIVERSITY OF GEORGIA

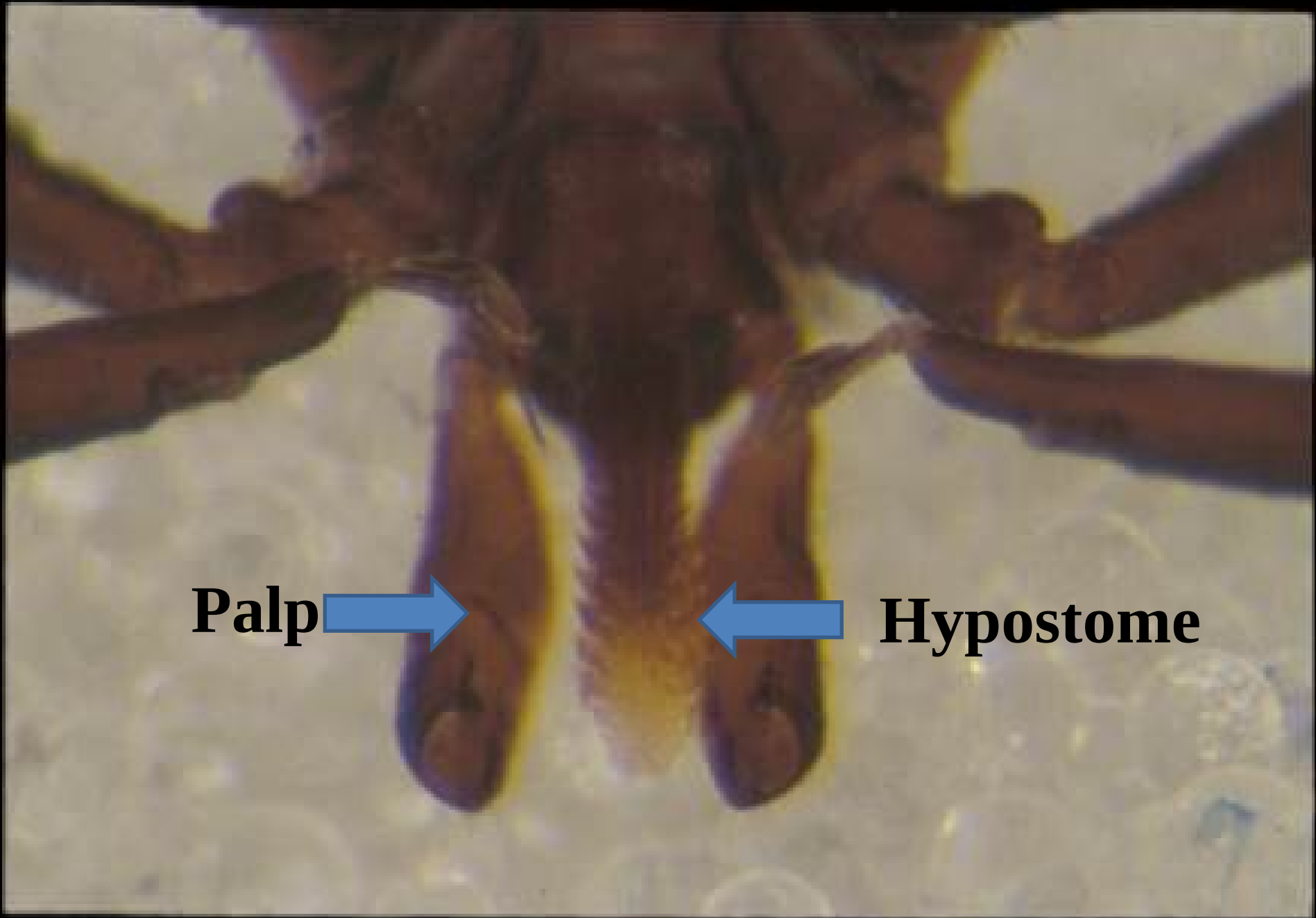






Palp →

← **Hypostome**







300 meters per month; within 1 hr of sunset





Seed Ticks (larval Lone Star Ticks)





Seed Ticks (larval Lone Star Ticks)









Amblyomma americanum

Lone Star Tick



Amblyomma maculatum

Gulf Coast Tick



Dermacentor variabilis

American Dog Tick

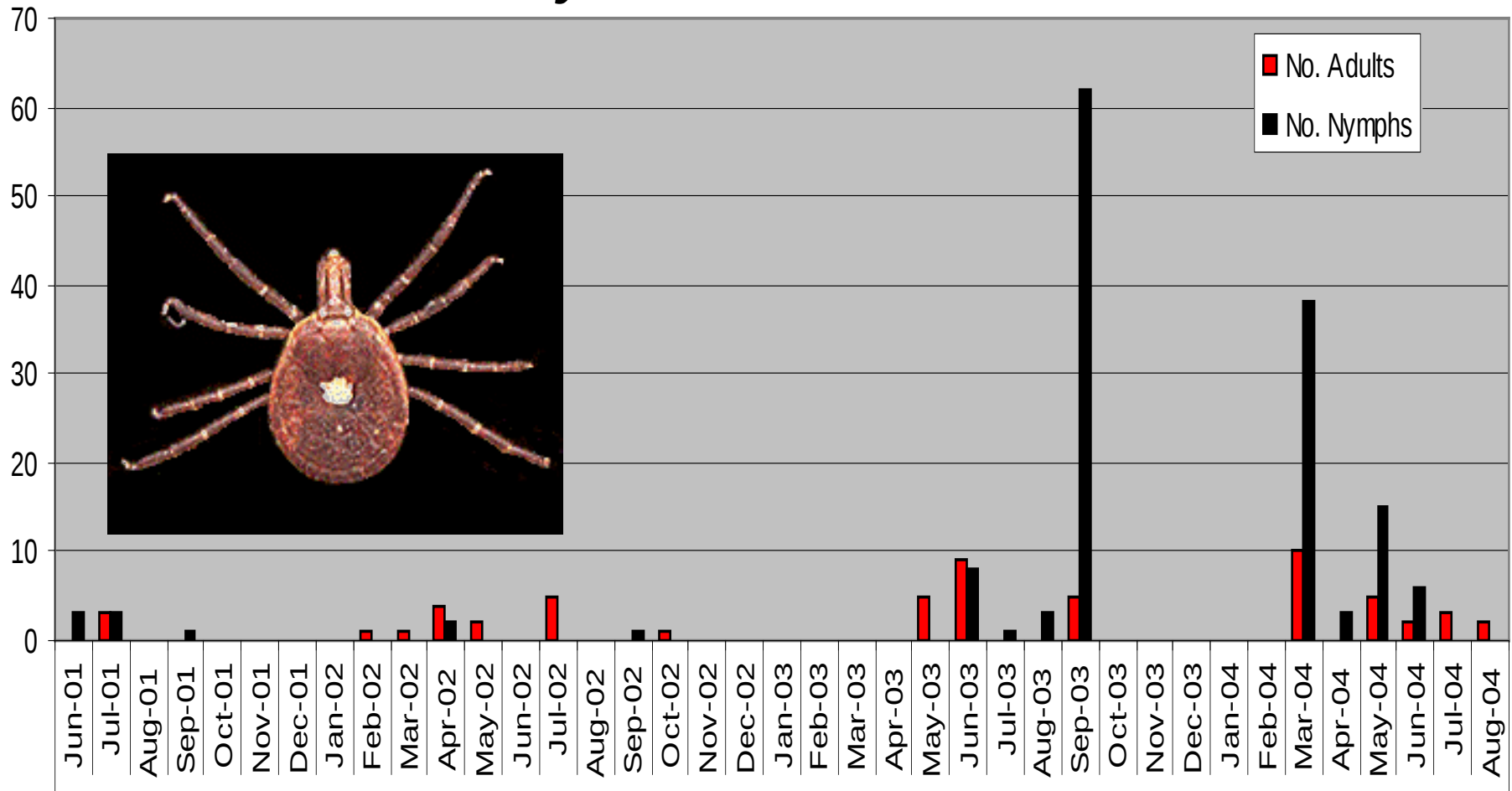


Ixodes scapularis

Black-legged Tick

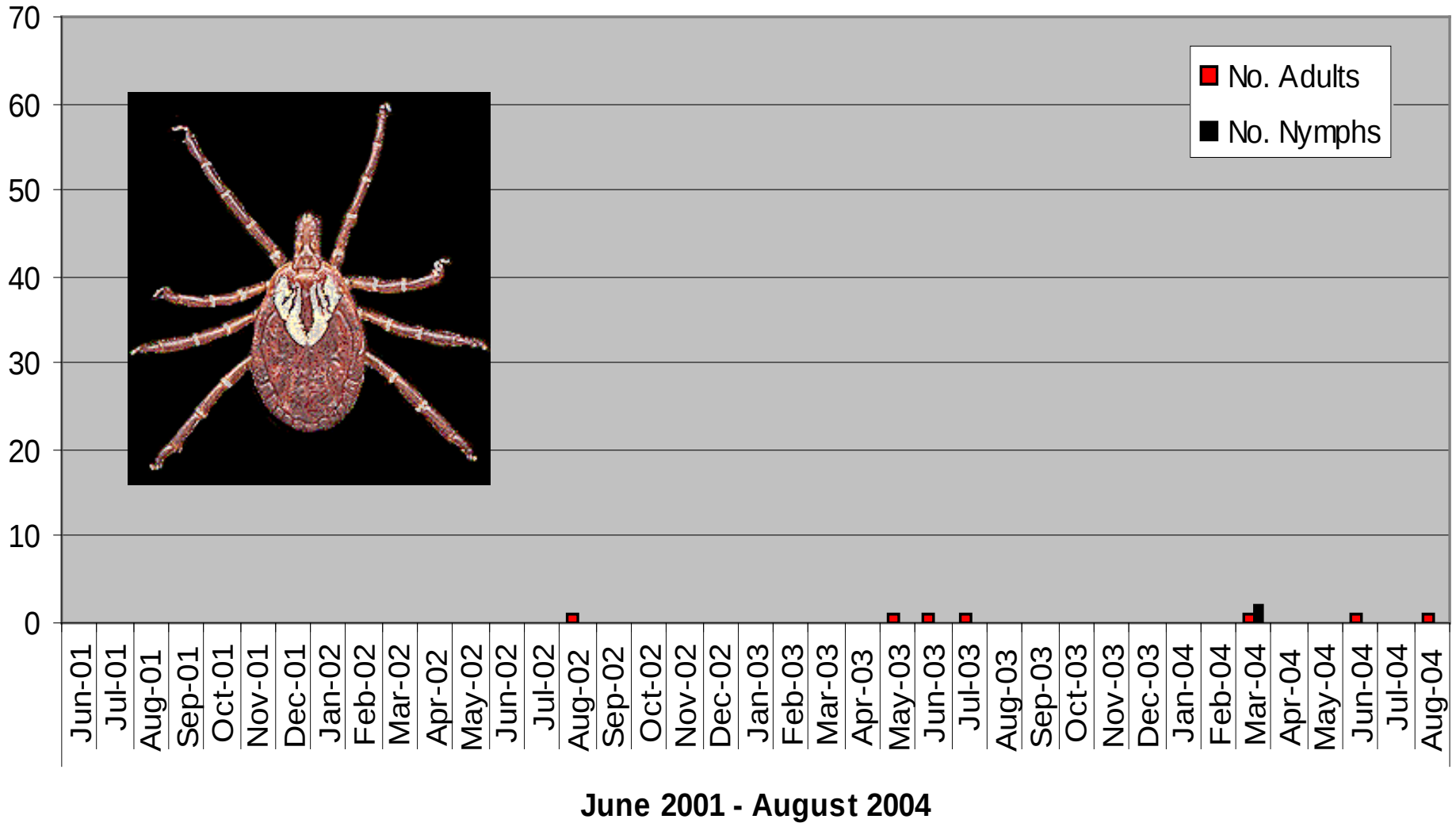


Amblyomma americanum

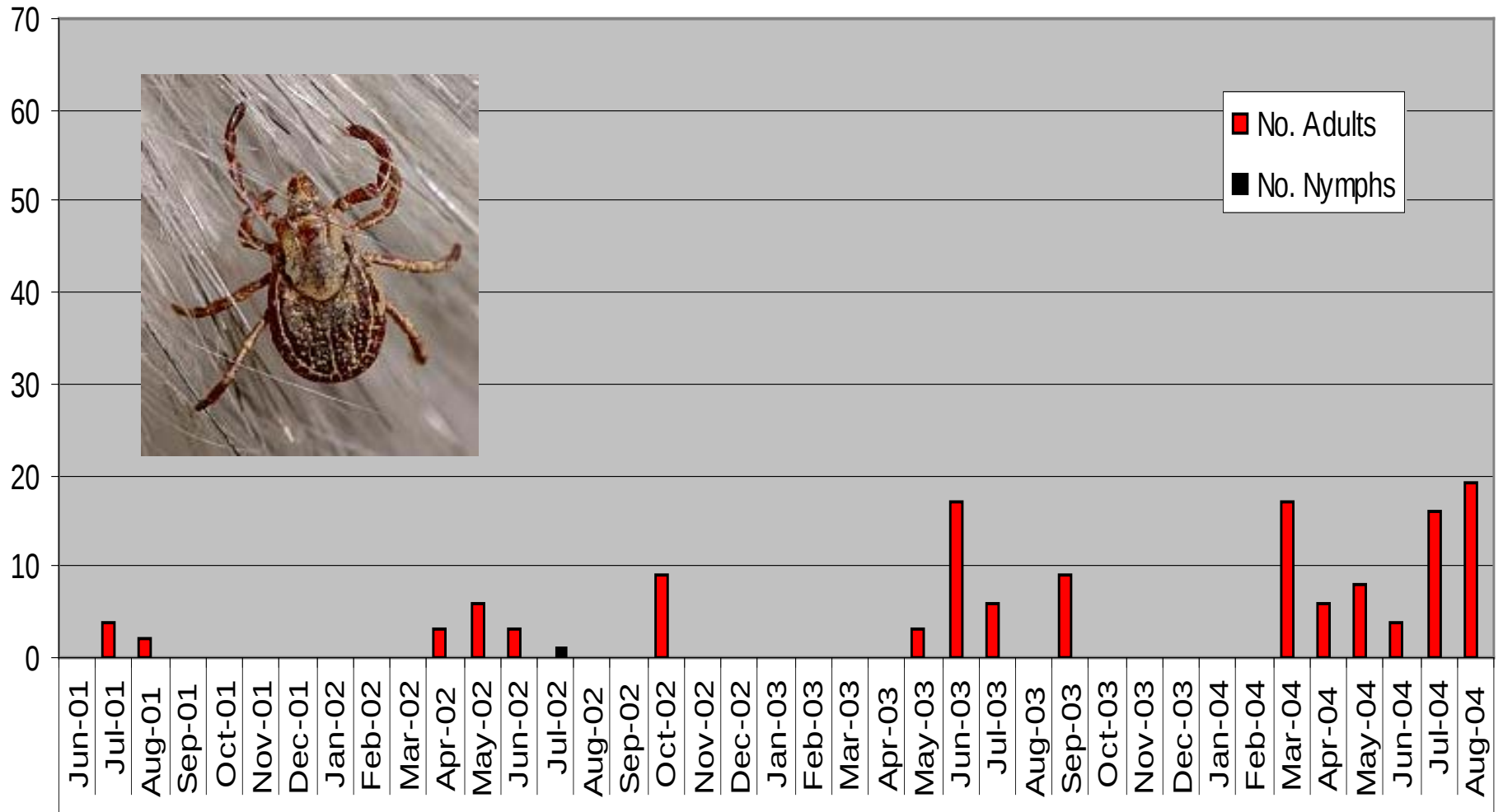


June 2001 - August 2004

Amblyomma maculatum

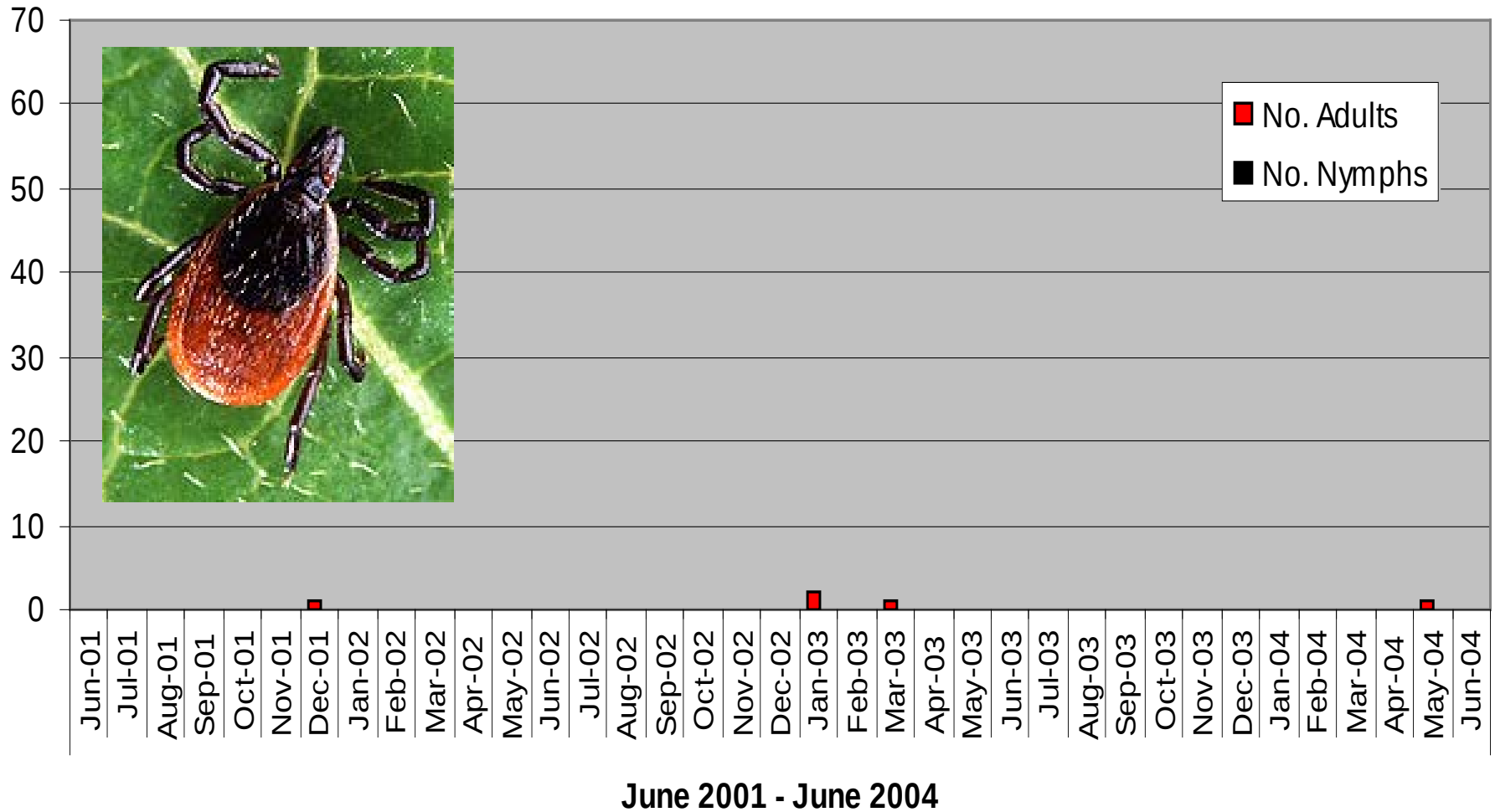


Dermacentor variabilis



June 2001 - August 2004

Ixodes scapularis





Amblyomma americanum

Lone Star Tick

Dermacentor variabilis

American Dog Tick

TICKS ARE ACTIVE YEAR-ROUND IN CLARKE COUNTY, GEORGIA

OF TICKS COLLECTED IN THIS SURVEY

59% WERE *AMBLYOMMA AMERICANUM*

37% WERE *DERMACENTOR VARIABILIS*

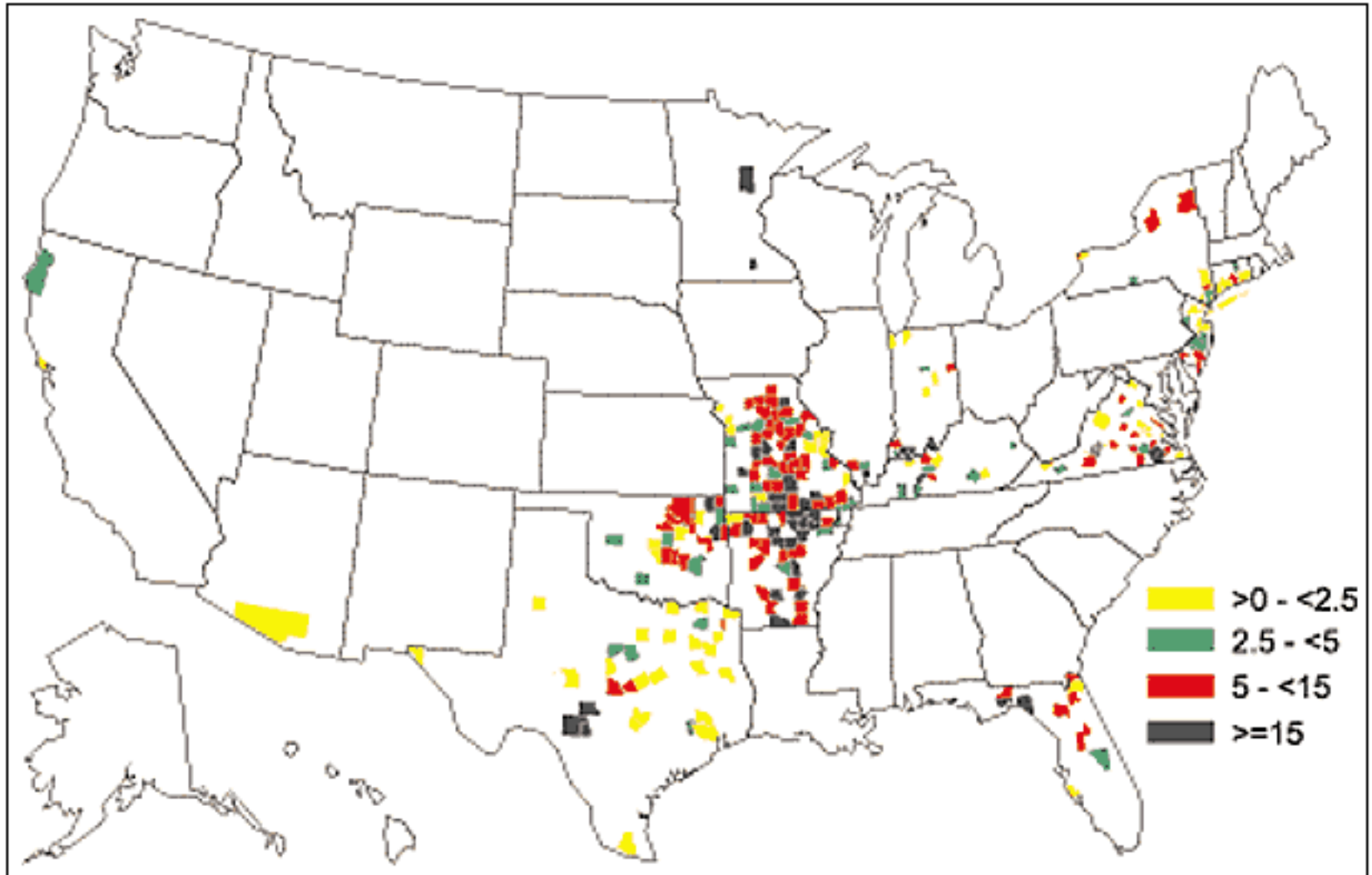
3% WERE *AMBLYOMMA MACULATUM*

1% WERE *IXODES SCAPULARIS*.

**TICK-TRANSMITTED DISEASES OF GREATEST CONCERN
IN NORTH GEORGIA ARE EHRLICHIOSES AND *BORELLIA*
LONESTARI (TRANSMITTED BY LONESTAR TICKS)**

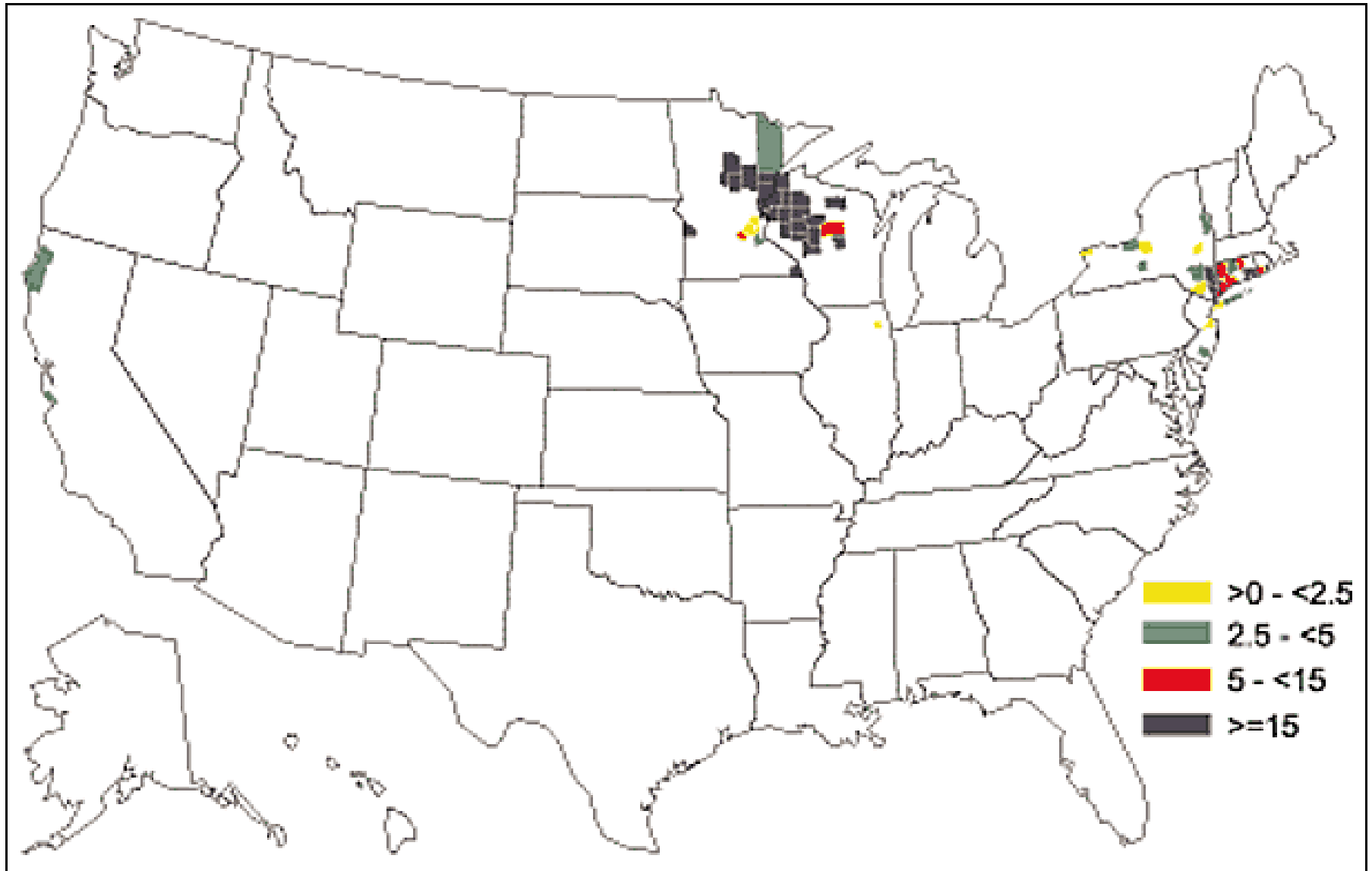
**AND ROCKY MOUNTAIN SPOTTED FEVER
(TRANSMITTED BY AMERICAN DOG TICKS).**

HUMAN MONOCYTTIC EHRLICHIOSIS



Amblyomma americanum

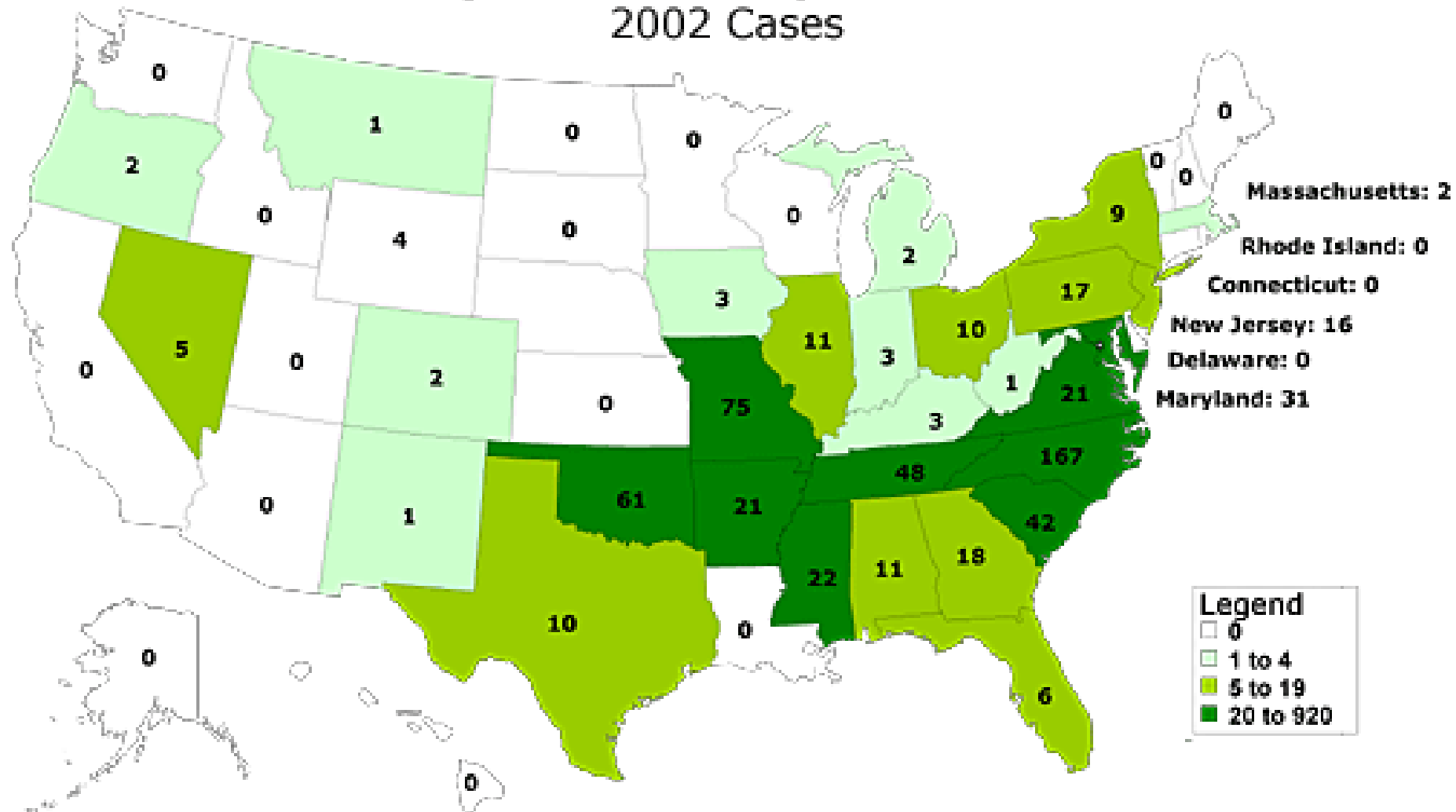
HUMAN GRANULOCYTIC ANAPLASMOSIS



Ixodes scapularis

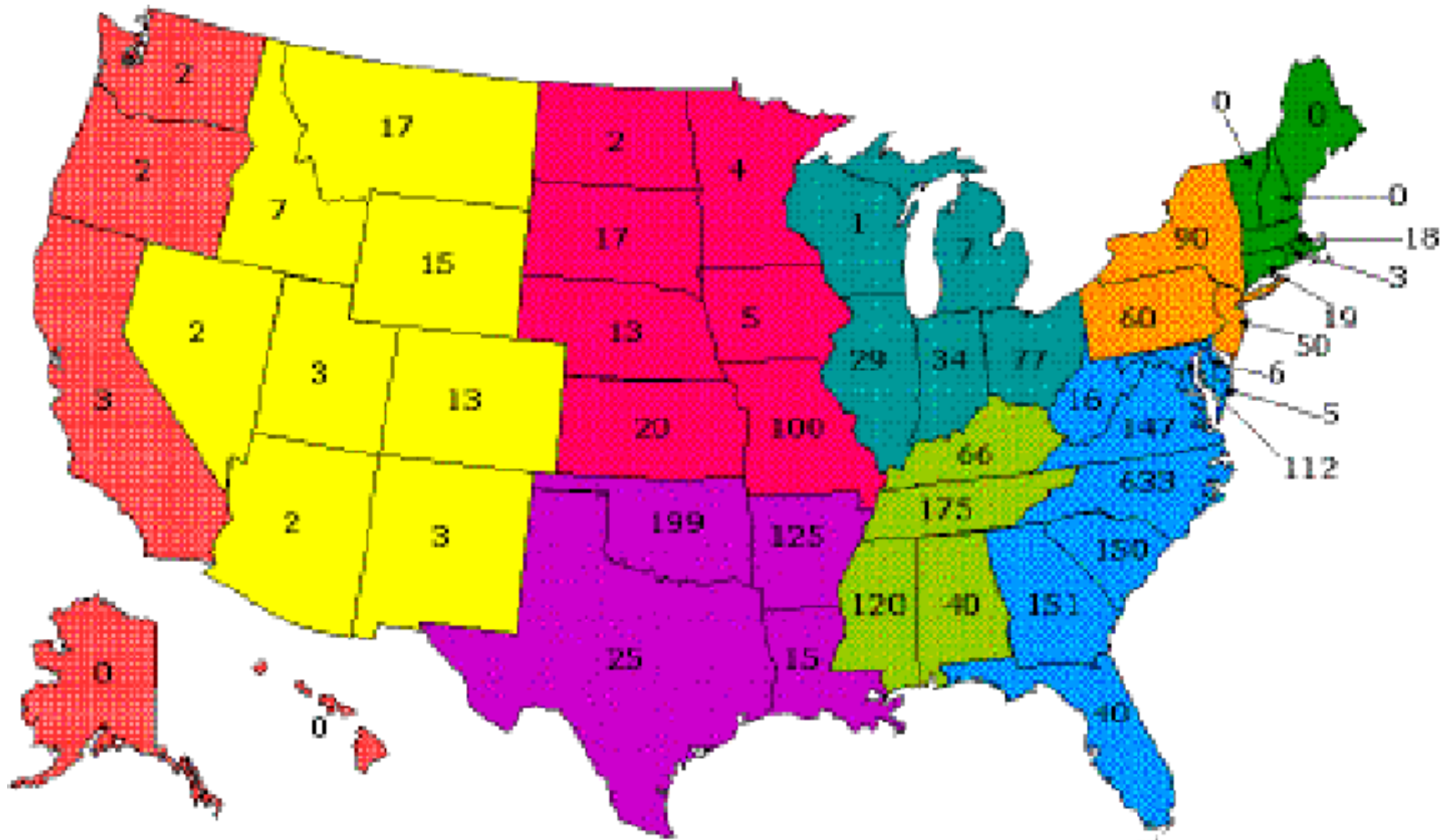
Rocky Mountain Spotted Fever

2002 Cases

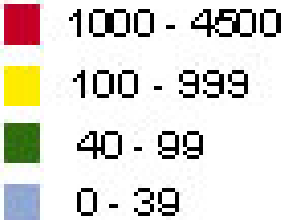


ROCKY MOUNTAIN SPOTTED FEVER

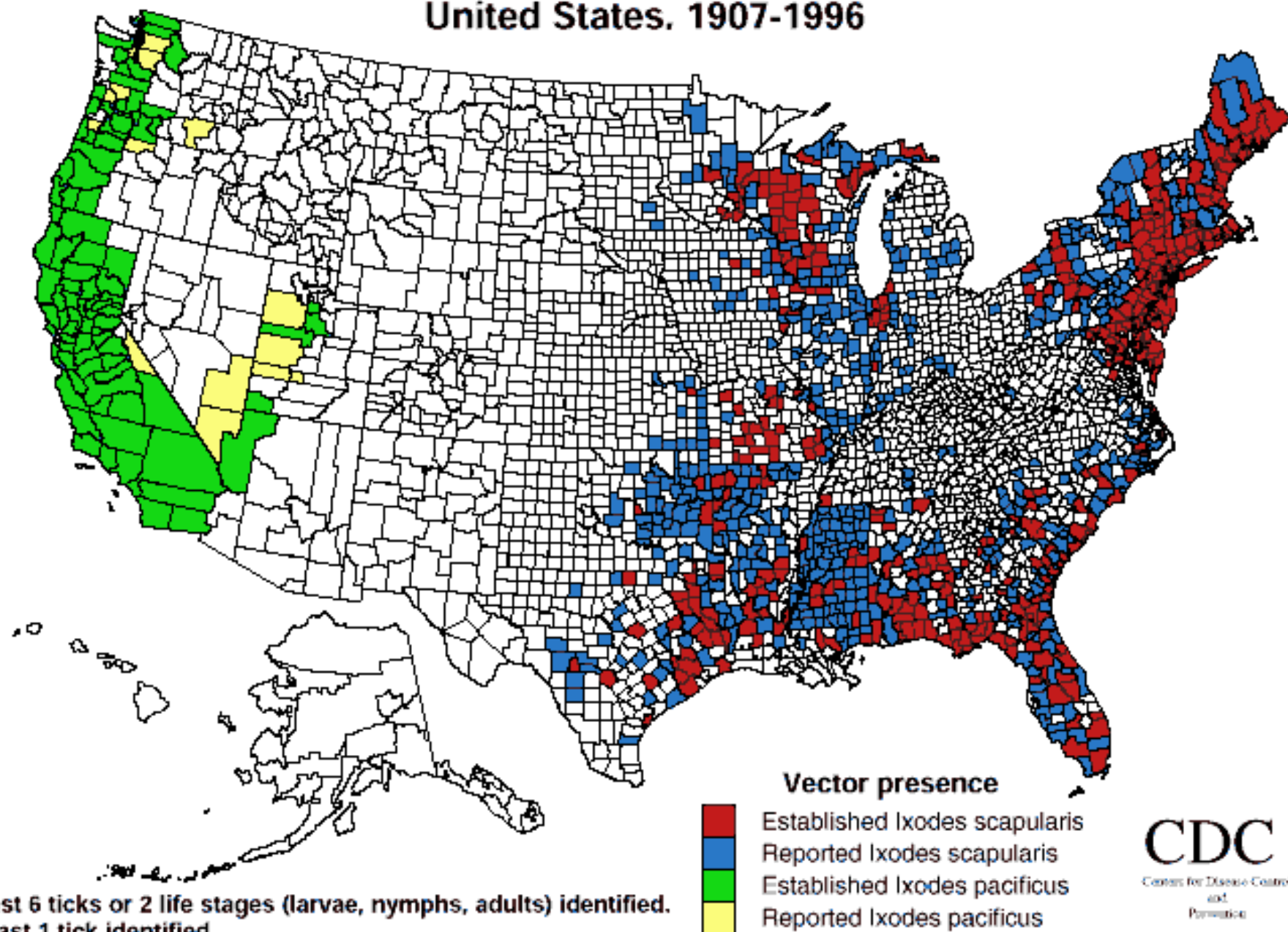
HUMAN CASES 1994-1998



Geographical Distribution of Reported Lyme Disease Cases



Established* and reported distribution of the Lyme disease vectors
Ixodes scapularis (I. dammini) and Ixodes pacificus, by county,
United States. 1907-1996**



*at least 6 ticks or 2 life stages (larvae, nymphs, adults) identified.
**at least 1 tick identified.

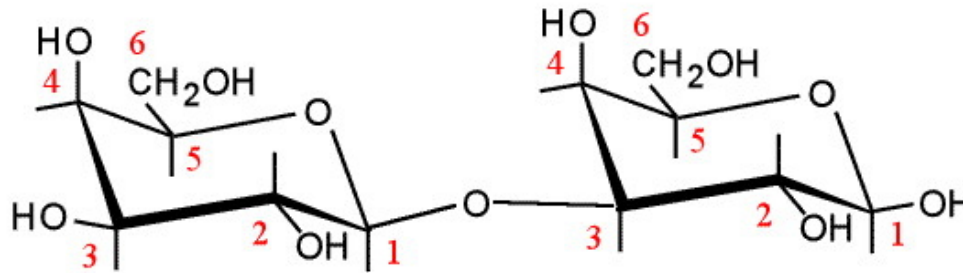


**van Nunen SA, O'Connor KS, Clarke LR, Boyle RX and Fernando SL. 2009
An association between tick bite reactions and red meat allergy in humans. Med J Aust 190: 510-511.**



Tick Bites and Red Meat Allergy

galactose- α -1,3-galactose (alpha-gal)



1. Develops later in life
2. Sugar (not protein)
3. Hives to anaphylaxis
4. Delayed hypersensitivity
5. Blood-type dependent

Commings S, et al. 2009. Delayed anaphylaxis, angioedema or urticaria after consumption of red meat in patients with IgE antibodies specific for galactose- α -1,3-galactose. *Journal of Allergy and Clinical Immunology* 123: 426-433.



External hives

Nausea, diarrhea

Anaphylaxis



***Amblyomma americanum* (Lone Star Tick)**