

TICK BITE-INDUCED RED MEAT ALLERGY

(“Alpha-Gal Syndrome”)

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GEORGIA HAS
23 TICK
SPECIES



Red Meat Allergy



**Lone Star Tick bites can lead to
Tick-bite Induced Red Meat Allergy**



External hives produce severe itching

Internal hives may result in vomiting and diarrhea

Throat swelling may be life-threatening



External hives
Nausea, diarrhea
Anaphylaxis



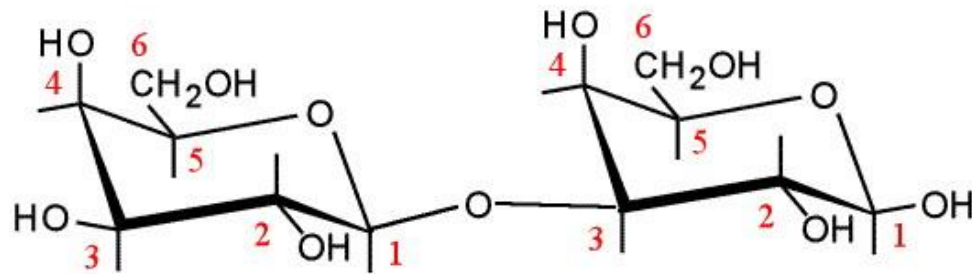
Woke 3 to 8 hours following eating red meat
Itching, hives, nausea, diarrhea
Difficulty breathing
History of tick bite (Lone Star Tick)

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 (maybe)

Lone Star Tick



Don't Let Ticks Feed on You!





Amblyomma americanum

Lone Star Tick

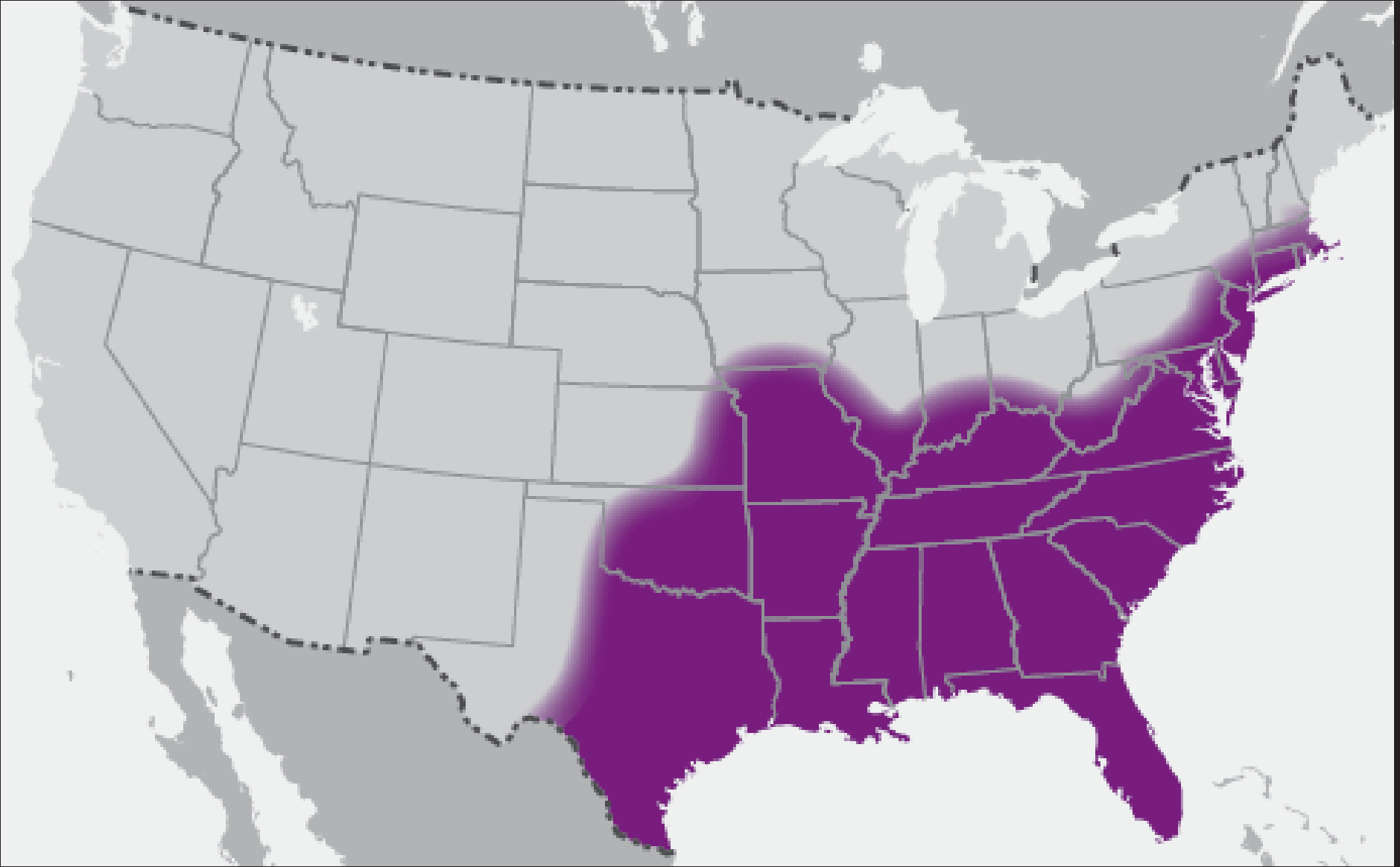
Dermacentor variabilis

American Dog Tick

Amblyomma americanum

Lone Star Tick

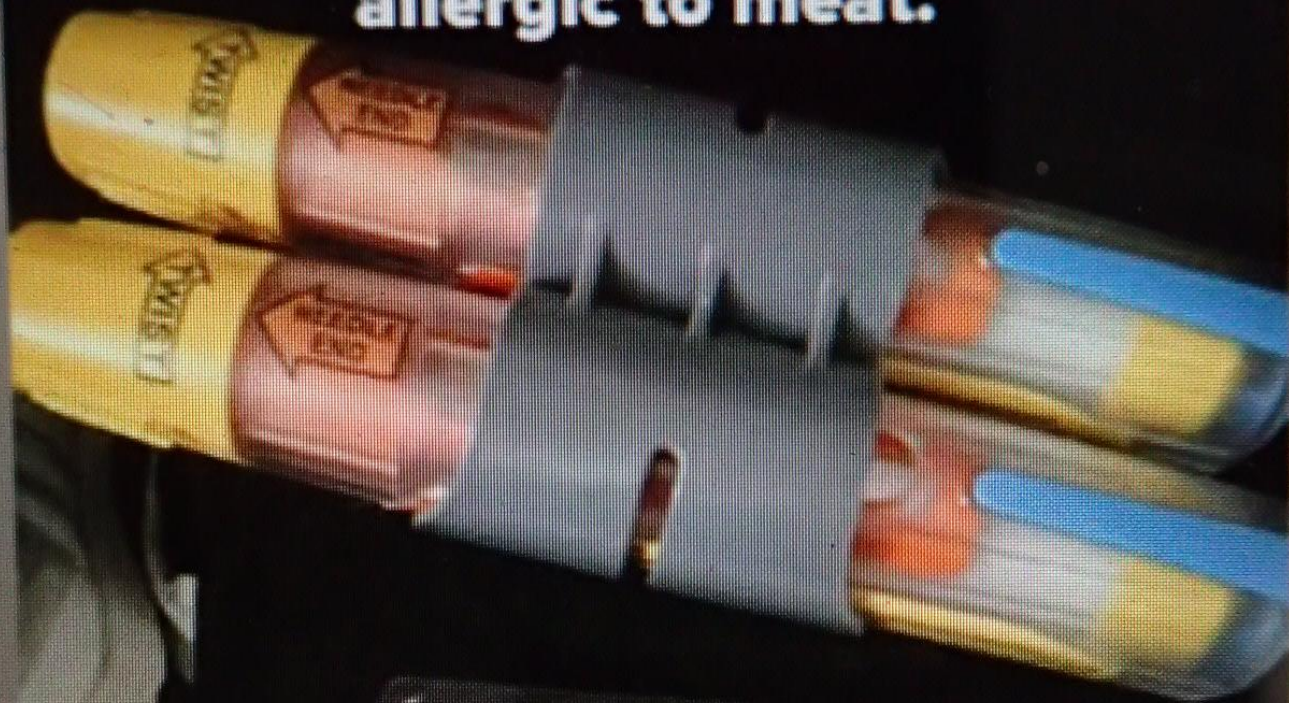




Approximate U.S. distribution of *Amblyomma americanum* (lone star tick) CDC



I was bitten by a lone star tick while hiking and now am severely allergic to meat.



FOOD ALLERGY

EDU! EATS

I have alpha-gal allergy.

I cannot eat red meat or products made from mammals, even in small amounts, or I will have a severe allergic reaction and require medical attention.

Alpha-gal can be found in:

- Beef
- Pork
- Lamb
- Venison
- Dairy
- Beef broth
- Gelatin
- Sarcosine

Does this food contain meat?



Caution: Please use clean dishes, utensils, surfaces, cookware, and toys whenever preparing or eating. Thank you!

Treatment is symptomatic
Avoidance is the key





Avoid tick bites



People with meat allergy should avoid mammalian meat



SEED TICKS



Seed Ticks (larval Lone Star Ticks)



Seed Ticks (larval Lone Star Ticks)

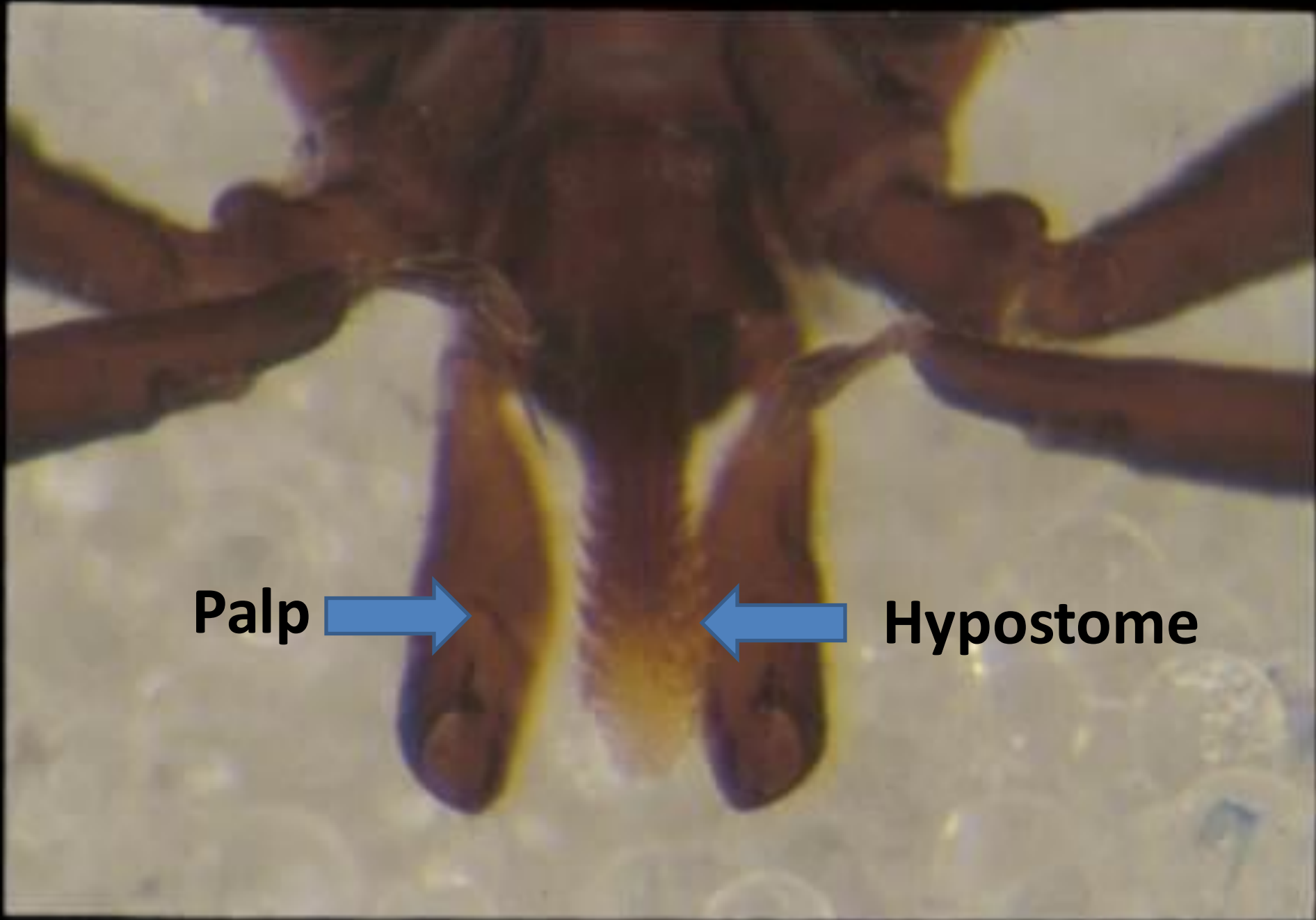




Palp



Hypostome





Protect dogs

Use according to label directions



Tick Mouthparts—Why Dead Ticks Don't Fall Off







Repellents containing DEET used on skin
Permethrin applied to clothing



Permethrin-treated clothing

insect  shield®

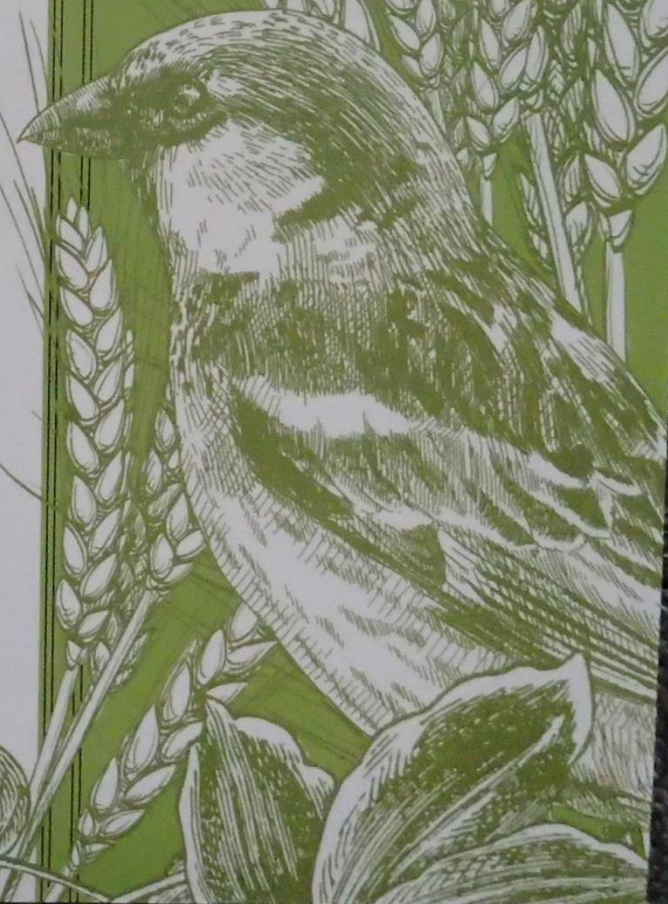


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QUESTIONS?



(Lone Star Tick – the most common tick in Georgia.)

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Itching



Itching's a pointless annoyance a while after the bug has bitten you. Harmful, even. But as a response to a bug possibly crawling on you, it's useful, **making you instinctively touch the area**, brushing the bug off.