



Spiders, Snakes, & Ticks – Oh My!



October 30, 2009

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Frequently Feared Animals & Plants



* Stinging or Biting Invertebrates



~ ants, bees, mosquitoes, chiggers, ticks, spiders, etc.

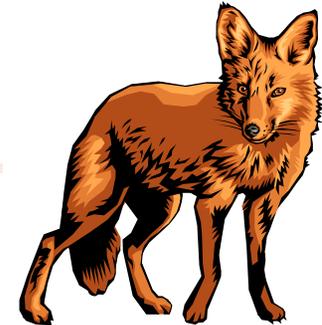
* Snakes



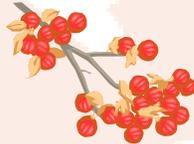
~ 41 species in Georgia (6 venomous)

* Potentially Rabid Mammals

~ raccoons, coyotes, bats, skunks, etc.



* Toxic Plants



~ poison ivy, nettles, nightshade berries

Advanced Planning is the KEY to Success



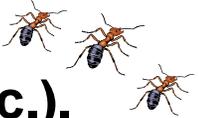
***Most ACCIDENTS are the result of POOR PLANNING.
To help prevent unpleasant incidences:***

LEARN about potentially harmful plants and animals *in your area* – species ID, natural history, first aid protocol

Give students CLEAR INSTRUCTIONS on what they will be doing and emphasize behavioral expectations.



SURVEY the outside area you will be visiting and designate boundaries for students. **Note any potential DANGERS** (ant hills, yellowjacket nests in ground, hornet nests in trees, etc.).



May want to collect blanket PERMISSION SLIPS before taking kids outside during the year. **Include a HEALTH FORM.**

Brown Recluse



Both sexes ½”

SPIDERS

Black Widow



Females ½”, Males smaller

Symptoms: Hemotoxin

Bite feels painful and itchy.

Bite area later begins to swell profusely; skin breaks open and fatty areas turn black.



Nausea, vomiting, fever, rashes, & muscle/joint pain are possible.

Apply cool compress to minimize swelling and seek medical attention immediately.

Symptoms: Neurotoxin

May see 1, 2, or no bite marks; could be painful or go unnoticed.



Dull muscle pain spreads from bite area to the rest of the body.

Later may experience fatigue, headache, nausea, vomiting, insomnia, muscle weakness + cramps/tremors.

OTHER SPIDERS THAT MAY BITE

Orb Weavers



Golden Silk Spider (Banana Spider)

Wolf Spiders



Black and Yellow Argiope

SCORPIONS

2 species native to Georgia

Southern Devil



Striped Scorpion

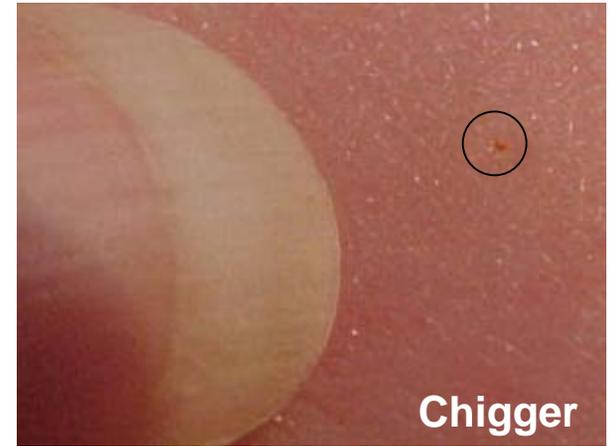


Both species are less than 2" long.

Sting may be painful but typically is harmless ~ may require medical attention if person has severe bite/sting allergies.

Of 90 species in US, only the Bark Scorpion in the Southwest has venom potent enough to produce severe symptoms.

TICKS & CHIGGERS



To prevent unpleasant encounters:

Wear long pants, preferably tucked into socks.

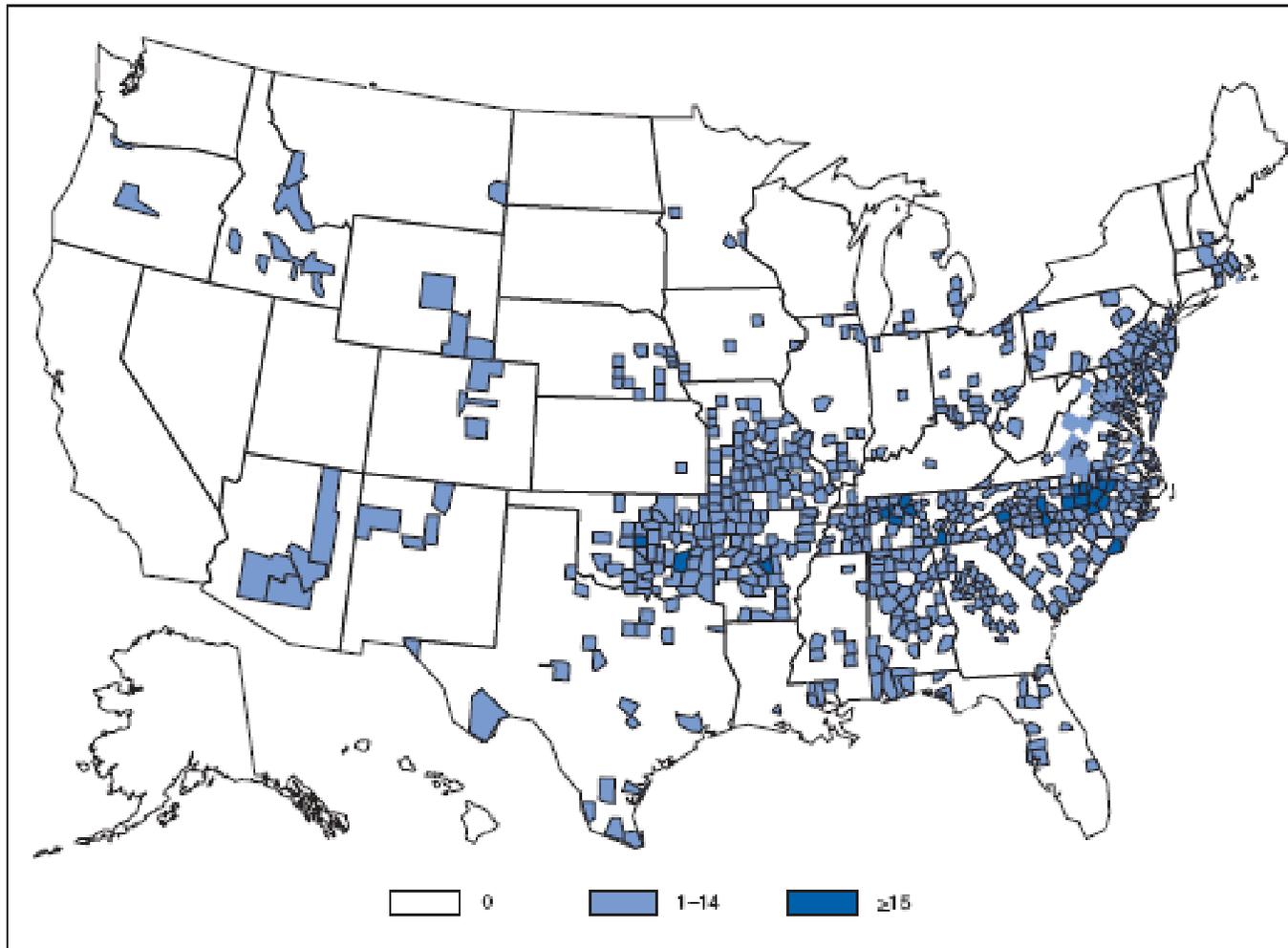
Wear light-colored, tightly woven clothes.

Stay on trails, avoiding brush and leaf debris if possible.

Use repellent sprays containing Deet (other ingredients may work too).

Don't use Permethrin (Permanone) on skin!

ROCKY MOUNTAIN SPOTTED FEVER. Number of reported cases, by county — United States, 2006



American Dog Ticks
(female top, male bottom)

Dog Tick (east) and Wood Tick (west) are primary vectors of the *Rickettsia* bacteria.

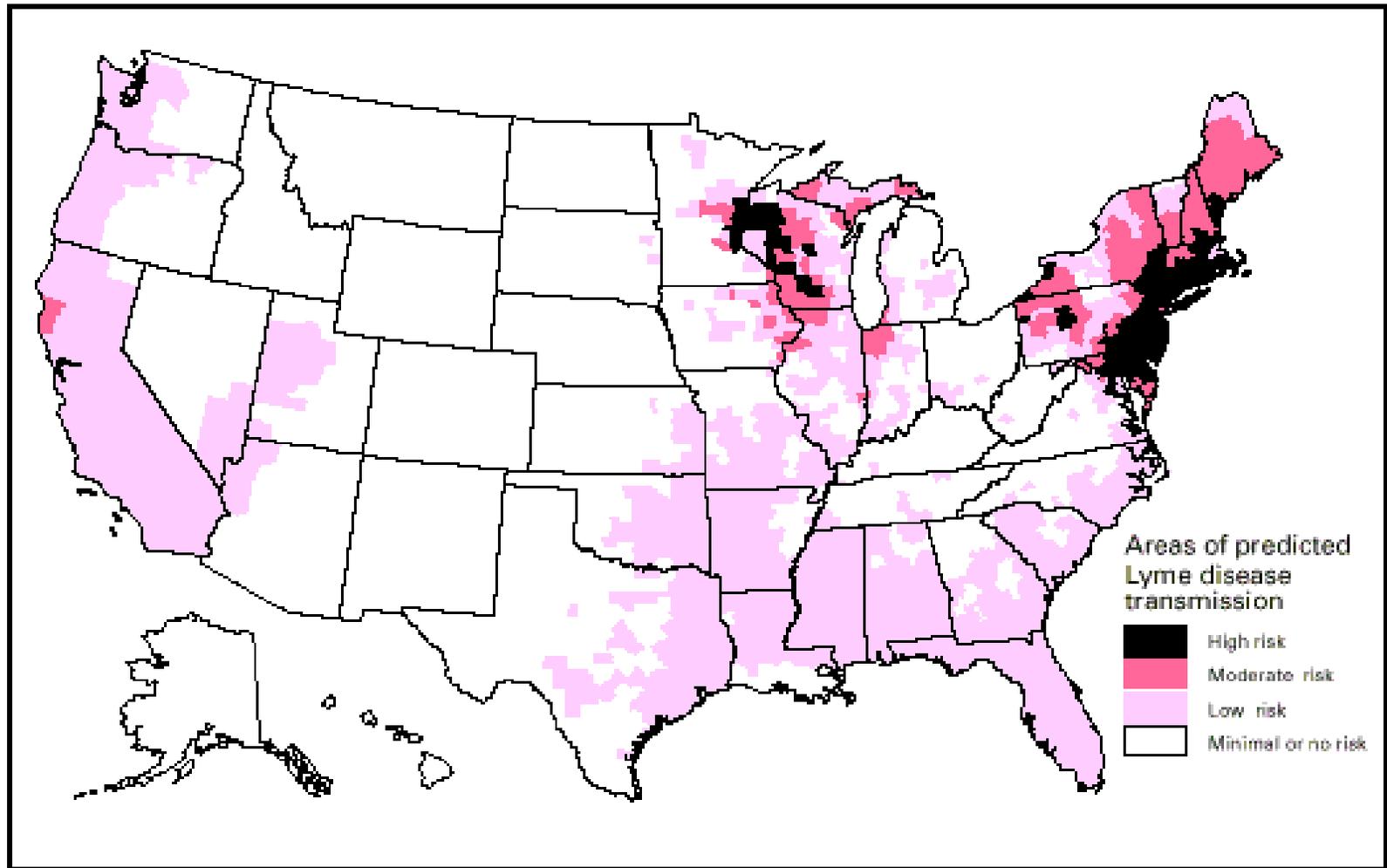
Symptoms (about a week after bite): fever, nausea, vomiting, muscle pain, loss of appetite, severe headache. Later may develop rash, joint pain, abdominal pain, and diarrhea.

Rocky Mountain spotted fever (RMSF) is caused by *Rickettsia rickettsii*. Since 2000, the number of reported cases of RMSF has increased during all but a single year. RMSF is reported throughout much of the United States, reflecting the ranges of the primary tick vectors responsible for transmission. Local and regional areas of new or increased reporting and higher incidence are evident in multiple states, including Idaho, Nebraska, North Carolina, and Tennessee.

RMSF mostly occurs from April – September .



National Lyme disease risk map with four categories of risk



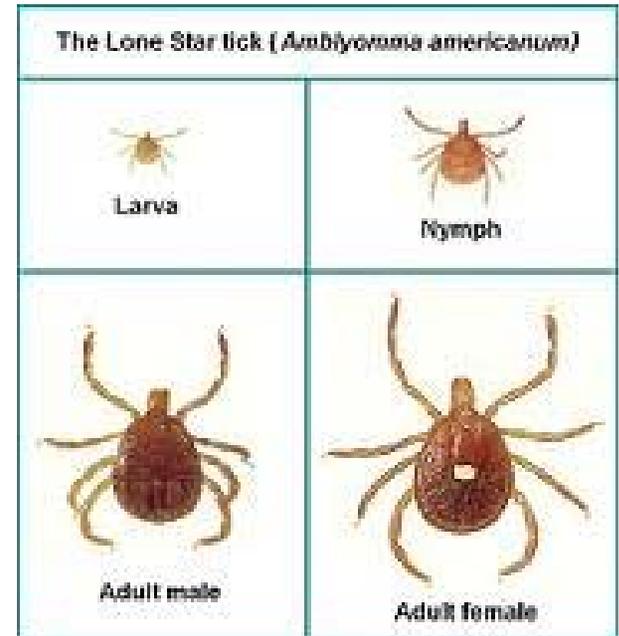
Black-legged/Deer Tick transmits the *Borrelia* bacteria.

Symptoms: bullseye skin rash (although 1 in 4 patients never develop a rash). May later develop heart and nervous system complications & arthritis.



STARI (southern tick-associated rash illness)

Transmitted by Lonestar Ticks.



Flu-like symptoms and a rash.

Treated with antibiotics (like RMSF & Lyme's Disease).

BITING INSECTS

Puncture from the bite and saliva used in feeding can cause pain, swelling, and itching.
Only females bite (blood meal allows eggs to develop and reproduction to occur).
Otherwise, adults eat pollen, nectar, & plant sap.

MOSQUITOES

West Nile Virus, Equine encephalitis



HORSE/DEER FLIES

Tularemia, Anthrax (very rare)



BITING MIDGES

(“no-see-ums”)



Adults are less than 1/8” long.

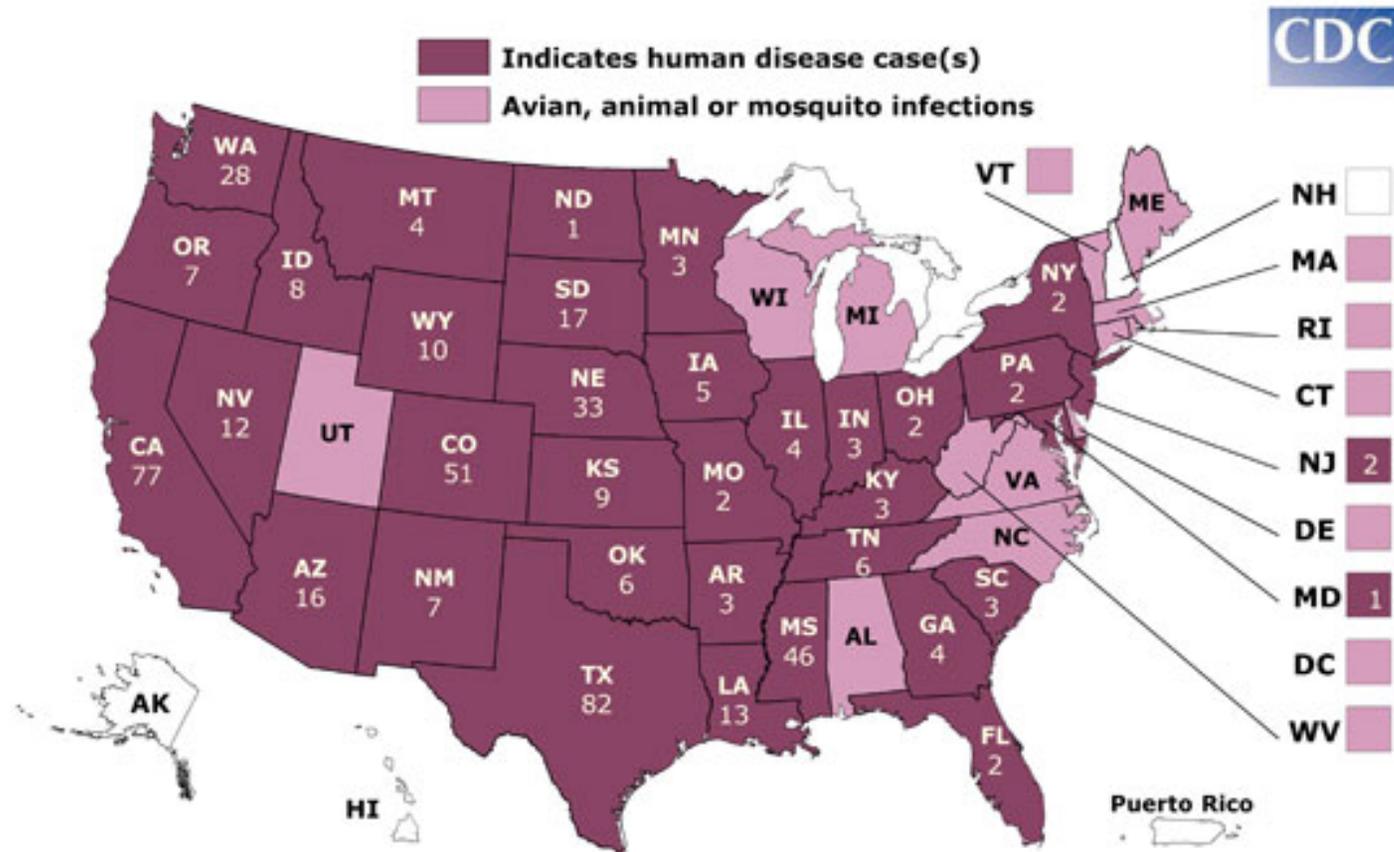
BLACK FLIES

(“buffalo gnats”)



Transmits River Disease (parasitic worm) outside US, mainly in Africa

WEST NILE VIRUS in 2009



Cases flare up in summer & continue into the fall. More common in people > 50 years old. Humans are “dead-end” hosts (don’t transfer virus through casual contact).

Symptoms: About 80% of people infect won’t show any symptoms. Others may experience flu-like symptoms for up to 2 weeks. About 1 in 150 will develop severe illness.

*If you find a dead bird, call your local health department for instructions.
Don’t handle the bird with your bare hands!*

STINGING INSECTS

Order Hymenoptera: females inject venom from tip of the abdomen (males don't have stingers).

ANTS



2 species of imported fire ants in GA ("red" and "black" + hybrids)

Red Velvet Ant ("Cow Killer")



actually a type of wasp (not an ant)

BEEES

- generally have hairy bodies
- eat pollen and nectar
- sting once and die (except bumblebees)

European Honeybee



Carpenter Bee



Rusty-patched Bumblebee

WASPS

- generally have smooth bodies
- eat insects and other animals
- can sting repeatedly (except cuckoo wasps)

Eastern Yellowjacket



Paper Wasp



Cuckoo Wasp (lacks stinger)



HORNETS



European Hornet

Baldfaced Hornet and Nest



STINGING INSECTS: Prevention

Survey surroundings by sight and sound.

Don't wear strong perfumes, hairspray, lotions, cosmetics, etc.

Wear shoes, long pants, and a hat (cover up hair/"fur").

Don't wear brightly-colored clothes,
especially with floral patterns (white is best).

Be careful with food.



If a bee/wasp/etc. approaches you or lands on you:

Stay still (rapid movement scares insect & encourages stinging).

Blow gently on insect (encourages it to leave without scaring it).

STINGING INSECTS: Symptoms

Potential results of a bite or sting:

1. Pain, swelling, and stiffness that may only last a few minutes or may continue for a few days.
2. Swelling may involve an entire arm or leg for several days; may require hospitalization.
3. Anaphylactic shock (immune system goes “wrong”).
Within a few minutes of a sting, may develop:
 - a. nausea and chest constriction
 - b. difficulty breathing and swallowing
 - c. drop in blood pressure, blue skin (due to lack of oxygen), and unconsciousness or death in extreme cases.

Bee stinger is barbed and is left behind in skin.
Scrape credit card across skin to remove.



CATERPILLARS

(March – September)

Some moth species' larvae have stiff hairs or spines that sting upon contact.

Reactions are generally mild (redness & itching) but may be severe in some people (swelling, severe pain, nausea ~ could require hospitalization).



Saddleback Caterpillar



Puss Caterpillar



Whitemarked Tussock Moth



Hag Moth Caterpillar
(Monkey Slug)



Io Moth Caterpillar

Gently apply tape and pull off skin to remove spines. Cold compresses may alleviate pain and swelling, as well as over-the-counter pain medications and hydrocortisone creams. Consult a doctor if symptoms persist for more than a few days.

<http://www.forestpests.org/gfcbook/stingingcat.html>

<http://georgiafaces.caes.uga.edu/storypage.cfm?storyid=2325>

WHEELBUGS



A member of the Assassin Bug family. Can inflict a painful bite with its beak. Typical reaction is pain for about 10-15 minutes with some swelling and itching. However, symptoms may be more severe in sensitive individuals.

POTENTIALLY RABID MAMMALS

1. Raccoon
2. Skunk
3. Fox
4. Bat
5. Domestic Cat
6. Domestic Dog
7. Bobcat
8. Cow
9. Horse
10. Coyote



Human cases of rabies may be fatal but are **EXTREMELY** rare.

Rabies can **ONLY** be transmitted by direct contact with saliva or central nervous system tissue.



Source: Georgia Epidemiology Report
<http://health.state.ga.us/pdfs/epi/gers/Sept07GER.pdf>

Be Cautious with these PLANTS

Poison Ivy ~ leaves of 3, let it be!



Urushiol is found in all parts of this vine. Wash off immediately after contact.



Stinging Nettle

Remove stiff, stinging hairs with tape. May result in rash similar to that of poison ivy.



Virginia Creeper has 5 leaflets and is not harmful.



Some plants that produce TOXIC BERRIES



VENOMOUS SNAKES

Of 41 species in Georgia, only 6 are venomous
(and not all of those commonly live where you live)



NON-VENOMOUS vs. VENOMOUS TRAITS (exceptions exist!)

NON-VENOMOUS

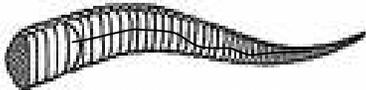
Appear leaner (long/skinny)

Rounded head (EXCEPT for water snakes)

Round pupils



Double row of belly scales past vent



VENOMOUS

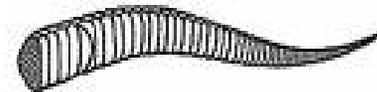


Appear chunkier (shorter/fatter)

Triangular head (except coral snake)

Vertical pupils (except coral snake)

Single row of belly scales past vent



**The more you know about critters
and the roles they play, the less you will
fear them... and the more you will
appreciate and enjoy the great outdoors!**

