

SPIDER BITES

SPIDER BIOLOGY

SPIDER IDENTIFICATION

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SPIDER BITES

- All spiders have venom glands containing venom
- All spiders are strictly predators of insects and other arthropods
- Spiders will also bite as a means of defense

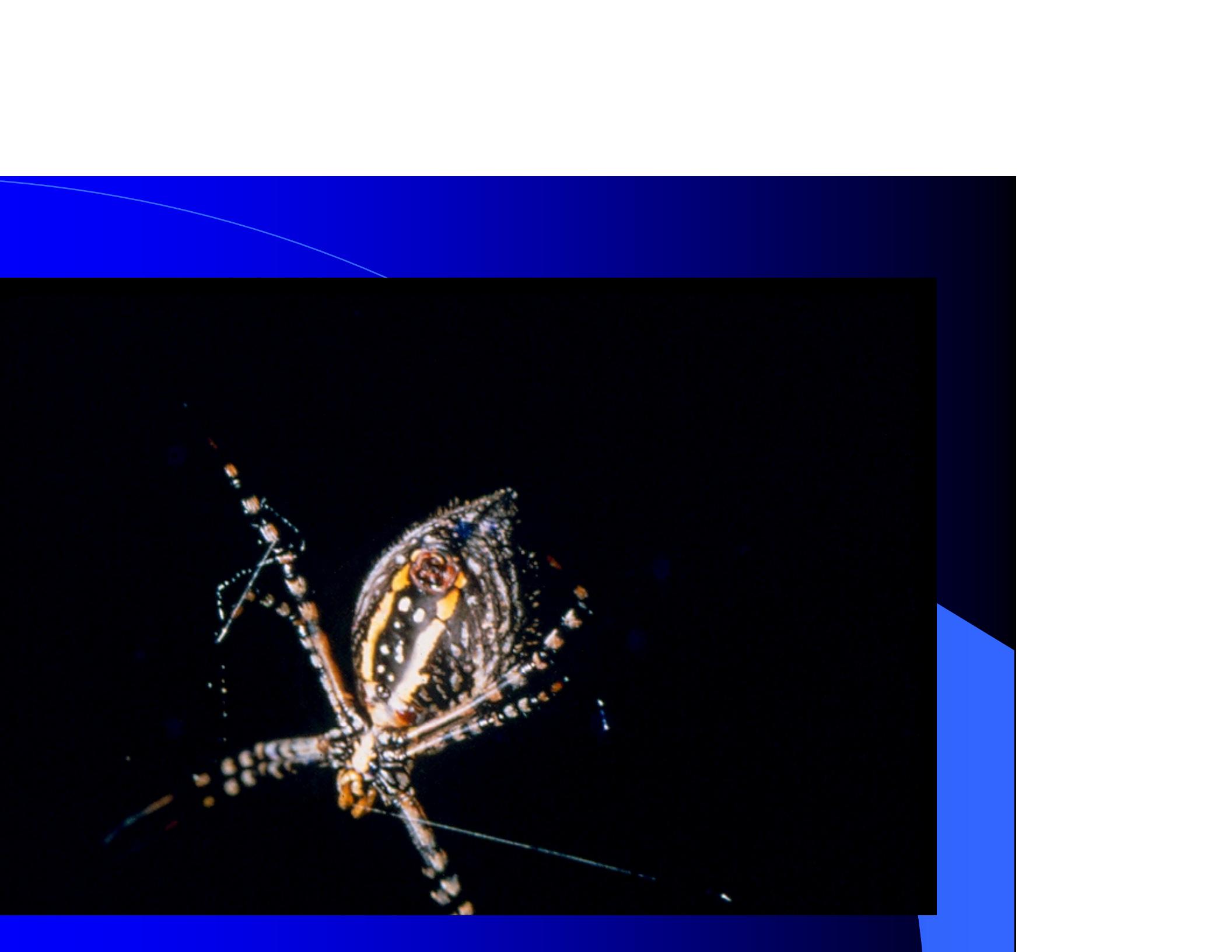
OTHER CAUSES MISDIAGNOSED AS SPIDER BITES

- Other arthropods can cause envenomization
- Insect bites to extremely sensitive people
- Natural plant chemicals
- People hypersensitive to naturally occurring and man made chemicals
- Bacterial staphylococcus (MRSA) infection, etc.

SPIDER BITES

General Information

- Male spiders of most species tend to be more dangerous as they are more venomous
- People vary in their sensitivity to spider venoms
- Spiders are poor venom injectors and may take several bite attempts to inject a significant amount of venom





















SPIDER IDENTIFICATION

- Important for proper diagnosis of a spider bite
- Based on chelicerae (*fangs*), eye count and arrangement, and leg and genitalia characters
- Colors and patterns of captured spiders are not positive characteristics for identification

SPIDER VENOMS

NEUROTOXIC VENOMS - LACTRODECTISM

- Associated with Black Widow Spiders

CYTOTOXIC VENOMS - LOXOSCELISM

-Associated with Brown Recluse Spiders

IF BITTEN BY A SPIDER...

- ★ Remain Calm
- ★ Collect Spider, if possible, for positive identification
- ★ Seek medical care if concerned or exhibiting adverse symptoms

SYMPTOMS FOR NEUROTOXIC VENOMS

Bite feels like a pin prick or is not even felt

There may be localized swelling, redness and two red spots

Intense pain in one to three hours, continuing up to 2 days

Symptoms include abdominal pains, increased blood pressure, nausea, profuse sweating, leg cramps, tremors, loss of muscle tone and vomiting

Breathing difficulties and unconsciousness





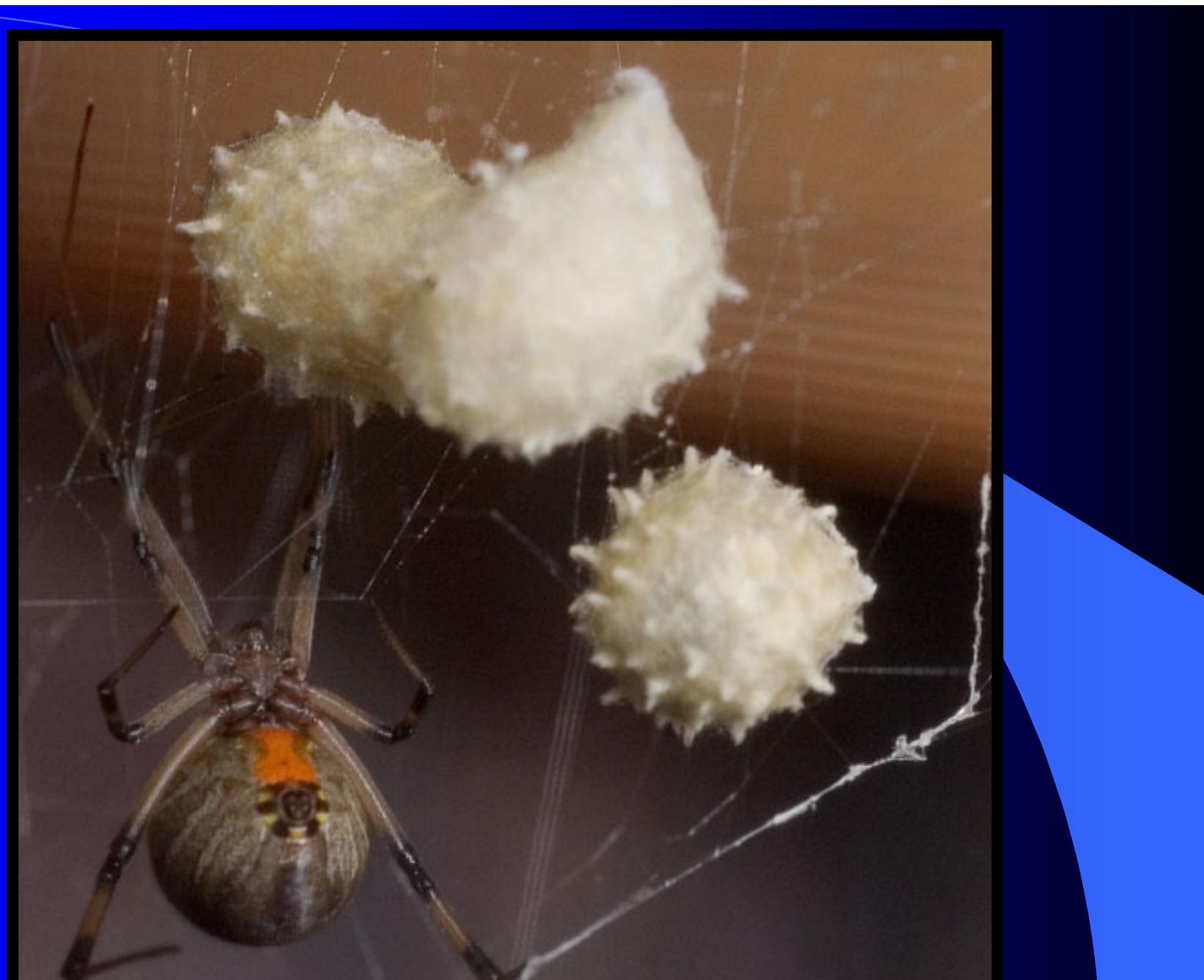






**Black Widow Spider web
with 1 female & 2 males**





FIRST AID FOR NEUROTOXIC VENOMS

- ① Relieve local swelling and pain by applying an ice pack or alcohol to the bite area
- ① Apply a mild antiseptic to prevent infection
- ① Physician may administer specific antivenom
- ⚡ Complete Rest
- ⚡ Mortality in less than 1% of cases

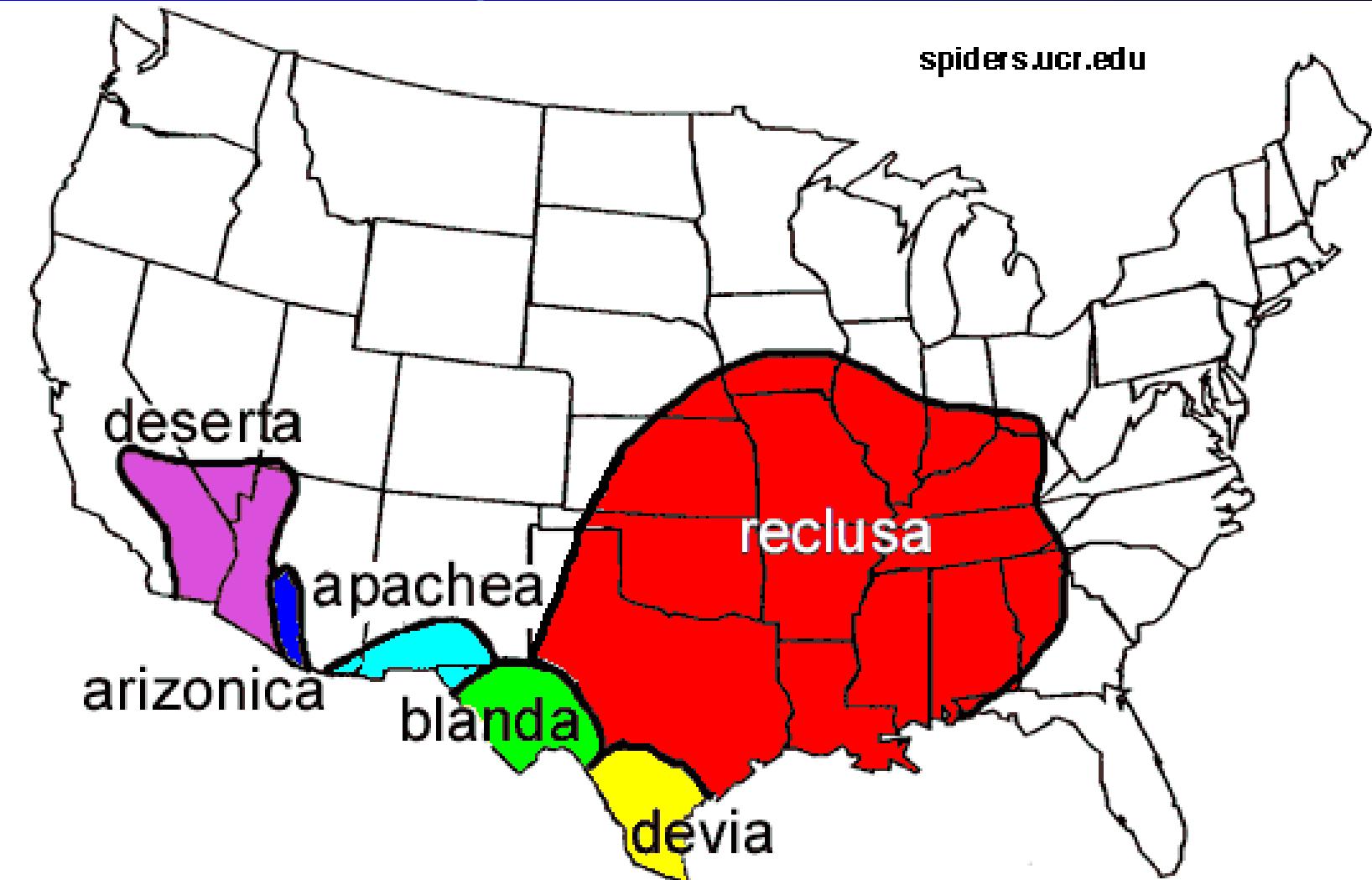
BITE SYMPTOMS FOR CYTOTOXIC VENOMS

- Initial bite is painless or has a slight stinging sensation
- Bites may cause intense pain later
- Systemic reaction in 12 to 24 hours may occur characterized by restlessness, fever, chills, nausea, weakness and joint pain
- The second day, there is a small blister surrounded by a large congested swollen area

BITE SYMPTOMS FOR CYTOTOXIC VENOMS

(continued...)

- Affected tissue is usually killed, exposing underlying tissue
- Ulceration develops and a well defined eschar appears -
- The edges of the wound thicken, while the exposed center fills with dense scar tissue
- Healing may take 8 to 12 weeks
- Sometimes there is liver and/or kidney



Range of recluse (genus *Loxosceles*) spiders
in the United States







FIRST AID FOR CYTOTOXIC VENOMS

- ① Relieve local swelling and pain by applying an ice pack or alcohol to bite area
- ① Apply mild antiseptic to prevent infection
- ① No specific antivenom is available in the U.S.
- ⚡ Physicians usually provide supportive therapeutic treatment



VIOLIN SPIDER IDENTIFICATION

- 6 eyes in three pairs (*most spiders have 8 eyes*)
- Only one color on abdomen
- Only thin hairs on legs (*no conspicuous spines on legs*)
- Only one color on legs
- Body only 3/8 inch long

NOTE:

The NATIVE DESERT RECLUSE
*does not have pigment in violin
area ...only hairs!*

AND...

CHECK OUT THIS EXCELLENT SPIDER
WEBSITE...

<http://spiders.ucr.edu>

SPIDER VENOM RESEARCH

- A single spider species venom may contain a hundred or more toxins
- Antivenoms must be specific to a spider species
- Research money is not readily available for spider venom research because spiders pose an extremely low risk to humans







