

# Biology of *Centruroides sculpturatus*: Justin O. Schmidt







*Pseudouroctonus  
williamsi*



*Diplocentrus  
peloncillensis*



*Serradigitus allredi*

# SCORPIONS



**Lots of species – over 100 in the US**

**In Arizona – 57**

**MEDICALLY DANGEROUS: only one – the  
bark scorpion, *Centruroides exilicauda***



# Biology of Scorpions

**Predators**

**Nocturnal**

**Long lived**

**Low reproductive  
potential**

**Can sting**

**Very clean and do not  
carry disease**

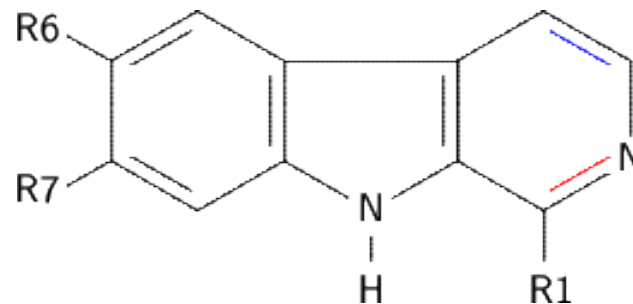


# Unique feature of Scorpions



**They fluoresce under UV**

**This is caused by  $\beta$ -carboline in the integument of the scorpion**



# BARK SCORPIONS

*(Centruroides exilicauda)*



Jillian Cowles photo



# BIOLOGY OF *Centruroides*

Strictly nocturnal

Live in or near rocky areas

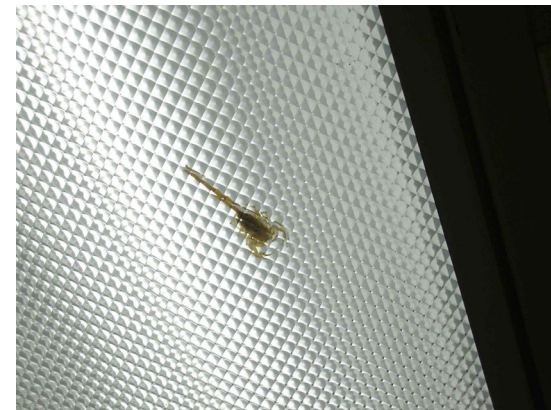
Or near riparian areas, often under  
bark of dead trees (hence,  
the name “bark scorpion”)

The only species that is gregarious in retreats

Excellent climbers – in fact,  
the only scorpion species  
that climbs walls readily

Desert areas of Arizona, California,

New Mexico, Nevada, Utah, and adjoining Mexico





# DISTINGUISHING FEATURES

Yellow or light colored

Thin and delicate looking

Long tail and pedipalp arms

Thin, weak pinchers (chelae or “hands”)





# FEATURES NOT OF *Centruroides*

Dark (brown or black instead of yellow)

“Sturdy” looking

> 3 Inches



# FEATURES NOT OF *Centruroides*

“Sturdy” looking, with robust claws



*Diplocentrus*



*Vaejovis*



*Centruroides*



# FEATURES NOT OF *Centruroides*

Tubercle or tooth at base of stinger

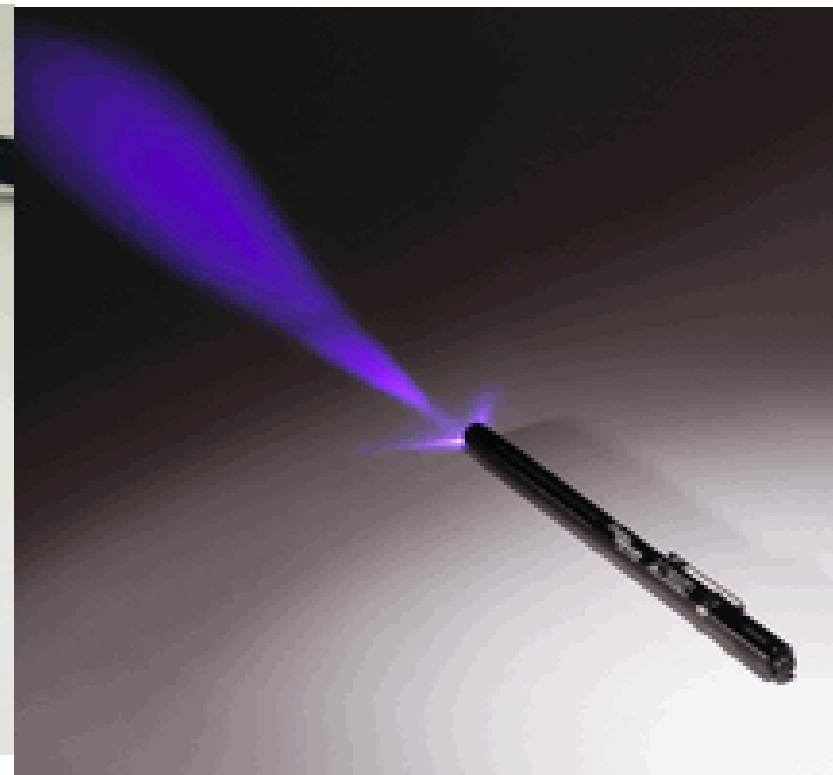




# The Ace in the Hole for Detecting Scorpions



**LED Blacklight – UV 380 nm**







# STINGS OF *Centruroides*

Not aggressive but sting if pinched

Immediate sharp pain, little swelling or redness

Systemic: Progressive restlessness

Profuse sweating

Muscle, nerve, and abdominal pain

Nausea

Rapid heart beat

Respiratory depression

Life threatening only for very small children and frail elderly people (antivenin now available)



# Why insecticides do not work well on bark scorpions

Very smooth cuticle

Powders do not stick well

Do not move around much

Incredibly low metabolism

Often require several days to kill

Almost require spraying directly ON the scorpion

(Why bother, try a boot!)

