

Is it venomous?

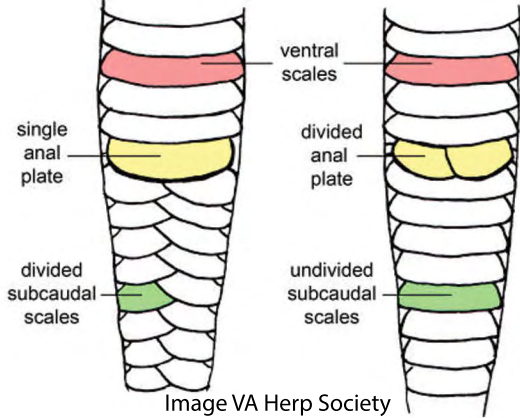


Image VA Herp Society

People are often concerned that the shed skin they have found came from a venomous snake. In Florida, all medically significant snakes except Coralsnakes *Micrurus fulvius* have both undivided subcaudal scales and undivided (single) anal plates.

So many Snakes!

How do I narrow it down?

	Smooth Scales	Keeled Scales
Undivided		<i>Pituophis</i>
	<i>Cemophora</i>	<i>Thamnophis</i>
	<i>Drymarchon</i>	<i>Agkistrodon</i>
	<i>Lampropeltis</i>	<i>Crotalus</i>
Anal Plate Divided		<i>Sistrurus</i>
	<i>Coluber</i>	<i>Heterodon</i>
	<i>Diadophis</i>	<i>Nerodia</i>
	<i>Farancia (sometimes single)</i>	<i>Ophedrys</i>
	<i>Rhadinaea</i>	<i>Pantherophis</i>
	<i>Liodytes pygaea</i>	All other <i>Liodytes</i>
	<i>Tantilla</i>	<i>Storeria</i>
<i>Virginia</i>	<i>Haldea</i>	
	<i>Micrurus (sometimes single)</i>	

Morphological differences between species can be subtle, and shed skins are often damaged.

The quickest way to narrow down what you found is by determining if the shed you found has smooth or keeled scales, and if the anal plate is divided or single. Use the cheat sheet above to quickly determine which group and the fold-out table to help further narrow it down. Comprehensive diagnostic scale counts can be found in Ernst and Ernst 2003.

Snakes and Shedding

Snakes are secretive animals that often live among us unseen, providing useful services that benefit humans and the environments in which we live. Most snakes are harmless and beneficial - even those that use venom to secure their prey only bite when startled or otherwise provoked, and control pest species far more impactful to humans. Often the only clues we have to their existence is finding the shed skins they leave behind.

Snakes undergo a process called shedding or 'ecdysis' where old skin is shed in favor of a new, fresh layer of scales. During this process the old skin becomes dull, the belly may turn pink and the eyes turn mostly opaque blue due to a build-up of fluid between the old and new spectacle. A few days before the skin is physically sloughed, the eyes become clear. When it comes time to shed, the snake will push or rub up against objects in the environment to hook the old skin and unroll it not unlike taking off a tube sock.

Resources used in this guide and recommended reading:

Snakes of the United States and Canada. Ernst and Ernst, 2003. ISBN-13: 978-1588340191
 Amphibians and Reptiles of Florida. Krysko, Enge and Moler, 2019. ISBN-13: 978-1683400448
 Color Patterns and Scales - Florida Museum: www.floridamuseum.ufl.edu/herpetology/fl-snakes/color-pattern/
 Reptile Database: reptile-database.reptarium.cz
 SSAR Common Names Database: ssarherps.org/cndb
 Identifying Snake Sheds. Andrew Durso: snakesare-long.blogspot.com/2012/11/identifying-snake-sheds-part-iii.html

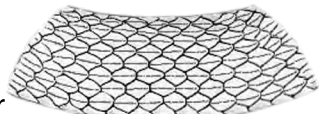
Florida Master Naturalist Project
 First Revision 25 September 2019
 Walton County Coastal Systems
 Alexander D. McKelvy

Shed Snake Skins of Florida



Keels and Patterns

Keels are raised lines on the surface of scales which usually make snakes look more dull or drab. Smooth scales reflect light better than keels and appear glossy or iridescent. Strength of keel varies among species, and not all scale rows may have keels.



Keeled Scales



Smooth Scales

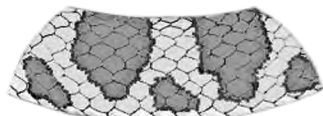


Rings



Crossbands

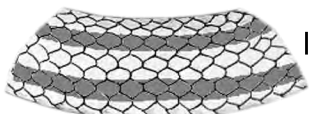
Large, squarish or irregular markings are called blotches. Large, connected blotches may resemble crossbands. Spots are small marks, usually lacking the dark border seen in blotches.



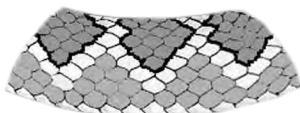
Blotches



Spots



Stripes

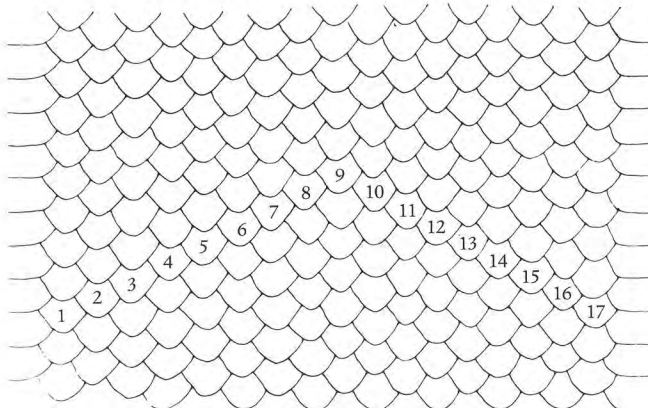


Diamonds

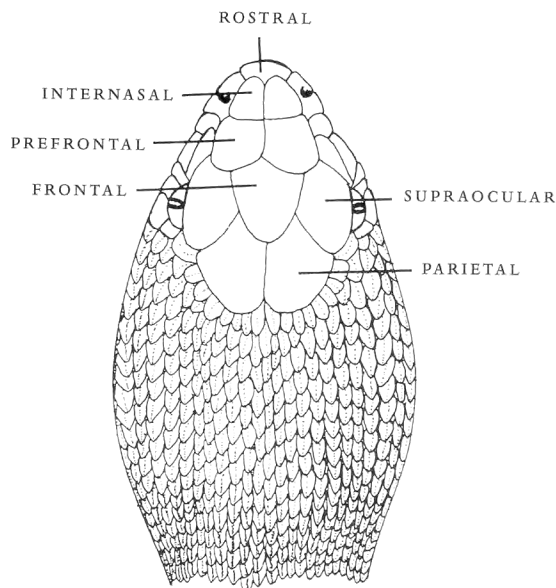
Markings that run the length of a snake are called stripes. Often, the scale rows they fall on are useful diagnostics for determining species. Diamonds are regular-shaped blotches that usually have dark borders flanked by white

Images on this panel from UFL.edu

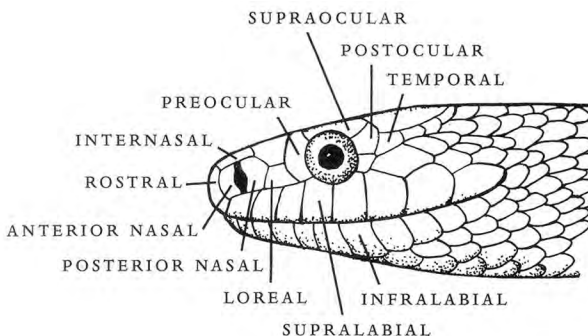
How to Count Scale Rows



Dorsal Head Scales of Snakes



Lateral Head Scales of Snakes



Diagrams on this panel by Evelyn M. Ernst (Ernst and Ernst 2003)

		Species	Keels	Anal Plate	Subcaudals	Midbody Scale Rows	Other Diagnostic Features	Color Pattern notes	Frequency of encounter in Florida		
Colubrids	Dipsadines	<i>Coluber constrictor</i>	None	Divided	Divided	17 (15-19)	15 scale rows at vent, preocular invades supralabial row	Patterned as juvenile	Extremely Common		
		<i>Masticophis flagellum</i>	None	Divided	Divided	17 (15)	13 scale rows at vent		Uncommon		
		<i>Drymarchon couperi</i>	None	Undivided	Divided	17			Rare		
		<i>Rhadinaea flavilata</i>	None	Divided	Divided	17		Stripe through eye	Uncommon		
		<i>Tantilla coronata</i>	None	Divided	Divided	15		Geographic range	Rare - range edge		
		<i>Tantilla oolitica</i>	None	Divided	Divided	15		Geographic range	Rare, limited to Dade, Monroe, Keys		
		<i>Tantilla relicta</i>	None	Divided	Divided	15		Geographic range	Uncommon		
		<i>Opheodrys aestivus</i>	Present	Divided	Divided	17 (15-19)		Sheds completely unpatterned, very light in color	Common		
		<i>Diadophis punctatus</i>	None	Divided	Divided	14-17		loreal scale, 7-8 labial scales	Common		
		<i>Farancia abacura</i>	None	Usually Divided	Divided	19 (18-21)		One internasal	Uncommon aquatic		
		<i>Farancia erytrogramma</i>	None	Usually Divided	Divided	19		Two internasals	Uncommon aquatic		
		<i>Heterodon platirhinos</i>	Weak	Divided	Divided	25 (21-27)		Prefrontal scales touch	underside of tail lighter than venter	Common	
		<i>Heterodon simus</i>	Weak	Divided	Divided	25 (23-27)		Prefrontals separate	underside of tail same color as venter	Rare	
		Tribe Thamnophini	<i>Haldea striatula</i>	Present	Divided	Divided	17				Uncommon -range edge
			<i>Liodytes alleni</i>	None/weak	Divided	Divided	19		one internasal	No dark pigment on venter	Rare - locally abundant
	<i>Liodytes pygaea</i>		None	Divided	Divided	17			Pale streak on scales resembles keel	Common aquatic	
	<i>Liodytes rigida</i>		Present	Divided	Divided	19 (18-21)			Two rows of half moons on venter	Uncommon aquatic	
	<i>Regina septemvittata</i>		Present	Divided	Divided	19		Geographic range, lower dorsal rows keeled	Striped venter	Rare - range edge	
	<i>Nerodia cyclopion</i>		Strong	Divided	Divided	25,27 (23-29)		Subocular scale, Geographic range		Rare - range edge	
	<i>Nerodia floridana</i>		Strong	Divided	Divided	25-27 (28-31)		Subocular scale, Geographic range		Uncommon aquatic	
	<i>Nerodia erythrogaster</i>		Strong	Divided	Divided	23-25 (20-27)			Unmarked venter	Uncommon - range limit	
	<i>Nerodia fasciata</i>		Strong	Divided	Divided	23 (21-25)			Dark stripe from eye to corner of mouth, blotches form crossbands	Common	
	<i>Nerodia clarkii</i>		Strong	Divided	Divided	21-23			Dark venter, one to three rows of spots	Common coastal	
	<i>Nerodia sipedon</i>		Strong	Divided	Divided	23 (21-25)			Blotches alternate, do not form bands towards posterior	Rare - range edge	
	<i>Nerodia taxipilota</i>		Strong	Divided	Divided	29-31 (25-33)			21-26 blotches	Common	
	<i>Storeria occipitomaculata</i>		Present	Divided	Divided	15 (13-17)			Faint stripes on dorsum, belly center unpatterned	Common	
	<i>Storeria dekayi</i>		Present	Divided	Divided	17		Midbody scale rows, geographic range		Common	
	<i>Storeria victa</i>		Present	Divided	Divided	15		Midbody scale rows, geographic range		Common	
	Tribe Lampropeltini	<i>Thamnophis saurita</i>	Present	Undivided	Divided	19		Tail up to 38.8% of total body length	Stripe on scale rows 3+4, bright preocular	Extremely Common	
		<i>Thamnophis sirtalis</i>	Strong	Undivided	Divided	19 (21)			Stripe on scale rows 2+3	Common	
<i>Virginia valeriae</i>		None	Divided	Divided	17 (15-19)		5-6 supralabials		Uncommon		
<i>Cemophora coccinea</i>		None	Undivided	Divided	19 (17-21)		Enlarged rostral	Crossbands form saddles, unpatterned venter	Common		
<i>Pantherophis alleghaniensis</i>		Weak	Divided	Divided	25 or 27 (23-29)		Geographic Range - east of Apalachicola River	Sheds have visible blotched or striped pattern	Extremely Common		
<i>Pantherophis spiloides</i>		Weak	Divided	Divided	25 or 27 (23-29)		Geographic range - west of Apalachicola River	Sheds have visible blotched pattern 24-42 blotches	Extremely Common		
<i>Pantherophis guttatus</i>		Weak	Divided	Divided	27 (23-29)			15-50 Blotches lined with darker pigment, arrow on head	Extremely Common		
<i>Pituophis melanoleucus</i>		Strong	Undivided	Divided	27-35		Four prefrontal scales	19-39 blotches, darker on tail	Rare, locally abundant		
<i>Lampropeltis elapsoides</i>		None	Undivided	Divided	17 or 19			Complete rings	Uncommon		
<i>Lampropeltis extenuata</i>		None	Undivided	Divided	19		Geographic Range. Tail only 7-12% of total length	50-80 blotches	Rare, limited to Lake Wales Ridge		
<i>Lampropeltis getula</i>		None	Undivided	Divided	21-23 (19-25)			Dark bars on supralabials	Common		
<i>Lampropeltis occipitolineata</i>		None	Undivided	Divided	21 or fewer		Geographic Range	Over 75 blotches	Rare, range limited		
<i>Lampropeltis rhombomaculata</i>		None	Undivided	Divided	21-23		Geographic Range	Fewer than 71 blotches, average 55	Rare - range edge		
Viperids		Pit Vipers	<i>Micrurus fulvius</i>	None	Usually Divided	Divided	15		Distinct rings, snout usually dark	Uncommon	
			<i>Agkistrodon conanti</i>	Strong	Undivided	Undivided	25 (21-27)		No loreal scale	Band through eye	Common
	<i>Agkistrodon contortrix</i>		Strong	Undivided	Undivided	23 (21-27)		Loreal Scale	10-21 bands forming a triangular pattern	Rare - range edge	
	<i>Sistrurus miliarius</i>	Strong	Undivided	Undivided	23		9 large head scales	22-45 blotches	Common		
	<i>Crotalus adamanteus</i>	Strong	Undivided	Undivided	27-29 (25-31)			24-35 diamond-shaped blotches	Common		
	<i>Crotalus horridus</i>	Strong	Undivided	Undivided	23 or 25 (21-26)			15-34 bands, no light scales within dorsal blotches	Rare - range edge		