


Appreciating Herptile Diversity in Educational Collections

By Ricky Johnson



A close-up, blurred image of a snake's head, showing the intricate patterns of its scales. The image is dark and out of focus, with a semi-transparent dark rectangular box overlaid in the center. Inside this box, white text is displayed in a clean, sans-serif font.

This is not an attack on the
industry or any individual
educational collection

What do I mean?

- How many herptile species in the world?

8,489 amphibians, **74** families, **558** genera

11,820 reptile species, **92** families, **1226** genera

+2167 subspecies!

Not that many in captivity though...

- Over **2000** reptile species...*
- Over **1000** amphibian species...*

This is a HUGE proportion

HOW can we be teaching with near single digit species to learn with?

*According to recent National Geographic Photo Ark data

NOPE!

Usual 'offenders'

- Corn Snakes, Royal Pythons, Bearded Dragons, Leopard Gecko, Crested Gecko, Pacman Frog, White's Tree Frog... **These do not cover care requirements for enough niches!**
- ... But their care does need to be covered in depth...

A conundrum

Clarification...

- I am not saying every collection needs 100's of species!
- There cannot be a nerd for each genera in every collection.
- An attempt should be made to represent a wider range...



Clarification...

- So I'm having a **moan**... Yes.
- But I hope to help with the **'how?'**



A possible method?

1. Take an over represented species
2. Move back to its genus or further
3. See what other species are in captivity
4. Find out what species are ideal (communicate with genera experienced people!)
5. Source them & COMMUNICATE WITH THE TRADE

A possible method?






- Pick a species you want and alternative to!
 - Corn Snake *Pantherophis guttatus*
- Check out & take note of the Family or Genus!
 - *Colubridae* & *Pantherophis*

naturalist Explore Community More

Observations

Colubrid Snakes Location

The World **640,030** OBSERVATIONS **1,489** SPECIES **29,776** IDENTIFIERS **176,326** OBSERVERS

 84,666 observations CC	 39,391 observations	 35,575 observations	 28,761 observations CC	 23,733 observations CC
Common Garter Snake (<i>Thamnophis sirtalis</i>)	Common Watersnake (<i>Nerodia sipedon</i>)	Gopher Snake (<i>Pituophis catenifer</i>)	Dekay's Brownsnake (<i>Storeria dekayi</i>)	North American Racer (<i>Coluber constrictor</i>)

Colubridae

Temporal range: **Oligocene** to recent



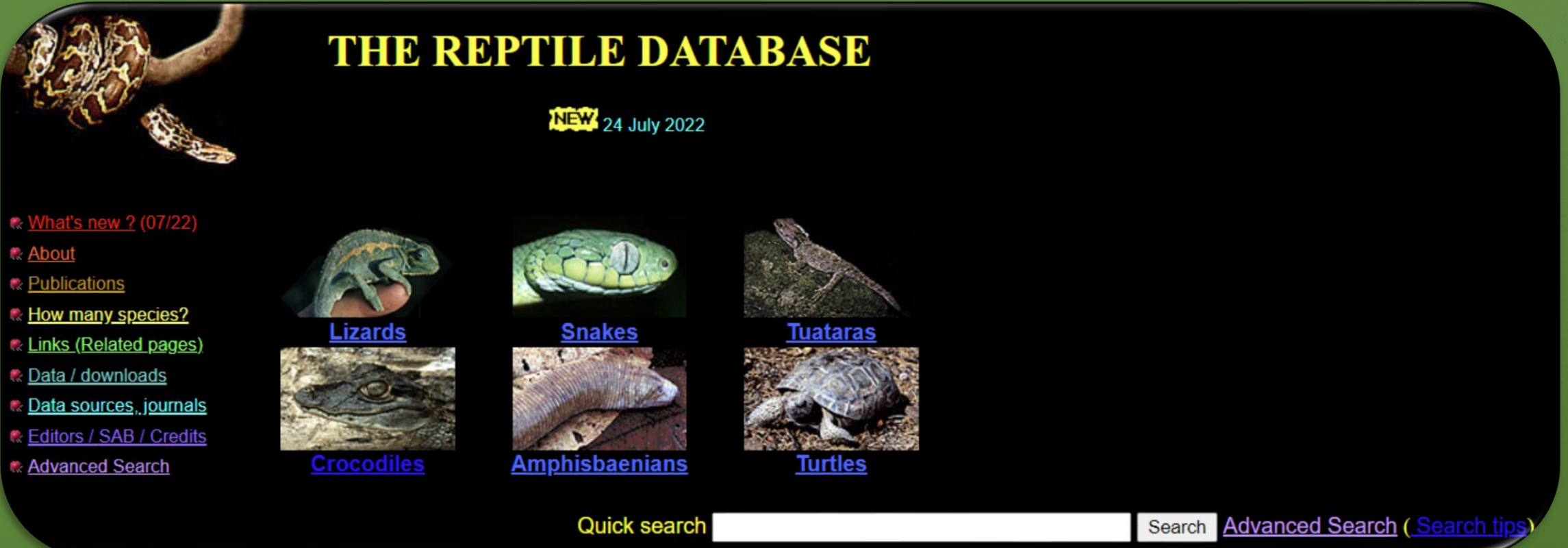
Colubridae species

Scientific classification

Kingdom:	Animalia
Phylum:	Chordata
Class:	Reptilia
Order:	Squamata
Suborder:	Serpentes
Superfamily:	Colubroidea
Family:	Colubridae
	Oppel, 1811

A possible method?







- So Colubridae or Pantherophis...
- Head to the Reptile Database by Peter Uetz et al



THE REPTILE DATABASE

NEW 24 July 2022

[What's new ? \(07/22\)](#)
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[Publications](#)
[How many species?](#)
[Links \(Related pages\)](#)
[Data / downloads](#)
[Data sources, journals](#)
[Editors / SAB / Credits](#)
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 [Snakes](#)
 [Tuataras](#)
 [Crocodiles](#)
 [Amphisbaenians](#)
 [Turtles](#)

Quick search Search [Advanced Search](#) ([Search tips](#))

A possible method?

- So Colubridae or Pantherophis...
- Click 'Advanced Search'

[Home page](#)

Advanced search

[Search tips](#)

[Contact us](#)

[Global Reptile BioBlitz](#)

[reptile-database.org](#)

Advanced search

Please use the following text boxes to conduct your search. To see a complete list of every species in the Reptile Database, leave the text boxes blank and click on 'Search'. To perform an exact match against the parameters you enter, check the boxes beside the fields. More details in [search tips](#)

Advanced search

Search category	Search input	Exact match
Higher taxa (e.g. Crocodylia, Sauria, Viperidae, lizard, snake):	<input type="text" value="colubridae"/>	<input type="checkbox"/>
Genus (e.g. Chamaeleo, Oligodon):	<input type="text"/>	<input type="checkbox"/>
Species epithet (e.g. elegans, ornatus):	<input type="text"/>	<input type="checkbox"/>
Subspecies (e.g. Ablepharus bivittatus lindbergi):	<input type="text"/>	<input type="checkbox"/>
Author (e.g. Boulenger, Linnaeus):	<input type="text"/>	<input type="checkbox"/>
Year (e.g. 2006):	<input type="text"/>	<input type="checkbox"/>
Common name or synonym (e.g. Abronia, Amphibolurus):	<input type="text"/>	<input type="checkbox"/>
Distribution (e.g. Madagascar, Florida):	<input type="text"/>	<input type="checkbox"/>
Types (e.g. USNM 6769):	<input type="text"/>	<input type="checkbox"/>
Reference (author or title keyword):	<input type="text"/>	<input type="checkbox"/>

A possible method?

- So Colubridae or Pantherophis...
- Search the family, take note of the genera within, then start looking through the genera via the Advanced Search

Search results

Search Parameters

› Higher taxa: colubridae

Search results

Species found: 2079

- › [Adelophis copei](#) DUGÈS, 1879
- › [Adelophis foxi](#) ROSSMAN & BLANEY, 1968
- › [Adelphicos daryi](#) CAMPBELL & FORD, 1982
- › [Adelphicos ibarrorum](#) CAMPBELL & BRODIE, 1988
- › [Adelphicos latifasciatum](#) LYNCH & SMITH, 1966
- › [Adelphicos newmanorum](#) TAYLOR, 1950
- › [Adelphicos nigrilatum](#) SMITH, 1942
- › [Adelphicos quadrivirgatum](#) JAN, 1862
- › [Adelphicos sargii](#) (FISCHER, 1885)
- › [Adelphicos veraepacis](#) STUART, 1941
- › [Adelphicos visoninum](#) (COPE, 1866)
- › [Aeluroglena cucullata](#) BOULENGER, 1898
- › [Afronatrix anoscopus](#) (COPE, 1861)
- › [Ahaetulla anomala](#) (ANNANDALE, 1906)
- › [Ahaetulla borealis](#) MALLIK, SRIKANTHAN, PAL, D'SOUZA, SHANKER & GANESH, 2020
- › [Ahaetulla dispar](#) (GÜNTHER, 1864)
- › [Ahaetulla farnsworthi](#) MALLIK, SRIKANTHAN, PAL, D'SOUZA, SHANKER & GANESH, 2020

Search results

Search Parameters

› Genus: pantherophis

Search results

Species found: 8

- › [Pantherophis alleghaniensis](#) (HOLBROOK, 1836)
- › [Pantherophis bairdi](#) (YARROW, 1880)
- › [Pantherophis emoryi](#) (BAIRD & GIRARD, 1853)
- › [Pantherophis guttatus](#) (LINNAEUS, 1766)
- › [Pantherophis obsoletus](#) (SAY, 1823)
- › [Pantherophis ramspotti](#) CROTHER, WHITE, SAVAGE, ECKSTUT, GRAHAM & GARDNER, 2011
- › [Pantherophis spiloides](#) (DUMÉRIL, BIBRON & DUMÉRIL, 1854)
- › [Pantherophis vulpinus](#) (BAIRD & GIRARD, 1853)

A possible method?

- What are some other genera I found to look at?
- *Elaphe*, *Lampropeltis*, *Nerodia*, *Oreocryptophis*... Lets look at ***Elaphe***

Search results

Search Parameters

> Genus: elaphe

Search results

Species found: 20

- > [Archelaphe bella \(STANLEY, 1917\)](#)
- > [Elaphe anomala \(BOULENGER, 1916\)](#)
- > [Elaphe bimaculata SCHMIDT, 1925](#)
- > [Elaphe cantoris \(BOULENGER, 1894\)](#)
- > [Elaphe carinata \(GÜNTHER, 1864\)](#)
- > [Elaphe climacophora \(BOIE, 1826\)](#)
- > [Elaphe davidi \(SAUVAGE, 1884\)](#)
- > [Elaphe dione \(PALLAS, 1773\)](#)
- > [Elaphe hodgsoni \(GÜNTHER, 1860\)](#)
- > [Elaphe moellendorffi \(BOETTGER, 1886\)](#)
- > [Elaphe quadrivirgata \(BOIE, 1826\)](#)
- > [Elaphe quatuorlineata LACEPEDE, 1789](#)
- > [Elaphe sauromates \(PALLAS, 1811\)](#)
- > [Elaphe schrenckii STRAUCH, 1873](#)
- > [Elaphe taeniura \(COPE, 1861\)](#)
- > [Elaphe urartica JABLONSKI, KUKUSHKIN, AVCI, BUNYATOVA, ILGAZ, TUNIYEV ET JANDZIK, 2019](#)
- > [Elaphe xiphodonta QI, SHI, MA, GAO, BU, GRISMER, LI & WANG, 2021](#)
- > [Elaphe zoigeensis HUANG, DING, BURBRINK, YANG, HUANG, LING, CHEN & ZHANG, 2012](#)
- > [Pseudelaphe flavirufa \(COPE, 1867\)](#)
- > [Pseudelaphe phaescens \(DOWLING, 1952\)](#)

Species found: 20

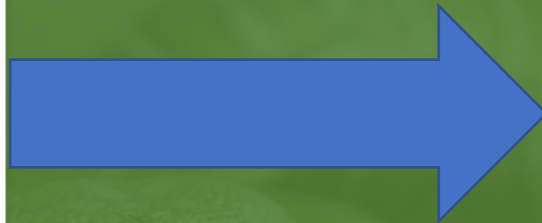
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A possible method?

- Elaphe... Start researching & finding genus experts through reputable community sources, we then find available, safe, interesting species-

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Elaphe anomala (Korean Rat Snake)

Elaphe bimaculata (Twin-Spotted Rat Snake)

Elaphe climacophora (Japanese Rat Snake)

Elaphe dione (Dione's Rat Snake)

Elaphe schrenckii (Russian Rat Snake)

Elaphe taeniura (Beauty Snake)

Corn snakes?



Elaphe anomala
(Korean Rat Snake)



Elaphe bimaculata
(Twin-Spotted Rat Snake)



Elaphe climacophora
(Japanese Rat Snake)



Elaphe dione
(Dione's Rat Snake)



Elaphe schrenckii
(Russian Rat Snake)



Elaphe taeniura
(Beauty Snake)

Bearded Dragons?

A wider look at *Agamidae*



Pogona henrylawsoni
(Rankins Dragon)



Laudakia stellio
(Painted Dragon)



Xenagama taylori
(Shield Tail Agama)



Uromastyx ornate + sp
(Uromastyx species)



Phrynocephalus mystaceus
(Toad Headed Agama)

Leopard Geckos?

A wider look at *Eublepharidae*



Eublepharis fuscus
(Western Leopard Gecko)



Eublepharis hardwickii
(East Indian Leopard Gecko)



Aeluroscalabotes felinus
(Cat Gecko)



Goniurosaurus orientalis
(Japanese Cave Gecko)



Holodactylus africanus
(African Clawed Gecko)

Royal pythons?



Antaresia childreni
(Children's Python)



Python anchietae
(Angolan Python)



Bothrochilus boa
(Bismarck Ringed Python)



Morelia bredli
(Bredl's Python)

A wider look at *Pythonidae*

Crested Geckos?



Correlophus sarasinorum
(Roux's Giant Gecko)

A wider look at *Diplodactylidae*



Rhacodactylus auriculatus
(Gargoyle Gecko)



Strophurus ciliaris
(Spiny-tailed Gecko)



Rhacodactylus leachianus
(New Caledonia Giant Gecko)

Bosc monitors?

A wider look at *Varanidae*



Varanus acanthurus
(Spiny-Tailed Monitor)



Varanus beccarii
(Spiny-Tailed Monitor)



Varanus prasinus
(Emerald Tree Monitor)



Varanus macraei
(Blue Tree Monitor)

White's Tree Frogs?

A wider look at *Hylidae* & nearby
Anurans NOT via The Reptile Database...



Hyla arborea/*H. savignyi*
(European Tree Frog/Savigny's Tree Frog)



Agalychnis lemur
(Lemur Leaf Frog)



Pithecopus hypochondrialis
(Tiger Monkey Tree Frog)



Triprion spinosus
(Crowned Tree Frog)



Polypedates otitophus
(Borneo Eared Frog)

Mongolian Gerbils?

A wider look at *Meriones* & nearby



Meriones persicus
(Persian Jird)



Meriones shawi
(Shaw's Jird)



Pachyuromys duprasi
(Fat-tailed Gerbil)

+ way more!



Gerbillus cheesmani
(Cheesman's Gerbil)

Why?

Yes morphs can cover the aesthetics, but what does that help? Line pockets? A range of morphs \neq species diversity.

But is the education sector not also dealing with some conservation?

We can support this on the captive side by aiding zoos & keepers in establishing & maintaining captive populations of lesser kept species.

Remember that there is not enough space in zoos for conservation...

Student passion effect?

Public interest effect?

Reputable?



- Advancing Herpetological Husbandry
- Advancing Herpetological Husbandry - Events
- Not Just a Pet Rock (Python regius)
- How Not to Slay The Dragon – Pogona vitticeps
- Advancing Amphibian Husbandry
- Giant Leaps in Giant Husbandry
- Reptile Lighting
- Herp HQ (FB & Youtube)
- UK Animal Care Technicians (UKACT)
- Skinks UK
- Bioactive Vivaria Worldwide
- Herping the Globe
- European Reptiles and Amphibians Husbandry Group



Group by Advancing Herpetological Husbandry - Events

Advancing Herpetological Husbandry

Private group · 32.3K members