



# A survey of parasites of spotted skunks (*Spilogale* sp.) found throughout their range



PC: Arizona-Sonora Desert Museum

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## ABSTRACT

To date, little has been reported on the full parasitic fauna of spotted skunks (*Spilogale* sp.) across their range in the USA. Skunks collected thus far represent eight states and were obtained from vehicle-killed animals, mortalities from previous research projects, donations from natural history collections, and legally harvested animals by fur trappers. We have performed forty-eight total necropsies on spotted skunks, seven western spotted skunks (*S. gracilis*) and forty-one eastern spotted skunks (*S. putorius*). Endoparasites (acanthocephalans, cestodes, and nematodes) have been found in thirty-five hosts and ectoparasites (fleas, lice, mites, and ticks) were found on fifteen hosts.

## ECTOPARASITES

When possible, the fur was examined for ectoparasites by rubbing the skin with forceps to dislodge any parasites imbedded in the skin or fur. Parasites were stored in 70% EtOH. During the identification process, parasite types were separated into vials. We used morphological keys to identify the parasites as close to species level as possible. In addition to the ectoparasites found on the 48 necropsied individuals, 42 ectoparasite samples were provided from a radio collar project in Harris County, Texas.

Table 2. Ectoparasite species found on examined hosts

	PARASITE SPECIES	# OF HOSTS
Flea	<i>Ctenophthalmus</i> sp.	1
	<i>Echidnophaga glasgowi</i>	1
	<i>Orchopeas howardii</i>	1
	<i>Pulex irritans</i>	9
	<i>Xenopsylla chaopis</i>	3
Louse	<i>Trichodectes</i> sp.	55
Mite	<i>Haemolaelaps glasgowi</i>	1
Tick	<i>Ixodes texanus</i>	9
	<i>Ixodes dentatus</i>	1
	<i>Ixodes</i> sp.	9
	<i>Rhipicephalus sanguineus</i>	4

*Ctenophthalmus* sp., Arkansas, ASK 15923



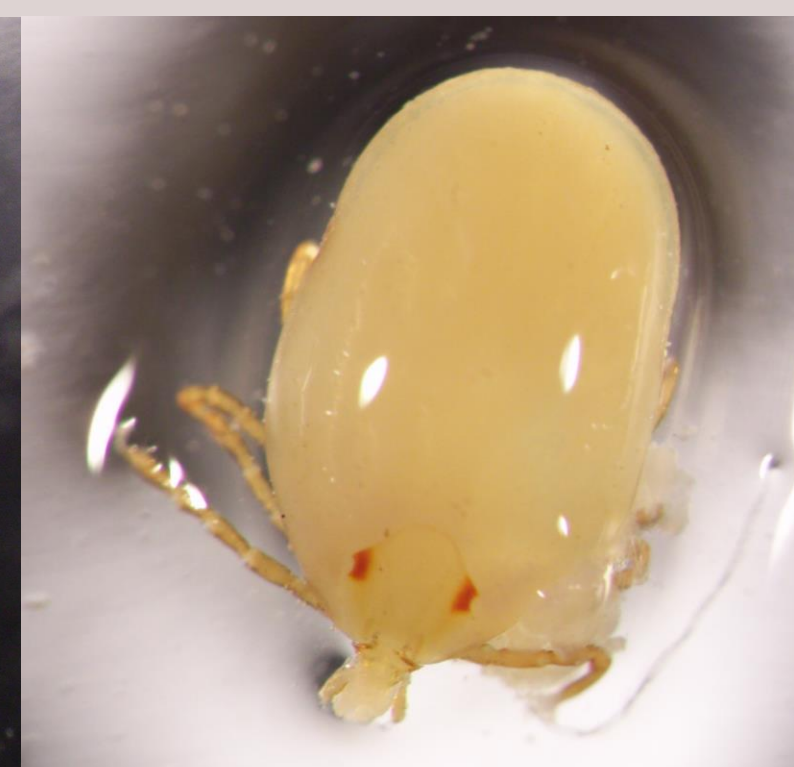
*Trichodectes* sp., Texas, ASK 15065



*Ixodes texanus*, Texas, ASK 15106



*Ixodes texanus*, Arkansas, ASK 15925

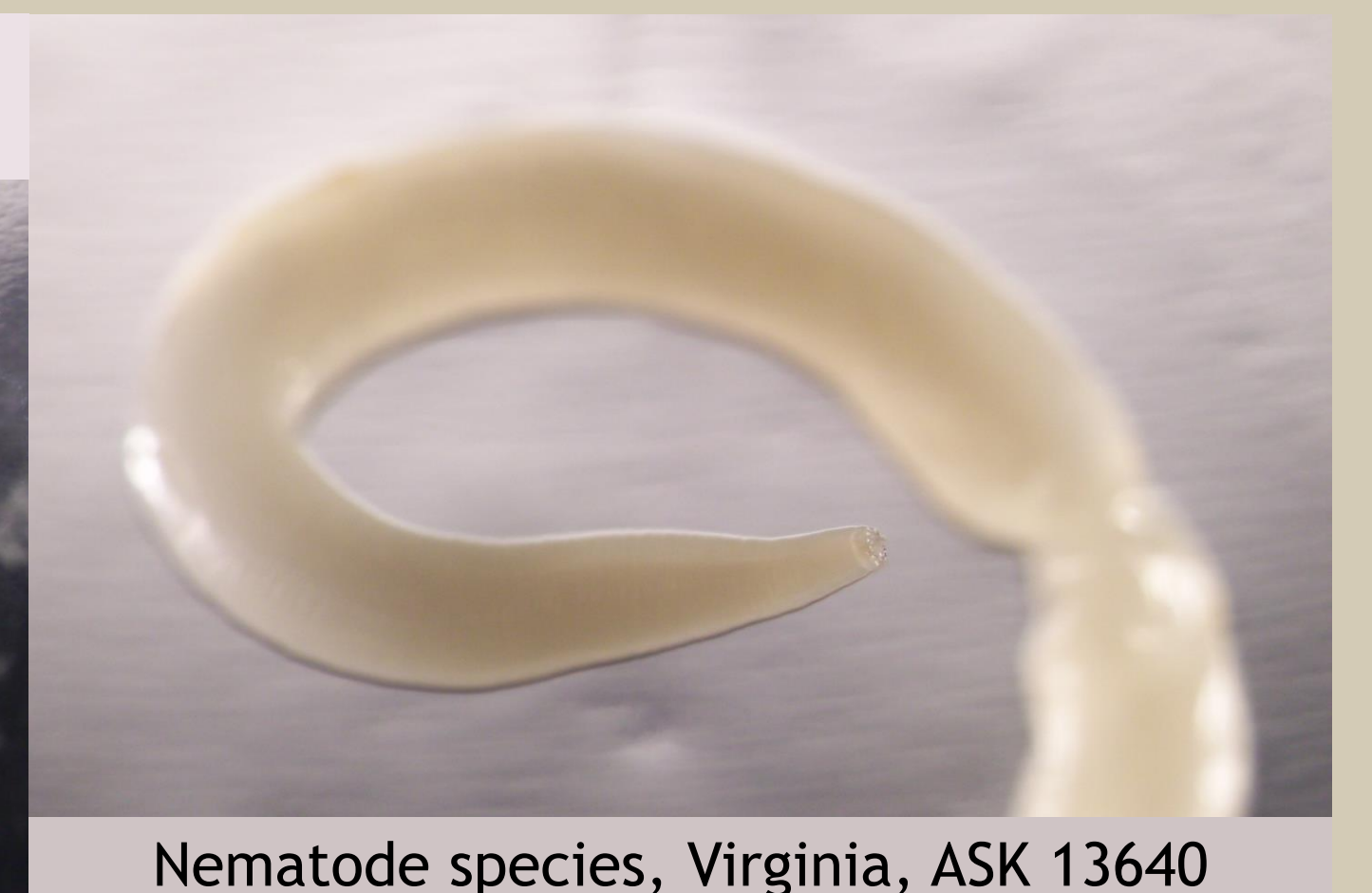


Cestode species, Texas, ASK 15654



Acanthocephalan species, Alabama, ASK 13635

Nematode species, Arkansas, ASK 13200

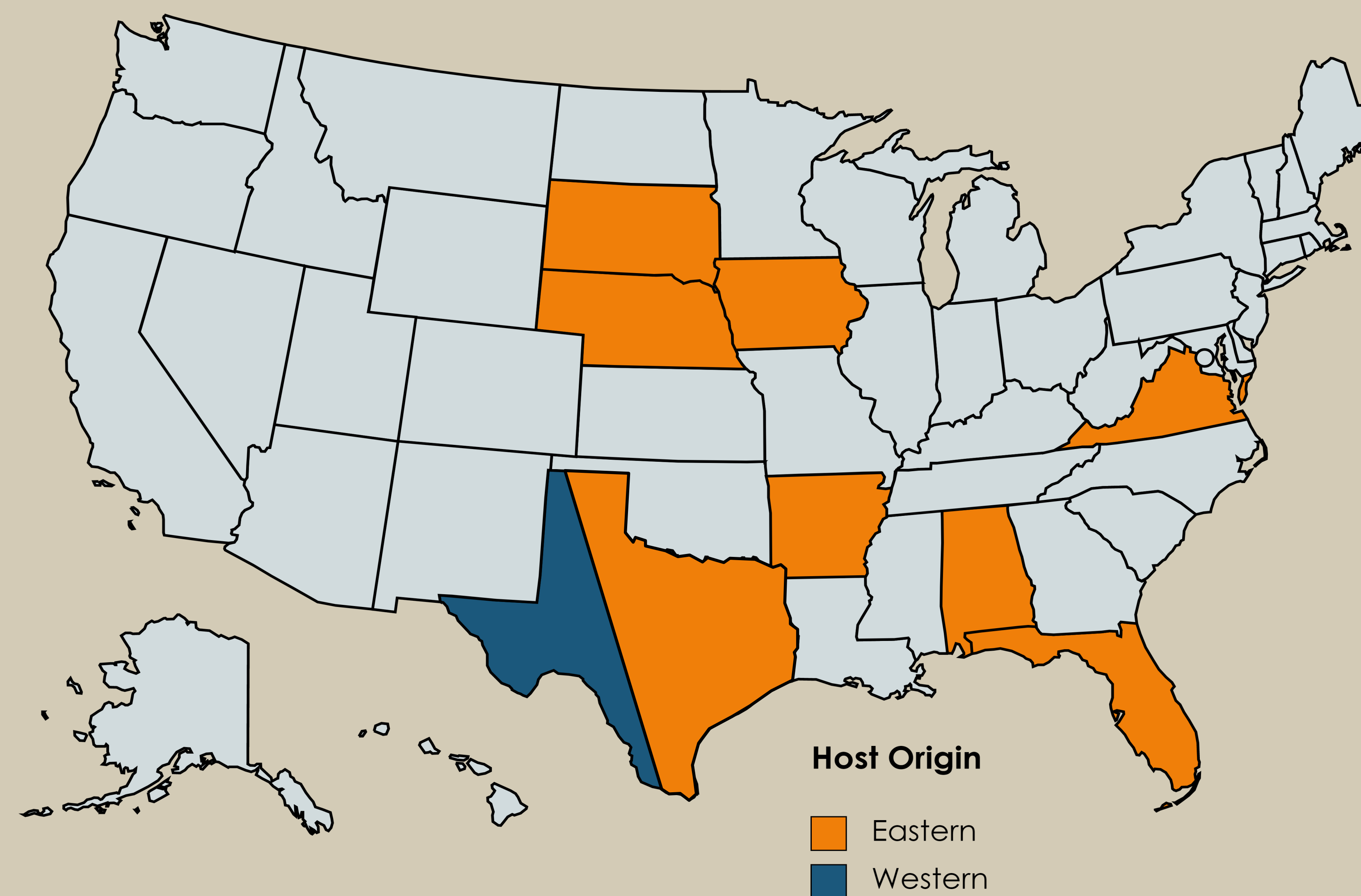


Nematode species, Virginia, ASK 13640



An eastern spotted skunk (*S. putorius*). Photo courtesy of Alexandra Shaffer.

## DISTRIBUTION OF NECROPSIED SPOTTED SKUNKS



Presented at the annual meeting of the Texas Society of Mammalogists, February 2022

## FUTURE WORK

We are still working on collecting more skunk specimens to necropsy, with focus on areas with low representation. A majority of the ectoparasites have already been identified using morphological keys. We continue to work on identifying endoparasites based on morphology, as well as those ectoparasites that remain unidentified.

Table 1. Host distribution and quantity examined for endo- and ectoparasites

STATE	SPECIES	TOTAL HOSTS	# SEARCHED FOR ENDOS	# SEARCHED FOR ECTOS
Alabama	eastern	2	2	1
Arkansas	eastern	8	2	4
Florida	eastern	2	2	0
Iowa	eastern	1	1	0
Nebraska	eastern	1	1	0
South Dakota	eastern	12	12	4
Texas	eastern	12	6	9
	western	7	5	6
Virginia	eastern	3	3	3

## ENDOPARASITES

When possible, each organ, the GI tract, and the body cavity was examined for endoparasites. To examine the GI tract, the organs were separated, cut in half, and the contents were scraped out with a microscope slide. Contents were then washed, filtered, and examined for parasites. Parasites were stored in vials of 70% EtOH.

Table 3. Endoparasites found in examined hosts

PARASITE	WESTERN HOSTS	EASTERN HOSTS
Acanthocephalan	3	6
Cestode	1	7
Nematode	0	15