

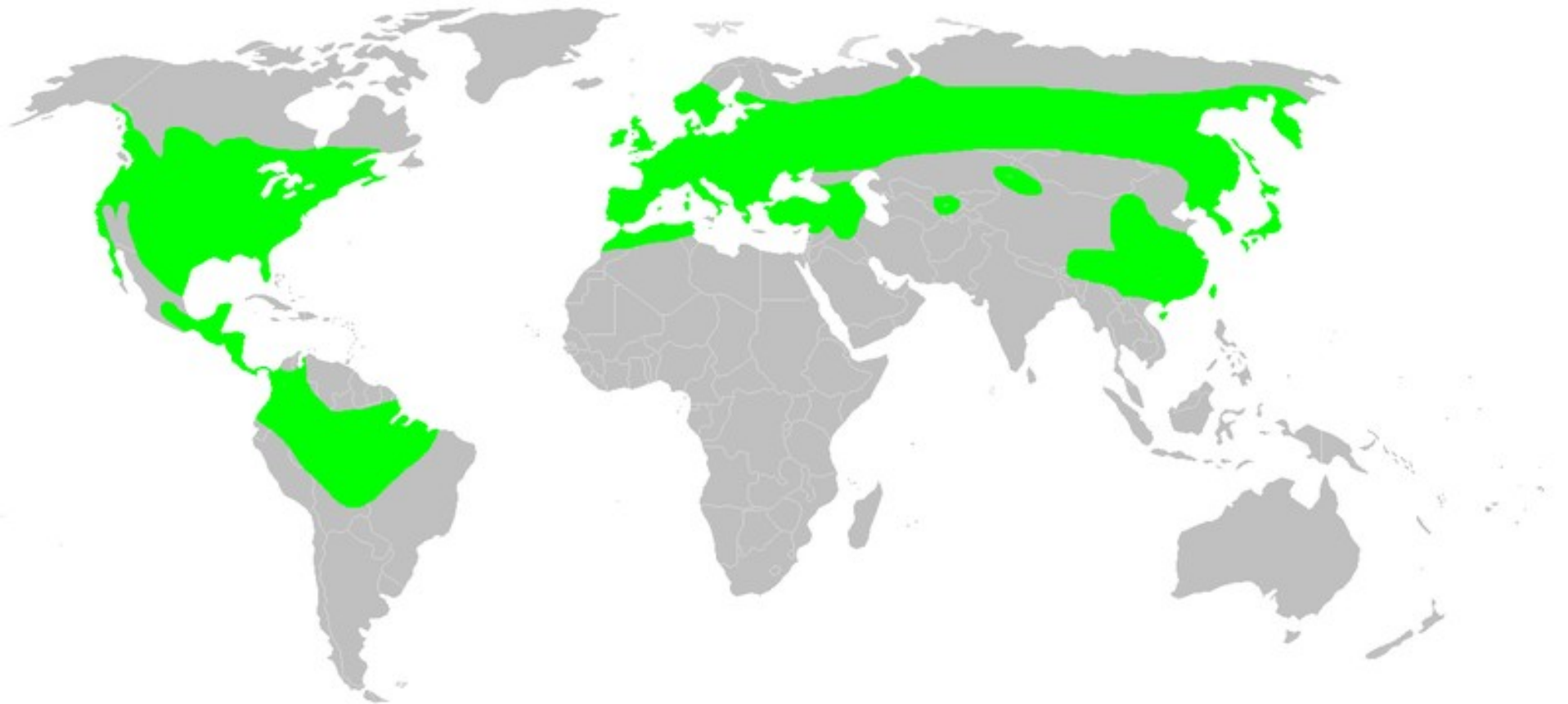
Why do we care
about



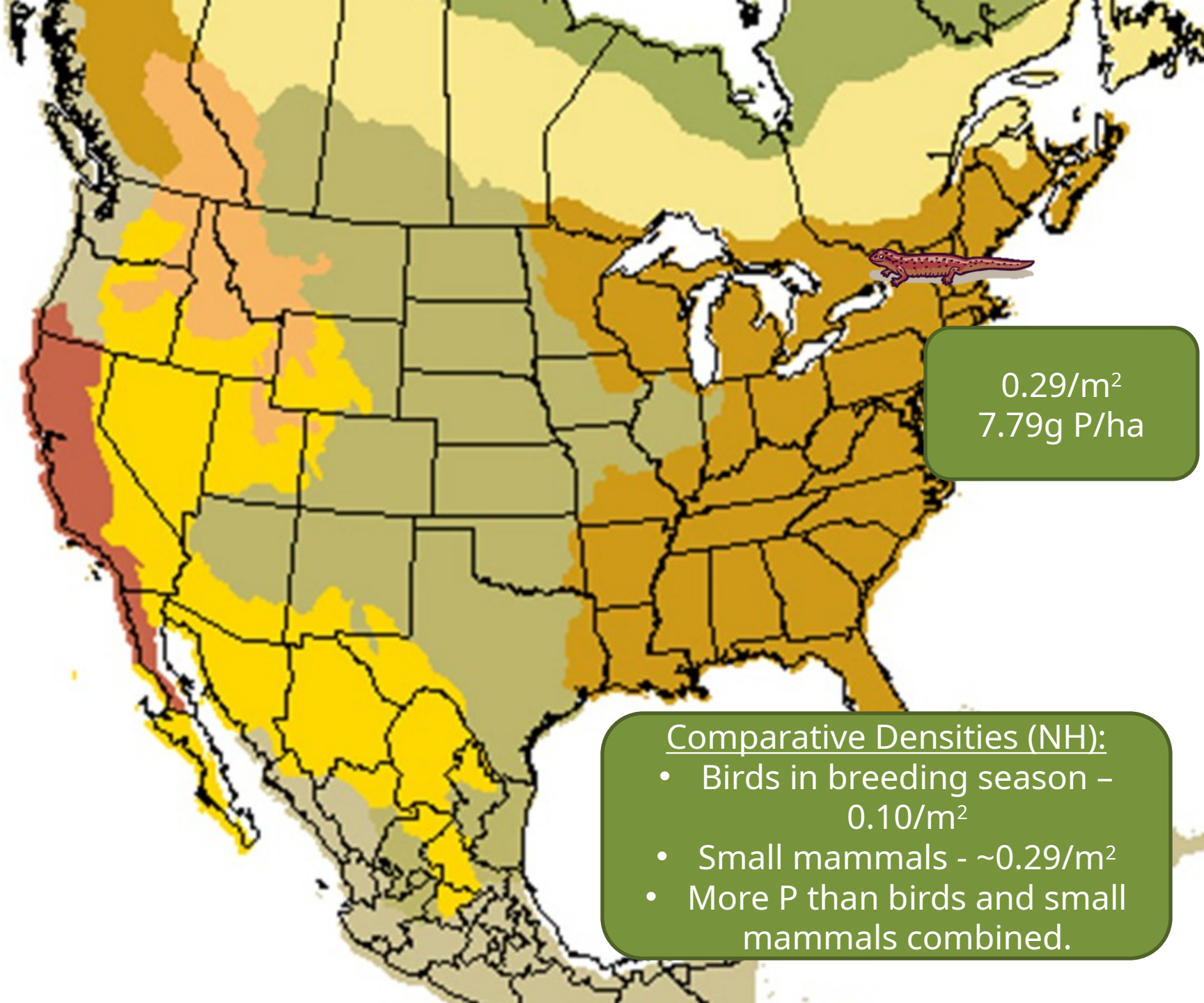
salamanders?

“Why do I care about
salamanders? I never see
them...”

60% of salamander species are found in the United States
(compared to 3% of frogs).



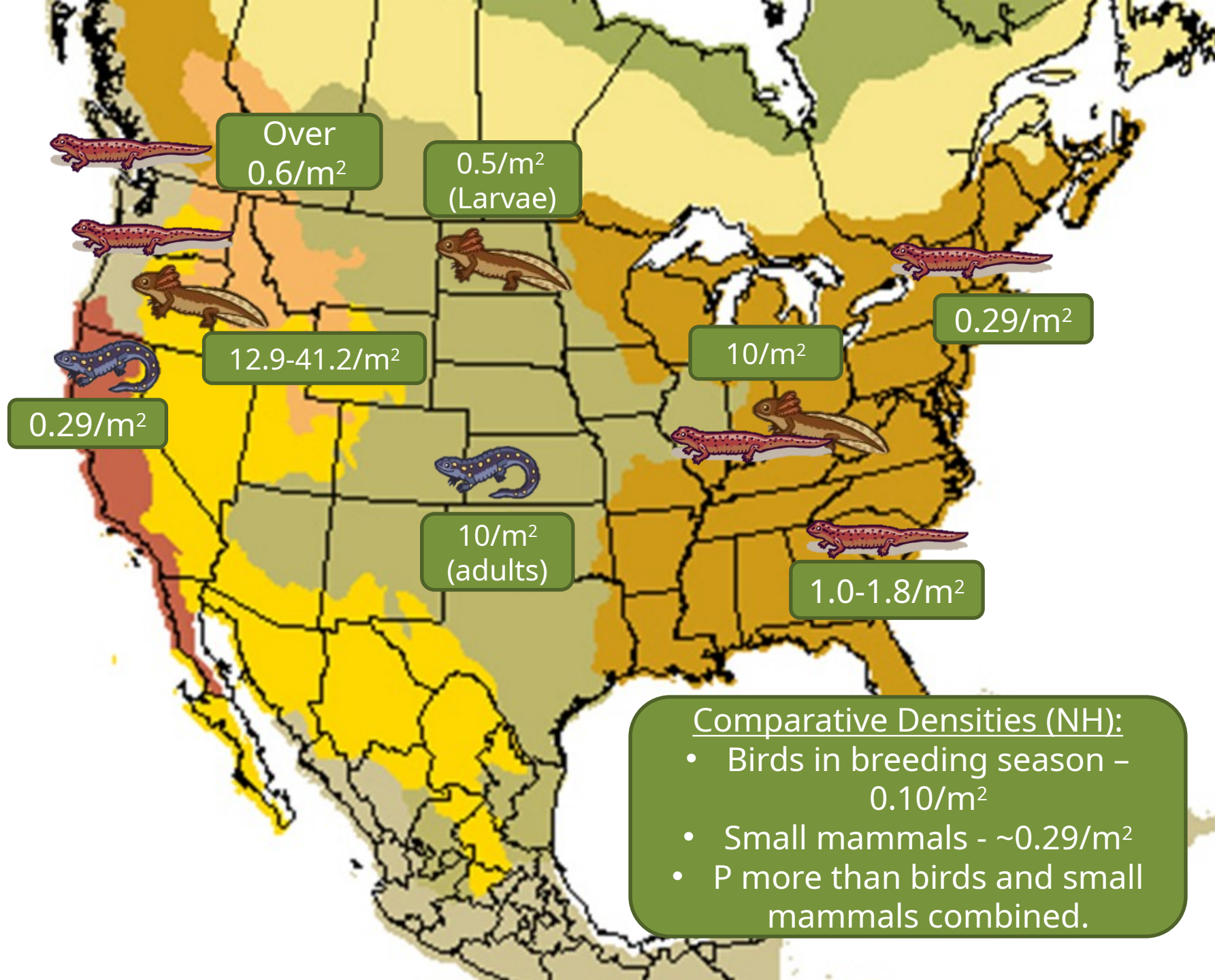




0.29/m²
7.79g P/ha

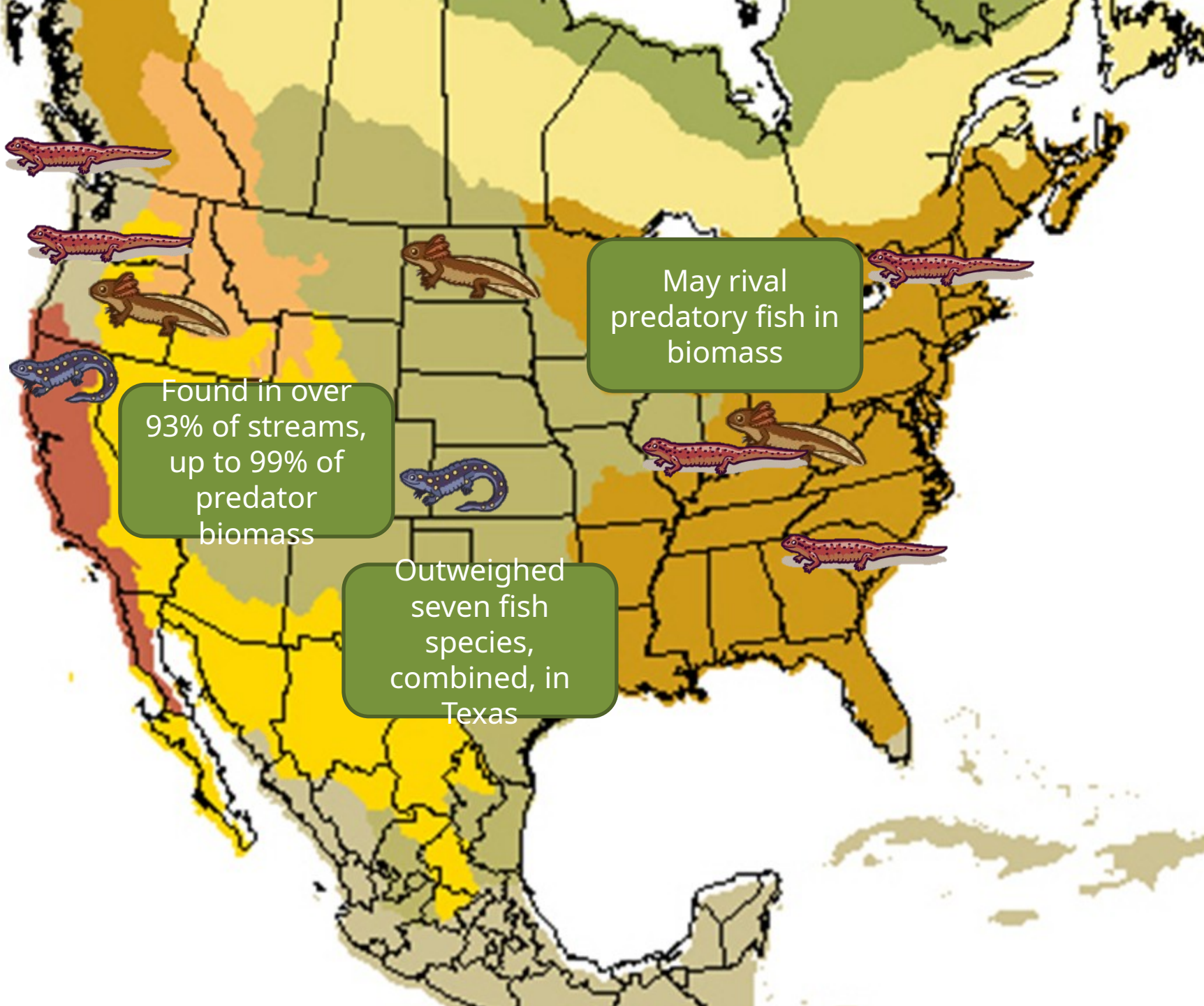
Comparative Densities (NH):

- Birds in breeding season - 0.10/m²
- Small mammals - ~0.29/m²
- More P than birds and small mammals combined.



Comparative Densities (NH):

- Birds in breeding season - $0.10/\text{m}^2$
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- P more than birds and small mammals combined.



May rival
predatory fish in
biomass

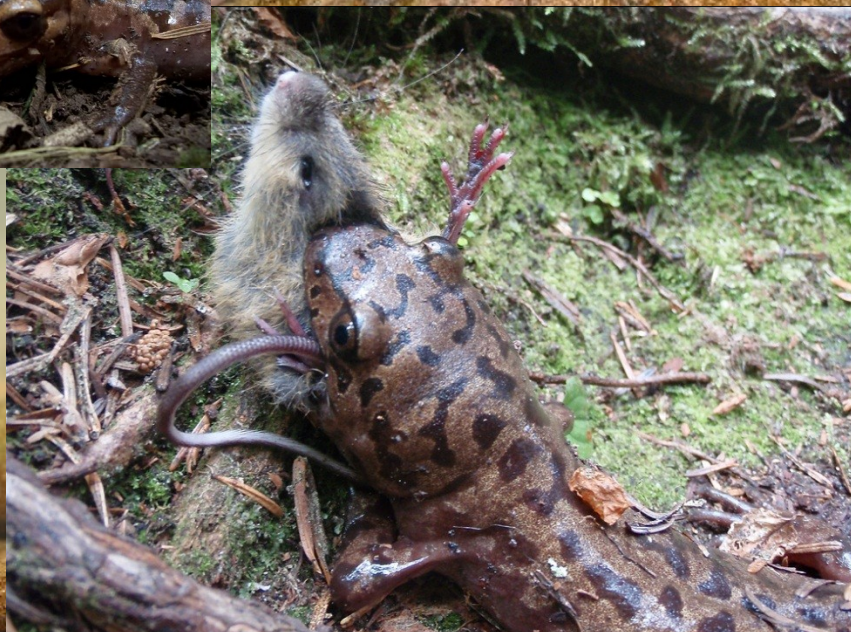
Found in over
93% of streams,
up to 99% of
predator
biomass

Outweighed
seven fish
species,
combined, in
Texas





ARKIVE
www.arkive.org









May prevent
~300kg/ha/yr of
C from entering
air (11-17% less
decomposition)

Reduction of
98% of
mosquitos
emerging; 5000
isopods per day

Store P, N, and C
long term

Consumption
of 2/3
invertebrate
biomass

Vastly numerous
headwater
vertebrate
predator

Aerate soil,
Colonize soil
with fungi,
bring
nutrients into
soil.

Prevent run off of
dissolved
particles into
streams and
rivers

Move nutrients
and organisms
between water
and land



Limb regeneration

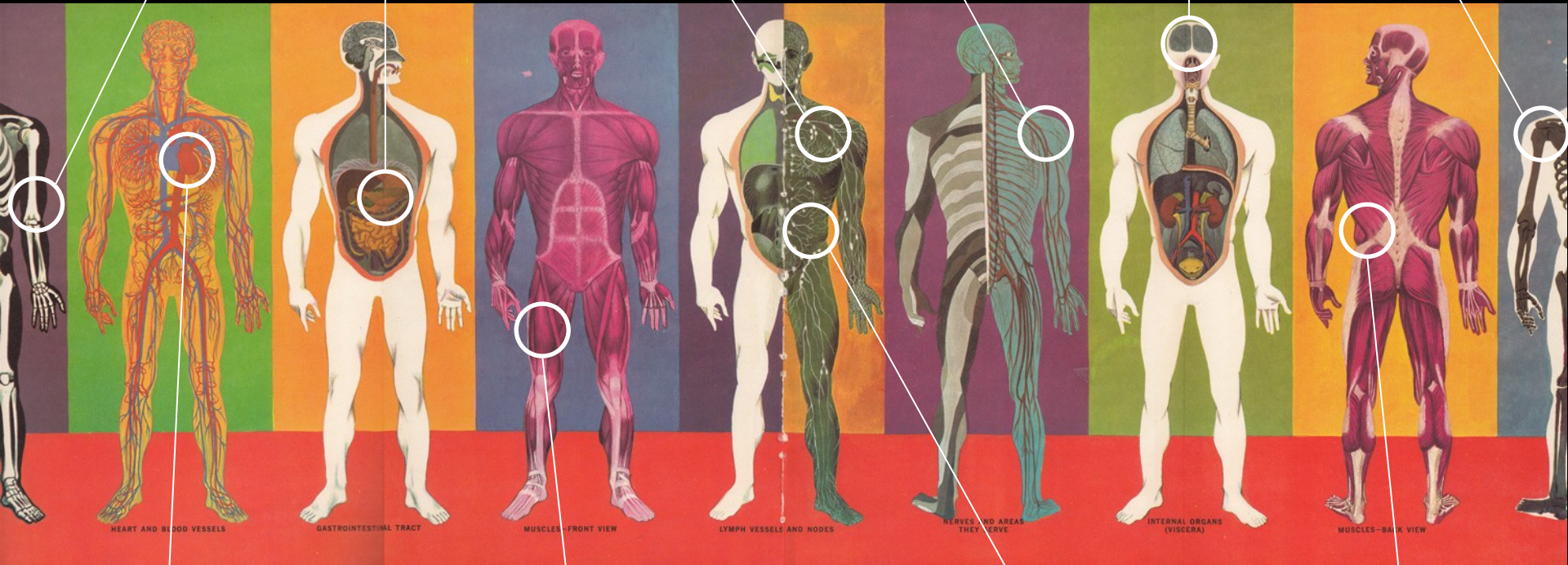
Ulcer repair

Magainin:
antibiotic, antifungal

TTX:
Safer, reversible
anesthetic

ABT-594:
Pain block
without opioid
issues

Cartilage
repair glue

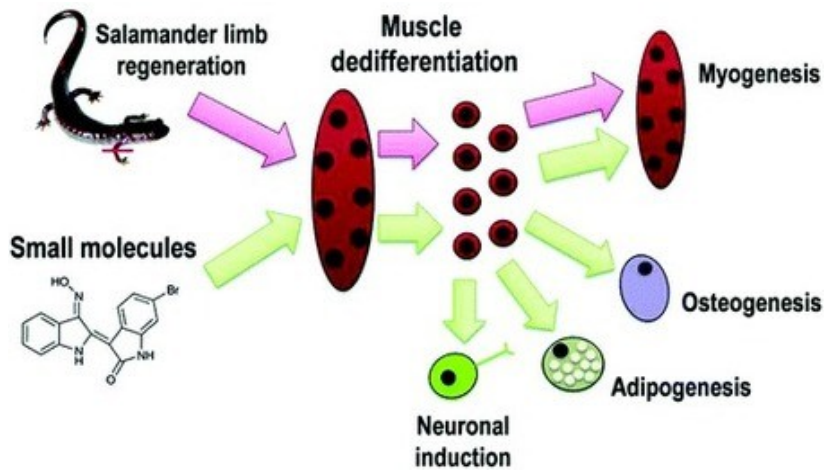


Dermorphin:
Reduced blood
pressure

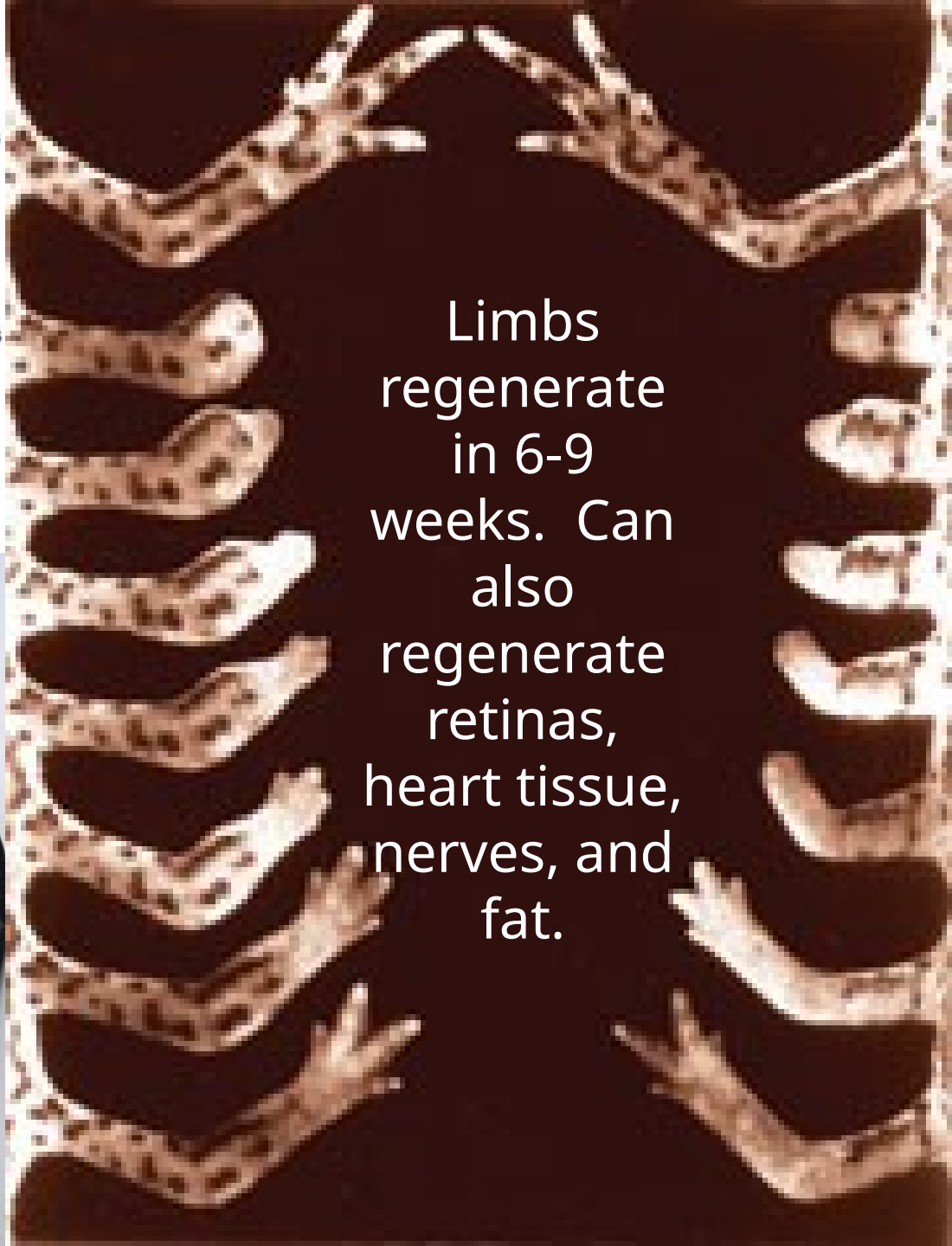
TTX:
Muscle pain, antiseptic,
drug withdrawal

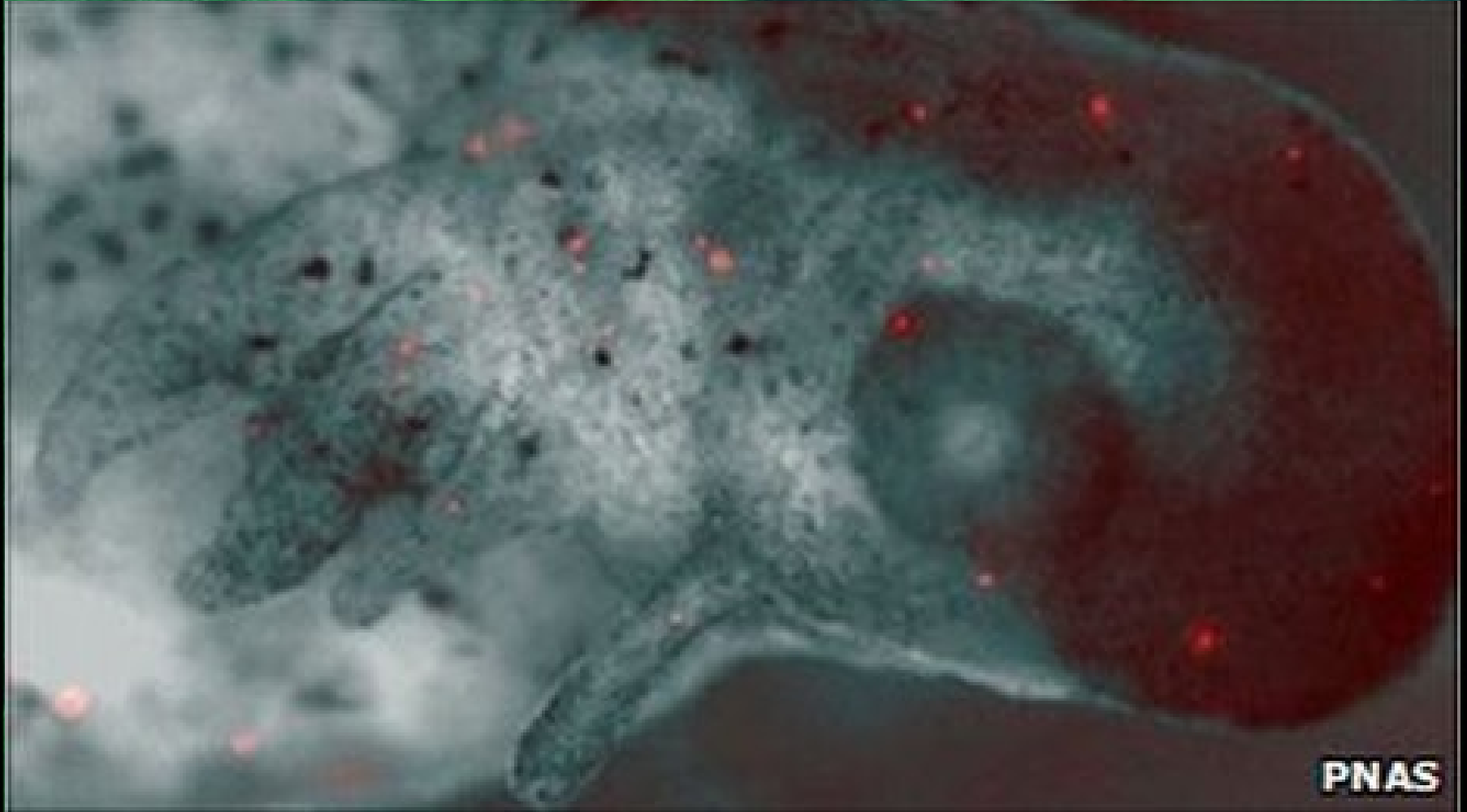
Magianin:
Cancer growth suppressant

Bombasin:
Weight Loss



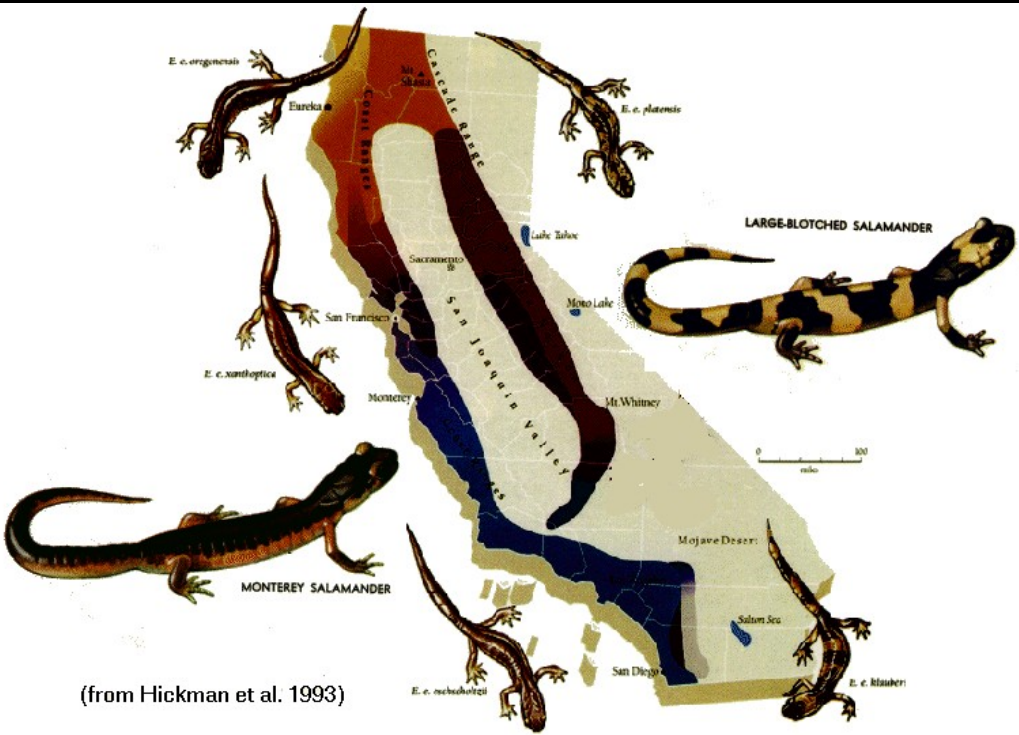
Limbs
regenerate
in 6-9
weeks. Can
also
regenerate
retinas,
heart tissue,
nerves, and
fat.



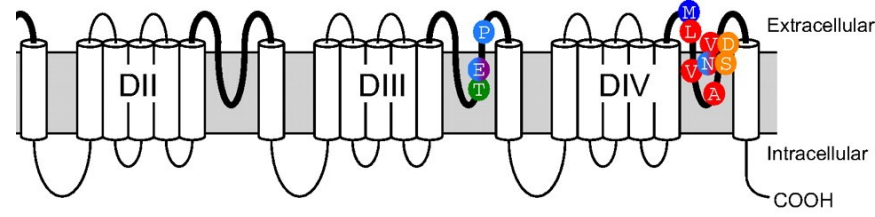
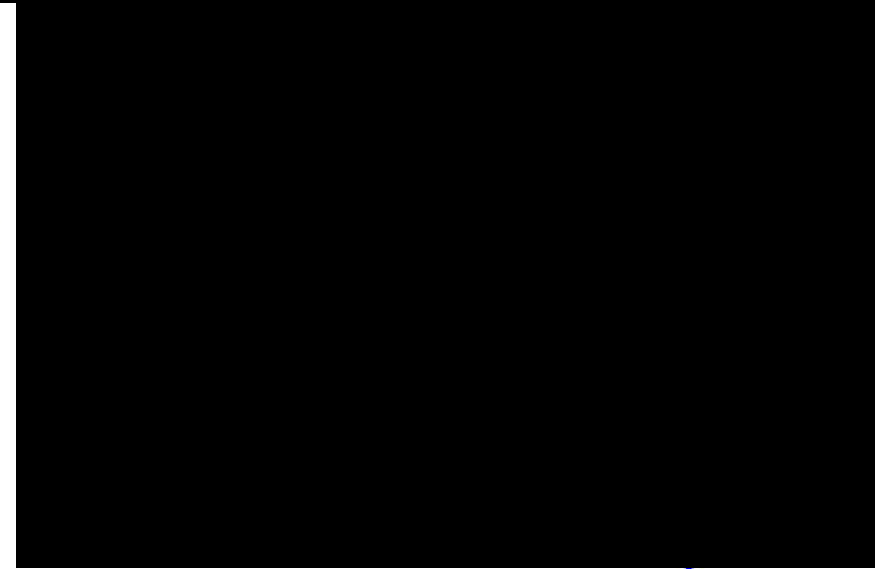




Male free
since
5 million B.C.



(from Hickman et al. 1993)



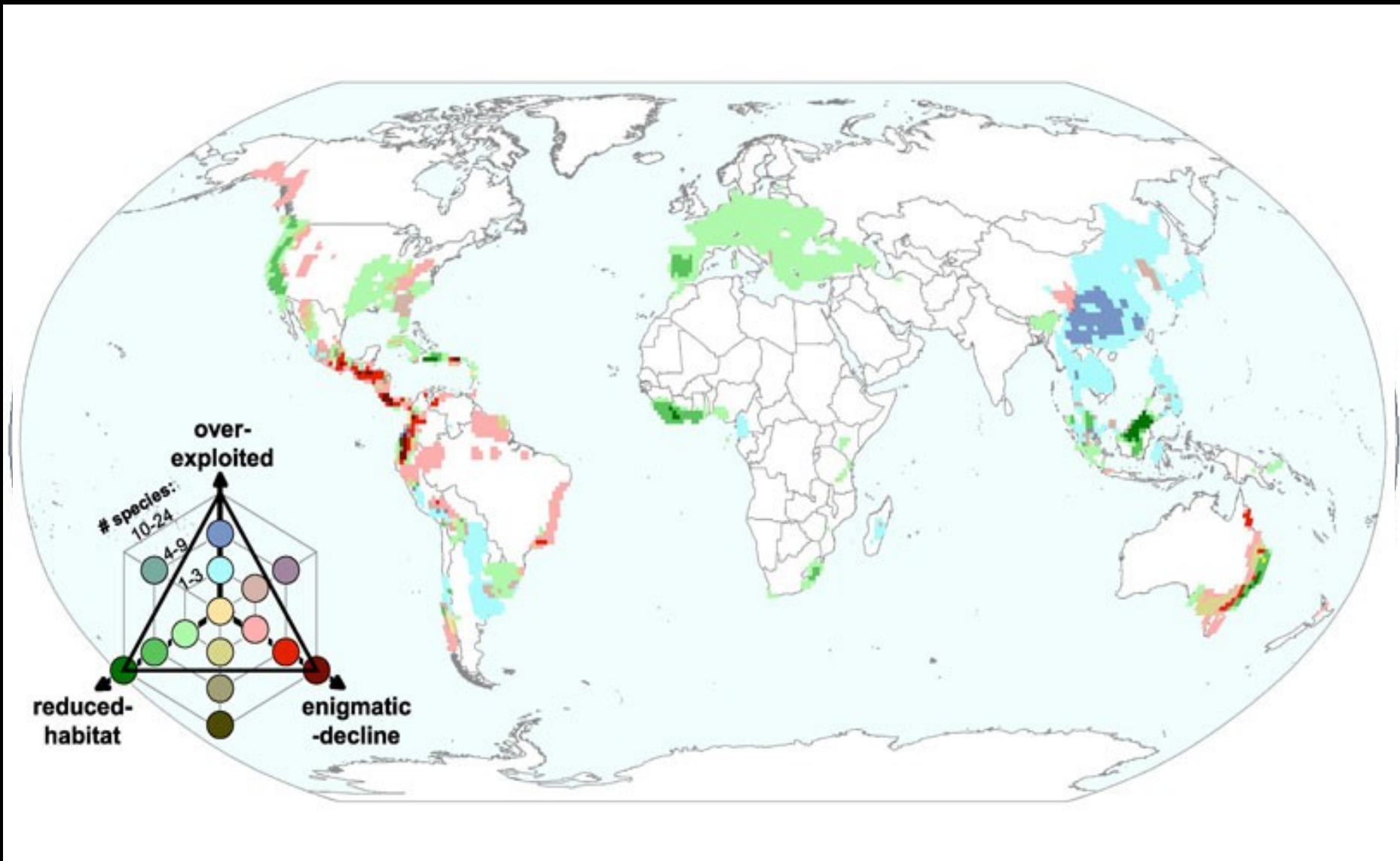
NH₂



	DIII			DIV			
	1276	1277	1281	1555	1561	1566	1568
<i>Th. elegans</i>	KGWMDIMYA			IICLFEITTSAGWDGL			
<i>Th. atratus</i>	KGWMEIMYE			IICLFEITTSAGWNGL			
<i>Th. couchii</i>	KGWTDIMYA			IICLFEITTSAGWDGL			
<i>Th. sirtalis</i> WC	KGWMDIMYA			IICLFEVTTTSAGWNVL			
<i>Th. sirtalis</i> B	KGWMDIMYA			IICLFEVTTTSAGWDGL			
<i>A. pryori</i>	KGWMEIMYA			IICLFEITTSAGWDGL			
<i>R. tigrinus</i>	KGWMDIMYA			MICLFEITTSAGWDGL			
<i>L. epinephelus</i>	KGWMDIMYA			IICLFEITTSAGWSDL			
<i>Rattus</i>	KGWMDIMYA			IICLFEITTSAGWDGL			
	*—β—			—α— *—β—			

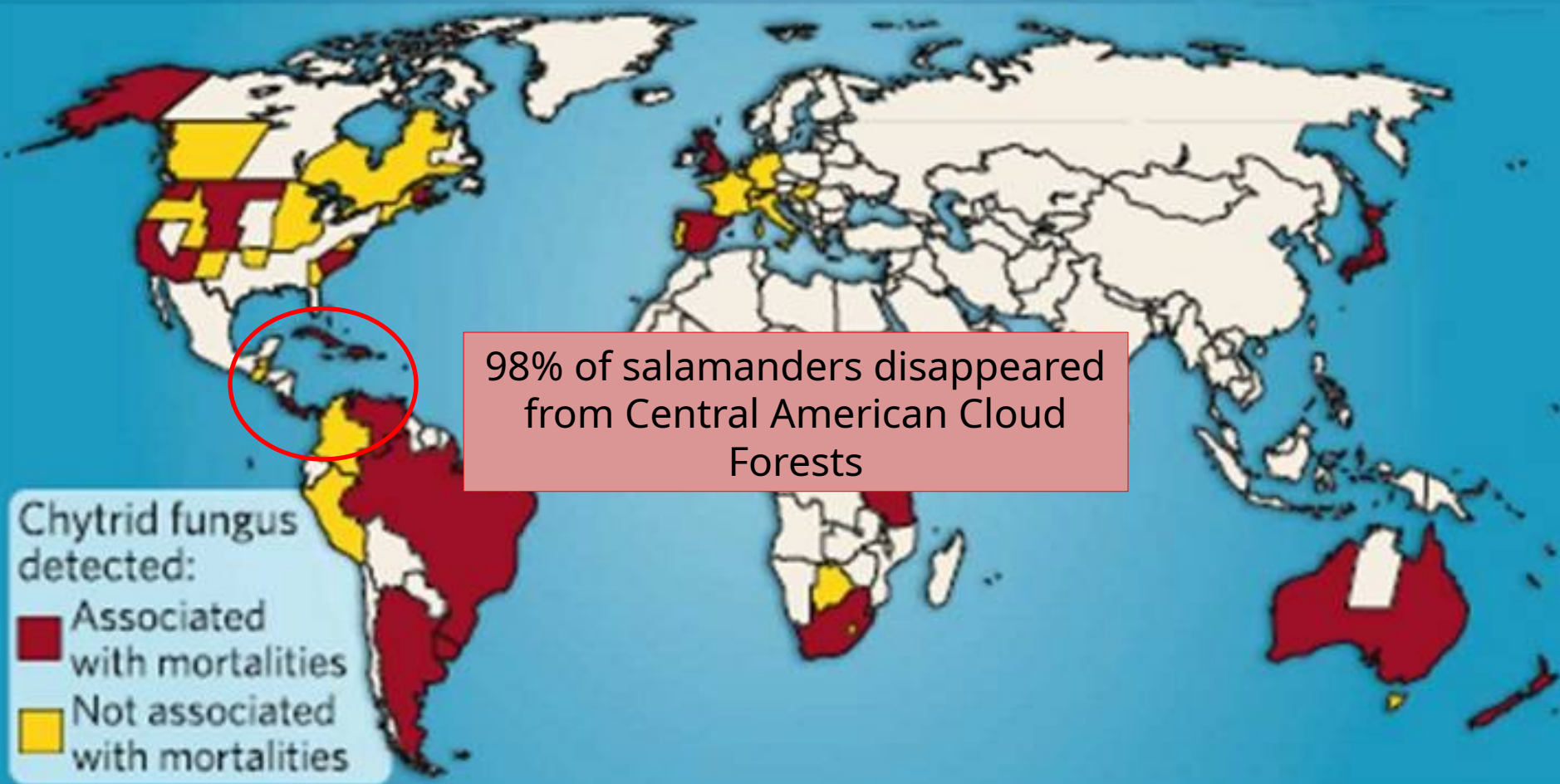


50% of salamanders are endangered or threatened



Compared to 30% of frogs

GLOBAL SPREAD OF CHYTRID FUNGUS, 2007



Questions?

