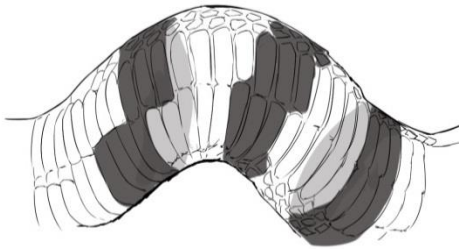
Model species: California King snake (*Lampropeltis californiae*)

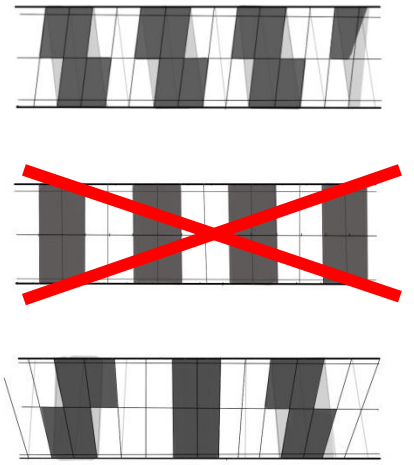
Snakes are understudied
But they exhibit a remarkable diversity of colour patterns!

Among them, *L.californiae* has one of the **simplest**: a repeat of black and white "bands" all over the body

It is a common snake in pet store, **easy** to breed and maintain
Ease of observation

And, it shows an astonishing diversity of natural variants:





By WZQ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California Kingsnake
Lampropeltis getula californiae
Orange County, CA
United States
© 2011 Brian Hinds-AKA Fundad
www.herpwiki.com


alamy stock photo

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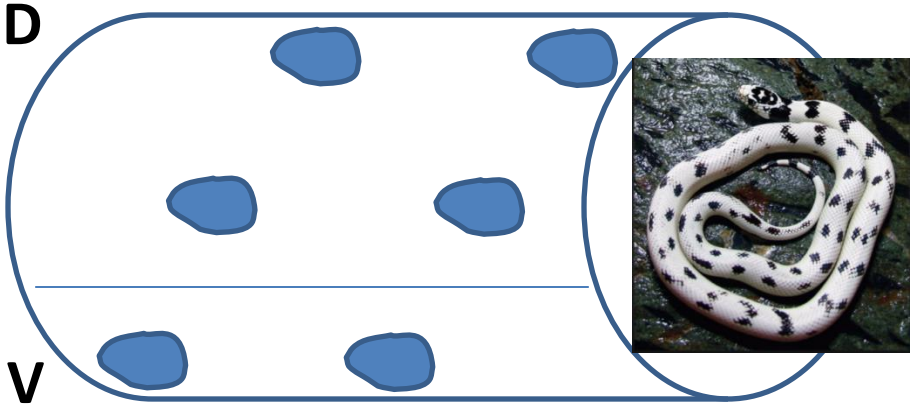
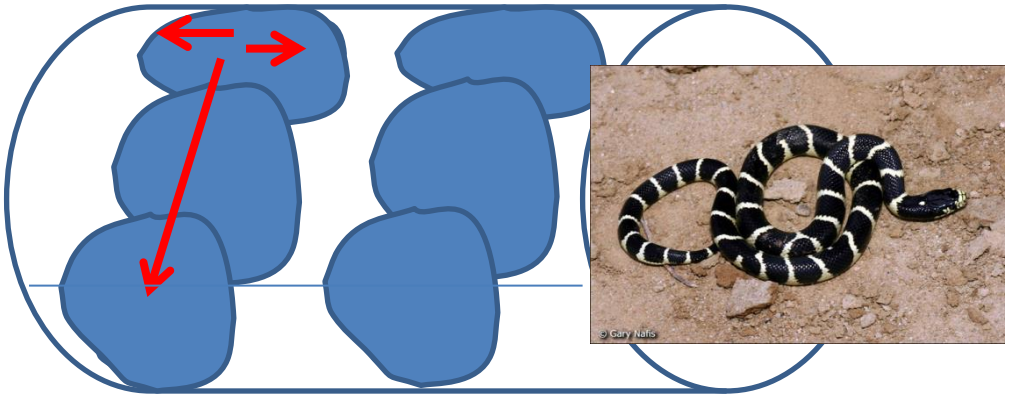


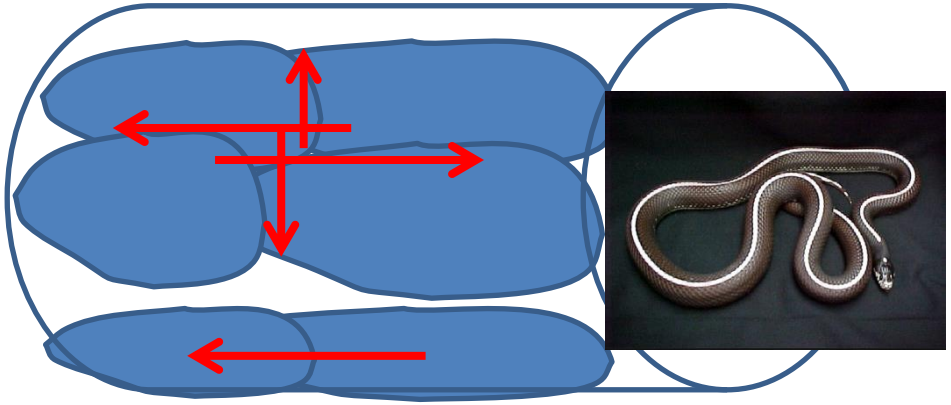
V

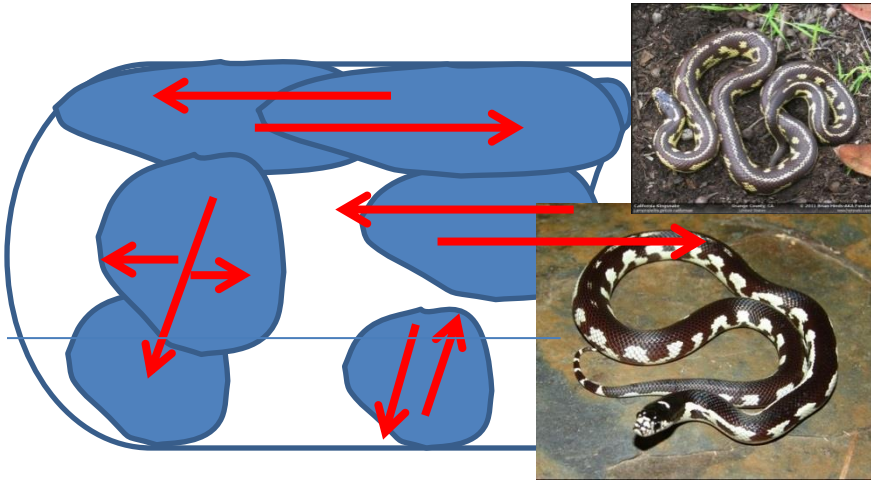
Are variants resuming development???

Asynchrony

Synchrony







Hypothesis

1/ At least 3 independent spots arise during development per side (seen in many many many species)

2/ They start to spread with one preferential direction or not (circle)

3/ independent spots can later develop in synchrony (reinforcement) or asynchrony with others

Problems

From there, black spot with melanophores seem to be forming the prepattern. It is clearly different from what is described for zebrafish. In zebrafish, xantho et iridophore are the first one.
But in snakes, it was described the melano appears first…