



Studying evolution in Madagascar

Research Mentor: Arianna Kuhn

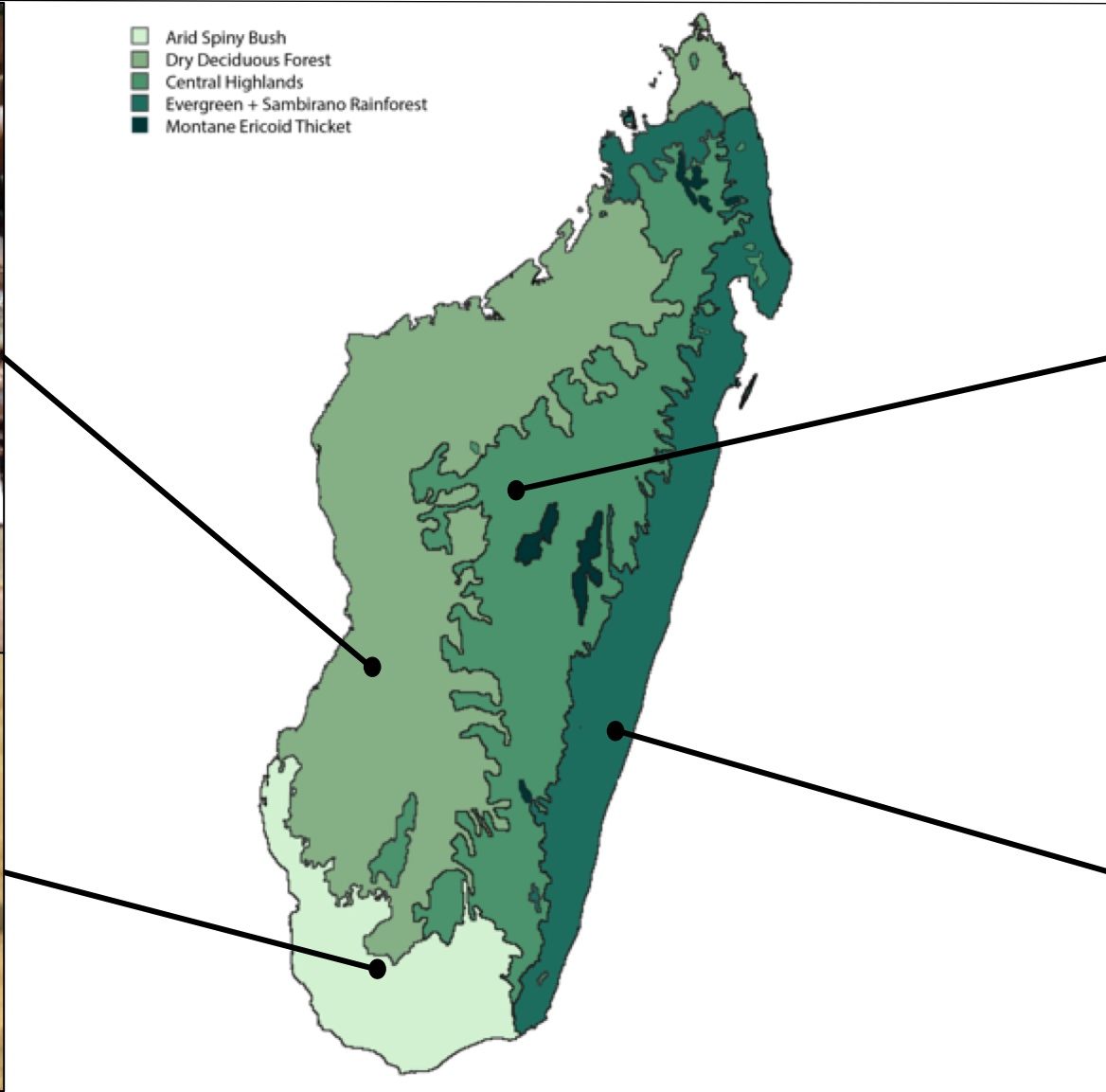


ariannakuhn.com



[@PseudohajeSci](https://twitter.com/PseudohajeSci)

Madagascar is an isolated landmass with sharply contrasting habitats





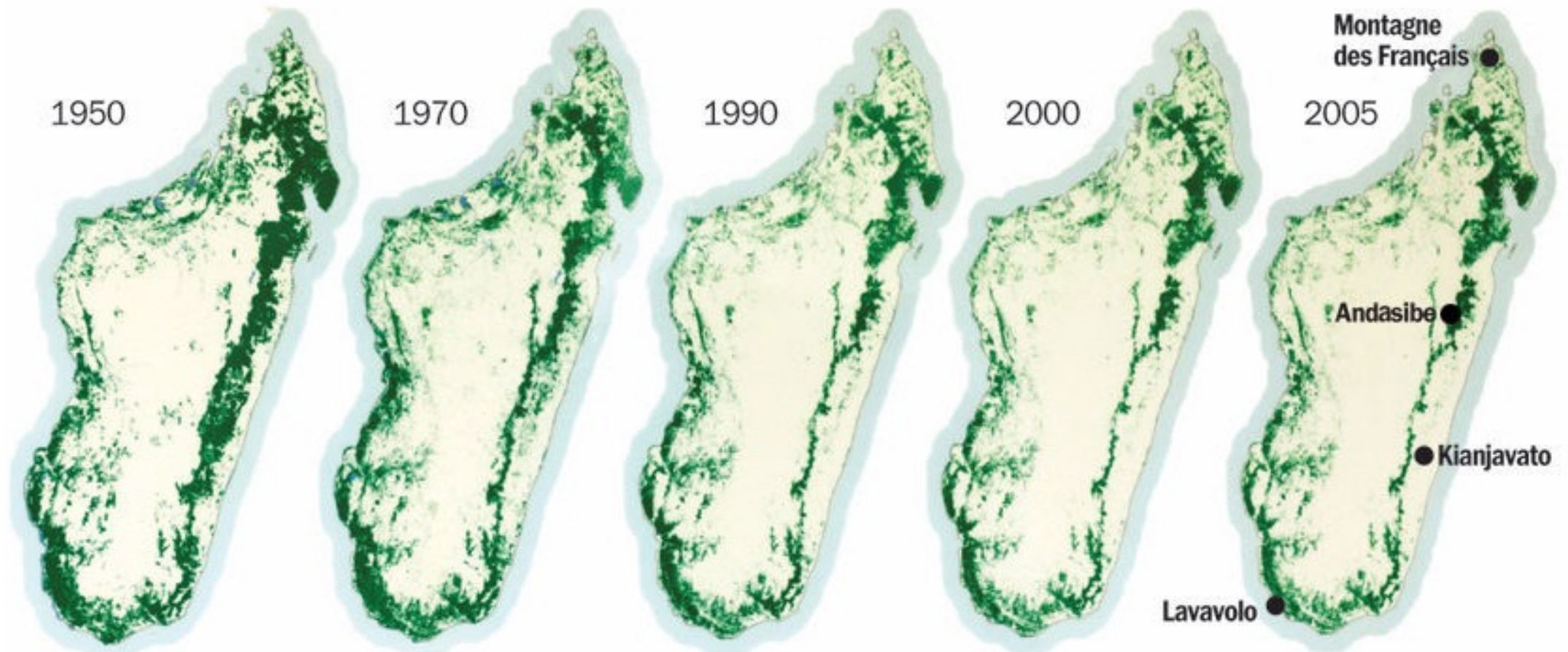
These habitats may have driven observed patterns of extreme species richness and endemism



Many of the species here are
found nowhere else on earth



Right now, as little as 8% of the original forest remains





Forest burning for charcoal
and cattle grazing



Habitat loss from
farming



Erosion due to
deforestation



Timber logging

I am working with a team that has been exploring new regions of Madagascar for the past 30 years



This team surveys new areas for amphibians and reptiles that have never been studied





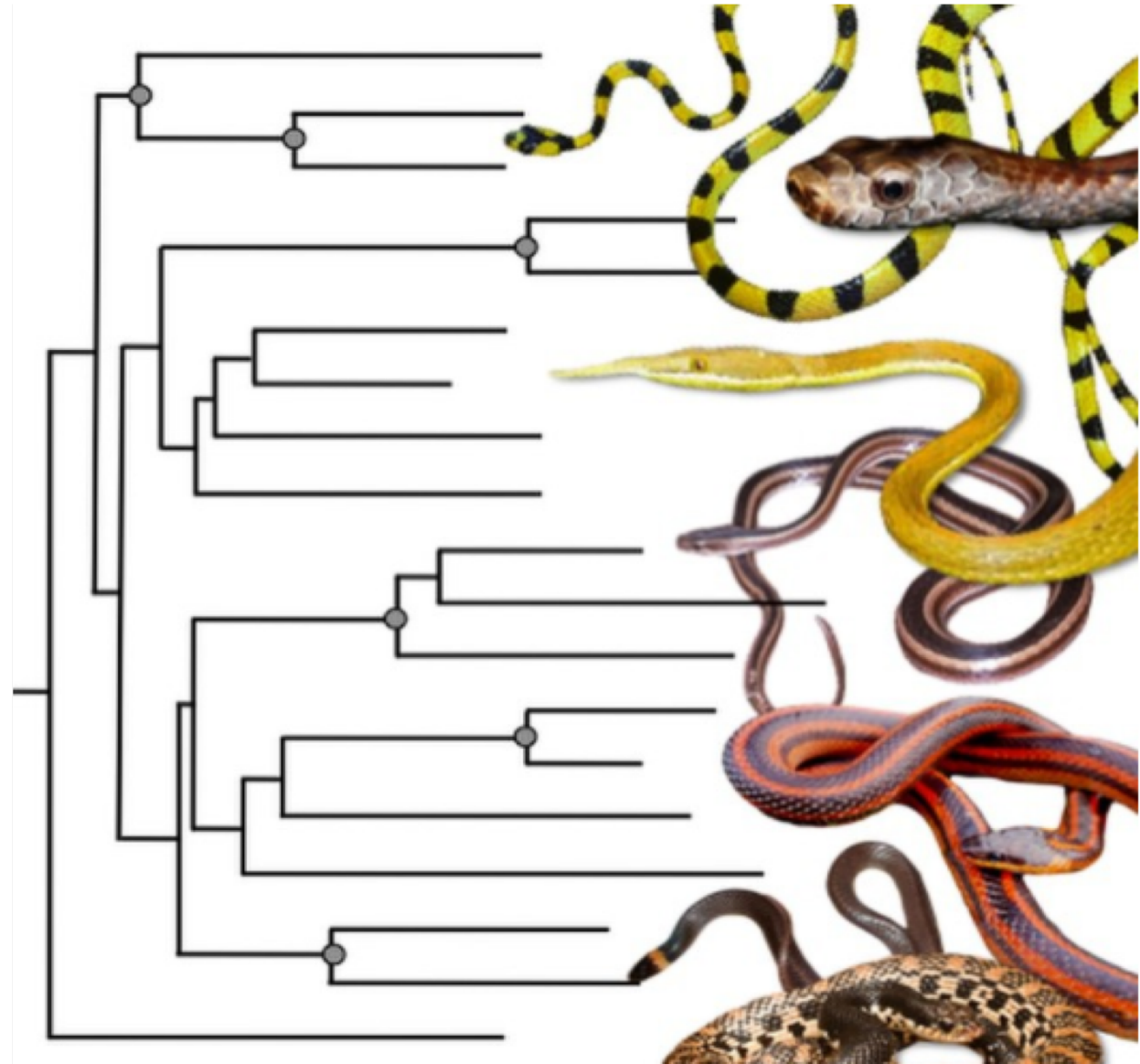
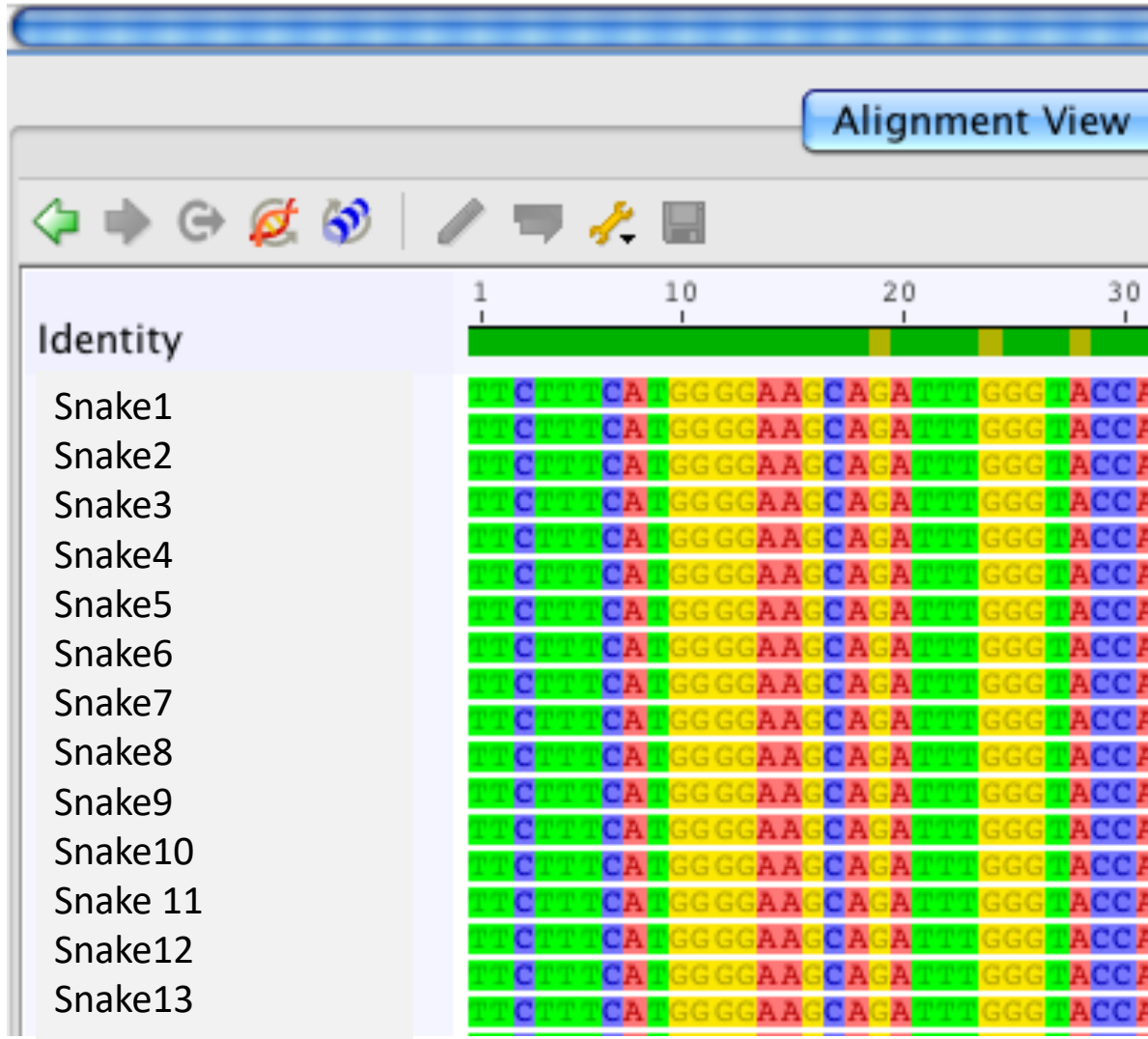
Back at the museum, we study specimens that have been collected



And we also extract DNA from tissues collected in the field



Using this DNA & computer programs, we can determine evolutionary history and speciation patterns



In particular, right now I am studying a group called the 'gemsnakes'



DNA and external characteristics can be used to identify new species



TRILOBITES

The New Ghost Snake in Madagascar



A newly discovered species of cat-eyed snake in Madagascar, *Madagascarophis lolo*. Christopher J. Raxworthy/American Museum of Natural History

PC: @Sara and Snakes

**A rhapsody of colours from Madagascar:
discovery of a remarkable new snake of the genus *Liophidium*
and its phylogenetic relationships**

DAVID R. VIEITES¹, FANOMEZANA M. RATSOAVINA²⁺³, ROGER-DANIEL RANDRIANIAINA²⁺³,
ZOLTÁN T. NAGY⁴, FRANK GLAW⁵ & MIGUEL VENCES³



PC: [@CarlHutter](#)

We can only protect these species if we know what species are present



Our goal is to document and describe
Madagascar's true biodiversity



To inform conservation decisions that will protect this beautiful and unique biota

