

Biogeography of Crete

Mylonas Moissis

University of Crete





Psiloreifis mt.
2456 m

Dikti mt.
2152 m

Lefka Ori mt.
2452 m

Geomorphology



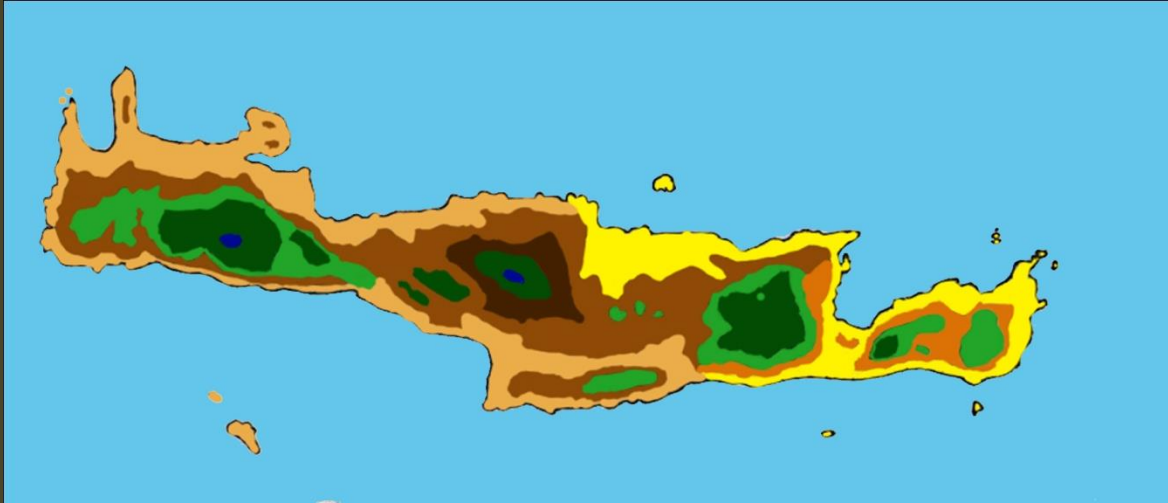
Geomorphology



Geomorphology



Climate



Bioclimatic
map of Crete

Winter

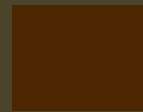
very cold
 $m < 0^{\circ}\text{C}$



cold
 $0^{\circ}\text{C} < m < 3^{\circ}\text{C}$



mild
 $3^{\circ}\text{C} < m < 7^{\circ}\text{C}$



hot
 $m > 7^{\circ}\text{C}$



humid

semi humid

semi dry

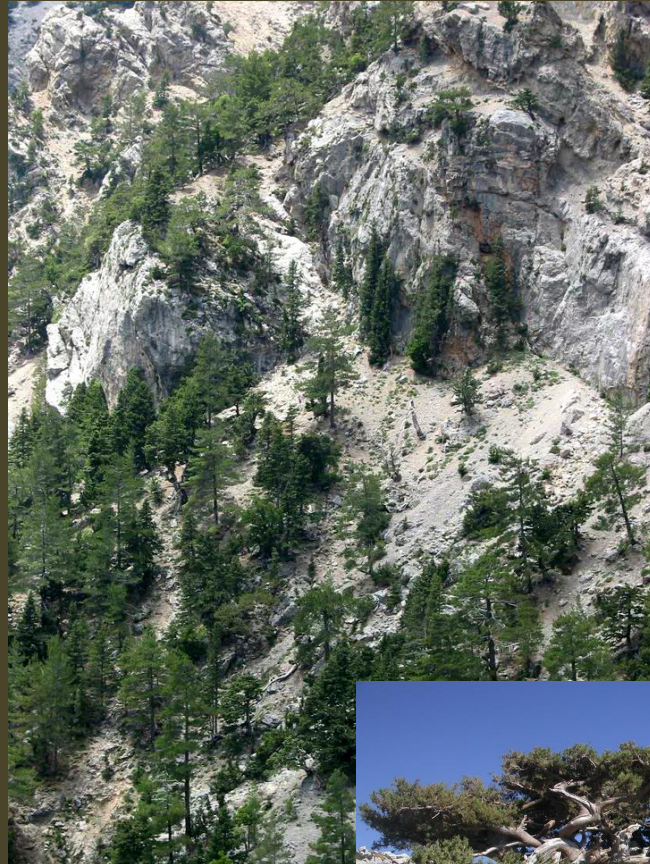
Ecosystems maquis



Ecosystems phrygana



Ecosystems Cypress tree forests (*Cupressus sempervirens*)



Ecosystems

pine forests (*Pinus brutia*)



Ecosystems

subalpine



Ecosystems freshwater



Ecosystems freshwater



Ecosystems

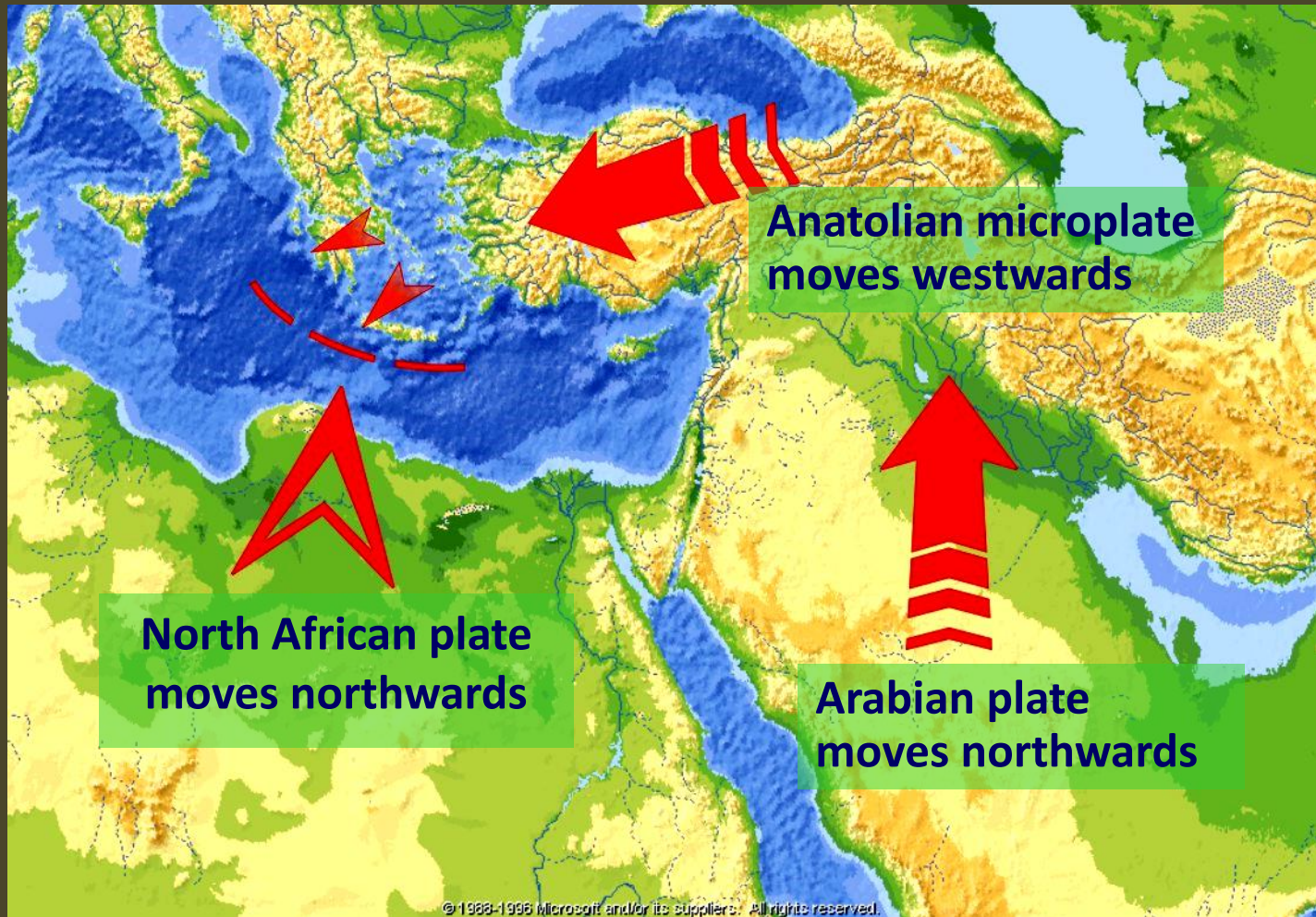
gorges - screes



Ecosystems caves

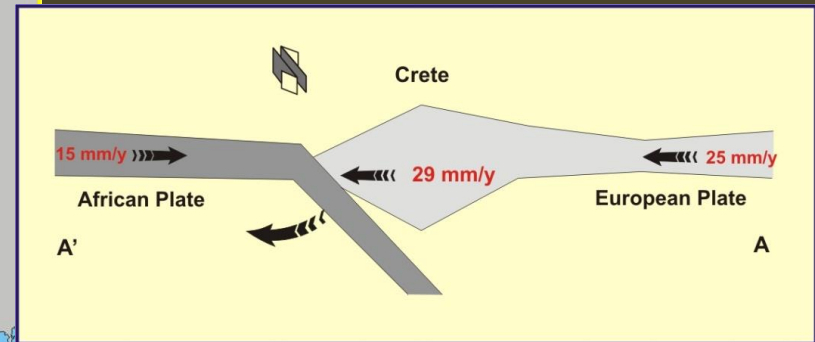
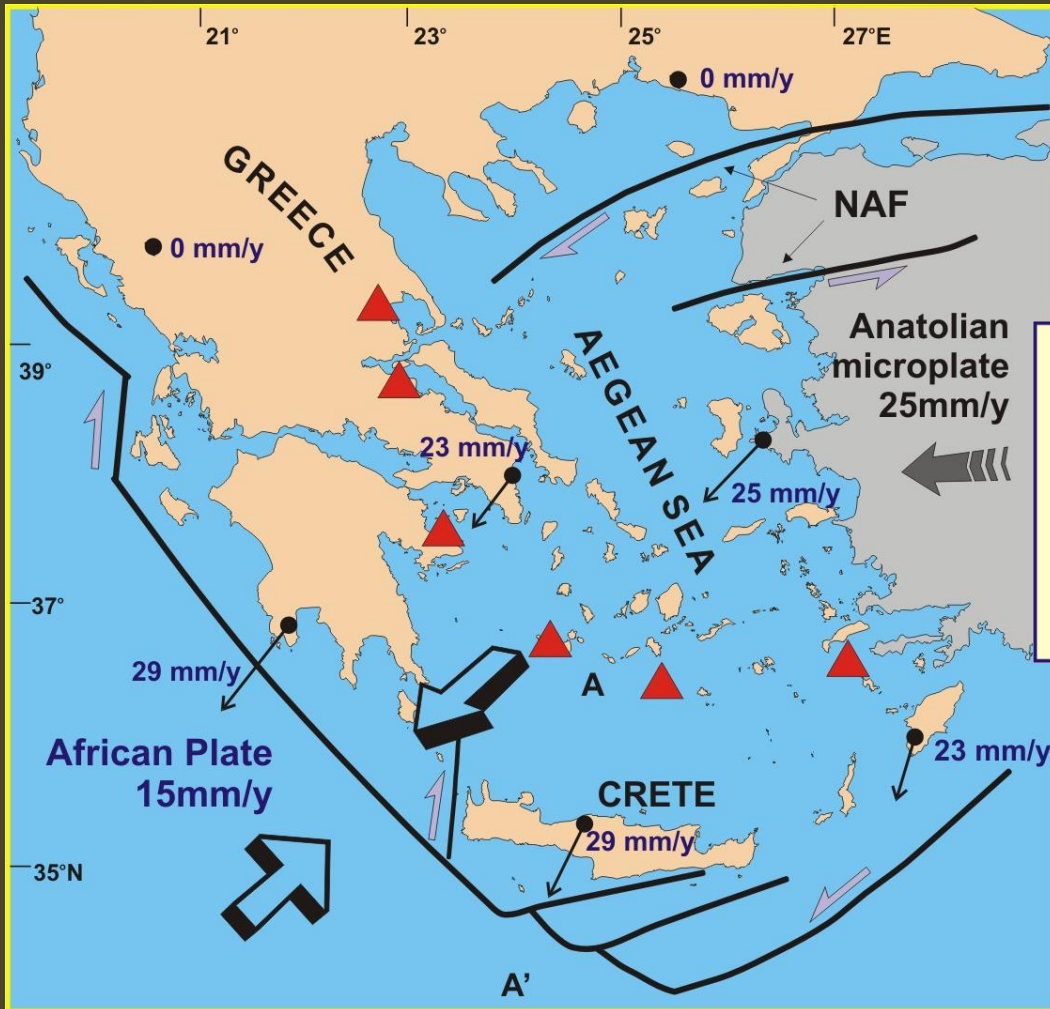


Palaeogeography



Palaeogeography

Present day movement of Crete



Palaeogeography

Miocene 17 mya



Middle Miocene 12 mya



Late Miocene 8 mya



Messinian 5.5 mya



Pliocene 3.5 mya



Pleistocene

200,000 y.a



Land



Sea



Lakes

Palaeogeography



Extinctions

Miocene



Deinotherium giganteum



Footprint of *Hyena*



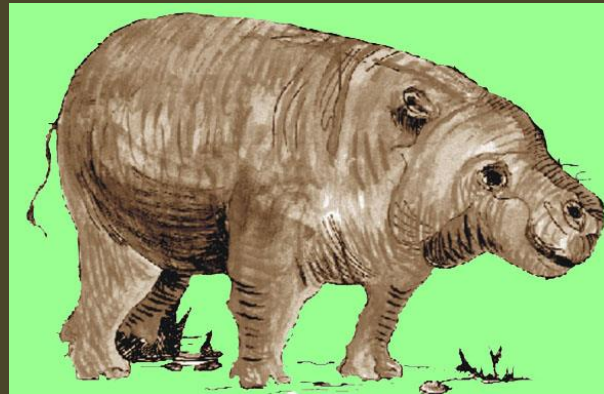
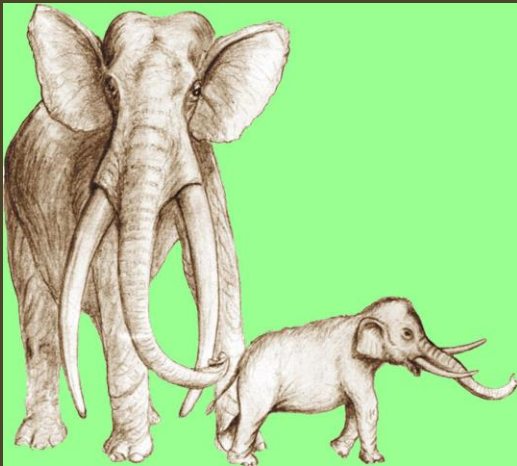
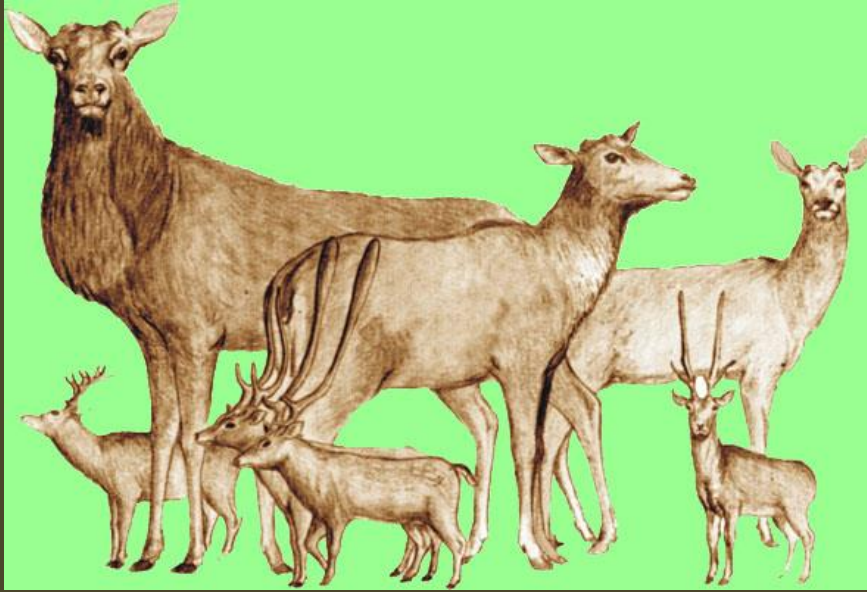
Hipparion
tooth



Zonites sp.

Extinctions

Pleistocene



Biodiversity



Biodiversity



Biodiversity



Endemism plants



Endemism animals



Relicts



Zelkova abelicea



Petromarula pinnata



Uroscorpius dufourei



Helicodonta gyria



Crocidura zimmermanni

Human influence Introductions



Human influence Introductions



Bull frog



Testudo spp.

Human influence Introductions

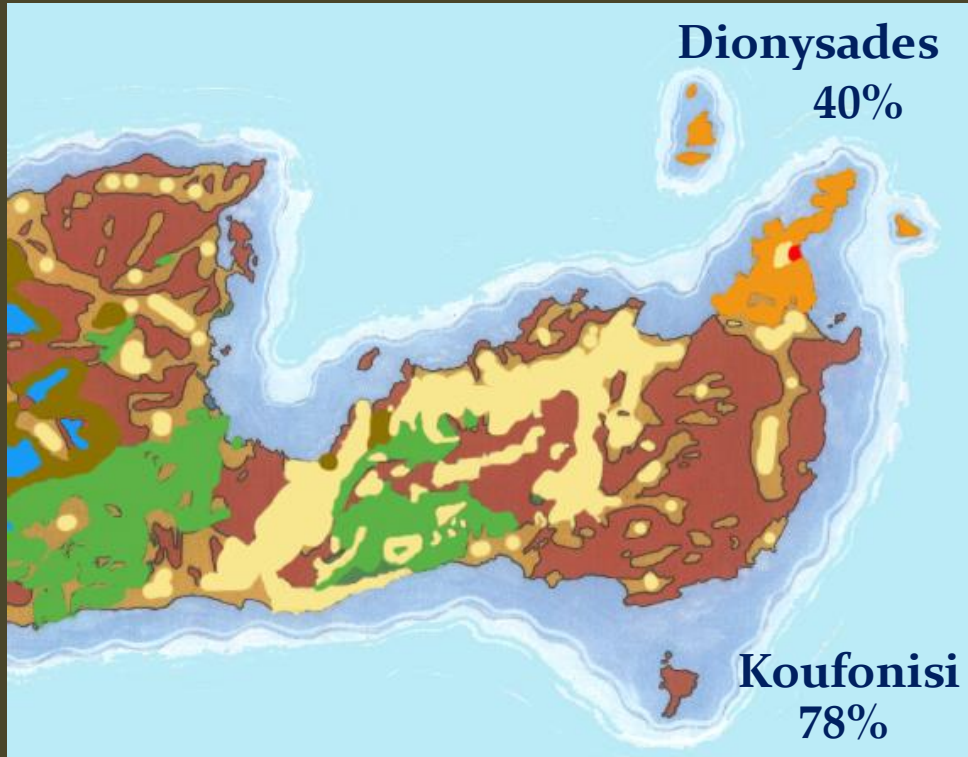


Patterns

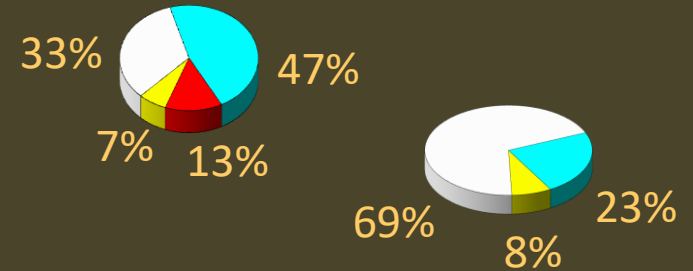


Lefka Ori mt., West Crete

Patterns



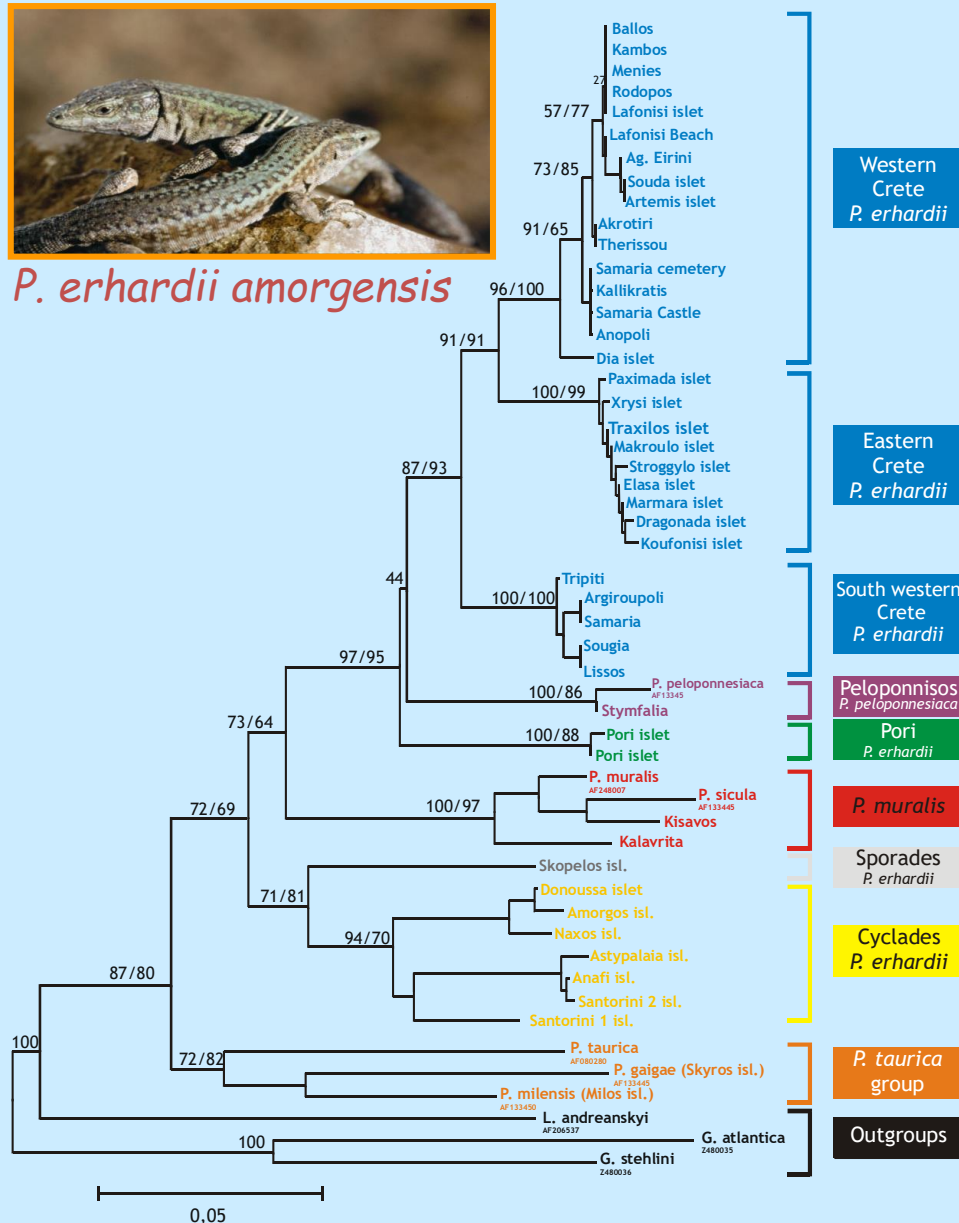
- Mediterranean
- Balkan
- Aegean
- Endemic
- European



Phylogeography *Podarcis* spp

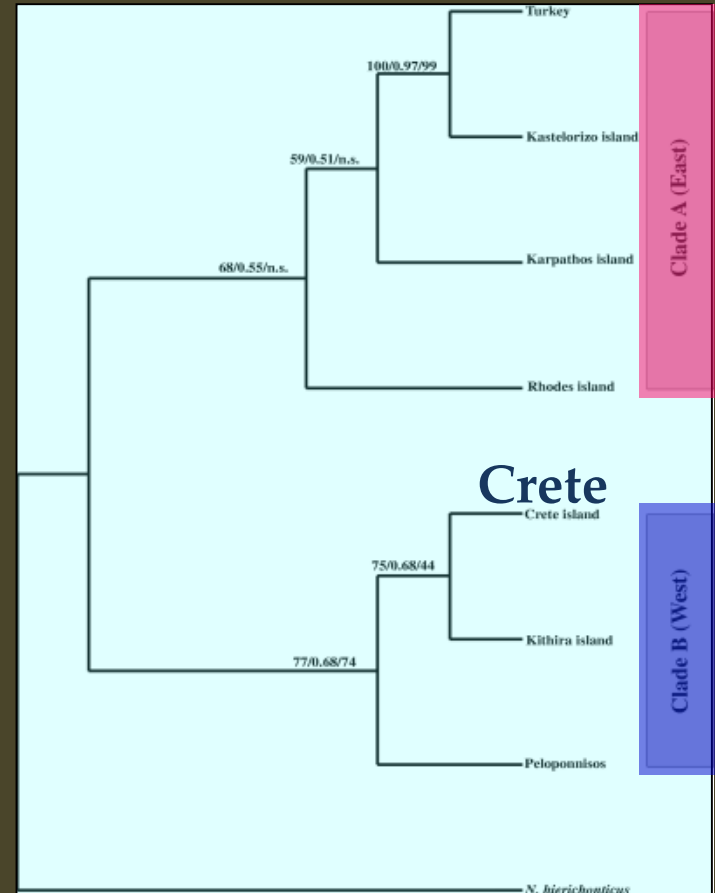
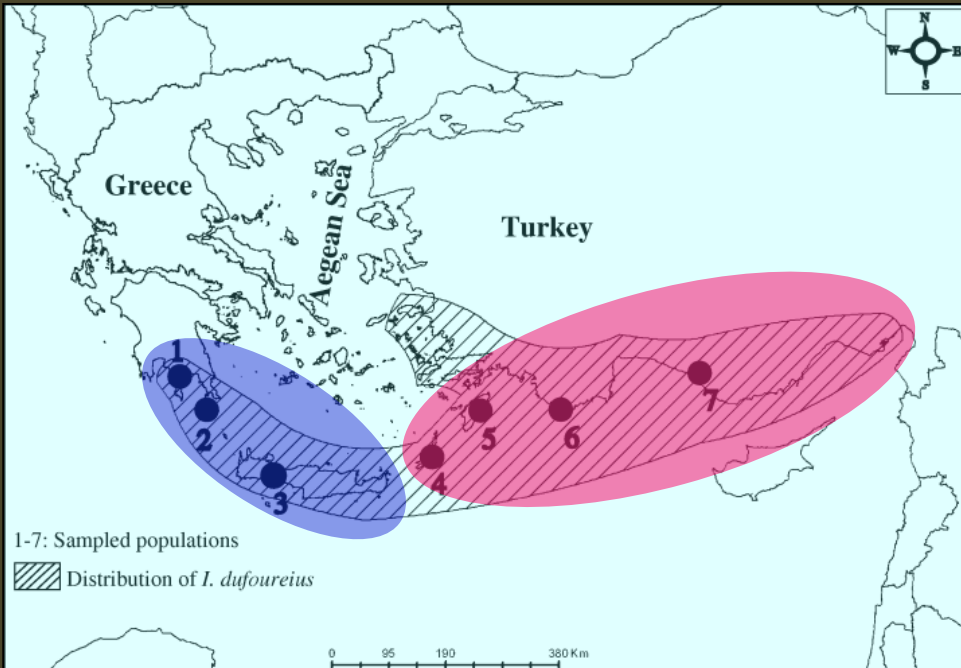


P. erhardii amorgensis

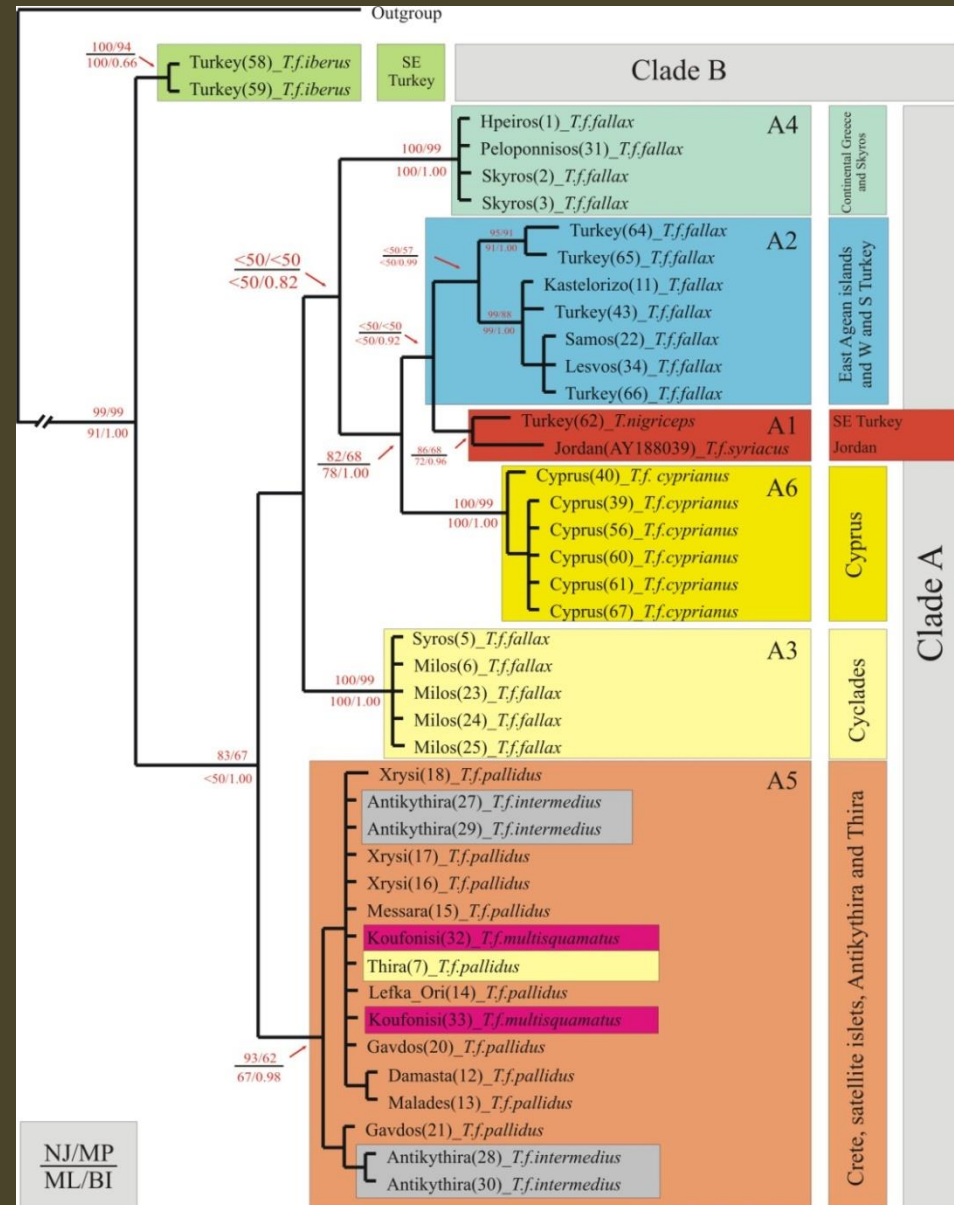
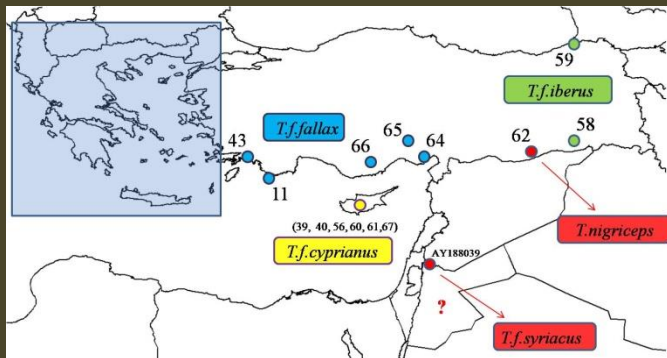
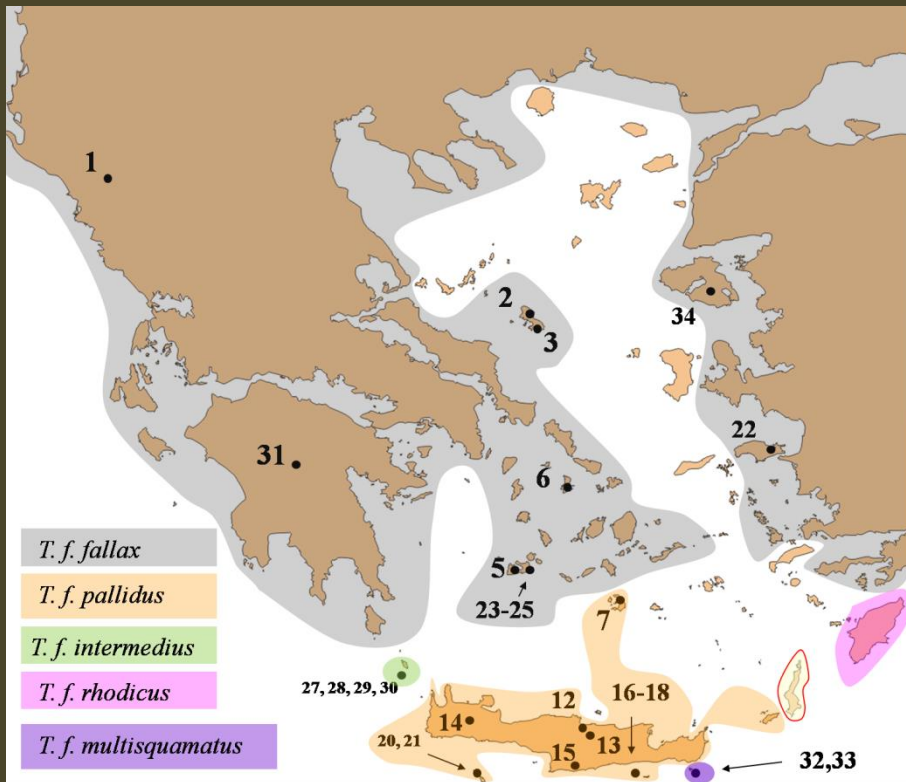


P. milensis

Phylogeography *Iurus* spp.

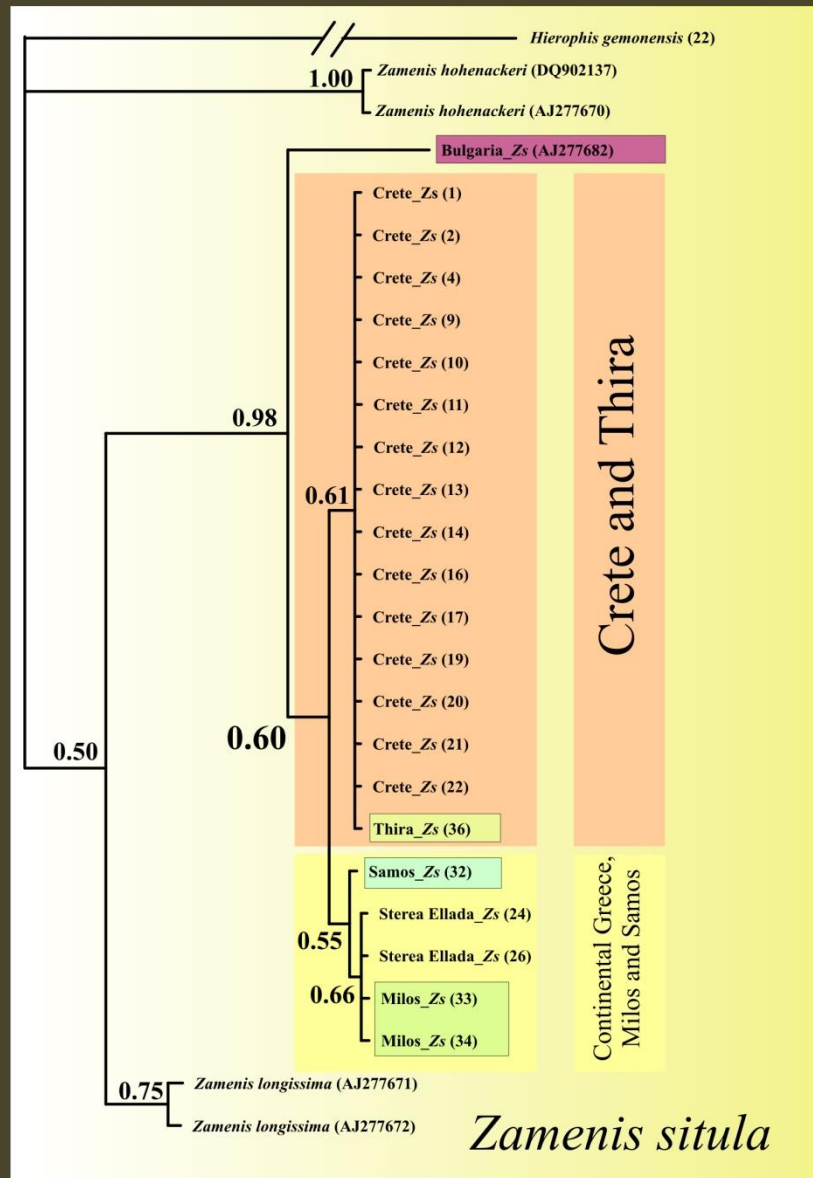


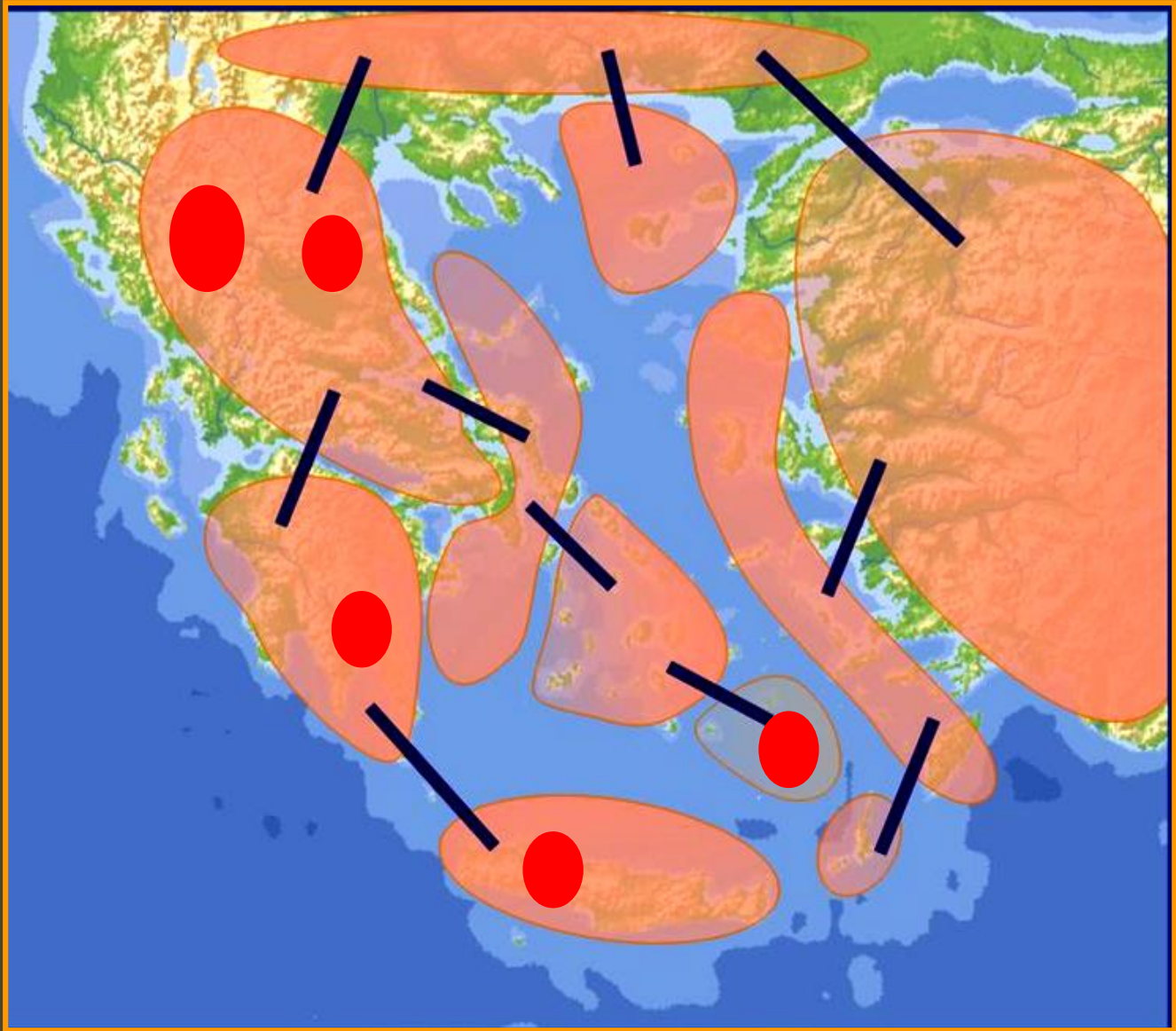
Phylogeography *Telescopus fallax*



Phylogeography

Zamenis situla





A dramatic landscape featuring a wide valley with mountains in the background. The sky is filled with large, white, billowing clouds, and a bright light source, likely the sun, is visible through a break in the clouds near the top center. The foreground shows a rocky, uneven terrain with some patches of snow or light-colored rock. The overall color palette is dominated by blues, greys, and whites, creating a moody and atmospheric scene.

Thank you