

# Darter Goodeids of the Genus *Allodontichthys*

8th Convention of the European Branch of the Goodeid Working Group

# Road Map of the Presentation

Assumed Origin and History of the Genus

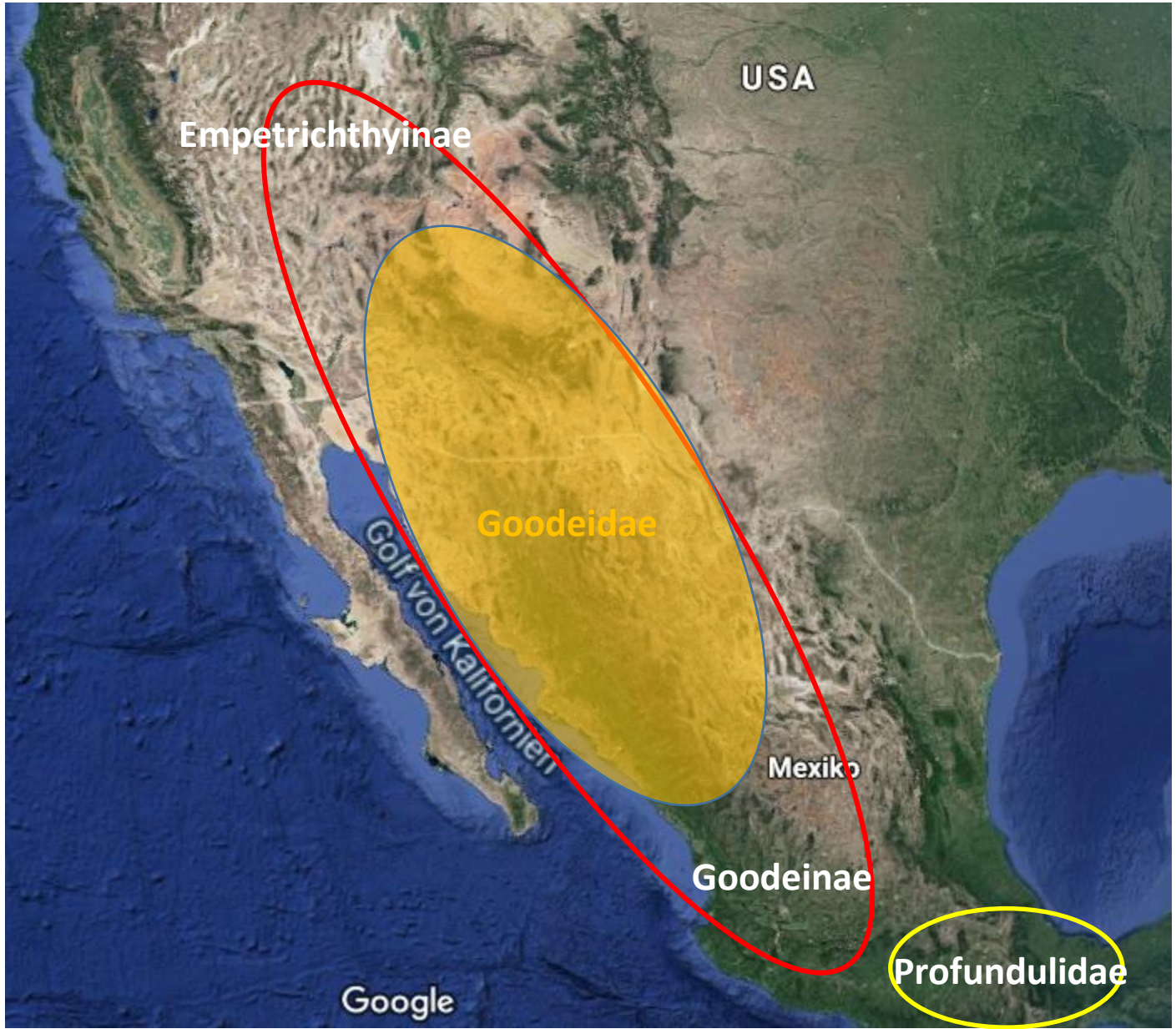
Distribution and Habitats of the Species

Life History and co-distributed Fish Species

Husbandry and Conservation of the Species

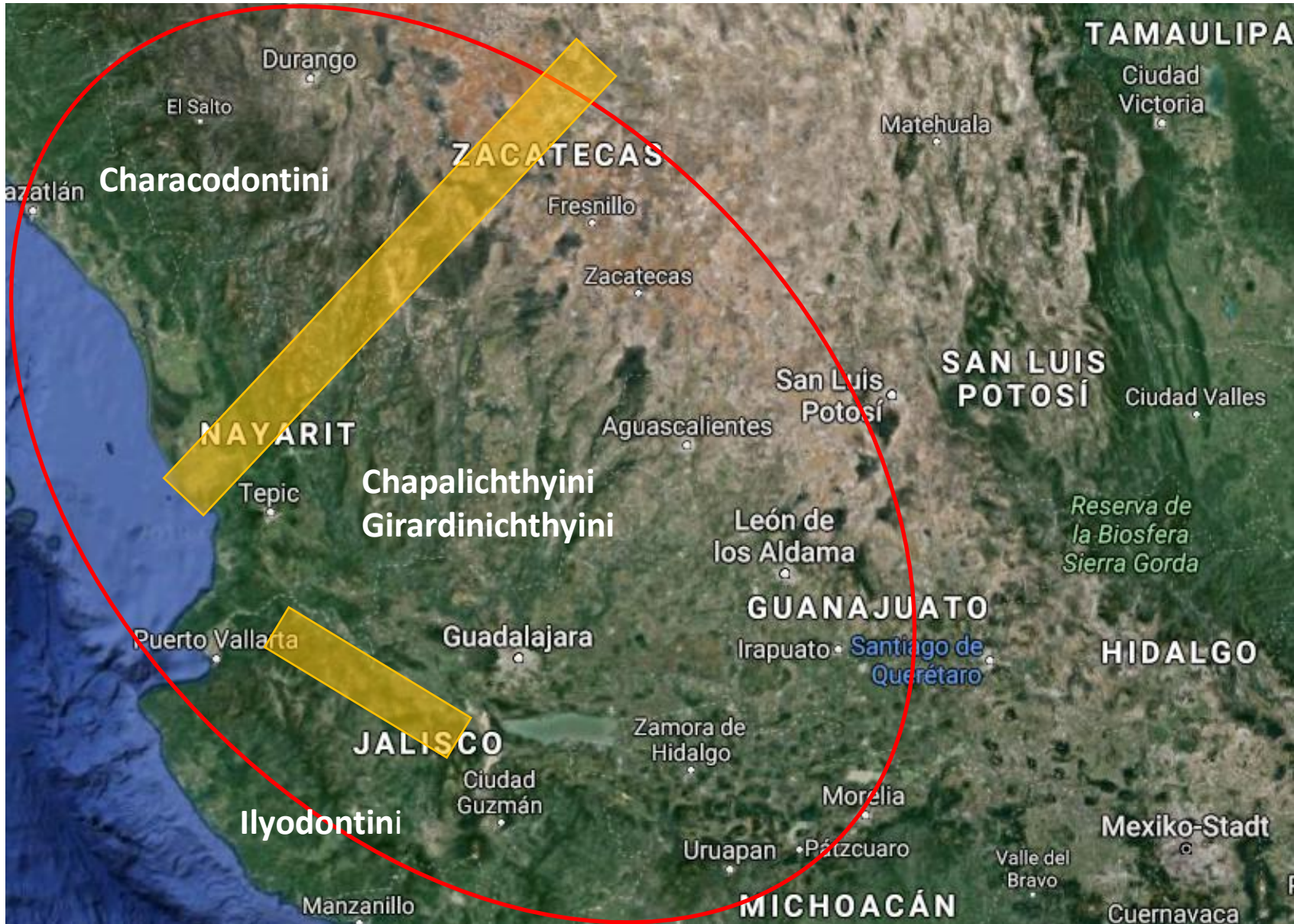
# Assumed Origin and History of the Genus



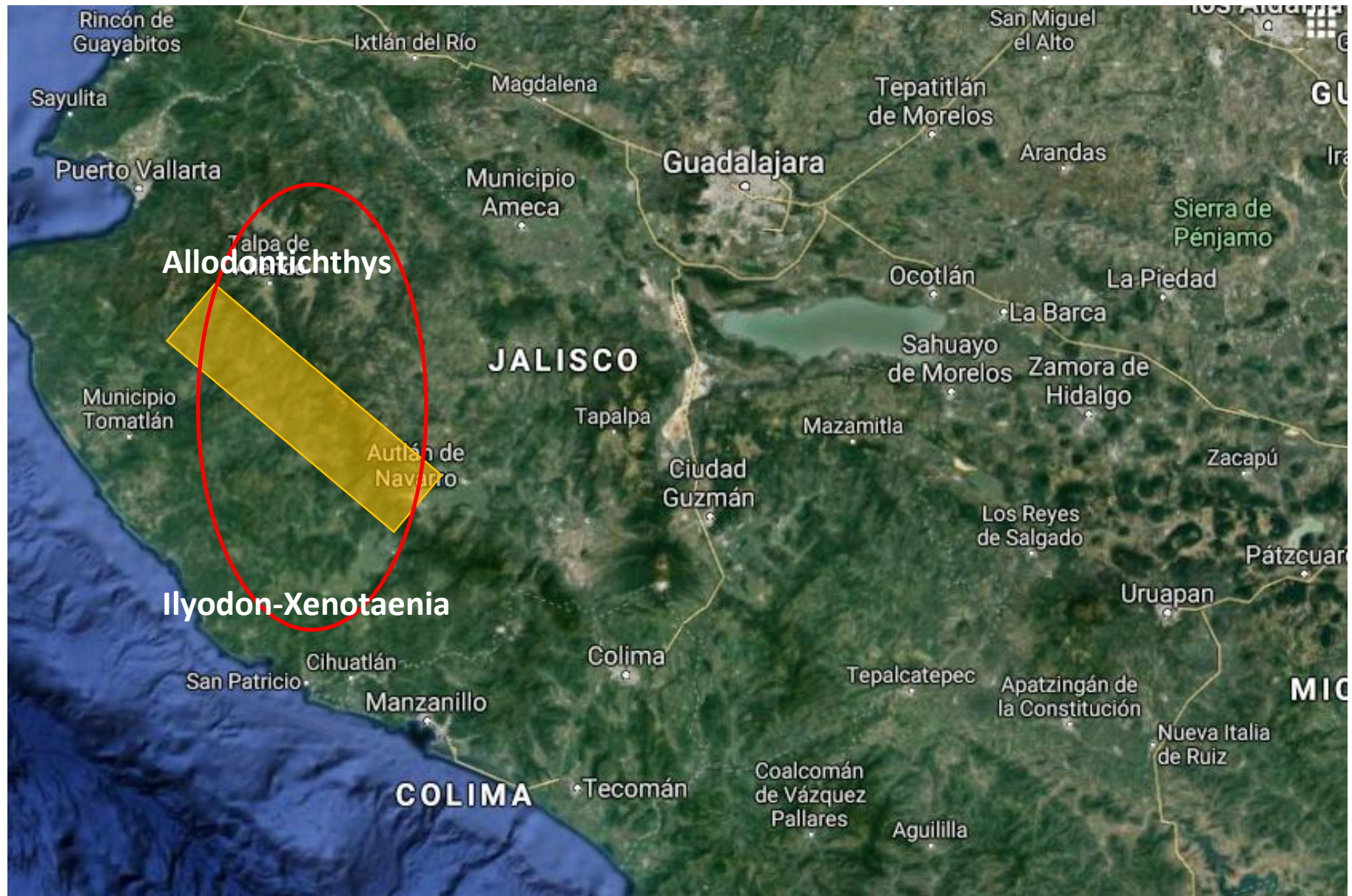


ca. 23 Mya

ca. 17 Mya



ca. 15 Mya  
ca. 10.5 Mya  
ca. 9.5 Mya



ca. 6.9 Mya

# Tribe Ilyodontini



Xenotaenia

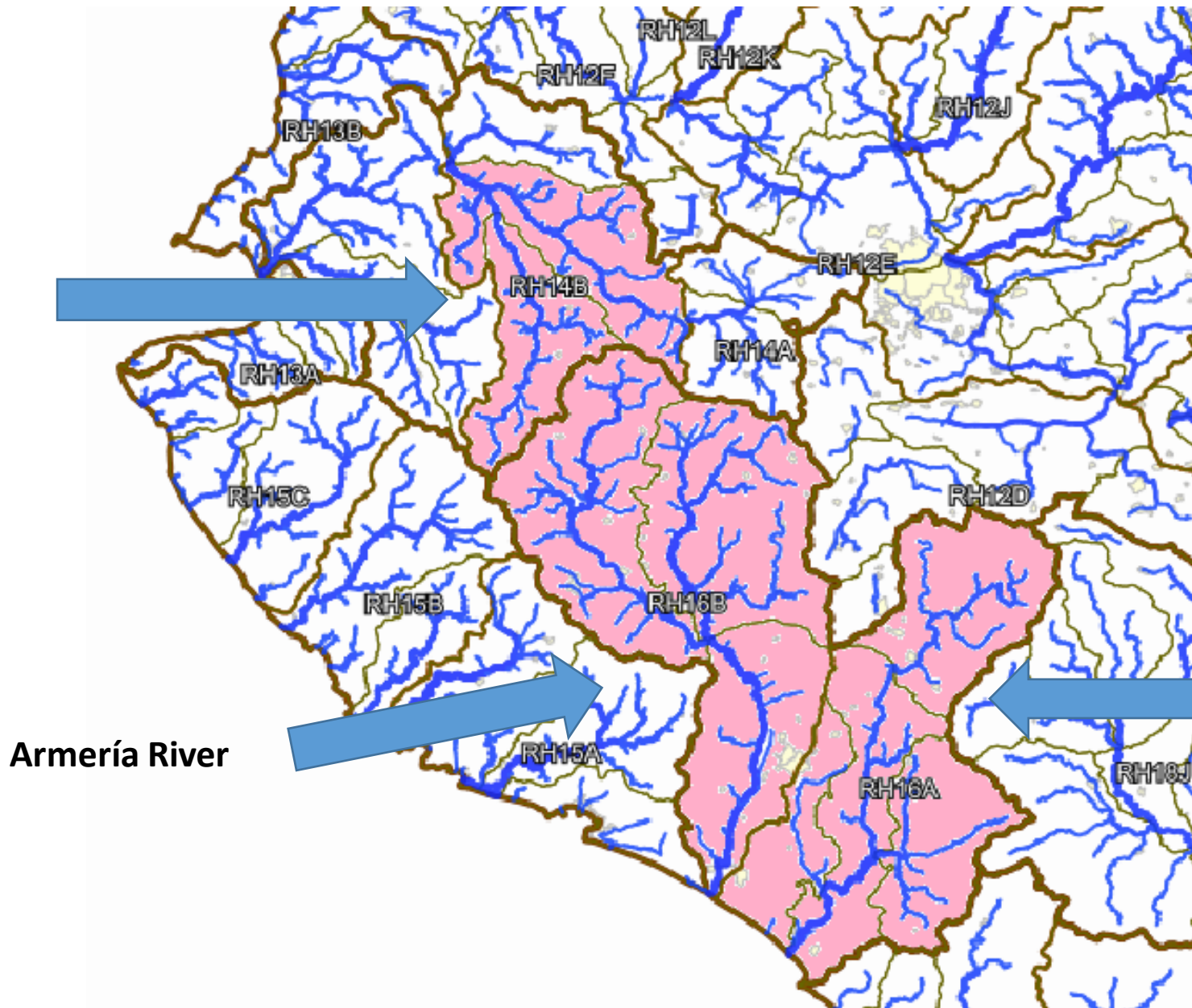
Allodontichthys



Ilyodon



(Middle)  
Ameca River



ca. 3.6-2.9 Mya

Coahuayana River

Armería River



# Distribution and Habitats of the Species



# The genus *Allodontichthys*

*hubbsi*



*polylepis*



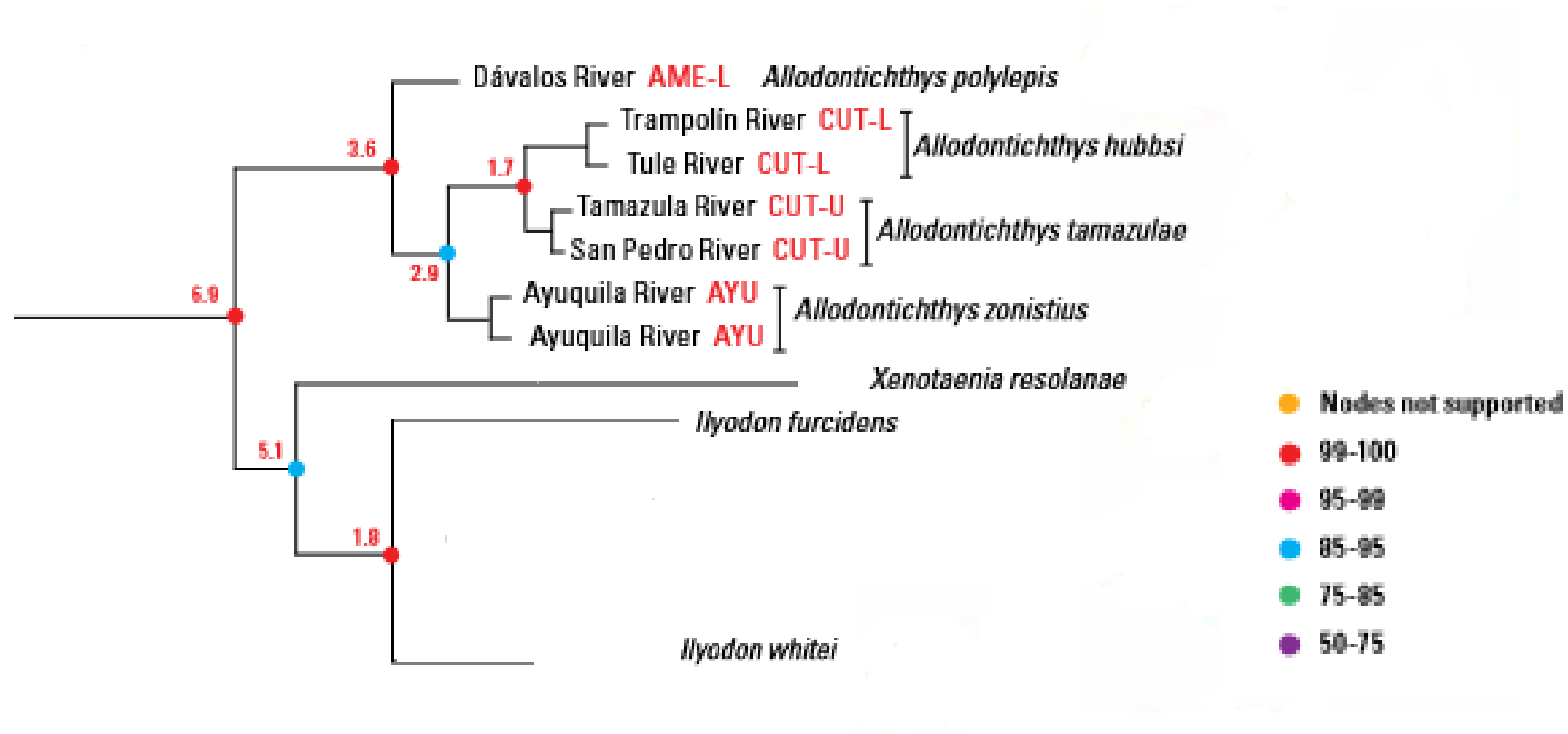
*tamazulae*

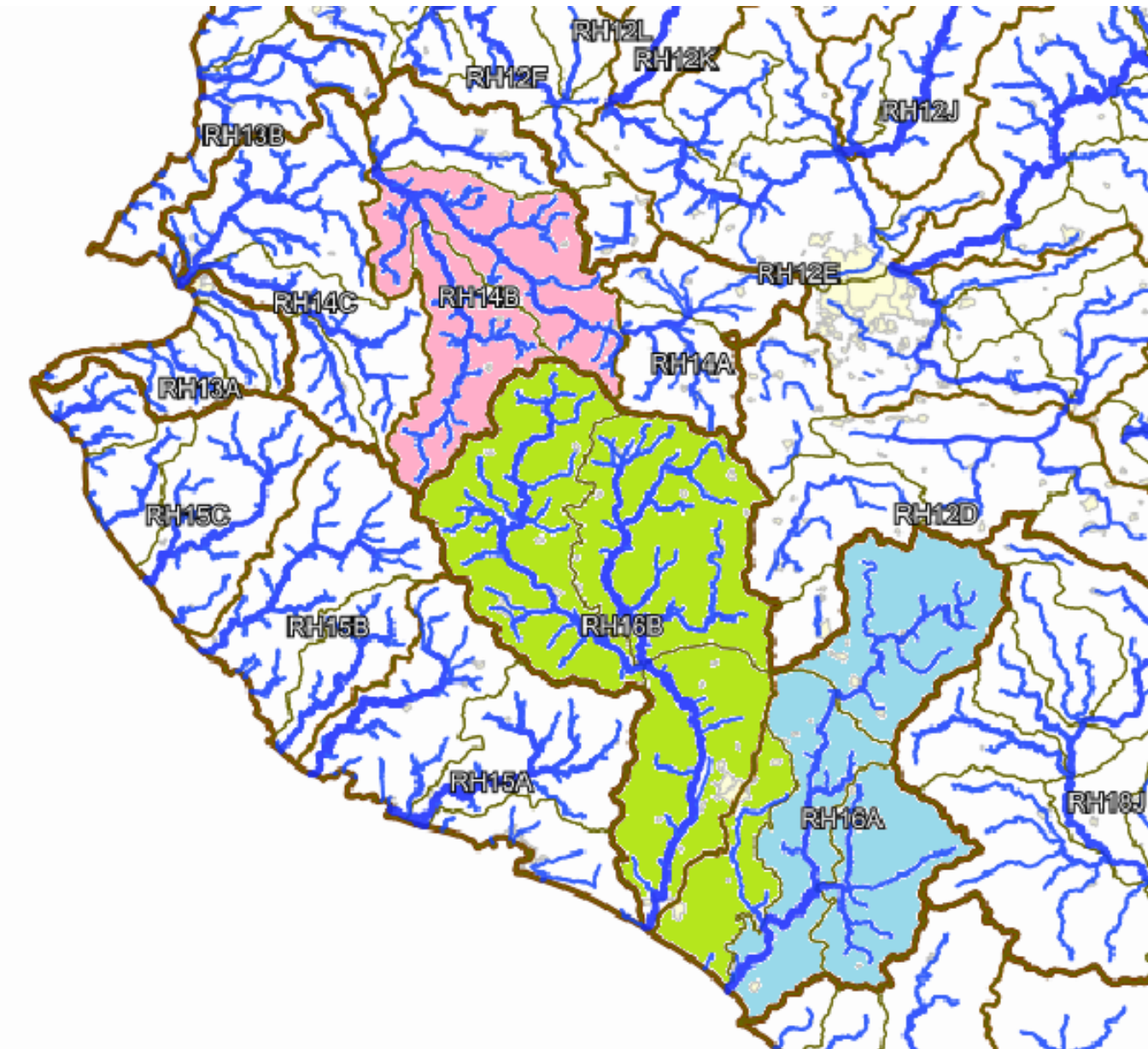


*zonistius*



# Relationship





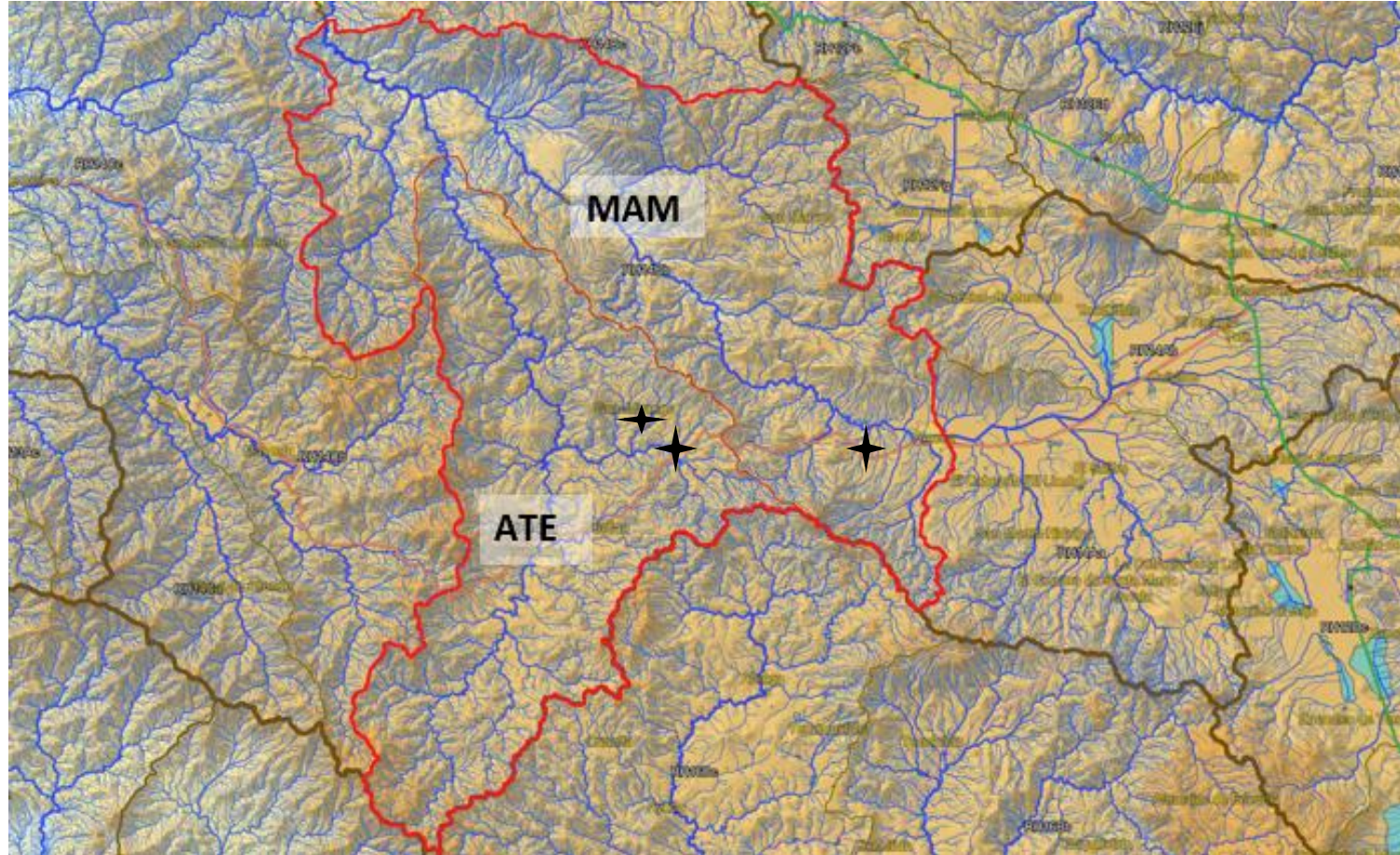
polylepis

zonistius

hubbsi

tamazulae

# Ameca River habitats





# Arroyo de Ávalos



# Arroyo de Ávalos







# Arroyo Estanzuela (Río de las Bolas)

# Arroyo Estanzuela (Río de las Bolas)



# Armería River habitats





# Barranca de la Tía Barragana (Comala, 1st Bridge)

# Barranca de la Tía Barragana (Comala, 1st Bridge)



# Arroyo Manantlán



# Arroyo Manantlán



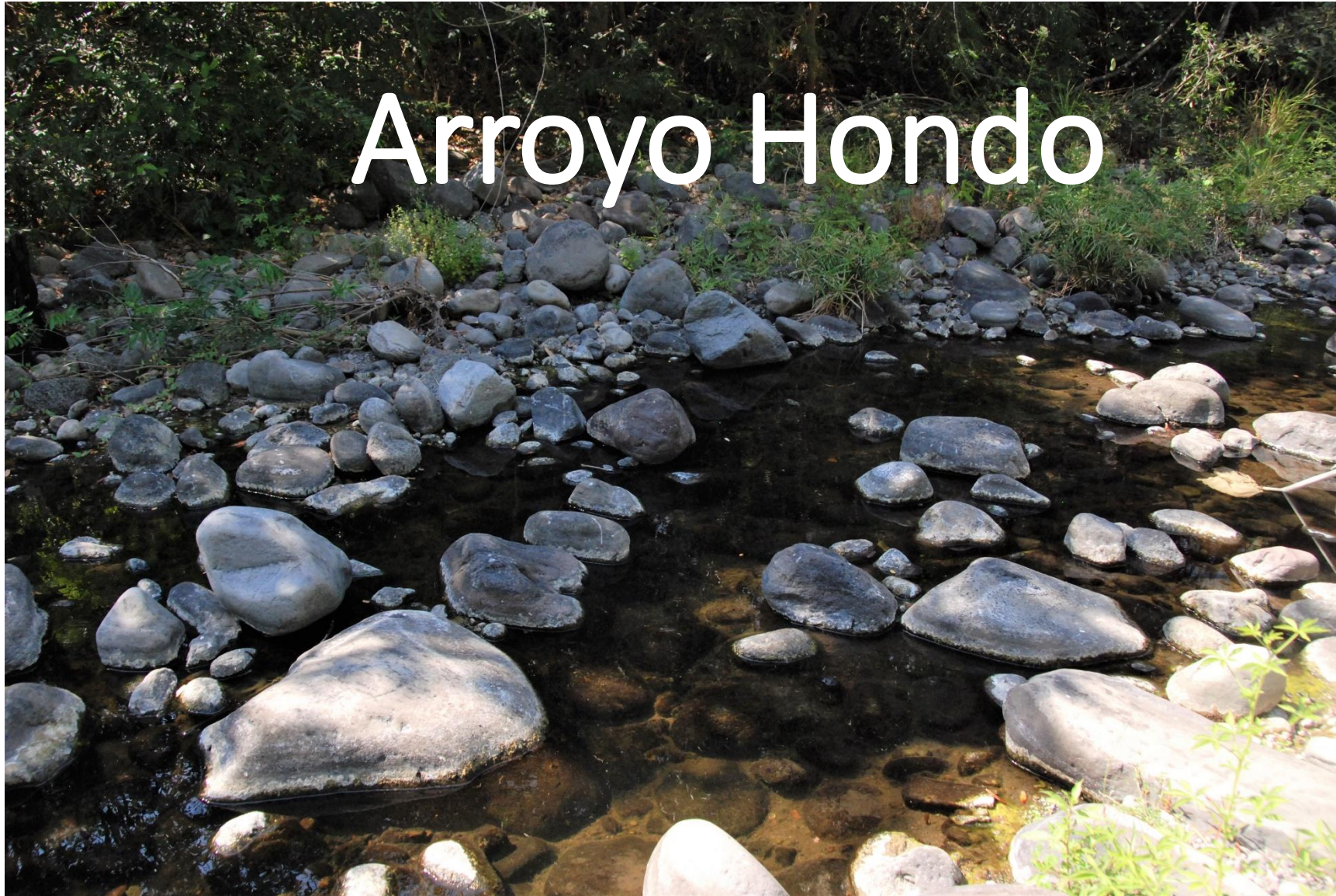




# Arroyo Tamazula (San Rafael)



# Arroyo Hondo



# Arroyo Hondo





# Río San Jerónimo (Vista Hermosa)



# Río San Jerónimo (Vista Hermosa)



# Río San Jerónimo (Vista Hermosa)



# The differences





# The differences





# Río Contla



# Río Contla





# Río Tuxpán



# Río Tuxpán



# Río La Trampa (San José de Tule)





# Río La Trampa (San José de Tule)



# Río La Trampa (San José de Tule)



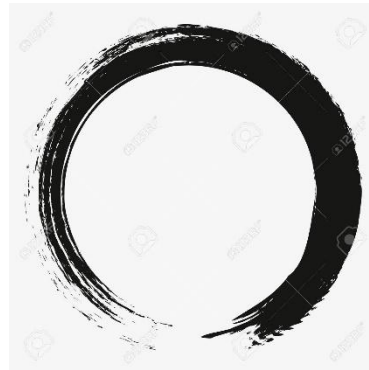


# Río Pihuamo

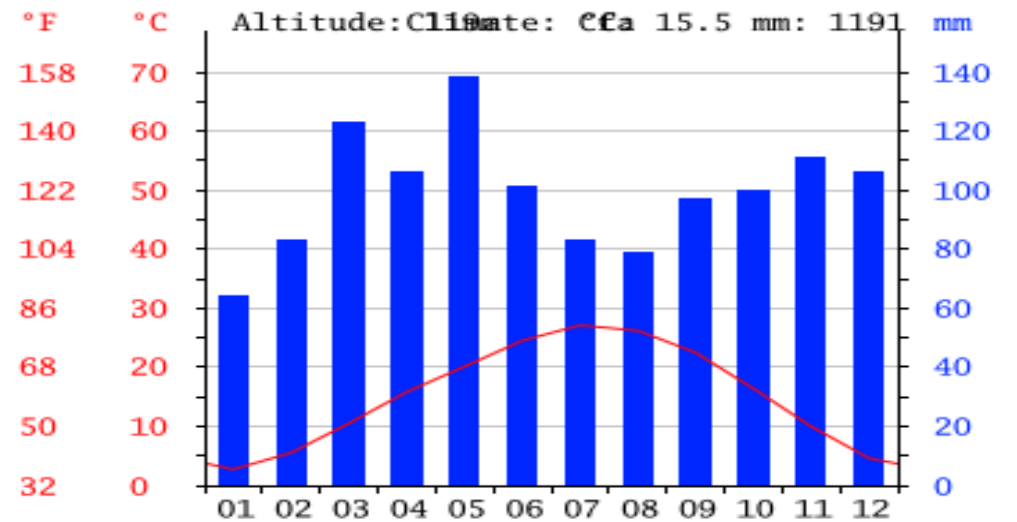
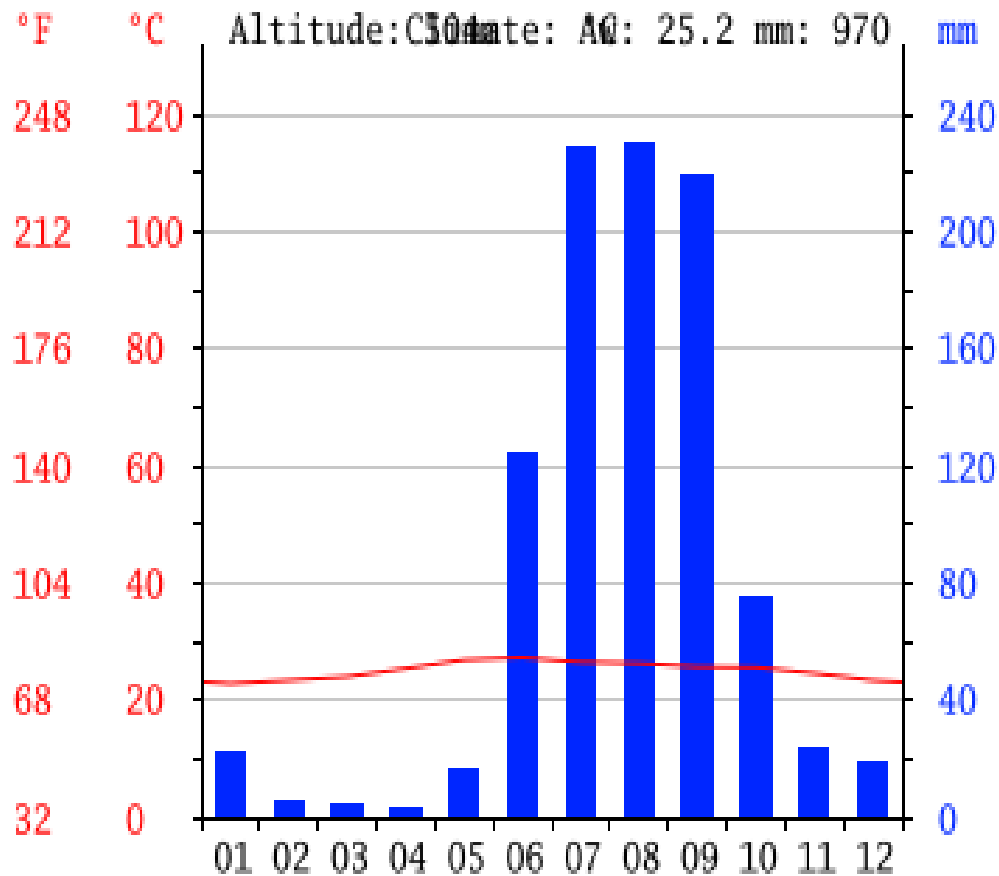
# Río Pihuamo



# Life History and co-distributed Fish



# Colima compared with London





Chester Zoo, November 2019



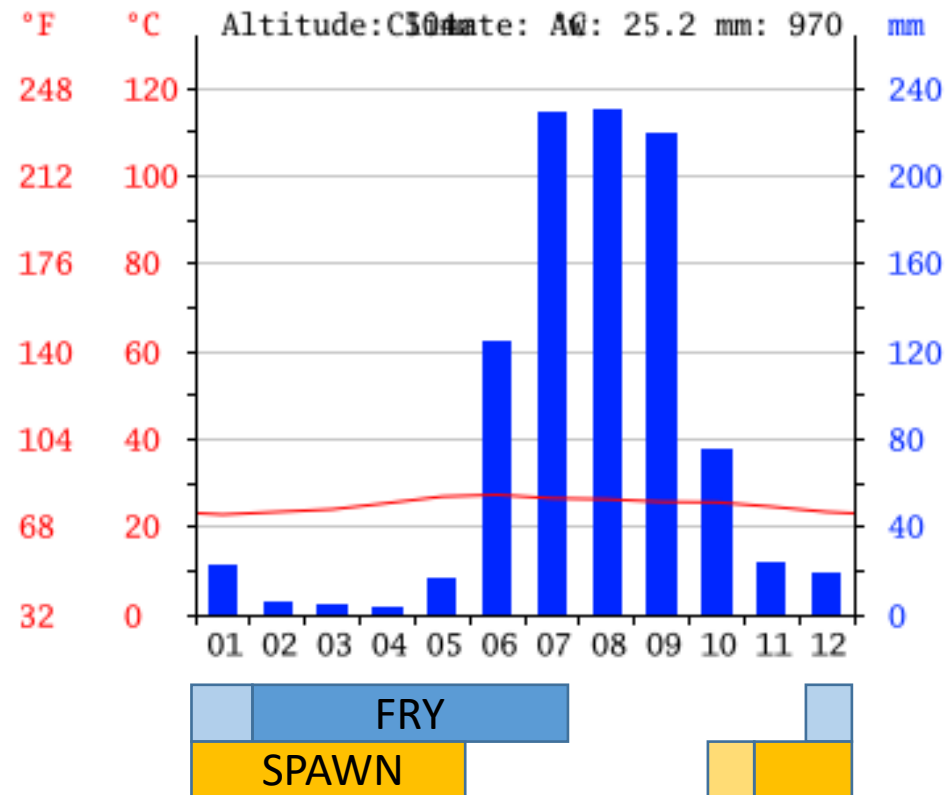




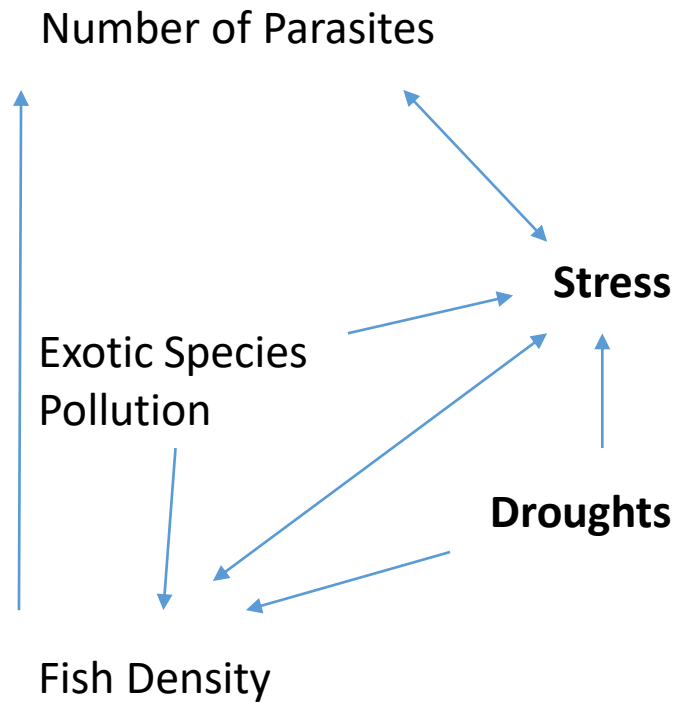




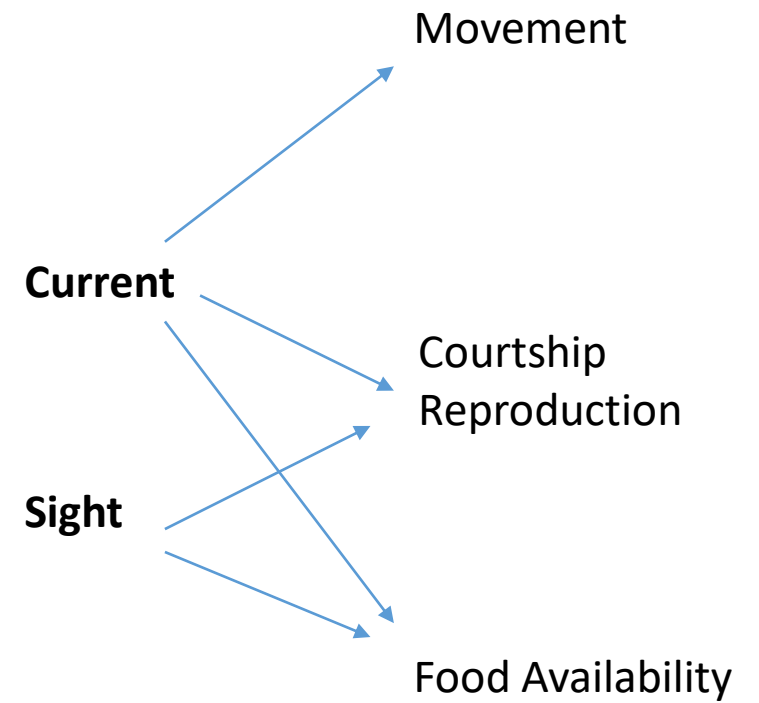
# Reproduction



# Catchwords

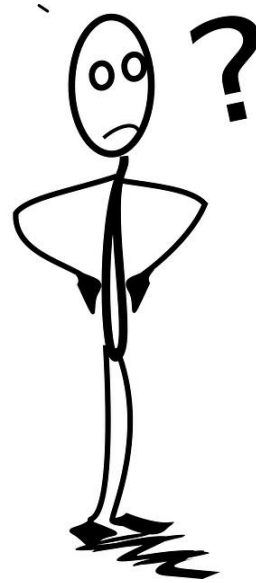


**Bottom Dwelling  
Ambush Predating  
Optical Orientating**

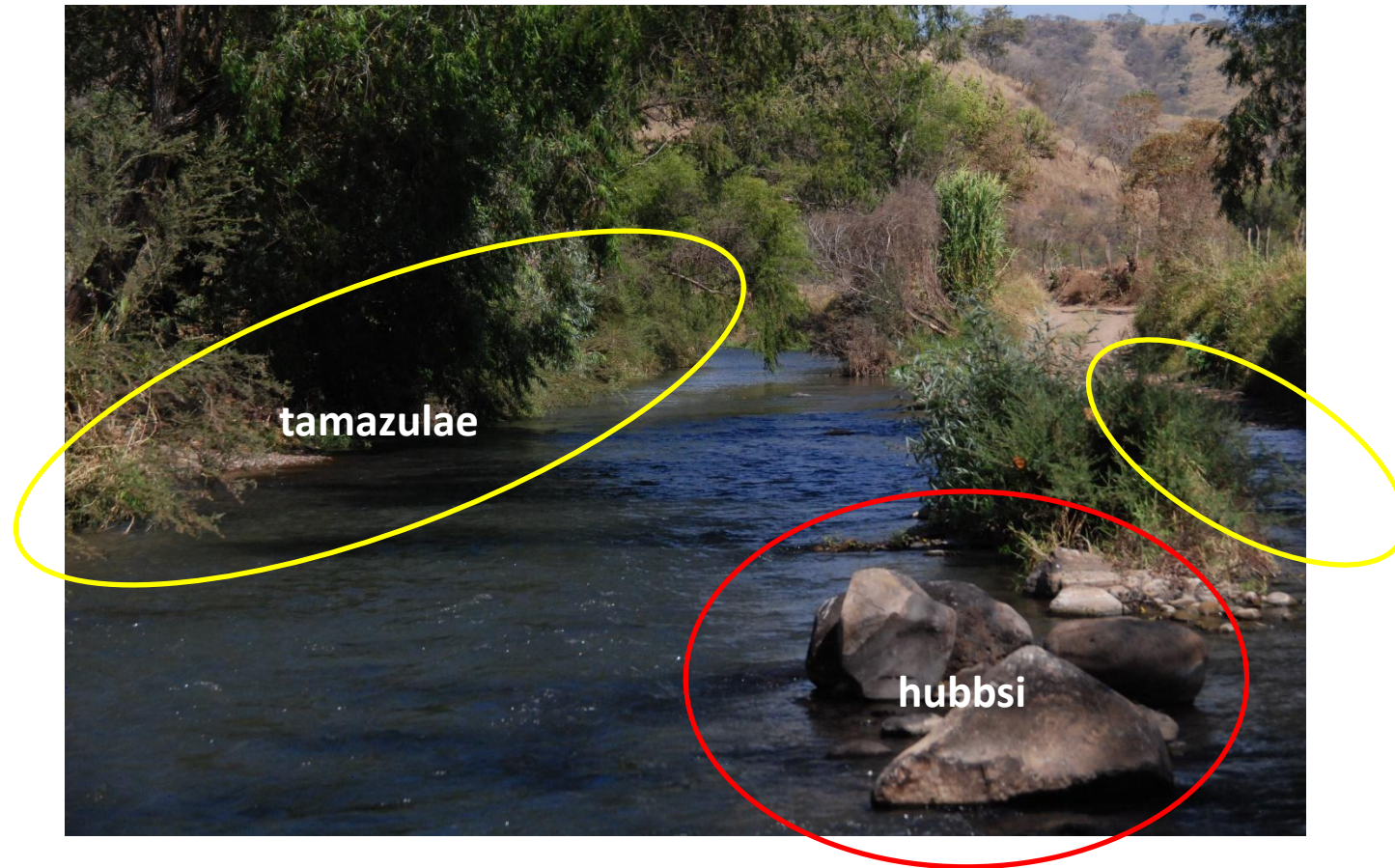


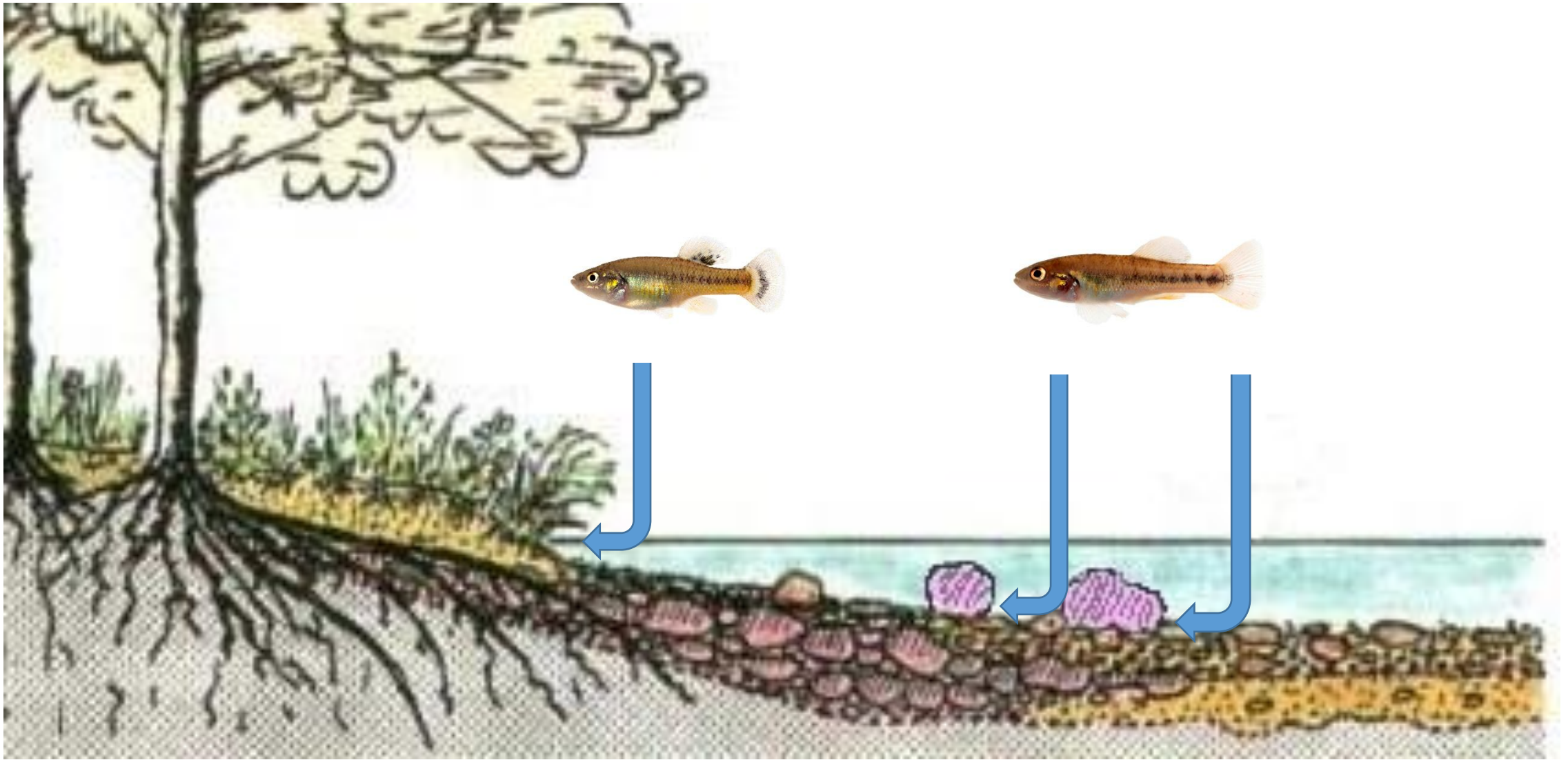
# The *hubbsi-tamazulae*-case

How can two species of this genus coexist in the same river system?



# Either trophical or habitat niching







# Coahuayana River





# Armería River



# Middle Ameca River

*Moxostoma austrinum*



*Algansea amecae*



# Husbandry and Conservation of the Species



# Suggested Husbandry Guideline

1. Shallow Aquariums with a large base (maybe 100 x 50 x 30cm)
2. Well structured (mainly on the bottom)
3. Medium strong current and high oxygen level
4. Temperature range between 18 and 24°C
5. Regular water changes (best weekly best) of 1/3 up to 2/3
6. Quite strong full spectral light
7. Two to five times feeding a day with varying amounts of different food varieties from mainly carnivorous sources

# Example



# Reproduction in Captivity

1. Probably year-round, but resting period with temperatures below 20°C recommended
2. Pregnancy about 2 months, up to two drops a year
3. Litter sizes depending on size, age and condition of female between 1 and 40, average about 15
4. Maternity starts at sizes of 4–4.5cm and ages of 6 -8 months
5. Longevity about 4 years means up to 5–7 drops per female life.



# Sexual Dimorphism

♂



♀



# Conservation Status

|  |  |   |   |
|--|--|---|---|
|  <p>ANIMALIA - ACTINOPTERYGII<br/><b>Peppered Splitfin</b><br/><i>Allodontichthys tamazulae</i></p> <p>↓ Decreasing</p> <p>&lt;VU&gt;</p> |  <p>ANIMALIA - ACTINOPTERYGII<br/><b>Bandfin Splitfin</b><br/><i>Allodontichthys zonistius</i></p> <p>↓ Decreasing</p> <p>&lt;VU&gt;</p> |  <p>ANIMALIA - ACTINOPTERYGII<br/><b>Whitepatched Splitfin</b><br/><i>Allodontichthys hubbsi</i></p> <p>↓ Decreasing</p> <p>&lt;EN&gt;</p> |  <p>ANIMALIA - ACTINOPTERYGII<br/><b>Finescale Splitfin</b><br/><i>Allodontichthys polylepis</i></p> <p>↓ Decreasing</p> <p>&lt;CR&gt;</p> |
|--|--|---|---|



# Main Threats

1. Water Pollution through agriculture (Sugar Cane), industry (Sugar and Paper Mills) and urban waste water
2. Sedimentation through logging
3. River damming
4. Competition through and predation by Exotic Fish Species
5. Droughts

# Rotterdam Zoo



Finally done...

