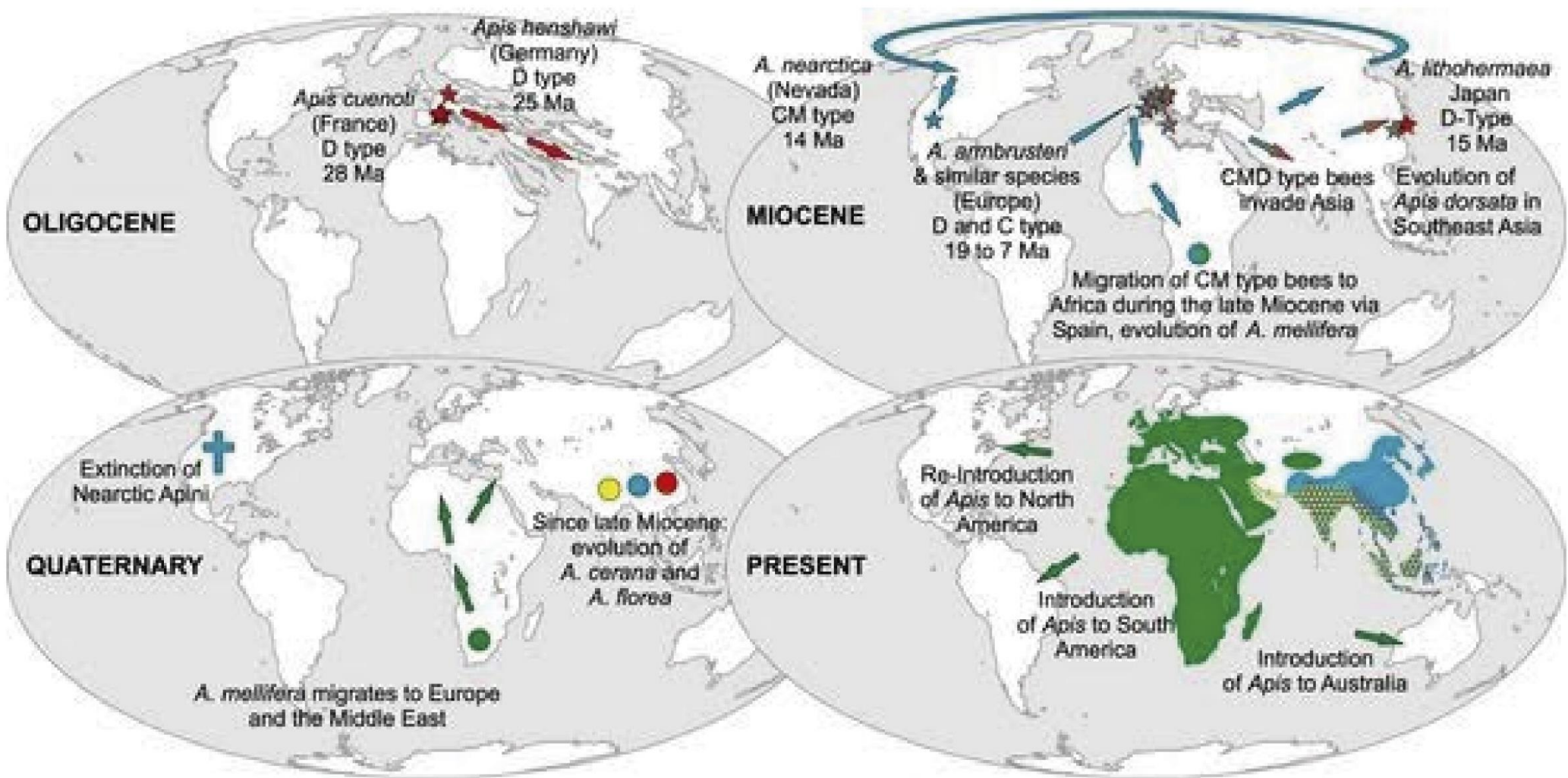


# **APUNTES DE LA HISTORIA EVOLUTIVA DE LAS ABEJAS Y CRITERIOS PARA LA SELECCIÓN DE LA CRÍA DE REINAS**

**José Antonio Dorantes Ugalde**

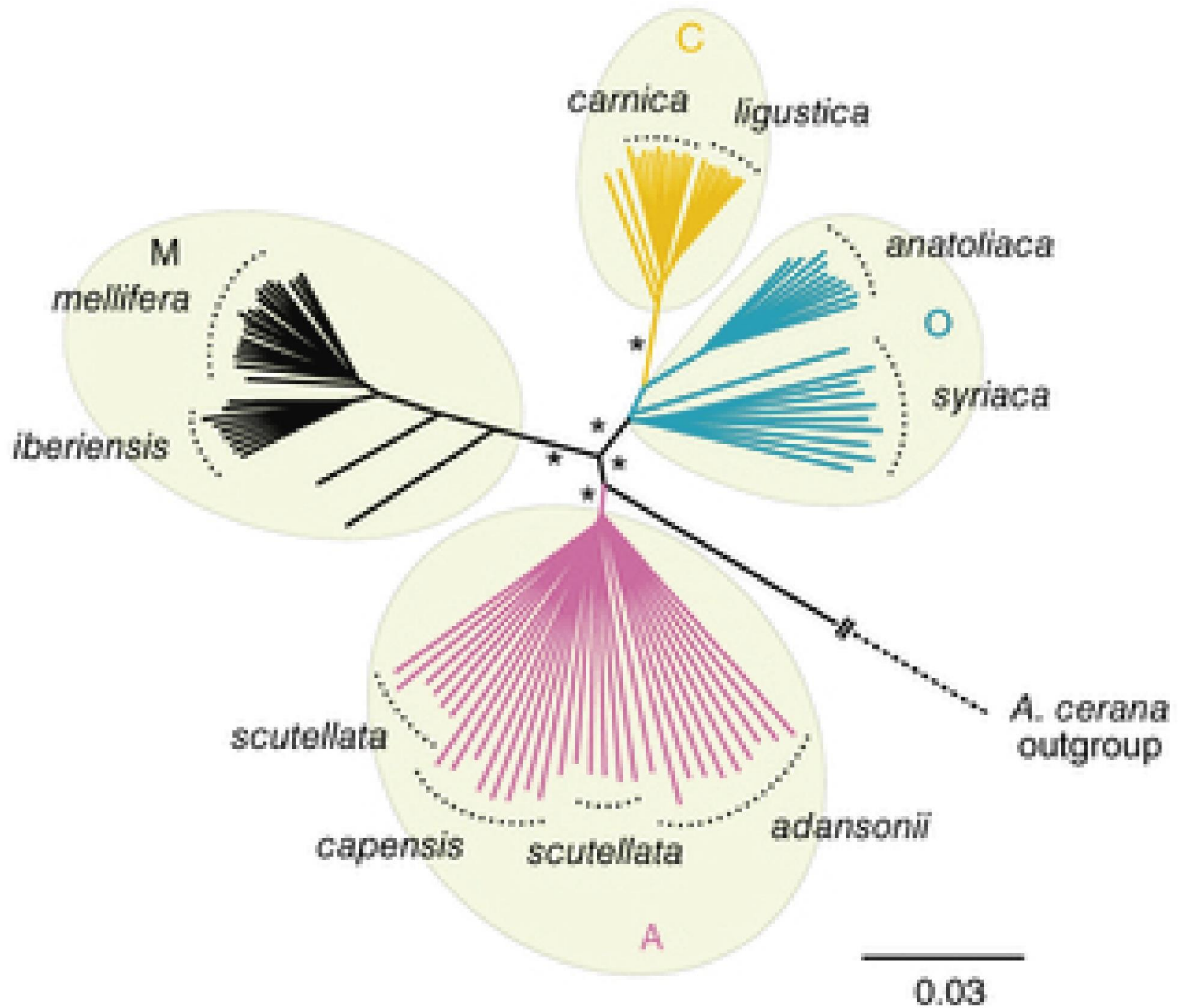


# EPIGENÉTICA



Oligocene to Quaternary: ● *dorsata* type ● *cerana* type ● *mellifera* type ● *florea* type ⇐ migration route

Present: ■ *Apis mellifera* ■ *A. cerana*, *A. nigrocincta*, *A. koschevnikovi* ■ *A. dorsata* ■ *A. florea*, *A. andreniformis*



# BIOMASA Y BIODIVERSIDAD

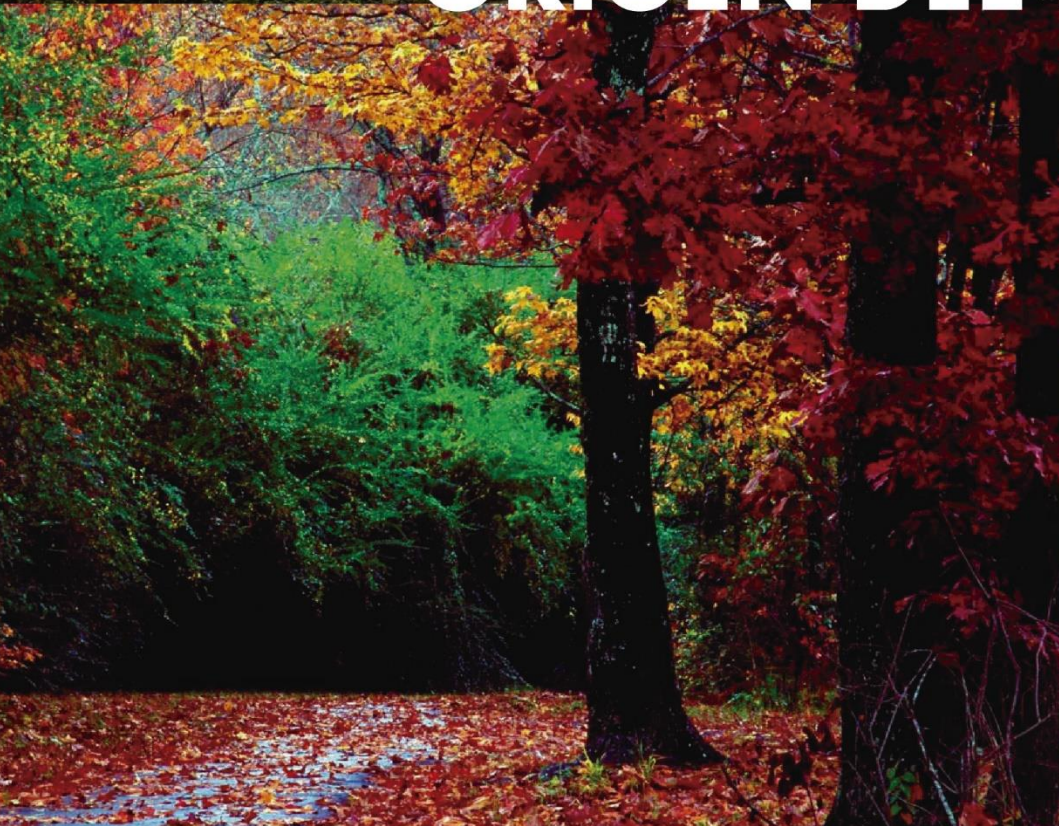


# LA ERA DE HIELO 6

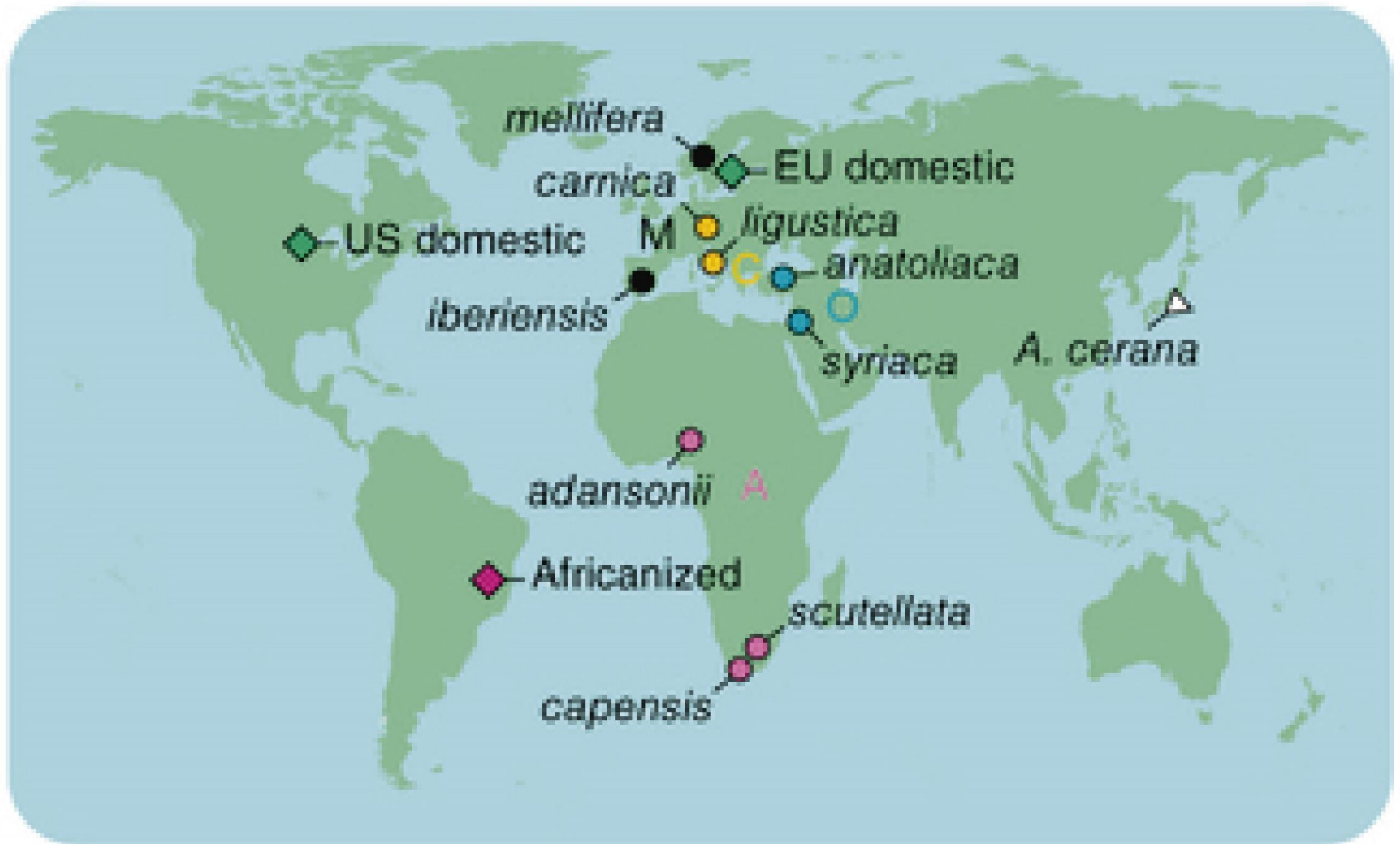




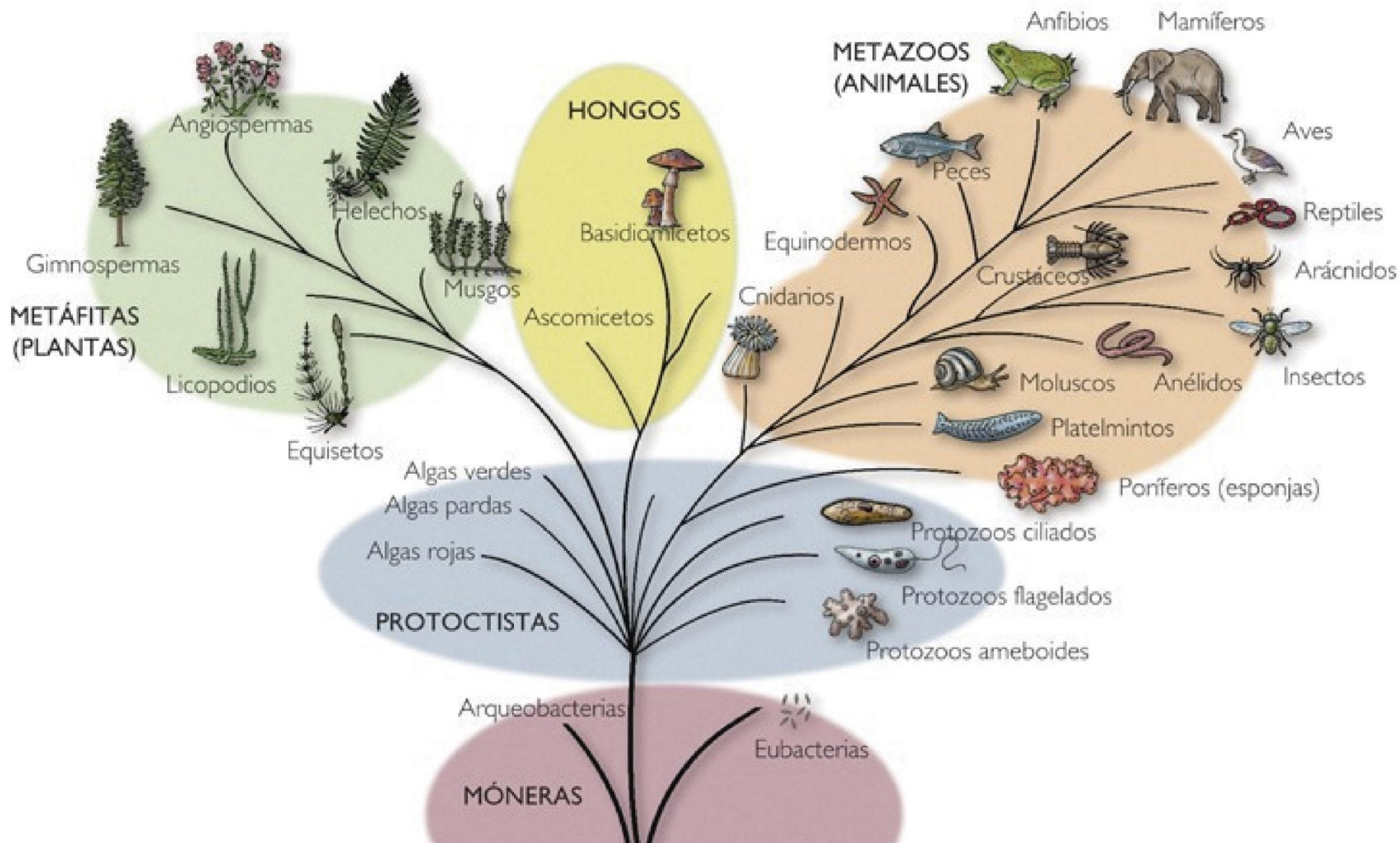
# ORIGEN DEL MICROBIOMA



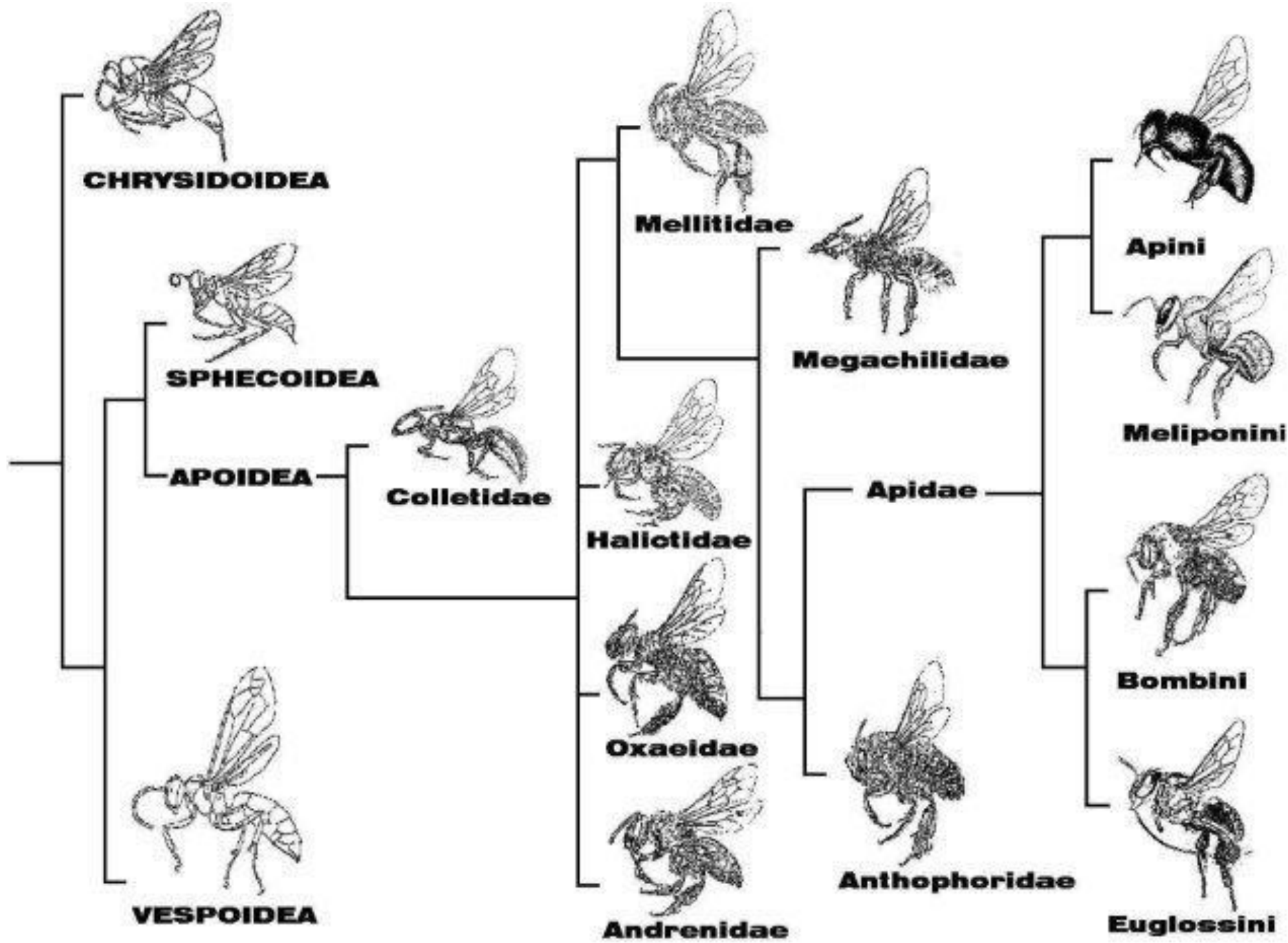
# POBLACIONES MODERNAS



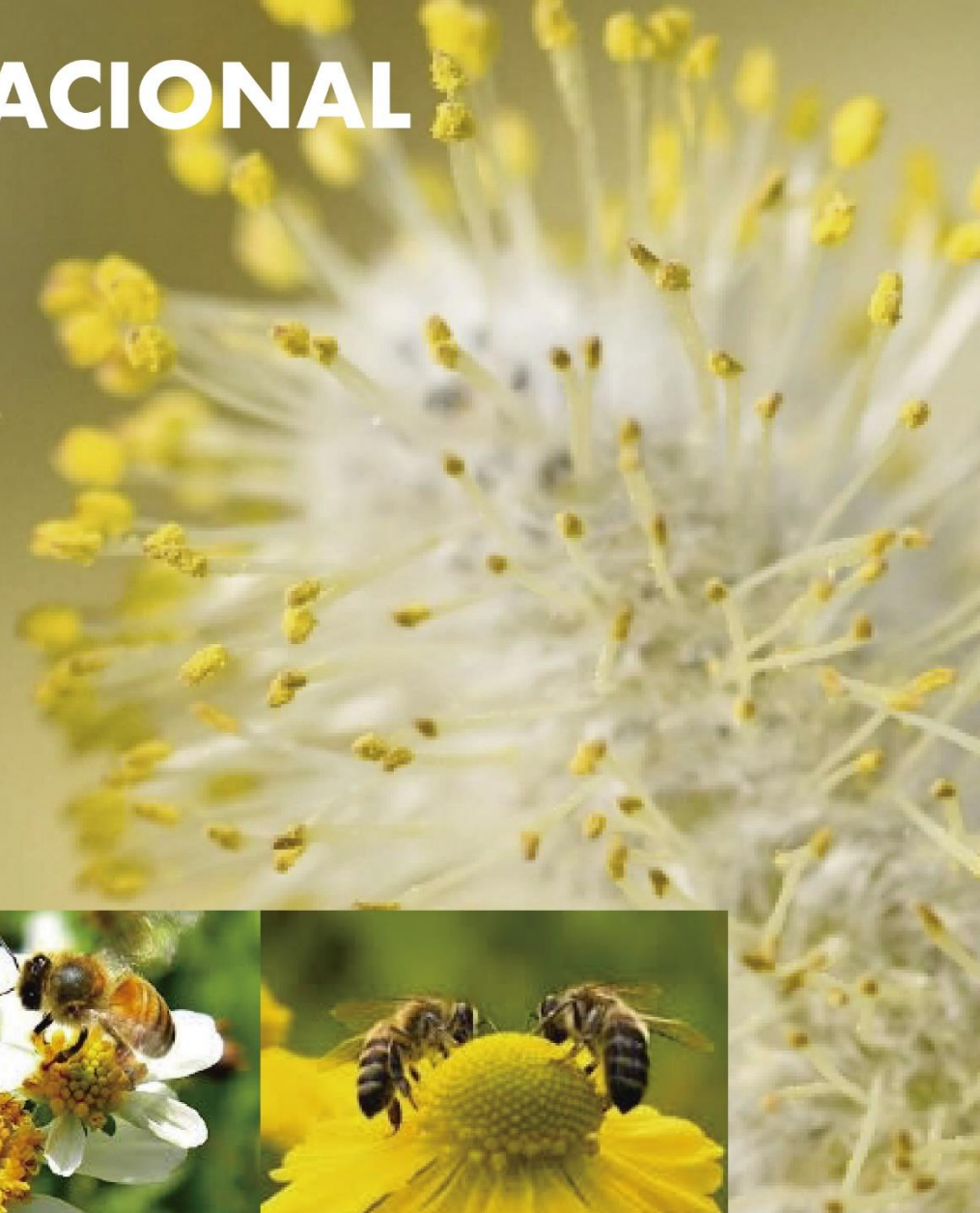
# CO-EVOLUCIÓN



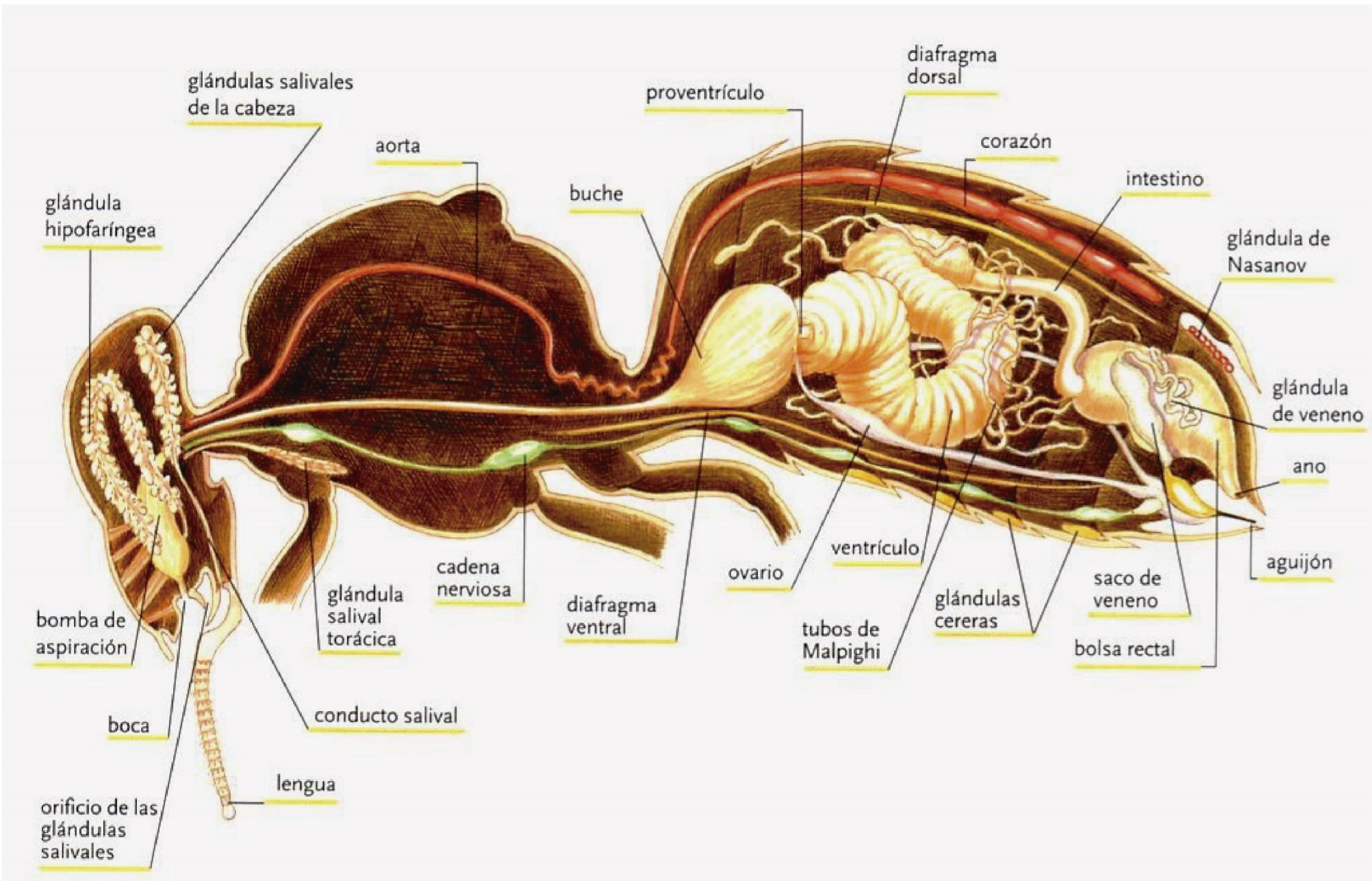


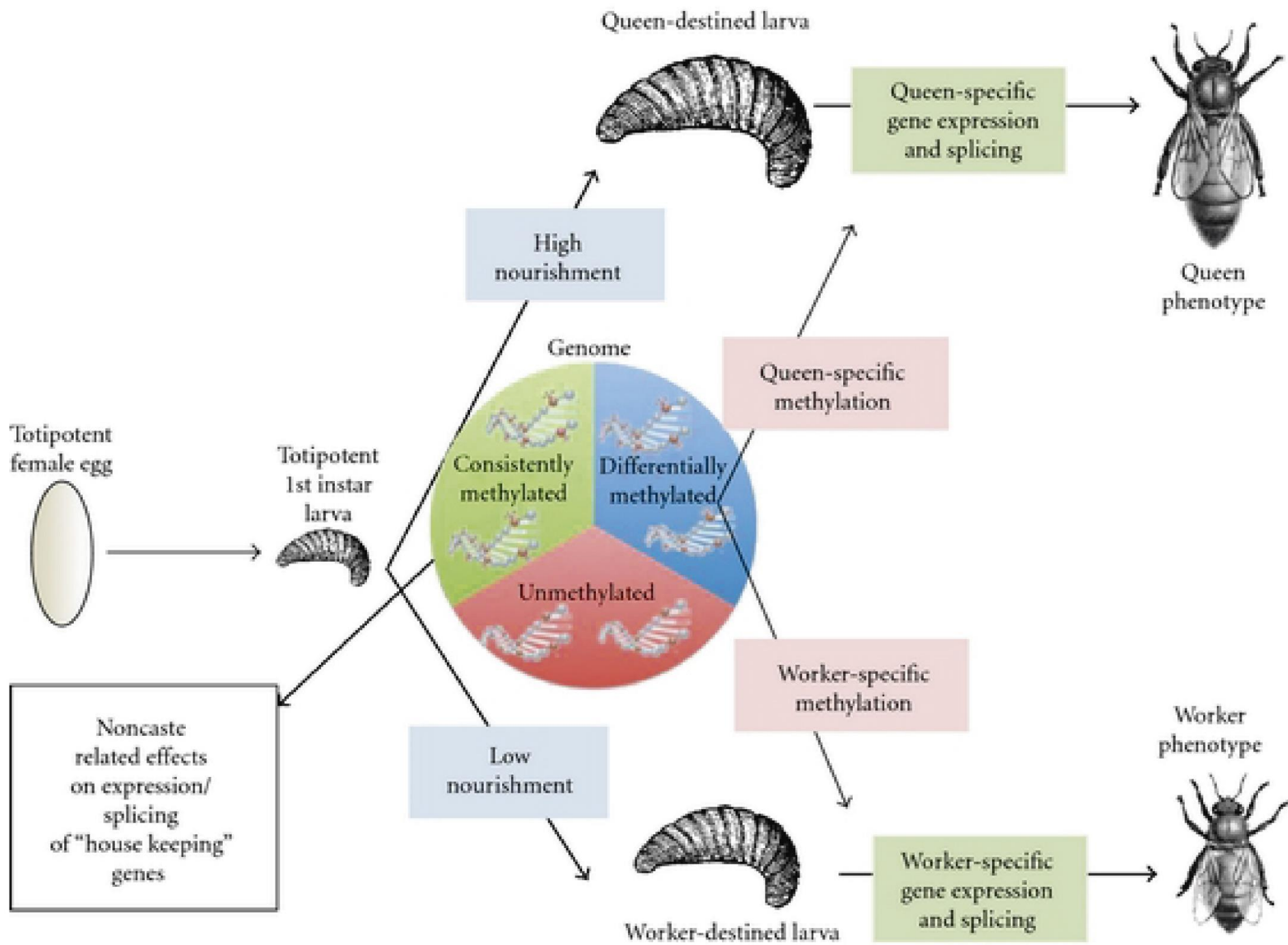


# CICLO ESTACIONAL

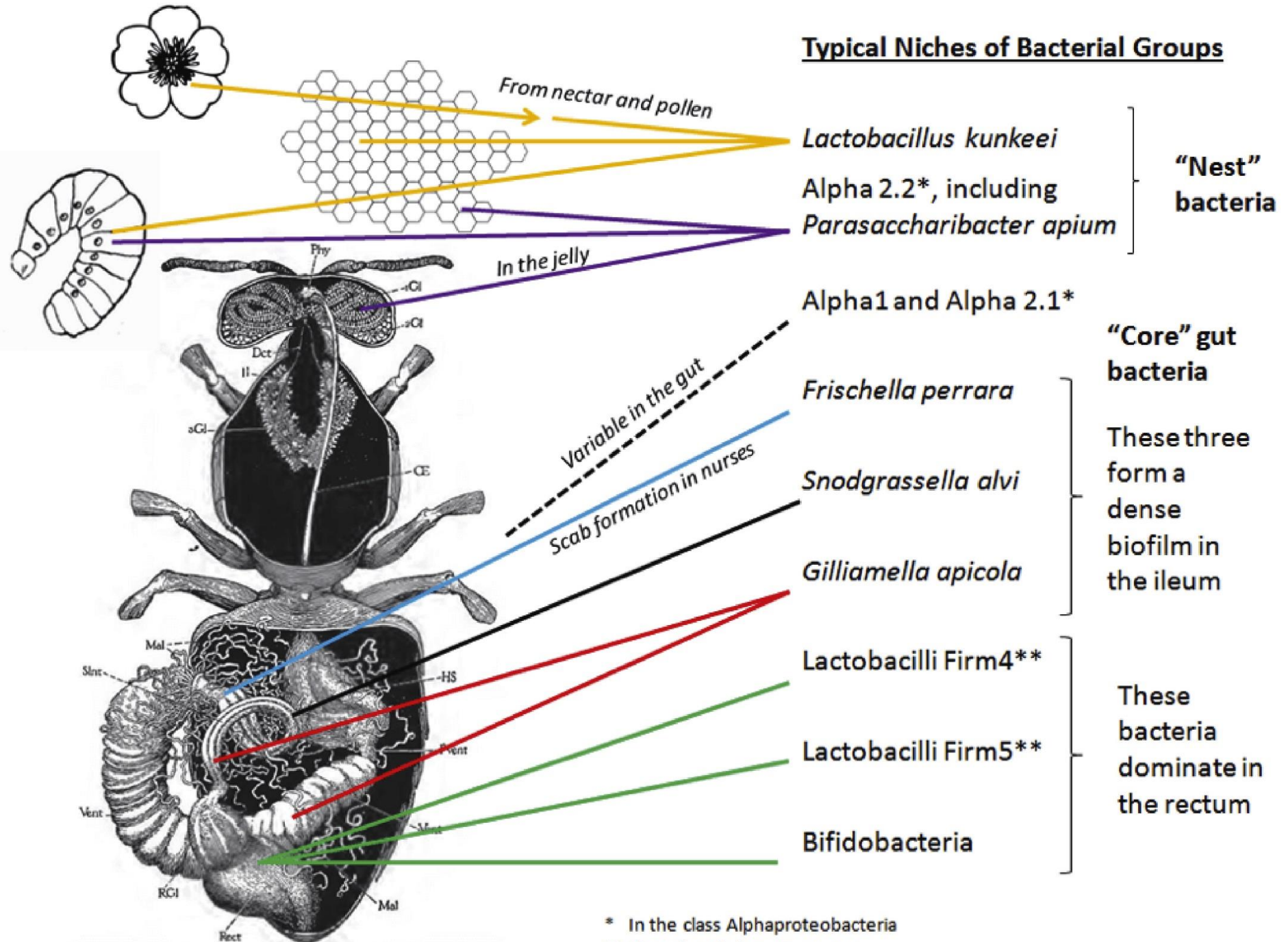


# MICROBIOMAS





## Typical Niches of Bacterial Groups



\* In the class Alphaproteobacteria

\*\* Short for phylum Firmicutes

# MANDIBULATA





# CONCLUSIÓN

