



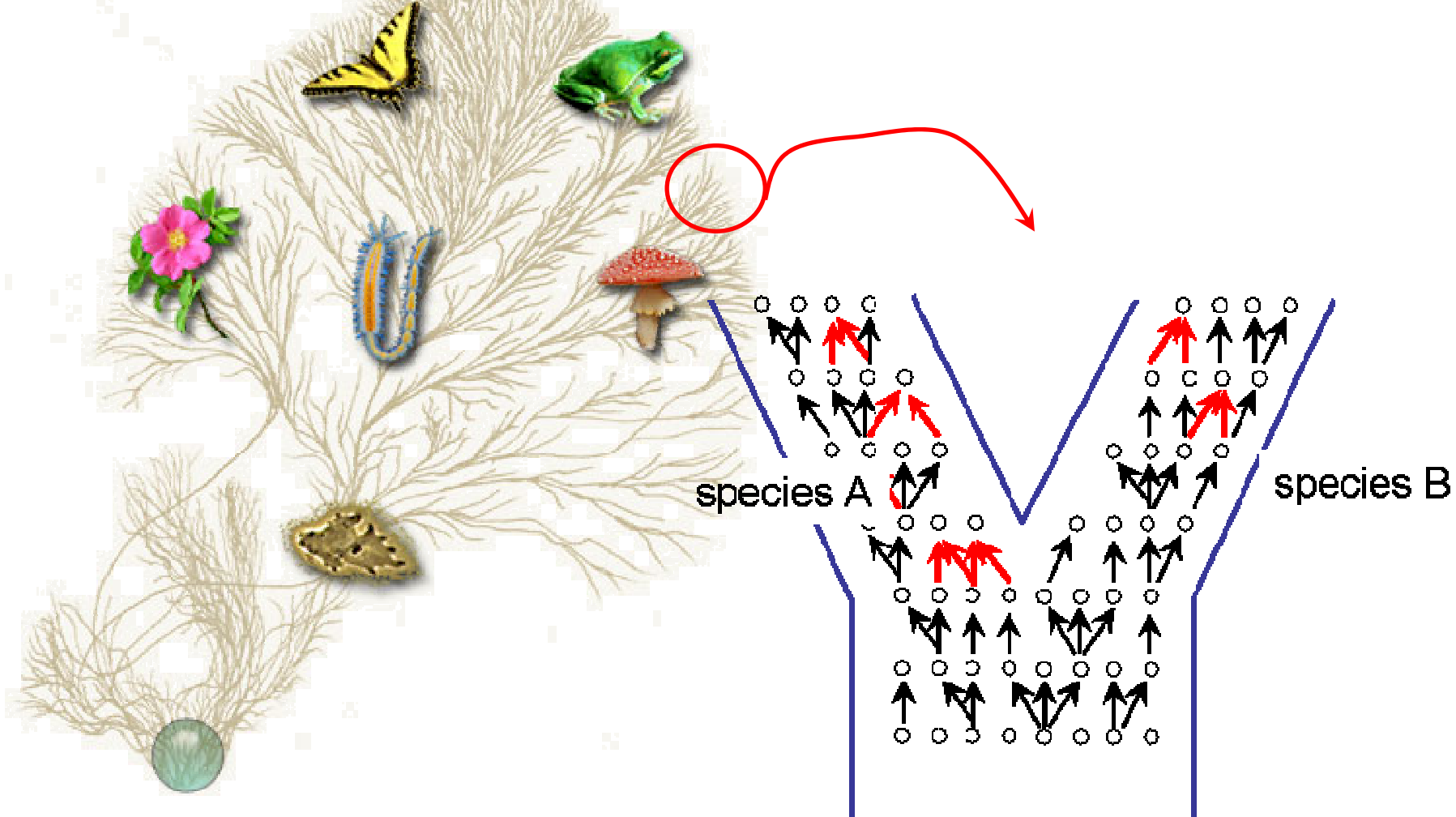
Genetic Similarity Networks: Weak and strong links in populations and metapopulations

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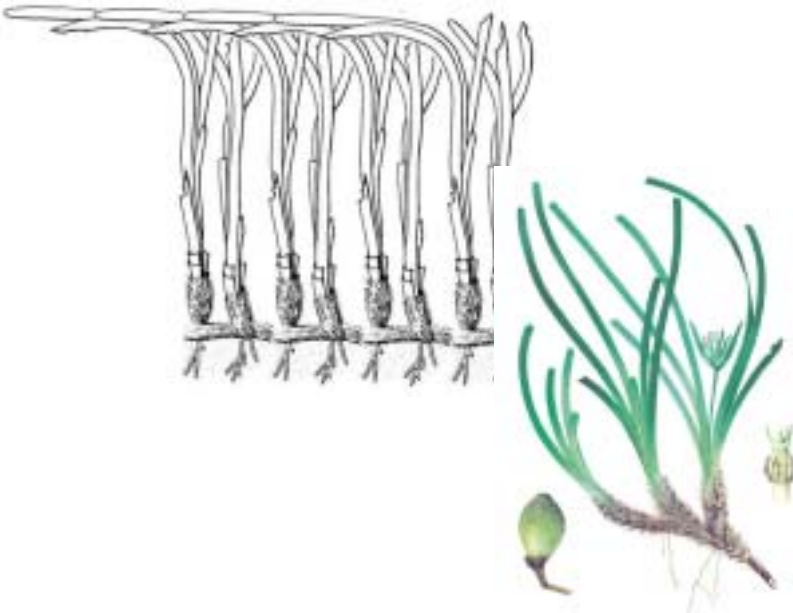
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PHYLOGENETIC TREES → INTRASPECIES NETWORKS



Tree of Life from tolweb.org



***Posidonia oceanica* in the Mediterranean**

Constructing networks of genetic similarity in *Posidonia oceanica*

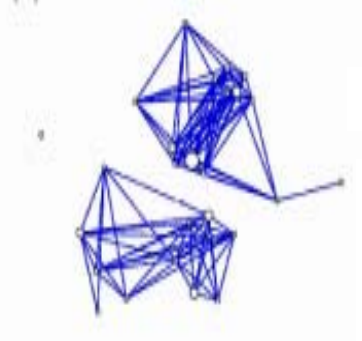
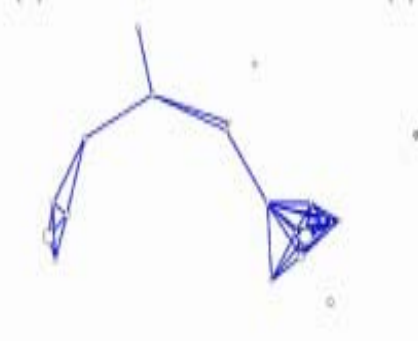
- **Sampling** the individuals: 40 ramets collected from 40 populations located in different places of the Mediterranean
- **Genotyping**: Characterization by 7 microsatellite loci.
- Network construction:
 - **Distance** definition: Distance matrix
 - Network construction by **thresholding** the distance matrix

INTRAPOPOPULATION GENET NETWORKS

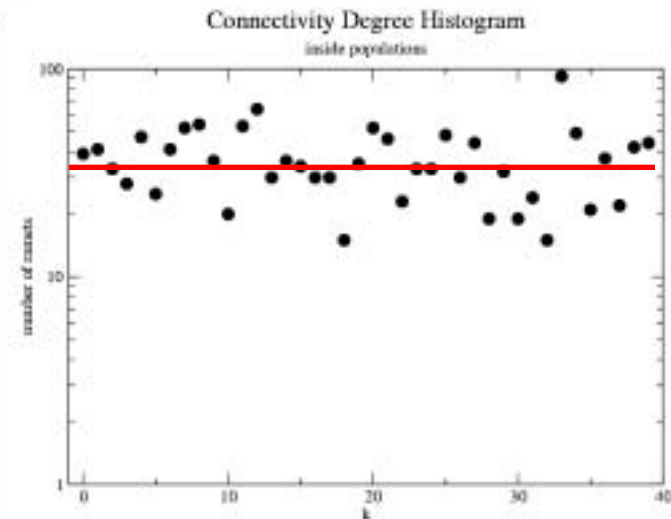
Es Castell (Cabrera)



Cala Jonquet (Iberian Peninsula)



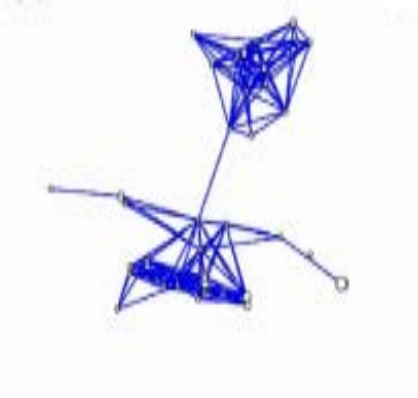
Rodalquilar (IP)



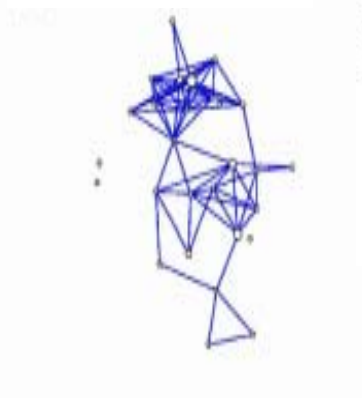
Azzura (Sicily)



Roquetas (IP)



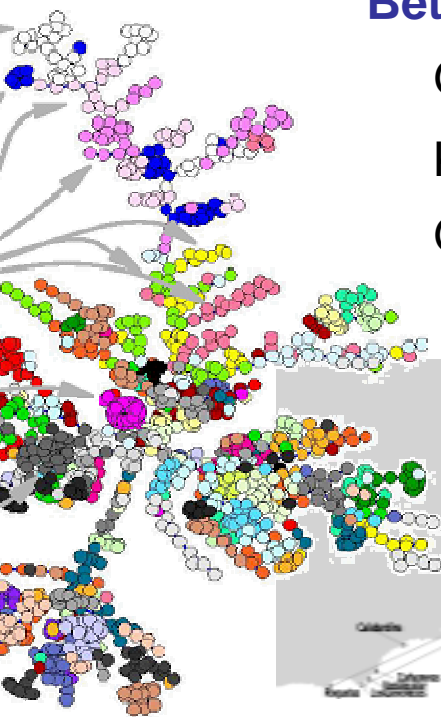
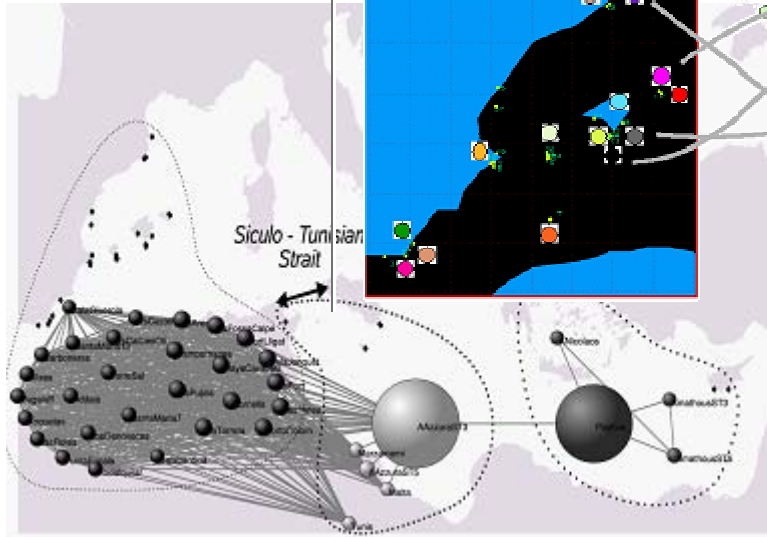
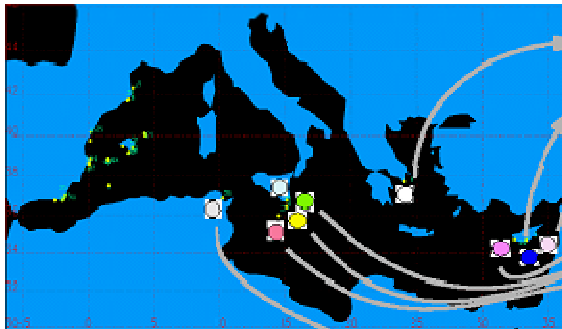
Cavallets (Ibiza)



Population structure, small worlds, percolating genetic distances, ...

INTERPOPULATION NETWORKS

Meta-populations structure

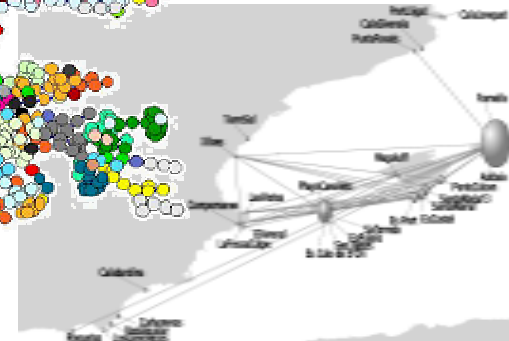


Betweenness and degree:

Gene flow

Key populations

Gene source and sink populations



Rozenfeld et al., J. Roy. Soc. Interface (2007)
 Hernandez-Garcia et al., AIP Conf. Proc. 913 (2007)
 Hernandez-Garcia et al., Physica D (2006)

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