



Dolphin Cliques

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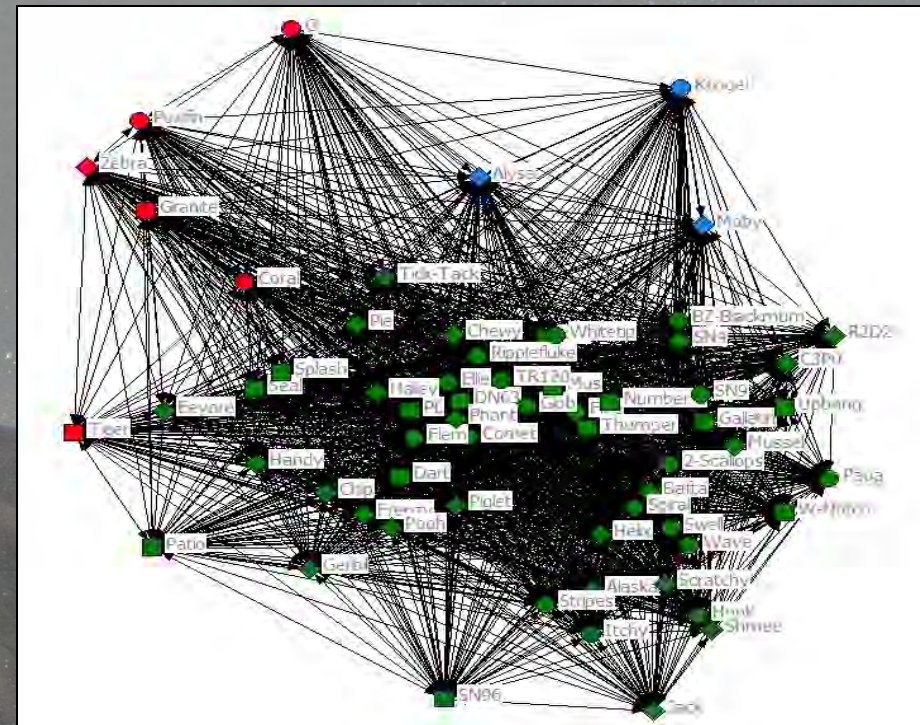
Understanding key drivers of a population's dynamics is fundamental to effective conservation. However, little attention is given to social aspects of demographic stochasticity.

Doubtful Sound is home to a small population of bottlenose dolphin (*Tursiops truncatus*). A highly social species, they live in fission-fusion societies, where group composition is dynamic over time. It is likely there are advantages in actively avoiding or associating with other specific individuals within each group.

Does who a mother associate with affect her calf's survival however?

Individuals in the population can be identified using unique features of their dorsal fins that change little over time. Using a newly developed time-based method, where two individuals are considered associated if they were photographed within a defined time period, association rates can be quantified.

These association rates will then be used as explanatory variables in an information theoretic approach to try relate a mother's association patterns to her calf's survival.



Above: Example of a non-metric MDS plot visualizing the Doubtful Sound population social structure. Squares are males, circles are females and diamonds are unknown genders. Colours represent three different clusters within the population.

Left: W-Notch, an older male of the Doubtful Sound population.