Workshop SNAAS (Social Network Analysis in Animal Societies)



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## Social network in a colonial species: a field experiment in the wild zebra finch

Understanding social interactions among individuals is key to establishing the link between individuals'behaviour and population dynamic. In particular in colonial species, understanding social interactions between neighbours may help explain the benefits of breeding in large aggregations and thereby the evolution of coloniality. Here, we conducted a large-scale field experiment to establish association patterns between zebra finches at breeding colonies and while foraging. We set up several feeders among the breeding colonies in the study site. Birds used feeders extensively, including to feed their nestlings. We equipped 150 adults with transponder tags and installed readers at their nest during nestling provisioning and at feeders throughout the breeding season. Feeder location was moved weekly to force birds to find new food patches. Social network analyses based on 45,000 visits to the feeders revealed that birds from the same breeding areas tended to use the same feeders and to visit them at the same time. Association patterns however varied in space and time during the breeding season. Our study highlights the huge potential for social network analyses to help understanding animal societies in the wild.

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