HOSTING GROUPS FOR INTERNATIONAL MOBILITY

Animal Behaviour Group

DANIELA CAMPOBELLO

I have been working mostly in collaboration with colleagues around the world. Below some present and past collaborations:

Maria Ceraulo, CNR Capo Granitola, Italy Davide Dominoni, University of Glasgow, UK (past) James Hare, University of Manitoba, Canada Mario Lo Valvo, University of Palermo, Italy Diego Rubolini, University of Milan, Italy Spencer Sealy, University of Manitoba, Canada Rose Thoregood, University of Helsinky, Finland

Current students

Martina Esposito, MSc Student (University of Turin, Italy) Daniela Muzzicato MSc Student (University of Florence, Italy) Riccardo Solinas MSc Student (University of Palermo, Italy) Deryk Tolman PhD Candidate (cotutoring with Rose Thoregood, University of Helsinki, Finland) Flavio Vizzini MSc Student (University of Palermo, Italy) *Erasmus intern* Myrtò Eleftheriadi, University of Thrace, Greece



RESEARCH TOPICS

My research interests focus on behavioural and ecological aspects of animal interspecific interactions with particular attention to their evolutionary implications. My focus species are mostly wild birds that I study in diverse field sites, from marshes in Northern Italy to green urban areas.

Avian brood parasitism

Brood parasites lay their eggs in other species nests and their chicks kill their foster siblings or monopolise the foster parent care. My first experiments, back in 2002 in North America, explored the interaction between with the parasitic brown-headed cowbird (*Molothrus ater*) and its host, the yellow warbler (*Setophaga petechia*) and then in Europe with the parasitic common cuckoo (*Cuculus canorus*) and its host, the reed warbler (*Acrocephalus scirpaceus*). We revealed a rather complex and articulated combination of *social and individual learning*, each mode adopted by the parasite victims to get their nest defence a more efficient antiparasitic 'weapon'. More recently, I have been investigating brood parasites as one of the most challenging study model for *sexual selection*. Do cuckoo males offer females specific immaterial gifts such as the location of parasitable host nests? These are very precious to females which would save an important reproductive effort if their location is signalled by males. I have got some evidence consistent with this hypothesis but I need more experimental studies to confirm such an ambitious project.

Animal personalities & social networks in the city.

This is a brand-new project carried at the Botanical Garden of the University of Palermo. I am investigating the effects of urbanization to the personalities of the urban avifauna and its social networks. Being bold or shy in a specific context might improve individual survival or breeding performance. Social interactions may form cohesive and stable networks which might as well being advantageous for each network member. Is our disturbance at the urban green areas, such as noise or artificial lights, able to disrupt the personality and network balance and therefore to decrease our urban biodiversity?

MATERIALS & METHODS

Audio & video recordings with audio moths, song meters & camera traps; presentations of taxidermic mounts & playback calls; video & audio device setting & checking; nest searching & monitoring; bird feeders & boxes management; videocoding & bioacoustic analyses.

Selected publications:

Ciaralli S, Esposito M, Francesconi S, Muzzicato D, Gamba M, Dal Zotto M, & Campobello D. 2024. Ritual displays by a parasitic cuckoo: nuptial gifts or territorial warnings? *Animal Behaviour* 207: 147-156. <u>http://doi.org/10.1016/j.anbehav.2023.11.003</u>

- Campobello D & Sealy SG. 2018. Evolutionary significance of antiparasite, antipredator and learning phenotypes of avian nest defence. *Scientific Reports* 8: 10569. <u>http://doi.org/10.1038/s41598-018-28275-3</u>
- Campobello D, Sealy SG & Welbergen JA. 2017. Anti-brood parasite defences: the role of individual and social learning. In: Avian Brood Parasitism. Behaviour, Ecology, Evolution and Coevolution (M Soler Ed), pp 421-436. Springer International Publishing, Cham, CH.
- Campobello D, Hare JF & Sarà M. 2015. Social phenotype extended to communities: expanded multilevel social selection analysis reveals fitness consequences of interspecific interactions. *Evolution* 69: 916-925. <u>http://doi.org/10.1111/evo.12629</u>
- Campobello D & Sealy SG. 2011. Use of social over personal information enhances nest defense against avian brood parasitism. Behavioral Ecology 22: 422-428. <u>http://doi.org/10.1093/beheco/arq225</u>