Code B_2752

Department	Life and Environmental Sciences
UniCa reference person	Pierluigi Cortis
Project title in English	Species isolation and isolation barriers in Ophrys orchids
Project title in Italian	Isolamento riproduttivo delle specie e barriere di isolamento nelle orchidee del genereOphrys
Subject area of reference (World University Ranking)	LIFE SCIENCES
Project summary and VPS' profile	Sexually deceptive orchids of the genus Ophrys mimic females of their pollinator species to attract male insects for pollination. Reproductive isolation is mainly based on pre-mating isolation barriers, the specific attraction of males of a single pollinator species, mostly bees, by mimicking the female species-specific sex-pheromone. Sexually deceptive orchids are ideal candidates for studies of species isolation and sympatric speciation, because key adaptive traits such as the pollinator-attracting scent are associated with their reproductive success and with premating isolation. On Sardinia populations of O. bombyliflora and O. tenthredinifera occur in sympatry and hybrids of both species can be found. Both species are are pollinated by males of Eucera bees namely by Eucera oraniensis (O. bombyliflora) and E. nigrescence (O. tenthredinifera). The aim of the project is to study species isolation and potential isolation barriers such as floral scent and morphological traits of flowers in both species. Therefore, pollinator attracting scent will be collected, chemically analyzed and compared. Furthermore, in behavioral experiments with flowers and odor samples of flowers the attractiveness for pollinators of both species will be tested. Finally, in morphometric measurements characters of flowers such as width and height of stigmatic cavity, pollinaria length, and length of outer central tepal will be measured. The results will be a first step to measure the strength of reproductive isolation between both species and following up studies will be performed in the next years. The visiting Professor must full fill the profile of a scientistis in Chemical Ecology. He/she should have proofed records with expertise and high impact publications.
Proposed length of stay	Short visit of 6 days
Expected period of activity	March 2024
Academic position of the VPS'	Professor
Course of Study	Laurea triennale (1st cycle University Degree), Laurea magistrale (2nd cycle University Degree), Laurea magistrale a ciclo unico (5-6-year Master Degree)
Language of instruction	English