The interaction between organisms and their surrounding environment is a fundamental concept in animal ecology as it determines an individual's fitness and ability to survive. For most animal species, such interaction is usually confined to a finite area within the larger available landscape. Assessing animal home range requirements and habitat preferences by animals is of prime importance in a fast-changing environment due to human activities. The recent development of animal tracking technology has expanded study opportunities in animal ecology, facilitating the study of cryptic and nocturnal species in particular. Taking advantage of these new tools, the goal of this project is to equip breeding barn owls with GPS tags to study breeding success in relation to home range characteristics, habitat selection, plumage colouration and life history traits. Another goal is to investigate the “alternative foraging strategy” hypothesis by comparing foraging ground selection, hunting strategy and prey species captured by differentially coloured individuals. This study has therefore implications in the context of nature conservation and evolutionary ecology.