

Z.T. Nagy, Ch. Kusamba, L. Lokasola, J. Kolby & J. Kielgast

### Survey of the reptile fauna in the Congo basin

In the spring of 2010, a large interdisciplinary expedition was conducted in the Democratic Republic of the Congo. Four field sites between Kisangani and Bumba were surveyed along the Congo mainstream as well as at the tributaries Lomami, Aruwimi and Itimbiri. Approximately 750 amphibian and reptile specimens were collected, and tissue samples were taken for genetic analyses. We used a DNA barcoding approach to assist this survey of the reptile diversity in the Congo basin. DNA barcoding was applied for species delineation complementing morphological identification. Furthermore, we analyzed intraspecific diversity and tested the possible isolating effect of large rivers on reptiles. We confirmed that the 180 reptile samples investigated belong to >50 species. Reptile species proved to be well diverged and easy to delineate using DNA barcode sequences while intraspecific variation is generally low. Remarkable intraspecific divergence was only found in skinks and in some snakes, notably in scoleophidians. This observation indicates that rivers do not significantly hamper reptile radiation in many cases across Central Africa.

P. Pafilis, K. Sagonas & E.D. Valakos

### The impact of grazing on lizard populations from East Mediterranean islets

The practice of free-range goat grazing in islets is common throughout Mediterranean Sea with well-documented consequences on plant communities. In the case of lizards grazing has been reported to alter vegetation providing less cover from avian predators, increasing thus predation risk. In this study we focused on the impact of grazing on populations of the Skyros Wall lizard (*Podarcis gaigeae*), an endemic lacertid of Skyros Archipelago (Aegean Sea, Greece). Our aim was to detect and assess possible direct and/or indirect effects on several features of lizards' overall biology. Five biotopes (three islets and two localities from Skyros Island) that differ in the duration and intension of grazing were included in the project. For a time-window of six years we realized monthly samplings during spring and summer (reproductive period of *P. gaigeae*) and recorded invertebrate population densities, lizard ectoparasites prevalence, presence and density of sea gulls and lizard population densities. As expected, grazing had a strong negative influence on plant communities. The restriction of vegetation impoverished considerably invertebrate populations, decreasing thus food availability for lizards, which feed mainly on insects. Furthermore it resulted in a serious degradation of the biotope quality since lizards in islets use plants as shelters or thermoregulation sites. Ectoparasite loads (ticks and mites) were higher in places where goats were present in large numbers for long periods. Goat activity disturbs sea gulls that normally nest on remote islands. Islets where grazing was continuous hosted few or even none breeding pair. Since sea gulls support in terms of energy many islets of Skyros Archipelago through marine subsidies, the devastation of their breeding colonies affected negatively small insular ecosystems. Finally, population densities of lizards were higher in biotopes with no grazing (Diavates islet and the dunal ecosystem of Palamari at Skyros Island) and much lower in places with intense grazing.