Amphibian monitoring in the «Nationalpark Neusiedler See-Seewinkel» – first results

In 2010 the monitoring of the amphibians in the «National Park Neusiedler See-Seeewinkel» (Burgenland, Austria) started. Selected shallow saline lakes and sampling points in the area of the «Zitzmannsdorfer Wiesen» (temporarily flooded meadows) were investigated on species distribution, as well as the state of aquatic and terrestrial habitats and the endangerment of the amphibians during migration. In this report the results of the first investigation year are presented, the current distribution of the species and a comparison with previouse studies is shown. In total, twelve amphibian taxa have been detected in 54 water bodies. Strong anthropogenic influenced shallow saline lakes (detection of 8–9 species) have been waters without or with low turbidity and turned out to be the waters with the highest diversity. In five waters only one species could be detected (Bufo viridis). These waters showed high turbidity. More calling sites than breeding sites have been proved in the monitored area for all species. For example 47 calling sites have been investigated for Bombina bombina, spawning sites only 14. Larvae of the water frogs (Pelophylax esculentus complex) have been caught in four waters only, 32 calling sites could be detected. Even breeding sites for species not common in this area could be found: Bufo bufo (10), Rana dalmatina (5) and Rana arvalis (14). In 1976 and 1977 the distribution of Bombina bombina, Pelobates fuscus, Hyla arborea, Bufo viridis, Rana arvalis and Pelophylax esculentus complex had been investigated. The comparison of the two studies (1976/1977 vs. 2010) provides following results: In 2010 all species showed a higher presence at the investigated water bodies (percentage of the species’ used sampling sites on total investigated sampling sites) than in 1976/1977. Monitoring in subsequent years should allow a better estimation of the amphibian populations, document the variability in species distribution caused by different water-level situations and the causes of endangerment. It should also provide the basics for the management measures in the National Park to conserve and protect the amphibians and their habitats. Moreover, the influence of current (e. g. habitat management pasturing) and planed management measures (e. g. water retentions) on the amphibians should be investigated.

Key words: Amphibians, monitoring, National Park Neusiedler See-Seewinkel, species distribution, management.

Zusammenfassung

Im Jahr 2010 startete ein Monitoringprojekt für Amphibien im Nationalpark Neusiedler See-Seewinkel (Burgenland, Österreich). Ausgewählte Salzlacken, diverse andere Gewässer und einzelne Probenpunkte in den temporär überschwemmten Zitz-