

Survival rates and long-term capture history of amphibians in an agricultural landscape near Bonn (Germany)

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In context of the long-term study „development of amphibian habitats in an agricultural landscape“ seven amphibian species in an arable landscape near Bonn (Northrhine-Westphalia, Germany) have been surveyed during eleven years (1989-1995, 2000-2003). The study focuses on a pond system with two natural and three artificial waterbodies, using permanent drift fences with pitfall traps and funnel traps. In order to estimate the survival rates of Agile Frog (*Rana dalmatina*), Common Frog (*R. temporaria*), Waterfrog (*R. kl. esculenta*) and Great Crested Newt (*Triturus cristatus*) individual (toe-clipping, transponders and photo-identification for *T. cristatus*) and group marking methods (toe-clipping) have been applied.

Return probabilities and survival rates for adults of the species mentioned are given and compared with data from literature. Additionally individual recognition by transponders and photo-identification, applied for a long period, enables us to determine minimum ages of individuals in the field. The minimum ages observed for some individuals of the four species belong to the highest ages recorded in field studies in Europe.

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