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Wasserfallen als effektives Hilfsmittel zur Bestandsaufnahme von Amphibien – Bau, Handhabung, Einsatzmöglichkeiten und Fängigkeit

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Funnel traps as an effective tool for amphibian field recording – Construction, handling, application and catch results

Four types of funnel traps are described regarding their construction and application in the field. Bottle funnel traps made of 1.5 l plastic bottles and traps made of 10 l plastic buckets with bottle heads as funnel trap openings are cheapest and easy to construct. Bottle traps are positioned near pond shore at the water surface in such a way that they rise up with the perforated side approx. 1.5–4 cm. In the deeper water bucket traps with floats larger box traps as well as gauze box traps with floats are useful. The traps are displayed in the afternoon and emptied from morning to early afternoon of the next day. All funnel trap types supply good catches of newt and amphibian larvae, but only the larger box funnel trap also catches of adult anurans. A comparison between all four funnel trap types shows that the best results are obtained with the position framework box funnel trap, but already six bottle funnel traps exceed this result. The catches with bottle and bucket funnel traps can be compared directly, because the funnel trap openings consist in both cases of bottle heads. The bucket funnel traps possess four to fivefold number at openings equal in size, but number of caught animals only were tripled. Bottle funnel traps therefore supply the best results. These good catch results are connected with their positioning in the shallow water areas, at night the preferential place of residence of many animals, tadpoles and newt larvae. Bucket funnel traps show clearly better results only with males of smooth newt and larvae of crested newt. For the evaluation of the data with combined application of bottle and bucket funnel traps the number of caught animals is referred to one night of exposure 100 bottle heads (activity density). Thus the results become comparable between different ponds, as well as number and types of traps.

Key words: Survey method, funnel trap, bottle funnel trap, bucket funnel trap, position framework box funnel trap, gauze box funnel traps, catch results, monitoring, amphibians, newts, larvae.

Zusammenfassung

Verschiedene Wasserfallen werden hinsichtlich Bau und Einsatz beschrieben. Flaschenreusen aus 1,5-l-Plastikflaschen und Eimerreusen mit Flaschenköpfen als Reusenöffnungen sind die billigsten und am einfachsten herzustellenden Fallen. Flaschenreusen werden dabei in den flachen Uferbereichen so positioniert, dass sie mit der gelöcherten Seite ca. 1,5–4 cm aus dem Wasser ragen. Im tieferen Wasser wurden Eimerreusen mit Schwimmern, aber auch Stellrahmen-Kastenreusen sowie Gaze-