

# Beobachtungen zum Paarungsverhalten der Gelbbauchunke (*Bombina variegata variegata*)

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## Observations on mating behaviour of the yellow-bellied toad (*Bombina variegata variegata*)

To study the mating behaviour of *Bombina variegata* two randomly selected males (I and II) and females (I and II) were resettled into the aqua-terrarium after a two week dry period. With the help of a video surveillance system, which recorded a period of over 750 min, the relevant biological mating behaviour could be evaluated. During the entire observation period female I laid her eggs in five different intervals of 13 to 115 min. After every egg laying a behaviour was observed, which we called »Circle Dance«: The pair, led by the female, swims two to eight small circles around the area where the eggs have been laid. The egg laying and the »Circle Dance« takes between 30–45 s. The number of laid eggs decreased from 72 to 2. Everytime eggs were laid, new water plants were selected. With female II only mating attempts were observed. The male which was ready to mate would clasp himself onto female II, the female, however, freed herself successfully from his clasp with very slow motions, thereafter escaping on land or submerging. The entire action from the female's clasping until her release took anything from a few seconds up to a few minutes and never led to egg laying. We observed by which the male tried to conquer already occupied females:

- The attacking male clasped himself to the ventral side of the female, turned the couple over and squeezed himself, with sliding motions, onto the back of the female, thereby displacing the clasping male (38 % success rate, n = 42).
- The attacking male attached himself to the hindlegs of his competitor turned himself sideways thereby twisting the hind extremities until the clasping male released (30 % success rate, n = 36).
- The attacking male approached the mating pair laterally and tried to place his front legs between the couple (8 % success rate, n = 13).

During two of five times at which the female laid eggs, male II dove under and swam with powerful strokes toward the couple and attached himself exactly at the moment the eggs were laid to the ventral side of the female. During this way, the eggs were probably fertilised by the attacking male.

**Key words:** Amphibia, Anura, Discoglossidae, *Bombina variegata variegata*, mating, sexual behaviour, competition.

### Zusammenfassung

Um das Paarungsverhalten von *Bombina variegata* zu studieren, wurden zwei zufällig ausgewählte Männchen (I und II) und Weibchen (I und II) nach einer zweiwöchigen Trockenperiode in ein Aquaterrarium umgesiedelt. Mit Hilfe einer Videoüberwachungsanlage, die während 750 min Bild und Ton aufzeichnete, konnten die paarungsbiologisch relevanten Verhaltensweisen ausgewertet werden. Während der gesamten Beobachtungszeit laichte das Weibchen I in Intervallen von 13 bis 115 min fünfmal ab. Nach jeder Eiablage folgte ein Verhalten, welches wir als »Kreistanz« beschreiben: Angetrieben durch das Weibchen, schwamm das Paar im Wasser zwei bis