NATURAL HISTORY NOTES

JUVENILE BASKING BEHAVIOUR. Fieldwork on the ecology of B. bufo on the British Channel Island of Jersey was conducted during 2005–2007. During summer 2006, several daytime visits were made to one of the study sites (Grosnez pond in the Les Landes maritime heath in the NW) to assess pond desiccation. This particular pond was created by stone quarrying in past centuries and is fed by water draining through a cliff face, below which it is situated. It is heavily shaded by the cliff and other large rocks except when the sun is very high in the sky.

On several occasions in May and June 2006, 30 to 40 yearling (20–35 mm) toads (Fig. 1) were seen active along one side of the pond during the early afternoon and in full sun. On at least one occasion the air temperature at this location was in excess of 30°C. Small insects (particularly immature grasshoppers) were abundant there and shelter was available in the form of nearby vegetation and several rocks (Fig. 2). The toads were actively foraging or (apparently) basking, some being very dark in colour (Fig. 1), and "ran" away to hide when I approached. Several at least remained in this area of the pond perimeter until mid-August (C. Lenoir, pers. comm.).

Basking behaviour is known in other juvenile toads (reviewed by Carey, 1978) and specifically described for *B. americanus* (Taigen, 1981), as well as high altitude species such as the Andean *B. spinulosus* (Sinsch, 1989) and arid-landscape

Figure 1. Some of the juvenile toads seen active in full sun at Grosnez pond, Jersey, summer 2006.

J. Wilkinson.



dwellers like *B. debilis* (Seymour, 1972) and *B. granulosus* (Navas *et al.*, 2007). In European *Bufo*, this type of behaviour is more typical of juvenile green toads (*B. viridis*; *pers. obs.*) and natterjacks (*B. calamita*; T. Beebee, *pers. comm.*) but has not, to my knowledge, previously been described in *B. bufo* (R. Oldham, T. Beebee, *pers. comms.*). Meek & Jolley (2006), however, recorded diurnal sentinel/basking behaviour of adults in their study on *B. bufo* in France and daytime migration has been observed (e.g. Harrison, 1985).

For other *Bufo* spp., juvenile basking behaviour is attributed to the need to raise metabolism and therefore allow increased energy allocation to development (Taigen, 1981; discussed by Navas *et al.*, 2007). I suggest that this is also the case with the juvenile toads at Grosnez pond due to its heavy shading and the (often harsh) conditions on the surrounding heathland.

ACKNOWLEDGEMENTS

I thank Trevor Beebee, Rob Oldham and Richard Griffiths for their comments and Caroline Lenoir for additional field observations.

REFERENCES

Carey, C. (1978). Factors affecting body temperatures of toads. *Oecologia* 35, 197–219.
Harrison, J. D. (1985) Daytime breeding migration in toads. *Br. Herpetol. Soc. Bull.* 11, 28.

Meek, R. & Jolley, E. (2006). Body temperatures of the common toad, *Bufo bufo*, in the Vendee,

Figure 2. Grosnez pond photographed from the adjacent cliff top. The area enclosed by the white line (NW side) is where the juvenile toads were seen. © J. Wilkinson.



- France. Herpetol. Bull. 95, 21-24.
- Navas, C. A., Antoniazzi, M. M., Carvalho, J. E., Suzuki, H. & Jared, C. (2007) Physiological basis for diurnal activity in dispersing juvenile *Bufo granulosus* in the Caatinga, a Brazilian semi-arid environment. *Comp. Biochem.* & *Phys. A* **147**, 647–657.
- Seymour, R. S. (1972). Behavioural thermoregulation by juvenile green toads, *Bufo debilis*. Copeia 3, 572–575.
- Sinsch, U. (1989). Behavioural thermoregulation of the Andean toad (*Bufo spinulosus*) at high altitudes. *Oecologia* 80, 32–38.
- Taigen, T. L. (1981). Activity metabolism of the toad (Bufo americanus): ecological consequences of ontogenetic change. J. Comp. Phys. B: Biochem. System. & Env. Phys. 2, 247-252.

Submitted by JOHN W. WILKINSON. The Herpetological Conservation Trust, 655A Christchurch Road, Boscombe, Bournemouth, Dorset BH1 4AP, UK... johnw.wilkinson@herpconstrust.org.uk