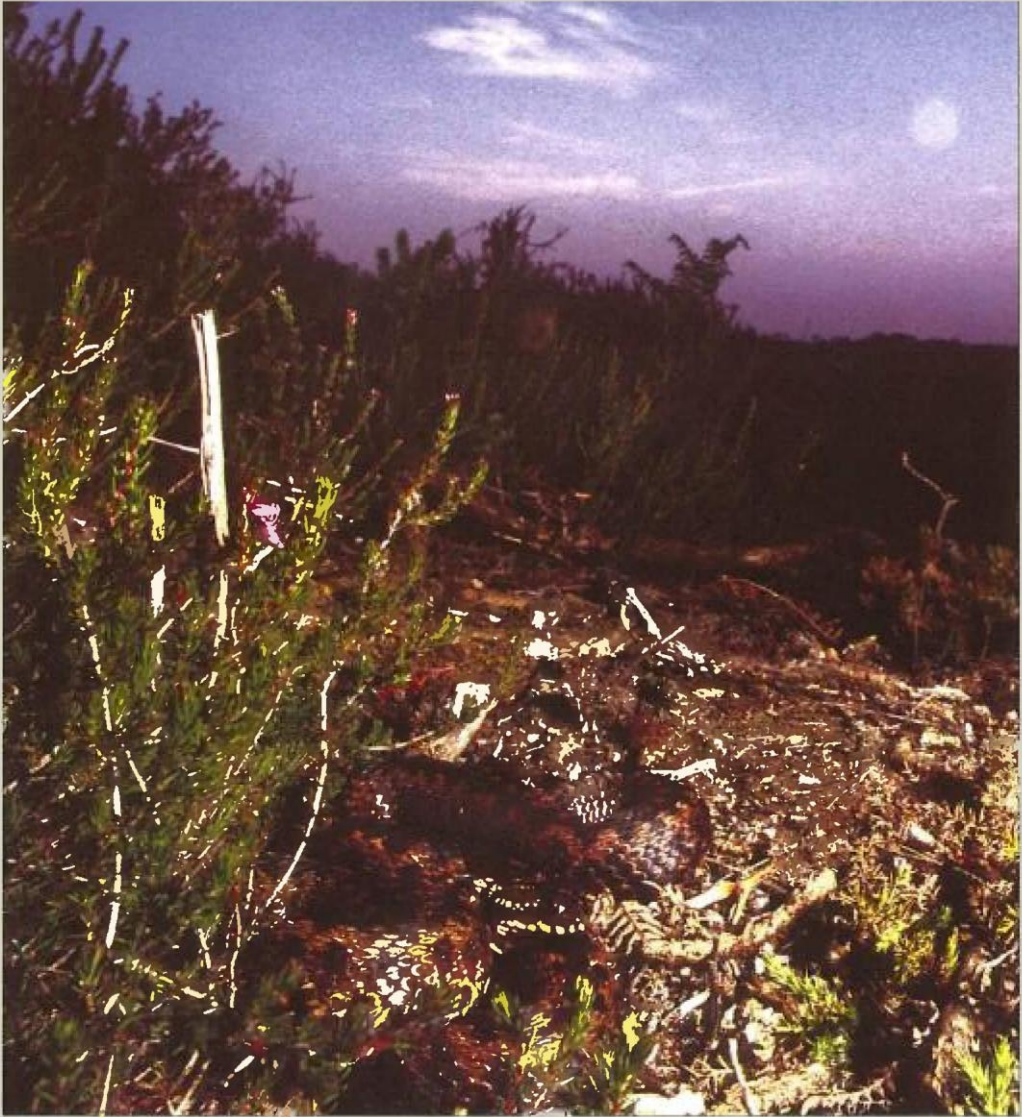


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VIPERA BERUS (European Adder): HOT WEATHER BEHAVIOUR IN PURBECK, DORSET. The summer of 2003 was notable for the hot dry weather, and for those of us working in the field a lack of consistent reptile sightings. Extreme weather and the apparent dearth of reptiles, particularly snakes, called for some initiative.

One obvious approach was to search during early morning, a method which in past hot years, (e.g. 1976, 1998), has not been very successful. Sure enough, apart from a few Common Lizards, *Zootoca vivipara*, no reptiles were sighted. Nocturnal behaviour in the Adder is not unknown (Wareham, 1998), although in the past searches at dusk and beyond by myself and others (see Prestt, 1971), have revealed little. The first evening and night searches began in June and on 9th June a non-breeding female was found lying out at Studland at 20:30 hrs, and was still there when I returned at 22:00 (see front cover). On 22nd June a sub-adult male was found crossing the road at Hartland Moor at 21:30, and on 26th June an adult male was found under refugia (tin) at Furzebrook at 22:15. Daytime temperatures were around 26°C, and there had been no rain, with an almost zero dewpoint.

Temperature began to peak during July and August and fieldwork continued during early morning and night. During 1997, refugia (tins) had been placed in areas known to be summer grounds for the Adder. These are usually checked from May onwards and in 2003 that month proved very successful for recaptures of adult males and immature individuals. Such recaptures followed a trend for previous years which normally provided good data for the entire summer period.

From about the middle of July sightings in the summer grounds dropped off to almost nil as daytime temperatures soared to in excess of 30°C, and this also included early morning and evening searches. It was also routine to check hibernation areas during the summer months as it is known that breeding females remain in these areas (Phelps, 1977).

Around mid August there was an evening of substantial rain. The following day was cloudy with occasional sunny spells and an air temperature of around 20°C. The first site visited was a hibernation bank at Furzebrook near Wareham. Two adult males were found coiled together, with another adult male coiled just two metres away. These snakes were coated in a thin layer of clay which strongly suggested that they had recently emerged from an underground retreat (Fig. 1). All the males were identified and each one had been previously recorded in the summer ground during late May. The summer ground was about five hundred metres away and it seems that these males at least had deliberately returned to the hibernation bank to undertake a period of aestivation. Two gravid females were also found on the hibernation bank, and these too had clay adhering to the body (Fig. 2).

On 8th September two of the males recorded on the hibernation bank were found back on the summer grounds. Both had recently fed, and indeed, these and other adders subsequently examined seemed to be in good condition. Birthing dates were also normal and neonates were much in evidence during early September.

These observations pose a number of questions. Firstly, in a temperate climate is aestivation obligatory during such extreme weather?, and why return to the hibernation area? Summer grounds are usually damp places and would apparently

Figure 1. Males on hibernation bank during August with clay adhering to bodies, Furzebrook. All photographs by author.





Figure 2. Gravid female on hibernation bank with clay adhering to body, Furzebrook.

offer plenty of scope for thermoregulation during hot weather. Or could this highlight the attachment to the hibernation area?, which after all is the focus of all Adder populations (Phelps, in press). When considering conservation and management we probably underestimate the aspect of site fidelity with regard to the Adder and other snake species and even though unwittingly, could be a cause of the decline of populations if such management is deemed inappropriate.

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