A RECORD OF MELANISM IN VIPERA LATASTI

J.C. BRITO

Portugal. E-mail: jose.brito@fc.ul.pt

ATASTE’S viper (Vipera latasti Boscá, 1878) is a Mediterranean snake occurring in all of the Iberian peninsula, except in the extreme north, and in northwestern Africa (Morocco, Algeria and Tunisia). It is a small species with a snout-vent length usually not larger than 60 cm. Two subspecies are currently recognised: Vipera l. latasti, found in most of the Iberian peninsula and Portugal above Mondego River, and Vipera l. gaditana, found in the south and southeastern area of the Iberian peninsula and northern Africa (Bea & Braña, 1997; Gasc et al., 1997). The two subspecies are differentiated by the number of ventral scales, higher in the former subspecies (135-147) and lower in the latter (122-138) (Saint-Girons, 1977).

It is a viper with reduced polymorphism in the body colour and pattern. The background body colour is commonly grey, or grey-yellowish with yellow, light brown, orange or reddish spots according to the various populations (Bea & Braña, 1997; Barbadillo et al., 1999). The dorsal colour pattern is a dark stripe, with contrasted margins. The stripe can be either a zig-zag with sharp angles or a succession of inter-connected rhomboidal spots in the shape of rosary (Bea & Braña, 1997; Barbadillo et al., 1999). To our knowledge, melanism in this species has never been reported.

On 23 April 1997 a melanistic Vipera latasti (Figure 1) was found dead on a road in the Mata de Albergaria, Parque-Nacional da Peneda-Gerês, north of Portugal (UTM 29TNG7127). The specimen was at 680 m a.s.l. on a mountainside subjected to heavy rainfall (>3000 mm/yr.), and the surrounding habitat was a dense oak forest (Quercus robur) with heath (Erica sp.), brooms (Cytisus sp.) and brambles (Rubus sp.). The specimen was an adult male and its biometry is presented in Table 1.

In other European viper species melanism is quite frequent, especially in Vipera berus and Vipera aspis. In some populations of these two species, melanic individuals can represent more than 50% of the population (Naulleau, 1973). For Vipera seoanei it has been described for 38.8% of melanic individuals in the mountains of northern Spain (Bea et al., 1984). Since 1998, more than 100 vipers have been captured in this area, either live or dead on the roads, and this was the only record of a melanistic specimen. This presupposes a very low abundance of melanism and/or that melanism is quite rare in this species. Inquiries among local people inhabiting this mountain revealed that some are aware of the existence of these ‘black vipers’ but stated that they are very rare.

Table 1. Biometric data for melanic specimen of Vipera l. latasti.

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Snout-vent length</td>
<td>50.0 cm</td>
</tr>
<tr>
<td>Total body length</td>
<td>59.0 cm</td>
</tr>
<tr>
<td>Head length</td>
<td>2.40 cm</td>
</tr>
<tr>
<td>Head width</td>
<td>1.24 cm</td>
</tr>
<tr>
<td>Head height</td>
<td>1.07 cm</td>
</tr>
<tr>
<td>Body weight</td>
<td>64.0 gr</td>
</tr>
</tbody>
</table>
Several theories regarding the evolutionary advantages of melanism have been suggested, and some data point to an advantage of melanic individuals of *Vipera berus* in faster heating rates, especially in mountain and cold regions (Andrén & Nilson, 1981), higher growth rates and body sizes (Madsen & Stille, 1988), higher fecundity in the females (Capula & Luiselli, 1994), and lower mortality rates after parturition (Luiselli, 1992). However, higher risk of predation (Andrén & Nilson, 1981) and considerable susceptibility to low food abundance (Madsen & Stille, 1988) has been reported as well. The evolutionary role of melanism in this species is yet to be determined, but it seems to be of less importance due to the extreme low frequency of occurrence.

ACKNOWLEDGEMENTS
This work was financially supported by a PhD grant from Fundação para a Ciência e Tecnologia (PRAXIS XXI/BD/16093/98) and by the Peneda-Gerês National Park (PNPG). Thanks are extended to José Ferreira and Francisco Neto for collecting the specimen.

REFERENCES


