

MELANISTIC WANDERING GARTERSNAKE (*THAMNOPHIS ELEGANS VAGRANS*) AND DISCOVERY OF A HIBERNACULUM IN THE CRESTON VALLEY, BRITISH COLUMBIA

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Wandering Gartersnake (*Thamnophis elegans vagrans*) is the only subspecies of Terrestrial Gartersnake (see Crowther 2008 for current taxonomy) in British Columbia. It is common and widely distributed across southern portions of the province, including the south coast, and north through the interior to the Peace River district (Gregory and Campbell 1984, St. John 2002, Matsuda et al. 2006).

On 15 April 2009, I discovered a mixed “ball” of gartersnakes at a hibernating site near Creston in southeastern British Columbia (Figure 1). The aggregation consisted of 32 Wandering Gartersnakes and six Common Gartersnakes (*Thamnophis sirtalis*). Although the colour pattern of Wandering Gartersnake varies geographically, in Creston the body is generally gray with a light dorsal stripe, usually a yellow to orange-red stripe down its back and a matching stripe running down each side. There is also a pattern of irregular dark spots over its back



Figure 1. Wandering Gartersnakes having emerged from their winter hibernaculum engage in mating. Creston, BC. 15 April 2009. (Linda M. Van Damme). BC Photo 3731a.

and overlapping the stripes, giving the appearance of a wavy or zigzag pattern. The belly is pale and may have dark blotches. Among the typical patterned snakes observed on 15 April, an all-dark snake emerged (Figure 2). A series of photos were taken of this striking black snake and later sent to Patrick T. Gregory who identified it most likely as an *elegans*. Despite field research in the Creston valley, Dr. Gregory and his students (*e.g.*, Farr 1988) had never seen a melanistic gartersnake in the area.



Figure 2. Melanistic Wandering Gartersnake (center) is a striking contrast to other normal-patterned individuals. Creston, BC. 15 April 2009. (Linda M. Van Damme). BC Photo 3731b.

A melanistic snake, presumably the same one, was observed six days later on 21 April. When I arrived at the hibernaculum, 36 Wandering Gartersnakes were visible. I could hear a rustling in the dry vegetation below the slope and within seconds the melanistic snake emerged and joined the other snakes.

Melanism, the increased amount of dark pigmentation in the skin of an animal resulting from the presence of melanin, occurs occasionally within a population, such as the Creston valley, and is actually fairly common in temperate-zone snakes (Gibson and Falls 1979, Bittner et al. 2002, Tanaka 2005). It has been previously documented in *Thamnophis* and is reasonably common in Northwestern Gartersnake (*T. ordinoides*) on the coast of British Columbia (Matsuda et al. 2006).

One of the earliest published records of melanism was from Blanchard and Blanchard (1941) who noticed all-dark colouration in Eastern Gartersnake (*T. s. sirtalis*) in Michigan. Melanistic individual Wandering Gartersnakes have been found in a small local population in the Puget Sound region of nearby Washington State (Hebard 1950, St. John 2002) but it is an apparently rare occurrence in British Columbia (P.T. Gregory pers. comm.).

During two summers field work in the Creston valley in 1986 and 1987, Farr (1988) suggested that *T. sirtalis* and *T. elegans* “do not overwinter communally, and the long-distance migrations between winter and summer habitats observed in other populations apparently do not occur.” The discovery of what appeared to be an over-wintering den site for Wandering Gartersnake in spring 2009 is therefore noteworthy.

The hibernaculum entrance was one metre from a roadway on an east-facing slope with full southern exposure. The opening to the over-winter den was exposed following brush cutting of roadside vegetation by road maintenance crews. A temporary depression of water from snow melt and spring runoff was 15 m away. The site was monitored until the end of April when it appeared the gartersnakes had dispersed from the immediate vicinity to summer ranges.

Acknowledgements

A sincere thank you to Dr. Patrick T. Gregory for identifying the “black snake” and providing editorial comments.

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About the author

While out and about bird watching, Linda encounters many other fascinating natural history events.