

of the author due to suspected neoplasia and progressive body condition loss. Necropsy revealed the presence of renal tumors, with one mass located in the left kidney and two masses located in the right kidney. These tumors were previously detected by palpation as three lumps in the posterior body, which slowly increased in size and eventually became visually noticeable. Histological examination of the tumors was not performed.

The author's observations suggest that the lifespan of *T. marcianus* may exceed the previous longevity record in captivity available from the literature. Moreover, there are non-peer reviewed reports that this species could live longer than indicated in this report ([www.stevenbolgartersnakes.com](http://www.stevenbolgartersnakes.com); 15 Feb 2022).

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**THAMNOPHIS RUFIPUNCTATUS (Narrow-headed Garter-snake). LONGEVITY.** There is little information available on the longevity of the federally threatened *Thamnophis rufipunctatus* in the wild or in captivity, and what is presently known is from rough approximations. Rosen and Schwalbe (1988. Unpublished report from Arizona Game and Fish Department to U.S. Fish and Wildlife Service, Albuquerque, New Mexico) suggested wild *T. rufipunctatus* may live as long as 10 years according to body size frequency distribution of captured snakes, not from mark-recaptured snakes, which may not provide a reliable longevity estimate. The oldest confirmed *T. rufipunctatus* was a marked female born at the Phoenix Zoo in 2009 which was released into an outdoor semi-wild wetland enclosure managed by the Arizona Game and Fish Department in 2014 and recaptured in the of fall 2018 at the age of nine years (Holycross et al. 2020. In Holycross and Mitchell [eds.], Snakes of Arizona, pp. 440–455. ECO Publishing, Rodeo, New Mexico). Here, we present the first longevity record for a male *T. rufipunctatus* maintained in captivity.

On 17 July 2007, a 260 mm snout–vent length (SVL) male *T. rufipunctatus* was captured from the Black River, Gila County, Arizona, USA and brought to the Phoenix Zoo as one of the founding animals for the Phoenix Zoo's managed *T. rufipunctatus* breeding program. On 7 September 2020 this snake died after 13 years, one month, and 20 days (540 mm SVL) at the Phoenix Zoo, which is three years greater than the previous longevity estimates for the species. In the wild, neonate *T. rufipunctatus* are typically born between mid-June to mid-September with SVLs ranging from 192–254 mm (Rosen and Schwalbe 1988, *op. cit.*; Holycross et al. 2020, *op. cit.*) and based on this snake's SVL and capture date it could have been born in late 2006 or June of 2007; if the former, its age would have been closer to 14 years.

Longevity would be expected to differ between wild snakes and those under human care, and our observation may not reflect longevity in the wild and should be interpreted carefully. However, there is evidence that longevity between the two conditions may be similar. For example, wild *T. elegans* have been reported to live >15 years (Sparkman et al. 2007. Proc. R. Soc. B. 274:943–950) compared to the maximum known longevity of 17.8 years under human care (Tacutu et al. 2018. Nucleic Acids Res. 46:D1083–D1090). Longevity rates are a key demographic trait that can be used to estimate population turnover rates for managed zoo-based breeding programs or in wild populations. Because *T. rufipunctatus* is the focus of an active breeding program for future wild releases this information can guide how the Phoenix Zoo's snakes are managed as they age.

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