

ABSTRACT

Title: Field Sampling Design for the Eastern Small-eyed Snake, *Cryptophis nigrescens*, in South-eastern Australia using Artificial Shelters.

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Little is known about the ecology and behaviour of the Eastern Small-eyed Snake, *Cryptophis nigrescens*, in Victoria. This lack of knowledge can, to a great extent, be attributed to the secretive nature of this small-bodied, nocturnal elapid snake. To date, the most frequently applied sampling techniques for *C. nigrescens* involve pitfall trapping or the checking of natural shelters, primarily volcanic rocks. Both methods are detrimental to the habitat of the species. Here, we present an alternative and successful sampling technique for attracting *C. nigrescens* and other Volcanic Plains / open woodlands herpetofauna. Artificial shelters in the form of double-stacked sheets of corrugated iron were laid out in grid format since 2003 at Morang Parklands at the northern fringe of Melbourne. Shelters were checked at least monthly and data were recorded on vertebrate diversity and number of individuals per species. The thermal behaviour of natural and artificial shelters within grids was compared using temperature data loggers. Our results show a clear seasonal peak in catchability under the corrugated iron in late spring and early summer. Thermal comparisons of natural and artificial shelters suggest that double-stacked sheets of corrugated iron provide a more consistent and less fluctuating retreat for *C. nigrescens* than roof tiles, with thermal properties closer to environments provided at the base of tussock grasses but warmer than the conditions under half-submerged volcanic rocks. Further ecological data on *C. nigrescens* and implications for future studies will be discussed.