HETERODON PLATIRHINOS (Eastern Hognose Snake). **ROAD CROSSING BEHAVIOR.** The effect of roads on the ecology and movement patterns of animals is of great interest to ecologists and conservationists (Forman and Alexander. 1998, Ann. Rev. Ecol. Syst. 29:207–231; Forman et al, 2003, Road Ecology: Science and Solutions, Island Press, Washington, D.C.). Recent work on snakes demonstrates that roads might have significant effects on their movements (Shine et al. 2004. Ecology and Society 9:9). Furthermore, different species of snakes may respond differently to roads (Andrews 2003. Proc. Int. Conf. Ecol. Trans., pp. 649–651; Andrews and Gibbons 2005. Copeia 2005:772–782).

In the course of accumulating over 1700 observations while radiotracking 16 *Heterodon platirhinos* daily over four years (Plummer and Mills 2000. J. Herpetol. 34:565–575), we observed 61 cases among four snakes that approached within 5 m of a lightly used 5 m wide paved asphalt road. In each case, we recorded the snake's location the following day and classified the interim movement as a 1) road crossing; 2) a move away from the road (snake reversed its direction of travel); or 3) a move parallel to the road. Three snakes approached the road 27 times but avoided crossing (Table 1). One male snake (HP6) appeared to move randomly after approaching the road, crossing it in 25% of cases. Eight of his nine crossings resulted from moving to and from a hibernaculum on the side of the road opposite from its home range (Plummer 2002. Herpetol. Rev. 33:89–90) and occurred at two specific locations on the road. Among all snakes, only 15% of the 61 road approaches were followed by crossings. Our telemetric data suggest that *H. platirhinos* is sensitive to the presence of paved roads and that moving individuals typically avoid crossing them; however, some individuals might be compelled to cross when moving to and from hibernating sites (Bonnett et al. 1999. Biol. Cons. 89:39–50). The overall 85% avoidance rate we found is similar to the 80% road avoidance rate observed for *H. platirhinos* by Andrews and Gibbons (*op. cit.*). Plummer and Mills (*op. cit.*) found that resident *H. platirhinos* moved about 120 m per day within unusually large (50 ha) home ranges, probably creating regular opportunities for road crossings on the study area. That crossings did in fact occur is evidenced by HP6 and by two road-killed untracked *H. platirhinos* observed over four years of daily observations.

TABLE 1. Number of responses of *Heterodon platirhinos* after approaching a paved asphalt road. Responses were classified as road crossings, movements away from the road, and movements parallel to the road.

Snake	Sex	No. approaches	No. crosses	No. away	No. parallel
HP1	F	6	0	3	3
HP6	M	34	9	9	16
HP10	F	16	0	1	15
HP13	M	5	0	2	3
Total		61	9 (14.8%)	15 (24.6%)	37 (60.7%)

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HETERODON PLATIRHINOS (Eastern Hognose Snake). **REGURGITATION OF PREY.** The death-feigning behavior of snakes in the North American genus *Heterodon* has long been recognized (Edgren. 1955. Herpetologica. 11:105–117). On 11 September 2005, in the Adirondack foothills of northwestern Saratoga County, New York, USA, JB encountered an active neonate *H. platirhinos* (ca. 11.4 cm TL). During an attempt to move the snake, it responded by hissing, hooding, and writhing. As the snake entered the death-feigning phase, it regurgitated a partially digested red eft (land stage of *Notophthalmus viridescens*). After the death-feigning phase was completed, the snake retreated. Although predation on *N. viridescens* by *H. platirhinos* has been reported (Uhler et al. 1939. Trans. N. Am. Wildl. Conf. 4:605–622), we are unaware of reports indicating predation frequency. Tetradotoxin (TTX) and its analogues occur in many terrestrial and marine animals and have been detected in salamanders of the genera *Taricha*, *Notophthalmus*, *Cynops*, *Ambystoma*, *Triturus*, and *Paramesotriton* (Yamashita and Mebs 2001. Toxicon 39:1261–1263). Brodie et al. (1974. Copeia 1974:506–511) found that the aposematically pigmented red eft stage of *N. viridescens* contained concentrations of TTX approximately ten times the levels of the aquatic adult stage. Further observations are needed to determine if *Heterodon platirhinos* frequently predate red efts in the referenced area.

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HETERODON PLATIRHINOS (Eastern Hognose Snake). **ENVENOMATION AND PREY SURVIVAL.** Whether or not colubrid snakes of the genus *Heterodon* are at all venomous has been questioned, but mostly supported since the idea was first proposed by Ditmars (1912. Zoologica 1:204) upon observation of microscopic grooves along the rear fangs. Later, evidence was provided through personal experiences and observations of envenomation by *Heterodon*, first by Bragg (1960. Herpetologica 16:121–124) and later by Grogan (1974. Herpetologica 30:248–249) and Morris (1985. Herpetologica 41:361–363). Each author described swelling and pain at the site of the wound. Hill and Mackessy (1997. Toxicon 35:671–678; and 2000. Toxicon 38:1663–1687; see also Mackessy 2002. J. Toxicol.-Toxin Rev. 21:43–83 for an extensive review of toxicity of colubrid salivas) used molecular techniques to quantify the toxicity and enzymatic activity in venoms of several species of colubrid snakes (including subspecies within *H. nasicus*). However, experimental evidence supporting toxicity of *Heterodon* saliva is limited. In one study, fluid from the salivary glands of *H. platirhinos* was injected into mice (none died), anurans (15 of 17 died; including *Bufo fowlerii,* 8 of 10 died), and one *Ambystoma laterale* (which did not die) (McAlister 1963. Herpetologica 19:132–137). Additionally, Young (1992. Toxicon 30:775–779) showed that application of *H. platirhinos*