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PYGMY SHORT-HORNED LIZARD (*PHRYNOSOMA DOUGLASII*): UNRECORDED PREY FOR THE GREAT BASIN NIGHTSNAKE (*HYP SIGLENA CHLOROPHAEA DESERTICOLA*)

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Key words: Great Basin Nightsnake, *Hypsiglena chlorophaea deserticola*, *Phrynosoma douglasii*, predation, prey, Pygmy Short-horned Lizard, shrub-steppe, Washington

North American nightsnakes (*Hypsiglena* spp.) are cryptic squamates found throughout much of the arid western United States (Stebbins 2003). As a group, nightsnakes prey mostly on sceloporine lizards (family Sceloporidae) and squamate eggs, though some taxa have been recorded to take frogs, snakes, insects, and amphisbaenians (Dil-

ler and Wallace 1986; Rodríguez-Robles and others 1999). Recent research has shown that the Great Basin Nightsnake (*Hypsiglena chlorophaea deserticola*; Mulcahy 2008) is more broadly distributed and common in Washington State than historically recognized (Weaver 2008). In Washington, the Great Basin Nightsnake consumes all the lizard species with which it is known to co-occur except for short-horned lizards (Weaver 2010). Here, we report the 1st record of short-horned lizards (family Phrynosomatidae) as Great Basin Nightsnake prey.



FIGURE 1. Female Great Basin Nightsnake with its regurgitated Pygmy Short-horned Lizard prey.

At midnight on 8 August 2008, APO and JLW found an adult female Great Basin Nightsnake (302 mm snout-vent length, SVL) during a survey of Vantage Highway in the eastern, more incised portion of Schnebly Coulee (UTM Zone 10: 722566.9E 5203475.0N, WGS84; 444 m elevation), Kittitas County, Washington. Stiff Sage (*Artemisia rigida*), Blue Bunch Wheat Grass (*Pseudoroegneria spicata*), and non-native forbs and grasses on thin rocky soil characterized habitat along this portion of the highway. The nearby coulee wash was ephemeral, and Great Basin Wild Rye (*Elymus cinereus*), a few short Aspen (*Populus tremuloides*), and Black Cottonwood (*Populus trichocarpa*) dominated its fragmentary moist area. Scattered Big Sage (*Artemisia tridentata*) also occurred along the wash.

The snake, when found, had the obvious bulge of recently ingested prey. We placed the snake in a cloth bag for subsequent observation, and by the following morning it had regurgitated a half-digested adult male Pygmy Short-horned Lizard (*Phrynosoma douglasii*; Fig. 1). The lizard was estimated to have a right hind limb length of 15 mm; and based on body size-hind limb length and mass-body size regressions (REW, unpubl. data) was approximately 41 mm SVL and 6 g in mass. We also

approximated the snake's mass (also from a regression) to be just over 12 g. Based on these values, the predator-prey mass ratio would be close to 0.50, a value similar to the largest predator-prey mass ratio recorded for the Great Basin Nightsnake (Lacey and others 1996). The snake was released at the point of capture on the evening of 9 August 2008.

Based on gap analysis maps of the distribution of the Great Basin Nightsnake and the Pygmy Short-horned Lizard in Washington, the species appear to be sympatric over a substantial area of the Columbia Basin (Dvornich and others 1997). However, nightsnakes are frequently associated with coarse rocky habitats (Weaver 2008), and short-horned lizards with finer substrates in shrub-steppe (Lahti and Beck 2008). Hence, the 2 species might infrequently co-occur in the same habitats. Our observation indicates that syntopy does occur, but its frequency and the circumstances under which Great Basin Nightsnakes prey on Pygmy Short-horned Lizards need to be better researched and understood.

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CHARACTERISTICS OF TREES USED BY WHITE-HEADED WOODPECKERS FOR SAP FEEDING IN WASHINGTON

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Key words: *Picoides albolarvatus*, *Pinus ponderosa*, Ponderosa Pine, sap feeding, Washington, White-headed Woodpecker

The White-headed Woodpecker (*Picoides albolarvatus*) is uncommon and non-migratory throughout its geographic range in Washington, where it inhabits forests dominated by Ponderosa Pine (*Pinus ponderosa*). In the northern part of their range, White-headed Woodpeckers rely on Ponderosa Pine seeds as an essential fall and winter food resource (Ligon 1973; Garret and

others 1996). Previous studies investigated White-headed Woodpecker foraging in relation to food items consumed (Raphael and White 1984), tree species used for foraging (Raphael and White 1984; Morrison and others 1987), sexual differences (Koch and others 1970; Morrison and With 1987), and competition with other species (Morrison and With 1987). Although previous research revealed that White-headed Woodpeckers do feed on tree sap in California (Raphael and White 1984) and Oregon (Dixon 1995), the characteristics of trees used for sap feeding have not been described in