

A NOTEWORTHY RECORD OF THE PIGMY SHORT-HORNED LIZARD (*PHRYNOSOMA DOUGLASII*) FOR BRITISH COLUMBIA

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The Pigmy Short-horned Lizard (*Phrynosoma douglasii*) occurs only in northwestern North America, its contiguous range stretching from extreme southern Canada (south-central British Columbia) south into central and eastern Washington, central and southeastern Oregon, northeastern California, northwestern Nevada, and is found locally in northern Idaho (Cook 1984, St. John 2002). Within this range it frequents a variety of habitats from sagebrush rangelands and bunchgrass plains to open juniper and pine woodlands. Nussbaum et al. (1983), Cook (1984), Gregory and Campbell (1984) and Matsuda et al. (2006) provide information on the distribution and natural history of the Pigmy Short-horned Lizard in British Columbia; Zamudio et al. (1997) review the taxonomic status of *Phrynosoma douglassii* (of which the present *P. douglasii* was a subspecies; it is now considered to be a distinct species, the other subspecies of the former *P. douglassii* being grouped together as the Greater Short-horned Lizard, *P. hernandesi*).

The Pigmy Short-horned Lizard was added to the herpetofauna of British Columbia on the basis of two specimens collected at Osoyoos by Charles DeBlois Green in approximately 1898 (Fannin 1898). These specimens (catalogue numbers 323 and 324) are deposited in the Royal British Columbia Museum in Victoria, British Columbia.

Mr. Green moved to the Okanagan valley from England, and after a short period in the West Kootenay region of British Columbia in the early 1890s, lived

close to the northern end of Osoyoos Lake (Brooks 1930). He spent much of his time surveying mining claims for prospectors in the mountains to the east and west, all the while keenly observing the local butterflies, birds, and mammals. Charles became interested in collecting birds' eggs and this activity soon became his "absorbing" hobby. He also collected a few mammals, amphibians, and reptiles, and deposited these in museums, but these animals were collected incidentally, and with less interest and documentation, than birds. This probably accounts for the incomplete details of the Pigmy Short-horned Lizard documentation (such as the uncertainty of the actual date of collection) published by Fannin (1898). In 1919 Green moved to the Keremeos area, where he went into sheep farming until his death in 1929 (Brooks 1930).

Powell and Russell (1998) have summarized the historical status of the Pigmy Short-horned Lizard in British Columbia. Specific details, however, still remain confused and sketchy regarding records for the province. The specimens collected by Mr. Green have been cited in at least 74 major books, scientific papers, reports, and checklists in the Pacific Northwest through 1984 (see Campbell et al. 1982, Gregory and Campbell 1984, Matsuda et al. 2006) without confirmation of subsequent collections or sightings. An apparently valid record in 1937, again from the Osoyoos region, is without specific details (Powell and Russell 1998).

There have been anecdotal reports of "lizards" over the past two decades from the vicinity of Osoyoos, Richter Pass, Cawston, and Keremeos but none have been substantiated (Powell and Russell 1998). In August 1991, a thorough 10-day search of "all the suitable undisturbed habitat" along the east side of Osoyoos Lake (the suspected origin of the 1898 specimens) was completed without finding a horned lizard (Powell and Russell 1991, 1998). In addition, the authors have frequently searched for Pigmy Short-horned Lizards in the southern Okanagan valley over the past 40 years without success.

The purpose of this note is to put on record an observation made northeast of Osoyoos, British Columbia, during the summer of 1957.

On 22 June 1957, while he was searching for Indian artifacts on the ground and under rocks along

the east shoreline of Osoyoos Lake, and generally observing wildlife, Glen R. Ruder discovered a Pigmy Short-horned Lizard. The following notes, summarized from two pages in the field notebook of Mr. Ryder, read:

[Pygmy Horned Lizard, found under a large, flat stone, which had an entrance hole under one side. On carefully lifting it up there was a lizard, a neat little fellow, some 4+ inches in length and covered mostly all over in small spines. This lizard is rather fat-looking. The overall colour was gray with black, dark markings.] "... a very interesting animal when it is the first time one sees it. At this stage I wished I owned a camera but I don't so I did a rough sketch]." (Figure 1).

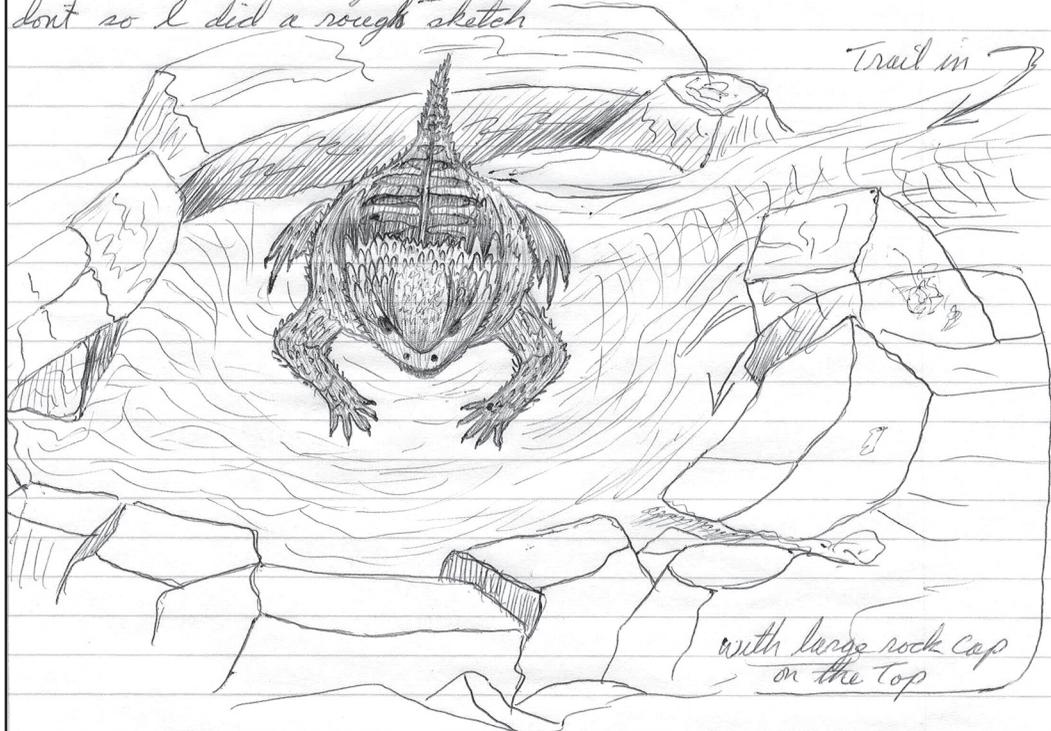
This observation is the first for British Columbia with full details. The exact site where the horned lizard was found was situated about one-third of the way along the east shore of Osoyoos Lake north of the town of Osoyoos and 300 m from the lakeshore. The area falls within the Ponderosa Pine – Bunchgrass biogeoclimatic zone (Farley 1979). The immediate habitat was characterized by a relatively open, dry and sandy soil surface with some cover of big sagebrush (*Artemisia tridentata*) interspersed with grasses (e.g., *Stipa* sp.). Small rock piles dotted the area.

There are persistent reports, especially by First Nations people living and working along the east shore of Osoyoos Lake, that "small lizards" are still present (D. Brown pers. comm.). Caution is warranted, however, as some of these sightings may refer to Western Skink (*Eumeces skiltonianus*), Northern Alligator Lizard (*Elgaria coerulea*), or in some cases, Barred Tiger Salamander (*Ambystoma mavortium*). Access to the area is restricted and over the past five years vineyards have been established, reducing the habitat available for horned lizards. The general consensus among herpetologists is that this isolated peripheral population of the Pigmy Short-horned Lizard is extirpated from British Columbia (Powell and Russell 1991, Matsuda et al. 2006).

Literature Cited

Brooks, A. 1930. In memorium: Charles deB. Green. *Condor* 31:9-11.

Date June 22 1957 Area Osoyoos B.C. Pocket Desert.
 Wildlife seen during this trip Cont. from page ①.
 Pygmy Horned Lizard, over all Colour grey Back dark markings
 But a very interesting animal when it is the first time one
 sees it, at this stage I wished I owned a Camera but I
 don't so I did a rough sketch



Other Wildlife species in area are. Scorpions - (15) seen
 under rocks of the Area during a search for more Lizards
 But none was seen.

Figure 1. Field drawing by Glenn R. Ryder of a Pigmy Short-horned Lizard found at Osoyoos Lake, BC. 22 June 1957. BC Photo 3288.

Campbell, R.W., M.G. Shepard, B.M. Van Der Raay, and P.T. Gregory. 1982. A bibliography of Pacific Northwest herpetology. British Columbia Provincial Museum Heritage Record No. 14, Victoria, BC. 152 pp.

Cook, F.R. 1984. Introduction to Canadian amphibians and reptiles. National Museum of Natural

Sciences National Museums of Canada, Ottawa, ON. 200 pp.

Fannin, J. 1898. A preliminary catalogue of the collections on natural history and ethnology in the Provincial Museum, Victoria, British Columbia. British Columbia Provincial Museum, Victoria, BC. 196 pp.

Farley, A.L. 1979. Atlas of British Columbia. University of British Columbia Press, Vancouver, BC. 136 pp.

Gregory, P.T., and R.W. Campbell. 1984. The reptiles of British Columbia. British Columbia Provincial Museum Handbook No. 44, Victoria, BC. 103 pp.

Matsuda, B.M., D.M. Green, and P.T. Gregory. 2006. Amphibians and reptiles of British Columbia. Royal British Columbia Museum Handbook, Victoria, BC. 266 pp.

Nussbaum, R.A., E.D. Brodie, Jr., and R.M. Storm. 1983. Amphibians and reptiles of the Pacific Northwest. The University Press of Idaho, Moscow, ID. 332 pp.

Powell, G.L., and A.P. Russell. 1991. Report on the 1991 search for the Pigmy Short-horned Lizard (*Phrynosoma douglassii douglassii*) in the region of Osoyoos, British Columbia. British Columbia Ministry of Environment Report, Victoria, BC.

_____, and _____. 1998. The status of Short-horned Lizards, *Phrynosoma douglasi* and *P. hernandezii*, in Canada. Canadian Field-Naturalist 112:1-16.

St. John, A. 2002. Reptiles of the Pacific Northwest – British Columbia to California. Lone Pine Publishing, Edmonton, AB. 272 pp.

Zamudio, K.R., K.B. Jones, and R.H. Ward. 1997. Molecular systematics of Short-horned Lizards: biogeography and taxonomy of a widespread species complex. Systematic Biology 46:284-305.

About the Authors

Glenn lives in the Fraser River valley and is a seasoned field naturalist who meticulously records natural history on all forms of wildlife, often accompanied by detailed sketches.

Wayne has authored books, scientific papers, and popular articles on amphibians and reptiles in British Columbia.

Larry is a lecturer and research associate at the University of Calgary, and has investigated various aspects of Greater Short-horned Lizard ecology in Alberta.