

# SURVEY OF PAINTED TURTLES IN THE CRESTON VALLEY, BRITISH COLUMBIA, IN 2003 AND 2004

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## **Abstract**

Field surveys of painted turtles (*Chrysemys picta*) in the Creston Valley, British Columbia, in 2003 and 2004 revealed 392 and 415 individuals respectively. Although many wetlands were occupied by turtles, sluggish river channels with exposed mud banks and floating logs was the preferred habitat. The valley probably supports well over 1,000 painted turtles making it one of the largest reported populations in British Columbia.

## **Introduction**

The Painted Turtle (Figure 1) is the most widely distributed turtle species in North America. In the west it reaches the northern limit of its range in southern British Columbia including southeastern Vancouver Island (Ernst et al. 1994). Although widely distributed across southern regions of the province, populations are often local and vary greatly in size (Gregory and Campbell 1984). Four subspecies are recognized on the continent; the race in British Columbia is the “western” painted turtle (*C. p. belli*).

The Creston Valley, located in southeastern British Columbia, is a wide flat valley comprised of marshlands and agricultural fields. The floodplain has been completely altered with dyking and diversion of major creeks and rivers (Butler et al. 1986). It is generally believed that these human activities have enhanced painted turtle habitat, resulting in



**Figure 1.** Painted turtles basking on a log in the Creston Valley, BC. 19 April 2000. (Linda M. Van Damme).

increased populations throughout the valley.

Since the painted turtle is one of our more easily observable reptiles, I established permanent survey units to monitor this species as part of a general wildlife monitoring program established for the Creston Valley. The bottomland of the Creston Valley was divided into 10 survey units (Table 1). General habitats included shallow lakes, cattail marshes, river channels, permanent roadside ditches, ponds, sluggish streams, and sloughs. Leach Lake and Six Mile Slough were not included in this survey.

### Methods

The Creston Valley study area was divided into 10 discrete units to represent a variety of wetland habitats and to maximize survey potential and coverage (Table 1). In 2003 and 2004, 17 and 21 sites within these units were sampled respectively, although only 13 of the sites from 2003, plus eight new sites, were sampled in 2004. Surveys were completed between 10 April and 27 August in 2003, and between 21 April and 8 October in 2004. All sites were visited at least once. However, because the opportunity for sighting turtles is highly variable with fluctuating water levels, weather conditions, and time of day, six sites were visited more often to better estimate turtle abundance. Surveys were conducted on warm, sunny days when turtles are more conspicuous basking on floating logs, mats of aquatic vegetation, grebe nests, mudbanks, river shores, fallen cattails (*Typha latifolia*), or other vegetation along the water's edge. In ponds, many animals were simply floating

among dense aquatic plants with only their heads showing above common duckweed (*Lemna minor*). Roadside ditches were the only habitat surveyed by vehicle. All turtles were viewed and counted from a minimum of 8 metres to prevent disturbance and escape into the water.

### Results and Discussion

A total of 807 painted turtles were recorded in both years of which 392 were tallied in 2003 and 415 in 2004 (Table 1). The painted turtle was widely distributed throughout the Creston Valley with individual survey units having from 9 to 159 animals. Largest numbers in both years were found along the Old Goat River Channel, Nick's Island, and Swan Road. Each of these locations had gentle sloping mud shores where more extensive linear habitats were available for basking. Human disturbance was also minimal. In cattail marshes, turtles usually basked on fallen vegetation

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and frequently on Red-necked Grebe (*Podiceps grisegena*) and Western Grebe (*Aechmophorus occidentalis*) nests. In sloughs, large floating logs were utilized as haulouts for turtles.

There is concern among herpetologists, biologists, and naturalists that populations of the painted turtle are vulnerable mainly due to loss of wetland habitats, vehicle collisions to and from nesting sites, obstructed access to breeding sites, chemical contamination from agricultural practices, and introduction of non-indigenous turtles (Ernst et al. 1994, Blood and Macartney 1998). In southeastern British Columbia, nest site enhancement, number of nesting

**Table 1.** Survey units, maximum number of painted turtles, and habitat descriptions in the Creston Valley, BC.

Survey Unit	2003	2004	Major Habitat
Duck Lake	22	56	lake; dense aquatic plants
Corn Creek Marsh	25	14	cattail marsh
Old Goat River Channel	138	159	slough
Lower Kootenay Indian Land	11	14	cattail marsh
Nick's Island	105	32	slough
French Slough	13	24	river backchannel
Dale Marsh	27	21	bulrush marsh
Mawson Lake	9	n/a	freshwater lake
Reclamation Road	42	18	irrigation ditch
Swan Road	n/a	77	irrigation ditch
Total	392	415	

turtles, and complete turtle surveys have been initiated at various locations. These include Kikomun Creek Provincial Park (maximum 819 turtles reported by Macartney and Gregory (1985)), Elizabeth Lake near Cranbrook (maximum 174 turtles reported by Gillies and Clair (1997) and Clark and Gruenig (2001, 2003)), Red Devil Hill near Revelstoke (maximum 10-35 turtles reported by Maltby (1998, 1999 and 2000)), McGinty Lakes near Kimberley (no turtles reported by Gillies (1998)), Mirror Lake near Kaslo (maximum two turtles reported by Herbison (1998)), and Argenta (maximum 20-25 turtles reported by Ross Clarke (pers. comm)). Nesting sites and enhancement programs have not been identified for the Creston Valley.

The painted turtle requires open upland areas with loamy or sandy soil for nesting usually within 200 metres of water (Lindemann 1992). During the nesting season, mainly from late May to mid-July, small numbers of egg-laying females are killed each year by vehicles travelling along the West Creston Road, Channel Road, Duck Lake dyke road, and Reclamation Road. Erecting "Turtle Crossing" signs in known areas of high activity should be encouraged to make drivers aware of the potential for turtles on roadways in the Creston Valley. One such sign erected by the Creston Valley Wildlife Management Area is in a prominent place along West Creston Road. Results from surveys in the Creston Valley suggest the area supports significant populations of painted turtles, probably exceeding 1,000 animals for the entire area, making it one of the largest reported for British Columbia.

### **Acknowledgements**

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### **About the Author**

As an experienced naturalist Linda continues her research and monitoring on raptors, colonial-nesting birds, and other wildlife in the Creston Valley.