



Western Painted Turtle (Pacific Coast population)

Photo: © Kym Weistead



Scientific name

Chrysemys picta bellii

Taxon

Reptiles

COSEWIC Status

Threatened

Canadian range

British Columbia

Reason for Designation

The distribution of this population overlaps with an area of dense human population in southwestern British Columbia, including the Lower Fraser Valley, where wetland loss has been extensive. Across its range, this population continues to face multiple threats from habitat loss and alteration, road mortality, and introduced species, such as Bullfrog and introduced turtles. Survey efforts within the past 10 years have revealed many new localities, bringing the total number of occupied waterbodies to over 80, grouped within 39 clusters. However, the Canadian population and local subpopulations are small and many, especially in the Lower Fraser Valley, are declining or considered not viable. The long-term persistence of the Canadian population remains precarious.

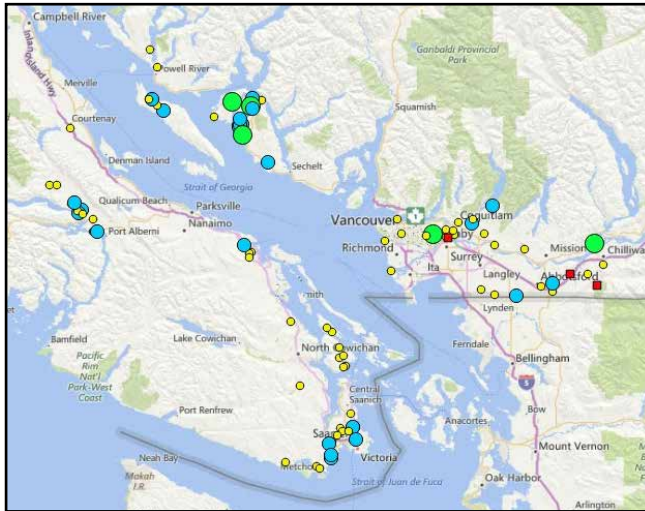
Wildlife Species Description and Significance

Western Painted Turtles (*Chrysemys picta bellii*, Gray 1831) are relatively large-bodied painted turtles with adults reaching up to 25 cm in carapace (dorsal shell) length. The subspecies has a distinct bright orange plastron (ventral shell) with a complex pattern of reticulated black lines.

In Canada, Western Painted Turtles occur in three discrete broad areas, corresponding to the following designatable units: Pacific Coast and Intermountain – Rocky Mountain populations in British Columbia, and Prairie/Western Boreal – Canadian Shield population east of the Rocky Mountains. Western Painted turtles in British Columbia show extensive genetic differentiation, sometimes over short distances. This report recognizes these differences but maintains the three designatable units from the previous COSEWIC assessment (2006), based on considerations of discreteness and significance of the variation.

Distribution

The distribution of the Prairie/Western Boreal – Canadian Shield population extends from the Algoma region of northern Ontario, west across the southern prairies to southeastern Alberta. Its natural range in Alberta is limited to the Milk River watershed, but numerous introduced subpopulations exist, some of which have been well established for close to a century or longer. The Intermountain – Rocky Mountain population occurs primarily in major valley bottoms between mountain ranges across the Southern Interior of British Columbia. Major population centres include the Thompson and Okanagan valleys, the southern East Kootenay Trench, and the southern Cariboo Region. The Pacific Coast population occurs in the Lower Fraser Valley from about Chilliwack to Greater Vancouver, Sunshine Coast north to Powell River, Texada Island, and parts of Vancouver Island including the Capital Regional District, Nanaimo area, and Alberni Valley.



Distribution of Western Painted Turtle in Pacific Coast Population. Small yellow circle: <10 individuals; mid-sized blue circle: 10-100 individuals; large green circle: >100 individuals; red square: extirpated. Note that there is much uncertainty about population sizes, particularly for Vancouver Island north of the Capital Regional District.

Habitat

Western Painted Turtles are highly aquatic and are found in shallow waters of ponds, lakes, oxbows, and marshes, in slow-moving stream reaches, and in quiet backwater sloughs of rivers. Usually, their habitat contains muddy substrates with emergent aquatic vegetation, exposed vegetation root mats, floating logs, and open banks. Painted Turtles prefer floating logs, branches, or other emergent objects for basking. Nesting habitats are on land adjacent to aquatic foraging habitat, usually within 200 m of the water body, typically on gentle south-facing slopes. Eggs are laid in well-drained sites with soil, sand or gravel substrates that have minimal or no plant cover.

Biology

Adult Western Painted Turtles are omnivorous and forage on aquatic vegetation, carrion, and small live prey in shallow waters during the active season from spring to autumn. Younger turtles tend to be more carnivorous and feed on a variety of invertebrates and tadpoles. Eggs hatch in autumn, but hatchlings usually remain in the nest for their first winter. Hatchlings are freeze-tolerant to at least -10°C. Painted Turtles are considered to be one of the most tolerant vertebrates of hypoxic (oxygen-poor) conditions. Predation on eggs and hatchlings can be very high. Age at maturity is thought to range

from 4 to 10 years for males and from 6 to 15 years for females. Generation time is estimated to be approximately 25 to 30 years for the Pacific Coast population and 30 to 40 years for the Intermountain – Rocky Mountain and Prairie/Western Boreal – Canadian Shield populations.

Population Sizes and Trends

There are no accurate estimates of population size for any of the three populations. The Pacific Coast population probably consists of approximately 3000 or fewer adults. The Intermountain – Rocky Mountain population may have 5,000 – 10,000 adults, while the Prairie/Western Boreal – Canadian Shield population may have 10,000s of adults. None of these estimates are based on robust methods. Inferred from habitat loss, the Pacific Coast population has most likely declined from historical levels by an unknown percentage. The number of known localities has increased greatly over the past ten years due to search efforts. The Intermountain – Rocky Mountain population has also likely suffered declines from historical levels, especially in the Okanagan Valley, based on habitat trends. Population trends for the Prairie/Western Boreal – Canadian Shield population are unknown, but localized declines are likely.

Threats and Limiting Factors

The main threats to Western Painted Turtles are from habitat loss and alteration, and road mortality. Habitat loss and alteration result from a variety of threats including residential and industrial development, agricultural activities that drain or infill water bodies, and free-ranging cattle that degrade water bodies. Turtles face threats from road mortality during seasonal migrations, when females move from water bodies to terrestrial nesting areas and when both males and females disperse. Other threats include invasive species, such as American Bullfrogs on the coast that prey on hatchlings and plants that reduce the quality of their nesting grounds. Recreational use can disturb basking and nesting turtles. Off-road vehicle use may degrade ponds and adjacent riparian habitats or damage nesting sites. Pollution runoff may affect water quality; sources include agricultural and septic tank runoff and industrial pollutants. Combined, threats for the Pacific Coast population were scored as “Very High”, for the Intermountain – Rocky Mountain population as “High”, and for the Prairie/Western Boreal – Canadian Shield population as “Medium”.

Protection, Status, and Ranks

Western Painted Turtle was assessed by COSEWIC as three populations in 2006: Pacific Coast - Endangered; Intermountain-Rocky Mountain - Special Concern; and Prairie/Western Boreal - Canadian Shield - Not at Risk. The Pacific Coast and Intermountain - Rocky Mountain populations were placed on Schedule 1 of the *Species at Risk Act* (SARA) in their respective designations. A provincial recovery plan for the Pacific Coast population was finalized in June 2016. Critical Habitat has been drafted but not yet identified under SARA. There are no specific habitat protection measures in place for Western Painted Turtles. The species does benefit from some municipal planning measures designed to maintain environmentally sensitive areas and certain water bodies. These measures have limited scope and application.

Source: COSEWIC. 2016. COSEWIC assessment and status report on the Western Painted Turtle *Chrysemys picta bellii*, Pacific Coast population, Intermountain - Rocky Mountain population and Prairie/Western Boreal - Canadian Shield population, in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xxi + 95 pp.

For more information, please visit
www.sararegistry.gc.ca.

Cat. No.: CW69-14/727-2016-1E-PDF
ISBN: 978-0-660-07300-2

For information regarding reproduction rights, please contact Environment and Climate Change Canada's Public Inquiries Centre at 1-800-668-6767 (in Canada only) or 819-997-2800 or email to ec.enviroinfo.ec@canada.ca.