

Parkesia noveboracensis (Northern Waterthrush)

Family: Parulidae (New World Warblers)

Order: Passeriformes (Perching Birds)

Class: Aves (Birds)



Fig. 1. Northern waterthrush, *Parkesia noveboracensis*.

[<http://www.alanmurphyphotography.com/tax%20list/warblers/northern%20waterthrush.htm>, downloaded 7 March 2017]

TRAITS. The northern waterthrush *Parkesia noveboracensis* was formerly known as *Seiurus noveboracensis*. Despite the common name it is not a thrush, but a member of the family Parulidae, the new world warblers. It is a relatively large member of this family, with a length of 12-15cm and a wingspan of 21-24cm. Its bill is dark, pointed and short, being roughly 1.1-1.2 cm long. An average northern waterthrush weighs 13-25g (Parr et al., 2014). This species is sexually monomorphic (males and females look similar), and is characterized by its evenly coloured, dark brown back, yellowish underside and distinct light brown supercilium above the eye (Fig. 1). Its throat is thinly streaked with dark olive lines that thicken in the breast and flank regions. Young birds possess buff instead of white underparts.

DISTRIBUTION. Native to the western hemisphere, this species can be found over a very large range that spans from Alaska to South America, including the Caribbean islands and the Bahamas (Fig. 2). During its breeding season, it can be found along the region from central

Alaska to the east, covering all Canadian territories. For the period of winter, the birds migrate to the warmer regions of Central and South America (Harris 1999). Additionally, the northern waterthrush is distributed in vagrant populations over certain parts of Europe including France, United Kingdom, Russian Federation, Portugal and Ireland (BirdLife International, 2016).

HABITAT AND ACTIVITY. *Parkesia noveboracensis* inhabits terrestrial and aquatic biomes. It favours areas near water sources like the margins of rivers and lakes. The river areas they inhabit are usually lined with alder and willow trees as they prefer settling in forested areas (Harris, 1999). Additionally, they like bog thickets and wooded swamps where it is dark and cool. Northern waterthrushes are annual migrants. When in the north, they occupy the thicker forested areas, using the cover to breed. They migrate at night in loose flocks to the tropical regions. In the non-breeding season, they live around damp lowland areas, usually below 1,500m. These areas include marshes and edges of pools and streams. At these habitats, instead of hopping, the birds prefer to walk around to feed or drink. After daytime foraging, the bird will fly as far as 2km to roost in the night. Roosts are usually situated in mangrove areas as the root cover offers protection (Smith et al., 2008).

FOOD AND FEEDING. The feeding habits of the northern waterthrush vary seasonally. When breeding, their primary food sources include snails, worms, spiders, and adult and larval insects (Fig. 3). During spring, when there is leaf emergence, the diet consists mostly of butterfly larvae. In the winter the diet opens up to a larger variety, adding decapod crustaceans and minnows. *Parkesia noveboracensis* typically forages alone unless among a flock during migration. They forage mostly by wading through water and walking on logs. It does this on the ground level, foraging through foliage, water and even the air. Various strategies are employed, such as pecking, chasing, hovering, fly-catching and twig gleaning (Harris, 1999).

POPULATION ECOLOGY. *Parkesia noveboracensis* is solitary until pair or family group formation. Moreover, they are accompanied in a flock during migration. They have a very large population that is estimated to be around 13,000,000 (Dick, 2013). They are not observed in dense populations, but as groups during the breeding season.

REPRODUCTION. Reproduction begins on the breeding site with sexual selection. The males are the competing sex, perching atop trees; they sing, erect their crown feathers and flutter their wings to capture the attention of females feeding at the water's edge below. A female selects a male with a "chink" call and a pair bond is formed until a few days after proper fledging. This makes them essentially monogamous, as they form family groups after fledging. This occurs in the nest that is made of twigs, stems and animal hairs that are shaped within a mossy exterior. The male determines the general area and the female chooses the specific site of the nest. Nesting sites are usually in root cavities in forested swamps, clusters of ferns or within vegetative cover at a river bank. They are usually set up with the top portion of the nest covered and a space for movement on one side to protect it from predation (Parr et al., 2014). After the breeding season, eggs are laid between May-June. They produce one brood per season. On average, a clutch would contain 4-5 white, spotted eggs. The female incubates the eggs by herself for around 12 days and lures away predators. However, both parents split up feeding duty for 4-5 weeks.

BEHAVIOUR. Northern waterthrushes display territorial behaviour all year round. They occupy a territory of around 0.5 to 1.0 ha. They are songbirds (Fig. 4). They proclaim their territory with strong, ringing songs (Axelson et al., 2010). They are hardly hostile toward different species. They are more territorial and aggressive at non-breeding, foraging grounds. Their defensive behaviours incorporate their "chink" calls with some fighting and chasing. Apart from this, this species also makes high-pitched calls during flight. Young northern waterthrushes are altricial and require brooding for 5-12 days. After leaving the nest, they cannot fly and must hide in thick vegetation for 2-3 days. They then become independent and can forage alone without seeing the parents until returning to rest.

APPLIED ECOLOGY. This species occurs over an extremely large range with very large, stable population. Hence, it is assessed under the red list category, Least Concern (Birdlife International, 2016). However, their mangrove habitats are threatened by deforestation and swamp drainage. Pesticide usage also threatens them at their breeding grounds directly, and through decreased biomass of prey (NatureServe, 2015).

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Posted online: 2017

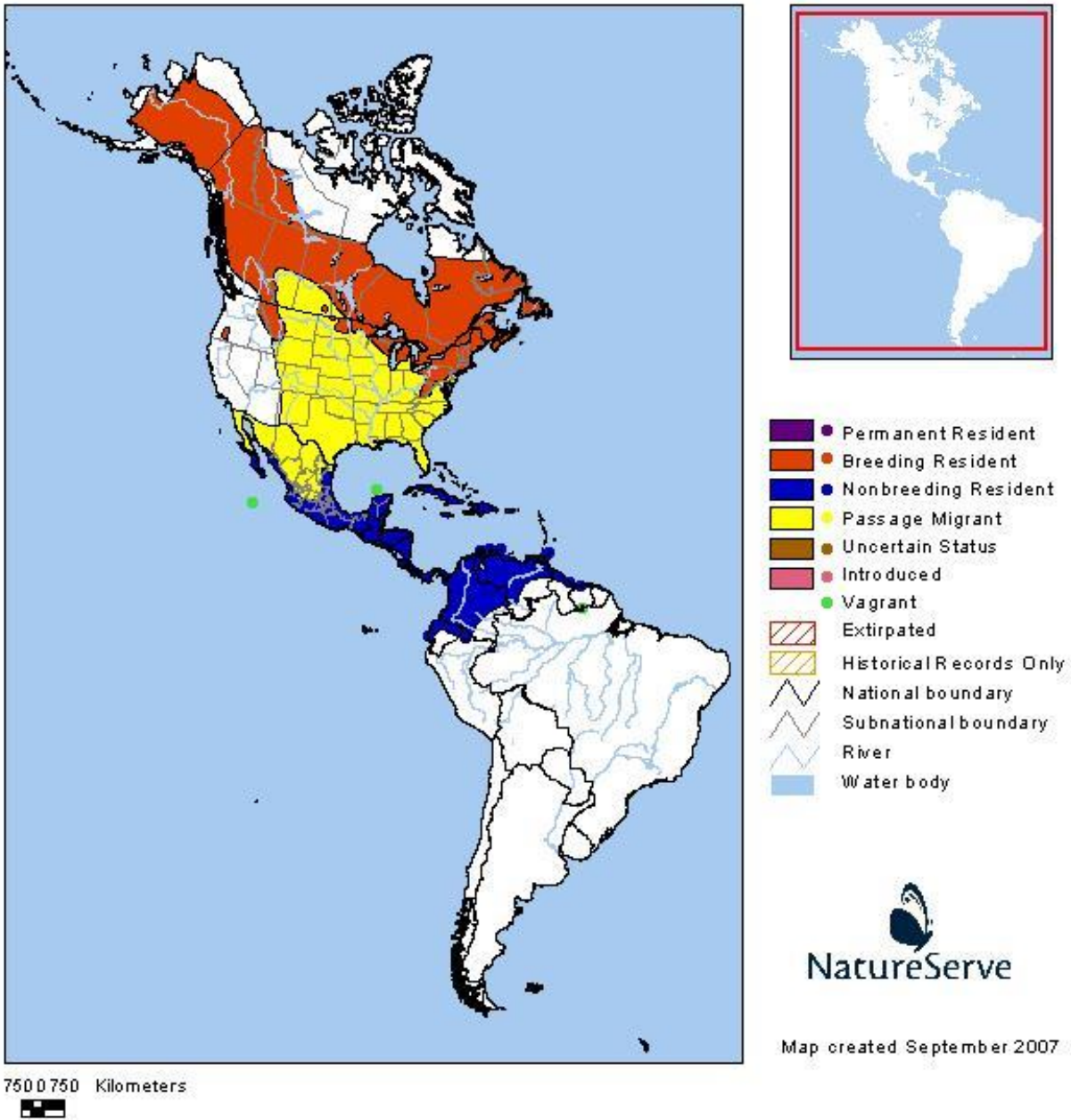


Fig. 2. Northern waterthrush geographic distribution.

[<http://explorer.natureserve.org/servlet/NatureServe?searchName=Parkesia%20noveboracensis>, downloaded 7 March 2017]



Fig. 3. Northern waterthrush holding food.

[http://animaldiversity.org/site/resources/cal_vorn/northwaterthrushworm.jpg/view.html/, downloaded 7 March 2017]



Fig. 4. Northern waterthrush calling.

[<https://www.flickr.com/photos/curculion/15087243423/>, downloaded 7 March 2017]

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