

# Recognizable Forms

## Subspecies of the Dark-eyed Junco

by  
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### Introduction

The Dark-eyed Junco (*Junco hyemalis*) is comprised of many forms that are recognizable in the field. Just take a look at the six forms of the Dark-eyed Junco illustrated on page 403 of the National Geographic Field Guide (Scott 1987). Before they were lumped by the American Ornithologists' Union (AOU 1973), Ontario birders eagerly checked the migrant and winter flocks of Slate-colored Juncos (*J. hyemalis*) for Oregon Junco (*J. oreganus*). Reports of Oregon almost ceased after 1973! Yet juncos are a good example of why birders should look at recognizable forms. By looking just at species, we are limiting our opportunities of seeing interesting birds and learning more about them. In the following, I describe the identification features and occurrence of the recognizable forms of the Dark-eyed Junco in Ontario.

### Taxonomy

The AOU Check-list (1957) listed the following five species of juncos that were later lumped as the Dark-eyed Junco: (1) Slate-colored Junco (*J. hyemalis*); (2) Oregon Junco (*J. oreganus*), including the Pink-sided Junco (*J. o. mearnsi*); (3) White-winged Junco (*J. aikeni*); (4) Gray-headed Junco (*J. caniceps*), including the Red-backed Junco (*J. c. dorsalis*); and (5) Guadalupe Junco (*J. insularis*).

The two well-marked subspecies included in the above were also formerly recognized by some authorities as distinct species: the Pink-sided Junco (*J. mearnsi*) and the Red-backed Junco (*J. dorsalis*) (Sibley and Monroe 1990).

The AOU (1973) lumped all of the above species (except the Gray-headed Junco) as the Dark-eyed Junco because they interbreed where their ranges come into contact. The Gray-headed was later merged with the others (AOU 1983). However, interbreeding is "minor in most cases" according to George Barrowclough (pers. comm.) of the American Museum of Natural History. Michel Gosselin (pers. comm.) of the Canadian Museum of Nature stated that "the forms are quite distinct in most areas and this is borne out by specimens".

Currently, most ornithologists follow the Biological Species Concept (BSC) which means that populations that freely interbreed, or if separated, could potentially interbreed with one another, are the same species. Recently, a new species concept called the Phylogenetic Species Concept (PSC) has been gaining wider acceptance. The PSC recognizes as separate species those populations and subspecies which have distinctive traits and are evolving along separate evolutionary lines. The identifiable forms treated

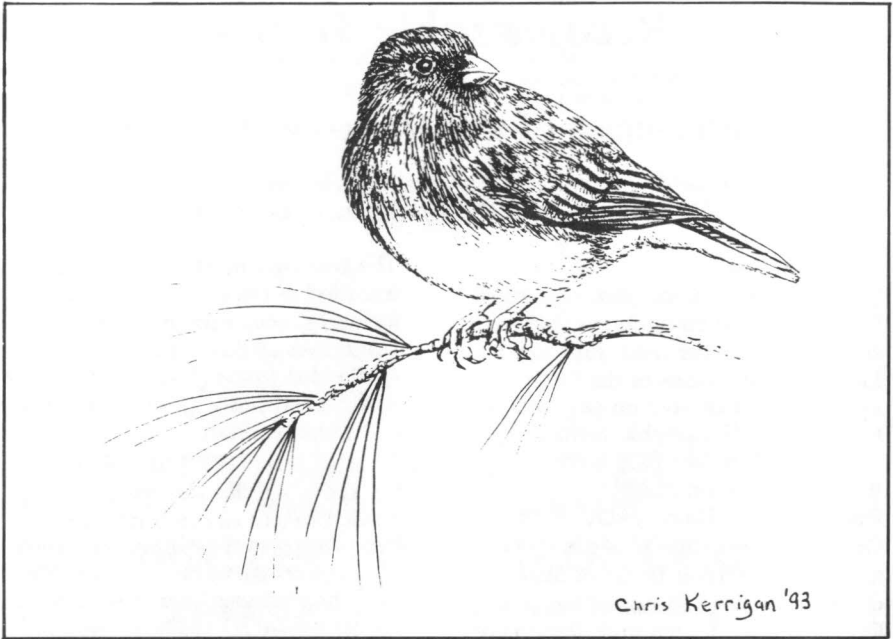


Figure 1: Slate-colored Junco. Drawing by *Christine Kerrigan*.

in this article are considered to be phylogenetic species (George Barrowclough, pers. comm.).

For a list of the junco subspecies (races) in Canada see Godfrey (1986), and for Ontario see James (1991).

### **Plumages, Ageing and Molts**

The following describes the plumages and ages of the Slate-colored Junco (*hyemalis* group). The molts are similar in all forms.

Adult juncos (definitive basic) undergo a complete molt on the breeding grounds before fall migration takes place. Most adults (particularly females) in fresh fall feathering are tinged with buff or brown. The brownish feather tips largely wear off by summer, resulting in a darker plumage.

The streaked, sparrow-like juvenile (juvinal) plumage is seen only on the breeding grounds - see the illustration on page 403 of the National Geographic Field Guide (Scott 1987). Juveniles undergo a partial molt to first year (first basic) plumage before autumn migration. First year birds are duller and more uniformly brown than adults. Juncos retain their first year plumage for about one year, after which they molt completely into adult plumage.

### **Slate-colored Junco: (*J. h. hyemalis* group)**

This is the common form in the province. In winter, it frequents feeding stations in southern Ontario.

The Slate-colored Junco is made up of three very similar subspecies:

nominate *hyemalis* of the boreal forest; *cismontanus* of western Canada; and *carolinensis* of the Appalachian Mountains (AOU 1957). In Ontario, James (1991) lists *hyemalis* as breeding in the province and *cismontanus* as an "occasional, rare straggler, autumn to spring". *Cismontanus* is "similar to *hyemalis* but hood more blackish, often noticeably darker than back; back more brownish; females with sides more mixed with pinkish brown" (Godfrey 1966, 1986). The subspecies *cismontanus* intergrades with the subspecies *montanus* of the Oregon form in Alberta and British Columbia, resulting in puzzling intergrades.

Some female Slate-colored Juncos are difficult to separate from some Oregon Juncos. In the Slate-colored Junco, "usually there is some indication of slate colour near the junction of the base of the hood with the sides" (Godfrey 1966).

### Oregon Junco:

#### (*J. h. oreganus* group)

In Canada, three very similar western races, *oreganus*, *montanus*, and *shufeldti*, form part of a subspecies group formerly known as the Oregon Junco (Godfrey 1966). (The Pink-sided Junco, *mearnsi*, is often grouped with the above, but is distinctive enough to merit separate treatment.) James (1991) lists both *montanus* and *shufeldti* as "occasional, rare straggler, autumn to spring" for Ontario. The only Ontario specimen of Oregon Junco in the Canadian Museum of Nature was collected at Kingston in March 1958. It has been identified as *montanus* by Dr. W. Earl Godfrey (Michel Gosselin, pers. comm.). Most

specimens from the East have also proven to be of the widespread *montanus*; for example, in New York State, Bull (1974) lists four specimen records of *montanus* and Tufts (1986) lists *montanus* from Nova Scotia.

Adult male Oregon Juncos (with their convex black hoods, chestnut backs and scapulars, and rufous sides) are easily recognizable. See Plate 72 in Godfrey (1986). Adult females are duller with grayer hoods. Some female Oregons are occasionally misidentified as Pink-sided Juncos, *mearnsi*, but Oregons generally have darker, more contrasting hoods and lack the contrasting blackish lores of the Pink-sided. See the illustrations on page 403 of the National Geographic Society Field Guide (Scott 1987).

First year (first basic) female Slate-colored Juncos of the subspecies *cismontanus* often have pinkish sides and brownish backs and are sometimes difficult to distinguish from Oregon Juncos. With Oregons, "note that the dark hood on the breast tends to turn up on the sides of the breast and does not extend onto the sides; on the Slate-colored Junco this turns downwards on the sides of the breast onto the sides" (Godfrey 1966). Confusing individuals are best just called Dark-eyed Juncos.

### Pink-sided Junco:

#### (*J. h. mearnsi*)

The Pink-sided Junco is usually grouped with the Oregon Junco group of subspecies (AOU 1957, Godfrey 1966). It is considered to be a phylogenetic species and therefore is treated separately here.

James (1991) states that "*mearnsi*

has been reported as sighted in Ontario, but no specimens confirm this". Pink-sided Juncos have also been reported in Quebec (Michel Gosselin, pers. comm.) and Nova Scotia (Tufts 1986). However, most reports of Pink-sided Juncos in the East probably refer to pale female Oregon Juncos. Pink-sided Juncos (sexes similar) are best distinguished from female Oregons by their paler blue-gray (in the field) hoods and contrasting blackish lores, grayish brown backs and more pinkish sides (brighter than back). Refer to the illustrations of Pink-sided and female Oregon juncos on page 403 in the National Geographic Field Guide (Scott 1987).

### White-winged Junco:

#### *(J. h. aikeni)*

The White-winged is the largest and palest of the juncos (Miller 1941). It breeds in the Black Hills of South Dakota and adjacent mountainous areas.

The White-winged Junco has been reported in Ontario on a number of occasions, and it was added to the Ontario list (Baillie 1964) based on a specimen collected in Metropolitan Toronto (Scarborough) on 1 January 1964 (ROM 93625). However, this specimen was examined by Earl Godfrey and determined to be a Slate-colored Junco with "abnormal white wing bars"; it also did "not match a White-winged Junco in the amount of white in the tail or in size". It was subsequently removed from the Ontario list (Baillie 1965). The above record was also reported in Bent (1968).

Slate-colored Juncos "occasionally show a slight presence of white wing bars" (Earl Godfrey, pers. comm.) and some White-winged Juncos lack white wing bars (Miller 1941). Typical White-winged Juncos are bigger and a paler gray (ashy) colour than Slate-colored Juncos, with more white in the outer tail feathers (usually first three and part of fourth on each side). The Slate-colored Junco usually has two white outer tail feathers and the third is partially white. (Miller 1941, Bent 1968, Oberholser 1974).

### Gray-headed Junco:

#### *(J. h. caniceps group)*

Godfrey (1986) lists two Canadian records of this distinctive junco of the western United States. Both records are of the more migratory northern subspecies, *caniceps*. This beautiful junco is illustrated on Plate 72 in Godfrey (1986).

A Gray-headed Junco (sexes similar) was found and photographed in colour at Point Pelee on 9 May 1989 by John and Ginny Kreest (Alan Wormington, pers. comm.). It was reported in the sightings book at the park but apparently no one went to see it. Ten years earlier, when it was considered a full species, it would have caused a stampede! I examined the photograph of the Point Pelee bird (courtesy of Alan Wormington) and its pale upper mandible is clearly evident, indicating *J. h. caniceps* rather than the more southerly and less migratory Red-backed Junco (*J. h. dorsalis*) which has a dark upper mandible. See the illustrations of these two subspecies on page 403 in Scott (1987) and on page 333 in Peterson (1990).

## Summary

The Dark-eyed Junco is made up of several rather distinct subspecies and groups of similar subspecies that were formerly considered to be separate species. They are treated here as identifiable forms of the Dark-eyed Junco. Intergrades occur, but because of sharp clines between populations, most forms are quite distinct and recognizable in the field. For additional information, the reader is referred to Bent (1968) and Farrand (1983).

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