

The following species are given as representative of what birds are to be expected in each zone:

<i>Upper Austral</i>	<i>Canadian</i>	<i>Arctic</i>
Cardinal	Hudsonian Chickadee	Ptarmigan
Orchard Oriole	Red-breasted Nuthatch	Snowy Owl
Carolina Wren	Olive-backed Thrush	Snow Bunting
Grasshopper Sparrow	Three-toed Woodpecker	Gyr Falcon
Blue-grey Gnatcatcher	Hermit Thrush	Longspur
Dickcissel	White-throated Sparrow	
	Canada Jay	
	Grey-cheeked Thrush	
	Slate-coloured Junco	
<i>Transition¹</i>	<i>Hudsonian</i>	
Bobolink	Rough-legged Hawk	
Wood Thrush	Fox Sparrow	
Yellow-throated Vireo	Northern Shrike	
Baltimore Oriole	White-crowned Sparrow	
Towhee	Pine Grosbeak	
Cuckoo	American Pipit	
Field Sparrow		
Bluebird		
Catbird		

MIGRATION.

The migration of birds, their periodical and seasonal appearance and disappearance, is one of the most obvious phenomena of nature. The fact that many birds disappear in winter is common knowledge and has attracted attention for ages. Though once regarded as a mystery, and still far from being thoroughly understood in many of its details, we are beginning to wonder less but admire more as accurate knowledge gives place to vague speculation. To-day, where most of our northern species spend the winter is known and many of the routes by which they come and go have been mapped out. We know that on the whole they are governed by ordinary and well known, though perhaps highly developed, senses and common every day influences, and not by the mysterious powers and instincts once ascribed to them.

The fundamental cause of migration is obviously the waxing and the waning of the food supply. Birds leave the northern land of their birth because there is no other way by which to avoid starvation. Many species can withstand extreme cold but none can go long without food and though some bird food still remains in Canada throughout the winter, its amount is small and only sufficient for a limited population and even that supply rapidly decreases, or to the north is buried under deep snow. The cause of the southward migration in the autumn then is obvious, but why should a bird leave the soft climate and plentiful food supply in the south to brave dangerous travel and finally find itself in a land where retiring winter still lingers and the danger of starvation is imminent. Many ingenious explanations have been advanced to account for this, longing or homesickness for the land of birth, hereditary memories of an ancient home enduring through geological ages, the seeking of special food for nestlings, and insufficiency of nesting sites in the southern areas, have all been given as possible reasons. However, it is unnecessary to advance a complicated or far-fetched explanation when a simple and direct one exists. If we remember that in the nesting season the bird population is increased many

¹Most of the species of this zone also occur in the Upper Austral, but reach their northern limit here. The occurrence of these with the absence of the species of bordering zones are the most marked characteristics of the Transition zone.