

erous to mention, and the lecturer himself seems to be equally at home upon any topic which he may choose.

As for Mr. Longley's future, no one can speak of it. What he may do next is a problem which his most intimate friends would not care to even conjecture, but that, if his life is spared, he will be actively engaged in intellectual work of some kind; that he will always be bold, even at the expense of making lifelong enemies; that he will never shrink from uttering his opinion, even though he brings upon himself untold malignity, and that his name will continue to be prominently in the mouth of people in most parts of the English speaking world, is about the only thing that can be safely affirmed.



## The Migrations of Birds.

No doubt the earliest observers of birds noticed their appearance and disappearance from a given locality at certain seasons. But the knowledge of their migrations is of recent date. At the beginning of this century nearly all naturalists believed that birds hibernated as do the reptiles and many animals. It was thought that swallows hid themselves in hollow trees and caves, while the rails and other marsh inhabiting birds buried themselves in the mud and there passed the cold season in a torpid state. But as the result of close observation, by an increasing number of naturalists, the birds have been traced in their movements, till now no doubt exists as to where they spend the different seasons.

But why do birds migrate? What causes them to leave the land of their birth, and attempt the long and hazardous journey through unknown regions to warmer climes? And why again do they leave these southern lands where everything necessary to their subsistence is to be found in abundance, for the northern latitudes, encountering again the many dangers which beset them on their previous journey?

The first question is quite easily answered. Many migrating birds are so frail in makeup and so thinly clad with feathers, that they would be unable to endure the severities of a northern winter. Then again, as a result of colder weather their food supply fails. The various species of snipe and sandpipers, which obtain their insect fare by probing the soft mud with their long slender bills, are compelled to leave their haunts upon the advent of frost. So with the flycatchers and warblers whose insect food disappears as cold weather approaches, and those birds that obtain their food from the water, as ducks, geese and gulls, are compelled to go farther south as the different lakes and rivers freeze up, and as the great body of sea ice moves southward along the coast.

But why birds leave the southern lands of plenty with the arrival of spring for the more desolate north is less easily explained. In summer, it is true, the more northern parts of the continents again