

determining the various species abound in their writings. The most recent of these is Mr. Ridgway's, who, in his 'Manual of North-American Birds,' gives a key whereby to determine the North-American and Mexican species. This key was adopted almost in its entirety by Mr. Sclater in the fourteenth volume of the Catalogue of Birds in the British Museum, and we have studied it closely for our present work. If we except the use of subspecific names the result we come to is not very different from Mr. Ridgway's, though we arrive at our conclusions by rather different means. We have not taken much account of comparative measurements, for experience shows how greatly these vary in the members of the same species.

In endeavouring to determine Mexican and Central-American individuals of the migratory *Empidonax*, we are met with the difficulty arising from having to compare birds of different seasons together. By far the greater part of the birds collected in the south are obtained in the winter and early spring months, *i. e.* in the dry season. In the States, collecting commences on the arrival of the spring migrants and extends through the summer. Thus the only birds that are properly available for comparison, so far as their plumage is concerned, are those shot in the latter part of the spring in the south just as they are preparing to leave, and those just arrived in the north from the south. Our materials do not always include birds prepared under these conditions.

Our task, however, has been vastly lightened by having before us the collection of Messrs. Henshaw and Merriam with its extensive series of carefully named specimens of North-American species.

Empidonax is almost exclusively a genus of America north of the Isthmus of Panama. There are a few species located in the north-western parts of South America, and a small section occurs as far south as the Argentine republic; but it is doubtful if the latter do not belong rather to *Empidochanes*.

Of eighteen species recognized by us, no less than fourteen occur within our limits, of which perhaps eight may be wholly or partially migrants, leaving six residents. The birds that perform the longest migrations are *E. acadicus*, *E. trailli*, *E. minimus*, *E. flaviventris*, and *E. hammondi*. The partial migrants are *E. fulvifrons*, *E. bairdi*, and *E. obscurus*. Mexico retains as residents *E. affinis* and *E. canescens*, Guatemala *E. salvini*, Mexico and Central America generally *E. albigularis*, Costa Rica and Panama *E. flavescens* and *E. atriceps*.

Like *Tyrannus*, *Empidonax* has short stiff setose feathers, which almost hide the open nostrils, and the rictal bristles are well developed but not so long as in *Mitrephanes*; the bill is wide, the width at the rictus being rather more than half the length of the tomia, the sides of the bill are convex from the base to the tip; the tarsi are slender; the 3rd quill is the longest in the wing, the 2nd=4th, 1st=6th; tail moderate, $> \frac{4}{5}$ wing, wing > 4 tarsus.