THE SPECIES AND SUBSPECIES OF THE FRINGILLID GENUS PASSERELLA SWAINSON

By JEAN M. LINSDALE

A ANALYSIS of variation in the Fox Sparrow (Passerella iliaca), based primarily on a study of internal structure, and an examination of material in other closely related species have resulted in the conclusion, among others, that Melospiza Baird (1858) is so closely related to Passerella Swainson (1837) as to belong properly in the same genus. Accordingly, it has been proposed (see Univ. Calif. Publ. Zool., 30, 1928, p. 367) that Melospiza be merged with Passerella, the latter name having priority.

A considerable amount of evidence of a varied nature has been given (loc. cit., pp. 261-2, 286, 291, 363-5, 367-8) which supports this conclusion. A brief summary of the facts which bear upon this question follows:

The two genera were established without their authors having sufficient material to determine properly the relation existing between them.

No constant differences in external structure could be found in the published diagnoses of the genera except with respect to length of outer toe compared with middle toe, and that character is highly variable in both groups; in fact the range in each group is equal to, or greater than, the hiatus between them.

There is no constant difference in coloration. Even the possession of the characteristic grouping of spots in the center of the breast is common to both groups.

The distribution of the two groups indicates an intimate relationship, as has been shown by Swarth.

The two groups have many common features as regards migratory habit, although the song sparrows tend to be more sedentary than the fox sparrows.

In respect to habits there is:

- a. Close similarity in habitat choice, closely related races in both preferring stream sides.
- b. So close similarity in songs that it is difficult to distinguish between some races.
- c. Close similarity in type of nest and choice of nest site.
- d. Similarity in eggs so close that they are nearly indistinguishable.

There is an almost complete intergradation in all the characteristics examined in the structure of the skull.

The extraordinarily great geographic variation exhibited by each of these groups is a characteristic which markedly separates them from any adjacent group of sparrows.

Should workers in systematic ornithology agree that the genus *Passerella* be constituted as herein suggested, new combinations of names for several races will be necessary. The names that have been proposed within the four species in the genus and which may prove worthy of recognition are given in the following list:

Genus Passerella Swainson

Subgenus Helospiza Baird

Passerella georgiana (Latham)

Passerella lincolnii gracilis (Kittlitz)

Passerella lincolnii lincolnii (Audubon)

Subgenus Melospiza Baird
Passerella melodia acadica (Thayer
and Bangs)
Passerella melodia adusta (Nelson)
Passerella melodia atlantica (Todd)
Passerella melodia beata (Bangs)
Passerella melodia caurina (Ridgway)

Passerella melodia pusillula (Ridg-Passerella melodia clementae (C. H. Townsend) Passerella melodia cleonensis (Mc-Gregor) Passerella melodia cooperi (Ridgway) Passerellamelodiacoronatorum(Grinnell and Daggett) Passerella melodia fallax (Baird) Passerella melodia fisherella (Ober-Passerella melodia goldmani (Nelson) Passerella melodia gouldii (Baird) Passerella melodia graminea (C. H. Townsend) Passerella melodia heermanni (Baird) Passerella melodia inexspectata (Riley) Passerella melodia insignis (Baird) Passerella melodia juddi (Bishop) Passerella melodia kenaiensis (Ridgway) Passerella melodia mailliardi (Grinnell) Passerella melodia maxillaris (Grinnell) Passerella melodia melodia (Wilson) Passerella melodia merrilli (Brewster) Passerella melodia mexicana (Ridg-

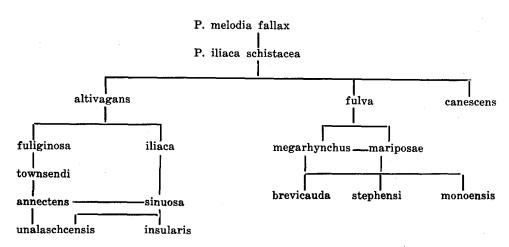
wav) Passerella melodia micronyx (Grin-Passerella melodia morphna (Oberholser)

way) Passerella melodia rivularis (W. Bryant) Passerella melodia rufina Bonaparte Passerella melodia saltonis (Grin-Passerella melodia samuelis (Baird) Passerella melodia sanaka (Mc-Gregor) Passerella melodia santaecrucis (Grinnell) Passerella melodia semidiensis (Brooks) Subgenus Passerella Swainson Passerella iliaca altivagans Riley Passerella iliaca annectens Ridg-Passerella iliaca brevicauda Mailliard Passerella iliaca canescens Swarth Passerella iliaca fuliginosa Ridg-Passerella iliaca fulva Swarth Passerella iliaca iliaca (Merrem) Passerella iliaca insularis Ridgway Passerella iliaca mariposae Swarth Passerella iliaca megarhynchus Baird Passerella iliaca monoensis Grinnell and Storer Passerella iliaca schistacea Baird Passerella iliaca sinuosa Grinnell Passerella iliaca stephensi Anthony Passerella iliaca townsendi (Audubon)

Passerella iliaca unalaschcensis

(Gmelin)

Since the alphabetical arrangement of names in the list given above can not indicate any degree of relationship between races it may be desirable to present a diagram to show my own ideas of the relations which obtain between the subspecies of Passerella iliaca and between that species and P. melodia. The races schistacea and fallax have been chosen to head the diagram not because there are reasons to believe that these two represent the original or oldest subspecies in their respective species, although that is possible, but because they appear to be the races of the two species which are most closely related. The lines in the diagram connect races which, it seems probable to me, are most closely related. Incidentally, this diagrammatic arrangement illustrates the difficulties that may be encountered in any attempt to show relationship by columnar arrangements of names.



Museum of Vertebrate Zoology, University of California, Berkeley, August 22, 1928.