

PART 4
GRASSLAND BIRDS

BY O. A. STEVENS

THE species closely restricted to the grassland as a breeding ground include representatives of 10 or more diverse families and 5 orders: Marsh Hawk, Short-eared Owl, Burrowing Owl, Marbled Godwit, Upland Plover, Meadowlark, Bobolink, Brewer's Blackbird, Rock Wren, Sprague's Pipit, Nighthawk, Sandhill Crane, Horned Lark, and several sparrows.

There is some evidence of distribution corresponding to life zones. The grassland biome, extending from Mexico into Canada, may seem to be a vast natural area. Yet, though sharp lines cannot be drawn, it has definite variations. Sprague's Pipit and Baird's Sparrow nest only in the northern part; the Chestnut-collared Longspur extends a little farther south and the Lark Bunting still farther.

The return of certain individual birds to the same locality year after year shows that individuals are conditioned to definite latitudes. Plants are immobile, and although some grasses occur all over the biome, we are beginning to recognize that they, too, have races conditioned to certain localities. Much has been done by phytologists in defining physiologic races of fungi, but we know little of such races of birds and grasses.

Certain grassland birds are not limited to the biome, but choose areas with vegetation similar to the climax grassland. The Horned Lark is a characteristic prairie bird, but its range goes far beyond the grassland biome into all sorts of open spaces, especially those with short cover. It breeds in all parts of North America except the southeastern United States. It has been divided into a number of races, three of which breed in parts of the grassland biome.

STATE COLLEGE STATION, FARGO, NORTH DAKOTA

PART 5
CONIFEROUS FOREST BIRDS

BY ROGER TORY PETERSON

IN analyzing the most typical birds of the coniferous forest biome, we find that roughly one-third of them find their ranges within the great sweep of boreal forest stretching across Canada. Some examples are the Black-poll Warbler, Parula Warbler, Magnolia Warbler, Cape May Warbler, Bay-breasted Warbler, and Gray-cheeked Thrush. Roughly, another third are peculiar to the montane coniferous forests of the Western States. Some examples are the Steller's Jay, Clark's Nutcracker, Williamson's Sapsucker, and Townsend's Solitaire; the remaining third are birds that are common to the coniferous forest biome as a whole. Typical examples are the Red-breasted Nuthatch, Purple Finch, Pine Siskin, Hermit Thrush, and Olive-sided Flycatcher.