

a large number of individual Field Sparrows under observation, each distinguished by its location, and by the peculiarities of its song, I did not find a single individual that sang throughout the song period of the species. A great many ceased singing in the latter part of May and were not singing at all in June, in the height of the breeding season. This same condition obtained with the Meadowlark, Vesper Sparrow, Towhee, Yellowthroat and Wood Thrush, among species I had selected for study. In fact there was only one species, the Song Sparrow, of those I studied, where individuals did sing throughout the song period of the species.

From May to August I visited a certain wood almost daily. I found no less than seven male Wood Thrushes residing in that wood, each with its own special preference as to locality, and each with certain peculiarities in the phrases of its song that distinguished it from the others. I studied each song carefully and made graphic records of the phrases of the songs, so that I came to know each bird quite well. During this entire time I never heard more than three thrushes in song in this wood on the same day, even early in the morning. Anyone attempting a count of birds in this area, basing his count on singing males, unless he studied individual songs, would have counted but three pairs of Wood Thrushes.

These facts, if they are true of birds throughout the country, will make the bird counts underestimates so far as certain species are concerned. I suppose there are some who will be skeptical as to my ability to distinguish individual birds by peculiarities in their songs. While I am not ready to go into the detailed proofs and explanations of this work now, I would suggest to the doubter, that if he possess a musical ear, he try it himself. I am convinced that there is much to be learned by a detailed study of bird songs, and more students in this field would be welcome.—
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Convergent Habits in Fur Seals and Penguins.—In reading Dr. G. Murray Levick's interesting book 'Antarctic Penguins,' I find it impossible to avoid frequent suggestions of parallelism in the habits of the Adelle Penguin and the Fur Seal. These may be of no particular significance but perhaps are of enough interest to be especially noted.

Like the seals, the penguins are amphibious, highly gregarious, and migratory. Unlike them, they are polygamous and this of course involves important differences in habits; but when these are taken into account, the resemblances are still numerous. As is well known, the Fur Seal comes to land only to breed during a short summer season, arriving after a long migration from its winter home in the open sea. The penguin does the same and, no less than the seal, follows its course with the precision of a mariner and his compass and arrives at its destination within a narrow time limit. The male seals precede the females and take up adjacent positions in their rookery and the females later come to them, the males fighting much with each other at this time. With penguins, the sexes arrive together, but unmated, and the female chooses a nesting spot and

clings to it until joined by a male which may be almost immediately or may be delayed for some days. The males fight violently for the possession of individual females and their melees often cause injury to eggs or young. With the seals the case is similar. With both seals and penguins, after domestic relations are well established, there begins a period of excursions to and from feeding areas at sea. During this period much time is spent in playing in the water directly in front of the rookery. The sheer joy shown by fur seals when they return to the water after an enforced stay on land is evidenced also by the penguins which are said to go through many of the same antics as the seals, shaking and rubbing themselves clean, rolling and tumbling about, chasing each other, "porpoising" in small schools and having a general good time. The game of "joy riding" on ice floes, which seems to be a favorite with the penguins, is not possible for the seals, but otherwise their "fun" is much the same. Like mother seals, the penguins remain away from the rookery several days, sometimes nearly a week, while on their fishing excursions. During the interval the temporarily orphaned young await their return collected in groups which may number 50 or more. The pup seals in such groups, or "pods," are left largely to their own devices, although the presence of many adult seals, which are always near them, guarantees them against serious danger. The same result is accomplished by the penguins, but in their case there is perhaps a more definite guardianship of the young by certain of the adults which remain with them. Dr. Levick's account of the way the food-laden, returning mother penguins are successively importuned by various hungry youngsters not their own, and the way these are scornfully repulsed until the rightful one is found, could be applied almost to the letter to the Fur Seal.

Possibly the most interesting parallel in the habits of the two animals is that relating to the enforced fasting. In the seals, this is largely confined to the males, which go without food for six to nine weeks. With the penguins, both sexes fast, but the female does so longer than the male, her minimum being about four weeks. In both cases, the fasting takes place while vital demands are at the peak during a time of great sexual and general physical activity.

Further resemblances, especially those of minor character, are numerous, but these need not be noted.—WILFRED H. OSGOOD, *Field Museum of Natural History, Chicago, Ill.*

A Bagworm Plague.—When I first came to Bowling Green, Kentucky, in 1908, the great knob now the site of the Western Kentucky State Normal School was covered except for a small space on the summit with a rank cedar thicket, once the rendezvous of bands of outlaws in the unsettled times following the Civil War. This knob and several similar cedar brakes had long been the nesting places of the Bronzed Grackle, the Robin, the Brown Thrasher, the Cardinal, and the Chewink. In winter hundreds of White-throated Sparrows, Golden-crowned Kinglets, and