

be continued afterwards. Nearly all birds sing again in the fall,—the well known “autumnal recrudescence of the amatory instinct”—and the full flight song is often to be heard at this season.

Mr. Saunders has shown clearly that the Bobolink-like flight song of the Meadowlark is more ancient than the ordinary song. In some cases, it seems to me, the flight song is plainly an elaboration of the ordinary courtship song, while in others it is a return to a more primitive and passionate, but less evolved utterance. Some ecstatic flight songs fall under both these heads, and by this I mean that parts of the flight songs are elaborations and variations of the common songs, but that numerous inarticulate and sometimes unmusical notes of a primitive nature are intruded.—CHARLES W. TOWNSEND, 98 Pinckney St., Boston, Mass.

Aeolian and Percussion Bird Music.—The non-vocal forms of bird music, though not so widely distributed as those produced in the throat, are sufficiently positive to be deserving of separate recognition and special terms.

There are two types: those sounds produced by any kind of tapping or beating, which may be termed percussion music; and those induced by the action of extraneous air currents on the outstretched wing feathers, a type perhaps best designated as aeolian. Like song, both are probably expressions of sex pressures in the male, and both are primarily seasonal.

Percussion music may be subdivided into that made with the bill and that with the wings. The best example of the former is the resonant roll of the Flicker, which in mating season is sure to find some hollow tree or tin roof that will megaphone the returns of his “riveting hammer” equipment.

The second kind of percussion music has its clearest exposition in the Ruffed Grouse, which produces his gallant staccato accelerando, as instantaneous photography shows, by beating his wings together above his back. It is the tympani roll of the timberland symphony. Drumming is so prominently a part of the cock Grouse that it is not limited to his mating season.

Aeolian music is the most picturesque form of avian expression. Who that has seen the Nighthawk mounting in the soft May twilight to his spectacular swoop and aeolian boom can have watched the act without a thrill?

But the master aeolian artist is a bird of a widely different order. A sketch from the migration course in the lower Susquehanna valley will illustrate.

After a whirling, piling February blizzard there is a thaw and a warm drizzle. With upland bare and soggy and meadow flooded March comes at misty midnight. And with it, out of the gloom above, comes the mysterious winnow of the Wilson’s Snipe. It is the first nocturnal announcement

of spring and the long-billed herald plays to no spot but sends down his message to the sleeping village as well as to the broad bottoms of his favorite swamp.

That softly penetrating roll of the Snipe is one of the most remarkable sounds in bird life. Very rarely, in wild cloudy weather during the vernal flight, the bird, "drums" in the daytime. From memory of one of these exhibitions the wiry traveler can be imagined up in the damp darkness going through the extraordinary evolutions that accompany the sound. He drives about in large circles for several minutes at highest speed, which is well above ninety miles an hour with the Snipe; then, suddenly setting his outstretched wings, he descends sharply and obliquely for fifty or sixty feet, producing the roll or winnow as he makes the drop. The sound is apparently made with the primaries thrown into vibration by the strong rush of air. Knowing the harsh 'skeap, skeap' of the Snipe as he jumps from the grassy springhead it is impossible to imagine the beautiful, soft roll as coming from his throat.

The first impression of the Snipe's winnowing is that it is the roll of the Screech Owl. With closer attention it seems too big and too free a tone for an *Otus*, and it is altogether out of habit for that bird to give a roll without an ascending quaver at the end. But nevertheless the tone is so owl-like that it suggests the possibility of some large, unfamiliar variety of owl, to which the novice is likely to attribute it or leave it a mystery for later solution. And one of the singular qualities of this curious music is that the position of its source is altogether baffling. When as a boy I first heard the sound in the daytime I hunted through the nearby trees for the expected owl only to discover to my amazement that the roll was coming from a Snipe, in a mad acrobatic act, nearly half a mile up in the air.

The whole performance appears purposeless, particularly in a species so seemingly unemotional as the Snipe. It may be a wild game evolved in both sexes by the stored up energy which is provided in extra amount for the great flight, and evoked by a stormy day or some wild element in the gloomy night. Frank Forester, the classic writer on American field sports of the early nineteenth century, described large wisps in the act of drummery, though the snipe he saw may have been all males at that. Or it may have to do solely with the mating instinct and be an act of bizarre intersexual gallantry peculiar to the male.

In any event the aeolian music of the Snipe in the night always touches a responsive cord within me as deeply as does the twilight song of the Wood Thrush.—HERBERT H. BECK, *Franklin and Marshall College, Lancaster Pa.*