

tent, his tail spreads and flattens against the downward rush and the great talons hang loosely down. Then gliding swiftly over the topmost branch, the swinging and apparently useless feet suddenly stiffen, a faint crack is heard and he slowly fans his way over to the nearby nest, firmly grasping in his talons a twig from the tree on which he seemingly so nearly escaped destruction.

The nest itself is a huge platform of sticks often measuring four feet across and two feet in depth, sometimes deeply and other times only slightly cupped, lined with pieces of green leaves and green pine needles. Their location I always found was in a pine tree, the distance from the ground varying from fifteen to fifty or sixty feet. More often, however, they were between twenty and thirty feet up, in small pines.

According to several good authorities the usual complement of eggs is two and three, but in only one instance out of the twenty-seven nests examined was there more than one egg, and this exceptional nest contained two. In some cases they are beautifully marked with lavender, umber and light brown, and in other cases they are totally unmarked; however the greater majority show distinct markings.

The old birds are very bold when the nest contains young and often perch on a branch five or six feet from the nest while one handles the young. Often, too, the male, circling high in the air with dangling legs, a marked peculiarity of this species, will suddenly make one of his awful plunges straight at the intruder, swerving just in time to avoid the shock which would undoubtedly kill the bird and knock the intruder out of the tree.

Like many other hawks, if the nest is robbed, they at once go to work on another nest, and I have taken three sets in one season from the same bird.

Livermore, Iowa.

A MIGRATION WAVE OF VARIED THRUSHES

By JOSEPH MAILLIARD

OCTOBER 20, 1906, is a date firmly fixed in my memory by two occurrences. One was the commencement of one of the worst forest fires that we have ever been threatened with—started as usual by criminal foolishness—and the other the witnessing of the only actual *wave* of migration on the Pacific Coast that I have had the good fortune to observe. The latter, happily, came first in order on that memorable day, the second occurrence keeping me too busy for a week to think of anything beyond saving the Rancho San Geronimo, and possibly the old idea of future punishment, when the flames got the better of us at times. On the morning of this day I started out early on a quail hunt, with my son and my ranch superintendent, as had been previously arranged, partly on business and partly on pleasure bent.

A very strong, and exceedingly warm and dry north wind was blowing, amounting in places to a veritable gale. We drove from the house to the extreme end of the ranch, a distance of about four miles, before sunrise, in the face of the gale, and putting up the team in the barn there, commenced on foot to ascend the range with the purpose in view of looking over the property and, incidentally, seeking for quail in their accustomed haunts. The sun was rising as we began the ascent and the air startlingly clear. We had taken but a few steps when my atten-

tion was attracted by the sight of a few birds, about the size of robins, flying high and scattered over the sky. This was so unusual at this time of day that I remarked upon the phenomenon to my companions.

As the sun cleared the horizon and the light increased we realized the fact that the sky was dotted in every direction with birds flying singly, and at quite an elevation, mostly toward the south. As the light grew stronger individuals here and there dropped to a lower altitude and allowed us to discern the fact that they were Varied Thrushes (*Ixoreus naevius*). For some time their numbers increased until there were hundreds in sight at once in any direction one might look, and as we were by this time pretty well up on the range we had quite an extended view. Soon we noticed single birds dropping out of the flight and settling in the bushes. These must have been our regular winter residents. Apparently not over one in a hundred dropped out in this way. After nine A. M. the numbers decreased and by ten o'clock the flight was over, with no birds in sight except a few flying from one canyon to another and settling down locally, apparently. I have seen many flights of birds, and migratory flights at that, but only on a limited scale, during many years of observation in California, and yet have never witnessed such a genuine wave of migration, on so vast a scale, as occurred between the hours of six and ten A. M. on the above date. Nor have I seen any mention of this wave having been observed by others. We are not supposed to have such things in California, as the birds generally move more leisurely on this coast when migrating. It would be interesting to know if any other members of the C. O. C. encountered this wave.

San Francisco, California.

NOTES ON THE WALTZING INSTINCT IN OSTRICHES

By F. W. D'EVELYN

ONE evening just as the lengthened shadows in the West proclaimed the advent of early darkness, for there is no twilight in Africa, while driving along the high veldt leading to Pretoria, then but a village nestling among beautiful hedges of rose trees, my Kaffir suddenly startled me by exclaiming "Nance Inje": there is an ostrich! The shrill tone of the interesting announcement for the moment threw me off my guard; quickly recovering myself I raised my carbine to my shoulder and sent a 45-caliber bullet after the great grey bird which by that time was making rapid strides in a two-step gait several rods away, that baffled accurate shooting.

The motion of the bird was peculiar but characteristic of the species in the first stages of its flight, and was one of the gaits in the strange combination of movements so well known to those who are familiar with the birds in their wild or domestic state. It was suggestive of a form of dance, indeed in many of its parts not at all dissimilar to the steps in some of the native dances in Kaffir-land. The dance is a rapid whirl suggestive of the turn of the dervish priest; the ostrich however turns first in one direction and then while turning, without slackening speed, suddenly reverses and turns the other direction; the wings are held extended and conform with the alternate raising and lowering of the sides; the head is sometimes held extended forward with the neck outstretched and again held backward with the head erect. Even when going at full speed the bird will suddenly pivot and go directly opposite to its former course.