

III. HIGH RANGING BUT RATHER LOW NESTING

	Nesting height	Wing minus tail mm.
Great Crested Flycatcher	Generally less than 20 ft.	10.0
THRUSHES NESTING ABOVE GROUND		
Wood Thrush	About 8 ft.	37.5
Gray-cheeked Thrush	Low trees or bushes	31.0
Olive-backed Thrush	About 4 ft.	30.8
	Average	33.1
THRUSHES NESTING ON GROUND		
Hermit Thrush		24.2
Wilson Thrush		27.9
	Average	26.0

Other birds ranging and nesting high are the Tanagers, Cedar Waxwing, Kinglets, Robin (at times), Bluebird, Crows, and Grackles. These are all long and pointed of wing. Apparently the only short and round winged bird in eastern North America to nest high is the Blue-gray Gnatcatcher, ten to sixty feet; this is the only exception to the law.

All our passerine birds that fly at any considerable elevation above the ground have the long, pointed wing, as Grackles, Red-winged Blackbirds, Cowbirds, Rusty Blackbird, Longspurs, Shore Larks, Titlarks, Robin, Kingbirds, Bluebirds, European Starling, Crows, Ravens and, of course, the Swallows. Even such as fly in flocks in the open above the trees are of the same wing form, as Goldfinches, Siskins, Redpolls, Crossbills, Purple Finches, Cedar Waxwing.

To sum up: Birds with long pointed wings may nest high or low, but the short and round winged are low nesting. In short, among groups of similar passerine North American birds the power of flight is closely related to the elevation of the nest in species that are arboreal.

Bridgeport, Connecticut, January 8, 1922.

FROM FIELD AND STUDY

Red-wings of the Imperial Valley, California.—During the comparatively few years since agricultural development in the Imperial Valley of California has been in progress, many species of birds have extended their ranges to include this favored area, some have multiplied apace, and not a few of them are, to some extent, changing their habits to conform to new conditions. Chief among these in numbers is probably the Sonora Red-wing (*Agelaius phoeniceus sonoriensis*). Coming in from the valley of the Colorado River, where they were practically limited to the riparian association, the blackbirds have spread over the broad and fertile plain of the Imperial and, fattening unmolested on the grain crops, have become amazingly abundant. There seems to have been little competition in their ecological position, and, with few apparent enemies, their untold thousands have already become such a serious menace that it is being loudly and insistently demanded that some steps be taken to control their depredations.

Red-wings seem to be rather evenly distributed over the valley floor during the

breeding season, as might be expected; for then their diet consists largely of insects, and a given territory will support only a definite number of families. During September and October it is discovered that there has occurred a shifting of the population, and at that time they are not at all common about my ranch near Calexico but are reported as then fairly swarming at the northern end of the valley, where the greatest damage is done to the maturing crop of kaffir corn and milo. The reason for this seasonal shifting is obscure, as those crops are raised to an equal extent at the southern end of the valley, but a significant fact is that a vast area between the irrigated land and the Salton Sea is covered with a wilderness of tules, in which the birds may roost, while at the southern end the tules seem to be limited to a narrow strip along the river.

At about the time that the last of the kaffir corn is being harvested, the red-wings reappear in the vicinity of Calexico in large numbers. There are then no great fields of standing grain in which several thousand birds may sink without a trace; the bulk of the crop has been sacked for export, and what is needed for winter feeding is left "in the head" and placed in piles handy to the feed lot. Obviously, no farmer will view with equanimity the descent upon his corn pile of a couple of thousand red-wings, and law or no law, he will get down his shotgun. Whether from this likely cause or a more obscure one, the birds disperse after the harvest is over and congregate in small flocks, each numbering a few dozen individuals, in the neighborhood of the feed lots, where, with the cowbirds and towhees, they partake of a hearty meal of corn morning and evening, but spend the greater portion of the day about other business.

Whether the red-wings roost to any extent in the river tules near my ranch I am unable to state; but certain it is that they did not do so in the rank patch of this growth, fifty feet square, that formerly filled my horse pond. Rather did they repair for the night with a flock of feral guinea fowl to the protection of a large cottonwood, and during the short time in winter when this is totally without leaves, probably to a row of eucalyptus trees some distance away. During the hottest part of the day, they are in the habit of gathering in an exceedingly garrulous assemblage in the top of a cottonwood or other shady tree; or, as often, I have seen a flock of several hundred taking their siestas strung along the ground beneath the arrow-weed growing on a big ditch bank.

At the Colorado River, in January of 1913, I examined many old red-wing nests situated in tules, which latter, as far as I observed, were always growing in little sloughs that were partly shaded by willows, and hence the nests were protected from the full force of the spring sun during at least a part of the day. I know of no such associational conditions in the Imperial Valley, and the tules along the New River are unshaded. Although these grow in a particularly dense tangle, certain it is that the red-wings do not nest in this situation near my ranch. As the birds were particularly common, I was at a loss to discover just where they do nest, until May 6, when A. van Rossem noted several carrying nesting material into a cottonwood fully sixty feet above the ground; and we subsequently found that a considerable number had taken up their abode in this lone tree. The inference is that if the birds had at any time begun to nest in their usual tule location, they were speedily forced to change their abodes; for I am firmly convinced that unless they nested close to the ground, where they would be subject to the depredations of foraging raccoons and skunks, the intense fervor of the Imperial sun would be too much for them. Hence, the logical alternative would be the cooler protection of the cottonwood.

On the economic status of the red-wings of this district I am unqualified to speak. Their food must be secured with unusually slight effort, for in a large proportion of individuals, the culmen is found to project considerably beyond the gonys, sometimes to a marked extent, and this condition is caused by the lack of the wear and tear usually encountered in gaining a livelihood. It cannot be gainsaid that these birds do an enormous amount of damage at certain seasons in certain districts, and that controlling measures will probably have to be adopted. But a word should be said in their defense. The yellow alfalfa butterfly is a serious pest, and I strongly suspect that when a flock of a hundred of the black fellows wheels over a field and settles into the waving alfalfa, the birds are seeking the festive caterpillar.—A. BRAZIER HOWELL, *Pasadena, California, December 1, 1921.*