

glers from the winter migrants from the north? To what extent do the larger rivers bring down the northern zones into the zones below, and do the thermal belts along the valley sides carry the southern zones northward? Year-round observations might add additional races for the following: Barred Owl, Pileated Woodpecker, Nighthawk, Blue Jay, Red-winged Blackbird, Grackles (*Quiscalus*), and possibly others. By far the most of my observations were perforce near the mountains, and must show that influence strongly.—A. L. PICKENS, *Berkeley, Cal.*

**Banditry Among Birds.**—Observing Robins when feeding on the ground, you will sometimes see one or more English Sparrows hopping around near them, and when the Robin finds a worm they will walk up to him quietly and boldly, take it out of his mouth, with scarcely a protest from the Robin. A few days ago I saw a sparrow take a worm out of a Robin's mouth and fly off with it, and the Robin simply went on hunting for another one. Then again I saw another Robin pull out a worm and a sparrow standing by tried his best to take it from him. The Robin would not give it up, but flew into a distant tree with the sparrow after him, but the sparrow failed to secure the worm this time. A neighbor of mine saw a Robin robbed six times of six worms, one right after the other, by a small flock of sparrows which had gathered around him, while the Robin kept on hunting for more worms.—HENRY A. PERSHING, *South Bend, Ind.*

**Prairie Birds Seek the Shade.**—On a recent trip through North Dakota, the writer noticed an interesting habit of certain prairie-nesting birds. During the intense heat of the afternoon numerous Lark Buntings (*Calamospiza melanocorys*) were found perching on the barbed wire fences. The birds were, however, sitting close to the posts and on the side opposite to the sun. Thus they took the advantage of the shade offered by the posts and kept out of the burning rays of the sun. A very few Chestnut-collared Longspurs (*Calcarius ornatus*) and one Western Mourning Dove (*Zenaidura macroura marginella*) were also resting in the same position. It seemed a well formed habit with the Lark Buntings, as was evidenced by hundreds of examples.—WILLIAM YOUNG WORTH, *Sioux City, Iowa.*

**The Relation Between the Blue Jay and the Pin Oak.**—Through watching the behavior of a tame Blue Jay (*Cyanocitta cristata cristata*) that first came to us with an injured wing on August 5, 1929, and that in good weather is free to come and go as it pleases, the discovery was made that it feeds on a small white grub enclosed in the acorns of the pin oak (*Quercus palustris*), and not on the acorns themselves. Taking the hint, we watched the other Blue Jays, and observed them also feeding on these grubs.

Henry D. Thoreau (Succession of Forest Trees, 1860) says, "I can confirm what Wm. Bartram wrote to Wilson, the ornithologist, 'The Jay is one of the most useful—these birds alone are capable in a few years time to replant all the cleared lands'". This was said in regard to the well known habit of the Blue Jays of burying acorns. And it also appears that, in addition to providing food for unborn generations of their kind in planting tree seeds and nuts, they help the trees by destroying the enemies of the acorns. Is it too much to think that this relation, approaching a true symbiosis, gradually began with the primitive ancestors of both forms of life, and has helped in the present biological success of both species? The oaks provide a great excess of acorns, many millions more during the life of the tree than the one acorn which will reproduce the