

Mistletoe-Birds as Plant Distributors.

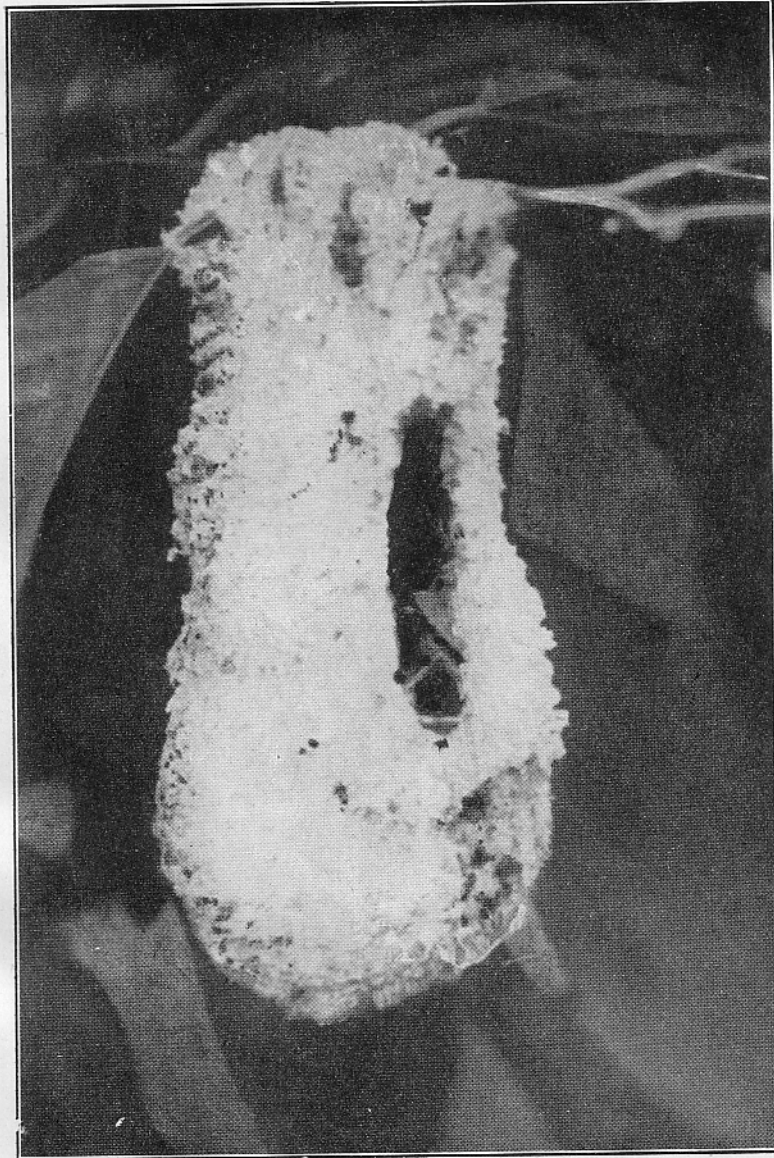
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A SWEET and gentle disposition is combined with brilliant plumage in the case of Australia's single species of Mistletoe-Bird, the tiny *Dicaeum hirundinaceum*. The male bird has the head, back, wings, and upper tail feathers a metallic steel-blue, the throat and chest a deep claret-scarlet, the belly greyish-white, and the under-tail feathers a salmon-pink. The hen is a dull grey, with a whitish-grey belly and light salmon-pink under tail feathers.

These wee birds are exceptionally high fliers, and are seldom seen on a low tree. Their only drink seems to be dew, taken early in the morning. During the mating season, April and May, their mating call can be heard at almost any time; it is exceptionally penetrating and carries a long distance. The cock bird indulges in quite a nice little song of his own. Although the males never really attack each other, they lower their wings, stretch their necks and raise their head feathers. In this attitude they emit peculiar sounds, no doubt a sign that they are in a very furious mood. Mistletoe-Birds usually nest in October and November, building in almost any kind of tree. During the breeding season they become exceptionally tame. In freedom, shown a very small meal-worm or little grub, the parents will readily fly on the finger and take the dainty for their young. For the most part, the young are fed on insects, but as soon as they are sufficiently advanced mistletoe berries appear on the menu. The young males in their first feather are just like the females. They colour about April, but the gorgeous red and pure steel-blue comes only after several years of moult.

These birds are exceptionally sensitive to cold, and many immature birds must perish during the heavy rain-storms and cold winters nights. One may be found sitting on a branch and clinging to it so tightly that it can only be removed by using force. The bird seems to all appearance dead, and it may remain in that condition for days; but if brought to the warmth of a stove, little by little the muscles relax, and within less than a quarter hour the bird is as healthy as ever. A friend who, before the war, took six Mistletoe-Birds to America, told me afterwards that they had been frozen to death and resurrected four times! I have had similar experiences with my own aviary birds each winter.

I have never seriously tried to breed these birds in captivity, the young being so very tiny that it would take too much time to procure the insects they would require. My birds, have, however, built in asparagus vines and laid eggs. It is a simple matter to keep these birds in captivity. They are remarkable eaters. We allow half a banana per bird per day, besides giving them other fruit in season. They will also eat cake and finely-chopped egg. In 1912 I presented some to the Zoological Gardens in London. When I was in England



NEST OF THE MISTLETOE-BIRD.

Photo. by A. H. Chisholm.

in 1914 they were still doing well, and the curator told me they were one of their best Australian exhibits. I have often been asked to send more specimens of them, but as by law only the Zoos may make exchanges, I think it will be a long time before another such exhibit is seen.

As an aviary dweller the Mistletoe-Bird is certainly all that could be desired—an exceptionally good liver, very tame, and beautifully coloured. I have kept them in my aviaries during the past 35 years, and there is no bird I like better. The only annoying point is that during the mating season the caged birds call wild birds down, with the result that the fruit trees become covered with mistletoe. In freedom, the mistletoe berries are undoubtedly their staple food, with insects during the breeding season. In summer-time, when mistletoe berries are scarce, these birds will eat apricots, pears, or persimmons. I have two large mistletoe bushes attached to a small wattle tree in my garden, and at arm's length have watched the way the birds were eating.

They are certainly very particular in their choice of berries. Quite a number are tapped first with the bill before they find one to possess the right consistency—not too young and not too ripe. For some time the berry is squeezed between the mandibles, and is then swallowed whole. Of course, there is very little flesh on the mistletoe berry. It is really skin and kernel, and that part of the skin which is digested is evidently at the same time turned into a white, glutinous substance. When the stone is passed by the bird, it is encased in this glutinous substance, which seems to hold the kernel fast to the branch on which it is dropped; drying is almost instantaneous. But nature makes doubly sure that its work shall be done well, and causes the bird, as soon as the stone is dropped, to hop along the branch about three inches jerking out more of this glue, which then acts as a safeguard in holding the mistletoe kernel in place.

Now, the remarkable thing is this—that when the young mistletoe shoots out its first root, this root runs along on top of the gluey substance ejected by the bird, for the primary purpose of holding the seed to the branch. The tap-root does not enter the branch of the tree to its centre, thereby causing a big swelling to appear, until a later period. No mistletoe will hurt a gum tree, no matter how many are on one tree, for the reason that it is indigenous to it. But the parasitic plant will certainly kill the branch of a fruit tree, or the whole of it, either by strangulation or by sucking its sap. Once growing, the mistletoe parasite is exceptionally hard to eradicate from a fruit tree, unless taken at a very early stage, for the roots seem to run below the bark and throw out plants at any point.

It is a remarkable thing that the mistletoe kernel will grow only where the bird has deposited it. I have experimented for many years trying to put mistletoe kernels, the moment I saw them deposited, on another branch of the same tree, and on branches on trees close by, but I have never been able to cause one of those transplanted seeds to germinate.