Feather Fascination!

with local Birdwatcher,

Jim Butler

Mistletoebirds deposit mistletoe seeds!

THE dimorphic Mistletoebird (10 cm) is quite elusive in the bush: small and high in the canopy. Its name comes from its fascinating mutualistic relationship with the mistletoe plant of which it is the major seed disseminator. The Mistletoebird has a narrow primary diet of mistletoe nectar and fruit and therefore is found in areas of mistletoe-infected forest. The Mistletoebird and the 91 mistletoe plant species are found across the whole of Australia except for Tasmania.

Mistletoes are a group of plant hemiparasites that parasitise trees but retain the ability to photosynthesise. Mistletoes form a physical and biochemical attachment to tree branches using a specialised aerial root: the haustorium. After the seed is deposited on the host tree, the seed-shoot penetrates the host branch through the action of special enzymes. The haustorium connects to the xylem and phloem of the host tree and extracts water and essential minerals. Mistletoes are usually host specific and Eucalypts and Acacias are the most common host species. Isolated and aerial, mistletoes are reliant on both a suitable host tree and aerial seed disperser (Mistletoebird) for their distribution; hence, mistletoes are patchy in the forest. Mistletoes provide nutritional resources for many birds and the dense branches provide secure nest sites and concealment from predators.

Mistletoes produce plentiful flowers and fruits which feed the Mistletoebirds which disperse the mistletoe seeds. The fruits contain a single seed that is surrounded by a sticky layer. As the seed is passed through the bird's gut, some of the sticky layer is digested but plenty is left on the seed. When the seed is passed by the bird it often sticks to the feathers of the cloaca and the bird must actively remove the seed by wiping its cloaca along a branch. Mistletoebirds generally perch along rather than across branches when defecating. Once the seed is stuck to the host branch the growth of the mistletoe commences.

Mistletoebirds enhance biodiversity in forests.

~ Jim

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Image: Male Mistletoebird by Ed Frazer at Brookfield