

Feather Fascination!

with local Birdwatcher, Jim Butler

Contact Jim at: beautifulbirds@y7mail.com

WITHOUT BINOCULARS IN THE BUSH



What's it like? Well, it's like snorkelling on the Great Barrier Reef without a face-mask! It's a disaster! We need face-masks to get air against our eyes. Our eyes evolved under the condition that they are in air, and in that case they can project perfect images onto the retina. In water, which has a very different refractive index to air, the eye-optics cannot do a proper job and the beautiful fish are horribly blurred!

Those same eye-optics also severely limit the details of bird's bodies that we can see. At six metres the normal un-aided eye can resolve contours 1.7mm apart in the object. There are many features of birds' bodies - their colour patterns, feathers and bills - that are less than 1.7mm apart. Look closely at the adjacent one-third actual-size image of the Spotted Pardalote. This bird is out there today in our western bush. It is 9cm in length, weighs 8gm and forages in the

canopies of large eucalypts. The spots on their head are 1mm in diameter, the exquisite detail of the feathers on the back are nearer 0.1mm! When you find them they will be 30 metres up in the canopy. Look at the image again, look at the beauty you are missing out on! It's a disaster!

To see the wonderful details of the bodies of bush birds while out walking, the image on the retina has to be made larger. This is what binoculars do! But how much larger? Long experience has taught us that in the Australian bush, taking into account the sizes of our trees and our birds that x8 to x10 magnification will sufficiently enlarge the image projected on most people's retinas to produce spectacularly rewarding results.

Happy "magnified" birding.

~ Jim

Image: Spotted Pardalote by
Ed Frazer at Brookfield ©