Chameleon Colour Not Camouflage

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Chameleon colour not camouflage, according to a report on BBC News Online, New Scientist news and PLoS Biology, 29 Jan 2008. Chameleons are well known for the ability to rapidly change colour and this is usually explained as having evolved to avoid predators in the struggle to survive. Another theory claims chameleon colours were originally for signalling to other chameleons in order to fend of rivals and attract mates. Two researchers at the Universities of Melbourne have tested the two theories by studying the colouration and colour changing capacity of 21 species of dwarf chameleons of the *Bradypodion* genus, taking into account the colours that the chameleons were seeing, rather than what humans were seeing.

Chameleons are able to see ultra-violet light as well as the colours that are visible to humans. Therefore the scientists measured the amount of reflected UV as well as visible light. If the colour changing ability is for camouflage, chameleons that live in the most variable environments should produce the most colour changes. The researchers measured changes in colour in male chameleons confronting one another and in chameleons confronted by a predator. They also looked at the variation in colour of the natural habitats of the different species. The results indicated that colour changing ability was more related to signalling other chameleons than being able to blend into different background colours. Devi Stuart-Fox, who led the study, commented: "We found that chameleon species that changed colour the most had displays that were most conspicuous to other chameleons. But they didn't have a greater range of background colours in their habitats."

BBC, PLoS, New Scientist

Editorial Comment: We are often asked why animals appear to be so well designed for hiding from predators, if God created them to live in a world without predators (Genesis 1:29-31). This research shows that even though chameleon colour can be used for hiding from predators in today's degenerate world, it has other functions (such as finding a mate) that would be useful in the original good world. Now that the world is no longer good because of human sin and God's judgement, animals use whatever built in abilities they already possess, (e.g. changing colour) to survive. This change in behaviour may be "survival of the fittest," but is not evolution because it doesn't explain how the ability to change colour came about. (Ref. reptiles, communication)

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