

## **DECEIVER CONTEST**

The summer migrant cuckoos are here. The photo shows the patterned white breast of the female Eastern Koel and her glossy blueblack mate. They are here to breed and being cuckoos they exploit other bird species – hosts - to brood their eggs and raise their young. The unique relationship between the parasitic cuckoos and their hosts results in an intense selection contest for survival by both species.

The Koel's striving for reproductive success involves the female inserting her individual eggs into numerous nests of the host species (record: 25 nests in one season). Firstly, she must do this undetected with an egg that mimics the host's eggs so that it is not ejected. Then the cuckoo hatchling must preferably hatch first and remove the host eggs or chicks, and induce the host parents to continue to feed it until fledged. Lots of complex steps! Selection pressure on the cuckoo favours those individuals who can most successfully deceive the host with correct egg size and colouring and with matching gape appearance and begging calls. The survival contest favours the best Koel deceivers.

Meanwhile, the host species are pursuing their own reproductive success. To combat the cuckoo threat there is constant evolutionary progress in detection of cuckoo parents, cuckoo eggs and cuckoo chicks. Selection pressure on the host species favours those individuals who best detect the cuckoo deception at whatever stage. The survival contest favours the best host detectors of Koels.

Cuckoo deception versus host detection is a constant struggle for survival that has endured for millions of years. Natural selection never ceases. The visit this summer of the Koels is just one tiny segment of the everlasting contest for survival that involves the two species caught up in the cuckoo lifecycle.

Happy complex birding!

- Jim

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Image: Female and male Eastern Koel, taken by Ed Frazer at Brookfield