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ROLLERS (CORACIAS) AS KLEPTOPARASITES - In a recent study of the ecology of wheatears *Oenanthe* spp. in Senegal, we noted aggressive interactions between them and other insectivorous species, including Abyssinian Rollers *Coracias abyssinica*.

On 10 January 1982 an Isabelline Wheatear *Oenanthe isabellina* was hunting flying insects by sallying from perches 3-5 m high on thorn trees *Balanites aegyptiaca*. A roller flew to a nearby tree and also commenced sallying for aerial prey; after a few minutes it flew at and displaced the wheatear, which flew to a tree 60 m away. This observation suggests competition for foraging space between the species.

On 19 January 1982 a Common Wheatear *O. oenanthe*, which held a territory adjacent to that of the Isabelline Wheatear above, was on the ground, in the shade of a 0.5 m high bush, mandibulating food, probably a caterpillar, shaking and banging it on the ground for 2 min, when an Abyssinian Roller flew past 5 m overhead. The roller returned and perched on the bush above the wheatear, then flew down, seized the wheatear's prey and flew off with it. After a moment the wheatear flew up onto the bush, then resumed hunting. This observation shows that rollers may occasionally kleptoparasitise other birds.

Kleptoparasitism has not been reported previously for rollers (Brockmann & Barnard *Anim. Behav.* 27, 1979, 487-514) although they are pugnacious and opportunistic, characteristics which favour the development of kleptoparasitism (Brockmann & Barnard *loc. cit.*, A. Tye mss). Brockmann & Barnard listed six kinds of interspecific association which might lead to kleptoparasitism, namely predator-prey, mobbing, feeding in mixed-species flocks, nesting in mixed colonies, scavenging for scraps, faeces or parasites, and specialised feeding associations such as 'beating'. None of these could explain kleptoparasitism between rollers and wheatears; although *Coracias* rollers may occasionally eat nestlings (Meinertzhagen *Pirates and Predators* 1959, Oliver & Boyd, Edinburgh), they are not known as predators of healthy, adult birds. We suggest a seventh origin for kleptoparasitism, namely interspecific competition. Wheatears feed mainly on terrestrial or aerial invertebrates (L. Cornwallis unpubl. D.Phil. thesis 1975 Univ. of Oxford, A. Tye unpubl. Ph.D. thesis 1982 Univ. of Cambridge), up to the size of a 4 cm grasshopper, and at the upper end of their prey size range they overlap with rollers (pers. obs.). More importantly, each species' hunting activities might disturb the active prey of the other, resulting in a need for isolation during hunting and in competition for foraging space (A. Tye mss). Rollers also overlap in diet and hunting technique with shrikes (*Lanius* spp.), and shrikes may attack and kleptoparasitise rollers (Moreau & Moreau *Ibis* (14)5, 1941, 614-615).

This slender evidence suggests that competition between *Coracias* rollers and wheatears may occur and that kleptoparasitism by rollers on wheatears has developed from competitive interactions.

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