

Predation of a small passerine by the Purple-winged Roller *Coracias temminckii*, an endemic species of Sulawesi

MARC ARGELOO¹ AND JAMES FITZSIMONS^{2,3}

¹ planG, Panamakade 36, 1019 AX, Amsterdam, The Netherlands. Email: marcargeloo@plang.nl

² School of Life and Environmental Sciences, Deakin University, 221 Burwood Highway, Burwood VIC 3125, Australia. Email: james.fitzsimons@deakin.edu.au

³ The Nature Conservancy, Suite 3-04, 60 Leicester Street, Carlton VIC 3053, Australia

Ringkasan. Makanan burung Tionglampu Sulawesi *Coracias temminckii*, spesies burung endemik Sulawesi, diduga kebanyakan berupa invertebrata besar dan reptil berukuran kecil. Di suatu area yang ada galian untuk menanam bibit, sekitar batas Taman Nasional Bogani Nani Wartabone, Sulawesi Utara, penulis pertama mengamati seekor burung dewasa menyerang burung Gereja *Passer montanus* dewasa di tanah kemudian membunuh dan memakannya. Meskipun burung dikenal sering dimangsa oleh spesies tionglampu lain, namun biasanya dilakukan pada sata burung masih sangat muda atau sangat kecapaian setelah melakukan migrasi panjang.

The Purple-winged Roller (*Coracias temminckii*) is endemic to Sulawesi and nearby islands where it is considered widespread and moderately common (Coates & Bishop 1997). It is found in open country, forest edges and wooded areas (Holmes & Phillipps 1996; Coates & Bishop 1997). Like other *Coracias* rollers, the Purple-winged Roller forages using a 'sit and watch' strategy from a prominent perch, dropping to the ground to catch small prey. Vorderman (1898: 40) reports "large grasshoppers and small insects" as stomach contents for this roller species, and Heinrich (in Stresemann 1940) fed his two captive birds with large quantities of grasshoppers. Surprisingly, in a review of the Coraciidae, Fry *et al.* (1992: 292) suggested the diet of this species was "unknown" but that it was "probably like that of the Indian Roller, but the very deep, powerful hooked bill suggests that it eats larger prey than does that species". Subsequent authors have described the diet of the Purple-winged Roller as consisting of 'grasshoppers, locusts, beetles and small lizards' (Coates & Bishop 1997, Fry 2001) and 'large invertebrates and small reptiles' (Strange 2001).

On 17 April 1991, in the late afternoon, MA observed an adult Purple-winged Roller perched on a small dead tree near the school complex of Mokintop, North Sulawesi (Plate 1). This (former) school is situated in agricultural fields at the foothills of the degraded forest of the Bogani Nani Wartabone National Park (0°35'54" N, 124°07'26" E). MA continued observing the perched bird, as two adults and two juvenile rollers had been seen here three days prior. The roller stayed at a distance of less than 100 m and was observed with Zeiss 10x40B binoculars.



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Plate 1. Purple-winged Roller at Mokintop, North Sulawesi.

After a few minutes the bird flew down on the newly ploughed land. It was clear it had caught a prey item, presumed to be a large insect, as the bird hopped up and down and kept on pecking with its bill while the prey was still on the ground. The roller was then approached to within approximately 50 m. At this distance, and with the roller now standing on a slightly higher part of the ploughed land, it was clear that it had caught a Eurasian Tree Sparrow *Passer montanus*. The roller stood on the live sparrow with both of its feet, hammering its prey with its bill until (after just a few seconds) no further movement from the sparrow was observed. Several young Eurasian Tree Sparrows had been observed in the vicinity around that time, most of

them still with a yellow gape. The sparrow that the roller had caught looked very much like an adult bird; clearly observed with white cheeks with a black spot and chocolate brown on the head; no yellow on the bill, nor any fluffy juvenile feathers. The roller started consuming the sparrow on the ground. No notes of what happened after this were made and whether the bird flew away with the sparrow was not recorded.

Birds do not appear to have been previously recorded in the diet of Purple-winged Roller in the published literature. Birds have been occasionally recorded in the diet of the related European Roller *Coracias garrulus* but they are “generally taken when very young”, although “small exhausted migrants have occasionally been captured after making landfall on Mediterranean islands” (Fry 2001: 354). The Eurasian Tree Sparrow killed by the Purple-winged Roller in this observation was an adult bird and sparrows are probably sedentary, not migratory, at this site. The Eurasian Tree Sparrow was first introduced to North Sulawesi in 1979 (Escott & Holmes 1980; Coates & Bishop 1997) and is now common in most areas of human habitation in the north of the island (Fitzsimons *et al.* (2011). The Eurasian Tree Sparrow would be one of the few small bird species relatively common and relatively tame around human settlement and disturbed areas, thus potentially making them more susceptible than other bird species to predation by Purple-winged Rollers. This is particularly so as rollers in general tend to select prey based on size and availability (Fry 2001).

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