Ornithological Observations

An electronic journal published by BirdLife South Africa and the Animal Demography Unit at the University of Cape Town

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Editor: Arnold van der Westhuizen

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Recommended citation format:
Mortimer JA, Matyot P, Labrosse W, Bristol D 2011. Traumetic encounter between Ruddy Turnstone *Arenaria interpres* and Hermit Crab *Coenobita perlatus* at D'Arros Island, Amirantes Group, Seychelles. Ornithological Observations, Vol 2: 58-59

URL: http://oo.adu.org.za/content.php?id=28

Published online: 5 October 2011

- ISSN 2219-0341 -

Traumatic Encounter between Ruddy Turnstone *Arenaria interpres* and Hermit Crab *Coenobita perlatus* at D'Arros Island, Amirantes Group, Seychelles

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On 13 March 2011 at 09:00, we (JAM, WL, DB) encountered a juvenile Ruddy Turnstone *Arenaria interpres* (Skerrett et al. 2001) on the ground in apparent distress (S 5°25.246', E 53°17.497'). We were conducting a nesting sea turtle track count survey along the sandy shoreline of D'Arros Island in the Amirantes Group of the Seychelles (Mortimer et al. 2011). Unable to take flight, the Turnstone was struggling in the manner of a bird entangled by the sticky seeds of the *Pisonia grandis* tree (Walker 1991). But, upon closer inspection we found that the tip of its bill was in the grip of the left claw (major chela) of a Hermit Crab *Coenobita perlatus* (Bowler 2006) (Figure 1). The crab have retreated tightly into the *Turbo spp* shell in which it was housed. The crab and shell together weighed approximately 80-100 g. We photographed the association and then after several minutes prised open the claw of the crab. The pressure of the claw left a dent in the surface of the bill (Figure 2), but the bird appeared otherwise unharmed and energetically flew away upon release.

Crabs previously have been reported to grasp the bills of birds attempting to feed on them. In the United States, the White Ibis *Eudocimus albus* which readily consumes fiddler crabs *Uca pugilator*

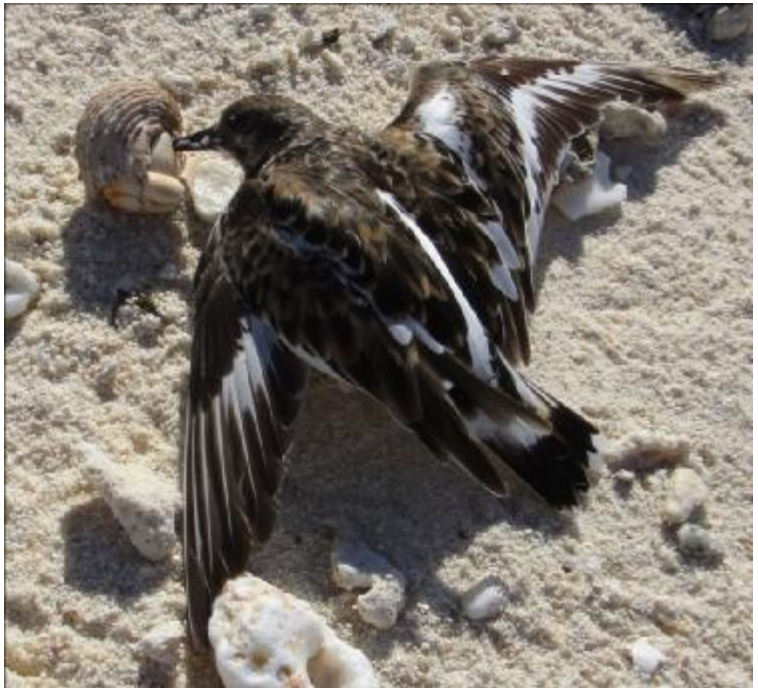

Figure 1. Ruddy Turnstone struggling to free itself from the grasp of the Hermit Crab (Photo: JA Mortimer)

suffers in this manner. But according to Bildstein et al. (1989), the much larger Ibis easily frees itself, usually by remaining motionless for up to 30 seconds with the crab attached to its bill until the crab releases its grasp or, more often, until the Ibis shakes it from its bill. In contrast, we consider the situation of the Ruddy Turnstone to have been more desperate.

We do not know how long the bird had been trapped by the Hermit Crab prior to our arrival. Nor is it clear how the entrapment occurred.

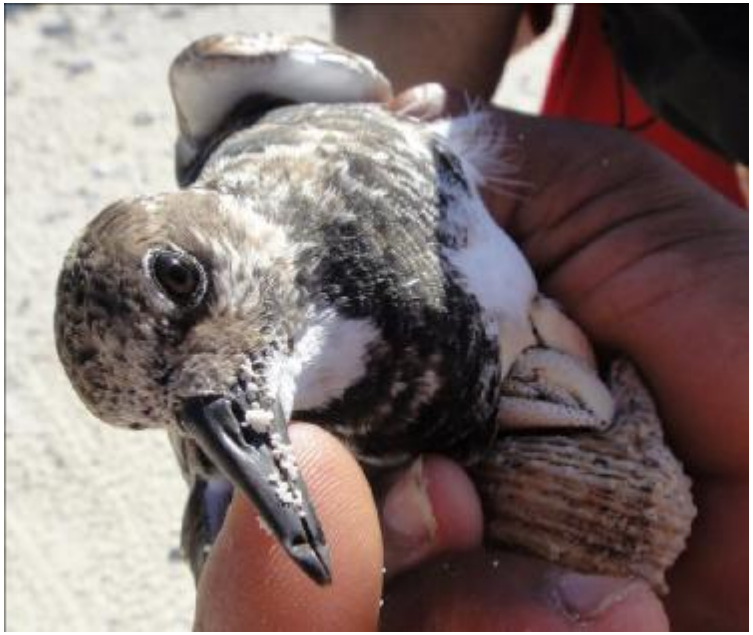

Figure 2. Indentation near tip of Ruddy Turnstone bill caused by pressure of Hermit Crab claw (Photo: JA Mortimer)

Crustaceans, including Hermit Crabs, feature in the diet of Ruddy Turnstones (Cramp and Simmons 1990). We suspect that the Ruddy Turnstone was trapped either while attempting to eat the crab, or while turning it over in search of other prey. It is unclear whether the interaction would have proved fatal to the bird had we not intervened. But, the crab appeared to tighten its grasp as the bird struggled, and it seemed unlikely that the bird would succeed in "throwing off" the crab. The tenacious hold of crabs is legendary and many species are known to retain their grip on objects for a long time. Schmitt (1973) reports on a Robber Crab *Birgus latro*, also in the terrestrial hermit crab family *Coenobitidae*, that would not let go of the handle of an insect-collecting net for "some hours". While we found no comparable data for *Coenobita* species in literature, given that Hermit Crabs regularly forages in groups and consumes dead or dying sea birds and other animals stranded on the foreshore at D'Arros (JAM pers obs), it would have been in the interest of the crab to maintain its grip on the bird until death or at least until the bird stopped struggling and other Hermit Crabs moved in to prey on it.

Acknowledgements

We are grateful to Adrian Skerrett and Ross Wanless for helpful comments on an early draft of this note, and to Carlos Vejarano, Mike Anacoura, Rainer von Brandis and personnel of the D'Arros Research Centre (DRC) whose support made this study possible.

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