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Wilson Bull., 103(1), 1991, pp. 130–132

Tristan Thrushes kill adult White-bellied Storm-Petrels.—The Tristan Thrush (*Nesocichla eremita*) is restricted to the Tristan da Cunha group of islands in the central South Atlantic Ocean. It has a catholic diet, taking a range of invertebrates and fruits, and scavenging carrion from dead birds and fishes (Hagen 1952, Richardson 1984). The species has several structural adaptations to life on oceanic islands, including fairly small, rounded wings, a reduced sternum, and robust legs and feet. These adaptations are associated with its more cursorial life-style and reduced flight capabilities compared to most members of the Turdidae. However. the most distinctive feature of the Tristan Thrush is its concave, brush-tipped tongue (Lowe 1923) that is used to extract the contents of eggs. Tristan Thrushes use their large, strong bills to make holes in seabird eggs which are a seasonally abundant resource at the Tristan islands. Tristan Thrushes also kill and eat nestlings of other landbirds on the islands, including the buntings *Nesospiza* spp. and the Inaccessible Island Rail (*Atlantisia rogersi*) (Collar and Stuart, 1985, pers. obs.). However, there are no reports of Tristan Thrushes killing fully grown birds.

We visited Inaccessible Island for four months between October 1989 and March 1990. During this period, Tristan Thrushes were seen to attack and kill fully grown White-bellied

Storm-Petrels (*Fregatta grallaria*). On two occasions, thrushes were observed perched on top of a storm-petrel, using their feet to hold down the petrel at the base of its wings and hammering at the back of the petrel's head. One of the storm-petrels, caught near the western edge of the island plateau, escaped by catching a strong updraft after shrugging off the thrush. However, the other storm-petrel was caught in dense vegetation in the center of the plateau and could not escape. It was barely alive when found.

The thrushes had exposed both storm-petrels' skulls but were not seen to penetrate the skull. However, one of three White-bellied Storm-Petrel carcasses found showing evidence of thrush predation had a caved-in skull. Storm-petrels killed by Tristan Thrushes could be distinguished from those killed by Subantarctic Skuas (*Catharacta antarctica*), the only other species that preys upon birds at Inaccessible Island (Fraser 1984, Ryan and Moloney, in press), because thrushes attacked the dorsal surface, whereas skuas either swallowed storm-petrels whole or opened them ventrally to remove the pectoral muscles (pers. obs.). Tristan Thrushes had difficulty feeding from storm-petrels they killed. Only the brains had been eaten from the storm-petrel with the caved-in skull. The head and neck had been skinned and one eye removed from another storm-petrel. The abdominal cavity of one storm-petrel was opened through a hole between the scapulars, whence the entrails had been pulled. All storm-petrels killed had fully ossified skeletons, because the observations took place during the early part of the breeding season, prior to fledging.

Some of the White-bellied Storm-Petrels killed were caught directly by thrushes. Tristan Thrushes were seen chasing storm-petrels flying over the island plateau on three occasions during the day. These pursuits took place in level flight, in the open, and 2–5 m above the ground. The thrushes flew at approximately the same speed as the storm-petrels, but the outcomes of chases were not determined because the birds flew out of sight. Tristan Thrushes may also benefit from hunting attempts by Subantarctic Skuas. Skuas chase White-bellied Storm-Petrels that venture over the island during the day, sometimes causing them to seek refuge in dense vegetation. Once among such vegetation, a storm-petrel's mobility is reduced, making it easy prey for thrushes.

White-faced Storm-Petrels (*Pelagodroma marina*) also breed at Inaccessible Island, but we found no evidence of them being killed by thrushes, probably because they only visit the island at night. In addition to killing adult White-bellied Storm-Petrels, Tristan Thrushes were seen to attack fledgling Tristan (*Neospiza acunhae*) and Wilkins' buntings (*N. wilkinsi*) at Inaccessible Island. Fledglings five- to eight-weeks old were grappled in mid-air by thrushes but managed to escape. However, a banded Tristan Bunting chick was killed by a thrush on the day it left the nest.

White-bellied Storm-Petrels (mean mass ca 53 g) are more than half the mass of Tristan Thrushes (mean mass ca 91 g), and are approximately the same total length. Other thrushes occasionally kill young birds (e.g., the Mistle Thrush [*Turdus viscivorus*] Cramp 1988), but this apparently is the first record of any thrush regularly killing birds with fully ossified skeletons. This unusual predatory behavior by Tristan Thrushes is yet another example of opportunistic niche expansion by terrestrial birds at oceanic islands.

Acknowledgments.—We thank the Administrator, Island Council and people of Tristan da Cunha for permission to work at the Tristan islands. Support was received from the Wildlife Society of Southern Africa and the South African Department of Environment Affairs through the South African Committee for Antarctic Research.

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Wilson Bull., 103(1), 1991, pp. 132–137

Behavioral ecology of Red-backed Hawks in central Chile.—The Red-backed Hawk (*Buteo polyosoma*) is found in South America from Colombia to Tierra del Fuego, along both sides of the Andes, in the Juan Fernández Archipelago off the coast of Chile, and in the Falkland Islands off the Argentine coast (Vaurie 1962, Johnson 1965, Jaksić and Jiménez 1986). The species has been studied little except for its diet and food-niche relationships (Schlatter et al. 1980, Jaksić et al. 1981). Here we report on the behavioral ecology of the Red-backed Hawk, based on a one-year study in central Chile, and draw comparisons with a similar and simultaneous study of the Grey Eagle-Buzzard (*Geranoaetus melanoleucus*) by Jiménez and Jaksić (1989).

Methods.—The study site is described in Jiménez and Jaksić (1989). San Carlos de Apoquindo (33°23'S, 70°31'W, referred to as Los Dominicos in Paynter (1988) is a rugged area 20 km east of Santiago in the Andean foothills, with elevations ranging from 1050 to 1915 m. The physiography includes both flat areas and numerous ridges dissected by deep ravines. The climate is Mediterranean, with cool and rainy winters and dry and hot summers. The wind blows westwardly from the valley to the mountains during the daytime. The predominant vegetation is evergreen scrub that changes physiognomically depending on topography and orientation.

For each Red-backed Hawk we recorded: (1) time and duration of observation, (2) activity type, and (3) habitat beneath the bird. We recognized the following activity types (see Jiménez and Jaksić 1989): (1) thermal soaring, (2) wind soaring, (3) cruising, (4) hovering, (5) harassing, (6) perching, and (7) miscellaneous behavior. We recognized the following habitat types (Jiménez and Jaksić 1989): flatlands, ravines, ridgetops, and slopes (east-, west-, south-, and north-facing). We mapped these habitats and calculated their surface areas (slope-corrected) with a digital planimeter from a high-resolution aerial photograph. The vegetative cover of each habitat type, as represented by trees, shrubs, herbs, bare ground, and rocks was documented by Jiménez and Jaksić (1989), who also estimated prey numbers in these different habitats.

Observations were made from sunrise to sunset, with the day arbitrarily divided into six equal intervals. We made observations every other week between 1 August 1984 and 1 August 1985. We divided a total of 1730 min of observations into four seasons: spring (1