Comunicaciones breves

FIRST RECORD OF A SEMIPLUMBEOUS HAWK (*LEUCOPTERNIS SEMIPLUMBEUS*) PREYING ON A RED-THROATED ANT-TANAGER (*HABIA FUSCICAUDA*) IN TIRIMBINA BIOLOGICAL RESERVE, COSTA RICA

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Abstract.- Semiplumbeous Hawk (*Leucopternis semiplumbeus*) preys on lizards, snakes, amphibians, mammals, birds, and arthropods. However, there is no information about which bird species compose its diet. This paper presents the first record of a Semiplumbeous Hawk preying on a Red-throated Ant-Tanager (*Habia fuscicauda*) in Costa Rica, while both were tangled in a mist net. Apparently, the hawk took advantage of the tanager being entangled in the mist net to capture it. This report contributes to the knowledge about the natural history of two species that share a similar habitat.

Keywords: *feeding ecology, diet,* Habia fuscicauda, Leucopternis semiplumbeus, *mist net, predation, Suerre.*

Resumen.- PRIMER REGISTRO DE UN GAVILÁN DORSIPLOMIZO (*LEUCOPTERNIS SEMIPLUMBEUS*) DEPREDANDO UNA TANGARA HORMIGUERA GORGIRROJA (*HABIA FUSCICAUDA*) EN LA RESERVA BIOLÓGICA TIRIMBINA, COSTA RICA**.** El Gavilán Dorsiplomizo (*Leucopternis semiplumbeus*) se alimenta de lagartijas, serpientes, anfibios, mamíferos, aves y artrópodos. Sin embargo, no hay información sobre qué especies de aves componen su dieta. Este artículo presenta el primer registro de un Gavilán Dorsiplomizo depredando a la Tangara Hormiguera Gorgirroja (*Habia fuscicauda*) mientras ambos estaban enredados en una red de niebla. Aparentemente, el halcón se aprovechó de la tangara enredada en la red de niebla para capturarla. Este informe contribuye al conocimiento sobre la historia natural de dos especies que comparten un hábitat similar.

Palabras clave: *ecología alimentaria, depredación, dieta,* Habia fuscicauda, Leucopternis semiplumbeus, *red de niebla, Suerre.*

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Food is an essential resource for all animals, and quantifying their diet is one of the first steps to understand the ecology of a species (Sih and Christensen 2001). Recognizing the kind of food a species eats, and how, why and where this resource was obtained, can help to understand their feeding ecology (Kushlan 1979, Granzinolli and Motta-Junior 2007). However, there are few studies on the diet of neotropical birds and, in many cases, the known data are scarce from a scientific basis (Fierro-Calderón et al. 2006).

The Semiplumbeous Hawk (*Leucopternis semiplumbeus*) is a bird of prey distributed from easternmost Honduras to northwest tropical Ecuador, from sea level to 1600 masl (Stiles and Skutch 1989, Ferguson-Lees and Christie 2001, Bierregaard et al. 2020). It has also been observed and heard in Mishana and San Martín, northern Peru (Alonso et al. 2012). This hawk inhabits tropical and subtropical humid forest zones, being able to live in the forest edge and in forest fragments, but it rarely comes out to open areas (Stiles and Skutch 1989, Ferguson-Lees and Christie 2001, Garrigues and Dean 2014, Bierregaard et al. 2020). In Costa Rica, the Semiplumbeous Hawk is a common resident in Caribbean lowlands and foothills, seldom found above 500 masl (Stiles and Skutch 1989, Garrigues and Dean 2014). This species is classified as Least Concern according to the IUCN (International

Union for the Conservation of Nature) Red List, and its populations are reduced and threatened according to the LCVS (Ley de Conservación de Vida Silvestre) (SINAC 2017, BirdLife International 2020).

The Semiplumbeous Hawk is known to prey mainly on lizards (e.g., *Ameiva* spp.) and snakes, but it may eat amphibians, small mammals (e.g., bats), birds and probably also feeds on arthropods (Stiles and Skutch 1989, Ferguson-Lees and Christie 2001, Bierregaard et al. 2020). There are reports of this species attacking birds following army ants and preying on nestlings (Ferguson-Lees and Christie 2001, Visco and Sherry 2015, Menezes and Marini 2017, Bierregaard et al. 2020). However, there is no specific information at genera or species level of the birds that are part of the Semiplumbeous Hawk´s diet.

The Red-throated Ant-Tanager (*Habia fuscicauda*) is a small bird distributed from eastern Mexico to northern Colombia from sea level to 1200 masl (Stiles and Skutch 1989, Chiver and Morton 2020). It is classified as Least Concern according to the IUCN Red List and it is not threatened according to the LCVS (SINAC 2017, BirdLife International 2020). This species inhabits the undergrowth of humid to semiarid evergreen and semi-deciduous forests, edge habitats (including banks of streams and rivers), shady second-growth forests, woodlands, thickets, and overgrown dense plantations (Stiles and Skutch 1989, Garrigues and Dean 2014, Chiver and Morton 2020). In Costa Rica, it is fairly common to find the Red-throated Ant-Tanager in Caribbean lowlands and foothills up to 900 masl (Stiles and Skutch 1989, Garrigues and Dean 2014).

The Red-throated Ant-Tanager has been reported as prey of the Ferruginous Pygmy-Owl (*Glaucidium brasilianum*) during the breeding season (Willis 1961, Chiver and Morton 2020). However, there are no reports of Semiplumbeous Hawks preying on Red-throated Ant-Tanagers. The following report represents the first record of an event of this kind.

OBSERVATION

The incident took place at a mist net installed as part of a study with White-collared Manakin (*Manacus candei*) on 2 June 2017, on a trail in the riparian forest at the Tirimbina Biological Reserve, La Virgen de Sarapiquí, Heredia, Costa Rica (10°25'N, 84°07'W; 180 masl). At 16:00 h, I found two birds tangled in a mist net, a Semiplumbeous Hawk (Fig. 1) and a female Red-Throated Ant-Tanager (Fig. 2). The ant-tanager was dead and had signs of predation (it had blood on the head and some loose feathers; Fig. 2). Since the

Figure 1. Semiplumbeous Hawk (*Leucopternis semiplumbeus*) tangled in the mist net, Tirimbina Biological Reserve, Costa Rica. (Photo: Sergio Villegas).

Figure 2. Dead Red-Throated Ant-Tanager (*Habia fuscicauda*) with signs of predation highlighted (blood on the head and some loose feathers), Tirimbina Biological Reserve, Costa Rica (Photo: Sergio Villegas).

observation was made after the prey had already been killed and the two individuals were trapped in the mist net, the entire predation event was not recorded. However, nearly three hours before (at 13:15 h) I had seen an individual of Semiplumbeous Hawk perched on a nearby (3 m above the ground) branch of the mist net. After I untangled both individuals, I released the hawk, placed the tanager on the forest floor (away from the site), closed the mist net, and left in order to avoid disturbance.

DISCUSSION

The Semiplumbeous Hawk hunts by dropping onto prey (including birds) from low perches and forages throughout the understory and under the canopy (Stiles and Skutch 1989, Ferguson-Lees and Christie 2001). This could be an opportunistic event in which the hawk was perched and possibly took advantage of the tanager being entangled in the mist net to capture it. This behavior has been recorded in this species before, when an individual flew into a mist net to grasp a small passerine that was trapped (Ferguson-Lees and Christie 2001). However, in this record, at the time the Semiplumbeous Hawk captured the prey, it also got entangled. This opportunistic behavior has been registered in other *Leucopternis* birds (e.g., Komar 2003, Gelis and Greeney 2007), which take advantage of small passerines that are injured or trapped in mist nets (Ferguson-Lees and Christie 2001, Komar 2003, Garske and Andrade 2004).

Likewise, this event could have been favored by the fact that both predator and prey share a similar habitat, as they are fairly common in Caribbean lowlands and foothills, being also found at similar altitudinal ranges in Costa Rica (Stiles and Skutch 1989, Garrigues and Dean 2014). Moreover, Red-throated Ant-Tanagers sometimes participate in army ant raids and it is known that the Semiplumbeous Hawk can attack birds that are following army ants (Stiles and Skutch 1989, Ferguson-Lees and Christie 2001).

This evidence on the predation of a Red-throated Ant-Tanager by a Semiplumbeous Hawk contributes to the knowledge about its natural history, as few studies exist on its diet, being this the first where a predated bird is identified at the genera or species level. Therefore, this record allows for a better understanding of the feeding habits of this bird of prey.

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LITERATURE CITED

Alonso JÁ, Alván JD and Shany N (2012) Avifauna de la Reserva Nacional Allpahuayo Mishana, Loreto, Perú. *Cotinga* 34:132-152

Bierregaard RO, Boesman PFD and Marks JS (2020) Semiplumbeous Hawk (*Leucopternis semiplumbeus*). Version 1.0. in del Hoyo J, Elliott A, Sargatal J, Christie DA and de Juana E (eds) Birds of the World. Cornell Lab of Ornithology, Ithaca

BirdLife International (2020) Species factsheet: *Habia fuscicauda*. BirdLife International (URL: http://datazone.birdlife.org/species/factsheet/red-throated-ant-tanager-habia-fuscicauda)

Chiver I and Morton ES (2020) Red-throated Ant-Tanager (*Habia fuscicauda*). Version 1.0. in Schulenberg TS (ed) Birds of the World. Cornell Lab of Ornithology, Ithaca

Ferguson-Lees J and Christie DA (2001) *Raptors of the world*. Christopher Helm, London

Fierro-Calderón KF, Estela A and Chacón-Ulloa P (2006) Observaciones sobre las dietas de algunas aves de la Cordillera Oriental de Colombia a partir del análisis de contenidos estomacales. Ornitología Colombiana 4:6-15

Garrigues R and Dean R (2014) The birds of Costa Rica: A field guide. Second Edition. A Zona Tropical Publication, New York

Garske CEDS and Andrade VAD (2004) Observações e capturas de Leucopternis lacernulata (Accipitridae) na Ilha da Marambaia, litoral sul do estado do Rio de Janeiro, Brasil. Ararajuba 12:1-2

Gelis RA and Greeney HF (2007) Nesting of Barred Hawk (Leucopternis princeps) in northeast Ecuador. Ornitología Neotropical 18:607-612

Granzinolli MAM and Motta-Junior JC (2007) Feeding ecology of the White-tailed Hawk (Buteo albicaudatus) in south-eastern Brazil. Emu 107:214-222

Komar O (2003) Predation on birds by the White Hawk (Leucopternis albicollis). Ornitología Neotropical 14:541-543

Kushlan JA (1979) Feeding ecology and prey selection in the White Ibis. Condor 81:376-389

Menezes JC and Marini MÂ (2017) Predators of bird nests in the Neotropics: a review. Journal of Field Ornithology 88:99-114

Sih, A and Christensen B(2001) Optimal diet theory: when does it work, and when and why does it fail? Animal Behaviour 61:379-390

SINAC (Sistema Nacional de Áreas de Conservación) (2017) Listado de especies de fauna silvestre en peligro de extinción (R- SINAC-CONAC-092-2017). Sistema Nacional de Áreas de Conservación, San José

Stiles FG and Skutch AF (1989) A Guide to the Birds of Costa Rica. Cornell University Press, Ithaca

Visco DM and Sherry TW (2015) Increased abundance, but reduced nest predation in the chestnut-backed antbird in costa rican rainforest fragments: surprising impacts of a pervasive snake species. Biological Conservation 188:22-31

Willis E (1961) A study of nesting ant-tanagers in British Honduras. Condor 63:479-503