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Authors: Lledo-Ferrer, Y., Hidalgo, A., Heymann, E. W., and Peláez, F.

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FIELD OBSERVATION OF PREDATION OF A SLATE-COLORED HAWK, *LEUCOPTERNIS SCHISTACEA*, ON A JUVENILE SADDLE-BACK TAMARIN, *SAGUINUS FUSCICOLLIS*

Lledo-Ferrer, Y.
Hidalgo, A.
Heymann, E.W.
Peláez, F.

Due to their small body size, callithrichines are probably subject to high predation pressure; in fact, it may be an important factor shaping their cooperative social systems (Caine, 1993). However, predation events are difficult to observe, and published reports are still scarce (Hart, 2007; Ferrari, 2009). While a number of predators of tamarins have been identified (see Table 1), other potential predators may still remain unknown. Here we add an additional raptor species, the slate-colored hawk, *Leucopternis schistacea*, to the known predators of callithrichines.

The observation reported here was made at the Estación Biológica Quebrada Blanco (EBQB), north-eastern Peru (see Heymann (1995) for details of the study site). A moderately habituated mixed-species troop of 11 saddle-back tamarins, *Saguinus fuscicollis* (5 adult males, 5 adult females and 1 juvenile) and 7 moustached tamarins, *Saguinus mystax* (3 males, 4 females and 1 carried infant), was followed by the second author between 7 and 14 April 2008 to collect fecal samples from the saddle-back tamarins.

On 11 April 2008, at 1000 h, both tamarin species were feeding in a *Protium* spp. tree at about 30 m height. Suddenly, a slate-colored hawk, *Leucopternis schistacea*, flew in and caught a juvenile saddle-back tamarin that was standing without feeding on an exposed branch, lower than the rest of the group. With the prey in its talons, the hawk flew to a nearby tree where it perched at about 30 m height and started to feed on the tamarin. Both saddle-back and moustached tamarins left the *Protium* tree and surrounded the tree where the hawk perched; they vocalized intensely while

climbing up and down the tree trunks between 10–20 m. After about one hour, the hawk left with the remains of its prey. The saddle-back tamarins moved c. 200 m and rested for about 2 hours in a tree at about 30 m height. The moustached tamarins travelled into a different direction before being lost by the observers. The saddle-back tamarins entered a sleeping tree at 1650 h. On the following day, 12 April, the saddle-backs left their sleeping tree at 0530 h, moved only about 20 m and then rested until 0900 h. Afterwards, they travelled for the rest of the day, were very difficult to follow, behaved nervously, giving more alarm calls as usual, and increasing their vigilance and went down to about 8 m upon hearing any of the usual noises of the forest. They did not long call until about 1400 h. At that time, they started long calling which ceased when the moustached tamarin arrived and the two tamarin species re-established their association. The group entered a sleeping tree at 1640 h.

On 13 April, the saddle-back tamarins left their sleeping tree at 0620 h. They emitted very few vocalizations and travelled very high in the trees, about 50 m apart from the moustached tamarins, feeding in the same trees but not simultaneously. They entered their sleeping tree at 1640 h. On the next day that the group was followed (16 April) and subsequently (26–29 April) the tamarins seemed to behave normally.

This is the first documented attack of a slate-coloured hawk on callithrichines or any other New World primate (Ferrari, 2009). These medium-sized hawks (bill-tip to tail-tip: 41–43 cm; (Hilty and Brown 1986)) are dietary generalists, usually feeding upon large arthropods and small vertebrates (Robinson, 1994). Thus, tamarins, at least juveniles, fall into the range of potential prey. Peres (1993) considered this species as a potential predator for tamarins and observed alarm calling by moustached tamarins in response to the related *Leucopternis kuhli* and *Leucopternis albicollis*, but did not actually observe any attacks. Our observation confirms Peres' (1993) hypothesis and expands the list of known raptorial predators of tamarins. After the attack, the tamarins followed the raptor and vocalized, as was

Table 1. Predation and predation attempts on tamarins

Predator	References
Raptors	Bicolored hawk, <i>Accipiter bicolor</i> (Terborgh, 1983)
	Ornate hawk-eagle, <i>Spizaetus ornatus</i> (Terborgh, 1983; Robinson, 1994)
	Barred forest-falcon, <i>Micrastur ruficollis</i> (Izawa, 1978)
	Red-throated caracara, <i>Daptrius americanus</i> (Ramirez, 1989)
	Crested eagle, <i>Morphnus guianensis</i> (Oversluijs Vasquez and Heymann, 2001)
	Harpy eagle, <i>Harpia harpyja</i> (Ney Shahuano Tello, pers. comm.)
Reptiles	Anaconda, <i>Eunectes murinus</i> (Heymann, 1987)
	Boa constrictor (Shahuano Tello <i>et al.</i> , 2002)
Mammals	Tayra, <i>Eira barbara</i> (Moynihan, 1970; Goldizen, 1987b; Snowdon and Soini, 1988)
	Ocelot, <i>Felis pardalis</i> (Moynihan, 1970; Goldizen, 1987b; Snowdon and Soini, 1988)

also observed after successful attacks by a Guianan crested eagle, *Morphnus guianensis*, on juveniles from both tamarin species (Oversluijs Vasquez and Heymann, 2001). In contrast to previous observations where the tamarins remained very low in the forest after an attack (Heymann, 1990), in the case described here, the tamarins stayed high up in the canopy, even resting there, in the hours after the attack. However, the next day the saddle-back tamarins behaved more nervously and descended in response to various noises, although they remained at higher levels than those at which saddle-back tamarins are usually most active, i.e. below 6–7 m. This may be due to the lower degree of habituation of this group in comparison to other saddle-back tamarin groups that have been under observation for longer periods at the same study site.

Even if unsuccessful (Heymann, 1990; Peres, 1993), attacks from avian predators may strongly influence the behavior of the tamarins in the days following the attack. In our observations, the group became more cryptic and alert, resting more often and for longer periods and traveling at lower strata. This is in contrast to a snake attack on moustached tamarins, in which case the group continued on with its normal activities (Shahuano Tello *et al.*, 2002). This may reflect the difference between aerial and terrestrial predators, the former being much more unpredictable, and thus representing a higher risk throughout the home range, even if previously detected. All successful predation events observed at EBQB involved non-adult tamarins of both species. This highlights the vulnerability of young tamarins that may not yet have developed the full array of anti-predator strategies of adults (vigilance, avoiding exposed positions, etc.). Successful mobbing was reported after the attack of a *Boa constrictor* at EBQB (Shahuano Tello *et al.*, 2002). In this and our own observations, both species of tamarins tried to mob the predator. Again, this strategy seems to depend on the type of predator involved. For avian predators, mobbing has no effect, as they are able to fly away for long distances, out of reach of the mobbers (Oversluijs Vasquez and Heymann, 2001), while snakes may not move away rapidly, and even can be attacked by the mobbers (Shahuano Tello *et al.*, 2002). In our case the hawk remained in the same place while consuming its prey, and mobbing had no effect on it.

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Lledo-Ferrer, Y., Abteilung Verhaltensökologie & Soziobiologie, Deutsches Primatenzentrum, Göttingen, Germany, and Departamento de Psicología Biológica y de la Salud, Universidad Autónoma de Madrid, España, e-mail: <yvan.lledo@uam.es>, **Hidalgo, A.**, Caserio Diamante – 7 de Julio, Río Tahuayo, Loreto, Perú, **Heymann, E.W.**, Abteilung Verhaltensökologie & Soziobiologie, Deutsches Primatenzentrum, Göttingen, Germany, and **Peláez, F.**, Departamento de Psicología Biológica y de la Salud, Universidad Autónoma de Madrid, España.

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News

PRIMATE MORPHOLOGY ONLINE (PRIMO)

The PRIMO (Primate Morphology Online) database is back online at <http://primo.nycep.org>. PRIMO is a resource for researchers who use metrical (including 3D) data to study aspects of primate morphology and evolution. It permits downloading of data on dentitions, crania and postcrania, mainly of cercopithecids, with nearly 8000 individuals in the database. For more information go to the web site above.

Eric Delson

THE MONKEY SANCTUARY TRUST CHANGES ITS NAME

“Wild Futures” is the new name for The Monkey Sanctuary Trust; a change which reflects its charity’s growing influence in the world of conservation, education, habitat protection and primate welfare. The change in the name does not mean a move away from the work we have championed for decades, and The Monkey Sanctuary, will still exist as a flagship project of Wild Futures. By becoming Wild Futures we aim to raise our profile in national and international circles, thus increasing revenue and creating opportunities to direct funding to where it is most needed in the key areas of our work. For more information visit the new website www.wildfutures.org.

Rachel Hevesi

NUEVA MESA DIRECTIVA ASOCIACIÓN MEXICANA DE PRIMATOLOGÍA

Durante el VI Congreso Mexicano de Primatología, llevado a cabo en Junio 2009, se presentó la nueva mesa directiva de la AMP para el periodo 2009–2012; conformada por Gabriel Ramos Fernández – Presidente (ramosfer@alumni.upenn.edu), Pedro Americo Dias – Secretario, Cristina Domingo Balcells – Tesorero, Victor Arroyo Rodríguez – Coord. Editorial (arroyov@correo.oikos.unam.mx). En este mismo evento, dicha mesa directiva presentó el plan de trabajo 2009–2012, con el cual se pretende colocar a la AMP como un factor de unión entre los primatólogos en México, promoviendo la excelencia académica, incidiendo sobre las políticas públicas e iniciativas de conservación del hábitat de los primates en México. Para más información visitar <http://primates-amp.org.mx/index.php>

SAVE THE GOLDEN LION TAMARIN

To honor Devra Kleiman, the foundation Save the Golden Lion Tamarin is creating the *Devra Kleiman Fund to Save the Golden Lion Tamarin* - the fund Devra proposed before her death April 29, 2010. All contributions to the fund will go to support the conservation work for golden lion Tamarins in Brazil, assuring the work Devra dedicated herself to for 40 years will continue to save golden lion tamarins in perpetuity. Contributions can be made online at www.SaveTheLionTamarin.org

PUBLICACIÓN DEL SEGUNDO CAMP PARA PRIMATES MEXICANOS

El reporte final del segundo taller para la conservación análisis y manejo planificado (CAMP) para primates mexicanos se publicó el pasado 16 de abril de 2010, en la página web del Grupo Especialista en Conservación y Cría (CBSG) de la UICN. Los objetivos principales del taller fueron actualizar el estatus de cada especie y realizar las recomendaciones de conservación pertinentes, así como evaluar el impacto del primer taller, llevado a cabo en 1995, sobre la conservación de los primates a once años de su realización. Se evaluaron las cuatro subespecies presentes en el país: *Ateles geoffroyi yucatanensis*, *Ateles geoffroyi vellerosus*, *Alouatta palliata mexicana* y *Alouatta pigra* ubicándolas dentro de las categorías de riesgo de la Lista Roja de la UICN. En el reporte final del taller se incluye información relevante acerca de las principales amenazas que enfrentan estas especies, la influencia de las políticas públicas en los mecanismos de transformación del hábitat, así como el papel de las universidades y centros de investigación en la conservación de ellas. El documento completo del taller se encuentra disponible en <http://www.cbgs.org/cbgs/workshopreports/display.asp?catid=24>.