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## Observations of Intraspecific Aggression in Giant Anteaters (*Myrmecophaga tridactyla*)

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Giant anteaters (*Myrmecophaga tridactyla*) are wide-ranging, typically solitary animals. Interactions between conspecifics are rarely witnessed, and aggressive behavior has only been described twice before in the recent scientific literature (Shaw *et al.*, 1987; Rocha and Mourão, 2006).

In northeastern Roraima, Brazil (02°49'N, 60°39'W), small plantations of the non-native *Acacia mangium* (black wattle) are readily accepted as foraging habitat by giant anteaters. This creates unusual population densities in these artificially forested areas (Kreutz, 2007), and due to the greater opportunity for intraspecific encounters, it provides excellent conditions for the study of social interactions.

On 5 December 2005 one of us (KK) was observing a single foraging anteater when it suddenly halted and ran away. This was an unexpected behavior: When becoming aware of a potential threat, anteaters usually assess the situation by raising their head to scent the air and eventually flee subsequently. Even though there was no major disturbance, the animal did nothing of that sort, but suddenly ran into the understory and vanished from sight after approximately 30 meters. A few moments later it entered the forestry track close to the observer, chasing another anteater (Fig. 1a). The two animals re-entered the understory after another 20 meters and were soon out of earshot. During the next five minutes the animals twice came into sight, and then remained on the forest track, running alongside the plantation border. This time the observer followed them in full stride for about 1.7 km, which they did not notice (or at least did not react to), until they finally entered an open part of the plantations.

When one of us (KK) arrived some 30 seconds later they were already involved in intense fighting, which allowed approaching and observing the scene from close up. By that time the animals were wrestling on the ground, each trying to pin the opponent's limbs and to wound thorax, abdomen or the extremity directly (Fig. 1b). One apparent tactic was to secure this extremity with one forepaw while attacking the inner side of the elbow-joint with the claws of the free paw. The animals were not randomly slashing at each other, but making well-aimed attacks trying to penetrate sensitive points with their claws.

Several times they interrupted their combat to circle each other, roaring and grunting, threatening each other with head- and claw-lifting postures (Figs. 1c, 1d). During these interruptions two very different roles became obvious: the original pursuer, evidently dominant, stood on all four legs with its tail piloerected and carried high. It pranced aggressively on its forelegs, occasionally showing the broad side and wagging its brushy tail. Meanwhile, the other animal sat on its haunches and kept its tail flattened on the ground, continuously screaming and roaring.

There were perhaps five such interruptions during which the dominant animal would retreat further each time, but always return to deliver heavy blows with its foreclaws and begin fighting again. Interestingly, after the fifth interruption the original pursuer (the apparent victor) left the scene, leaving behind its exhausted and heavily bleeding opponent. In contrast to the ritual fights witnessed by Shaw *et al.* (1987) and Rocha and Mourão (2006), this fight left serious marks on both animals.

The entire encounter had lasted approximately 20 minutes. It was not possible to identify the cause or purpose of the fight, nor the gender of the combatants. Further studies on the territoriality of the species will be necessary to improve our understanding of the triggers and potential function of this intense aggression in giant anteaters.

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a



b



c



d

**Figure 1.** Aggressive interactions between two giant anteaters. The initial pursuit (a) was followed by a wrestling phase (b) with interruptions of posing and beating (c & d). Note the piloerection of the pursuer's tail during the chase and the particularly flat hair and tail of the other animal (a & d).