NOTA

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# Mechanical cattle: lawn mower attracts the Smooth-billed Ani (*Crotophaga ani*) and an assemblage of bird opportunists in southeastern Brazil

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**RESUMO: Gado mecânico: cortador de grama atrai o anu-preto (*Crotophaga ani*) e um conjunto de aves oportunistas.** A associação entre anus-pretos e gado pastando é uma cena comum em áreas rurais. Em ambientes urbanizados, esta ave se associa a segadores (operadores de máquinas de segar) que, do mesmo modo que o gado, espantam insetos com sua atividade. Apresento aqui uma breve descrição da atividade alimentar do anu-preto e de um conjunto de nove espécies de aves que aproveitaram a atividade de um segador ao longo de quatro manhãs. Duas espécies insetívoras e uma onívora foram seguidores habituais do segador, embora os anus fossem os que mais se aproximassem da segadeira em atividade. Após o primeiro dia, quando a vegetação segada começou a murchar e secar, um conjunto maior de aves, incluindo as granívoras, iniciou sua atividade alimentar. A semelhança entre o efeito que gado pastando e segadores se deslocando têm para as aves é notada, pois ambos os tipos de agentes expõem alimento mais difícil de obter em vegetação intocada. Todas as aves registradas vivem em áreas abertas, o que favorece a sua presença em áreas urbanas.

**PALAVRAS-CHAVE:** Associação alimentar, ambientes urbanos, ajustes comportamentais, aves oportunistas.

**KEY-WORDS:** Feeding association, urban habitats, behavioural adjustments, opportunistic birds.

The association between Smooth-billed Anis (*Crotophaga ani*) and grazing cattle is a common scene in rural and even suburban habitats throughout this bird's range (Payne 1997, Sick 1997, Quinn and Startek-Foote 2000). In urban habitats the anis follow people operating lawn mowers, which have an effect similar to cattle in stirring insects in the course of this activity (Quinn and Startek-Foote 2000).

I present here a brief description of the feeding activity of the Smooth-billed Ani and an assemblage of nine additional birds that capitalized on the activity of a mower in an urban park in the course of four consecutive mornings. The increase of the mowed area and the drying vegetation caused the assemblage gradually increasing in species richness. The similarity between the activity of cattle and mowers as related to some foraging insectivorous birds is commented upon.

Records were made at the urban park "Parque Ecológico Prof. Hermógenes F. Leitão Filho" (22°48'64"S, 47°04'50"W), Campinas, São Paulo, southeastern Brazil (*see* Sazima 2007 for a brief description of the study site). The birds were observed with naked eye, through binoculars, and a 70-300 mm photographic autofocus camera lens at a distance of 2-5 m on four consecutive mornings between 0745 h and 1205 h on 18 to 21 April 2007. Another observation of the same situation was made on three non-consecutive mornings between 02 and 11 May of the same year, yielding similar results (most notably related to activity of the principal mower followers). "Ad libitum" and "behaviour" sampling rules (Martin and Bateson 1986) were used throughout observational sessions that lasted 20 to 65min, totalling 475 min. A series of digital photographs was taken to analyse the birds' behaviour, and to voucher the observations.

Ten bird species distributed in seven families were recorded at the mowed places (Table 1). Three species were following the mower and/or foraged on the freshly cut grass on day 1; this number doubled on day 2, when the grass was already drying, and on days 3 and 4 the initial number increased three-fold (Table 2). Two insectivorous and an omnivorous species were habitually following the mower on all or most of the four days; after the first mowing day, the grass began to dry and attracted insectivorous and granivorous birds as well. In the last two days the bird assemblage included insectivores and granivores in almost equal or equal numbers, as well as omnivores (Table 2).

Smooth-billed Anis were unafraid enough to approach the mower while the vegetation was still being cut, thus capitalizing on the stirred insects as the machine

**TABLE 1:** Birds attracted to mowing activity over four consecutive mornings in an urban park at Campinas, São Paulo, southeastern Brazil. Sequence of families follows the CBRO (2008), genera and species in alphabetical order. Days refer to a particular day of the four consecutive mornings in which that species was recorded.

| Bird species | Main feeding habits | Foraging sites | Days |
|---|---|---|---|
| Columbidae | | | |
| *Columbina talpacoti* | Granivorous | Drying grass | 3-4 |
| *Zenaida auriculata* | Granivorous | Drying grass | 2-4 |
| Cuculidae | | | |
| *Crotophaga ani* | Insectivorous | Still mowed or freshly cut grass | 1-4 |
| Furnariidae | | | |
| *Furnarius rufus* | Insectivorous | Freshly cut and drying grass | 2-4 |
| Tyrannidae | | | |
| *Fluvicola nengeta* | Insectivorous | Freshly cut and drying grass | 4 |
| *Machetornis rixosa* | Insectivorous | Freshly cut and drying grass | 1-4 |
| *Pitangus sulphuratus* | Omnivorous | Freshly cut and drying grass | 3-4 |
| Mimidae | | | |
| *Mimus saturninus* | Omnivorous | Freshly cut and drying grass | 1-3 |
| Emberizidae | | | |
| *Zonotrichia capensis* | Granivorous | Drying grass | 3-4 |
| Icteridae | | | |
| *Molothrus bonariensis* | Granivorous | Drying grass | 2-4 |

**TABLE 2:** Birds attracted to mowing activity over four consecutive mornings in an urban park at Campinas, São Paulo, southeastern Brazil. Sequence of species follows Table 1.

| | Bird Species |
|---|---|
| Day 1 | *Crotophaga ani* |
| | *Machetornis rixosa* |
| | *Mimus saturninus* |
| Day 2 | *Zenaida auriculata* |
| | *Crotophaga ani* |
| | *Furnarius rufus* |
| | *Machetornis rixosa* |
| | *Mimus saturninus* |
| | *Molothrus bonariensis* |
| Day 3 | *Columbina talpacoti* |
| | *Zenaida auriculata* |
| | *Crotophaga ani* |
| | *Furnarius rufus* |
| | *Machetornis rixosa* |
| | *Pitangus sulphuratus* |
| | *Mimus saturninus* |
| | *Zonotrichia capensis* |
| | *Molothrus bonariensis* |
| Day 4 | *Columbina talpacoti* |
| | *Zenaida auriculata* |
| | *Crotophaga ani* |
| | *Furnarius rufus* |
| | *Fluvicola nengeta* |
| | *Machetornis rixosa* |
| | *Pitangus sulphuratus* |
| | *Zonotrichia capensis* |
| | *Molothrus bonariensis* |

moved in front of the birds (Figure 1). Besides staying close to the moving mower in a characteristic upright posture and alert to stirred insects, the anis also inspected the already cut vegetation (Figure 2) and foraged on insects at the cleared areas. The Cattle Tyrant (*Machetornis rixosa*) and the Chalk-browed Mockingbird (*Mimus saturninus*) also followed the mower, although they never came as close to the machine as the anis did. None of the remaining birds followed the mower, although they took advantage of the freshly cut or drying vegetation to forage (Figure 3). In the absence of mowing activity or when the mowed areas were older than a week, the birds were scattered in various habitats and there were no such aggregations of foraging birds at the study site, although no quantitative data are available.

From the behavioural viewpoint, following cattle and following mowers may be deemed similar for the birds that customarily follow the former. Both the cattle and the mower stir insects while grazing/mowing and thus create an opportunity for the birds to capitalize on this now more easily accessible food resource (Quinn and Startek-Foote 2000, present study). However, the follower birds, especially the Smooth-billed Ani, should habituate to the mower, who, in its turn, should not pose immediate risk for the foraging birds. This would be accomplished by a careful and tolerant (or even good-natured) machine operator, which was the case in the present study. This situation set, the birds would learn that the mower yields a profitable and relatively risk-free feeding opportunity, and would associate mowing activity with foraging possibilities.

The ani, the tyrant, and the mockingbird display variable foraging behaviour, the latter having the widest diet (Argel-de-Oliveira 1989, Sick 1997, Gabriel and Pizo 2005). Additionally, the two former birds habitually associate with grazing cattle and other ungulates (Sick 1997). Two other birds, the Great Kiskadee and the Rufous Hornero are opportunistic foragers as well (Sick 1997, Remsen 2003, Gabriel and Pizo 2005) and their presence at the mowed areas would not come as a surprise. The same may be said – although with a narrower diet – about the cowbird and the sparrow, which are habitually seen on mowed or freshly cut areas (Sick 1997, Jaramillo and Burke 1999). Both dove species usually forage on areas with low vegetation or in the open (Sick 1997), and thus their presence in newly cleared areas is to be expected. Several insectivorous bird species are attracted to newly mown pastures and freshly cut hay, as these situations increase food accessibility, and thus


**FIGURES 1-3:** (**1**) Three Smooth-billed Anis (*Crotophaga ani*) forage in close proximity of a worker operating a portable mower; (**2**) a Smooth-billed Ani in freshly cut grass alert to insects stirred by the mower; (**3**) a Ruddy Ground-dove (*Columbina talpacoti*) forages in the drying grass after mowing.

favour the exploitation of such sites by these birds (*e.g.*, Devereux *et al.* 2006, Whittingham *et al.* 2008). A similar explanation would apply to seed foraging species such as doves, sparrows, and cowbirds (Sick 1997, present study).

All birds studied here dwell in open areas, a trait that favours their presence in urban areas (Sick 1997). It may be instructive to compare bird assemblages attracted to mowers (or other vegetation-cutting small devices) in urban and rural areas. These latter probably will produce species-richer assemblages and would yield raptorial birds, for instance.

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## REFERENCES

**Argel-de-Oliveira, M. M. (1989)**. *Eco-etologia do sabiá-do-campo* Mimus saturninus *(Lichtenstein, 1823) (Passeriformes, Mimidae) no Estado de São Paulo.* Ph. D. Dissertation. Campinas: Universidade Estadual de Campinas.

**CBRO – Comitê Brasileiro de Registros Ornitológicos. (2008)**. *Lista das aves do Brasil.* Seventh edition, 05/10/2008 < www.cbro.org.br> (last access December 2008).

**Devereux, C. L.; Whittingham, M. J.; Krebs, J. R.; Fernández-Juricic, E. and Vickery, J. A. (2006)**. What attracts birds to newly mown pasture? Decoupling the action of mowing from the provision of short swards. *Ibis,* 148(2):302-306.

**Gabriel, V. A. and Pizo, M. A. (2005)**. Foraging behavior of tyrant flycatchers (Aves, Tyrannidae) in Brazil. *Rev. Bras. Zool.,* 22(4):1072-1077.

**Jaramillo, A. and Burke, P. (1999)**. *New World blackbirds: the icterids.* Princeton: Princeton University Press.

**Martin, P. and Bateson, P. (1986)**. *Measuring behaviour, an introductory guide.* Cambridge: Cambridge University Press.

**Payne, R. B. (1997)**. Family Cuculidae (cuckoos), p. 508-607. In: J. del Hoyo, A. Elliot and J. Sargatal (eds.) *Handbook of the birds of the world.* Vol. 4. Sandgrouses to cuckoos. Barcelona, Lynx Edicions.

**Quinn, J. S. and Startek-Foote, J. M. (2000)**. Smooth-billed ani (*Crotophaga ani*), p. 1-19. In: A. Poole and F. Gill (eds.) *The Birds of North America,* No. 539. Philadelphia: The Birds of North America, Inc. Online edition, doi:10.2173/bna.539.

**Remsen, J. V. (2003)**. Family Furnariidae (ovenbirds), p. 162-357. In: J. del Hoyo, A. Elliot & D. Christie (eds.) *Handbook of the birds of the world.* Vol. 8. Broadbills to tapaculos. Barcelona: Lynx Edicions.

**Sazima, I. (2007)**. Frustrated fisher: geese and tilapia spoil bait-fishing by the Green Heron (*Butorides striata*) in an urban park in southeastern Brazil. *Rev. Bras. Ornitol.,* 15(4):611-614.

**Sick, H. (1997)**. *Ornitologia brasileira, uma introdução.* Rio de Janeiro: Editora Nova Fronteira.

**Whittingham, M. J. and Devereux, C. (2008)**. Changing grass height alters foraging site selection by wintering farmland birds. *Basic Appl. Ecol.,* 9(6):779-788.