CATCHABILITY OF THE WHITE-EARED OPOSSUM, *Didelphis albiventris*, IN A DISTURBED AREA OF SOUTHEASTERN BRAZIL

Emygdio Leite de Araujo Monteiro-Filho
Augusto Shinya Abe

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ABSTRACT: To obtain information about biological aspects of some mammals, is important to know the probability of catch a particular species. Thus, the catchability of White-eared Opossum *Didelphis albiventris* was studied for 18 months in a disturbed area of municipality of Campinas, southeastern Brazil. On the study area which is partially swampy, the effort of catch was 5,112 trapnight. Twenty seven opossums was trapped 95 times, and the catchability was not correlated with climatic variables. Our data show that few opossums are resident, and much are apparently nomad, trapped once or twice. These data was similar to those obtained for others opossums.
KEY WORDS: white-eared opossum, catch, Marsupialia, Didelphidae, *Didelphis*.

CAPTURABILIDADE DO GAMBÁ-DE-ORELHA-BRANCA, *Didelphis albiventris*, EM UMA ÁREA PERTURBADA DO SUDESTE DO BRASIL

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RESUMO: Ao longo de 18 meses o estudo de diferentes aspectos da biologia do gambá-de-orelha-branca, *Didelphis albiventris* foi desenvolvido em uma área perturbada, parcialmente alagada e situada entre pastos de duas fazendas do município de Campinas, no Estado de São Paulo. Relatamos aqui dados referentes à capturabilidade desta espécie, que é o parâmetro fundamental para se obter os dados complementares de dinâmica populacional, biologia reprodutiva sob condições naturais, área de vida e atividade diária, além de informações sobre o hábito alimentar. No período de estudo, o esforço de captura foi de 5.112 armadilhas/noite, resultando em 95 capturas e recapturas de 27 diferentes indivíduos, não havendo correlação entre a capturabilidade dos gambás e as condições climáticas locais. Alguns poucos animais permaneceram por longos períodos na área de estudos, demonstrando ser residentes, ao passo que a maioria permaneceu por pouco tempo aparentando um comportamento nômade, o que parece ser comum para as outras espécies de gambás.
PALAVRAS-CHAVE: gambá-de-orelha-branca, captura, Marsupialia, Didelphidae, *Didelphis*

[1] Biólogo, Mestre, Doutor, Professor Adjunto do Departamento de Zoologia, Universidade Federal do Paraná – UFPR, Caixa Postal 19020 – 81531-970 – Curitiba - PR – Brasil. elamf@bio.ufpr.br
[2] Biólogo, Livre Docente, Professor Titular do Departamento de Zoologia, Universidade Estadual Paulista - UNESP, Caixa Postal 199 – 13506-900 – Rio Claro - SP – Brasil. asabe@life.ibc.unesp.br

CAPTURABILIDADE DE LA COMADREJA OVERA, *Didelphis albiventris*, EN UNA ÁREA PERTURBADA DEL SUDESTE DEL BRASIL

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RESUMEN: Para obtener informaciones sobre los aspectos biológicos de algunos mamíferos, es importante saber la probabilidad de captura de una especie particular. Así, la capturabilidade de la comadreja overa *Didelphis albiventris* se estudió durante 18 meses en una área perturbada de la municipalidad de Campinas, sudeste del Brasil. En la área de estudio, que es parcialmente pantanosa, el esfuerzo de captura fué de 5.112 trampas/noche. Se entramparon 27 comadrejas 95 veces, y la capturabilidade no se puso en correlación con variables climáticas. Los datos muestram que pocas comadrejas son residentes, y la mayor parte es nómada, sendo entrampada una o dos veces. Estos datos son similares a aquéllos obtenidos para otras comadrejas.

PALABRAS-CLAVE: comadreja overa, captura, Marsupialia, Didelphidae, *Didelphis*.

Introduction

The White-eared Opossum, *Didelphis albiventris*, occurs in South America, ranging from Venezuela to Argentina, through Brazil, Uruguay and Paraguay (VIEIRA, 1955; CABRERA, 1957; EMMONS & FEER, 1997). Despite such a wide geographic distribution, little is known about the biology of this species, and most of the available data are on reproductive biology, reproductive season and litter size (GILMORE, 1943; TYNDALE-BISCOE & MACKENZIE, 1976; VALE *et al.*, 1981; MELLO, 1982; STREILEIN, 1982; CERQUEIRA, 1984). Besides that, data on the biometry are also reported (FONSECA *et al.*, 1982; VAREJÃO & VALLE, 1982).

In order to get data on growing rate, home range, feeding habits, and reproductive cycle, it is necessary to have information about catchability of the species to be studied. In this study, a brief information on capture and recapture of *D. albiventris* in a disturbed area is reported.

Material And Methods

The studied area measured 5.1 hectare and included three physionomically distinct patches: a central permanently flooded patch, with bushy and arboreal trees, a partially swampy terrain covered with *Typha angustipholia* (Typhaceae), and an external border covered by grass. The area belongs to two ranches (Fazenda Argentina and Rancho Isa) at the municipality of Campinas, State of São Paulo (23° S; 47° W), Brazil. Captures were done twice a week with 36 live-traps which were placed around the area, during 18 months. The traps were bait with ripen bananas, that proved to be mostly attractive for opossums (personal observation). Following capture, each opossum was marked by ear perforation (Figure 1), being possible to individualize up to 99 animals with a maximum of two holes in each ear (see MONTEIRO-FILHO, 1987). The ambient temperature on the capture area was recorded with a maximum-minimum thermometer hung 150 cm above the ground level. Climatic data from the area was taken at the meteorological station, at the neighboring ranch Fazenda Santa Elisa, eight km away from the collecting area.

Results And Discussion

An effort of 5,112 trapnight, from June 1984 to November 1985, yielded 95 captures of *D. albiventris* (Figure 2), with a success of 1.87%. A total of 27 individuals was trapped, being 12 of them captured once, and 15 twice or more (Table 1). Some of the opossums remained in the area for up to nine months. There was no correlation between climatic variables (temperature and rain) and catchability at 0.05 level ($P = 0.261$). Catchability was higher in July

1984, April 1985 and May 1985 (Figure 2). Most of individuals new to the studied area were captured on July 1984, April 1985 and May 1985. Out of 27 opossums captured, seven were young with weight lower than 200 g. These young were captured only in October and December 1984 (Figure 2). The high frequency to which some individuals were captured suggests that they might remain in the area, while other apparently wander through the area. This irregular catchability througt the year was similar to the data obtained by CATZEFLIZ *et al.* (1997) in French Guyana. Two females remained in the area for six and nine months, although not at the same time. A similar pattern of transient and resident individuals was also reported for *D. marsupialis* at the region of Teresópolis, State of Rio de Janeiro (DAVIS, 1944; 1945), and in Curitiba, State of Paraná (CÁCERES & MONTEIRO-FILHO, 1998), Brazil, and in Cayenne, French Guiana (ATRAMENTOWICZ, 1986). In such case, some females remained closer to the area where they were first captured. FITCH & SHIRER (1970) found out that *D. virginiana* individuals have many shelters, but stay mostly in a preferred one which is used more frequently than the others. There was no evidence that *D. albiventris* has the same sheltering pattern at the studied area and that the presence of shelters affect the catchability.

The climatic condition influences the mobility of *D. virginiana*, mainly due to the low temperature during the winter that can frozen ears or the tip of the tail of these mammals (McMANUS, 1969). Furthermore, the furs of the opossums have a poor insulation capacity (SCHOLANDER *et al.*, 1950), and the animals remain sheltered during the winter, decreasing the catchability. The winter in Southeastern Brazil is dry and cold, but not enough to reduce the activity of the opossums. Therefore, the catchability may reflect the activity that remains nearly unchanged along the year.

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Table 1. Catch frequency of 27 White-eared Opossums *D. albiventris* in a disturbed area of southeastern Brazil.

Number of catch	Number of opossums catched per class	Frequency (%)
1	12	44,44
2	6	22,22
3	3	11,11
4	-	-
5	-	-
6	-	-
7	-	-
8	1	3,70
9	-	-
10	2	7,40
11	-	-
12	1	3,70
13	-	-
14	-	-
15	1	3,70
16	-	-
17	-	-
18	1	3,70
	N = 27	99,97

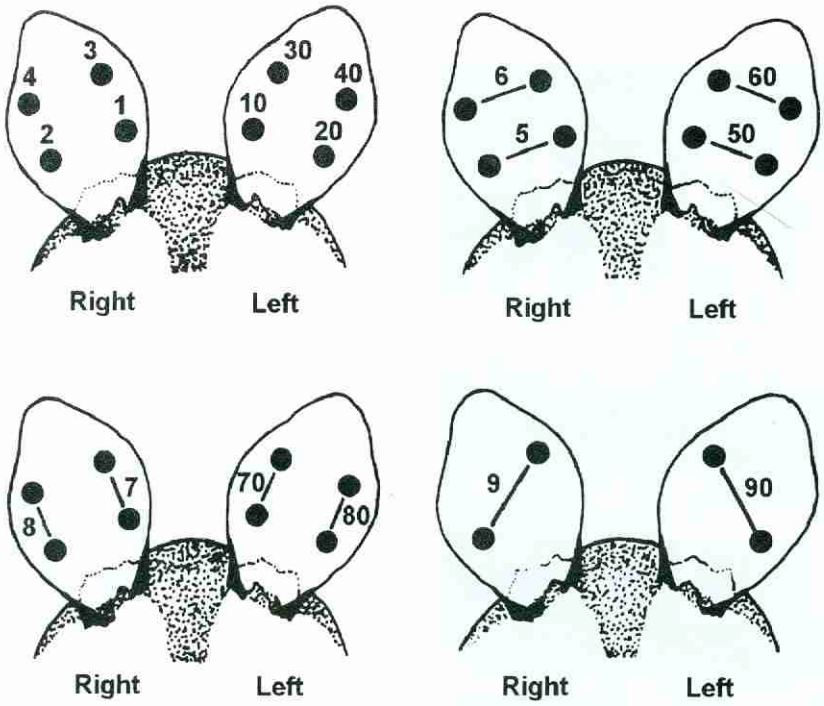

Figure 1. Frontal view of marking system with ear perforation utilized in White-eared Opossum. The numbers in the right ear correspond to units, and the numbers in the left ear refers to a set of ten. (*cf.* MONTEIRO-FILHO, 1987)

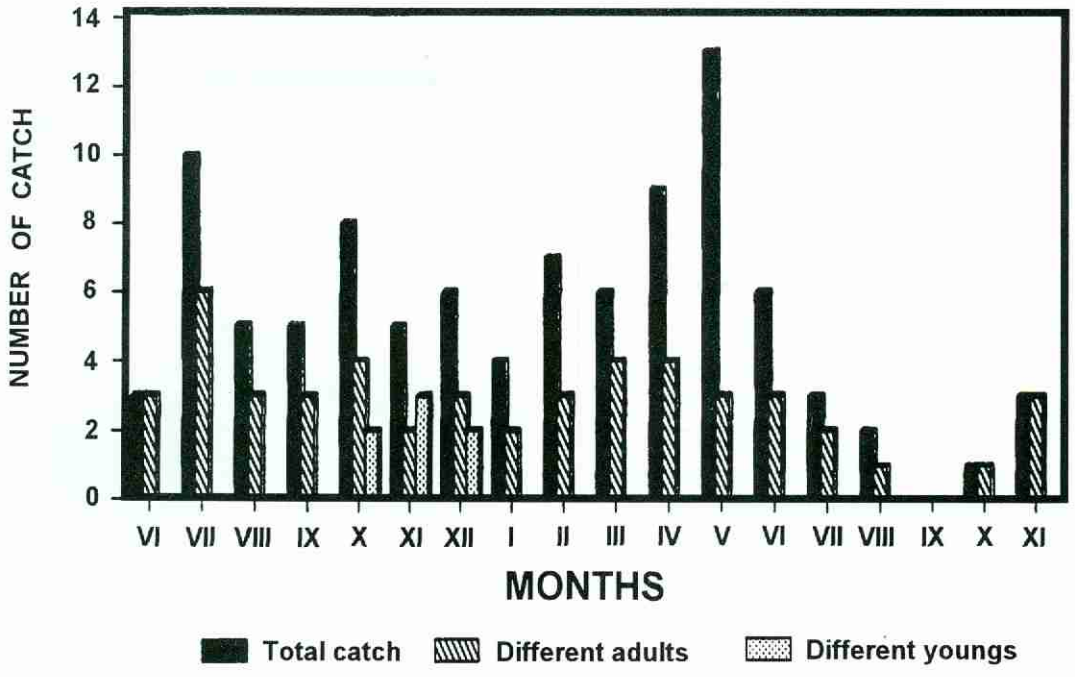

Figure 2. Number of opossums, *Didelphis albiventris*, catched along 18 months (June 1984 to November 1985) in a disturbed area of Campinas, southeastern Brazil.