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ANALYSIS OF DOG AND CAT POPULATION SUBMITTED TO VACCINATION CAMPAIGNS AGAINST RABIES IN A SMALL CITY FROM BRAZIL

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In many developing countries domestic dogs and cats are the most important transmitters of rabies to men. The annual vaccination constitutes an important preventive activity, and the knowledge of animal population profile can assist future prophylatic programs, not just for rabies but also for other infectious diseases and social problems involving dogs and cats. In most Brazilian cities there is no census that can provide these data. One alternative, although limited, is to collect information from the vaccination campaign itself, realized by the public service. The present study aimed to analyze: the number of vaccinated dogs and cats in a small Brazilian city; their sex and reproductive status; and evaluate if there was a decrease in vaccinated animals after two years without campaign. The study was realized in the city of Botucatu (22°53'09"S 48°26'42"W), São Paulo State, Brazil, which comprises an area of 1,482.87 km2, has a human population of approximately 127,370 hab. (last census, 2010), and its dog and cat population are estimated to be 29,197 and 7,542 animals, respectively (Pasteur Institute estimative,2010). Data from the campaigns of 2009 and 2012 were obtained from the records of the Environmental Vigilance Department of the city. The total of vaccinated animals in 2009 was 26,664 (23,755 dogs and 2,909 cats) and in 2012 was 23,584 (20,195 dogs and 3,389 cats). The profile of the vaccinated dog population was as follow: in 2009 – 12,284 females and 11,471 males; 3,966 castrated and 19,789 intact. In 2012 – 10,659 females and 9,563 males; 5,281 castrated and 14,914 intact. The profile of vaccinated cat population was as follow: in 2009 – 1,699 females and 1,192 males; 1,307 castrated and 1,602 intact. In 2012 – 1,907 females and 1482 males; 1,537 castrated and 1,852 intact. The number of females was higher than males for both species and years. The proportion of intact animals was also higher than castrated ones, especially for dogs. These facts shown that the population of dogs and cats submitted to vaccination against rabies has a high proportion of individuals able to breed. This pattern probably also occur in the population of unvaccinated animals. Towards these data, local authorities should be aware of the problematic involving uncontrolled and undesirable reproduction of these species, which involves not just rabies control, but also other aspects of public health. During the years 2010 and 2011 there was no vaccination campaign against rabies in Botucatu. Nevertheless, only a small decrease in the number of vaccinated animals was observed in 2012. This difference is probably not significant, and can be observed among previous years with successive campaigns. Also, during 2012 there was no reinforcement in divulging the campaign against rabies. Thus, despite the two-year interruption of the vaccination campaign, the human population appears to continue to consider it as an important activity.

PT.058
RABIES SEASONALITY IN BATS (Chiroptera, Mammalia) FROM NORTHWEST OF SAO PAULO STATE, BRAZIL

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Rabies is an important zoonosis which has the bats as one of the main reservoirs of the viral agent. In the XXI century still causes huge financial losses to the livestock industry and public health in Latin America, although it is a disease that has prevention, by preventive vaccination in cattle and human populations in risk areas, and post exposition treatment with serum in human beings. Considering the importance of the disease, the objective of this study was to test statistically the correlation between its occurrence in bats and seasonality (rain precipitation) in the northwest of São Paulo, Brazil. To test this hypothesis we used the records of results diagnostic for samples of bats that were sent for examination to the Rabies Laboratory at UNESP (Araçatuba Campus), by health or agriculture teams services of the municipalities in the northwestern region of São Paulo, Brazil. Some samples came from bats found inside the houses or in the streets by the general population or captured by the staff of the Laboratory of Chiroptera, UNESP (Araçatuba Campus), between the years 1999 and 2010, in the same region. The rainfall data were provided by the station of INMET (Institute of Meteorology) Votuporanga in the same period. For statistical analysis the data were grouped in periods of rain (October-March) and dry (April to September), year to year, and we used the Spearman correlation coefficient to test the correlation between rainfall and the occurrence of rabies in bats. The analysis resulted in a negative and significant correlation using the average rainfall during the dry and rainy seasons and the rabies positivity ($p = 0.0185$, $R = -0.477$, $N = 24$). Therefore, the positivity of rabies increases during the dry season. The weak but significant negative correlation between rainfall and the occurrence of rabies suggests that this is one of the factors that affect the temporal distribution of this zoonosis in bats in the northwestern region of São Paulo, Brazil. It is argued here, by hypothesis, that during the dry seas on the dislocation of bat populations from their shelters occurs due to the water scarcity and resources, and also due to the formation of new colonies by young bats that leave their original shelters. These displacements lead to dispersion of the virus to new areas, as well as an increase in the intraspecific and interspecific interactions of bat populations, that will compete for spaces in shelters, and consequently resulting an increased occurrence of rabies in different species. In addition to rainfall, other factors and processes probably affect or determine the distribution and occurrence of rabies, including the availability of shelters and resources, and the methods for control of hematophagous species. Acknowledgments: To the Institute of Meteorology (INMET) for rainfall data. To CNPq for providing scholarships to Pedro WA and Biagi MB.