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RESEARCH ARTICLE

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## ENDANGERED SPECIES: THE CASE STUDY OF CAMPINA GRANDE-BRAZIL

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### ABSTRACT

Throughout the 1981-2021 period, the Brazilian environmental legislation was being structured and updated, so that currently, it is one of the most complete sets of environmental laws in the world. The preservation of fauna, punishing criminal actions practiced by individuals who carry out illegal activities, is based on Laws No. 9605/1998 and No. 5.197/1969. Thus, the objective of this study was to analyze the performance of the Military Police in the protection of endangered species and their ecosystems in the State of Paraíba, in order to support the decision making of the operational bodies of preservation and protection of the environment. It was used by study method - the case study, satisfactorily suitable to answer the subsequent questions to this research. Furthermore, the work proposed here is coated with scientific and social relevance, and may serve as a basis for advances in environmental protection, in combating wild animal trafficking and in ensuring the rights of society to a balanced environment, as well as for other studies in the areas of Environmental Law, Public Security and Natural Resource Management.

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## INTRODUCTION

Participating in the global effort on behalf of the environment, in 1981, Brazil approved its National Environmental Policy (PNMA), with "the objective of preserving, improving and recovering environmental quality conducive to life, aiming to ensure, in the country, conditions for socioeconomic development, the interests of national security and the protection of the dignity of human life" (BRASIL, 1981). In this same normative instrument, the National Environmental System (SISNAMA) was created, responsible for implementing and monitoring the PNMA. In 1988, the Brazilian Federal Constitution, in its Article 225, established that "everyone has the right to an ecologically balanced environment, an asset for common use by the people and essential to a healthy quality of life, imposing on the public authorities and the community the duty to defend and preserve it for present and future generations" (BRASIL, 1988). The Environmental Crimes Law (BRASIL, 1998) and Law no. 5.197 (BRASIL, 1969) that deal with the protection and preservation of our fauna and flora stand out in this set. And since Brazil is a Federative Republic, federal laws, which act as a "general rule", obviously influenced and modified the legislation of the federative units of the country, among which is the environmental legislation of the State of Paraíba. In order to put into practice all the legal norms for the protection and preservation of the environment, in addition to the sectional agencies of SISNAMA (state agencies or entities, responsible for the protection of environmental quality and for the

discipline of the use of environmental resources), the collaboration of several public agencies is necessary. Among these, the Military Police of Paraíba stands out, through the Environmental Police Battalion, headquartered in the capital, João Pessoa, and operating in all municipalities of the state - created by Complementary Law No. 87 of December 2, 2008, which National Security and determines other provisions (PARAÍBA, 2008) - and which is an important piece of state machinery created in order to prevent the practice of environmental crimes. One of the environmental crimes that is currently growing and becoming more specialized is the traffic in wild animals, especially birds. The environmental security in the use and enjoyment of its environmental police power, and based on the principle of supremacy of the social interest over the individual, supported by federal and state legislation, has sought to dissuade the practice of this illegal economic activity on a daily basis. In view of the above, some questions arise: (a) What are the contributions of the National Environmental Security to the defense of endangered species and the ecosystems in which they are located in the State of Paraíba? (b) Is the action of the Environmental Battalion an adequate and sufficient contribution to prevent the practice of environmental crimes, in the Paraíba territory, related to wild animal trafficking? and (c) In terms of legal and operational norms, how could this action be improved?

Thus, this paper, conducting a case study on the performance of The Environmental Security in the defense of endangered species and their ecosystems in the state of Paraíba, will try to answer the above

questions, and will be characterized, as to the research methods, in observational and inductive, as to the purposes, in descriptive and explanatory, and as to the means, in bibliographic and documentary.

**The Public Power and the fight against the traffic of wild animals in the State of Paraíba:** According to the 1st National Report on Wildlife Trafficking (2001), the illegal trade in wildlife, including fauna, flora and their products and by-products, is extremely profitable and is considered the third largest illicit activity in the world, second only to arms trafficking and drug trafficking. The trade in wild-caught animals has always been a deleterious activity for fauna, regardless of being legal or illegal. The trading process, capture techniques, transportation, and handling are generally the same from the beginning until today, and it is even worse because it is currently an illegal activity.

high rates of animal trafficking (SALDANHA; PEIXOTO, 2021). In the case of the Military Police of the State of Paraíba, it has been acting daily in the fight against this type of crime, always aiming at the arrest of the violators of the environmental laws related to the fauna and the rescue of animals threatened with some type of violence. In Table 01 below, we will see the number of animals rescued by the Military Police in 2020 and the number of animals voluntarily surrendered to that institution by their alleged breeders. In the table above, we can see that during the year 2020, approximately 3,551 (three thousand five hundred and fifty-one) animals were rescued or voluntarily surrendered. Regarding the territorial location, the capital João Pessoa was the place where there were more rescued animals, registering in 2020 an amount of 2,635 (two thousand six hundred and thirty-five) rescues.

**Table 1. Number of animals rescued and/or voluntarily surrendered to the Military Police of Paraíba in 2020**

ANIMAIS RESGATADOS E/OU ENTREGUES VOLUNTARIAMENTE													
Subunidade	JAN	FEV	MAR	ABR	MAI	JUN	JUL	AGO	SET	OUT	NOV	DEZ	TOTAL
1ª CPAmb/JP	128	119	127	181	261	197	258	349	269	291	283	172	2635
2ª CPAmb/CG	31	29	31	58	91	15	49	46	42	64	32	89	577
3ª CPAmb/Patos	14	12	2	23	58	35	60	56	41	25	4	9	339
<b>TOTAL</b>	<b>173</b>	<b>160</b>	<b>160</b>	<b>262</b>	<b>410</b>	<b>247</b>	<b>367</b>	<b>451</b>	<b>352</b>	<b>380</b>	<b>319</b>	<b>270</b>	<b>3551</b>

Source: Adapted from the Annual Activity Report (2020) of the Environmental Battalion.

**Table 2. Number of animals seized by the Military Police in 2020**

ANIMAIS APREENDIDOS - 2020													
Subunidade	JAN	FEV	MAR	ABR	MAI	JUN	JUL	AGO	SET	OUT	NOV	DEZ	TOTAL
1ª CPAmb/João Pessoa	37	94	1658	237	322	149	88	487	105	40	161	50	3.428
1ª CPAmb/SUDEMA	0	0	0	13	0	18	0	0	342	1	0	0	374
2ª CPAmb/Campina Grande	82	34	72	252	199	103	104	26	44	23	104	128	1.171
3ª CPAmb/Patos	9	0	20	81	6	44	191	19	30	13	37	20	470
<b>TOTAL</b>	<b>128</b>	<b>128</b>	<b>1.750</b>	<b>583</b>	<b>527</b>	<b>314</b>	<b>383</b>	<b>532</b>	<b>521</b>	<b>77</b>	<b>302</b>	<b>198</b>	<b>5.443</b>

Source: Adapted from the Annual Activity Report (2020) of the Environmental Battalion.



Source: Adapted from the Annual Activity Report (2020) of the Environmental Battalion.

**Photo 2. Record of actions to combat bird trafficking carried out by the Military Police in the year 2020 in the capital city of João Pessoa**

Animals have always been treated in a disrespectful way, seen as mere commodities used as a source of income (RENTAS, 2001). Currently, this illegal activity has been growing, specializing and becoming one of the main environmental and economic problems to be solved in Brazil and in the world (RENTAS, 2001). Among the numerous environmental actions carried out by police officers is the fight against illegal wildlife trafficking, a crime that constitutes a major threat to biodiversity, being one of the most significant factors of fauna destruction, especially in countries like Brazil, which has

An important fact that should be recorded is that, among the animals rescued by the Military Police in 2020, the majority, i.e., 44% (forty-four percent), approximately, are birds. Next, with 36% (thirty-six percent), comes the rescue of reptiles. Finally, with 20% (twenty percent), we will have mammals. In the year 2020, another way to save wild animals was seizing them, as we can see in the Figure. In 2020, as shown in the table above, 5,443 (five thousand four hundred and forty-three) animals were seized in the State of Paraíba, of which 3,428 (three thousand four hundred and twenty-eight) only in the

capital city of João Pessoa. In the city of Campina Grande, 1,171 (one thousand one hundred and seventy-one) animals were seized. In the municipality of Campina Grande, area of operation of the 2nd Environmental Police Company (2nd CPAmb), according to the table below, 197 (one hundred and ninety-seven) animals were rescued in the three open fairs existing in that municipality. The Prata fair was the one that had more actions that resulted in the rescue of captive birds, totaling 106 (one hundred and six) passerines.

**Table 3. Number of animals rescued by the Military Police in Campina Grande in 2020**

NOME DA FEIRA	MUNICÍPIO	QUANTIDADE DE ANIMAIS APREENDIDOS
FEIRA CENTRAL (CG)	CAMPINA GRANDE	61
FEIRA DA PRATA	CAMPINA GRANDE	106
FEIRA LIVRE	SANTA RITA	30
<b>TOTAL</b>		<b>197</b>

Source: Adapted from the Annual Activity Report (2020) of the Environmental Battalion.

Although the city of Campina Grande, as well as other cities in the state of Paraíba, is not included among the cities with major participation in bird trafficking, it is common for birds to be sold in open-air markets, thus showing the presence of a small internal traffic. In the open-air markets, the birds are sold by "travelling salesmen" who take their birds to these places on the busiest days. One of the main points of sale is the Feira da Prata, where there is a real bird fair on Sunday mornings. This fair is the most popularly known, although there is commercialization of birds in the Central Fair, on Saturdays. These public markets are widely known as places of sale of birds by the city's population, even by those who do not usually raise birds, which demonstrates how this activity is culturally widespread. (ROCHA *et al.*, 2014). The activities of sale, resale and exchange of birds move a large trade in the city of Campina Grande. In addition to birds, cages, traps, drinking troughs, food and medicines for birds are sold. Among the species traded, the male specimens are more sought after; females are only captured for reproductive purposes or to stimulate the singing of males at the time of sale, being sold for lower prices. (ROCHA *et al.*, 2014). In 2020, in the State of Paraíba, the Environmental Police Battalion, intensified actions based on the above mentioned laws in order to preserve the Paraíba fauna, managing to save thousands of animals, especially birds, from the places where they were imprisoned, as well as applying criminal and administrative penalties to those who insist on breaking such laws, so that such actions are discouraged.



Source: Adapted from the Annual Activity Report (2020) of the Environmental Battalion

**Figure 1. Bird species most rescued in 2020 by the Military Police**

When observing the species rescued by the military police, the most rescued bird species is the so-called golado (*sporophila albogularis*), with 215 (two hundred and fifteen) birds being returned to nature. Then comes the Red grouse, with 173 (one hundred and seventy-three) birds rescued in 2020. In Campina Grande, 498 (four hundred and ninety-eight) animals were rescued or voluntarily surrendered. Most of these birds are taken to the Wild Animal Sorting Center (CETAS), located in the Restinga de Cabedelo National Forest, city of Cabedelo, PB, which is responsible for the reception, sorting, treatment and destination of wild animals rescued or seized by the

enforcement agencies in several locations in Paraíba, as well as animals delivered by individuals. (PAGANO *et al.*, 2009). In 2020, the Military Police made 95 (ninety-five) arrests of individuals who kept domestic animals in captivity without authorization from the competent authority. Of these, 50 (fifty) occurred in the capital João Pessoa. The 2020 Annual Report on the Activities of the Military Police on its actions in the area of defense and preservation of nature, prepared by the Environmental Police Battalion, states that 334 (three hundred and thirty-four) incidents related to the rescue of wild animals that were illegally held in captivity were dealt with by that specialized operational unit. With regard to the fines issued against lawbreakers who kept wild animals in captivity, mostly birds, the amount of approximately BRL 1,328,000.00 (one million three hundred and twenty-eight thousand reais), out of more than BRL 4 million issued throughout the year resulting from the practice of environmental administrative violations in the State of Paraíba, which corresponded to almost 33% (thirty-three percent) of the total. Some scholars in the economic sciences have dedicated time and effort in order to understand the reasons that would lead a man not to commit crimes or misdemeanors to the detriment of nature, and especially to the detriment of fauna. For COHEN (2000), economists studying firm compliance and deterrence invariably begin with Gary Becker's "optimal penalty" model, a seminal article that asserts that potential offenders respond to both the probability of detection and the severity of punishment if detected and convicted. Thus, continues the brilliant scholar, deterrence can be improved by raising the pen high, increasing monitoring activities to increase the likelihood that the offender will be caught, or changing the law and other rules to increase the likelihood of conviction. Gary Becker's model ultimately leads to an "efficient" level of crime, where the marginal cost of enforcement is equal to the marginal social benefit of crime reduction. Thus, given individual preferences and enforcement technologies, both the crime rate and the level of monitoring and enforcement activities are determined by this model. Thus, the arrests, seizures and the amounts of the fines triggered by the Military Police actions to combat animal trafficking and to maintain public and environmental order, have as a major scope the deterrence of the practice of minor offenses - misdemeanors - and crimes against the environment committed.

## METHODOLOGY

The research in question is a case study, given that the main focus is the analysis of the performance of a particular public security institution in combating bird trafficking. According to Brasnski, R. M *et al.* (2010), the case study methodology is divided into five stages: research design; research design; preparation and data collection; analysis of cases in an individual and comparative way and, finally, the results. Case studies and other qualitative research generally use an intentional direction. As for the suitability of the case study, the issue is verified according to (Yin, 2009) apud Branski (2010) *et al.* that the phenomenon studied, providing the necessary elements to verify the propositions and answer the research questions above. To achieve the objectives proposed here, the observational and bibliographic methods were used because they are considered the first step of a study of any nature and serve as a basis for any area of science. Thus it was verified, from the data collected with in the year 2020, that there is correlation between endangered species (birds) and the itinerary of the legal system. As for the purposes, the research is characterized as descriptive and explanatory, because it exposes characteristics of the Environmental Battalion, belonging to the Paraíba Police, the data reflect information on operations, statistics, tables of the illegal bird trade. It was also collected the quantitative of the actions performed by the Environmental Battalion in the year 2020, in the fight against the forms of threat to ecosystems of Paraíba, especially in relation to the trafficking of birds and their rescue from irregular captivity, establishing correlations between variables and defining their nature, in order to clarify the relationship between legal regulations and operational performance.

## FINAL CONSIDERATIONS

The traffic of wild animals, particularly birds, is one of the most profitable criminal activities. According to the 1st National Report on Wild Animal Trafficking (2020), this type of crime is second only to weapons and drugs trafficking. Birds are the most commonly found animals in the illegal trade due to their preference by traders and to the richness of the avifauna. Worldwide, the bird trade is a very varied industry, moving each year about 44 million dollars. In 2020, approximately 3,551 (three thousand five hundred and fifty-one) animals were rescued or voluntarily surrendered to the Paraíba Military Police, with the month of August being the month in which most situations of this nature occurred, with a record of 451 (four hundred and fifty-one) animals surrendered and/or rescued. With regards to territorial location, the capital city João Pessoa was the place where most animals were rescued, registering an amount of 2,635 (two thousand, six hundred and thirty-five) rescues in 2020. Most animals rescued by the Military Police, that is, 44% (forty-four percent), approximately, are birds. Next, with 36% (thirty-six percent), comes the rescue of reptiles. With regard to seized animals, the Military Police made 95 (ninety-five) arrests of individuals who kept domestic animals in captivity without authorization from the competent authority and 334 (three hundred and thirty-four) incidents related to the rescue of wild animals that were illegally held in captivity were dealt with, resulting in the rescue of 5,443 (five thousand four hundred and forty-three) animals. In terms of fines, a total of BRL 1,328,000.00 (one million three hundred and twenty-eight thousand reais) was imposed. Thus, based on the data above, which were brought to light and quantitatively and qualitatively analyzed, we can infer that the Military Police of Paraíba made a very important contribution to the fight against wild animal trafficking, especially in relation to birds, which are preferred by traffickers, illegal wild animal traders and consumers of this type of merchandise. In other words, the action of the Environmental Police Battalion was an adequate and sufficient contribution to prevent the practice of environmental crimes in the Paraíba territory related to the traffic in wild animals. In order to improve the performance of this specialized unit in environmental policing, we suggest to the public powers the revision of the laws related to the crime of wild animal trafficking, with the increase of the penalties attributed to it, and to the agencies responsible for the defense and preservation of nature, the development of joint action plans to combat this type of criminal environmental offense, each one exercising its legally constituted function, which will certainly contribute to a greater optimization and a better use of the potential of each participating agency in what concerns the dissuasion of individuals to practice such crimes, winning at the end the society and the environment. Finally, it is expected that this work encourages others of its kind, considering that research topics related to endangered species are very important and its vast content should be better explored by the scientific community, thus being impossible to exhaust it completely.

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