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ROLES OF NECROPHAGE PREDATOR BIRDS IN NATURAL AND ANTROPOGENIC ECOSYSTEMS

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Abstract:-This articles discusses “sanitary” roles of Gypsfulvus, Aegyptius Monachus, Gypaetus barbatus and Neophron percnopterus of Falconiformes cluster in natural and anthropogenic ecosystems. It analyses and comments on the role of these necrophage species in decreasing of epizooty sources by eating animal corpses died of various reasons.

Keywords:animals, losses, necrophage birds, corpses, epizooty .

INTRODUCTION

REVIEW OF LITERATURE

It's known that many wild animals and pets die from various causes such as aging, sinking in rivers, falling from hills, traps, traffic accidents, killings by predators, diseases and others. Most corpses of those animals remain in unknown places unattended by vets and hence don't receive salvaging. Moreover, owners of dead animals also dispose them to dumps, ditches and rivers. As a result, those disposal areas of animal corpses become sources of natural spreading of infectious diseases (epizooty). [5].

Animal species including deer, badgers, bears, rabbit, raccoons, foxes, jackals, wolves, bats and small rodents are known as main transmitters of infectious diseases. They spread rabies to pets by biting as well as mouth saliva [4].

Corpses of animals died in the mentioned situations become sources of diseases by remaining out of sight and control of vets.

It is worth noting that number of necrophage birds in Western Africa decreased by 95% last 30 years. This forced the involved countries to take steps to eliminate spreading of fatal diseases caused by animal corpses. However, decisions made in the first Panafrica summit dedicated to protection of scavenger birds have not brought practical results.

Egyptian vulture (Neophron p. Percnopterus, Linn.1758), Eurasian griffon (Gyps fulvus, Hume,1869), cinereous vulture (Aegyptius monachus, Linn.1766) and lammergeier birds (Gypaetus barbatus, Habl.1783) can't hunt and feed themselves with corpses of dead animals. Therefore, these birds are known as “orderlies of nature” [6].

Caucasus region (Russia, Georgia, Armenia, Turkey and Azerbaijan) makes one of the main aeriels of these species. This is related to developed level of cattle breeding which comprises feeding base for necrophage birds (greek. nekrós -corpse and phágos - feeding). Sophisticated mountain reliefs as well as changing climate conditions result in killings of many animas. Those areas of most animal deaths contain residence districts. Hence, unattended animal corpses become sources for

infectious diseases for populations [1,2,3,7].

Considering all discussed we planned to study the 'sanitary' roles of necrophage birds in natural and anthropogenic ecosystems.

MATERIALS AND METHODS

For this purpose an extensive monitoring was conducted in 2013 in Turyanchay State National Park (total area 22488 ha) encompassing 6 provinces (total population of 610 thousand) and in neighboring territories. Number of Egyptian vultures, Eurasian griffons and cinereous vultures in this area is 108-110 during propagation period. Frequent floods on the Turyanchay, Alicanchay, Goychay and Garachay cause killings of wild and pet animals. About 700 thousand pets are kept in the territory of 6 provinces. About 24 wild mammal species live in the National Park territory (*U.arctos*; *P.lotor*; *M.meles*; *F.silvestris*; *F.manul*; *f.lunx*; *S.scrofa* and *ot.*). Often animals grazing on sloppy hills fall and die. Also corpses of pets and wild animals killed by wolves remain in the territory. On the Agdash-Gabal highway many pets and wild animals are killed by transport means.

Monitoring was carried out during July-august period in which necrophage birds intensively feed their babies, propagation of most animals happen and most 'inexperienced' baby birds die. Observations were held by means of visual and optical devices (binoculars, telescopes) by walk and transport (car, horse) on the banks of Turyanchay, Goychay, Garachay, pastures and highways.

OUTCOMES AND DISCUSSION

Within 2 months about 60 animals and bird corpses were found in the national park its surrounding neighborhood. 12 of them were pets, 43 were wild animals and 5 were birds. 36 animals were hit on traffic (15 foxes - *V. Vulpes*; 2 rabbits- *L. Europaeus*; 4 hedgehogs- *E. Concolor*; 3 turtles- *T.graeca*, 5 birds- *M.calandra*, *S.vulgaris*; 7 snakes- *N.tessellata Laurenti*, *Vursini Bonap*), 12 wolves (*Canus lupus*) were trapped, 9 (7 sheep, 1 donkey, 1 dog) were killed by wolves, 2 (1 cow, 1 dog) were drown in river and 1 cow felt from rocks.

80% of death cases (48 times) were of anthropogenic nature, 20% (12 times) were by natural occasions. Anthropogenic reason was due to trapping of wolves (numerous in the area) set by farmers and hitting by transport means. Corpses of the 12 trapped wolves were thrown to scavenger birds. Each wolf corpse was fully eaten by 30-50 birds within 30-40 minutes.

The soft parts of each cow weighing 150-170 kg (during 17-20 July) were fully eaten by 36-108 Egyptian vultures, Eurasian griffons and cinereous vultures within 2-4 hours. The next day total 5-8 birds were found around the remaining bones on ground.

Within two months 15 foxes were hit on the 20 km road passing through the national park, which makes 0.7 fox death for each kilometer.

We observed eating by scavenger birds of those animal corpses hit on the road within 2-3 hours.

During July-August the number of animals increases thanks to newborn babies. At this period, mostly younger, weak and ill animals die compared to older ones. It is explained by the fact that their defense skills and physical conditions are not sufficiently developed and they lack practice. Rodents, wolves, foxes, jackals, flies eating dead animals become carriers of diseases by spreading them to soils, water sources, pastures and forages, thus infecting the environment. In this way, such chain of epizooty 'ensures' lasting and increase of disease spreaders in the nature.

It was clarified that 110 Egyptian vultures, Eurasian griffons and cinereous vultures fully ate animal corpses within 2 days thus preventing emergence of stink and disease sources during hot climate (july-august).

It should be added that residents and pets in Agdas, Goychay and Gabala provinces are provided with water from Turyanchay and Goychay rivers. By eating, in short period of time, the corpses of animals left in rivers, on river bank pastures and roads the necrophage birds act as orderlies in natural and anthropogenic ecosystems.

Considering that most animals carry in their bloods generators of about 50 diseases (i.e plagues, tuberculosis, tularemia, encephalitis, leptospirosis, ornitoz, foot-and-mouth disease,

Brucellosis, Anthrax) and most of those parasites are common for both humans and animals (1) the role of necrophage Egyptian vultures, Eurasian griffons and Cinereous vultures in minimizing epizooty cases and betterment of sanitary and hygienic conditions is important.

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