DISTRIBUTION AND MANAGEMENT CONSIDERATIONS OF RACCOON DOGS AND MASKED PALM CIVETS IN URBAN AREAS IN JAPAN – A CASE STUDY OF KASHIWA CITY, JAPAN –

Ting XUE, GPSS, ID 47-116830
Advisor: Professor Makoto Yokohari
Co-Advisor: Associate Professor Maki Suzuki

ABSTRACT

With the fast urbanization, biodiversity loss and lots of species lost their natural habitat, meanwhile, some species found their new habitat in urban area.

The increasing abundance of coming back wildlife on one side could be thought as a positive signal of urban biodiversity. However, on the same time, the increasing human-wildlife encounters lead to more human-wildlife conflicts happened in urban area. The conflicts include both existing damages (exp. economic loss) and potential risks (exp. outbreak of zoonoses).

According to the previous experience on human-wildlife conflicts in rural areas, without fully understand on the situation and proper management countermeasures, the level-up conflicts could cause negative impacts on both human side (exp. economic loss and outbreak of zoononses) and wildlife side (exp. eradication and unbalance ecosystem).

However, the current policy concern and academic research on human-wildlife conflict issue in urban area is still very limited. Managements base on fully understanding on the current situation of human-wildlife conflict happened in urban area is urgently needed. This study aims to investigate the basic current situation of ecological factors (distribution, presence and abundance of the population) and sociological factors (current politics and how humans respond to their presence and abundance) related to human-wildlife conflict issue in urban area.

A group of medium sized mammals (Japanese Raccoon Dog, *Nyctereutes procyonoides viverrinus*; Masked Palm Civet, *Paguma larvata* ; Raccoon, *Procyon lotor*) have been chosen as the research target, which have high resemblance in terms of appearance, behaviors and niche with each other. The encounters and conflicts between urban residents and these three species have been reported from several areas in Japan.

Kashiwa city (Japan) has been chosen as the study area, which is a representative city of the "satellite" towns of the mega city in Japan.

Camera trap survey, interview survey and questionnaire survey have been conducted in this research during January 2012 to March 2013.

The results of study could suggest that: 1) Distribution: Raccoon dogs and masked palm civets are found in nearly every randomly selected district in Kashiwa city, however, raccoon dogs and masked palm civets abundance and increasing rate might be different. Raccoons are still rare in Kashiwa city. 2) Habitat selection: Raccoon dogs showed preferences on *satoyama* landscape and urban forests (such as forest in the park), while masked palm civets showed preferences on urban land use areas. 3) Human-wildlife conflict: Both raccoon dogs and masked palm civets are causing conflicts with residents in urban areas. However, their different land use preferences, behaviors and available food resources in urban area lead to different types and levels (12% caused by raccoon dogs while 81% caused by masked palm civets) of human-wildlife conflicts.

The current wildlife management policy categorize species into different management methods basically according to they are native or introduced species in Japan and whether they caused agricultural related damages or not, therefore both raccoon dogs and masked palm civets

are in the same category even masked palm civets are considered as introduced species in several academic studies.

Based on the results, this study could provide a new aspect on building the proper categorize standard for wildlife management policy, including the considerations of each species' urban-adaptation ability, land use preference and the potential conflicts/damages they could cause in urban area.

This study will hopefully play a role as an initial step of study on human-wildlife conflict and wildlife management in urban area in Japan, and provide the hints of consideration factors for the further management and policy making process to achieve human-wildlife coexistence in urban area.