

TEMPORAL INTERACTIONS BETWEEN WILD BOAR (*Sus scrofa*) AND OTHER OMNIVOROUS MAMMALS BASED ON CAMERA TRAP IN SHONAI AREA

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ABSTRACT

The wild boar (*Sus scrofa*) has long been a subject to human-wildlife conflict in Japan and their population has grown significantly through the years. In terms of food resources, wild boar shares similar diet pattern with other omnivorous mammals, such as the Japanese racoon dog (*Nyctereutes procyonoides*), Japanese badger (*Meles anakuma*), and Japanese macaque (*Macaca fuscata*). Acquiring a comprehensive understanding of wild boars impacts towards agricultural land as well as other species is an important component in wildlife management. By investigating the activity patterns of wild boars and other omnivorous mammals in Shonai area, it can be inferred whether their interaction is classified as competition or coexistence.

This research was conducted using a total of 32 camera, installed in 8 different sites throughout Shonai area from May until November 2023. Data collected from this research were used to identify seasonal activity patterns and the interspecies interactions between wild boar and other omnivorous mammals based on active time captured with camera traps. Identifying the temporal interactions were conducted through kernel density method to estimate active time of each species, while a resource selection function (RSF) was utilized to specify the interactions between the subjects with environmental factors.

Temporal overlaps were found at highest between wild boar and Japanese badger, particularly during autumn ($\hat{\Delta}_1 = 0.65 - 0.78$). Interactions between wild boar and Japanese raccoon dog showed a quite significant overlap with each season display a moderate to major overlap value ($\hat{\Delta}_1 = 0.64$ to 0.79). The interactions between wild boar and Japanese macaque were hardly detected overall ($\hat{\Delta}_1 = 0.36 - 0.53$). Result from analyses regression of environmental factors pointed out that wild boar was influenced by elevation and land-use and land-cover all year round.

Keywords: wild boar, interactions, camera trap, activity pattern

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