

Invasive Alien Raccoon Species at Ito Campus

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Background/Purpose

Raccoon (*P. lotor*)
Carnivora Procyonidae Procyon

omnivorous
body length: 40-60 cm
body weight: 4-10 kg

Invasive alien species are a threat to biodiversity and one of the challenges in ecosystem conservation. In the SDGs, Goal 15 "Life on Land" clearly states that "halt biodiversity loss." One invasive species that has become **a serious problem in Japan is the raccoon, *Procyon lotor*.**

Problem:

- ①the collapse of biodiversity & the destruction of ecosystems
- ②zoonotic diseases – diseases transmitted from wildlife to people

In order to maintain biodiversity and ecosystems and live safely, it is necessary to monitor their habitat status and engage in extermination efforts.

Although the invasion has already been confirmed in Japan, it is not a stranger in other Asian countries. According to a study that examined the potential niche of raccoon, suitable habitats include East Asia, including the Korean Peninsula and China (Louppe et al., 2019 Sci Reports). If raccoons were introduced to these regions, they could easily be expected to expand their populations. In Fukuoka Prefecture, where Kyushu University is located, the population of raccoons has been increasing, and raccoons have been confirmed at the Ito Campus (Fig.1).

The purpose of this research is to clarify the current raccoon habitat situation in the entire campus area and to consider wildlife management in the campus, an extraordinary environment.

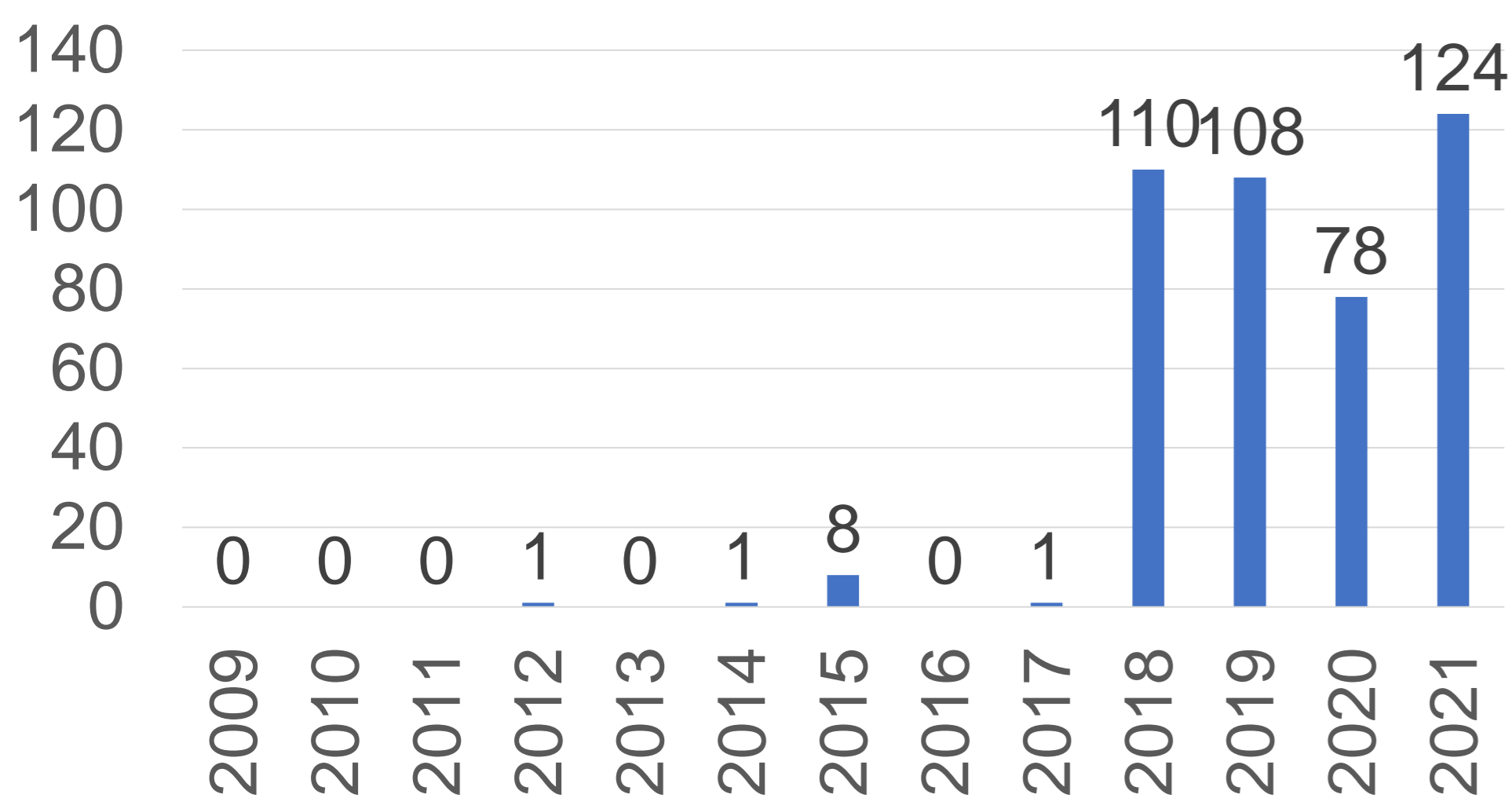
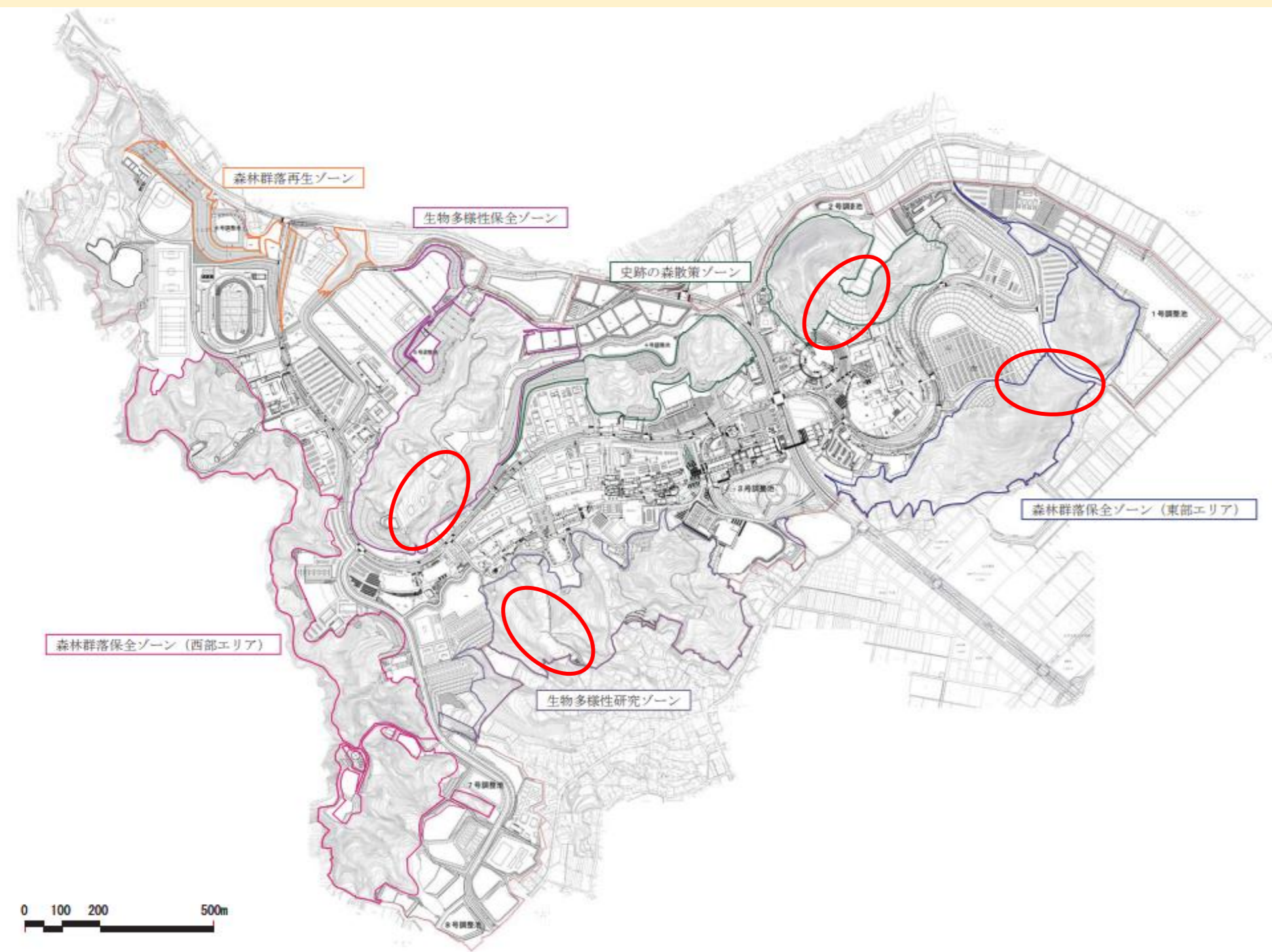


Fig.1 Number of photos (raccoon, 2009-2021)

research by zoology laboratory, faculty of agriculture, Kyushu Univ.

Methods



Survey of Habitat Situation

Install unmanned infrared sensor cameras on the Ito campus to determine the species of animals being photographed, their frequency, etc.

Location: 13 points (1 camera/point)

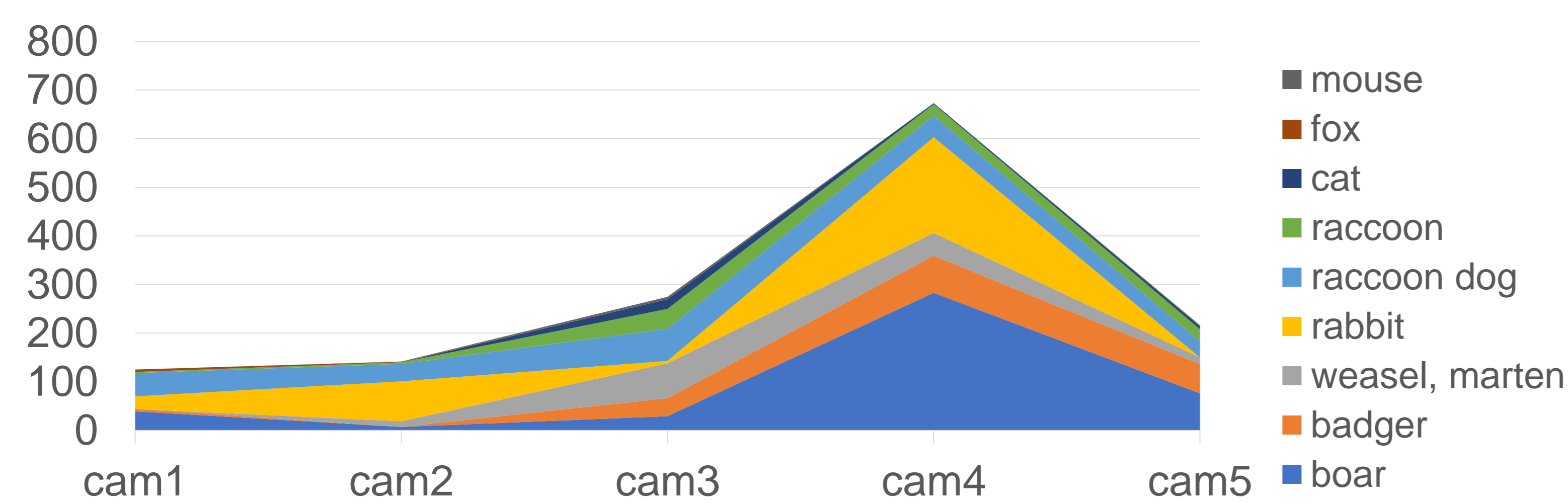
Model: Bushnell TROPHYCAM XLT 32MP, XLT 30MP

Settings: Sensor activation, video recording 10 seconds, sensor interval 1 minute

Installation period: West Zone October 26, 2023 – present

East Zone February 22, 2024 - present

Results



West Zone: confirmed at all 5 sites
East Zone: data is being sorted out

Raccoons are said to use waterside area more frequently than other mammals.

As a result,
Cam2 (by the pond): rarely shot
Cam3 (along the river): frequently shot



Cam2



Cam3

⇒ Even within the waterside area, there are environments that are easy to use and environments that are difficult to use?

Fig.2 Total number of shots

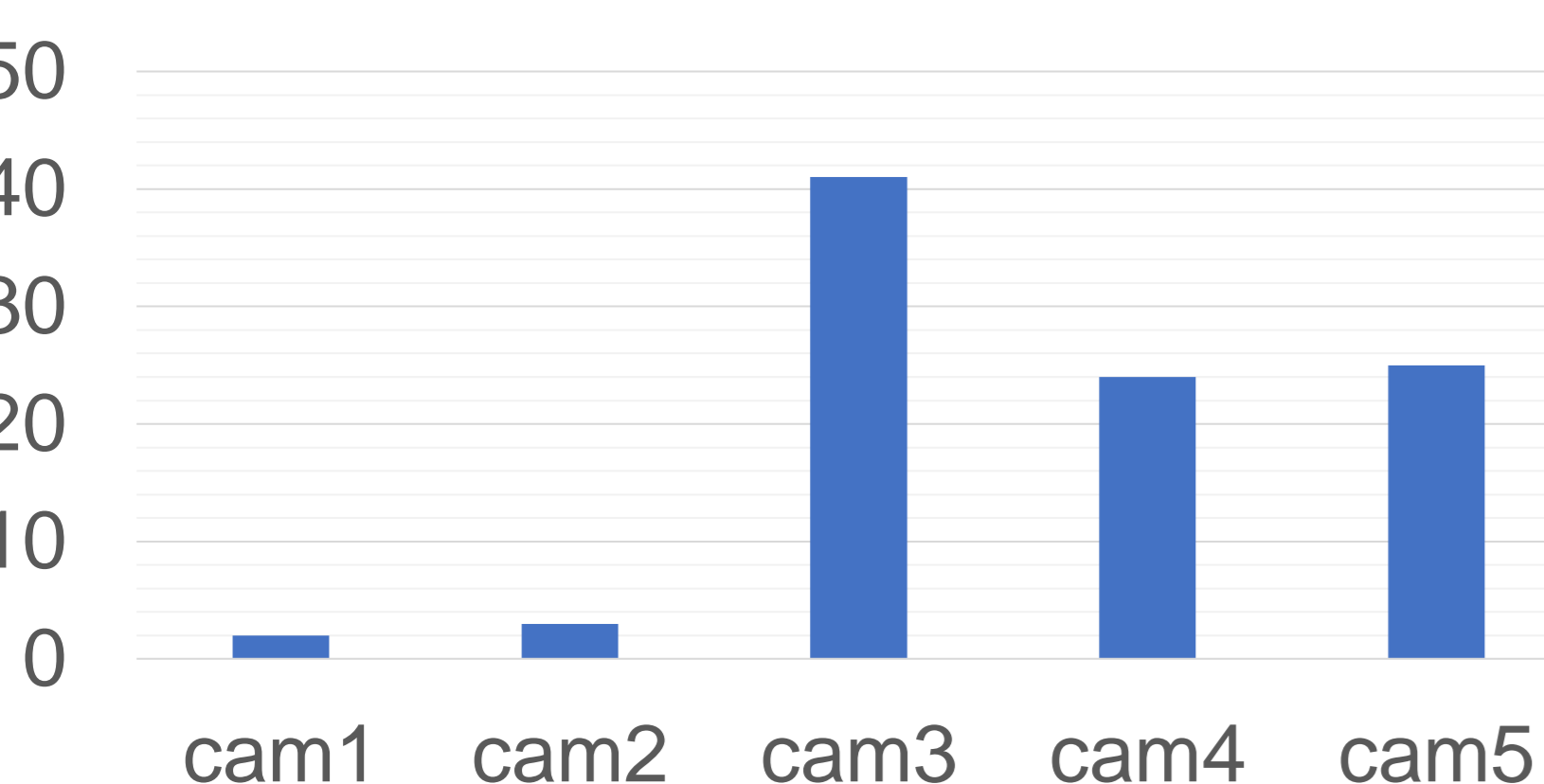


Fig.3 Number of shots (raccoon)



Fig.4 a raccoon shot by Cam3



Fig.5 two raccoons shot by Cam5

two raccoons were seen working together several times around autumn (Raccoons usually act alone except during the breeding and rearing seasons).

⇒ Maybe a couple or parent and offspring

Summary/Future Plan

A survey of raccoon habitat on the Ito campus revealed a wide range of raccoon species. Since it became clear that some waterside environments are used more frequently and others less frequently, **further surveys will be conducted focusing on the waterside environment.** This work was supported by Grant from Graduate Program of Interdisciplinary Policy Analysis and Design (GIPAD), Kyushu University.