

Short Report

Follow-up in 2021-22 of *Meles anakuma* in an urban Okayama City area

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Abstract: The Japanese badgers, which appeared in summer 2021 in an urban residential area in Okayama City, western Japan, were tracked and recorded by camera traps for more than one year. The appearance of the family ended in October 2021, and only one appeared after November, with a one-month inactive period from December to January. From the second half of January, no periods of absence longer than 10 days were recorded before the rainy season. The appearance declined from the beginning of the rainy season, and has not recovered. Nevertheless, one animal is intermittently seen. The inactivity in winter is possibly controlled by day length as well as temperature. In 2022 no breeding likely occurred in the neighborhood, and the animal's appearance has likely decreased with the recovered human traffics after the repeated COVID-19 waves.

A mother and two cubs of the Japanese badger (*Meles anakuma*) appeared in the summer of 2021 for three months in an urban residential area in Okayama City, western Japan, as reported by Takasaki (2022a). Since then, monitoring of the animals has been continued using camera traps. Here, the summary of over one year follow-up records until October 31, 2022, is reported.

The study area (Tsushima-Niino, Kita-ku, Okayama City) and location of the two fixed-point camera traps (Cam1 and Cam2) in the house lot have been the same as described by Takasaki (2022a). Despite the highest summer heat in the meteorological record up to 2022, the emergence of cicadas in the house lot was as usual. Notable

changes in the environment have been as follows. (1) Some old houses have been pulled down and replaced with vacant lots or new houses. (2) Traffics of people and vehicles have returned to the area, in particular the neighboring Okayama University campus [Southwestern OUTC; see Fig. 1 in Takasaki (2022a)] following the gradual shift after the repeated COVID-19 pandemic waves.

The appearance dates of badgers recorded by the camera traps are summarized in Fig. 1. The former records in Takasaki (2022a) have been appended, updated and corrected. The badger family stopped to appear together in November 2021. The mother and one of the cubs were last recorded on October 30 (Fig. 2). The appearance

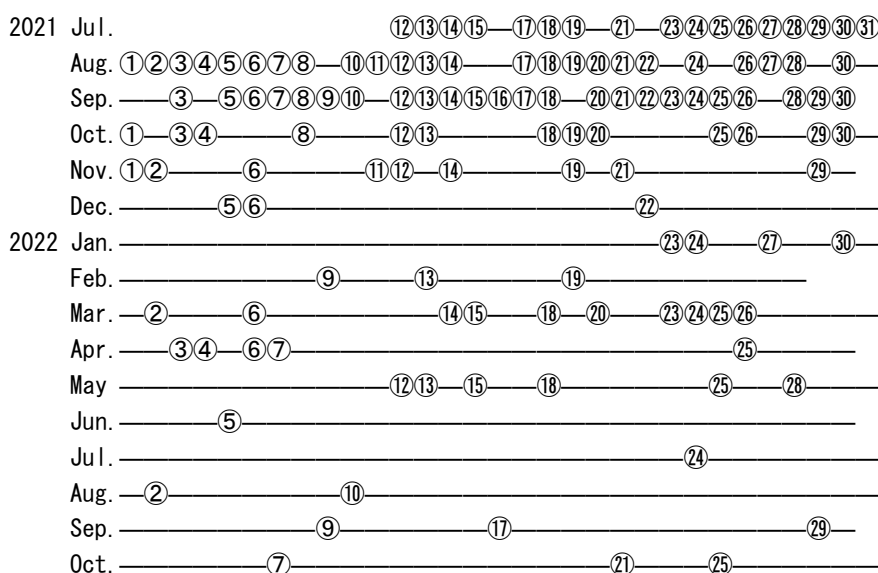


Fig. 1. The appearance dates of badgers recorded by the camera traps in the house lot. Horizontal dash — indicates “not recorded” on the day. Site located in western half of Tsushima-Niino in urban Okayama City [i.e. near the area overlaid by the lettering of ‘Tsushima’ in “Tsushima Kindergarten” in Fig. 1 in Takasaki (2022a)].

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Fig. 2. The mother (left) and one of the cubs last photoed at 19:06 on October 30, 2021.

of the animal declined in frequency from November, with a one-month inactive period from December to January. However, from the second half of January, despite the coldest season, there were no periods of absence longer than 10 days until the rainy season (early June - mid July) started. The appearance decreased drastically from the beginning of the rainy season and has not recovered noticeably. Nevertheless, one animal (likely the same female identified with a peculiar shape of its right ear) has been intermittently seen a few times per month. The frequency of the badger's visit in the last couple of months has returned to the level before July 2021. Incidentally after the previous record (Takasaki 2022b), a male Japanese marten (*Marten melampus melampus*) was once again video-recorded on Cam 2 on October 7, 2022.

For the Eurasian badger (*M. meles*), which has a vast distribution over Eurasia and is closely related to *M. anakuma*, the inactive period is reported to depend on the daily temperature, lasting as long as six months per year in cases (Kowalczyk et al. 2003). The rather short winter inactivity, strangely not in the coldest season, recorded here may suggest possible control of badgers' winter inactivity by day length as well as temperature. However, additional supporting evidence (e.g. similar data records in lower latitude habitats or of experimental attempts) is necessary to make it conclusive. In 2022, no breeding likely occurred in the neighborhood.

References

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- Takasaki, H. (2022a) A *Meles anakuma* mother and two cubs appeared in an urban Okayama City area for three months in summer 2021. *Naturalistae* 26: 1-6.
- Takasaki, H. (2022b) Japanese marten, *Marten melampus melampus*, first camera-trapped in an urban residential area in Okayama City, western Japan. *Naturalistae* 26: 41-42.

高崎浩幸：市岡山街地住宅に出没したアナグマの1年を超える追跡記録2021-22

要約

岡山市の市街地住宅(岡山市北区津島新野)で2021年に出没したニホンアナグマを1年以上にわたってカメラトラップで定点追跡記録した。親子での出現は2021年10月末までだった。11月から出現頻度が減り、12-1月は1ヵ月の休止期があった。しかし1月後半からは10日を超える休止期はなかった。冬季の活動休止は日長依存を示唆する。梅雨入り頃から出現頻度が激減して、目だった回復はない。それでも1個体が月に2-3回、現れている。2022年は近隣での繁殖がなく、人や車の交通量の回復に伴って出現が減ったものと考えられる。

(Accepted 7 November 2022)