



An unprecedented observation of a North American Raccoon *Procyon lotor* and a group of Bobcats *Lynx rufus*

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Abstract

The video of an encounter between a North American Raccoon *Procyon lotor* and a group of Bobcats *Lynx rufus* in a wooded area of Maine, USA, is discussed. The video is unique in that it documents an interaction between a Raccoon and a group of Bobcats (presumably littermates). This interaction is considered in the context of the predator–prey relationship between the two species.

Keywords: predator–prey relationships, behavioural avoidance, Felidae, Procyonidae

In this note, we describe an encounter between a North American Raccoon *Procyon lotor* and a group of four Bobcats *Lynx rufus*. A search of the internet turned up no other videos or still images of interactions between a Raccoon and several Bobcats. There are only a few videos that depict engagements between these species. A recent record from Maine, USA, shows a Bobcat chasing a Raccoon up a tree (Bangor Daily News 2021). In another, a Bobcat and a Raccoon are filmed fighting in the backyard of a home in Sarasota, Florida, USA (Erinn Earth's Youtube Channel 2018). There are also several still images of encounters between individual Raccoons and Bobcats but none of groups of animals. There could be a bias in what is posted: people could be more likely to post images of fights and chases rather than those of animals meeting and going on their own ways to avoid a fight or an injury.

In the early morning of 8 January 2023, a camera-trap recorded the footage discussed herein (<https://www.youtube.com/watch?v=VBqSryInT8g>). The camera-trap was placed near a rock ledge in a mixed hardwood forest in Cumberland County in south-western Maine, USA. The primary author had previously observed that Raccoons, Bobcats and North American Porcupines *Erethizon dorsatum* frequent this area and occasionally travel through a narrow funnel-shaped gap on this ledge. He positioned the camera-trap to capture mammal activity in and around this area.

In the video, a Raccoon and a Bobcat encounter one another other near a gap in a rocky outcrop. The Raccoon initially faces the Bobcat, then retreats and ducks beneath a large fallen tree. The Bobcat seems to paw at the air while slowly following the Raccoon and then also enters the space under the tree. A second Bobcat appears and follows the first one. A few minutes pass before a Raccoon (presumably the same individual as before) reappears in the middle of the frame. After walking around near the entrance to the gap, the Raccoon walks quickly toward the came-

ra and leaves the field of view. Four Bobcats emerge from the gap. One of the Bobcats walks out of the frame. For more details, see Fig. 1.

Given their similar size and that they are together, these Bobcats were probably from the same litter. It would be a relatively large one. In reviewing 21 Bobcat studies, Anderson (1987) found that the species's average litter size ranged from 1.7 to 3.6 kittens/litter, with a mean of 2.7. These may not be fully grown, though this is hard to discern from the video. Bobcats tend to stay with their mother until the subsequent breeding season. Though Bobcats can breed at any time of the year, most of their breeding takes place in February and March. The yearlings often remain in their natal area for a few more months, at which time some of them disperse whereas others stay in the area (Anderson & Lovallo 2003).

Bobcats seldom prey on Raccoons but when they do, they kill both adults and young (see Johnson 1970). McLean et al. (2005) found that male Bobcats in Pennsylvania, USA, kill a greater number of Raccoons than females. Nevertheless, predation is usually not a significant cause of Raccoon mortality (e.g., Gehrt 2003, Zeveloff 2002, 2017). This is so even in the southern USA, where Bobcats, as well as another predator, the Coyote *Canis latrans*, are relatively abundant (see Larivière 2004).

Nonetheless, Bobcats could play a critical role in whether Raccoons occur in an area. In their classic volume on the Raccoon, Whitney & Underwood (1952) stated that Raccoons are usually not plentiful wherever Bobcats are common. Indeed, referring to the Bobcat, they exclaimed that the “coonhunter's chief thought in Raccoon preservation might be the extermination of this one very real enemy” (1952: 91). This is plausible. The presence of Bobcats, given their potential as predators, might be sufficient to deter Raccoons from taking up residence in an area. In a recent study in Ontario, Canada, of Canada Lynx *Lynx canadensis* and Bobcat habitat selection, it was found that Raccoons almost never occurred

in areas where these felids are present (Morin et al. 2020). Lesmeister et al. (2015), however, found little evidence for spatial partitioning between Raccoons and Bobcats in southern Illinois, USA. Animals will attempt to avoid fighting or being preyed upon, and their assessment of predation risk can play a role in their behaviour (e.g., Lima & Dill 1990).

While the Raccoon in this video might have initially appeared to be unperturbed by its encounter with the Bobcat, it soon cautiously retreated from the area. The first Bobcat, as well as the one that followed it, were curious enough to pursue the Raccoon. Given their apparent young age and possible lack of familiarity with Raccoons, attempting a kill might not have been within their repertoire. This Raccoon was a relatively large individual, which may

have also deterred the young Bobcats from trying to kill it.

Given the increasing use of camera-traps to observe wildlife, by professionals and hobbyists alike, more recorded interactions between Bobcats and Raccoons are to be expected. Such evidence should improve our understanding of the potential effects these species have on one another (e.g., Nelson & Fijn 2013, Zeveloff 2022).

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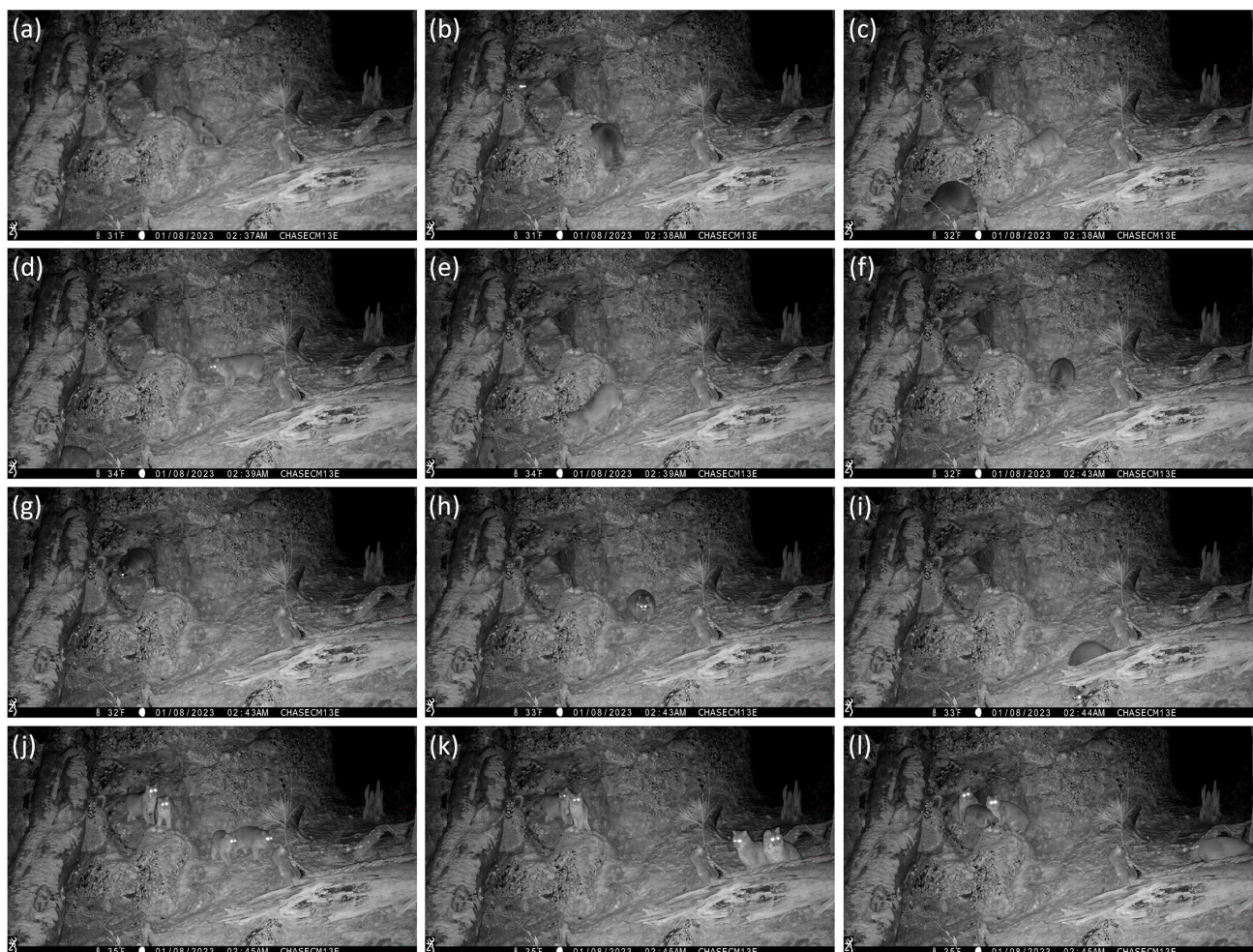


Fig. 1. Stills from a videotape of an encounter between a Raccoon *Procyon lotor* and a group of Bobcats *Lynx rufus* in Maine, USA, on 8 January 2023, between ca. 02h37 and 02h45. The camera-trap was triggered at 02h37, capturing a Bobcat in the middle of the frame as it (a) walks toward the upper left, near a gap in a rocky outcropping and disappears among the rocks. (b) A Raccoon then appears in the middle of the frame, walking in the same direction as the Bobcat. The Bobcat's eyeshine then becomes visible in the upper left. (c) Followed by the Bobcat, the Raccoon turns and walks downhill. After turning to face the Bobcat, the Raccoon turns away again and walks beneath a fallen tree, exiting the frame to the left, followed closely by the Bobcat. (d) A second Bobcat appears and (e) follows closely after the first, exiting to the left at about 02h39. (f) At 02h43, what is presumably the original Raccoon appears in the middle of the frame and (g) climbs over the rocks. (h) The Raccoon turns and rapidly makes its way downhill, (i) exiting the frame at the bottom-middle. (j) Four Bobcats appear on the rocky outcropping. (k) Two of them move downhill and to the right, (l) one then rejoining the pair on the rocks and one exiting the frame to the right.



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