24 Hour Feline Behavior

London Dewhirst

Introduction

While the behaviors of felines have been studied greatly in the past, there are few studies available that provide information regarding the daily activities of the animal. This can be made difficult in cats housed outdoors, as a significant portion of their time is spent hunting or sleeping away from human view. However, exclusively indoor cats can be easily observed in a controlled environment while minimally disturbing their daily habits, making them ideal for behavior studies. The objectives of this study were to observe and record the type and length of actions of a feline as they occur over a 24-hour period, then develop an ethogram of displayed behaviors.

Methods

A single, male domestic cat of 10 years of age was used for this study. The subject was kept in its normal environment to prevent a novel area from affecting displayed behaviors. As it was expected that a significant portion of the time would be spent sleeping, a camera was not set up to provide constant surveillance. However, behaviors were recorded immediately as they occurred, and example videos were taken of each activity.

Start and end times of each behavior were recorded to the nearest minute, from 10 A.M to 10 A.M. of the following day. Doors to the area were kept closed whenever possible to prevent interruptions during this period, and interaction between the subject and researcher was kept at a minimum.

As another way to reduce the effects of novel experiences, the owner of the cat served as the recorder during the 24-hour period. However, as the cat normally sleeps next to the recorder during the night, there may have been a small effect on the animal's sleeping cycle.

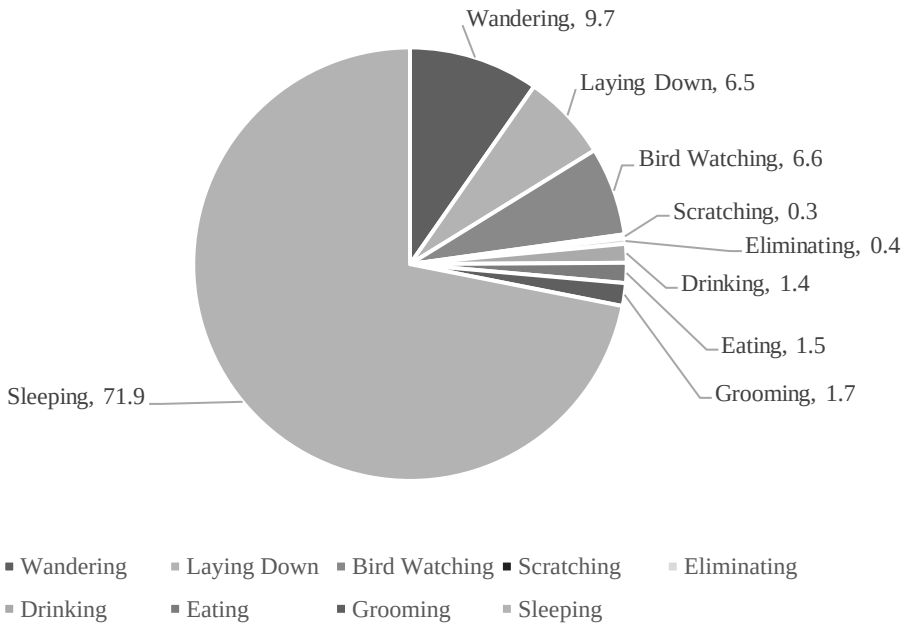
Feeding occurred twice during the day, at 10:00 A.M and at 6:00 P.M., and consisted of a dry kibble. Water was given ad libitum and changed once at 11:23 A.M to remove kibble which had fallen into the bowl.

Results

Table 1. Feline Ethogram

Behavior	Description	Times Expressed
Sleeping	Curled up and motionless, not aware of environment as it rests	14
Grooming	Using tongue and/or paws to clean body, face, and limbs	6
Eating	Consuming food from bowl	6
Drinking	Consuming water from bowl	12
Eliminating	Defecating and urinating in litter box, usually followed by digging to cover waste	2
Scratching	Lowering front body and clawing a floor scratching post, rear end remains up in the air	4
Bird Watching	Waiting by window, ears forward and alert, attention focused on birds outside	3
Laying down	Resting either on side or sternum with paws tucked underneath, still aware and watching surroundings	7
Wandering	Walking back and forth through apartment, occasionally interrupted by short, one second bursts of sprinting	5

Figure 1. Percentage of 24 hour period spent on each behavior



Conclusions and Interpretations

Sleep was the most common behavior by a significant margin, taking up more of the day than the rest of the behaviors combined. Despite cats normally being active throughout the night, the subject slept for longer periods after the sun had set, with each period being closer to four hours rather than the short, hour periods of rest earlier in the 24-hour period.

A possible explanation for this would be the gradual shifting of the cat's natural schedule to better match with humans it is housed with, as periods when its caretakers are awake would be the only time when food and play is available. As a result, it is possible that its sleeping schedule gradually shifted to match closer to a human's than what a cat's natural schedule is.

The excessive amount of sleep could also be a result of the animal not needing to spend a significant amount of time hunting for food. In addition, the subject is housed apart from any other animals, and as a result does not need to compete to ensure its food is not eaten by another.

Another factor could be the animal's age and weight. At 22 pounds, the cat can be classified as obese for its size, and as a result may have a lower amount of activity throughout the day. In addition, 10 years is in the late adult stages for a feline, and thus they will have significantly lower amounts of energy than a kitten of the same breed.

There were also patterns that tended to emerge in the sequence behaviors. Eating and drinking typically occurred several times in a row together with the order of drink, eat, drink. As cats typically do not drink a large amount of water throughout the day, this behavior sequence was likely because dry food was the only food made available. Replacing this with wet food may result in the alteration or potential absence of this behavior, as the water consumed while eating likely will not cause the animal to drink immediately afterwards.

Another pattern emerged with grooming and sleep. During long periods of rest, the subject would spontaneously wake and begin to groom their body. After less than a minute of grooming, the subject would then return to sleep for upwards of 30 minutes. Previous studies have found similar results, with cats displaying an increased likelihood to self-groom directly following a period of sleep as opposed to other times of the day.

References

Eckstein, R. A., and B. L. Hart. 2000. The organization and control of grooming in cats. Applied Animal Behaviour Science 68:131–140.

Feline behavior guidelines. 2005. AAFP, Hillsborough, NJ.

Voith, V. L., and P. L. Borchelt. 1996. Readings in companion animal behavior. Veterinary Learning Systems, Trenton, NJ.