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House Mouse *Mus domesticus* (Rutty)



GENERAL INFORMATION

The house mouse is believed to have originated in Central Asia. The above Latin name *Mus domesticus* as well as the Latin name *Mus musculus* (Linnaeus) are used in the nomenclature for the present-day house mouse depending on specific geographic areas. The Latin word for mouse is *mus*, which is derived from the ancient Sanskrit language meaning "to steal". The word *musculus* simply means "little thief". Thus the relationship between mankind and the mouse started long ago as they have traveled with us as stowaways through early trade routes and have continued to use mankind and his food supplies to extend their range to most parts of the world today.

SIGNS OF INFESTATION

Severe damage to collections and exhibits in a museum can occur very rapidly with mice present. A single mouse only needs a few minutes to chew through fabric, wood, leather or other materials to get to a food source or create a nest. Some notorious signs of mouse activity include; gnaw marks, fecal pellets, urine stains, oil rub marks, nests made from surrounding materials or holes chewed through barriers or packages containing food. The urine produces a noticeable 'mousy' odor to areas that it is deposited. Damage to collections generally comes from urine and fecal staining to the collection item as well as gnawing and removal of components of the item to make a nest.

Mice are capable of producing up to 3,000 micro-droplets of urine in a single 24 hour period. Rodent urine fluoresces under ultraviolet light. Also, house mice will typically produce between 50 - 75 fecal pellets every day. These 3 to 7 mm pellets usually have either one or both ends pointed. There are exceptions to this.



DIAGNOSTIC MORPHOLOGY

Adults:

- Length of 5 to 8 inches (127 - 206 mm)
- Ears are moderately large and distinct
- Color: Light brown to black with some having lighter belly fur
- Tail is as long as the head and body combined



Immature Stage:

- Newborn mice (pups) are blind and pink and hairless. They weigh only about 0.03 ounces (0.8 grams).

FOOD SOURCES

Mice are considered omnivorous and opportunistic foragers. This means that they eat a wide variety of food items such as seeds, grains, meats, fish, fruits, insects, etc.

Within a collections storage area, they will eat any of the above food items that are available or will find alternatives. These alternatives could be such things as deer antler, cellulose buttons on textiles and a wide variety of other items that one would not consider to be a food source.

In most storage environments, mice can live without the presence of open water, surviving on the moisture in their food and benefiting from the high relative humidity in that environment.

LIFE CYCLE

The typical litter size is 5 to 7 pups. A female can have 6 to 10 litters in her lifespan of 1 to 2 years. The gestation period is 18 to 21 days, so new generations can arrive every month or less! Juveniles can be weaned from their mother in 21 days. Mating can begin anywhere from 6 to 10 weeks from birth. In an indoor environment, breeding can occur year round.

CONTROL & TREATMENT

The house mouse commonly exists outdoors in fields, wooded areas, backyards and ditches. Foraging mice will locate warm air currents and food odors coming from inhabited structures and enter the building through gaps beneath doors, cracks in the foundation and unsealed pipe chases

penetrating the outside of the building. Increasing the structural integrity of your museum or storage will prevent wild mice from entering and doing damage. A house mouse will be able to come through any opening that it can get its head through. The height of the skull is 0.25 inches (6 mm). They are good climbers and can jump up to 2 feet (60 cm). It is recommended to seal off any opening that will allow mice to enter. Use an appropriate sealing material (E.g. copper gauze, steel wool, stone or concrete products, etc.) that the mice will not be able to chew through.

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