

FAMILY: Mustelidae Also M. (Putorius) nigripes (black footed ferret)	Least Weasel <i>Mustela nivalis</i> (Previously <i>M. rixosa</i>)	Short-tailed Weasel <i>Mustela ermine</i>	Long-tailed Weasel <i>Mustela frenata</i>	Mink <i>Mustela (Lutreola) vison</i>
Length, total Length, head+body Length, tail tail, relative to body Weight (smaller in northern parts of range)	6 ¾ – 8 ¼" 5 ⅞–7 ¼" ¹ ; 5–10" ² 7/8– 1 ¼" 10– 15% 37 – 50 g ♂ larger (2x?) than ♀	7 ½ – 13 ½ " 5 ⅞–11" ¹ ; 7–13" ² 1 ⅞– 3 ½ " ~ 25% 45 – 182 g ♂ 2x size of ♀	11 – 22 " 7 ⅞–15 ⅝" ¹ ; 9–10" ² 3 ⅞ – 6 ⅜ " 50 – 100% 85 – 267 g ♂ 2x size of ♀ \bar{x} = ♀ 111g; ♂ 195g; juv ♂ 162 g	19 ⅜ – 22" 13 ⅞–14 ⅜" ¹ ; 14–22" ² 6 ¼ – 7 ⅝" 50% 700 – 1,600 g ♂ larger than ♀
Coloration	Tiny. Dark brown above, white below. Tail very short and all brown. Feet white. Turns white in winter in the northern part of range. Often has an individually distinct brown spot on chest at 18 days which disappears after 4 months of age (when mature? after first adult molt?).	Dark brown above, white below; brown tail with black tip. Feet white. Turns white in winter w/black tail tip in the northern part of range. No chest markings.	Brown above, white to deep yellow below. Brown tail with black tip. Feet brown-ish. Tail often equal to head+body length. Turns white in winter w/black tail tip in northern part of range. Some individuals have spot/s on chest developing at 35 days.	Lustrous chocolate brown to black fur, white spotting on chin and throat. Tail long and somewhat bushy. (note: no white underparts)
Breeding	Mates year round <i>with no delayed implantation</i> ; young born after \bar{x} =35 day gestation. ♂ are sexually mature at 8 months and ♀ at 4 months although they seldom breed in their birth year.	Mates in June-July <i>with delayed implantation</i> . Young are born following April after 27 day active gestation ♂ are sexually mature 2 nd year but ♀ is often bred by same male breeding with her mother, giving birth the following spring.	Mates mid-summer <i>with delayed implantation</i> ; young are born the following spring after 23-24 day active gestation. ♂ mature during 2 nd summer; ♀ at 3-4 months.	Mates January – April, <i>may have delayed implantation</i> . Males may mate with several females but eventually lives with one and helps with the young.

Primary references:

¹National Audubon Society Field Guide to Mammals, 1996 rev;

²Mustelid (Mustelidae) Care Manual, Association of Zoos and Aquariums, July 2008, revised January 2010;

³American Weasels, E. Raymond Hall, August 2015 (written over the past 25 yrs.);

⁴"The Least Weasel *Mustela nivalis* Linnaeus, Developmental Biology in Comparison With Other North American *Mustela*," Biological Series Volume 4, Number 7, Publications of the Museum, Michigan State University, Gary A Heidt, April 1970

⁵East and Lockie, Edinburgh

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Litter, size & description Larger litters are more common in the northern part of range.	Up to 3 litters per year of 1-14 young (\bar{x} =4-5); usually born in early spring and mid-summer, often in abandoned burrows of another animal. Documented births (in the wild) in every month.	1 litter of 4-9 young (\bar{x} =6); born blind with fine hair. Mane present at birth and continues to develop as fur comes in (14 days). Male and female may care for the young.	Litter size \bar{x} =6-7 but wide range (<4 to >9) Born blind and nearly naked. Only the female cares for the young. Young disperse at 7-8 weeks, at which point the σ are already larger than their mother.	Litter of 1 – 10 (\bar{x} =4-5) born blind and [nearly] naked in fur-lined nest in April or May.
Weight at birth	\bar{x} =1.4 g	\bar{x} =1.7 g	~3 g	8-10 g
Hair appears	@ 4 days covered with fine white hair. ⁴	Fine white hair within first day.	Born with a few sparse long white hairs on back and head. >1 day covered with fine white hair. ⁴	
Begins to crawl	4 days	“early”	14 days (σ), 14-21 days (♀)	
Brown dorsal fur appears	18 days Hair comes in fast; at 18 days has brown/white coloring.	21 days @7 days demarcation apparent; @14-21 days heavy mane contrasts with “scantily white furred animal” ⁴	28-35 days @ 3 weeks dark line of demarcation and tail tip is black. @ 5 weeks brown top and bottom light (white – yellow/tan)	Varies with color phase
Ears open	21-28 days ⁴	35 days ⁴	28 days ⁴	?
Eyes open	26-30 days ⁴	35 days (blue at first) ⁴ 36-41 day, ♀ before σ ⁵	35-37 days ⁴	?
Black tail tip appears	N/A	45 days (in England) ⁴	21 days ⁴	N/A
Weaning Continues limited nursing until dispersal	@14 days begins to suck and chew on pieces of mouse; Eating solid food > 18 days ⁴ Weaning Initiated at 32 days and continues until 42-56 days ⁴	Consumes meat at 21-28 days and by 35 days is eating >50% BW in meat (still continues to nurse until dispersion) ⁴ Juveniles begin hunting at 10-12 weeks.	Consumes meat at 21 days and by 36 days are eating ½ to nearly their own weight in meat/day ⁴ Weaned at 28-35 days.	5-6 weeks Young remain with their other until the family disperses in early fall.

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First kills prey	6-7 weeks	80 days (Europe)		
Growth complete Disperses at 13-18 weeks Summer>Fall>Winter/Spring	Reaches adult length at 8 weeks and adult weight at 12-15 weeks.		♀ slows growth ≥ 8 wks; both sexes at adult size ≥ 12 wks. Consuming 28-38% BW/day	
Kills prey by =====> Killing move is instinctive but efficiency improves with training/experience.	Biting back of the neck. Prefers head/brains, inner organs, muscles.	Biting back of the neck. Prefers head/brains, inner organs, muscles.	Biting back of the neck. Prefers head/brains, inner organs, muscles.	Biting back of the neck. Marks hunting territory with fetid musk > skunk
Activity Hunting is a learned behavior.	Day and/or night, all seasons. Very rarely seen as they stay undercover. Home range < 2 acres.	Active both day and night. Hunts mainly on the ground but can climb and even pursues prey into the water.	Most wide-spread carnivore in the Western Hemisphere. Active both day and night. Hunts mainly on the ground but can climb.	Able to dive to a depth > 16 feet, the mink is an accomplished swimmer and spends much time hunting in ponds and streams. Adapts activity to prey.
Vocalization	Murmurs. When disturbed may give a shrill squeaking call, and may also hiss when threatened.	Grunts, murmurs, hisses, chatters, shrill (and very loud) alarm call	Screech and squeal, rapid trill, and purr when content.	If angered or alarmed (or trapped) may hiss, snarl, or screech, and discharge its anal glands. Purrs when content.

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Habitat The range of the male is generally larger than the range of the female; larger ranges in wooded environment vs open	Grassy and brushy fields, marsh areas. Known to climb trees/brush/logs but active primarily underground and under vegetation following mouse/vole burrows. - Unlikely to dig their own tunnels unless soft substrate but will take abandoned burrow of another small mammal, adding mouse hair to the dried grass lining the nest. - Solitary as adults. - Home range 7-24 acres ²	Varies: open woodland, brushy areas, grasslands, wetlands, and farmland. Dens may be appropriated from chipmunks, often found in or beneath a log, stump, roots, brush pile, or stone wall. Readily climbs trees and other objects; will swim if necessary. Also known to inhabit human residences. - Known to live both solitary and in a group. - 2-5 favorite denning sites and 3-10 daytime resting places. - Home range 2.5-12 acres in open grassland; ♂: 17-37 acres in woods, and ♀: 2.5-10 acres in woods ²	Varies: forested, brushy, and open including farm land, preferably near water. Dens in abandoned burrows, making a nest lined with hair from prey. Will climb trees when chasing prey. - Solitary except males <i>may</i> assist with providing food for young (probably in exchange for breeding rights). - 2-5 favorite denning sites and 3-10 daytime resting places. - Home range 2.5-12 acres in open grassland; ♂: 17-37 acres in woods and ♀: 2.5-10 acres in woods ²	Along rivers, creeks, lakes, ponds, and marshes. Dens in openings in stream banks, 4" wide, usually appropriated from muskrats; also beaver lodges, hollow log, or digs own. Moves often.
Prey The size of the weasel heavily influences ability to take different prey. Largest males take the largest prey.	Almost exclusively prey on voles/mice. Males esp will occasionally eat shrews, moles, birds, and insects if mice are scarce. Consumes ~40% BW/d over 5-10 meals.	Mice and voles are preferred prey but diet may also include rats, chipmunks, shrews, baby rabbits, birds, frogs, lizards, and insects.	Mice and voles are preferred prey but diet may also include rabbits, shrews, chipmunks, rats, birds & poultry, and occasional insect or worm.	Muskrat is preferred prey but will also take rabbits, mice, chipmunks, fish, snakes, young snapping turtles, marsh birds
Predators	Foxes, cats, hawks, owls.	Hawks, owls, house cats; also other carnivores. Cars.	Hawks, owls, house cats, foxes. Cars.	Foxes, bobcats, lynx, alligators, and great horned owls. Cars.

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<p>Misc. Notes:</p> <p>Medications (inject oral medications into the brains of food mice):</p> <ul style="list-style-type: none"> - Panacur (50 mg/kg PO sid) can be used treatment of hookworms - Carafate (sucralfate suspension) 0.1 mL of 1g/100mL solution via food mice used to treat stress-induced ulcers until stool returned to normal. - Fleas treated with Advantage (single application, 0.05 mL) - Possible Pasteurella infection treated with Clavamox orally 2x/day (25 mg/kg PO bid) via food mice 	<ul style="list-style-type: none"> - Smallest living carnivore; does not appear to be common in any part of its range. Considered a “species of concern” in MN. - Can run very fast, up to 6 mph. - After four weeks of age becomes more difficult to handle (once eyes open). - European LW 2-2.5x larger than American LW - <i>BW can fluctuate 5-10 g/day depending on timing and amount of last meal.</i> - At 4 weeks ♂ gradually gain weight faster than ♀ & by 6 wks 2x size of ♀; @ 8 wks ♀ have a growth spurt. - Defensive behavior follow set vocal and movement patterns which begin when the eyes open. Size of adversary is irrelevant. - High mortality in first year; #1: raptors, #2: starvation. 	<ul style="list-style-type: none"> - Often called ermine (white phase) or stoat (brown phase). - May release strong musk when alarmed, enraged, or excited by mating urge. - Defensive behavior includes loud screeching and holding their ground/charging adversary. - <i>>4 ½ weeks mother would no longer retrieve if out of the nest.</i> - Did not play outside the nest until > 7 wks. 	<ul style="list-style-type: none"> - Color change seems to be genetic. If a northern weasel is captured and taken south it will turn white during winter while a southern weasel taken north stays brown. - May release powerful malodorous musk when alarmed, enraged, or excited by mating urge. - Immobilization using IM injection (25G x 16mm needle) of ketamine HCl (25 mg/kg) + xylazine HCl (2 mg/kg), as recommended for ferrets. - ear tags used for tracking study were size 1 Monel tag, National Band and Tag Company, Newport, KY 	<ul style="list-style-type: none"> - Both sexes are hostile to intruders, and males fight viciously with one another. - Mink require water depth >1.2’, allowing them swimming room. Water pH≥7.0 b/c highly susceptible to methylmercury toxicity and increasing acidity increases methylation of Hg.