Supporting Information S4(B): Necropsy and radiography information from WDNR. We acknowledge N. K. Businga, WI DNR Wildlife Health Center 2011.

Case ID	Wolf # (collar)	Age category	Sex	County	Parent' cause of death (COD)	COD	2nd 'Parent' COD	2nd COD	Metal in radiograph? (y/n)	Gunshot trauma but no metal? (y/n)
WI-2004-001		yearling	male	Bayfield	trauma	vehicle collision			y	
WI-2004-015		yearling	male	Portage	trauma	gunshot			y	
WI-2004-025		adult	male	Portage	trauma	vehicle collision	trauma	gunshot	y	
WI-2004-068		adult	male	Taylor	trauma	gunshot			y	
WI-2005-011		adult	male	Jackson	trauma	gunshot			y	
WI-2005-025		adult	female	Douglas	euthanasia	euthanasia			y	
WI-2005-043		adult	male	Douglas	euthanasia	euthanasia			y	
WI-2005-064		pup	male	Forest	trauma	gunshot			n*	y
WI-2005-065		adult	male	Bayfield	trauma	gunshot			y	

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Case ID	Wolf # (collar)	Age category	Sex	County	Parent' cause of death (COD)	COD	2nd 'Parent' COD	2nd COD	Metal in radiograph? (y/n)	Gunshot trauma but no metal? (y/n)
WI-2005-067		adult	male	Grant	trauma	gunshot			y	
WI-2006-009		adult	female	Kewaunee	trauma	gunshot			y	
WI-2006-011		pup	male	Juneau	trauma	gunshot			n	y
WI-2006-017		pup	female	Price	trauma	gunshot			y	
WI-2006-032		adult	male	Sauk	trauma	gunshot			y	
WI-2006-068		adult	male	Ashland	trauma	gunshot			y	
WI-2006-069		adult	female	Price	trauma	gunshot			y	
WI-2006-070		adult	female	Adams	trauma	gunshot			y	
WI-2006-071		adult	male	Chippewa	trauma	gunshot			y	

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Case ID	Wolf # (collar)	Age category	Sex	County	Parent' cause of death (COD)	COD	2nd 'Parent' COD	2nd COD	Metal in radiograph? (y/n)	Gunshot trauma but no metal? (y/n)
WI-2007-006	575	adult	female	Bayfield	trauma	gunshot			y	
WI-2007-021		adult	female	Price	trauma	gunshot			y	
WI-2007-022	H?	adult	female	Burnett	trauma	gunshot			y	
WI-2007-029		adult	female	Jackson	trauma	gunshot			y	
WI-2007-047	454	adult	female	Shawano	trauma	gunshot			y	
WI-2007-053		adult	female	Shawano	trauma	vehicle collision			y	
WI-2007-064	556	adult	male	Douglas	euthanasia	euthanasia			y	
WI-2007-077	624	adult	female	Douglas	parasitism	Sarcoptic mange			y	

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Case ID	Wolf # (collar)	Age category	Sex	County	Parent' cause of death (COD)	COD	2nd 'Parent' COD	2nd COD	Metal in radiograph? (y/n)	Gunshot trauma but no metal? (y/n)
WI-2007-081		adult	female	Dane	trauma	gunshot			y	
WI-2007-085		pup	female	Bayfield	trauma	gunshot			y	
WI-2007-086		adult	female	Trempealea	trauma	gunshot	trauma	other projectile	y	
WI-2007-089		adult	male	Iowa	trauma	gunshot			y	
WI-2007-093		adult	male	Adams	trauma	gunshot			y	
WI-2007-094		adult	male	Sauk	trauma	other projectile			y	
WI-2007-097		adult	male	Clark	trauma	gunshot			y	
WI-2007-099	461	adult	female	Oneida	trauma	gunshot			y	
WI-2008-004	477	adult	female	Sawyer	parasitism	Sarcoptic mange	physical	trauma	y	
WI-2008-008		adult	male	Oneida	trauma	gunshot			y	

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Case ID	Wolf # (collar)	Age category	Sex	County	Parent' cause of death (COD)	COD	2nd 'Parent' COD	2nd COD	Metal in radiograph? (y/n)	Gunshot trauma but no metal? (y/n)
WI-2008-013		yearling	male	Portage	trauma	gunshot			y	
WI-2008-014		adult	female	Wood	trauma	gunshot			y	
WI-2008-015		adult	female	Washburn	trauma	gunshot			y	
WI-2008-016	4927	adult	male	Crawford	trauma	gunshot			y	
WI-2008-072		pup	male	Marinette	trauma	gunshot			y	
WI-2008-091	2739	adult	male	Ashland	trauma	gunshot			y	
WI-2008-092		adult	female	Bayfield	trauma	gunshot			y	
WI-2008-093		adult	female	Monroe	trauma	gunshot			y	
WI-2008-097		adult	male	Juneau	trauma	gunshot			y	
WI-2008-098		adult	male	Adams	trauma	gunshot			y	
WI-2008-099		adult	female	Lafayette	trauma	gunshot			y	

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Case ID	Wolf # (collar)	Age category	Sex	County	Parent' cause of death (COD)	COD	2nd 'Parent' COD	2nd COD	Metal in radiograph? (y/n)	Gunshot trauma but no metal? (y/n)
WI-2009-005	611	adult	female	Manitowoc	trauma	gunshot			y	
WI-2009-010		adult	female	Barron	trauma	gunshot			y	
WI-2009-014		yearling	female	Price	trauma	gunshot			y	
WI-2009-033	M3128	adult	female	Douglas	trauma	gunshot			n*	y
WI-2009-034		adult	male	Price	trauma	gunshot			y	
WI-2009-040		adult	male	Iron	euthanasia	euthanasia			y	
WI-2009-045		adult	female	Bayfield	trauma	vehicle collision			y	
WI-2009-056	677	yearling	female	Clark	trauma	gunshot			y	
WI-2009-057		adult	male	Burnett	trauma	gunshot			y	
WI-2009-059		adult	male	Polk	trauma	gunshot			y	

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WI-2009-060		adult	female	Bayfield	trauma	gunshot			y	
WI-2009-061	695	adult	female	Jackson	trauma	gunshot			y	
WI-2009-065		adult	female	Vilas	trauma	gunshot			y	
WI-2009-066		adult	female	Shawano	trauma	gunshot			y	
WI-2009-071		pup	female	Clark	trauma	gunshot			n	y
WI-2010-002		adult	female	Vilas	trauma	gunshot			y	
WI-2010-006		adult	male	Eau Claire	trauma	gunshot			y	
WI-2010-007		adult	unknown	Jackson	trauma	gunshot			y	
WI-2010-009		adult	female	Portage	trauma	vehicle collision			y	

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WI-2010-010		adult	female	Portage	trauma	gunshot			y	
WI-2010-017	503	adult	female	Price	trauma	gunshot			y	
WI-2010-023		adult	male	Monroe	trauma	gunshot			y	
WI-2010-063	777	yearling	female	Sawyer	trauma	gunshot			y	
WI-2011-005	784	adult	male	Washburn	trauma	vehicle collision			y	

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Case ID	Wolf # (collar)	Age category	Sex	County	Parent' cause of death (COD)	COD	2nd 'Parent' COD	2nd COD	Metal in radiograph? (y/n)	Gunshot trauma but no metal? (y/n)
WI-2011-006		adult	male	Washburn	trauma	gunshot			y	
WI-2011-015	691	adult	male	Ashland	trauma	gunshot			y	
WI-2011-017	663	adult	female	Bayfield	trauma	vehicle collision			y	
WI-2011-029	684	adult	female	Wood	trauma	gunshot			y	

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Case ID	Wolf # (collar)	Age category	Sex	County	Parent' cause of death (COD)	COD	2nd 'Parent' COD	2nd COD	Metal in radiograph? (y/n)	Gunshot trauma but no metal? (y/n)

was not done because it was known that the wolf was shot by a citizen.

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Case ID	Radiograph text
WI-2004-001	thorax (lat)-No metal is seen abdomen (lat, VD)- multiple 1-4mm metal density fragments scattered throughout the abdominal and pelvic regions
WI-2004-015	thorax (lat, VD)- There is one 1x1.2 cm metal density in lower left quadrant of the thorax abdomen (lat, VD)- There are two 1x1.2 cm metal densities in the abdomen and three 1x1.5 cm irregularly shaped metal densities in the pelvis and right lower rear limb with multiple 1-2mm fragments near the left hip joint.
WI-2004-025	thorax (lat, VD)- There are eleven 4-5mm round metal densities spread throughout the left shoulder and forelimb. abdomen (lat, VD)- There are eight 4-5mm round metal densities spread throughout the left upper hindlimb and two in the right upper hindlimb.
WI-2004-068	thorax (lat)- no metal seen. abdomen (lat)- There are numerous 1-10 mm metal densities of varying shapes scattered throughout the abdomen. skull (lat)- no metal seen.
WI-2005-011	thorax (lat), abdomen (lat), neck/shoulders (lat, VD, obliques- left and right)- There are 29-30 round and fragmented metal densities approximately ¾ cm in diameter throughout the neck and right shoulder.
WI-2005-025	front paws (AP, lat): The left foot appears mildly swollen. The right foot, 5th digit, the metacarpus has a complete fracture with an approximately cm separation of the fractured ends. There appears to be some bone remodeling. There is also evidence of boney remodeling or inflammation associated with P2 of digit 5. There are 6-10 tiny metal fragments associated with either the caudal aspect of the right carpus or the fracture site.
WI-2005-043	right elbow - (AP, lat): There is extensive bony remodeling of the elbow joint with multiple 1-3mm metal fragments present in the bone and soft tissue.
WI-2005-064	Front feet (AP): No fractures are seen. The left foot is slightly swollen.
WI-2005-065	Thorax (lat, VD): There are multiple, 1-5mm, irregularly shaped metal fragments scattered across the mid-body. Abdomen (lat, VD): There are multiple, 1-5mm, irregularly shaped metal fragments scattered across the mid-body. There is also one round, 5-6mm diameter, metal density in the ventral pelvic region. This is not present in the ventro-dorsal view, possibly due to positioning or possibly something in the bag that the skinned animal was wrapped in. The stomach appears full of bone fragments with some bone fragments appearing in the intestines also.

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Case ID	Radiograph text
WI-2005-067	thorax and abdomen(lat, VD): There are numerous 1mm to 1cm metal fragments scattered throughout the body cavities. Most fragments appear in the dorsal caudal thorax and the cranial abdomen. On the ventro-dorsal view, many fragments appear to be on the left side at the level of the last 4 ribs.
WI-2006-009	Radiographs taken by the National Wildlife Health Center, Madison. Lateral views of the thorax, abdomen, pelvis, and skull show multiple, 1mm to 1cm, irregular shaped metal fragments scattered over the thorax.
WI-2006-011	Thorax (lat): No metal is seen. Abdomen (lat): No metal is seen
WI-2006-017	Thorax, abdomen, head (lat)- There are numerous 1-7mm metal fragments scattered across the dorsal-cranial thorax with a few fragments over the caudal thorax. There are possible spinal column fractures at thoracic vertebrae 5 and 6.
WI-2006-032	thorax (lat) - Numerous 3-4 mm round metal pellets are scattered throughout the thorax. abdomen (lat) - Multiple 3-4 mm round metal pellets are scattered in the muscles of the back and in the cranial abdomen. There is one approximately 1cm irregular shaped metal density with associated smaller fragments just caudal to the rib cage. head/neck (lat) - There are six 3-4 mm round metal pellets in the muscles at the back of the skull and in the neck.
WI-2006-068	(radiographic size estimates may not reflect true measurements) thorax (lat, VD), abdomen (lat): There are numerous 1-7mm metal fragments scattered across the thorax and cranial abdomen.
WI-2006-069	(radiographic size estimates may not reflect true measurements) Thorax (lat, VD), abdomen (lat): There are numerous 1-7mm metal fragments scattered across the thorax and the left side of the cranial abdomen. Rear feet (AP): Right unremarkable; Left: enlargement of soft tissues around tarsometatarsal-phalangeal joints; enlargement of distal metatarsi, digits 1and 2 and smooth thickening along the length of the metatarsus, digit 2; this is suggestive of healed fractures of the first and second metatarsi and significant associated soft tissue damage.
WI-2006-070	Thorax (lat, VD), Abdomen (lat): There are multiple 1-7mm metal fragments throughout the thorax, especially concentrated in the right shoulder area. Right front leg (lat): There is evidence of an old humeral fracture with significant boney remodeling of the distal humerus.
WI-2006-071	Thorax (lat), Abdomen (lat, VD) - There is one 1.8cm irregularly round metal piece in the right abdominal body cavity. There are numerous 1-6mm metal fragments scattered across the left side of the pelvis and upper left rear leg, four 1-5mm metal fragments between the large metal piece and the spine and additional multiple 1-3mm metal fragments scattered across the cranial abdomen.

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Case ID	Radiograph text
WI-2007-006	Thorax (lat), abdomen (lat), caudal thorax/cranial abdomen (VD) - There are a 1x1/2cm metal fragment visible associated with the right mid-thorax and a 1x1cm metal fragment associated with the right cranial abdomen. There are also multiple smaller metal fragments scattered throughout the thorax and right cranial abdomen.
WI-2007-021	head (lat, VD), thorax (lat, VD), abdomen (lat, VD) - There are numerous 1-6mm irregularly shaped metal fragments in the tissues of the caudal oral cavity and jaw. There are multiple 1-8mm irregularly shaped metal fragments scattered in a line from the dorsal cranial thorax extending caudally down the right side of the thorax. There are several irregularly shaped 1-4mm metal fragments from the right hip joint down to the mid right femur. There are five 5mm round metal pellets seen: one in the dorsal, proximal neck, one in the dorso-lateral left shoulder, one in the left lateral mid-thorax, one in the right dorso-lateral abdomen near the level of lumbar vertebrae 4 and 5, and one in the right upper mid-maxilla. No fetal bony structure is evident.
WI-2007-022	thorax (lat, VD), abdomen (lat): Numerous 1-6mm irregularly shaped metal fragments are scattered across the cranial thorax, especially concentrated in the left shoulder area. There are a few small metal fragments scattered over the caudal thorax. The head is missing. No metal is seen in the abdomen.
WI-2007-029	Thorax, abdomen (lat) - There are approximately twenty to twenty-five 7mm round metal pellets seen. Three are in the area of the thorax and the rest are scattered in the abdomen and pelvis.
WI-2007-047	Thorax (lat) - There is one 7mm round metal pellet over the shoulder/thoracic vertebrae 1 and 2 and three 3-4mm round metal pellets in the ventral thorax. Abdomen (lat) - There are numerous 1-5mm metal fragments over the dorsal abdomen and rear legs, and four 3-4mm round metal pellets: over the stomach, 6th lumbar vertebrae, near the stifle, and caudal to the femur.
WI-2007-053	Thorax (lat) - There are multiple 1-5mm metal fragments dorsal to the shoulders; Abdomen (lat) - No metal is seen; Skull (lat) - No metal is seen.
WI-2007-064	Front feet, legs (AP) - There is a displaced oblique fracture to the left distal tibia, with multiple 1-6mm metal fragments in the region.
WI-2007-077	Thorax (lat)- No metal is seen; abdomen (lat, VD)- There are 10-12 metal fragments on the left side of the abdomen.; front feet (AP)- There appears to be some boney proliferation associated with metacarpals 3-4, right front foot.

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Case ID	Radiograph text
WI-2007-081	Thorax (lat, VD)- There are numerous 1mm to 1cm metal fragments scattered in the areas of the neck, shoulders, and forelimbs. There is one 4mm metal pellet over the right proximal radius/ulna and severe fractures of the left radius and ulna. Abdomen (lat) - There are several 1mm-1cm metal fragments in the area of the femurs. Head (lat, VD) -There is one 4mm round metal pellet in the area of the right ear.
WI-2007-085	Thorax (lat), abdomen (lat), head (lat): There are several 1-3mm metal fragments in the area of the left shoulder.
WI-2007-086	Thorax (lat, VD) - There is a 5cm arrowhead with an 8cm shaft in the area of the left shoulder/humerus. The right humerus is fractured proximally and there is a 7-8mm metal fragment near this fracture. Abdomen (lat, VD) - There are 2 larger (1cm) and numerous 1-5mm metal fragments dorsal and ventral to the spinal column around L2-3. There are three 1-2mm metal fragments in the dorsal right thoracic cavity. Head (lat, DV) - There are multiple 1-7mm metal fragments in the areas of the right upper jaw and left side of the head.
WI-2007-089	Thorax (lat, VD) - There are fractures of the thoracic vertebrae and the left ribs. Also, there are numerous 1-8mm metal and bone fragments scattered throughout the caudal thorax. Abdomen (lat, VD) - No metal is seen within the abdomen.
WI-2007-093	Front feet (AP) - no fractures seen. Head (VD) - There is a 7x9mm metal fragment associated with the right side of the jaw and numerous 1-2mm fragments throughout the soft tissues of the right side of the head and around the base of the skull.
WI-2007-094	Thorax (lat) - There are multiple 1-3mm metal fragments within the cranial half of the left thoracic cavity, and one 1cm x 6mm fragment midline on the right. Abdomen (lat) - No metal is seen.
WI-2007-097	Thorax (lat, VD) - No metal is seen. Abdomen (lat, VD) - There are numerous 1-4mm metal fragments scattered throughout the left abdomen, and the left femur is fractured.
WI-2007-099	Thorax (lat) - No metal is seen. Abdomen (lat) - There are multiple 1-9mm metal fragments scattered across the abdomen. There are two 1.5-2cm metal or bone fragments near a fractured femur.
WI-2008-004	Thorax (lat) - No metal is seen. Abdomen (lat)-There are multiple 1-5mm metal fragments around the right elbow with associated boney changes. Also, there are boney changes to the 4th metacarpal of the left foot.
WI-2008-008	Thorax (lat) - There are a few 1-3mm metal fragments in the area of the lungs; abdomen (lat) - There are numerous 1-10mm metal fragments scattered across the abdomen; pelvis (VD) - There is one 1.5x2cm and several 1-4mm metal fragments scattered in the area of the pelvis.

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Case ID	Radiograph text
WI-2008-013	Thorax (lat, VD) - There are numerous 1mm to 1cm metal fragments in the dorsal thorax, primarily on the right side and there is one 1cm round metal fragment in the area of the thoracic spine. Abdomen (lat, VD) - No metal is seen.
WI-2008-014	Thorax (lat, VD)- There are multiple 2mm-10mm metal fragments and bone fractures in the area of the right shoulder. Abdomen (lat) - No metal is seen.
WI-2008-015	Thorax (lat, VD) - There are several .5 to 1.5 cm metal fragments in the area of the left shoulder and numerous 1-4mm metal fragments in the upper thorax. Abdomen (lat) - No metal is seen.
WI-2008-016	Thorax (lat) - There are numerous (>50) round, 3mm metal pellets visible scattered throughout the thorax. Abdomen (lat) - No metal is seen.
WI-2008-072	Thorax (lat) - No metal is seen. Abdomen (lat) - No metal is seen. There is a comminuted fracture of the right distal femur. Head (VD, lat) - There are numerous 4mm, round metal pellets scattered throughout the head.
WI-2008-091	Thorax (lat, VD)- There are twelve to fifteen 1-4mm metal fragments scattered in the thoracic cavity and associated with the skin of the left thorax. Abdomen (lat) - There is no metal seen.
WI-2008-092	Thorax (lat, VD) - There are ten 4-6mm round metal objects scattered in the tissues of the right thoracic cavity and right shoulder. Abdomen (lat, VD) - There are approximately eight 4-6mm round metal objects scattered in the tissues of the upper rear legs and pelvis. Right front leg (lat) - There are two round metal objects in the shoulder and one in the carpus. Head (VD) - There is one 5mm metal shot associated with the tissues on the right side of the head behind the jaw.
WI-2008-093	Thorax (lat)-There are numerous metal fragments measuring approximately 1mm to 6mm scattered throughout the thorax, especially on the right side. Abdomen (lat) - No metal is seen in the abdomen.
WI-2008-097	Skull (lat) - There is no metal seen; Thorax (lat, VD) - There is one 1-2cm metal fragment associated with the left cranial thoracic skin, and there are numerous 1-5mm metal fragments associated with the dorsal neck, upper left front leg, and along the left side of the thorax; Abdomen (lat, VD)- There are numerous 1mm-1cm metal fragments scattered throughout the abdomen.
WI-2008-098	Thorax (lat) - There are several 1-5mm metal fragments in the caudal thorax. Abdomen (lat, VD) - There are many 1-10mm metal fragments in the abdomen and along the left abdominal wall.
WI-2008-099	Thorax (lat, VD) - There are numerous 1-5mm metal fragments scattered across the dorsal-caudal thorax. Abdomen (lat) - Metal is seen in the caudal thorax, possibly extending in to the cranial abdomen. ments on File

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Case ID	Radiograph text
WI-2009-005	Thorax (lat) - There are numerous 1-5mm metal fragments concentrated in the caudal thorax. Abdomen (lat/VD) - There are numerous 1-7mm metal fragments in the vicinity of the right hip and femur, and three 1cm bullet fragments in the abdominal cavity, on the right side.
WI-2009-010	Thorax (lat, VD) - There are multiple 1mm to 12mm metal fragments scattered across the ventral thorax from two large fragments along the right mid-thorax to smaller fragments in the area of the left shoulder. Abdomen (lat) - No metal is seen.
WI-2009-014	Thorax (lat, VD), abdomen (lat): There are numerous 1mm-1cm irregular metal fragments throughout the area of the left shoulder and left cranial thoracic wall.
WI-2009-033	Front feet (AP, lat) - The left foot is partially amputated with malformation of multiple metacarpals. The remaining phalangeal and metacarpal bones have a somewhat "moth-eaten" appearance, suggesting significant boney remodeling (and possibly infection??)
WI-2009-034	Thorax (lat, VD) - There are several metal fragments concentrated dorsally in the thorax associated with luxation of the spinal column at the level of the last two ribs. Abdomen (lat) - There are several metal fragments dorsally near the spinal column.
WI-2009-040	Right rear foot (AP), right rear leg (lat), pelvis (VD) - There are healed, displaced fractures of the right femur and tibia with large numbers of metal fragments and abundant boney callus. There is loss of bone from the right foot, amputation of digit 1, and segmentally of digits 2 and 3.
WI-2009-045	Thorax (lat), abdomen (lat), front legs (lat)- There is no metal seen. Head (DV)- There are multiple (about 20) approximately 3mm round metal shot scattered throughout the tissues of the head.
WI-2009-056	Thorax (lat, VD), abdomen (lat): There are multiple metal fragments present in the area of the right shoulder and in the thoracic tissues.
WI-2009-057	Thorax (lat, VD), abdomen (lat): There are multiple metal fragments in the area of the left shoulder and scattered through the caudal thorax (especially on the right side).
WI-2009-059	Thorax (lat, VD), abdomen (lat): There are numerous 1-5mm irregular metal fragments scattered across the entire thorax and approximately fifteen 3-4mm metal shot, primarily in the area of the right scapula and associated with a fracture of the humerus.

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Case ID	Radiograph text
WI-2009-060	Thorax (lat), Abdomen (lat), Thorax/Abdomen (VD): There are multiple small metal fragments in the caudal thorax and anterior abdomen, especially on the right side.
WI-2009-061	Thorax (lat), Abdomen (lat), Thorax/Abdomen (VD): There are multiple metal fragments scattered throughout the thoracic cavity. Additionally, there are multiple metal fragments associated with the right shoulder.
WI-2009-065	Abdomen (lat) - There is no metal seen. Head (lat) - There is one 3mm round metal pellet associated with the maxilla. Thorax (lat, VD) - There are five 3-4mm round metal pellets and multiple 1-5mm metal fragments mostly concentrated around the left shoulder and fractured left humerus. There is one pellet in the dorsal, left mid-thorax and a second pellet associated with the ventral mid-thorax (in the area of the heart).
WI-2009-066	Thorax (lat, VD), abdomen (lat), head (VD): There are multiple small metal fragments in the area of the right axilla, and also in the thorax just dorsal to the sternum.
WI-2009-071	Thorax (lat), abdomen (lat): There is no metal seen.
WI-2010-002	Thorax (lat), abdomen (lat, VD): There are multiple, very irregular, metal fragments (measuring <1-5mm) associated with the right hip and the pelvis. There are associated comminuted fractures of the right proximal femur and the right side of the pelvis. There are also multiple irregular metal fragments in the area of the lumbar vertebrae, in the dorsal abdomen, and in the caudal thorax.
WI-2010-006	Thorax (lat, VD), abdomen (lat): There are numerous <1mm to 8mm irregularly shaped metal fragments scattered throughout the tissues of both shoulders, the anterior thorax, and the anterior abdomen.
WI-2010-007	Thorax (lat), abdomen (lat), left hind leg (lat): There are multiple (up to 3mm) metal fragments in the area of the proximal left tibia and stifle joint, associated with a comminuted fracture of the proximal tibia. There are also multiple (up to 4mm) metal fragments in the area of a spinal column fracture at approximately rib 4. There are also a few 1-2mm fragments around the right scapula.
WI-2010-009	Thorax (lat), abdomen (lat): There is one 2mm metal shot in the dorsal caudal thorax (at the level of the 9th ribs).

Supporting Information S4(B): Necropsy and radiography information from WDNR. We acknowledge N. K. Businga, WI DNR Wildlife Health Center 2011.

Case ID	Radiograph text
WI-2010-010	Thorax (lat, VD), abdomen (lat): There are 10 metal shot (7-8mm in diameter, compatible with '00 size buckshot): 2 associated with a fracture of the right humerus, 2 cranial to the proximal left humerus, 2 in the area of the ventral thorax, 1 associated with the thoracic vertebrae 9/10, 2 dorsal to lumbar vertebrae 3/4, and 1 in the soft tissues cranial to the proximal left femur.
WI-2010-017	Abdomen (lat, VD) - There is one 1cm x 1.5cm metal fragment in the area of the pelvis on the left side; there are several 1-5mm metal fragments scattered throughout the abdomen. Thorax (lat), head (lat) - No metal is seen.
WI-2010-023	Radiographs were provided to DNR Wildlife Health from the local veterinary clinic. (They are of poor quality: some are without legible labels, most have poor positioning (due to the carcass having been frozen at the time) and the exposure technique was suboptimal.) There are multiple 3-4mm round metal densities associated with the caudal skull and dorsal caudal abdomen.
WI-2010-063	Head (VD/Lat): There are two approximately 7mm round metal pellets in the caudal skull at the midline at the junction of spinal cord. There are multiple, <1-2mm, metal fragments in dorsal central skull between the eyes. There is a 2-3mm round metal density in right distal rostrum. Thorax (VD/Lat): There are five approximately 7mm round metal pellets: one is in the area of the shoulder blades, one is in the dorsal right mid-thorax and is associated with a few tiny bone or metal fragments, one is in the ventral right side of the cranial thorax at level of approximately rib 3-4, and two are in the caudal right side of the thorax. Abdomen (VD/Lat): There is one approximately 7mm round metal pellet in the right caudal abdomen at level of the 6th abdominal vertebra. There are a few tiny bone or metal fragments just dorsal to the 6th abdominal vertebra.
WI-2011-005	Thorax (LAT): There is no metal seen. Increased soft tissue opacity dorsally at the hiatus of the diaphragm extending towards the mediastinum and cardiac shadow (possible diaphragmatic hernia); the apex of the heart is displaced dorsally. Abdomen (LAT): There is no metal seen. Increased soft tissue opacity in abdomen; the stomach is enlarged with bones and other injesta; the liver appears ruptured. Stifles (PA): Left rear leg: an approximately 1cm x 1/2cm metal opacity is located at the head of the tibia on the medial aspect, with >10 small fragments surrounding this opacity, there are no corresponding boney lesions; 3cms distal to this opacity is a small shot opacity at the level of the midshaft of the tibia, again no boney changes noted. A final metal shot opacity is noted in the region of the tail, approximately mid-length, no apparent changes of the soft tissue or bone are noted.

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Case ID	Radiograph text
WI-2011-006	Thorax (LAT, VD): Possible pneumothorax of right lung, diffuse; increased soft tissue opacity intermixed with > 50 metal fragments radiating from area of diaphragm; Lateral view showed soft tissue obscured visualization of heart. Abdomen (Lat): Increased gas within intestines; some gas lines in liver; other organs indistinguishable due to increased soft tissue opacity possible fluid in abdomen. Left Rear Leg: (Lat) Healing fracture of the calcaneous, and boney remodelling of the tarsal bones (unable to distinguish number from radiograph) Right front leg (lat): Old healing spiral fracture of the distal shaft of the humerus with possible osteitis; boney remodeling at the head of the humerus.
WI-2011-015	(radiography screen for metal; radiographic size estimates may not reflect true measurements): Head/neck (LAT): There are small metallic fragments in the neck; C2 has a comminuted fracture of the vertebral body. C3 has a fracture of the spinal process and vertebral body of the vertebrae with a circular radiolucent region present in the vertebral body. Multiple punctate radiopaque fragments are present in both the soft tissue and vertebral region of C1-C2; cannot determine from radiograph if these are bone or metal. An area of gas radiolucency is located dorsally to these fragments. Thorax (Lat) - No metal is apparent. Abdomen (Lat) - No metal is apparent.
WI-2011-017	(radiography screen for metal; radiographic size estimates may not reflect true measurements): Thorax (LAT): No metal is apparent. Abdomen (LAT): No metal is apparent. Bone fragments are apparent in the abdomen. The intestines are full of feces. There are small opacities around the distal aspect of the femur. Left front leg (LAT): No metal is apparent. There is a comminuted fracture of the distal humerus, involving the bottom 1/3 of the humerus. Very minute, > 1mm, opacities are seen along the humeral shaft which are either bone or metal. Head (LAT) (DV): There are four shot pellets on the left side of the head and one shot pellet in the cervical vertebrae. Small punctuate fragments are seen along C3 of the right side which cannot be determined.
WI-2011-029	(radiography screen for metal; radiographic size estimates may not reflect true measurements): Thorax (VD, lat): A small linear, metallic opacity (approx 2cm in length) is present along the midline, doral to T4, and is consistent with a microchip. There are five, 0.4-0.5 cm round metal opacities present: three are dorsal to the shoulders, one is dorsal to the midline center thorax, and one appears dorsally and just right of midline over the caudal thorax. Approximately five small, metal fragments are present caudal ot the distal aspect of the left humerus. Abdomen (LAT): A small 0.4-0.5cm round metal opacty is present dorsal to L1. Head (LAT, DV): Approximately forty-four, 0.4-0.5cm round, metal pellets are present throughout the distal aspect of the neck in the soft tissue, primarily dorsally. Three pellets are located in the soft tissue of the right side of the head.

Supporting Information S4(B): Necropsy and radiography information from WDNR. We acknowledge N. K. Businga, WI DNR Wildlife Health Center 2011.

Case ID	Radiograph text
was not done	