

BEST PRACTICE GUIDELINES FOR
TRAPPING OF MAMMALS IN EUROPE

Ondatra zibethicus

2013/2014



Trapping is a
legitimate
and **indispensable** activity
for regulating
wildlife populations.

FACE is sharing a series of Best
Practice Guidelines for 5 specific
mammal species.

These Guidelines seek to share a
greater understanding of trapping
activities and promote high
standards of trapping methods.

Ondatra zibethicus

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IMPORTANT CONSIDERATIONS & DISCLAIMERS

CHECK NATIONAL LEGISLATION

Before engaging in any trapping or capture of wild animals it is necessary to understand and follow the national legislation or regulations pertaining to that species or methods used. Each trapper must be aware of days of trapping season, special requirements (possession of the trapping exam, permission from landowner, areas where trapping is allowed, number of specimen allowed to trap, etc.). This document provides guidance only.

USE OF CERTIFIED TRAPS UNDER THE AIHTS

Trappers may use different types of traps according to national legislation. Some of the traps presented in this document are certified in accordance with the AIHTS. Others have not been certified as the process of testing is ongoing. Although they have not yet been certified, this is not to say that they have not undergone assessment, and may meet the standards once tested. According to the implementation schedule of the AIHTS, after 2016 it will only be permitted to use certified traps for species listed in Annex I of the agreement.

TRAPPING METHODS

Trapping is diverse activity and each country and region has different methods that are allowed and used to trap. The following document is presenting only limited number of practices that have been highlighted by those with expert knowledge. Learn about the current legislation in your country to check which trapping methods are allowed.

UPDATING OF BEST PRACTICE GUIDELINES

The practice of trapping is continually developing to ensure better selectivity and improved welfare for trapped animals. This document will be updated on regular basis, so check back regularly for latest information.

DISCLAIMER

Whilst all reasonable care in producing these guidelines, FACE disclaims all liability for costs, claims and damages arising from the use of traps and trapping methods described in these guidelines, and disclaims all responsibility for consequential losses arising from their use.

WHY THESE GUIDELINES ?

These guidelines are meant for trappers, authorities, NGO's and other parties interested in trapping of mammals. The information presented in this document refers to specific species and guidelines for trapping them while ensuring a high standard of welfare for the trapped animals and to ensure that any non-target captures are minimal.

Trapping is a legitimate and indispensable activity for regulating wildlife populations. To avoid that there are unjustified restrictions of this activity and to ensure that trapping remains ecologically and socially sustainable, more needs to be done to create greater understanding of trapping activities and promote high standards of trapping methods.

To progress towards this aim FACE developed best practice guidelines for certain mammal species. The Trapping Guidelines are a series of five guidelines covering the following species: *Nyctereutes procyonoides*, *Mustela erminea*, *Vulpes vulpes*, *Martes Martes* and *Ondatra zibethicus*.

BACKGROUND ON REGULATION OF TRAPPING IN THE EU

In the EU, trapping is generally subject to specific legal provisions and rules. These can include the types of trap, the conditions under which these may be used, methods required to avoid capture of non-target species (selectivity), as well as the elimination of avoidable suffering (regular inspections). Several Member States require that trappers must have taken and passed mandatory training courses in hunting and/or trapping. In addition, trappers are often required to obtain a valid trapping and/or hunting license along with landowner permission where they wish to trap.

IMPORTANT NOTE: Before engaging in any trapping or capture of wild animals it necessary to understand and follow the national legislation or regulations pertaining to that species or methods used. Each trapper must be aware of days of trapping season, special requirements (possession of the trapping exam, permission from landowner, areas where trapping is allowed, number of specimen allowed to trap, etc.). This document provides guidance only.

LEGISLATION

In 1987 the International Organisation for Standardization ISO through its Technical Committee TC 191 (where FACE has an observer status) started working to agree acceptable trapping standards from a point of view of animal welfare. Although good progress was made, the process did not manage to establish the welfare thresholds for which it strived. Nevertheless excellent work of ISO-TC 191 resulted in 1999 in an agreement on methods for testing restraining traps, respectively for killing-trap systems used on land and underwater.

Few years after the ISO-TC process started the Council of the European Union adopted in 1991 the “Leghold Trap” Regulation 3254/91 prohibiting the use of leghold traps in the Community and the introduction into the Community of pelts and manufactured goods of certain wild animal species originating in countries which catch them by means of leghold traps or trapping methods which do not meet international humane trapping standards.

In 1995 negotiations began on the Agreement on International Humane Trapping Standards (AIHTS) between the EU, Canada, Russia and the US and concluded successfully in 1998, although it only came into force much later, in July 2008 after the ratification by the Russian Federation. The EU and its Member States have therefore an international obligation to comply with the standards set by AIHTS. According to the standards, Parties to the Agreement will have until 2013 (5 years after entry into force) to test and certify trapping methods, and until 2016 to implement the use of certified traps.

Traps are used worldwide in interactions with wildlife. This may be to minimise environmental damage or to assist conservation by helping to control over-abundant or alien invasive species, or for relocation. It is an equally valuable research method, for example to fit individuals with markers or transmitters to follow their movements. Since many mammals are predominantly nocturnal, or are present around buildings or settlements, trapping is often the safest method for restraint (FACE, 2013).

SPECIES INFORMATION SHEET

Scientific name: *Ondatra zibethicus*

Common names: Muskrat (English), Rat musquéon (French),
Bisamratte (German)

DESCRIPTION

Muskrat is the only species in genus *Ondatra*. This species occurs in North America. It was introduced to Czech Republic in 1905, and is now present throughout the Palaearctic, Mongolia, China, northeast Korea, and Honshu Island, Japan. (Musser and Carleton, 2005 in Linzey, 2008). Many of these introductions have resulted in establishment of viable populations (Willner et al., 1980).

Muskrats are good swimmers and can swim at a rate of 1, 5 to 5 km/h (Peterson, 1950 in Willner et al., 1980) and they use their long, laterally flattened tail in a rudder-like manner during swimming (Johansen, 1962 in mammalians species). They can stay submerged to up to 20 min (Errington, 1961 in Willner et al., 1980).

CURRENT DISTRIBUTION

The species is originally from North America. It has been introduced into many areas of the world, especially in Europe and Asia, but also in South America. In 1905, the introductions into Europe were initiated. In Czech Republic five individuals were released and from there they spread to neighbouring countries (Hoffmann 1958, 1985 in Danell, 1996). The spread of the species in Europe was facilitated by both intentional releases and escapes from fur farms. It was also introduced to Finland from where it spread to Sweden and Norway (Danell, 1996). In France, farms were founded but after prices for fur plunged a number of farms released the animals (Skyrienė & Paulauskas, 2012).

RANGE COUNTRIES

It is native in Canada and United States. It was introduced in: Albania, Argentina, Austria, Belarus, Belgium, Bulgaria, Chile, Czech Republic, Estonia, Finland, France, Germany, Gibraltar, Hungary, Italy, Japan, Latvia, Lithuania, Mexico, Moldova, Mongolia, Netherlands, Poland, Romania, Russian Federation, Slovakia, Slovenia, Sweden, Switzerland, Ukraine (Linzey, 2008).

POPULATIONS

The species is common to abundant in suitable habitats, with average densities of 40 individuals per hectare (Linzey, 2008). Muskrat is sensitive to changes in water level and habitat conditions as the changes can dramatically increase mortality and population abundance (Brzeziński et al., 2010 in Skyrienė & Paulauskas, 2012). Population size and mortality depend on water pH, salinity, dissolved oxygen, water tables, food plant species composition (Ferrigno, 1967 in Skyrienė & Paulauskas, 2012), as well as on floods and hurricanes (Feldhamer et al., 2003 in Skyrienė & Paulauskas, 2012).

IDENTIFICATION

APPEARANCE

Ondatra zibethicus belongs to the family Muridae and is the only species within the genus *Ondatra* (Musser & Carleton 1993 in Danell, 1996). It has a “rat-like” appearance but is actually closely related to voles and lemmings. On average, adult animals weight slightly more than one kg. The body length is around 50 cm and the tail is approximately 25 cm (Banfield 1974 in Danell, 1996). The muskrat is easily recognised by the long tail which is naked and laterally flattened (Danell, 1996). They have dense fur that traps air underneath for insulation and buoyancy. Their heads are very large and their ears are almost invisible underneath the fur. The whiskers are medium size. Muskrats have short legs and big feet; the back feet are slightly webbed for swimming. Adults have glossy upperparts that are dark brown, darker in winter and paler in the summer (Baker, 1983 in Newell, 2000). Their average life expectancy is 3 years. Dental formula is $1/1 + 0/0 + 0/0 + 3/3$ (Leskovic, 2012).

TRACKS

Its tracks can be found in mud or sand along shorelines. The mark of a dragging tail is sometimes apparent. Tracks are small, hand like prints, with long, finger like toes. The rear print is 5 to 7 cm long. The front print may appear four-toed, as the inner toe is extremely small and barely shows in the track (Link, 2005).

BURROWS

In cases of stable water levels it may dig burrows in dikes/levees and banks. In habitats unsuitable for digging, lodges are constructed, with building activity concentrated in the late autumn (Moerkens, pers. comm.). They build lodges of plant material and mud which is collected from the immediate area. The largest lodges are often used by group of animals, while the smallest ones are used as feeding sites and for breathing as well as shelter during travels within their territory (Danell, 1996).

DROPPINGS

Droppings can be found floating in the water, along shorelines, on objects protruding out of the water, and at feeding sites. The animals may repeatedly use these spots, and more than one animal may use the same spot. Droppings are dark green, brown, or almost black. They are slightly curved and cylindrical (Link, 2005). Droppings are around 1.6 mm long.

SIMILAR SPECIES

It is the only species in the genus *Ondatra* (Danell, 1996).



Illustration by Pičulin, LZS 2012

LIFE HISTORY

DIET

They are mainly vegetarians but will eat food of animal origin including carrion (Danell, 1996). They consume about one-third of their weight every day. In the summer they eat the roots of aquatic plants. In the winter, they swim under the surface ice to get to the plants. They also eat agricultural crops (Baker 1983 in Newell, 2000).

FORAGING BEHAVIOUR

As animals do not hibernate, feeding occurs throughout the year. During the ice-free season feeding is spread over larger areas, but during winter when habitats are ice-covered feeding activities are heavily concentrated to the close vicinity of the houses or the entrances of burrows (Danell, 1996)

REPRODUCTION

Female after 30 to 47 days of gestation gives birth to 2 to 14 fry. It can have 1 to 3 (4) litters per year. (Leskovic, 2012) or up to 5 - 6 in favourable climatic and habitat conditions (DAISE, 2006).

HABITAT

It can survive in many habitats ranging from sub-tropical rivers and costal marshes to arctic tundra and deltas (Errington 1963 in Danell, 1996). It lives always by fresh water, still or flowing. Banks of ponds, lakes, rivers and canals with rich riparian vegetation, and in marshes. It also penetrates along streams even in mountains. (Mitchell-Jones AJ. Et al, 1999).

HUMAN AND WILDLIFE INTERACTIONS

INTERNATIONAL LEGAL & CONSERVATION STATUS

Not listed in EU Habitats Directive or Bern Convention
AIHTS – Annex I

DISEASE

Parasites may reduce populations to a great extent. Trematodes are the dominant helminthic parasites (Skyrienė & Paulauskas, 2012).

PREDATION

The mink is a primary predator of *Ondatra zibethicus*. Supposedly, one American mink can take up to 20 or 30 muskrats per year (Prūsaitė, 1988 in Skyrienė & Paulauskas, 2012). Predation by red fox (*Vulpes vulpes*) can be also considered as an important factor affecting its populations as foxes prey for young but not for adult animals (Danell, 1978, 1996 in Skyrienė & Paulauskas, 2012). Otters (*Lutra lutra*), barn owls (*Tyto alba*) and harriers (*Circus* spp.) also prey on them (Genovesi, Scalera, 2008 in Skyrienė & Paulauskas, 2012). Indirect enemies are wild boar which using the food dismantle the lodges of muskrat. (Skyrienė & Paulauskas, 2012).

IMPACTS (ECOSYSTEM, HUMAN HEALTH, ECONOMIC)

The species has a great potential to reduce vegetation (Danell, 1996).

Because of burrowing activity it is regarded as a pest in ponds and other constructions on rivers (Mitchell-Jones AJ. Et al, 1999). It can destroy dams and other man-made structures close to the water (Danell, 1996). A negative effect of economic importance caused by *Ondatra zibethicus* includes burrowing-related damage of dikes, ditches, ponds, and removal of vegetation in wetlands used for wastewater treatment, as well as occasional losses of crops (Miller, 1994 in Skyrienė & Paulauskas, 2012).

They only occasionally affects human directly (Danell, 1996). In well-vegetated and productive wetlands and lakes, they may be a positive factor

for a waterfowl, by opening dense vegetation stand, thus creating new feeding areas. On the other hand, reduction of vegetation in localities where the plant cover already is sparse will have the opposite effect (Danell, 1996).

They negatively effects populations of fishes (Becker, 1972 in Skyrienė & Paulauskas, 2012), molluscs, shellfishes and mussels (Genovesi, Scalera, 2008 in Skyrienė & Paulauskas, 2012). Moreover, the animal is a predator on freshwater crayfish and bivalves (Hochwald, 1990; Zimmermann et al., 2000 in Skyrienė & Paulauskas, 2012). There is some evidence of competition between water vole *Arvicola terrestris* and *Ondatra zibethicus* (Danell, 1996).

GENERAL OVERVIEW OF TRAPS

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Within the EU traps must meet international standards, for those species¹ referred to in Agreement on International Humane Trapping Standards (see section 1.3 for timeline of implementation). However, regardless of the species, efforts should be made to reduce pain, distress and suffering of trapped animals as much as technically feasible .

When trapping it is important to avoid catching non-target animals. This is achieved by carefully planning and setting the trap. The most important factor in selective trapping is location. Each species follows certain habits and has preferences for food and habitat. For generalist species identification of tracks and signs is essential. Knowledge of these factors is essential to find best places to set your traps. Prior observations in the trapping area will reveal which locations are the best for specific species. You should also avoid trapping close to trails that are heavily used by people and their pets, and avoid areas which hunters use with their hunting dogs.

Once you chose the proper location, choosing the proper size and type of trap for the situation and species is also a key component of trapping selectively. Use the proper bait, lure to ensure selectivity, as each animal response to certain food smells (New York State – Department of Environmental protection, 2011).

¹ Species listed in Annex I of AIHTS, present in EU: *Canis lupus*, *Castor canadensis* (FI only), *Castor fiber*, *Lutra lutra*, *Lynx lynx*, *Martes martes*, *Meles meles*, *Mustela ermine*, *Nyctereutes procyonoides*, *Ondatra zibethicus*, *Procyon lotor*.

WAYS TO TRAP MUSKRAT

Muskrat can be trapped with active or passive trapping:

Active trapping consists of using the following traps:

- Conibear 110 or -150
- Ground clamp

Passive trapping consists of using the following traps:

- Livecatching bait-traps
- Bait-traps with body-gripping, floating island with mounted Conibear's
- Cages with body-gripping traps
- Drowning bait-traps
- Drowning traps

Note: The Canadian Wildlife Directors, Competent Authorities for implementation of the AIHTS have approved a process for implementing the AIHTS in Canada. The list of certified traps (last updated May 2014), contains a number of killing traps approved for Muskrat on land and underwater. See www.fur.ca/certifiedtraps.php

CAPTURE STRATEGIES FOR MUSKRAT

The muskrat has two migrations periods every year:

- Spring Migration (February to end of April):
 - influence of changing water depth: transition from winter to summer levels
 - search for own territory
 - search for partner
- Autumn Migration (September to November):
 - social tensions between the young and the older animals
 - composition and density of the population
 - possible formation of new parent couples
 - shortage of food
 - looking for deeper water to have the possibility of moving under the ice

Trappers make intense use of these migration periods

TACTICS FOR TRAPPING MUSKRAT

During the migration periods drowning- and bait-traps are placed in all watercourses to trap migrating muskrats (passive trapping). Passive trapping means: install a trap and wait until the target species enters it.

Between the migration periods all watercourses are checked by the trappers for the presence of muskrats, in these periods there is intensive use of Conibear traps (active trapping). Active trapping means that trapper searches for the burrows of the muskrat. Once a burrow is found traps are installed. Under water at the entrances to the burrow.

GENERAL CONSIDERATIONS

WHEN TRAPPING SPECIES

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How often do we have to check the trap?

- Live trapping cages are checked daily, if the temperature is above 20 ° C check the cage as early as possible, and if the temperature is above 25 ° C several checks per day are needed (this does not apply to cages which are equipped with a cage transmitter);
- Passive installed traps are checked no later than once a month
- Active installed traps are checked every working day



USER SAFETY

CONSIDERATIONS

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Trapping is not a dangerous activity; however there are few safety issues each trapper should consider.

As activities require spending time outside, warm clothes to avoid hypothermia and boots and rubber gloves when setting traps in water are recommended. For setting the traps, good safety equipment, e.g. gloves, knelling pads, should be used. In case the trap springs while setting, each trapper must have knowledge how to free himself. If using firearms while trapping, keep them unloaded until required for dispatching animals.

Carry a map and compass. Don't rely only on GPS and mobile phone, as they might not work when needed. Consider also trapping with another person, who can help you in distress.

As trapping season coincides with the hunting season, it is important that clothes you wear are highly visible at all times. Consider wearing hunter orange vest or cap (New York State – Department of Environmental protection, 2011).

SPECIFICATIONS OF TRAPS

TRAP TYPE A - ACTIVE TRAPPING (BODY-GRIPPING TRAPS)

Conibear 110 or -150

All Conibear traps are made of stainless steel and are placed entirely under water as land-use is not allowed. The trap is placed at/in all entrances of a burrow. Avoid using bigger sizes of Conibear traps due to re-introduction programs of the Beaver (*Castor fiber*) and Otter (*Lutra lutra*). To avoid trapping non-target species the Conibear can be equipped with a grid to prevent catches of waterbirds.

According to the AIHTS for Muskrat any jaw-type trap (body-gripping or leg-hold) that exerts a clamping force on a muskrat and maintains the animal underwater is certified.

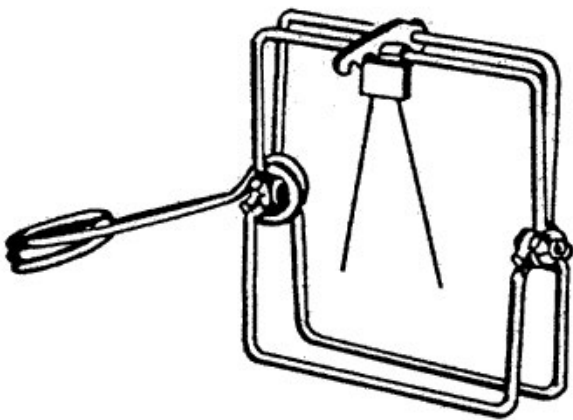


Illustration: Conibear



Figure 2, Conibear, picture by Herman Schuurman



Figure 3, mark 'prov' on Conibear, picture by Herman Schuurman



Figure 4, Conibear + reed, picture by Herman Schuurman



Figure 5, Conibear installed, picture by Herman Schuurman

Ground Clamp

The Ground Clamp is mostly used in underwater situations. The trap is placed at/in all entrances of a burrow; usage of Ground Clamps should be avoided in known living areas of the Beaver (*Castor fiber*) and Otter (*Lutra lutra*).

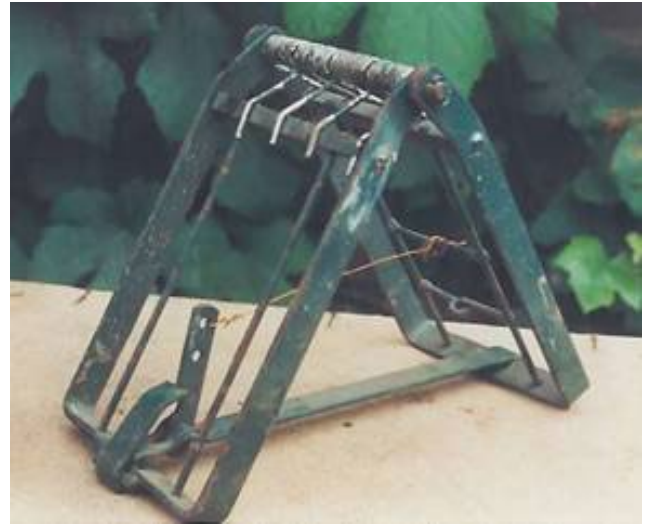


Image: Ground Clamp, Source: Dutch Water Authorities

TRAP TYPE B - PASSIVE TRAPPING

Live catching bait-traps, used floated or on land

Live catching bait-traps are used for scientific reasons, for instance to investigate the home range of muskrats, the population size etc. Live catching traps are not used (in the Netherlands) for trapping muskrats. As bait carrots and apples are used.



Image: Using live catch bait-traps, Picture by Waterschap Rivierenland

Bait-traps with body-gripping, floating island with Conibear or Ground Clamp mounted

These traps can be used in situations with ranging water levels. The cage is fitted with 9 cm rings to prevent trapping of European Otter (*Lutra lutra*). The number of fitted Conibear traps depends on the assumed population of muskrats. As bait carrots and apples are used.

According to the AIHTS for Muskrat any jaw-type trap (body-gripping or leg-hold) that exerts a clamping force on a muskrat and maintains the animal underwater is certified.



Floating bait-trap with conibears, Waterschap Groot Salland



Floating bait-trap with groundclamps, Dutch Water Authorities

Cages with body-gripping traps

These types of traps are used in situations with small ranging water levels. The cages are placed in a fake tube; these tubes are then buried into the banks. The cages are equipped with a ceiling that remains under water. The cage is fitted with 9 cm rings to prevent trapping de European Otter (*Lutra lutra*). Up to two Conibear traps are fitted in the cage. Baits are not used in this type of traps.

According to the AIHTS for Muskrat any jaw-type trap (body-gripping or leg-hold) that exerts a clamping force on a muskrat and maintains the animal underwater is certified.



Cages with Conibear fitted: Picture Dutch Water Authorities

Drowning bait-traps

These traps can be used in situations with ranging water levels. The width of the entrances is limited to 9 cm to prevent trapping de European Otter (*Lutra lutra*). As bait carrots and apples are used. Once Muskrat enters the trap it can only move to the underwater compartment. In this type of trap several animals can be captured simultaneously.



Drowning baittraps, Dutch Water Authorities

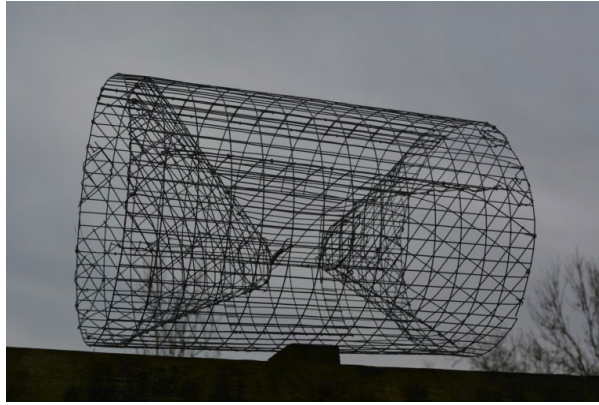


Drowning traps

These types of traps are used in situations with small ranging water levels. The cages are placed in a fake tube; these tubes are then buried into the banks. The cages are equipped with a ceiling that remains under water. The cage is fitted with 9 cm rings to prevent trapping of European Otter (*Lutra lutra*). Baits are not used in these cages.



Drowning cage – 2-sided use Picture by Herman Schuurman



Drowning cage installed, picture by Herman Schuurman



Situation where drowning cages are used picture by Herman Schuurman

HOW TO ENSURE SELECTIVITY AND EFFECTIVENESS OF TRAPS

To ensure selectivity many improvements have been made to all kind of traps:

- Using the 9 cm ring to prevent trapping Otters (*Lutra lutra*)
- Application of a fish flap so fishes will not enter the trap
- Aperture to release Water vole's (*Arvicola amphibious*)
- Installation of an S-curve in the cages to prevent bycatch of pikes (*Esox lucius*)
- Mounting grids to the Conibear to prevent bycatch of waterbirds
- It is only permitted to use used bait traps featured with a protection against pecking by waterfowl
- The use of bait traps is permitted only with the application of a protective cover up to the water level. Casings for the bank use bait clamps are designed so that they force the muskrat to approach the trap from the front side;
- Depending on the weather situation, and the location, the upper side of a live capturing cage is covered or the cage is covered entirely. When unnecessary suffering is expected due to extreme cold or heat, the cage will not be used;
- The live trapping cage should always be provided with adequate moisture-containing bait;
- All species other than Muskrat, Nutria or Brown rat, which are found alive in the live trapping cages are released immediately on the spot.



Image: Ground clamp equipped with a grid to prevent the bycatch of waterbirds, Picture by Ivo van Velthuisen

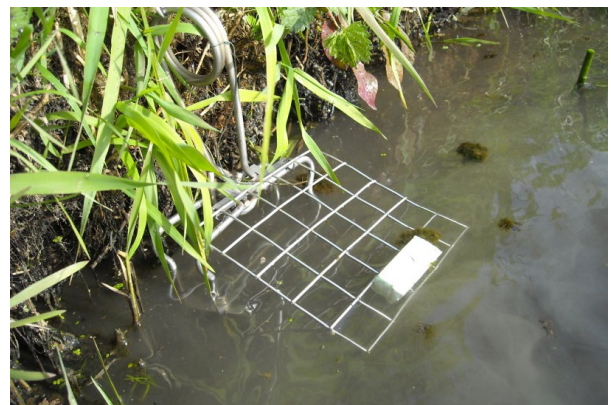


Image: Conibear equipped with a grid to prevent the bycatch of waterbirds, Picture by Ivo van Velthuisen



Image: Ground clamp equipped with a grid to prevent the bycatch of waterbirds, Picture by Ivo van Velthuisen

CONTRIBUTIONS & ACKNOWLEDGEMENTS

FACE is the European federation of associations for hunting and conservation.

Established in 1977, it represents in the interests of Europe's 7 million hunters as an international non-profit-making non-governmental organisation (INGO). This makes FACE the largest democratically representative body for hunters in the world and is probably one of the largest European civil society organisations.

FACE is made up of its Members; national hunters' associations from 38 European countries including all EU-27 Member States. FACE also has 3 Associate Members.

FACE upholds the principle of sustainable use, has been a member of IUCN since 1987, and more recently Wetlands International. FACE works with its partners on a range of hunting related issues, from international conservation agreements to local implementations with the aim of sustaining hunting across Europe.

FACE is recognised by the European Commission as the representative body for Europe's hunters. It is consulted by the relevant Commission Directorates-General and Units during the preparation, elaboration and monitoring of EU legislation dealing with hunting, wildlife management, nature conservation, firearms, trapping, wild animal health, game meat hygiene, etc.

PARTNERS

International Fur Federation

Formed in 1949, the IFF protects the fur trade's interests, promotes innovation and high standards and presents a factual image of the fur industry. The IFF represents 49 national associations and organizations from 38 countries. Members are drawn from the entire fur supply chain: farmers, trappers, auction houses, merchants, brokers, buyers, dressers and dyers, designers, manufacturers, wholesalers, marketing organizations and retailers. The IFF has contributed some €10 million to the implementation of the Agreement on International Humane Trapping Standards (AIHTS) in Canada, the Russian Federation, the European Union and the United States.

The IFF has been a full voting member of the International Union for the Conservation of Nature (IUCN) since 1985 and supports the principles of Sustainable and wise Use.

More information is available on wearefur.com

UETA - Union of European Trapper's Associations

Founded in 2012, it represents trappers to other authorities and sectors of the society by guarding and defending the rights of trappers. Member organizations can be found throughout Europe.

UETA promotes responsible and sustainable trapping including training programs respecting national regulations. UETA is involved in trap develop- and test programs.

UETA supports the implementation of AIHTS and codes of Best Management Practice in territories of member organizations. UETA collaborates with FACE to achieve these goals.

Partners

Dutch Water Authorities - umbrella organization of 23 regional water authorities in the Netherlands.

Dutch regional water authorities want to share their expertise on regional water management with the world. By joining forces they strive to be of better service to the people and organizations that need it the most, bolster international business, and create mutual benefit from international cooperation.



USEFUL LINKS

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Dutch Water Authorities

<http://english.uvw.nl/>

Portal Muskrats

www.meldpuntmuskusrat.nl

REFERENCES

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FACE. 2013. Annual Report

IAHTS – International Agreement on Human Trapping Standards, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:1998:042:0043:0057:EN:PDF>

DAISE , http://www.europe-aliens.org/pdf/Ondatra_zibethicus.pdf, 26.11.2013

Danell, K. 1996: Introduction of aquatic rodents: lessons of the muskrat *Ondatra zibethicus* invasion. – Wild. Biol. 2:213-220 (<http://www.wildlifebiology.com/Downloads/Article/95/en/oldpath.pdf>)

Leskovic B. 2012. Pižmovka (*Ondatra zibethicus*). In: Divjad in lovstvo. Leskovic B., Pičulin I. (ur). Ljubljana, Lovska zveza Slovenije: 544-545: In Slovenian

Link R, 2005. Adapted from « Living with Wildlife in the Pacific Northwest, <http://wdfw.wa.gov/living/muskrats.html>, 16.12.2013

Linzey, A.V. 2008. *Ondatra zibethicus*. In: IUCN 2013. IUCN Red List of Threatened Species. Version 2013.2. <www.iucnredlist.org>. Downloaded on 11 February 2014.

Mitchell-Jones AJ, Amori G, Bogdanowicz W, Krystufek B, Reijnders PJH, Spitzenberger F, Stubbe M, Thissen JBM, Vohralik V, Zima J (1999) The atlas of European mammals. Poyser Natural History, Academic, London, p. 224-225

REFERENCES

New York State – Department of Environmental Conservation. 2011. 'Killing trapping methods' means traps designed and set with the intention of killing a trapped animal of the target species. Student Manual. New York State – Department of Environmental Conservation., p 112.

Newell, T. 2000. "*Ondatra zibethicus*" (On-line), Animal Diversity Web. Accessed November 26, 2013 at http://animaldiversity.ummz.umich.edu/accounts/Ondatra_zibethicus/

Skyrienė G., Paulauskas A., 2012, Distribution of invasive muskrats (*Ondatra zibethicus*) and impact on ecosystem, *EKOLOGIJA*, Vol 58, No 3. P 357-367

Willner G.R, Feldhamer G.A. Zucker E.E. Chapman J.A., 1980, *Ondatra zibethicus*. Mammalian species, No 141, pp 1-8

Images and illustrations:

Pičulin I., Footprints Pižmovka (*Ondatra zibethicus*), [illustration]. From Divjad in lovstvo (pg. 545), 2012, Ljubljana, Lovska zveza Slovenija - Zlatorogova knjižnica

Illustration of Conibear 110, <http://www.gundogghouse.com/articles/articleImages/trap1.gif>

FOR AN HONEST RELATIONSHIP
WITH NATURE

Best Practice Trapping



WWW.FACE.EU