

FISH
IN THE WATERS OF
LAKE PEIPSI
AND FISHERMEN
ON PEIPSI WATERS

PEIPSI GUIDE



Lake Peipsi is habitat for hundreds of millions of fish – a total of 37 species are represented here. The most well-known inhabitants of the Peipsi waters are understandingly those which also occur on people’s dining table from time to time: perch, pike, pikeperch, bream, burbot, silver bream, Peipsi lavaret, European smelt, rudd, vendace, roach...



Vendace – *Coregonus albula*



Pikeperch – *Sander lucioperca*

The smallest fish of our largest lake are, however, the nine-spined sticklebacks, with a length of only up to 7 centimetres and weighing no more than 3 grams. But the most plump fish growing here are the Wels – the sheatfish caught on August 10, 1935, was 2.1 metres long and weighed 56 kilograms. The age of this record Wels has



Nine-spined stickleback – *Pungitius pungitius*

indeed remained a secret, although it is known that catfish can even live as long as 80 years.



Wels – *Silurus glanis*

Two local fish species have obtained their name from the lake. In the case of Peipsi lavaret, we are dealing with an endemic sub-species, naturally populating only Lake Peipsi and associated water bodies. From here, lavaret has been introduced elsewhere in the world – into the bodies of water in Poland, Germany, Romania and Japan.

On the other hand, Peipsi smelt has not solely been connected with Lake Peipsi, being a natural inhabitant elsewhere in European internal waters. At the same time, Peipsi smelt has played a vital role in the life of Peipsi shore people throughout times.

Lake Smelt – *Osmerus eperlanus eperlanus*



Whitefish – *Coregonus lavaretus maraenoides*

Quite a few of the fish listed within the species of Peipsi do not constantly live in the lake. For instance, brown trout and greyling spend most of their time in rivers, paying random visits to the lake waters, whereas the vimba and the asp do live in the lake but can spawn only in rivers. There are also



Asp – *Aspius aspius*

fish species, e.g. pike and bream, which partly spawn in the lake, with the rest preferring spawning in rivers. The above-mentioned fish can sometimes move hundreds of kilometres along rivers.

In comparison with other Estonian water bodies, pike and bream grow significantly more rapidly in Lake Peipsi. Peipsi smelt, pike-perch, roach, rudd, silver bream, burbot and perch are also outstanding for their rapid growth here.

Carp and gibel carp have been brought to Peipsi by humans. Today, the existence of the eel in the lake is also dependent on people – following the construction of the Narva Hydroelectric Power Plant, these fish are not capable of swimming here from the sea water themselves.



Spined loach – *Cobitis taenia*

Mud loach –
Misgurnus fossilis



Competent nature experts are aware of several other mysterious fish living in Lake Peipsi. Among these, there are three species subject to conservancy – weather-fish, spined loach and sculpin.

The beautiful shores of Lake Peipsi, profuse in fish, have, for a long time, been home for fishermen. The habits of local fish have been known in detail in Piirissaare and Praaga fishermen's villages – for instance, how fish migrate and when and where they spawn. There are experts still living in the locality, knowing how to associate the movements of different pike forms with the disappearance of ice and the blooming of bird-cherry. Old fishermen still have interesting fishing devices in barn and shed corners and they can remember numerous exciting fishermen stories.

THE FISH OF LAKE PEIPSI AND THE ONES LIVING IN THE DELTA PART OF THE RIVERS FLOWING INTO PEIPSI

The abundance (° – visitor; * – rare, ** – common, *** – abundant) of fish species of Lake Peipsi-Pihkva.

SPECIES	ABUNDANCE
Brook lamprey <i>Lampetra planeri</i>	°
Brown trout <i>Salmo trutta fario</i>	°
Vendace <i>Coregonus albula</i>	***
Whitefish <i>Coregonus lavaretus maraenoides</i>	***
Grayling <i>Thymallus thymallus</i>	°
Lake Smelt <i>Osmerus eperlanus eperlanus</i>	***
Pike <i>Esox lucius</i>	***
Eel <i>Anguilla anguilla</i>	**
Roach <i>Rutilus rutilus</i>	***
Dace <i>Leuciscus leuciscus</i>	*
Chub <i>Leuciscus cephalus</i>	*
Ide <i>Leuciscus idus</i>	**
Minnow <i>Phoxinus phoxinus</i>	°
Rudd <i>Scardinius erythrophthalmus</i>	***
Asp <i>Aspius aspius</i>	*
Sunbleak <i>Leucaspis delineatus</i>	*
Tench <i>Tinca tinca</i>	**
Gudgeon <i>Gobio gobio</i>	*
Bleak <i>Alburnus alburnus</i>	**
Riffle minnow <i>Alburnoides bipunctatus</i>	°
Silver bream <i>Blicca bjoerkna</i>	***
Bream <i>Abramis brama</i>	***
Vimba bream <i>Vimba vimba</i>	*
Crucian carp <i>Carassius carassius</i>	**
Gibel carp <i>Carassius gibelio</i>	*
Carp <i>Cyprinus carpio</i>	*
Stone loach <i>Barbatula barbatula</i> (L.)	°
Spined loach <i>Cobitis taenia</i> L.	*
Mud loach <i>Misgurnus fossilis</i> (L.)	*
Wels <i>Silurus glanis</i> (L.)	*
Burbot <i>Lota lota</i> (L.)	***
Three-spined stickleback <i>Gasterosteus aculeatus</i> L.	°
Nine-spined stickleback <i>Pungitius pungitius</i> (L.)	*
Pikeperch <i>Sander lucioperca</i> (L.)	***
Perch <i>Perca fluviatilis</i> L.	***
Ruffe <i>Gymnocephalus cernuus</i> (L.)	***
Bullhead <i>Cottus gobio</i> L.	*

FISHING FIGURES THROUGHOUT TIMES

The fish fauna of Lake Peipsi has changed significantly in the course of time. This is partly revealed by the long-term statistics of caught fish quantities. The data, collected within seventy years, show the large fluctuations of catches and an obvious decrease in the total catch during the recent decades.

Regarding different species, the changes in catches have been extremely varied. For instance, bream, pike and perch have been caught in more or less stable quantities, but there have been abrupt shifts in the abundance of several other fish. An explosive increase in the population of pike-perch and the lingering of vendace is characteristic of the second half of the previous century.

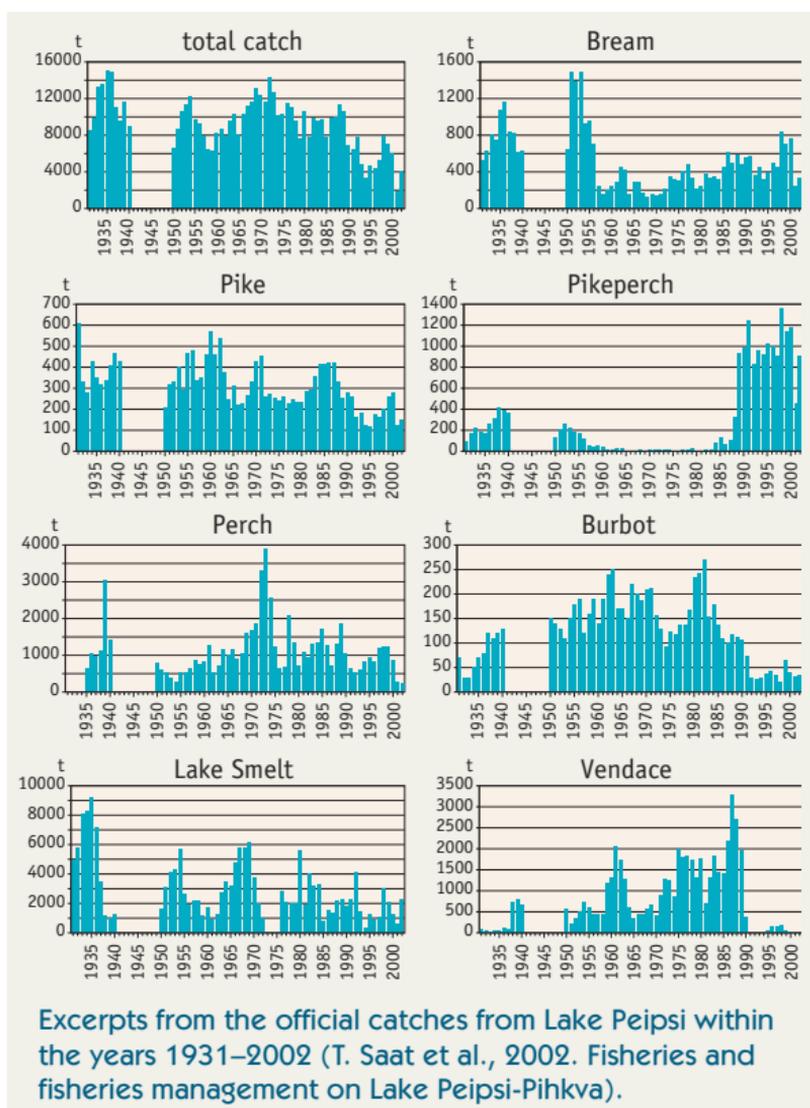


Quite a number of the changes in fish fauna have been conditioned by the alterations in the general status of the lake. Warm summers, with long windless periods in the shallow-water Peipsi have gradually increased the blooming of the algae and thus the deterioration of water quality. The fish have significantly suffered because of this – in some places, there have been large amounts of little dead fish on the lake shores, mainly ruff. Some fish, such as the vendace, cannot tolerate winters with too little ice, as their eggs would need peace during the winter period.

To some extent, fish-catching figures also reflect the taste preferences of people. Throughout centuries, the small shoal fish – smelt – has probably been caught most of all. However, the smelt and yet more the ruff, have by



Võrtsjärv Limnological Station's ichthyologists on Lake Peipsi (2003).



now remained in a more modest position. But the vendace, pike, roach, bream, perch, lavaret, pike-perch and burbot are definitely among our favourites of today.

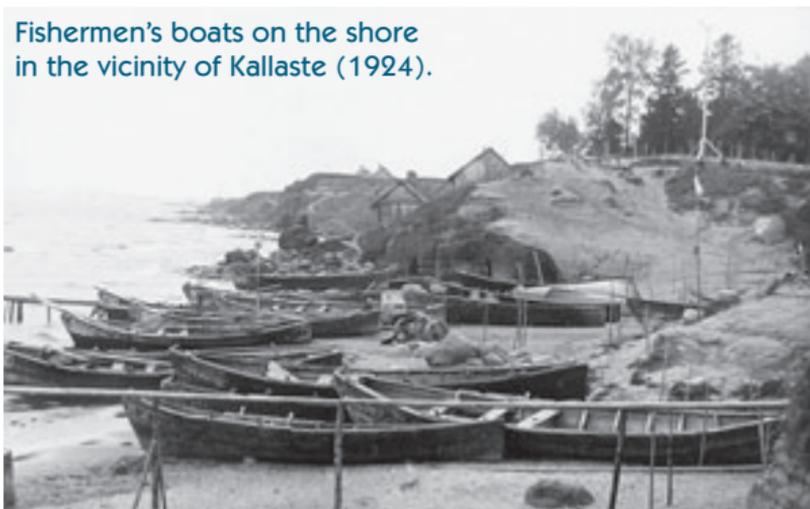
Bounteous fish resources have contributed to the situation where fishing keeps a firm place in the life of the shore inhabitants. Throughout times, fishery has been one of the main sources of subsistence here and several old ways of fish-catching have indeed been preserved namely on the shores of Lake Peipsi up until now.



In comparison with the quondam annual catch of 30 thousand tons, the fishermen presently have to be satisfied with less. And again, the human factor – both direct and indirect – unfortunately takes first place among the reasons for the disappearance of fish resources in Lake Peipsi.

Fishermen using a lure tackle (*sikuska*) near Mustvee (2001).

Fishermen's boats on the shore
in the vicinity of Kallaste (1924).



FISHING THROUGHOUT TIMES

Fish have been caught on Peipsi since the settlement of the lake shore. Before the occurrence of permanent villages, fishermen used temporary cabins and resting places.

14th-15th centuries – the emergence of the first permanent villages, where fishery became the main activity of the inhabitants. The beginning of the generation of an Estonian-Russian mixed population.

16th-17th centuries – smelt catching was the most important branch of fishery on Lake Pskov. Fishing was often the only source of income for the Russians, with a small amount of supplementary handicraft work and trading. Estonians, however, also dealt with land cultivation, whereas the Setu people living at Lake Pskov, often preferred to rather buy fish from their Russian neighbours.

The beginning of the 19th century – the merchants of mainly Russian origin began to purchase fish and delivered it further to the larger towns of Estonia as well as to Riga, St. Petersburg, Pskov and elsewhere.

1851-1852 – the organisation of the first scientific expeditions for researching the fish and fisheries of Lake Peipsi. The implementing agency was the Russian Ministry of State Resources, headed by the academician Karl Ernst von Baer.

1859 – approval of the “Regulation on the Limitation of Fishery in Lakes Peipsi and Pskov”. This was the first fish protection law in the Estonian territory.



A fisherman angling on Peipsi (1924).



Pulling the ice
drag-net or *mutt* on
Lake Peipsi (1931).

According to the Baltic private law, that entered into force in **1865**, fishing was free on public waters, including on Lake Peipsi. However, certain limitations had been laid down, thus giving rise to fish poaching.

End of the 19th century – introduction of coops, the example being the fishing devices of the Russian seen on Lake Ladoga. The coop, as an efficient trap demanding less manpower, ousted the large seine net, which remained in use mainly in under-ice fishing. This way, fishing became more and more of an industrial nature. Entrepreneurship, wage-work and *artel*-type catching teams came into being.

The first half of the 20th century – fishing on Lake Peipsi still took place by way of oar boats; motorised boats were extremely rare.

Since the 1940s, following the annexing of Estonia by the Soviet Union, the creation of fisheries collective farms was launched. Following the example of marine fishing, trawl-nets were also introduced on Lake Peipsi. But due to the rapid catching of juvenile fish, they were banned as early as in 1956. Thus, the *muttnoot*, a special drag-net, remained to be the largest net used in Lake Peipsi. In order to transport such drag-nets, it was necessary to use motorboats equipped with large winches.

After Estonia regained its independence **in 1991**, several fishing companies, successfully operating up until now, were formed of the largest sections of the “Peipsi Kalur” fisheries collective farm. Private small-scale fishing was also reintroduced. The majority of fishing companies and the fishermen belong within the Peipsi Fishermen’s Association, established in 1995.

Today, up to 10,000 tons of fish from Lake Peipsi reach people’s tables; half of this quantity being caught by Estonians and the other by the Russians. The major share of the fish is caught by professional fishermen with nets, fyke nets and bottom trawls. Amateur fishermen only play an important role during winter.

PEIPSI FISHERMAN'S GLOSSARY

Burbot tackle or *lutsumänd* is a catching device without bait, used for fishing burbot from ice holes, during wintertime spawning. The tackle is formed of 6-12 radial iron branches, the sharp edges of which are twisted upwards. It is fastened to a long string or a wooden stick. When moving the tackle up and down in an ice hole, the metal pieces attached to it start to jingle and attract the fish. Similar fishing-tackle has also been used in eastern parts and in Scandinavia. Today, burbot catching is banned during spawning.



Lutsumänd.

Drag-net or *mutt* is a specific deep-water seine with short net wings; the wings are extended with ropes made of wisps of straw and net rags. Such rope-wings, when dragged along the bottom, pull out mud, forcing the benthic fish to move. Drag-nets have been used for fishing both in summer as well as in winter and they are still in use today.

Drying of fish – a widespread way of preserving fish among the peoples living at the lake-shore. Fresh fish are cleaned and salted for a couple of days. After this, they are drained for a while in a shady place and then put to dry. The bream, roach, pike, perch and smelt are dried most often. In old times, the smelt was dried like hay on shore hayfields – the tiny fish were laid out in the sun and wind until they were finally raked into piles.



Drying of roaches on the Pedaspää shore (2003).

Fisherman's sledge is one of the simplest aids of carrying fishing gear on the lake ice and back. Today, the sledges of fish-catchers tend to be of simple structure and are dragged behind. However, the traditional fisherman's sled of Lake Peipsi has also had a rectangular sail, set as a wind shelter with a special supporting device and an upright ice-pick lath.



In smooth ice, the fisherman sat on the sledge and pushed it with the lath. The sail was used for moving in fair winds, as with a sailboat.

Fishing-rod – this angling tackle consists of a hook, line and a flexible rod. In earlier times, the hooks were made of wire and also of bone; the line cord was twisted from horsehair, flax or hemp.

Kere or *keri* has been a temporary hut for wintertime fishing. The hut was without a floor – instead of this, there was a loose layer of straw or boards. The hut definitely had a stove or a hearth. In the last case, there was no chimney and the smoke exited through the door of the fishing hut. In order to take the hut on the ice, runners were installed or it was mounted on a fisherman's sleigh.

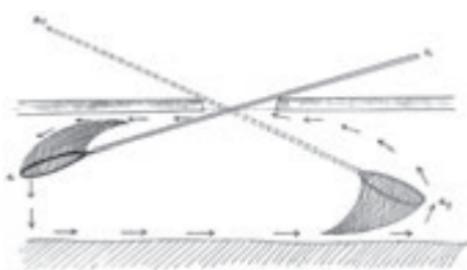
Korup is a large fishing sleigh, with its body made of boards or bark, used earlier mainly during smelt catching.

Kummijuku or *karakatitsa* – a modern motorised vehicle for moving on the ice of Lake Peipsi. Thanks to large wheels, they do not sink into the bottom even when occurring in open waters. As such vehicles are hand-made, their appearance may be extremely peculiar.



A ride on a kummijuku (2001).

Landing nets (*kahv* or *kaha*) were used for fishing in severe frost, when the ice was so thick that the fish gathered near the hole cut in the ice. Such type of fishing was popular in places where the lake water tended to foul. The landing net used for catching has a long stalk and a narrowing scoop. Through a hole in the ice, the landing net was pushed under the ice, with its mouth below and then was moved to the bottom and dragged symmetrically to the other side, so that the mouth of the landing net turned upwards again. From this position, the landing net was pulled back onto the ice through the hole.



Catching with landing-nets in winter.

Lootsik or *küna* is a small, flat-bottom boat for fishing in river mouths and flood plains of the lake. The boat does not have boards to sit on, it is steered in a standing position, by paddling with one oar, or thrust further by pushing from the bottom of the water body.

Net kiddie – a netted trapping device, used up until today. The net kiddie is a long bag narrowing towards the end, the supporting ring of which divides it into corresponding lengths. Such type of gear was formerly often used in flood plains of the lake, but ever more seldom nowadays, as the plains have become covered with brushwood.



Net kiddie.

Night fishing (*tulusel käimine* or *tuledega käimine*) is night-time catching with fish-forks, having been popular in many places of the world, including Lake Peipsi. The flat boat, *küna*, was used for fishing which, most often, meant the catching of pike in shallows, during their springtime spawning. Formerly, the water used to be lit up with flares, by burning bark or resinous pine wood on a fire-holder *tooseraud*, later also with the help of a kerosene lantern, *tooselatern*. Fish-forking as poaching was prohibited as early as in the year 1920.



Tooseraud and tooselatern.



Fish-fork.

Noosing fish – this is a playful type of fishing by way of a horsehair loop with a running knot. The catcher had to slip it around the dorsal fin of the fish in the water and then jerk the noose abruptly and pull the fish on the shore with the same swing. Today, it is not among the allowed devices of fish-catching.

Peipsi vene is a boat characteristic of Lake Peipsi, with its stern part ending with an abrupt and upright-positioned *tohupakk*, made of a split log. In the fore end of the boat, there is a peculiar, upright-bending stem (*tääv*).

Sikuska is a baitless tackle, used primarily to catch lavaret, perch and other larger fish from the ice hole. The fishing line is wrapped around a short stem, from where it succumbs once the fish takes the bait. This gear is just as well suitable for fishing during the ice-free period.



Fishermen at the
Ninaküla village (2002).

Springtime fishing – springtime fish catching lasts from the departure of the ice until Midsummer Day. Provisionally, the beginning of the season is denoted by the Lady Day, March 25. At this time, the last salted fish are eaten, in order to make room for the fresh catch.

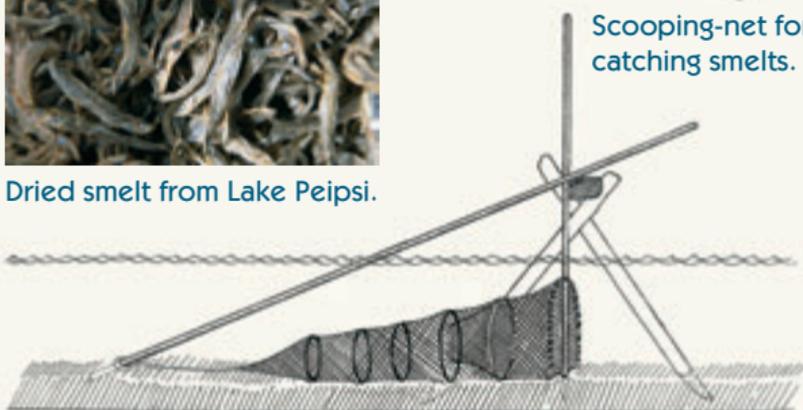
Stunning (*põrutamine* or *põksul käimine* and also *välsul käimine*) was employed during the young, transparent ice, aimed primarily at catching pike and burbot. The fish were stunned with the help of the stunning club (*välss*) or with an axe eye or by striking with a rock against the ice. This method was mainly used by young boys and old men – it was rather a form of recreational fishing.



Dried smelt from Lake Peipsi.



Scooping-net for
catching smelts.



Positioning of a net kiddle.

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