

Fishes of Middle-Earth

A Field Guide to What Species Would Be There
as well as Those Seen in the Books and Movies

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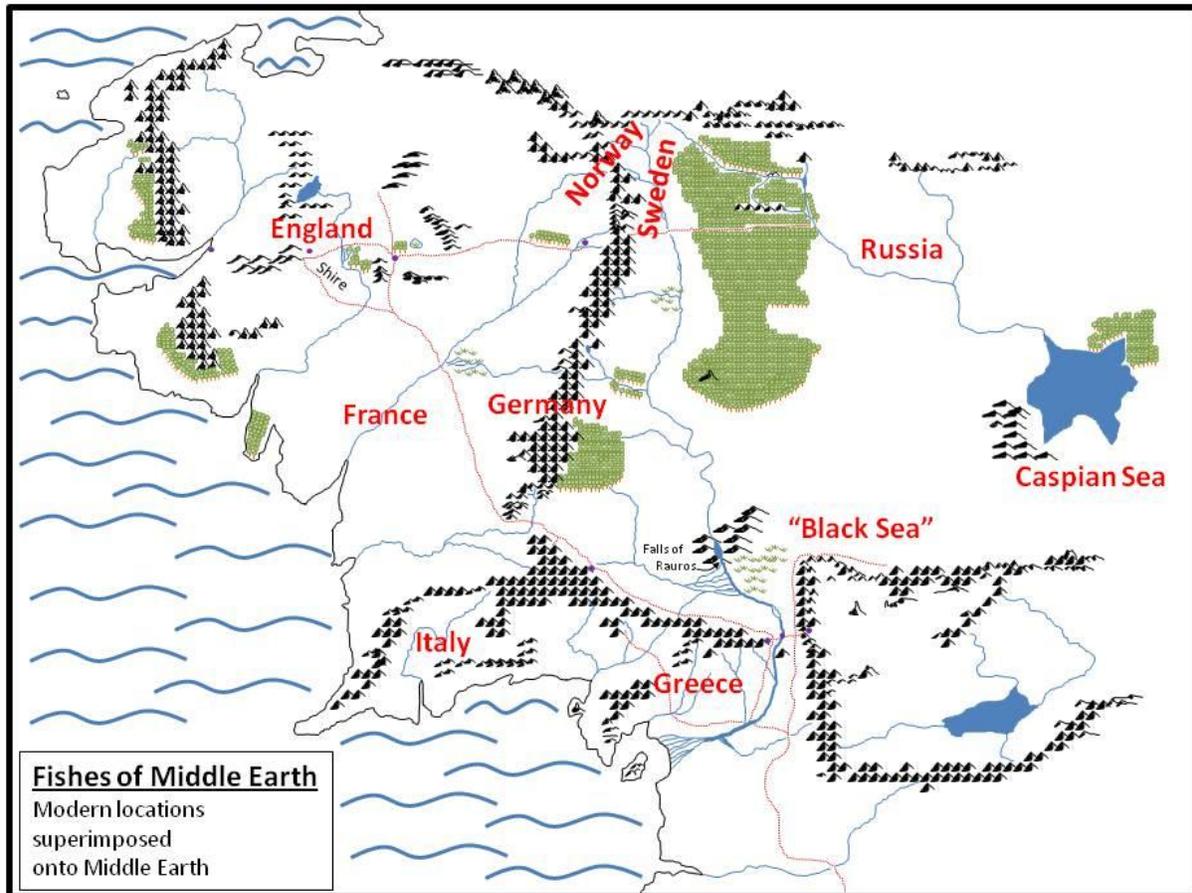
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Contact Information

Introduction

This manuscript is intended to introduce the reader to the diversity of fishes living in Middle-Earth during the Third Age. Think of it as something Radagast the Brown would have written. (And perhaps someday a scribe going through the library in Minas Tirith will find such a document.) Not every fish species is included here, as that would be overwhelming. Rather, the focus is on the more dramatic, dangerous, and / or edible fishes that could have been encountered during The Hobbit and Lord of the Rings adventures. Small minnows, oceanic fishes, etc. are not covered here.

The basis for the species descriptions is the supposition that Middle-Earth is the forerunner of modern day Europe. Tolkien claimed that this was the case, but at other times recanted his statement (Harvey 2003)). In short, The Shire very much resembles England. The Rohirrim are Scandanavian-like people originally from the headwaters of the Anduin River. This would place Norway / Sweden in the northern Misty Mountains. Gondor has a very Greco-Roman influence. If you use these as general place markers, then it is fairly easy to superimpose modern-day Europe and western Asia onto the Third Age of Middle-Earth. People may disagree with this presumption, but it is the geographical basis that will be used in this manuscript.



Purple dots indicate the locations of the more significant towns and cities. Dotted red lines are roads. For a more detailed geographical description of Middle-Earth, please see Fonstad (1991).

No normal fishes are known from the poisoned waters of Mordor. That does not mean that there are none. It is just that nobody has gone to Mordor, seen fishes, then lived to tell the tale. It is very likely that any fishes living in Mordor are mutated and / or monstrous.

We also do not know what fishes live in Fordwaith or the Northern Waste. Clearly an adventurous group of fish biologists need to mount a scientific expedition to the region. Haradwaith, the Belegaer Ocean, and far Rhûn to the east fall outside the coverage of this manuscript.

This field guide is split into three chapters. The first chapter is an overview of the more significant species that live in Middle-Earth. The second chapter traces the path followed by Bilbo Baggins and the dwarves in *The Hobbit*, and, based on material presented in the first chapter, recreates what fishes they could have encountered. The third chapter covers the fishes seen in the recent Peter Jackson et al. adaptation of the *Lord of the Rings* trilogy. The last chapter is followed by an appendix with the various references to fishes in *The Hobbit* and *Lord of the Rings* novels. And finally there is a list of suggested readings (i.e., Bibliography section) for those so inclined to learn more about these topics.

Chapter I

What Fish Species Would Be in Middle-Earth

Here are 18 brief descriptions of the more significant fish species that inhabited Middle-Earth during the Third Age. Each account includes the common name, scientific name, distribution map, and a couple paragraphs describing the habits, habitat, and interesting facts about the species. Some are monsters in their own right. Others are popular with fishermen. And still others are common food-fishes.

The distribution map shows the basic geography of Middle-Earth, but is largely unlabeled with place names. The distribution of the fish is marked by the shaded orange area.

Hundreds of other species could have been included in this manuscript, but the information would have been overwhelming.

Cavefishes

Scientific name unknown, but possibly Cyprinidae sp. or Salmonidae sp.

Cavefishes fascinate people. Their bizarre features and forbidding habitats make them creatures of mystery. Interestingly, we probably know more about cavefishes from Tolkien's novels than any other species of fishes. When Bilbo first meets Gollum under the Misty Mountains, there are several references to cavefishes. For example, from *The Hobbit* Chapter *Riddles in the Dark*:

“There are strange things living in the pools and lakes in the hearts of mountains: fish whose fathers swam in, goodness only knows how many years ago, and never swam out again, while their eyes grew bigger and bigger and bigger from trying to see in the blackness.....”

and

“He [Gollum] was looking out of his pale lamp-like eyes for blind fish, which he grabbed with his long fingers as quick as thinking.”

Here we see evidence for at least two species of cavefishes. The first species has large eyes. This is a more common condition with fishes living in the depths of the ocean where it is dark, but still with a little bit of light. In short, eyes work the same way as glass lens. The larger the lens, the greater its ability to collect and concentrate light for vision. In other words, larger lens or eyes are advantageous in low light conditions. Apparently there were habitats under the Misty Mountains in which there was a little bit of light. It is unclear what was causing this illumination, but there are a number of mythical possibilities (e.g., glow-in-the-dark fungi, luminescence minerals, bioluminescent fishes, etc.). Regardless, this species of cavefish lives in semi-twilight.

We also have evidence from the quotes in *The Hobbit* that these species originally lived above ground, but entered subterranean habitats and adapted to the darkened conditions. Adapting to lightless caves can take a relatively short period of time, sometimes just a few decades (Brach 2007).

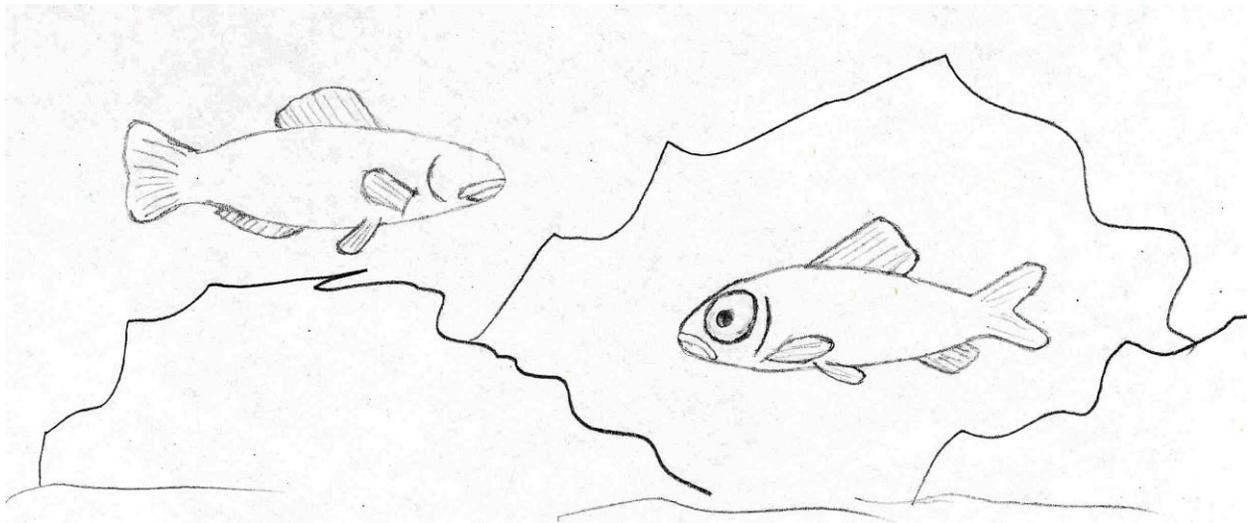
The second is blind, indicating that it either has eyes that are nonfunctioning or entirely lacks eyes all together. This is a very common condition for cavefishes. Since they live in an

environment with no light, they have no eyes because there is no way to see and hence no reason to develop a part of the body that would be a useless. Furthermore, they are usually white because they have no reason to be pigmented with colors since nobody can see them. This species of cavefish lives in complete darkness.

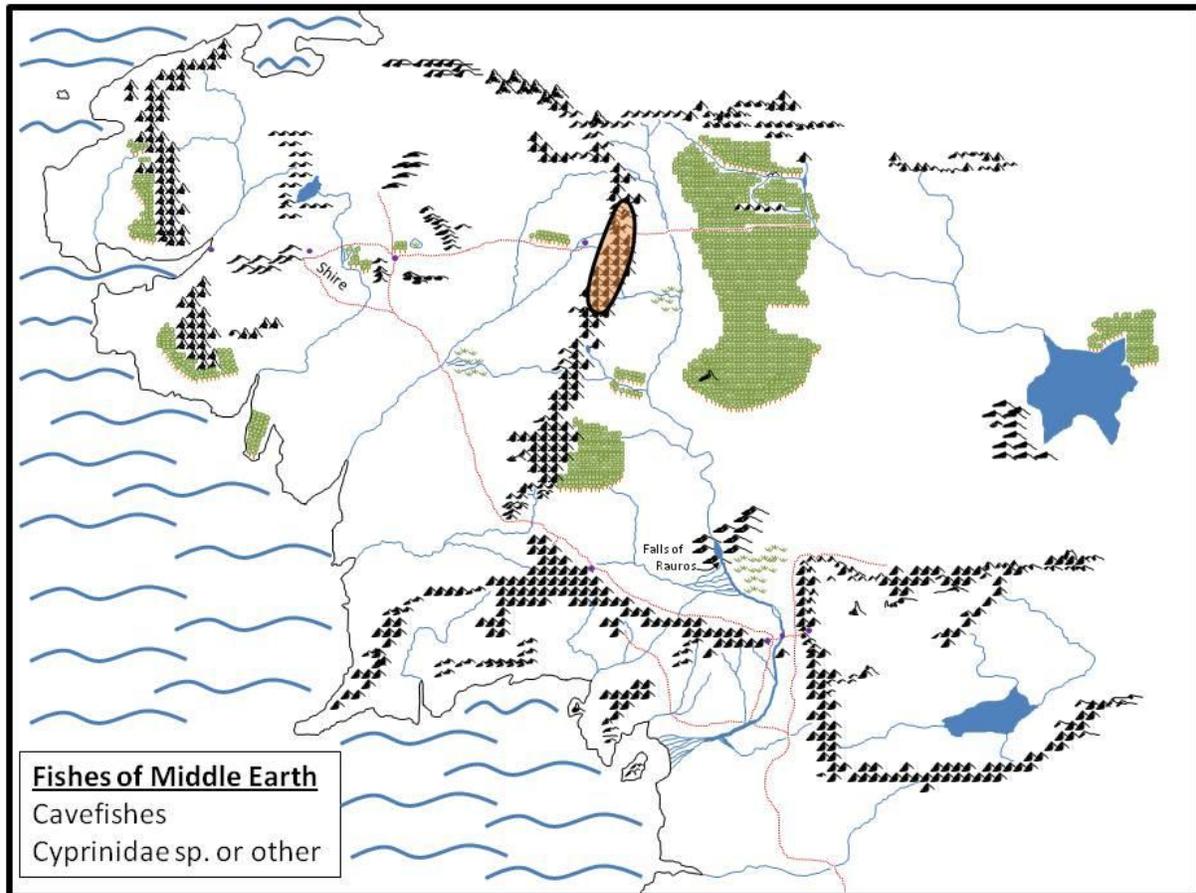
Applying a scientific name to these fishes is problematic because no cavefishes are currently known from modern Europe. As a matter of fact, there are no cavefishes from any northern latitude that was heavily glaciated (i.e., Europe, northern Asia, or northern North America). The nearest cavefishes are from the Middle East, and they are in the family Cyprinidae or the closely related Balitoridae (Romero and Paulson 2001). Since cyprinids are still common in today's Europe, it is most likely that the fishes referred to in *The Hobbit* are a couple of undescribed species in the family Cyprinidae. Other possibilities include undescribed species from the families Siluridae, Eleotridae, and / or Gobiidae, because there are representatives from all of these families in Europe and there are instances of cave-dwelling species within these families elsewhere in the world. Another possibility would be species that evolved from the family Aphredoderidae, such as what happened with the family Amblyopsidae in North America.

In the movie *The Return of the King*, Gollum is pictured in his cave with salmon skeletons strewn about. There are no known natural subterranean-adapted species of salmon, but brown trout (*Salmo trutta*) will live temporarily in European caves and become pale in color (Proudlove 2006). There is also an artificial population of subterranean rainbow trout (*Oncorhynchus mykiss*) in Arkansas (Brach 2007). Hence it is possible that the cavefishes referred to in *The Hobbit* are undescribed species in the family Salmonidae. The eel (*Anguilla anguilla*), millers thumb (*Cottus gobio*), and several minnows (Cyprinidae species) are also known to live temporarily in European caves (Proudlove 2006).

Cavefishes are only known from the roots of the northern Misty Mountains. Other possibilities include caverns in the White Mountains or within the dwarven realms of the Blue Mountains, Grey Mountains, or Iron Hills.



Blind (eyeless) Cavefish (left) and Big-Eye Cavefish (right) in an underground lake deep beneath the Misty Mountains.



Wels (European Catfish)

Silurus glanis

The Wels is a monster in its own right. The largest strictly freshwater fish in modern Europe, it is also one of the largest freshwater fishes in the modern world. It routinely reaches lengths of 6 feet or more, and there are unsubstantiated reports of some being 15 feet long! The primary food of this catfish is other fishes, but they have been known to eat swimming mammals, birds, reptiles, and amphibians. People have seen them leap out of the water and devour pet dogs! They have been accused of attacking swimming children and drowning the occasional fisherman. A large Wels would have no problem eating a hobbit, and would even scare the wits out of a full grown human. For some of the more interesting internet stories, please see:

The “Monster” of Martin Mere (Wels attacking swans)

<http://www.cfz.org.uk/expeditions/02martinmere/mere-index.htm>

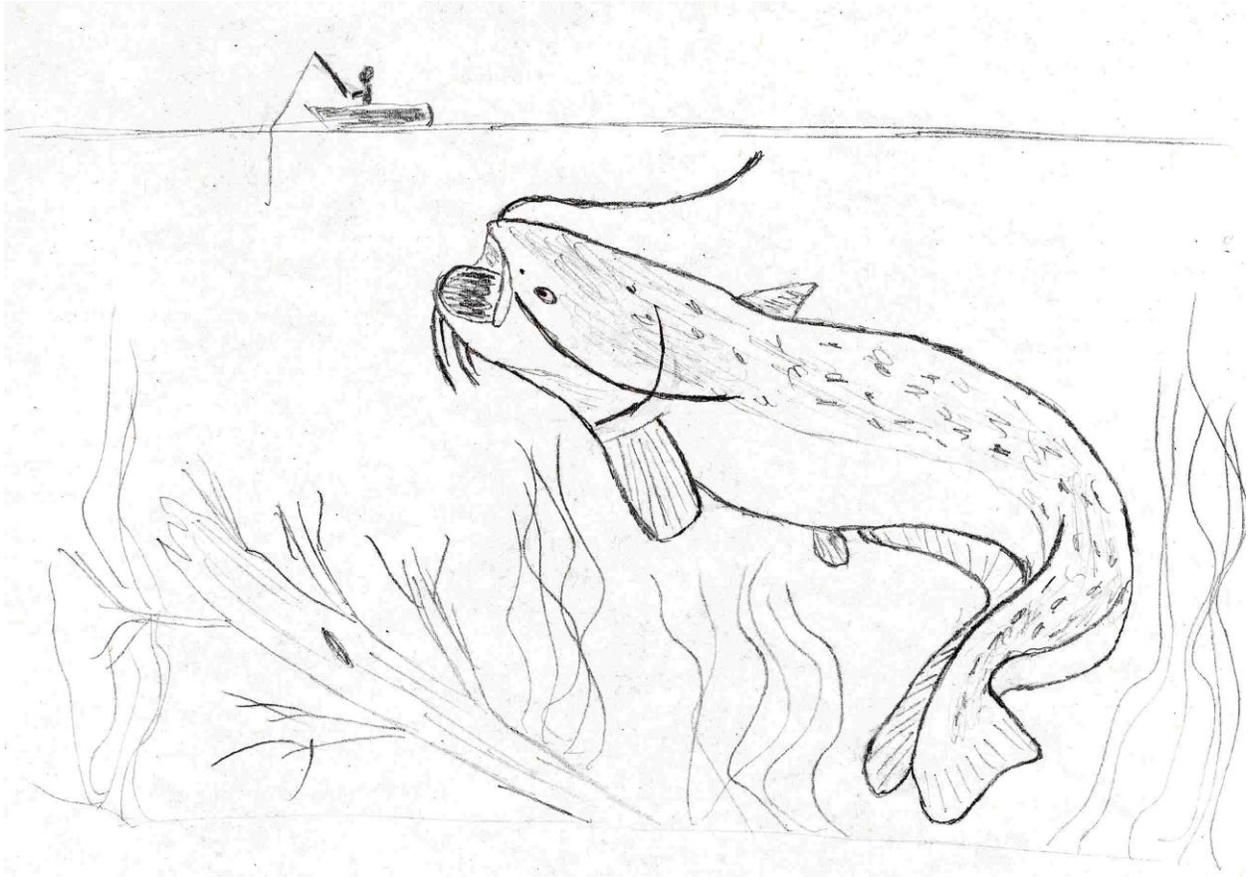
Kuno the Killer (Germany’s Legendary Dog-Eating Catfish Found Dead)

<http://www.smh.com.au/articles/2003/07/25/1059084215575.html>

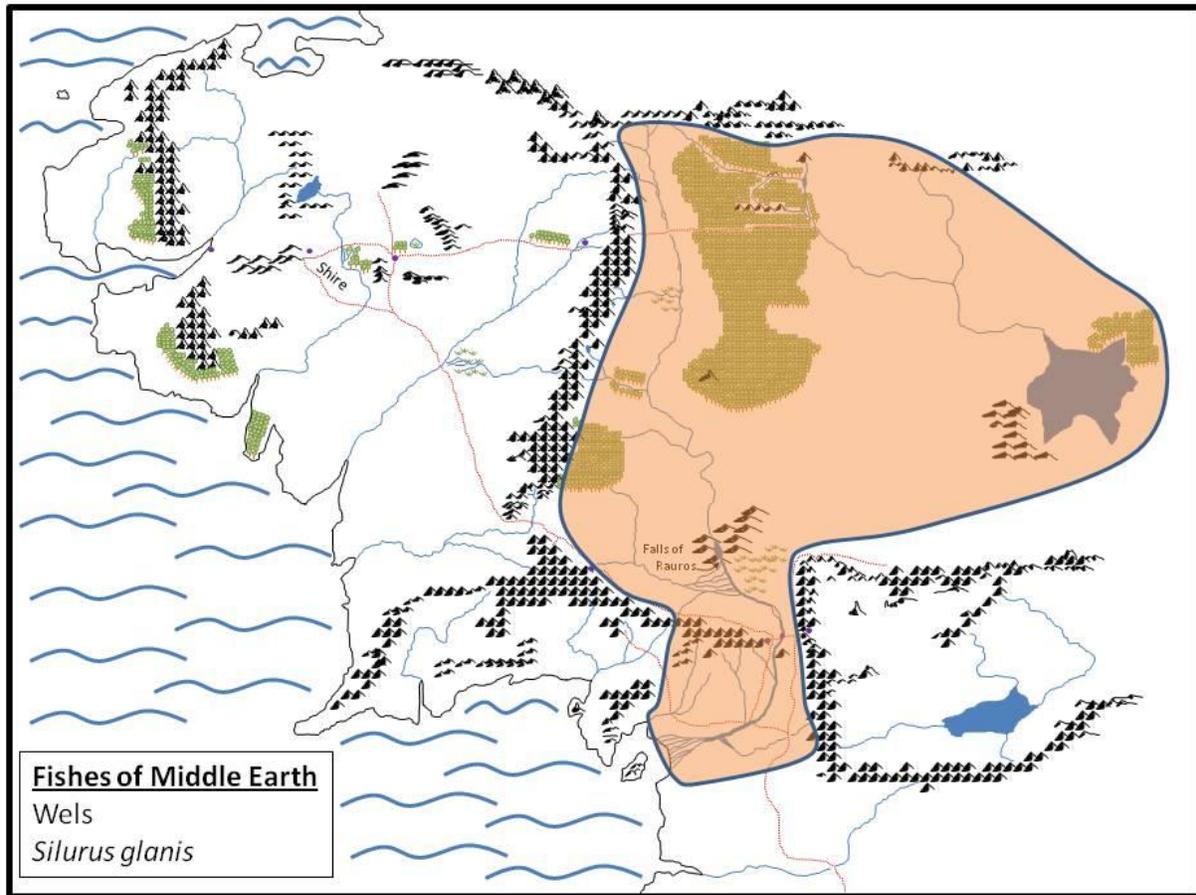
<http://www.moun.com/Articles/july2003/7-25-5.htm>

<http://www.practicalfishkeeping.co.uk/pfk/pages/item.php?news=58>

Like most catfishes, the Wels is a nocturnal predator. It prefers slow moving to still waters, such as can be found in lakes or the backwaters of large rivers. It is found throughout the Anduin and Sea of Rhûn drainages.



Gigantic Wels approaching from below an unsuspecting fisherman in the Forest River.

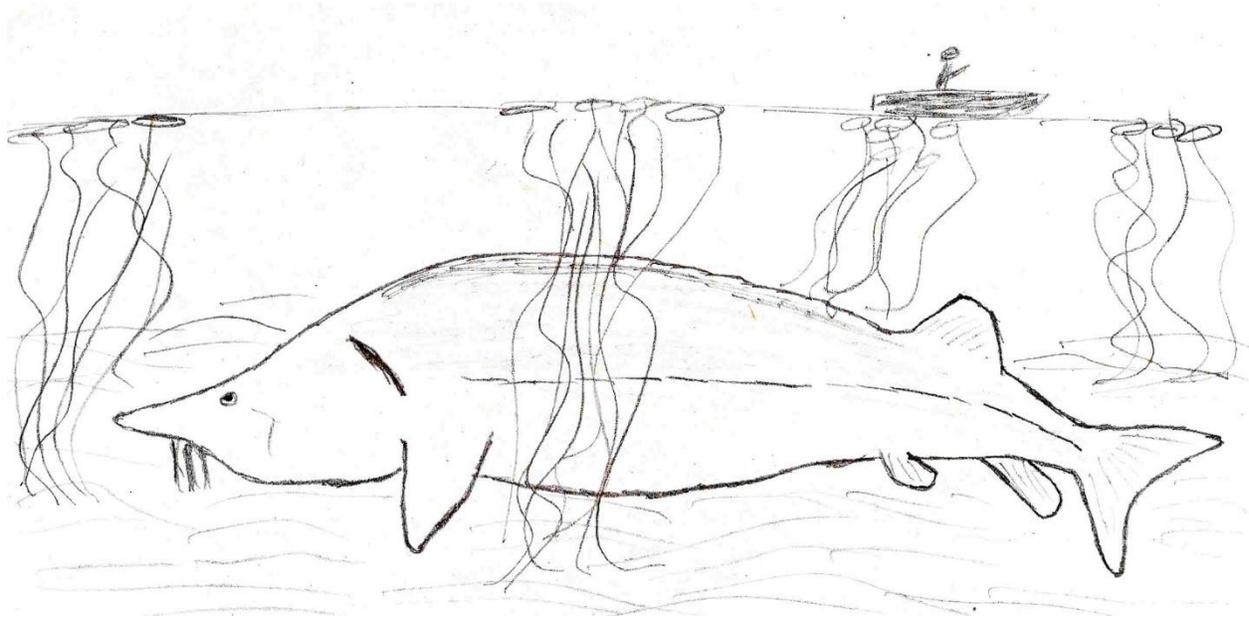
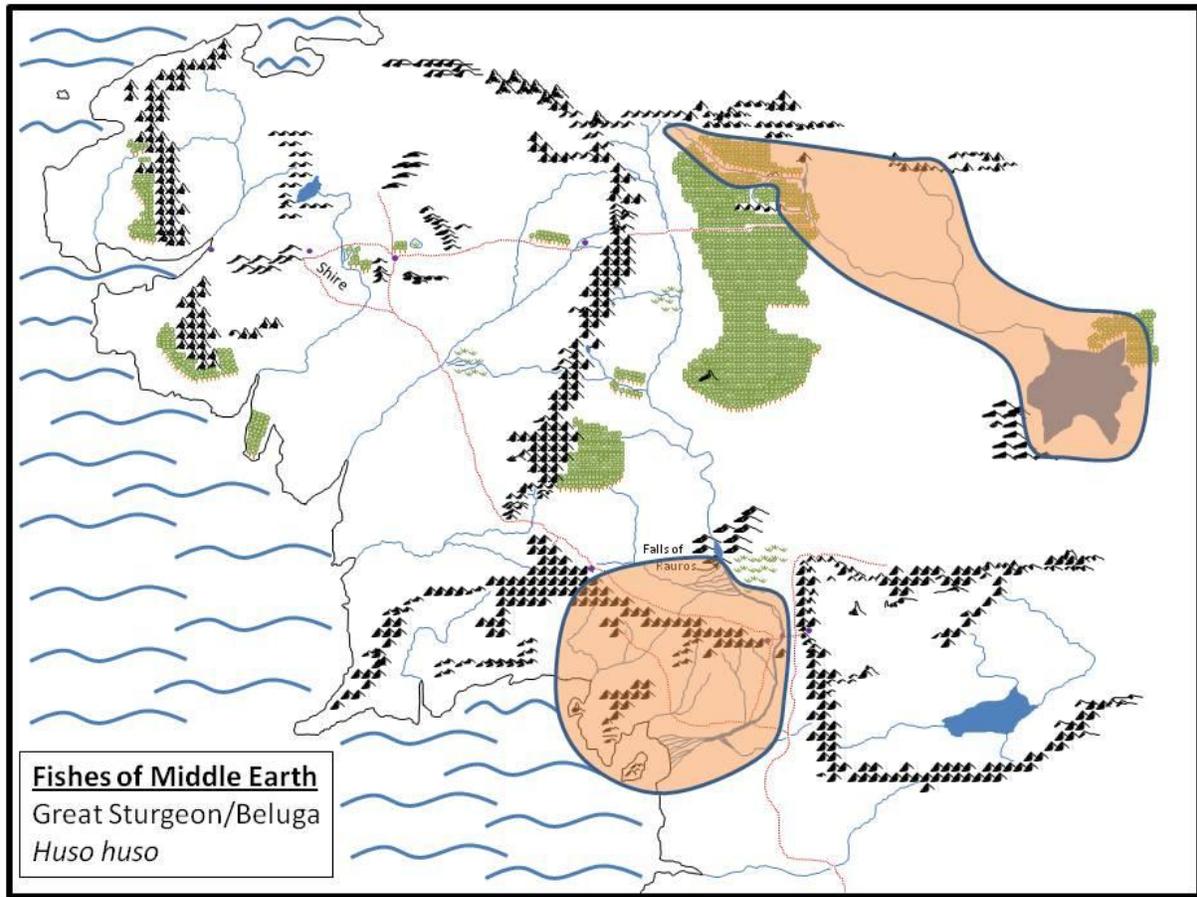


Great Sturgeon / Beluga

Huso huso

The largest fish found in the fresh waters of the modern world is the Great Sturgeon or Beluga. It can reportedly reach 20 feet in length and weigh over 1 ton. This is truly a massive fish! However, it does not usually spend its entire life in freshwater. Born in rivers, it then swims into the ocean/sea where it does the vast majority of growing. Later in life, it returns to rivers to spawn. Despite its large size, it is not considered a particularly dangerous predator because its mouth is underneath its head. The Great Sturgeon feeds primarily on bottom-dwelling fishes, mollusks, and other invertebrates. Regardless, its appearance has frightened many people and has probably given rise to more than a few sea monster stories. The Great Sturgeon is most famous for its eggs, which are known as caviar, and its delicious flesh. Some individuals can live for over 100 years.

The Great Sturgeon can be found in large lakes and rivers throughout the Sea of Rhun drainage, lower Anduin basin, and coastal rivers of eastern Gondor. The Sea of Rhun population spends its entire life in freshwaters, whereas the Anduin / eastern Gondor population spends part of their life in freshwater rivers and partly in the Bay of Belfalas.



Great Sturgeon cruising below a fisherman in the River Celduin. Fortunately for the fisherman, the Great Sturgeon has no interest in him.

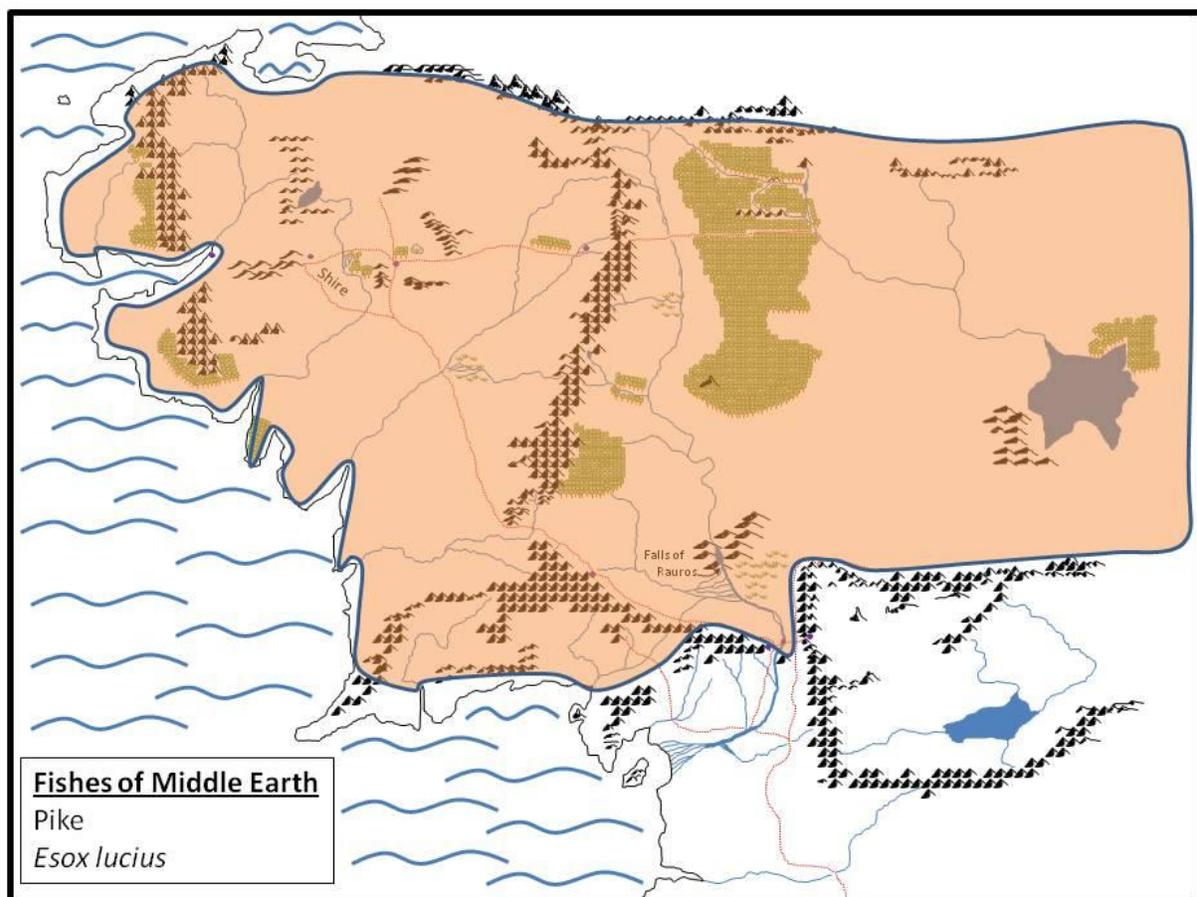
Pike

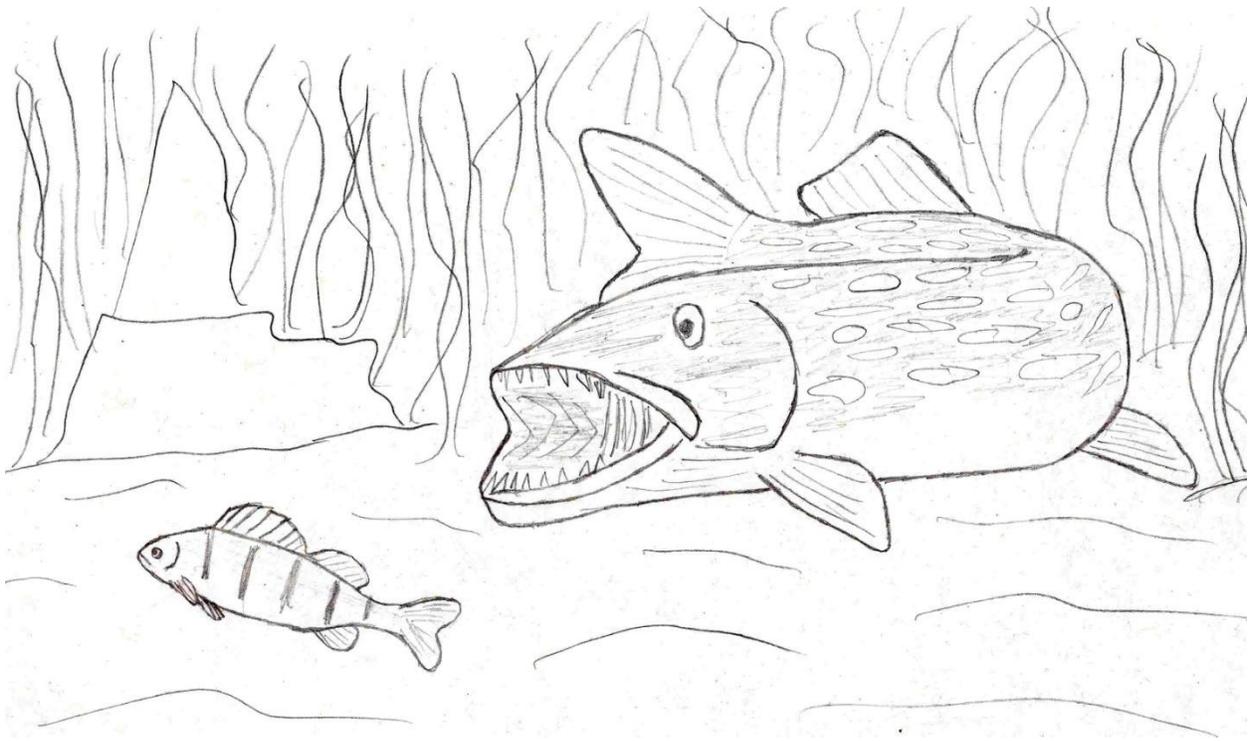
Esox lucius

The Pike is the top predator in many lakes and rivers. Its torpedo-shaped body and large mouth full of teeth make it an ideal ambush predator. And that is exactly what it does. It hides in weed beds waiting for a fish to swim by, and then lunges at its prey. Pike can eat fishes up to half their own length, so very few fishes are safe from attack. Furthermore, they have been known to eat small mammals, birds, and amphibians. Large Pike also have the disconcerting habit of foraging in shallow water. For example, I once saw a two foot Pike searching for prey in less than a foot of water.

Pike commonly reach 3 feet in length, but have been recorded up to 5 feet. This is not particularly large by Middle-Earth standards. However, with a little mythical artistic license, a pike two to three times this size would easily be a danger to swimming hobbits or humans.

The Pike is one of the most widespread fishes in Middle-Earth, being found everywhere but the far north and south. Pike can be found in almost any freshwater habitat. They prefer slow moving to still water, but can also be found in flowing rivers.





Pike (right) ambushing a Perch (left) in Long Lake.

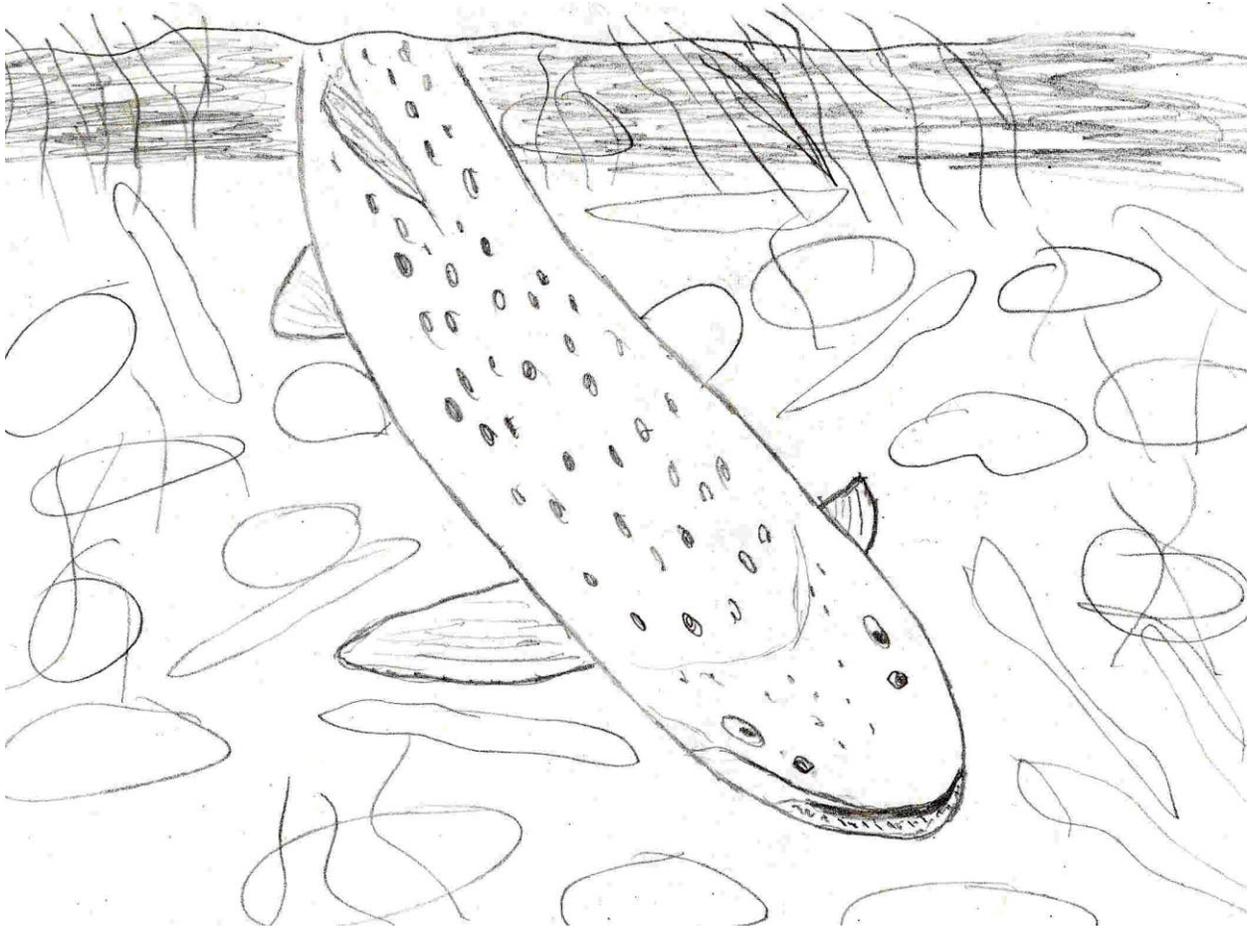
Huchen

Hucho hucho

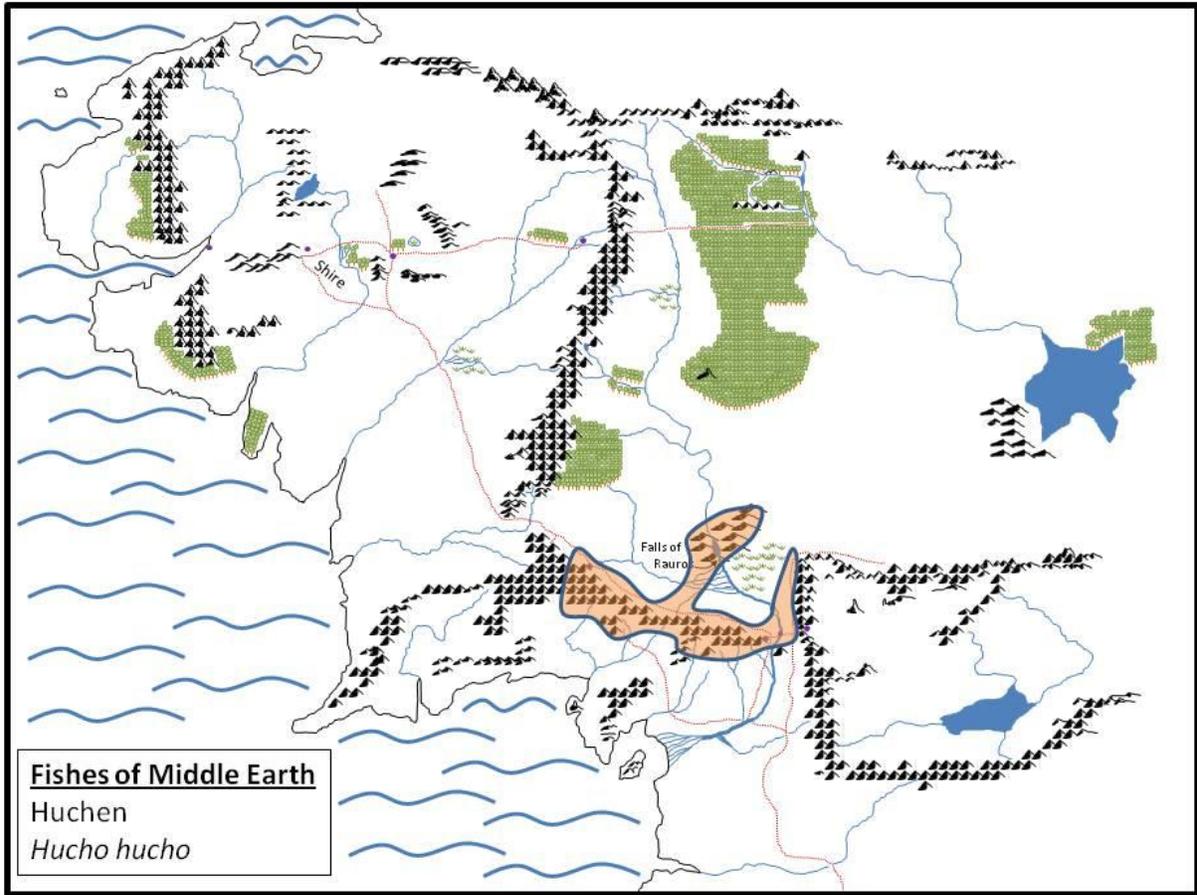
The Huchen is one of the modern world's largest salmon or trout. At over 5 feet in length, it is only rivaled by the Taimen (*Hucho taimen*) in size. The Huchen is a predator, feeding primarily on other fishes. Because of its strength and fighting ability, it is a popular sport fish.

The Huchen prefers cold water that is clear and fast flowing, such as can be found amongst and near mountains. Its range is restricted to the eastern White Mountains, North Ithilien, and Emyr Muil.

There is some speculation that the Huchen is actually responsible for pulling Smeagol / Gollum out of the boat when he first found the one ring (as depicted in the movie *The Return of the King*). However, the known range of the Huchen does not extend that far north. (See the species description for the Chinook Salmon in Chapter III for more information.)



Huchen emerging from underneath a stream bank in the Eastern White Mountains. Something at the surface has caught its attention.

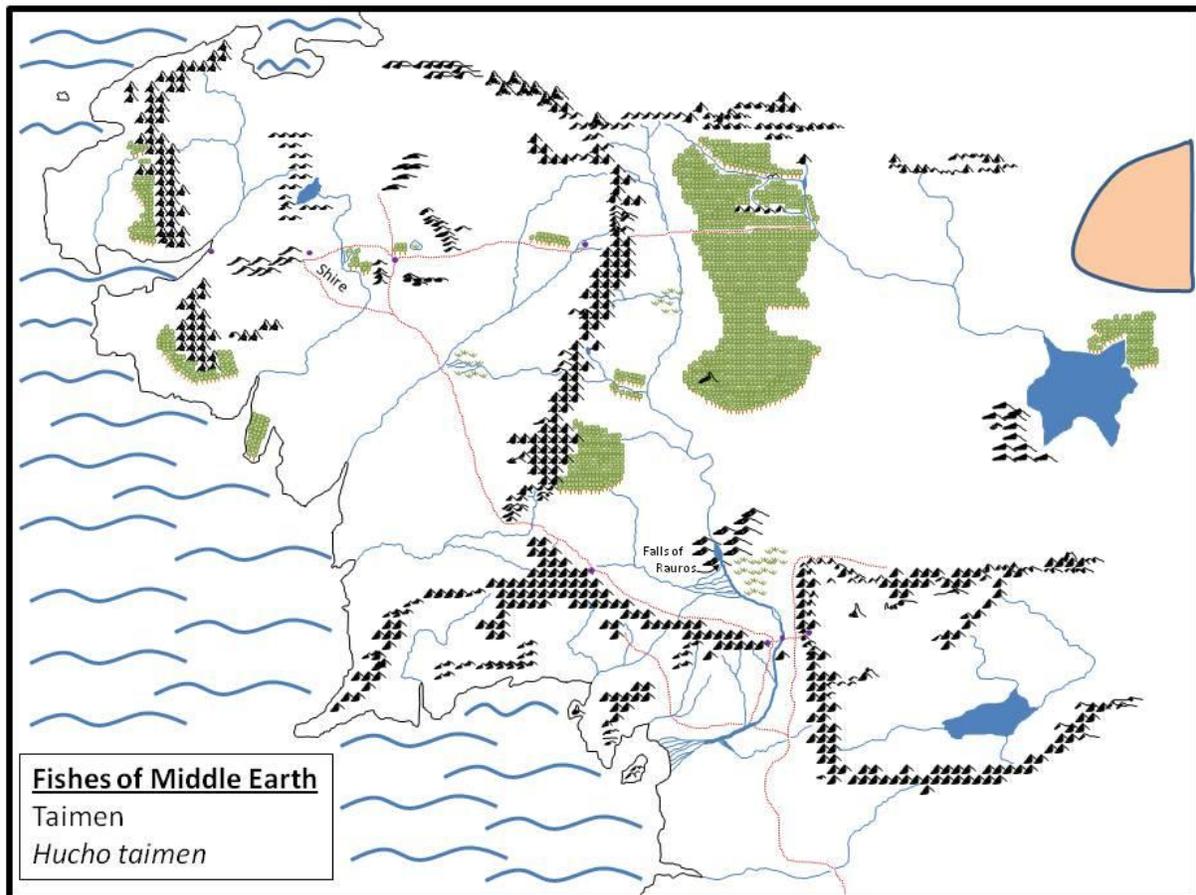


Taimen

Hucho taimen

The largest salmon or trout in the modern world is the Taimen. It can be over 6 feet long. (The next largest is the Huchen (*Hucho taimen*) at 5+ feet, followed by the Chinook Salmon (*Oncorhynchus tshawytscha*) at 5 feet and Atlantic Salmon (*Salmo salar*) at 4 feet.) In regards to habitat, they are very similar to the Huchen. Taimen prefers cold water that is clear and fast flowing, such as can be found amongst and near mountains. It is a predator, feeding primarily on other fishes. Because of its strength and fighting ability, it is a popular sport fish.

The Taimen is found predominantly to the east of our area of interest, but some do live in rivers north of the Sea of Rhûn.



Belegaer (Atlantic) Salmon

Salmo salar

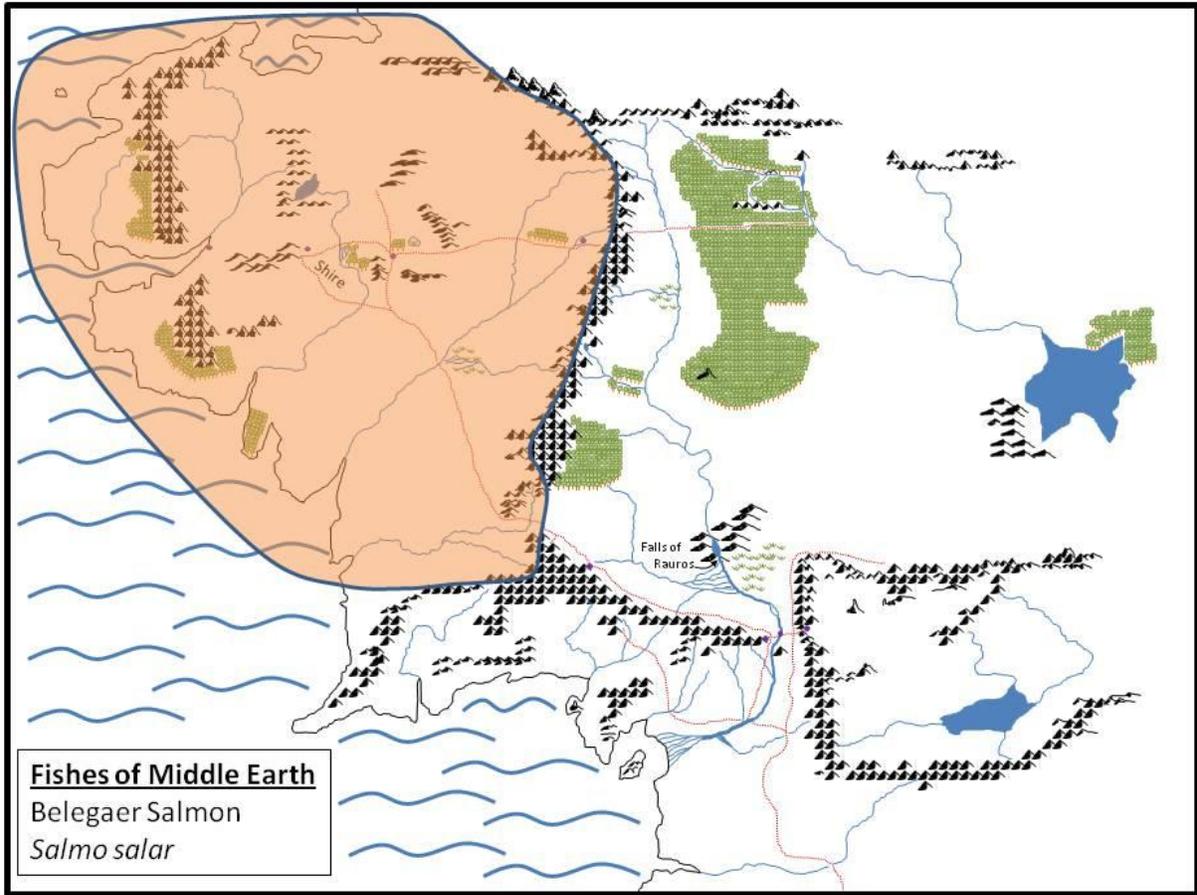
Known as the Atlantic Salmon in the modern world, this name does not work for us since the Atlantic Ocean per se does not exist yet. Because it lives in the Belegaer Ocean, this species will be referred to as the Belegaer Salmon. This species is born in rivers, then the young migrate downstream to the ocean where they grow to adulthood. They can reach 4 feet in length. After several years, the adults swim back to the river in which they were born. It is here they spawn. Most of the adult salmon die soon afterwards.

The Belegaer Salmon is very popular with fishermen, especially when large numbers swim up rivers during spawning migrations. There is a mysticism surrounding the pursuit of this species, each fisherman having their preferred special lures and secret techniques.

Belegaer Salmon can be found in moderately cool rivers throughout Middle-Earth west of the Misty Mountains. Some populations are landlocked, living their entire lives in large lakes and the nearby rivers. An example of such a population is in Lake Nenuial, north of the Shire.



Belegaer Salmon leaping past waterfalls during its monumental spawning migration up the River Mitheithel.

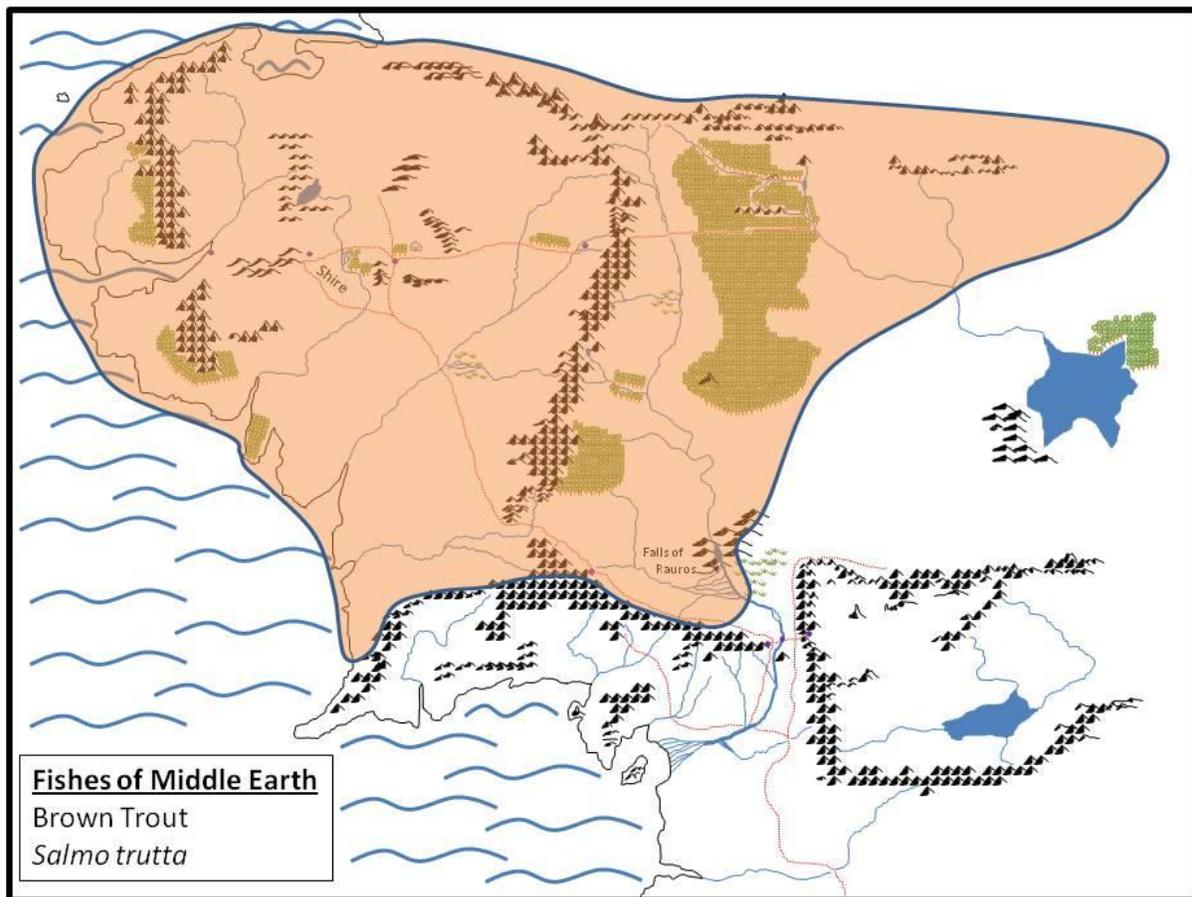


Brown Trout

Salmo trutta

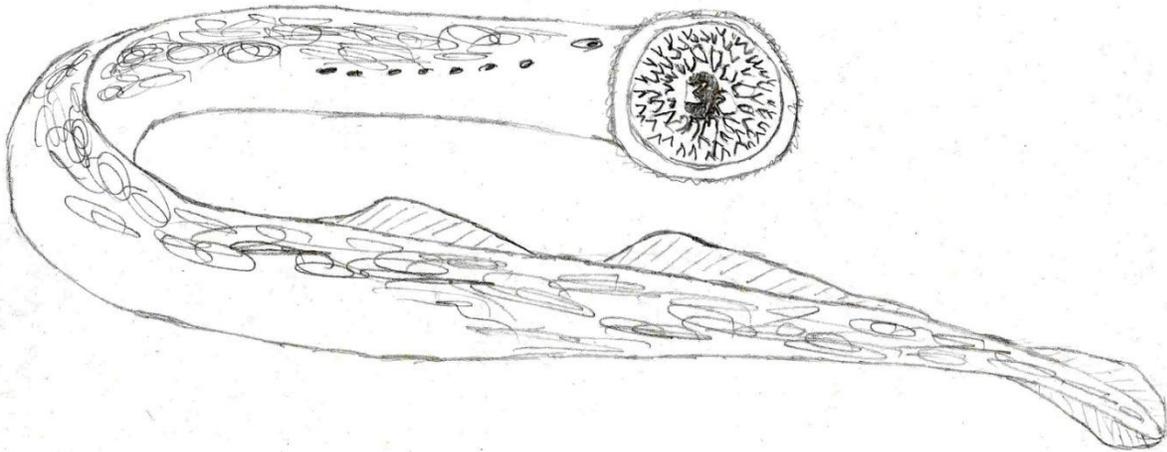
The Brown Trout is the most widespread trout or salmon in Middle-Earth. It can be found in streams, rivers, lakes, or the ocean, however it is most common in cold, clear, fast-flowing mountain streams. At over 3 feet long, it is usually the top predator in these systems. Unlike some other salmon and trouts, they do not usually undergo long-distance migrations when it is time to spawn, hence their populations tend to be more localized. They are very wary, put up a spectacular fight, and taste good, so they are very popular with fisherman. As with the Belegaer Salmon, some fishermen can be fanatical about catching this species.

The Brown Trout is found throughout all the lands west of the Misty Mountains, the upper Anduin River basin, and the River Celduin and Carnen drainages. Trout in streams and rivers are the typical brown coloration with small red spots. Those that spend most of their lives in lakes or oceans are silvery in color with black dots and small cross-hatches. As mentioned under **Cavefishes**, it is possible that some may live in caves, and these would be pale in color.





Grayling (left) and Brown Trout (right) in the foothills of the Misty Mountains near Rivendell.



Nightmarish Sea Lamprey found in the Gulf of Lune.

Sea Lamprey

Petromyzon marinus

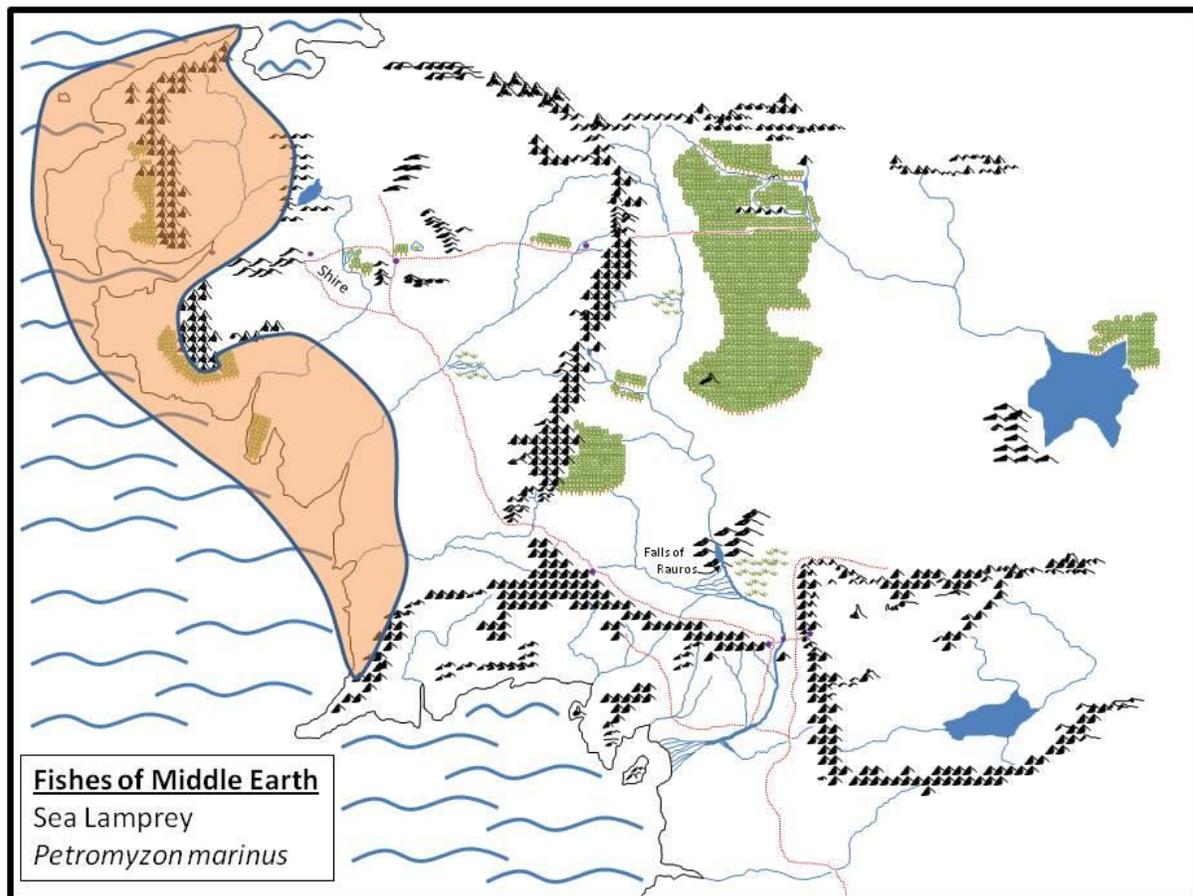
The lamprey is a creature from nightmares. It superficially resembles a snake or eel, but the lower half of its face is a mouth surrounded by a suction cup laced with wicked hooks. It uses the suction cup and hooks to latch onto the sides of fishes or other large swimming animals. The lamprey then uses its mouth to rasp a hole in the side of the victim, and then sucks out the blood, bodily fluids, and innards of the fish.

Fortunately Sea Lampreys only get 3 feet long or so. But with a little mythical artistic license, this creature would be a danger to any human, elf, dwarf, hobbit, etc. entering the water.

As the name implies, Sea Lampreys spend much of their life in the Belegaer Ocean. They swim into coastal rivers to spawn, then die soon afterwards. The young hatch in the rivers, and then spend several years maturing before migrating to the ocean, where they spend several more years feeding on fishes. At this point they migrate back to the coastal rivers to begin the life cycle anew.

Some other species of lampreys are strictly freshwater, never entering the ocean. But they tend to be smaller than the Sea Lamprey. It is also possible that there are some populations of Sea Lampreys that are landlocked – hence their entire life-cycle is in freshwater.

The Sea Lamprey is found in the Belegaer Ocean, coastal rivers of western Middle-Earth, River Lhûn basin, and the downstream sections of the rivers Baranduin, Gwathlo, and Angren.





Images of the mouth (above) and lateral body (below) of an actual Sea Lamprey caught in Lake Michigan along the shores of Chicago, 2004. It was feeding on a Chinook Salmon at the time of its capture.

Eel (European)

Anguilla anguilla

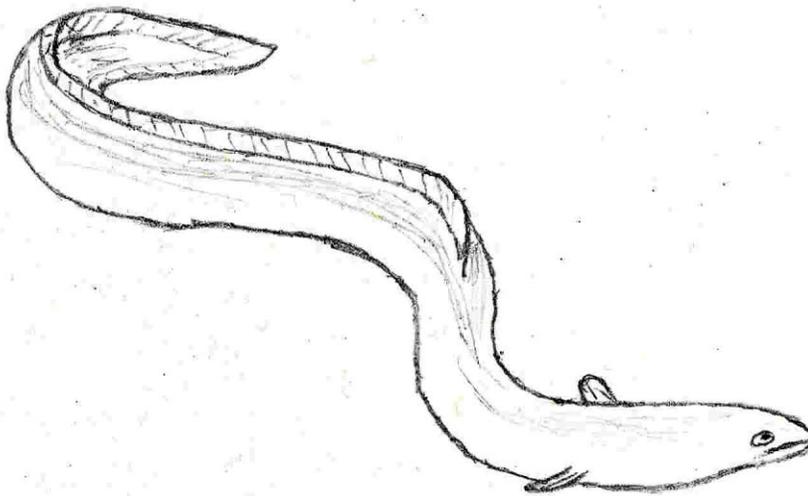
When most people think of eels, they think of large moray eels hiding in coral reef crevices, snatching beautifully-colored fishes as they swim by. This undoubtedly happens in Middle-Earth, but there are other eels that actually spend part of their life in fresh water. Their story is a true adventure.

These Eels are born thousands of miles away in the middle of the Belegaer Ocean. There is a region where the oceanic currents rotate in a large circle around a central calm area. Large mats of seaweed float in this becalmed region (as do ghost ships and sea monsters, according to legend). Hundreds of feet below the surface, the Eels start their lives. They then swim to the shores of Middle-Earth, and advance up coastal rivers. It can take a couple years to complete the journey. After spending ten or so years growing in the rivers, the adult Eels begin the long migration back to the depths of the ocean where they were born, and the cycle of life begins again.

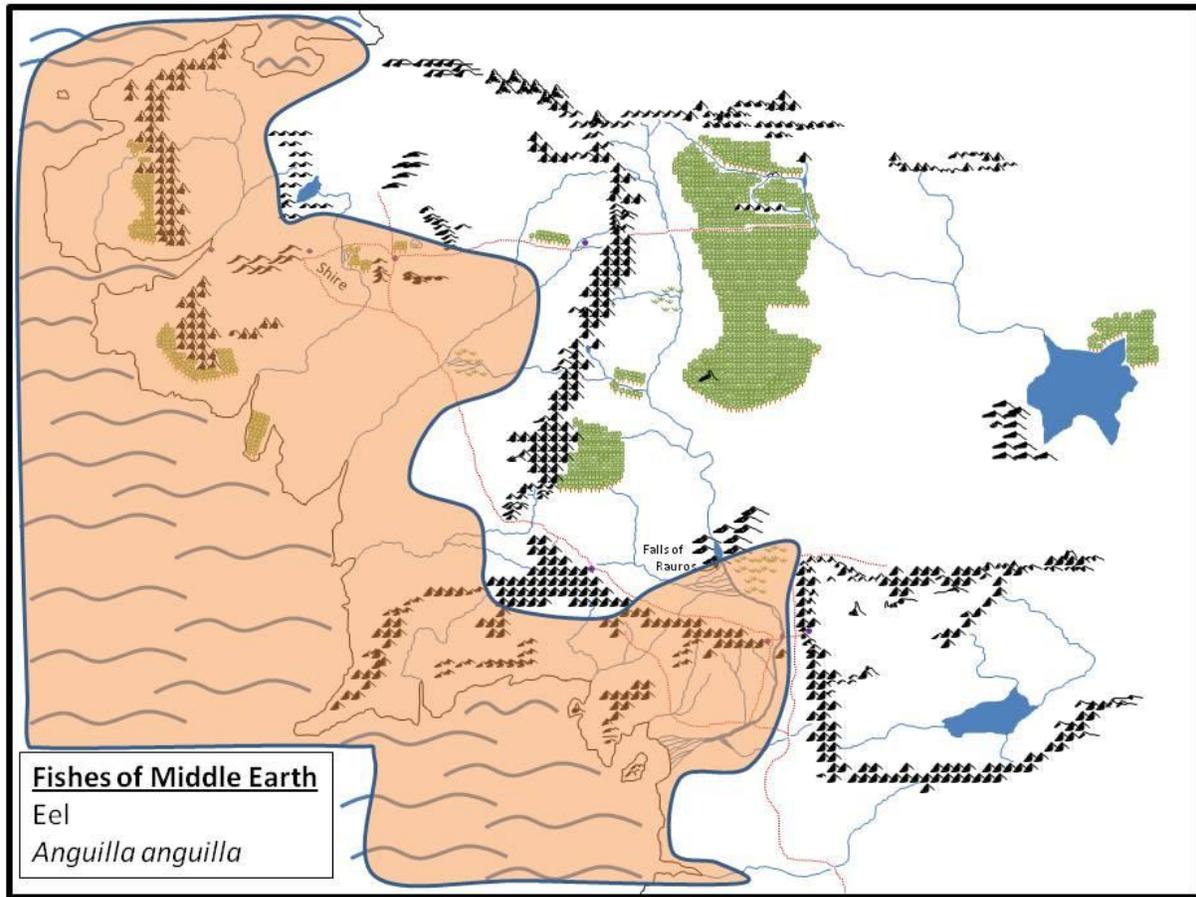
Eels can get around 3 feet long. Their smooth muscular bodies covered with slime make them difficult to pick up and handle. They can also crawl out of the water and move quite quickly over land for short distances. This ability helps them bypass rapids and waterfalls as they swim up rivers. Eels are predators, feeding mainly on fishes and aquatic invertebrates. They are most active at night. Female Eels tend to swim further upstream than males, which are found mostly near the coast.

Some consider Eels very tasty and intentionally fish for them with specially designed traps and nets.

The Eel is found in the Belegaer Ocean, the Anduin River below the Falls of Rauros, Gondor, and the western third of Middle-Earth. As already mentioned under **Cavefishes**, some may live temporarily underground.



Eel swimming deep beneath the Belegaer Ocean on its way to hidden spawning grounds.

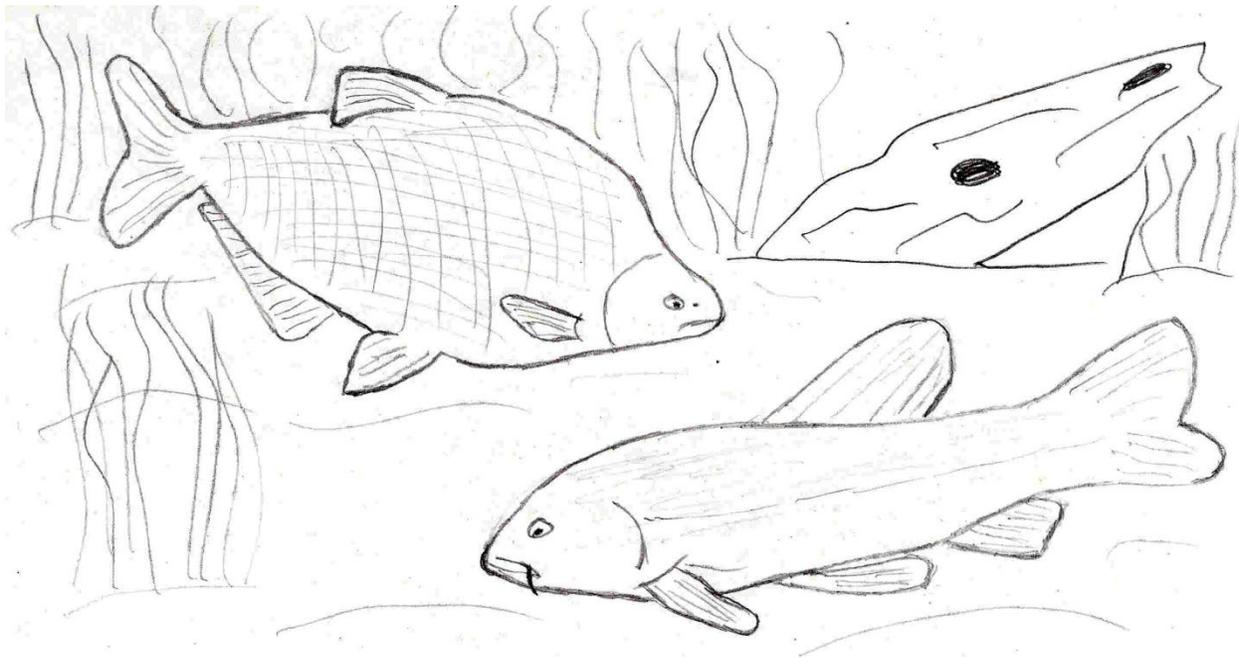
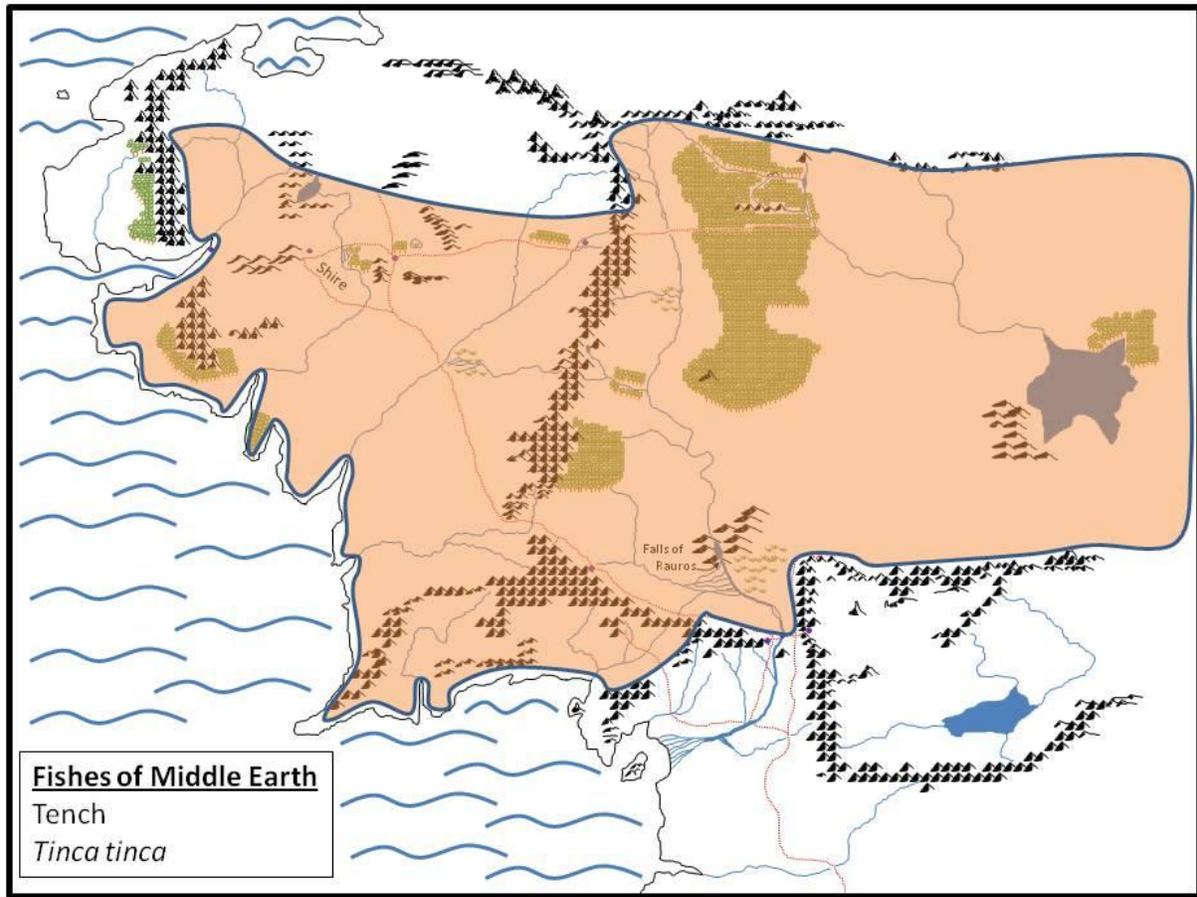


Tench

Tinca tinca

The Tench is a carp-like fish that reaches a couple feet in length. It lives along the bottom of lakes and slow-flowing rivers where it feeds on aquatic insects hiding in the mud and aquatic vegetation. It is considered by some to be good-tasting, and is popular with fishermen because it can put up a good fight. If hobbits were fishing for supper in Bywater Pool, they would probably be going for Tench or Bream (*Abramis brama*). Tench are very slimy, and this slime was once believed to have medicinal properties.

Tench are found throughout most of Middle-Earth except for the northern and southern extremes.



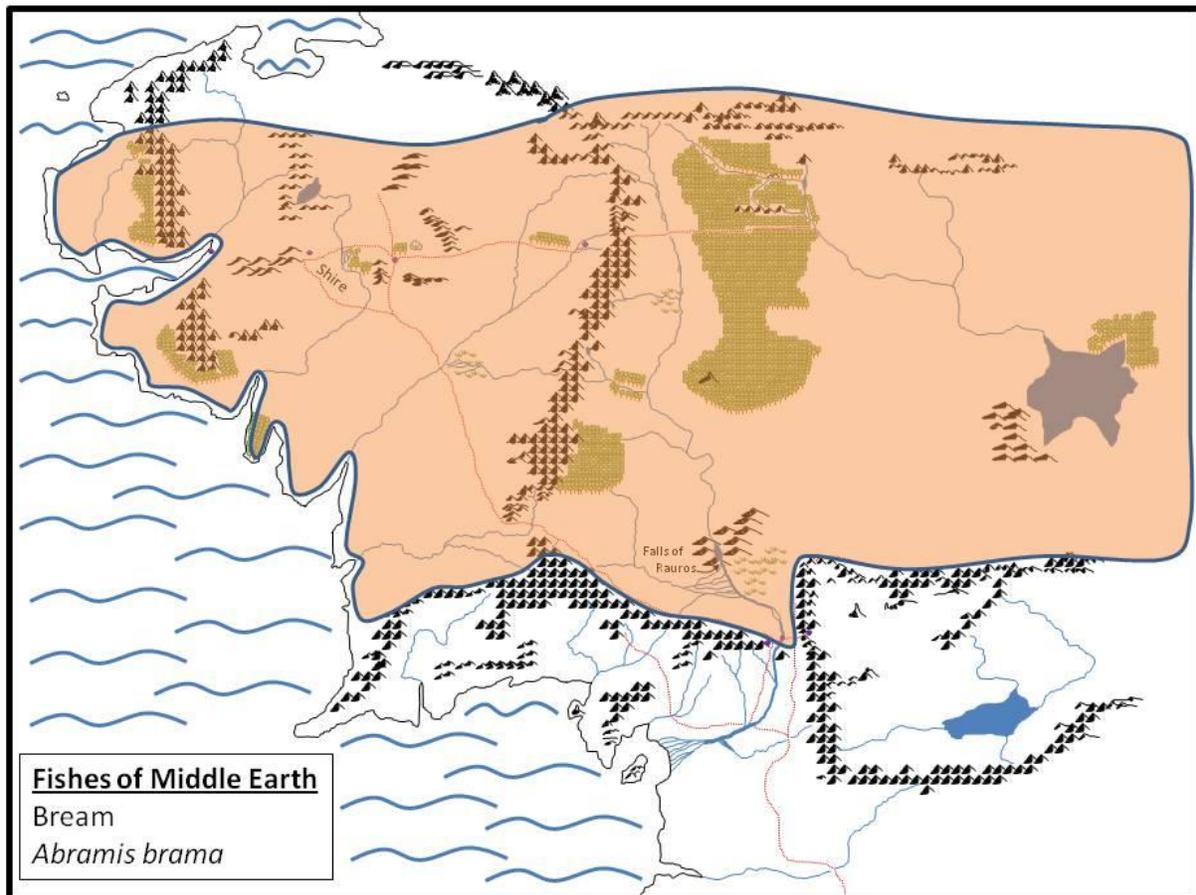
Bream (left) and Tench (right) looking for aquatic insects on the bottom of Bywater Pool.

Bream

Abramis brama

The Bream is a carp-like fish that reaches a couple feet in length. It lives along the bottom of lakes and slow-flowing rivers where it feeds on aquatic insects hiding in the mud. It is a good-tasting fish and popular with fishermen. The Bream can form schools or shoals, and in some places is common enough to support a commercial fishery. If hobbits were fishing for supper in Bywater Pool, they would probably be going for Bream or Tench (*Tinca tinca*).

Bream are found throughout most of Middle-Earth except for the northern and southern extremes, including Gondor.

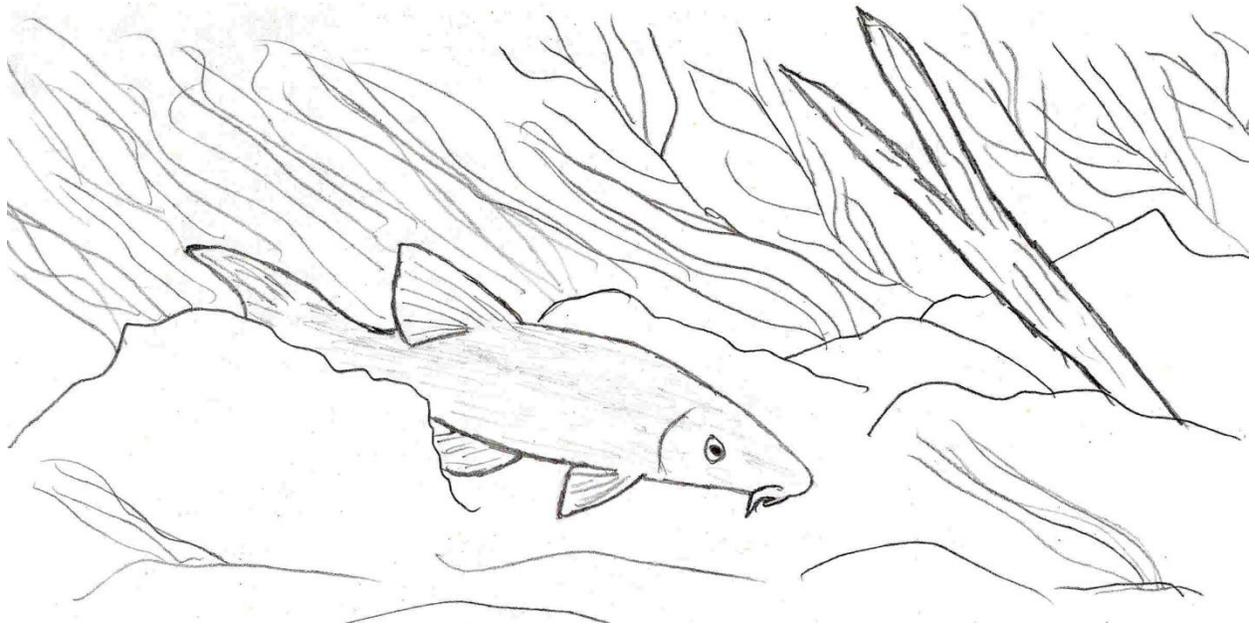


Barbel

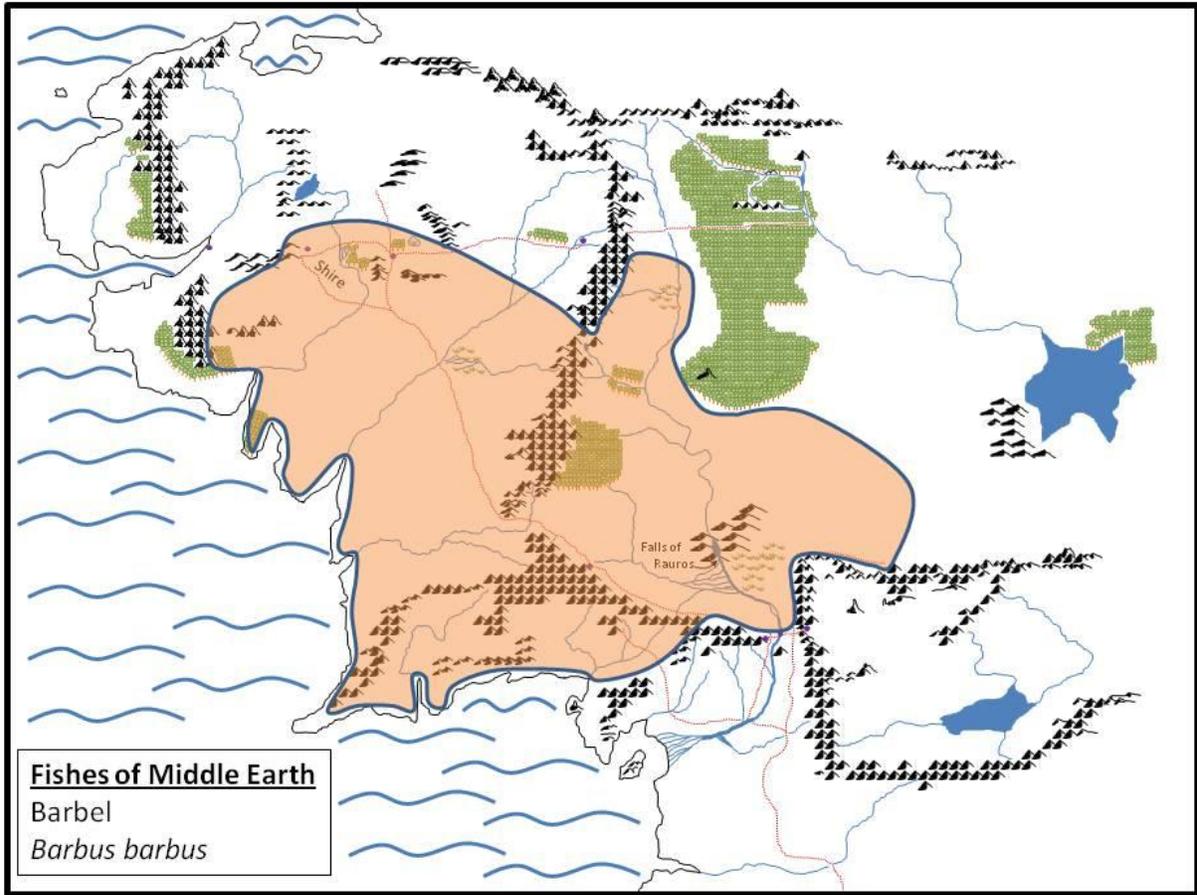
Barbus barbus

The Barbel is a carp-like fish that reaches a couple feet in length. It lives along the bottom of fast-flowing rivers with clear water where it feeds on aquatic insects hiding amongst the sand and gravel. It is popular with fishermen because it puts up a good fight. If hobbits were fishing for supper in faster-flowing sections of the Brandywine River, they would probably be going for Barbel.

The Barbel is found in the middle Anduin drainage, western Gondor, the Angren basin, and the downstream sections of the rivers Baranduin and Gwathlo.



Barbel in the Brandywine River finding respite from the current behind rocks and sticks.



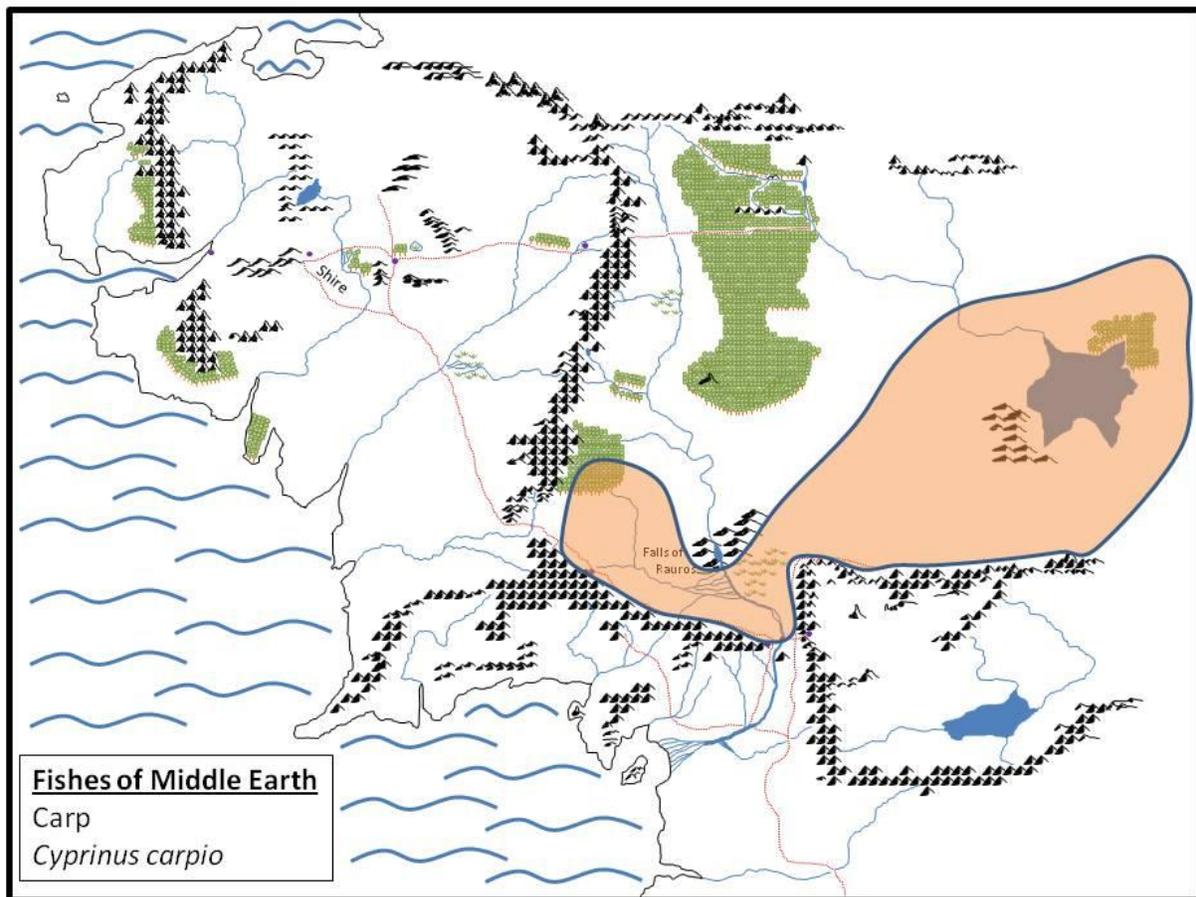
Carp

Cyprinus carpio

The Carp is one of the most recognized fishes in the world. Its hardiness and generalist habits allow it to survive under a wide regime of environmental conditions. Its ruggedness combined with a relatively rapid growth rate has resulted in it becoming a favorite food fish. People raise Carp in ponds and transplant them into new rivers and lakes with the intention of eating them later (Balon 1995, Hoffman 1995). Because people keep introducing them into novel areas, the distribution of Carp in the modern world is far larger than its distribution during the Third Age of Middle-Earth.

Carp generally prefer slow-flowing or still water with mud bottoms and lots of vegetation. But they can be found in a variety of streams, rivers, ponds, and lakes. A large Carp would be 3 feet in length.

Carp are found in a swath from roughly Rohan to the Sea of Rhûn.

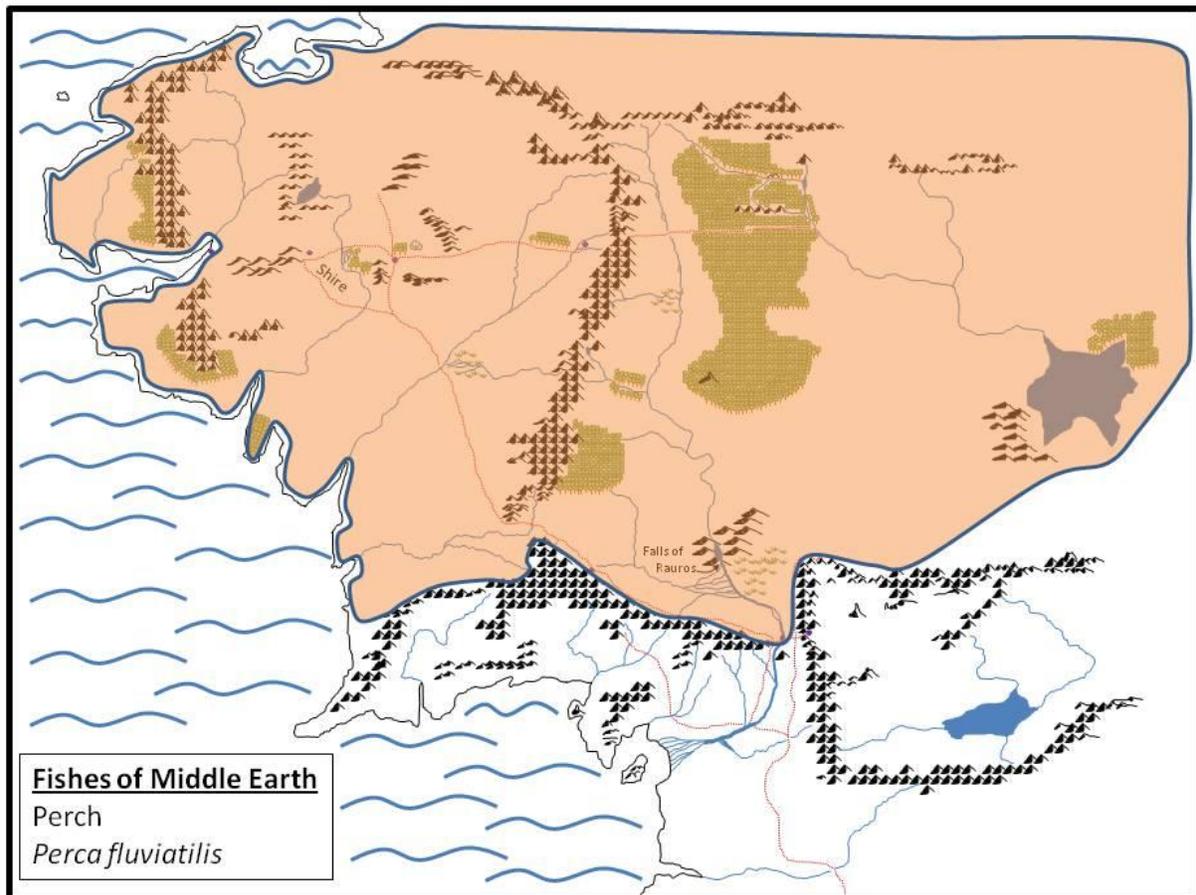


Perch (European)

Perca fluviatilis

The Perch is one of the most widespread, abundant, and popular food-fishes in Middle-Earth. It is found in a wide variety of habitats, from lakes to ponds to rivers, and can be quite numerous, often forming schools or shoals. Furthermore it is fun to catch and delicious to eat. Since they are moderately active in the winter, they are sometimes fished for through holes in the ice covering lakes or rivers.

Perch can be one foot long, with individuals larger than this uncommon. They are found throughout Middle-Earth, except for Gondor.

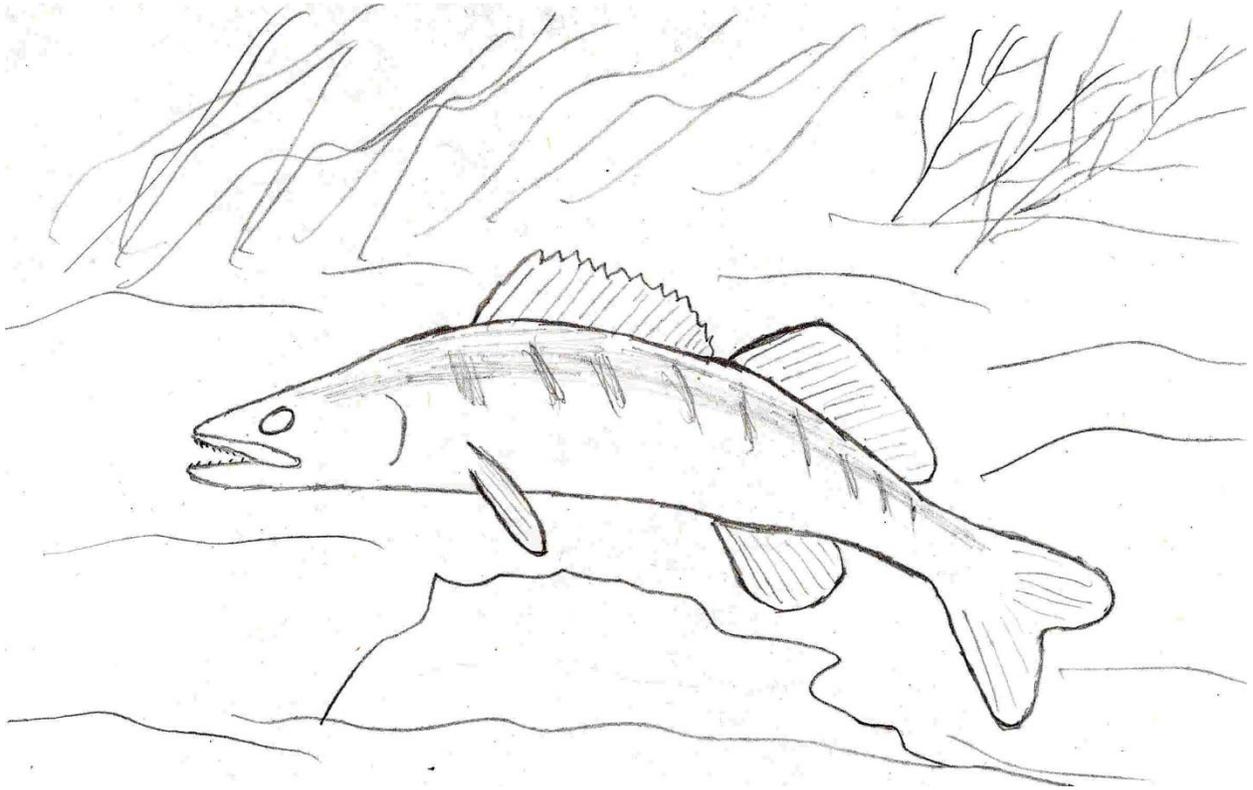


Zander / Pikeperch

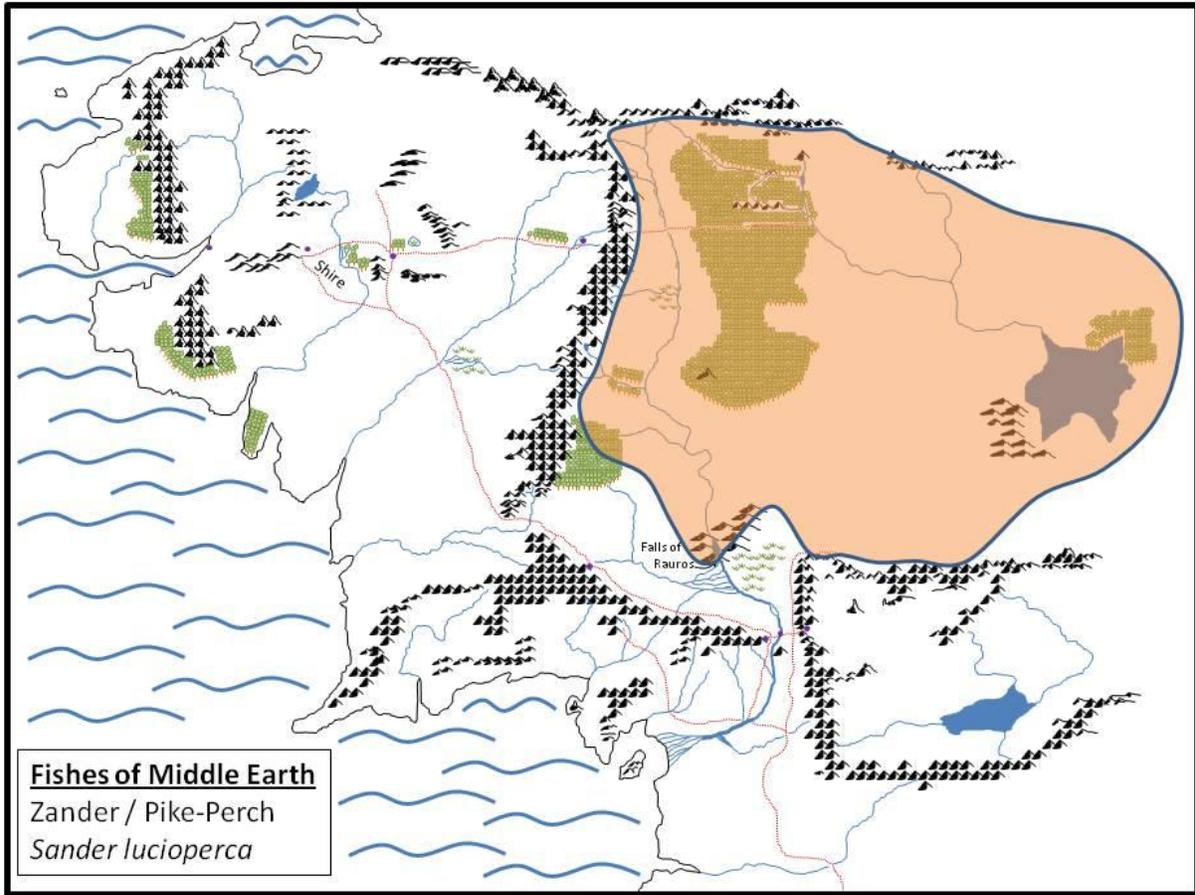
Sander lucioperca

The Zander resembles a Perch (*Perca fluviatilis*) that has been stretched out. It prefers to live in large lakes or larger rivers that are rich in nutrients. It is delicious to eat and popular with fishermen. They reach a couple feet in length.

The Zander is found in the Sea of Rhûn and upper Anduin drainages.



Zander swimming up the Anduin River.

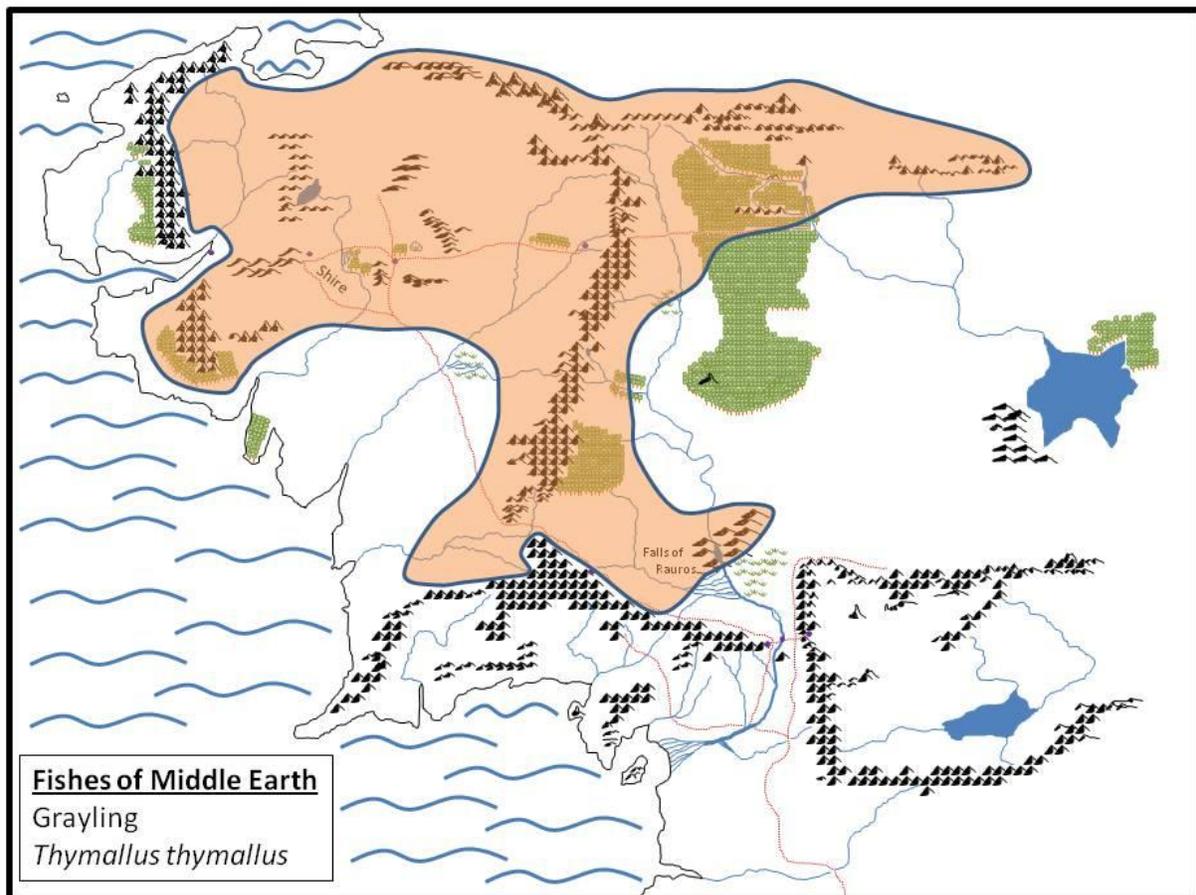


Grayling

Thymallus thymallus

A relative of the salmon and trouts, the Grayling lives in cold, clearwater streams at the foot of mountains where the current is fast and the bottom is gravel and larger stones. Sometimes it is found in lakes. The Grayling is delicious and popular with fishermen. It is only a couple feet long, smaller than many of the other salmon and trouts in Middle-Earth. The Grayling was given the scientific name *Thymallus* because it supposedly smells like thyme.

The Grayling is found across northern Middle-Earth and central Middle-Earth along the Misty Mountains.



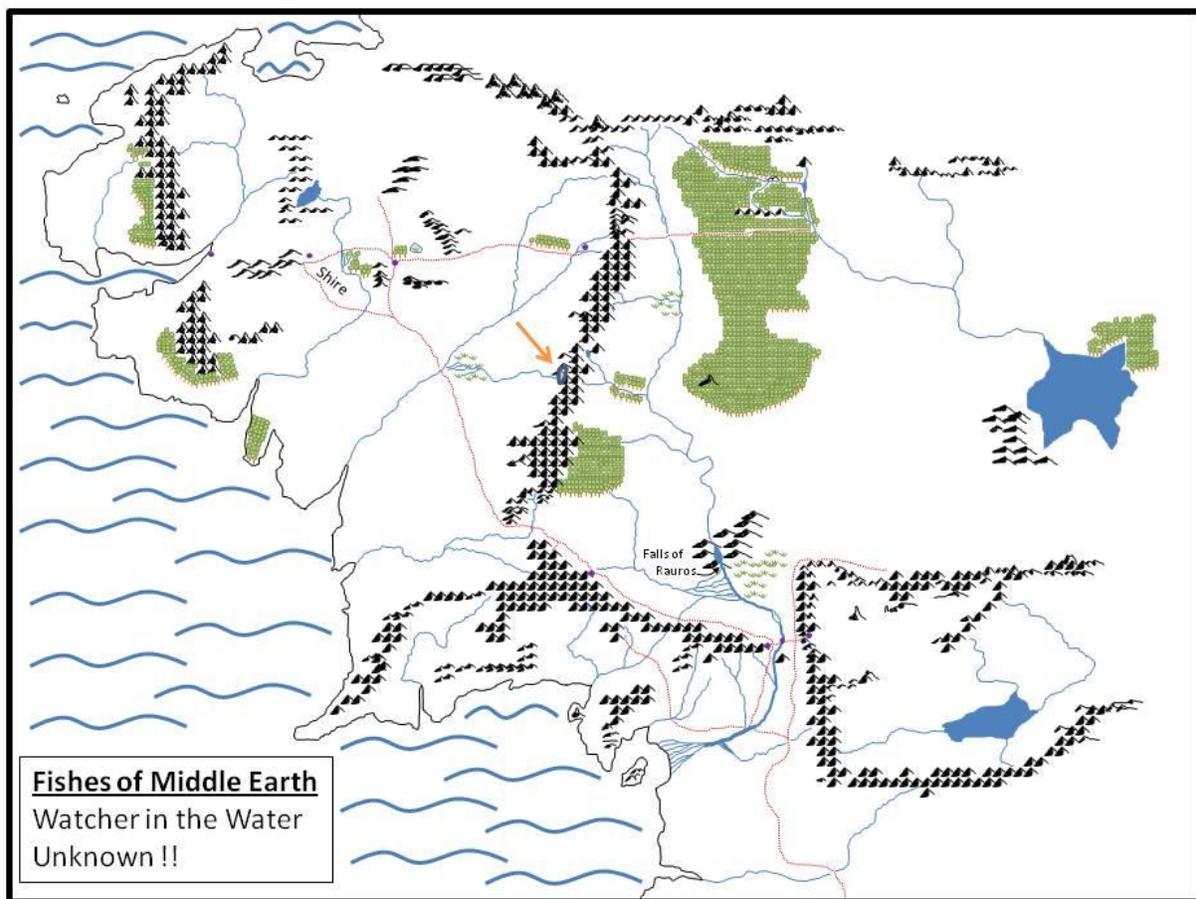
The Watcher in the Water

Scientific name: unknown

Strictly speaking, the watcher is probably not a fish. But it is included here because it is a significant aquatic creature. We have very little information about this monster. It is large, has many tentacles, and is very strong. Gandalf believes it came from beneath the mountains, and that it is purposely malevolent.

The description of a mass of tentacles is reminiscent of a giant squid or octopus, and was probably inspired by the sea-faring tales of ship-swallowing kraken. In the modern world, there are no freshwater squid or octopus, so we can only conjecture that this species has gone extinct.

Only one watcher is known to exist, and it lived in the lake outside the western entrance of Moria, Hollin Gate. As far as anyone knows, it is still there.....



Chapter II

Fishes that Could be Encountered during The Hobbit Adventure

As Bilbo Baggins and the dwarves travelled from The Shire to Erebor, the Lonely Mountain, they had several opportunities to encounter fishes. The most significant areas are the caverns under the Misty Mountains, Forest River, and Long Lake. However, this chapter will review the entire adventure by region.

Starting with The Shire, we have ponds, streams, and rivers. Pike, Tench, Bream, and Perch are common in the ponds, like The Water and Bywater Pool. Brown Trout live in the cooler streams. Barbel, Pike, and Brown Trout live in the River Baranduin (Brandywine). Eels are present, but rarely seen. Belegaer Salmon arrive in large numbers in the River Baranduin in the fall during their reproductive migration.

The fishes from Bree to Rivendell are similar to those in The Shire. Habitats are primarily streams and rivers with moderate to fast-flowing water. Brown Trout, Barbel, and Pike are the most common species. In the fall, Belegaer Salmon arrive in large numbers to spawn. Closer to Rivendell, in the foothills of the Misty Mountains, Grayling are the dominant species.

Although Midgewater Marshes is not crossed in The Hobbit, it is a dominant aquatic habitat in the region. Shallow marshes that dry completely in the summer or freeze completely in the winter typically have few to no fishes. Small minnows, which are not covered here, are the most common fishes. Deeper portions may have a few species, like Pike, Tench, or Bream. Cool streams flowing into the Midgewater Marshes have Brown Trout.

The Misty Mountains can be divided into three regions: foothills, mountains, and underground. In general, the diversity of fishes is low in mountains. The foothills, on both the western and eastern versants, are dominated by Grayling. Every fall, large numbers of Belegaer Salmon arrive in the foothills on the western side to spawn. Brown Trout are the most common species in the higher elevation mountainous streams. Cavefishes live in the underground caverns beneath the Misty Mountains, and these are the only fishes explicitly mentioned in The Hobbit.

Some different fish species live on the eastern side of the Misty Mountains. In the upper Anduin River near The Carrock, it is possible to encounter Brown Trout in the faster flowing sections and nearby streams. Zander and Pike live in the slower flowing sections. Wels, Tench, and Bream may live in the backwaters, but are uncommon here.

No fishes are known from the Enchanted River. There may be some, but so far nobody has successfully surveyed the river to see what lives there. It is possible that the only fishes in the Enchanted River are of the magical variety.

Although no fishes are mentioned in The Hobbit for the Forest River, this is clearly the most likely place that Bilbo Baggins would have seen a fish. He very easily could have had a life-ending encounter with a giant Wels or Pike, and is fortunately that his path did not cross these species. Great Sturgeon cruise the river, and certainly would have scared the hobbit. Zander, Brown Trout, and Perch are also present.

The inhabitants of Lake-Town undoubtedly know a great deal about the fishes of Long Lake. Wels, giant Pike, and Great Sturgeon prowl the shallows. Only a skilled fisherman or adventurer would be able to catch one of these monsters. Perch are abundant. Tench, Bream, Zander, and the occasional Brown Trout swim through the depths.

[I have thought of writing a similar essay based on the three Lord of the Rings books, but their travels are too complex and widespread. One is better off reading this entire field guide.]

Chapter III

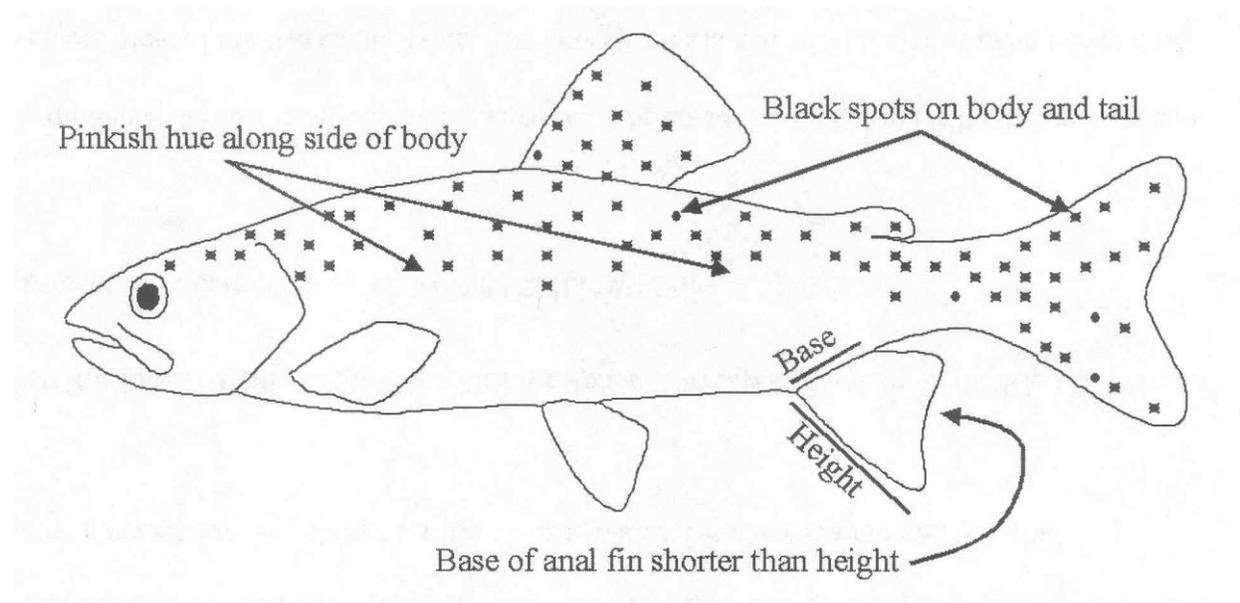
Those Fish Species Seen in the Lord of the Rings Movies

Tolkien's Middle-Earth is home to many fascinating and unusual creatures. Among the many that have taken on a new life in the recent Peter Jackson movies, a few fishes make cameo appearances. What follows is a short essay on these three fishes and a means to tell them apart and identify to which species they belong. Common names for the species will be used, especially those used in New Zealand, but scientific names in italics will be included. This is followed by a short discussion on whether these are truly pre-European Middle-Earth species and their hypothesized distribution in Tolkien's Middle-Earth.

Rainbow Trout

Oncorhynchus mykiss

The first live fish to make an appearance in the movie trilogy is the Rainbow Trout (also known as Steelhead). The Rainbow Trout can be recognized by its relatively short anal fin, pinkish hue along the sides of the body, black spots on a paler background, and black spots on the tail.



This species makes two appearances in 'The Two Towers'. In both instances the fish appears to be computer generated. Both times Gollum is catching (or trying to catch) them for dinner. The first is in North Ithilien. As Frodo and Sam are talking, Gollum slips and slides down a stream while chasing the fish, which eventually gets away.

Some important characteristics of the fish that are apparent in this scene is that the anal fin is relatively short, there is a pinkish hue along the sides of the body, and there are black spots on a paler background. It is difficult to tell if there are any spots on the tail.

The second appearance of the Rainbow Trout is in the Forbidden Pool, near the hidden camp Henneth Annun of Faramir and the Ithilien Rangers in the foothills of Ephel Duath (Mountains of Shadow). Gollum dives into the pool, catches a fish, then bangs it against a rock as he prepares to eat it. Frodo appears and calls to Gollum. As Gollum goes to Frodo, he is jumped by Ithilien Rangers and drops his fish.

Once again, it is possible to see that the fish has a relatively short anal fin, a pinkish hue (although very faint) along the sides of the body, and black spots on a paler background. It is not possible to see if there are spots on the tail.

The Rainbow Trout is also on the back of (at least some) the DVD box cover and in a number of collectible statues, such as come with The Two Towers Extended Edition gift set.

In the modern world, Rainbow Trout are actually native to the Pacific and Arctic coasts of the United States, Canada, Mexico, and Russia (McDowall 1978, Page and Burr 1991, Moyle 2002). They were originally introduced into New Zealand from North America in 1883 (McDowall 1978, 1980). They were also originally introduced into Europe in 1881 (Lelek 1987, Greenhalgh 1999).

Because it is not always easy to see the distinguishing characters in the movie, there is always the chance that the fish belongs to a different species. One possibility is the Belegaer (Atlantic) Salmon (*Salmo salar*). This species is native to the Atlantic coasts of North America and Europe, and was originally introduced into New Zealand from England in 1868 (McDowall 1978). It is currently rare in New Zealand. The easiest way to distinguish a Belegaer (Atlantic) Salmon from a Rainbow Trout is the Belegaer Salmon have no, or very few, black spots on the tail.

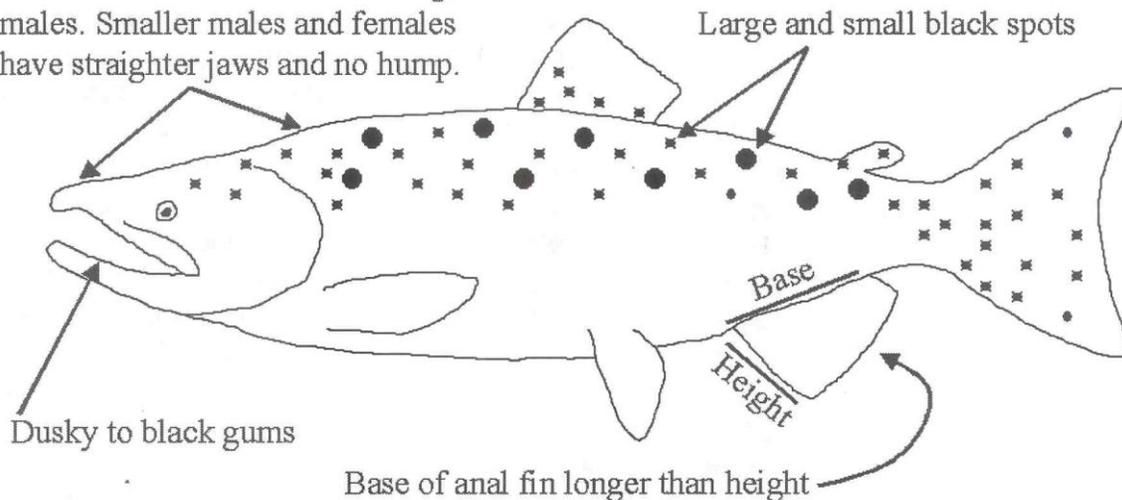
Another possibility is the Brown Trout (*Salmo trutta*). Brown Trout are native to Europe and northern Africa (McDowall 1978, Muus and Dahlstrøm 1978, Lelek 1987, Greenhalgh 1999), and were originally introduced into New Zealand from Tasmania in 1867. The Tasmanian fishes were from England (McDowall 1978). Lake or ocean forms may resemble Rainbow Trout. However, Brown Trout have no, or very few, black spots on the tail. Furthermore, the tail has a straight posterior edge, whereas other species have slightly forked tails.

Chinook Salmon

Oncorhynchus tshawytscha

The second fish species to make an appearance in the movie trilogy is the Chinook Salmon (also known as Quinnat Salmon or King Salmon). The Chinook Salmon can be recognized by its relatively long anal fin, dusky to black-colored gums (tissue immediately adjacent to teeth) in lower jaw, 16-27 shorter gill rakers (structures in the mouth used for straining prey from the water), as well as large and small black spots on the back and upper sides of the body.

Note: The hooked jaw and hump on the back are characteristic of larger males. Smaller males and females have straighter jaws and no hump.



The Chinook Salmon makes one appearance in 'The Return of the King'. Deagol and Smeagol (Gollum) are fishing in the Gladden Fields, which is a wetland area near where the Gladden River flows into the Anduin River. The Chinook Salmon is the large fish that drags Deagol out of the boat and under the river. It is during this underwater adventure that Deagol finds the One Ring.

It is not always very clear, but in this scene one can see a relatively longer anal fin as well as large and small black spots on the back and upper sides of the body. The overall shape of the body and tail is reminiscent of salmon, particularly Chinook Salmon. The color of the gums actually appears to be whitish, which is a characteristic of the Sockeye Salmon (see below). It is possible that the color of the gums was artificially brightened in order to provide contrast with the rest of the fish. The other characteristics lead me to believe that the fish in the movie is a Chinook Salmon.

The fish appears to be computer generated.

In the modern world, the Chinook Salmon is native to the Pacific coasts of the United States, Canada, Russia, and Japan (Healey 1991, Page and Burr 1991, Moyle 2002), and was originally introduced into New Zealand from California around 1875 (McDowall 1978, Healey 1991, Moyle 2002). It has also been introduced into Europe, but has never successfully established itself (Lelek 1987).

The Chinook Salmon is a large salmon, reaching at least 149 centimeters or 59 inches in length (Scott and Crossman 1973, Page and Burr 1991). Hobbits are around 107 centimeters or 42 inches in height, so this fish is certainly big enough to drag a hobbit-sized person out of a boat and through the water. (A relative to the salmon, the Huchen (*Hucho hucho*), reaches 150-180 centimeters. It is native to Europe (Muus and Dahlstrøm 1978, Greenhalgh 1999).)

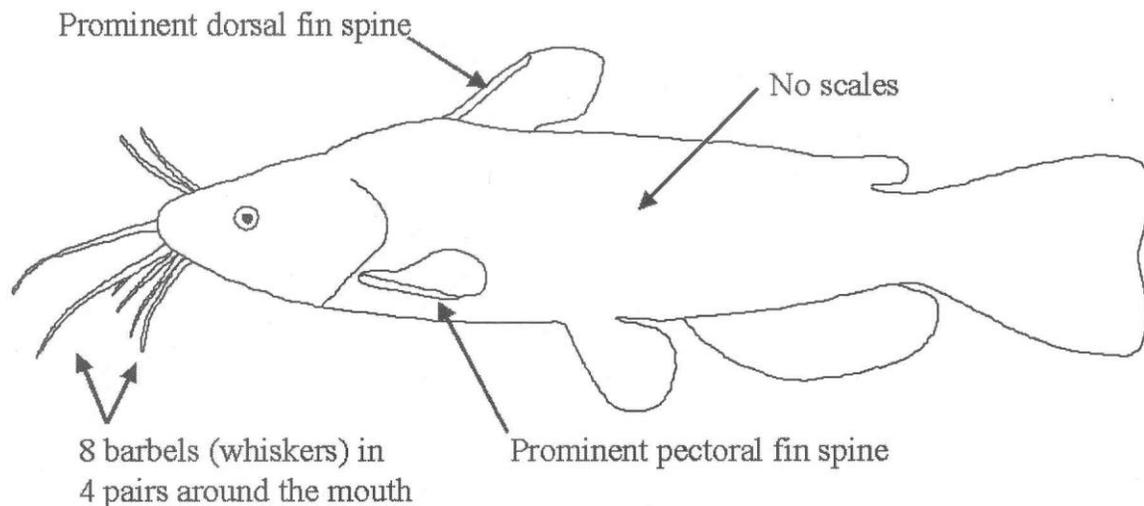
There is another species of salmon that is very similar in appearance to the Chinook Salmon. It is the Sockeye Salmon (*Oncorhynchus nerka*, also known as Kokanee Salmon or Red Salmon). It is native to the Pacific coasts of the United States, Canada, Russia, and Japan (Burgner 1991, Page and Burr 1991, Moyle 2002), and was originally introduced into New Zealand from Canada in 1901-1902 (McDowall 1978). I am not aware of it being introduced into Europe. It is currently rare in New Zealand.

The Sockeye Salmon can be distinguished from the similar Chinook Salmon by its white gums in the lower jaw, 28-43 longer gill rakers, and possibly small black spots on the back and upper sides of the body but never large black spots. It seems like the tail of the Sockeye Salmon is more forked than in the Chinook Salmon, but this is very subtle. Furthermore, the Sockeye Salmon only reaches 84 centimeters or 33 inches in length (Scott and Crossman 1973).

Catfish (Brown Bullhead)

Ameiurus nebulosus

The final fish to make an appearance in the movie trilogy is the Catfish (also known as Brown Bullhead). The Catfish can be recognized by the fact that it has no scales, its mouth is surrounded by eight barbels (or whiskers), and the pectoral and dorsal fins each have a single prominent spine.



The Catfish makes only one appearance in 'The Return of the King'. As the One Ring transforms 'Smeagol' into 'Gollum' and he crawls past a stream in what is presumably the Misty Mountains, he finds a Catfish in a pool of water and eats it raw.

In regards to the fish in the pool of water, one can clearly see the barbels (whiskers) around the mouth and a prominent pectoral spine. This fish appears real.

At the end of the scene, Smeagol / Gollum is eating a replica made out of gelatin or something. The mottled coloration along the sides is consistent with the coloration of the Catfish. No other defining characteristics are visible.

[As an aside, it is generally unwise to eat uncooked fishes, especially freshwater fishes, because they often contain numerous parasites that will then infect your body. Sushi is generally okay because it is made from oceanic fishes that should be human parasite free. Just a friendly warning to any wannabe Gollums out there.]

In the modern world, the Catfish is native to the eastern United States and Canada (McDowall 1978, Page and Burr 1991, Moyle 2002). In 1874, Catfish from Vermont were transplanted to California (Moyle 2002). Catfish from California were then introduced into New Zealand in 1877 (McDowall 1978). They have also been introduced into Europe (Muus and Dahlstrøm 1978, Lelek 1987, Greenhalgh 1999).

Fish Bones

It would be a mistake to not mention the first appearance of fishes in the movie trilogy. This would be in Gollum's cave in the prelude to 'The Fellowship of the Ring'. Fish bones are scattered on the ground as Gollum caresses the ring, and bones are still there years later when Bilbo stumbles upon the scene.

It is difficult to see enough detail in these scenes in order to identify these fish bones with certainty. The size and shape of the head, eye, and mouth, as well as the large premaxillary teeth (the teeth on the bone at the very forward end of the upper jaw) are reminiscent of a salmon or trout. These are also likely suspects due to their apparently common presence elsewhere in Middle-Earth, as is seen in the movie trilogy. Gollum must just love to eat trout and salmon. I cannot say that I blame him, because so do I.

It should be noted that salmon and trout are not usually found in caves, but some do live temporarily underground (Proudlove 2006).

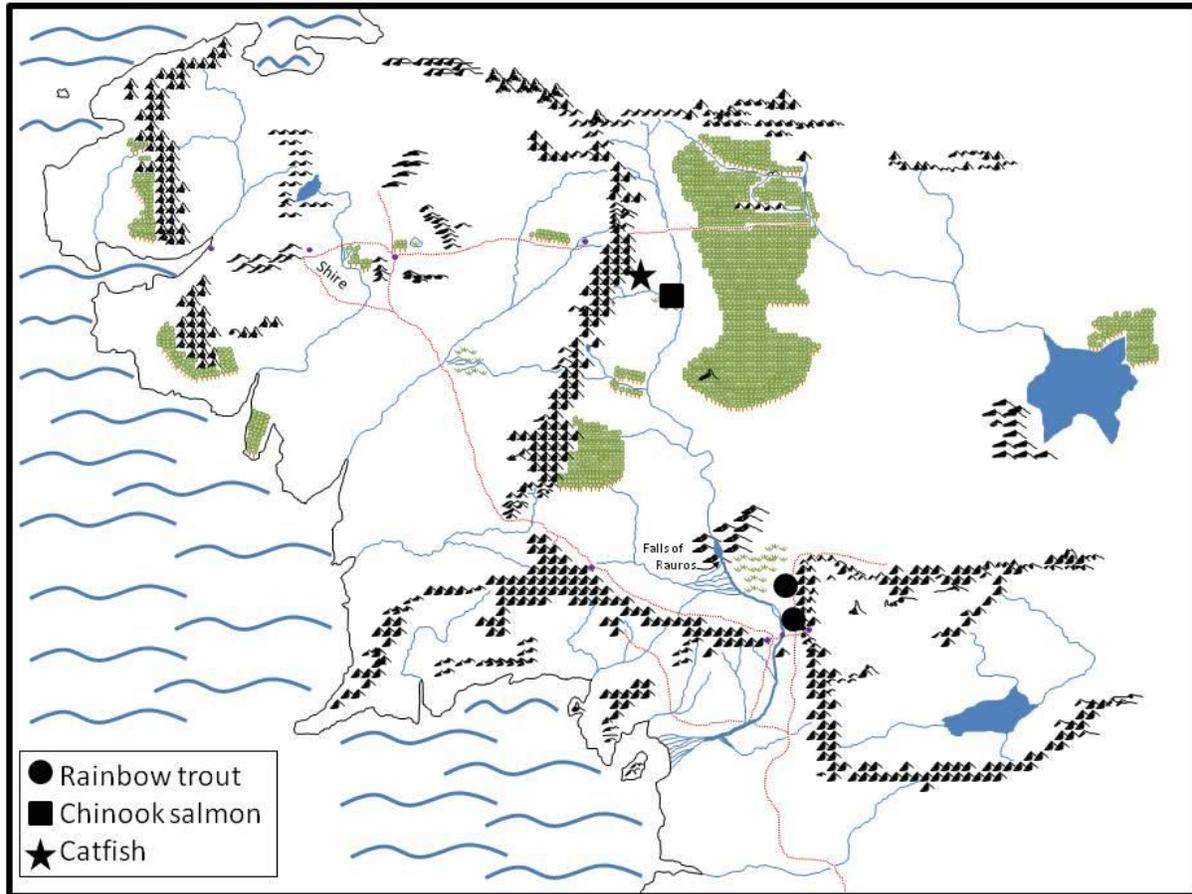
Pre-European Middle-Earth Fishes??

There are obviously fishes in Middle-Earth, but would these three particular species be expected to be there? In short, we are operating on the premise that Middle-Earth in the Third Age is a precursor to modern day Europe, so we would expect the fishes to be European or the ancestors of European fishes. However, the movies were filmed in New Zealand, hence the localities and presumably the fishes in the films have a New Zealand influence.

By reviewing the information under each species description, it is apparent that all three species of fishes were originally from North America. It was not until the late 1800's that they were introduced into New Zealand. Furthermore, not only were they absent from New Zealand in the past, they were also absent from Europe. All three have been recently introduced into Europe, and the Rainbow Trout and Catfish are doing well, but they were not there in the distant past. In short, there is no evidence that these three species of fishes ever inhabited Middle-Earth during the Third Age.

But, we must remember that Middle-Earth is a fantasy world where anything is possible. It is a realm of heroes and villains, epic struggles, and triumphs. In this type of setting, who knows what species of fishes could show up? Maybe these are even new species waiting for someone to officially describe them?

Species distributions



Ignoring the fact that these three species were not present during the Third Age of Middle-Earth and assuming the ecology and life history of fishes in Middle-Earth is similar to that of fishes here today, we can make some conjectures about their distributions. For example, Rainbow Trout spawn in smaller streams and rivers. After the eggs hatch, the young drift downstream and grow to adulthood in larger rivers, lakes, or the ocean. When it is time for these adults to spawn, they return to the smaller rivers or streams. According to the movies, moderately-sized Rainbow Trout are in smaller streams and rivers in North Ithilien. They probably spawn in the region. Larger adults would be expected in larger rivers in North Ithilien, the Anduin River, and / or as far away as the Bay of Belfalas.

Chinook Salmon also spawn in smaller streams and rivers. The young swim downstream and grow to adulthood in larger lakes or the ocean (or very rarely in larger rivers), then return to the same river they were born in to spawn. According to the movies, Chinook Salmon are in the Gladden Fields. Furthermore, the fish Deagol caught had a humped back, which is a good indication that this fish was on a reproductive migration and ready to spawn. Salmon do not typically feed during reproductive migrations, so it is unusual that Deagol was able to hook it. Either this fish just happened to feel like having a small snack, or it was accidentally snagged as it swam by the hook. Regardless, Chinook Salmon appear to spawn in the upstream parts of the Anduin River. They spawn in rivers with gravel bottoms, so the fish probably prefer rivers

flowing out of the Misty Mountains because these are more likely to have gravel bottoms than rivers in Mirkwood.

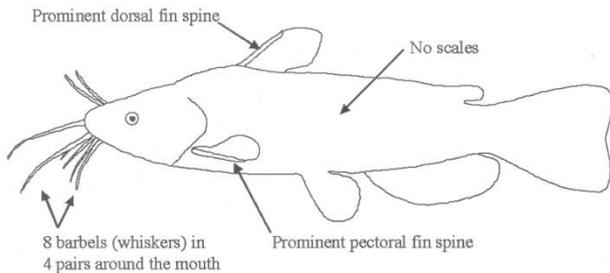
The most likely scenario is that this Chinook Salmon grew to adulthood in the lake Nen Hithoel, which is immediately downstream of the Argonath and within Eryn Muil. This is the only large lake in the upper portion of the Anduin River that I am aware of. The reason this is the most likely spot is because of the Falls of Rauros. These falls are immediately downstream of the lake Nen Hithoel, and they are massive. Fishes are certainly swept downstream over the falls, but very few fishes have the ability to climb upstream against the falls. Chinook Salmon are famous for their ability to jump and swim up rapids, but they would not be able to pass upstream of the Falls of Rauros.

Catfish do not make reproductive migrations that are tens to hundreds to thousands of kilometers / miles in length. Rather, they grow up pretty much in the same area they were born in. According to the movies, Smeagol / Gollum encountered a Catfish in a rocky, clearwater stream in what I presume to be the foothills of the Misty Mountains. This is a slightly unusual locality for this species, which typically prefers slower moving rivers and lakes with muddy bottoms and lots of weeds. However, they can live in a variety of habitats. Catfish can probably be found in many of the rivers and ponds in Mirkwood and the foothills of the Misty Mountains.

Identification Key

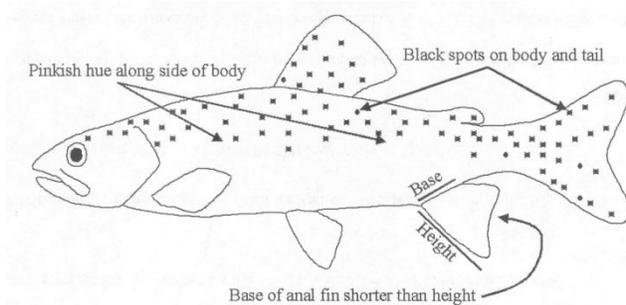
Identification keys are relatively simple tools that can be used to help determine the species of a given organism. You simply go to step 1 and read the two options, choosing which one best describes the fish you are interested in. If the option you choose is a name, then that is the species. It is always best to read a more complete description of this species to make sure you have the correct one. If the option you choose is a number, then you go to that number and read the next two options, and so on and so forth.

1. No scales. Mouth surrounded by barbels (whiskers).....Catfish, *Ameiurus nebulosus*.

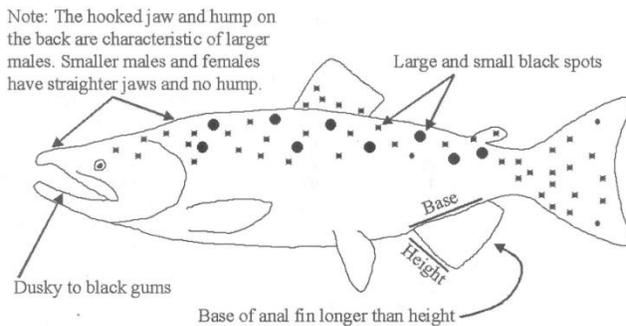


1. Scales present, but very small. No barbels (whiskers) around mouth.....Go to 2.

2. Small anal fin, the base of the anal fin shorter than the height. Often pink along the sides, but may be silvery in color. White gums.....Rainbow Trout, *Oncorhynchus mykiss*.



2. Large anal fin, the base of the anal fin longer than the height. Usually silvery in color, but may have a pinkish hue. Dusky to black gums...Chinook Salmon, *Oncorhynchus tshawytscha*.



Appendix

Fish References in *The Hobbit* and *Lord of the Rings* Novels

There are not many references to fishes in the novels *The Hobbit* and *The Lord of the Rings*, but there are a few. These are listed below. Page numbers are those from the 1966 Houghton Mifflin edition of *The Hobbit* and the 1987? Houghton Mifflin collector's edition of *The Lord of the Rings*. Page numbers may differ in other editions.

It is possible that there are other fish references that are not listed here. They will be added in later versions of this manuscript.

The Hobbit

Chapter *Riddles in the Dark*

Page 82 – “There are strange things living in the pools and lakes in the hearts of mountains: fish whose fathers swam in, goodness only knows how many years ago, and never swam out again, while their eyes grew bigger and bigger and bigger from trying to see in the blackness; also there are other things more slimy than fish.”

Page 82 – “He [Gollum] was looking out of his pale lamp-like eyes for blind fish, which he grabbed with his long fingers as quick as thinking.”

Page 83 – “Sometimes he [Great Goblin] took a fancy for fish from the lake, and sometimes neither goblin nor fish came back.”

Page 87 – “But when he put his long webby foot in the water, a fish jumped out in a fright and fell on Bilbo's toes. ‘Ugh!’ he said, ‘it is cold and clammy!’ – and so he guessed. ‘Fish! Fish!’ he cried. ‘It is a fish!’”

Page 88 – “As it was, talking of fish, ‘no-legs’ was not so very difficult, and after that the rest was easy. ‘Fish on a little table, man at table sitting on a stool, the cat has the bones’ that of course is the answer, and Gollum soon gave it.”

Page 90 – “He [Gollum] thought of all the things he kept in his own pockets: fish-bones, goblins' teeth, wet shells, a bit of bat-wing, a sharp stone to sharpen his fangs on, and other nasty things.”

Page 97 – “A sudden understanding, a pity mixed with horror, welled up in Bilbo's heart: a glimpse of endless days without light or hope of betterment, hard stone, cold fish, sneaking and whispering.”

The Fellowship of the Ring

Chapter A *Journey in the Dark*

Page 322 – “The others swung round and saw the waters of the lake seething, as if a host of snakes were swimming up from the southern end. Out from the water a long sinuous tentacle had crawled; it was pale-green and luminous and wet. Its fingered end had hold of Frodo’s foot, and was dragging him into the water.”

Page 322 – “Twenty other arms came rippling out. The dark water boiled, and there was a hideous stench.”

Page 322 – “..... when the groping tentacles writhed across the narrow shore and fingered the cliff-wall and the doors. One came wriggling over the threshold, glistening in the starlight. Gandalf turned and paused. If he was considering what word would close the gate again from within, there was no need. Many coiling arms seized the doors on either side, and with horrible strength, swung them round.”

Page 323 – “ ‘I do not know,’ answered Gandalf;’ but the arms were all guided by one purpose. Something has crept, or has been driven out of dark waters under the mountains. There are older and fouler things than Orcs in the deep places of the world.’ He did not speak aloud his thought that whatever it was that dwelt in the lake, it had seized on Frodo first among all the Company.”

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Illustrations by Philip W. Willink, and I deeply apologize for their quality. My talents do not lie within the realm of artistic sketching.

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