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Catching Basking Ide, *Leuciscus idus* (L.), in the Baltic Sea

Fishing and Local Knowledge in the Finnish and Swedish Archipelagos

ABSTRACT Ide (*Leuciscus idus* (L.)) gathers in shallow bays in the Baltic archipelagos during warm summer days. Finnish, Estonian and Swedish islanders called this "basking" or "sunbathing." The phenomenon was previously well known among fishermen, but it is very little researched. Local people caught the basking fish until some decades ago with special techniques, for example closing the bay with nets. Catching basking ide required observation, knowledge, attention and skill, but could provide a large catch when done properly. The method called for cooperation, but also divided the islanders according to fishing rights. The islanders' observations and fishing techniques reflect a broad local ecological knowledge and the capability to utilise local resources from the environment. This historical and ethno-biological study investigates perceptions and traditional knowledge of basking ide, fishing techniques connected to ide and from a larger perspective, the interaction between humans and fish in the Baltic archipelagos.

KEYWORDS ide, *Leuciscus idus* (L.), Baltic Sea, local knowledge, historical fishing methods

Introduction

"In late summer," writes the Swedish author August Strindberg, the water gets warm in the bays and the ide comes up for *basking* as the

locals say. He describes how the islanders at this time kept watch from the treetops and when someone observed that the "water becomes alive, he tells his comrades, who arrive in their flat skiffs from both points around the bay. The oars are carefully wound with wool stockings in order not to scare off the fish. Then they stretch a net over the mouth of the bay" (Strindberg 1888).

Strindberg's collection of short stories, *Life of the Men in the Skerries* (orig. *Skärkarlsliv*), describes people in the Stockholm archipelago in the 1880s. The account has a very authentic ring and supposedly the author took part in or observed an ide fishing event himself. Actually, he describes both certain ide behaviour known to the local fishermen and a special kind of fishing technique for ide (*Leuciscus idus* (L.)), which was still common in Sweden and Finland half a century ago. The basking behaviour of ide near the surface is well known also among biologists, but there is little research on the topic. The story of Strindberg reflects the thorough local knowledge of the sea and its inhabitants that islanders in the Baltic Sea possessed. It is also an excellent example of traditional relations between coastal inhabitants and marine biota.

The ide is a brackish and freshwater fish of the family Cyprinidae. It reaches a length of 40 to 60 centimetres and weighs up to two kilos, in rare cases even six kilos. Ide feeds on insect larvae and adults, cladocerans, worms, spawn of other fishes, small molluscs, diatoms and filamentous algae (Mutenia 1978; Brabrand 1985). Ide was previously distributed all over northern Europe, including Russia and northwest Siberia. In Sweden it occurs from the Öresund in the south along the Baltic coast into the Gulf of Bothnia. It also occurs around the island of Gotland (Kottelat & Freyhof 2007: 206–207). In Finland, ide occurs in coastal brackish waters and almost all main watersheds, with a concentration around the southwest archipelagos, especially the Åbo (Turku) area (Järvi 1932: 36; Piironen 1994). Today ide populations are diminishing, because of environmental stress stemming from both local and international sources, such as nutrient loading, fish farming, intense agriculture and increasing ship and boat traffic. Presently eutrophication is the main threat to the Baltic Sea and its inhabitants (Leppäkoski *et al*. 1999; Elmgren 2001; Ådjers *et al*. 2006).

The anthropologist Claude Lévi-Strauss noted as early as 1962 that local populations are deeply familiar with the natural environment they depend on and pay close attention to it. They devote a lifetime to learning, understanding and mastering their environment. This understanding (Lévi-Strauss calls it "science of the concrete") is today usually called *local knowledge* (Lévi-Strauss 1962; Hunn 2011: 85). Such knowledge includes not only those organisms and contexts that reflect cultural, economic or medicinal

Ide (*Leuciscus idus*) from Finland. Chromolithography by Gösta Sundman (from *Finlands fiskar målade efter naturen af Gösta Sundman* 1883–1893).

needs of humans, but comprises a profound and detailed knowledge of the entire ecosystem in which the population lives and acts. Local knowledge is often defined as the product of long-term observation and trial and error efforts. Some traditions are transmitted through generations and have crystallised into a summary of experiences and observations made by several persons. Such knowledge is usually incorporated in a complex system, including beliefs and practices, social relations, information on gathering techniques and data distribution (Berkes *et al*. 1995).

Local knowledge among fishermen is growing in importance internationally and it is used for the improvement of fisheries. Fishermen provide information about fishing practices, environment and ecology, behaviour, diet, habitat, predators and abundance trends of fish (Johannes *et al*. 2000; Silvano *et al*. 2008). In the Baltic Sea region, however, the significance of biological folk knowledge for fisheries and environmental issues is only beginning to be recognised. Yet rich data on local knowledge has been gathered from coastal dwellers around the Baltic Sea over the past few centuries. Most knowledge is, of course, lost through change and never recorded. Today some written information can be found in archives and printed books. Since the end of the nineteenth century, the population in the Baltic archipelagos has decreased and continues to diminish. Urbanisation, economic and cultural changes, emigration and globalisation processes are the main causes. In the past decades, ecological changes have also influenced the demographical processes on the islands (Leppäkoski *et al*. 1999).

Sources, Methods and Purpose

Historical ethnobiology differs from fieldwork-based research in that the researcher is unable to carry out interviews or observation activities on the spot. A qualitative rather than quantitative approach is required. Instead of doing fieldwork, we have to use narrative sources which at best convey concrete descriptions. Narrative sources are for example travelogues, topographical descriptions, chronicles, diaries, memoirs and older fauna surveys. Here we find descriptions and information on human perceptions that can be exposed to source criticism, analysis and interpretation. The sources often also provide data that cannot be extracted by other means, such as material culture, traces in the landscape or toponyms. Thus we are able to reconstruct folk knowledge that would otherwise be lost (Ståhlberg & Svanberg 2010; Svanberg *et al*. 2011).

Historical sources are in general scarce and fragmentary, but ethnobiological information can be analysed by applying a consistent comparative perspective with other sources, biological research, etcetera (Kinzelbach 1999; Myrdal 2007; Svanberg 2010). In the case of ide, there are a number of ethnographic descriptions, which can be found in archives and older publications. These descriptions are mainly based on eyewitness accounts or self-perceived experiences and observations from the eighteenth to the earlier half of the twentieth century (Sundevall 1855; Ohlsson 1944). For this study, we have used unpublished records in the archives of the Society of Swedish Literature in Helsinki (SLS), Finnish Literature Society in Helsinki (SKS/KRA), Finland, and the Institute for Language and Folklore in Uppsala (ULMA; Department of Dialectology and Folklore Research, Uppsala), Sweden, together with published sources.

The study of previous local knowledge is important for its historical, social, cultural and ecological values, for the practical reasons mentioned above, for biodiversity conservation and for the gathering of diachronic data (Berkes *et al*. 1995; Kinzelbach 1999; Huntington 2000). Our aim here is to describe folk knowledge about ide and ide fishing from around the Baltic Sea, compare it with the surprisingly scarce biological data on the phenomenon of basking ide and discuss the significance and relevance of the traditional knowledge in relation to modern research.

Folk Knowledge about Baltic Fish

Ethnobiologists often analyse folk taxonomies of fish, but seldom consider other knowledge about fish fauna (May 2005). As Kornhall (1968), Ernby (1985) and Edlund (2010) show, taxonomic folk knowledge about fish was previously very common in Scandinavia. In coastal areas along the Swedish

province of Hälsingland, fishermen could for example distinguish 25 kinds of Baltic herring (*Clupea harengus* (L.)), naming them according to occurrence, size and spawning season (Hedblom 1913).

Local people normally name different species of fish, but other aspects of fish fauna are considered important as well and receive names. This reflects an activity context (Balée 1994). Yet fish move in a completely different habitat than other animals caught by humans. Humans have limited physical possibilities to gather knowledge about fish. It is rather *ecology*, more than *taxonomy* that distinguishes fish from other prey. Fishermen cannot observe fish in the same way as hunters observe birds, mammals or other animals living in forests or fields. Yet most fishermen in the Baltic region were capable of recording not only the species, but also the signs of fish behaviour and to interpret them (Pálsson 1990). This kind of knowledge was very important for the success of the catch and ultimately, for the survival of the human population in the archipelagos.

An example of local knowledge is the "bubbling" of the Baltic herring, a well-known phenomenon among peasant fishermen in Sweden, Finland and Estonia. When big swarms of herring gathered together, fishermen around the Baltic Sea observed the quantity of bubbles rising to the surface. Fishermen in Norrland (Northern Sweden) said that the herring *mölar* or *mörar*, while fishermen in the western Finnish archipelago distinguished between *aamusore* 'morning bubbling' and *ehtoosore* 'evening bubbling' (Gisler 1748: 118; Ljungman 1879; Numelin & Hellevaara 1915).

Through looking for such traces of fish on the water surface, the archipelago population could locate the fish shoals. There is naturally a biological and physical explanation of such an observation, to the reasons for the gathering of lots of fish on a small area and how they stir up the water. On the other hand, the interpretation of the "bubbling" behaviour and similar pieces of folk knowledge must be understood within the context of the economic and ecological background. There was a special situation before starting the fishing event, which included waiting, uncertainty and tension, according to Orvar Löfgren (1981; see also Storå 2003: 111–129 for further examples on the strategies used in fishing as part of local knowledge).

Cyprinids comprise a large proportion of fish communities in lowland rivers in Northern Europe, but little is known about their migratory behaviour. There are a few studies on migrations, for example in the Netherlands and Germany (Lucas *et al*. 2000; Winter & Fredrich 2003). Fluctuations in ide population and general behaviour, especially in the Baltic Sea, are also not very well known (MacKenziel *et al*. 2002). Folk knowledge appears to contain more data on certain ide behaviour than modern research and especially the "basking" is a phenomenon which has, as far as we know, not been researched before.

Basking Ide

Folk terminology in relation to ide is rich and detailed. During spawning season, the ide migrates from the sea into rivers and streams (Cala 1970). When ide shoals reach the coast, they are an impressive sight. The English hunter Llewellyn Lloyd (1854), who lived in Sweden, observed an ide shoal arriving at a river mouth and observed that the fishes were packed very closely together and lashed the surface with their tails, which gave a peculiar noise. The male ide was the first to reach streams and rivers in spring. This first ide for the year was called *isfisk*, 'ice fish,' in Sweden (Ekström 1831). In Uppland, north of Stockholm, the name was *tjälid*, 'the ide that comes when the frost has left the ground,' or *strömid*, 'stream ide.' A later arrival was the *ängsid*, 'meadow ide,' which was already bigger than the previous fishes (Lönnberg 1908; cf. Cala 1970).

On warm summer days, the ide for reasons yet undefined comes up to the water surface. It gathers in great shoals in shallow bays and ponds around islands. In the Swedish and Finnish archipelagos, there are thousands of islands, often small and close to one another. In Sweden the extraordinary behaviour of the ide was called *badfisk*, 'basking fish,' or *badid*, 'basking ide.' The Swedish names *badfisk* and *badid* are related in meaning to the Estonian *päilik* or *päiliku kalad*, 'sun fish,' which at Hiiumaa meant fish, among others ide, which kept to the surface when the weather was sunny, and was caught with seine (Saareste 1958).

The name *badfisk* originates from the idea that the fish comes up to sunbathe, like humans bask in the sun in summer. Especially in Sweden and Finland, winters tend to be long, dark and cold; previously the Baltic was covered with ice for several months. In 1935, John Westin observed the catching of "basking ide" and "basking roach" on the Swedish coast. The fish was, according to him, caught during the hottest summer days in shallow water, "when it got up to (sun) bask." The weather had to be warm, calm and clear. When a cloud hid the sun, the ide "jumped out" which further confirmed its addiction to the sun, according to the local people (Westin 1935).

Also from Finland there is information that explains the origin of the concept. In late summer, when the ide gathered in the bays of islands and stood still in great shoals, seemingly not feeding, the Swedish-speaking population in the Åbo (Turku) archipelago called the phenomenon *bada*, 'to bask,' 'to bath,' in the meaning of sunbathing. At this time, according to folk tradition, the ide tasted the best. Therefore the bays were closely watched by the local people who would put in a net or a seine (Zilliacus 1955). In Finnish the bay fishing technique is called every-man's *hellepyynti*, 'heat fishing' (Järvi 1932: 99).

In the Baltic archipelago, ide is generally the fish species mostly identified with basking or sunbathing. However, not only the ide is basking. Other fish species did the same:

> In the summer, when the weather is beautiful and warm, and there is a small wind, fish of all kinds such as pike, ide, perch, roach, rudd and others rise from the depths and move into small, narrow sounds and bays. They amuse themselves in different ways and the fishermen have the habit, not without profit, to seal up the basking fish in such a place, and then haul a seine called *bonotar*, or a similar seine through the bay or sound (Enholm 1753).

Fishermen in the Swedish provinces of Gästrikland, Uppland and Östergötland as well as the Swedish-speaking population in the archipelagos of Finland also knew *badmört* 'basking roach,' *badabborre*, 'basking perch' (*Perca fluviatilis*) and *badbraxen*, 'basking bream' (*Abramis brama*) (Lönnberg 1925; Westerberg 1958; Ahlbäck 1982: 93). The basking behaviour in large shoals is also known for the chub (*Squalius cephalus*) in England (Amphlett 1906: 39; Page *et al*. 1968: 153).

Possibly this unusual behaviour of the ide and some other fish species is due to the fact that they feed on insects, especially night flies, or search for smaller animals and fish from the bottom of the shallow bays. It is also possible that the shoal simply rests and enjoys the warm environment. The folk connotation of basking seems therefore quite adequate. This kind of behaviour is still well known among fishermen in the archipelagos, even though many of the fish species are hardly caught anymore (personal communications from fishermen in Sweden and Finland).

Concepts about Ide Behaviour

Traditional knowledge about ide behaviour in the Baltic Sea is varied and covers not only the fish, but several other aspects as well. Modern research is lacking; the local ecological knowledge comprises a complex system of observations, experience and calculations.

The timing of *badid* rising to the bays varied according to latitude. Normally the Baltic Sea does not become very warm even in summer. Along the coastline of Finland the average summer peak temperature of the water varied from 11 to 17°C, depending on weather, latitude and site (Järvi 1932: 14). For the ide to rise, the water had to be close to its warmest peak for the summer. In the northern regions, the seawater temperature rose slowly and usually reached the peak only at the brink of autumn. In Blekinge and Kalmar in Southern Sweden, ide shoals started gathering already after Midsummer (24 June). In Östergötland this took place around the end of July

and in Uppland north of Stockholm it could occur in August, depending on the summer's weather and water temperatures. Also on the Baltic island of Gotland one could usually catch ide only in August. The inlet fishing method of ide was a highly popular occupation. One of the possible reasons for the positive connotations about ide fishing in folk knowledge is that the local peoples liked the fairly warm water, which was much more pleasant than the usual fishing in deep sea or cold waters during most of the year (Modeer 1767; Gustavson 1918–40; Klintberg & Gustavson 1972).

For the local population the right timing of fishing preparations with the ide arrival was most important. The time was mainly calculated on the basis of weather conditions and water surface observations. At Kalmarsund in Southern Sweden, the locals kept close watch over the usual "basking" places in summer. When the water "boiled" as in a pot, it was time to start fishing (Granlund 1958). As Strindberg described in 1888, the people in the archipelago would sit on a treetop or a cliff and check on the fish during this time of the summer. They observed closely the sites where the fish were supposed to appear. Other informants had a different explanation: they say that if there was fish on the surface, it was necessary to climb a tree far away from the bay or stand on a cliff. Then it was possible to see if the fish swam at the water's edge; their fins stood up in the water. This was the time to start fishing (Westin 1935).

There were also other ways of knowing when the fish was on its way. Wild animals that preyed on the ide were a certain sign. Roland Svensson (1961) also shows the importance of weather: "The air was hot, the wind turned with the sun and small, white clouds moved over the blue sky" on a summer day in Möja, Stockholm archipelago. Now the fish was expected, both ide and bream, which in huge swarms found their way into the bays. Those who possessed fishing rights for the area watched closely over the water, as they had to react quickly with their especially constructed rod-nets. Sometimes the calm bay would turn into a "boiling gruel" of slime in which the fish rolled. If water surface observation was missed and the fish already had arrived in the bay, the white-tailed eagles (*Haliaeetus albicilla*) and gulls were the first to find them, according to Svensson's informants. The eagles would, according to local tradition, "push the fish into the bays with their shadow." Then humans, alarmed by the appearance of the birds, which were busy catching fish, turned immediately up at the fishing site (Svensson 1961).

Difficulties when fishing arose from the nets and the weather. The ide preferred calm, hot weather, which is a rarity in the Baltic Sea. In an old thesis about Baltic fish, an observer noted:

> Around the day of St Olof [29 July] this fish rises in large groups up to the surface, especially around sunset, in the bays, close to islets and rocks. Sometimes it only shows its head, rolling like a harbour porpoise, sometimes it jumps and beats with the tail. Then the fishermen join in and put their nets around the beaches and catch him [the ide], certain of a lucky catch (Enholm 1753).

Enholm adds that the profit was not very big, because of the difficulties of putting out the nets and sometimes hard weather conditions and high waves. In other instances (examples below) the time of the day was not important, but weather conditions could seriously influence the fishing. It was therefore important to interpret meteorological processes and their relationship to fish behaviour correctly. "When the summer heat arrived, the fish gathered together," wrote one anonymous observer in Finland more than a century ago. The warmer and sunnier the weather, the more fish collected in shoals. During the night, sometimes also in daytime when the wind was calm, the fish stayed in the shallow bays and would not return to the deep sea. Yet if the wind blew up, they immediately retreated and were observed to follow certain paths and swim along specific cliffs and islet beaches (O. R. 1896).

Ide Fishing Techniques

In pre-industrial, predominantly agricultural Scandinavia, ide was an economic asset for the fishermen and their families. Ide was caught at two different times, spawning season and summer and the two techniques differed. Locally, ide fishing could give sizeable catches. The ethnologist John Granlund (1958) reported from Kalmarsund in the early twentieth century that if the fishing was successful, the islanders could around Midsummer catch thousands of kilograms of ide in warm weather.

Fresh ide was in demand in the city and commanded a good price. Therefore the successful fishermen sailed quickly to the next steamboat station or to Vaxholm near Stockholm, where they sold the fish to urban summer guests. The locals could sometimes keep several sacks of ide for themselves as well. The best ones were put in a fish well for later use as food; part was given to pigs and chickens and the rest was thrown back into the sea (Svensson 1961). Different ide fishing techniques and use reflect the local inhabitants' understanding about the habitat and behaviour of ide. They used their traditional knowledge for nutritional and economic needs, but until now researchers have not shown much interest in ide fishing and its importance for the diet and the local economy. Only some seasonal variations in fish stock and abundance dynamics have been studied (cf. Ojaveer & Lehtonen 2001).

Traditional fishing methods often depend on the way in which the fish appear (cf. Bartz 1964: 30). Islanders had to wait for a shoal to approach the coast. Along the Baltic coast, ide was fished with nets, bow-nets and osier baskets. The spawning of ide usually begins in late spring, once the water holds a temperature of about 5°C for two or three days (usually in April or May). Different blocking and other catching devices were used for the spawning fish in spring, although nets and bow-nets were the most common. Often fishing took place during the night, which gave bigger catches (Cajanus 1755; Tolvanen 1915). From Karttula in Finland, it is recorded that during the spring fishing of ide, the nets had to be put out and the oars and steering-tackle painted red. With these colourful implements the fishermen moved with their boats towards the nets. The ide would follow and then spawn near the nets, providing the fishermen with a good catch (Oksman 1937).

On the coast of Småland, ide moving upstream was caught with hoop nets and common nets (Modéer 1928; Lundin 1950). In Skåne, southernmost Sweden, spawning ide was taken with cast nets (Nilsson 1855: 309). This technique could give a catch of up to 300 kilos or more due to the large amount of fish (Arwidsson 1930). Yet in the Östergötland archipelago, where ide was economically very important for the local population, it was fished throughout the summer. After the spring fishing it was also caught with seine in the open sea together with other fish included in the general folk category *fjällfisk*, 'scale fish.' Often ide was consumed with different "scale fish" as fresh food (Österman 1950).

Inlet Fishing of Basking Ide

The kind of inlet fishing technique for ide described by August Strindberg was neither spring fishing, nor ordinary seine-hauling in the Baltic Sea, which usually brought in a mixture of different fish species during the whole fishing season. Inlet fishing was rather a specific method that was carried out in summer, when the large shoals of ide headed for the bays to "bask." The catching of *badfisk* took place in the whole of Southern Finland, the Åland archipelago and in the Gulf of Bothnia, Estonia, around Gotland and the archipelagos of the Swedish coast from Uppland in the north to Kalmarsund and Eastern Blekinge in the south (Hesselman 1918; Gustavson 1918–40; Danell 1951: 11; Andersson 1964: 94; Klintberg & Gustavson 1972; Ahlbäck 1982: 93).

Inlet fishing of *badid* was not an easy technique. Apart from the important knowledge of ide behaviour, skill and prudence were needed to catch the fish. Several records emphasize the importance of acting quickly, pro-

fessionally and silently. When the fish came, neighbours along the Finnish coast all the way in the eastern parts of the Gulf of Finland went out with their nets and laid them down beside each other in a long line. Men and women were standing fully clothed even up to their waists in the water. Slowly walking, they closed the circle so that the fish were surrounded. Then they pulled the line of nets together and onto the shore (Järvi 1932: 99–100).

Strindberg mentioned that wool stockings isolated the sound from boat oars. Yet one had to be very careful already when observing the fish, because the ide was regarded as extremely shy. This explains why the observer had to climb a tree or a cliff; local people were certain that the ide would flee if it knew humans were observing it. Because of its quick reactions to human activities, there was no need to chase it with oars or other instruments. As soon as the boats floated over the surface, the fish rushed towards the net (Svensson 1961).

The fishermen could reap sizeable catches if they were many and skilful enough to cut off the retreat of the fish with nets or to angle together when the fish moved. Firstly, the fish had to be held in the bay with the help of a net. For instance in the region of Väddö in Sweden, *täppor*, a kind of fine nets, were used to keep the basking fish in the shallows (Gustavsson 1960). Secondly, helpers were needed. The extensive shoals of large fish that congregated in the inlets of coastal islands created extensive social activities for the local peoples. Fishing rights played an important role for the decision on who could fish and who divided the catch (Svensson 1961). This aspect has not yet been studied, but could provide valuable information on the social and economic relationships in the Baltic Sea region. The fishing rights were in many places connected to the land rights. Ide fishing was in comparison with other fishing done closer to the coastal waters and touched the rights of the landowners of the specific beaches. Therefore the owners joined together for the fishing, everyone with his part in the long line of the nets (Hedenstierna 1949: 215; Ehn 1991: 51; Storå 2003: 34–49).

Summer ide was caught in a very different way compared to any other fish and emotions ran high. Women participated in ide fishing in Finland, joining the men and distributing the catch to all participants and stakeholders (Järvi 1932: plate 62). Olle Andersson (1980) experienced *badid* catching at Aspö in the Stockholm archipelago. Here ide fishing was a male occupation. Women were excluded from the event. His description gives an idea of the technique as well as the accompanying thrill and excitement that one would (and expected to) experience while catching *badid*:

> It was a wonderful sight to see the whole bay boiling. We undressed. Fixed a rod net on the beach. Then we glided naked down into the water, pulling the net with us. When it was stretched to its full length, an eel bow-net was tied to it, a new net, again a bow-net, and the next rod net reached the other side. Now the bay was closed. All the time we moved with utmost care in order not to disturb the ide (Andersson 1980).

After this, the fishermen needed only to draw in the nets and they would have an easy catch. There were several uses for ide in the archipelagos. *Badfisk* was mostly salted for the winter. C. U. Ekström describes ide consumption in Södermanland in 1831:

> In the places where ide is caught in great quantities, it is an important article in the household. It can be conserved for a long time and the taste improves rather than deteriorates with time. When ide is cooked, it receives a reddish complexion; after it has cooled, the meat is loose and contains many bones, but is still quite delicious. It is usually salted or dried. If the latter method is applied, ide easily becomes rancid, due to the great quantity of fat it contains, and the taste is harsh and unpleasant. When salted, it is only washed and eaten as such; then it is called *spikefisk*, meaning 'salted and dried fish,' and it makes up a significant part of the garnish of common people. In this simple preparation it has a complexion and taste similar to salmon (Ekström 1831).

Lloyd (1854) too mentions that when properly prepared, ide made a very palatable dish. It was eaten fresh, salted, smoked or pickled, that is, served cold in its own gelatine with vinegar and spices.

Conclusion

Until the 1950s, ide was the object of rather extensive fishing in the Baltic Sea. The large size of the fish and the huge shoals it forms were the main causes of the previous importance. Cyprinids were previously the most commonly consumed fish species in the Baltic Sea (Leppäkoski *et al*. 1999). Previously there was an abundance of ide, a market demand and a local importance of the fish. Ide fishing was also part of a complex and diversified resource utilisation system. Islanders kept cattle which grazed on islets in the summer, caught different fish species, hunted birds, gathered eggs from wild birds, collected hazelnuts and sold fish, nuts, handicraft products and firewood to town inhabitants in order to survive; very few were prosperous (Eskeröd 1954; Granlund 1958; Storå 1985).

Today catching ide and especially the inlet fishing techniques hold no economic value and are forgotten. In Finland ide is still consumed, but

only locally and in very small quantities. A general decrease in appreciation of Cyprinids for human consumption has occurred in the past decades (Bonow & Svanberg 2011), together with urbanisation and the decrease of archipelago populations. Salmon and herring are the most popular contemporary fish species in Scandinavia. As early as the 1930s, the diminishing tendency could be observed. John Westin writes in 1935 that the method of inlet fishing for roach had disappeared and that only ide was still caught in this way (Westin 1935). The fact that ide does not have any economic value anymore probably explains the lacking interest among researchers.

The traditional concepts and folk observations of ide described in this study reflect a profound local ecological knowledge that can be used in modern fish research. Folk knowledge was integrated in a complex resource system, necessary for the sustenance of the rural population in the Finnish, Estonian and Swedish archipelagos in the Baltic Sea, but today it can be used to improve fisheries and the deteriorating condition of the Baltic Sea. Our specific piece of folk knowledge about ide is not an isolated case. Traditional knowledge is not only important as a source of information about the past, but it can help us change the future. The islanders' familiarity with the various local fish species, behaviour, habitat, predators and diet; the fishing techniques adapted to the geographical conditions; and their tradition- and experience-based information and beliefs about the fish were all part of their skill for managing and harvesting available biological resources. This can be seen as a kind of organic database comprising many different kinds of information, changing with every experience, season, fishing occasion and every new piece of information. Actually, the local peoples lived *in* the archipelago, not *on* it, as Leppäkoski *et al*. (1999) assert, which means they were completely integrated in the ecosystem.

The future will show if the problems in world fisheries based on predatory fish will result in an increasing interest in omnivorous and herbivore species such as ide. Locally produced foods already receive more attention due to growing ecological consciousness. The concerns about high-energy consumption, for example for transportation and climate change, combined with the question of food quality could result in a comeback for fish like ide. Especially in Finland, but also in Sweden, interest in traditional food has become something of a fashion trend in recent years.

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