Chapter 9

ALL QUIET ON THE EASTERN FRONT? THE FINNISH ARMY AND WILDLIFE DURING WORLD WAR TWO

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World War Two was a macroscale war but its history is made of microhistories. In Finland, World War Two consisted of three different but connected wars. The Soviet Union attacked Finland in November 1939, starting the Winter War, which ended in March 1940 with a peace treaty signed in Moscow. During the Continuation War, 1941–1944, Finland together with Nazi Germany, attacked the Soviet Union to regain lost areas. Hostilities were ended by an armistice agreement that obliged Finland to oust German forces from the northern part of the country, which took place in the Lapland War of 1944–1945. In this chapter we will especially focus on the environmental history of the Continuation War, due to its length and relevance for our theme. After the rapid advancement of the Finnish army at the beginning of this war in summer 1941, the front line stagnated in East Karelia for almost three years. In summer 1944 the Red Army launched a major attack, which the Finnish Army was eventually able to stop; the Continuation War ended in September 1944 and Finland retained its independence, capitalist economy and democratic institutions.[1]

Despite the significant overall impact of wars on societies and nature, environmental studies have tended to focus on peacetime processes. Consequently, environmental history is a new approach to the study of the largest war that has taken place on Earth so far. This article addresses the mobilisation of natural resources in Finland during World War Two. More specifically, we study the following question: what role did hunting and fishing have in the war zone during the Continuation War? Depictions do exist in the memoirs of soldiers and officers from different countries, but hardly any historical studies

1. See Laakkonen and Vuorisalo (eds) 2007.

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have been conducted on these themes despite their importance.[2] This article is probably the first attempt to review the extent of hunting and fishing activity in a war zone during World War Two, and its significance both for military personnel and wildlife populations.[3]

In the interwar period the more-than-1,500-kilometre-long Finno-Soviet border extended from the Baltic Sea in the south to the Barents Sea in the north. This chapter addresses a region named East Karelia, situated west of the White Sea and Lake Onega and north of Lake Ladoga, Europe's largest freshwater lake. It is a sparsely inhabited wilderness of thousands of lakes, immense marshes and conifer forests. It is part of the taiga – that is, the boreal forest zone that extends from Siberia in the east to the Nordic Countries in the west. East Karelia covers over 100,000 square kilometres, an area larger than that of contemporary Portugal or Austria.

Our focus is on traditional game and fish species of Northern Europe. We attempt to discover how it was possible to hunt and fish in the conditions of a world war, and what significance this had for Finnish troops as well as for fish and game populations in the area. Our article focuses primarily on the everyday aspects of wartime woodcraft, including hunting, trapping and fishing practices and catches; as well as if attempts were made to regulate hunting and fishing during war so that game and fish stocks would not be destroyed. This article is based on archival material in addition to wartime professional publications and journals and reminiscences of Finnish veterans.[4] Interviews with almost 600 veterans who served in the 14th division of the Finnish army from 1941 to 1944 are collected in the archives of the Finnish Literature Society. We refer to these interviews anonymously.

We argue that, while the Finnish military administration endeavoured to protect game and fish resources at the outset of the war, wartime conditions and ruthless exploitation of wildlife meant there could only be modest success. The oasis of wildlife that the Finnish army found in East Karelia was soon lost.

2. The impact of WWII on marine fisheries and fish stocks has been studied. See, for example, Holm 2012.

3. None of the following three edited volumes on the environmental history of WWII addresses fishing or hunting on or behind the frontlines: Laakkonen, Tucker and Vuorisalo (eds) 2017; Laakkonen, McNeill, Tucker and Vuorisalo (eds) 2019; Robertson, Tucker, Breyfogle and Mansoor (eds) 2020.

4. See Soikkanen 1999.

Map 1. East Karelia occupied by the Finnish army in 1941–1944. The map shows the eastern Finnish border both before and after the war as well as the conquered territory at its largest. Marked on the map is Kentjärvi where the biological field station of the University of Helsinki was located during the war.

The Karelian Autonomous Soviet Socialist Republic

In territorial terms, since the late Middle Ages East Karelia had belonged first to Novgorod, then to Imperial Russia and finally to the Soviet Union, but the population of the area was historically Finno-Ugric, consisting of mainly of Karelians and Finns, who spoke rather similar languages. Russian-speaking Slavic populations began to migrate to the area in greater numbers after the eleventh century. The majority of verses in the Finnish national epic, *The Kalevala*, were collected from the Finnic inhabitants of East Karelia. At the turn of the nineteenth and twentieth centuries, East Karelia became the object of Karelianism, an idealistic nationalism and romanticism that captured the imagination of Finland's cultured elite. Karelianism gradually turned into a political ideal aimed at annexing East Karelia to Finland.[5] But, from 1917, when Finland achieved independence and the Soviet Union was founded, the border between the countries was gradually closed. Despite this, East Karelia remained a mythical region in the minds of many Finns, including those who spent time fishing and hunting in the wilderness.

The local populace of the East Karelian wilderness was skilled in hunting and fishing. Traditionally hunting and fishing provided them with a significant addition to their livelihood and income.[6] After the October Revolution, the Soviet state established the Karelian Autonomous Soviet Socialist Republic, or KASSR, in East Karelia. Communist power brought curtailment of liberties, confiscation of private property and collectivisation. In fishing *kolkhozy,* only professional fishermen had access to effective fishing equipment.[7] Hunting with modern weapons was allowed only by small body of professional hunters. After the Soviet state confiscated weapons, local inhabitants had to resort to hunting with traps and other primitive equipment.[8] All this hampered flourishing traditional hunting and fishing in East Karelia.

The KASSR attempted to regulate hunting by juridical means as well. A hunting statute laid out by the Soviet Republic in 1935 offered complete protection to moose and Finnish forest reindeer, which had survived in East Karelia only. Also completely protected were American imports – the muskrat, the silver fox and the American mink. Soviet hunting seasons were slightly more liberal than Finnish hunting seasons. Hunting bear, wolf and wolverine was

5. See Nygård 1978; Näre and Kirves (eds) 2014.

6. Nieminen 1998, p. 281; Hämynen 1998, pp. 175–76.

7. Halme 1943, p. 98; Siltamaa 1984, p. 50.

8. Airaksinen 1943, p. 42.

permitted year-round for professional hunters. The KASSR also established nature reserves to protect the Finnish forest reindeer and specific wilderness areas. Leningrad's academic institutions carried out zoological and ichthyological research in the region.[9]

Stalin's paranoia was notorious for being directed at minority nationalities. In the KASSR, Finnic people like Finns, Karelians, Vepsians and Ingrians were particular targets of Stalinist persecution.[10] In 1935, an order was given to NKVD to purge minority nationals from the Soviet border zone and in 1937–1938 the great terror was carried out. Due to mass deportations, sentences and killings, traditional hunting and fishing waned or stopped completely in Karelian villages located on the Soviet side of the border.[11]

The brutal developments on the Soviet side of the border were noticed by Finnish game researchers. They noted through snow-track counts conducted at the border that the reduction of hunting in East Karelia was rapidly reflected in an increase in the populations of game animals at the Finno-Soviet frontier.[12] To put it rather crudely, it can be argued that one of the few positive results of the Stalinist terror was the increase in game and perhaps also fish populations in some parts of the Soviet Union, and partially in some neighbouring countries as well.

Use and management of East Karelia

Stalin's policies at the end of the 1930s had a profound impact on the abundance of game and fish in East Karelia. When Finnish soldiers crossed the border into East Karelia in late June 1941, the region's waters were full of fish and its game stocks ample.[13] In the eyes of the Finnish soldiers, the game populations in the

9. 'Karjalan ASNT:n metsästyssäännöt ja metsästysajat'. Decree no. 247, 1935. (Photocopy).

10. During the terror of 1937–1938, about 11,000 Finnic people were sentenced, of whom about two thirds were of Finnish or Karelian nationality. Over 80% of those sentenced were executed. For information on the history of the KASSR, see Kangaspuro 2000.

11. Autio 2002, pp. 261–63.

12. 'Riistakannan vahvistuminen vv. 1937–38 karjalaisvainojen eräänä seurauksena', Uusi Suomi, 31 Jan. 1943.

13. Halme 1943, p. 100; Lampio 1946, p. 21; Lauri Siivonen, 'Itä-Karjalan riistatilanne ja metsästysolot. Kertomus Valtion tieteelliselle Itä-Karjalan toimikunnalle', Suomen kirjallisuuden seura, 30 Oct. 1942. (Photocopy); Interview by Simo Laakkonen with Sakari Laakkonen (b. 1919), veteran and retired building contractor, 1 Mar. 2006, Porvoo, Finland.

area appeared fabulously plentiful, especially as several of the species that existed in annexed Karelia had been hunted to near or utter extinction in Finland. The Finnish forest reindeer had been hunted to extinction in Finland by the early 1800s, and the moose almost suffered the same fate a hundred years later. Of fur-bearing animals, the Eurasian beaver was extinct and wolverine, lynx, wolf, bear and pine marten were encountered in Finland only in frontier lands. Large birds of prey had also almost disappeared, thanks to bounty hunting and general enmity towards predators.[14] Overfishing, building of dams, massive log floating and urban-industrial pollution had annihilated stocks of valuable fish species such as salmon, trout and white fish in Finnish Karelia.[15] In brief, democratic and capitalist Finland had taken particularly poor care of its game and fish stocks prior to World War Two.

Finland needed the natural resources of the annexed territory and so, by the time Finnish troops took East Karelia, plans for the region's use and management were ready. The East Karelian military administration undertook this management. The plan was that ownership and use of the annexed territory's lands and waters would be more tightly restricted than in Finland. The sizes of new plots would only be large enough to ensure subsistence farming. Forests would be doled out in parcels large enough to meet the demands of households, but not large enough to bring in additional income through commercial use. Ample debate had taken place in Finland over the private ownership of waters, and it was decided that the best solution in East Karelia was that the state would retain ownership.[16] East Karelia was to become a new societal laboratory for Greater Finland, in which public administration would guarantee rational management of natural resources.

On this foundation, the military administration of East Karelia also planned the hunting and fishing in the area and their regulation. Already by August 1941 the first general directive for both the civilian populace and soldiers was given. It also regulated fishing and hunting:

The populace of Karelia must demonstrate commitment and initiative and begin gathering food stores for the upcoming autumn. Fishing is hereby declared free to all in all lakes and rivers; however, explosives and poisonous substances or drugging agents may not be used. At least one third of a fishing channel's breadth must always be left open. The hunting of other game, such as

14. See Lehikoinen 2007.

15. See Laakkonen and Bolotova 2021.

16. Laine 1982, pp. 282–83.

Figure 1. A young Finnish soldier and baby owls. At the front, soldiers took care of all kinds of pets, which shows the young men's desire to take care of living things even in dire conditions. Source: Photo Archives of the Finnish Defence Forces, photographer Tk-Keskimäki.

moose and wild boar, is also free, but the use of firearms without the approval of authorities is forbidden.[17]

There was an urgent need to tap the natural resources of East Karelia, as there was a continuous lack of foodstuffs on the front and the homefront. In particular, the winter of 1941–1942 was extremely difficult and lack of food also afflicted East Karelia. If at all available, fish and game offered a badly needed dietary supplementation.

Putting the natural resources of East Karelia to immediate use proved possible. At the time, Finland was an agrarian nation; the majority of Finnish soldiers were thus used to fishing or hunting to meet household needs. During wartime, everyone had weapons that could be used for hunting as well, and simple gear was often sufficient to catch fish. As early as the winter of 1941–1942, hunting and fishing detachments made up of skilled hunters and fishers were beginning to be established among the troops, and it was their task to bring in game for the army's use. The military administration gave more specific orders regarding hunting and fishing, patterned after the laws and regulations laid down in Finland. A decree made in the spring of 1943 established rules for all hunting aside from moose hunting. For instance, soldiers were required to obtain a personal written authorisation to hunt, a hunting licence.[18] The hunting seasons were in line with those established in Finnish homeland.

Moose – the prime game animal

Once the fronts had stabilised by the fall of 1942, widespread hunting began in East Karelia. The moose was the most desired catch, but most Finnish soldiers were unfamiliar with how to hunt it, since the moose had been hunted almost to extinction in the early 1900s, and the species had been completely protected up to 1933. Even since then, the take had been low: before World War Two, the annual take was only 500–600 moose a year in the entire country.[19] In East Karelia, however, moose were prolific.

According to the new edict issued by the Finnish military administration in autumn 1942, moose hunting was a licensed activity and allowed during

17. Proclamation No. 2 of the East Karelian military administration commander to the populace of East Karelia. Itä-Karjalan sotilashallinnon säädöskokoelma, 7–10, 1941. The Finnish military archives (Sota-arkisto, SA) are now part of the Finnish National Archives (henceforth SA).

18. Edict on hunting, Itä-Karjalan sotilashallinnon säädöskokoelma no. 30. 1943, SA.

19. Kairikko 1991, pp. 403–05.

Figure 2. During the Second World War, the majority of the Finnish military consisted of farmer boys skilled in the ways of the forest. This moose, shot in East Karelia, was quickly flayed and cut into pieces as well. These skills proved useful, especially during unlicensed moose hunts. Source: Photo Archives of the Finnish Defence Forces, photographer Tk-Keskimäki.

the period between 16 October and 16 November.[20] Moose-hunting licences were granted by the district chief from the military administration. He also established the licence areas after having agreed on the matter with the commander responsible for the military organisation. The military organisation then distributed the licences to entire units and to individual hunters within them. For instance, for the hunting season of fall 1943, units were granted permission to take 1,500 moose, and individual hunters within the units, 600 moose.[21] Thus, within the area managed by the East Karelia military administration, the

20. Edict on moose hunting, 4 Oct. 1942.

21. Edict on hunting in the area of the East Karelia military administration 30/43. Made 25 Aug. 1943 by Chief of Military Administration Olli Paloheimo. Itä-Karjalan sotilashallinnon esikunnan arkisto [Archives of the staff of the East Karelia military administration], SA.

size of the legal moose take that year was 2,100 animals – about four times as many as moose legally taken in Finland on an annual basis.

This is the official story, but the reality is that moose were taken in much greater numbers.[22] They were hunted year-round, as the soldiers found it difficult to understand that you could only shoot moose from October to November, yet you could shoot people year-round. Superiors also recognised this contradiction, and so in practice not much attention was paid to the protection orders given by the military administration. Moose taken outside the hunting season were normally noted on reports as having been killed 'in the minefields'.[23] Thus East Karelia became a true oasis of big game for licensed hunters and poachers as well.

As moose stocks diminished, air force assistance was sometimes called on to bring in supplementary food. Especially during wintertime patrolling expeditions, fighter pilots could readily spot herds of moose and deer in the white and open frozen swamplands and lakes, and it was easy to fell the necessary amount of game with fighter plane machine guns. The pilot would report the location of the take to the air base, and a scouting party would go to retrieve it. This method of hunting was also prohibited under threat of court martial, but monitoring this prohibition in the vast stretches of wilderness was difficult, if not impossible.[24]

Hunting and protection of Finnish forest reindeer

The Finnish forest reindeer is distinct from the domesticated reindeer in its larger size and preference for dense forest. Regrettably it had been hunted to extinction in Finland in the early nineteenth century, but did not receive protected status in Finland until 1913. When reports of this rare creature began to arrive from East Karelia at the beginning of the Continuation War, some enlightened officers, hunters and conservationists alike began immediately campaigning on behalf of the species in the war zone. As a result of the political pressure, the military administration of East Karelia fully protected the Finnish forest reindeer as early as October 1941,[25] which can be considered respectably rapid conservation policy-making in wartime conditions.

22. Siivonen, 'Itä-Karjalan riistatilanne ja metsästysolot. Kertomus Valtion tieteelliselle Itä-Karjalan toimikunnalle', Suomen kirjallisuuden seura, 30 Oct. 1942, p. 9.

23. See, Henttonen and Lappalainen 1991.

24. Interview with Väinö Pokela on March 2, 1999 in Helsinki; Interviews with veterans of the 14th division; Soikkeli, 'Hirvenmetsästystä hävittäjäkoneella Vienan Karjalassa'.

25. Ylänne 1941, pp. 257–58; 'Alkusanat', Suomen Luonto 2/1942.

Yet hunger drove the soldiers to it, and Finnish forest reindeer were hunted rather ruthlessly despite their protected status, especially in the winter of 1941–1942. They were shot later as well, even though the military administration stressed the protection of the species and threatened shooters of wild reindeer with court martials. Consequently, in the later reports of the hunting detachments, the Finnish forest reindeer no longer appeared; it was normally recorded as a 'small moose'.[26]

Fur-bearing animals

The populations of large fur-bearing animals such as wolves, wolverine, lynx and brown bear were much more sizable in East Karelia than in Finland.[27] However, the most common and most significant fur-bearing animal was a somewhat smaller species – the squirrel.[28] Yet, the squirrel was not only a fur-bearing animal; during the 1942 winter of famine, the soldiers cooked skinned squirrels in their mess kits and went so far as to pronounce them good, 'they just tasted a little pitchy'.[29]

Red fox was common in East Karelia, and it was also an important and valuable fur-bearing animal. Foxes were shot in fields as they stalked mice. Other furbearers were also hunted. Otter and pine marten always got hunters out the door. The skins of tundra hares were also set aside. The muskrat had spread to East Karelia by this point, and was in certain locales very abundant.[30] The European polecat and the European mink, rare in Finland at that time, were also among the animals hunted by soldiers.[31]

The abundant stock of fur-bearing animals induced hunters to rely on a variety of hunting methods. Hunting with poison was familiar to the elderly Karelians who had remained in the occupied territory. These old-timers instructed the Finnish soldiers in the art of poison trapping, as few of the latter had practised this in their homeland. As a result, during wintertime the walls

26. Soikkanen 1999, p. 28.

27. Lampio 1946, p. 26; Siivonen, 'Itä-Karjalan riistatilanne ja metsästysolot. Kertomus Valtion tieteelliselle Itä-Karjalan toimikunnalle', Suomen kirjallisuuden seura, 30 Oct. 1942, p. 7; Itä-Karjalan sotilashallinnon esikunnan arkisto, SA.

28. 'Yli 2 milj. oravaa ammuttu – 120 milj. ansaittu', Metsästys ja Kalastus 2 (1943): 62; Soikkanen 1999, p. 74.

29. Interviews with veterans from the 14th division.

30. Siivonen, 'Itä-Karjalan riistatilanne ja metsästysolot. Kertomus Valtion tieteelliselle Itä-Karjalan toimikunnalle', Suomen kirjallisuuden seura, 30 Oct. 1942, p. 18.

31. Hunting regulations of the KASSR, (no place or publisher) 1935.

Figure 3. The commander of the 14. division and an expert in wilderness warfare, the 'wilderness general' Erkki Raappana giving his Karelian Bear Dog a scratch after a successful bear hunt. The Second World War proved attritive to Finland's dog population. The Seskar Seal Dog, an ancient breed living in the outer archipelago of the Gulf of Finland went extinct. The populations of the Finnish Hound, Finnish Spitz and Lapponian Herder saw a massive decline. The Karelian Bear Dog population only survived due to studs brought in from East Karelia. Source: Photo Archives of the Finnish Defence Forces, photographer Tk-Rossi.

of the dugouts were strewn with drying fox skins, which were then sold to East Karelian wholesale traders if there was a dire need for money.[32]

However, the soldiers trusted more in the domestic market, since there was a general lack of all goods during wartime, meaning pelts fetched good prices. In the fur auction of 1943, an average of 1,500 Finnish mk was paid for a red fox pelt. Muskrat was a true luxury fur; the price rose to 300–400 mk for a single skin. In civilian life, you could earn more over a couple of weeks of muskrat hunting than you could breaking your back in the fields all summer. The skins of large predators were exceptionally desirable and valuable. A good bear skin brought in 5,000–7,000 mk.[33] Furthermore, the Finnish government

32. Kulha 2004.

33. 'Turkisten hinnat', *Metsästys ja Kalastus* 10 (1943): 285.

supported bounty hunting of large predators in the occupied territory, just as at home.[34] The hunting bounty for a wolf in East Karelia was 3,000 mk, 2,000 mk for a wolverine and 1,000 mk for a bear. Only half the sum was paid for pups, kits and cubs.[35]

The overall income from hunting small and big game could in individual cases be astounding, when one takes into consideration the earnings of soldiers at the time. In the summer of 1943, the per diem for soldiers at the front was 40 mk for a lieutenant, 30 mk for a sergeant first class and 16 mk for a private. The family at home received a so-called monthly war stipend, 850 mk for a wife and two children. Thus one good skin of a large predator could support a whole family for several months. The fur-bearing animals of East Karelia shielded the families of many Finnish soldiers from poverty during the war.

Profitable fishing

Fishing offered soldiers an easier-to-access dietary supplement than hunting, and was also a more popular and more profitable activity among the soldiers than hunting. Hooks and a bob were stowed in the backpacks of many soldiers and, when they returned from leave, nets and long lines were brought from home. Boats were sometimes found on the shores of the lakes; in other instances, log rafts were built to get out onto the water. If no 'normal' fishing equipment was at hand, soldiers made do with what was available – explosives.

The majority of explosives were distributed during the onslaught of autumn 1941, when there was no time to use normal fishing tackle. Hand grenades, mines, dynamite or TNT were used to build a piled-up charge that was given the moniker 'pioneer fishing rod'. A satchel charge with six kilos of explosives, built around a German-type stick hand grenade, was often used in fishing. This is how it was used:

> One man was at the upper oarlock, two men at one pair of oars and the best thrower of the group in the rear bench. When the rowers figured they had achieved full speed, the fellow in the back gave it all he got and threw a piled-up charge behind them. It took a moment before the charge reached the bottom and the fuse burned. Then Boom! The first time, it felt like the boat would burst too. But we didn't sink ourselves after all. Fish began rising to the surface

34. Bounty hunting was widely practised in Europe in past centuries. See, Pohja-Mykrä, Vuorisalo and Mykrä, 2005.

35. Itä-Karjalan sotilashallinnon esikunnan arkisto, SA.

> in a radius of about 100 yards. We got pike, whitefish, bream and big perch. Vendace was too small to collect.[36]

Explosives were commonly used in fishing during WWII, even though it had been prohibited in the general directive given in 1941. There was an attempt to root out this destructive form of fishing with education and monitoring as well, but it seems to have been in use until the summer of 1944, when the fishing waters of East Karelia were forced to be ceded.

The fishing administration

Great hopes were pinned on fishing in occupied East Karelia. After all, part of magnificent Lake Ladoga and hundreds of other large, fish-rich lakes were now at Finland's disposal. A collection was organised in the Finnish homeland to bring fishing gear to the occupied territory, and it produced nets, fykes and even a few seines. The highest authority on fishing management was the military administration's agency of fish trade. Buying and brokering goods from the fishermen was the exclusive right of the wholesale company established by the military administration, which also managed the trade in fur and meat.[37]

Fishing brought a significant supplement to the local economy. The local populace had a right to fish for their own needs in waters near their homes without a permit. In practice, this applied only to the Karelian populace, since the Russian populace of East Karelia had been interred in prison camps. One needed a permit for boating, and fishing was a regulated activity in those lakes where the enemy held the opposite shore. On some of the larger lakes, boating was prohibited because of the danger of partisans. The prohibition was an attempt to offer the populace security, but also to prevent any possible partisan contact.

Professional fishermen had come from the Finnish homeland to the occupied territory in hopes of better catches and greater earnings. However, the price for the fish was regulated.[38] In the summer of 1944, a total of 505 fishermen were working in 91 professional fishing groups under the military administration. Their fishing gear included about 100 seines, more than 2,000 various fykes and more than 4,000 nets. Professional fishing per se was organised in such a way that the military administration rented gear to the fishermen and retained a third of the catch as payment. Fishermen were also allowed to buy the nets provided by the military administration, and towards the end

36. Sopanen 1992, pp. 74–75.

37. Simonen 1971, p. 89.

38. *Paateneen Viesti*, 5 June 1942.

Figure 4. Lacking modern fishing equipment, soldiers utilised handy Stone Age techniques for fishing in the wilderness. This picture depicts the soldiers checking a wooden fish trap built by pushing narrow splints cut from a young pine tree to the bottom of the pond into a fish-trap-shaped snare. Source: Photo Archives of the Finnish Defence Forces.

of the occupation, there were plenty of independent professional fishermen working in the area. The fishermen were allowed to take a specified portion of the catch for their own needs, but the largest part of the catch was to be sold to the fish receiving depots run by the military administration, so the fish would be available for army and general consumption. These depots had their own icehouses, salting houses and smokehouses, which were in continuous use during the fishing season.[39]

More specific directives on fishing in East Karelia were not given until the spring of 1943.[40] For the most part, the regulations were in accordance with the fishing laws in force in the Finnish homeland, defining, for instance, the

39. Siltamaa 1984, p. 51.

40. Edict on fishing in the area of the East Karelia military administration no 18. Itä-Karjalan sotilashallinnon säädöskokoelma nos 18–20, 1943.

size of net eyelets, minimum fish size by species and closed season for crayfish. In addition, fishing licences, which were required for professional fishing, were regulated. The military units were allowed to organise independent fishing to meet the needs of their men without special permission.[41] Salted, smoked and fresh fish brought much needed variety to the soldiers' diets. In addition, fishing – just like hunting – helped individual soldiers and officers to relax somewhat in nature in the middle of war.[42]

Small and big catches

The military organisations had their own fishing officers, who were responsible not only for organising fishing activities and procuring nets for the fishermen, but also gathering information on fishing waters, and preparing statistics. Second Lieutenant Erkki Halme acted as the fishing officer for one unit and later, as a well-known fisherman, a researcher and professor in the field of ichthyology. The duties of the fishing officer also included inspecting the fishing detachments. It becomes clear from his inspection reports that the fishermen were not in all cases so enthusiastic about fishing.

On one inspection tour, Halme noted that when he arrived at the detachment's bunkers in daytime, all twelve fishermen were inside and most were not engaged in any activity. In another fishing detachment he found 200 nearly untouched nets.[43] Area headquarters later sent an order to the detachments stating, 'if the daily catch of the fishing detachment's fishing group is under two kilograms per man per day, there is no call to keep the group fishing'.[44] The norms familiar from the Soviet economy were in this way adopted into the economy of the Finnish military.

But usually fishing gear was used and often the fishing yielded well. The previously mentioned Erkki Halme remembered one of his platoons pulling in a catch of biblical proportions in the early spring of 1943:

> The ice hole was in the middle of the lake. The men's legs were up to their calves in water. They were doubtful as to whether the ice would take the weight of the entire haul. With the support of heavy ropes and long poles, they succeeded in pulling the seine onto the ice. A truck and ten horse-drawn sleds were needed to

41. Report of the fishing officer, Archives of the Maaselkä group headquarters, SA.

42. Interviews with veterans of the 14th division.

43. Report of the fishing officer, Archives of the Aunus group headquarters, SA.

44. Halme, 'Report of the head of the fishing company', Archives of the Maaselkä group headquarters, SA.

take the catch to the city. The weigh-in at the food and feed magazine indicated 12,000 kilograms of bream and 200 kilograms of pike-perch.

In 1943, the fishermen brought in over 535,000 kilograms of fish to the fish receiving depots, of which 115,000 kg remained for the use of the fishermen themselves.[45] When gauging the size of the entire take, we need to add the amounts caught by the units and other fishermen to these figures; however, these have not been estimated. These wartime catches from East Karelia appear significant. But in reality, the fish from East Karelia were only a fraction of the national fish catch of Finland for 1943, which was about 28 million kilograms.[46]

Fishing was, however, important for soldiers and civilians living in East Karelia. One consequence of this was that, by the end of World War Two, East Karelia's lakes were the most thoroughly known waters in wartime Finland. The reason for this perhaps slightly surprising situation was that the Finns in late 1941 took control of the Russians' Kentjärvi biological field station, run by the Leningrad Society for Naturalists.[47] This lake-region station, situated in what had been the USSR, became the University of Helsinki's first field station for freshwater studies. The finest Finnish professors of animal and plant sciences and geography of their day started to work in summer 1942 at this scientific station beautifully built of logs.[48] An East Karelian village thus became the centre of empirical natural scientific studies in wartime Finland.

Basic scientific research on fish and game was undertaken in order to develop the nature-based livelihoods of East Karelia and to harness the territory's natural resources for the use of the future state of Greater Finland.[49] In order to organise fishing activities, the fishing officers used printed questionnaires to gather precise information on East Karelian fishing waters from professional fishermen and others who used the waters. The research results produced by Russian ichthyologists in the inter-war period at the Kentjärvi biological station were taken advantage of too. Data was gathered on each lake: size, characteristics, time of freezing, and key fish species and their populations and spawning

45. Siltamaa 1984, p. 50.

46. Data provided by the Finnish Game and Fisheries Research Institute in 2020.

47. Today the name of the Kentjärvi biological station is Kontsezerskaya biologitseskaya stantsiya.

48. Report on the activities of the University of Helsinki, academic year 1941–42, p. 58: Report on the activities of the University of Helsinki, academic year 1942–1943, p. 72; Central Archives of the University of Helsinki, university senate meeting minutes, card 1/11, 7 Jan. 1942, 8 § and card 2/14, 10 Feb. 1943, 23 §.

49. Laine 1993, pp. 184–85.

Figure 5. The University of Helsinki's first field station specialising in biological research of freshwaters operated in East Karelia in 1941–1944. Preceding the biologic station was the Borodino limnological research station founded by the Russians in 1897. The station was moved to the Karelian village of Kentjärvi by the end of the 1920s. After the war, the station was moved to the control of the University of Petrozavodsk. Source: Photo Archives of the Finnish Defence Forces.

seasons. Detailed maps indicating the lake depth, bottom quality, fishing spots for different kinds of equipment and fish species, and the quality of the fishing spot (good, satisfactory, poor) were prepared for the ten largest lakes.[50] Dr Erkki Halme collected the data on the limnology and ichthyology of the East Karelian lakes into a manuscript hundreds of pages long. It was, however, not published as a book, since the area reverted to the Soviet Union at the end of the war. Nevertheless, no equally broad scientific-economic study of Finnish lakes has ever been conducted.

In addition to the lakes of East Karelia, the fisheries management administration planned on tapping the resources of the White Sea and the Barents Sea, which belonged to the Soviet Union. The White Sea contained abundant stocks of oceanic bivalves, crabs, fish species, seals, walrus and whales that Finns were not very familiar with. The Finns were interested, for instance, in the

50. Erkki Halme, archives of the Aunus group headquarters; Heikki Järnefelt, Archives of the East Karelian military administration scientific unit, SA.

plentiful harp seal, whose total population in the Barents Sea was estimated at 10–11 million individuals. The beluga whale was also of interest to the military administration, but surprising hurdles to hunting the species arose: 'Hunting it would be extremely productive, but the local inhabitants have been very resistant, as they consider it a holy animal.' According to the locals living on the shores of the White Sea, beluga whales drove fish shoreward from the open water, from where inhabitants could then catch them.[51] The cultural heritage of local people based on long-term observation of local coastal environs apparently protected valuable natural resources.

The effects of hunting and fishing

Fishing and hunting in East Karelia were monitored from time to time and punishments were even meted out. The use of explosives for fishing was considered particularly reprehensible, and there are records of punishments in the units' orders of the day.[52] Even during the retreat, those who had fished using the 'pioneer method' were threatened with court martial. However, despite the fact that there were attempts to closely regulate hunting and fishing, soldiers exhibited lapses in following many of the regulations.[53] This was the case in East Karelia in 1941–1944 as well. Hunting seasons were ignored and game was shot on sight, regardless of season or species. This was the case particularly in the vicinity of the front lines, although further back there were attempts to better monitor the edicts.[54]

There were attempts to enlighten and educate the soldiers,[55] but their effects remained minor. Since hunting and fishing violations had been dealt with lightly in the Finnish homeland, respect for such regulations in conditions of war was even more irregular. Furthermore, the soldiers were in a foreign land, perhaps only temporarily, and this also affected the morale of the hunters and fishers negatively. In East Karelia, even high-level officers were guilty of violations. One well-known general asked about moose when visiting a wilderness

51. Archives of the Kalastusmuseosäätiö, MMM, MH, Tiedusteluosaston kirjelmiä, Kalataloudellinen katsaus; Maantieteellis-hydrologinen selostus, Captain H. Järnefelt, 12 May 1942; Information on the fishing on the Muurmansk shores and the Barents Sea, Captain H. Järnefelt, 1 June 1942.

52. Infantry Regiment (JR) 52 order of the day, 17 Nov. 1941, SA.

53. Soikkanen 1999, p. 152.

54. Ollikainen 1985, p. 90; Interviews with veterans of the 14th division.

55. See Kivilinna 1944; Halme, Memo to units about the harmfulness of the use of explosives in fishing, 12 May 1942. Archives of the Aunus group staff, SA.

base. The soldiers informed him that they existed in the vicinity, noting that it was only allowed to hunt moose during the official hunting season. To this the general responded: 'If there's a lack of food, go ahead and shoot and say it stepped on a mine.'[56] Since the upper military leadership turned a blind eye to infractions, it was difficult to question illegal hunting by the enlisted men.

Figure 6. A capercaillie that stepped on a land mine? According to the descriptive text about this photograph taken from the front, 'a handsome capercaillie has stepped on a land mine' in no man's land. The surroundings hinting of an early spring combined with the immaculate shape of the bird, however, give credence to the assumption that it's been illegally hunted during courtship. The conditions during the war saw a general decline in law-abidingness. Source: Photo Archives of the Finnish Defence Forces, photographer Tk-Holming.

But what sort of effect did this apparent plundering have on the fish and game populations of East Karelia? A unique study on the ecological ef-

56. Tapola 2004, pp. 164–65.

fects of the war is zoologist Teppo Lampio's survey of game stocks conducted in 1941–1944.[57] His study gives a precise picture of the game in the area, and also partially of the effects of the war on game populations. One development is convincingly demonstrated in the study. When East Karelia was occupied, game was abundant, but by the time Finland retreated, game had become scarce. Lampio categorised the abundance of stocks on a scale from 5 to 1, in other words from very abundant (5) to very scarce (1). The population of only one species, the mallard, was approximately at the same level when Finland left East Karelia as it was when it entered, in this case averagely abundant. The other populations had decreased dramatically. By the spring of 1944, moose had decreased in the territory from very abundant to very scarce, and things had gone even worse for the black grouse. The capercaillie had also dropped from abundant to scarce. The squirrel had diminished to non-existent, but the researcher noted disease and lack of food in addition to hunting as reasons for its demise. Even though game was susceptible to the destruction and disturbance caused by war, Lampio's study convincingly indicated that the main reason for the severe drop in amounts of game was the merciless hunting practised by the soldiers and officers on both sides of the front.

As far as fishing is concerned, there are no Finnish studies of fish species in the area, but research was conducted on the fish stocks in waters and how they could be exploited in fishing and feeding the troops. There is also a lack of detailed fishing statistics, since, due to the hurried evacuation of the military administration of East Karelia in June of 1944, 'a worthless section of the archives was burned to ease transport difficulties', at which time the greater part of the fisheries administration archives were destroyed.[58] In all probability, fish stocks did not, however, suffer nearly as much from warfare as game populations. Even though explosives were used, many waters suffered from overpopulation and stunted fish, in which case the explosive hunting may have served to thin out overly dense populations and improve the conditions of those individuals that survived. Furthermore, the wilderness warfare of the time did not cause the same kind of environmental damage to fishing waters that contemporary armies and warfare can cause.

57. Lampio 1946, pp. 19–31.

58. Syrjö 1972, p. 318.

	1941	1942	1943	1944
Brown bear	2	1	2	2
Fox	5	4	4	4
European otter	1	1	1	1
Stoat	2	2	2	2
Least weasel	?	?	1	?
Wolverine	1	2	2	?
Lynx	1	1	1	?
Brown hare	4	4	2	2
Red squirrel	5	5	3	1
Moose	4	4	2	1
Wild forest reindeer	2	2	?	?
Mallard	3	3	3	3
Common teal	2	2	2	2
Wigeon	1	1	1	1
Common goldeneye	3	3	3	3
Red-breasted merganser	2	2	2	2
Loon	2	2	2	2
Common snipe	1	1	1	1
Willow grouse	3	3	2	2
Black grouse	5	4	2	1
Wood grouse	4	4	2	2
Hazel grouse	4	4	3	3

Table 1. A unique collection of research material gathered over the course of the war by a zoologist Teppo Lampio displayed the ruthless nature of hunting in the East Karelian region. Before the arrival of the Finnish troops, the area had abundant game (5/4), but only a few animals remained after the troops' departure (2/1). (Data Source: Lampio 1946, 21.)

East Karelia: The fish and game store of Finland?

In the collective Finnish mindscape, East Karelia was made into the land of poetry, song and music and seen as belonging to the Finnish state. But when Finnish control of the mythical East Karelia was finally achieved during World War Two, Finland entered it by violence, through warfare and as a conqueror.

For over a little less than three years, East Karelia was governed by a Finnish military administration that attempted to regulate fishing and hunting by applying legislation from peacetime Finland. This strategy was an unrealistic choice in conditions of war, which favoured illegal practices. Despite this, we can say that there was a clear principle of sustainable use of natural resources evident in the policies of the military administration. Also, the Finnish army strove to take conservation of rare species such as forest reindeer into consideration as early as World War Two. So-called Khaki conservation – that is, attempts by the military to protect nature – is often thought to have started in the late twentieth century. In this current framework, the wartime initiative of the Finnish army seems to provide a particularly early example.

Hunting and fishing offered Finnish soldiers exceptional opportunities to relax in nature in wartime conditions. However, the hunting lands and fishing waters of East Karelia did not meet the ambitious goals set for them by military administration. The region did not become the inexhaustible store of game and fish that would supply the 'bread of the waters' for the populace of the Finnish homeland or enough furs for export. Fishing did generate, however, a significant dietary supplement both for the troops as well as the local populace, and there was something left over to send back to the home front. The effective organisation of fishing and its productivity were, indeed, significant factors in the wartime food administration of East Karelia.

Hunting was of less significance. Even during peacetime conditions, hunting in East Karelia had been significant primarily in terms of fur-bearing game. Following collectivism and the Stalinist persecutions, the significance of hunting diminished even further. During World War Two, the game of East Karelia did offer extra income and, in certain areas, a significant supplement to the rations of Finnish soldiers. The downside was the destructive effect of hunting on the game stocks in the area.

The implications of this study are obvious. The war had a devastating effect on wildlife on the frontlines. However, this conclusion raises an important follow-up question. How did the transfer of about half a million able-bodied Finnish men to the eastern front affect fishing and hunting, and thus the game and fish stocks of the home front, which made up the overwhelming majority

of the country's area? It seems that this perspective has not been studied in any systematic manner so far. Nevertheless, there are strong indications that the significant reduction in hunting and fishing behind the front had a very positive effect on the number of seals, large birds of prey and large carnivores in wartime Finland. In conclusion, in order to answer such important questions about the overall environmental effects of wars, we need comprehensive long-term studies of entire countries in the future. Yet, we should be careful not to greenwash warfare.

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