CHAPTER 7

From Harmless Nuisance to Frightening Enemy: the Perceptions of Ticks in Finland before the Beginning of the Tick Hysteria in the 1990s

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1 Introduction

In October 1991, a letter was published in the medical column of a newspaper in eastern Finland, in which a mother expressed concern about how her son had been bitten by a tick during the summer:

> There has been a lot of discussion recently about the tick-borne disease, which causes all sorts of harm. Our little boy was bitten by a tick in the summer, it was rubbed off and he was cured. The boy seemed to be perfectly healthy then and now, months later. Should he be tested as there has been such a scare, and how do we best get the tick off the skin? In the old days, there were plenty of ticks on people living in the countryside.[1]

The letter clearly shows how the connection between Lyme disease (borreliosis) and ticks, which had been discovered only a few years prior in 1981,[2] began to provoke worrying reactions in public discussion in the early 1990s. A doctor who replied to the above-mentioned letter in the same column had also noticed this and wrote that "there were ticks on almost every child in the old days and they seemed to survive. The tick hysteria is spreading to Finland, but only on a small scale compared to America."[3]

The question from the concerned mother and the doctor's response are among the many examples of how attitudes toward ticks in Finland became tinged with fear from the early 1990s onward. However, the conversation between the two individuals also reveals something about the period before

1 "Seuraava potilas," *Länsi-Savo*, October 7, 1991.

2 Willy Burgdorfer et al., "Lyme Disease – a Tick-Borne Spirochetosis?" *Science* 216, no. 4552 (1982), doi:10.1126/science.7043737. See also Alan G. Barbour and Jorge L. Benach, "Discovery of the Lyme Disease Agent," *mBio* 10, no. 5 (2019), doi:10.1128/mbio.02166-19.

3 "Seuraava potilas".

the so-called hysteria. They are talking about the old days, when people in rural areas had a lot of ticks, and the impact of these small arachnids onpeople was clearly not a matter of concern in the same way as it was in the early 1990s.

In this chapter, I examine the historical relationship between ticks and people in Finland before the 1990s, when fear, anger, and anxiety began to define the Finnish attitude toward ticks. I explore the shared history of humans and ticks by examining the Finnish public discussion. I will investigate how ticks have been described in different times, what perceptions were associated with these animals, and how these perceptions have changed over time.

There are about 1500 species of ticks in Finland, but this study focuses on the so-called common tick, whose Latin name is *Ixodes ricinus*. These ticks have been studied almost exclusively in the natural sciences, especially in the fields of biology and virology. In Finland, for example, studies in these fields have produced significant findings on the physiology and behavior of ticks and their distribution. These are important studies, but they do not really account for the shared history between humans and ticks and the cultural dimension of this relationship.[4] Overall, the history between ticks and humans has been previously mentioned in only a few studies and usually very briefly. These explanations mainly include only a few sentences about how Homer might have mentioned ticks as early as 800 BC or how early naturalists such as Aristotle and Pliny described ticks as hideous parasites.[5]

In the field of environmental humanities, which looks at the shared history of humans and nature and the cultural dimension of this relationship more extensively, only a few studies have been published exploring the humans – tick relationship, and most of them are included in this book.[6] However, none of the studies looks at the long-term relationship between humans and ticks, nor the changes in this relationship. Thus, my aim in this chapter is to fill this gap in our knowledge, explore the shared long-term history of humans and

4 See, e.g., Maija Laaksonen et al., "Crowdsourcing-Based Nationwide Tick Collection Reveals the Distribution of Ixodes Ricinus and I. Persulcatus and Associated Pathogens in Finland," *Emerging Microbes & Infections* 6, no. 1 (2017), doi:10.1038/emi.2017.17; Eeva Sajanti et al., "Lyme Borreliosis in Finland, 1995–2014," *Emerging Infectious Diseases* 23, no. 8 (2017), doi:10.3201/eid2308.161273.

5 See, e.g., John F. Anderson, "The Natural History of Ticks," *Medical Clinics of North America* 86, no. 2 (2002): 205, doi:10.1016/S0025-7125(03)00083-X.

6 See chapters by Sanna Lillbroända-Annala, Suvi Rytty, Tuomas Räsänen and Heta Lähdesmäki, and Taina Syrjämaa in this volume. See also Sanna Lillbroända-Annala and Oscar Winberg, "'Fästingen håller inget säkerhetsavstånd': Konkurrerande riskdiskurser om fästingar i media," *TRACE ∴ Journal for Human-Animal Studies* 9 (2023), doi:10.23984/fjhas.121761.

ticks in Finland, and explain how our relationship with these arachnids has changed over time and why old beliefs to understand ticks as harmless nuisance persisted for a surprisingly long time until the turn of the 1980s and 1990s, even though ticks had been known to spread diseases to both cattle and humans for decades. These questions are important because humans have coexisted with ticks in Finland for centuries, if not millennia. Our relationship with nature and species is constantly changing and has changed throughout history,[7] and our perception of the tick is no exception.

As my research data, I use the material digitized by the National Library of Finland, which contains a massive number of nearly 27 million pages of newspapers, magazines, books, and ephemera published in Finland from the early modern period to the present day.[8] This amount of data already offers a comprehensive representation of how Finnish public discourse perceived and comprehended various phenomena, as well as how it responded to them.

I have conducted a word search in the database using the word "puutiainen," which is the Finnish word for tick. The National Library's database contains a total of 1237 hits with this key word in various works published before 1991. The first mention of this small arachnid dates to 1889, which is also the year from which I begin my examination of the research data. I will end my analysis in 1991, when the relationship between humans and ticks in Finland had already become marked by fear. The time frame of my study therefore covers the period between 1889 and 1991.

Since "puutiainen" is a word with many meanings in Finnish, including the surname of people, I have had to exclude many search results that do not directly refer to this animal. In addition, some ORC errors have occurred during the digitization of the Finnish National Library's collection, and some words similar to "puutiainen" such as "punainen" (red) or "puutetta" (shortage) have been incorrectly machine-read as "puutiainen." I have also removed all such errors from the data. After filtering the data from all the irrelevant search results, the total number of relevant results for the period 1889–1991 was only 407. Although the amount of data was greatly reduced after filtering out irrelevant data, the dataset of more than 400 research sources is still a representative sample of the public discussion, given that it has been carefully collected from all of the more than 27 million pages of data. Thus, in this chapter, I will focus only on the results found with the word "puutiainen"

7 Otto Latva, *The Giant Squid in Transatlantic Culture: The Monsterization of Molluscs* (London: Routledge, 2023), 9, doi:10.4324/9781003311775.

8 National Library of Finland, https://digi.kansalliskirjasto.fi/stats?set_language=en, Accessed October 24, 2023.

and not on the sources found with the Finnish synonyms for tick such as "punkki" or "puutäi," nor with the Swedish name for tick such as "fästingar" or "skogsbässar".

Methodologically, my research contributes to digital history research as it uses digitized sources, in which printed texts have been translated into machine-encoded data.[9] My research also makes use of the search functions of the National Library's digital archive, which have enabled me to search material on ticks in a vast number of Finnish publications from different periods. In addition to the digital methods, I have analyzed all 407 sources using qualitative methods such as careful reading and content analysis.

Theoretically, my research contributes to the study of multispecies history and the tradition of human-animal studies. The starting point for such a study is to look at the past from the perspective of multispecies agency, where humans are not the only agents to have shaped the past, but where all other species, alongside humans, have by their actions and existence made the world as it is today.[10] For example, if we think that ticks had never existed on Earth, the world would certainly look very different today.

2 Changes in the Public Discussion

As you can see from Figure 8.1, people have been talking steadily about ticks in Finland from the late 1800s to the 1990s. The number of texts written about these animals has increased significantly since the 1990s, when the so-called tick hysteria started. However, ticks were by no means an uncommon topic of discussion before the 1990s, but how were they discussed then? From my data set, four major themes emerged that defined how these little arachnids were talked about in 1889–1991. They were spoken of as metaphors for human activity, unpleasant creatures that attached themselves to humans and other animals, disease vectors to cattle as well as to humans.

As Figure 8.2 shows, the debate on ticks has changed not only in the 1980s and 1990s but also earlier in the 20th century. By far the most significant change occurred in the 1950s and 1960s, when ticks' ability to spread diseases dangerous to humans became part of the public discussion. As the volume of this debate began to increase, the amount of discussion describing ticks as a vector of cattle diseases decreased. In addition to these themes, ticks were

9 Hannu Salmi, *What Is Digital History?* (Cambridge: Polity Press, 2021).

10 Margo DeMello, *Animals and Society: An Introduction to Human-Animal Studies*, (New York: Columbia University Press, 2012); Latva, *The Giant Squid*.

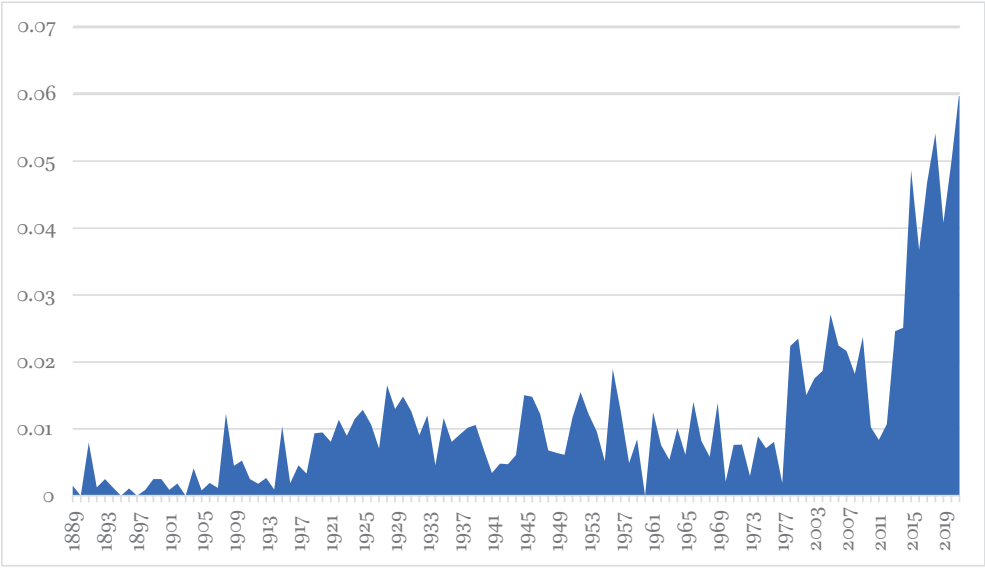

FIGURE 8.1 Occurrence of the word "puutiainen" in public discussion in Finland between 1889 and 2021
Note: The graph is based on data from which all hits that do not refer to ticks have been removed. The years are shown below the graph, and the percentage related to all digitized public discussion is shown on the left.

steadily used as a metaphor in Finnish public discourse, especially for human activity, until the 1950s and 1960s, after which they were only occasionally mentioned metaphorically. Equally, the number of texts describing ticks as merely unpleasant creatures began to decline by the 1970s at the latest.

I now turn to each of the four above-mentioned themes separately. The order in which they are dealt with is chronological, starting with the oldest ways of understanding the tick in Finland, using it as a metaphor or understanding the tick as a nuisance to humans and animals.

3 The Tick as a Metaphor in Finland

The abundance of tick-related metaphors in the dataset shows that these arachnids and their ability to burrow firmly into humans and suck blood was widely known in Finland as early as the 19th century. In these metaphors, the appearance and behavior of the ticks were most often used to describe devouring and a person who has eaten or drunk too much. For example, Aleksis Kivi, the author of *Seitsemän veljestä* (*Seven Brothers*) (1870), which became

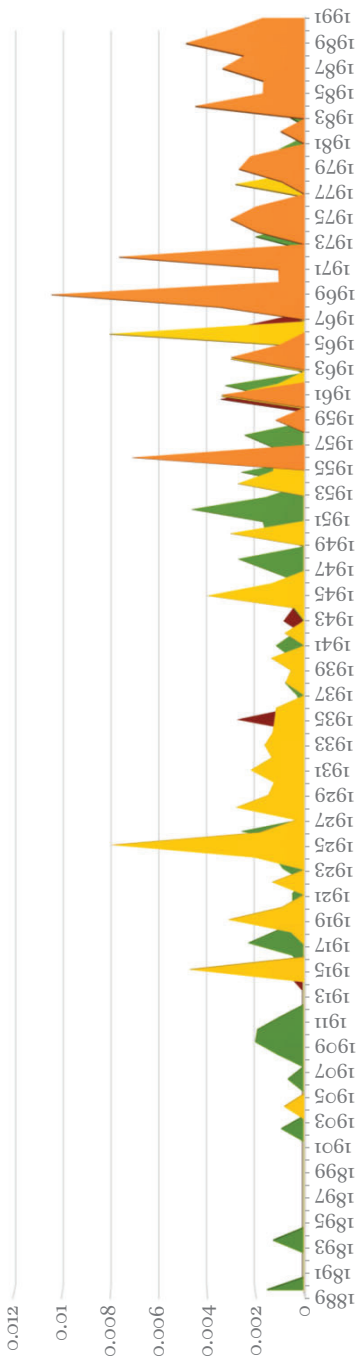

FIGURE 8.2 Graph representing discussions of the tick

Note: In the graph, orange represents the discussion of the tick as a disease vector to humans, yellow the tick as a disease vector to cattle, green the tick as a metaphor for human activity, and dark red the tick as a nuisance to human and other animals.

a Finnish national novel, compared the ticks in that book and in many other works to a human who had been overeating and drinking excessively.[11]

The first metaphorical mention of a tick in my data, dating from 1889, is similar. It describes an elderly man who had become as full as a tick from his haymaking lunch.[12] The comparison of the ticks' habit of sucking blood with overeating, especially by humans, is repeated numerous times in my dataset throughout the early 20th century. It appears, for example, in connection with the Finnish Christmas feast or, more generally, with the consumption of large quantities of food, usually in a humorous sense.[13] The last time this metaphor was mentioned in my data is in 1974.[14]

Although comparing the ticks' blood-sucking habit to the human overeating is central to tick-related metaphors, these metaphors have also been made in relation to other subjects. A metaphor closely related to devouring has been to compare large or slow-moving people and other things to ticks. For example, in 1950, it was written that after Christmas, a person is "as fat and ill-tempered as a tick."[15] During the Winter War, Soviet transport planes were also compared to ticks: "A familiar sight on the front is a heavily loaded Russian transport plane. Because of their load, they fly slowly, resembling a tick that has sucked itself full."[16]

Another notable characteristic of ticks (in these examples), which has been used as a metaphor, is that these animals bite and attach themselves to their target. Such metaphors have been written, for example, in relation to the weather, how a frost or wind bites a person like a tick.[17] What is interesting is that this metaphor has also been used in a positive sense. Such cases often involve situations in which a person falls in love with a place and decides to live there. These cases have been described in the data, for example, as "when you meet a place you like, you bite yourself into it like a tick."[18] Alongside these

11 Aleksis Kivi, *Seitsemän veljestä* (Helsinki: Gummerus, 2014 [1870]), 205–206. See also Aleksis Kivi, "Olviretki Schleusingenissä," in *Näytelmiä*, ed. E.A. Saarimaa (Helsinki: SKS, 1916 [1866]), 100.

12 "Salmelaisten heinänteko," *Savo-Karjala*, July 12, 1889.

13 See, e.g., Juho Koskimaa, "Leivän takia," *Vaasa*, June 19, 1924; "Sana aikanaan," *Etelä-Saimaa*, December 23, 1947; Olli, "Makkarakärryt," *Uusi Suomi*, January 12, 1958.

14 Anneli Ollus, "Ajattele sydäntäsi," *Helsingin Sanomat*, January 31, 1974.

15 Lippa, "Lipoittain," *Uusi Suomi*, January 6, 1950.

16 T.S., "Bolshevikkien 'erikois-hiihto-osaston' tuho Kuhmossa," *Kansan voima*, February 27, 1940.

17 See, e.g., Samuli, "Sydäntalven Somero," *Uusi Aura*, January 17, 1926; Samuli, "Salomailta sahoille," *Uusi Aura*, February 7, 1926; Samuli, "Kirvesmies," *Uusi Suomi*, June 16, 1929.

18 "Miksi, miten ja missä on retkeiltävä," *Oman kodin opas* no. 2 (1933): 3–5. See also Jalmari Sauli, "Vaiti olevat muotokuvat," *Maailma* no. 9 (1926): 390–392.

examples, tick bites have been used as a metaphor for concrete bites, especially dog bites.[19]

A much less used theme than the many metaphors of tick swelling and biting was to use the tick as a symbol for patience and perseverance. Two such cases were found in the dataset. One was a description written in 1951 of a person's perseverance in staying in business as "tenacious as a tick."[20] Another was a text written in 1944, which compared a tram standing at the terminus as a patient and tenacious tick.[21]

Metaphors related to ticks were told in Finland especially in a political context. As early as 1908, a newspaper writing appeared in which the new generation's activity in party politics was criticized by saying that they were "all as full of party politics as ticks."[22] This was the time when the first Finnish parties were founded.[23] Soon afterward, the tick metaphors began being used to criticize parties and supporters of different political tendencies.[24] According to my dataset, tick metaphors were used in the Finnish public discussion of politics until 1970.[25]

The range of tick-related metaphors mentioned above is significant because it reveals much about the past relationship of Finns with these arachnids. Above all they show that the tick was by no means an unknown or unimportant animal to Finns. The ticks' habit of sucking blood and how they attach themselves to humans and cling tenaciously to the skin was known in detail. Moreover, the above-mentioned metaphors clearly show that the tick was not a well-liked or appreciated animal, but rather a nuisance. Few of the metaphors describing its bodily functions are mentioned in a positive light, but even these cannot be interpreted as implying that the tick was somehow perceived as a pleasant animal.

There are also metaphors suggesting that the ticks were perceived as a pest not only to humans but also to other animals such as dogs and cattle. For instance, before the mid-20th century, metaphors appeared in which things

19 See, e.g., Samuli-Setä, "Leppo, Linta ja Lurkki," *Uusi Aura*, July 22, 1928; Tor Forslund, "Lemmikkieläimet," *Apu* no. 4 (1981): 80.

20 Jahvetti, "Elää, ken näkee," *Suomen Sosialidemokraatti*, November 20, 1951.

21 Lippa, "Lipoittain," *Uusi Suomi*, March 15, 1944.

22 Onni W.A., "Köppi," *Uusi Suometar*, November 1, 1908.

23 Juhani Mylly, "The emergence of the Finnish multi-party system System. A Comparison with Developments in Scandinavia, 1870–1920," *Scandinavian Journal of History* 5, no. 1–4 (1980), doi:10.1080/03468758008578978.

24 See, e.g., Jussi, "Puhetta ja pakinaa," *Karjala*, October 28, 1926; Sulka, "Maalaisliitto kuumehoureissa," *Sisä-Suomi*, September 25, 1930.

25 See, e.g., "Olipa kerran," *Suomen Sosialidemokraatti*, November 5, 1933; STT-Reuter, "NL:lla ohjusten torjuntaohjaus," *Uusi Suomi*, July 17, 1962; Aki, "Kiljavalta kuuluu," *Etelä-Suomen Sanomat*, September 5, 1970.

were described to be as closely related as a tick to a dog's skin or as a tick to a heifer.[26] Although tick metaphors were widely used and had many different meanings, their use began to decline in the 1950s and 1960s. Perhaps the reason for the slow decline in the use of metaphors was the fact that public discussion began to include information that ticks also spread diseases that are dangerous to humans. There may also have been other factors, such as the decline in cattle grazing in forests and increasing migration from rural to urban areas, where nature was no longer present in the same way as in the countryside. Whatever the reason, ticks were no longer used as metaphors in public discussion toward the end of the 20th century.

4 An Unpleasant Creature and a Nuisance

As the metaphors discussed above show, ticks were considered a nuisance to humans as well as to other species. This conclusion becomes even more evident when one looks at the other public discussions on ticks. Many articles describing ticks as unpleasant appeared in the early 20th century. One of the first such texts in my dataset is an account of a 1914 expedition to Sakhalin Island by the Finnish-Swedish writer Ludvig Munsterhjelm. The island is in the North Pacific Ocean on Russia's eastern border and had been used since the 1850s as a penal colony for prisoners.[27] In this connection, Munsterhjelm wrote of the island's nature that it offers an unpleasant environment for criminals, not only because of its climate but also because of its fauna. He mentions that "the island is infested with the disgusting nuisance of ticks, which are incredibly ingenious at clinging to human skin. Every night we had the arduous and painful task of cleaning ourselves of these bloodsuckers, which often left their heads under the skin, causing painful inflammations."[28]

Munsterhjelm's description of ticks as a nuisance to humans is not exceptional among my data. Many texts about ticks published in the early 20th century either directly or indirectly give a similar picture of the relationship between humans and ticks. Experiences with ticks were particularly prevalent in texts on hiking and camping.[29] For example, in 1924, an article about a traveling party's visit to a wilderness praised the beautiful nature of the area

26 See, e.g., "Olipa kerran"; Kuukunen, "Juttukirje," *Etelä-Suomen Sanomat*, March 14, 1941.

27 Andrew A. Gentes, "The Institution of Russia's Sakhalin Policy, from 1868 to 1875," *Journal of Asian History* 36, no. 1 (2002).

28 Ludvig Munsterhjelm, "Sahalinin sydänmaista," *Uusi Suometar*, December 20, 1914.

29 See, e.g., A.R., "Hawaintoja Woikaalta," *Eteenpäin*, July 27, 1924; "Leirikuvia ja selostuksia," *Partio* no. 10 (1925): 157–159.

and emphasized that, although "tick sucks blood, the traveler still wants to go deeper into the wilderness to enjoy the bounty of nature, such as berries."[30]

Ticks appeared to have been a familiar animal to Finns who spent time outdoors, but as the published metaphors and other material on ticks show, it is likely that a much larger number of Finns were familiar with these arachnids. A text describing ticks, written by biologist Heikki Väänänen in 1933, stated that "everyone has probably encountered it at least once in his or her lifetime."[31] The familiarity of ticks is also indicated by a widespread text, written in 1929 by the entomologist Niilo Vappula. His text explained in detail what was known at the time about the biology, behavior, and habitat of ticks. The text was initially published in an agricultural magazine,[32] but later that year, it was also published in *Kotiliesi*, a widely circulated and very popular so-called women's magazine.[33] The reason for the publication was mentioned in the article – several readers had asked the editorial team how to get rid of the ticks that were causing problems in their hometowns. As for the relationship between humans and ticks, Vappula said that a tick bite causes an unpleasant itching sensation but very rarely has worse consequences. He adds that a few cases of severe infections and even fever are mentioned in the research literature, but generally, the tick bite is insignificant to humans.[34]

Vappula's text and the other examples mentioned above show how ticks were understood in Finland in the first half of the 20th century as harmless, albeit irritating, pests. There is only one widespread news report of a human death involving a tick in my database. The case concerned the death of a 21-year-old man in Sääminki village in 1908, a few days after the man had been bitten by a tick and the head of the tick had remained stuck under his skin. Although the case received a lot of publicity, it did not directly affect people's attitudes toward ticks. It was also reported as a rare cause of death.[35]

Altogether, though the tick was perceived as a disgusting nuisance, people clearly did not perceive it as a frightening or dangerous animal in the late 19th century or the first part of the 20th century. There is only one exception to this, and that is the tick's effect on children. In a text written in 1943, archaeologist and writer Sakari Pälsi described children plucking ticks from the skin of calves and putting them on their own skin so that they could later pull them

30 A.R., "Hawaintoja Woikaalta".

31 "Eläinten maailma," *Turun Sanomat*, March 25, 1933.

32 Niilo Vappula, "Puutiainen ja sen suhde punatautiin," *Karjatalous* no. 10 (1929a): 297–298.

33 Päivi Aikasalo, *Alli Wiherheimo – Uranaisen sydän* (Helsinki: Otava, 2004).

34 Niilo Vappula, "Puuntäit eli puutiaiset kesäkiusana," *Kotiliesi* no. 11 (1929b): 430–432.

35 See, e.g., "Harwinainen kuoleman syy," *Savolainen*, August 13, 1908; "Harwinainen kuoleman syy," *Turun Sanomat*, August 16, 1908; "Harwinainen kuoleman syy," *Tampereen Sanomat*, August 18, 1908.

off at the beach.[36] This may have been connected to the children's carefree and approachable attitude to living with animals. However, I believe that adults did not do this, and such actions were probably rare among children.

Although ticks were not understood to be a threat to human life, there was still a desire to remove them from the skin of humans and animals. There are several instructions for the removal and disposal of ticks in my data. Petroleum, for example, was used before the 1900s by pouring it over a tick that had become attached to the skin. Among the substances mentioned for pouring over the ticks were spirit, grease, lamp oil, and turpentine.[37] Today, these methods of tick removal are no longer recommended, but they were used to remove ticks from the skin still in the 1990s. By that time, however, petroleum and turpentine had been replaced by Vaseline and nail varnish.[38]

However, the ticks were a nuisance not only to humans but also to other animals. My data show that dogs were particularly targeted by ticks. For example, the novel *Rai Jakkerintytär* (1927), written by the Finnish novelist Joel Lehtonen, describes a situation in which a tick attaches itself to a dog's paw, and how the dog's owner carefully tries to remove it.[39] Ticks attached to dogs were also later addressed in various texts on dog care in the 1930s and 1960s.[40] Texts in newspapers and magazines also show that people were aware that ticks were found on wild animals in the early 20th century. They were said to be an annoyance to rabbits, birds, and reptiles such as lizards.[41]

In addition to dogs and other animals, ticks were found especially in cattle. Many texts show how cattle visiting forest pastures were sometimes found to be very abundant in ticks. In his text, Vappula said that "in some areas ticks are said to be so abundant that in the evening, when the cattle return from grazing, a bucket of one liter can be filled with ticks and used as food for the chickens."[42] The text may be an exaggeration, but it repeats the same story as many other newspaper articles about ticks in cattle.

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36 Sakari Pälsi, "Ukonilma," *Forssan Lehti*, July 17, 1943.

37 I., "Taisteluun kärpäsiä, itikoita ja puutiaisia vastaan," *Maatalouden Karjanhoitolehti* no. 3 (1915): 42–43; Joel Lehtonen, *Rai Jakkerintytär* (Helsinki: Otava, 1927), 192; Vappula, "Puuntäit eli puutiaiset kesäkiusana"; J. B-g., "Koiran lois-ihotaudeista," *Suomen Kennelklubin Aikakauskirja* 41, no. 3 (1936): 33–36.

38 Pirkko Kolbe, "Pieni itikka voi olla paha peto," *Helsingin Sanomat*, June 13, 1979; Klaus A. Järvinen, "Kotoiset puutiaiset voivat levittää sairautta," *Etelä-Suomen Sanomat*, July 4, 1988; "Seuraava potilas," *Länsi-Savo*, October 7, 1991.

39 Lehtonen, *Rai Jakkerintytär*, 192.

40 See, e.g., B-g., "Koiran lois-ihotaudeista"; "Koiran elämää," *Uusi Suomi*, July 2, 1965.

41 See, e.g., "Puutiaisia jäniksissä vielä myöhään syksyllä," *Metsästys ja Kalastus* 15, no. 11 (1926): 417; Vappula, "Puutiainen ja sen suhde punatautiin"; "Pääskynen lääkärissä," *Uusi Suomi*, August 23, 1939.

42 Vappula, "Puuntäit eli puutiaiset kesäkiusana".

A few texts from the early 20th century still referred to ticks as a mere bother to cattle, but by the 1920s at the latest, texts describing the relationship between cattle and ticks began to refer to the redwater fever that ticks spread to cattle. As a result, ticks were no longer understood as annoying arachnids, but as small animals that spread death among cattle herds.[43] Overall, the understanding of ticks as pesky but harmless to humans and animals declined in the second half of the 20th century, no doubt due to the fact that ticks came to be understood as animals that spread life-threatening diseases to cattle and humans.

5 Ticks "Living in Trees" Cause Diseases to Cattle

The ticks' involvement in spreading redwater fever in cattle was recognized as early as the 1890s. While the disease was already widely known in Europe and the United States in the mid-19th century, it wasn't until the 1890s that American scientists Fred L. Kilborne and Theobald Smith discovered the bacteria responsible for the disease and realized that it was transmitted to cattle through tick bites.[44] The first two decades of the 20th century saw the beginning of writing about ticks in the context of redwater fever cases, but the volume of discussion increased significantly during the 1920s and 1930s. Most of these texts described the symptoms of redwater fever and how to react when cattle get ill. These texts also mentioned the tick that spread the disease, sometimes only briefly and sometimes in more detail.

It is clear that the texts mentioning the tick as an animal that spreads redwater fever portrayed them in a negative light. In this context, it was no longer just a nuisance but an arachnid causing death and economic loss. Therefore, the central theme of ticks in the news coverage of redwater fever was how to get rid of these animals once and for all. In a few contexts, for example, it was emphasized that the tick should not be released but burned. This was justified on the grounds that the ticks would not be able to continue their life and spread redwater fever to cattle.[45]

43 See, e.g., Vappula, "Puutiainen ja sen suhde punatautiin".

44 Anderson, "The Natural History of Ticks," 205. See also Taina Syrjämaa's chapter in this volume.

45 "Toimenpiteitä punataudin ehkäisemiseksi," *Suomen Eläinvakuutusyhdistyksen Asiamieslehti* no. 2 (1930): 2–3; B-g., "Koiran lois-ihotaudeista".

However, in the case of redwater fever, it was not so much a question of destroying individual ticks but of eradicating them from entire areas. Already at the beginning of the 20th century, the tick habitat was believed to be "watery and deciduous grassland," and ticks were believed to live in alder trees, willow, and hazel bushes.[46] Therefore, texts proposing to remove all shrubs from pastures and to drain and dry wet places were published as early as the 1920s.[47] In addition to these practices, other ways people tried to get rid of ticks included spreading chalk and ants in pastures.[48] However, by far the most frequent solution identified in the public discussion was the destruction of alders and various shrubs. The idea of destroying alder trees and various shrubs to eradicate ticks was proposed in several texts until the 1950s,[49] when herbicides such as hormone-type plant killers were introduced as a way to destroy these trees and shrubs.[50] The last mention of destroying alder and willow bushes to prevent redwater fever is found in my material from 1978.[51]

Burning trees to get rid of ticks appears strange from today's perspective, as we now know that ticks do not live in trees. In a scientific context, this was noticed already in the 1950s. Biologist Christina Öhman, who studied ticks in that decade, discovered that when she collected the animals for experiments, all attempts to collect ticks from trees and bushes proved futile. They could only be found in hay.[52] However, it was not until the late 1970s that the notion of ticks falling from the branches of alder or walnut trees to their prey began to be questioned in the public discussion.[53] Even so, in 1990, for example, a news-

46 See, e.g., "Punatauti lehmistä ja sen hoito," *Hämeen Sanomat*, August 19, 1915; the Finnish etymology of the tick, "puutiainen," refers to a bug that lives in a tree. See *Suomen etymologinen sanakirja*, s.v. "Puutiainen", https://kaino.kotus.fi/ses/?p=article&etym_id=ETYM_cd5753864f0d7f141dbcdd9fb7ec3b80&word=puutiainen.

47 L.P., "Punataudin vastustaminen," *Maaseudun Tulevaisuus*, July 29, 1922.

48 Vappula, "Puuntäit eli puutiaiset kesäkiusana".

49 See, e.g., Eläinten hoitaja, "Punataudin aika lähenee!," *Pellervo* no. 19 (1926): 307; R.S., "Punataudin ehkäisytoimenpiteistä ja punatautisen lehmän hoidosta," *Karjatalous* no. 11 (1930): 388–391; "Lehmien punataudista," *Hämeen Sanomat*, July 6, 1934.

50 "Lepät pois laitumilta," *Työkansan Sanomat*, June 17, 1950.

51 Hakon Westermarck, "Punatauti uhkaa laitumilla. Vesakoiden torjuminen tärkeää," *Maaseudun Tulevaisuus*, May 23, 1978.

52 Christina Öhman, "The Geographical and Topographical Distribution of Ixodes Ricinus in Finland," *Acta Societatis pro Fauna et Flora Fennica* 76, no. 4 (1961): 4.

53 "Puutiainen levittää vaikeaa aivotulehdusta," *Ilta-Sanomat*, September 22, 1978; Riitta Kallioinen, "Pistoista oireet lievenevät," *Uusi Suomi*, July 3, 1979; "Suomen suvi hyttysiä täynnä," *Maaseudun Tulevaisuus*, July 23, 1987.

paper article on ticks was published in which ticks were said to crave "blood on the branches of deciduous trees."[54]

Overall, the importance of redwater fever as a disease of cattle began to decline in Finland, when forest grazing of livestock ceased in the 1950s. In general, the whole agricultural sector in Finland underwent a structural change; the result was that cattle farming became a business rather than a way of life for farmers. Cattle were given fenced pastures, and many farms introduced semi-detached cattle sheds, where these animals lived indoors all year round.[55] This also reduced contact with ticks and the incidence of redwater fever. For example, a 1988 newspaper article mentions ticks as a target not only for humans but also for dogs, horses, sheep, and large mammals in general.[56] The cattle were not even mentioned by name any more in relation to ticks.

6 Disease Vector to Humans

In Finland, it was slowly realised in the 1950s that ticks spread a form of brain fever to humans. The link between ticks and cases of tick-borne encephalitis (TBE) was discovered by Soviet scientists in the late 1930s.[57] In Finland, the first cases were recorded in the 1940s on the island of Kumlinge in Åland, which is why TBE was almost exclusively called "Kumlinge disease" in my data until the 1980s.[58]

Although the importance of ticks as the cause of a dangerous disease for humans entered the public discussion in the 1950s, the texts published in newspapers and magazines on the subject until the mid-1960s were almost

54 Esko Keränen, "Mökkihöperö," *Etelä-Suomen Sanomat*, August 3, 1990.

55 See, e.g., Taija Kaarlenkaski, *Kertomuksia lehmästä: tutkimus ihmisen ja kotieläimen kulttuurisen suhteen rakentumisesta* (Jyväskylä: Suomen kansantietouden tutkijain seura, 2012), 20, 207–208; Taija Kaarlenkaski and Annika Lonkila, "In Search of Invisible Cows: Collaboration, Resistance and Affection in Human-Animal Relationships on Contemporary Dairy Farms," *Ethnologia Fennica* 47, no. 2 (2020), doi:10.23991/ef.v47i2.88774.

56 Klaus A. Järvinen, "Kotoiset puutiaiset voivat levittää sairautta," *Etelä-Suomen Sanomat*, July 4, 1988.

57 Vladimir I. Zlobin, Vanda V. Pogodina and Olaf Kahl, "A Brief History of the Discovery of Tick-Borne Encephalitis Virus in the Late 1930s (Based on Reminiscences of Members of the Expeditions, Their Colleagues, and Relatives)," *Ticks and Tick-Borne Diseases* 8, no. 6 (2017), doi:10.1016/j.ttbdis.2017.05.001.

58 "Kumlingen taudin syitä etsitään," *Etelä-Suomen Sanomat*, June 11, 1956. See also Peter Wahlberg et al., "TBE in Åland Islands 1959–2005: Kumlinge Disease," *Scandinavian Journal of Infectious Diseases* 38, no. 11–12 (2006), doi:10.1080/00365540600868297. See also Suvi Rytty's chapter in this volume.

without exception either written by virologists or were short news items from research conferences. Some short and provocative texts warning of the diseases spread by ticks to humans, however, appeared already at the turn of the 1950s and 1960s. Nevertheless, on a larger scale, such texts began to appear in the 1970s and 1980s.[59]

In 1978, for example, a newspaper article was published, and it came with a warning: "Beware of ticks, or you will become their blood meal. In the worst case, you can get a severe brain infection from a tick, which takes a long time to recover from."[60] In addition, in 1980, an even more affective text appeared, telling how TBE had been found on islands other than the island of Kumlinge. An interesting detail in the text is that it emphasized that the archipelago of Hiittinen, where the disease was found, is place to many holiday resorts for people living in the Finnish capital region.[61] This was clearly intended to highlight the increased risk of exposing larger numbers of people to the virus. Also, in 1982, a text was published describing TBE as a danger to boaters and emphasizing that there is no cure for the disease.[62] In the press, concern about boaters from the capital region seemed to be clearly higher than for permanent residents of archipelago.

There was clearly an attempt to create horror scenarios about TBE at the turn of the 1970s and 1980s,[63] but the number of such texts was small, and they did not seem to create any panic, at least not in the public discussion about ticks. In general, news coverage of TBE failed, on the basis of my data, to significantly impact people's awareness and perception of the character of the disease. For example, in 1978, *Uusi Suomi* newspaper presented the question "What are ticks?" and answered with the following: "Ticks (Ixodes ricinus) live in our area, especially in alder woods. They are harmless to humans but can spread dysentery in cattle."[64]

The above quote is a good indication that not all Finns were even aware of TBE at the turn of the 1970s and 1980s, even though the disease had been known in Finland for about 25 years. In general, the public discussion suggests that TBE did not attract nearly as much public attention as it does today. The reason for people's ignorance and disinterest in the disease was very probably

59 See Suvi Rytty's chapter in this volume.

60 Pekka Hiekkala, "Puutiainen levittää vaikeata aivotulehdusta," *Ilta-Sanomat*, September 22, 1978.

61 "Kumlingen tauti leviää," *Uusi Suomi*, April 12, 1980.

62 Hannu Laaksonen, "Kumlingen tauti – Vaara veneilijöille," *Tekniikan Maailma* no. 7 (1982): 180.

63 See Suvi Rytty's chapter in this volume.

64 "Tiedon tikapuut," *Uusi Suomi*, November 29, 1978.

that the public discussion had created an image of the disease, especially by its name, as an exotic virus found only on the island of Kumlinge, far away in the archipelago, isolated from inland settlements.

In the public discussion, it was pointed out that TBE occurred not only in Åland but also in the Turku archipelago and on Finland's eastern border along the coast of the Gulf of Finland. Despite this, TBE was implicitly defined in the public discussion only for the island of Kumlinge and its surroundings.

Although the link between TBE and ticks in Finland in the 1950s might have been thought to have sparked fear about ticks, this did not happen until virologists discovered the link between borreliosis and ticks in the early 1980s.[65] Of course, ticks did not become frightening creatures overnight but gradually, as the media began to feed information about the link between ticks and borreliosis to the general public.

The first mention of borreliosis in my data is not until 1986, and in that text, it is mentioned as an extremely rare disease in Finland.[66] Of course, this was not the case.[67] After two years, the situation had changed and articles appeared that clarified information about borreliosis for the wider public. These new articles showed that borreliosis was associated with a central nervous system infection and that there must be hundreds of cases of borreliosis in Finland each year. Information about the wider symptoms and the number of people affected certainly contributed to people's anxiety about ticks, but I would argue that a more significant factor in people's increased fear of ticks was the implicit statement in various press articles that, in addition to the spread across Kumlinge Island, tick-borne diseases could be caught almost anywhere in Finland.[68]

Thus, suddenly, people began to understand the tick, previously known to people mainly as an irritating pest spreading the mysterious Kumlinge disease, as a frightening creature (in the public discussion) that could cause serious illness in familiar and previously safe environments. This was very quickly reflected in texts written about ticks as early as 1989–1991. Among other things, ticks began to be described as dangerous and insidious enemies and as silent

65 Burgdorfer et al., "Lyme Disease"; see also Barbour & Benach, "Discovery of the Lyme Disease Agent".

66 "Kysy lääkäriltä," *Länsi-Savo*, May 24, 1986.

67 J. Cuellar et al., "Seroprevalence of Lyme Borreliosis in Finland 50 Years Ago," *Clinical Microbiology and Infection* 26, no. 5 (2020), doi:10.1016/j.cmi.2019.10.003.

68 See, e.g., STT, "Punkista voi saada keskushermostoinfektion," *Etelä-Suomen Sanomat*, August 7, 1987; Klaus A. Järvinen, "Kotoisat puutiaiset voivat levittää sairautta," *Etelä-Suomen Sanomat*, July 4, 1988.

predators with a thirst for blood.[69] Affective material, such as images of people's bare feet in the grass, also began to be used to illustrate texts about ticks.[70]

Nevertheless, even in the 1990s, some comments still appeared in the public discussion, referring to the fact that ticks used to bite people also in the past without serious consequences.[71] One example is the conversation between a concerned mother and a doctor that I mentioned at the beginning of this chapter.[72] However, the number of these texts was much smaller than the number of articles in newspapers and magazines, which talked about ticks and the diseases they spread, creating fear and anxiety. During the 1990s, new knowledge and understanding of ticks as dangerous and terrifying creatures began to effectively take hold in Finnish culture and society. The change was so effective that few people today are actually aware that, during the previous century, the tick was mainly understood as a harmless pest.

7 Conclusion

I have shown in this chapter that the tick has not always been understood as a creature of fear, anger, and anxiety as it is today. These arachnids have, in fact, evoked the strong emotions we are familiar with today in Finland for a relatively short period of time, from the turn of the 1980s and 1990s until today. From the 1890s to the 1990s alone, there were many different ways of understanding ticks. They were used as metaphors for human activity and were widely understood as nuisances that sought to attach themselves to the skin of humans and other animals. Of course, the hatred associated with ticks emerged in public discussion as early as the early 1900s due to the redwater fever that they spread to cattle. However, the disdain that emerged in the context of the discussion on this disease did not define the whole debate on ticks. There were also many different ways of talking about ticks at the same time. Even the fact that ticks were found to spread TBE on the island of Kumlinge in the 1950s did not create fear and anxiety; however, once the connection was made between borreliosis and ticks, particularly the fact that borreliosis can be caught almost anywhere

69 Marja Haapalahti, "Vaarallinen puutiainen," *Suomen Kuvalehti* no. 30 (1989): 59–61; Keränen, "Mökkihöperö".

70 Niina Lempiäinen, "Punkin purema voi olla vaarallinen," *Länsi-Savo*, August 16, 1990.

71 See e.g. Päivi Repo, "Puutiaistaudit eivät ole lisääntyneet," *Helsingin Sanomat*, August 24, 1992; "Seuraava potilas," *Länsi-Savo*, June 12, 1995.

72 "Seuraava potilas" (1991).

in Finland, the public discussion and media formulated this knowledge to articles and news that propelled the current fear about ticks.

Thus, the tick became "a frightening enemy" in the public discussion after its danger outgrew human control. That is, the tick was not perceived as frightening until its ability to spread diseases to humans was recognized, but above all because it was discovered that ticks were not limited to a small geographical area. People realized that ticks spreading borreliosis can be found almost anywhere in Finland. This detail in particular makes the tick intimidating because we cannot simply isolate these animals to a specific area. In practice, the public discussion on ticks since the 1990s, which highlights the frightening and dangerous characteristics of these animals, is quite similar to the discussion on the danger of predator animals such as wolves, as well as their numbers and distribution. What breaks the illusion of control over our relationship with nature created by Western culture becomes frightening and monster-like. This is what ticks have become in the Finns' perception, and it is hard to say whether we will ever succeed in changing our views on these animals unless we first make a broader systematic change in our relationship with nature.

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