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Picking Finnic mushrooms in a Baltic primeval forest

A Finnic borrowing in the Yatvingian of the Narew River

1. Introduction

Despite being part of two distinct language families – Indo-European and Uralic – the Baltic and Finnic languages share a long-standing, deeply entwined, and extensive history of contact and mutual influence. Both families have borrowed vocabulary from each other during various periods of their contact (e.g., Thomsen 1890; Zeps 1962; Junttila 2015). The close contact relationship of Latvian especially with Livonian but also with South Estonian has resulted in the presence of other shared features such as similarities in prosodic systems and syntax (Norvik et al. 2021; Balodis et al. 2016; Teras & Tuisk 2021).

The span of time over which the Baltic and Finnic languages have been more extensively written or otherwise documented numbers in only a few centuries. Though only two (Latvian, Lithuanian) or four (if Latgalian and Samogitian are counted separately) Baltic languages exist today, historically, not only was the geographical spread of the Baltic languages much more extensive but there were also several other Baltic languages which are known to exist based on mentions in historical records and Baltic elements surviving in placenames in the territories once inhabited by speakers of these languages. Some fragmentary records exist for several extinct Baltic languages. The most extensive of these are for Old Prussian – many of which are translations of



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This paper focuses on one of these possible Yatvingian records – a handwritten copy made in the 1970s of a now lost short glossary found in Belarus entitled *Pogańske gwary z Narewu* (The Pagan dialects of the Narew; referred to henceforth as "the Narew dictionary"). This glossary contains several words which may be of Finnic origin. This paper will not examine the whole set of these possible borrowings but will instead focus on just one – *sini* 'mushrooms'² – which seems likely to have come from a Finnic language of some sort, and as much as is possible to tell, is not found in the Baltic languages spoken directly adjacent to the Yatvingian speech area. This paper will provide some historical background on the Yatvingians and discuss the nature of the data, touch upon other papers examining this vocabulary, survey terms for 'mushroom' in other nearby languages, and then propose a few theories for how this word may have come to be in a language seemingly not spoken near any Finnic-speaking community.

2. The Baltic languages and the Yatvingians

The Baltic languages – a branch of the Indo-European language family – are divided into two sub-branches: East and West Baltic. All of the living Baltic varieties are East Baltic. Of extinct Baltic varieties, the best documented – Old Prussian – is a West Baltic language, which likely became extinct at some point in the 18th century.³ As noted above, records for other extinct Baltic languages are extremely scant or non-existent. However, there are some minimal records attributed to Yatvingian, which has historically been seen either as a variety of Old Prussian or a closely related West Baltic language. See Figure 1 for a map of Baltic and other tribes in the 9th-11th centuries with modern political borders. This map also shows the location (1 = Novy Dvor, Belarus) near which the Narew dictionary was discovered and the location (2 = Białowieża, Poland) from which it reportedly had been brought at some earlier point (for more see Section 3).

^{1.} The Lord's Prayer recorded by Simon Grunau (1510–1530) in *Preussische Chronik* may be in a mix of Latvian and Curonian (Zinkevičius 1984: 347; Vaba 2014: 174).

^{2.} In the original source (see Figure 2), this word is written with a long-s <f> as *fini*. In this paper, I chose to write the word with a regular <s> as *sini*.

^{3.} There is an ongoing effort to revive Old Prussian. Prussian has been reconstructed and at present there are individuals who have learned revived Prussian raising children speaking this language (Szatkowski 2021).



Figure 1: Baltic and other tribes in the 9th–11th centuries with modern political borders.⁴ Baltic tribes are in bold, non-Baltic tribes in italics, river names are underlined. 1 = Novy Dvor, 2 = Białowieża, shaded area = approximate current extent of Białowieża Forest.

^{4.} The locations of tribes are based on the map "Balti un to kaimintautas 9.–11. gs." (The Balts and their neighboring nations 9th–11th century) published online in the Latvian National Encyclopedia as part of Kalniņš 2023. Other information is taken from publicly available sources; the political boundary map template is taken from https://commons.wikimedia.org/wiki/File:Europe_blank_map_without_disputed_regions.svg.

As discussed in more detail in the next section, the language in the Narew dictionary cannot with certainty be called Yatvingian. I chose to call it "Narew Yatvingian" in this paper in order to connect this article with the earliest published descriptions of the Baltic language in the Narew dictionary by Zinkevičius (1985a, 1985b) where the language in the dictionary is referred to as Yatvingian in the name of this two-part article. However, a more neutral term such as 'the Narew language' or 'Narewian', versions of which are used by Hock et al. (2015) and Karulis (2001), may be more precise in referring to the language in the dictionary, as – whether a variety of Yatvingian or not – its identity is difficult to establish with certainty.

Several names are used to refer to the Yatvingians. Dini (2014: 300) describes the historical territory of the Yatvingians as extending "to the east beyond the Masurian lakes, with its center in the modern district of Grodno, including Sudovia, Jotva, Dainava and other regions". Zinkevičius (1985b: 188) writes that the Teutonic Knights list several tribes to the east and south of Prussia – the Sudovians (*Sudowia, Suderland, Sudi...*), Yatvingians (*Jettuen, Jetwesen, terra Jatuitarum...*), and Dainavans (*Denowe...*), which may have formed a group of closely-related tribes – and that another group mentioned in Polish sources – the *Pollexiani* (*Pollexia*) – who lived near the Narew River near present-day Podlasie in Poland – also may have belonged to this group. Dini (2014: 300) notes that these names may have been extended by neighboring peoples to refer to all of these tribes. Thus, he writes:

[T]oday the name Yatvingian designates two separate entities. In a narrow sense of the word it indicates the single tribe, and in a wider sense the totality of tribes: the Sudovians... comprised the western group and the Yatvingians (Polessia) the eastern group, the name of which subsequently served for a collective designation; a third group was probably settled in Dainava..., and a fourth group in Masuria... (Dini 2014: 300.)

According to Zinkevičius (1985b: 189), the Yatvingians were devastated by the Teutonic Knights in the 13th century. One group of Yatvingians refused to surrender and retreated to Lithuania. The Knights laid waste to areas bordering their territory resulting in a wilderness, which was meant to serve as a protective buffer from Lithuanian and Polish attacks. The southern edge of this area included Podlasie and the area where the Narew dictionary may have originated. It was more distant from the Teutonic Knights and could have remained populated. After the Peace of Toruń in 1411, Lithuanians, eastern Slavs (Zinkevičius 1985b: 189 notes that these were ancestors of modern Belarusians), and Poles also settled this territory, but the Yatvingians maintained

their independent character. In a census conducted by Mikhail Lebedkin in 1860 in the Grodno Governorate, 30,929 residents in the southern part of the governorate, which the Yatvingians had earlier also inhabited, are listed as Yatvingian. According to Zinkevičius (1985b: 189–190), Lebedkin states that the Yatvingians spoke Russian (Zinkevičius notes that this was actually Belarusian) with Lithuanian dialect features, were Orthodox, but differed from their neighbors in their customs and appearance (Zinkevičius 1985b: 189–190).

3. The Narew dictionary

The Narew dictionary – entitled *Pogańske gwary z Narewu* (The Pagan dialects of the Narew) – is a glossary containing 215 entries in a Baltic language translated into Polish. The dictionary was found in the summer of 1978 by Vyacheslav Zinov, a young collector of rare books living in Brest in Belarus, while travelling through the northern part of Białowieża Forest⁵ located near the border of Poland and Belarus. Zinov bought a prayer book in Latin from a man living on a homestead near Novy Dvor (in Pruzhany District located on the western edge of Brest Region in Belarus). The prayer book included the short dictionary which is the focus of this paper, and which Zinov copied by hand (Zinkevičius 1985a: 61).

When Zinov left between 1978 and 1980 for his term of service in the Soviet army, his parents threw away the original manuscript, so all that survives is Zinov's handwritten copy.⁶ Zinov ultimately contacted the Department of Lithuanian at Vilnius University and his copy of the manuscript reached linguist Zigmas Zinkevičius. After careful analysis and also interviewing Zinov, Zinkevičius reached the conclusion that the dictionary was authentic and not a forgery. Zinkevičius recorded all possible information from Zinov about the appearance of the dictionary, the circumstances under which he found it, and also about the original owner of the book in Białowieża Forest. Zinov

^{5.} Białowieża Forest is the primeval forest alluded to in the article title. It is one of the last remaining portions of ancient primeval forest in Europe. The forest stretches across the Polish-Belarusian border and the parts of the forest located in both countries form a UNESCO World Heritage Site. Białowieża Forest is also home to the largest population of European bison (UNESCO).

^{6.} One of the anonymous reviewers of the current paper noted that Daniel Petit had stated in a personal communication that he had been unable to find Zinov's handwritten copy of the Narew dictionary in the archives. This may mean that now the only copy of the dictionary that exists is Zinkevičius's (1985a) published reproduction.

remembered the original owner saying that either he or his father had brought the book from the town of Białowieża – in Poland – between the two world wars (Zinkevičius 1985a: 61–62).

Zinkevičius subsequently published a detailed article on the dictionary (*Lenkų-jotvingių žodynėlis?* = A Polish-Yatvingian Dictionary?), which appeared in two parts. In the first part (1985a), he gives a detailed account of the circumstances surrounding the discovery of the dictionary and its discoverer Vyacheslav Zinov as well as analyzing each entry in the context of possible cognates and publishing images of Zinov's handwritten copy of the dictionary in its entirety. In the second part (1985b), Zinkevičius discusses the phonological and morphological properties of the dictionary's entries and possible sources for borrowings and similarities with words in other languages as well as giving an in-depth description of the history of the Yatvingians.

At the time of his articles' publication, Zinkevičius (1985b) theorized that the Baltic variety recorded in the dictionary was (1) a local Yatvingian dialect with Lithuanian influence, (2) Lithuanian with a strong Yatvingian substratum, (3) a mixture of Yatvingian and Lithuanian words with the person recording them not being able to distinguish the two languages.

The dictionary shows various idiosyncrasies in spelling and also with words sometimes missing their endings (Zinkevičius 1985b: 184). One of the anonymous reviewers of the current paper noted that features of the written form of Polish used in the Narew dictionary are consistent with a more recent form of the Polish orthography than would be expected suggesting that the version of the dictionary found by Zinov may itself have been a copy of an earlier document. While this does not imply that the contents of the dictionary are fraudulent, it does mean that there may have been more steps separating the copy of the Narew dictionary we have today from the original dictionary, on which Zinov's discovery was based.

The contents of the dictionary also appear unlike the Yatvingian recorded by Hieronymus Maletius in 1561 (Hasiuk 1993), that is, from a variety, which Dini (2014: 304) states is "probably northern, given the strong Old Prussian influence". At present, the Yatvingian identity of the Baltic variety in the Narew dictionary remains controversial (Dini 2014: 304). Petit (2010: 21) observes that the language recorded in the Maletius materials is extremely similar to that found in other Old Prussian sources, but that since little – outside of onomastic material and substrate phenomena – testifies to the nature of the languages spoken in the historical Yatvingian region in northeastern Poland and northwestern Belarus, the language in the Narew dictionary cannot be treated as a reliable source of the Yatvingian language. Nevertheless, the contents of the dictionary are fascinating as they show words stemming from a number of different sources, suggesting a rich and complex language contact environment. According to Dini (2014: 306– 307), 11% of the words in the dictionary are shared with all Baltic languages, 7% only with Old Prussian, 20% with East Baltic (especially Lithuanian), 28% are "Baltic by root and structure, but lack exact correspondences in the other Baltic languages". Zinkevičius (1985b: 187) notes the presence of three Polonisms and as many as 18 possible Germanic loans. Schmid (1986) also notes possible evidence in the dictionary for contact with Northeastern Yiddish.

Words of apparent Finnic or Finno-Ugric origin have been detected in the dictionary since Zinkevičius's (1985a; 1985b) first description of the dictionary and its contents. Possible Finno-Ugric origins for a number of words in the dictionary were observed by Helimskij (1985) and Orel (1986), and as Dini (2014: 306) notes, this led "them to conclude that the lexicon in the glossary reflects a situation of close contact with a Finno-Ugric language, in particular with (Proto-)Hungarian." More recently, Witczak (2020) has also discussed the apparent Finno-Ugric element in the dictionary and concludes that the Finno-Ugric borrowings derived from an unknown source in prehistoric times similar to the Finnic languages.

4. Finnic elements in the Narew dictionary

This article will not review all earlier proposed Finnic borrowings in the Narew dictionary. Instead, as stated above, it will focus only on one entry in the dictionary – *sini* 'mushrooms' – as it seems more clearly to be of Finnic origin. See Figure 2 for an image of *sini* as it originally appeared in Zinov's copy of the Narew dictionary later republished in Zinkevičius (1985a).

ja estem - Af irm grzyby - fini mie, so - fala

Figure 2: Zinov's recording of *sini* in his copy of the Narew dictionary (Zinkevičius 1985a).

As noted above, Helimskij (1985) and Orel (1986) discussed the possible Finno-Ugric origin of certain words in the Narew dictionary as did Witczak (2020) most recently in his analysis of such possible borrowings in the dictionary. Witczak (2020: 154) includes *sini* among the words he considers to be of Finnic origin and notes that this origin is generally accepted. He also observes that aside from Latvian *sēne* 'mushroom', no other Indo-European language has a similar word for 'mushroom'. According to Karulis (2001), Latvian *sēne* is borrowed from either Livonian *sēņ* 'mushroom' or Estonian *seen* 'id.' and is first recorded in dictionaries in the 17th century.

If we accept that *sini* is indeed a Finnic borrowing in Narew Yatvingian, then the next question to ask is how it got there. Unlike Latvian, which directly borders several Finnic languages (Livonian, Estonian, South Estonian) and has had other Finnic language exclaves within its speech area (Votic, South Estonian), no such community is known to have existed in the region surrounding the Narew River. In his etymological dictionary of Latvian, Karulis (2001) also mentions *sini* and states that it was likely borrowed into Yatvingian by way of the Curonians. However, as Curonian was spoken quite a distance away from Yatvingian and not adjacent to the area near the Narew River, it seems uncertain if Curonian could indeed have been the source of this word in Narew Yatvingian.

My next thought was to check if there were dialect forms in Lithuanian that could show evidence of a word like *sini* also existing elsewhere in Baltic besides Latvian and perhaps closer to Courland and adjacent areas in Lithuania where Curonian was historically spoken. I consulted with Baltic linguists Laimutė Balode and Anna Stafecka⁷ and neither of them were aware of any word for 'mushroom' in any Lithuanian variety that resembled Narew Yatvingian *sini* or Latvian *sēne*.

While the Latvian word for 'mushroom' is a Finnic borrowing, in Lithuanian, 'mushroom' is a Slavic borrowing – *grybas*. Unfortunately, the Old Prussian word was not recorded in any documented source. Table 1 shows the modern (Latvian, Latgalian, Lithuanian, Samogitian, Belarusian, Polish) or regional (German, Yiddish) forms used for 'mushroom' in the Baltic languages or other languages with which Narew Yatvingian speakers would have been in contact.

^{7.} Laimutė Balode (University of Helsinki) is a Baltic placename specialist and one of the editors of *Latvijas vietvārdu vārdnīca* (e.g., Balode et al. 2013). Anna Stafecka (University of Latvia) is a Baltic dialect specialist and is one of the editors of the *Baltu valodu atlants = Baltų kalbų atlasas = Atlas of the Baltic Languages* (Mikulėnienė & Stafecka 2013) and has also been one of the editors of *Latvijas vietvārdu vārdnīca* (see above).

Family	Language	'mushroom'
Baltic	Latvian	sēne
(Indo-European)	Latgalian	sieņs
	Lithuanian	grybas
	Samogitian	grība, grībs
	Old Prussian	unknown
	Narew Yatvingian	<i>sini</i> 'mushrooms'
Slavic (Indo-European)	Belarusian	грыб (hryb)
	Polish	grzyb
Germanic (Indo-European)	German	Pilz, Pilze, Pilzke
	Yiddish	švom

Table 1: 'mushroom' in Narew Yatvingian and its linguistic relatives and contact languages⁸

So, what can we make of Narew Yatvingian *sini*? How did this word come to be found in this language apparently so far from known Finnic populations and also without a clear route for borrowing? I propose several different possibilities, which I leave unranked, as I do not feel there is a clear favorite among the theories below due to a lack of decisive data.

^{8.} The Latvian, Lithuanian, Belarusian, Polish terms were sourced from online dictionaries and are treated as general knowledge here and not separately referenced. The Latgalian translation is from Leikuma et al. 2011-2013. I could not find a scholarly source for a literary Samogitian translation of 'mushroom'; however, the Samogitian Wikipedia uses *grība* and *grībs* in its article on mushrooms (https://bat-smg.wikipedia. org/wiki/Gr%C4%ABba). For a local Yiddish translation, I wrote Anna Verschik (Tallinn University), a specialist of Yiddish contacts in the Baltic area. She said that the common Yiddish form for 'mushroom' is *švom* and any other more local forms would be hard to determine without fieldwork, but that words for particular types of mushrooms, plants, trees, berries, and so on, are often borrowed from co-territorial languages in Yiddish. The German forms are ones used in East and West Prussia in the late 19th century according to Frischbier (1883: 144) in his dictionary of local forms typical of this region.

(1) A prehistoric borrowing from Finnic

Lang (2018: 204–226) describes in depth the routes taken by the ancestors of present-day Finnic peoples as they entered the Baltic area from the east along the Daugava waterway as well as the long-term contact they had with Baltic peoples even before reaching the Baltic region. This might mean that sini is a more ancient borrowing, perhaps even that Finnic 'mushroom' was borrowed into Baltic as a whole at a much earlier stage of contact with Finnic. Since it seems unlikely that Narew Yatvingian could have borrowed sini from Latvian, one of its precursor languages (e.g., Curonian), or Finnic languages spoken north of Latvian, it would seem that sini had to come into Narew Yatvingian directly from a Finnic language as none of its linguistic neighbors has a word like this for 'mushroom'. Though it should be noted that while *seni 'mushroom' is the Proto-Finnic form, in Pre-Proto-Finnic, 'mushroom' is reconstructed as *säni and in Proto-Uralic as *śänä 'bracket fungus' (Aikio 2015: 40), thus if sini was borrowed at an early stage, the period during which this could have occurred may be somewhat circumscribed.

(2) A borrowing from Baltic

Perhaps a Finnic borrowing like *sini* was historically also used in some Lithuanian dialects but this was lost and never documented. This could have provided a path for *sini* to enter Narew Yatvingian. Also, since the word for 'mushroom' in Old Prussian is not known, an important data point is missing in unraveling this puzzle, as it may have itself been similar to *sini*. It should be noted too that Narew Yatvingian⁹ <i> corresponds to * \bar{e} in other Narew Yatvingian words shared with Lithuanian in the Narew dictionary (e.g., *flibd* 'to hide' (Lith. *slepti*), *fid* 'to sit' (Lith. *sedéti*)). While it is unknown at what stage of its development * $\bar{e} > i$ in Narew Yatvingian, it is conceivable that a Lithuanian word cognate with Latvian *sēne* could have been borrowed into Narew Yatvingian prior to this change and that *sini* is the resulting form following this change. Though other Finnic words have been borrowed into Lithuanian via Latvian (e.g., Lithuanian *bùré* 'sail', cf. Latvian *bura*, Livonian *pūṛaz* 'id.'; Fraenkel 1962; Viitso & Ernštreits

^{9.} This sound correspondence and the Lithuanian counterparts to the Narew Yatvingian verbs in this sentence as well as the example of a Finnic borrowing in Lithuanian borrowed via Latvian were provided by one of the anonymous reviewers.

2012), the borrowing of Latvian *sēne* into Lithuanian with it subsequently being borrowed into Narew Yatvingian but with no trace of the word appearing in any documented Lithuanian variety is not impossible, but is a somewhat complex path for this word to have traveled. Thus, a Baltic source for *sini* in Narew Yatvingian does not have enough evidence to be proven at this time, though there are some intriguing phonological facts testifying to its feasibility.

(3) A borrowing from some unknown and undocumented Finnic population that existed in or near northern Belarus

Another possibility is that there existed other Finnic populations further to the south of those known and documented in recent centuries. This could have been another Finnic-speaking group descending from the same migrations of peoples that brought Finnic speakers to the Baltic area originally or, alternatively, it could have been a group from some known Finnic-speaking community that came to live in this area for one reason or another.

Certainly, such language islands are known in Latvia (the Krevin Votians near Bauska, the Leivu South Estonians in NE Latvia near Ilzene, the Lutsi South Estonians near Ludza in SE Latvia) and neighboring parts of Russia (the Kraasna South Estonians near Krasnogorodsk just east of the Lutsi region in Latvia) (Balodis & Pajusalu 2021). The Krevins came to live around Bauska already in the 15th century (Wiedemann 1871) and knowledge of their language persisted long enough to be documented in 1846 by Andreas Johan Sjögren (1849) and fragmentary knowledge existed among rememberers even several decades into the 20th century (Sehwers 1940: 68; Winkler 1997: 117-118). Other non-Finnic but also non-Baltic language islands like the Karaim Tatars similarly have long existed in Lithuania with their language and culture surviving up to the present day. Evidence for the existence of such a Finnic-speaking language island near the historical Yatvingian area would need to be sought from studies of local Lithuanian and Slavic dialects to identify other interesting borrowings or language features that suggest the historical presence of Finnic speakers.

(4) A different source or random chance

sini may have some other source, it could be a mistake in the original transcription, or also just chance similarity with the corresponding Finnic words for 'mushroom'.

5. Conclusion

The Finnic and Baltic languages have a long history of close contact both in antiquity and throughout recorded history. However, while the Finnic influence on living Baltic languages due to contact is known and continues to be studied (e.g., Norvik et al. 2021), the existence of possible Finnic influence on a Baltic language like Narew Yatvingian comes as more of a surprise. No known Finnic population has existed near the historical Yatvingian area either when it was still spoken or at any other time.

This paper examined the history of the Yatvingians and focused on one particular seemingly Finnic borrowing – *sini* 'mushrooms' – in a purportedly Polish-Yatvingian dictionary discovered in 1978 in Belarus by the young amateur book collector Vyacheslav Zinov. With the original subsequently destroyed by Zinov's parents, all that remained was his handwritten copy, which itself may now be lost potentially leaving the reproductions of Zinov's notebook pages by Zinkevičius (1985a) as the only surviving copy. Regardless, the Narew dictionary provides fascinating insight into a severely underdocumented extinct Baltic language and the complex contact environment in which it existed.

sini may have come from a Finnic source, but the nature of that source remains a mystery. Possible scenarios for its origin include (1) that *sini* reflects an ancient Finnic borrowing perhaps to Baltic more generally and not Narew Yatvingian specifically, (2) that *sini* is borrowed from other neighboring Baltic languages, but that subsequently evidence for this has been lost or obscured, (3) that *sini* came from an unknown Finnic community living in the area either since ancient times or perhaps as a language island resulting from a more recent migration to the historical Yatvingian area in a vein similar to the migrations resulting in the Votic and South Estonian language islands in Latvia, or (4) some other source or a chance similarity between Narew Yatvingian *sini* and Finnic words for 'mushroom'. However *sini* came to exist in Narew Yatvingian, it presents a fascinating linguistic and historical puzzle to ponder and perhaps someday unravel.

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References

- Aikio, Ante. 2015. The Finnic 'secondary e-stems' and Proto-Uralic vocalism. Journal de la Societé Finno-Ougrienne 95. 25–66. https://doi.org/10.33340/susa.82642
- Balode, Laimute & Bušs, Ojārs & Hirša, Dzintra & Siliņa-Piņķe, Renāte & Stafecka, Anna & Trumpa, Anta (eds.). 2013. Latvijas vietvārdu vārdnīca: R. Rīga: Latvijas Universitātes Latviešu valodas institūts.
- Balodis, Uldis & Pajusalu, Karl & Teras, Pire. 2016. Broken Tone in South Estonian Dialects in Latvia. *Linguistica Lettica* 24. 98–114.
- Balodis, Uldis & Pajusalu, Karl. 2021. Introductory survey of the South Estonian language islands. *Eesti ja soome-ugri keeleteaduse ajakiri = Journal of Estonian and Finno-Ugric Linguistics* 12(2). 7–31. https://doi.org/10.12697/jeful.2021.12.2.01
- Dini, Pietro U. 2014. *Foundations of Baltic languages*. Vilnius: Vilnius University.
- Fraenkel, Ernst. 1962. *Litauisches etymologisches Wörterbuch*, Vol. 1. Heidelberg: Carl Winter Universitätsverlag, Göttingen: Vandenhoeck & Ruprecht. https://archive.org/details/fraenkel-litauisches-etymologisches-woerterbuch-bd.-1-2-1962-1965/>
- Frischbier, Hermann. 1883. Preussisches Wörterbuch: Ost- und westpreussische Provinzialismen in alphabetischer Folge, Zweiter Band (L-Z). Berlin: Verlag von Th. Chr. Fr. Enslin (Richard Schoetz).
- Hasiuk, Michał. 1993. Bemerkungen zum Text Hieronymii Meletii "Wahrhaftige Beschreibung der Sudawen auf Samland, sammt ihrem Bockheiligen und Ceremonien". *Linguistic and Oriental Studies from Poznań*. 83–86.
- Helimskij 1985 = Хелимский, Евгений А. 1985. Fenno-Ugrica в ятвяжском словарике? In Zinkevičius, Zigmas (ed.), *Tarptautinė baltistų konferencija*, 234–235. Vilnius: Vilnius University.

- Hock, Wolfgang & Fecht, Rainer & Feulner, Anna Helene & Hill, Eugen & Wodtko, Dagmar S. 2015. Altlitauisches etymologisches Wörterbuch (Studien zur historisch-vergleichenden Sprachwissenschaft 7). Hamburg: Baar-Verlag. https://dx.doi.org/10.18452/19817>
- Junttila, Santeri. 2015. Proto-Finnic loanwords in the Baltic languages? In Junttila, Santeri (ed.), *Contacts between the Baltic and Finnic languages* (Uralica Helsingiensia 7), 12–37. Helsinki: University of Helsinki – Finno-Ugrian Society.

<a>https://journal.fi/uralicahelsingiensia/issue/view/uh7>

- Kalniņš, Aigars. 2023. Baltu pirmvaloda. *Nacionālā enciklopēdija*. https://enciklopedija.lv/skirklis/91093-baltu-pirmvaloda (Accessed 2023-06-17.)
- Karulis, Konstantīns. 2001. *Latviešu etimoloģijas vārdnīca*. Rīga: Avots.
- Lang, Valter. 2018. *Finnic be-comings = Läänemeresoome tulemised*. Tartu: University of Tartu Press.
- Leikuma, Lidija & Bernāne, Līga & Cibuļs, Juris & Butkus, Alvydas & Butkienė, Violeta & Vaisvalavičienė, Kristina & Sperga, Ilze. 2011–2013. *Lietuvių-latvių-latgaliečių kalbų žodynas = Lietuviešu-latviešu-latgaliešu vārdnīca = Lītuvīšu-latvīšu-latgalīšu vuordneica*. Rēzekne: Rēzeknes Augstskola. <http://hipilatlit.ru.lv/dictionary/lv/dictionary.html> (Accessed 2023-06-17.)
- Mikulėnienė, Danguolė & Stafecka, Anna (eds.). 2013. *Baltu valodu atlants,* Leksika 1: Flora = Baltų kalbų atlasas, Leksika 1: Flora = Atlas of the Baltic Languages, Lexis 1: Flora. Vilnius: Lietuvių kalbos institutas, Latvijas Universitātes Latviešu valodas institūts.
- Norvik, Miina & Balodis, Uldis & Ernštreits, Valts & Kļava, Gunta & Metslang, Helle & Pajusalu, Karl & Saar, Eva. 2021. The South Estonian language islands in the context of the Central Baltic area. *Eesti ja soome-ugri keeleteaduse ajakiri = Journal of Estonian and Finno-Ugric Linguistics* 12(2). 33–72. https://doi.org/10.12697/jeful.2021.12.2.02
- Orel, Vladimir E. 1986. Marginalia to the Polish-"Jatvingian" Glossary. *Indo*germanische Forschungen 91. 269–272.
- Petit, Daniel. 2010. Untersuchungen zu den baltischen Sprachen (Brill's Studies in Indo-European Languages & Linguistics, Vol. 4). Leiden: Brill.
- Schmid, Wolfgang P. 1986. Die "Germanismen" im sog. Polnisch-Jatvingischen Glossar. *Indogermanische Forschungen* 91. 273–286.
- Sehwers, Johannes. 1940. Die Kreewinen nebst einem Wörterverzeichnis der lettischen Lehnwörter in ihrer Sprache. *Wörter und Sachen, Neue Folge III (Band 21)*. 65–77.
- Sjögren, Andreas Johan. 1849. Bericht über eine im Auftrag der russischen geographischen Gesellschaft während der Sommermonate des Jahres 1846 nach den Gouvernements Livland und Kurland unternommene Reise zur genauen Untersuchung der Reste der Liven un Krewingen. Denkschriften der russischen geographischen Gesellschaft zu St. Petersburg, Erster Band. Weimar. 453–605.

- Szatkowski, Piotr. 2021. Language practices in a family of Prussian language revivalists: Conclusions based on short-term participant observation. *Adeptus* 18. Article 2626. https://doi.org/10.11649/a.2626
- Teras, Pire & Tuisk, Tuuli. 2021. Broken tone in Livonian and Leivu. *Proc. 1st International Conference on Tone and Intonation (TAI)*. 26–30. https://doi.org/10.21437/TAI.2021-6
- Thomsen, Vilhelm. 1890. Beröringer mellem de finske og de baltiske (litauisklettiske) sprog: En sproghistorisk undersøgelse. København: Blanco Lunos.
- UNESCO = Białowieża Forest. https://whc.unesco.org/en/list/33/ (Accessed 2023-06-16.)
- Vaba, Lembit. 2014. Curonian linguistic elements in Livonian. *Eesti ja soomeugri keeleteaduse ajakiri = Journal of Estonian and Finno-Ugric Linguistics* 5(1). 173–191. https://doi.org/10.12697/jeful.2014.5.1.09>
- Viitso, Tiit-Rein & Ernštreits, Valts. 2012. $L\bar{i}v\tilde{o}k\bar{i}el-\bar{e}stik\bar{i}el-letk\bar{i}els on aront \tilde{o}z = Liivi-eesti-läti sõnaraamat = L\bar{i}biešu-igauņu-latviešu vārdnīca. Rīga Tartu: Latviešu valodas aģentūra Tartu Ülikool.$
- Wiedemann, Ferdinand Johann. 1871. Über die Nationalität und die Sprache der jetzt ausgestorbenen Kreewinen in Kurland. Mémoires de l'Académie Impériale des Sciences de St.-Pétersbourg, VII^E Série, Tome XVII, No. 2.
- Winkler, Eberhard. 1997. Krewinisch: Zur Erschließung einer ausgestorbenen ostseefinischen Sprachform. Wiesbaden: Harrassowitz Verlag.
- Witczak, Krzysztof Tomasz. 2020. Ugrofinizmy w języku jaćwieskim. *Acta Baltico-Slavica* 44. 142–167. https://doi.org/10.11649/abs.2020.008
- Zeps, Valdis 1962: *Latvian and Finnic linguistic convergences*. (Indiana University Publications. Uralic and Altaic Series, Vol. 9). The Hague: Mouton & Co.

Zinkevičius, Zigmas. 1984. Lietuvių kalbos kilmė. Vilnius: Mokslas.

- Zinkevičius, Zigmas. 1985a. Lenkų-jotvingių žodynėlis? *Baltistica* XXI(1). 61–82.
- Zinkevičius, Zigmas. 1985b. Lenkų-jotvingių žodynėlis? (Tęsinys). *Baltistica* XXI(2). 184–194.