

## **Towards a historical phonology of the Yeniseian languages Vowels in anlaut and inlaut position**

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**Abstract:** In this study, correspondence sets for word-initial vowels and vowels between consonants are presented, involving all six attested members of the Yeniseian language family. These data are analysed by means of a systematic application of the Comparative Method aiming at a reconstruction of the Proto-Yeniseian vowel system as well as further insight on the intra-familial phylogenesis. The following results are derived from the data: (I) Ket and Yugh behave mostly identical regarding vowel quality and tone, except for a specific sound change \*i > e after  $\chi$  in Yugh. (II) In most of the Yeniseian branches, neighbouring uvular as well as labial stops are primary catalysts of vowel splits. (III) For Proto-Yeniseian, mostly the North-Yeniseian vowels are reconstructed, due to their extremely conservative development, while the other branches exhibit more secondary vowel changes.

**Keywords:** Yeniseian, Proto-Yeniseian, Comparative Method, linguistic reconstruction, correspondence sets, vowels.

### **1 Introduction**

The Yeniseian or Yeniseic languages are a group of genetically related languages within the paleo-Siberian<sup>1</sup> classification. They include Ket as well as the now extinct languages Yugh, Kott, Arin, Assan and Pumpokol. Fortunately, we have records since the time of the first explorers of Siberia in the 18th century, who left us valuable descriptions of the country and its people, as well as word lists of the languages they found. Thanks to them, the Assan, Arin and Pumpokol languages did not die out without leaving traces of their existence, which is what makes the present research possible. Since the work

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<sup>1</sup> The term paleo-Siberian refers not to a group of genetically related languages but rather to those which are not part of the recently expanding Uralic, Tungusic or Turkic family.

of Matthias Alexander Castrén in the 19<sup>th</sup> century we possess detailed linguistic treatises of Kott, Yugh and Ket, of which the last two were thoroughly investigated and documented by Andreas Dulson, Heinrich Werner, Stefan Georg, and Edward J. Vajda in years of field research in the end of the 20<sup>th</sup> and the beginning of the 21<sup>st</sup> century. Heinrich Werner in particular shaped the field of Yeniseian studies by publishing extensive grammars and the comparative dictionary which forms the basis of the present work, as well as discovering the four syllable tones of Ket and Yugh, which has had a strong impact on the research from then on.

In recent years, the Yeniseian languages have been famous mostly for being the subject of macro-familiar studies, the best known of which is the Dené-Yeniseian hypothesis of Edward J. Vajda, seeking to establish a distant genetic relationship between the Yeniseian languages of Siberia and the Na-Dené languages of North America. However, to prove any long-distance relationships between language families, the family-internal history has to be thoroughly analysed first. Although attempts at a reconstruction of Proto-Yeniseian have been made by scholars like Starostin and Werner, no systematic analysis through consequent application of the Comparative Method has taken place until now. This includes the establishment of sound correspondence sets and the derivation of sound laws, the use of isoglosses to determine the relationship between the languages and their position within the family tree, as well as the reconstruction of the Proto-Yeniseian language through the reconstruction of each branch. The Comparative Method has been successfully applied in historical linguistics for many years and has given us a comprehensive understanding of many language families like Indo-European and Uralic, including the language change processes involved.

In this work, we will apply the Comparative Method to the six attested Yeniseian languages and investigate the sound correspondences between the Yeniseian vowels in word-initial position and in inlaut between consonants. Based on (Southern) Ket, we will compile correspondence sets for each of the seven vowel phonemes, resulting in 14 chapters in which each table will be analysed and discussed. If more than one pattern can be discerned for one vowel correspondence, the chapter may be split to examine each pattern separately. In chapter 5, the results of each correspondence set will be gathered to permit a reconstruction within the different branches and, based on the outcomes, of the Proto-Yeniseian language. Of course, systematic problems such as the imprecise early documentation and the scarcity of the data, as

well as transcription errors and the lack of information about the tonal properties of the Yeniseian languages until the 20<sup>th</sup> century must be considered as well.

The present work is associated with the series of papers published by Bonmann et al. at the University of Cologne, which aim at a new reconstruction and study of the Yeniseian languages from a comparative-historical perspective based on strict application of the Comparative Method. So far, papers on word-initial as well as word-final consonants have been published, which are based on the same material as the present work. The preparation and compilation of the data based on Werner's "Vergleichendes Wörterbuch der Jenissei-Sprachen" (Werner 2002a, 2002b) was not conducted by the author of this paper alone, but in cooperation with Svenja Bonmann, Simon Fries, Eugen Hill, and Natalie Korobzow. The way the data are presented as well as the notation of the syllable tone are also adopted from the aforementioned publications.

For the reader's orientation, a short overview of previous research as well as general information on the Yeniseian language family will be given first. This involves data about the languages, their speakers and their geographical distribution, as well as dialectal variation and a short overview of the history of their study. We will summarize their most important typological features, including phonology and tonal properties, morphological characteristics, and syntax, as well as the current state of knowledge regarding genetic relationships between the languages and their position in the Yeniseian family tree.

## **2 The Yeniseian languages**

In this chapter, an overview of the Yeniseian language family as well as previous research will be given. Starting from the history of investigating the Yeniseian languages, we will proceed to discuss the genetic relationships within the family and the family tree, give some general typological information and finally outline the problems associated with current research and the investigation at hand.

## 2.1 History of research

The first mentions of the Yeniseian peoples and languages date from the time following the expansion of the Russian empire and the beginning exploration of Siberia by fur trappers and government officials towards the end of the 16<sup>th</sup> century. They left valuable notes about the lifestyle of the indigenous peoples they encountered on their journeys through western Siberia. The first systematic investigations, however, were ordered in the 1720s by Tsar Peter the Great, who sent scholars eastwards to describe the flora and fauna as well as the natives of his realm (Vajda 2013: 1–2). The first word lists of Yeniseian languages were made by the German physician Daniel Gottlieb Messerschmidt in the year 1723 (Lehfeldt 2023: 314) and Swedish officer and geographer Philipp Johann von Strahlenberg, who accompanied Messerschmidt during the same expedition.

It must be noted that both pioneers of Siberia were amateur linguists at best, with their focus of research lying in the flora and fauna as well as geography of the unexplored north of Asia. Thus, 31 of Messerschmidt's 27 entries in his Yeniseian word list (“Dencka-Asstiacki ad Jenizee et Oelugúi, Oesth-tschésch fl. etc. 1723. add.”) are bird names (Lehfeldt 2023: 314). As a result, the linguistic material must be regarded with a certain caution, since variation in the data can be due to actual variation in the input or inconsistency in the notation. As an example, in many word lists, the possessive prefix is often found preceding the actual nouns, meaning that the scholar recorded, e.g., ‘my father’ instead of the intended ‘father’. Still, these first records prove to be of invaluable importance to today's research since half of the Yeniseian languages went extinct within less than 100 years of their first account.

We owe further records to Johann Georg Gmelin and historian Gerhard Friedrich Müller (M) who travelled Siberia in the Second Kamchatka Expedition 1733 to 1743 as well as subsequent journeys by the historian and linguist Johann Eberhard Fischer, geographer and natural scientist Peter Simon Pallas and linguist Heinrich Julius Klaproth. Although partly unavailable today, some of the data found their way into the comparative dictionary through linguists Andreas Dulson and Eugen Helimski (H; = Evgenij A. Xelimskij), who had access to the original word lists. Of special interest are

also the extensive word lists and grammatical investigations of Ket, Yugh<sup>2</sup> and Kott created by Matthias Alexander Castrén (C) in the first half of the 19<sup>th</sup> century and published posthumously in 1858 by Anton Schiefner (“Versuch einer Jenissei-Ostjakischen und Kottischen Sprachlehre”). When Castrén travelled Siberia, he could not find any traces of Arin, Assan and Pumpokol, which therefore must have gone extinct between the end of the 18<sup>th</sup> and the beginning of the 19<sup>th</sup> century. Kott, as well, was believed to be extinct, but Castrén managed to find five competent speakers of the language, who had founded a little village near the river Agul in order to keep their language and nationality intact and pass it on to the next generation (Castrén 1858a: 87–88). Despite this effort, Castrén’s material on the Kott language is the last record we have of it, leaving Yugh and Ket as the only living members of the Yeniseian language family, whose number, according to Castrén, amounted to barely 1000 speakers at the time.

Since the end of the last millennium, an increasing amount of research on the remaining two languages has been conducted and this time by expert linguists. The most comprehensive research on Ket and Yugh has been conducted by Heinrich Werner, who in the years 1961–1990 did field work in several villages near the Yenisei river (Werner 2002a: 1). He not only wrote numerous treatises on grammatical phenomena and discovered the tonal system in Yeniseian but also assembled the word lists of previous researchers as well as his own in a comparative dictionary of the Yeniseian languages, which will be used as the basis for the present paper. Since Yugh died out even during the years of Werner’s field research, his work was the last conducted on the Yugh language. Another extensive study of Ket, resulting in a written grammar of the language, was conducted by linguist Stefan Georg in 1999–2001 (Georg 2007: 38). The written and audio material gathered by these researchers is invaluable for future research, although much of it still remains to be properly transcribed and archived. Another huge addition to the knowledge about the Yeniseian languages has been made by Edward

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<sup>2</sup> Castrén speaks of Yenisei-Ostyak as a linguistic unit with Imbat (Imb.) (“imbatzisch”, = Ket) and Sym (= Yugh) as dialects. Therefore, in his word lists, entries are often marked with the collective term “Ostyak” (Ost.) that can refer to either language. To complicate things even further, the same term (Russ. Остяк) is used by many scholars of the 18<sup>th</sup> and 19<sup>th</sup> century and as a self-designation for different Uralic and Yeniseian peoples of Central Siberia, due to their similar lifestyle (Werner 2002b: 46). For a detailed explanation see Georg 2007: 11–12.

Vajda who did field research on the Ket language around the turn of the millennium and wrote the first extensive English grammar of Ket (Vajda 2004). He is one of the world's leading researchers on Yeniseian and has been instrumental in shaping the debate about the reconstruction of Proto-Yeniseian and its genetic relations.

Of course, apart from the above mentioned, mainly German scientists, numerous early Russian researchers investigated the Yeniseian languages and culture. Their findings, however, are inaccessible to the author due to the language barrier and the fact that they are often not digitalized and will therefore, with some exceptions, be disregarded in the present paper. This also applies to the first attempts at a reconstruction of Proto-Yeniseian by Sergej A. Starostin in the second half of the 20<sup>th</sup> century, which will be discussed elsewhere.

The fact that many scholars from various linguistic backgrounds and at different points in time contributed to our present knowledge of the Yeniseian languages, significantly shapes the material available. Not only did the individual native languages of the recording researchers influence the way they documented the languages, but also their respective writing traditions. Messerschmidt's word lists taken from Messerschmidt (1964: 64–65), for instance, reflect German orthography, which can be seen in the evidence of the Eed-Šeš dialect, i.e. *sch* for *š*, *ch* for *χ* or *Vh* for *Ṽ*. In this paper, if possible, the original notation is used to avoid transcription errors from conversion and adaptation between different writing systems.

## 2.2 Origin and distribution

Although old tax registers show evidence of more than the six Yeniseian languages we know of, these languages left no more than a few toponyms and clan names, their speakers having been absorbed into the Russian, Turkic or Samoyedic speaking communities before the first scholars recorded the Yeniseian languages. Among others, this probably applies to the Yarin (Buklin), Yastin, Baikot and Ashkyshtym people (Vajda 2004: 1; Werner 2005: 2). For comparative purposes such as the present paper, we must therefore rely on the six recorded languages and their varieties only.

About the origin of the Yeniseian language family and their speakers, little is known, since there are no records prior to the end of the 16<sup>th</sup> century at which point Yeniseian languages are believed to have existed for around