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ХОРОГСКИЙ ГОСУДАРСТВЕННЫЙ УНИВЕРСИТЕТ

## Introduction

In July 2008, a team of scholars gathered at a month-long workshop at the University of Kentucky to launch a long-term collaboration devoted to producing a comprehensive grammar of Shughni. The core participants at this workshop included four language specialists from Khorog State University (all of them native speakers of Shughni), four linguists on the University of Kentucky faculty, and five students at Kentucky.

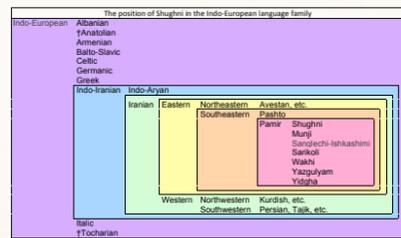
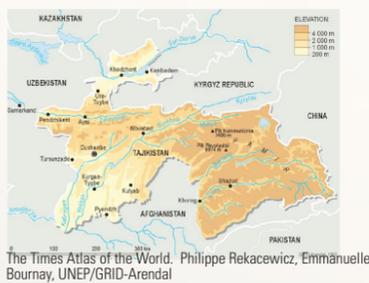
The strength of this project is that it has been planned to take the fullest possible advantage of the synergistic activity of participants with diverse areas of training and specialization.

- Our team of linguists includes native Shughni speakers who are active participants in the small but energetic community of language researchers in Tajikistan.
- Our team of linguists includes specialists in varied areas of linguistic theory and analysis, including lexicology, morphosyntax, semantics, and historical linguistics.
- The members of our team have extensive experience both with digital recording technology and with computational resources for language documentation.
- Our team incorporates specialists in nonlinguistic areas of study relevant to assembling the projected grammar, including specialists in anthropology, computer science, folklore, geography, and documentary filmmaking.

## About Shughni

Shughni is an Indo-European language; it belongs to the Pamir branch of Southeastern Iranian languages. It is spoken by approximately 40,000 people in the Pamir mountains of eastern Tajikistan and by roughly 20,000 more in adjacent regions of Afghanistan. Like its closest relatives (Yazgulyam in Tajikistan; Sarikoli in China; Munji and Sanglechi-Ishkashimi in Afghanistan; and Wakhi and Yidgha in Pakistan), it is an endangered language. There is no written tradition in Shughni, many of whose speakers also use Tajiki (a Western Iranian language, the majority language of Tajikistan) and Russian. Although grammatical sketches of Shughni exist and more detailed accounts of particular aspects of Shughni grammar have been published in Russian and Tajiki, no comprehensive grammar of Shughni has ever been published.

In the Pamir Mountains of eastern Tajikistan, Shughni has the status of a lingua franca among speakers of the other, smaller Pamirian languages. For this reason, our research is a necessary first step towards a more comprehensive study of the Pamirian language group, whose members are all underdocumented and are at varying degrees of endangerment. In the longer term, we intend to undertake fuller documentation of all of these languages.



## Project Participants

### In Tajikistan

**Muqbilsho Alamshoev**, Head of the Department of Pamirian Languages, Institute of Humanities of the Tajik Academic of Sciences; Khorog State University  
**Shoxnazar Mirzoev**, Vice Director of the Institute of Humanities of the Tajik Academy of Sciences; Foreign Language Department, Khorog State University  
**Gulnoro Mirzovafoeva**, English Department, Khorog State University  
**Shahlo Nekushoeva**, Department of Tajik Language and Literature, Khorog State University; student at the Institute of Humanities of the Tajik Academy of Sciences

### In Kentucky

**Stanley Brunn**, Professor of Geography, University of Kentucky  
**Raphael Finkel**, Professor of Computer Science, University of Kentucky  
**Andrew Hippisley**, Assistant Professor of Linguistics, University of Kentucky  
**Diane King**, Assistant Professor of Anthropology, University of Kentucky  
**Mark Richard Lauersdorf**, Associate Professor of Languages and Linguistics, University of Kentucky  
**Jeanmarie Rouhier-Willoughby**, Associate Professor of Russian and Linguistics, University of Kentucky  
**Igor V. Sopronenko**, Documentary Film Producer/Director, Signature Media Production LLC, Lexington, Kentucky  
**Gregory Stump**, Professor of Linguistics, University of Kentucky



Muqbilsho Alamshoev, Shoxnazar Mirzoev, Gulnoro Mirzovafoeva

## Project Resources

### The Collaboratory for Research in Computing for Humanities

The Collaboratory for Research in Computing for Humanities (RCH), a research unit of the University of Kentucky, brings together faculty and students from engineering, computer science, and the humanities for mutually beneficial collaboration on research projects in the Digital Humanities, and encourages and supports interdisciplinary projects among partners from UK and around the world.

The main lab (the "Digital Research Incubator") of the RCH provided an ideal environment and toolset for digitally-enhanced research collaboration during the Shughni Workshop in July 2008:



Shahlo Nekushoeva discussing research plans in Shughni at the University of Kentucky's RCH Collaboratory

- all work sessions were recorded in digital audio and video and stored as lossless, archive-quality media files
- all elicited examples were keyboarded directly as digital text and projected onto the whiteboard for immediate group verification, correction, annotation, and discussion, and archived as written documentation of sessions
- verbal morphology data were entered directly into KATR (a set-based extension of DATR) for "on-the-fly" paradigm generation and verification, as well as immediate adjustment of KATR rules
- all digital materials were immediately uploaded onto a networked server for anytime/anywhere retrieval by team members

### KATR

DATR is a language for lexical knowledge representation designed and implemented by Roger Evans and Gerald Gazdar (Evans & Gazdar 1996). KATR is an extension of DATR designed and implemented by Raphael Finkel and Gregory Stump; its main deviation from DATR is that it allows a word's morphosyntactic properties to be represented and manipulated as an essentially unordered set. Finkel has used KATR to devise a formal definition of (a fragment of) Shughni verb morphology; this definition allows a verb's paradigm to be computed automatically. This facilitates the checking of hypothesized forms with native speakers and is affording the development of an extremely precise model of Shughni morphology. Below is the paradigm of forms which Finkel's program generates for the Shughni verb *nistow* 'sit down'.

infinitive		nis-tow						
imperative	ng	niš-et	pl					
positive	niš	niš	niš-et					
negative	niš niš	niš niš-et						
present	1sg	masculine	wuz niš-um	feminine	wuz niš-um	1pl	masculine	māš niš-ām
	2sg	masculine	tu niš-i	feminine	tu niš-i	2pl	masculine	tama niš-et
	3sg	masculine	yu niš-t	feminine	yu niš-t	3pl	masculine	wāš niš-en
past	1sg	masculine	wuz-um niš-t	feminine	wuz-um niš-t	1pl	masculine	māš-ām niš-t
	2sg	masculine	tu-yat (tu-t) niš-t	feminine	tu-yat (tu-t) niš-t	2pl	masculine	tama-yet (tam-et) niš-t
	3sg	masculine	yu niš-t	feminine	yu niš-t	3pl	masculine	wāš-en niš-t
perfect	1sg	masculine	wuz-um niš-c	feminine	wuz-um niš-c	1pl	masculine	māš-ām niš-c
	2sg	masculine	tu-yat (tu-t) niš-c	feminine	tu-yat (tu-t) niš-c	2pl	masculine	tama-yet (tam-et) niš-c
	3sg	masculine	yu niš-c	feminine	yu niš-c	3pl	masculine	wāš-en niš-c

## Shughni Verb Morphology Close Up

One aspect of Shughni grammar to which we have devoted particular attention is the system of verb inflection. In the present tense, verb inflection is comparatively ordinary, with person/number agreement suffixes on the verb. In the past tense, by contrast, agreement is marked by means of Wackernagel clitics.

Present tense of <i>wiftow</i> 'knit'			Past tense of <i>wiftow</i> 'knit'				
wuz	wāf-um	'I knit'	wuz -um	wift	'I knitted'	biyor-um	wuz wift.
tu	wāf-i	'you (sg.) knit'	tu -t	wift	'you (sg.) knitted'	yesterday-1sg	I knit.PAST.STEM
yu / yā	wof-t	'he / she knits'	yu / yā -yi	wift	'he / she knitted'		'Yesterday I knitted.'
māš	wāf-am	'we knit'	māš -am	wift	'we knitted'	wift-um.	
tama	wāf-et	'you (pl.) knit'	tama -yet	wift	'you (pl.) knitted'	knit.PAST.STEM-1sg	
wāš	wāf-en	'they knit'	wāš -en	wift	'they knitted'		'I knitted.'

There is a special subclass of verbs with distinct behavior in the past tense, e.g. *wirivdow* 'stand': these verbs exhibit gender/number agreement in the main verb, and the 3sg agreement clitic is absent. In both respects, this special past-tense construction resembles the predicative adjective construction in the present tense. The differences between the majority type (e.g. *wiftow* 'knit') and the minority type (e.g. *wirivdow* 'stand') may be summarized as in the table on the right. This difference is a vestige of partial ergativity in pre-Shughni (Payne 1980).

Past tense of <i>wirivdow</i> 'stand'		Present-tense forms of the enclitic copula		MAJORITY TYPE (e.g. <i>wiftow</i> 'knit')		Minority type (e.g. <i>wirivdow</i> 'stand')	
wuz -um	wirivd	'I (masc.) stood'	wuz -um	zulik.	'I (masc.) am tall.'	Agreement marking is -yi in 3sg past	No overt person agreement in 3sg past
wuz -um	wirovd	'I (fem.) stood'	wuz -um	zalik.	'I (fem.) am tall.'		
tu -t	wirivd	'you (masc. sg.) stood'	tu -t	zulik.	'You (masc. sg.) are tall.'		
tu -t	wirovd	'you (fem. sg.) stood'	tu -t	zalik.	'You (fem. sg.) are tall.'	No gender agreement	Gender agreement in past tense
yu	wirivd	'he stood'	yu	zulik.	'He is tall.'		
yā	wirovd	'she stood'	yā	zalik.	'She is tall.'		
māš -am	wirovd	'we stood'	māš -am	zalik.	'We are tall.'	No gender agreement	Gender agreement in past tense
tama -yet	wirovd	'you (pl.) stood'	tama -yet	zalik.	'You (pl.) are tall.'		
wāš -en	wirovd	'they stood'	wāš -en	zalik.	'They are tall.'		

### Present-tense agreement suffixes in four Pamirian languages

	Jazguljami		Bartangi		Shughni		Orosori	
	Singular	Plural	Singular	Plural	Singular	Plural	Singular	Plural
1 <sup>st</sup>	-in	-am	-um	-an	-um	-ām	-um	-an
2 <sup>nd</sup>	-ay	-it	-i/zero	-at/-af	-i	-et	--	-at/-af
3 <sup>rd</sup>	-t/-d	-an	-t/-d	-an	-t/-d	-en	-t/-d	-an

We have begun a close comparison of the verb system of Shughni with those of other Pamirian languages, including those exemplified here. The Pamirian languages vary in the degree to which they have retained features of their shared ancestor's partial ergativity.

### Past-tense auxiliary clitics in four Pamirian languages

	Jazguljami				Bartangi			
	Intransitive Singular	Transitive* Singular	Intransitive Plural	Transitive* Plural	Intransitive Singular	Transitive Singular	Intransitive Plural	Transitive Plural
1 <sup>st</sup>	-am	-an	-am	-an	-um	-an	-um	-an
2 <sup>nd</sup>	-at	-af	-at	-af	-at	-af/-at	-at	-af/-at
3 <sup>rd</sup>	--	-an	-ay	-af	zero	-an	-i/zero	-af* /-an

Verbal morphosyntax is by no means the only feature of Shughni grammar that has drawn our attention; others include a system of obviation encoded by deictic adverbs, apparent instances of an associative plural inflection, and the incidence of complementizer agreement in cleft sentences.

Shughni				Orosori	
Intransitive Singular	Transitive Singular	Intransitive Plural	Transitive Plural	Singular	Plural
1 <sup>st</sup>	-um	-ām	-um	-an	-an
2 <sup>nd</sup>	-at	-et	-at	-af	-af
3 <sup>rd</sup>	--	-en	-i	-af	-af

## Outcomes and Student Research

### Some preliminary outcomes of our research

Andrew Hippisley & Gregory Stump, 'Periphrasis and Shughni verb inflection', paper presented at the Southeast Morphology Meeting, University of Surrey, Guildford, United Kingdom, September 26, 2008.

Andrew Hippisley & Gregory Stump, 'The wonders of morphology: The Shughni past tense', English Department Colloquium, University of Kentucky, November 14, 2008.

Andrew Hippisley, Gregory Stump & Raphael Finkel, 'Computing in the field: Language modelling for elicitation and documentation of Shughni', paper presented at the 1st International Conference on Language Documentation and Conservation University of Hawai'i at Manoa, March 12-14, 2009.

Andrew Hippisley & Gregory Stump, 'Valence sensitivity in Pamirian past-tense inflection: A realizational analysis', to appear.

Shohnazar Mirzoev & Jeanmarie Rouhier-Willoughby, 'Synonymy in the Functional Parts of Speech in Shughni', to appear.



Shahlo Nekushoeva consulting with students in Andrew Hippisley's "Grammatical Analysis" course

### Student research

Since the inception of our work on Shughni, student participation has been an important component of the project. In the spring semester of 2007, Greg Stump had students in his Grammatical Analysis course investigate Shughni morphosyntax through consultation with Gulnoro Mirzovafoeva; in the spring semester of 2009, Andrew Hippisley has had his students in this same course prepare analyses of Shughni through their work with Shahlo Nekushoeva. Several students have begun to pursue more extensive work:

**Amanda Barie**, a graduate student in English and Linguistics, is currently finishing her Master's thesis "Cleft Sentences and Other Aspects of Shughni Syntax" and will graduate in May 2009.

**Darya Bukhtoyarova**, an undergraduate anthropology major / linguistics minor, has been working as a research assistant on the Shughni project since August 2008, abstracting and translating Shughni descriptions written in Russian, doing bibliographic work, and working on the compilation of a database of the Shughni verb system.

**Ashley Cowan**, an undergraduate linguistics major, is working on an independent study project involving the compilation of a database of the Shughni verb system.

**Jonathan Fisher**, an undergraduate linguistics major, is working on an analysis of the Shughni system of adpositions; this analysis incorporates both formal and sociolinguistics components. For this research, he is co-recipient of the Linguistics Program's Undergraduate Research Award for 2009.

**Dustin Zerrer**, an undergraduate linguistics major, has undertaken an analysis of the Shughni system of kinship terminology in comparison with those of Persian, Pashto, and Kurdish. For this research, he is co-recipient of the Linguistics Program's Undergraduate Research Award for 2009.