A corpus of Andi field recordings

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Outline of the talk

- Corpora of Linguistic Convergence Laboratory
- Corpora of minority languages of Russia: the Meadow Mari corpus
- The Andi language and the descriptive data available
- Our path towards the corpus and the challenges we have faced

Corpora of Linguistic Convergence Laboratory

Corpora of Linguistic Convergence Laboratory: http://lingconlab.ru/

- Russian Dialect corpora (14)
- Corpora of Bilingual Russian (7)
- Corpora of minority languages of Russia (6)

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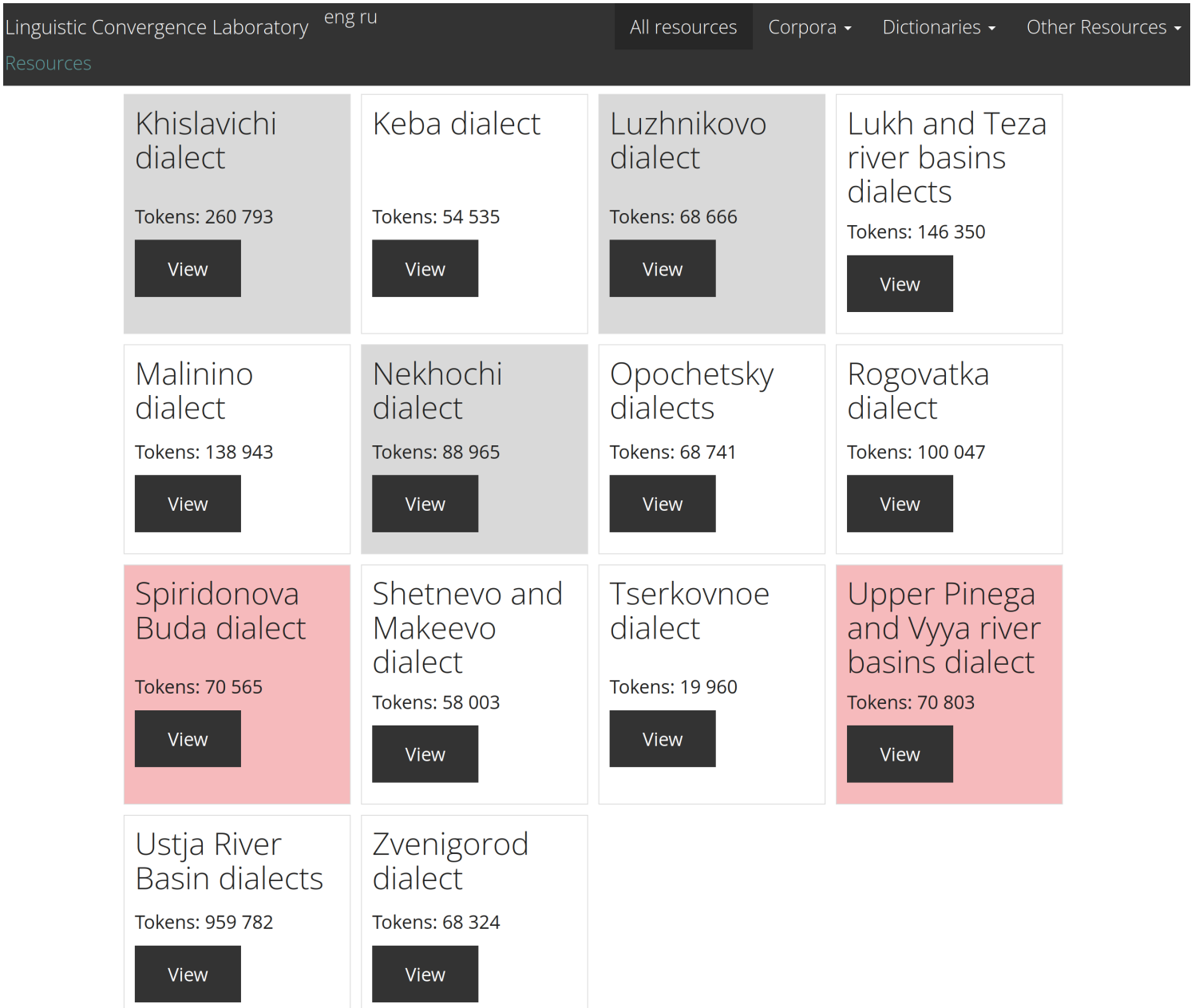

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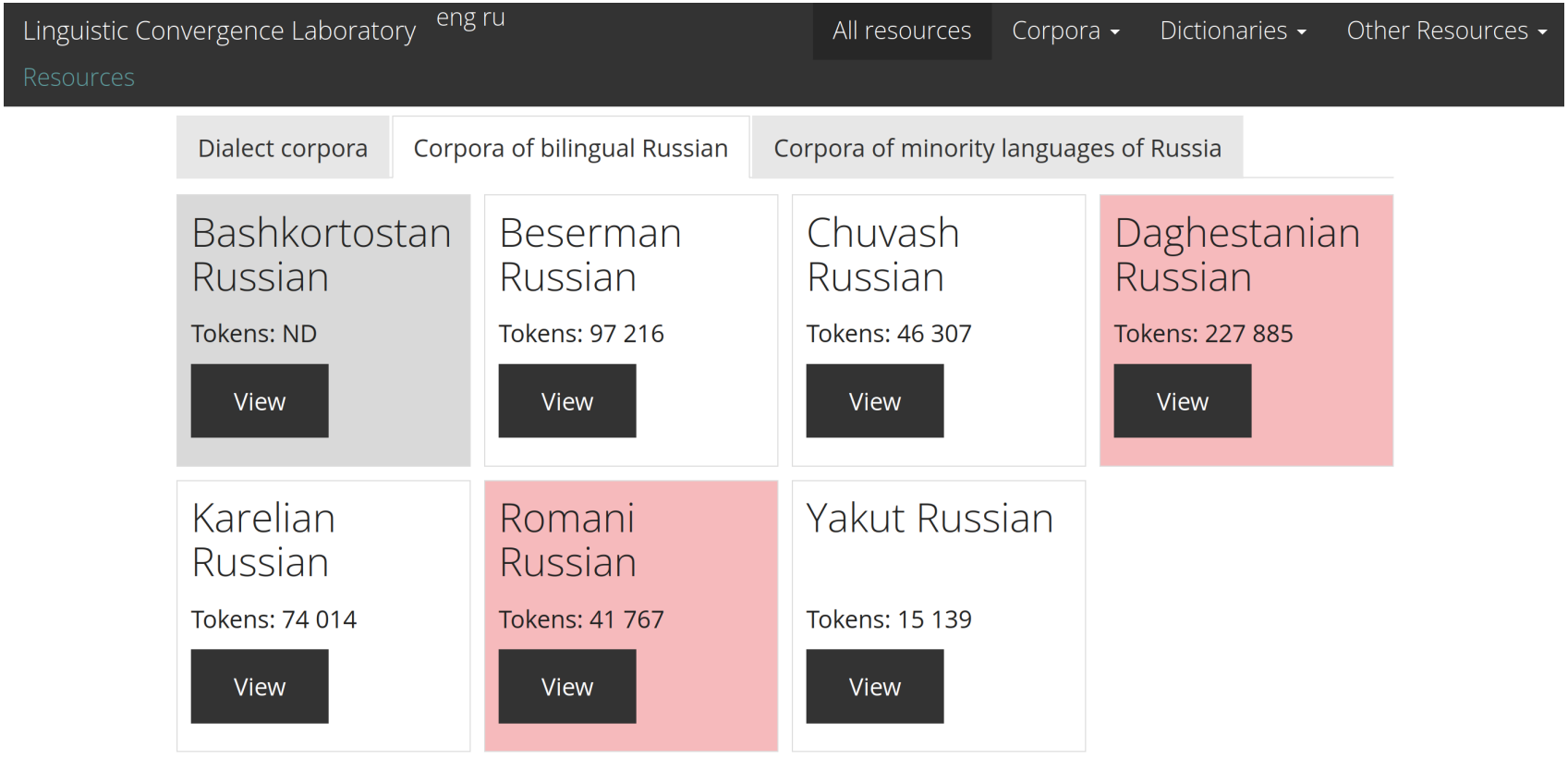

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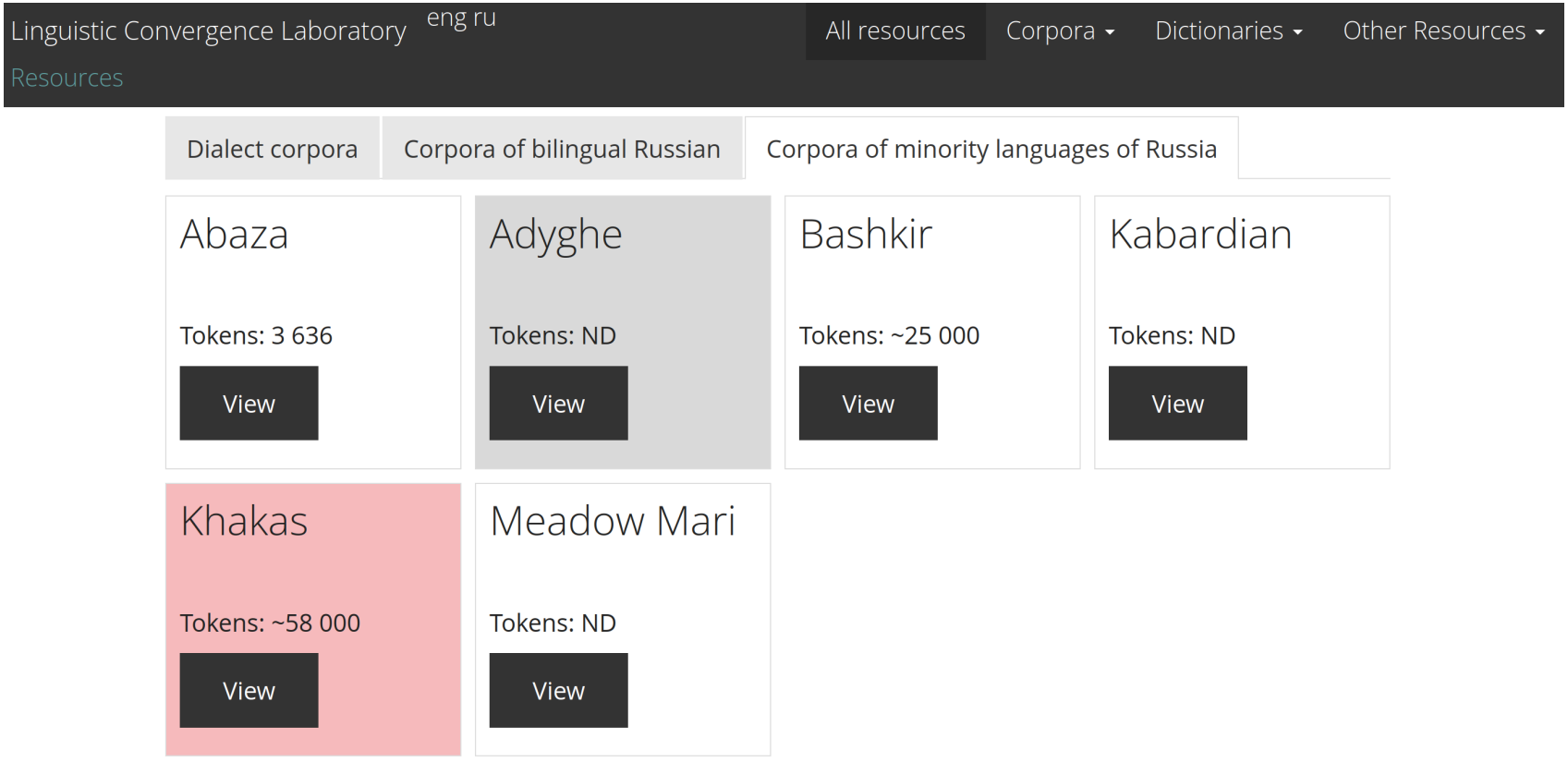

The spoken corpus of Meadow Mari

- Meadow Mari < Mari < Finno-Ugric < Uralic
- spoken in the Mari El republic and adjacent areas
- ~360.000 speakers (2010 Census)
- endangered (Ethnologue)
- written and taught in school
- relatively well-described: grammars, e.g. (Pengitov et al. 1961, Alhoniemi 1993), dictionaries, e.g. http://marlamuter.com/ru/
- several written corpora, e.g. http://corp.marnii.ru/# and http://meadow-mari.web-corpora.net/index_en.html

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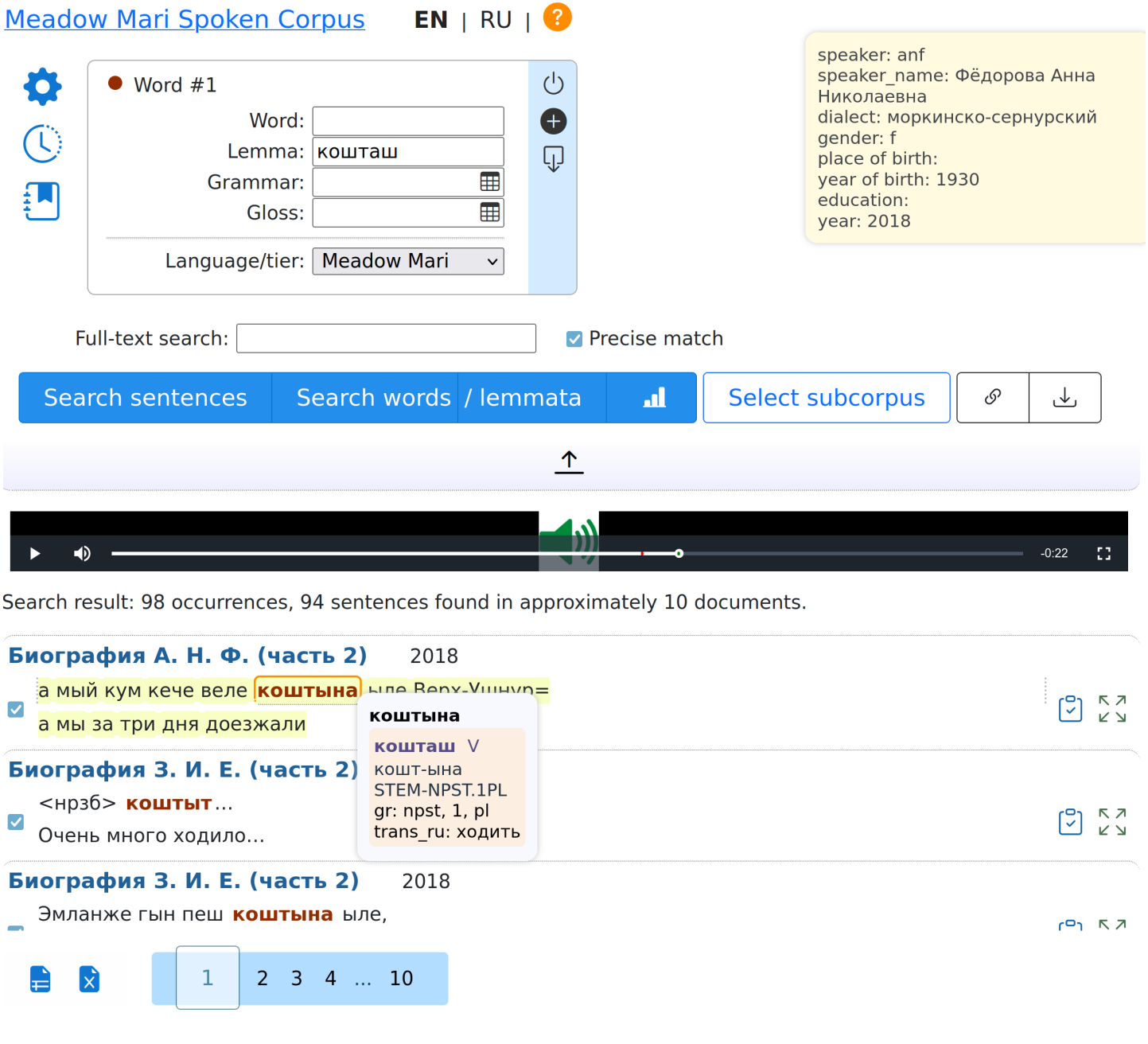
- several written corpora, e.g. http://corp.marnii.ru/# and http://meadow-mari.web-corpora.net/index_en.html
- texts come from the village of Staryj Torjal, Mari El republic

The spoken corpus of Meadow Mari: credits

- Anna Volkova
- Aigul Zakirova
- Mikhail Voronov
- Maria Dolgodvorova
- Zinaida Klyucheva
- Svetlana Kokoreva
- Ilya Makarchuk
- Irina Khomchenkova
- Timofey Arkhangelskiy
- Elena Sokur

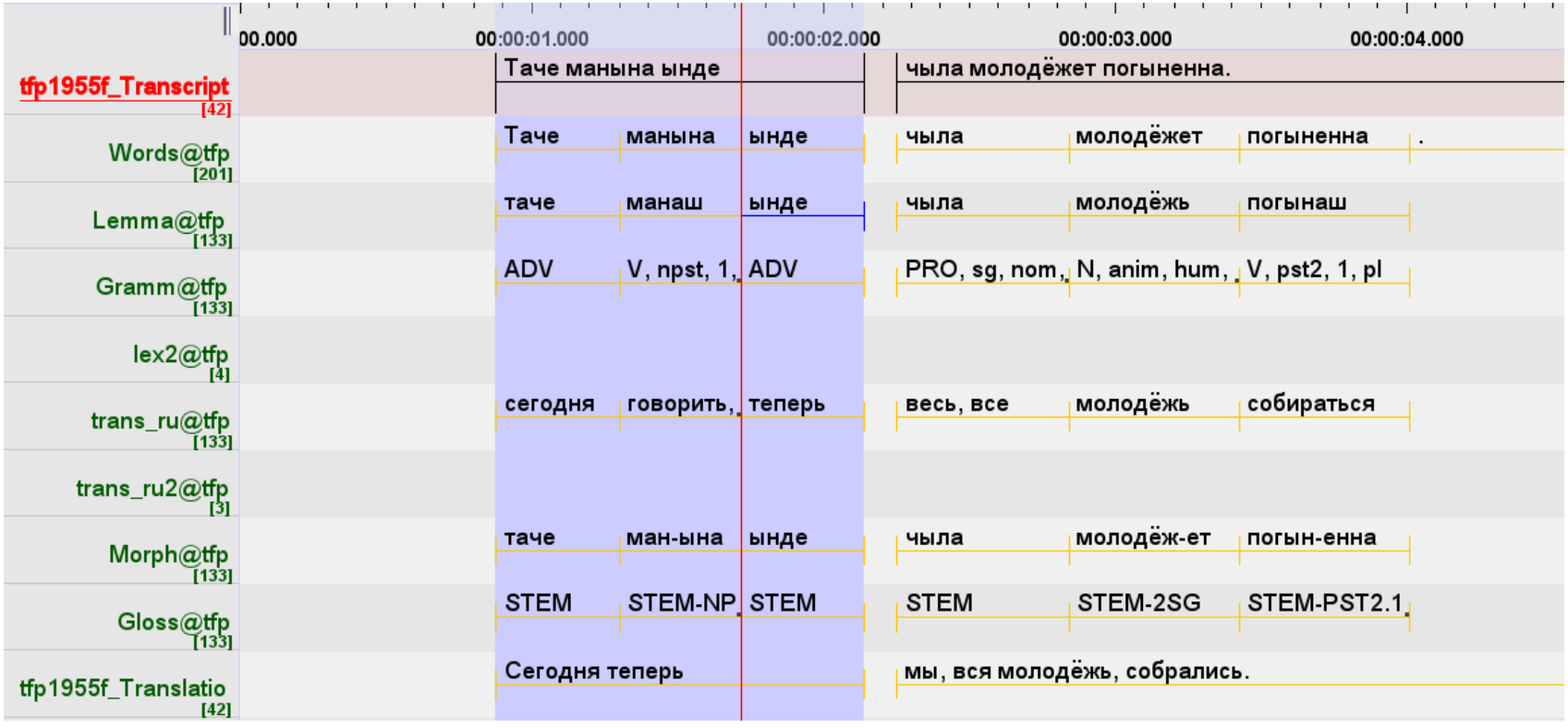
An example from the Meadow Mari corpus



An example from the Meadow Mari corpus

- created with Tsakorpus (Arkhangelskiy 2019)
- translation (into Russian)
- glosses
- audio
- export to `.xlsx`
- sociolinguistic information

An example of a required ELAN .eaf file



- hierarchy of tiers
- time alignment
- lemmatization

Pipeline used for the Meadow Mari corpus

- transcribing the texts by a native speaker of Meadow Mari;
- aligning sound and transcription in ELAN;
- proofreading of the texts by linguists;
- automatic glossing of texts with the help of a morphological analyzer
- modifying the analyzer (adding dialect-specific morphemes, correcting mistakes in the previous version of the analyzer)
- manually removing homonymy left after the morphological analysis.

Developing the corpus of Andi

The Andi Language: a sociolinguistic background

- Andic < Avar-Andic < East Caucasian, glottocode [andi1255]
- spoken in several villages of the Botlikh district of Dagestan (Upper dialects: Andi, Rikvani, Gagatli, Zilo, Chanko, Gunkha, Lower dialects: Kvankhidatli, Muni).
- more than 20,000 speakers of Andi [Aglarov (2002); All-Russian National Census 2010]
- rarely written (e.g. almost no books or newspapers, but Andi is used in messengers)

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- more than 20,000 speakers of Andi [Aglarov (2002); All-Russian National Census 2010]
- rarely written (e.g. almost no books or newspapers, but Andi is used in messengers)
- Andi speakers are trilingual in Andi, Avar and Russian
- Avar serves as a lingua franca in the area and is taught in school (Dobrushina et al. 2017)
- Andi speakers write using the Avar alphabeth

Andic data

	Andi	Rikvani	Gagatli	Zilo
sources	(Kibrik and Kodzasov 1988; Alekseev 1999; Dirr 1906; Tsertsvadze 1965);	(Sulejmanov 1957)	(Salimov 2010)	(Kaye et al. rthc)
grammar sketch	+	+	+	+
dictionary	+	-	±	±
morphological parser	±[1]	-	-	-

[1]A first version of a morphological parser of Andi is presented in (Buntyakova 2022).

Andic data

- Written texts from grammar sketches, some with translation
- Field recordings from 1 trip to Rikvani, a few trips to Muni and Kvankhidatli, and several trips to Zilo
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- Recordings were made my different researchers, with different approaches to recording and processing
- We have approximately 8.27 hours of recordings
  - 7.77 hours are transcribed
  - 3 hours are aligned with sound
  - 17.35 minutes are fully glossed

Problems

- Andi has several dialects and no cross-dialectal standard;
  - no full-fledged dictionary (but there exist word lists in Sulejmanov 1961, Salimov 2010, Kibrik, Kodzasov 1990)
  - no full-fledged morphological analyzer (but there exists a first attempt in (Buntyakova 2022))
- Our recorded data are heterogeneous:
  - different dialects
  - different conventions
  - different file formats
- Due to our limited knowledge of the Andi dialects, sometimes we do not know what the correct analysis of a given word form is.

Morphological analyzer

(Buntyakova 2022):

- analyzes nominal morphology;
- works for the Andi dialect (based on word lists in Kibrik, Kodzasov 1990)

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- analyzes nominal morphology;
- works for the Andi dialect (based on word lists in Kibrik, Kodzasov 1990)
- for two test corpora, the analyzer was able to analyze 7.6% ~ 13.8% tokens (due to the fact that the analyzer only processes nominal morphology + there are different spelling conventions in corpora).

Plans

- collect an extensive word list for Zilo;
- convert the material to a singular format using `phonfieldwork` (Moroz 2020);

Plans

- preprocess the annotation files, converting them to ELAN `.eaf` format (Wittenburg et al. 2006);
- align them with the sound;
- gloss them manually;
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- repeat all previous steps, adding more audio files.

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- repeat all previous steps, adding more audio files.
- at the same time, continue developing the morphological analyzer of Upper Andi.

Conclusions

Conclusions:

- For a better-described language, we were able to use a morphological parser;
- For underdescribed languages, such as Andi, we still need to find the optimal way to develop the corpus, the dictionary and the parser.

Thank you for your attention!

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