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THE ATLAS OF NORTHEASTERN YIDDISH: ON THE STATUS OF MAPS IN LINGUISTIC RESEARCH

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Abstract. The paper introduces the application of cartographic methods to research on a culture at the last moment of its in situ existence. The atlas in progress seeks to determine the historic external borders, the internal differentiation and the cultural and linguistic structure and characteristics of Líte ([lítə] – the territory of traditional Jewish Lithuania (coterritorial with today's Lithuania, Latvia, Belarus, and swaths of northeastern Poland, northern and eastern Ukraine and westernmost Russia). The main linguistic data were initially organized by lists of locations where use of a particular form had been documented. Sparse information has been converted to a relational database model, linked to geographic data (locations) and analyzed. The discovered information was sufficient to approximately locate spatial clusters that were not thought to be recoverable when the project was initiated. The results of the geographic analysis are presented in the form of maps in the evolving draft of *Litvish: An Atlas of Northeastern Yiddish* that is accessible for preview at http://www.dovidkatz.net/WebAtlas/AtlasSamples.htm. The structure of the linguistic database also enables publication of the data as a web service representing the location of occurrences of linguistic forms on a larger scale map. However, the small scale linguistic maps represent characteristics of the dialect areas that are more convenient for readers who specialize in the relevant language and culture, but are not familiar with geospatial technologies.

Keywords: cartography, linguistic research, linguistic maps, dialects, dialectology, Yiddish atlas, Lithuania, Litvak.

1. Background

This project, the language atlas *Litvish: An Atlas of Northeastern Yiddish* was not conceived de novo. It was conceptualized on the basis of a century's work in Yiddish dialectology that had started with the non-Lithuanian ("southern") Yiddish dialects of Eastern Europe, in the works of Landau (1896) and Prilutski (1920 etc.), and came to encompass the North ("the Lithuanian area") in the Soviet Yiddish atlas of Vilenkin and Veynger (1931), and then, in the postwar (and still ongoing) *Language and Culture Atlas of Ashkenazic Jewry* (Herzog *et al.* 1992 etc.). The current project was born of frustration with the methodological and linguistic limitations of working exclusively with emigré informants (e.g. in North America or Israel), which had been the only kind of taped dialectological research possible during the Cold War and Soviet times. Nevertheless, Jean Jofen (1953) had demonstrated the plausibility of atlas construction with emigré informants, and Uriel Weinreich had constructed a brilliant blueprint for a major Yiddish language atlas in North America (see e.g. U. Weinreich 1960) which evolved into the *Language and Culture Atlas of Ashkenazic Jewry.*

With the collapse of the USSR, possibilities opened up for a project to find and systematically interview such informants as could still be found in situ, though it was known from the start that in view of the Holocaust and the minimal remnant nature of survivors on the territory that had been occupied by the Third Reich, there could be no systematic geographic coverage (e.g. to obtain evenly distributed data from all or equidistant points on a grid). Still, for the practice of dialectology, the emergence of classic patterns of linguistic differentiation, clustering and patterned geolinguistic gradation are firm signs of accurate retrieval of data even from such scattered "mohican" informants. Moreover, the discovery and documentation of survivors in their eighties or nineties, some of whom were the last speakers of Yiddish in their towns or regions, represented an eleventh hour opportunity not only for Yiddish dialectology, but a project of potentially wider methodological interest for determining recoverability of the geolinguistic makeup of vanished societies.

Various aspects of East European Yiddish elucidated by this project have led to a series of maps and analyses published by both named authors, especially in Katz (2007, 2010).

2. Spatial aspect of the research

The project was limited from the start to what has been known for centuries as *Litvish* or "Lithuanian Yiddish" and which covers a substantial territory broadly reminiscent of various incarnations of the erstwhile Grand Duchy of Lithuania (Katz 2010: 19). Much of the heartland of the territory is in today's Belarus, and for much of the 1990s, the second named author carried out one or two expeditions a year to Belarus, each time covering another section of the country and eventually crossing borders to pursue the dialect to its contemporary limits, for example to Brest in the southwest, discovered to be a mixed dialect, with many aspects characteristic of the southerly Ukrainian (Southeastern) Yiddish; but, extending all the way to Kherson, on the Black Sea, in the southeast, where the current Belarus-Ukraine border has no significance for the historical patterning of the Yiddish language. He settled in Vilnius, Lithuania in 1999 to pursue the project more systematically and intensively. In other words, expeditions over a twenty year period tended to follow the data, either in the sense of (a) pursuing informants as far as they existed (for example very few were found in today's eastern Poland, and hopes for e.g. Białystok, within *Litvish*, could not be pursued in situ, while a single outstanding in Suwałki / Suvalk led to returns there); pursuing informants until a major dialect boundary had been crossed to obtain as much data as possible about the place of the boundary (in some cases more exactly than previous research had established) and about the precise structural composition of transitional dialects (e.g. in parts of northern and eastern Ukraine).

Analysis of spatial information can be performed through interactive visual interfaces. Geographic information systems provide convenient tools for confirmatory analysis that includes calculation of statistics and measurements. However, dealing with sparse and inconsistent data, it cannot be considered a very efficient method and the intuitively acceptable answers may be not statistically significant. Moreover, even when GIS systems and tools of spatial analysis can provide answers to many particular questions, the task of formulating such questions remains challenging.

Using images of maps for the exploratory analysis is a better approach in this instance. Maps have a hidden potential to reveal unknown spatial patterns and trends and the process does not require any specific technological skills on the part of the user, who may be well versed in the target language and in traditional dialectology. They allow for integration of expert and common knowledge to the end of discovering cross-thematic spatial patterns (Beconytė, Kryžanauskas 2010: 606). The authors have decided to use the results of spatial statistic analysis as background information on maps that also represent, of course, the data itself. A series of maps have been designed in order to facilitate visual analysis of distribution of dialects within the dialect and cultural boundaries of Jewish Lithuania (Fig. 1).

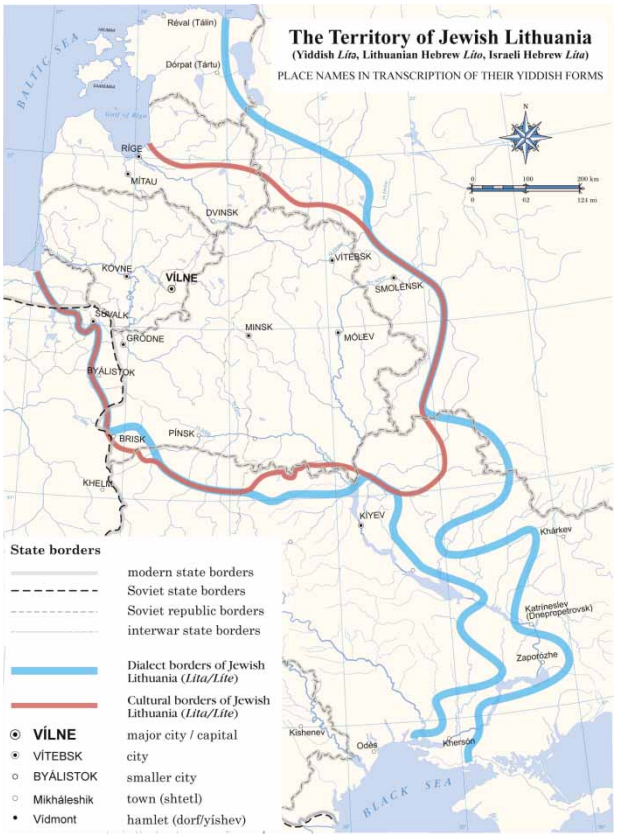

Fig. 1. Dialect and cultural borders of Jewish Lithuania

3. Technology

A general conceptual model of the database is shown in Fig. 2.

The words have the semantic attributes of their English language counterparts. The same word may have many Yiddish forms that occur in different locations. The forms are linked to each other in different and rather complex ways thus forming various groups and subgroups within one dialect. Such a model is very flexible; however some specific information could only be stored in the form of textual notes.

Spatial statistical techniques have been used for measuring spatial autocorrelation, analyzing spatial patterns (i.e., clustering or dispersion), and assessing distributions of spatial data. Spatial statistics differ from traditional statistics in that space and spatial relationships are an integral and implicit component of analysis (therefore some traditional statistical tools are not suitable for spatial data analysis). ArcGIS 9 Spatial statistics tools were used to:

a) evaluate whether features or attribute values form a clustered, uniform, or random pattern across a region (Average Nearest Neighbor Distance, High/Low Concentration, and Spatial Autocorrelation tools);
b) determine the characteristics of the distribution, such as location of the center, the shape and orientation of the data, and the degree to which objects are dispersed. Unfortunately, initial data was

not sufficient to produce statistically significant results. However, general trends were lucidly revealed and used to confirm or correct the linguistic borders of items. In cases where individual isoglosses are pivotal to both native speakers' and scholars' very definitions of different dialects and their concomitant cultural correlates, such "details" become significant for the whole.

Most hypotheses can be verified using spatial analysis that is formulated only after initial visualization of data (mapping) that once again demonstrates the power of visual perception and the exploitation of spatial data. In order to facilitate understanding and primary visual analysis, much attention has been paid to the design of the conventional signs that represent complex links between the linguistic forms of lexical items. Clusters of similar forms have been added to the small scale maps and the final design achieved using graphic design software. All maps were grouped into chapters by the main spatial message conveyed: extent of *Litvish* from the Baltic to the Black Sea (for example, the fragment of a map shown in Fig. 3), linguistic regions within *Litvish*, southward transition (Fig. 4), proliferation of local forms (Fig. 5) etc.

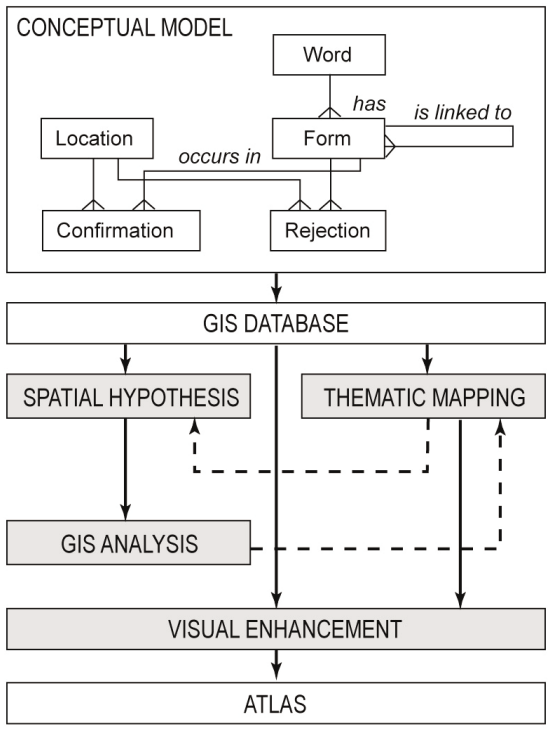

Fig. 2. Technological scheme of the Atlas

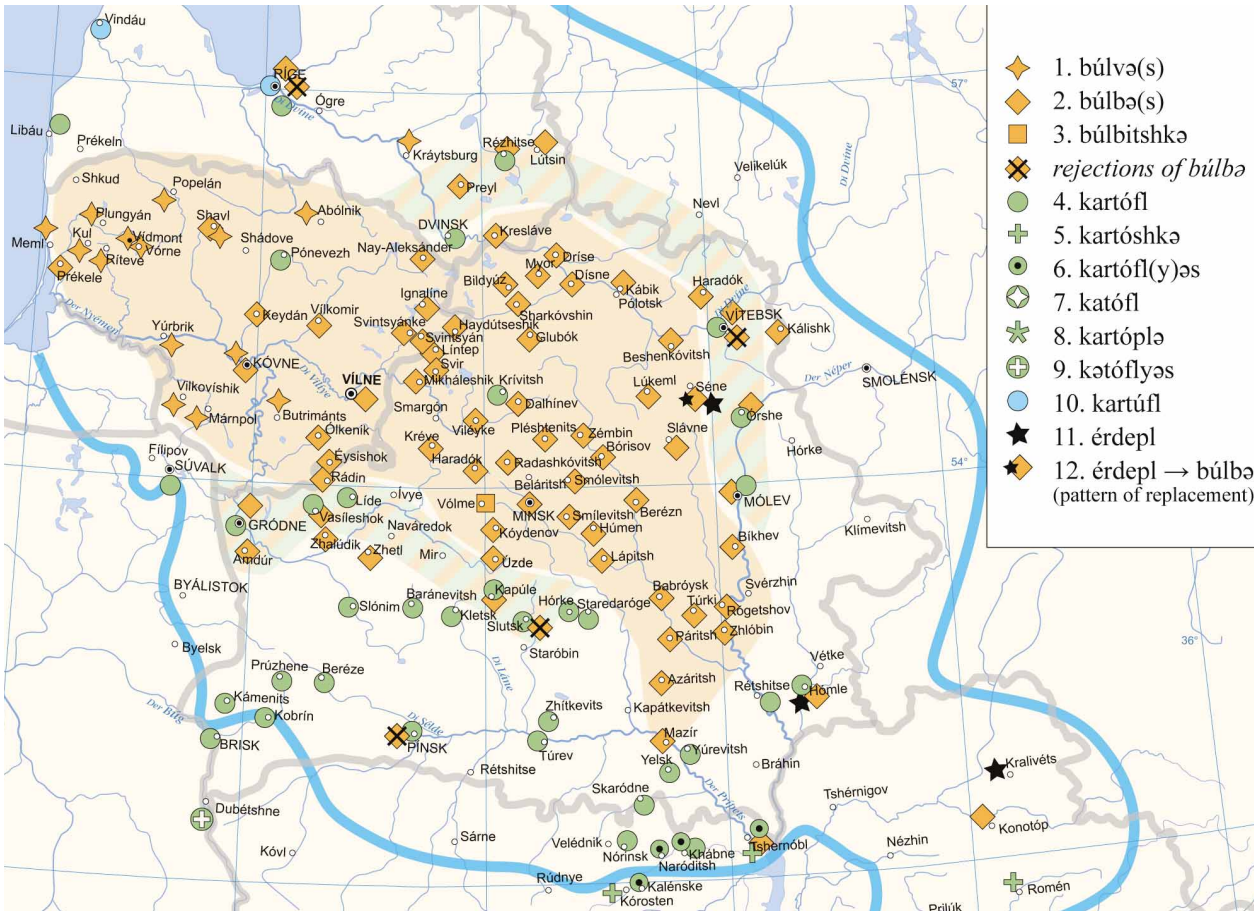

Fig. 3. Spatial pattern of "potato" (fragment; full image accessible at http://www.dovidkatz.net/WebAtlas/34_Potatoes.htm)

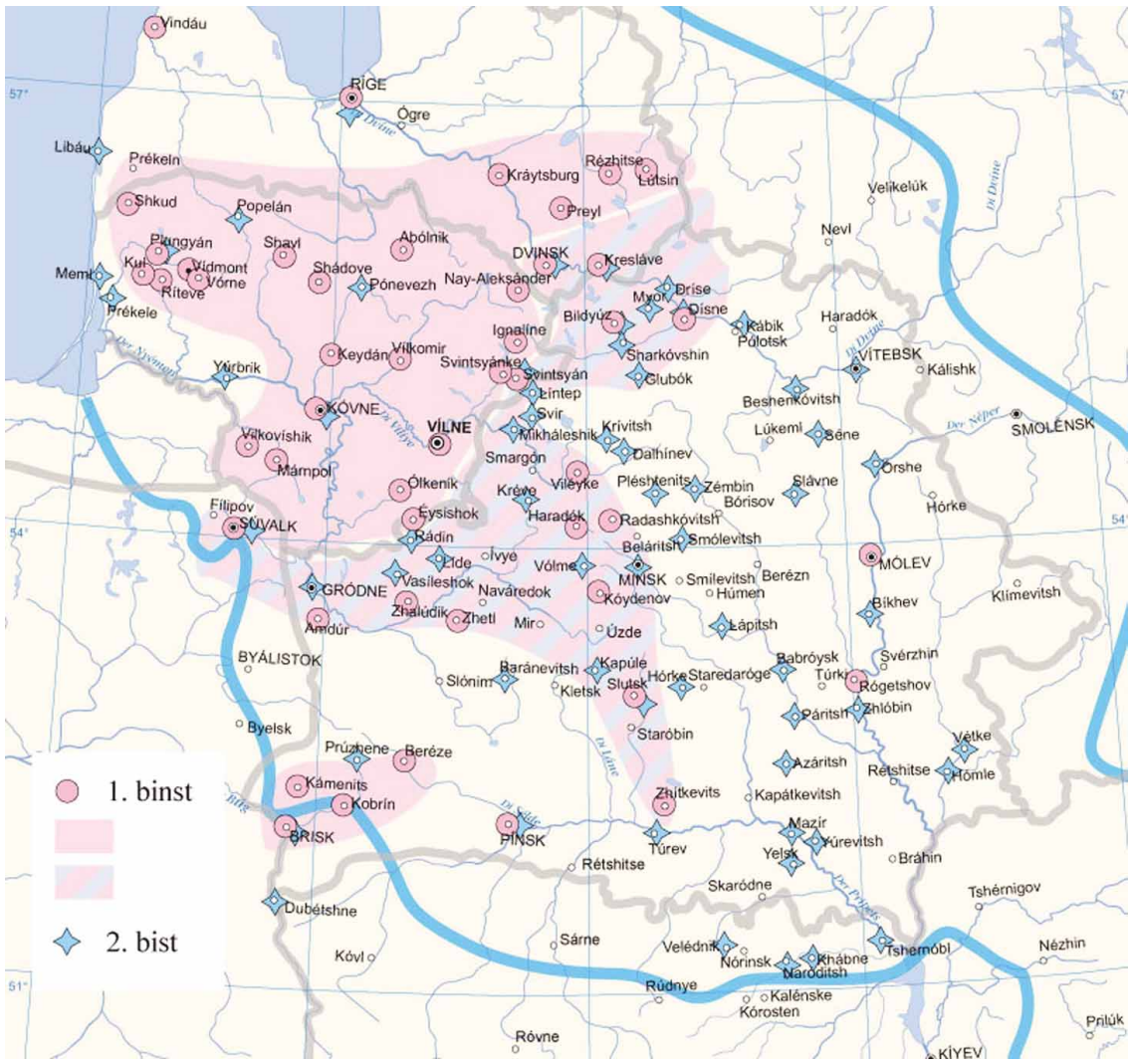

Fig. 4. An unexpected cluster of an earlier Litvish form *binst* for "(you) are [singular familiar]"

4. Samples of spatial patterns on maps

4.1. "Potato"

This map shows synchronic (areal / horizontal / multilingual) patterning as well as diachronic (historical, retrospective, reconstructive) depth. First there is the coinciding of the two Litvish words with those of the coterritorial donor languages (not exactly, but enough to make it clear it's not coincidence!): In the far west, where Lithuanian was the main coterritorial language, it's *búlvə*; and where it begins to be Belarusian and related Slavic dialects it's *búlbə*. One of the big surprises here is that far to the east, very deep in Slavic territory, the atlas came up with the historic antecedent: the high probability that both *búlbə* and *búlvə* replaced the for Yiddish much older *érdepl* [ɛ́rdɛpl] (Germanic 'earth-apple', the word presumably brought by the first migrants from German speaking lands many centuries ago to the Grand Duchy territories). We unearthed this detail only because we were lucky to find one or two informants who remembered from older family members a switch from the Germanic to the Slavic rooted lexical item. Note that the southerly appearance of *kartófl* [kartɔ́fl] is expected in the porous border region between Litvish and Southeastern (Ukrainian) Yiddish, where *kartófl* is frequent. The occurrences of *kartófl* in Latvia are likely the result of relatively recent influence of the local German dialects that were prominent in Courland and its region.

4.2. "You are"

This was unknown to Yiddish dialectology. 'You are [singular familiar]' was thought to be universally bist. After hearing binst from an elderly informant born in Svintsyán (Švenčionys, Lithuania), it was inserted in the questionnaire and it was happily revealed by other informants from other locations over many years (mostly in the 1990s), but it was only when the map was made, that it was revealed that the unknown binst (which apparently arose by analogy with first person [ix] bin), is characteristic for western Líte. Eastern Líte (or Raysn) goes with the standard Yiddish bist but the few survivals (if that's what they are) of binst as far east as Mohilov and Rogachov may be relics of an earlier Litvish when binst was much more common, and was perhaps pushed out by the force of an expanding territory of standard bist, but who can know...

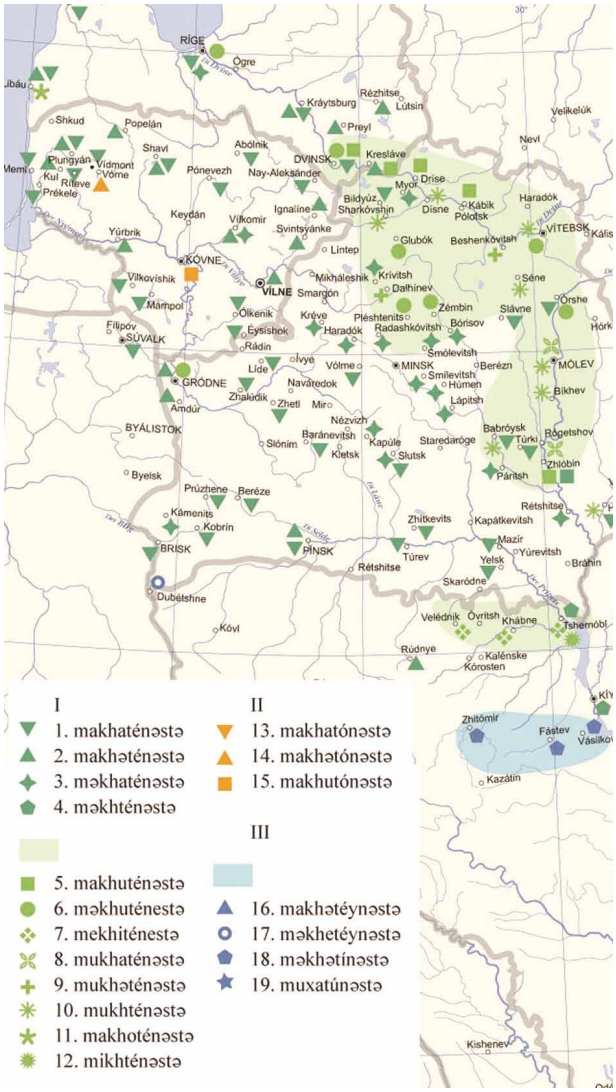

Fig. 5. Variety of forms of "female relative by marriage" and their distribution (fragment; full image accessible at http://www.dovidkatz.net/WebAtlas/15_Female.htm)

4.3. Female relative by marriage

The revelation here was the ordering from a seemingly amorphous mass into a series of partially similar forms that give the whole picture a broad semblance of linguistic sense. To work backwards: The blue series (16–19) are essentially the non-Litvak / southern / Ukrainian Yiddish / Southeastern Yiddish forms, so no big surprises there (though exciting for this atlas to document bona fide Litvish forms right near the Black Sea in the Litvish strip that extends way down south). Nos 13–15 are still a complete mystery. Where there is historically significant patterning discovered by the mapping of the data (completely unrecognized by the interviewer over many years) *within* Litvish is a geo-historical differentiation between group I (nos. 1 to 4) which more or less represent the known, standard Yiddish forms, and the concentration of group II in Eastern Líte / Raysn (where an ancient Hebrew vowel [u] is preserved, either as such in deep Litvish or in the i < u in those areas where it would be expected, e.g. Chernobyl Yiddish, bordering with Ukrainian Yiddish to the south, where the [i] forms deriving from historical [u] are universal).

4.4. "Garden of Eden"

The historically predicted forms have *n* at the end: *ganéydn* [ganéjdn] in standard Yiddish, as in English *Garden of Eden*, from the biblical place name Eden. To the best of our knowledge, a form with final *-m* (that could have arisen via analogy with other words ending in unstressed *-əm*) had never before been documented. When we started to hear it "on the road" in Belarus and Lithuania we wondered whether a future map would elucidate patterning (as we have seen in our examples above). In the event, it did not show geographic patterning within the territory of Litvish as much as it showed an ahistoric form "all over the place". Given that this "wrong" form would have been repudiated and corrected by the educated, those who know Hebrew (and even other languages with cognates of Eden), and given the rise of Standard Yiddish over the past 150 years or so, it is a safe guess that the forms with final *-m* are truly Old Litvish, if not proto-Litvish, and by some miracle could be recovered in most parts of the territory at the turn of the 21st century, rescuing a disappearing Litvish form for posterity.

Because the standard form is so widespread in the language, orthography, culture, and so well known from the Bible, the occurrences of the standard form as well "all over" mean very little here. It is the discovery of the real pan-Litvish form for Garden of Eden that is illustrated by this map (Fig. 6). It is emblematic of Yiddish more generally that a counter-classic form can survive and thrive even in a society where the classic texts remain very much a part of daily life.

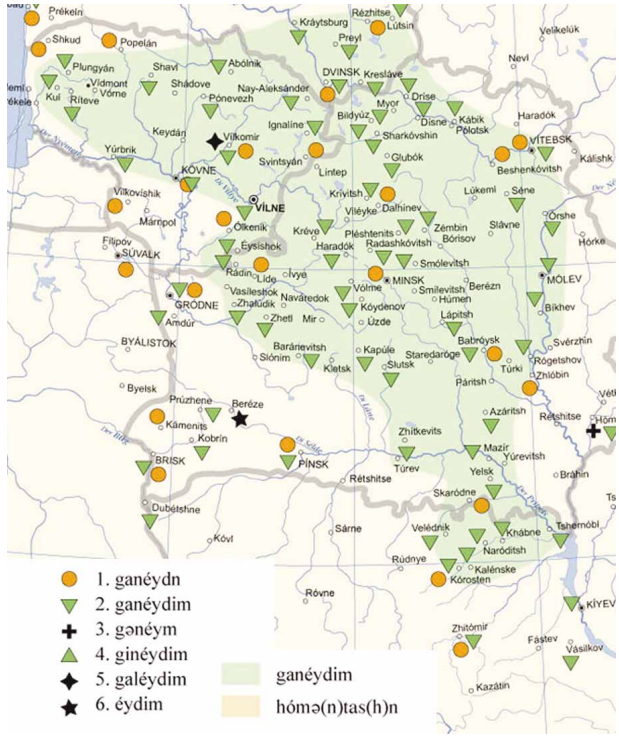

Fig. 6. A 'real Litvish' word (fragment; full image accessible at http://www.dovidkatz.net/WebAtlas/16_Eden.htm)

5. The Atlas

The evolving draft of *Litvish: An Atlas of Northeastern Yiddish* is accessible for preview at http://www.dovidkatz.net/WebAtlas/AtlasSamples.htm. The series of small scale linguistic maps represent characteristics of the dialect areas and are easily understandable to readers who specialize in the relevant language and culture but are not familiar with geospatial technologies. The structure of the linguistic database also allows for publishing the data as a web service accurately representing the location of occurrences of different forms of words on a larger scale map.

The Atlas project synthesizes culture-specific goals (the internal structure of the geolinguistics and cultural study of Lithuanian Yiddish) with more general issues, including possibilities for in situ mapping of language and culture after near-total destruction of the relevant population, based on the sporadic location of very aged "mohicans". Unexpected continuities and discontinuities cc an elucidate select issues of multicultural patterning and multilingualism via comparison of the elucidated patterning with that of the coterritorial languages and cultures.

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