

Language and archeology: some methodological problems. 1. Indo-European and Altaic landscapes

The article is the first part of a larger work that represents an attempt to systematize our ideas on the natural environment and material culture of the Proto-Indo-Europeans. It is based on a more or less complete selection of reconstructed words from the appropriate semantic areas and on their comparison with a similar selection performed for a proto-language of similar time depth, whose speakers evidently inhabited a territory that was not in contact with the Proto-Indo-European one — Proto-Altaic. In this part, only the words that belong to the semantic field of landscape terms are analyzed. The main conclusion is that the hypothesis of a steppe environment is more applicable for the Proto-Altaic population, whereas for Proto-Indo-Europeans a mountainous region seems more appropriate. As for the water bodies, for Proto-Indo-Europeans we should suppose the existence of a sea (or of a very big lake), and for speakers of Proto-Altaic, the existence of very big rivers with season floods.

Keywords: Indo-European homeland, Altaic homeland, *Wörter und Sachen*, semantic reconstruction, proto-lexicon.

In order to reconstruct the phylogenetic tree of a language family, it is essential to understand what the human language is in general, and how the individual languages could be classified as nodes on one phylogenetic tree. Language may be considered a semiotic system that consists of signs and relations between signs, and serves to transmit information within a community; it is independent of individual speakers, and it has the property of changing over time. As a rule, the language sign is a two-sided entity that includes both “semantics” and “text”. The link between the semantic side and the textual side is arbitrary, conditioned by the tradition of each individual language. Therefore, any homogeneity between the textual sides of the words (morphemes, signs) and the same meanings in two different languages (which is what linguists often observe in practice) needs an explanation. If the homogeneity involves large sets of words, random coincidence is statistically unlikely. For this reason, the basic assumption of comparative historical linguistics is that these multiple homogeneous coincidences indicate that any such pair of signs represents two different reflections of one proto-sign.

The matches between the textual sides should not be necessarily exact (literal); most often, two sets of words in two languages can be deduced from a third (hypothetical), “deep”, form of the words through the application of regular phonetic rules. These “deep” forms, coupled with their meanings, are considered as proto-signs, which allows for their historic interpretation. Namely, we believe them to have been integral constituents of a proto-language that is reflected in both of the recent languages. But if such a proto-language existed, there must also have been a certain community of speakers that used this proto-language for communication. This raises the question of what kind of people this community included, where it was located and how it functioned.

It is quite reasonable to try and find any facts from other historical disciplines that could verify the existence of such a community. However, in doing that, one should not forget about the basic meaning of the term “Proto-Indo-Europeans” — a hypothetical ethnos that used to speak the reconstructed Proto-Indo-European language, which is pretty much all that we definitively know about it. Consequently, it is the linguistic part of the information that shall get priority in our research by definition.

Since most of human history lies outside the boundaries of historical records, our only possibility of retrieving lost knowledge lies in the comparison of the results of archeological excavations with the data of our linguistic reconstruction. As far as interdisciplinary cooperation is concerned, this comparison involves two types of problems. The first one is that the correlation between any particular archeological culture and any particular protolanguage cannot be established directly: there is no reason to think that the area occupied by this culture was inhabited at the time by speakers of only one language. Consequently, talking about, e.g., an “Indo-European archeological culture”, generally makes little sense. The other part, of a more subjective and technical nature, is that, unfortunately, interaction between these two disciplines is often belated, so that the archeologists build their models on fifty-year-old linguistic data, and vice versa.

However, in some cases we can state that the presumable speakers of a particular protolanguage could (or could not) be the subjects of a particular culture or inhabit a particular area. This can be established by analyzing the reconstructed lexical corpus, with a simple assumption: we expect that if a word that defines, e.g., a ‘plough’, is reconstructible for a protolanguage, then the speakers of this language could talk about ploughs and, therefore, possess them.

Now the reconstruction of the proto-lexicon involves not only the reconstruction of the phonetic shape of the word or stem, but also the reconstruction of the word’s meaning(s). When reconstructing the phonological aspects of the lexical entities, we have strict criteria that help us distinguish between genetically conditioned and typologically conditioned features. In the case of semantic reconstruction, these criteria are far more obscure. In general, linguists are guided by vague ideas of semantic similarity; at best, they rely on typologically similar cases of semantic change that are historically attested for different languages. Thus, the reconstruction of the so-called “world picture” for any proto-ethnos often places the researcher on shaky ground. It is clear that such work (traditionally defined as studies in *Wörter und Sachen*) should be more productive if the material were to be organized typologically. But any such typology should be founded on compatible data sets. If we produce a “proto-cultural reconstruction” for, e.g., Indo-European, it does not become more convincing by features that reveal any similarity with the “world picture” of “archaic peoples”, regardless of whether we are talking of, e.g., the Bushmen (San), the aboriginal Australians, or “of the Shoshonies and Blackfeet”. On the contrary — if we do not see any differentiating features, it is highly probable that what we have before us is not a reconstructed “world picture” that is specific for Proto-Indo-Europeans, but a general set of typologically natural archetypes, constructed in accordance with the personal beliefs of the researcher.

For some years already, we have been working on the reconstruction of Proto-Altaiic culture, using the reconstructed Proto-Altaiic vocabulary. Now that, with the publication of EDAL, we have at our disposal at least two more or less fully and reliably reconstructed proto-lexicons for two similarly dated proto-languages (6th–5th mill. BC for Proto-Altaiic, 5th–4th mill. BC for Proto-Indo-European), it becomes possible to compare these proto-lexicons with particular attention to the semantic areas that are most diagnostic for the proto-homeland and proto-culture of both of these hypothetical ethnic groups.

Of the two, the problem of Indo-European proto-homeland and proto-culture has a long tradition. Today, three hypotheses on the IE proto-homeland are most popular: the Northern Black Sea steppe area (validated in the works of M. Gimbutas and endorsed, among others, by P. Friedrich, D. Q. Adams, J. P. Mallory, D. W. Anthony), the Balkans or Carpatho-Balkan area (validated by a number of Hungarian archeologists and, in Russia, by I. M. Diakonoff, V. A. Saffronov), and the Anatolian area (supported by V. V. Ivanov, T. V. Gamkrelidze, C. Renfrew). Since the Proto-Altaiic reconstruction is much younger, there is currently but one hypothesis on the Proto-Altaiic homeland, suggested by G. Ramstedt and supported by K. H. Menges — one that is in agreement with the very name of this language family.

The basic works that are used below, as concerns the Indo-European side of the study, are Гамкрелидзе & Иванов 1984, Schrader & Nehring, Benveniste 1970, WP (and the database created by S. L. Nikolaev on the basis of this dictionary¹), Pok., Friedrich 1979, Renfrew 1987, and Adams & Mallory 1997. The main source on Altaic material is EDAL; apart from that source, we also consult some older works on Altaic linguistics, such as the series of papers by Leningrad scholars, led by V. I. Tsintsius, that analyze fragments of the Common Altaic cultural lexicon (published in such series as ОСЛАЯ, ИОЭАЯ, АЭ). Cf. also my own paper А. Дыбо 1997.

Reconstruction of semantic features in a proto-language may be formalized if we consider the variability of the meanings of individual reflexions as a kind of polysemy (analogous to polysemy within one language or one small group of closely related languages), and then work with this polysemy by comparing it with the common ways of semantic derivation that are attested in synchronic semantics.

Naturally, our definition of “proto-lexemes” will be restricted to non-derived words² or such derivatives as can be reconstructed for the proto-language and cannot be explained as having been separately derived in some daughter languages after a productive pattern³.

Reconstruction of lexical items that are relevant for the proto-culture involves a number of problems concerning the semantic description of the so-called “encyclopedically loaded” semantic fields, or “lexics of concrete lexicon”. It should be noted that, when working on the entities of an encyclopedically loaded semantic field, the semantic description that is appropriate for historical studies can be obtained if we divide the semantic features that structure the field (or a lexical microsystem within the field) into “functional” ones and “formal” (or “topo-

¹ <http://starling.rinet.ru/cgi-bin/response.cgi?root=config&morpho=0&basename=\ data \ie \piet&first=1>

² The types of derived words that may, however, be included in the procedure of semantic reconstruction for substantive entities were defined in А. Дыбо 1996: 29; these include diminutives (diminutive affixes are almost always semantically “empty”, working almost exclusively as stem-building morphemes), substantivated adjectives and locative names. Such reflexions can usually be identified with primary names.

³ For this reason, we do not consider such words from Mallory & Adams 2006 as, e.g., **m̥dho/eh*- ‘clay’ (e.g., OE *molde* ‘sand, dust, soil’ [NE *mould*], Grk *málthē* ‘modelling mixture of wax and pith’, Skt *mṛd-* ‘clay, loam’), since they are derived (by means of heterogeneous suffixes) from the verb **mel-* ‘to grind’. The second word from Mallory & Adams 2006 to denote ‘clay’ (**tkwreh*, *yot-* > OIr *crē* ‘clay’, Lat *crēta* ‘chalk’, Toch A *tukri* and Toch B *kwriye*, both ‘clay’) is rather a term for pottery material, not for a type of landscape. No PIE landscape term can be seen in the connection between OE *swelle* ‘slope, rise in land’ and Toch B *šale* ‘mountain’, since, *contra* Mallory & Adams 2006, neither of them can be traced back to PIE **swelno-* ‘slope’. The PToch form, according to Adams 651, can be reconstructed in two ways: a) **šw’āle* < PIE **swelo-*, probably related to Germanic **swel-* ‘to swell’, which is proposed as the formative stem for OE *swelle*, but not with the same suffix; b) **s’ālwe*, from a putative PIE **selwo-* and connected with Latin *silva* ‘forest’ (with dialectal *-i-* for *-e-*). The majority of stems, considered below, can be reconstructed as noun stems (often as root nouns) for PIE, and their suffixal extensions in different languages can be interpreted as adjectival or diminutive ones.

graphic”) ones. The words whose meaning contains “functional” elements are the basic points of the semantic structure of the field, while their “topographic” capacity and types of regular polysemy define the direction of semantic shifts undergone by other words of the field.

As an example, among the different names for ‘dwelling’ one often finds two types of names for ‘house’. Those with a functional value mean not only ‘a certain type of building’, but also ‘locus of the subject’. These words show a regular polysemy: ‘house’ — ‘the house-dwellers’ — ‘the family living in the house’. It is clear that such words are basic for the field, generally more frequent and better revealing the tendencies of semantic evolution within their particular semantic field (such as English *house*, Russian *дом*). Other words (such as English *cottage*, Russian *хижина*) serve to denote only specific types of buildings and do not have such polysemy. The main problem in reconstructing the semantics of the “encyclopedically loaded” words is to reconstruct the “topographic” features, since the functional features are generally preserved or can be traced in the evolution of the lexical field, while the “topographic” ones may be simply replaced along with changes in the surrounding environment, so that, in order to trace them, we have to use indirect evidence (e.g., one can suggest the presence of a rectangular type of dwelling if the language had a regular polysemy between ‘inner angle’ and ‘a part of the dwelling’).

Another point is that it is important not only to choose the “diagnostic” proto-words that are the most relevant ones for the problems involved, but to consider the full scope of available etymological evidence in all thematic fields, which permits us to compose a complete picture of the lifestyle shared by the speakers of the proto-language.

Below I list an example of a group of “proto-words”, prepared for the procedure of semantic reconstruction. This is the comparison of two fragments of Proto-Indo-European and Proto-Altaic systems of landscape terms.⁴

Landscape

Indo-European	Altaic
<p>“Earth as place” — “earth as soil”</p> <p>PIH *<i>dgʰom</i>/*<i>dgʰem</i> ‘earth, soil, territory, earth surface’: Hitt. <i>tēkan</i> ‘territory, soil, earth surface’, <i>dagan</i>, <i>tagan</i> ‘down, to the earth’, HLuw <i>takamia</i> ‘Erde’, Luw. <i>tijammi</i> id.; OInd. <i>kṣāḥ</i>, gen. <i>jmāḥ</i>, <i>kṣmāḥ</i> ‘earth, soil, habitation place’, Avesta <i>zō</i>, gen. <i>zəmo</i>, acc. <i>zəm</i>, loc. <i>zəmi</i> ‘earth, soil, territory’; Grk. <i>χθών</i>, -<i>ovός</i> f. ‘earth, soil, country’, Slavic *<i>zem-jā</i>; *<i>zem-b</i> ‘earth, soil, country’; Baltic *<i>žem-iā</i> f. ‘earth, soil, country, world’; Latin <i>hum-us</i>, -<i>ī</i>-<i>ūs</i> f. (f.m.) ‘soil’, <i>humilis</i> ‘low’; Tokhar A <i>tkaṃ</i>, B <i>keṃ</i> ‘soil, country, earth surface’. WP I 662, Pok. 414–416, WH I 654, Buck 16, Kloekhorst 858–862, Adams 192, MA 174. # ? Nostr. *<i>DVG-</i> ‘earth’, PA *<i>tʰágo</i>, Kart *<i>diq-</i>, Drav *<i>Tūk-</i> MCCНЯ 342, OCHЯ 1, 220.</p>	<p>“Earth as place”</p> <p>PA *<i>nālV</i> ‘earth, country’: PT *<i>jalaj</i> ‘open treeless place, steppe, glade’; PNM *<i>nalai</i> ‘wide, vast’; PTM *<i>nā</i> ‘earth, dry land, field’; Kor. *<i>nàrá(h)</i> ‘country’. # Nostr.: Dr. *<i>nēl-</i> ‘earth’ (DED 2913).</p> <p>PA (East) *<i>miotī</i> ‘earth, dry land’: Kor. *<i>mut</i> ‘dry land’; PJa. *<i>mita</i> (~ -<i>u-</i>) ‘earth’.</p> <p>PA (West) *<i>rier-(k)a</i> ‘earth, floor’: PT *<i>jer</i> ‘earth as world, earth surface, territorium’; PNM *<i>žirgi</i> ‘litter of grass or leaves; doormat’; PNTM *<i>rierke</i> ‘earth, world; place under the hearth’.</p> <p>PA *<i>múgda</i> ‘earth; place’: PCT *<i>bodun</i> ‘people’; PM *<i>muži</i> ‘territory, province’; PTM *<i>megdī</i> / *<i>mugdī</i> ‘step precipitous bank’; Kor. *<i>màt(h)</i> ‘place, enclosed place,</p>

⁴ For a detailed overview of problems usually encountered in the semantic reconstruction of landscape terms, see Толстой 1969, Невская 1977.

The illustrative external cognates are adduced according to references; if any reference lacks, the comparison originates from the Nostratic database made within the *Tower of Babel* project, mostly by S. A. Starostin, G. S. Starostin, S. L. Nikolaev and me. See <http://starling.rinet.ru/cgi-bin/main.cgi?root=config&morpho=0>

Indo-European	Altaic
<p>PIH <i>*wedn-/*udn-</i> ‘earth, soil, territory’: Hitt. <i>utne-</i> n. ‘country, village’; Armenian <i>getin</i> ‘soil’ Martirosian 2006; Grk. (?) οὔδας, -εος n. ‘soil, earth surface’; ἔδαφος (<i>*wedn-</i>) n. ‘floor, soil, earth surface’ WP I 254, Buck 17–18, Beekes 373.</p> <p>PIE (Celt-Ital) <i>*tēres-</i> ‘earth, soil, territory’: Latin <i>terra</i> f. ‘earth, soil, country, world’, <i>terrestris</i>, <i>-e</i> ‘placed on the earth’, <i>terrēnus</i>, <i>-a</i> ‘earthen’; Oskish <i>teer[úm]</i>, <i>terúm</i> ‘territorium’, <i>teras</i> ‘terrae’; Celtic <i>*tēros-</i>, <i>*tēres-</i> ? > OIrish <i>tír</i> n. ‘district’; Breton <i>tir</i> ‘earth, dry land, soil, country, world’ WP I 737, WH II 636, 694, Pok. 1078–1079 (derived from <i>*ters-</i> ‘trocknen’). # Nostr <i>*t̥Vr̥V</i> ‘earth, dust’, PA <i>*t̥ōr̥e</i> ‘soil, dust’, Kart <i>*m̥t̥we[r]</i>–.</p> <p>PIE <i>*mag(ʰ)h-</i> ‘earth, soil, place’: OInd. <i>mahí</i> f. ‘world, soil’; Celtic <i>*mag-</i> > Gallic <i>Arganto-magus</i>; OIrish <i>mag</i> ‘plain earth, unworked field’; Cymr. <i>mā</i> ‘place’ WP II 257, Pok. 709. # Nostr. <i>*magV</i> ‘earth’, PA <i>*mūgda</i>, (?) Ur <i>*maye</i>. MCCНЯ 342.</p> <p>PIE <i>*tolH-/*telH-/*t̥H-(m)on</i> ‘earth, soil, plain place’: OInd. <i>talima-</i> n. ‘building yard’; Armenian <i>thal</i> ‘place, district’, <i>thatar</i> ‘earthen’; Slavic <i>*t̥blo</i>, Baltic <i>*tal-u-</i> c. ‘floor, bottom, lower part’ (OLith. <i>Patulas</i> ‘Gott des unterirdischen Reiches’, Lith. <i>filės</i> f. pl. “wooden decking on the bottom of a boat”; OPrus <i>talus</i> ‘Fussboden des Zimmers’ V. 207; <i>Patollus</i> or <i>Potollos</i> ‘Gott des unterirdischen Reiches’); Latin <i>tellūs</i>, gen. <i>-ūris</i> f. ‘earth, dry land, soil, country, world’; Celtic OIrish <i>talam</i>, gen. <i>talman</i> ‘soil, earth surface, territory’ WP I 740, Pok. 1061, MA 174. # Nostr. <i>*t̥alV</i> ‘level ground’, PA <i>*t̥āle</i> MCCНЯ 355.</p>	<p>yard’; PJa. <i>*māti</i> ‘street, quarter’. # ? Ur. <i>*mäke</i> ‘hill’ (MCCНЯ 371).</p> <p>“Earth as soil” – “bad earth” (“sand”, “marsh”, “salt marsh”)</p> <p>PA <i>*t̥ōre</i> ‘earth, soil, dust’: PCT <i>*tōř</i> ‘dust’ (OT <i>üzä tuman turdı, asra toz turdı</i> “The fog was hanging above, The dust was rising below”); PNM <i>*tor-tag</i> ‘soot, flying dust’; PTung <i>*turV</i> ‘earth as soil, territory, world’; Kor. <i>*t̥r̥r̥</i> ‘field, steppe’, PJa. <i>*t̥r̥r̥</i> ‘dirt’.</p> <p>PA <i>*s̥jári</i> ‘earth, sand; marsh’: PT <i>*siař</i> ‘(salt) marsh’; PM <i>*sirayu</i> ‘soil, dust’; PTM <i>*siru-</i> ‘sand’; Kor. <i>*h̥ark</i> ‘earth as soil’; PJa. <i>*situ</i> ‘marshland, fen, swampy soil’.</p> <p>PA <i>*máro</i> ‘sand, cobble-stone soil, marsh’: PT <i>*bōr</i> ‘soil, clay, chalk’; PNM <i>*mara-</i> ‘salt marsh’; PNTung <i>*mar-</i> ‘moor, marsh’; Kor. <i>*mòr(η)ái</i> ‘sand’, <i>màmǎrǎ-</i> ‘coarse, cobble-stone soil’; PJa. <i>*mana-n-kua</i> ‘sand’.</p> <p>PA (West) <i>*k̥umo</i> ‘sand, earth’: PT <i>*Kum</i> ‘sand’; PM <i>*kumaki</i> ‘earth as soil; powders’; PTung <i>*küme</i> ‘seashore, beach; barrow’.</p> <p>PA (West) <i>*k̥iažurV</i> ‘sand, salt marsh, earth’: PT <i>*Kajir</i> ‘sandy, mellow soil; soil; pebble; pebbly; salt marsh’; PM <i>*kužir</i> ‘salt marsh’; PNTung <i>*kužur-</i> ‘to cover with ground; to bury’.</p>
<p>“Bad earth”</p> <p>? PIE (Eur.) <i>*māk(ʰ)-</i> ‘sandy soil, marsh’: Germanic <i>*mók-a-</i> m. ‘sandy soil’, Celtic <i>*m[ā]k-ni-</i> > OIrish <i>mōin</i> ‘marsh, peatbog’; OIrish <i>macha</i> ‘plain earth’ WP II 226 (“unsicher”). Differently in Pok. 699–700. # Nostr. <i>*mVKV</i> ‘hill, bank’, Ur. <i>*mäke</i> MCCНЯ 371.</p>	

Indo-European	Altaic
<p>“Sand – pebble” (+ “sandbank, beach”)</p> <p>PIE <i>*k(ʰ)ag(ʰ)hl-</i> ‘pebble’: Grk. κάχληξ, -ηκος ‘Stein, Kiesel’ m. ‘pebble in river-bed’; Germanic <i>*xagl-a-</i> m., n. ‘hail’ WP I 338, Pok. 518.</p> <p>PIE (Eur.) <i>*gʷeis-</i> ‘gravel, sand’: Baltic <i>*žēis-r-â</i> f., <i>-a-</i> c., <i>*žis-r-a-</i> c. ‘gravel, coarse sand’; Germanic <i>*kīs-a-</i> m., n., <i>*kīs-il-a-</i> m. ‘gravel, sand’ WP I 553, Pok. 356. # Nostr. <i>*kwižwV</i> ‘sand’: Alt. <i>*kiažurV</i> ‘sand, steppe, earth’ EDAL 693–694; Ur. <i>*kOčV</i> ‘Sand; sandige Stelle’ UEW 226; Kart. Georg. <i>kenč-</i> ‘pebble’ (cf. Georg. <i>kviša</i>, Svan. <i>kwiše</i> ‘sand’ ?); Drav. SDr <i>*kesar-</i> (<i>*-i-</i>) ‘mud, mire’ DED 2020. Blažek 1992 135; ND 954, 990a, 1103; A. Dybo 2005.</p> <p>PIE (GA) <i>*kʷork-/kʷrk-</i> ‘pebble’: OInd. <i>śarkara-</i> m., <i>śárkarā</i> f. ‘pebble, gravel; granulated sugar’; Grk. κρόκη, κροκάλη f. ‘smoothed pebble on a seacoast’ WP I 463, Pok. 615, Buck 51, MA 547.⁵</p> <p>PIH <i>*pē(n)s-</i> ‘sand, pebble’: Hitt. <i>passila-</i> c. ‘pebble’, (?) <i>passu-</i>, <i>pissu-</i> ‘stone block’; OInd. <i>pāṁsú-</i> m., <i>pāṁsuka-</i> n. ‘sand, dust’; Avesta <i>pāsmu-</i> ‘dust, sand’; Slavic <i>*pēs-ьko</i> ‘sand’ WP II 68, Pok. 824 (deriv. from <i>*pēs-</i> ‘blasen’; this could explain sporadic nasalisation but is not quite satisfactory from the semantic point of view), Kloekhorst 650, 652, MA 499.</p> <p>? PIE <i>*psabh-</i> ‘sand, pebble’: Grk. ψάμμο-ς f. (/m.), ψάμμη f. ‘sand’, ψήφο-ς f. ‘pebble’; Latin <i>sabulum</i>, <i>-ī</i> n. ‘sand, pebble’, <i>sabulō</i>, <i>-ōnis</i> m. ‘coarse-grained sand, gravel’ WH II 458. Differently in Pok. 145–146, MA 499.</p> <p>? PIE <i>*samHdh-</i> ‘sand’: Armenian <i>awaz</i> ‘sand’; Grk. ἄμαθο-ς f. ‘sand’; Germanic <i>*samd-a-</i> m., f. ‘sand’ Frisk I 84, Buck 1.215. Differently in Pok. 145–146, MA 499.</p>	<p>PA (West) <i>*tʰapʰo(rV)</i> ‘earth as soil, dust’: PT <i>*topra-k</i> ‘earth as soil’; PM <i>*toγur-</i> ‘soil; dust’; PTung <i>*tap-</i> ‘clay; to soil’.</p> <p>“Sand – pebble” (+ “sandbank, beach”)</p> <p>PA (East) <i>*žajkV</i> ‘pebble’: PTM <i>*žaxar(a)</i> ‘pebble’; Kor. <i>*čjākà-</i> ‘pebble; mother-of-pearl’.</p> <p>PA <i>*sájV</i> ‘pebble; shallow place’: PT <i>*saj</i> ‘shallow place with pebbles; arroyo with pebbles; wadi; river’; PNM <i>*sajir</i> ‘river-bed, pebble’; PTung <i>*saj-</i> ‘sandy mound’; Kor. <i>*sāi-m</i> ‘spring, shallow well’; PJa. <i>*sái</i> ‘sandbank’.</p> <p>PA <i>*álʷi</i> ‘sand, clay’: PT <i>*alu</i> > PCT <i>*ašu</i> ‘red clay’, PM <i>*ele(r)-sü</i> ‘sand, pebble’; PTung <i>*al-</i> ‘dirt; bight’; PJa. <i>*isá-</i>, <i>*isuá</i> ‘shore, coast’.</p> <p>PA (East) <i>*ijū</i> ‘sandbank’: PTM <i>*(x)ijā</i> ‘sand or pebble on the riverbank, sandbank; spit’; Kor. <i>*jə</i> ‘reef, rock in a sea’; PJa. <i>*ía</i> ‘bay’.</p>
<p>“Ore”</p> <p>PIE <i>*woHr-/owHr-</i> ‘ore, ore-bearing soil’: OInd. <i>vālu-kā-</i> f. ‘sand’, Germanic <i>*aur-a-</i> n., m.; <i>*ūr-a-</i> n. ‘iron sand, ore’ Orel 437; Latin <i>urium</i>, <i>-ī</i> n. ‘gob’; Celtic OIrish <i>úr</i> ‘earth, clay’; Tokhar A <i>wāryāñc</i>, B <i>warañce</i> ‘sand, gold dust’ Adams 578, differently Mayr. EWA 2, 547.</p> <p>Many names for different types of stones:⁶</p> <p>PIH <i>*h₂ek(ʰ)h₂-mon</i>, <i>*kā-mon</i> (< <i>*keh₂-mon-</i>) ‘stone, rock’: Hitt. <i>aku-</i> c. ‘stone’, <i>akuwant-</i> ‘stony’; OInd. <i>ásman-</i> ‘stone, rock; firmament, cloud’; Avesta <i>asman-</i> ‘stone, sky’, OPers. <i>asman-</i> ‘sky’, Grk. ἄκμων, — ονος m. ‘an-</p>	<p>A single name for stone:</p> <p>PA <i>*tšólʷi</i> ‘stone’: PT <i>*diāl</i> ‘stone’; PM <i>*čilayu</i> ‘stone’; PTung <i>*žola</i> ‘stone’; Kor. <i>*tōrh</i> ‘stone’; PJa. <i>*(d)isi</i> ‘stone’.</p>

⁵ According to MA, the argument against the IE origin in this and many other cases is that “there are comparable forms in non-IE languages, so this is probably a substrate word”. Naturally, without any specific hypotheses that speak strongly in favor of borrowing, this argument does not need to be taken into consideration.

⁶ See also MA 547–548.

Indo-European	Altaic
<p>vil', Slavic *<i>kāmy</i>, gen. <i>-ene</i>, Baltic *<i>ak-mō</i> (*<i>ak-men-es</i>) 'stone'; Germanic *<i>xam-ar-a-</i> m.; *<i>xam-al-</i>; *<i>xum-Vl-</i> 'stone, rock, hammer'; Celtic Gallic <i>acaunum</i> 'rock, cliff, lump, block'. WP I 28, Pok. 18–22. The variability of reflexations could be caused by the contamination of two stems, presumably *<i>akmon/r-</i> 'stone'⁷ and *<i>k'em-er/n-</i> 'sky, cloud' (cf. Hitt. <i>kammara-</i> c. 'Wolke, Dunst, Qualm, Rauch' Tischler 472–473, Germ. *<i>xim-in-a-</i>, *<i>xim-il-a-</i> m., Celt. Gael. <i>cwmwl</i>, Bret. <i>koumoul</i>, Corn. <i>comol</i> 'cloud' — here rather than borrowed < Lat. <i>cumulus</i> 'heap' [Differently in Pok.]).</p>	
<p>PIE *<i>glewH-</i> 'round stone, lump': OInd. <i>glau-</i> m. 'round lump'; ? Slavic *<i>gly-b-ā</i> 'lump'; Germanic *<i>kliuw-an-</i> m., n., <i>-ō(n-)</i> f.; *<i>klunj-a-</i> n. 'round stone'; Celtic OIrish <i>glō-snathe</i>, <i>glao-snathe</i> 'plummet'. WP I 612, Pok. 363 (sub *<i>gel-</i> 'round').</p>	
<p>? PIE *<i>twrd-/tword-</i> 'hard stone, quartz; hard as quartz': Grk. <i>σάρδιο-ν</i> n. 'name of a precious stone, jewel', 'Sarder, Karneol'; Slavic *<i>tvbrdv(jb)</i> 'hard'; ? Baltic > Lith. <i>tvirta-s</i> 'fest, stark, hart' (acute because of Winter's law; <i>-t</i>-secondarily), Germanic *[<i>ʍ</i>]<i>wart-</i> 'quartz' WP I 747 (differently in <i>Фасмер</i> and Pok. 1101, Beekes 1308 (derived from <i>Σάρδεις</i>)).</p>	
<p>? PIE *<i>k'eHil-</i> 'stone, rock, stone flag': OInd. <i>śilā</i> f. 'stone, rock, cliff'; Armenian <i>sal</i> 'stone flag, anvil' WP I 454, Pok. 541–542 (from <i>k'ē(i)-</i> : <i>k'ō(i)-</i> : <i>k'ə(i)-</i> 'to sharpen'), Mayr. EWA 2, 640 ("Nicht aufgeklärt"). # Nostr. *<i>kEIV</i> 'stone', Kart *<i>kl-</i>, Drav *<i>kal-</i>.</p>	
<p>PIE *<i>lep-</i> 'stone, rock': Grk. <i>λέπας</i> n. 'nude rock, cliff', <i>λεπᾶιο-</i> 'rocky, cliffy'; Latin <i>lapis</i>, gen. <i>-idis</i> m. (<i>/f.</i>) 'stone, jewel' (< *<i>lep-ed-s</i>), Umbric abl. <i>vapeře</i> 'throne' WP II 431, WH I 761, Pok. 678, Beekes 848 ("Mediterranean borrowing").</p>	
<p>PIE *<i>Hond-/Hnd-</i> 'stone, rock': OInd. <i>ádri-</i> m. 'stone, rock, mountain'; Celtic *<i>ondes-</i>: MlIrish <i>ond</i>, <i>onn</i>, gen. <i>uinde</i> 'stone, rock' Pok. 778, Mayr. EWA I 165, MA 547.</p>	
<p>PIE *<i>pels-/płs-</i> 'stone, rock': OInd. <i>pāśāṇa-</i> m., <i>pāṣī f.</i>, <i>pāṣyā-</i> n. 'stone, rock'; Iranian Pashto <i>paršá</i> 'stone, rock'; Grk. <i>πέλλα</i> f. 'stone'; Germanic *<i>filz-á-</i> n., *<i>filis-a-</i>; *<i>fulVs-</i> 'rock'; Celtic *<i>płso-</i> > OIrish <i>all</i>, gen. <i>alle</i> 'rock, cliff' Pok. 807, MA 548, Mayr. EWA 2, 125, Beekes 1168 ("Pre-Greek").</p>	
<p>PIE *<i>steh₂i-(n-)</i> 'stone, pebble': Grk. <i>στία</i> f., <i>στῖον</i> n. 'pebble'; Slavic *<i>stēnā</i> 'stone, rock, wall'; Germanic *<i>stain-a-</i> m. 'stone'. WP II 610 f., Pok. 1010–1011 (as deriv. from <i>stāi-</i> 'to condense, press together', which is semantically unlikely), Beekes 1405.</p>	
<p>PIE *<i>g'hverzd-</i>, *<i>g'herzdw-</i> 'sharp stone, gravel': Avest. <i>zarštva-</i> n. 'stone'; Grk. <i>χέρος</i> (att. <i>χέροος</i>) f. 'Festland',</p>	

⁷ The rule of regular depalatalization before resonants in Balt. and Slav. (MA 547) does not work, cf. Slav. **ostrv* < **os-r-*, Balt. **ač-r-u-* id., Lith. *šlāpia-* 'nass, feucht' etc.

Indo-European	Altaic
<p>Slavic *<i>gvbrstā</i>, *<i>gvbrstv</i>, *<i>žbrstvā</i>, *<i>grbstvā</i>, Baltic *<i>žwiřžd-a-</i> c., -<i>ia-</i> c., -<i>iā-</i> f. ‘gravel’; Latin pl. <i>herna</i>, gen. -<i>ōrum</i> ‘stones, rocks’ (*<i>g’hers-no-</i>; sabin. nach Serv. Aen.) WH I 643, Beekes 1626, Fraenkel 1328, Pok. 445–446 (as deriv. from *<i>g’her-</i> ‘starren’, which is semantically unlikely).</p> <p>PIE *<i>leh₁w-</i> (<i>lēu-</i> : <i>lau-</i> Pok.) ‘stone’: Gr. hom. <i>λάας</i>, Gen. <i>λάος</i> ‘Stein’ (Ausgleichung von ursprüngrl. *<i>λήρας</i>; <i>λάρα[σ]ος</i> n.), att. <i>λάας</i> und <i>λάς</i> m., Gen. <i>λάου</i> usw.; hom. <i>λαῖγξ</i>, Pl. <i>λαῖγγες</i> f. ‘Steinchen’ (wohl mit Suffixtausch für *<i>λαῖγκ-</i>, vgl. kelt. *<i>liuank-</i>) [Differently by Beekes 817, MA 547: Myc. <i>ra-e-ja</i> ‘of stone’ and Cypr. <i>la-o-se</i> show the lack of <i>ř</i>]; <i>κρατάλιεως</i> ‘hartfelsig’ (*-<i>ληρος</i>); att. <i>λεύω</i> ‘steinige’ (<i>ἐλεύσθην</i>), <i>λευστήρ</i> ‘Steiniger’ (aus *<i>ληυσ-</i>, idg. *<i>lēus-</i>); ablaut. (*<i>laus-</i>) <i>λαυστήρ</i> m. ‘Steinarbeiter’ > ‘mühselig, elend, mit Steinen belegter Hausgang’; neben dem -<i>ας</i>-St. ein -<i>αρ</i>-St. *<i>λάραρ</i> als Grundlage von att. <i>λάρυρα</i>, ion. <i>λάρυρη</i> ‘in Fels gehauener Weg, Gasse’, <i>λαῦρον</i> · <i>μέταλλον ἀργύρου παρὰ Ἀθηναίους</i> Hes., Berg Name <i>Λαύρεον</i>; Alb. <i>lerë</i>, -<i>a</i> ‘Gestein, Felssturz’ (*<i>lāu.rā</i>), Celt. *<i>liuank-</i>, < PIE. *<i>lēuank-</i> ‘stone’. WP II 405, Pok. 683, Matasović 242 (*<i>leh₁u-s</i>, Gen. *<i>lh₁w-os</i>).</p> <p>Flat part of relief: “plain earth” — “uncultivated earth” — “free space”⁸</p> <p>PIE (Eur.) *<i>k(‘)aito-</i> ‘forest, uncultivated earth, pasture’: Germanic *<i>xáið-i-z</i> f. ‘uncultivated earth, pasture’ Orel 154; Latin <i>bū-cētum</i> ‘(cow) pasture’; Celtic *<i>kayto-</i> ‘wood’. WP I 328 f, Buck 47, Pok. 521, Matasović 198.</p> <p>PIE (Eur.) *<i>londh-/l₁ndh-</i> ‘free land, heath, steppe’: Slavic *<i>lěda</i>, *<i>lědo</i>, *<i>lědjā</i> ‘waste ground, clearing overgrown with trees’; Baltic *<i>lind-a-</i> n. ‘valley’; Germanic *<i>land-a-</i> n.; ‘place, field’ Orel 235; Celtic *<i>landā</i> ‘open land, pasture, steppe’ WP II 438, Pok. 675, Trautmann 157 (from <i>lendh-</i> ‘Lende; Niere’, semantically unlikely), Matasović 232.</p> <p>PIE *<i>wen-/w₁n-</i> ‘outside, forest, field’: OInd. <i>vāna-</i> n. ‘forest, tree’; Avesta <i>vanā-</i> ‘tree’, MPers. <i>van</i>, NPers. <i>bun</i> ‘tree’; Slavic *<i>vъnъ</i> ‘outside’; Germanic *<i>win-jō</i> f., *<i>wun-jō</i> f. ‘meadow’ WP I 258 (differently in Pok. 1146–1147).</p> <p>PIE *<i>ghaw-</i> ‘space around the village, waste land’: Arm. <i>gavarr</i> ‘Landstrich, Gegend’; Grk. <i>χάος</i>, -<i>εος/-ους</i> n. ‘unbeschränkter Raum, Luftraum; weite Kluft, Schlund’; ‘Chaos’; Germ. *<i>gau-ja-</i> n., -<i>jō</i> f., -<i>jan-</i> m. ‘country, environment’ Orel 128. WP I 465, Pok. 449 (as deriv. from <i>ghēu-</i> : <i>ghō(u)-</i> : <i>ghəu-</i> ‘to yawn, gape’ which is sem. unlikely). # Nostr. PA *<i>kébà(rV)</i> ‘field, steppe’ 749.</p>	<p>Flat part of relief: hilly steppe. “Plain earth” — “steppe” — “eminence”</p> <p>PA *<i>kéba(rV)</i> ‘field, steppe’: PM *<i>keyere</i> ‘open field, steppe, waste ground; taiga; wilderness’; PNTung *<i>keber-</i> ‘meadow, tundra, plain earth’; PJa. *<i>kápi</i> ‘a valley between mountains’</p> <p>PA (West) *<i>‘oli</i> ‘steppe’: PCT *<i>‘öl</i> ‘desert, steppe, plain earth (as opposition to <i>qol</i> ‘valley’ and <i>dāg</i> ‘mountain’); PNM *<i>‘čoli-d</i> ‘region dotted with lakelets’; PTM *<i>‘čulbi-</i> ‘hill, mound’.</p> <p>PA (West) *<i>k’iāre</i> ‘plateau steppe, eminence’: PT *<i>K’ir</i> ‘plateau, eminence, hilly steppe, desert; a single mountain; mountain top; plain earth; edge, bank’; PM *<i>kira</i> ‘mountain ridge’; PTung *<i>xiāri-</i> ‘talus, precipice’</p> <p>“Plain earth” — “open space” — “unpopulated space”</p> <p>PA *<i>biogo</i> ‘place, open place’: PNM *<i>buji-</i> ‘far off, unpopulated (place)’; PTM *<i>biga</i> ‘field, steppe’, PJa. *<i>p’ia</i> ‘room, place; surroundings’.</p> <p>PA *<i>p’ālā</i> ‘plain earth’: PT *(<i>h</i>)<i>ala-η</i> ‘open place, glade, meadow, plain earth, hills on the plain’; PTM *<i>pāla-n</i> ‘glade, plain place; floor’; Kor. *<i>p’ar(h)-</i> ‘fields, meadows’; PJa. *<i>p’arà</i> ‘field, plain earth, steppe’.</p>

⁸ PIE **rowə-* ‘to open’ > ‘free space, plain earth’: Avesta *ravah-* ‘space, room’, *ravas-čarāt-* ‘free’; Germanic **rūm-a-* m., **raum-a-* m. ‘space, room’; Latin *rūs*, *rūris* ‘country, village, field’; Celtic OIrish *rōe*, *rōi* ‘plain field’ (**rowesiā*), *rē* ‘space, room’ (**rēwiā*); Tokhar A, B *ru-* ‘to open’. WP II 356 f., WH II 454, Pok. 874 — this is apparently a group of separate derivatives.

Indo-European	Altaic
<p>PIE <i>*pol-/*pel-/*pl-</i> ‘field, plain earth’: Armenian <i>hot</i> ‘soil, earth, field’; Slavic <i>*pol-j-e; *pol-n-inā</i> ‘field; waste ground’; Germanic <i>*fel-ǵ-a- n., m.</i> Orel 97, <i>*ful-ǵ-ō(n)- f.</i>, Orel 117 ‘plain earth, field, pasture’, <i>*fal-ōn- f.</i> (> OSwed <i>fala</i> ‘Ebene, bes. baumlose; Heide’) WP II 61; Pok. 805–807 (together with <i>pelǵ-, plā-</i> ‘wide, plain’; but these reflexes have no traces of <i>*-H-</i>). # Nostr. PA <i>*p̄âlā</i> ‘field, level ground’, Drav. <i>*paḷ-</i> ‘plain, valley’.</p>	<p>PA (West) <i>*t̄āle</i> ‘open place’: PM <i>*tala</i> ‘steppe, open place’; PTM <i>*tālgi-</i> ‘far from the shore, open sea; quiet sea surface’ # MCCНЯ 355 (PIE <i>*telǵ-</i>).</p>
<p>PIE <i>*dhon-(w-)</i> ‘plain earth, wild place’: Ind. <i>dhānus-</i> n., <i>dhānvan-</i> m., n. ‘desert, arid land’; <i>dhānu-</i>, <i>dhanū-</i> f. ‘sandbank, sandy shore’; Germ. <i>*dan-jō f.</i>, <i>*dan-ja- n.</i>, etc. ‘den, forest dale’; VLat. <i>danea</i> ‘area’. WP I 853, Pok. 249 (together with <i>dhen-</i> ‘surface of hand’).</p>	<p>Valley PA <i>*goblū</i> ‘valley’: PCT <i>*Kōl</i> ‘river valley; ravine’; PM <i>*gowl</i> ‘river, river valley; center’; PManch <i>*gola</i> ‘middle of river bed, valley between mountains’; Kor. <i>*kōr</i> ‘valley’; PJa. <i>*kura</i> ‘deep valley’</p>
<p>Valley PIH <i>*Har-</i> ‘valley, vale, dale; grotto; swamp’: Hitt. <i>hari-</i> c. ‘valley’; Armenian <i>ayr</i> ‘Spelunke, Grotte’; Baltic <i>*ar-mō̃ (-men-)</i> c. ‘swamp, marsh’. Tischler 172–173.</p>	
<p>PIE <i>*ank(ʰ)o-</i> ‘meadow, valley’ Grk. ἄγκος n. ‘Bergschlucht, Felsental’; Germanic <i>*ang-iō f.</i>; <i>*ang-ia- n.</i>; <i>*ang-r-a- m.</i> ‘meadow’ Orel 19. WP I 60 f, Buck 28.P I 60, Pok. 45–47 (sub <i>ank-</i>, <i>ang-</i> ‘to bow’).</p>	
<p>PIE <i>*dholo-s-</i>: Iranian <i>*dara- / darna-</i> ‘ravine, valley’, Celtic <i>*dolā</i> ‘meadow, dale’ (Wels <i>dōl</i> ‘valley, meadow’), Germ. <i>*dal-a- n., m.</i>, <i>*dōl-</i>, <i>*dalj-a- m., n.</i>, <i>*dal-jō(n)-</i>, ? <i>*dil-jō(n)- f.</i> (ON <i>dalr</i> ‘valley’, NE <i>dale</i>, OHG <i>tal</i>, Goth <i>dals</i>, Eng <i>dell</i> (<i>*dhol-yo-</i>), Slav. <i>*dolъ</i> (<i>*dhol-u-</i>) ‘valley, under side’, WP I 864, Pok. 245–246, MA 618, ЭСИА II 344–345, Beekes 551, Matasović 103.</p>	
<p>PIE <i>*lonko/ā-</i>: Baltic <i>*lanka</i> (Lith. <i>lankà</i> ‘valley, river-meadow’, Lett. <i>laņka</i> ‘low long flatland’), Slavic <i>*lōka</i> ‘gulf, valley, meadow, marsh’, Preromanian (Celt.?) <i>*lankā</i> ‘depression, bed of a river’ (< <i>*lonkā</i>), Tocharian B <i>lenke</i> ‘valley; cleft’. WP II 435, Trautmann 159, Pok. 676–677, Adams 3043, MA 618.</p>	
<p>Meadow</p>	
<p>PIE (Eur.) <i>*wongh-</i> ‘meadow, field’: Baltic <i>*wang-u- c.</i>, <i>*wang-â f.</i>, <i>*waņg-it-iā</i> ‘meadow, field’ (OLith. <i>vanga</i> ‘Acker’, Lett. <i>uôdzīte</i> ‘kleiner Bach; sumpfige Stelle im Wald’, OPrus. <i>Wangus</i> ‘Dammerau’; Kur. > Lett. <i>vaņga</i> ‘feuchte Wiese mit hohem Gras’); Germanic <i>*wang-a- m.</i> ‘meadow, field’ Pok. 1149 (Germ., sub <i>ue-n-gh-</i> ‘to be bent’).</p>	
<p>PIE (Celt-Ital) <i>*prāt-</i> ‘meadow, hillock’: Lat. <i>prātum, -ī</i> n. ‘Wiese’, Celt. <i>*rāt-</i> > Mlr <i>rāth, rāith</i> f. ‘Erdwand, Erdbank’; MCymr. <i>bed-rawt</i> ‘Grabhügel, Grab’, Cymr. <i>beddrod</i> m. ‘Grabhügel, Grab’, Bret. <i>bez-ret</i> ‘Begräbnisplatz, Friedhof’. WH II 358.</p>	
<p>PIE <i>*louk-</i> ‘woodless field, lawn, glade’: OInd. <i>loká-</i> m. ‘free, open space, world, place’; Baltic <i>*lauk-a- m.</i></p>	

Indo-European	Altaic
<p>‘field; woodless place in a forest’; Germanic <i>*láux-ō</i> / <i>*laug-ō</i> f. ‘lawn, glade’; Latin <i>lūcus</i>, -ī m. ‘sacred grove’, Oskish <i>lúvkeí</i> ‘in lūcō’, ? Tokh. A <i>lok</i>, B <i>lauke</i> ‘far’ WP II 408, WH I 828; Pok. 687–690 (sub <i>leuk-</i> ‘to shine’).</p> <p>PIE <i>*poyHw-ā</i> ‘meadow’: Grk. att. <i>πόα</i>, ep.-ion. <i>ποίη</i>, dor. <i>ποία</i> ‘Gras, Kraut, Rasenplatz’, aus <i>*ποιϝā</i>; Balt. <i>*póyūā</i> > Lith. <i>pieva</i> (1) f. ‘meadow’ WP II 72, Pok. 793–794 (sub <i>pej(ə)-, pī-</i> ‘fat, milk’), Beekes 1214. # To IE <i>*pōi-</i>, Nostr <i>*pVñV</i> ‘to graze’ MCCHЯ 354, OCHЯ 3, 106–111.</p>	

If we interpret the variability of the meanings as polysemy within a language family, certain definite differences between Altaic and Indo-European may be observed. Thus, it appears that the type of polysemy that is quite familiar for us (“earth as place” — “earth as soil”) is characteristic of Indo-European languages, but significantly less so for the Altaic languages, where the meaning “earth as soil” is often connected with such meanings as “bad soil”, “marsh”, “sand”, “salt marsh”. On the other hand, the Altaic languages have another series of words meaning “sand”, related to the meanings “pebbles” and “shallow place”, and this word group has an exact semantic analog in the Indo-European languages. While there is only one name for “stone” in the Altaic languages, we find many names for different types of stones in Indo-European (which brings to mind the well-known story about the lack of a general name for “snow” in Eskimo and the diversity of specific names for different types of snow). Almost obligatorily figuring among the meanings related to the sense of “flat place, plain” in various Altaic groups is the meaning “hill, mound, mountain” — something that would be quite atypical of Indo-European languages. Common words meaning “meadow” as a clearing inside a wood exist in PIE but are absent in PA. This means that the ideas of the corresponding landscape objects must have been significantly different for speakers of Proto-Altaic and Proto-Indo-European.

Let us now try to demonstrate, as completely as possible, the sets of landscape terms that are reconstructible for PIE and for PA.

Mountainous terrain

Indo-European	Altaic
<p>Mountains</p> <p>PIE <i>*g^wh₁r-</i> / <i>*g^wh₁or-</i> ‘mountain’: PIIr <i>*g_{ari-}</i>, Ind. <i>girí-</i> m. ‘mountain’, PIran. <i>*gari-</i> ‘Berg’, Grk. <i>δειράς, -άδος</i>, kret. <i>δηράς</i> f. ‘Anhöhe, Berggrücken’ (Hes.), <i>δειρά</i> ‘mountain range’ (Pind.) (< <i>*g^wh₁r-ya-</i>); βορέας ‘Nordwind’ (< <i>*g^wh₁or-</i>), Alb. <i>gur</i> ‘Felsen, Stein’ (<i>*g^wri-</i>); Slav. <i>*gorā</i> (<i>*g^wor-ā</i>) ‘mountain > mountain forest’, Balt. <i>*gura-</i> > Lith. <i>gùra-s</i> ‘Bergvorsprung’, <i>*gir-ja</i> ‘forest, tree’ WP I 682, Pok. 477–478, Buck 25, 48, MA 270, Beekes 227, 311, ЭСИЯ III, 191–192. # Nostr. <i>*g^wVrV</i> ‘mountain, hill’, PA <i>*k^uri</i>, Ur <i>*kur₃</i>, Kart <i>*gora</i>, Drav <i>*kur-</i> (<i>*-d-</i>). Старостин 2007, 804.</p> <p>? PIE <i>*mon-(ti-)</i> ‘mountain’: PIran. <i>*mñti-</i> > Av. <i>mati</i> ‘Vorsprung des Gebirgs’, Ital. > Lat <i>mōns, -tis</i> m. ‘Berg,</p>	<p>Cliffs</p> <p>PA (West) <i>*kadV</i> ‘rock’: PCT <i>*K(i)aja</i> ‘rock’; PM <i>*kada</i> ‘rock’; PTM <i>*kada-</i> ‘rock’.</p> <p>PA (West) <i>*bajV</i> ‘rock’: PCT <i>*bAjir</i> ‘hill, foot-hill; outness’; PNM <i>*baji-ča</i> ‘rock’; PNTung <i>*baj-</i> ‘rock, cliff’</p> <p>PA (East) <i>*pāk’o</i> ‘rock, cliff’: PSTung <i>*pākta</i> ‘hill, mound; precipice; sand bank’; ? PKor <i>*pāhói</i> ‘rock’; PJa <i>*paki</i> ‘steep rock’.</p> <p>Hills, slopes</p> <p>PA <i>*tújpe</i> ‘top of a mountain’: PT <i>*depö</i> ‘hill, top’; PM <i>*döbu</i> / <i>*döbe</i> ‘hill’; PTM <i>*düj-</i> (~ <i>*düb-</i>) ‘shore; mountain top; taiga region’; PJa. <i>*(d)ipä</i> ‘rock, cliff’.</p>

Indo-European	Altaic
Gebirge', Celt. * <i>monijo-</i> > OIr. <i>-monid</i> ; Cymr. <i>mynydd</i> , Corn. <i>meneth</i> , Bret. <i>menez</i> 'Berg' WP II 263, Pok. 726 (sub * <i>men-</i> 'to tower'), MA 270, Matasović 277.	PA (East) * <i>t̥idu</i> 'elevation': PTM * <i>dīdū</i> (~ <i>ž-</i>) 'mountain ridge'; PKor * <i>tūtán</i> 'hill, elevation'; PJa. * <i>tūtūmī</i> 'dike'.
PIH * <i>peru-(n-)</i> 'mountain top': Hitt. <i>peru-na-</i> (<i>piruna-</i>) c. 'Fels' (Friedrich 167), <i>perunant-</i> 'rocky', <i>pirwa-</i> 'bestimmte Art von Felsen (auch als Gottheiten)' (Friedrich 170); Ind. <i>parvata-</i> m., <i>parvatī-</i> , <i>parvatī</i> f. 'mountain, hill, rock'; <i>paru-</i> m. 'mountain', Av. <i>paurvatā-</i> 'mountain'; Tokh. ? A <i>pārem</i> 'rock, stone'. MA 547. # Nostr. * <i>p̥VrV</i> 'mountain, top', PA * <i>p̥óre</i> 'top, mountain top', Kart. Georg. <i>prialo</i> 'step rock', Drav. * <i>par-</i> 'pebble, gravel'; * <i>pār-</i> 'rock, stone slab'.	PA (West) * <i>dión(š)e</i> 'slope, bank': (?) PT * <i>jān</i> 'side', PNM * <i>denži</i> 'terrace (between the steppe and the river bank)', PTung * <i>dunse</i> 'dry land, coast; wood, taiga'.
PIE (Eur.) * <i>kaln-</i> 'narrow passage': Slav. * <i>koln-bcb</i> 'ravine, narrow passage between mountains'; Lat. <i>callis</i> , <i>-is</i> m. 'schmäler Bergpfad, Triftweg, Gebirgstriben'. WP I 356, WH I 140, Pok. 524, ЭССЯ 10, 140.	PA (East) * <i>anta(gV)</i> 'hill, slope': PTM * <i>antaga</i> 'slope of a mountain'; PKor * <i>antək(h)</i> 'hill'; PJa. * <i>antuma</i> 'East' # PIE * <i>ant-</i> (MCCHЯ 354).
PIE * <i>geHup-/gHup-</i> 'cave, den, mines': Grk. γύπη f. 'den, vulture's nest' (Hes.), Slav. * <i>žúpa</i> 'salt mine; grave'; Germ. * <i>kuf-ēn-/kōf-ēn-</i> m. 'cove, cave' Orel 222. WP I 555, Фасмер 2, 65–66, Beekes 292 ("European substrate words"). # Nostr. * <i>kop'a</i> 'hole, empty', PA * <i>kóbú</i> 'hollow, cavity', Ur * <i>koppa</i> , Kart * <i>kwab-</i> . OCHЯ 1, 232–233, MCCHЯ 358.	PA <i>biòsá-gV</i> 'woodless mountain slope': CT * <i>basig</i> 'field'; PNTung * <i>bosoga</i> 'northern slope'; PJa. * <i>bàsái</i> 'early rice'.
PIH * <i>kolHn-</i> , * <i>kolHm-</i> 'top, hill, rock': Hitt. <i>kalmara-</i> , Luw. <i>kalmaha-</i> 'Berg'; Grk. κολωνός m., κολώνη f. 'Hügel, Anhöhe, Stein-, Grabhügel'; ? κολοφών m. 'Gipfel, Spitze, Höhepunkt' statt *κολαφών auf Grund eines * <i>kolḡ-bho-s</i> '); Balt. * <i>kal̃n-a-</i> (2) c., * <i>kal̃w-â</i> (1) f. 'mountain'; Germ. * <i>xall-u-</i> c., * <i>xull-i-</i> c.; * <i>xulm-a-</i> m., <i>-an-</i> m. 'stone, rock' Orel 157; Ital. Lat. <i>collis</i> , <i>-is</i> , abl. <i>colle/collī</i> m. 'Hügel, Anhöhe'; <i>columen</i> , (jünger) <i>culmen</i> , <i>-inis</i> n. 'Höhepunkt, Gipfel, First' [Celt. * <i>klukā</i> : OIr., Ir., Gael. <i>cloch</i> 'stone, rock', — non-IE borrowing in Matasović 210]. WP I 433, WH I 197, Pok. 544, Buck 23–24, Beekes 742, MA 270 (as deriv. from * <i>kelh₁-</i> 'rise, stand').	PA * <i>biuge</i> 'slope, hill': ? PT > Oghuz * <i>bögür</i> 'mountain slope'; PNM * <i>böyerüg</i> 'mountain slopes, hill'; PTung * <i>buga(n)</i> 'hill, mound'; ? PKor * <i>pàhói</i> 'rock'; PJa. * <i>bə</i> 'hill, hillock'.
	PA * <i>k'uri</i> 'hill, cliff': PCT * <i>Korum</i> 'rock, cliff, heap of stones'; PNM * <i>kür</i> 'precipice, rock'; PTM * <i>xurē</i> 'mountain, rock'; PKor * <i>kòràŋ</i> 'embankment, boundary'; PJa. * <i>kürüa</i> 'dike, boundary'. # PIE * <i>g^wer-</i> (WP 1, 682).
	PA (West) * <i>sira</i> 'hill, high mountain': PT * <i>sirt</i> 'mountain ridge'; PNM * <i>siro-</i> 'rock, high mountain'; PTung * <i>sirk-</i> 'small hillock, cape'.
	PA * <i>úk'è</i> 'hill': PNM *(<i>h</i>) <i>ukaya</i> 'hill'; PTM *(<i>x</i>) <i>uKu-</i> 'hill'; PJa. * <i>báká</i> 'hill'.
	PA (West) * <i>iú'na</i> 'pit, ravine': PT * <i>ijn</i> 'pit, lair'; PNM * <i>oni</i> 'defile, gorge'; PSTung * <i>u'ni</i> 'small river, brook'.
	To cross mountains
	PA * <i>āl'a</i> 'to cross (a mountain)': PCT *(<i>i</i>) <i>āλ-</i> 'to cross (a mountain); to surpass'; PM * <i>alu-</i> 'on the other side; far away'; PTM * <i>ala-</i> 'to cross (a mountain); mountain pass'; PJa. * <i>asu</i> 'steep bank, precipice'. # PIE * <i>al-</i> 'other side' (MCCHЯ 372, OCHЯ 1, 274–275).
	PA * <i>dāpa</i> 'to cross (a mountain)': PM * <i>daba-</i> 'cross (a mountain)'; PTM * <i>dāb-</i> 'to cross (a river)'; PJa. * <i>dàma</i> 'mountain'.
Hills, slopes	
? PIE (PGA) * <i>tung^w</i> 'hillock': Ind. <i>tuṅga-</i> m. 'elevation, height, mountain'; <i>tuṅga-</i> 'prominent, lofty, high' Mayr. KEWA 1, 508 ("Nicht überzeugend erklärt"); Grk. τύμβος m. 'mound, burial mound, grave' Beekes 1517 ("Pre-Greek/Mediterranean word" because of Corcyr. τῦμος). WP I 706. Or. Greek = Lat. <i>tumulus</i> 'earth-hill', Arm. <i>t'umb</i> 'landfill, earthen wall', Celt. * <i>tumbo-</i> 'excrescence, hill' (Matasović 394); if so, PIE * <i>tum-bh-</i> , not related with Ind. See Pok. 1072 (all from * <i>teHw-</i> 'to swell').	
PIE * <i>k(ʷ)onHm-/k(ʷ)neHm-</i> 'slope, mountain forest': Grk. κνημός m. 'Berghang, Bergvorspur, Bergwald' Beekes 723; Germ. * <i>xamm-a-</i> m. 'mountain forest, fenced land' WP I 460, Pok. 613–614.	

Indo-European	Altaic
<p>PIE (Eur.) <i>*sledh-</i> ‘gentle slope, valley’: Balt. <i>*slē̃(d)-n-a-</i>, <i>*sled-n-u-</i> adj., <i>*slē̃(d)-n-iā̃</i> f. (2), <i>*slē̃(d)-sn-a-</i> adj. (1), <i>*sle(d)-sn-a-</i> adj. ‘flat, low (about a terrain); valley’, Germ. <i>*slādan</i> (n) ‘valley’. Orel 348; Fraenkel 829.</p> <p>PIE <i>*ro(H)y-n-/w-/k-</i> ‘elevated stripe of land, sand-bank’: Ind. <i>reṇú-</i> m. ‘dust, sand’, Iran. <i>*rai-ka-</i> ‘sand’ (Mayr. EWA 1, 459); ESLav. <i>*rěnb</i> ‘Sandbank’ (Vasm. 3, 470); Balt. <i>*roiw-ā̃</i> f., <i>*rīw-ā̃</i> f., <i>-iā̃</i> f. (Lith. <i>rievà</i> (4) ‘Riff, Steinkluff, Fels, Klippe, Hügel’; Lett. <i>rīve</i>, <i>rīva</i> ‘erhöhter Streifen’) Fraenkel 692; Germ. <i>*rai-n-a-z</i> m., <i>*rai-n-ō(n)-</i> f. ‘boundary, strip of land, ridge’ Orel 296; Celt. <i>*royno-</i> ‘route, road, mound’ Matasović 316. WP II 343, Pok. 326–332 (sub <i>*er-</i> : <i>or-</i> : <i>r-</i> ‘to move’).</p>	

Water landscape

Indo-European	Altaic
<p>Water-meadows, swamps</p> <p>PIE <i>*selo/es-</i> ‘water-meadow’: Ind. <i>sáras-</i> n. ‘lake, pond, pool’ Mayr. EWA 2, 708; Grk. ἔλος n. ‘feuchte Wiese, sumpfige Niederung, Marschland’, ἔλειος ‘palustris’ Beekes 415; Slav. <i>*selò</i> n. (b) ‘ploughed field; soil, country’ Фасмер 3, 596, Derksen 444 (but not to Lith. <i>salà</i> f. 4 ‘island’ etc.!) WP II 507; Pok. 901; MA 370 (+ Wels <i>heledd</i> ‘meadow along the river’ < <i>*sel-iyā̃</i>).</p> <p>PIE <i>*pa(H)w-</i> ‘clay, mud, morass’: Ind. <i>palvala-</i> n. ‘pool, small tank, pond’ Mayr. EWA 2, 104; Grk. πηλός Hes., Dor. παλός m. ‘Lehm, Ton, Schlamm, Kot, Morast’ Beekes 1186 (“without convincing etymology”); Balt. <i>*pal-ia-</i> f. ‘Sumpf, Moor’ Fraenkel 1, 532; Lat. <i>palūs</i>, gen. <i>-ūdis</i> f. ‘stehendes Wasser, Sumpf, Pfütze’ WH 2, 243 (Alb. <i>pūt</i> ‘Wald’ borrowed from Balk.-Rom. <i>*padūlem</i> < Lat. <i>palūdem</i>, Orel AlbD 353). WP II 55, Pok. 798–801 (sub <i>*pelə-</i> ‘full’) # Nostr. <i>*pVIV</i> ‘wash, flow’, PA <i>*p’ōle</i> ‘wet, succulent; grass, plant’, Ur. <i>*pūlk₃</i>.</p> <p>? PIE <i>*īl-u-</i> ‘silt’ (rather ‘mud’): Grk. ἰλύς, -ύος f. ‘Schlamm, Kott, Morast’ Beekes 589; Slav. <i>*jīlv</i> ‘bog, silt, mud’ Derksen 211 (<i>*jlv</i>); Balt. <i>*īl-u-</i> (1) adj. > Lett. <i>īls</i> ‘very dark’. WP I 163, Pok. 499, MA 370–371. # Nostr. <i>*īēlV</i> ‘earth’: PA <i>*nālV</i> ‘earth, land’; Drav. <i>*īēl-</i> ‘earth’ (DED 2913). A. Дыбо 2000.</p> <p>PIE (Eur.) <i>*balH-</i> ‘marsh’: Slav. <i>*bol-nv-je</i> n. (a) ‘low meadow’ Derksen 53; Balt. <i>*bal-ā̃</i> f. ‘Morast’ Fraenkel 1, 30, Germ. <i>*pōl-az</i> ‘pool’ Falk & Torp 151, Orel 293 (Celt. Ir <i>poll</i>, <i>pull</i>; Cymr <i>pwll</i> < Germ.?). WP II 176 # Nostr. <i>*palV</i> ‘swamp, marsh’, PA <i>*biālu</i> ‘dirt, mud’. MCCНЯ 331, OCHЯ 2, 97–98.</p> <p>PIE (Eur.) <i>*bholHt-om</i> ‘marsh’: Slav. <i>*bólto</i> n. (a) ‘swamp’ Derksen 53; Balt. OPrus. <i>*balt-an</i> ‘marsh’ (in</p>	<p>Water-meadows, swamps</p> <p>PA <i>*tē̃ηa</i> ‘lowland’: PCT <i>*tEη</i> ‘pond’; PTM <i>*tē̃η</i> ‘lowland; wide lake’; PJa <i>*tāni</i> ‘valley’.</p> <p>PA (West) <i>*nèkù</i> ‘lowland, water meadow’: PNM <i>*nigu</i> ‘water-meadow’; PTM <i>*nek-te</i> ‘lowland’.</p> <p>PA (East) <i>*mūsV</i> ‘swamp, pond’: PNTung. <i>*mūsa</i> ‘grassy marsh’; PKor <i>*mós</i> ‘pond, swamp’.</p> <p>PA <i>*lepu(-nV)</i> ‘swamp’: PNM <i>*lobku</i> ‘marshy ground’; PTM <i>*lebē(n)-</i> ‘swamp, marsh’; PKor <i>*nip(h)</i> ‘swamp, marsh’; PJa <i>*númà</i> ‘swamp, marsh’.</p> <p>PA <i>*kut’i</i> ‘bog, marsh’: PCT <i>*Küte(re)</i> ‘bog, marsh’; PTM <i>*kuta</i> ‘bog, pond’; PJa <i>*kutai</i> ‘bog, marsh’.</p> <p>PA (West?) <i>*tèt’o</i> ‘swamp, water pool’: PCT <i>*TAdgun</i> ‘a big river’; PTM <i>*detu</i> ‘swamp, mossy meadow’; PJa <i>*də(n)tə</i> ‘backwater’.</p> <p>PA <i>*sīpe</i> ‘swamped ground, swamp vegetation’: PNM <i>*siber</i> ‘swamped forest’; PTM <i>*sibe</i> ‘horse-tail, swamped ground where it grows’; PJa <i>*símpà</i> ‘turf’.</p>

Indo-European	Altaic
<p>toponyms, Топоров 1, 189, Mažiulis 1, 132); {Lett. <i>Balates kalns</i> ‘Sumpfborg’ < Slav.}; Germ. *<i>puld-r</i> m.: ONord. <i>poll-r</i> m. ‘runde Bucht, Teich’, MDutch <i>polre</i>, <i>polder</i> m., f. ‘polder; dijk’; Dutch <i>polder</i> ‘Marschland’ (> Efris. <i>polder</i> ‘Marschland’) De Vries 427; Alb. <i>baltë</i> f. (< *<i>baltā</i>, NPI neu.), Balt. m. ‘swamp’ (> Rum. <i>baltă</i> ‘swamp’, Middle Greek βάλτος) Orel AlbD 15–16; near can be Illyr. *<i>balta</i> ‘Sumpf’, Lat. <i>blatea</i> f., ‘Kotklümpchen’, ODalm. <i>balta</i> ‘Sumpfssee’. WP II 176, Pok. 118–120 (mixed).</p> <p>PIE (Eur.) *<i>k(ʷ)woin-</i> ‘marsh’: Germ. *<i>xwain-ō</i> ‘swampy field’ Orel 197, *<i>xwin-</i> id. Falk & Torp 86; Lat. <i>caenum</i>, -ī n. ‘Schmutz, Schlamm, Kot, Unflat’ WH 1, 132; Celt. OIr. <i>cōennach</i> ‘Moos’ WP I 469, Pok. 628 (sub <i>kʷei-</i> ‘dirt’).</p> <p>PIE (Eur.) *<i>dhongʷ-</i> ‘bog, marsh’: Balt. *<i>dang-ā</i> f. ‘bog, marsh’ (> Lett. <i>dañga</i> ‘kotige Pfütze, weiches morastiges Land’, length because of Winter’s law); Germ. <i>đank(w)-ō</i> f., ‘bog’ Orel 68. WP I 851, Pok. 247–248 (sub *<i>dhemə-</i> ‘to smoke’).</p> <p>PIE (Eur.) *<i>pan-</i> ‘mud, slush, morass’: Balt. *<i>pan-iā</i> f. > OPrus. <i>pannean</i> ‘Moorbruch’ Mažiulis 3, 217; Germ. *<i>fan-ja-n</i> n. ‘fen, marsh, mud’ Orel 92; Celt. Mlr <i>an</i> ‘Wasser’, <i>enach</i> ‘swamp’; Gaul <i>anam</i> ‘paludem’. WP II 5, Pok. 807–808, MA 370–371.</p>	<p>Island</p> <p>PA *<i>bùk’e</i> ‘tall island’: PCT *<i>bük</i> ‘wood/hill/meadow on the river bank’; PM *<i>buka</i> ‘hillock, canal’; PTM *<i>būka</i> ‘island’; PKor *<i>puk</i> ‘heaping of earth’; ? PJa *<i>bəka</i> ‘hill’.</p> <p>PA *<i>šiumi</i> ‘island; forest’: PCT *<i>simek</i> ‘forest on the river bank’; PTung *<i>šumi</i> ‘foreland, shallow place; tussock’; PKor *<i>sjām</i> ‘island’; PJa *<i>sīmà</i> ‘island’. # Nostr. *<i>swajmV</i> ‘marsh’: Ur. FU *<i>šajm3</i> ‘Vertiefung, Senkung (mit einem Teich od. Bach)’ UEW 457. A. Dybo 2005.</p> <p>PA *<i>siumŋu</i> ‘island, shallow place’: PNM *<i>sinaya-</i> ‘island; bend of river’; PTung *<i>sumŋi</i> ‘tussock (in a swamp)’; PJa *<i>súná</i> ‘sand’.</p>
<p>Shore</p> <p>PIE *<i>aHperos</i> ‘river bank, sea shore’: Grk. ἡπειρος, dor. ἄπειρος f. ‘Ufer; Festland’; Germ. *<i>ōferaz</i>, *<i>ōferan</i> ‘bank, shore’ Orel 290; Arm. <i>ap’n</i> ‘shore’. WP I 48, Pok. 53, MA 343.</p> <p>? PIE (GA) *<i>dhisn-</i> ‘sand-hill, dune’: Ind. <i>dhīṣṇya-</i> m. ‘a heap of earth covered with sand on which the fire is placed’ Mayr. KEWA 2, 103, Mayr. EWA 1, 792; Grk. θίς, gen. θίνος (*<i>dhisn-s</i>, *<i>dhisn-os</i>, see Sihler 216) m./f. ‘Haufen; Sandhaufen (am Meere), Düne, Gestade’ Beekes 596 (“Without explanation”). WP I 835 f (differently in Pok.).</p> <p>PIE (Eur.) *<i>dhūn-</i> ‘coast, (dry) land’: Balt. *<i>dūn-ia-</i> c., *<i>dūn-iā</i> f. ‘silt’ Fraenkel 1, 109; Germ. *<i>dūn-ō</i> f., *<i>dūn-az</i> m. ‘hill, dune’ Orel 80. Pok. 263 (sub *<i>dheu-</i> ‘to blow’) # Nostr. *<i>dVwnV</i> ‘shore, land’, PA *<i>diōna</i>.</p>	<p>Shore</p> <p>PA *<i>bjóro</i> ‘bank, rift’: PCM *<i>borgija</i> ‘river rift; hill, mound’; PTM *<i>bir[u]-kan</i> ‘precipice; mountain’; PKor *<i>pirá</i> ‘bank’.</p> <p>PA *<i>giru</i> ‘shore; road’: PT *<i>Kirgak</i> ‘shore, edge’; PTM *<i>giri</i> ‘shore, riverbed’; PKor *<i>kírħ</i> ‘road’.</p> <p>PA *<i>p’ire</i> ‘bank, steep bank’: PM *<i>her-gi</i> ‘steep bank’; PNTung *<i>piri</i> ‘steep (slope, bank)’; PJa *<i>pi(n)ti-pa</i> ‘bank’.</p> <p>PA *<i>sap’i</i> ‘shore’: PCT *<i>sep</i> ‘duct, river branch, bay’; PSTung *<i>sapsV</i> ‘bank, shore’; PJa *<i>sipà</i> ‘tide’.</p>
<p>Water, wave</p> <p>PIH *<i>weHr-luHr-</i> ‘water, moisture’: Luv. <i>wār-</i> ‘water’ (<i>wārsa</i> is a form of nom.-acc. sg.) Melchert CLL 257; Ind. <i>varī</i> f. pl. ‘streams, rivers’; <i>vār</i>, <i>vāri</i> n. ‘water’; Avest. <i>vairi-</i> m. ‘See’; <i>vār-</i> ‘Regen’, Pers. <i>bārān</i> ‘rain’; Arm. <i>gayrr</i> ‘Sumpf, Schlamm’; OPrus <i>wurs</i> < *<i>ūras</i> ‘Teich’ Mažiulis III 271; Germ. *<i>warōn</i>, *<i>waraz</i> m. ‘liquid, water; sea’; Orel 451; Celt. ? Mlr <i>feraim</i> ‘giesse’, <i>ferad</i> ‘Feuchtigkeit’; Cymr <i>gweren</i> ‘liquamen’; Tokh. *<i>wār</i> ‘Wasser’ (Adams 577). WP I 268, Buck 3, 45, Pok. 80, MA 636. Probably it</p>	<p>Water, wave</p> <p>PA *<i>miùri</i> ‘water’: PM *<i>mören</i> ‘river’; PTM *<i>mū</i> ‘water’; PKor *<i>mír</i> ‘water’; PJa *<i>mí(-n-tú)</i> ‘water’.</p> <p>PA (West) *<i>siuba</i> ‘water’: PT *<i>sib</i> ‘water’; PM *<i>usu</i> ‘water’. # PIE *<i>sew(ə)-</i>, PK *<i>šw-</i> (MCCHЯ 341).</p> <p>PA (East) *<i>lát’á</i> ‘wave’: PSTung *<i>lāta</i> ‘wave, storm’; PJa *<i>nàntá</i> ‘open sea’.</p> <p>PA (West) *<i>čalu</i> ‘wave, to overflow’: PCT > Oghuz *<i>dalga</i> ‘wave’; PM *<i>dolgi-yan</i> ‘wave’; PNTung *<i>žal-</i> ‘to overflow, to wave’. # PIE *<i>sol-</i> ‘to flow’.</p>

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<p>should be distinguished from ? PIH *HewH- ‘to be wet’: Hitt. <i>heu-</i> ‘Regen’ (Tischler 238); <i>hu-r-nai-/i-ja-</i> (I), <i>hu-r-nu-</i> (I) ‘besprengen, befeuchten’, Pal. <i>huwarninai</i> ‘besprengt’ (Tischler 305–306); Ind. <i>avaṭá-</i>, <i>avatá-</i> m. (*ew-ṛ-t-) ‘a hole, vacuity in the ground’, <i>aváni-</i> f. ‘stream, river, bed of a river’; Grk. ἄναυτος ‘wasserlos, von Bächen’ Balt.: Lith. <i>jáura</i>, pl. –ōs (1) ‘Moorgrund, Sumpfland’ Fraenkel 1, 198; Germ. *au-r-a-z m. ‘wet soil; ocean’ Orel 29, *ū-r-a-n n. ‘drizzling rain, mist, fog’ Orel 437, Lat. <i>ūrīnārī</i> ‘tauchen unter Wasser’, <i>ūrīnātor</i> ‘Taucher’. WP I 268 f, Buck 37, 45, Pok. 78–81. MA 636 (<i>iuHr-</i>, Balt. + Thrak. <i>iuras</i> ‘name of a river’) or MA 539 (Ind. <i>avata</i> + Latv. <i>avuots</i> ‘spring’).</p> <p>PIH *we(n)dh- ‘water, wave’ Friedrich 249–250, Adams 511, WP I 252, Pok. 80, MA 636 # Nostr. PA *udV ‘rain’, Ur. <i>wete</i>, Drav. *jēd- ‘water’ MCCCHЯ 334. Or to PA *untu ‘whirlpool, tide’?</p> <p>PIE *welam-/włHm-, *włn- (< *włm-?) ‘wave’: Ind. <i>ūrmī-</i> m., f. ‘wave, billow’; Avest. <i>varami-</i> ‘Woge, Welle’; Slav. *vblnā, Balt. *wiln-i- (2), -jā f. ‘wave’; Germ. *walmi-z ‘well; boiling’; *wellō- f. (< *welna), *walla-z m. ‘wave’ Falk & Torp 269, Orel 444; ? Tokh. B <i>γolme</i> ‘pond, pool’ (Adams 513 with doubts); ? B <i>lāñe</i> ‘flood’ (Adams 547). WP I 298, Pok. 1140–1142, MA 637 (uncertain).</p> <p>?? PIE *bhang- ‘wave’: Ind. <i>bhaṅga-</i> m. ‘wave’ (Mayr. KEWA 2, 461, classic Sanskrit, = <i>bhaṅgá-</i> ‘das Zerbrecchen’; no traces in Turner CDIAL), Balt. *bañg-â (2) f. > Lith. <i>bangà</i> ‘Welle, Woge, Regenguss’ WP II 149 f</p> <p>? PIE *k(‘)ūm- ‘wave’: Grk. κύμα, -ατος n. ‘wave, billow’ Beekes 848; Germ. *xúm-a-n > ONorse <i>hūm</i> n. ‘See, Meer’ (poet.) n. De Vries 266 (or to <i>hūm</i> ‘Dunkelkeit’), Holthausen 132; ? Lat. <i>cumulus</i>, -ī ‘Haufe; Menge; Höhepunkt’ (cf. Ov. <i>cumulus...immānis aquārum</i>) WH 1, 307. WP I 365, Pok. 592–594 (sub *k’eμ- ‘to swell’) # Nostr *kUmV ‘sand, thin snow’: PA *kiumo, Ur. <i>kumz</i> MCCCHЯ 362.</p>	<p>To flow</p> <p>PA *iākî ‘to flow; basin’: PT *iak- ‘to flow’; PTM *iaKu ‘swamp’; PJa *ikà-i ‘pond’.</p> <p>PA *giàru ‘wave, stream’: PNM *gōri-ka ‘small river, rivulet, stream’; PTung *guru-ki ‘reach (of river); whirlpool’; PKor *kjār ‘wave’.</p> <p>PA *untu ‘whirlpool’: PNM *undu- ‘to burst, whirl (of water); fountain, well’; PTung *onda- ‘to rise (of water); water’; PJa *untu ‘whirlpool’.</p> <p>PA *čurka ‘swift stream, current’: PNM *dargil ‘rapid current’; PNTung *žurku ‘rapid, swift stream; fairway’; PJa *taki ‘swift current, waterfall’</p>

⁹ For a new interpretation of the traditionally reconstructed set of roots *wed-, *wet-, *und-, see V. Dybo 2002, 413–415, 468.

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<p>PIE (Eur.) *sol- ‘to flow > island’: ? Ind. <i>salilám</i> ‘Meer, Meerflut’ Mayr. KEWA 3, 448; Balt. *sal-â f. ‘island’, *sâl- ‘to flow’ (Lith. <i>salà</i> ‘Insel’, dial. <i>sálti</i> ‘fliessen’; Lett. <i>sala</i> ‘Insel, Holm, eine Höhe im Morast’; OPrus. <i>salus</i> ‘Regenbach’ Mažiulis IV 55–56); Lat. <i>insula</i> f. ‘Insel’. WP II 452, Pok. 899 (sub *sel- ‘springen’). ? Here maybe as a loanword from an IE language (cf. Georgiev VS), Grk. <i>σάλος</i> m. ‘unruhige Bewegung des Meeren, Wogenschwalm; Ankerplatz, Reede’. WP II 454; Pok. 879–880, with irregular <i>s-</i>; nach Frisk II, 670, Beekes 1303–1304 vorgriechisches Wort; Lat. <i>salum</i> (and <i>salus</i> Ennius) ‘unruhiger Seegang, hohe See; Meer’ WH 2, 471 (with Germ. as <i>Wasserschwall</i> etc.; but this is impossible, because *swa- > sua- in Latin! If the form of Ennius is primary, it may be a loanword from Greek, thus acc. to Beekes); cf. WP II 454. ? *sel- (Germ. *šil-θ- > OEngl. <i>seoloθ</i> ‘See’); # Nostr. *calV ‘wave’: PA *čalu ‘wave, to overflow’ EDAL 391–392; Drav. *čal- ‘well, spring’ DED 2367.</p>	<p>PA (West) *orusi ‘river, to flow’: PT *örs, *örsen ‘river’; PM *urus- ‘to flow’. # MCCHY 341: PIE <i>Heur-</i> / <i>Hwer-</i>, PK <i>γwar-</i>.</p>
<p>PIH? PIE (Eur.)? *ak^w- ‘water (flowing)’: Hitt. ? <i>akukal(la?)</i>- or <i>akutal(la?)</i>- ‘Waschbecken’ (Tischler 11–12); Germ. *áxw-ō ‘river, stream’ f. Orel 5; Lat. <i>aqua</i> f. ‘Wasser, Wasserleitung’. WP I 34 f, Buck 29, 35, 42. Pok 23, MA 636 (<i>h₂ek^weh₂</i>) # Nostr. *Eku ‘water’, PA *iák’a ‘liquid, flow’ or *uk’u ‘wet, wash’, Drav. SDr. *āk ‘swamp’ or *uk- ‘spill, pour’ MCCHY 334, 347, OCHY 1, 275–276. [two roots]</p>	
<p>River</p>	<p>River</p>
<p>PIH *Hap- ‘water, river’: Hitt. <i>hap(a)-</i> ‘Fluß’, Pal. <i>hāpnas</i>, Luw. <i>hāpinni-</i> (Tischler 159–160) (MA — to *h₂eb(h)- ‘river’); InIr. *ap-/āp- f. ‘water, river’ ЭСИЯ 1, 311; ? Greek toponyms <i>Ἰωπός</i>, <i>Ἀσωπός</i>; Balt. *ap-iā f. > OPrus. <i>ape</i> ‘Fluss’, <i>ap-us</i> ‘Brunnen’ Mažiulis 1, 86–87, 89–90; Lat. <i>amnis</i>, -is m./f. ‘Fluss, Strom, (dicht.) Strömung, Wasser’; Tokh. A, B <i>āp</i> ‘water, river’ (Adams 44). WP I 46, Buck 30, Pok. 51–52, MA 636 (<i>h₂ēp-</i> / <i>h₂ep-</i>) # Nostr. *VpV ‘water’, Ur *üptV (Redei 83) ‘половодье’, Drav NDr *op- ‘become wet’. Or ? PIH *hab(h)- ‘river’: ? Hitt. <i>hap(a)-</i> ‘Fluß’ etc.; Celt. *ab-on Matasović 24–25 (< PIE *h₂ep-h₃on, so related to PIH *Hap-), Lat. <i>amnis</i> ‘river’. Pok. 1, MA 486, Buck 1.36.</p>	<p>PA *āmu ‘big river, big basin’: ? PCT *umar ‘big river’; PNM *ama-n ‘fold, valley’; PTM *āmu- ‘lake; big river’; PKor *omi ‘land sink, pool’; PJa *ūmí ‘sea’. # Cf. Dr. *am (Tamil <i>am</i>, <i>ām</i>) ‘water’ (DED 187).</p>
<p>? PIE *dānu- ‘river’: Ir. *dānu- (Ind. <i>dānu-</i> n. ‘fluid, drop, dew’, Av <i>dānu-</i> f. ‘Fluss, Strom’; Osset. <i>don</i> ‘Wasser, Fluss’) ЭСИЯ 3, 450–451; Wels <i>donwoy</i> ‘a river name’ (*dānew-yos), Lat < Celt <i>Dānuvius</i> ‘a river name’. Pok. 175, MA 486; WP I 763 (< *dā- ‘to flow’).</p>	<p>PA (East) *k’ēba ‘river, bay’: PTung *xebe ‘bay; lake’; PKor *kái (< *kabi) ‘inlet, estuary’; PJa *kápà ‘river’.</p>
<p>Spring, well</p>	<p>PA *iuger’V ‘river’: PCT *ügüř ‘small river’; PM *üjer ‘flood, inundation’; PTM *uwoġē(r)- ‘wave, stream’; PKor *jāhír ‘shallow place’; PJa *ùrà ‘bay, coast’. # ? PU *uwa MCCHY 334.</p>
<p>PIH *g^wela- ‘to boil over’: Hitt. <i>kweluwana-</i> (<i>kuluwana-</i>) ‘Waschbecken’ (Tischler 604); Ir. *gal-/jal- ‘to drip,</p>	<p>PA (West) *žiölu ‘river bed, stream’: PT *jul ‘stream, brook, fountain’; PM *žilga ‘river bed, ravine’; PTM *žila- ‘swift (not freezing) river current, ice-hole’.</p>
	<p>Spring, well</p>
	<p>PA *biujri ‘well, spring’: PNM *bürü-dü ‘spring’; PTM *bira ‘river’; PKor *ü- ‘well’; PJa *bi ‘well’.</p>

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<p>ooze, trickle', Sanskrit <i>jalá-</i> n. 'water, any fluid' ЭСИЯ 3, 152–154; Grk. βαλανεῖον n. 'Badstube, warmes Bad' Beekes 195 ("Pre-Greek"); Germ. <i>*kwellan-</i> 'to gush, to drop' Orel 227. WP I 690, Pok. 471–472 # Nostr. <i>*kiülä</i> 'pond', PA <i>*k'óli</i>, Ur. <i>*k[ä]lV</i>, Drav. <i>*kUl-</i> MCCHЯ 352, OCHЯ 1, 305–306.</p> <p>PIE <i>*bhrew-eHr/*bhru-Hn-os</i> (Gen.) 'spring (of water)': Arm. <i>albiur, albeur</i>, gen. <i>alber</i> 'Quelle' Martirosian 32–33 (<i>*bhrewr</i>); Grk. φρέατο, -ᾶτος 'well, spring' (*φρηφατο-, -ατος, hom. φρήατα, φρείατα) Beekes 1590 (<i>*bhreh₁-ur</i>); Germ. <i>*brunn-ō(n-)</i> f. 'spring, well' Orel 58. WP II 167, Buck 44, Pok. 144, MA 539 # Nostr., PA <i>*biujri</i> 'well, spring'.</p> <p>? PIE <i>*alm-os</i> 'spring': OInd. <i>arma-</i> 'Brunnen' Mayr. EWA 1, 120, ? Toch. B <i>älme</i> 'spring (of water)', vřddhi Toch B <i>yolme</i> 'Teich' (Adams 55–56). MA 539 (<i>*h_aelmos</i>, <i>*h_aēlmos</i>).</p> <p>PIE <i>*k(?)rosn-</i> 'stream, spring': Grk. aeol. κράννα, dor., arkad. κράνα, ion. κρήνη ds. (> att.) 'source, fountain'; κρουνός m. 'spring' Beekes 777; Germ. <i>*xraznō</i> 'tide, wave' Orel 185; Alb. <i>krúa</i> 'spring, fountain' Orel AlbD 198 (< <i>*krāna</i> < <i>*krasna</i>). WP I 488, Buck 44. MA 539 (<i>*krsneh_{ar}</i>, <i>*krosno-leh_{ar}</i>, only Greek – Germanic) # Nostr. <i>*kara</i> 'flood, spring', PA <i>*k'ara</i>.</p> <p>PIE (Eur.) <i>*bhog-</i> 'brook, stream': Slav. <i>*bāg-n-o</i> 'marsh', <i>*Bāgŷ</i> 'name of a river' Фасмер I, 102, Derksen 33 (not taking into account the Winter's law effect); Germ. <i>*bak-iz</i> m. 'stream' Orel 33; Celt. <i>*boglā</i> > Mlr <i>būal</i> 'fliessendes Wasser'. WP II 187, Pok. 161 (the long vowel in Slav. is due to the Winter's law).</p>	<p>PA <i>*biülō</i> 'to soak, to gush forth': PCT <i>*bulak</i> 'spring, well'; PNM <i>*bilka-</i> 'to issue from the ground, to overflow'; PTM <i>*bilkü-</i> 'to splash, swash'; PKor <i>*puri-</i> 'to soak, make wet'; PJa <i>*pürə</i> 'bath'. # PIE <i>*bhleu-</i> (WP 2, 213–214).</p>
<p>To move across</p> <p>PIE <i>*terH-</i>, <i>*trā-</i> 'to move across': [Hitt. <i>tarhu-</i> 'besiegen, bezwingen, überwinden' is not here according Kloekhorst 835–837]; Ind. <i>táрати, tiráти, titarti</i> 'to pass across, cross over'; <i>tára-</i> 'carrying across or beyond', m. 'crossing, passage'; <i>tarāni-</i> 'moving forwards, carrying over'; <i>táras-</i> n. 'energy, progress; ferry'; <i>tirthá-</i> n. 'Furt, Tränke' (<i>*třtho-</i>); <i>*tūrthá-</i> in Prākr. <i>tūha-</i> 'Ufer', Dard. <i>tūrt</i> 'Furt' (> Wakhī <i>tūrt</i> Стеблин 368); Iran. Avest. <i>tar-</i> 'hinübererlangen über', prs. <i>titar-</i>, <i>taraya-</i>, ptc. <i>vī-tarata-</i>; <i>tarantá-</i> m. 'Meer'; OPers. <i>viyatārayāma</i> 'wir überschritten'; ModPers. <i>gu-dar</i> 'ford', Bal. <i>tarag, tharay</i> 'umwenden, umkehren' Mayr. EWA 1, 630–632; [Grk. τράνης, τράνός 'klar vernehmlich, deutlich' probably not from here, Beekes 1499]; Lat. <i>intrāre</i> 'hineingehen', <i>extrō, -āre</i> 'über etwas hinausgehen'. WP I 728, Pok. 1074–1075.</p> <p>PIE (Eur.) <i>*b(h)red(h)-</i> 'to wade, to jump over': Slav. <i>*brestī</i> 'to wade', <i>*brodъ</i> 'ford'; Balt. <i>*brid-</i> (<i>breñd-a-</i>) 'to wade', <i>*brad-s-l-a-</i> 'ford'; Alb. <i>*breda</i> 'to jump, to spring' Orel AlbD 34. Fraenkel 58, Schr-N I 167 #</p>	<p>To move across</p> <p>PA <i>*t'iuęe</i> 'ford, bridge': PNM <i>*tuguj</i> 'brow, gangway'; PTung <i>*tüęde-</i> 'to cross a bridge; sb. bridge, log'; PJa <i>*tù</i> 'ford'.</p> <p>PA (East) <i>*t'olV</i> 'bridge, crossing': PTung <i>*tul-</i> 'to wade; to cross (a mountain ridge)'; PKor <i>*t'ari</i> 'bridge'.</p> <p>PA <i>*ól'a</i> 'ford, shallow': PNM <i>*(h)olam</i> 'ford'; PTM <i>*ola-</i> 'to ford, wade'; PJa <i>*ásá-</i> 'shallow'.</p> <p>PA <i>*k'op'ira</i> 'bridge, crossing': PCT <i>*köpür</i> 'bridge'; PM <i>*köyürge</i> 'bridge'; PTM <i>*xupuru</i> 'rift (in river); bridge'; PJa <i>*kápára</i> 'shallow, sandy place in a river or on its bank'.</p> <p>PA (East) <i>*bét'a / *p'éda</i> 'sea, ford': PTM <i>*pedē-</i> 'to ford, cross over'; PKor <i>*pátá, *pàrá</i> 'sea'; PJa <i>*bátá</i> 'sea; to ford'.</p>

Indo-European	Altaic
<p>Nostr. *bVrdV ‘ford’, PA *bét’al/*p’éda, Kart. *bo(r)d-, Drav. *paḍ- MCCНЯ 332.</p> <p>? PIE *telat- ‘bridge, ford’: ? Ind. <i>tīrthā</i>- n. ‘ford’ (if not from *terH- ‘to move across’); Balt. *tīlt-a-s ‘bridge’. Fraenkel 1094 (differently in Pok.), Schr-N I 167, Иллич-Свитыч 1963, 74.</p> <p>PIE (Eur.) *bher[e]w-, *brēw- ‘wooden flooring, decking, bridge’: Slav. *brōv-no ‘beam, bridge’ Derksen 67; Germ. *brōw-ō, *bru-g-jōn- ‘bridge’ Orel 58; Celt. *brēwā > Gaul. <i>briva</i> ‘Brücke’. WP II 207, Pok., Schr-N I 167. # Nostr.: Ur. *pora ‘raft, float’ UEW 395. MCCНЯ 332.</p> <p>PIE *pont-/pent-/pnt- ‘way through obstacles, way through water space’: Ind. <i>pānthā</i> ‘way, path’; <i>pāthas</i>- n., <i>pāthis</i>- n. ‘spot, place; (L.) water’; Avest. <i>pantō</i>, instr. <i>paḍa</i> ‘Pfad, Weg; Raum, Stelle’ Mayr. EWA 2, 82; Arm. *fon-i > <i>hun</i> (i-St.) ‘Furt, Weg’ Martirosian 422–426; Grk. πόντος m. ‘Meer, hohe See’, πάτος m. ‘Weg, Pfad’ Beekes 1221; Slav. *pōtv ‘way’ Derksen 417, Balt. *pint-[i]- > OPrus. <i>pintis</i> ‘way, road’ Mažiulis 3, 281–282, Иллич-Свитыч 1963, 149; Germ. *fenḍ-anan- denom. vb. ‘to find’ Orel 99; Lat. <i>pons</i>, -tis m. ‘Brücke, Steg, Prügelweg durch Sümpfe, Verdeck, Schiffstabulat’ WH II 336; ? Celt. *fansā ‘trace’ > OIr. <i>ēs</i> ‘Spur’ Matasović 121 (< *pnt-teh₂); ? Tokh. B <i>-pānte</i> as a putative PIE *pnth₂-ó- ‘one pertaining to the way’ Adams 19. WP II 26; Pok. 808–809; Benveniste 1954.</p>	<p>Shallow place</p> <p>PA *niala ‘shallow, shallow place’: PCT *jAl- ‘shallow; wave’; PNM *naliyur ‘pool; overflowed plain’; PTung *niala ‘overflowed place; shallow’; PKor *nārā ‘ford; ferry point’.</p> <p>PA *siógu ‘shallow, shallow place’: PCT *sig ‘shallow’; PM *siya-r ‘sediments’; PTung *sigi-n ‘ice-hole’; PJa *sú ‘shallow place, sandbank’.</p> <p>PA *sájV ‘pebble; shallow place’: PT *saj ‘shallow place with pebbles; arroyo with pebbles; wadi; river’; PNM *sajir ‘river-bed, pebble’; PTung *saj- ‘sandy mound’; Kor. *sāi-m ‘spring, shallow well’; PJa. *sái ‘sandbank’.</p> <p>PA (East) *iḡu ‘sandbank’: PTM *(x)iḡā ‘sand or pebble on the riverbank, sandbank; spit’; Kor. *jā ‘reef, rock in a sea’; PJa. *ia ‘bay’.</p>
<p>Still water</p> <p>PIE *ag’her- ‘lake’: Grk. Ἀχέρον, -οντος ‘Fl. der Unterwelt’, ἄχερουσία ‘marshy waters’ (Hes.) Beekes 182; ? Arm. <i>ezr</i>, Pl. *ezer-a (*n.) ‘edge, bank’ Martirosian 247–249; Slav. *e/zero, *ezerv ‘lake’ Derksen 148, Trub. 6, 57, 59 (but the suggested connection with Slav. *ězv ‘dam, fishing basket’ is doubtful because of different vowel quantity); Balt. *ežer-an ‘lake’ n. Fraenkel 125, Mažiulis 1, 104 (but the suggested connection with Balt. *ež-jā, -iā f. ‘border’ is not obligatory). Pok. 291–292; MA 343 (*h₁eg’herom without Greek and Arm.).</p> <p>? PIH *woHr-: *wōp-/wup ‘basin’: Hitt. <i>wappu</i> ‘river bank’ Kloekhorst 958 (“no good etymology”); OInd. <i>vāpī</i> ‘pond’ (Mayr. KEWA III 188: to <i>vāp</i>- ‘to throw, to sow’); OCSl <i>vapa</i> ‘lake, marsh, pond’ Фасм. 1, 125; ? Lith. <i>ùpė</i>, Lett. <i>upe</i> ‘river’ (the short <i>u</i> is unclear). Pok. 1149, MA 343, 636–637 (uncertain).</p> <p>PIE *lakw- ‘lake, pond’: Grk. λάκκος (*Λακκος) m. ‘Wasserloch, Zisterne; Teich, Grube’ Beekes 827 (*lkw-); Slav. *loky ‘pool, swamp, pond’ Derksen 284; Balt. *lek-men-iā f., *lak-men-â f. ‘pool’ Fraenkel 352–353 (differently); Germ. *lagú-z ‘sea, lake’ Orel 231; *lāx-ō, *lāx-az ‘sea, pool, swamp’ Orel 232; Lat. <i>lacus</i>, gen. -ūs (/ -ī) m. ‘jede trogartige Vertiefung, See; Brunnenrog; Kufe’;</p>	<p>Still water</p> <p>PA *k’óli ‘lake, basin’: PT *[k]ól ‘lake’; PNM *küjil-sü ‘island in a river, shallow place in a river’; PTM *xule- ‘canal, duct; whirlpool’; PKor *kārām ‘lake, big river’. # ? PIE *g^wel- ‘quellen, Quelle’ (WP 1, 690); PU *k[ä]lV; Drav *kul a (MCCНЯ 352, OCHЯ 1, 305–306).</p> <p>PA *najrV ‘lake, river’: PM *naḡur ‘lake’; PTM *niāru ‘lake; swamp’; PKor *nāih ‘river’. # OCHЯ 2, 89.</p> <p>? PA (West) *žādé (~ *žedā) ‘pond, pool’: PNM *žada-yai ‘pond, pool’; ? PJa <i>dāntā</i> ‘backwater’.</p>

Indo-European	Altaic
<p>Grube'; <i>lacūna</i> f. 'Vertiefung, Senkung; Loch, Grube; Lache, Weiher'; Celt. *<i>loku</i> 'lake, pool' Matasović 243. WP II 380, Pok. 653, MA 343 (without Balt.). # Nostr.: Ur. *<i>lake</i> 'bay, low ground' UEW 234, 683.</p> <p>PIE (Eur.) *<i>lām-</i> 'hollow filled with water': Slav. *<i>lāmъ</i> 'pit, flooded meadow' ЭССЯ 14, 26, Derksen 268 (to *<i>lomiti</i> 'to break'); Balt. *<i>lām-â</i> (1?), *<i>lām-a-</i> 'hole, den, pit' Fraenkel 385 (to <i>laminti</i> etc.; doubtful because of different vowel quantity); Lat. <i>lāma</i> f. 'Lache, Morast, Sumpf' WH I 753. WP II 385, Pok. 653–654. # Nostr. *<i>laHm[u]</i> 'swamp', PA *<i>lāmò</i> 'sea, wave', Ur. *<i>lampe</i> 'pond', Kart. *<i>lam-</i> 'silt, dampness', Drav. *<i>nam</i> 'dampness'. МССНЯ 331, ОСНЯ 2, 29–30.</p> <p>PIE *<i>tenHæg-</i> 'hole under the water': Grk. τέναγος n. 'shallow place' Beekes 1466; Balt. *<i>ting-â</i> > Lett. <i>tīgas</i> pl. 'Tiefe zwischen zwei Untiefen'. WP I 724, Pok. 1067, MA 343 (<i>tenh_g- / tñh_g-</i>).</p> <p>PIE (Eur.) *<i>lindh-</i> 'reservoir': Germ. *<i>lindō</i> 'spring, pool, wave' Falk & Torp 244, De Vries 357; Celt. *<i>linda</i> 'lake' Matasović 239–240. WP II 438, Pok. 675.</p>	<p>To overflow, deep water</p> <p>PA *<i>dāla</i> 'deep place': PT *<i>dāl-</i> 'to sink' > *<i>dAluj</i> 'ocean'; PTM *<i>dala(n)</i> 'inundation, stream'; PJa *<i>dara</i> 'sea bottom, deep place'.</p> <p>PA *<i>tōle</i> 'deep water': PCT *<i>tolku-</i> 'to beat (of waves); wave(s)'; PNM *<i>tülki-n</i> 'rising water'; PNTung *<i>tōlgu-</i> 'deep place close to the bank; whirlpool; backwater'; PKor *<i>tór</i> 'ditch'; PJa *<i>tərə</i> 'backwater, deep water'.</p> <p>PA *<i>k'ara</i> 'to overflow, flood': PCT *<i>KAr-</i> 'to overflow'; *<i>KArim</i> 'ditch'; PNM *<i>kargi-</i> 'overfall, rift'; PTung *<i>xarba</i> 'shallow place, shoal; shallow; ebb-tide'; PJa *<i>kátà</i> 'tide, ebb-tide; beach, bay'.</p> <p>PA (West) *<i>t'ial'ke</i> 'to splash, overflow': PCT *<i>d(i)āl(i)-</i> 'to overflow'; PNM *<i>čalgi-</i> 'to splash, overflow'; PTung *<i>tilka-</i> 'to splatter, overflow'.</p> <p>PA *<i>ōk'e</i> 'deep place, place far from the shore': PT *<i>ōkū</i> 'hole in ice'; PNTung *(<i>x</i>)<i>uK-t-</i> 'ice-hole; river rift'; PJa *<i>ōki</i> 'open sea'.</p> <p>PA *<i>lāmo</i> 'basin, wave': PNM *<i>namug</i> 'marsh, swamp'; PTM *<i>lāmu</i> 'sea; wave'; PJa *<i>nàmi</i> 'wave' # PIE *<i>lām-</i>, PU *<i>Lampe</i>, PD *<i>namV</i>, Georg. <i>lam-</i> (МССНЯ 331, ОСНЯ 2, 29–30).</p>
<p>Sea</p> <p>PIE *<i>moHr- / *m̄- / *m₃r-</i> 'sea, lake'¹⁰: Ind. <i>mīra-</i> m. 'the sea, ocean; (L. also) limit, boundary' Mayr. KEWA 2, 644; Iran. Ossetic <i>mal</i> < *<i>māri-</i>, *<i>māryo-</i> 'deep still water, deep place in a bassin; fig. a giant quantity of fluid' Аб. II 68–69; Slav. *<i>morje</i> 'sea' Derksen 325; Balt. *<i>mar-i</i>, *<i>mar-iā</i>, *<i>mar-jā</i> f. 'sea; harbour' Mažiulis 3, 110; Germ. *<i>mariz</i>, *<i>marin</i> 'sea, lake', *<i>marisk-a-z</i> m. 'marsh' Orel 261, *<i>mōr-a-z</i> m., n., *<i>mōr-i-z</i> 'marsh, lake, sea' Orel 274; Lat. <i>mare</i>, <i>-is</i> n. 'Meer'; Celt. *<i>mori</i> 'sea' Matasović 277. WP II 234, Pok. 748, MA 2, 503 (*<i>mori</i>; + Arm. <i>mawr</i> < ? *<i>maru</i> 'marsh', but see Martirosian 447 — not here). # Nostr. *<i>mārā</i> 'wet', PA <i>m̄üri</i> 'water', Kart. *<i>mar-</i>, Drav. *<i>maṛ-</i> МССНЯ 334, ОСНЯ 2, 60–61.</p> <p>? PIE *<i>g'wop-</i> (~ <i>-bh-</i>) 'sea': Arm. <i>cov</i> 'Meer' Martirosian 141; Germ. *<i>kwa[f]-a-</i> > ON <i>kaf</i>, OSwed. <i>kwaf</i> 'Meerestife' n. De Vries 296 (= <i>kaf</i> 'untertauschen'). WP I 637, Pok. 465–466.</p> <p>[PIH *<i>g'rei-</i> 'to spread' > 'big water surface': Hitt. <i>karaitt-/karett-</i> c. 'flood, inundation' Kloekhorst 440 (*<i>g'roi-t-</i> / *<i>g'rei-t-</i>); Ind. <i>jrāyati</i> 'stürmt an, läuft an', <i>jrāyas-</i> n. 'Ungestüm, Lauf, Flußlauf'; Av. <i>zrayah-</i>, OPers. <i>drayah-</i> 'See, Meer', MPers. <i>zray</i>, ModPers. <i>daryā</i> 'sea, big river' Mayr. EWA 1, 606. WP I 660, Pok. 401 ('Nur</p>	

¹⁰ Cf. Гамкрелидзе & Иванов 1984 673; the Hittite form *marmara-*, *mammara-* only means 'a type of landscape' (Friedrich 137, Tischler 3, 140–141), so it is not necessarily a reflexion of this root; if so, the more probable proto-meaning is 'sea': European — Indo-Iranian, cf. Sanskrit *mīra-*, *mirā-* 'sea; boundary' (cf. Mayr. II 644), Osset. **mal* < **māri-*, despite Гамкрелидзе & Иванов 1984 673 not 'stagnant water', rather 'deep place in a bassin; a giant quantity of fluid', cf. *mal* of blood etc., see Аб. II 68–69.

Indo-European	Altaic
<p>indoiranisch”). The term for ‘big water surface’ is, however, not PIH, cf. different affixes in Hitt. and InIr.]</p> <p>[PIE *<i>sal-s</i> ‘salt’, *<i>sal-d-</i> ‘salty’ > ‘sea’ in separate IE languages: Arm. <i>at</i> ‘Salz’ (i-St.), <i>att</i> ‘salt-mine, salt land’ Martirosian 24; Grk. ἄλς, Gen. ἄλός m. ‘Salz’, f. ‘Salzflut, Meer’ Beekes 74–75; Slav. *<i>solb</i> ‘salt’, *<i>soldьkь</i> ‘tasty, sweet’ Balt. *<i>sal-i-</i> ‘salt’, *<i>sal-d-u-</i> ‘sweet’ Mažiulis 4, 42–43; Germ. *<i>sal-t-a-n</i> ‘salt’, *<i>sal-t-a-z</i> adj. Orel 316, *<i>sul-t-jō</i> ‘saline, sea-water’ Orel 385; Lat. <i>sāl</i>, gen. <i>salis</i> m. ‘salt’; Umbr. acc. <i>salu</i> ‘saalem’; Celt. *<i>salano-</i> ‘salt’; Mlr <i>sāl</i>, gen. <i>saile</i> ‘Meer’ Matasović 319; Tokh. A <i>sāle</i>, B <i>saljiye</i> ‘salt’ Adams 678. WP II 452, Pok. 878–879, MA 498 (but variants with the long vowel should be explained by the lengthening in the nominative form of the root stem; see Mažiulis IV 42–43, V. Dybo 2002, 443–444) # Nostr. *<i>salV</i> ‘salt’, Ur. *<i>salз (sala)</i> ‘salt’ UEW 750, Drav. *(s)<i>aḷam</i> ‘salt marsh, salty’ DED 299].</p> <p>PIE (Eur.) *<i>k(ʹ)ap-n-</i> ‘sea bay, harbour’: Germ. *<i>xab-an</i> n. ‘sea; haven’ Orel 147 (from *<i>xabjanan</i> ‘to hold up’); Celt. Ir. <i>cúan</i> (*<i>kapno-</i>) ‘(See-)Hafen’. Buck 37, 39, Pok. 527–528 (from PIE *<i>kap-</i> ‘to grab’). # Nostr. *<i>kVpV</i> ‘rift’, PA *<i>k’op’ira</i> ‘rift (in a river), bridge’, Ur. *<i>kupз</i> ‘wave’ UEW 676.</p> <p>Foam</p> <p>PIE *(s)<i>poHmn-</i> (or rather *(s)<i>poHymn-</i>, cf. Balt.; see in detail V. Dybo 2002, 389) ‘foam’: Ind. <i>phéna-</i> m. ‘foam’ Mayr. EWA 2, 204; Ir. *<i>faina-ka</i> ‘foam’ ЭСИЯ III 44; Slav. *<i>pěna</i> A ‘foam’ Derksen 397; Balt. *<i>spáin-ia</i> (1) > *<i>spaĩn-ia</i> (Hirt’s law) ‘foam’ Fraenkel 1 858, Mažiulis IV 128; Germ. *<i>faim-an</i> n. ‘foam’ Orel 90; Lat. <i>spūma</i> f. ‘Schaum, Gischt’ (*<i>spoima</i>) WH II, 580. WP II 681, Pok. 1001.</p>	<p>Salt</p> <p>[PA *<i>čioberV</i> ‘salt; bitter, acid’: PT *<i>dūř</i> ‘salt’; PM *<i>dabusu</i> ‘salt’; PTM *<i>žujar-</i> ‘bitter, acid’; PKor *<i>čjōr-</i> ‘salty’; PJa *<i>túrá-</i> ‘hard, bitter’. # Dr. *<i>suvar</i> ‘salt, brackishness; salty’ (DED 2674)].</p> <p>Foam</p> <p>[PA *<i>k’óp’i</i> ‘to foam’: PT *<i>kōp-</i> ‘to foam, to swell’; PM *<i>kōye-</i> ‘to foam, swell up’; PTM *<i>xapu-</i> ~ *<i>xopu-</i> ‘foam’; PKor *<i>kəphúm</i> ‘foam’].</p> <p>[PA *<i>ūjbà</i> ‘foam’: PM *<i>ibil-</i> ‘to flow (of milk from the udder at the time of sucking)’; PTM *(x)<i>ōb-</i> ‘to get covered by foam; foam (on water)’; PJa *<i>àwà</i> ‘foam’].</p>

Based on these juxtapositions for a number of proto-lexical microsystems, the following conclusions can be proposed.

The peculiarities of the landscape-related lexicon in both families are as follows. First of all, the steppe must be excluded from the regions potentially inhabited by Proto-Indo-Europeans.¹¹ Some relatively high mountains with many kinds of rocks and sharp or big stones are present.¹² Some of these mountains are covered by forests. There are words for narrow passages, canyons, precipices, mines and caves, foothills, valleys and dells, meadows in

¹¹ When I say — more or less arbitrarily — about the “Proto-Altaics” and “Proto-Indo-Europeans”, each of these labels surmises a big human community whose members are territorially and culturally related: hypothetic ethnos-speakers of the Proto-Indo-European language, reconstructed for the initial period of its disintegration into separate groups of languages, and, likewise, hypothetic ethnos-speakers of the Proto-Altaic language, reconstructed for the same period. The contrastive list of Proto-Indo-European and Proto-Altaic thesauri in selected thematic areas is still preliminary; conclusive results will be obtained upon systematic application of semantic reconstruction to all the subgroups of related languages.

¹² Cf. the identical conclusion, reached on different grounds by Гамкрелидзе & Иванов 1984.

forests and on the river-banks. The rivers have fords and are definitely smaller than their Proto-Altaic counterparts (there is no semantic variation between “river” and “sea”; nota bene that the only trace of the name of flood is GA; the lower Danube?); cf. here the noticeably weaker function of fish in the Indo-European economy (expressed in a substantially smaller number of terms for fishing tools, fish body parts and fish species — see the example below). But they could have lived near a sea or a big lake with sandy banks¹³.

In Proto-Altaic, the landscape was represented by names of not very high mountains, low-pitched slopes, foot-hills (also with rocks and gravel). They had a number of verbs meaning “to cross mountains.” The canyons, valleys and steppes are present, the steppes being of a rather arid and dusty type. There are many terms for small, quick-flowing rivers with shallows and rifts, but we also know words for big rivers as well. The reflexes of those words reveal semantic variation: in some daughter languages they mean “big river”, while in the others the meaning is “sea”. We may talk about islands and floods. Floods, from my point of view, may rather indicate big rivers with seasonal floods. We still do not have a reliable reconstruction with the undisputable meaning of “sea”. The Tungus-Manchu name for sea can be traced back to a common name for wave, while the common Korean and Japanese forms originally meant “ford”. The same development is found, for example, in Ancient Greek, where the corresponding word is historically explained as a development of the original meaning “aquatic way”.

Fishing tools

Indo-European	Altaic
<p>PIE (Eur.) <i>*sait-</i> ‘rope, cord, cord for catching, net’: Slav. <i>*sětv</i> ‘snare, net’ Derksen 448; Balt. <i>*sāit-a-</i> ‘rope, cord’ Fraenkel 756; Lat. <i>saeta</i> f. ‘Borste; Angelschnur’. WP II 463, Pok. 891–892 (<i>*sey-</i> ‘tie’ (but <i>*a</i> is unclear)). # Nostr. <i>*[š]VtV</i> ‘rope, string’: PA <i>*sitV</i> (~ <i>z-</i>, <i>š</i>) ‘bands tied to sacrifices’ EDAL 1262; Ur. FW <i>*s/šitV</i> ‘binden, befestigen’ UEW 762; Kart. Georg. <i>šit-</i> ‘woollen thread’; Svan <i>štrān-</i> ‘twist, twist a rope’ (in ND 2233). A. Dybo 2005.</p>	<p>PA <i>*t’óbru</i> ‘catching net’: CT <i>*Tuňak</i> ‘trap’; PM <i>*towr</i> ‘net, cage’; PTung <i>*turku-</i> ‘to get caught (in a trap, net)’; PKor <i>*tārāčhi</i> ‘basket’; PJa <i>*túri</i> ‘fishing’.</p>
<p>?? PIH <i>*h₁ekt-</i> ‘net’: Hitt. <i>ekt-</i> ‘hunting net’, Luv. <i>aggati-</i> ‘catch-net’ Kloekhorst 235–236 (to OHG <i>jagōn</i> ‘to hunt’, PIE <i>*jek-</i>); Ind. <i>ákṣu-</i> ‘net’ Mayr. EWA 1, 42 (to <i>ákṣi</i> ‘eye; net’s cell’); Grk. <i>δίκτυον</i>, Myc. <i>de-ku-tu-</i> ‘fishing net’ Beekes 335–336 (Pre-Greek). MA 2, 393 (“<i>d-</i> as in ‘tear’”).</p>	<p>PA <i>*āgna</i> ‘net’: PCT <i>*āg</i> ‘net’; PNM <i>*ayo-ga</i> ‘leading string in net’; PTung <i>*aŋga</i> ‘net (for catching fish under ice)’; PJa <i>*āmì</i> ‘net’, OJa <i>ama</i> ‘fisherman’, cf. <i>*ām-</i> ‘to knit’.</p>
<p>? PIE (GA) <i>*pork-</i> ‘fish-net, noose’: Arm. <i>ors</i> ‘hunt, catch’ Martirosian 544 (to <i>*york-os</i> ‘roe’); Grk. <i>πόρκος</i> m. ‘Art Fischernetz’ Beekes 1222. WP II 44 # Cf. PA <i>*p^hurVkV</i> ‘rope, lasso’.</p>	<p>PA (West) <i>*nable</i> ‘net, fish-trap’: PT <i>*jilim</i> ‘fishing net’; PTung <i>*nalba</i> ‘fish-trap, crib’.</p>
<p>PIE (Eur.) <i>*wadh-</i> ‘fish net’: Slav. <i>*vodv</i>; <i>*nevodv</i> ‘dragnet’ Фасм. 3, 55–56; Balt. <i>*wad-a-</i>, <i>-u-</i> . ‘grosses Zugnetz; Flügel eines Zugnetzes’ Fraenkel 1177; Germ.</p>	<p>PA (West) <i>*iuŋi</i> ‘to weave (nets), net’: PNM <i>*(h)öye-si</i> ‘fishing net’; PTung <i>*inŋi-</i> ‘to weave net’.</p>
	<p>PA (West) <i>*t’ukV</i> ‘fishing dam, fishing net’: PT <i>*Tug</i> ‘dam, fish-trap’; PNM <i>*togsija</i> ‘bird net, fish net’; PSTung <i>*tuki-</i> ‘to fish by a stake net in a narrow channel’.</p>
	<p>PA <i>*gòlí</i> ‘a k. of tool for water-hunting’: PM <i>*gol-mi</i> ‘net’; PTung <i>*goli</i> ‘net for big fishes’; PJa <i>*kùrúri</i> ‘arrow for shooting sea-birds or for catching fish’.</p>
	<p>PA <i>*bé</i> ‘bait’: PCT <i>*be-ŋ</i> ‘bait, bird-seed’; PTM <i>*be</i> ‘bait’; PJa <i>*bái</i> ‘bait’.</p>
	<p>PA <i>*il’bi</i> ‘fish bait’: PNM <i>*(h)ilbeye-sün</i> ‘fish bait’; PTM <i>*ilbì</i> ‘bait; plummet, sinker’; PJa <i>*i(n)sa-r-</i> ‘to fish’.</p>

¹³ Cf. Гамкрелидзе & Иванов 1984: 673–674; they are definitely right that the IE names for ‘sea’ could originally be the names for some big and deep lake, but the existence of names for ‘salt basins’ derived from the IE name for ‘salt’ in a number of IE languages is not necessarily proof of the fact that Proto-Indo-Europeans must have known salt lakes or seas. Cf. the similar conclusion in MA 498.

Indo-European	Altaic
<p><i>*wadiz</i> ~ <i>wadōn</i> ‘fishing line; dragnet’ Orel 438 WP I 255, Pok. 1, 78.</p> <p>[PIE (Eur.) <i>*rēt-</i> ‘sieve, net’: Balt. <i>*rēt-ia-</i> ‘sieve’, <i>*ret-ūk-a-</i> ‘thin net’ Fraenkel 724–725; Lat <i>rēte</i>, <i>-is</i> n. ‘Fisch-, Jagdnetz’ WP I 142, Pok. 332–333 (sub <i>erā-</i> ‘rare’)].</p> <p>PIE <i>*g(°)rībh-</i> ‘fishing basket’: Grk. γρῖφος, γρῖπος m. ‘fishing basket’ Beekes 287 (Pre-Greek); Germ. <i>*krib-jōn-</i>, <i>*krubbōn</i> ‘crib’ Orel 222. WP I 593, Pok. 385–390 (sub <i>*ger-</i> ‘to wind’).</p> <p>[PIE (Eur.) <i>*nad-</i> ‘fish-net, fishing basket’: Germ. <i>*nat-jan</i> n. ‘net’ Orel 281–282; Lat. <i>nassā</i> (<i>*nad-tā</i> or <i>*nad-sā</i>) f. ‘Fischreuse, aus Binsen geflochtener Korb mit engem Hals, aus dem die Fische nicht wieder entkommen können’ WH 2, 145, MA 336 (with <i>*ned-</i> knot). Rather different derivatives from <i>*nōd-</i> ‘knot’].</p> <p>[PIE <i>*ankos</i> ‘hook’, see Pok. 45–46, WP I 60, MA 2, 272, rather is not specialized for PIE as fishing hook].</p>	
<p>On the whole 1 reliable PIE term for fishing net, 1 reliable Eur. term for fishing net, 1 reliable Eur. term for fishing basket, 1 reliable Eur. term for a fishing tool.</p>	<p>On the whole 2 reliable PA terms for fishing net, 2 reliable PA terms for bait, one reliable PA term for a fishing tool; 3 reliable Western Altaic terms for fish traps.</p>

We can also see that a substantial part of landscape environment terms can be reconstructed only for the later stages of PIE. The set of terms that is reconstructed for PIH is hardly telling: PIH **dg’hom/*dg’hem* ‘earth, soil, territory, earth surface’; PIH **wedn-/*udn-* ‘earth, soil, territory’; PIH **pē(n)s-* ‘sand, pebble’; PIH **h₂ek(°)h₂-mon, *kā-mon* (< **keh₂-mon-*) ‘stone, rock’; PIH **Har-* ‘valley, vale, dale; grotto; swamp’; PIH **peru-(n-)* ‘mountain top’; PIH **kolHn-, *kolHm-* ‘top, hill, rock’; PIH **weHr-/uHr-* ‘water, moisture’; PIH **we(n)dh-* ‘water, wave’; PIH **Hap-* ‘water, river’; PIH **g^wela-* ‘to boil over’; ? PIH **woHp-* ‘basin’. Nonetheless, even in this case we see mountainous terrain entering the picture.

Abbreviations

Alb – Albanian	Grk. – Ancient Greek	MIr – Middle Irish
Arm. – Armenian	Ark. – Arkadian	MPers. – Middle Persian
Av – Avestan	Att. – Attic	Nostr – Nostratic
Bal. – Baluchi	Corcyr. – Corcyrean	NPers. – New Persian
Balt. – Baltic	Dor. – Doric	ODalm. – Old Dalmatian
Bret. – Breton	Ion. – Ionic	OInd. – Old Indian
Celt-Ital – Celto-Italic	Lesb. – Lesbian	OIr – Old Irish
Corn. – Cornish	Hitt. – Hittite	OLith. – Old Lithuanian
Cymr. – Cymrish	Ind. – Indian	OPrus – Old Prussian
Dard. – Dardic	Iran. – Iranian	Osset. – Ossetic
Drav – Dravidian	Kart – Kartvelian	OSwed – Old Swedish
ESlav. – East Slavic	Kor. – Korean	PA – Proto-Altaic
Eur. – European	Kur. – Kursh	Pal. – Palaic
GA – Greek–Aryan	Lat – Latin	PCT – Proto-Common Turkic
Gael. – Gaelic	Lett. – Lettish	PIE – Proto-Indo-European
Georg – Georgian	Lith. – Lithuanian	PIH – Proto-Indo-Hittite
Germ. – Germanian	Luw. – Luwian	PIIr – Proto-Indo-Iranian

PIran — Proto-Iranian	PT — Proto-Turkic	VLat. — Vulgar Latin
PJa. — Proto-Japanese	PTM — Proto-Tungus-Manchu	
PM — Proto-Mongolian	PTung — Proto-Tungussic	
PNM — Proto-North Mongolian	Rum. — Rumanian	# — supposed external relation
PNTung — Proto-North Tungussic	Slav. — Slavic	[...] — The reconstructed stem
Prakr. — Prakrit	Tokh — Tokharian	does not belong to the con-
PSTung — Proto-South Tungussic	Ur.- Uralic	sidered semantic area

Literature

- Adams — ADAMS D. Q. *A dictionary of Tocharian*. Amsterdam — Atlanta, 1999.
- Beekes — BEEKES R. *Etymological dictionary of Greek*. Leiden: Brill, 2010.
- Benveniste 1954 — BENVENISTE É. Problèmes sémantiques de la reconstruction // *Word* 1954, Vol. 10, № 2–3.
- Benveniste 1970 — BENVENISTE É. *Le vocabulaire des institutions indo-européennes*. I: *Économie, parenté, société*. II: *Pouvoir, droit, religion*. Paris, 1970.
- Buck — BUCK C. D. *A dictionary of selected synonyms in the principal Indo-European languages*. Chicago, 1949.
- Blažek 1992 — BLAŽEK V. Kartvelian Material in Nostratic Lexicon: New Etymologies. *Nostratic, Sino-Caucasian, Austric and Amerind*. Bochum: Brockmayer, 1992. [I] 112–128, [II] 129–148.
- De Vries — DE VRIES J. *Altnordisches etymologisches Wörterbuch*. Leiden, 1957–1961.
- DED — BURROW Th., EMENEAU M. *A Dravidian etymological dictionary*. 2nd ed. Oxford, 1984.
- Derksen — DERKSEN R. *Etymological dictionary of the Slavic inherited lexicon*. Leiden: Brill, 2008.
- A. Dybo 2005 — DYBO A. V. Some peculiarities of Altaic reflexes of Nostratic sibilants // *Nostratic Centennial Conference. The Pecz Papers*. Pecz, Lingua franca Group, 2005. P. 85–114.
- V. Dybo 2002 — DYBO V. A. Balto-Slavic Accentology and Winter's Law // *Studia Linguarum* 3/2. Moscow, 2002.
- EDAL — STAROSTIN S. A., DYBO A. V., MUDRAK O. A. *The etymological dictionary of Altaic languages*. Leiden: Brill, 2003.
- Falk & Torp — *Wörterbuch der Indogermanischen Sprachen*: Dritter Teil: *Wortschatz der Germanischen Spracheinheit* by August Fick with contributions by Hjalmar Falk, entirely revised by Alf Torp in 1909.
- Fraenkel — FRAENKEL E. *Litauisches etymologisches Wörterbuch*. Bd. I–II. Heidelberg, 1965.
- Friedrich — FRIEDRICH J. *Hethitisches Wörterbuch*. Heidelberg, 1952–1954.
- Friedrich 1979 — FRIEDRICH P. *Indo-European names of trees*. Chicago 1979.
- Frisk — FRISK H. J. *Griechisches etymologisches Wörterbuch*. Heidelberg, 1954.
- Georgiev VS — GEORGIEV VI. *Vorgriechische Sprachwissenschaft*. Vol. 1–2. Sofia, 1941–1945.
- Holthausen — HOLTHAUSEN F. *Altenglisches etymologisches Wörterbuch*. Heidelberg, 1934.
- Kloekhorst — KLOEKHORST A. *Etymological Dictionary of the Hittite Inherited Lexicon*. Leiden-Boston: Brill, 2008.
- MA — ADAMS D. Q., MALLORY J. P. (ed.). *Encyclopedia of Indo-European culture*. Chicago, 1997.
- Mallory & Adams 2006 — MALLORY J. P. & ADAMS D. Q. *The Oxford Introduction to Proto-Indo-European and the Proto-Indo-European World*. Oxford: Oxford University Press, 2006.
- Martirosian — MARTIROSIAN G. *Etymological dictionary of the Armenian inherited lexicon*. Leiden: Brill, 2010.
- Matasović — R. MATASOVIĆ. *Etymological Dictionary of Proto-Celtic*. Leiden–Boston: Brill, 2009.
- Mayr. EWA — MAYRHOFER M. *Etymologisches Woerterbuch des Altindoarischen*. Heidelberg, 1986–1996.
- Mayr. KEWA — MAYRHOFER M. *Kurzgefasstes etymologisches Wörterbuch des Altindischen*. Heidelberg, 1953–1979.
- Mažiulis — MAŽIULIS V. *Prūsų kalbos etimologijos žodinas*. I–IV. Vilnius: Mokslas, 1988–1997.
- Melchert CLL — MELCHERT H. Craig. *Cuneiform Luwian lexicon*. Chapel Hill, 1993.
- ND — DOLGOPOLSKY A. *The Nostratic Etymological Dictionary*. Preliminary electronic publication. McDonald Institute for Archaeological Research, 2008.
- Orel — OREL VI. *A Handbook of Germanic Etymology*. Leiden/Boston: Brill, 2003.
- Orel AlbD — OREL VI. *Albanian Etymological Dictionary*. Leiden/Boston/Koln: Brill, 1998.
- Pok. — POKORNY J. *Indogermanisches etymologisches Wörterbuch*. Bern, 1959.
- Renfrew 1987 — RENFREW C. *Archaeology and language. The puzzle of Indo-European origins*. London, 1987.
- Schrader & Nehring — SCHRADER O., NEHRING A. *Reallexikon der indogermanischen Altertumskunde*. I–II. Berlin/Leipzig, 1917–1928.

- Sihler — SIHLER A. L. *New comparative grammar of Greek and Latin*. Oxford, 1995.
- Tischler — TISCHLER J. *Hethitisches etymologisches Glossar*. Innsbruck, 1977–.
- Trautmann — TRAUTMANN R. *Baltisch-Slawisches Wörterbuch*. Göttingen 1923.
- Turner CDIAL — TURNER R. L. *A Comparative Dictionary of the Indo-Aryan Languages*. London, 1962–1964.
- UEW — REDEI K. *Uralisches etymologisches Wörterbuch*. Budapest, 1986–1989.
- WH — WALDE A., HOFMANN J. B. *Lateinisches etymologisches Wörterbuch*. Bd. I–II. 5. Aufl. Heid., 1982.
- WP — WALDE A. *Vergleichendes Wörterbuch der indogermanischen Sprachen*. Hrsg. u. bearb. von J. POKORNY. Bd. I–III. Berlin/Leipzig, 1926–1932.
- Аб. — АБАЕВ В. И. *Историко-этимологический словарь осетинского языка*. Т. I–V. Москва/Ленинград, 1958–1995. [АБАЕВ V. I. *Istoriko-etimologičeskij slovar' osetinskogo yazyka*. Т. I–V. Moskva/Leningrad, 1958–1995.]
- АЭ — *Алтайские этимологии*. Ленинград, 1984. [*Altajskie etimologii*. Leningrad, 1984.]
- Гамкрелидзе & Иванов 1984 — ГАМКРЕЛИДЗЕ Т. В., ИВАНОВ Вяч. Вс. *Индоевропейский язык и индоевропейцы*. Т. 1–2. Тбилиси, 1984. [ГАМКРЕЛИДЗЕ T. V., IVANOV Vyach. Vs. *Indoeuropejskij yazyk i indoeuropejcy*. Т. 1–2. Tbilisi, 1984.]
- А. Дыбо 1996 — ДЫБО А. В. *Семантическая реконструкция в алтайской этимологии*. Москва, 1996. [ДЫБО А. V. *Semanticheskaja rekonstrukcija v altajskoj etimologii*. Moskva, 1996.]
- А. Дыбо 2000 — ДЫБО А. В. *Ностратические этимологии с начальными носовыми // Проблемы изучения дальнего родства языков на рубеже 3-го тысячелетия. Тезисы и доклады конференции*. Москва: РГГУ, 2000. С. 31–38. [ДЫБО А. V. *Nostraticheskie etimologii s nachal'nymi nosovymi // Problemy izučeniya dal'nego rodstva yazykov na rubezhe 3-go tysyacheletija. Tezisy i doklady konferencii*. Moskva: RGGU, 2000. S. 31–38.]
- А. Дыбо 1997 — ДЫБО А. В. *К культурной лексике праалтайского языка // Балто-славянские исследования 1988–1996*. Москва, 1997. [ДЫБО А. V. *K kul'turnoj leksike praaltajskogo yazyka // Balto-slavyanskije issledovaniya 1988–1996*. Moskva, 1997.]
- Иллич-Свитыч 1963 — ИЛЛИЧ-СВИТЫЧ В. М. *Именная акцентуация в балтийском и славянском*. Москва, 1963. [ILICH-SVITYCH V. M. *Imennaja akcentuacija v baltijskom i slavyanskom*. Moskva, 1963.]
- ИОЭАЯ — *Исследования в области этимологии алтайских языков*. Ленинград, 1979. [*Issledovaniya v oblasti etimologii altajskikh yazykov*. Leningrad, 1979.]
- МССНЯ — Иллич-Свитыч В. М. *Материалы к сравнительному словарю ностратических языков // Этимология 1965*. Москва, 1967. [ILICH-SVITYCH V. M. *Materialy k sravnitel'nomu slovarju nostraticheskikh yazykov // Etimologija 1965*. Moskva, 1967.]
- Невская 1977 — НЕВСКАЯ Л. Г. *Балтийская географическая терминология*. Москва: Наука, 1977. [NEVSKAYA L. G. *Baltijskaja geograficheskaja terminologija*. Moskva: Nauka, 1977.]
- ОСЛАЯ — *Очерки сравнительной лексикологии алтайских языков*. Ленинград, 1972. [*Očerki sravnitel'noj leksikologii altajskikh yazykov*. Leningrad, 1972.]
- ОСНЯ — Иллич-Свитыч В. М. *Опыт сравнения ностратических языков*. Т. I: Введение. *Сравнительный словарь б–к*. Москва, 1971; Т. II: *Сравнительный словарь л–н*. М., 1976; Т. III: *Сравнительный словарь р–q*. Москва, 1984. [ILICH-SVITYCH V. M. *Opyt sravneniya nostraticheskikh yazykov*. Т. I: *Vvedenie. Sravnitel'nyj slovar' b–k*. Moskva, 1971; Т. II: *Sravnitel'nyj slovar' l–n*. М., 1976; Т. III: *Sravnitel'nyj slovar' p–q*. Moskva, 1984.]
- Старостин 2007 — Старостин С. А. *Труды по языкознанию*. Москва, 2007. [STAROSTIN S. A. *Trudy po yazykoznaniju*. Moskva, 2007.]
- Стеблин — СТЕБЛИН-КАМЕНСКИЙ И. М. *Этимологический словарь ваханского языка*. Санкт-Петербург, 1999. [STEBLIN-KAMENSKIJ I. M. *Etimologičeskij slovar' vakhanskogo yazyka*. Sankt-Peterburg, 1999.]
- Толстой 1969 — ТОЛСТОЙ Н. И. *Славянская географическая терминология*. Москва, 1969. [TOLSTOJ N. I. *Slavyanskaja geograficheskaja terminologija*. Moskva, 1969.]
- Топоров — ТОПОРОВ В. Н. *Прусский язык*. 1–5. Москва, 1975–. [TOPOROV V. N. *Prusskij yazyk*. 1–. Moskva, 1975–1990.]
- Фасмер — ФАСМЕР М. *Этимологический словарь русского языка*. В 4-х томах. Москва, 1964–1973. [FASMER M. *Etimologičeskij slovar' russkogo yazyka*. V 4-kh tomakh. Moskva, 1964–1973.]
- ЭСИЯ — РАСТОРГУЕВА В. С., ЭДЕЛЬМАН Д. И. *Этимологический словарь иранских языков*. Т. 1–. Москва, 2000–. [RASTORGUEVA V. S., EDEL'MAN D. I. *Etimologičeskij slovar' iranskikh yazykov*. Т. 1–. Moskva, 2000–.]
- ЭССЯ — *Этимологический словарь славянских языков*. Под ред. О. Н. ТРУБАЧЕВА. Т. 1–. Москва, 1974–. [*Etimologičeskij slovar' slavyanskikh yazykov*. Pod red. O. N. TRUBACHEVA. Т. 1–. Moskva, 1974–.]

А. В. ДЫБО. Язык и археология: некоторые методологические проблемы. 1. Праиндоевропейская и праалтайская ландшафтная терминология.

Статья представляет собой первую часть работы, в которой проводится попытка систематизировать наши представления о природном окружении и материальной культуре праиндоевропейцев на основании, во-первых, максимально полной выборки реконструированной лексики соответствующих семантических областей, во-вторых, ее сопоставления с такой же выборкой, сделанной для праязыка сходной временной глубины, носители которого явно обитали на территории, не контактной с индоевропейской прародиной — для праалтайского. Здесь представлена лексика, связанная с ландшафтом. Основной вывод заключается в том, что из двух рассмотренных пралексиконов на степное природное окружение указывает скорее праалтайский; праиндоевропейский указывает скорее на горную местность. Что касается водных объектов, для праиндоевропейского окружения следует предполагать наличие моря (или очень большого озера), а для праалтайского — наличие очень больших рек с сезонными разливами.

Ключевые слова: индоевропейская прародина, алтайская прародина, метод слов и вещей, семантическая реконструкция.