

Abstract

The article represents the quantitative Nostratic verification scientific results of the degrees of affinity of the Afro-Asiatic, Indo-European and Kartvelian language families, which was carried out based on the procedural steps of diachronic interpretation of the Afrasian $*f[a]$ -, Indo-European $*p^h\acute{e}$ h-ur- [$*p^h\acute{a}$ h-ur-], $*p^h$ h-wór- and Kartvelian $*px$ - that reach the Nostratic $*p^ha$ - ($\sim *p^h$ -). The methodological algorithm has been conducted, on the one hand, for the procedure of diachronic interpretation, which involves three stages: 1) morphological level (general morphonemic structure, quality of syllables, shifts (transitions) and coincidences), 2) phonological level (vocal and / or consonant phonemes), alternations, modifications / mutations of vocal and / or consonant phonemes, ictus(´) (if any), shifts (transitions) and coincidences), 3) semantic level (content plan, archiseme(s), shifts (transitions) and coincidences), and on the other hand, for the procedure of quantitative verification, which involves two stages: 1) matrix verification of indicators – building a matrix of phonological, morphological and semantic shifts (transitions) and coincidences, 2) verification of degrees of affinity of Nostratic languages, i.e. establishing the degrees of affinity of Nostratic languages in the triad 'type – metric – relationship'. As a result, it was possible to register a close degree of affinity, corresponding to divergent-convergent development, between Afrasian $*f[a]$ - and Kartvelian $*px$ -, a distant degree of affinity, corresponding to convergent-divergent development, between Afro-Asiatic $*f[a]$ - and Indo-European $*p^h\acute{e}$ h-ur- [$*p^h\acute{a}$ h-ur-], $*p^h$ h-wór-.

Keywords: diachronic interpretation, quantitative verification, Nostratic etymon, Afro-Asiatic, Indo-European and Kartvelian language families.

$*p^h\acute{a}$ h-ur-], $*p^h$ h-wór- ($\sim *p^h$ -); $*px$ -; $*f[a]$ -, $*p^h\acute{e}$ h-ur- $*p^ha$ -

: 1) (/ (-) (), (), 2) (/ (-) (), (), 3) ((-) (), : 1) (), 2) - $*f[a]$ - " ; " $*p^h\acute{e}$ h-ur- $*px$ - " ()", $*f[a]$ - " ; " $*p^h\acute{a}$ h-ur-], $*p^h$ h-wór- " .

(5)

() :

/ ;

() ;

/ ;

() ;

() () ;

(2) ;

() ;

() ;

(2) ;

(3) ;

() ;

() ;

(2) ;

(3) ;

() ;

(3) ;

() ;

(1985):

$$S = \frac{c}{a+b+c},$$

(b) - X Y (/ , (+ b + c)) (X (/ , - n.),

() () () / (2) :

1) distance) - (URL: <https://calculatorium.ru/text/levenshtein-> ; 2)

):

$$D = 1 - \frac{2 \cdot q}{A+B},$$

2) - (/ 1) + B (/ (2) : (2) : . . . ,

1) : . . . ,

0,30, 3,20. = 0,30, = 3,20; 2) = =

*p^ha - (~ *p^h -) “ ”

()

| | | (семіго-хамітська сім'я) | | | | | |
|--|--------------------|--------------------------|-----------------|---|-----|------|--------|
| *p ^h a - (~ *p ^h -) | “ , ; , ” | *f[a] - | “ , ” “ ” | *p ^h é h-ur- [*p ^h á h-ur-], *p ^h h-wór- | “ ” | *px- | “ ()” |
| *p ^h | | *f | | *p ^h | | *p | |
| *a / * | | *a | | *a / *e / * | | | |
| * | | * | | * | | *x | |

(Bomhard, 2018, Vol. 3, pp. 158-159)

*p^ha - (~ *p^h -) - *CVC- (~ *CVC-),
*f[a] - *CVC-, *f[a] - *CVC-,
*pa -am, *a-f[wa]-
*CVCVC, *pa - *CVC-,
*CVCCV-, *a-f- *CVC-,
(* a * a-f[wa]-) - (2014).
*p^héhh-ur- [*p^háhh-ur-], *p^h hh-wór- *CVCCVC-
[*CVCCVC-], *CVCCVC-, *p^héhh- [*p^háhh-], *p^h hh- *CVCC- [*CVCC-],
*CVCC-,
*px- * - *px- * -
*p^héhh-ur- [*p^háhh-ur-], *p^h hh-wór-, *px- *f[a] -,
*p^ha - (~ *p^h -) *CVC- (~ *CVC-) >
*px- * - / : *p^héhh- [*p^háhh-],
*p^h hh- *CVCC- [*CVCC-], *CVCC-;
(1) , 2) : *p^ha -
(~ *p^h -) - *CVC- (~ *CVC-) (1, 2) > *f[a] - *CVC- (1, 2) / *p^héhh-
[*p^háhh-], *p^h hh- *CVCC- [*CVCC-], *CVCC- (2) / *px- * - (2).

*f[a] - *pa -am,

* a-f[wa]-

: 1) , 2) :

*f[a] - - *CVC- (1, 2) > *pa - - *CVC- (1, 2) / * a-f- -

*CVC- (1, 2).

()

*p^ha - (~ *p^h -)

() : 1)

* (*p^ha - (~ *p^h -)), * (*p^ha - (~ *p^h -))

: 2)

* (*p^ha - (~ *p^h -)); 3)

* (*p^ha - (~ *p^h -)), * (*p^ha - (~ *p^h -)).

*f[a] -, *p^hé h-ur- [*p^há h-ur-], *p^h h-wór-

: 1)

* (*f[a] -; *p^hé h-ur- [*p^háhh-ur-]), * (*p^h h-wór-) /

* (*p^hé h-ur-); 2)

* (*p^h h-wór-); 3)

*p^hé h-ur- [*p^há h-ur-] /

* (*f[a] -; *p^hé h-ur- [*p^há h-ur-]),

/

* (*p^hé h-ur-), * (*p^h h-wór-).

()

* : *p^ha - (~ *p^h -); * : *p^ha - (~ *p^h -) >

* : *p^hé h-ur-;

1) *p^hé h-ur- [*p^háhh-ur-] / * > * : *p^ha - (~ *p^h -) > *f[a] -;

* : *p^ha - (~ *p^h -) > *p^h h-wór-; 2)

* : *p^ha - (~ *p^h -) > *a: *f[a] -; *p^hé h-ur-

[*p^há h-ur-] /

* : *p^ha - (~ *p^h -) > *e: *p^hé h-ur- / * :

*p^h h-wór-; 3)

/

* : *p^ha - (~ *p^h -) > * :

*p^hé h-ur- / * : *p^ha - (~ *p^h -) > * :

*p^hé h-ur- / * : *p^h h-wór-.

*p^ha - (~ *p^h -)

) /

*p^h (Fortson, 2004, 61–62).

*p^ha - (~ *p^h -)

1)

*p,

*p^ha - (~ *p^h -);

*p^h,

*p^ha - (~ *p^h -).

*f[a] -, *p^hé h-ur- [*p^há h-ur-], *p^h h-wór-, *px-

() : 1)

*f (

*f[a] -), *p / *p^h (*p^hé h-ur- [*p^há h-ur-], *p^h h-wór-; *p^h h-wór-; *px-),

* (*px-),

*f[a] -; *p^hé h-ur- [*p^há h-ur-], *p^h h-wór-); 2)

*f (*f[a] -), *p (*p^hé h-ur- [*p^há h-ur-],

*p^h h-wór-; *px-),

* (*f[a] -; *p^hé h-ur- [*p^há h-ur-],

*p^h h-wór-), * (*px-).

()

1)

*p^ha - (~ *p^h -) >

*f: *f[a] -,

*p:

() (, 2008, .209; Campbell, 1998, pp. 46-47; Ringe, 2006, . 93-102), (; 2) :
 * : *p^ha - (~ *p^h -) > * : *px-;
 () : 1) *p > *p: *p^ha - (~ *p^h -) > *px-;
 *p^hé h-ur- [*p^há h-ur-], *p^h h-wór-); * > * :
 *p^ha - (~ *p^h -) > *f[a] -; *p^hé h-ur- [*p^há h-ur-], *p^h h-wór-; 2)
 : * > *x: *p^ha - (~ *p^h -) > *px-; 3)
 *p: *px-, *p^h: *p^hé h-ur- [*p^há h-ur-], *p^h h-wór-; : * : *f[a] -,
 (~ *p^h -) > * : *f[a] -; *p^hé h-ur- [*p^há h-ur-], *p^h h-wór-, *x: *px-.
 , *f[a] -, *p^hé h-ur- [*p^há h-ur-], *p^h h-wór-, *px-,
 *f , *p , . . .
 , “ ” (, , 1984, .871). , , (, .878-879), , ,
 , , -
 *f[a] - () : 1)
 : * ; 2) : * (*f[a] -).
 * ; 3) / : * (*f[a] -).
 *pa -am, * a-f[wa]-
 () : 1) : * ;
 2) : * (*pa -am; * a-f[wa]-) /
 ()
 - () : 1) :
 * : *f[a] - > *a: *pa -am; * a-f[wa]-; 2)
 : * : *f[a] - > *a: *pa -am; * a-f[wa]-;
 3) / : * : *f[a] - > *a: *pa -am;
 * a-f[wa]-.
 ()
 - () : 1)
 : * : *pa -am > : pe m,
 f ama; 2) : * : *pa -am > :
 pe m, f ama / : / f m, f m;
 () : 1) : * :
 *pa -am > a: pa m , fa m, fä am, : / f m,
 f m; 2) : * : *pa -am > a:
 pa m , fa m, fä am; 3) / :
 * : *pa -am > a: pa m , fa m, fä am, : pe m,
 f ama, : / f m, f m.
 ()
 - () : 1) :
 * : * a-f[wa]- > : fee / :
 : fo; 2) : * : * a-f[wa]- >
 : fee; : fo; 3) / :

* : * a-f[wa]- > : fo; -
 () : 1) : * :
 * a-f[wa]- > a: afu, afa; 2) : * :
 * a-f[wa]- > a: afu, afa; 3) / :
 * : * a-f[wa]- > a: afu, afa, : fee. :
 *f[a] - () : 1)
 :
 *f, - * ; 2) :
 *f, * (:
 *f[a] -; : *f[a] -).
 *pa -am, * a-f[wa]-
 () : 1) :
 *p (*pa -am),
 * (* a-f[wa]-), - * (*pa -am),
 *f (* a-f[wa]-); 2) :
 * , *p, *f, * (:
 *pa -am, * a-f[wa]-; : *pa -am, * a-f[wa]-.
 *pa -am CVC, ,
 , “
 , ,
 ” (Huehnergard, 2008, . 231).
 (,
).
 (Moscati et al., 1980, pp. 72–73; Weninger, 2011, p. 152–153),
 *f[a] -, *pa -am.
 :
 (Huehnergard, 2008, . 233).
 - * *pa -am.
 , , , .
 : .
 (. hamzah) .
 , , , .
 (Orel et al. 1995). , * a-f[wa]-
 *p *pa -am - , ,
 [h], [] .
 (Blevins, 1994).
 () :
 : : *f: *f[a] -) >
 *p: *pa -am; - :
 () : 1) : :
 * : *f[a] - > * : *pa -am; 2) :
 : *f: *f[a] - > * : * a-f[wa]-, *p: *pa -am;
 : * : *f[a] - > * : *pa -am, *f: * a-f[wa]-.

, , * [*p^há h-ur-] * f n,

(Waterman, 1976).

***p^héh h-ur- [*p^há h-ur-], *p^h h-wór-** ()

: 1) : *p^h ; 2) *p^h,

* (: *p^hé h-ur- [*p^há h-ur-], *p^h h-wór-; : *p^hé h-ur- [*p^há h-ur-], *p^h h-wór-).

()

1) *p^hé h-ur- [*p^há h-ur-], *p^h h-wór- > : : () *p^h:

fiur, **fÛr;** 2) **f:** **f n,**

: * : *p^hé h-ur- [*p^há h-ur-], *p^h h-wór- > n: **f n,**

c **panno, r:** **fiur,** **fÛr,**

pú , . **por;** - () :

1) : : *p^h:

*p^hé h-ur- [*p^há h-ur-], *p^h h-wór- > p: ã , c **panno,**

pú , **pa-a - u-u-u,** **por,** **pa-a - u-ur;** :

* : *p^hé h-ur- [*p^há h-ur-], *p^h h-wór- > : **pa-a - u-u-u,** *p^h: *p^hé h-ur-

pa-a - u-ur; 2) : *p^h:

[*p^há h-ur-], *p^h h-wór- > f: **f n,** **fiur,**

fÛr, p: ã , c **panno,** **pú ,** **pa-a - u-**

u-u, **por,** **pa-a - u-ur;** : * : *p^hé h-ur- [*p^há h-ur-],

*p^h h-wór- > : **pa-a - u-u-u,** **pa-a - u-ur.**

***px-** () : 1)

- : *p,

* ; 2) : :

(: *px-; : *px-). ,

*px-, *p (, 1964).

*px-

+ (, 1995).

***p^ha - (~ *p^h -)** “ , ” - 1) , ; , ” ; 2) .

: “ ” - 1) (, 1971, . 170); “ ” - ,

- (, 1974, . 57); “ ” - ,

, (, 1971, . 130); “ ” - ,

; ’ (, 1970, . 715);

“ ’ ” - 1) , ; 2) ,

(, 1976, . 102); “ ” - (, 1973, . 48),

(4) : 1) ‘ / ’:

***p^ha - (~ *p^h -)** “ , ”; 2) ‘ : *p^ha -

(~ *p^h -) “ ”; 3) ‘ : *p^ha - (~ *p^h -) “ , ”;

4) ‘ , ’: *p^ha - (~ *p^h -) “ ”.

*f[a] - “ , ”; , *p^hé h-ur- [*p^há h-ur-], *p^h h-wór- “ ”, *px- “ ()”

: *f[a] - : “ , , ”, “ ” – ;
 *p^ha - (~ *p^h -) “ , , ”, “ ” ;
 “ ” –
 (1970: 779); *p^hé h-ur- [*p^há h-ur-], *p^h h-wór-: “ ” – ,
 *p^ha - (~ *p^h -) “ ”; *px-: “ ()” –
 ; (1979: 77),
 (5) : 1) ‘ / *f[a] -
 “ ”; 2) : *f[a] - “ ”; 3) ‘
 ’: *f[a] - “ ”, *p^hé h-ur- [*p^há h-ur-], *p^h h-wór- “ ”; 4) ‘ /
 ’: *px- “ ()”.
 *p^ha - (~ *p^h -) “ , , ”, “ ,
 , , ” *f[a] - “ , , ”; 5) ‘ /
 , , ” *p^hé h-ur- [*p^há h-ur-], *p^h h-wór- “ ”, *px- “ ()”
)”
 : ‘ ’: *p^ha - (~ *p^h -) “ ” >
 ‘ / ’: *f[a] - “ , *f[a] - “ ” / ‘ ’: *f[a] - “ ”, *p^hé h-ur- [*p^há h-ur-
], *p^h h-wór- “ ” / ‘ ’: *f[a] - “ ”, *p^hé h-ur- [*p^há h-ur-]
 *f[a] - “ ” / ‘ / , ’: *px- “
 ()”; : 1) ‘ /
 ’: *p^ha - (~ *p^h -) “ ” > *f[a] - “ ,
 ”; 2) ‘ ’: *p^ha - (~ *p^h -) “ ” > *f[a] -
 “ ”; 3) ‘ ’: *p^ha - (~ *p^h -) “ , , ” > *f[a] -
 “ ”, *p^hé h-ur- [*p^há h-ur-], *p^h h-wór- “ ”.
 *pa -am “ ”; *a-f[wa]- “ ”
 : *pa -am: “ ” – *f[a] - “ ”;
 *a-f[wa]-: “ ” – *f[a] - “ ”;
 (2) : 1) ‘ ’: *a-f[wa]- “ ”; 2) ‘
 ’: *pa -am “ ”.
 *f[a] - “ ”, “ , , ”, “ ,
 ” *pa -am “ ”; *a-f[wa]- “ ”
 ‘ / ’: *f[a] - “ , , ” / ‘ ’: *a-f[wa]- “ ” / ‘ ’:
 *f[a] - “ ” > ‘ ’: *pa -am “ ”;
 : 1) ‘ ’: *f[a] - “ ” >
 *a-f[wa]- “ ”; 2) ‘ ’: *f[a] -
 “ ” > *pa -am “ ”.
 .
 (),
 , , :) ;) -
)
 (),
 . : *p^ha - (~ *p^h -) “ , , ; , , ”,
 *f[a] - “ , , ; , , ”;
 *p^hé h-ur- [*p^há h-ur-], *p^h h-wór- “ ”, *px- “ ()”
 (2)
 *p^ha - (~ *p^h -) “ , , ; , , ” *px- “
 ()” – 0,33, - - *p^ha - (~ *p^h -) “ ,

$*p^h$ - “ ()”; $*p^h a - (\sim *p^h -)$ “ , ; ,
 $*p^h \acute{e}$ h-ur- [$*p^h \acute{a}$ h-ur-], $*p^h$ h-wór- “ ” - 0,60: ‘ /
 $*p^h a - (\sim *p^h -)$ “ ” / ‘ ;
 $(\sim *p^h -)$ “ ” > ‘ ; $*p^h \acute{e}$ h-ur- [$*p^h \acute{a}$ h-ur-], $*p^h$ h-wór- “ ”;
 $*p^h a - (\sim *p^h -)$ “ , ; , ” $*f[a] -$ “ ,
 $(\sim *p^h -)$ “ , ” / “ - 0,25: ‘ / ; $*p^h a -$
 $(\sim *p^h -)$ “ , ” / ‘ ; $*p^h a - (\sim *p^h -)$ “ ” /
 $*p^h a - (\sim *p^h -)$ “ ” > ‘ , ” / ‘ ,
 $*f[a] -$ “ ”.

$*p^h \acute{e}$ h-ur- [$*p^h \acute{a}$ h-ur-], $*p^h$ h-wór- “ ”, $*p^h a - (\sim *p^h -)$ “ ”;
 $()$ ” , $*p^h \acute{e}$ h-ur- [$*p^h \acute{a}$ h-ur-], $*p^h$ h-wór- “ ”, $*p^h a - (\sim *p^h -)$ “ ”;
 $*f[a] -$ “ ”, $*p^h \acute{e}$ h-ur- [$*p^h \acute{a}$ h-ur-], $*p^h$ h-wór- “ ”, $*p^h a - (\sim *p^h -)$ “ ”;
 $*p^h \acute{e}$ h-ur- [$*p^h \acute{a}$ h-ur-], $*p^h$ h-wór- “ ” - 1,00: ‘ / ; $*p^h \acute{e}$ h-ur- [$*p^h \acute{a}$ h-ur-], $*p^h$ h-wór- “ ”;
 $*f[a] -$ “ ” / ‘ ; $*f[a] -$ “ ” / ‘ ;
 $*f[a] -$ “ ” > ‘ / ;
 $*p^h \acute{e}$ h-ur- [$*p^h \acute{a}$ h-ur-], $*p^h$ h-wór- “ ” - 1,00: ‘ ; $*p^h \acute{e}$ h-ur- [$*p^h \acute{a}$ h-ur-], $*p^h$ h-wór- “ ”;
 $*p^h a - (\sim *p^h -)$ “ ” > ‘ / ;
 $*p^h \acute{e}$ h-ur- [$*p^h \acute{a}$ h-ur-], $*p^h$ h-wór- “ ” - 0,60: ‘ / ;
 $*f[a] -$ “ ” / ‘ ; $*f[a] -$ “ ” > ‘ / ;
 $*p^h \acute{e}$ h-ur- [$*p^h \acute{a}$ h-ur-], $*p^h$ h-wór- “ ”.

$*p^h \acute{e}$ h-ur- [$*p^h \acute{a}$ h-ur-], $*p^h$ h-wór- “ ”, $*p^h a - (\sim *p^h -)$ “ ”, $*p^h \acute{e}$ h-ur- [$*p^h \acute{a}$ h-ur-], $*p^h$ h-wór- “ ”;
 $*p^h a - (\sim *p^h -)$ “ ”, $*p^h \acute{e}$ h-ur- [$*p^h \acute{a}$ h-ur-], $*p^h$ h-wór- “ ”, $*p^h a - (\sim *p^h -)$ “ ”.

$*f[a] -$ “ ”, ; , ” $*p^h \acute{e}$ h-ur- [$*p^h \acute{a}$ h-ur-], $*p^h$ h-wór- “ ” - 0,15, (3,00): 1)
 $*f -$ *p; 2) *0; 3) * - * ,
(1,00): ‘ / , / ‘ ,
 $*p^h$ h-wór- “ ” / ‘ ; $*p^h \acute{e}$ h-ur- [$*p^h \acute{a}$ h-ur-],
 $*p^h a - (\sim *p^h -)$ “ ”, $*p^h \acute{e}$ h-ur- [$*p^h \acute{a}$ h-ur-], $*p^h$ h-wór- “ ” - 0,26,
(2,00): 1) *0; 2) * - * ,
(1,00): ‘ / ,

$*f[a] -$ “ ”, ; , ” $*p^h \acute{e}$ h-ur- [$*p^h \acute{a}$ h-ur-], $*p^h$ h-wór- “ ” - 0,36,
 $*f -$ $*p^h$; 2) (2,00): 1)
* - * ,
(1,00): ‘ / ,
 $*f[a] -$ “ ”, ; , ” $*p^h \acute{e}$ h-ur- [$*p^h \acute{a}$ h-ur-], $*p^h$ h-wór- “ ” - 0,36,
 $*f -$ $*p^h$; 2) (2,00): 1)
* - * , (0,60):
‘ / , ‘ / ‘ ,

Asingh, P., & Rasmussen, M. (1989). *Mange slags greanser. And examples of regional variations*. Retrieved from <http://phonetic-blog.blogspot.com/2011/03/strong-and-weak.html>

Blevins, J. (1994). The Bimoraic Foot in Rotuman Phonology and Morphology. *Oceanic Linguistics*, 33(2), 491-516.

Bomhard, A. R. (2014). *Afrasian Comparative Phonology and Vocabulary*. CHARLESTON, SC.

Bomhard, A. R. (2018). *A Comprehensive Introduction to Nostratic Comparative Linguistics: with special reference to Indo-European* (Vols. 1–4) (3rd ed.). Charleston, SC.

Campbell, L. (1998). *Historical linguistics. An Introduction*. The MIT Press.

Fortson, B. W. (2004). *Indo-European language and culture: An Introduction*. Malden, MA and Oxford: Blackwell Publishing.

Huehnergard, J. (2008). Afro-Asiatic. *The Ancient Languages of Syria-Palestine and Arabia*. Cambridge University Press.

Moscatti, S., Spitaler, A., Ullendorff, E., & von Soden, W. (1980). *An Introduction to the Comparative Grammar of the Semitic Languages*. Wiesbaden: Otto Harrassowitz.

Orel, V. E., & Stolbova, O. V. (1985) *Hamito-Semitic Etymological Dictionary: Materials for Reconstruction*. Leiden; New York; Köln: E. J. Brill.

Ringe, D. (2006). *From Proto-Indo-European to Proto-Germanic*. Oxford: Oxford University Press.

Waterman, J. C. (1976). *A History of the German Language*. Waveland Press Inc.

Weninger, S. (2011). Reconstructive Morphology. *The Semitic languages*. Walter de Gruyter.

REFERENCES

- Gamkrelidze, T. V., & Ivanov, Vjach. Vs. (1984). *Indoevropskij jazyk i indoevropcy : rekonstrukcija i istoriko-tipologičeskij analiz prajazyka i protokul'tury = Indo-European and the Indo-Europeans* (Ch. 1–2). Tbilisi: Izdatel'stvo Tbilisskogo universiteta.
- Klimov, G. A. (1964). *Jetimologičeskij slovar' kartvel'skih jazykov*. Moskva: Izdatel'stvo AN SSSR.
- Levic'kij, V. V. (2008). *Osnovi german stiki*. V nnicja : Nova Kniga.
- Raushenbah, G. V. (1985). *Mery blizosti i shodstva. Analiz nechislovoj informacii v sociologičeskijh issledovanijah*. Moskva: Nauka.
- Teselec, Ja. G. (1995). Sibiljanty ili kompleksy v prakartvel'skom? (Klassičeskaja dilemma i nekotorye novye argumenty). *Voprosy jazykoznanija*, 2, 10-28.
- SUM –Bilodid, I. K. (Hol. red.). (1970–1980). *Slovnyk ukrains'koi movy* (T. 1–11). Kyiv: Naukova dumka.
- Asingh, P., & Rasmussen, M. (1989). *Mange slags greanser. And examples of regional variations*. Retrieved from <http://phonetic-blog.blogspot.com/2011/03/strong-and-weak.html>
- Blevins, J. (1994). The Bimoraic Foot in Rotuman Phonology and Morphology. *Oceanic Linguistics*, 33(2), 491-516.
- Bomhard, A. R. (2014). *Afrasian Comparative Phonology and Vocabulary*. CHARLESTON, SC.
- Bomhard, A. R. (2018). *A Comprehensive Introduction to Nostratic Comparative Linguistics: with special reference to Indo-European* (Vols. 1–4) (3rd ed.). Charleston, SC.
- Campbell, L. (1998). *Historical linguistics. An Introduction*. The MIT Press.
- Fortson, B. W. (2004). *Indo-European language and culture: An Introduction*. Malden, MA and Oxford: Blackwell Publishing.
- Huehnergard, J. (2008). *Afro-Asiatic. The Ancient Languages of Syria-Palestine and Arabia*. Cambridge University Press.
- Moscatti, S., Spitaler, A., Ullendorff, E., & von Soden, W. (1980). *An Introduction to the Comparative Grammar of the Semitic Languages*. Wiesbaden: Otto Harrassowitz.
- Orel, V. E., & Stolbova, O. V. (1985) *Hamito-Semitic Etymological Dictionary: Materials for Reconstruction*. Leiden; New York; Köln: E. J. Brill.
- Ringe, D. (2006). *From Proto-Indo-European to Proto-Germanic*. Oxford: Oxford University Press.
- Waterman, J. C. (1976). *A History of the German Language*. Waveland Press Inc.
- Weninger, S. (2011). *Reconstructive Morphology. The Semitic languages*. Walter de Gruyter.

30.11.2020
10.12.2020