



Chukcho-Kamchatkan and Uralic: lexical evidence of their genetic relationship

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The Chukcho-Kamchatkan languages, particularly Koryak and Itelmen, were first described by Krašeninnikov in 1755. He also was the first who recognized the relationship of Chukchee and Koryak and of both with Itelmen, cf. [Vdovin 1954: 46]. The first sketch of the comparative grammar of the Chukcho-Koryak languages with occasional examples from Itelmen was published by Radloff [Radloff 1861]. His follower Bogoraz [Bogoraz 1922] significantly expanded his comparative material. In recent times three attempts to determine the regular sound correspondences between Chukcho-Koryak or Chukcho-Kamchatkan languages were formulated: [Golovastikov & Dolgopoľskij 1972; Muravjeva 1986, 1988; Mudrak 1988, 2000].

It was Holger Pedersen who took in account the Chukcho-Kamchatkan languages as a member of the Nostratic macrofamily, postulated by him already in 1903. In the 50s J. Ankeria and K. Bouda studied the specific relations between Chukcho-Kamchatkan and Uralic. The latter scholar especially collected hundreds of comparisons in a long series of articles [Bouda 1952, 1955, 1961, 1965, 1969, 1970, 1976, 1979]. Unfortunately, without the application of the comparative-historical method many of his equations do not have any value. On the other hand, regarding the number of his comparisons, Bouda's articles represent the richest source of the comparisons presented here. In the 60s A. Dolgopolsky returned to the idea of the Nostratic affiliation of Chukcho-Kamchatkan. J. H. Greenberg included Chukcho-Kamchatkan into 'Eurasianic' in his monograph *Indo-European and its closest relatives: The Eurasianic Language Family*, Stanford University Press 2000, unfortunately without any sound laws. The first scientific step was done by Golovastikov & Dolgopoľskij [1972] who made the first attempt to reconstruct the Chukcho-Koryak proto-language on the basis of regular sound correspon-

dences. They also formulated the preliminary phonetic correspondences between Chukcho-Koryak and Itelmen. In the 80s the Chukcho-Koryak reconstruction was precised and enlarged by I. Muravjeva. At the same time O. Mudrak starts his study of Chukcho-Kamchatkan languages in general. His recently published "Etymological Dictionary of the Chukcho-Kamchatkan Languages" [Mudrak 2000] opens new possibilities in the effort to determine the position of Chukcho-Kamchatkan in the global genetic classification. In the present study the question of the external genetic relatives of Chukcho-Kamchatkan is limited to Uralic, because the reconstruction of the Uralic protolanguage is the best developed one among the candidates for the closest relationship with Chukcho-Kamchatkan (Nivx, Yukaghir). All comparisons are based on the standard reconstructions of Uralic or its daughter branches according to K. Redei's *Uralisches etymologisches Wörterbuch* [UEW], sometimes confronted with [Sammalahti 1988 = S], [Xelimskij 1976 = X] and [Collinder 1960 = CG]; reconstructions of Chukcho-Kamchatkan or Chukcho-Koryak are primarily taken from [Mudrak 2000 = M].

A. Parallels between Chukcho-Kamchatkan and Uralic, including partial branches.

1. ChK ***ajta** "to drive" (M 20), cf. Chuk *aj-əlg* "sich fürchten"; FU ***aja-** "treiben, jagen" (UEW 4) = ***ąja** "to drive" (S 542); cf. Sm ***ajtá** "loslassen, schicken" (SW 17). Lit.: Bouda 1952: 33: Ch + FU.

2. ChK ***ajvä** "brain" (M 20); U ***ojwa** "Kopf, Haupt" (UEW 336) = ***ojwâ** "head" (S 536); Yuk ***öwj-** "edge, tip" (Nikolaeva, SFU 1988: 82).

3. ChK ***el** "no" (M 27); cf. also Ch ***el-** in ***el-eyti-** "to be unable" (M 160); U ***äla** or ***ela** '2sg imper. of the negative verb' (Illič-Svityč I, #128; CG 405: ***elä**); Yuk *ele* "no", cf. the sentence *ele, met niu Debegei oi-le* "no, my name is not Debegei" (Tailleur 1965: 108). Lit.: Ankeria 1951: 131; Bouda 1952: 38: Ch + FU + Yuk.

4. ChK ***äläkvi** "dirty" (M 31); BF ***loka** "Schmutz" | Lp N *loakke* "sediment" (SKES 301). Lit.: Bouda 1955: 297: Koryak + Fi.

5. ChK ***äm'jä** "rowan-tree / Sorbus" (M 33); FU ***emčs** "raspberry bush" (CG 411) = ***äñčs** "Himbeere" (UEW 26).

6. ***äməŋ-** > Ch ***äməŋ** "all" | K: W *m(i)nit* "all, many, much" (M 32); FU ***mone** "viel" (UEW 279).

7. ChK ***ən[š]ə** "fish" (M 34); U ***ončs** "Njelma-Lachs" (UEW 339) = ***unča** (X #149); Yuk: Kolyma *onuča* "Cyprinus labeo".

8. ChK ***is-** "to be" > Ch ***it-** | K ***is-/iĭ-** (M 55); FW ***is3** "sitzen, sich setzen" (UEW 629).
9. ChK ***ikǎm** "short" (M 54); Sm ***kǎjm** "kurz" (SW 51); Yuk *keibe-* "schlank". Lit.: Bouda 1961: 355: Ch + Sm; 1965: 170: ChK + Sm.
10. ChK ***i(k)w** "to drink water" > Chuk *ikwici-*, Koryak *iwwici-*, Palan *iwhisi*, Alyutor *iw'ici-* "to drink" | K ***i'(j)** "water" (M 56); FU ***juxi-** "to drink" (S 543); Nivx *í* "river" (Tailleur 1963: 120: Nivx + K + Chuk *iu-/eo-* "to dissolve").
11. ChK ***heqe** "bad, evil" (M 48); BF ***ākä** "Zorn, Bosheit, Groll" (SKES 1871). Lit.: Bouda 1952: 27: Chuk + Fi.
12. ChK ***nǎtnǎ** "horn" > Ch ***ḡḡtnḡ** | K ***ǎnten** (M 99); U ***aḡt3 ~ oḡt3** "Horn" (UEW 12-13).
13. ChK ***ḡǎnǔ** "center, middle" (M 39-40); FU ***kun3** "Bauch" (UEW 208). Lit.: Bouda 1952: 31: ChK + Komi.
14. ChK: Ch ***ḡḡḡyo-ĭa** "peak, top of mountain" | K ***kǎtx-** "altus" (M 40); ChK ***ḡḡčḡǔǔ-**; FP/FV ***kork3** "hoch" (UEW 672). Lit.: Bouda 1952: 30: BF + Ch.
15. ChK ***ḡḡv** "stone" (M 41-42); FU ***kiwe** "Stein" (UEW 163-64) = ***kiwi** "stone" (S 543). Lit.: Ankeria 1951: 134; Bouda 1952: 24: ChK + FU.
16. ChK ***ḡḡso** "hip, flank" > Ch ***ḡḡto-l** | K ***kasǔ-ḡ** (M 41); FP ***kaska** "Kreuz, Mitte des Körper" (UEW 648).
17. ChK ***jeḡḡši** "year, cycle" (M 98); FU ***jikǎ** "Alter, Jahr" (UEW 98) = ***ikǎ** "year; age" (S 541).
18. ChK ***jǎhilyǎ** "moon" (M 60); cf. *(**ḡ**)**lha** "sun" (M 81); U ***jelǎ** "Licht, Sonne, Tag" (UEW 96-97).
19. ChK ***jǎly^(w)ǎ** "knuckle, finger" (M 61); FU ***jalka** "Fuss, Bein" (UEW 88-89) = ***jǎlkǎ** "foot, leg" (S 543).
20. ChK ***jḡtḡ** "to get, bring, carry" (M 62); U ***jutta-** "ansetzen, anstückeln, hinzunähen, verbinden" (UEW 106).
21. ChK ***kěj'(v)-ke** "birch-sprout" (M 68); U ***kojwa** "Birke" (UEW 169) = ***kojǎ** "birch" (S 537).
22. ChK ***kelǎha** "evil ghost, devil" (M 68); FU ***kolja** "böser Geist" (UEW 173). Lit.: Bouda 1952: 25: Chuk + FU.
23. ChK ***kǎjě-** "to awake" > Ch ***kǎjev-** id. | K ***te-kej-** "surgere e lecto" (M 71); U ***koje** "Morgenröte" (UEW 167). Lit.: Bouda 1952: 26: Chuk + U.
24. ChK ***kinǔ** "navel; flesh (of belly)" (M 75); U ***kü-3** "navel" > FU ***küḡ-k3** > Permian ***g&g3** id. (Napołskix 1995: 170-72) | Sm ***kün** (SW 79) = ***kün** (H #572).

25. ChK ***kučkə** "crow-god" (M 76); FP ***kočka** "Adler" (UEW 668) = ***kočka** "eagle" (S 552).

26. ChK ***кѣсѹъ** "dry" (M 74) > Ch ***кѣгѹъ** id. | It ***k'izyi** id.; U ***kuška** "trocken" (UEW 223) = ***košká-** (S 537); cf. also FP ***koksə** id. (UEW 670).

27. ChK: Chuk *kuw* "breit" and / or *kuu, koo* "gross" | K: S *kuun* "grand, haut" (Worth 1962: 590); FU ***kawka** "lang" (UEW 132). Lit.: Bouda 1952: 24: Chuk *kuw* + FU; 26: Chuk *kuu, koo* + Fi *koko* "Grösse"; Mari *kuu, koŋo* "gross".

28. ChK ***ləγi** "to know (truth)" (M 79-80); U ***luke** "zählen, rechnen; Zahl, Anzahl" (UEW 253) = FU ***luki-** "to count" (S 545).

29. ChK ***ləγju** "nephew" (M 80); U ***läwä** "(jüngeres männliches) Familienglied" (UEW 242).

30. ChK ***loŋb** "to suck" (M 83); FV ***lüpsä** "Milk; melken" (UEW 295). Lit.: Bouda 1952: 36: Chuk + FV.

31. ChK ***lülhe** "ankle" (M 84); Ug ***lilkə** "irgendein Glied" (UEW 865).

32. ChK ***leqel** > Ch ***imleqcuke** "ermine" | K ***lek'es** "marten" (M 86); U ***luk(k)ə** ~ ***luk(k)ə** (Illič-Svityč II, #270) > Mari *luj*; mansi *loj-sa* "marten" | Sm ***loks** "fox" (SW 84).

33. ChK ***ijomča** "willow, poplar" (M 88); FW ***lemešz** "(junge) Linde" (UEW 688).

34. ChK ***lɛm-** "following" > Ch *(a)**lɛm(ŋá)-** "double, again; (too) many; reserve" | K ***lm-** ~ ***lm-** "sequens" (M 87-88); FV ***lama** "(grosse) Menge" (UEW 684). Lit.: Bouda 1952: 37: Chuk + Md.

35. ChK ***malá-** "to sweep, rake; row" (M 90); FP ***melä** "Ruder, Steuerruder" (UEW 701).

36. ChK: Ch ***macvá** "breast or belly of animals" (M 90: Ch + K ***məzə-m** "stomach" < ChK ***malɔ'má**) | K: W *maljav* "breast" (Worth 1959: 110 after the records from the village Napana by V.I. Tjušov, *Po zapadnomu beregu Kamčatki, Zapiski imperatorskogo ruskogo geografičeskogo obščestva po obščej geografii*, 37/2, SPb., 1906); E *ki-mševi-in* "grosses mamelles" (Tailleur 1960: 129); FU ***mälɣe** "Brust" (UEW 267) = ***mälki** "breast" (S 546); Yuk: Kolyma *mełut* "chest"; Nivx *moč* "sein" (Schrenck; Tailleur 1960: 129: ChK+FU+Y+Nivx). Lit.: Bouda 1952: 15: Chuk + Yuk + FU.

37. ChK ***mə** in ***γəmə** "I" (M 39) > Ch ***γəm** "I" | K ***kəma-**, ***kmi-** "I", cf. S *ma* "me" (M 39; cf. Tailleur 1960: 137, fn. 137); U ***mš** "ich" (UEW 294) = ***mun** "I" (Janhunen 1982: 30). Lit.: Ankeria 1951: 127: ChK + U.

38. ChK ***məCə** > Ch ***wər** " "mesh" | K ***mčə-n** "maculae retium" (M 93: ChK ***mərə** "mesh"); U ***mača** "Fischreuse" (UEW 263) > Mari *mača*

"Fischreuse" || Selkup Ke. *maazeng*, N *mYšek* "Netz, Zugnetz". It seems that K *č is primary instead of Ch *r, cf. ChK *кѳгѳъ "dry" (M 74) > Ch *кѳгѳъ id. | K *k'izyi id. vs. U *kuška "trocken" (UEW 223).

39. ChK *mәLә > Ch *mәše "to collect berries; edible root" | K *meł-qef "berries, fruits" (M 94: *mәše; but ChK *š > Ch *s ~ K *s in the non-final position according to M 12); FU *molǝ or *mođǝ "Beere irgendeines Strauches" (UEW 279).

40. ChK *miḥě- "good, nice" > Ch *miča- | K *mič- (M 95); U/FP *mića- ~ *müća- "(zusammen)fegen. (zusammen)rechen" (UEW 274) > Livonian *mütsa*- "fegen" | Udmurt G *mić*- "zusammenschaufeln, -fegen; barbieren, rasieren"; Komi S *mić* "Schönheit", SP *mića* "schön", *mićed*- "schön machen, schucken" || Nenets O *mecWj*, S *misí* "schmuck gekleidet, sauber angezogen". Lappic Kld. *močček* "schön, hübsch" reflects the velar vocalism (UEW l.c.) or FV *majǝǝ "glatt, hübsch" (UEW 697).

41. ChK *minlǝ "hare" > Ch *miljute | K *minǝ (M 95); U *ńoma(-lǝ) "Hase" (UEW 322) = *ńomǝ "hare" > FU *ńomǝlǝ | Sm *ńǝmǝ (S 539); Yuk: Omok *нема /ńoma/* "Hase".

42. ChK *muri "we" (M 97) > Ch *muri | K *muza /*mizyin-; U *mǝ "wir" (UEW 294) = *me- (Janhunen 1982: 30). Lit.: Ankeria 1951: 127: ChK + U.

43. ChK *nanǝwǝ "bast" (M 98); FP *nine "Bast, Lindebast" (UEW 707) = *ńini "bast" (S 553). Lit.: Bouda 1952: 20: Koryak + FP.

44. ChK *něl'ǝ "skin" > Ch *nǝl'ǝ | K: W *xan[s]x* (M 98); BF *naška or *načka "skin" (SKES 364). Lit.: Bouda 1952: 20: Ch + BF.

45. ChK *nyem "worm" (M 99); U *ńi(w)ǝǝ "Made, Wurm" (UEW 320) = *iǝǝ "worm" (CG 408) < *ńimǝǝ?

46. ChK *ǝemǝ-sqǝ "woman", *ǝev-ǝt "female" (M 101); U *ńiǝǝ "woman" (CG 408) = *ńiǝǝ "Frau" (UEW 305).

47. ChK *ǝelǝ "herd of reindeers" (M 101); U *ńeplǝ "Rentierkalb" (UEW 316).

48. ChK *ǝu- "that" > Ch *ǝun- | K *nu(w) (M 105); U *no "jener" (UEW 306).

49. ChK *pǝk "fledgeling, little bird" (M 106); U *pǝke "eine Art Raubvogel" (UEW 361).

50. ChK *penke "cap" (M 108) — perhaps *pen- + -ke (cf. *kěj'(v)-ke "birch-sprout"); U *pǝǝ "Kopf" (UEW 365) = *pǝǝ "head" (S 548). Lit.: Ankeria 1951: 133: K + U.

51. ChK *panša (M 107) > Ch *panša- "Rentierbeinfell" | K *pǝnz[ǝ]- "e pellibus pedum cervi tarandi factus"; U *ponča > Khanty O. *posǝ7*

"Schuhfuss" (UEW 394) | Sm ***pāncā** ~ ***pencā** "Beinling" (SW 118). Lit.: Bouda 1965: 162: Ch + Sm.

52. ChK ***peqə-** "to run on four feet" (M 108); BF ***pakene-** "to run away", ***pakoi** "flight, run" (SKES 470; Illič-Svityč I, #15), cf. U ***pukta-** "laufen, hüpfen" (UEW 402). Lit.: Bouda 1952: 6: Ch + BF.

53. ChK ***pəl-** "good; big" (M 109); U ***paljz** "dicht; dick" (UEW 396; CG 408). Lit.: Ankeria 1951: 133-134: K + U.

54. ChK ***pəne-** "to sharpen, whet; grinding stone" (M 109); FU ***pānz** "wetzen; Wetzstein" (UEW 365) = ***pānV-** "to grind" (S 548). Lit.: Bouda 1952: 10: Ch + FU.

55. ChK: Ch ***par** "shoulder-blade" | K: W *paspas*, pl. *paspad* "scapula"; S *ipət* "homoplata, scapula" (M 107: ChK ***panrə** reconstructed on the basis of Itelmen *paŋza* "armpit", but it is apparently a different word); U ***pekpā** "Schulterblatt" (UEW 368).

Note: Alternatively ChK ***vьl'pa-** "shovel" (M 151) could be a cognate of the U word.

56. ChK ***p̄hona** "mushroom, fungus" (M 110); FU ***paŋka** "eine Art Pilz — Fliegenpilz /Agarius muscarius" (UEW 355) = ***pāŋkā** "mushroom" (S 547). Lit.: Bouda 1952: 7: Ch + FU.

57. ChK ***pas̄w̄-** "hole" (M 107); U ***paśz** "Loch, Öffnung, Spalt, Riss" (UEW 357) = ***pośa** "hole" (X #213). Lit.: Bouda 1970: 131: K + U.

58. ChK ***q̄w̄elyə-** "crow" > Ch ***welvə** | K ***q̄lh** id. (M 122); U ***kulz(-kz)** "Rabe" (UEW 200) = ***kula** "crow" (X #207). Lit.: Bouda 1970: 130, fn. 1: K + Ug.

59. ChK ***sən-** "forest; hill" (M 126); FU ***śūŋkā** "grassy hill" (CG 414) = ***cūŋkā** "Hügel" (UEW 37).

60. ChK ***siyə-** "sledge; ski" (M 127); U ***sukse** "Schneeschuh" (UEW 450) = ***suksá** "ski" (S 540); A: Tg **sūksi-* "ski".

Note: Alternatively U ***sajkz** / ***śajkz** "Schneeschuh /Ski (laufen)" (UEW 429) may be compared with ChK ***siyə-** "sledge; ski".

61. ChK: Ch ***šileqe** "backbone, spine, ridge, sceleton" (M 24: Ch + K ***k-čič** "front" < ChK ***čil'e-**) | K: NE & Uka *šalk*, S *sakky*, W *šaalikin*, Karaga *kal yšilky* "en aridre" (Worth 1962: 593, #3.22); FW ***šelkä** "Rücken" (UEW 772). Lit.: Bouda 1952: 42, #367a: K + Fi & Lp.

62. ChK: Ch ***yə-t** "thou" (Mur 165) = Ch ***yə-š**, obl. ***yə-n-** | K ***kəza**, poss. ***kni-** < ChK ***yəšə**, obl. ***yən-** (M 40); U ***tun** ~ Ob-Ug ***näy/nëy** "thou" (Honti) & the 2sg verbal marker U*-**t** ~ Komi, Ob-Ug, Sm *-**n** (Janhunen 1982: 34-35). Lit.: Ankeria 1951: 127: ChK + U.

63. ChK ***tǎlvu-** "to blow (on wind)" > Ch ***tǎttu-** | K ***t'lu-** (M 138: ChK ***tǎsvu-**); FP ***tuuli** "wind" (S 554) = ***tule** "Wind" (UEW 800).

64. ChK ***tǎle-** "to walk" (M 136); U ***tule-** "kommen" (UEW 535) = ***tolá-** "to come" (S 540). Lit.: Bouda 1952: 18: Chuk + FU.

65. ChK ***tǎlyə** ~ ***t-** "skin; scale" (M 136); U ***talja** "Haut, Fell" (UEW 508-09). Lit.: Ankeria 1951: 135: K + FU.

66. ChK ***tǎnu(-m)** "trunk, stem" (M 137); FU ***tǎnje** "Stammende, dickes Ende des Baumes" (UEW 523) = ***tǎnji** "base" (S 550); A: OTk *tǎŋǎre* "a tree trunk" | Mong *tǎngke* "overgrowth of feather grass" | Koryak (!) *tǎŋk* "Stammende, dickes Ende des Baumes" (UEW 523).

67. ChK ***turi** (pl.) "you" (M 145-46); U ***tǎ** "ihr" (UEW 539) = ***te-** "you" (Janhunen 1982: 30). Lit.: Ankeria 1951: 127: ChK + U.

68. ChK ***vilu-** "ear" > Ch **viŋu-** | K ***elwe-** /**il(u)-** "ear" (M 152), ***vǎlu-m-** "to hear" > Ch ***valo-m-**/***palo-m-** | K ***ilfǎ(ə)-** id. (M 149); FU ***peljä** "Ohr" (UEW 370; S 547). Lit.: Bouda 1952: 13: Chuk + FU.

Note: K of Karaga *fljuŋi* "ear" (Worth 1962: 588) indicates ChK ***ŋvilju-**, compatible with FU/U ***kule-** "hören; Ohr" (UEW 197) = FU ***kuulǎ-** "to hear" (CG 412) = FU ***kuuli-** id. (S 544); Sm ***kǎw** "Ohr" (SW 62) included with the question-mark in UEW is better to relate with FP ***kovra** "ear" < U ***kǎwǎ** (S 538). The Nostratic reconstruction independently proposed by Illič-Svityč (1967: 366), namely ***iwlǎ** "to hear", perfectly agrees with the modified ChK reconstruction ***ŋvilju-**. Summing up, it seems, there were two different etymons in ChK, ***ŋvilju-** "ear", and ***p/vǎlu-m-** "to hear", corresponding to FU ***ku(u)li-** "to hear" and ***peljä** "ear" respectively.

B. Parallels between Chukcho-Koryak and Uralic, including its partial branches.

69. Ch ***ǎčhə-** adj. "fat" (M 154); FP ***ičǎ** "dick; gross" (UEW 627). Lit.: Bouda 1952: 40: Ch + Md.

70. Ch ***ǎkka** "son" (M 155); U *(j)**ǎkǎ** ~ *(j)**ǎǎǎ** "Sohn; Junges" (UEW 109) and / or Ug ***ǎkǎ** (UEW 835).

71. Ch ***elve** "other" (M 160); Ug ***ǎlmǎ** "andere Seite" (UEW 836).

72. Ch ***cǎR-** "(to become) grey, yellow" (M 159); FU ***čerǎ** "grau" (UEW 36); but cf. Sm ***sur** "weiss" (SW 138).

73. Ch ***ŋǎm-** "heavy, hard"; ? U/FU ***kǎmǎ** "hart, fest" (UEW 137); Yuk: Kolyma *kim-d(i)ěš-* "all seine Kraft entwickeln, sich anstrengen". Lit.: Bouda 1965: 169-70: Ch + FU.

74. Ch ***jet-** "to come" (M 175); U ***juta-** "gehen, wandern" (UEW 106).

75. Ch ***jəlki**- "thunder" (M 175); BF: Ob-Ug ***jīləx** "donnern" (Honti 1982: #188); cf. Fi *jylinä* "thunder", *jylistä* "to thunder"; LpN *jull*t* id. (SKES 127). Lit.: Bouda 1952: 33: Chuk + Fi.

76. Ch ***kalal** "горбуша = Buckellachs" (M 177), cf. also Alyutor *kil-lälŋyn* "Fischlaich" vs. Chuk *lälgyn*, Koryak *lälŋyn* "Laich"; U ***kala** "Fisch" (UEW 119) = ***kälä** "fish" (S 538); Yuk: Tundra *xaldawa* "scale of fish" < **xal-* "fish" & *sawa* "skin" (Kornilov, G.N., *Složnye imenna suščestvoitelnye v jukagirskom jazyke*, L. 1977: 117: Yuk + U). Lit.: Bouda 1952: 25: Ch + FU.

77. Ch ***kiwle**- "dried blood" (M 182); U ***kälz[w]** "(geronnenes) Blut" (UEW 134). Lit.: Bouda 1961: 354: Ch + Mansi.

78. Ch ***kəwwat**- "to dry" (M 181); FU ***kujwa** "trocken" (UEW 196-97). Lit.: Bouda 1952: 24: Koryak + Fi.

79. Ch ***kušyə-n** "spider" (M 183); U ***kočŋa** "ant" (X 130) = ***kočŋz** id. (CG 406) = ***kučz** "Ameise" (UEW 192-93).

80. Ch ***Lewtə** "head" (M 185); BF ***latva** "top of mountain or head, crown" (SKES 280). Lit.: Bouda 1952: 36: Chuk + Fi.

81. Ch ***mata**- "to marry" (M 186), cf. Chuk *mata-lən* "Nächster, Verwandter, Schwiegervater"; U ***mättz** "Haus, Zelt, Hütte, Familie" (UEW 269). Lit.: Bouda 1952: 14: Chuk + Udm.

82. Ch ***mik** "who" (M 96: Ch + K ***k'e** "who"); cf. ChK ***meŋ**- "which", Ch **miŋke* "where", K ***mankə**- "what, which" (M 92, 95); U ***mz** "was"; cf. Fi *mikä*, gen. *minkä* "welcher, was für ein" (UEW 296). Lit.: Ankeria 1951: 128: ChK + U.

83. Ch ***mькь** "морской конёк, корюшка" (M 187); FU ***möktz** "eine Art Fisch" (UEW 295) = FP ***müktV** "fish species" (S 553). Lit.: Bouda 1952: 14: Chuk + FU.

84. Ch ***пъппъj** "name" (M 189); U ***nime** "Name" (UEW 305) = ***nimi** "name" (S 538). Lit.: Bouda 1952: 21: Chuk + FU.

85. Ch ***pajaka** "calf of the leg" (M 192) or Ch ***pecki**- "reindeer's shinbone" (M 193); U ***počka** "Schenkel" (UEW 389) or ***poška** "Wade" (UEW 396). Lit.: Bouda 1952: 8: Ch ***pajaka** + U ***počka**.

86. Ch ***pelqet**- "to grow old" (M 193); FP ***pälä** "Zeit" (UEW 726); Yuk: Tundra *pälur*, Kolyma *polut'* "Alter, Greis". Lit.: Bouda 1952: 7: Ch + Yuk.

87. Ch ***pəlHə**- "to flow" (M 194); Ug ***pəls-** "quellend fließen" (UEW 881). Lit.: Bouda 1952: 9: Chuk + Hu.

88. Ch ***puq-** "bottom; back" (M 195); U ***pujz** "Hinterteil" (UEW 401) = ***puwz** (CG 408) = FU ***puwi** "behind" (S 547) > FU ***pūke-** | Sm ***puə-** (Sa #141); Yuk: Kolyma *puidie* "Flussaufwart". Lit.: Bouda 1952: 8: Chuk + FU.

89. Ch ***qal̥mə** "unlucky, unhappy" (M 196); U ***kalma** "Leiche; Grab" (UEW 119). Lit.: Bouda 1952: 28: Chuk + U.

90. Ch ***q̥mja-** "hoarfrost" (M 198); U ***kumz** "dünner Schnee" (UEW 204) = FU ***kumi** "rim, frost" (S 544); Yuk: Omok *ku* "snow".

91. Ch ***q̥cvo** "cedar" (M 198: ***q̥rvo**"), cf. Koryak *qasv, qysv, qyčvo* "Zeder, Zirbelkiefer" (Bouda 1961: 356); FU ***koča** "eine Art Nadelbaum" (UEW 165) or FU ***käč(η)z** "Wacholder" (UEW 133).

92. Ch ***š̥ly̆-** "finger" (M 203) < ChK *š̥- or *č̥-; U ***suđz** "Finger" (UEW 449) = ***suwd̥ä** "finger" > FU ***s/śuwd̥ä** | Sm ***t̥jä** (S 540).

93. Ch ***tok** "give!" (M 209); FU ***toxi-** "to bring" (S 550) = ***toxe-** "bringen, holen, geben" (UEW 529); cf. Sm ***t̥-** "bringen, geben" (SW 145; H 347).

94. Ch ***tur(ji)-** "new" (M 210); BF ***toorz** "fresh" (SKES 1409-10). Lit.: Bouda 1952: 17: Ch + BF.

95. Ch *[**v**]ač̥mə "reindeer" in Chuk *ta-ač̥me-nta* (hiatus between *aa* indicates a lost glide), Koryak *čoč̥-ač̥my-nta*, Alyutor *torj-asymynta* "vier-jährige Rentier(kuh)" < ***torje-[v]ač̥mə**, lit. "young reindeer"; FV ***wača**, ***wačimz** "Rentierkuh; Fohlen, Füllen" (UEW 806). Lit.: Bouda 1952: 13: Ch + FiLp.

96. Ch ***vət-yər** "space between" (M 212) < ChK *?**k̥vət-**, cf. also Chuk *vut-lät* "zwischen Tundra und Meeresküste nomadisieren"; FU ***kütz** "Mitte, Zwischenraum" (UEW 163). Lit.: Bouda 1952: 24: Ch + Ug.

97. Ch ***vitku** "first, for the first time" (M 212); FV ***wikta** > Fi *vihdoin* "endlich, yhden kerran"; Md *(**v**)**ukta** "hinter" (SKES 1734-35; Keresztes 1986: #516), cf. Welsh *cyntaf* "der erste" vs. Old High German *hintana* "hinter".

C. Parallels between individual Chukcho-Koryak languages and Uralic, including its partial branches

98. Chuk *ənan* "sehr"; U ***enä** "gross; viel" (UEW 74). Lit.: Ankeria 1951: 131: Chuk + U.

99. Chuk *čymjy* "bitter, herb"; FU ***čemz** "sauer (werden)" (UEW 56). Lit.: Bouda 1952: 41: Chuk + FU.

100. Chuk *peečvak* "einjähriges Rentierkalb"; FU/U ***poča** "Rentier(kalb)" (UEW 387); Yuk *pad'e* "Elentier"; Tg ***bučan** "косуля, изюбр". Lit.: Bouda 1952: 8: Chuk + FU.

101. Chuk *pyčiqä, pyčeqa* "eine Art kleiner Vogel, Bachstelze"; FU ***päčkz** "Schwalbe / *Hirundo rustica*" (UEW 358; CG 413). Lit.: Bouda 1952: 8-9: Chuk + FU.

102. Chuk *pylm* "dunkel"; U ***piłmz** "dunkel (werden)" (UEW 381-82; CG 408). Lit.: Bouda 1952: 7: Chuk + FU.

D. Parallels between Kamchatkan (Itelmen) and Uralic, including its partial branches.

103. K: NE *kallaka*, S & W *kalka* "penis" (Krašennikov; Worth 1959: 112, #6.2); cf. Ch ***həlqe** "penis" (M 168); FP ***káłkkz** "Ei; Hoden" (UEW 644); cf. also U ***kołe** "Hoden" (UEW 175).

104. K: NE *kidx ~ kudex* "sister's son" (Radliński; Worth 1959: 38); FU ***kükz** "Schwager" (UEW 154).

105. K ***k'e** "who" (M 96); U ***ke** "wer" (UEW 140). Lit.: Ankeria 1951: 128: K + U.

106. K: W *le-* "etwas werden", *li-* "sein"; FU ***le-** "sein, werden, leben" (UEW 243); Yuk Tundra + Kolyma *le-* "to be, become, live". Lit.: Ankeria 1951: 133: K + FU + Yuk.

107. K: W ***meca-** > *mécake* "far away", *mecaq* "distantly", *mecalax* "distant" (Stebnickij), *mečaan* "far-off" (Radliński), see Worth 1969: 161; FU ***mečä** "weit, entfernt" (UEW 269-70). Lit.: Bouda 1965: 163: K + FU.

108. K: W *nenem-k* "(in) front" (Jochelson; Worth 1969: 174); BF: Fi *nenä*, Estonian *nina* "nose"; Lp Sw *njuone* id. (SKES 372-73).

Note: Bouda 1970: 132: K + Selkup *nenmä* "Vorder-" < ***ner-nä** (SW 110).

109. K: W *suzc* "lizard" (Jochelson; Worth 1969: 242); U ***s3ŋćz(-łz) ~ *s3čćz(-łz)** "Eidechse" (UEW 454) = ***conśá-** "lizard" (S 536); Tg. ***sisel-Ž** "Eidechse" (UEW 454).

110. K: W *šežen*, pl. *šizin* (sic); S *čezokoč*, pl. *čezłoxon*; also *tsizat*; NE *šožo*, pl. *šuzed* "knee" (Radliński; see Worth 1959: 111); U ***šāncz** "Knie" (UEW 471).

111. K: S *tekten*, pl. *tekat* "bone" (Radliński, III, 17; Worth 1959: 113, #7.2); FU ***täktä** "Knochen, Gebein" (UEW 515).

112. K: W *tin* "this"; U ***tä/*te/*ti** "dieser" (UEW 513-14). Lit.: Ankeria 1951: 128: K + U.

113. K *tme* "Leim"; U ***đümä** "Leim" (UEW 66) = ***d'ümä** "glue" (S 537). Lit.: Bouda 1965: 164: K + U.

Conclusion

The collected lexical parallels allow us to formulate the following more or less probable phonetic correspondences between Chukcho-Kamchatkan and Uralic and their daughter dialects:

ChK	U	Comparisons (##)
k- ('k-)	*k-	21, 22, 23, 24, 25, 26, 27, 76, 77, 78, 79, (105)
*-k-	*-k-	4, 9, 25, 49, 82, 83, 85, 97
*-k-	*-x- (ɣ)	10, 93
*ɣ-	*k-	13, 14, 15, 16
*-ɣ-	*-k-	19, 26, 28, 58, 60
*q- (*q ^w -)	*k-	(58), 89, 90, 91
*-q-	*-k-	11, 32, 52, 61
*ŋ-	*ń-	46, 47
*n-	*n-	43, 44, 84, 108
*-n-	*-n-	13, 43, 51, 54, 62, 98, 108
*-n-	*-ŋ-	24, 56, 59, 66
*t-	*t-	63, 64, 65, 66, 67, 93, 94, 111, 112
*-t-	*-t-	1, 12, 74, 80, 96, 97, 111
*-t-	*-tt-	20, 81
p- ('p-)	*p-	49, 50, 51, 52, 53, 54, 55, 56, (57), 84, 85, 86, 86, 87, 88
*v-	*p-	68 (?)
*-v-	*-p-	30, 47
*v-	*w-	95, 97
*-v-	*-w-	2, 15, 21, 27
*-w-	*-w-	77, 78
*j-	*j-	17, 18, 19, 20, 74, 75
*-j-	*-j-	1, 2, 21, 23
m- ('m-)	*m-	35, 36, (38), 39, 40, 41, 42, 81, 82, 83, 107
*-m-	*-m-	5, 6, 9, 33, 34, 37, 73, 89, 90, 95, 99, 102, 113
*l-	*l-	28, 29, 30, 80 (?), 106
*-l-	*-l-	3, 4, 18, 19, 22, 31, 35, 41, 47, 53, 58, 61, 65, 68, 76, 77, 86, 87, 88, 89 (?)
*-l-	*-l̥-	102, 103
*ł-	*l-	32, 33, 34
*-ł-	*-l-	64, 71, 75

The most difficult task is to formulate the sound correspondences for sibilants and affricates, sometimes alternating with liquids in both Chukcho-Kamchatkan and Uralic (e. g. Ob-Ugric). The present material allows to establish the following correspondences, frequently based only upon unique examples:

ChK	U	Comparisons (##)
Ch *c- < *t'-	*ć-	72
*t'-	*-ć-	40 (?)
*-j-	*-ć-	5
Ch *č-	*č-	99
*-č-	*-č-	25, 69, 95 (?), 100
Ch *-č-	*-ć-	101
*š-	*ś-	61, 92 (?)
*-š-	*-č-	7, 79
*s-	*s-	60
*-s-	*-s-	8, 16
*s-	*ś-/*ć-	59
*-s ^w -	*-ś-	57

There are also some problematic clusters and nontrivial correspondences which imply small corrections in Mudrak's reconstructions:

Chukcho-Koryak	Kamchatkan	Uralic	##
*кьгүь "dry"	*k'izyi id.	U *kośká- id.	26
*macvá "breast"	W <i>maljav</i> id.	FU *mälye = *mäłki id.	36
*wər " "mesh"	*mčə-n "maculae retium"	U *maća "Fischreuse"	38
*məše " "collect berries"	*meł-qef "berries, fruits"	FU *mođz (or *mołz) "berries"	39
*nałyə "skin"	W <i>xan[s]x</i> id.	BF *naška (or *načka?) id.	44
*par " "shoulder-blade"	W <i>paspas</i> , pl. <i>paspad</i> "scapula"	U *pekpä "shoulder-blade"	55

The present list of lexical parallels between Chukcho-Kamchatkan and Uralic is too low to formulate *all* phonetic correspondences in details, but sufficient to accept genetic relationship. The occasional citations of parallels from Yukaghir and Nivx should indicate the future direction of research: common Uralo-Yukaghir-Nivx-Chukcho-Kamchatkan stock within Nostratic.

List of abbreviations

A — Altaic; BF — Balto-Fennic; Ch — Chukcho-Koryak; ChK — Chukcho-Kamchatkan; Chuk — Chukchee; Fi — Finnish; FP — Fenno-Permic; FU — Fenno-Ugric; FV — Fenno-Volgaic; Hu — Hungarian; K — Kamchatkan; Md — Mordvinian; NE — Northeast; S — South; Sm — Samoyedic; Tg — Tungusic; U — Uralic; Ug — Ugric; W — West; Yuk — Yukagir.

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