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# A DEMOGRAPHIC HISTORY OF THE KAMCHADAL/ITELMEN OF KAMCHATKA PENINSULA: MODELING THE PRECONTACT NUMBERS AND POSTCONTACT DEPOPULATION

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*Abstract.* This paper examines the possibility of estimating/reconstructing population numbers for the Kamchadal native people of the Kamchatka Peninsula, prior to the first Russian entry in 1697. Many authors have attempted to determine this figure through retrospective calculations based on Russian administrative records of the eighteenth century. In reality, however, such documents, especially those from the early period of Russian administration (1697–1740), did not constitute statistical sources so much as official reports, compiled in accordance with the changing mood of government policy in the Siberian colonies. They cannot be used as authentic sources for demographic calculations and should be supplemented with other data, including those from local parish records and village family rosters. An accurate count of the precontact indigenous population is hardly possible, since actually it falls somewhere between 8000 and 25,000–30,000 people. These figures are based upon data on early contact population distribution of the Kamchadals and on their recorded numbers during the much later period (1850–1920) when Russian settlers were fully established in the area.

## Introduction

Russian authors of the eighteenth century distinguished between three indigenous nations on Kamchatka Peninsula: Kamchadals, Koryaks, and Kuriles (Krasheninnikov 1972:193). To what extent such a division accurately reflected the network of indigenous population groups during precontact and early contact time should be the subject of separate research. This paper analyzes

the dynamics and distribution of the sedentary fishing population, referred to as “Kamchadals” in the early Russian records.

The question of possible numbers of Kamchadals prior to their first contact with Russians (1697) and during subsequent annexation of their territory to the Russian Empire (1700–1716) has been discussed more than once in the literature. However, this issue has hitherto been decided either by speculation or by means of statistical re-

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constructions based on early Russian records of the eighteenth century. For this reason, although relying upon the very same documents, various authors derived contradictory results. As a rule, scholars were influenced by reports from the Russian officer Vladimir Atlasov, who was the first to reach Kamchatka Peninsula in 1697. In his official dispatches, Atlasov reported on numerous and heavily populated Kamchadal *ostrozhek*, or fortified villages. Based on these accounts, an estimated contact number of Kamchadals in the lower Kamchatka River valley alone was once placed at 25,000 (Berg 1935:80). Earlier authors, on the contrary, proceeding from the low population figures of the Kamchadals during the nineteenth century, concluded that prior to the arrival of the Russians the total number of Kamchadals was less than 10,000 (Sgibnev 1869; Slovtsov 1896). Such divergent estimates reflect either the unreliable nature of data used, or marked differences in methods of calculation. Both scenarios merit special comment.

### Kamchadal Population Estimates by Boris Dolgikh

One of the most substantial attempts to estimate the number of Kamchadals prior to the Russian entry (henceforth referred to as the *pre-contact population number*) was made by the leading Soviet expert in Siberian ethnohistory, Boris Dolgikh (Dolgikh 1960:565–572). I propose here to dwell upon his approach in some detail, in order to illustrate the data and methods that have been used by several other Russian scholars.

In his classic volume on population numbers and distribution of the indigenous Siberian nations in the seventeenth century (Dolgikh 1960), Dolgikh relied mainly upon Russian documents of the 1600s and 1700s. Those were predominantly records on tallying of *yasak* (fur tax) and on the annual number of *yasak* taxpayers among various indigenous groups. Russian *yasak* records of the seventeenth and eighteenth centuries dealt exclusively with the adult male taxpayers from age 15 through approximately age 55. In order to derive a complete population estimate, Dolgikh suggested multiplying the number of *yasak* taxpayers by a coefficient of four. The latter was calculated upon data on the age-sex structure of the indigenous Siberians from the Soviet census in 1926/1927 (Dolgikh 1960:13–14). By these (and other) assumptions, Dolgikh was able to contribute a fully comparable estimate of the native population(s) for the entire Russian Siberia (Dolgikh 1960:616–617).

To determine precontact population numbers for the Kamchadals, Dolgikh used data on the number of *yasak* taxpayers (that is, male Kamchadals between the ages of 15 and 55), starting with the year 1715. By that time, he assumed,

**Table 1.** Numbers of Male *Yasak* Taxpayers in Kamchatka, 1715–1738 (based on estimates by Dolgikh 1960).

Year	Number of Taxpayers	Year	Number of Taxpayers
1715	3912	1730	2527
1718	3349	1731	2634
1724	3149	1732	2055
1728	2983	1737	2535
1729	2535	1738	2816

the collection of *yasak* on Kamchatka “was already regulated to some extent” (Dolgikh 1960:569). He excluded data from the very earliest years, evidently considering them to be incomplete or unreliable. That was fully justified, since the first 15 years of Russian colonial rule in Kamchatka (after Atlasov’s trip of 1697) were a period of continual clashes between the local inhabitants and the Russian Cossacks. During these years there also were frequent changes in administrative officials due to charges of abuse and misappropriation of furs received from the indigenous peoples, etc. (for a review of these incidents see: Sgibnev 1869; Berg 1935; Krasheninnikov 1972: 299–321 and others).

Data on the number of male *yasak* taxpayers in Kamchatka from 1715 through 1738, used by Dolgikh (1960:569–570), are summarized in Table 1. Dolgikh also made use of the list of native villages in Kamchatka with the number of taxpayers for 1738 (Krasheninnikov 1972:329–334).

On the basis of these data, however, it is not possible to determine the number of Kamchadal taxpayers because those figures concern *all* native inhabitants of Kamchatka, not only the Kamchadals. Until 1730, the number of *yasak* taxpayers among Kamchatka indigenous peoples steadily dwindled. Another sharp drop was observed between the years 1731 and 1732; this decrease was subsequently replaced by a slight numerical increase. Dolgikh links this sharp decline and subsequent rise to the Kamchadal rebellion of 1730–1731, primarily to its extremely brutal suppression by Russian forces and to the later governmental measures to improve administration of the territory (Dolgikh 1960:572).

Dolgikh notes that information regarding the quantity of fur taxes collected in Kamchatka was not always precise. When new *yasak* tax registers were compiled from the old records, new taxpayers were always listed but the deceased were not excluded. Nonetheless, Dolgikh considered these data adequate for his reconstruction of precontact numbers of Kamchadals. I will cite his reasoning verbatim:

**Table 2.** Estimate of Kamchadal Numbers by Tribe, 1697 and 1738 (Dolgikh 1960:571).

Tribes	1738 <i>Yasak</i> Taxpayers	1738 Total Population	1697 <i>Yasak</i> Taxpayers	1697 Total Population
Kamchadal proper (Burin Tribe)	1149	4600	1725	6900
Avacha Tribe (Suaachyu-ai)	170	680	255	1020
Bol'sheretsk Tribe (Kykhcharen)	268	1072	400	1600
Western Tribe (Lingurin)	370	1480	555	2200
Khairyuzovo Tribe (Kules)	156	620	235	940
Total Kamchadal	2113	8448	3170	12680

If for 23 years, from 1715 through 1738, the population fell by 28 percent, when during this period epidemics occurred and an uprising took place, then one may assume that during the previous 18 years the maximum drop in population was proportional, i.e., 23 percent (? O.M.). (. . .) Therefore one may conclude that, before the arrival of the Russians, there were approximately fifty percent more Kamchadals than in 1738. Applying this coefficient—1.5—to the then existing Kamchadal tribes, we derive a full estimate for the year 1697 (Dolgikh 1960:571–572).

Dolgikh further divided the list of Kamchadal villages in 1738 (compiled by Krasheninnikov in the 1740s) into linguistic and/or territorial groups, which he called “tribes.” For all these Kamchadal “tribes” he took the same ratio between the number of male taxpayers and the entire population to be 1:4. He then assumed that the numerical decline among all groups between 1697 and 1738 was uniform (e.g., by 150 percent). That final calculation resulted in a total figure for the estimated precontact number of Kamchadals of 12,680 (see Table 2).

One year after Dolgikh's monograph (1960) came out, an article by I. Ogryzko (1961) was published. It was dedicated in particular to the estimation of precontact numbers of Kamchadals. Ogryzko compiled a full list of all Kamchatka native village sites mentioned in Russian records of the eighteenth century as well as in archaeological publications. His paper listed 164 such sites in all. The author identified this figure as the number of villages on the Kamchatka Peninsula which were in existence by the arrival of the Russians, that is, by the year 1697. Such a calculation, in my view, lacks validity inasmuch as there is not a single piece of evidence that all of the sites listed existed at the same time.

Ogryzko relied further upon the same documents as Dolgikh, and employed an analogous method to determine the general population numbers based on the number of *yasak* taxpayers. He supplemented Dolgikh's reconstruction, however, on the basis of a very approximate calculation of the Kamchadal casualties throughout their

clashes with the Russian Cossacks and colonists. A precontact number of Kamchadals was then estimated from the number of *yasak* taxpayers recorded in the year 1715, multiplied by a factor of four (the ratio between adult male taxpayers and the entire population) plus the approximate number of Kamchadals who perished from 1697 through 1715. The total number, according to Ogryzko, was equal to 18,000 people, or nearly 50% more than estimated by Dolgikh (Ogryzko 1961:201–202).

## A Critique of Early Sources and Verification Methods

The sources used by Dolgikh, Ogryzko, and other earlier and later authors to quantify the pre- and early contact indigenous population of the Kamchatka Peninsula may be divided into two groups. The first includes: (a) earliest Russian narratives, primarily the dispatches of Vladimir Atlasov's 1697 trip to Kamchatka (where the number of Kamchadals is not directly indicated); (b) various administrative documents from the first half of the eighteenth century regarding the indigenous people, collected in Krasheninnikov (1755; see especially the subsequent 1949 publication of his book), Sgibnev (1869), Slovtsov (1896), Okun' (1935) and others, which principally refer to the native casualties during the first decades of colonization; (c) general accounts of Kamchatka and its native population left by participants of the Russian Government Expedition of 1733–1743 (Krasheninnikov 1755/1973, 1949, 1972; Steller 1774) and other eighteenth century authors.

The so-called statistical sources belong to the second group. Those include: various “registers”—*yasak* tax registers, where the amount of *yasak* tax and the number of *yasak* taxpayers were indicated; Cossack reports; local parish records; administrative accounts; etc. Most sources in all categories have been published elsewhere. New documents introduced in this paper are listed in the Appendix.

Making a comparison among early adminis-

trative reports and annual fur tax statistics is frequently perplexing and leaves the researcher at an impasse. For example, it is difficult to accept Dolgikh's explanation for the shifts in the number of *yasak* taxpayers in Kamchatka during the period 1715–1738 (see Table 1) solely as the consequences of the Kamchadal uprising of 1731. The number of taxpayers actually fell by more than half during the years preceding the uprising, but then rose slightly just prior to the rebellion. It dropped sharply during the next fiscal year of 1732, and was then very quickly restored during the next six years. One wonders whether all these fluctuations may simply be explained by the tax collectors' practice of entering the names of new taxpayers into the old registers but not striking out the names of the deceased (as Dolgikh assumed).

It is more probable that these conflicting trends actually reflected the reaction of the local Russian officials to changes in the course of government policy toward the Siberian indigenous people after 1731. During the previous period of "conquest," any decrease in the number of native taxpayers as well as in the amount of *yasak* collected may have been written off as a result of their armed resistance, evasion, losses through subjugation, etc. However, in the year 1731 a new Imperial Edict was issued. It prescribed grave modifications to the policy of *yasak* collection and to relations with native taxpayers. As a result, armed methods of subjugation and of brutal *yasak* collection were replaced by more peaceful policies. In answer to the 1731 Edict, reports of an increase in the numbers of *yasak* taxpayers quickly followed from Kamchatka administrators. Whether these reports displayed any actual dynamic in numbers of the native people is extremely problematic.

In assembling native population statistics on the basis of ambiguous sources, one may use the Lotka equation to verify the authenticity of two records if they are separated from each other by a short time period (Taba 1977:30). This equation depicts the change in the number of an exponentially growing population over time as a factor of its average annual natural increase:

$$N(O) = N(t) \ln rt,$$

where  $r$  is the rate of annual natural increase,  $N(O)$  is the population number at the starting point of measurement,  $N(t)$  is the population number at the measurement endpoint, and  $t$  is the number of years in the total time period. Of course, modern demography has several other, more complex models for the estimation of population growth. However, these models depend upon a great number of variables (fertility, maternal age, birth intervals, etc.) for the determination of population size. None of these indices can be

calculated for native peoples in Siberia during the 1700s. The Lotka equation is, hence, highly convenient in that it requires for this case the establishment of only one index—the annual rate of population growth.

The average level of annual natural growth of the Kamchadal population may be established on the basis of nineteenth century Kamchatka church parish records as the average difference in annual natality and mortality indices. Another strategy is to use the Lotka equation for census data on the Kamchadal population from the years 1828, 1848, 1864, and 1897. These censuses are commonly treated as fairly reliable. According to both sources, the average annual growth of the Kamchadal population in the nineteenth century varied between 2.9 and 8.8% (that is, from 2.9 to 8.8 people per 1000), and on average equalled 5%. This was an extremely low index, which resulted from periodic epidemics and bouts of starvation. We may assume that Kamchadal population growth during the turbulent decades of the 1700s was at least not higher than in the 1800s. The almost identical shape of Kamchadal age-sex structures, established by a set of parish rosters from the years 1740–1747, 1864, and 1893, serves as the basis for such an extrapolation.

Several jumps in the number of *yasak* taxpayers between the years 1730 and 1740, as recorded by Russian rosters, cannot pass any statistical verification whatsoever. When tested with the Lotka equation, they produce completely inconceivable annual natural population growth indices: from 42 to 106%. Therefore these data—widely used by Dolgikh and by several other researchers—cannot be considered reliable for any estimation of pre- and early contact population numbers.

Another approach in dealing with the early references to indigenous population numbers is via cross-checking—to the extent possible—of several types of records, that is, *yasak* statistics, parish church registers, and/or data derived from the available narrative texts. In matching these data, one should always give preference to those documents where native population is accounted according to its real social units, that is, by villages, households, and/or families. The latter sources, even when geographically incomplete, are highly preferable to any *yasak* tax records, since *yasak* statistics covered but adult males, and were generally processed, furthermore, according to the needs of tax collection from the population. I shall attempt to meet at least a portion of these objectives in my further examination of the dynamic of the eighteenth century Kamchadal population.

## A Demographic History of the Kamchadals in the Eighteenth Century

To complete my proposed task, I only considered here those archival documents in which native population numbers were assembled by villages. Among the available population inventories with reference to Kamchatka one finds: (1) a list of villages of *yasak* taxpayers, attached to Krasheninnikov's book (Krasheninnikov 1972:329–334), which Boris Dolgikh dated from the year 1738; (2) "Register of Baptized Taxpaying and Non-taxpaying Aliens" from the years 1740–1747; (3) "Yasak Tax Record" from the year 1829, which includes data for the years 1763 and 1822; (4) "Register" from the year 1770; (5) "Tax Receipt Register" from the year 1790 and others (see Appendix 1).

Given that the Russian colonists who settled in Kamchatka since the 1700s had an influence upon the dynamic of the native Kamchadal population, I also considered analogous data concerning the Russian settlers. They may be found in: (1) "Register of Names of Residents in Cossack Fortresses in the Year 1756"; (2) "Register Elaborated in 1758 for Peasants Engaged in Agriculture"; and (3) data from the Seventh All-Russian Population Inventory of 1822. Appendix 1 includes complete information on the location or on earlier publication of all these sources.

I have compiled the data from these sources in Table 3: "List of Eighteenth Century Kamchadal and Russian Villages of Kamchatka and Their Population Numbers." The location of all villages included in the table is provided on the map (Fig. 1).

The general list in Table 3 includes, among others, the native villages along the Amanino, Tigil', and Uka rivers (see Village nos. 1–8, 102–105). Soviet ethnohistorians usually considered their residents to be Koryak. Similarly, the inhabitants of the southernmost villages of the Kamchatka Peninsula around Cape Lopatka (see Village nos. 37–43) are generally called "Kuriles" rather than "Kamchadals" (cf. Dolgikh 1960:572–574). I have included the above-mentioned villages in the list of Kamchadal sites for two reasons.

Firstly, the identification of the villagers of the 1700s as Koryaks or Kuriles—that is, Ainu—was based mainly upon the occasional data and references by Stepan Krasheninnikov. If one assembles all of Krasheninnikov's references as regards the Northern and Southern limits of the Kamchadal area in Kamchatka, one finds that his data are extremely inconsistent. In different papers published in the Russian version of his book, *Explorations of Kamchatka* (1949) but not repro-

duced in the English translation of 1972—"Account of the Nation of the Koryaks," "On the Nation of the Kuriles," and "Account of the Nation of the Kamchadals" (see Krasheninnikov 1949)—Krasheninnikov draws the boundaries between the territories of the Koryaks, Kamchadals, and Kuriles quite differently.

For example, the people living along the Uka River on the northeastern seacoast were sometimes called "Kamchadal," while at other places were referred to as the "Uka aliens . . . whose language is little different from the Kamchadal language" (Krasheninnikov 1949:131, 512, 724). The border between the sedentary Koryaks and the Kamchadals on the northwestern seacoast, around the Tigil' River was also drawn in several varying fashions (cf. Krasheninnikov 1949:357, 698, 726). The border between the Kamchadals and the Kuriles (Ainu) on the southern end of the peninsula was once drawn along the Nemtik and Avacha rivers, while in another paper it was moved down to the southernmost extremity of Kamchatka (Krasheninnikov 1949:357, 691). Other contemporary sources displayed similar confusion in native ethnic or language tags. In the "Register of Baptized Taxpaying and Non-taxpaying Aliens" from the years 1740–1747, the inhabitants of villages along the Amanino, Tigil', and Uka rivers were named "Kamchadals," but the inhabitants of the villages on Cape Lopatka were called "Kuriles." The list goes on and on.

Secondly, in estimating the numbers of Kamchadals in the eighteenth century we must consider the fact that a portion of Kuriles (i.e., South Kamchatka Ainu) were assimilated into the Kamchadals. Even the name "Kuril" itself disappears from nineteenth century Russian documents, along with the majority of Kuril villages mentioned in the early sources. Thus, the inhabitants of the formerly "Kuril" villages of Golygino and Yavino on Cape Lopatka (Table 3, Village nos. 37–38) in nineteenth century documents were routinely named "Kamchadals." This occurred after the epidemic of 1800, when a portion of the surviving Kurils on Cape Lopatka intermixed with the Kamchadals, and another group migrated to the Kuril Islands.

By comparing data from Krasheninnikov's list for the year 1738 and from the "Register of Baptized . . ." for the years 1740–1747, the following conclusions may be drawn. The total number of Kamchadals accounted by the "Register" for the years 1740–1747 is unlikely to be absolutely reliable, inasmuch as for some villages (marked with an asterisk in Table 3), only incomplete population lists remained. In all, the "Register" lists are missing approximately 350 people (see Appendix 1 for more detail). Nevertheless, based on the data for the remaining villages one may say

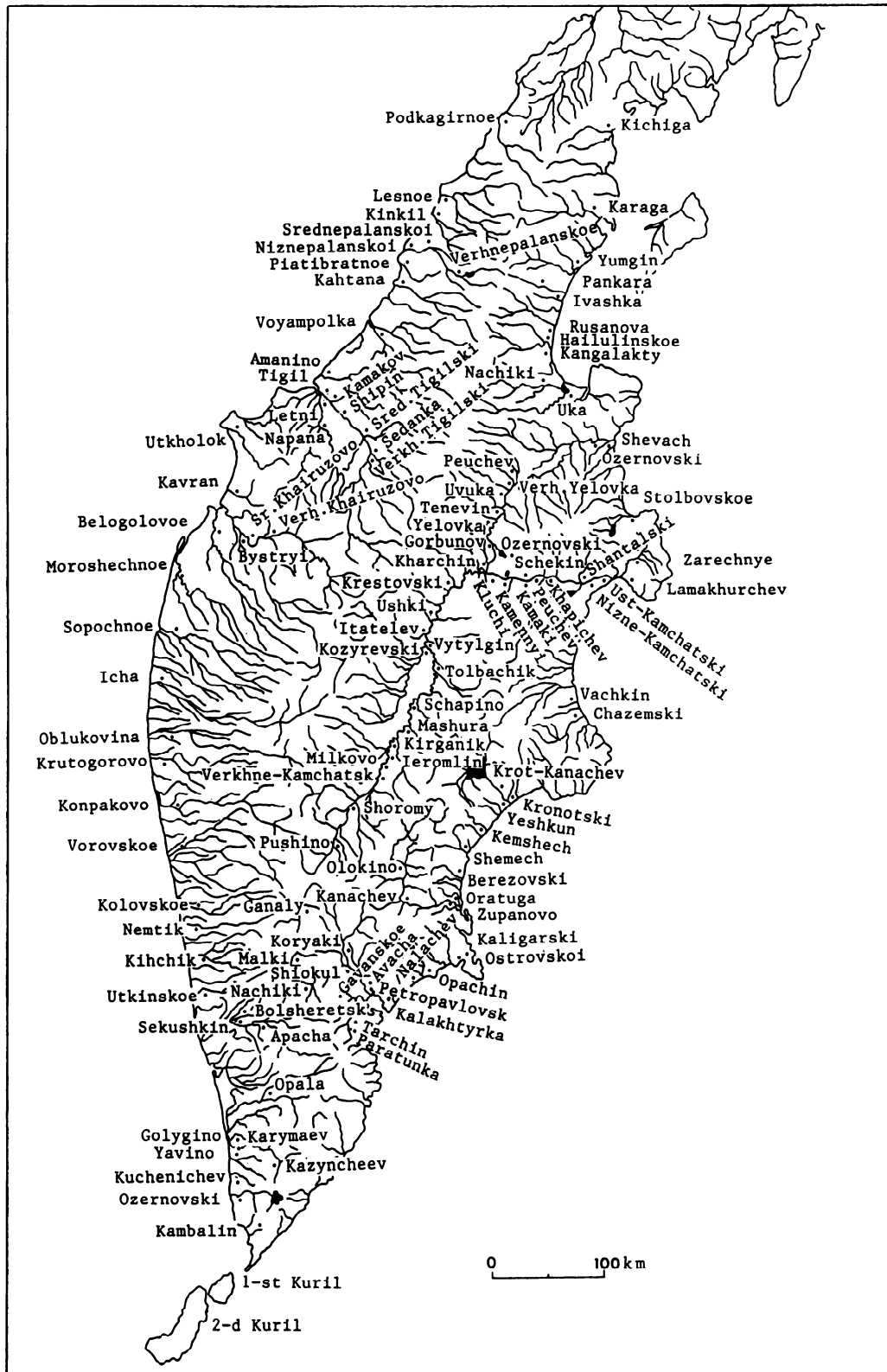


Fig. 1 Kamchatka: The map of 18–19th Century Kamchadal and Russian settlements.

**Table 3.** List of Kamchadal and Russian Villages in Kamchatka (1738–1822) and their Population.

Village	Number of Residents (or of Specific Categories)								
	1738 (a)	1740–1747 (b)	1763 (c)	1763 (d)	1770 (e)	1770 (f)	1790 (g)	1822 (h)	1822 (i)
1 Amanino	19	18	48	—	6	13	12	—	—
2 Sedanka	—	—	—	58	—	—	25	31	51
3 Tigil (Russian)	—	58	150	—	—	—	—	98	87
4 Verkhnetigil'ski	—	38	147	—	—	—	—	—	—
5 Srednetigil'ski	92	14	50	58	35	56	28	—	—
6 Shipin	—	32	104	—	—	—	—	—	—
7 Letni	—	1	10	—	—	—	—	—	—
8 Kamakov	—	16	46	—	—	—	—	—	—
9 Napana	34	24	94	26	8	17	17	22	34
10 Utkholok	27	9	43	—	5	7	14	—	—
11 Kavran	26	21	60	24	6	9	16	15	31
12 Sr. Khairuzovo	50	64	216	112	25	35	33	29	56
13 Verkhnekhairuzovo	—	3	14	—	—	—	—	—	—
14 Bystryi	36	55	223	—	15	26	—	—	—
15 Belogolovoe	44	29	87	46	17	27	24	25	40
16 Moroshechnoe	13	21	82	52	16	31	26	19	40
17 Sopochnoe	50	33	100	28	4	10	22	39	77
18 Icha (Kamchadal)	84	77	254	82	30	50	46	20	38
Icha (Russian)	—	—	—	—	—	—	—	11	10
19 Oblukovina	49	30	110	21	19	30	27	7	10
20 Krutogorovo	41	42	100	21	13	20	19	9	13
21 Konpakovo	53	51	123	49	11	19	25	15	37
22 Vorovskoe	80	19	81	33	6	11	28	12	26
23 Èälovskoe	20	13	37	14	16	23	23	4	9
24 Neïæiè	10	5	10	—	—	—	—	—	—
25 Verkh. Kihchik	30	20	47	13	13	27	19	7	14
26 Nizn. Èihchik	42	12	35	—	—	—	—	—	—
27 Utkinskoe	14	6	13	13	6	7	19	4	14
28 Sekushkin	27	—	—	—	—	—	—	—	—
29 Bolsheretsk (Russian)	—	146	500	—	—	—	—	34	35
30 Apacha	14	3	6	11	16	21	51	9	14
31 Nachiki	9	5	12	3	2	5	19	2	16
32 Karymaev	16	0	2	—	—	—	—	—	—
33 Kuchenichev	25	1	7	—	—	—	—	—	—
34 Malki	—	—	—	21	4	8	33	24	36
35 Ganaly	—	—	—	16	5	9	36	1	16
36 Opala	14	10	22	—	—	—	—	—	—
37 Golygino	—	12	43	58	4	8	11	14	37
38 Yavino	—	1	2	29	—	—	—	4	14
39 Ozernovski	—	31	137	—	22	33	28	—	—
40 Kazyncheev	—	4	70	—	—	—	—	—	—
41 Kombalin	—	4	20	—	9	14	19	—	—
42 1st Kuril	—	34	148	—	32	46	38	—	—
43 2nd Kuril	—	13	40	—	35	55	94	—	—
44 Koryaki	12	6	40	42	8	16	22	16	28
45 Shiokul	—	9	21	—	—	—	—	—	—
46 Gavanskoe	20	3	13	—	7	11	20	—	—
47 Avacha (Kamchadal)	9	—	—	—	—	—	—	—	—
Avacha (Russian)	—	6	16	—	—	—	—	10	13
48 Paratunka (Kamchadal)	25	1	8	—	21	30	28	—	—
(Russian)	—	—	—	—	—	—	—	25	11

(continued on next page)



Table 3. (con't.)

Village	Number of Residents (or of Specific Categories)								
	1738 (a)	1740-1747 (b)	1763 (c)	1763 (d)	1770 (e)	1770 (f)	1790 (g)	1822 (h)	1822 (i)
49 Tarchin	56	9	47	—	—	—	—	—	—
50 Kalakhtyrka	12	—	—	—	—	—	—	—	—
51 Petropavlovsk (Russ.)	—	15	30	—	—	—	—	297	183
52 Nalachev	27	0	7	—	6	7	—	—	—
53 Opachin	45	0	1	—	4	14	51	—	—
54 Ostrovskoi	9	6	26	—	—	—	—	—	—
55 Shipunski	11	—	—	—	—	—	—	—	—
56 Kaligarski	11	0	5	—	11	17	—	—	—
57 Zupanovo	18	1	10*	—	8	16	—	—	—
58 Oratuga	—	20	58	—	—	—	—	—	—
59 Kanachev	—	7	26	—	—	—	—	—	—
60 Olokino	—	1	5	—	—	—	—	—	—
61 Berezovski	14	13	48	—	2	5	—	—	—
62 Shemech	14	0	15	—	9	12	—	—	—
63 Keshmech	20	0	32*	—	6	10	—	—	—
64 Yeshkun	—	8	28	—	—	—	—	—	—
65 Kronotski	9	8	40	—	8	20	—	—	—
66 Krot-Kanachev	44	3	13	—	2	7	—	—	—
67 Chazemski	—	11	33	—	—	—	—	—	—
68 Vachkin	—	13	34	—	—	—	—	—	—
69 Chapichev	94	19	53*	—	—	—	—	—	—
70 Pushino	—	—	—	27	5	8	15	7	10
71 Yeromlin	43	—	—	—	—	—	—	—	—
72 Sharomy	—	—	—	42	5	10	21	10	13
73 Verkhnekamchatsk (Kamchadal)	—	—	—	—	22	31	28	—	—
(Russian)	—	60	115	—	—	—	—	30	35
74 Milkovo (Russian)	—	8	32	—	—	—	—	76	72
75 Kirganik	—	1	4	41	7	15	27	14	31
76 Mashury	155	29	92*	102	16	29	35	25	40
77 Schapino	13	1	4*	22	6	14	36	18	26
78 Tolbachik	12	4	9	24	2	10	23	8	21
79 Kozyrevskoe	14	5	12	5	5	6	26	10	12
80 Vytylgin	6	—	—	—	—	—	—	—	—
81 Itatelev	44	—	—	—	—	—	—	—	—
82 Uskhi	51	—	—	4	1	3	20	8	15
83 Krestovski (Kamchadal)	—	41	87	—	—	—	22	—	—
(Russian)	—	2	8	—	—	—	—	—	—
84 Kharchin	15	30	92	43	—	—	28	9	17
85 Gorbunov	—	22	63	—	9	6	—	—	—
86 Yelovka (Kamchadal)	—	2	12	51	15	26	44	17	28
(Russian)	—	6	15	—	—	—	—	—	—
87 Tenevin	77	57	145	—	—	—	—	—	—
88 Uvuka	—	5	13	—	—	—	—	—	—
89 Peuchev (Yelovka)	—	6	12	—	4	8	—	—	—
90 Kluchi (Kamchadal)	45	27	100	—	—	—	—	—	—
Kluchi (Russian)	—	13	52	—	—	—	—	106	96
91 Kamenny	69	58	144	—	20	33	36	—	—
92 Kamaki	—	4	16	—	22	40	43	15	27
93 Schekin	24	—	—	—	5	9	21	—	—

(continued on next page)

Table 3. (con't.)

Village	Number of Residents (or of Specific Categories)								
	1738 (a)	1740–1747 (b)	(c)	1763 (d)	1770 (e)	(f)	1790 (g)	1822 (h)	(i)
94 Peuchev	102	85	295	—	3	7	—	—	—
95 Khpichev	32	20	65	—	8	16	—	—	—
96 Shantalski	31	—	—	—	2	3	—	—	—
97 Nizne-Kamchatski	—	111	240	—	—	—	—	113	132
98 Ust-Kamchatski (Russian)	92	—	—	—	—	—	—	—	—
99 Lamakhurchev	14	76	151	—	13	24	25	—	—
100 Zarechnye	—	6	25	—	—	—	—	—	—
101 Stolbovskoi	23	36	113	—	11	15	—	—	—
102 Ozernovski	—	26	69	10	7	10	—	6	14
103 Shevach	—	5	14	—	—	—	—	—	—
104 Uka	24	39	123	11	7	16	18	8	13
105 Nachiki	32	27	102	—	8	13	10	—	—

(a) 1738—Data included for male *yasak* taxpayers (age 15–55) only (Krashennikov 1972:329–334).

(b) 1740—Baptized native male *yasak* taxpayers (Register of baptized and non-baptized aliens, 1740–1747).

(c) 1747—Total baptized native population (Register 1740–1747). Russian population for village nos. 29, 47, 51, 73, 83, 88, 90, and 97 is listed according to Register 1756 and Register 1758: b—able-bodied men; c—estimated total population.

(d) 1763—Native male *yasak* taxpayers only (Yasak Tax Register 1829).

(e) 1770—Native male *yasak* taxpayers only (Register 1770).

(f) 1770—Total native male population (Register 1770).

(g) 1790—Total native male population (Register 1790).

(h) 1822—Native male *yasak* taxpayers only (Yasak Tax Register 1829).

(i) 1822—Total native male population (Yasak Tax Register 1829).

\*Denotes incomplete data.

that Krashennikov's numbers were either evidently overstated, or that within a few years between the two enumerations, there occurred a dramatic reduction in the Kamchadal population.

The latter conclusion is corroborated by a report from another participant of the Kamchatka Expedition of 1733–1743, Georg Steller. According to Steller, in the year 1740 on the Bol'shoi River only three Kamchadal villages remained—Apacha, Nachiki, and Kuchenichev (Steller n.d.:275). In all, at that time only 25 residents were accounted in these villages; this figure obviously refers but to male *yasak* taxpayers of age 15–55, which results in a general population of some 100 people. Krashennikov's list for the year 1738 includes, on the other hand, four villages (Village nos. 28 and 30–32 in Table 3) on the very same Bol'shoi River, with 77 (!) *yasak* males, that is, around 300 inhabitants. Steller's number conforms more closely with data from the "Registers" for the years 1740–1747. Both of the latter documents illustrate a sharp decline in the Kamchadal population in areas of active settlement by Russian colonists.

The data from the "Registers" for the years 1740–1747 similarly demonstrate that for the Kamchadals, the ratio between the number of male *yasak* taxpayers and the population as a whole, taken by Dolgikh to be 1:4, is too high. According to data from the "Registers," and also from several nineteenth century *Yasak* Tax Registers, which include numbers for the population as a whole, this ratio varies between 1:3 and 1:3.5. This lower figure agrees closely with available data on the low birthrate among the Kamchadals during the eighteenth and nineteenth centuries.

Let us examine the dynamic of the Kamchadal population on the basis of the more complete list I have compiled of their villages, beginning with Krashennikov's inventory for the year 1738 (Table 3). For ease of comparison of data from different records, the more than one hundred villages mentioned in this list may be grouped into nine territorial subdivisions (Table 4). Thus, as Boris Dolgikh did in his calculations some 35 years ago (Dolgikh 1960:566–568), we may take as our basis Krashennikov's reference to certain linguistic divisions among the Kamchadals.

**Table 4.** Linguistic and Local Groupings of Eighteenth Century Kamchadals.

Linguistic Groups	Group No.	Village Names from the 1738 List	Village Numbers in Table 3
Kules	1	Amanino-Belogolovoe	1–15
Lingurin	2	Moroshechnoe-Nemtik	16–24
Kshaagzhi	3	Kihchik-Opala	25–36
	4	Koryaki-Nalachev	44–52
Burin	5	Opachin-Vachkin	53–68
	6	Pushino-Krestovski	69–83
	7	Kharchin-Peuchev	84–89
	8	Kluchi-Ust’Kamchatski	90–98
	9	Lamakhurchev-Nachiki	99–105

The Kamchadals, as these people are called by the Russians, do not have a shared name for themselves in their language, but are named according to the rivers upon which they live . . . They do not all speak one language, but several, which have the following names. *Kshaagzhi* or *Kykhcheren*, *Chupagzhu* or *Burin*, *Lingurin* and *Kules*, the latter having borrowed words from all the other languages. *Kshaagzhi* is used among the aliens living between the Zhupanova River, which flows into the Eastern Sea [Pacific Ocean] and the Nemtik River, which flows into Penzhina Bay; *Chupagzhu* or *Burin* from the Upper Kamchatka Fortress along the Zhulanova River, *Lingurin* from the Nemtik to the Belogolovaia River, *Kules* from the Belogolovaia (River) to Koryak and Olutora (Krasheninnikov 1949:691).

Where source data permitted, I have made an analogous territorial division for Russian settlers as well, both for Cossacks and peasants. This was done in order to estimate the ratio between the natives and the newcomers, as well as the degree of displacement/replacement of Kamchadals by the Russians during the 1700s and the early 1800s (Table 5).

A comparison of Kamchadal numbers by territorial groups in 1738 and during the later period of 1740–1747 indicates a dramatic shift in the native population. In less than a decade, six out of nine groups experienced a noticeable, sometimes very sharp, decline. Only the residents of the northwest coast of the Kamchatka Peninsula (Group 1), those of the Yelovka River in the interior (Group 7), and those of the villages to the north from the mouth of the Kamchatka River (Group 9) maintained (or even increased) their numbers of 1738. It is interesting that the increase in the Kamchadal population on the northeast shore (Group 9) coincides with the references by Krasheninnikov and by others in regard to the Kamchadal uprising of 1730–1732. These sources reported that, after the rebels were defeated and subdued by the Russian troops, a portion of the Kamchadals fled to the north, to the Yelovka and

the Uka Rivers. One cannot rule out that the data on the number of natives along the Yelovka and the Uka Rivers in 1738 that Krasheninnikov had at his disposal were already obsolete by that time.

The number of Russian colonists living in Kamchatka is known for the years 1756 and 1758: that of adult males (1756)—Cossacks, soldiers, peasants, priests—and of the entire population (1758). One must also take into account that among the wives and consequently among the children of Russian Cossacks, there were many Kamchadals and people of mixed origin (Krasheninnikov 1972:326; Murashko 1985:77).

Unfortunately, the data for Kamchadal population numbers in Kamchatka for the year 1763 are incomplete, as they are cited in the “Register” for the year 1829, that is, 65 years later. It is not surprising that the list of settlements for the year 1829 lacked any Kamchadal villages on the eastern coast of the peninsula and the lower reaches of the Kamchatka River. Both areas were certainly populated by Kamchadals in the year 1763. On the other hand, based on these data we may state with certainty that the native population on the northwest coast of Kamchatka also remained stable by 1763, that is, it had not decreased in comparison with that of the year 1740.

As a result of a smallpox epidemic and famine of 1769–1770, there was a general and very sharp decline in the Kamchadal population in Kamchatka. During a few years between the inventories of 1763 and 1770, the number of Kamchadals on the northwest coast of Kamchatka fell by almost 300% (Table 5). The native population of the Kamchatka River basin, from its upper reaches to the Yelovka River, dropped by 400%. This time the Kamchadals of the Bol’sheretsk and Avacha areas and of the eastern coast (Groups 2, 3, and 4; see Table 5) apparently suffered only slightly less.

It was precisely through the resettlement of Kamchadals from the more stable groups of the eastern coast that the Russian administration

**Table 5.** Population Numbers of Kamchadals and Russians in Kamchatka, 1738–1822 (By Village Groups).

Group Number	Census or Inventory Year												
	1738 (a) K	1740–1747 (b) K	1740–1747 (c) K	1756–1758 (d) R	1756–1758 (e) R	1763 (f) K	1770 (g) K	1770 (h) K	1790 (i) K	1822 (k) K	1822 (l) K	1822 (m) R	1822 (n) R
1	328	324	1142	58	150	324	117	190	169	122	212	98	87
2	400	291	837	—	—	300	99	194	216	125	231	—	—
3	177	57	121	150	400	77	46	77	177	47	110	45	45
4	161	28	136	21	50	42	42	58	70	16	28	332	262
5	195	91*	374*	—	—	?	50	101	51	—	—	—	—
6	432	60*	261*	70	155	267	69	126	253	100	168	106	107
7	92	127	337	6	15	94	22	40	70	26	45	—	—
8	395	194	620	124	292	?	50	108	100	15	27	219	228
9	93	215	597	—	—	21?	46	78	53	14	27	—	—
Total:	2278	1422	4425	429	1047	?	551	972	1151	465	848	800	729

K—Kamchadals; R—Russians

(a) *yasak* taxpayers (males from ages 15–55); (b) baptized males of *yasak* age; (c) entire baptized population; (d) adult males; (e) estimated general population number; (f) *yasak* taxpayers; (g) *yasak* taxpayers; (h) male population as a whole; (i) male population as a whole; (k) *yasak* taxpayers; (l) male population as a whole; (m) males; (n) females. \*incomplete data.

Data for the years 1756, 1758, and 1822 refer to Russians; data for the other years refers to the Kamchadals. Sources for Table 5 are the same as those for Table 3.

hoped to improve the demographic situation in native villages along the Kamchatka River and on the southwestern portion of the peninsula (Register 1770:7–9). The administrative measures were successful for a short period. As a result of this policy, by 1790 the number of Kamchadals had sharply declined in the villages along the eastern coast and around Avacha Bay, and had risen substantially in the areas of Bol'sheretsk (by a factor of 1.6), Upper Kamchatka and Yelovka (by a factor of 1.8). The average annual growth rate for the total Kamchadal male population (*yasak* taxpayers) during the 20-year period from 1770 to 1790 was 8.45%. In the areas of resettlement, such as Bol'sheretsk and Upper Kamchatka, the growth rates were 41.6% and 34.8%, respectively (that is, approximately 42 and 35 people per thousand per year). Apparently, the overall Kamchadal population grew slightly as well, inasmuch as the number of registered males rose from 972 to 1151.

In the year 1799, however, a devastating epidemic of "fever" (apparently typhus) broke out in Kamchatka; this was followed by famine and a new epidemic of measles in the year 1804. According to Sgibnev's report (Sgibnev 1869:36), between the years 1795 and 1804 the total number of *yasak* taxpayers (that is, adult male Kamchadals, Koryaks, and Kuriles) who died in Kamchatka was 986. Unfortunately, data arranging

population numbers by villages between the years 1790 and 1822 are not available. We may only assess the demographic consequences of these decades on the basis of a later inventory from the year 1822. It is evident that, by 1822, only the Kamchadal population of the northwest coast (village groups 1 and 2) more or less recovered from the epidemics and began gradually to increase. Among all the remaining groups, the Kamchadal population decreased significantly (two to three times) compared to its numbers in 1790.

### Russians and Kamchadals: Depopulation or Repopulation?

The indigenous population underwent its greatest reduction by far in areas settled by Russian colonists, and, as a rule, was gradually replaced by settlers. As such, an indirect approach to estimate Kamchadal population numbers by the time of the first Russian-Kamchadal contact in 1697 could be proposed. It could be accomplished through matching the data on population numbers, structure and the resource utilization system which was established in Kamchatka during the nineteenth and the beginning of the twentieth centuries by the coresiding Kamchadals and Russian colonists. A detailed analysis of this transition should be the subject of a separate paper;

here we shall merely illustrate it with a few eyewitness accounts from the eighteenth, nineteenth, and early twentieth centuries.

Beginning with Stepan Krasheninnikov's and Georg Steller's accounts of the 1740 Kamchatka Expedition, all researchers who observed the way of life and forms of economic activities of the Kamchadals and Russians in Kamchatka were quite unanimous in reporting the profound integration of the Russians into the system of traditional Kamchadal subsistence (e.g., Krasheninnikov 1972:326). On the other hand, these same authors consistently emphasized the unusual receptivity of the Kamchadals toward all features of the Russian economic patterns which could be adopted in Kamchatka. As a result, by the end of the nineteenth century, in the territories previously occupied solely by Kamchadals there had developed a unique economic and cultural community of the descendants of indigenous inhabitants and Russian settlers.

In 1917, social and ethnic divisions established by the previous Russian administration were abolished. Of those, the most important was a patrilineally transmitted distinction among the Kamchatka residents into the descendants of the native *yasak*-payers ("Aliens"), referred to in documents as Kamchadals or Koryaks; and the descendants of Russian peasants, Cossacks, and others, who in official documents were counted as "Russians." The communal nature of their economy and their shared identity quickly became evident in their common use of the term "Kamchadals" to refer to themselves. That term was legitimized by the first Soviet census of 1926. It is true that not all Russian inhabitants of Kamchatka referred to themselves as "Kamchadals." The overall number of descendants of the Russian settlers and former "*yasak*" Kamchadals in rural locations as accounted by the 1926 census was 7046. Another 830 "Itelmen," that is indigenous inhabitants who retained their native Kamchadal tongue, lived in a handful of villages (from Sopochnoe to Amanino) on the northwestern portion of the peninsula (Bol'shakov and Rubinsky 1934:36–41). The subsistence economies of all these groups were practically the same.

In comparison with the Kamchadal subsistence as described by Russian sources of the 1700s, one may call this later economic system "neotraditional." According to data from Kamchadal and Russian village statistics for the 1920s, the basis of the economy everywhere was river and coastal salmon fishery. Small gardening was of secondary importance; fur hunting was third, and hunting for sea mammals was fourth. Information concerning plant gathering was not taken into account (Bol'shakov and Rubinsky 1934:40–41). The main areas of villages' economic activity

turned out to be the same salmon river basins as had been used by the Kamchadals in the eighteenth century.

Vladimir Komarov (a biologist and future Russian academic) participated in the Riabushinski Expedition of 1908–1909 that surveyed Kamchatka Peninsula for the purpose of encouraging Russian immigration. Noting the shared economic life of the descendants of the Kamchadals and of Russian long-term residents, he wrote:

Kamchatka, with its 8000 inhabitants, should not be considered a region for colonization. With a significant increase in population, Kamchatka will hardly be able to feed them . . . at least within the limits of contemporary cultural methods. But this means that for the area, almost equal in size to Italy, the maximum resident population number amounts to 25–30,000 people (Komarov 1912:136).

## Summary and Conclusions

There is no doubt that the first decades of contact between the Kamchadals and the Russians were accompanied by substantial losses among the indigenous people. According to various estimates, the number of Kamchadals between 1697 and 1738 fell by a factor ranging from 1.5 to 2.5. According to sources cited in this paper, during the second half of the eighteenth century (specifically between 1747 and 1822), the number of Kamchadals decreased again by a factor of three.

Apparently, the most significant decrease in population during the first 40 years of colonization (1697–1737) was experienced by the Kamchadals of the Bol'sheretsk area on the southwestern coast of the Kamchatka Peninsula. Here, around the principal center of Russian administration, the Bol'sheretsk Fortress, at that time lived the largest number of Russian Cossacks and colonists. Georg Steller calculated that the Kamchadal population of this area had been reduced by a factor of 12 to 15 between the time the Russians arrived after 1700 and the year 1740 (Steller n.d.:283).

Subsequently, after the Kamchadal Uprising of 1730–1732 and as a result of the migration programs of the Russian administration after the year 1770, both the Kamchadal population and the number of native villages declined in the area of Avacha Bay, around the newly emergent administrative center and port of Petropavlovsk, and also along the entire southeastern coast. Finally, after the epidemic of 1799 there followed a sharp drop in the number of Kamchadals in the Kamchatka River Valley, that is, in the central and northeastern portions of the peninsula. At the same time, many Kamchadal villages on the eastern shore disappeared, as well as Kuril

(Ainu) villages on Cape Lopatka, at the southernmost tip.

Thus, by the beginning of the nineteenth century only the Kamchadals of the northwestern coast of Kamchatka, despite an earlier reduction in their numbers, were able to preserve a sustainable resident population. This occurred to no small degree as a result of the very modest presence of Russian colonists in this area. As a result of epidemics, administrative migration policy, and active settlement by Russian colonists, all the other local groups of Kamchadals had by that time lost their autonomous population structure, and their residents had begun to intermingle with the Russians.

It is worth mentioning that if Kamchadal population numbers for various years of the nineteenth century were basically not in doubt, then the statistical information contained in eighteenth century sources was always interpreted by Soviet researchers with a bias toward increase. For example, the overall number of male Kamchadals according to the "Register" of 1790 was sometimes taken to be the number of adult *yasak* taxpayers (cf. Gurvich 1966:102). The number of *yasak* payers was then multiplied by four, which resulted in an assumption that by the end of the eighteenth century there were about 4000 Kamchadals. Such arithmetic procedures could not have passed any statistical verification. In the year 1770 the *yasak* "Kamchadals" numbered only 551, and by increasing their numbers to 1151 in all over 20 years, the population's annual growth rate would have had to have been 36.8% (or 3.7% per year). The latter is completely unlikely. Even greater liberty was taken with the general figures for precontact Kamchadal population estimates.

In the first place, these ambiguous interpretations of statistical data concerning the early stages of Russian colonization of Kamchatka highlight the generally poor quality of population counts in the eighteenth century. Thus it becomes necessary to use the early documents selectively and to verify them, according to certain statistical procedures (to select and verify early documents). Secondly, such a sharp divergence among the various estimates frequently reflects the biases the authors have over the strictly data-based (archival) sources. In most instances, Soviet scholars were under the very strong influence of the first reports by Atlasov (1697) of the populousness of the Kamchadals and of the early Russian data regarding the large amount of fur tribute collected from the native people. Both these sources appear to be deliberately biased. Most researchers, however, used these sources literally in their attempt to construct a curve of Kamchadal depopulation during the eighteenth and the nineteenth centuries (e.g., Gurvich 1966:275).

In reality, on the basis of available statistical data it is hardly possible to reconstruct either the depopulation of Kamchadals during the eighteenth century or their precontact population numbers. Through indirect calculations and/or interpolations from certain periods or regions, we may merely establish that the Kamchadal population decreased unevenly over time and space due to contacts and Russian colonization.

In order to make any estimate of precontact numbers of Kamchadals, it is best to rely upon two figures which determine population size according to the dominant subsistence pattern within the same territory. The first number is that of 8000. It represents the total account of the descendants of *yasak* taxpaying Kamchadals and Russian colonists toward the end of the nineteenth century. This was the largest figure ever recorded through a series of fairly reliable population counts for the Kamchatka peninsula for the entire peacetime nineteenth century. The number 8000 was established by the first Russian Population Census of the year 1897 and it remained practically unchanged during the subsequent 30 years until the next Soviet Census of 1926/1927.

The second figure of 25–30,000 is a hypothetical estimate of a much larger population that could have been supported by Kamchatka's resources based on the subsistence system of the early twentieth century. These two figures, I suppose, constitute the correspondingly low and high limits in our estimates of numbers of Kamchadals on the eve of the annexation of Kamchatka by the Russians, around 1700.

## Appendix

### Commentary on the Sources of Table 3: "List of the Kamchadal and Russian Villages in Kamchatka 1738–1822"

#### "Register of Baptized . . ." 1740–1747

The "Register of Baptized" consists of six separate documents dating from 1740 to 1747. Baptism was carried out in several stages in nearly every village, in different years, and lists were compiled of the "formerly baptized" and "newly baptized." Registers for separate villages were compiled based on the principle of family rosters. In the supplementary lists, family relationships were not always indicated. The lists indicated either the absolute age of males or whether they were or were not of *yasak* taxpaying age (that is, younger than 15 or older than 50–55). Apparently in some villages along the Kamchatka River and on the east coast, all of the baptismal registers were not forwarded, but only supplementary lists, in which were included many women and children without indication of family relationships

and few *yasak* taxpayers. The "Register of Baptized" includes data on a total of 7697 people. The final "Register" indicates that in the year 1747 a total of 8031 persons had been baptized, meaning that in the documents available to us, data on 334 people are missing. A comparative village, name, family, and age analysis of the "Register of Baptized" revealed that of 7697 baptized persons, 1392 people were mentioned twice.

### "Register of Names . . ." 1756

In the "Register . . . of Inhabitants of Cossack Fortified Villages," the family position of each male and the number of male children are indicated. Assuming that the total number of boys is equal to the total number of girls, one may determine the total Russian Cossack population number. To estimate the overall amount of the Russian peasant and urban population in Kamchatka, the number of recorded adult males was multiplied by a factor of 4.

### Seventh All-Russian Population Survey 1822

Data from the Seventh All-Russian Population Survey concerning the Russian population of Kamchatka are published in: Sgibnev, 1869, N. 8, pp. 36–37.

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