

**CENTRE D'ÉTUDES ARCTIQUES  
ET FINNO-SCANDINAVES**

**ÉCOLE PRATIQUE DES HAUTES ÉTUDES**  
VI<sup>e</sup> Section : Sciences Économiques et Sociales  
SORBONNE

**FONDATION FRANÇAISE  
D'ÉTUDES NORDIQUES**  
(ROUEN)

FILE COPY

*"Appl. à l'Économie & l'Emploi"*

# INTER NORD

**Revue de géographie  
des pays du Nord**

S. E. V. P. E. N.  
(Ministère de l'Éducation Nationale)  
13, rue du Four  
PARIS-VI<sup>e</sup>

MARS 1967 - N° 9

FILE

TABLE III

Analysis of value of king crab by method of processing  
1964

Method of Processing	Number of Pounds Processed	Percent of Total	Wholesale Value After Processing (in dollars)	Percent of Total	Wholesale Value per Pound (in cents)
Frozen Whole	488,520	2.1	216,800	1.0	44.4
Frozen Sections	5,894,740	25.6	3,080,490	14.5	52.3
Frozen Meat	11,697,340	50.9	11,867,610	55.8	101.5
Fresh Whole Sections & Meat	312,380	1.4	156,190	0.7	50.0
Canned *	4,601,410	20.0	5,941,250	28.0	129.1
TOTAL	22,994,390	100.0	21,262,340	100.0	92.5

\* Consists of 235,970 standard cases of 48-6 1/2 oz. cans.

Source : Department of Fish and Game, State of Alaska.

### III

## ALASKA'S NATIVE POPULATION AND EMPLOYMENT PROSPECTS

by George W. ROGERS \*

Poverty in Alaska is principally identified with the State's native peoples (Indian, Eskimo and Aleut). A discussion of the subject in Inter-Nord Nr 8 concluded that the prospect of the future economic development in Alaska is no cause for complacency concerning the improvement of the well-being of these Alaskans. In addition to adverse factors such as lack of education and salable skills, racial discrimination, etc., the present geographic distribution of native population is heaviest in areas remote from centers of recent economic development and anticipated future growth. Coupled with labor immobility among Alaska's natives, their rates of natural increase further work against the probability that general economic development will automatically take care of their condition of poverty. Defining economic progress in terms of per capita income growth, the rates of native population outstrip the most optimistic projections of future rates of economic output.

If concern for the present and future condition of Alaska's native peoples is to be translated into realistic and effective public policies and programs, there is need for more basic knowledge and understanding of the native peoples themselves—such elementary matters as their numbers, distribution, and

the dynamics of change—and the relation of the projection of these elements to anticipated economic and employment development. The purpose of this essay is to give only a preliminary treatment of this subject to indicate the need of and nature of such analysis as guides for future planning.

### Alaska's Native Population—the Dynamics of its Growth.

Unlike Alaska's highly mobile non-native population, which has increased and decreased mainly by migration to and from Outside in direct response to changed economic conditions, the total number of Alaska's native people has fluctuated as a result of natural factors—the differences between births and deaths and the underlying forces which determined the rates of each. There has been some migration of native Alaskans within and from Alaska, but until recently this has been insignificant. From official U.S. Bureau of the Census reports from 1880 to 1960, supplemented by estimates based upon earlier incomplete census reports and estimates made recently of the probable native population of Alaska at the time of the first European contacts, the native population for all of Alaska and its five major geographical regions is summarized in Table I (the regions defined on the map are those used in previous issues of Inter-Nord).

(\*) University of Alaska.

TABLE I

## Alaska's native population by major regions, 1740-1964

Year or Date	Total Alaska	Southeast	Southcentral	Southwest	Interior	Northwest
Circa 1740-1780	74,700	11,800	3,700	26,000	5,200	28,000
1839	40,016	8,860	3,907	11,249	4,000	12,000
1880	32,996	7,455	4,318	13,826	2,560	4,837
1890	25,354	5,967	3,566	10,660	2,188	2,973
June 1, 1900	29,542	5,800	4,000	9,600	3,000	7,142
Dec. 31, 1909	25,331	5,866	3,205	7,326	2,403	6,531
Jan. 1, 1920	26,558	5,357	3,000	10,151	2,500	5,550
Oct. 1, 1929	29,983	5,990	3,559	10,735	3,329	6,370
Oct. 1, 1939	32,458	6,502	3,974	10,858	3,462	7,662
April 1, 1950	33,884	7,929	3,788	10,838	3,666	7,663
April 1, 1960	43,081	9,242	5,514	14,314	4,638	9,373
April 1, 1964	48,200	9,800	6,600	16,550	5,050	10,200

Source : 1740-1960 from G.W. Rogers and R.A. Cooley, *Alaska's Population and Economy, Vol. II - Statistical Handbook*, Table P-20. Figures from 1740 and 1900 are estimated from sketchy census figures and other historical data. The remaining figures are from decennial census reports of the U.S. Bureau of the Census and Vital Statistics.

Reviewing past historical trends, the general decline from an estimated 74,700 persons circa 1740-1780 to about one third that number during the first two decades of the present century follows the classic pattern of the disruptive contact between a self-sufficient, subsistence culture of an aboriginal people and a specialized and exploitative colonial culture. The destruction of aboriginal self-sufficiency through specialization of activities and depletion of the former natural resource base, the depredations of unfamiliar diseases and customs, all took their toll. The accelerating increase in native population, starting in the late 1920's and assuming explosive proportions in the 1950's with the total regaining about two-thirds of the 1740-1780 population by 1960, reflects improvement in general economic conditions in some regions of Alaska but more generally the success of programs of public health and welfare in keeping people alive.

Although of historical importance, a review of past population trends beyond the last decade are of limited value in understanding the current and probable future growth of Alaska's native population. The economic and social factors which determined the past rates of birth and death have been drastically altered or supplanted by entirely different factors as Alaska advanced from its earlier forms of colonialism to statehood. A study of recent experience covering a period in which social programs and similar factors might be said to have assumed a status which will probably hold into the foreseeable future is more relevant for our present purposes.

Table II through VII relate annual statistics on native births and deaths to the 1950 and 1960 census benchmarks for the total State and its five major regions. Vital statistics for earlier years are also available

but are lacking in consistency and coverage as compared with those which have been collected after 1950 when all collection and recording functions were centralized in the Alaska Department of Health and Welfare, Bureau of Vital Statistics. A comparison of the 1950 and 1951 births gives an indication of probable past under-reporting. The total natural increase (excess of births over deaths) between 1950 and 1960 as recorded in vital statistics indicated a total increase of 12,465 native people for the decade, but the difference between the official 1950 and 1960 census enumerations (which reflects other factors in addition to natural increase) indicated a total increase of only 9,197 in native population. The 3,268 difference is not uniformly distributed among the five regions. The census reports fewer native people in three of the regions (Southeast 1,585, Interior 972, and Northwest, 1,138) and more in two regions (Southcentral 44 and Southwest 263) than vital statistics.

It might be assumed that the 3,268 "missing" native people represent the total out-migration from Alaska and three regions, and an in-migration into two regions. No study has been made of this, however, but it is generally assumed that native migration from the State as a whole is not nearly as large as this calculation would suggest. The "missing persons" might be accounted for in part by differences in the reporting standards of the State and Federal agencies involved, errors, and the change of the Bureau of the Census' racial classification procedures between the taking of the 1950 and the 1960 census. With the members of a household rather than the enumerator making the racial classification, the 3,268 difference may be in part accounted for by native people living in urban centers who are now "passing" as non-native.

TABLE II

Total Alaska native population and components of annual change, 1950-1963

Calendar Year	Total Population April 1	Crude Birth Rate	Crude Death Rate	Rate of Natural Increase
1950	33,843	4.06*	1.70	2.37*
1951	34,456	4.45	1.81	2.64
1952	35,130	4.53	1.55	2.98
1953	35,904	4.51	1.38	3.02
1954	36,706	4.54	1.15	3.39
1955	37,625	4.60	1.01	3.59
1956	38,623	4.94	1.15	3.79
1957	39,704	4.65	1.11	3.54
1958	40,745	4.79	.97	3.83
1959	41,898	4.81	.99	3.82
1960	43,081	4.78	.94	3.84
1961	44,305	4.76	.98	3.79
1962	45,547	4.76	.94	3.82
1963	46,835	4.59	.94	3.65
1964	48,100	n.a.	n.a.	n.a.

n.a.—data not available.  
\* 1950 figure reflects under-reporting of births in Southwest, Northwest and Interior regions. Alaska Department of Health assumed full responsibility for recording vital statistics in 1951.

Source : Births and deaths from unpublished worksheets of Alaska Department of Health and Welfare, Bureau of Vital Statistics. Total population for 1950 and 1960 from U.S. Bureau of the Census.

TABLE III

Southeast Alaska native population and components of annual change, 1950-1963

Calendar Year	Total Population April 1	Crude Birth Rate	Crude Death Rate	Rate of Natural Increase
1950	7,929	4.33	1.17	3.15
1951	8,042	4.31	1.38	2.90
1952	8,149	4.27	1.15	3.12
1953	8,264	4.30	.98	3.32
1954	8,388	4.41	.83	3.58
1955	8,524	4.70	1.18	3.52
1956	8,660	4.71	.92	3.79
1957	8,809	4.53	1.07	3.46
1958	8,947	4.52	.97	3.54
1959	9,091	4.61	.93	3.67
1960	9,242	4.51	1.06	3.45
1961	9,387	4.67	1.03	3.63
1962	9,542	4.46	.97	3.49
1963	9,693	4.32	1.01	3.31
1964	9,838	n.a.	n.a.	n.a.

n.a.—data not available.

Source : Births and deaths adjusted to residence from unpublished worksheets of Alaska Department of Health and Welfare, Bureau of Vital Statistics. Total population for 1950 and 1960 from U.S. Bureau of the Census.

TABLE IV

## Southcentral Alaska native population and components of annual change, 1950-1963

Calendar Year	Total Population April 1	Crude Birth Rate	Crude Death Rate	Rate of Natural Increase
1950	3,788	4.36	1.21	3.14
1951	3,909	4.20	1.56	2.63
1952	4,016	4.56	1.29	3.26
1953	4,151	4.31	.96	3.35
1954	4,294	4.22	1.07	3.14
1955	4,434	4.87	.68	4.19
1956	4,625	5.60	.95	4.65
1957	4,845	4.91	.87	4.05
1958	5,046	5.47	.93	4.54
1959	5,280	5.08	.74	4.34
1960	5,514	5.59	.67	4.91
1961	5,785	5.36	.92	4.44
1962	6,042	5.45	.81	4.63
1963	6,322	5.79	1.01	4.78
1964	6,624	n.a.	n.a.	n.a.

n.a.—data not available.

Source : Births and deaths adjusted to place of residence from unpublished worksheets of Alaska Department of Health and Welfare, Bureau of Vital Statistics. Total population for 1950 and 1960 from U.S. Bureau of the Census.

TABLE V

## Southwest Alaska native population and components of annual change, 1950-1963

Calendar Year	Total Population April 1	Crude Birth Rate	Crude Death Rate	Rate of Natural Increase
1950	10,838	2.99	1.40	1.59
1951	11,035	3.90	2.20	1.69
1952	11,247	3.93	1.96	1.96
1953	11,493	3.91	1.66	2.24
1954	11,776	4.19	1.37	2.82
1955	12,133	3.71	1.03	2.68
1956	12,483	4.56	1.42	3.14
1957	12,900	4.19	1.21	2.98
1958	13,310	4.16	.94	3.22
1959	13,769	4.68	.96	3.72
1960	14,314	4.62	.94	3.68
1961	14,861	4.72	1.04	3.68
1962	15,408	4.72	.93	3.79
1963	15,992	4.48	.90	3.58
1964	16,565	n.a.	n.a.	n.a.

n.a.—data not available.

Source : Births and deaths adjusted to place of residence from unpublished worksheets of Alaska Department of Health and Welfare, Bureau of Vital Statistics. Total population for 1950 and 1960 from U.S. Bureau of the Census.

TABLE VI

## Interior Alaska native population and components of annual change, 1950-1963

Calendar Year	Total Population April 1	Crude Birth Rate	Crude Death Rate	Rate of Natural Increase
1950	3,666	5.07*	1.96	3.11
1951	3,727	5.85	2.20	3.65
1952	3,799	6.50	1.58	4.92
1953	3,899	5.87	1.19	4.69
1954	3,997	5.93	.95	4.99
1955	4,103	5.78	.88	4.90
1956	4,210	5.91	.86	5.06
1957	4,324	5.43	1.13	4.30
1958	4,423	6.15	.97	5.18
1959	4,544	5.04	1.17	3.87
1960	4,638	4.81	1.08	3.73
1961	4,730	5.05	.82	4.23
1962	4,837	5.15	.95	4.20
1963	4,945	4.83	.81	4.02
1964	5,051	n.a.	n.a.	n.a.

n.a.—data not available.  
\* 1950 births probably under-reported.

Source : Births and deaths adjusted to place of residence from unpublished worksheets of Alaska Department of Health and Welfare, Bureau of Vital Statistics. Total population for 1950 and 1960 from U.S. Bureau of the Census.

TABLE VII

## Northwest Alaska native population and components of annual change, 1950-1963

Calendar Year	Total Population April 1	Crude Birth Rate	Crude Death Rate	Rate of Natural Increase
1950	7,663	4.67	2.75	1.92
1951	7,751	4.84	1.63	3.21
1952	7,900	4.70	1.48	3.22
1953	8,053	4.59	1.73	2.87
1954	8,192	4.70	1.32	3.38
1955	8,359	5.08	1.04	4.04
1956	8,562	4.95	1.27	3.67
1957	8,750	4.95	1.12	3.83
1958	8,951	4.99	1.03	3.97
1959	9,164	4.97	1.17	3.80
1960	9,373	4.79	.90	3.79
1961	9,586	4.40	.92	3.48
1962	9,786	4.49	1.00	3.48
1963	9,991	4.11	.95	3.16
1964	10,181	n.a.	n.a.	n.a.

n.a.—data not available.

Source : Births and deaths adjusted to residence from unpublished worksheets of Alaska Department of Health and Welfare, Bureau of Vital Statistics. Total population for 1950 and 1960 from U.S. Bureau of the Census.

Whatever the explanation for the differences, they were redistributed to each year in the preceding tables as an adjustment to annual natural increases in arriving at an estimated total native population for each year. Crude annual rates of births, deaths, and natural increase were calculated in relation to these annual total population estimates. For the period from 1952 through 1963 (1950 and 1951 excluded because of possible distortions arising from transition in reporting), the crude rate of natural increase for the State has ranged from a low of 3.0 per cent to a high of 3.8 per cent (which was found in six years), for Southeast from 3.1 per cent to 3.8 per cent, for Southcentral 3.1 per cent to 4.9 per cent, Southwest 2.0 per cent to 3.8 per cent, Interior 3.7 per cent to 5.2 per cent, and Northwest 2.9 per cent to 4.0 per cent.

By any comparisons, these rates of natural increase are abnormally high. The United States in mid-1962 had an annual rate of natural increase of 1.6 per cent, which is also the rate for all North America. For Europe as a whole, the rate was 0.9 per cent. In Central America, including the Caribbean, the annual increase has been 2.9 per cent, in South America and Southeast Asia 2.7 per cent, and in Southwest Asia 2.6 per cent. It is only in some of the smaller underdeveloped areas of the world that rates can be found which approach or exceed those reported among Alaska's native population: Mauritania

5.1 per cent, Burundi 4.9 per cent, Costa Rica 4.3 per cent, Greenland 4.0 per cent, Mali 3.9 per cent, Vietnam 3.7 per cent, Dominican Republic 3.6 per cent, and Nicaragua 3.5 per cent (1).

United Nations planners are seriously concerned about these rates of population increase and warn that the battle against poverty in the underdeveloped nations is being defeated by it. The U.N. development goals for the 1960's among other things include holding population rises in the underdeveloped areas to about 2 to 2 1/2 per cent annually. Any war against poverty among Alaska's native people must include a similar recognition of the importance of rates of population increase (refer to discussion in Inter-Nord).

### The Future of Alaska's Native Population and the Incidence of Poverty, 1960-2000.

The trends of crude birth and death rates in the five regions over the past decade can be used as a starting place for making future projections. Looking at the trends of birth and death rates within Southeast, Interior, and Northwest Alaska, all present the general pattern of a rise in birth rates until the late 1950's and evidence of a downward trend as they enter the 1960's, while no real downturn is evidenced in South-

(1) United Nations, Demographic Yearbook, 1963 (August 1964).

TABLE VIII

Projections of Alaska native population, 1960-2000

Year	Total Alaska	Southeast	Southcentral	Southwest	Interior	Northwest
<b>Total Population (Monthly averages, thousands of persons)</b>						
1950	33.9	7.9	3.8	10.8	3.7	7.7
1955	37.6	8.5	4.4	12.1	4.1	8.4
1960	43.1	9.2	5.5	14.1	4.6	9.4
1964	48.1	9.8	6.6	16.6	5.1	10.2
1970	62.2	13.0	8.6	20.6	6.8	13.2
1980	86.1	17.5	12.7	27.7	9.6	18.6
1990	113.3	22.4	17.5	35.5	12.9	25.0
2000	141.5	27.3	22.4	43.3	16.5	32.0
<b>Average Annual Rate of Natural Increase (Per cent) (1)</b>						
1950-1954	3.00	3.20	3.10	2.20	4.50	3.15
1955-1959	3.80	3.60	4.35	3.20	4.65	3.85
1960-1973	3.75	3.50	4.65	3.70	4.10	3.55
1960-1970	3.73	3.50	4.60	3.75	4.00	3.50
1970-1980	3.20	3.00	4.00	3.00	3.50	3.50
1980-1990	2.78	2.50	3.25	2.50	3.00	3.00
1990-2000	2.23	2.00	2.50	2.00	2.50	2.50

(1) Expressed as approximate average interest rate, compounded annually.

TABLE IX  
Estimated total employed labor force, 1960-2000

Year	Total Alaska	Southeast	Southcentral	Southwest	Interior	Northwest
(Monthly averages, thousands of workers)						
<b>Total Employed Labor Force</b>						
1960	100.7	16.7	49.9	7.8	23.5	2.8
1980	191.0	36.0	86.0	14.0	46.0	9.0
2000	259.0	47.0	121.0	17.0	63.0	11.0
<b>Military</b>						
1960	33.3	0.6	17.4	3.5	11.0	0.8
1980	34.0	0.5	17.0	3.0	12.0	1.5
2000	35.0	0.5	17.5	3.0	12.0	2.0
<b>Civilian Government</b>						
1960	22.8	4.6	11.6	1.3	4.6	0.7
1980	27.0	6.0	13.0	1.5	5.5	1.0
2000	31.0	7.0	15.0	2.0	6.0	1.0
<b>Commodity-Producing Industries</b>						
Construction :						
1960	5.9	0.5	2.9	0.1	2.1	0.3
1980	7.0	0.5	2.9	0.1	3.0	0.5
2000	10.0	1.0	3.5	0.5	4.5	0.5
Natural resource extraction and manufacturing (1):						
1960	13.7	6.1	4.4	2.0	0.9	0.3
1980	25.7	11.7	9.6	2.1	1.6	0.7
2000	50.0	14.3	24.4	2.8	7.2	1.3
Distributive industries (2)						
1960	25.0	4.9	13.6	0.9	4.9	0.7
1980 (3)	97.3	17.3	43.5	7.3	23.9	5.3
2000 (3)	133.0	24.2	60.6	8.7	33.3	6.2
(1) Fishing, trapping, agriculture, forestry, mining, lumber and pulp, minerals processing and refining, food processing, construction materials, etc.						
(2) Transportation, communications, utilities, trade, finance, insurance, real estate, services and miscellaneous.						
(3) Tourism related increase included in "Distributive Industries":						
1960 to 1980	14.6	4.0	4.6	1.0	4.0	2.0
1980 to 2000	16.0	4.0	5.0	1.0	4.0	2.0

Sources : Projections based upon partial projections in the following studies, combined with minor adjustments for consistency : Battelle Memorial Institute, "Integrated Transport System to Encourage Economic Development of Northwest North America", May 25, 1961 (projections 1960-1980); Development and Resources Corp., "The Market for Rampart Power", April 23, 1962 (projections of basic major industries 1960-1995); Rogers and Cooley, op. cit. (projection 1960-2000).

west and Southcentral Alaska. (The comparison of 1950-1960 increases from census and vital statistics discussed above also indicates that the first three regions may have experienced some net out-migration and the last two some net in-migration of native population.) In all five regions the pattern of annual crude death rates has been a widely fluctuating one, but a very general downward trend over the total period can be found in all cases. Relating the two sets of factors produces a net natural increase pattern in each region which is a modified version of the pattern set by crude birth rates (refer to Table VIII).

It should be clearly understood that the projections made of native population beyond 1960 in Table VIII are not intended to be predictions of what will happen or even what is likely to happen. They are projections of what the population would be in the State and its five major regions on the basis of the following assumptions. It was assumed that the only source of change would be natural increase (the excess of births over deaths). In other words, net migration of native people from Alaska and within Alaska would be zero. There would be no other means of loss from the native population sector, such as assimilation



with other racial groups. Finally, it was assumed that over time, the rates of annual natural increase in all regions would progressively decline from the current levels to approach by the end of the century the annual rates of 2.0 per cent to 2.5 per cent which the United Nations has suggested as goals for underdeveloped areas to achieve during the decade of the 1960's. The distribution of native population among the five regions and the levels projected for the State, therefore, could be and probably will be significantly modified by other factors than those upon which the projections were based.

Despite these qualifications, the projected population figures are of use in the formulation of public programs and policies. The type of analytical tool such population projections provide can be illustrated by comparing them with projections of future employment levels and patterns for the same regional units.

The projection of future economic and employment development in Table IX was drawn up by borrowing from three recent projections and consolidating them into one projection of levels, general industrial composition and regional distribution of employment. The use of this or any other economic projection is subject to all the qualifications and cautions noted in connection with population projections, but it does present a reasonable picture of what a number of technical researchers anticipate given the present level of knowledge or resource, technology, etc. The details of the future will vary from this, of course, but the general patterns of projected population composition, distribution and trends provide useful guidelines.

A regional comparison of native population projections in Table VIII and total employment projections in Table IX bring out two basically important conclusions. The two regions with the largest present native populations and prospects for greatest future growth (Southwest and Northwest) are also the two regions with the lowest employment growth potential. The total number of new jobs anticipated at all levels in these regions, and which would be open to all persons without regard to previous residence or race, will be exceeded many-fold the additions to native population in these regions. There will be an urgent need of a large but highly intelligent relocation of population from these areas if a natural out-migration does not take place.

The second general conclusion to be drawn is that throughout the State as a whole the occupational or industrial sectors in which the greatest employment expansion will take place are those in which few native people are today to be found. The study used in arriving at the figures in Table IX anticipated only a modest future expansion in fisheries and fish processing beyond present levels. If Alaska is to compete with the efficient Russian and Japanese fishing industries, furthermore, the ratio of manpower to output of the Alaska industry must decline. It cannot be anticipated, therefore, that the industry which has traditionally afforded substantial employment to Alaska's native people will continue to do so. As a further minimum in considering public goals and programs, therefore, there is an urgent need for vocational education and re-training programs which are keyed to the most perceptive study of general economic trends in the State.