APPENDIX C

Faunal Analysis of Matrix Samples

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Faunal remains were recovered from thirteen matrix samples taken from the Namu excavations. Seven of the samples were taken in 1978 from the Rivermouth Trench; six samples were taken from adjacent to the Central Main Trench in 1977. The 1977 samples were selected from a single 50x50 cm. column; the 1978 samples were judgmentally selected from various strata during the course of excavation. The samples are small, and they cannot be considered representative of the stratum matrix from which they were taken. The faunal content of the samples would be expected to vary considerably according to relatively minor variations in micro-deposition patterns. One of the Period 4 samples from the Rivermouth Trench (Tab. C-2) was selected because of the high concentration of salmon within the sampled stratum. The matrix samples, therefore, cannot provide an accurate indication of changes in relative faunal abundance over time, but they can indicate the proportionate screening loss of small faunal remains from the overall excavation matrix. The samples were analyzed for shell content by passing the matrix through a series of nested screens of diminishing mesh size. All of the faunal remains retained in the screens were recovered for later identification. The sample volumes and frequencies of identified fauna are listed in Tables C-1 and C-2. Given the relative quantity of fish and mammal remains in the overall excavated matrix, it is not surprising that fish are the most abundant fauna in the matrix samples. The significant contrast with the overall fish assemblage is the relative abundance of herring *(Clupea harengus pallasi)*. The majority of herring vertebrae evidently passed through the 1/8 inch (3.2 mm.) mesh used to screen the excavation matrix. The small vertebrae of greenlings *(Hexagrammos sp.)* are also more abundant in the matrix samples. The presence of sablefish *(Anoplopoma fimbria)* vertebrae is somewhat surprising since they were extremely rare in the overall fish assemblage, but they are fragile elements, and they may have been destroyed more often during the water-screening of bulk matrix samples. However, even though sablefish may have been more common than indicated by their abundance in the total fish assemblage, they were still a relatively minor fish resource. The representation of salmon *(Oncorhynchus sp.)*, and the presence of single elements of deer *(Odocoileus hemionus)*, harbour seal *(Phoca vitulina)*, and dog *(Canis familiaris)* is consistent with the overall faunal assemblage. The small size of the matrix samples makes it difficult to extrapolate from their faunal content. Table C-3 shows the projected frequency of identified fauna per cubic metre of matrix samples. The results support an increase in salmon and herring in Period 4 (see Chapter 4), but without knowing whether the samples are representative it is impossible to infer temporal trends from these figures. The one clear implication of the matrix sample fauna is that herring was a major subsistence resource throughout the period of the faunal record. Table C-4 compares the abundance of salmon and herring from the total excavated matrix with their expected abundance as projected from the quantities recovered from the matrix samples. The figures show that the projected abundance of salmon in Periods 2 and 3 is actually lower than the quantities recovered. This is clear evidence that the matrix samples are not representative of the faunal content of the overall matrix from these periods. However, despite the inaccuracy of the absolute projections in Table C-4, they do indicate that herring are much more under-represented than salmon in the total faunal assemblage. Herring must be considered a major part of the Namu subsistence economy.

Table C-1. Frequencies of Identified Fauna in Matrix Samples from Adjacent to the Central Main Trench (Sample Volumes in cubic decimetres).

Period 5	**vol. = 15.6 $dm.^3$**	**vol. = 15.6 $dm.^3$**
Oncorhynchus sp.	0	39
Clupea harengus pallasi	48	199
Hexagrammos sp.	0	6
Unidentified Fish	1	0
Period 4	**vol. = 15.6 $dm.^3$**	**vol. = 12.5 $dm.^3$**
Oncorhynchus sp.	22	1
Clupea harengus pallasi	116	75
Hexagrammos sp.	7	5
Unidentified Fish	1	0
Period 3	**vol. = 13.5 $dm.^3$**	**vol. = 15.6 $dm.^3$**
Oncorhynchus sp.	1	2
Clupea harengus pallasi	16	80
Hexagrammos sp.	0	1
Canis familiaris	0	1
Period 2	**vol. = 6.25 $dm.^3$**	
Oncorhynchus sp.	1	
Clupea harengus pallasi	18	
Hexagrammos sp.	1	
Unidentified Fish	1	
Phoca vitulina	1	

Table C-2. Frequencies of Identified Fauna in Matrix Samples from the Rivermouth Trench (Sample Volumes in cubic decimetres).

Period 5	**vol. = 4 dm.^{3}**	**vol. = 4 dm.^{3}**	
Squalus acanthias	1	0	
Oncorhynchus sp.	2	3	
Clupea harengus pallasi	18	12	
Sebastes sp.	1	0	
Hexagrammos sp.	2	0	
Anoplopoma fimbria	1	0	
Unidentified Fish	4	0	
Period 4	**vol. = 4 dm.^{3}**	**vol. = 4 dm.^{3}**	**vol. = 4 dm.^{3}**
Oncorhynchus sp.	246	13	35
Clupea harengus pallasi	457	0	0
Sebastes sp.	3	0	0
Hexagrammos sp.	1	0	0
Anoplopoma fimbria	2	0	0
Unidentified Fish	8	0	0
Period 3	**vol. = 13.5 dm.^{3}**		
Oncorhynchus sp.	1		
Clupea harengus pallasi	121		
Hexagrammos sp.	3		
Anoplopoma fimbria	1		
Unidentified Fish	7		
Odocoileus hemionus	1		

Table C-3. Projected Frequencies of Identified Fauna per Cubic Metre of Matrix Samples.

	Period			
Taxon	**2**	**3**	**4**	**5**
Squalus acanthias	0	0	0	26
Oncorhynchus sp.	160	121	7406	1122
Clupea harengus pallasi	2880	6556	13791	7066
Sebastes sp.	0	0	75	26
Hexagrammos sp.	160	121	324	204
Anoplopoma fimbria	0	30	50	26
Unidentified Fish	160	211	224	128
Canis familiaris	0	30	0	0
Phoca vitulina	160	0	0	0
Odocoileus hemionus	0	30	0	0

Table C-4. Recovered and Projected Frequencies of Salmon *(Oncorhynchus sp.)* and Herring *(Clupea harengus pallasi)* in Excavated Period Matrix.

	Excavated	Salmon		Herring	
Period	**Volume (m^3)**	**Recovered**	**Projected**	**Recovered**	**Projected**
5	38.6	9509	43009	48	272748
4	16.3	58940	120718	366	224793
3	13.7	17272	1658	33	89817
2	13.4	5720	2144	28	38592