

UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

Reevaluation of Cytheracean Ostracode Species Identified
by Painter (1965) from Localities in the Northeastern
Pacific Ocean and Chukchi Sea

By

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This report is preliminary and has not been reviewed
for conformity with Geological Survey editorial standards.

INTRODUCTION

In 1965, Alice Painter completed a Masters thesis entitled "Recent Cytheracean Ostracodes from the Chukchi Sea and the Northeastern Pacific including Puget Sound, Haro Strait and Adjacent Areas, Strait of Juan de Fuca, Silver Bay, and Gulf of Alaska." Painter described 26 species in "Recent" sediments from 61 localities (figs. 1-4). This thesis was never published. The localities Painter examined from the Gulf of Alaska and the Chukchi Sea provided the only information (until my studies) on ostracode species living in the cold temperate to frigid marine climatic zones of the eastern Pacific Basin.

The author is presently studying modern ostracode assemblages from selected areas of the Alaskan continental shelf, including the northeast Gulf of Alaska, the Kodiak shelf, the northern Aleutian shelf, Norton Sound, and the western Beaufort Sea. Plotting the geographic distribution of ostracode species within this large region will allow recognition of major zoogeographic provinces which correlate with the major marine climatic zones. The modern datum being established includes the determination of the geographic ranges of individual ostracode species, as well as defining the major correlative environmental parameters that control these distributions. Preliminary studies by Brouwers (1981a, 1981b; 1982) in the Gulf of Alaska illustrate that ostracode species diversity in boreal and arctic waters of the Alaskan continental shelf is quite high, and that ostracode assemblages will provide a major tool in deciphering the paleoclimatic and paleoenvironmental history of Quaternary and older sediments. Reexamination of the Painter material was done to determine to what extent her distributional data is usable in this scheme.

SPECIMENS EXAMINED

Painter's species are deposited in the University of Kansas Museum of Invertebrate Paleontology, in Lawrence, Kansas. Representative specimens of all but one species (Cythere lutea pugetensis) were isolated by Painter from the faunal assemblage slides and placed in species slides. Specimens of the same species but from different localities were differentiated by placement in individual slides. These representative species slides form the basis of my updated taxonomic determinations.

Table 1 compares the species identifications made by Painter and by the present study. Studies of ostracodes during the last 25 years have necessitated revision of many of the original generic determinations.

Table 1.--Comparison of the original designations versus those of the present study

[This tabulation is based on the material deposited in the University of Kansas Paleontological collections. The material deposited illustrates representative specimens of species and not faunal assemblage slides. The species names that have quotation marks are names proposed by Painter in her thesis; as such, they are invalid nomen nudum. The names are used in this report as a convenience in referring to Painter's specimens.]

<u>Painter, 1965</u>	<u>This Study</u>
<u>Cythere maia</u> (Benson, 1959)	<u>Aurila</u> sp. A of Valentine (1976)
<u>Cytherura "enbyskae"</u>	<u>Cytherura</u> sp. 1 <u>Cytherura</u> sp. 2 <u>Cytherura</u> sp. 3
<u>Hemicytherura</u> sp.	<u>Hemicytherura clathrata</u> (Sars) of Neale and Howe (1975)
<u>Cytheropteron "beringensis"</u>	<u>Cytheropteron</u> sp. 1 <u>Cytheropteron</u> aff. <u>C. nodososalatum</u> of Neale and Howe (1975) <u>Cytheropteron</u> sp. P of Brouwers (1981b)
<u>Cytheropteron "beringensis"</u>	<u>Cytheropteron</u> aff. <u>C.</u> sp. J of Brouwers (1981b, 1982) <u>Cytheropteron</u> sp. 2 <u>Cytheropteron</u> aff. <u>C. latissimum</u> of Neale and Howe (1975) <u>Cytheropteron</u> sp. F of Brouwers (1981b, 1982) <u>Cytheropteron</u> sp. unidentified
<u>Cytheropteron</u> sp.	<u>Cytheropteron</u> sp. 3 <u>Cytheropteron</u> sp. 4 <u>Cytheropteron</u> sp. 5 <u>Cytheropteron</u> sp. 6
<u>Hemicythere? "alaskaensis"</u>	<u>Ambostracon</u> sp. G of Valentine (1976) <u>Ambostracon</u> sp. A of Valentine (1976)
<u>Hemicythere? alaskaensis</u>	<u>Ambostracon</u> sp. E of Valentine (1976) <u>Patagonacythere</u> sp. A of Brouwers (1981b)
<u>Hemicythere? "dixonensis"</u>	<u>"Australicythere"</u> sp. A of Brouwers (1981b, 1982)
<u>Normanicythere concinella</u> <u>"chukchiensis"</u>	<u>Normanicythere leioderma</u> (Norman, 1869) <u>Schizocythere</u> sp. A of Brouwers (1981b) <u>Elofsonella concinna neoconcinna</u> Bassiouni, 1965 <u>Cytherura</u> sp. of Swain (1963) <u>Paracyprideis pseudopunctillata</u> Swain, 1963

Table 1.--Comparison of the original designations versus those of the present study--Continued

<u>Painter, 1965</u>	<u>This Study</u>
<u>Elofsonella concinna</u> <u>"reticulata"</u>	<u>Elofsonella concinna neoconcinna</u> Bassiouni, 1965 <u>Elofsonella concinna concinna</u> (Jones, 1857) <u>Finmarchinella (Barentsovia) angulata</u> (Sars, 1866)
<u>Aurila "alaskaensis"</u>	<u>Aurila</u> sp. of Swain and Gilby (1974) <u>Aurila montereyensis</u> (Skogsberg, 1928)
<u>Aurila? jollaensis</u>	<u>Radimella jollaensis</u> (LeRoy, 1943) "Aurila" sp. E of Valentine (1976) <u>Ambostracon</u> sp. G of Valentine (1976)
<u>Aurila "pugetensis"</u>	<u>Aurila montereyensis</u> (Skogsberg, 1928) <u>Aurila</u> sp. of Swain and Gilby (1974) <u>Hemicythere</u> sp. A of Valentine (1976)
<u>Aurila? sp. aff. A. regalia</u> (Benson, 1959)	"Aurila" sp. E of Valentine (1976) <u>Radimella jollaensis</u> (LeRoy, 1943) <u>Aurila montereyensis</u> (Skogsberg, 1928) <u>Ambostracon</u> sp. G of Valentine (1976) <u>Aurila</u> sp. of Swain and Gilby, (1974)
<u>Sclerochilus contortus?</u> (Norman, 1862)	<u>Sclerochilus contortus</u> (Norman, 1862)
<u>Sclerochilus</u> sp.	<u>Sclerochilus</u> sp. D of Brouwers (1981b)
<u>Pectocythere "rectangulata"</u>	<u>Pectocythere</u> sp. A of Valentine (1976) <u>Pectocythere tomalensis</u> Watling, 1970 <u>Pectocythere aff. P. quadrangulata</u> Hanai, 1957 <u>Pectocythere</u> sp. F of Brouwers (1981b)
<u>Munseyella morrisi</u> (Triebel, 1957)	<u>Munseyella morrisi</u> Triebel, 1957
<u>Munseyella</u> sp.	<u>Munseyella morrisi</u> Triebel, 1957
<u>Schizocythere</u> <u>"chukchiensis"</u>	<u>Schizocythere</u> n. sp. A of Brouwers (1981b)
<u>Anaxeocythere "edentata"</u>	<u>Acuminocythere crescentensis</u> Swain and Gilby, 1974 <u>Cythere</u> sp. A of Brouwers (1981b, 1982) <u>Pectocythere</u> sp. <u>Aurila montereyensis</u> (Skogsberg, 1928)

Table 1.--Comparison of the original designations versus those of the present study--Continued

<u>Painter, 1965</u>	<u>This Study</u>
<u>Palmanella</u> sp.	<u>Palmanella limicola</u> (Norman, 1865)
<u>Ambocythere</u> sp.	<u>"Ambocythere"</u> sp.
	<u>Bradleya</u> cf. <u>B. dictyon</u> (Brady, 1880)
<u>"Cythereis" emarginata</u> <u>"diomedeensis"</u>	<u>Baffinicythere emarginata</u> (Sars, 1866)
<u>Echinocythereis dasyderma</u> (Brady, 1880)	<u>Echinocythereis</u> cf. <u>E. acanthoderma</u> (Brady, 1880)
<u>Echinocythereis</u> <u>"polyspinosa"</u>	<u>Echinocythereis</u> sp. 1 <u>Echinocythereis</u> cf. <u>E. acanthoderma</u> (Brady, 1880) <u>Echinocythereis</u> cf. <u>E. dasyderma</u> (Brady, 1880)

Table 2.--List of the species occurring in the different
geographic regions sampled

Puget Sound

Acuminocythere crescentensis Swain and Gilby, 1974
Ambostracon sp. A of Valentine (1976)
Ambostracon sp. E of Valentine (1976)
 ?Ambostracon sp. G. of Valentine (1976)
Aurila montereyensis (Skogsberg, 1928)
Aurila sp. of Swain and Gilby (1974)
 "Aurila" sp. E of Valentine (1976)
Hemicythere sp. A of Valentine (1976)
Munseyella morrissi Triebel, 1957
Pectocythere tomalensis Watling, 1970
Pectocythere aff. P. quadrangulata Hanai, 1957
Pectocythere sp. A of Valentine (1976)

Strait of Juan de Fuca, Haro Strait

Acuminocythere crescentensis Swain and Gilby, 1974
Ambostracon sp. G of Valentine (1976)
Aurila montereyensis (Skogsberg, 1928)
Aurila sp. of Swain and Gilby (1974)
 "Aurila" sp. E of Valentine (1976)
Cythere sp. A of Brouwers (1981b, 1982)

Strait of Juan de Fuca, Haro Strait

Cytheropteron sp. unidentifiable
Pectocythere sp. A of Valentine (1976)

Northeastern Pacific, Gulf of Alaska

"Ambocythere" sp.
Ambostracon sp. A of Valentine (1976)
Ambostracon sp. E. of Valentine (1976)
Aurila sp. of Valentine (1976)
 "Australicythere" sp. A of Brouwers (1981b, 1982)
Cytheropteron sp. 2
Cytheropteron sp. 3
Cytheropteron sp. 4
Cytheropteron sp. 5
Cytheropteron sp. 6
Echinocythereis cf. E. acanthoderma (Brady, 1880)
Echinocythereis cf. E. daysderma (Brady, 1880)
Echinocythereis sp. 1
Elofsonella concinna concinna (Jones, 1857)
Munseyella morrissi Triebel, 1957
Patagonacythere sp. A of Brouwers (1981b)

Table 2.--List of the species occurring in the different
geographic regions sampled--Continued

Northeastern Pacific, Gulf of Alaska

Pectocythere aff. P. quadrangulata Hanai, 1957
Pectocythere sp. A of Valentine (1976)
Sclerochilus sp. D of Brouwers (1981b)

Chukchi Sea

Baffinicythere emarginata (Sars, 1866)
Cytheropteron aff. C. nodosoalatum of Neale and Howe (1975)
Cytheropteron aff. Cytheropteron sp. J of Brouwers (1981b, 1982)
Cytheropteron sp. F of Brouwers (1981b, 1982)
Cytheropteron sp. P of Brouwers (1981b)
Cytheropteron sp. 1
Cytheropteron sp. 2
Cytherura sp.
Cytherura sp. 1
Cytherura sp. 2
Cytherura sp. 3
Elofsonella concinna concinna (Jones, 1957)
Elofsonella concinna neoconcinna Bassiouni, 1965
Finmarchinella (Barentsovia) angulata (Sars, 1866)
Hemicytherura clathrata (Sars) of Neale and Howe (1975)

Chukchi Sea

Normanicythere leioderma (Norman, 1869)
Palmanella limicola (Norman, 1865)
Paracyprideis pseudopunctillata Swain, 1963
Pectocythere sp. F of Brouwers (1981b)
Schizocythere sp. A of Brouwers (1981b)
Sclerochilus contortus (Norman, 1862)

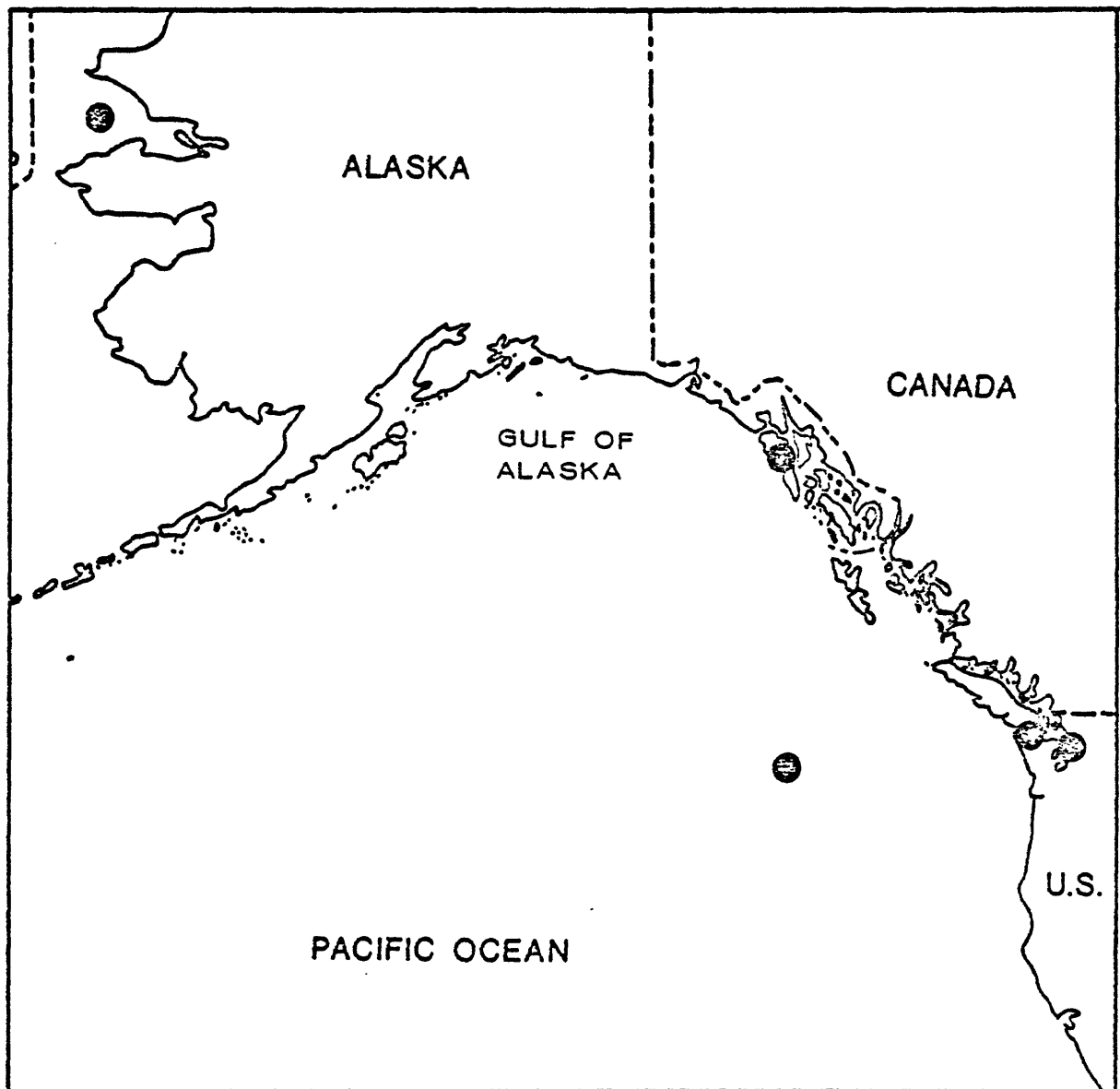


Figure 1.--Map illustrating the general geographic locations of the sample sets examined.

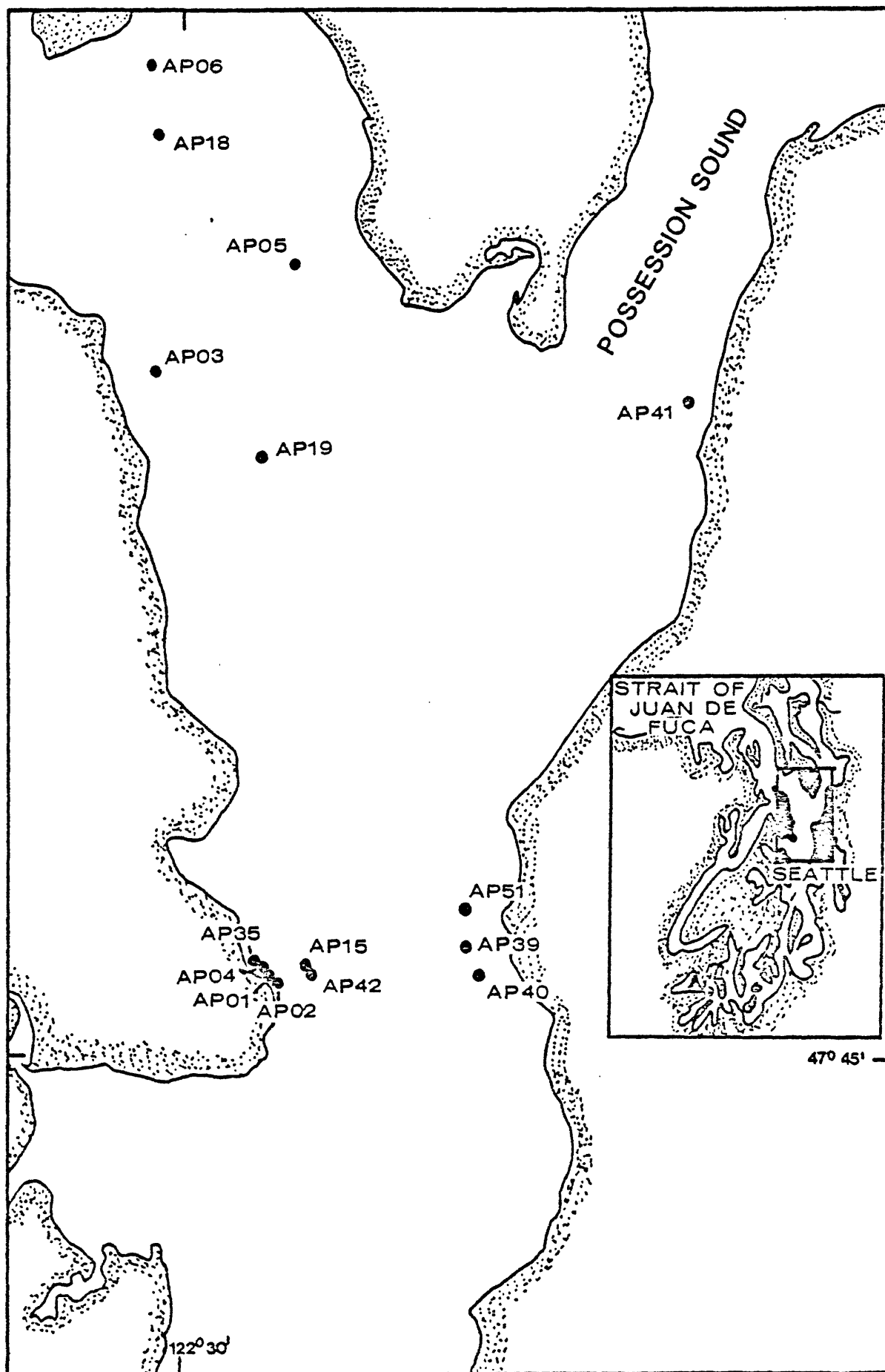


Figure 2.--Map illustrating the location of samples taken in Puget Sound.

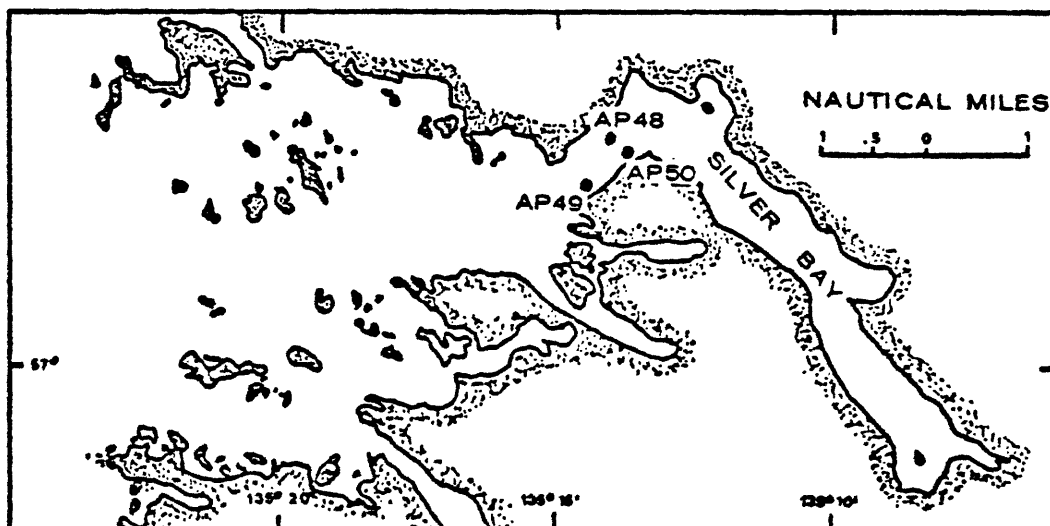
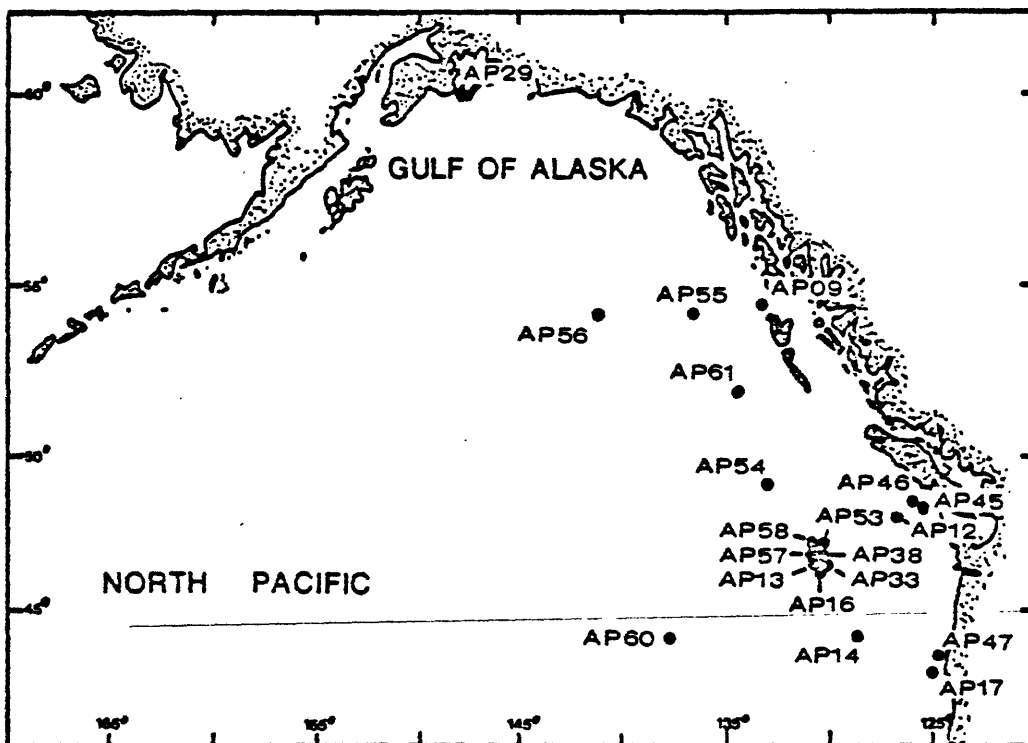


Figure 3.--Map illustrating the location of samples taken in the Strait of Juan de Fuca, the northeast Pacific and northwestern Gulf of Alaska, and the southeastern Gulf of Alaska (Alexander Archipelago).

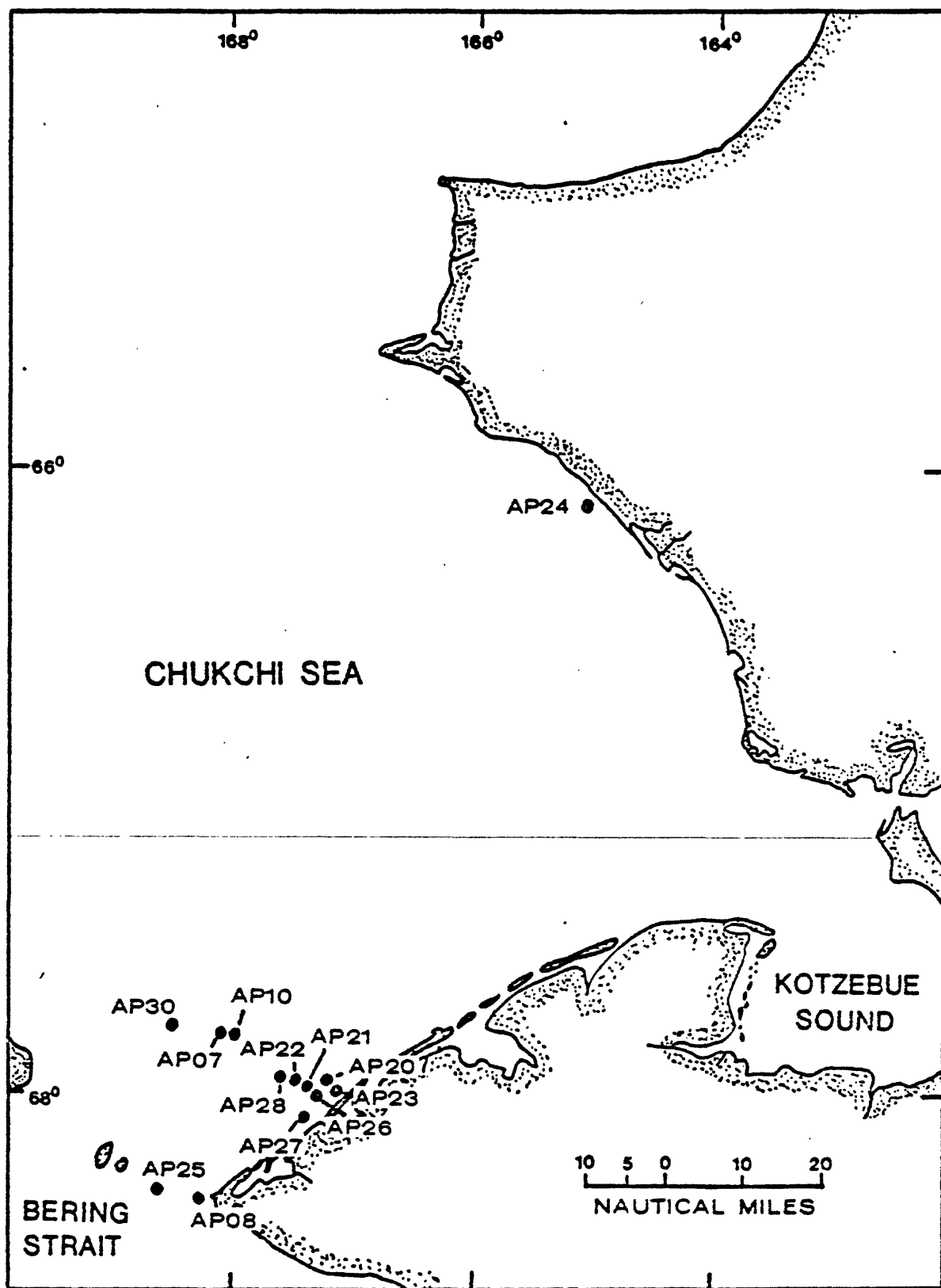


Figure 4.--Map illustrating the location of samples taken in the Chukchi Sea, near the Bering Strait.

Table 3.--List of locality numbers, and the latitude, longitude
and water depth of each locality

<u>Locality Number</u>	<u>Latitude (°N.)</u>	<u>Longitude (°W.)</u>	<u>Water Depth (meters)</u>
AP-01	47 ° 45.9'	122° 28.2'	9.7
AP-02	47° 45.9'	122° 28.0'	3.1
AP-03	47° 54.10'	122° 30.65'	43.9
AP-04	47° 45.9'	122° 28.2'	15.2
AP-05	47° 55.43'	122° 27.78'	109.7
AP-06	47° 58.00'	122° 30.49'	29.3
AP-07	66° 12'	168° 13'	52.4
AP-08	65° 41'	168° 15'	38.1
AP-09	54° 33.3'	133° 17.0'	166.4
AP-10	66° 12'	168° 01'	29.0
AP-11	48° 14.1'	123° 24.8'	126.2
AP-12	48° 13.2'	126° 51.5'	2560.6
AP-13	46° 37.8'	131° 02.3'	2405.1
AP-14	44° 01.7'	128° 29.3'	2555.1
AP-15	47° 46.2'	122° 27.4'	92.0
AP-16	46° 46.2'	130° 44.2'	unknown
AP-17	42° 54.0'	124° 36.4'	73.2
AP-18	47° 57.16'	122° 30.51'	80.5
AP-19	47° 52.81'	122° 28.67'	206.7
AP-20	66° 06'	167° 43'	15.2
AP-21	66° 11'	167° 35'	19.8
AP-22	66° 07'	167° 50'	13.7
AP-23	66° 02'	167° 42'	21.3
AP-24	67° 53'	165° 18'	10.1
AP-25	65° 42'	168° 42'	45.1
AP-26	66° 11'	167° 45'	18.3
AP-27	65° 56'	167° 39'	16.8
AP-28	66° 01'	167° 59'	29.9
AP-29	59° 53.7'	147° 56.8'	155.5
AP-30	66° 15'	168° 53'	54.9
AP-31	48° 31.98'	122° 49.6'	53.2
AP-32	48° 35.05'	123° 17.5'	95.1
AP-33	46° 46.2'	130° 49.2'	100.5
AP-34	48° 13.4'	122° 53.3'	45.7
AP-35	47° 46.0'	122° 28.2'	20.1
AP-36	47° 46.0'	122° 28.2'	20.1
AP-37	48° 28.86'	122° 50.58'	16.5
AP-38	46° 47.7'	130° 48.5'	115.2
AP-39	47° 46.4'	122° 24.3'	182.9
AP-40	47° 46.5'	122° 24.3'	164.1
AP-41	47° 53.51'	122° 20.38'	86.0
AP-42	47° 46.0'	122° 27.5'	80.1
AP-43	48° 18.2'	124° 03.5'	188.4
AP-44	48° 15.6'	123° 07.9'	117.1
AP-45	48° 27.7'	125° 03.2'	131.7
AP-46	48° 44.4'	126° 08.6'	109.7
AP-47	43° 13.1'	124° 36.0'	104.3

Table 3.--List of locality numbers, and the latitude, longitude
and water depth of each locality--Continued

<u>Locality Number</u>	<u>Latitude (°N.)</u>	<u>Longitude (°W.)</u>	<u>Water Depth (meters)</u>
AP-48	unknown	unknown	62.2
AP-49	unknown	unknown	40.2
AP-50	unknown	unknown	82.3
AP-51	47° 46.8'	122° 24.4'	167.9
AP-52	unknown	unknown	unknown
AP-53	47° 01.8'	130° 35.9'	2652.1
AP-54	49° 04.3'	133° 00.0'	3394.6
AP-55	54° 12.0'	137° 06.0'	2968.5
AP-56	54° 08.3'	141° 14.8'	3658
AP-57	47° 00.0'	130° 48.7'	2889.8
AP-58	47° 14.0	130° 47.8'	2835
AP-59	unknown	unknown	unknown
AP-60	44° 00.5'	137° 45.2'	4142.7
AP-61	52° 02.0'	134° 30.3'	3072.7

REMARKS

The remainder of this report documents the contents of Painter's (1965) faunal slides. The number(s) preceeding each species name is that assigned by the Museum of Invertebrate Paleontology, Department of Geology, University of Kansas. Following the number is the original species name assignment. The AP-number is the locality number assigned (see table 3). Any information concerning the general geographic location, latitude, longitude, and water depth labeled on the slide was included.

Following all of this information, I have indicated my species assignment, either to a described species or illustrated specimen, or to a species I have identified but not formally named (Brouwers, 1981b, 1982). I have also indicated whether the specimens were adults or juveniles, and whether any specimens contained soft parts. The presence of soft parts probably means that the individual was alive when collected; the absence of soft parts does not necessarily mean that a valve is fossil. Note that a carapace is counted as two valves.

University of Kansas, Museum of Invertebrate Paleontology,
Department of Geology Species Slides

- 1000956 Cythere maia (Benson, 1959)
AP-06 Puget Sound
Latitude 47° 58.00' N., Longitude 122° 30.49' W.
Depth 16.0 fm (29.3 meters)
= Aurila sp. of Swain and Gilby, 1974 1 Adult
(also = Aurila sp. A of Brouwers (1981b, 1982))
- 100957 Cytherura "enbyskae"
AP-07 Chukchi Sea
Lat. 66° 12' N., Long. 168° 13' W.
Depth 172 ft. (52.4 m.)
= Cytherura sp. 1 1 Adult
- 1000958-1000960 Cytherura "enbyskae"
AP-07 Chukchi Sea
Lat. 66° 12' N., Long. 168° 13' W.
Depth 172 ft. (52.4 m.)
= Cytherura sp. 1 3 Adults
Cytherura sp. 2 1 Adult
- 1000962 Cytherura "enbyskae"
AP-08 Chukchi Sea
Lat. 65° 41' N., Long. 168° 15' W.
Depth 125 ft. (38.1 m.)
= Cytherura sp. 3 (aff. C. granulosa Brady and 2 Adults
and Crosskey, 1871)
- 1000963 Hemicytherura sp.
AP-07 Chukchi Sea
Lat. 66° 12' N., Long. 168° 13' W.
Depth 172 ft. (52.4 m.)
= Hemicytherura clathrata (Sars) 1 Adult
of Neale and Howe (1975)
- 1000964-1000965 Hemicytherura sp.
AP-07 Chukchi Sea
Lat. 66° 12' N., Long. 168° 13' N.
Depth 172 ft. (52.4 m.)
= Hemicytherura clathrata (Sars) 3 Adults
of Neale and Howe (1975)
- 1000966 Cytheropteron "beringensis"
AP-07 Chukchi Sea
Lat. 66° 12' N., Long. 168° 13' W.
Depth 172 ft. (52.4 m.)
= Cytheropteron sp. 1 1 Adult

- 100967-100988 Cytheropteron "beringensis"
 AP-07 Chukchi Sea
 Lat. 66° 12' N., Long. 168° 13' W.
 Depth 172 ft. (52.4 m.)
 = Cytheropteron sp. 1 5 Adults 4 Juveniles
Cytheropteron aff. C. nodosoalatum of Neale
 and Howe, 1975 1 Adult
Cytheropteron sp. P of Brouwers (1981) 1 Adult
Cytheropteron aff. C. sp. J of Brouwers (1981) 1 Adult
Cytheropteron sp. 2 3 Adults 8 Juveniles
- 1000989-1000990 Cytheropteron "beringensis"
 AP 09 Northeastern Pacific
 Lat. 54° 33.3' N., Long 133° 17.0' W.
 Depth 91 fm. (166.4 m)
 = Cytheropteron aff. C. latissimum 1 Juvenile
 of Neale and Howe (1975)
- 100091-1001006 Cytheropteron "beringensis"
 AP-08 Chukchi Sea
 Lat. 65° 41' N., Long. 168° 15' W.
 Depth 125 ft. (38.1 m.)
 = Cytheropteron sp. 1 9 Adults 4 Juveniles
Cytheropteron sp. F of Brouwers (1981) 1 Adult 1 Juveniles
- 1001007 Cytheropteron "beringensis"
 AP-10 Chukchi Sea
 Lat. 66° 12' N., Long. 168° 01' W.
 Depth 95 ft. (29.0 m.)
 = Cytheropteron sp. 2 1 Adult
- 1001008 Cytheropteron "beringensis"
 AP-11 Strait of Juan de Fuca
 Lat. 48° 14.1' N., Long. 123° 24.8' W.
 Depth 69.0 fm. (126.2 m.)
 = Cytheropteron sp. unidentified 1 Juvenile
 (similar to Cytheropteron aff. C. latissimum of Neale and Howe, 1975)
- 1001009 Cytheropteron sp.
 AP-12 Northeastern Pacific
 Lat. 48° 13.2' N., Long. 126° 51.5' W.
 Depth 1400 fm. (2560.6 m.)
 = Cytheropteron sp. 3 1 Adult
- 1001010 Cytheropteron sp.
 AP-12 Northeastern Pacific
 Lat. 48° 13.2' N., Long. 126° 51.5' W.
 Depth 1400 fm (2560.6 m.)
 = Cytheropteron sp. 4 1 Adult

- 1001011 Cytheropteron sp.
 AP-09 Northeastern Pacific
 Lat. 54° 33.3' N., Long. 133° 17.0' W.
 Depth 91 fm (166.4 m.)
 = Cytheropteron sp. 4 2 Adults
- 1001012 Cytheropteron sp.
 AP-13 Northeastern Pacific
 Lat. 46° 37.8' N., Long. 131° 02.3' W.
 Depth 1315 fm. (2405.1 m.)
 = Cytheropteron sp. 5 1 Adult
- 1001013 Cytheropteron sp.
 AP-14 Northeastern Pacific
 Lat. 44° 01.7' N., Long. 128° 29.3' W.
 Depth 1397 fm. (2555.1 m.)
 = Cytheropteron sp. 6 1 Adult
- 1001014 Hemicythere? "alaskaensis"
 AP-01 Puget Sound
 Lat. 47° 45.9' N., Long. 122° 28.2' W.
 Depth 5.3 fm. (9.7 m.)
 = Ambostracon sp. G of Valentine (1976) 1 Adult
- 1001015-1001018 Hemicythere? "alaskaensis"
 AP-01 Puget Sound
 Lat. 47° 45.9' N., Long. 122° 28.2' W.
 Depth 5.3 m. (9.7 m.)
 = Ambostracon sp. E of Valentine (1976) 1 Adult
Ambostracon sp. A of Valentine (1976) 1 Adult
 (also = Ambostracon glaucum of Swain and Gilby (1974)
 and Ambostracon sp. A of Brouwers (1981b))
Ambostracon sp. G 2 Adults
- 1001019-1001020 Hemicythere? "alaskaensis"
 AP-15 Puget Sound
 Lat. 47° 46.2' N., Long. 122° 27.4' W.
 Depth 50.3 fm (92.0 m.)
 = Ambostracon sp. A of Valentine (1976) 3 Juveniles
 (also = Ambostracon glaucum of Swain and Gilby (1974)
 and Ambostracon sp. A of Brouwers (1981b))
- 1001021 Hemicythere? "alaskaensis"
 AP-16 Northeastern Pacific
 Lat. 46° 46.2' N., Long. 130° 44.2' W.
 Depth unknown
 = Ambostracon sp. E of Valentine (1976) 2 Adults

- 1001022-1001024 Hemicythere? "alaskaensis"
 AP-09 Northeastern Pacific
 Lat. 54° 33.3' N., Long 133° 17.0' W.
 Depth 91 fm. (166.4 m.)
 = Ambostracon sp. A of Valentine (1976) 4 Juveniles
 (also = Ambostracon glaucum of Swain and Gilby (1974)
 and Ambostracon sp. A of Brouwers (1981b))
 * specimens with soft parts present
Patagonocythere sp. A of Brouwers (1981b)
- 1001025 Hemicythere? "alaskaensis"
 AP-17 Northeastern Pacific
 Lat. 42° 54.0' N., Long. 124° 36.4' W.
 Depth 40 fm. (73.2 m.)
 = Ambostracon sp. A of Valentine (1976) 1 Juvenile
 (also = Ambostracon glaucum of Swain and Gilby (1974)
 and Ambostracon sp. A of Brouwers, 1981b))
- 1001026-1001027 Hemicythere? "alaskaensis"
 AP-18 Puget Sound
 Lat. 47° 57.16' N., Long. 122° 30.51' W.
 Depth 44.0 fm. (80.5 m.)
 = Ambostracon sp. G. of Valentine (1976) 2 Adults
 1 specimen broken, retaining only an unrecognizable fragment
- 1001028-1001030 Hemicythere? "alaskaensis"
 AP-19 Puget Sound
 Lat. 47° 52.81' N., Long. 122° 28.67' W.
 Depth 113 fm. (206.7 m.)
 = Ambostracon sp. A of Valentine (1976) 3 Juveniles
 (also = Ambostracon glaucum of Swain and Gilby (1974)
 and Ambostracon sp. A of Brouwers (1981b))
- 1001031 Hemicythere? "dixonensis"
 AP-09 Northeastern Pacific
 Lat. 54° 33.3' N., Long. 133° 17.0' W.
 Depth 91 fm. (166.5 m.)
 = Australicythere sp. A of Brouwers (1981b, 1982) 1 Adult
- 1001032-1001037 Hemicythere? "dixonensis"
 AP-09 Northeastern Pacific
 Lat. 54° 33.3' N., Long. 133° 17.0' W.
 Depth 91 fm. (166.5 m.)
 = "Australicythere" sp. A of Brouwers (1981b, 1982) 3 Adults 4 Juveniles
- 1001038 Normanicythere concinella "chukchiensis"
 AP-20 Chukchi Sea
 Lat. 66° 06' N., Long. 167° 43' W.
 Depth 50 ft. (15.2 m.)
 = Normanicythere leioderma (Norman, 1869) 1 Adult

- 1001039-1001043 Normanicythere concinella "chukchiensis"
 AP-20 Chukchi Sea
 Lat. 66° 06' N., Long. 167° 43' N.
 Depth 50 ft. (15.2 m)
 = Normanicythere leioderma (Norman, 1869) 5 Adults
 *several specimens contained soft parts
- 1001044 Normanicythere concinella "chukchiensis"
 AP-21 Chukchi Sea
 Lat. 66° 11' N., Long. 167° 35' W.
 Depth 65 ft. (19.8 m.)
 = Normanicythere leioderma (Norman, 1869) 1 Adult
- 1001045-1001047 Normanicythere concinella "chukchiensis"
 AP-22 Chukchi Sea
 Lat. 66° 07' N., Long. 167° 50' W.
 Depth 45 ft. (13.7 m.)
 = Normanicythere leioderma (Norman, 1869) 3 Adults
 *specimens with soft parts present
- 1001048 Normanicythere concinella "chukchiensis"
 AP-23 Chukchi Sea
 Lat. 66° 02' N., Long. 167° 42' W.
 Depth 70 ft. (21.3 m.)
 = Normanicythere leioderma (Norman, 1869) 1 Adult
- 1001049-1001074 Normanicythere concinella "chukchiensis"
 AP-07 Chukchi Sea
 Lat. 66° 12' N., Long. 168° 13' W.
 Depth 172 ft. (52.4 m.)
 = Normanicythere leioderma (Norman, 1869) 8 Adults 19 Juveniles
- 1001075-1001094 Normanicythere concinella "chukchiensis"
 AP-08 Chukchi Sea
 Lat. 65° 41' N., Long. 168° 15' W.
 Depth 125 Ft. (38.4 m.)
 = Normanicythere leioderma (Norman, 1869) 2 Adults 13 Juveniles
- 1001095 Normanicythere concinella "chukchiensis"
 AP-24 Chukchi Sea
 Lat. 67° 53' N., Long. 165° 18' W.
 Depth 33 ft. (10.1 m.)
 = Normanicythere leioderma (Norman, 1869) 1 Adult
 *specimen contains soft parts
- 1001096-1001097 Normanicythere concinella "chukchiensis"
 AP-25 Chukchi Sea
 Lat. 65° 42' N., Long. 168° 42' W.
 Depth 148 ft. (45.1 m.)
 = Normanicythere leioderma (Norman, 1869) 2 Juveniles

- 1001098-100114 Normanicythere concinella "chukchiensis"
 AP-07 Chukchi Sea
 Lat. 66° 12' N., Long. 168° 13' W.
 Depth 172 ft. (52.4 m.)
 = Normanicythere leioderma (Norman, 1869) 16 Juveniles
- 100115 Normanicythere concinella Swain, 1963
 AP-10 Chukchi Sea
 Lat. 66° 12' N., Long. 168° 01' W.
 Depth 95 ft. (29.0 m.)
 = Normanicythere leioderma (Norman, 1869) 1 Adult
- 1001116-1001127 Normanicythere concinella "chukchiensis"
 AP-10 Chukchi Sea
 Lat. 66° 12' N., Long. 168° 01' W.
 Depth 95 ft. (29.0 m.)
 = Normanicythere leioderma (Norman, 1869) 1 Adult 7 Juveniles
Schizocythere sp. A of Brouwers (1981b) 1 Adult
Elofsonella concinna neoconcinna Bassiouni, 1965
Cytherura sp. of Swain (1963) 2 Adults
Paracyprideis pseudopunctillata Swain, 1963 1 Juvenile
- 1001128-1001129 Normanicythere concinella "chukchiensis"
 AP-26 Chukchi Sea
 Lat. 66° 11' N., Long. 167° 45' W.
 Depth 60 ft. (18.3 m.)
 = Normanicythere leioderma (Norman, 1869) 2 Juveniles
- 1001130 Normanicythere concinella "chukchiensis"
 AP-27 Chukchi Sea
 Lat. 65° 56' N., Long. 167° 39' W.
 Depth 55 ft. (16.8 m.)
 = Normanicythere leioderma (Norman, 1869) 1 Juvenile
- 1001131-1001132 Normanicythere concinella "chukchiensis"
 AP-28 Chukchi Sea
 Lat. 66° 01' N., Long. 167° 59' W.
 Depth 98 ft. (29.9 m.)
 No specimens present in the slide.
- 1001133 Elofsonella concinna "reticulata"
 AP-07 Chukchi Sea
 Lat. 66° 12' N., Long. 168° 13' W.
 Depth 172 ft. (52.4 m.)
 = Elofsonella concinna neoconcinna Bassiouni, 1965 1 Adult
- 1001134-1001151 Elofsonella concinna "reticulata"
 AP-07 Chukchi Sea
 Lat. 66° 12' N., Long. 168° 13' W.
 Depth 172 ft. (52.4 m.)
 = Elofsonella concinna concinna (Jones, 1857) 1 Adult 7 Juveniles
Elofsonella concinna neoconcinna Bassiouni, (1965) 1 Adult 6 Juveniles
Finmarchinella (Barentsovia) angulata (Sars, 1866) 2 Juveniles

- 100155-1001157 Elofsonella concinna "reticulata"
 AP-08 Chukchi Sea
 Lat. 65° 41' N., Long. 168° 15' W.
 Depth 125 ft. (38.1 m.)
 = Elofsonella concinna concinna (Jones, 1857) 1 Adult 1 Juvenile
Finmarchinella (Barentsovia) angulata
 (Sars, 1866) 1 Juvenile
- 1001159 Elofsonella concinna "reticulata"
 AP-29 Northeastern Pacific
 Lat. 59° 53.7' N., Long. 147° 56.8' W.
 Depth 85 fm. (155.5 m.)
 = Elofsonella concinna neoconcinna 1 Adult
 Bassiouni, 1965
- 1001160 Elofsonella concinna "reticulata"
 AP-30 Chukchi Sea
 Lat. 66° 15' N., Long. 168° 53' W.
 Depth 180 ft. (54.9 m.)
 = Finmarchinella (Barentsovia) angulata 1 Juvenile
 (Sars, 1866)
- 1001161 Elofsonella concinna "reticulata"
 AP-28 Chukchi Sea
 Lat. 66° 01' N., Long. 167° 59' W.
 Depth 98 ft. (29.9 m.)
 = Finmarchinella (Barentsovia) angulata (Sars, 1866) 1 Juvenile
- 1001162 Aurila "alaskaensis"
 AP-18 Puget Sound
 Lat. 47° 57.16' N., Long. 122° 30.51' W.
 Depth 44.0 fm. (80.5 m.)
 = Aurila sp. of Swain and Gilby (1974) 1 Adult
- 1001163-1001170 Aurila "alaskaensis"
 AP-18 Puget Sound
 Lat. 47° 57.16' N., Long. 122° 30.51' W.
 Depth 44.0 fm. (80.5 m.)
 = Aurila sp. of Swain and Gilby (1974) 14 Adults
 *specimens with soft parts present
- 1001171-1001172 Aurila "alaskaensis"
 AP-03 Puget Sound
 Lat. 47° 54.10' N., Long. 122° 30.65' W.
 Depth 24.0 fm. (43.9 m.)
 = Aurila sp. of Swain and Gilby (1974) 4 Adults
- 100173 Aurila "alaskaensis"
 AP-05 Puget Sound
 Lat. 47° 55.43' N., Long. 122° 27.78' W.
 Depth 60.0 fm. (109.7 m.)
 = Aurila montereyensis (Skogsberg, 1928) 1 Juvenile

- 1001174-1001175 Aurila "alaskaensis"
 AP-31 Puget Sound
 Lat. 48° 31.98' N., Long. 122° 49.6' W.
 Depth 29.1 fm. (53.2 m.)
 = Aurila sp. of Swain and Gilby (1974) 4 Adults
- 1001176-1001178 Aurila "alaskaensis"
 AP-32 Puget Sound
 Lat. 48° 35.05' N., Long. 123° 17.5' W.
 Depth 52 fm. (95.1m.)
 = Aurila sp. of Swain and Gilby (1974) 4 Adults 1 Juvenile
- 1001179-1001180 Aurila "alaskensis"
 AP-16 Northeastern Pacific
 Lat. 46° 46.2' N., Long 130° 44.2' W.
 Depth unknown
 = Aurila sp. of Swain and Gilby (1974) 1 Juvenile
- 1001181-1001182 Aurila "alaskensis"
 AP-23 Northeastern Pacific
 Lat. 46° 46.2' N., Long. 130° 49.2' W.
 Depth 55 fm. (100.6 m.)
 = Aurila sp. of Swain and Gilby (1974) 3 Adults
- 1001183-1001188 Aurila "alaskaensis"
 AP-34 Strait of Juan de Fuca
 Lt. 48° 13.4' N., Long. 122° 53.3' W.
 Depth 25.0 fm. (45.7 m.)
 = Aurila sp. of Swain and Gilby (1974) 6 Adults 2 Juveniles
- 100190 Aurila? jollaensis (LeRoy, 1943)
 AP-32 Puget Sound
 Lat. 48° 35.05' N., Long. 123° 17.5' W.
 Depth 52 fm. (95.1 m.)
 = Radimella jollaensis (LeRoy, 1943) 1 Adult
- 1001191-1001194 Aurila? jollaensis (LeRoy, 1943)
 AP-32 Puget Sound
 Lat. 48° 35.05' N., Long. 122° 17.5' W.
 Depth 52 fm. (95.1m.)
 = Radimella jollaensis (LeRoy, 1943) 1 Adult
"Aurila" sp. E of Valentine (1976) 3 Juveniles
- 1001195-1001198 Aurila? jollaensis (LeRoy, 1943)
 AP-35 Puget Sound
 Lat. 47° 46.1' N., Long. 122° 28.2' W.
 Depth 11.0 fm. (20.1m.)
 = Radimella jollaensis (LeRoy, 1943) 1 Adult 3 Juveniles
- 1001199-1001200 Aurila? jollaensis (LeRoy, 1943)
 AP-19 Puget Sound
 Lat. 47° 52.81' N., Long. 122° 28.67' W.
 Depth 113.0 fm. (206.7m.)
 = Radimella jollaensis (LeRoy, 1943) 4 Adults

- 1001201-1001204 Aurila? jollaensis (LeRoy, 1943)
 AP-01 Puget Sound
 Lat. 47° 45.9' N., Long. 122° 28.2' W.
 Depth 5.3 fm. (9.7m.)
 = Radimella jollaensis (LeRoy, 1943) 6 Adults
Ambostracon sp. G of Valentine (1976) 2 Adults
- 1001205-1001211 Aurila? jollaensis (LeRoy, 1943)
 AP-06 Puget Sound
 Lat. 47° 58.00' N., Long. 122° 30.49' W.
 Depth 16.0 fm. (29.3m.)
 = Radimella jollaensis (LeRoy, 1943) 12 Adults
 *specimens with soft parts present
- 1001212 Aurila? jollaensis (LeRoy, 1943)
 AP-32 Puget Sound
 Lat. 48° 35.5' N., Long. 123° 17.5' W.
 Depth 52.0 fm. (95.1m)
 = Radimella jollaensis (LeRoy, 1943) 1 Adult
- 1001213-1001217 Aurila? jollaensis (LeRoy, 1943)
 AP-03 Puget Sound
 Lat. 47° 54.10' N., Long. 122° 30.65' W.
 Depth 24 fm. (43.9m.)
 = Radimella jollensis (LeRoy, 1943) 4 Adults 2 Juveniles
 *specimens with soft parts present
- 1001218-1001223 Aurila? jollaensis (LeRoy, 1943)
 AP-36 Puget Sound
 Lat. 47° 46.0' N., Long. 122° 28.2' W.
 Depth 11.0 fm. (20.1m.)
 = Radimella jollaensis (LeRoy, 1943) 5 Juveniles
- 1001224-1001226 Aurila? jollaensis (LeRoy, 1943)
 AP-19 Puget Sound
 Lat. 47° 52.81' N., Long. 122° 28.67' W.
 Depth 113.0 fm (206.7m.)
 = Radimella jollanensis (LeRoy, 1943) 6 Adults
- 1001227 Aurila "pugetensis"
 AP-04 Puget Sound
 Lat. 47° 45.9' N., Long. 122° 28.2' W.
 Depth 8.3 fm. (15.2m.)
 = Aurila montereyensis (Skogsberg, 1928) 1 Adult
- 1001228-1001237 Aurila "pugetensis"
 AP-04 Puget Sound
 Lat. 47° 45.9' N., Long. 122° 28.2' W.
 Depth 8.3 fm. (15.2m.)
 = Aurila montereyensis (Skogsberg, 1928) 14 Adults 2 Juveniles
 *specimens with soft parts present

- 1001238-1001239 Aurila "pugetensis"
 AP-32 Puget Sound
 Lat. 48° 35.05' N., Long. 123° 17.5' W.
 Depth 52 fm. (95.1m.)
 = Aurila sp. of Swain and Gilby (1974) 1 Adult 1 Juvenile
- 1001240 Aurila "pugetensis"
 AP-05 Puget Sound
 Lat. 47° 55.43' N., Long. 122° 27.78' W.
 Depth 60.0 fm (109.7m.)
 = Aurila montereyensis (Skogsberg, 1928) 1 Juvenile
- 1001241-1001243 Aurila "pugetensis"
 AP-02 Puget Sound
 Lat. 47° 45.9' N., Long. 122° 28.0' W.
 Depth 1.7 fm. (3.1m.)
 = Aurila montereyensis (Skogsberg, 1928) 2 Adults
 *specimens with soft parts present
Hemicythere sp. A of Valentine (1976) 3 Juveniles
- 1001244 Aurila? sp. aff. A. regalia (Benson, 1959)
 AP-31 Puget Sound
 Lat. 48° 31.98' N., Long. 122° 49.6' W.
 Depth 29.1 fm. (53.2m.)
 = "Aurila" sp. E of Valentine (1976) 1 Adult
- 1001245-1001247 Aurila? sp. aff. A. regalia (Benson, 1959)
 AP-31 Puget Sound
 Lat. 48° 31.98' N., Long. 122° 49.6' W.
 Depth 29.1 fm. (53.2m.)
 = "Aurila" sp. E of Valentine (1976) 2 Adults 1 Juvenile
- 1001248-1001250 Aurila? sp. aff. A. regalia (Benson, 1959)
 AP-03 Puget Sound
 Lat. 47° 54.10' N., Long. 122° 30.65' W.
 Depth 24.0 fm. (43.9m.)
 = "Aurila" sp. E of Valentine (1976) 2 Adults 2 Juveniles
 *specimens with soft parts present
- 1001251-1001259 Aurila? sp. aff. A. regalia (Benson, 1959)
 AP-32 Puget Sound
 Lat. 48° 35.05' N., Long. 123° 17.5' W.
 Depth 52 fm. (95.1m.)
 = "Aurila" sp. E of Valentine (1976) 4 Adults 7 Juveniles
Radimella jollaensis (LeRoy, 1943) 1 Juvenile
- 1001260-1001267 Aurila? sp. aff. A. regalia (Benson, 1959)
 AP-19 Puget Sound
 Lat. 47° 52.81' N., Long. 122° 28.67' W.
 Depth 113.0 fm. (206.7m.)
 = "Aurila" sp. E of Valentine (1976) 11 Juveniles
Radimella jollaensis (LeRoy, 1943) 1 Juvenile

- 1001268-1001277 Aurila? sp. aff. A. regalia (Benson, 1959)
 AP-05 Puget Sound
 Lat. 47° 55.43' N., Long. 122° 27.78' W.
 Depth 60.0 fm. (109.7m.)
 = "Aurila" sp. E of Valentine (1976) 7 Juveniles
Radimella jollaensis (LeRoy, 1943) 2 Juveniles
Aurila montereyensis (Skogsberg, 1928) 1 Juvenile
- 1001278 Aurila? sp. aff. A. regalia (Benson, 1959)
 AP-37 Puget Sound
 Lat. 48° 28.86' N., Long. 122° 50.58' W.
 Depth 9.0 fm. (16.5m.)
 = "Aurila" sp. E of Valentine (1976) 1 Juvenile
- 1001279-1001280 Aurila? sp. aff. A. regalia (Benson, 1959)
 AP-06 Puget Sound
 Lat. 47° 58.00' N., Long. 122° 30.49' W.
 Depth 16.0 fm. (29.3m.)
 = "Aurila" sp. E of Valentine (1976) 1 Adult 1 Juvenile
- 1001281-1001283 Aurila? sp. aff. A. regalia (Benson, 1959)
 AP-18 Puget Sound
 Lat. 47° 57.16' N., Long. 122° 30.51' W.
 Depth 44.0 fm. (80.5m.)
 = "Aurila" sp. E of Valentine (1976) 2 Juveniles
 *specimens with soft parts present
Radimella jollaensis (LeRoy, 1943) 2 Juveniles
 *specimens with soft parts present
- 1001284-1001298 Aurila? sp. aff. A. regalia (Benson, 1959)
 AP-34 Strait of Juan de Fuca
 Lat. 48° 13.4' N., Long. 122° 53.3' W.
 Depth 25.0 fm. (47.6m.)
 = Ambostracon sp. G of Valentine (1976) 4 Juveniles
 = "Aurila" sp. E of Valentine (1976) 3 Adults 7 Juveniles
Aurila sp. of Swain and Gilby (1974) 1 Adult
- 1001299 Sclerochilus contortus? (Norman, 1862)
 AP-07 Chukchi Sea
 Lat. 66° 12' N., Long. 168° 13' W.
 Depth 172 ft. (52.4m.)
 = Sclerochilus contortus (Norman, 1862) 1 Adult
- 1001300-1001302 Sclerochilus contortus? (Norman, 1862)
 AP-07 Chukchi Sea
 Lat. 66° 12' N., Long. 168° 13' W.
 Depth 172 ft. (52.4m.)
 = Sclerochilus contortus (Norman, 1862) 2 Adults 1 Juvenile
- 1001304 Sclerochilus sp.
 AP-38 Northeastern Pacific
 Lat. 46° 47.7' N., Long. 130° 48.5' W.
 Depth 63 fm. (115.2m.)
 = Sclerochilus sp. D of Brouwers (1981b) 1 Adult

- 1001305-1001306 Sclerochilus sp.
 AP-38 Northeastern Pacific
 Lat. 46° 47.7' N., Long. 130° 48.5' W.
 Depth 63 fm. (115.2m.)
 = Sclerochilus sp. D of Brouwers (1981b) 1 Adult 1 Juvenile
- 1001307 Pectocythere "rectangulata"
 AP-36 Puget Sound
 Lat. 47° 46.0' N., Long. 122° 28.2' W.
 Depth 11.0 fm. (20.1m.)
 No specimens present in the slide
- 1001308-1001325 Pectocythere "rectangulata"
 AP-36 Puget Sound
 Lat. 47° 46.0' N., Long. 122° 28.2' W.
 Depth 11.0 fm. (20.1m.)
 = Pectocythere sp. A of Valentine (1976) 12 Adults 6 Juveniles
 (also = Pectocythere tomalensis partim of Swain and Gilby (1974),
 pl. 5, fig. 15a)
- 1001326-1001329 Pectocythere "rectangulata"
 AP-15 Puget Sound
 Lat. 47° 46.2' N., Long. 122° 27.4' W.
 Depth 50.3 fm. (92.0m.)
 = Pectocythere sp. A of Valentine (1976) 6 Adults
 (also = Pectocythere tomalensis partim of Swain and Gilby (1974)
 pl. 5, fig. 15a)
- 1001330 Pectocythere "rectangulata"
 AP-39 Puget Sound
 Lat. 47° 46.4' N., Long. 122° 24.3' W.
 Depth 100 fm. (182.9m)
 = Pectocythere sp. A of Valentine (1976)
 (also = Pectocythere tomalensis partim of Swain and Gilby (1974) pl. 5 fig. 15a) 2 Adults
- 1001331-1001332 Pectocythere "rectangulata"
 AP-40 Puget Sound
 Lat. 47° 46.5' N., Long. 122° 24.3' W.
 Depth 89.7 fm. (164.1m.)
 = Pectocythere sp. A of Valentine (1976)
 (also = Pectocythere tomalensis partim of Swain and Gilby (1974) pl. 5, fig. 15a) 2 Adults 1 Juvenile
- 1001333 Pectocythere "rectangulata"
 AP-19 Puget Sound
 Lat. 47° 52.81' N., Long. 122° 28.67' W.
 Depth 113.0 fm. (206.7m.)
 = Pectocythere sp. A of Valentine (1976)
 (also = Pectocythere tomalensis partim of Swain and Gilby (1974), pl. 5, fig. 15a) 2 Adults

- 1001334 Pectocythere "rectangulata"
 AP-02 Puget Sound
 Lat. 47° 45.9' N., Long. 122° 28.0' W.
 Depth 1.7 fm. (3.m.)
 = Pectocythere tomalensis Watling, 1970 2 Adults
 *specimen with soft parts present
- 1001335 Pectocythere "rectangulata"
 AP-41 Puget Sound
 Lat. 47° 53.51' N., Long. 122° 20.38' W.
 Depth 47.0 fm. (86.0 m.)
 = Pectocythere sp. A of Valentine (1976) 2 Adults
 (also = Pectocythere tomalensis partim of
 Swain and Gilby (1974) pl. 5, fig. 15a)
- 1001336-1001342 Pectocythere "rectangulata"
 AP-01 Puget Sound
 Lat. 47° 45.9' N., Long. 122° 28.2' W.
 Depth 5.3 fm. (9.7 m.)
 = Pectocythere sp. A of Valentine (1976) 8 Adults
 (also = Pectocythere tomalensis partim of Swain and
 Gilby (1974), pl. 5, fig. 15a)
- 1001343-001345 Pectocythere "rectangulata"
 AP-42 Puget Sound
 Lat. 47° 46.0' N., Long. 122° 27.5' W.
 Depth 43.8 fm. (80.1m.)
 = Pectocythere sp. A of Valentine (1976) 4 Adults
 (also = Pectocythere tomalensis partim of Swain
 and Gilby (1974), pl. 5, fig. 15a)
 *specimens with soft parts present
Pectocythere aff. P. quadrangulata Hanai, 1957 2 Adults
 *specimens with soft parts present
- 1001346-1001347 Pectocythere "rectangulata"
 AP-06 Puget Sound
 Lat. 47° 58.00' N., Long. 122° 30.49' W.
 Depth 16.0 fm. (29.3m.)
 = Pectocythere sp. A of Valentine (1976) 2 Adults
 (also = Pectocythere tomalensis partim of Swain
 and Gilby (1974), pl. 5, fig. 15a)
Pectocythere aff. P. quadrangulata Hanai, 1957 2 Adults
- 1001348-1001349 Pectocythere "rectangulata"
 AP-08 Chukchi Sea
 Lat. 65° 41' N., Long. 168° 15' W.
 Depth 125 ft. (38.1m.)
 = Pectocythere sp. F of Brouwers (1981b) 2 Adults
- 1001350-1001351 Pectocythere "rectangulata"
 AP-07 Chukchi Sea
 Lat. 66° 12' N., Long. 168° 13' W.
 Depth 172 ft. (52.4m.)
 = Pectocythere sp. F of Brouwers (1981b) 2 Adults

- 1001352 Pectocythere "rectangulata"
 AP-34 Strait of Juan de Fuca
 Lat. 48° 13.4' N., Long. 122° 53.3' W.
 Depth 25 fm. (45.7m.)
 = Pectocythere sp. A of Valentine (1976) 2 Adults
 (also = Pectocythere tomalensis partim of Swain
 and Gilby (1974), pl. 5, fig. 15a)
- 1001353 Pectocythere "rectangulata"
 AP-43 Strait of Juan de Fuca
 La. 48° 18.2' N., Long. 124° 03.5' W.
 Depth 103 fm. (188.4m.)
 = Pectocythere sp. A of Valentine (1976) 2 Adults
 (also = Pectocythere tomalensis partim of Swain and
 Gilby (1974), pl. 5, fig. 15a)
- 1001354-1001356 Pectocythere "rectangulata"
 AP-44 Strait of Juan de Fuca
 Lat. 48° 15.6' N., Long. 123° 07.9' W.
 Depth 64.0 fm. (117.1m.)
 = Pectocythere sp. A of Valentine (1976) 5 Adults
 (also = Pectocythere tomalensis partim of Swain
 and Gilby (1974), pl. fig. 15a)
- 1001357 Pectocythere "rectangulata"
 AP-11 Strait of Juan de Fuca
 Lat. 48° 14.1' N., Long. 123° 24.8' W.
 Depth 69.0 fm. (126.2m.)
 = Pectocythere sp. A of Valentine (1976) 2 Adults
 (also = Pectocythere tomalensis partim of Swain
 and Gilby (1974), pl. 5, fig. 15a)
- 1001358 Pectocythere "rectangulata"
 AP-45 Northeastern Pacific
 Lat. 48° 26.7' N., Long. 125° 3.2' W.
 Depth 72 fm. (131.7m.)
 = Pectocythere sp. A of Valentine (1976) 2 Adults
 (also = Pectocythere tomalensis partim of Swain and
 Gilby (1974), pl. 5, fig. 15a)
- 1001359-1001360 Pectocythere "rectangulata"
 AP-46 Northeastern Pacific
 Lat. 48° 44.4' N., Long. 126° 08.6' W.
 Depth 60 fm. (109.7m.)
 = Pectocythere aff. P. quadrangulata Hanai, 1957 4 Adults
 *specimens with soft parts present
- 1001361 Pectocythere "rectangulata"
 AP-47 Northeastern Pacific
 Lat. 43° 13.1' N., Long. 124° 36.0' W.
 Depth 57 fm. (104.3m.)
 = Pectocythere sp. A of Valentine (1976) 2 Juveniles
 (also = Pectocythere tomalensis partim of Swain and
 Gilby (1974), pl. 5, fig. 15a)

- 1001362 Pectocythere "rectangulata"
 AP-29 Northeastern Pacific
 Lat. 59° 53.7' N., Long. 147° 56.8' W.
 Depth 85 fm. (155.5m.)
 = Pectocythere aff. P. quadrangulata Hanai, 1957 2 Adults
- 1001363 Pectocythere "rectangulata"
 AP-48 Silverbay, Alaska
 Depth 34.0 fm. (62.2m.)
 = Pectocythere sp. A of Valentine (1976) 2 Adults
 (also = Pectocythere tomalensis partim of Swain
 and Gilby (1974), pl. 5, fig. 15a)
- 1001364-1001365 Pectocythere "rectangulata"
 AP-49 Silverbay, Alaska
 Depth 22 fm. (40.2m.)
 = Pectocythere sp. of Valentine (1976) 4 Adults
 (also = Pectocythere tomalensis, partim, of Swain
 and Gilby (1974), pl. 5, fig. 15a)
- 1001366-1001372 Pectocythere "rectangulata"
 AP-50 Silverbay, Alaska
 Depth 45 fm. (82.3m.)
 = Pectocythere sp. A of Valentine (1976)
 (also = Pectocythere tomalensis partim of Swain
 and Gilby (1974), pl. 5, fig. 15a) 6 Adults 2 Juveniles
 *specimens containing soft parts present
Pectocythere aff. P. quadrangulata Hanai, 1957 2 Juveniles
- 1001373-1001374 Pectocythere "rectangulata"
 AP-32 Haro Strait, near Puget Sound
 Lat. 48° 35.05' N., Long. 123° 17.5' W.
 Depth 52 fm (95.1m.)
 = Pectocythere sp. A of Valentine (1976) 3 Adults
 (also = Pectocythere tomalensis partim of Swain and
 Gilby (1974), pl. 5, fig. 15a)
- 1001375 Munseyella morrisi Triebel, 1957
 AP-51 Puget Sound
 Lat. 47° 46.8' N., Long. 122° 24.4' W.
 Depth 91.8 fm. (167.9m.)
 = Munseyella morrisi Triebel, 1957 1 Adult
 (also = Munseyella sp. A of Brouwers, 1981)
- 1001376-1001377 Munseyella morrisi Triebel, 1957
 AP-51 Puget Sound
 Lat. 47° 46.8' N., Long. 122° 24.4' W.
 Depth 91.8 fm (167.9m.)
 = Munseyella morrisi Triebel, 1957 2 Adults
 (also = Munseyella sp. A of Brouwers, 1981b, 1982)

- 1001378-1001380 Munseyella morrisi Triebel, 1957
 AP-45 Northeastern Pacific
 Lat. 48° 27.7' N., Long. 125° 03.2' W.
 Depth 72 fm. (131.7m.)
 = Munseyella morrisi Triebel, 1957 2 Adults
 (also = Munseyella sp. A of Brouwers, 1981b, 1982)
- 1001381 Munseyella sp.
 AP-12 Northeastern Pacific
 Lat. 48° 13.2' N., Long. 126° 51.5' W.
 Depth 1400 fm. (2560.6m.)
 = Munseyella morrisi Triebel, 1957 1 Adult
- 1001382-1001383 Munseyella sp.
 AP-12 Northeastern Pacific
 Lat. 48° 10.2' N., Long. 126° 51.5' W.
 Depth 1400 fm. (2560.6m.)
 = Munseyella morrisi Triebel, 1957 3 Adults
- 1001384-1001387 Schizocythere "chukchiensis"
 AP-07 Chukchi Sea
 Lat. 66° 12' N., Long. 168° 13' W.
 Depth 172 ft. (52.4m.)
 = Schizocythere sp. A of Brouwers (1981b) 4 Adults
- 1001388-1001406 Schizocythere "chukchiensis"
 AP-07 Chukchi Sea
 Lat. 66° 12' N., Long. 168° 13' W.
 Depth 172 ft. (52.4m.)
 = Schizocythere sp. A of Brouwers (1981b) 19 Juveniles
- 1001408 Schizocythere "chukchiensis"
 AP-30 Chukchi Sea
 Lat. 66° 15' N., Long. 168° 53' W.
 Depth 180 ft. (54.9m.)
 = Schizocythere sp. A of Brouwers (1981b) 1 Adult
- 1001409-1001410 Schizocythere "chukchiensis"
 AP-30 Chukchi Sea
 Lat. 66° 15' N., Long. 168° 53' W.
 Depth 180 ft. (54.9m.)
 = Schizocythere sp. A of Brouwers (1981b) 2 Juveniles
- 1001411-1001412 Schizocythere "chukchiensis"
 AP-08 Chukchi Sea
 Lat. 65° 41' N., Long. 168° 15' W.
 Depth 125 ft. (38.1m.)
 = Schizocythere sp. A of Brouwers (1981b) 2 Adults 1 Juvenile
- 1001413-1001414 Schizocythere "chukchiensis"
 AP-26 Chukchi Sea
 Lat. 66° 11' N., Long. 167° 45' W.
 Depth 60 ft. (18.3m.)
 = Schizocythere sp. A of Brouwers (1981b) 2 Juveniles

- 1001415 Schizocythere "chukchiensis"
 AP-28 Chukchi Sea
 Lat. 66° 01' N., Long. 167° 59' W.
 Depth 98 ft. (29.9 m.)
 = Schizocythere sp. A of Brouwers (1981b) 1 Juvenile
- 1001416-1001417 Schizocythere "chukchiensis"
 AP-10 Chukchi Sea
 Lat. 66° 12' N., Long. 168° 01' W.
 Depth 95 ft. (29.0m.)
 = Schizocythere sp. A of Brouwers (1981b) 2 Juveniles
- 1001418 "Anaxeocythere" "edentata"
 AP-18 Puget Sound
 Lat. 47° 57.16' N., Long. 122° 30.51' W.
 Depth 44.0 fm (80.5m.)
 = Acuminocythere crescentensis Swain and Gilby, 1974
 (also = Acuminocythere sp. A of Brouwers (1981b)) 1 Adult
- 1001419 "Anaxeocythere" "edentata"
 AP-18 Puget Sound
 Lat. 47° 57.16' N., Long. 122° 30.51' W.
 Depth 44.0 fm. (80.5m.)
 = Acuminocythere crescentensis Swain and Gilby, 1974
 (also = Acuminocythere sp. A of Brouwers (1981)) 1 Adult
- 1001420-1001428 "Anaxeocythere" "edentata"
 AP-52 Strait of Juan de Fuca
 = Acuminocythere crescentensis Swain and Gilby, 1974
 (also = Acuminocythere sp. A of Brouwers (1981b)) 4 Adults 1 Juvenile
Cythere sp. of Brouwers, 1981b 1 Juvenile
Pectocythere sp. 1 Juvenile
Aurila montereyensis (Skogsberg, 1928) 4 Juveniles
- 1001429-1001430 "Anaxeocythere" "edenta"
 AP-19 Puget Sound
 Lat. 47° 52.81' N., Long. 122° 28.67' W.
 Depth 113.0 fm. (206.7,m.)
 = Acuminocythere crescentensis Swain and Gilby, 1974
 (also = Acuminocythere sp. A of Brouwers (1981b)) 2 Adults 1 Juveniles
- 1001431-1001435 "Anaxeocythere" "edentata"
 AP-32 Haro Strait, near Puget Sound
 Lat. 48° 35, 05' N., Long. 123° 17.5' W.
 Depth 52 fm. (95.1m.)
 = Acuminocythere crescentensis Swain and Gilby, 1974
 (also = Acuminocythere sp. A of Brouwers (1981b)) 5 Adults

- 1001436-1001438 "Anaxeocythere" "edentata"
 AP-06 Puget Sound
 Lat. 47° 58.00' N., Long. 122° 30.49' W.
 Depth 16.0 fm. (29.3 m.)
 = Acuminocythere crecentensis Swain and Gilby, 1974
 (also = Acuminocythere sp. A of Brouwers (1981b)) 4 Adults
 *specimens containing soft parts present
- 1001439 Palmanella sp.
 AP-10 Chukchi Sea
 Lat. 66° 12' N., Long. 168° 01' W.
 Depth 95 ft. (29.0 m.)
 = Palmanella limicola (Norman, 1965) 1 Adult
- 1001440 Palmanella sp.
 AP-08 Chukchi Sea
 Lat. 65° 41' N., Long. 168° 15' W.
 Depth 125 ft. (38.1m.)
 = Palmanella limicola (Norman, 1865) 1 Juvenile
- 1001441 Ambocythere sp.
 AP-53 Northeastern Pacific
 Lat. 47° 01' N., Long. 130° 35.9' W.
 Depth 1450 fm. (2652.1m.)
 = "Ambocythere" sp. 1 Adult
- 1002442-1001445 Ambocythere sp.
 AP-53 Northeastern Pacific
 Lat. 47° 01.8' N., Long. 130° 35.9' W.
 Depth 1450 fm. (2652.1m.)
 = "Ambocythere" sp. 2 Adults 2 Juveniles
- 1001446 Ambocythere sp.
 AP-54 Northeastern Pacific
 Lat. 49° 04.3' N., Long. 133° 00.0' W.
 Depth 1856 fm. (3394.6m.)
 = Bradleya cf. B. dictyon (Brady, 1880) 1 Juvenile
- 1001447 "Cythereis" emarginata "diomedeensis"
 AP-30 Chukchi Sea
 Lat. 66° 15' N., Long. 168° 53' W.
 Depth 180 ft. (54.9m.)
 = Baffinicythere emarginata (Sars, 1866) 1 Adult
- 1001448 "Cythereis" emarginata "diomedeensis"
 P-30 Chukchi Sea
 Lat. 66° 15' N., Long. 168° 53' W.
 Depth 180 ft. (54.9m.)
 = Baffinicythere emarginata (Sars, 1866) 1 Adult

- 1001449 "Cythereis" emarginata "diomedeensis"
 AP-07 Chukchi Sea
 Lat. 66° 121' N., Long. 168° 13' W.
 Depth 172 ft. (52.4m.)
 = Baffincythere emarginata (Sars, 1866) 1 Adult
- 1001450 Echinocythereis dasyderma (Brady, 1880)
 AP-13 Northeastern Pacific
 Lat. 46° 37.8' N., Long. 131° 02.3' W.
 Depth 1315 fm. (2405.1m.)
 = Echinocythereis cf. E. acanthoderma (Brady, 1880) 1 Adult
- 1001451 Echinocythereis dasyderma (Brady, 1880)
 AP-55 Northeastern Pacific
 Lat. 54° 12.0' N., Long. 137° 06.0' W.
 Depth 1623 fm. (2968.5 m.)
 = Echinocythereis = cf. E. acanthoderma (Brady, 1880) 1 Adult
- 1001452-1001453 Echinocythereis dasyderma (Brady, 1880)
 AP-56 Northeastern Pacific
 Lat. 54° 08.3' N., Long. 141° 14.8' W.
 Depth 2000 fm. (3658 m.)
 = Echinocythereis cf. E. acanthoderma (Brady, 1880) 2 Juveniles
- 1001454 Echinocythereis dasyderma (Brady, 1880)
 AP-57 Northeastern Pacific
 Lat. 47° 00.0' N., Long. 130° 48.7' W.
 Depth 1580 fm. (2889.8m.)
 = Echinocythereis cf. E. acanthoderma (Brady, 1880) 1 Juvenile
- 1001455 Echinocythereis dasyderma (Brady, 1880)
 AP-58 Northeastern Pacific
 Lat. 47° 14.0' N., Long. 130° 47.8' W.
 Depth 1550 fm. (2835 m.)
 = Echinocythereis cf. E. acanthoderma (Brady, 1880) 1 Adult
- 1001456-1001457 Echinocythereis dasyderma (Brady, 1880)
 AP-12 Northeastern Pacific
 Lat. 48° 13.2' N., Long. 126° 51.5' W.
 Depth 1400 fm. (2560.6 m.)
 = Echinocythereis cf. E. acanthoderma (Brady, 1880) 2 Juveniles
- 1001458 Echinocythereis "polyspinosa"
 AP-59 Northeastern Pacific
 = Echinocythereis sp. 1 1 Adult
- 1001459-1001463 Echinocythereis "polyspinosa"
 AP-59 Northeastern Pacific
 = Echinocythereis sp. 1 1 Juvenile
Echinocythereis cf. E. dasyderma (Brady 1880) 1 Adult 3 Juveniles

- 1001464 Echinocythereis "polyspinosa"
 AP-13 Northeastern Pacific
 Lat. 46° 37.8' N., Long. 131° 02.3' W.
 Depth 1315 fm. (2405.1m.)
 = Echinocythereis sp. 1 1 Juvenile
- 1001465 Echinocythereis "polyspinosa"
 AP-58 Northeastern Pacific
 Lat. 47° 14.0' N., Long. 130° 47.8' W.
 Depth 1550 fm. (2835m.)
 = Echinocythereis cf. E. dasyderma (Brady, 1880) 1 Adult 3 Juveniles
- 1001466-1001467 Echinocythereis "polyspinosa"
 AP-60 Northeastern Pacific
 Lat. 44° 00.5' N., Long. 137° 45.2' W.
 Depth 2265 fm. (4142.7m.)
 = Echinocythereis cf. E. dasyderma (Brady, 1880) 2 Juveniles
- 1001468-1001470 Echinocythereis "polyspinosa"
 AP-57 Northeastern Pacific
 Lat. 47° 00.0' N., Long. 130° 48.7' W.
 Depth 1580 fm. (2889.8m.)
 = Echinocythereis cf. E. dasyderma (Brady, 1880) 1 Adult 2 Juveniles
- 1001471 Echinocythereis "polyspinosa"
 AP-61 Northeastern Pacific
 Lat. 52° 02.0' N., Long. 134° 30.3' W.
 Depth 1680 fm. (3072.7 m.)
 = Echinocythereis cf. E. dasyderma (Brady, 1880) 1 Juvenile
- 1001472-1001474 Echinocythereis "polyspinosa"
 AP-56 Northeastern Pacific
 La. 54° 08.3' N., Long. 141° 14.8' W.
 Depth 2000 fm. (3658 m.)
 = Echinocythereis cf. E. dasyderma (Brady, 1880) 3 Juveniles

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