STUDENT SKILL PROJECT FINAL REPORT
&
FINAL REPORT for OEST 300V, Summer Terms I & II, 1993

UNIVERSITY OF HAWAII at MANOA,
MARINE OPTION PROGRAM

MARINE EXPLORATION and COASTAL NAVIGATION
North Pacific Ocean, Gulf of Alaska

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Appendix

References

Addresses
In October of 1992, I was introduced to Martin Leonard, Director of the From Around Alaska (FAA) project (Appendix 1). After learning about the program and its parent organization, Pacific Traditions Society (PTS) directed by Dr. David Lewis, I became interested in the Pan-Pacific studies conducted by these groups. In January 1993, I was asked to participate in the upcoming season as field assistant to Mr. Leonard. The season would entail paddling a kayak approximately 1,000 miles of exposed coastline in the gulf of Alaska. The purpose of the trip would be to visit villages and camps along the way, learning from the indigenous and local people about Alaskan issues affecting coastal peoples. In addition I would study the marine environment first hand: By traveling and living in the environment I would learn about coastal navigation and wilderness survival, observe marine life in its natural habitat and speak directly with the indigenous people about their connection to the marine environment (Appendix 2).

After deciding to participate in the trip, I pursued academic credit through the Marine Option Program (MOP). With the help of MOP's Director, Sherwood Maynard, I was able to receive 6 credits through the Ocean Earth and Science and Technology (OEST 300V, Ocean Internship and Research) and use the project to fulfill my MOP Skill Project requirement. This required that I write a proposal including details on the trip logistics, what I hoped to get from the experience and what I would do to justify the accreditation.

CULTURAL HISTORY OF COASTAL ALASKA

Recorded history in the Alaska Region begins with the first contact between white men and Native Alaskans, occurred during the Bering expedition in 1741. This marked the beginning of the surge in Russian, Spanish, English, French, and American "merchant mariners who visited Alaska and the adjacent coastal islands to explore and trade among these unusual people" (Miller, 1967).

On the 4th of June, 1741, the Russian ships St. Paul and St. Peter, commanded by Vitus Bering, set sail from Avancha, Siberia on course for America. Miller (1967) described this as "The start of the voyage that was to begin the process of transforming native life in Northwest America. Once started, the steady flow of explorers, followed by adventurers, traders, administrators, missionaries, anthropologists, settlers, and finally, art lovers, never ceased. They
came in waves, overlaying and mingling with each other like an oncoming tide, each depositing something of their own special stamp, each carrying away - along with their impressions - something indispensable to the continuance of the native culture."

The greatest destructive force seemed to come with the arrival of the "free-booting fur hunters, of Siberia" called promyshlenniki. The group consisted of "hundreds of untamed adventurers, convicts, hard-driving, hard-living outcasts from society who had roamed Siberia in the search for furs" (Miller, 1967). They learned of the otter pelt market when the Bering expedition's tattered crew returned with the furs as their survival clothing, not even aware of the potential commercial market in China. "No law, no order went with the tough promyshlenniki as they pushed eastward along the Aleutian Archipelago-only cruelty, drunkenness, the violation of women, the murder of men and the wholesale slaughter of the sea otter they so avidly sought" (Miller, 1967).

The first permanent Russian colony in America was established at Three Saints Bay, Kodiak Island in 1784 by Gregory Ivanovich Shelikov and his wife Natale. About the same time, Shelikov formed the Shelikov-Golikov Company which held the monopoly on the fur market (Miller, 1967). This helped to settle the competitive and massive hunting parties, but not soon enough to save the region's otter population.

Another wave of acculturation arrived shortly after, armed, not with ammunition, but with crosses. The Russian missionaries had a profound effect on the surviving native populations, which has outlasted the invasion. In the Kodiak region especially, the arrival of the Russian Orthodox church and its effects are prominent in the minds of the elders today. This invasion broke the native pride and managed to bury, almost completely, the Alutiiq culture. Of the Pacific Northwest Coast, Miller wrote that "the art which gained its fame ceased to exist, except in museums around the world" (1967). Unfortunately, large parts of the native Alaskan's culture were not even preserved in museums. Many groups still have mysteries which may never be solved because some of their history and traditions were lost completely with their ancestors.

In the past ten years, the climate has changed tremendously. The feeling among natives has gone from complete shame of their culture and history to a feeling of curiosity, interest and even pride. (Knecht per.com.) It was evident to me that, recently, there have developed traditional renaissance programs in various areas of their culture. Dance groups and voyaging societies are beginning to pick
up speed and determination. I was fortunate to be traveling by means of a semi-traditional method during this time. It is a very exciting time to be in the villages.

THE TRIP

During the months of February, March, and April 1993, Martin and I prepared and worked out the logistics of the trip. I did research on Alaska, kayaking, expeditioning, navigation and marine biology (Appendix 3). In addition, I spent time talking to people such as Audry Sutherland about her experiences kayaking in Alaska. I also read books such as Tracks, written by a woman who undertook a major journey in Australia. We wrote letters to equipment manufacturers requesting funding and equipment assistance for our trip. From the numerous letters and phone calls, we received product donations from several companies. Many of the companies had sponsored FAA trips in the years prior and, due to consistent follow up letters and product evaluations by Martin, the manufacturers were happy to assist the project again.

We received clothing sponsorship from Patagonia Inc. which fulfilled nearly all of our clothing and foul weather gear needs. Health Valley Foods, Glenn Foods and Powerfoods Inc. donated athletic food bars which made up our in-the-boat lunches. Motorola donated a Traxar GPS. A tent company called Garuda loaned us a single-walled light weight tent in exchange for comments on the performance of the product. We received most of our other equipment and food from manufacturers at dealer prices (Appendix 4).

We arrived in Seattle on April 29, 1993 and continued pursuing sponsorship and gathered our equipment. We encountered difficulties in shipping our kayak from Honolulu to Seattle due to its length, and so were delayed. After receiving our kayak and assembling our equipment, we took the Alaska Marine Highway Ferry from Bellingham to Ketchican. We transferred ferries and arrived in Hollis on May 30th. Friends met us at the ferry terminal and transported us, our gear and kayak to Craig. We left their house the following morning and began the southeast paddling portion of our trip.

We paddled the outer coast of South East Alaska from May 31st through June 26th (Figure 1). This included 19 days of paddling, 6 days spent in communities and 2 storm days. We averaged approximately 30 miles per day, traveling between 8 and 12 hours per day (Table 1). Our anticipated mileage for this leg was only 14
Figure 1

Map of Southeast Alaska

Routes traveled

[Map of Southeast Alaska showing various locations and routes traveled.]

Area of Detail

Source: Clear?
### Table 1

**TABLE OF DAILY PROGRESS, Southeast Alaska**

<table>
<thead>
<tr>
<th>Date</th>
<th>Starting Points</th>
<th>Miles Covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/31</td>
<td>Craig</td>
<td>18</td>
</tr>
<tr>
<td>6/1</td>
<td>Ridge Island</td>
<td>17</td>
</tr>
<tr>
<td>6/2</td>
<td>Sea Otter Harbor/Hook Arm</td>
<td>29</td>
</tr>
<tr>
<td>6/3</td>
<td>Port Bazon</td>
<td>25</td>
</tr>
<tr>
<td>6/4</td>
<td>Kaigani/Cape Muzon</td>
<td>22</td>
</tr>
<tr>
<td>6/5</td>
<td>Keg Point</td>
<td>27</td>
</tr>
<tr>
<td>6/8</td>
<td>Hydaburg</td>
<td>26</td>
</tr>
<tr>
<td>6/11</td>
<td>Ridge Island</td>
<td>20</td>
</tr>
<tr>
<td>6/12</td>
<td>Port Santa Cruz/Aquada Cove</td>
<td>30</td>
</tr>
<tr>
<td>6/13</td>
<td>Steamboat Bay</td>
<td>33</td>
</tr>
<tr>
<td>6/14</td>
<td>Edna Bay</td>
<td>17</td>
</tr>
<tr>
<td>6/15</td>
<td>Tenass Passage</td>
<td>23</td>
</tr>
<tr>
<td>6/16</td>
<td>Calder Bay</td>
<td>23</td>
</tr>
<tr>
<td>6/19</td>
<td>Point Baker</td>
<td>18</td>
</tr>
<tr>
<td>6/20</td>
<td>1 mile NE of Point Amelius</td>
<td>36</td>
</tr>
<tr>
<td>6/21</td>
<td>China Bay</td>
<td>32</td>
</tr>
<tr>
<td>6/23</td>
<td>Howard Cove</td>
<td>46</td>
</tr>
<tr>
<td>6/24</td>
<td>cove on Baranof Is.</td>
<td>42</td>
</tr>
<tr>
<td>6/25</td>
<td>Sevenfathom Bay</td>
<td>6</td>
</tr>
<tr>
<td>6/26</td>
<td>Goddard to Sitka</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>514</strong></td>
</tr>
</tbody>
</table>
miles under our actual total miles covered. Our actual starting point was at Craig instead of the Queen Charlotte Islands, as we had originally planned, but because we traveled south first before continuing our northerly route, the miles equalled out.

We chose to paddle a route from south to north to take advantage of the prevailing winds out of the west and south west. The warmest and calmest conditions occur during the summer, from mid-May to mid-August. We chose to paddle during this time to take advantage of the seasonally good weather on the coast and were fortunate in that the 1993 summer turned out to be exceptionally dry and hot. The good weather allowed us to cover more miles in fewer days. We had calculated our food supplies to include days on the beach due to bad weather, and since we had few, we had plenty of food left over.

Communities we visited included the native village of Hydaburg, the Noyes Island Cannery, Edna Bay where we received our resupply box, a Forest Service Station in El Capitan Passage, Point protection, Point Baker and Sitka, where we concluded the SE leg (Appendix 5).

While in Sitka I visited the Sheldon Jackson Museum at Sheldon Jackson College which is an amazing collection of native artifacts from all around Alaska. On July 5th and 6th we rode the ferry to Haines. We traveled by car with three graduate students from Pennsylvania, from the ferry terminal in Haines to Valdez and then on to Anchorage. On July 12th, we left Anchorage and went to Fairbanks where we visited friends and moved some gear into storage.

We returned to Anchorage on July 20th and traveled on to Homer on July 22nd. In the South Central region, we paddled 6 days, spent 2 full days visiting (Table 2). We were also able to spend time with people on paddling days because our distances were short. We spent 2 nights in Homer then paddled across the bay with two other kayakers to the Kenai Wilderness Lodge, the Center for Coastal Studies (where we were given a full tour and I was able to get some important information on the region's intertidal life) and on to Halibut Cove (Figure 2a). We paddled to the Halibut Cove Lagoon Forest Service campground and hiking trails and went hiking. On July 27th we paddled to Seldovia, and on to Port Graham the next day. We met the chief of Port Graham and spoke with her at length about the village, the public health programs they were applying and the effects of the oil spill on their way of life. We returned to Seldovia the evening of the 31st and caught the ferry to Kodiak the following day.
Table 2

TABLE OF DAILY PROGRESS, Kenai Peninsula and Kodiak Alaska

<table>
<thead>
<tr>
<th>Date</th>
<th>Starting Points</th>
<th>Miles Covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/24</td>
<td>Homer Spit</td>
<td>13</td>
</tr>
<tr>
<td>7/25</td>
<td>Halibut Cove</td>
<td>8</td>
</tr>
<tr>
<td>7/26</td>
<td>Halibut Lagoon</td>
<td>21</td>
</tr>
<tr>
<td>7/27</td>
<td>Hesketh Island</td>
<td>12</td>
</tr>
<tr>
<td>7/28</td>
<td>Seldovia</td>
<td>15</td>
</tr>
<tr>
<td>7/31</td>
<td>Port Graham to Seldovia</td>
<td>15</td>
</tr>
<tr>
<td>8/1</td>
<td>Ferry: Seldovia to Kodiak</td>
<td></td>
</tr>
<tr>
<td>8/4</td>
<td>Kodiak</td>
<td>20</td>
</tr>
<tr>
<td>8/5</td>
<td>Chiniak Lake</td>
<td>5</td>
</tr>
<tr>
<td>8/7</td>
<td>Cape Greville bight</td>
<td>30</td>
</tr>
<tr>
<td>8/8</td>
<td>North of Dangerous Cape</td>
<td>33</td>
</tr>
<tr>
<td>8/11</td>
<td>Old Harbor</td>
<td>40</td>
</tr>
<tr>
<td>8/12</td>
<td>Kaguyak Peninsula</td>
<td>22</td>
</tr>
<tr>
<td>8/13</td>
<td>East of Russian Harbor</td>
<td>27</td>
</tr>
<tr>
<td>8/16</td>
<td>Akhiok</td>
<td>6</td>
</tr>
<tr>
<td>8/17</td>
<td>Fassett Point (Larry Matfay’s camp)</td>
<td>16</td>
</tr>
<tr>
<td>8/18</td>
<td>Alitak Shoal</td>
<td>31</td>
</tr>
<tr>
<td>8/23</td>
<td>Ayakulik</td>
<td>42</td>
</tr>
<tr>
<td>8/24</td>
<td>Karluk</td>
<td>29</td>
</tr>
<tr>
<td>8/27</td>
<td>Larsen Bay</td>
<td>30</td>
</tr>
<tr>
<td>8/29</td>
<td>Cape Ugat (John Jackosi’s camp)</td>
<td>44</td>
</tr>
<tr>
<td>8/30</td>
<td>Whale Pass to Anton Larsen Bay</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>485</td>
</tr>
<tr>
<td></td>
<td>Total trip miles</td>
<td>999</td>
</tr>
</tbody>
</table>
Figure 2a

Map of Kenai Peninsula, Alaska

Routes Traveled
On August 1st we arrived in Kodiak and met up with the Cleary family; friends we had met on the SE ferry. We stayed with them until August 4th, when we began paddling in the Kodiak region (Figure 2b). We concluded this leg on August 31st; out of that we paddled 10 days. The days we spent out of the boat were a combination of visiting and waiting out weather (Appendix 6). We were fortunate in that when the weather was too rough to paddle, we were able to spend time with people in various settings. We visited Old Harbor, Ahkiok, Larry Metvay's fish camp, the Ayakulik Fish Weir, Karluk, Larson Bay, John Jackoski's Fish camp and Port Lions. We finished in Anton Larsen Bay in Kodiak town. We returned to the Cleary's house and stayed until I returned to Hawaii on September 5th.

EQUIPMENT

We paddled a double kayak built in Nottingham, England by Valley Canoe Products. The boat, called an Aleut Sea II, was designed after lines taken from a Nikolski traditional kayak (Figure 3). With a length of 23 feet and beam of 26 inches, the Aleut Sea II is capable of speeds up to 7 knots. We use the boat because of its speed and seaworthiness in big seas and rough conditions. The double was also advantageous in bridging the strength and experience gaps. The inside of the boat was divided by three water-tight bulkheads which created a total of five compartments. Each of the two cockpits is sealed around the paddler's waist by a neoprene skirt. The three storage compartments are sealed with rubber hatches and are independently buoyant. This safety oriented system was complimented by high-capacity manual bilge pumps for the cockpit areas.

Personal safety equipment included a collection of Solas-grade rocket/parachut flares, marker dyes and smoke flares along with a marine VHF radio and EPIRB (Emergency Possition Indicator Radio Beacon). We mainly used the VHF radio for daily weather reports, but could have used it to contact near-by boats in an emergency. The most important safety item which we used on a daily basis was a drysuit. Our drysuits were constructed of lightweight waterproof cordura by O.S. Systems. We had the suits constructed with latex booties, wrist and neck seals, a back zipper entry, a front relief zipper and semi-custom design specific to paddling. The suits provided us with total protection from the environment, keeping us dry and warm in the roughest conditions.
Map of Kodiak, Alaska

Figure 2b

Routes traveled

Source
Traditional Aleut Kayak:
The Aleut Sea II was designed based on these lines

Taken from Zimmerly. 1986.
We used USGS topographic maps for the areas we paddled, because of our mode of travel (Appendix 2). From a kayaker’s perspective, it is important to know where running water is available and good landing sites may be found. We also used coastwise navigation to double check our location and progress, as well as navigate among island and passage systems. The topos also enabled us to see how the weather conditions would be altered by the land. This allowed us to judge, for example, if the winds were being channeled in specific areas or if we were feeling the general wind speed. It was possible for us to push through areas of intense wind, but if the general winds were too strong, we would not make any progress.

Our gear was limited to what we felt were bare essentials (Table 3), and as the season progressed, what was not being used enough to justify its weight and space was eliminated. While in the field, we were totally self-sufficient and always planned for storm days and other delays when packing food and supplies. After resupplying our food, we had to readjust to packing a full boat; after a week or so, we would have more room again and packing was easier. The front compartment was my responsibility, the rear was Martin's and the middle was the community compartment. The middle and rear compartments had a second smaller hatch, just behind our seats, so that we could have access to personal gear inside the compartments while in the boat.

NAVIGATION

Navigation in a wilderness open ocean environment with a kayak involves more than finding your way from point A to point B. Factors such as: Fresh water sources, safe landing and launch sites, protection from surf and other rough conditions, distance and duration of the paddling day with possible exits along the way, weather conditions, currents and tidal cycles contribute to the kayakers navigational experience.

Planning

Navigational planning began with choosing the region we wanted to travel and getting the topographic maps for the area to be paddled. We then studied the local weather conditions, current and tide tables and topographic features. A good resource for this stage of the trip is the Coast Pilot (Appendix 3). We then measured distances we wanted to travel and computed the days necessary to reach the destination.
Table 3

EQUIPMENT LIST

In the front compartment:
- spare paddle
- miscellaneous repair kit
- two Therma-rest sleeping pads
- tent poles and stakes
- a dry bag with "tent things" such as a head lamp, book, journal, and walkman stereo
- a dry bay containing my warmer clothes and wash kit
- skin diving mask

In the middle compartment:
- two dry bags with food
- spare photographic equipment (some of which was sent back)
- stove
- daily use food bag
- cook-ware bag
- tent
- two sleeping bags
- a can of bear spray

In the aft compartment:
- expedition first aid kit
- extra fuel bottles
- Martin’s clothes bag
- boat repair kit
- a gear repair kit
- a Ruger Blackhawk 44cal pistol
- our lunch bags

In addition we each had:
- paddle skirt
- deck bags containing camera and emergency gear

Behind our seats we kept:
- extra jackets
- miscellaneous personal gear
- water bottles and bags
- sponges.
To determine the days necessary to cover a given distance by kayak, the paddler must know the average speed of the kayak and the time he is willing to spend each day in the boat. After determining the average miles per day, we allowed an extra "storm day" for every three we anticipated making our daily mileage. Through this method we were able to determine how long it would take us to cover the intended miles, as well as determine how many days worth of food we would need to carry. This also allowed us to determine where we would need to send resupply boxes along our route.

Navigational Equipment

Once we were in the field, we used waterproof map cases to keep our topographic maps, tide tables and some additional current and miscellaneous information accessible and completely protected from water damage. The map cases were kept on the deck directly in front of the paddler, clearly visible, along with a watch and compass. Binoculars, barometer, chart spanners and the marine VHF radio were kept in sturdy neoprene deck bags which were secured to the deck forward of the maps.

In predicting and measuring weather conditions, the barometer was the most important tool. We listened to the VHF weather broadcasts mainly for a general synopsis the weather systems in the area. The VHF weather reports were not specific enough to be accurate in the remote regions we traveled. The larger weather systems were effected by the local topography and often made the weather reports incorrect for our specific location. By monitoring the change in barometric pressure, we were able to determine how the regional weather systems were going to effect our location. The barometer was the most valuable and accurate instrument for weather prediction while kayaking, provided the user has a good understanding of weather patterns and regional conditions.

Navigation Methods

The form of navigation we used most commonly was piloting, or using the topographic formations to determine our location. Because we were usually traveling within a mile of the shore, we could follow the coastline without much need to use dead reckoning. We used a compass to determine our location and direction of travel during crossings, when the weather forced us to travel further off shore or when fog inhibited our view of the land (in dead reckoning). Our location was established by taking bearings on known land formations and triangulating to find our exact position. We would then determine the course needed to reach our destination, and after
factoring in and correcting for winds and currents, we would know our heading. Once we had established our location and heading it was not necessary to maintain visual contact with the land. For example, while paddling across a bay, we were surrounded by fog and lost our sight of any land. Because we had taking compass readings and knew our location and heading, we were arrived at our correct destination.

Marine Hazards
The information we had accumulated and keep in our map cases was very important in navigation through various marine hazards. The currents we encounter varied in strength and behavior. Most currents are strong enough to have an effect on a small vessel like a kayak. Our top speed was about 7 knots. When we paddled in a 3 knot opposing current, our speed was cut to 4 knots. Not only was this very discouraging when we were used to going much faster, but our estimated mileage for that day was drastically lower and put us behind schedule. For this reason, using the currents to our advantage was very important.

The tide tables dictated our paddling days. We would plan our schedule around the tidal cycle so as to ride the tide as much as possible in areas where the tidal currents were significant. The same 3 knot current running with us would make our paddling easier and give us some additional speed. It was critical to monitor the tides when paddling around capes and prominent points. We tried to arrive at capes at slack water to avoid the turbulent waters. Situations which warrant caution include any areas where the currents converge or oppose each other or where the flow of water in constricted or redirected by land formations. Other factors which can make water conditions significantly rougher are wind and waves. If the wind is opposing the direction of the current, the conditions can become extremely rough. With the addition of a swell, it is possible to have three opposing forces. Conditions in which a combination of currents, winds and/or waves are opposing, extreme caution is very important.

The kayak is a great method of travel because there is almost always a "sneak route" or route around the rough conditions. When going around capes, we would often encounter rips running off the point and creating really strong and rough conditions. In a kayak we were able to negotiate the shallow area directly next to the shore where the waters flow is slowed by the bottom. In a larger boat with more draft, it is necessary to pick a route off shore where the current is stronger and conditions rougher. At times when the
weather was dangerously rough, we simply stayed on land; an option not available to any larger vessels.

NATURAL HISTORY

The southeast region of Alaska is made up of a system of islands, the majority of which are high in elevation. The geologic history of the region indicates volcanism, uplifting and folding caused by the subduction of the pacific plate, as well as extensive glaciation during the last ice age. Along the coast, overall temperatures range seasonally from a high of 80 degrees to a low of about 30 degrees. The coastal climate is moderated by the temperature of the ocean; inland of the coast, temperatures are more extreme and seasonally dependent. Precipitation ranges between about 50 to 105 inches annually, which contributes to the climate for the dense ground cover and old growth forests (Arctic Environmental Information and Data Center, 1975a). The North Pacific Current and Predominant Westerlies bring warm water and air from the Southwest Pacific region, creating areas of upwelling along the coast throughout the Gulf of Alaska (Honors Notes, 1990).

A retreating glacial system exists throughout the region. In the southern part of the region, glacial remnants are found only in the higher elevations. North of Baranof Island, the glaciers become larger and often extend to sea level. Fresh water is introduced to the marine environment by means of glacial runoff and calving, in addition to precipitation; creating riverine and estuary ecosystems. Between the islands, are created complex systems of passages and straits. The large tidal range in this area causes substantial circulation through the water ways. This combined with long daylight hours (Figure 4) and nutrient rich waters provides concentrated feeding grounds for marine life. The heavily circulated rocky shores provide a structure for flourishing intertidal communities as well.

The Kodiak Island region is remarkably similar to the southeast Alaska environment described above. The island has a few glaciers, temperate climate and lace work coast line, much like SE. The differences originate from island's location and slight evolutionary variation in the indigenous species. This is demonstrated by regional population differences and, in some cases, organism size variations. I used the Alaska Regional Profiles (Arctic Environmental Information and Data Center, 1975a and 1975b) for all scientific names, unless another citation is evident.
Figure 4

Monthly comparisons of sunlight and darkness

For given latitudes/Alaska

Taken from Arctic Environmental Information and Data Center. 1975a.

Adapted from L. Selberg et al. 1972. Environmental Atlas of the Chinese Arctic, Area Boundary. Figure 4.
Species Found Throughout

Kelps
There were many forms of kelp which I saw in abundance everywhere I paddled. They include Nereocystis leutkeana which has blades originating from the pneumatocyst, Pelagophycus porra which has a system of blades, Egregia laevigata or "feather-boa kelp," Laminaria or oar weed and Fucus distichus which is a smaller, intertidal seaweed. (Dawson, 1966) These were the most obvious and abundant species, but were by no means, the only ones. The Nereocystis was found on the exposed outer coast, where as the Egregia was found in the passages and bays, protected from surf. The other species were found in most areas of moderate wave action, as well as in protected waters.

Seastars
Seastars include the Blood Star (Henricia leviuscula), a variably colored star (Henricia sanguinolenta), a thick & textured star (Pisaster ochraceus) and the Sunflower Star (Pycnopodia helianthoides). Seastars were very abundant in most intertidal zones and in all regions I paddled.

Hermit Crabs & Snails
All regions intertidal zones also commonly included hermit crabs (Pagurus hirsutiusculus) and snails (Lacuna carinata).

Marine Mammals
While paddling along the coast it was possible to observe animals both in the water and on the shore. Because of our method of travel, we were able to sneak up on many different animals. Because we were in their environment and not a typical "animal," we were often snuck up on ourselves. As a result, we had many encounters with the animals which would have to be classified as unusual.

Pacific Harbor Seal
The shiest of the marine mammals (found in both regions) was the Pacific harbor seal (Phoca vitulina richardii). The seals were always quite frightened when we would approach them. If we were on land or paddling away from the seals, they behaved quite differently. The behavior ranged from sitting offshore and watching us pack, often peering out from around a rock, to following us quite closely and inquisitively as long as we didn't break our stroke. The minute we made any move out of the ordinary, namely turning around to see what was breathing down our necks, the seals would scatter.
Steller Sea Lion

The steller sea lion (*Eumetopias jubata*) was quite a different story. Possibly the boldest of the marine mammals, they were seldom scared by us, even if that was our intent. We came across several rookeries and did our best not to cause any trouble while trying to observe them. Sometimes, if we were coming from up wind and didn’t smell them or if conditions were such that paddling further offshore would be dangerous (currents or winds), we were in close proximity and did our best to squeak through. The young males of the rookeries were always the ones to check us out. We had several sea lions who were very interested in us, at which point we would yell and shake our paddles as aggressively as we felt the need to. Most often this would cause them to hold their distance, but they rarely backed down until they were ready to.

I was fortunate to see a group of sea lions feeding on salmon on the outer coast of Dall Island, which is an unusual behavior to witness. The bull would catch the salmon then bring his upper body out of the water and shake his neck, breaking the salmon in half. The females would swim around and eat the pieces while the male caught another.

The only other instance of feeding sea lions I heard of was an interaction with man. We heard stories that the fishermen on the salmon boats had been feeding the sea lions, and, in effect, training them. The sea lions would evidently jump out of the water to take fish held out over the railing. Unfortunately, the sea lions had been trained so well that they would sometimes jump on deck. In one instance, a crew member was sitting on the railing when a sea lion grabbed his rear in its mouth and pulled him 15 feet under.

Sea Otter

The subject of the fur trade, sea otters (*Enhydra lutra*) of the Gulf of Alaska, were hunted to extinction and replaced (through introduction) by their southern counterpart. The status of the otter’s population varies depending upon whom you talk to. It is common to hear environmental enthusiasts claim that the population is still in trouble; the natives, locals and fishermen will all disagree. Based on the numbers of otters I saw, I would have to agree with the natives, many of whom are extremely knowledgeable (by means of indigenous science as well as western science) about the life cycles and population fluctuations of marine organisms and the marine ecosystem. The reason I heard most often for the status “miscommunication” was that the otters reproduce so rapidly that the outdated population estimates are inaccurate. The species is seen by most people I encountered as a nuisance and responsible for
the drop in abalone and urchins. There is a commercial market for both abalone and urchins. I believe collection by humans must contribute to the depletion of abalone and urchin populations. Depleting food source aside, sea otters were very evident.

I saw otters in every coastal area we paddled and communities of otters, or rafts, were highly populated. I estimated that the larger rafts reached sizes of approximately 80 individuals. By noting how many of these were pups, I concluded that the majority of females must have had young. Between 35 to 40 percent of the adult otters had pups with them. The estimate applies to the beginning of the season; as the pups grew, they were swimming on their own and it was harder to judge the percent of young relative to the group. It is important to note that the number of pups which would survive to reproduce, or the success rate of the pups (as a result of predation or disease, for example) would be much lower than the number born; demonstrating that the populations are not growing as quickly as the above numbers would imply.

**Land Mammals**

The only land mammal which I saw in both regions was the Black tailed deer, *Cervinae sp.* This species is hunted for food by most people in the villages. Villagers said that they had not seen any significant drop in the deer populations and believed them to be stable. The deer were most commonly sighted in the mornings when they would walk the beaches in search of food. I saw some deer eating kelp which had washed up on the beach. The only unusual encounter I had was when we paddled to a beach and pulled up right in front of two deer. It wasn't until we stood upright that they even began to walk away. We were in a region of very few people and were down wind.

**Sea Birds**

Sea birds common to both regions are numerous. Many of the species are migratory and have healthy populations. There are numerous species, a few of which I saw and was able to identify. These include Gulls (*Larus sp.*), sooty shearwater (*Puffinus griseus*), black-legged kittiwake (*Rissa tridactyla*), common murre (*Uria aalge*), pigeon guillemot (*Cepphus columbus*), horned puffin (*Fratercula corniculata*), tufted puffin (*Lunda cirrhata*) and the marbled murrelet (*Brachyrhamphus marmoratus*). From the kayak it was possible to watch all the species' behaviors in their rookeries or fishing. I learned a lot about their biological functions just by being in their environment and keeping an eye on their unique behaviors.
Bald Eagle

The bald eagle (*Haliaeetus leucocephalus*) is a coastal dweller as well, but is not typically viewed as a sea bird. It cannot land in the water, for instance. The eagles were present on every point and cape; their nests were often visible and once in a while we spotted one snagging a salmon from the water. This species is another example of an animal which is labeled "endangered" and appeared to me to be flourishing and reproducing. An Alaskan's comment that stuck in my mind indicated that one has only to look at the dumpster behind McDonald's to see that the bald eagle is not endangered by any means.

Species of the Southeast Region

In the intertidal zone & nearshore, I saw and identified only a few of the total species present. The organisms in this section are those which I did not come in contact with in regions other than southeast. I explored the intertidal regions during low tides, took photographs, sketched organisms and identified organisms I was familiar with. I feel that many of the species appeared specific to a single region because of my observation methods rather than the total absence of the species elsewhere.

Sea Anemones

The most common sea anemones, *Anthopleura xanthogrammica* were commonly about 6 inches across and bright green in color. They have symbiotic algae living in the tissue which is responsible for the color; anemones located out of sunlight are pink to white (Barr, 1983). I saw these anemones completely exposed by low tides, in areas of low surf.

Chitons

Gum boot or black leather chitons, *Katharina tunicata*, were the most common of the chiton family. This may have been due to their appearance, as they are the most visible of the chitons found in the region. Typically found in intertidal and shallow subtidal (Barr 1983), I was able to see them on rocks exposed by low tides. *Mopalia muscosa*, or hairy chiton, was also identified although camouflaged and hard to find.

Urchins

There were large numbers of urchins seen, most of which were under several feet of water, but the most likely candidate is *Strongylocentrotus droebachiensis*. This species has spines of moderate size, usually pale green, with darker tube feet of brown or
purple. Test size is a diameter of about 3 inches. This species is found in intertidal and subtidal zones to a depth of 130 meters, in regions circumpolar and south to Washington. It is the most common and widespread Alaskan urchin. (Barr, 1983)

**Kelp Crabs**

In the kelp beds, I spotted kelp crabs, probably *Pugettia gracilis*, sitting on the kelp itself. I also saw snails on the kelp which appeared to be eating it, but I could not identify them.

**Ctenophore**

I encountered a species of ctenophore which I have yet to identify. The organism was found in the passages above Dall Island in great numbers and appeared to be dying off. The ctenophores were distinct in that they all had two orange/pink balls within their football-shaped bodies. Each was between 2 and 2 1/2 inches long. I saw a few individuals which were still alive, some of which seemed to be paired up. I am guessing that the die off is part of a reproductive cycle; since I have yet to identify the organism, I cannot be sure what the cause is.

**Jellyfish**

I also saw large numbers of *Aurelia labiata* in protected waters. These jellyfish have a distinctive clover pattern on the translucent bell and many small tentacles. According to Barr (1983), this species is abundant in southeast during the summer season and is one of the large Alaskan jellyfish, up to 12 inches diameter. The majority of individuals which I saw were considerably smaller.

**Humpback Whales**

While paddling we also had close encounters with humpback whales (*Megaptera novaengliae*) on several occasions. I saw a pair in a bay one morning, raising their pectoral fins out of the water and slapping the water as they turned their bodies. Later that morning, as we were leaving the bay, one of the whales attempted to surface under us. We both felt that it would have surfaced, but came up about 20 feet away after passing under us. It visibly changed its direction and turned as it surfaced. At other times we encountered humpbacks that appeared to be feeding in the currents. I am assuming that was their purpose because of the visible feed and the position of the whale. We also saw a group who were breaching repetitively for about a half hour, and appeared to be scared off by a group of speed boats which came through the channel.

**Harbor Porpoise**

The harbor porpoise (*Phocoena phocoena*) is by far the shiest animal I caught a glimpse of. They would appear only for a moment,
and as soon as they detected us, would disappear completely. The pods I saw were made up of 4 to 6 individuals.

Land Mammals

Land mammals unique to southeast included the black bear (*Euractos sp.*), and the marten (*Martex americana*). We saw only a handful of black bears which live in the southern half of the region (brown bears populate the northern half). The bears were visible to us when they came down to the beaches to scavenge. They seemed to spend considerable time digging up big holes in the beach sands or rocks. Martens were rare as well, we only spotted a couple running along the beach and rocks.

Halibut

I was in southeast for the first halibut opening, a 24 hour fishing period on June 10th. *Hippoglossus stenolepis*, or halibut is a flat, bottom feeding fish which reaches up to 8 feet, but is more commonly around 3 to 4 feet and 150 to 200 pounds. I would have never seen the fish from my kayak; it was only because of the commercial fisheries and the sport fishers that I was able to see many dead halibut.

Sea Birds

Sea birds which I saw only in this region were the pelagic cormorant (*Phalacrocorax auritus*) and the parasitic jaeger (*Stercorarius parasiticus*). These birds exist in others regions; I only spotted a few and they happened to be in southeast.

Peregrine Falcon

A bird which is fairly rare in the areas traveled is the peregrine falcon (*Falco peregrinus*). We were fortunate to see a single bird on the remote island of Coronation. Virtually no people go to the island because of the currents, seas and rough coast. It is my guess that that is why the bird was there.

Species of the Kodiak Region

Eelgrass

In addition to the numerous forms of seaweed which were found in all regions I paddled, in the Kodiak region I identified eelgrass, or *Zostera marina*. This was a sea grass which was found in the inter tidal zone, often growing to lengths of about 30 to 36 inches. Most places where it was found were in areas of high circulation and moderate surf.

Sea Anemones

There was one species of anemone, *Metridium senile* which I identified on the last day of paddling. It was evident only in one bay.
we traveled in, and here it was abundant. The anemone is white with a long body and tentacles and appeared to flourish in this bay which was completely protected from swell and weather. I suspect that the species lives in other similar environments and in deeper water (up to 100m according to Barr, 1983).

**Jellyfish**

I identified one species of Cnidaria in the waters off Kodiak which I had not seen anywhere else. *Cyanea capillata* or Lion's mane jellyfish occur from Point Barrow to California, grow to a diameter of 20 inches or more with tentacles up to 30 feet long and are sometimes locally abundant (Barr, 1983). My observations would not have lead to the same conclusions since I saw just a few of smaller size, but I did hear many complaints from fishermen about this species getting caught in their nets and squeezed out by the block onto their heads, stinging them badly. I saw on a number of occasions, the distinctive orange flower patterned jelly from the bell washed up on the beach.

**Salmon**

I was in Kodiak at the time of the salmon spawning and, therefore, that is where I identified them; all salmon species are found throughout the Gulf of Alaska and beyond. Salmon are diadromous (migrate between river and sea environments), returning to the river where they hatched when they are of reproducing age themselves (Lager, 1962). The salmon swim upstream, stop eating and "ripen" when they are close to spawning. After spawning the adults die and return nutrients to the system. The species are timed in "runs" so that the majority of each species spawns together. For the same reason, streams are usually dominated by a species, although other species may share the stream.

The pink or humpback salmon, *Oncorhynchus gorbuscha*, was the species I saw the most of. Pinks were very evident in the streams about the time that we first began paddling in Kodiak. Later in the season, we spent time at the Ayakulik fish weir where the late run of reds or sockeye, *Oncorhynchus nerka*, was evident. The silver or coho salmon, *Oncorhynchus kisutch*, were running up this river as well. King or chinook salmon, *Oncorhynchus tshawytscha*, was identified while flying through the air, narrowly missing the boat.

**Land Mammals**

Brown bears were the most prominent land animal in the region. Kodiak brown bears, *Ursus sp.*, are the largest land carnivore in the world, weighing in at 1,500 pounds (Fish & Wildlife Service, 1987). We saw numerous bears from the boat, but only spotted one while on land. They are well fed on the salmon and berries available
in the area, and tend to be frightened of people. The other land species found on Kodiak was the fox, *Vulpes sp.* We saw them from the boat primarily, although we would see their prints on the beach around our camps. They were not very shy as long as we were in the boat, even if we were within feet of them.

Summary

I believe the similarities between the two regions which I observed are due to their location and proximity in the Gulf of Alaska, Pacific Ocean. Species variations occurring between the southern tip of SE and the Sitka area, for example, are comparable to those occurring between Sitka and Kodiak.

**MARINE BIOLOGY IN THE FIELD**

The experiences of trying to collect information on the biological elements of the environment, with extremely limited resources and equipment, were more than frustrating. This aspect of the project was secondary and often suffered because of that. In planning a trip like this in the future, I would do one of two things depending upon the chosen goals.

1) If the main focus lay in the kayak journey, as my trip did, I would be more realistic about the amount and accuracy of data to be collected. (It was difficult to identify organisms in the water while paddling. We did not have enough time for me to sit still and identify things, so instead, I would catch quick glimpses and remember to sketch and describe it that night.) I was not equipped with the tools or background to do anything beyond observe and take notes. From my observations and some additional research, I can now create a species list and information base (following the QUEST species list model) which would assist other students to focus their preparatory studies on those species likely to be sighted.

2) If the main focus lay in studying the marine environment, at any level, it would be necessary to alter the schedule and equipment significantly. The marine biology base mentioned above could be developed and used as a focus for students to do further and more comprehensive investigations. In addition, there are guide books and other resources which could be made available in the field. The schedule would be developed to reflect the goals of the group. For example, the projected miles per day would be reduced to allow the student(s) to spend time studying the marine environment.

These same ideas could be modified even further in the development of a field course or school. The resources could be
expanded to include a field library, surveying equipment, computers, scientists, etc. Along the same lines, the schedule could include lectures, field investigations and surveys, visits to resource centers, dives, etc. Research beforehand would be important, possibly in the form of a graduate seminar style course or group investigation. The resources are available to develop an experience based and comprehensive field school. For future trips, the level of development would depend on the group and their focus.

CULTURE

The ancestors of native Alaskan groups are believed to have migrated across the Beringa land bridge between 15,000 and 40,000 years ago. Following the herds from which they subsisted, these groups spread across Alaska. Through their regional adaptations, these groups diverged and developed into the four indigenous cultures; Eskimo, Aleut, Athabascan, and Northwest Coast Indian (Alaska Native Journeys, 1993). During my trip, I encountered each of these groups, but spent significant time with Northern Aleuts on Kodiak and two groups of Northwest Coast Indians in southeast (Figure #5).

The groups which make up the Northwest Coast Indians are Tlingits, Haidas and Tsimpshians. Since I was traveling on the outer coast primarily, I did not encounter Tsimpshians as they occupy the mainland coastal areas. The Haida are focused in the southern half of the region, while the Tlingits are in the North. "There was almost complete sharing in mode of life, customs, and habits of these people. Still, all the tribes, because of their various locations, lived in various ways. Some were oriented strongly toward the open sea, others exclusively toward the rivers and inland bays" (Josephson, 1974).

As we paddled along the coast, it was amazing to realize that the region had been populated by these coastal peoples. The villages were constructed in areas providing a good view of the ocean conditions and approaching people. We noticed the advantage of this as we visited old village sites. "Even areas of dangerous water would be acceptable as village sites, the attitude being that local knowledge and skill could make the places safe. Treacherous waters were deemed dangerous only to strangers" (Josephson, 1974). They were masters of their environment, they had to be, "the sea was the source of life. Its abundant resources made a relatively dense population possible once methods for preserving the seasonal fish were found" (Josephson, 1974).
Geographic locations of Indigenous Cultures in the Alaska Region

HISTORICAL AND ETHNOGRAPHIC MAP

Taken from Castleman and Pitcher. 1992.
The communities would move to camps during the summer to take advantage of salmon streams and other distant resources. Because of the travel involved, they sometimes lived out of their canoes, bringing entire families and all the camping necessities. Because of this lifestyle, they were termed marine nomads by Josephson (1974). "They derive their principal nourishment from the sea... which is extraordinarily rich, not only in fish, but in all kinds of mollusks and algae.... He refuses no kind of mollusk and consumes nearly every species of marine plant" (Josephson, 1974). An early explorer "concluded that each man, woman or child consumed the equivalent of approximately 4,000 pounds of fresh fish per year" dried or otherwise preserved (Josephson, 1974).

In the Kodiak region, the environment and the culture were similar to those of southeast. The Kodiak Aleuts relied on sea birds and sea mammals more than the coastal Indians and, therefore, had developed many tools for the purpose (Josephson, 1974). They used kayaks for transportation and hunting, developing different types of boat and ocean skills. Because of the abundance of food, the Aleuts had time to develop in other areas as well. Studies show a complex culture including surgery, complex burial rituals and an impressive array of tools. Their crafts also show great attention to detail and mastery of materials (Alaska Native Tourism Council, 1993).

It is difficult to find a modern analogy that expresses the role of subsistence in the lives of pre-contact native Alaskans. It was more than a trip to the store, it was the stem of their art, religion, transportation and music. Subsistence was the basis of their entire culture; their culture developed around the act of subsisting, surviving and thriving in their coastal environment. All aspects of the cultures are specific to the region and reflect their close relationship with the natural environment. The native populations were completely adapted and successful in the region. They had been living and evolving in their environment for thousands of years.

In the days before the non-native exploitation started, the marine environment provided a bounty of food and materials that were efficiently and effectively reaped by the indigenous people. The foreigners who came to exploit the resources, from the first Russians to the out of state fisherman, did not understand the environment in the same way. The indigenous groups, because of their history as part of the environment, knew its limits. The other groups who came to benefit from the environment wanted as much wealth as possible, as quickly as possible with no regard to the environment or how it would be affected when the resource has been
removed. The difference between the foreign attitude and indigenous (locals and visitors) is amazing and has made the difference between raping the environment and living as a part of it.

In 1989, the infamous Exxon Valdez oil spill occurred. The effects of the spill on the marine life were well publicized at the time and educational displays and information are common. The effects of the oil spill on the Indigenous coastal people of Alaska were something that I never heard about. It wasn’t until we spent time with the people themselves that I began to understand the extent of the damage.

We spoke with many people in the villages which had been impacted by the spill, but the woman who taught me the most was the chief of Port Graham, on the Kenai Peninsula. Elenore McMullen told me the stories of how it used to be, and how it had become. She told me that, before the spill, digging for clams on the lowest tides of the month was a community affair. This was the time when the elders told stories to the children and passed on the knowledge. She said it was a very important time because the community would all come together, and that this did not happen otherwise. Ever since the spill, the clams are toxic and cannot be eaten. She was concerned about the loss of this exchange of information and sharing within the community.

She told me about how Exxon had sent barge loads of food to the villages hardest hit, and then been disgusted and angry when the fresh vegetables had rotted, untouched. Exxon had neglected to realize that the food they had sent was foreign to the villages. Fresh food is hard to find in the villages because it has to be brought in and is too expensive. In the more traditional villages, she explained, nobody knew what to do with tomatoes. For people who primarily subsist and eat minimal amounts of canned goods, the food was useless.

As we talked some more, she told me she frequently would travel between her village and the villages in the Prince William Sound area for meetings. In one village, she would always be greeted at the plane by a hunter. He would have in his skiff sea otters, seals, sea lions, and other food from the ocean. He would tell her to take anything she wanted. She would distribute the meat in the villages she visited and then bring some home for her own. After the oil spill, she was met at her plane by the same man with tears in his eyes and an empty skiff, apologizing for having nothing to give her.
PERSONAL EXPERIENCES

Physical and Nutritional Elements

For the Spring 1993 semester I carried 7 credits, worked at least 35 hours per week and worked on my project proposal, funding and logistics. All of the little time I had left went towards physical preparation. I paddled and did other exercises to get in shape as much as possible, but was not able to attain the level of fitness necessary to start our trip without an adjustment period after we began. In training, I paddled between 6 and 12 miles periodically but mostly worked out for 1 to 2 hours. This was compared to our average of 30 miles per day (up to almost 50 miles) and sitting in the boat for up to 6 hours at a time, often doing 12 hour days.

The first week was the most challenging physically, I think there is no real way to prepare except to do it. The physical adjustments necessary include getting used to sitting in the same position for long periods, getting your arms and torso in shape for endurance paddling and finding a stroke and cadence which is sustainable. It is very important to pay close attention to the stroke you are using. The trick is learning how to use all of the upper body to distribute the stress. If the paddler's form is bad, it can cause uneven distribution of the stress, often focusing it on the wrist and elbow joints. This can cause tendenitous and in extreme cases makes paddling impossible until the joint repairs itself. Times when it is important to give this additional attention include the first week or more and any time when there are opposing conditions.

The schedule which we undertook was reflected by our physical development across the season. Because of the rigorous schedule and a low fat diet, I lost about 15 pounds. I also experienced a gain in muscle strength and mass of the upper-body and a loss of muscle strength in the lower body. The only muscles of the lower body which did not suffer strength loss were those used in an attempt to secure myself in the boat, through bracing with my knees and feet. While in the field, we used our legs about 1 to 2 hours per day for walking short distance in camp. This resulted in a major adjustment when we returned from the field. We actually had to get back in shape for walking; something I ordinarily take for granted.

Good nutrition is the basis for physical performance in continuously demanding conditions. We planned our meals accordingly and found that we still needed additional supplements.
We ate mostly freeze-dried backpacker style meals for breakfast and dinner while in the field. Not the highest quality food but it was necessary in the attempt to keep bulk and weight to a minimum. In addition, freeze-dried meals take very little time and effort to prepare. The lunches were mostly Powerbars because of their nutritional benefits. In addition we had various bars from Health Valley, mixed nuts, dried fruit and the occasional candy bar.

We should have had foods higher in nutritional value, including more amino acids for rapid recovery, and would have enjoyed more diversity in our camp food. The food system we used worked, but for the next trip, I will include food supplements. We concluded that drink mixes such as Pro Optibol contain the extras that we needed and should have used.

Camp Life

I learned a lot about spending extensive time in the field with minimal gear. At the end of a paddling day, we would find what looked like a good location and check it out through the binoculars as we approached. We then pulled the boat up and walked the beach and surrounding area, making lots of noise and looking carefully for bear signs. More than once we abandoned what seemed like a good camp because further inspection revealed too many signs. Most of the time we found good camps, but sometimes took what we could find because of time or limiting topography. In an attempt to avoid bears, we camped on islands or out of the way peninsulas as much as possible, and always away from salmon streams.

In camp we were completely fanatic about leaving no traces of food anywhere. When possible we used driftwood for cooking on and threw it into the ocean after cleaning up, just in case anything spilled in it. There was absolutely no food allowed in the tent, this also extended to soap, toothpaste and anything else that might smell good to a bear.

For personal safety, we each carried a can of Counter Assault bear spray or a loaded .44 magnum. Anytime we went hiking or walking around camp, we made loud noises and maintained visual or verbal contact with each other.

In both Southeast and Kodiak regions we were in areas inhabited by bears. Bears have eyesight similar to or worse than humans, good hearing and an incredibly good sense of smell. I was taught that, if confronted by a bear, I should be very loud and look as large as possible and never, ever run away (this catches their interest and makes you appear as game).
The bears which we had contact with seemed curious, totally uninterested or frightened. Every bear ran in the opposite direction upon smelling us, as this is their strongest, most reliable sense. Because of this keen sense of smell, it was necessary to observe some camp rules. The guideline seems to be to keep all appealing or interesting smells off of gear and the surrounding camp area. We washed dishes and disposed of all food, brushed our teeth and washed in the ocean; and when menstruating it was necessary for me to pee in the water. Using their sense of smell and instinctual fear of fire to our advantage, we sometimes placed burnt wood from our camp fire around the tent when bears were evident in the area. Meticulous as all this seems, we never had a bear in camp and that speaks for itself.

Villages

Entering villages was another subtle skill. I was fortunate in many ways that Martin was experienced at this mode of travel, this was one of the most important things I learned and often made the difference between sleeping in the tent and being asked into the village. It was always important for us to come in the "front door" of the village.

People in the villages tend to spend time looking out their windows to see what is going on with the weather and the ocean conditions. By paddling into the main part of town, we showed our arrival by kayak and made ourselves receptive to people coming to speak with us. Kids were always very helpful in letting us know where things were located and spreading the word of our arrival. In addition to phones (in town only), the villagers also communicate by marine radio; every home or camp has one on and tuned to the local channel. It was common for us to be spotted by a boat in the area which would radio in about us so that the town would know we were coming and be keeping and eye out.

Once in the villages, I found it was very important to keep quiet and listen to what people had to say. I would ask questions, careful not to ask ones which would show my lack of knowledge too often, and enjoy the abundance of information which I would receive. I am sure I came across as shy and quiet; it was so educational to listen, I often redirected questions away from myself. It is important as well not to brag or spend too much time talking about yourself. In the villages it seems that information passed on by some one other than the subject has that much more value.
Difficulties

Some of the difficulties which I encountered throughout the experience originated from a lack of funding and time. Money was extremely tight for both Martin and me from the beginning, but we were determined to make the trip successful regardless. This resulted in lots of work hours during the spring semester, many hours writing to sponsors and other time consuming fundraising activities. It also meant that we hitched rides and exchanged lectures for passage on the ferry, for example, all of which resulted in more time traveling than we wanted. With all of our funds exhausted at the end of the trip, our slides were put on hold; therefore, a valuable resource and major form of documentation was not available to me. Time was made tight by all the work required to pull the trip off, and at such short notice. I would have liked to have spent a significant part of the spring semester doing research and preparing physically, but feel that it was a great accomplishment to successfully complete the project with such obstacles.

Another problem I encountered was the way in which the project came together and how that affected the final paper. In western science, the project arises because of a need to answer a question or hypotheses. My project came into being in a different way. I was told about the FAA project and decided to become involved as a member of the paddling team. In an attempt to tie the FAA project into my own academic goals, I pursued credit for the summer, extending my experience to include an investigation into the marine biota of the regions we would paddle. My approach was to view the trip as a whole with many elements contributing to a broad and basic learning experience. I believe that this was reflected in my detailed proposal, which was accepted and approved. I researched and gathered data in the field according to my proposed outline.

When I returned from Alaska, I had a meeting with Sherwood in which I discussed my intended format for my paper, based on the outline in my proposal. He directed me on a different course which, I felt, placed heavy emphasis on research. After continued discussion, I have produced a paper which reflects a compromise.

I found that it was very hard to explain what I had observed and learned in the form of a scientific research paper. The majority of my information was based on my personal observations and understanding and what was expressed by individuals I encountered. The people I learned the most from were the natives and people who lived close to the marine environment. I would consider some of
these people to be scholars in Indigenous Science. The type of information I received from them is not easily transferred into scientific terms, and therefore it has been difficult for me to express all that I have learned in the form required. I am learning, first hand, about some of the difficulties natives encounter in their own pursuits to teach scientists about the marine ecosystem from a holistic perspective.

Another difficulty stems from the amount of information I was exposed to and the numerous experiences I had. My personal accounts from this trip, if written in entirety, would be enough to fill a book. In documenting such a broad experience, I tried to cover the basics of each significant element. I found the paper getting too large and not adequately reflecting the amount of knowledge gained on any given subject. This was inevitable with a project this large in the time frame which it has taken place. It is hard to narrow the scope when the whole experience has significance.

SUMMARY

The trip provided me with the opportunity to explore a new region via kayak; an experience in itself. Through the Marine Option Program, the trip became a lesson in independent study and experiential education. I began to learn about another culture, caught a glimpse of a new marine environment and became a seasoned kayaker and outdoors person. In addition, I feel that the experience was the first step in my goal to create a similar program for other students.

This project was an incredible opportunity for me to challenge myself in many ways. I feel that the intensity of the experience contributed the amount that I learned. In reflection, I feel as though I still have so much to learn about Alaska, and I really look forward to returning and continuing to learn. I feel fortunate to have met Martin, it was through his expertise that I was able to experience all that I did.
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Appendix 1

FROM AROUND ALASKA
A KAYAKER'S JOURNEY OF DISCOVERY

BACKGROUND

Since 1986 the From Around Alaska (FAA) team has traveled to over 65 villages and hundreds of indigenous camps in rural Alaska, Canada, and the Russian Far East. To date, FAA has traveled close to 10,000 miles on coastal and near shore waterways utilizing the neo-traditional craft most at home in these waters - the KAYAK.

These journeys have provided insight into: traditional ways of knowing, the spiritual role of indigenous sciences like subsistence hunting and gathering, the use of experiential education as a primary learning technique and northern based eco-sensitive issues and trends.

PURPOSE of the PROJECT

The focus of From Around Alaska is to provide public education about the traditional wisdom of indigenous peoples and develop positive attitudes towards related eco-sensitive / northern based issues and trends. FAA is designed to accomplish these objectives by providing an attractive platform by which to expose ideas, issues, and trends emerging from the current renaissance of traditional values in Alaska and surrounding regions.

The culminating educational documentary for this project will be in book/manuscript form. The literary portion of the manuscript will serve as a forum for Alaska's writers, thinkers and artists; traditional and transitional alike. Literary pieces will address northern based topics with international, even global, significance. Photographic documentation of the kayak journey will compliment these unique literary presentations by providing visual insights into the land, it's people and the emerging issues and trends.


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Appendix 2

INTERVIEW LOG

Seattle
Kelly Tjaden, 5/17, Olympus Environment/member of the Alaska team during the crossing of the Bering Strait expedition in 1989 and other sea kayaking expeditions.

Ketchican
Captain, 5/29, of the Alaska Marine Highway System ferry. Shared navigation information on western Gulf of Alaska region including currents, winds and tides; personal experience and literature from the bridge library.

Geoff Gross, 5/30, Southeast Exposure Kayak Tour Co. Tourism in Southeast, recent weather patterns in the area, recent paddling expeditions in the regions we were about to paddle.

Craig
Norwegian Paddlers (3), 5/31, who had just completed a kayak trip around Baker Island, Southeast AK. Recent weather conditions, growth of the kayak sport world wide, Norway's salmon hatcheries and position on the revival of the whaling industry.

Hydaburg
Charles Natkong, Sr., 6/5, 6/6, 6/7, Haida elder, native language instructor. Haida history and culture, traditional use of marine organisms, current cultural revival efforts, videos of traditional dances and canoe construction (including the video of the tree donated to the Polynesian Voyaging Society and the ritual conducted by both native groups).

Woody Morrison, Sr., 6/7, Haida chief and elder. Haida Voyaging Society, Haida history, showed us traditional dress and headgear.

Haida villager, 6/6, told us about licorice and other coastal plants the ancestors used while out on the ocean.

Noyes Island Cannery
Linda, 6/12, of Whale Pass and other cannery workers. Logging and development in the area, drop in fisheries.
Appendix 2

Edna Bay
School kids, 6/13, discussed logging and development, how it was for them to grow up in the community and surrounding area, fishing, weather, history of the community, development of road around the bay and how it changed people, the post office and scow.

Mark, 6/14, owner of the fish buying station and scow store, spoke extensively about the fisheries, community, region and weather patterns.

Steven, 6/14, (and family), certified teacher and resident of Edna Bay for 20 years. Marine life and diving in the region, alternative schools, home study, development in the region.

El Cap. Passage
Employees/Biologists, 6/15, of the El Capitan Passage, Forest Service Station. Took us caving, discussed wolf studies, bird studies, logging's effect on the ecosystem, their job: a "historical footnote."

Workers and fishermen, 6/16, at Port Protection buying station and dock. Fishing industry, navigational hazards, "domestic" wolves.

Point Baker
Fishermen, 6/17, declining fisheries, navigational hazards.

Joe Sebastian and Joan Kautzer, 6/17, 6/18, 6/19; stopping the logging, living and raising a family in the region, building from drift wood, showed me large marine mammal skeletons.

Sitka
Page Else, 6/28, environmental tourism/marine biologist. Job opportunities for marine biologist (or lack of), logging and environmental issues, protection of sea otters and other marine animals, closing of the Sitka pulp mill.

Dave Musgrave, 6/27, 6/29, oceanography professor at UAF. Gave us a tour of the University of Washington's new Research Vessel on which he had just concluded 2 months as chief scientist. He explained his work studying currents in the Pacific, oceanographic equipment, labs, the field of oceanography and UAF's program.
Appendix 2

Boyd Detrickson, 7/1, 7/3, native artist. Effects of hunting on the otter populations and how the abundant otters are a pest and eating all the shellfish, native rights, illegal selling of ivory and other marine mammal parts, his legal battles to maintain his rights as a native, survival of traditional ways in a western society. After hearing who we were, in the tradition of sharing wealth, he gave us large amounts of deer meat, fish, seaweed and seal oil.

Haines
Mark Kistler, 7/6, Able-bodied Seaman on the AMHS ferry, taught me how to navigate and steer the ferry while under way, discussed weather and current data.

Valdez
Brian Teale, 7/8, long time resident/outdoor enthusiast. Weather patterns and local conditions, ice climbing, hiking, snow boarding, outdoor gear and fitness.

Andrew Embic, 7/8, local physician. Sports medicine, first descents white water kayaking, egos and what it takes to excel.

Kimmer Ball, 7/10, owner Adventures & Delights, Kayak Tour Co. kayak industry, season's weather patterns.

Fairbanks
Rick, Lynn & family, 7/18; raising a family and living in Fairbanks, building a log house w/ weather related modifications, the education system and alternative ed. programs, dog-mushing and expeditioning in cold climates, interpersonal relations.

Kenai Peninsula
Peter Brondze, 7/23, ceramicist and long time AK res./ocean kayaker. Development of ocean kayaking as a recreational sport in Alaska.

Employees of Kenai Wilderness Lodge, 7/24. Tourist industry in the area, local conditions.

Conrad Field, 7/24, marine biologist, Antarctic expeditions, volunteer at Center for Coastal Studies. Intertidal organisms, history and current activities of CCS.
Appendix 2

State employees, 7/25, at Kachemak Bay State Park. Weather conditions, educational programs, local bear populations, water quality.

Port Graham
Elenore McMullen, 7/30, chief and public health officer. Village history, public health programs, effect of oil spill, money from settlement and social impacts.

Bob McMullen, 7/31, Port Graham resident/owner of community store. How it is to be a non-native in a village (and Elenore's husband), settlement money and tensions brought up between native and non-native residents regarding who should receive money.

Bob Huntsman, 7/30, 7/31, non-native in village (expressed some similar feelings as McMullen), subsistence, Alaska history (shared his photos from 1940's and on of many AK regions), showed us the traditional kayak frame in the community center and told us about the construction.

Director, 7/30, and workers at the hatchery; were getting their first adult salmon returns. Toured hatchery and explained equipment processes.

Port Graham children, 7/30, 7/31, told about growing up there, compared their village to the neighboring village, girls in Alutiiq dance group showed me their costumes and some steps. Village men/fishermen told about how many of the men were not fishing because of the bad prices this year. Shared thoughts on spirit camps and traditional revival, how they are lost between the elders who know and the children who are being taught. (Adult women are good at gathering to do art work or help out the kids, the men have no gathering methods or focus).

Philamena Knecht, 7/30, language specialist, explained the language preservation and teaching methods/projects in the villages.

Kodiak
Carmen Field, 8/1, Fish and Wildlife Service, lectured on the ferry to Kodiak, answered some of my questions about sea birds.
Appendix 2

Tom Watson, 8/2, Wavetamers Kayak Tours. Kayak industry in Kodiak, recent trips done by other ocean kayakers, recent weather patterns.

Brian Cleary, 8/2, teacher at Kodiak Community College, computer sciences. Background of Kodiak town, gave us contacts and info on current events.

Joe Kelley, 8/3, director Alutiiq Art Center, Kodiak Area Native Association. Traditional Kayak construction efforts and projects, contacts in villages.

Old Harbor
Women & children, 8/8, at the beach. Told us about the village, where things were at, who was in town, where we could camp, ect.

Jeff Peterson, 8/9, lifetime res./tour guide. Coastal Navigation conditions and weather, guide business, hunting in the area, gave us a tour of the area by skiff including an old whaling station, beef ranch from W.W.II, and a salmon stream with many brown bears.

Phyllis & Glenn, 8/9, invited us for "fish and Banya" (banya is traditional sauna). Village life, weather and fishing stories.

Sven Hawkenson joined us the same night (Phyllis' father). He used to be head of the city council in Old Harbor and is now retired. Shared history and family stories, discussed spirit camps and possibilities for involvement of kayaks as a means of tradition revival and focus for youth.

Akhiok
David, 8/13; head of Akhiok city council. Told us about the village and gave us a room in the city building to stay in.

Ephram Agnot, 8/14, 8/15, elder and religious figure. Taught me about the traditional uses of some marine organisms, history of Akhiok, alcohol abuse and recent recovery-community wide, traditions and stories.
Appendix 2

Larry Matfay, 8/15, 8/16, one of the last elders who knows the traditional methods of building kayaks and remembers paddling. We paddled up to his fish camp and were welcomed by his whole family. Two days full of history lessons and information about traditions, the natural/marine environment.

Ayakulik
Shawna Rudio and George Pappas, 8/19, Fish and Wildlife Service employees. Lessons in weir operation, fish counts and how their work determines the length and timing of the commercial salmon season.

Larsen Bay
Roy Jones, 8/19, owner of Amook Lodge. Life in Larsen Bay, resident bears in town, tourism and fisheries, shellfish industry, artifacts and history of area.

Cape Ugat
John Jackoski, 8/28, set net sight owner, fisherman. History and decline of fisheries, politics involved in set net sights and canneries.
Appendix 3

READINGS & RESOURCES

Kayaking & Coastal Navigation:


Kayaks:


Outdoor:


Alaska Culture/History:


Appendix 3


Native Art:


Marine Biology:


Maps & Guides:

USGS Maps of Gulf of Alaska Regions.
Dixon Entrance: D-3, D-4, C-3
Craig: A-3, A-4, A-5, B-4, B-5, B-6, C-4, C-5, C-6, D-4, D-5, D-6, D-7, D-8
Petersburg: A-4, A-5, A-6, B-5, B-6
Sitka: A-4, A-5
Seldovia: C-4, C-5, B-4, B-5, B-6
Kodiak: A-3, A-4, A-5, A-6, B-1, B-2, B-3, C-1, C-2, C-5, C-6, D-1, D-2, D-3, D-4, D-5, D-6

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Appendix 3

Kaguyak: D-5, D-6
Trinity Islands: C-1, D-1, D-2
Karluk: A-1, A-2, B-2, B-3, C-1, C-2

Mac's Field Guide to Northwest Coastal Fish. 1984. The Mountaineers, Seattle. (Laminated guide includes over 70 illustrations, common names, scientific names, description of bottom where it is found and its length. 12" by 7" card.)

Mac's Field Guide to Water Birds of the Northwest Coast. 1986. The Mountaineers, Seattle. (Laminated guide includes 80 illustrations, common names, scientific names, size and typical environment. 12" by 7" card.)
Winter season rains and winds have already begun here on Kodiak Island and I'm happy to say "we're in harbor". Another season of kayak travel has come to a close. This season we managed 31 paddling days, covering over 1,000 miles of coastline in S.E., S. Central, and the Kodiak Archipelago regions of Alaska. About 38 days were spent in visitation in 15 rural communities throughout these regions.

Because of logistics, our itinerary was changed to incorporate as many village visits as time would allow. Our overall mileage fell short of our grandiose goals, but our group did visit 70% of the intended communities. In this central focus we were successful! As always, FAA was warmly welcomed by young and old alike; in the true Alaskan spirit and hospitality.

I am extremely excited at the prospects raised through our FAA efforts. This year was unique in many respects:

1) We are nearing completion of our intended goal for village visits in Alaska with only a few remaining sites in the Aleutian to contact. Our current total is some 60+ sites and at least twice that many contacts in outlying camps. Wow!

2) In S.E. Alaska, we found a strong interest in the revival of the Haida Voyaging Canoe Tradition. This movement in using the traditional canoe as an element towards cultural revival is very significant and extremely exciting. FAA will support this effort in earnest.
3) As expected, traditional kayaks are ripening paths towards cultural revival in S. Central Alaska, especially on Kodiak Island. FAA, along with the Alaskan Center for Experiential Education, is supporting this effort through educational program development projects.

4) FAA support groups continue to grow in communities around Alaska as contributions for the literary section of our presentation are being compiled and edited. Exciting possibilities brewing as for using the FAA experience to develop an interactive / multimedia educational presentation utilizing computer / CD ROM format.

5) FAA assistant, Spinnaker Wyss-Johnsen, upon return to the University of Hawaii - Marine Options Program, will complete 6 credit hours of independent and self directed study through her work with FAA. Spin's efforts and commitment towards fulfilling FAA and personal goals were vital and contributed to the success of the 1993 field season.

Your support has been vital and I take this time to thank you all.

QUYANAQPA!

PATAGONIA, INC+MOTOROLA+GARUDA MOUNTAINEERING+OS SYSTEMS+MAUI JIM SUNGLASSES+POWERFOOD, INC+HEALTH VALLEY FOODS+ALASKA MARINE HIGHWAY+FANTASTIC FOODS+COLORADO KAYAK SUPPLY+WILKINSEN BOATS+HUNT JOHNSON DESIGNS+WIGGY'S, INC+WAVE TAMER KAYAKS +ADVENTURE AND DELIGHTS+RICHMOOR/NATURAL HIGH+GLENN FOODS+OUTDOOR RESEARCH+CASCADE DESIGNS

Appendix 5

SE Log: dates, mileage, weather, personal comments.
Recorded and edited by Spinnaker Wyss-Johnsen

5/31 Craig to Ridge Island 18

Left Craig 10:30am, high tide @ 10. Getting off the beach was hard, we had not packed to boat yet, had to rearrange & put stuff in awkward places, very heavy, too much stuff? Norwegian paddlers and Nola and Jerry paddled with us for a while, our boat's speed showed. Sore and tired along the way, had to get out a lot to stretch, etc. Very beautiful area! Can see Dall from camp. Am nervous about bears, not enjoying bugs, nervous about the trip. Dall is unpaddled by modern kayaks to our knowledge, it is a big commitment once we get on the outer coast. I am wondering if I can do this, if I've gotten in over my head. Honestly can't believe I'm here. It will all be fine, maybe I'll believe that in retrospect. Biota: saw a seal off beach, a marten, lots of birds, dear prints, otter food remnants, etc. Great inter tidal plus good water visibility, can see things on bottom while paddling. Weather: is beautiful, sun out, light winds at our backs, some currents but wind was dominant force. Marine report says there is a very large, strong high over all of the gulf, we should get a couple small lows w/ rain in the next couple days. Tomorrow afternoon we are supposed to get SW winds, could keep us off the outer coast, we'll see.

6/1 Ridge Island to Sea Otter Harbor/Hook Arm 17

Left the beach at 9am, stopped 2pm, paddle was O.K., in a bit of pain, depressed, sore, adjusting I guess, took one break. Found an abalone shell on a log, smelled like sea otter. Spinal column on beach, very light, picked clean, 20-25 inches, Fish. Lots of eagles. Sea lion in Meares passage, sea otter, seal. Massive die-off of ctenophores, thick in Meares Passage, saw some paired, possibly reproducing? Pink/orange ball within clear/iridescent body with pulsating ribbons on bodies. Lots of starfish on rocks, evidence of otter food, urchins and more abalone. Weather is stable.

6/2 Sea Otter to Port Bazon 29

Left late, 10am and out at 6pm. Two spotted seals watched us pack from close off shore. We paddled hard & far, was a good day but boy did it hurt. Still does. We went in behind Devil's Island, saw 2 spotted seals, totally glassy & beautiful. Went back out and saw a bull sea lion and 3 females fishing. The bull shook the fish apart,
tossing them and himself into the air, females swam around and ate the pieces. Very spectacular, startled us and we weren't sure if we should paddle away, watch, take pictures or what. Spotted an unidentified whale, tall dorsal but not an orca, minke? I'm O.K., lost it in the boat—when there was no place to get out, same feeling as being trapped plus physical pain. Difficult to overcome. We'll try for Muzon tomorrow. Good stream where we camped, across from Dolgoi Island.

6/3 Port Bazon to Kaigani

We came around the cape today!!! Left at 11 am, out of the water by 7pm. I was extremely fatigued when I got up, Martin was very supportive, weather was too good to sit. Felt better after we got going. Didn't land till east side of Wolk Point, paddling is getting better. Wind was NW at our beam, made good progress. We'll catch the current tomorrow up the Kaigani Straight, should make some miles. Kaigani is really neat, old village site, good view of coast both ways plus Queen Charlottes. Flat areas where house sites must have been. Check how long it takes for trees to grow, date of last settlement; clearings and new trees mark sites. Off to bed, the bugs are too ferocious. It will be a long trip to Sitka.

6/4 Kaigani to Keg Point

Got Water from Ham Cove on the way to Keg Pt. camp, saw beavers dam and so have begun treating water w/ iodine. Long Island logging was a sight.

6/5 Keg Point to Hydaburg

Paddled into Hydaburg harbor, called home and then, thankfully, found Martin's friend Charles Natkong, Haida elder. He has been showing us videos of Canoe construction, dance and other Haida related stuff. Will leave tomorrow morning, my finger is infected from a blister, all swollen. Looks horrible, drained it (ouch!) and will soak in iodine at Chuck's daughter-in-law's suggestion, she is EM here. I'm having a hard time, want to stop but I know I'd never forgive myself. I want to travel our routes, the means is very difficult still. Must give it a chance or I'll regret it. National Geographic here has an article about the Queen Charlotte Haidas: Vol. 172 #2, July 1987 (soybean, painted Japanese face on cover). I think it said the cedar get 1,200 yrs. old, the kaigani site may have had a pop. of 900 in about 1900. So the site we saw quite recent and evident. Chuck said the petroglyph we saw (North Point) may have been made by a man who "went wild" and was shot near there; we
aren't sure exactly what chuck said, not sure if he knows the truth about it but he did know of it, so our grand discovery was probably too good to be true. That will take some investigating as well.

Additional source: NW Coast Native Indian Art, "Learning By Doing", Clark, Karin & Gilbert, Jim, Raven Publishing 1987-90, 570 Seacliff Rd. Saanichton, B.C. VOS 1MO.

Stayed in Hydaburg at Chuck's, I went to the clinic about my finger and ear infection. Got 2 rounds of Amoxill, 1 for now, 1 for med kit. Felt very depressed, scared, etc. stayed in the house, should have kept busy but it was so hard to even be awake. Dangerous rut, I later discovered.

6/8 Hydaburg to Ridge Island 26

Returned to our 1st camp, in the trees this time in stead of on the Dall side beach, its much better, very flat, no tidal threat. There is stuff (fire, garbage, etc.) from someone else that we did not see last week. I am very comfortable here, familiar ground I guess. Martin reminded me after I had pitched that the other people may have left food or other bear attractants and we should be careful to not camp near other's sites. We keep a clean camp, food and fire stay down on the beach, often below the high tide mark so it will all get washed by the tide. No food, soap, etc. comes near the tent. Nothing that might attract animals. Martin believes that if you piss near your stuff you let the animals know you're there and it's your stuff. He has never had a problem in all his years in the field so I don't argue much with his methods. All our garbage is burned at night, biodegradables get thrown in the ocean. I'm getting the camp routine down pretty well, Martin's been cooking so I have tried to do that more so I get the stove wired. The marine radio is pretty simple, we've seen boats just about every day except on the outside of Dall. Halibut season is tomorrow, 24 hours on June 10 so we've seen tons of boats today. We are held up today in camp. There are Gale warnings in this area. A low in S is causing the weather to sock in. We should have gone this morning, we were both awake at 4am (gets light about 3 or 3:30) but we thought we would sleep for a little while, woke at 8:45 and the wind and rain had started all ready. Everybody who knows this area says early AM till noon is the time to be on the water. After that the wind picks up. We were in the boat a good 6 hours, didn't really keep track, we left about 11:30, my butt didn't get sore, minimal stiffness. Feeling better. I started antibiotics for my ear infection day before yesterday (6/7) went to the Hydaburg clinic. Thoughts: Looks like about 41 miles to
Veta Bay, Baker Island - 64 all the way to Edna Bay, all outer coast. It will be good to get to Sitka.

6/10 on the beach again today, still at ridge I. This is a good site except there is no water. It’s been raining hard enough I’ve gathered 1 bag worth off the tarp today. Martin’s tarp is really good; unless you are in a rain free zone, the tarp is really important. We would be in the tent all day without it, also enables us to cook away from the tent which is important around here. Our tent is working out O.K. seems to be holding up to the rain O.K. I’ve got lots of condensation maybe small leak about midway down, side of my bag is a little wet. The tent is just big enough for two, would be excellent space for 1 person & gear. It forces us to keep all our stuff in the boat which is a little inconvenient but should be that way anyway to eliminate carrying and scattering things everywhere. Our setup is working out well, we need to lighten up a bit. We have dinners & lunches enough for 2 weeks at this point. We’ll be at Edna Bay (resupply) in less than a week and will streamline a bit for the week to Sitka. We weren’t sure how the dinners would work, thus the over packing, lunches too. Carrying 1-1 &1/2, even 2 weeks of food is fine, not too much weight, much more is a real drag. We end up hurting ourselves carrying the boat. It’s a real pain having to lug that boat, empty it, pack it, etc. That’s the way it goes, I guess. This morning we were looking at the map trying to figure if there was any route we could paddle in the weather. I told Martin that I didn’t want to pack camp for less than a 20 mile paddle. We both laughed, just over a week ago we, (mostly me) were straining over our first day of 17 miles or so. I bitched lots! Martin keeps his mouth shut most of the time. He puts up with a bit of shit from me when it gets rough. Day before yesterday we made about 25 miles without a break from sitting and I really felt fine, my arms still hurt warming up and get tired, but sitting is O.K. now.

I am anxious to travel, one day on the beach or in town is long enough. Part of me has come to accept this as how it is and is fine with it. I’m really starting to enjoy it. We see incredible things, I still can’t get over our humpback encounter day before yesterday -so close! My jaw fell off. Found sea lion jaw today. I saw it these past two days, assumed it was the deer jaw we saw last time here. It was washed up and finally picked it up today. We’ve been listening on the radio, halibut fishermen trying to avoid crossing strings mostly, sounded like the orcas and coast guard were adding to the weather to make it quite a difficult day for them. Anxious to get to a new spot and the radio says NE winds will start blowing hard after
the low passes so I'm real skeptical about outside Sumez and Baker and Noyes, I think we might have a tough time.

6/11 Ridge I. to Port Santa Cruz/Aquada Cove 20

Left Ridge Island and went around Sumez Island, Cape Felix was a bit "squirrelly", basically scared the senses out of me, mostly because I had never experienced anything like it and was really confused in the midst of chaos. There was a 6ft. swell running, plus tides that catch on the cape and were starting to run, made it all jumbled and quite rough. The cape has rocks/cliffs which caused the swell to reflect and even break in places off shore. It was quite the experience; it gets wild fast and I learned the harder you paddle, the quicker its over. I also learned that Martin really does know what he is doing and in rough situations I need to keep quiet, follow instructions, and paddle hard. Trust is key here, I need to, and am starting to trust his experience, knowledge and skills. We went down to Port Santa Cruz because I was too scared to cross. Martin was frustrated but respectful of my fears.

6/12 Santa Cruz to Steamboat Bay 30

The Port is beautiful! We saw a few humpbacks in the morning, feeding and rolling with their pectoral fins out then slapping the water. We got into the boat and paddled out into the middle. One of the whales swam right under us; the water was stirring, as if the whale were about to surface from one side to the other then he broke and took a breath really quickly and then dove. He came up about 20ft. from us, he must have been about to surface then noticed us and steered clear. I thought it was turbulence caused by a rock at first, he must have been within a few feet of the surface! It was really exciting, they are beautiful animals. We paddled around the inside of Baker to Noyes Island Cannery. We were offered jobs when we paddled up & invited to walked around the docks, we almost did laundry but found the cafeteria instead. Linda from Whale Pass fed us leftovers and cake. We talked for a while, set up camp right before dark and slept after the ferocious dogs left. Also saw a wood worm that someone had caught in a bucket, impressive.

6/13 Steamboat to Edna Bay 33

We got up and out by 7:30, no packing to do made it easy! Saw harbor porpoises before we even left the bay. Lots of humpbacks breaching between Noyes and the Morelles. Really enjoyed them and Salmon trying to get lice off, until the Waterfall speed boats zoomed through and scared everything under. The Morel Islands are
outstanding, saw a whole group of otters, babies too, on the north end, past Turtle I.

Edna Bay is really great, cool people, beautiful location except the clear cut. Met Mark, owner of the Edna Bay Buying Station, and Steven & family. He seemed really cool, hippie from Seattle/ Port Townsend music scene 20 years ago. He seems like a good possible contact for the field school. They home school their 4 kids, had gotten wet suits for them in the mail the day we were there, his daughter is so beautiful! Rows well. Excited to go snorkeling, got me to keep my mask. We got our box at the Post, unloaded and packed the boat with 2 weeks worth of food, filled the box with all the things we haven't and won't use and our boat is packed perfect. Just enough room for everything and will get more roomy as we eat through our food stock. Our bags have been extreme overkill, mass and weight, need 30 degree bags or one of each if the temps are questionable. Have not used rain gear because of high pressure system. Also have not used my mask but Steven convinced me to check it out. He said after living here for so long, he thought he had seen the bio stuff but was amazed at how much more you can see. I'll try it near Goddard if not before. Lots of diving in Sitka too, Apparently.

6/14 Edna Bay to Tenass Passage

We chomped our Hagendaz from the Scow and made our way to just near El Cap. Passage in the evening. We paddled from 6:30 to 10-ish with the tide so we could get in position to ride the flood up El Cap. We got Halibut cheeks from Mark and ate them for late dinner, SO good!

6/15 Tenass to Calder Bay

This AM we got to the Forest Service about 11:30 and went climbing in the caves - totally killer! Unbelievable! We picked salmon berries & blueberries, they are coming into season! We hung out with Linda-the new cook at the station. I took her for a quick paddle. Visited with the guys too, cool people, very nice, very academic, made me miss the U. atmosphere a little. We left about 5 and paddled into Calder Bay and checked out this trapper's cabin, pretty cool, lots of bugs so we are in the tent. The area around here is most intense. There are huge peaks, beautiful passages, bays, etc. just incredible. I'm looking forward to Point Baker, supposed to be a bunch of Greenies & Hippies. They forced out the plan to build a road there a while back and withdrew from the US supposedly to become their own nation. Should be some interesting folks. I am
overwhelmed with the beauty of this area. I have, in the past 2 days, seen so many places I would love to live. I feel as though I have found another place as incredible as Hawaii and the Big Island. I'm stoked, paddling is getting routine. I am comfortable with the trip to Sitka, can't wait to get to Goddard. Can't wait to show others how incredible it is here. A smidge homesick. Wish I could swim and surf.

6/16 Calder Bay to Point Baker

We are in Port Protection doing laundry at Wooden Wheel Buying Station. Nice people, free shower, $2 laundry. We got more hagendaz and bananas. I bought tortillas and cheese! I have been craving cheese, butter, milk-fats & dairy stuff. It occurred to me that the food we have is all really low fat/high cal. stuff. All the bars we eat are 2 grams or less, mostly 0 grams. Breakfast can't be much either. I think the freeze-dried foods are quite low. So it makes sense with all the energy expanded and cold sometimes. El Cap. was really nice, this end of the l. is great, paddle was good. We'll probably head to Pt. Baker, hear there is a community building with T.V., kitchen, etc. We want to meet with people at baker, heard they are cool. Most of the peps. here are nice, friendly, ask about the boat and our trip, offer advice on tricky spots, etc. This one fisherman, Danny seems the only nuisance, he shot the wolf down the dock because it bit him. I suspect he got into a dog fight (between his dog and the wdf) that he shouldn't have. The owner of the dock is really nice, and his worker/ too. People with the wolves seem nice, have traveled much around here and offered good advice about the Spanish Islands & Coronation. Danny said the beaches on Coronation are good beach combing/glass balls. Hope the weather is goo so we can go out there. Here the low pressure is to get stronger tomorrow, 25 knots SE winds, if that comes to be we could be in for a wait. When we were at Ridge I. we got scared off a good day on the 9th by the report, but we can see the crossing from here to Kuiu so we should avoid false weather scares. I am settling into the groove, really enjoying the trip, looking forward to Goddard/Sitka but seeing the end in grasp makes me wish we were going farther. I enjoy being out and stopping in to town, meeting people so it seems to be a good balance. As long as we wash every week, much past that we can hardly stand our stench. And then it's nice to get some of the food cravings taken care of; I can't believe how many places have had Hagendaz, its just amazing. People say at the store here that it gets eaten constantly, even through winter. Comes here every Wednesday, sometimes partly melted because the weather has been so warm.
lately. I think it is great. I am really happy, having lots of fun, seeing incredible things. Martin and I are getting along great. I am a bit weary of bad weather and conditions on the outer coast to Sitka. I think the conditions will be O.K., weather this season is on the 3rd in the 3 year cycle of bad, really, bad & good. I like the inside and small islands/channel systems a lot. We also spotted some really good climbing spots. Marine life: spotted seals on the small rock outside shakan Bay, 1 hump. on the way by Hole-in-the-Wall. Not much else today. Almost finished with Amoxill, ear still aches, finger slowly healing, taking only 1 ibuprofen in the morning seems to help with aching back. I'm stoked.

"Miles from nowhere, guess I'll take my time, oh yeah, to reach there." Cat. I am in Pt. Baker right now (6/18), at Joe Sebastian's house. He and Joan have 2 kids, Forest and Elsa, 5 & 3 yrs. We came into Port Protection on the 16th, stayed there till about 7:30pm then paddled over here. We cooked and slept in the community building, unfortunately the water here is "contaminated", the spring at Pt. Protection is good so we may go over for a bit of food & water before we cross over to Kuui I. maybe tomorrow AM if the weather is good. I'll be ready to go, 2 days in town is about the max. I haven't been feeling too great but it should pass, I'm feeling better today than yesterday. (Amoxill?-same symptoms in Kodiak when I had strep) Off to beach comb. Went logging with Joe and Martin. We walked a couple beaches and got about 6 logs, toed them back to his house. Incredible way to build.

6/19  Pt. Baker to 1 mile NE of Pt. Amelius  18

AM @ Joe's house, saw a deer from the living room. Wind picked up after 12, we left about 2pm to catch the ebb tide across the Straight. Was quite rough, I got soaked without my dry suit top on. Stupid move, Patagonia Paddling jacket is not a substitute for OS suit. Winds from the W, SW blowing up the channel. We got across in record time and battled down to a camp about 1 mile NE of Point Amelius. Beautiful camp, big sand beach. Saw deer prints, small bear and maybe otter prints. Wondering if the NOLS program of 20 paddlers was here.

6/20  Amelius to Coronation Island/China Bay  36

Left late, maybe 9 or 10? Saw lots of otters, spotted seals on Kuui. Crossed over to Coronation, good beach on small island between 2nd & 3rd Spanish Islands, and on that side of Coronation. Went down the S coast & saw a few sea birds, otters, spotted seals, etc. Willowas on coast from W winds coming off mountains. China
Bay is beautiful, landing in far rear, lots of seals with pups, one looked like it had a dead pup, would not leave it.

6/21 China Bay to Kuiu Island/Howard Cove

When we left the beach we spotted a peregrine falcon on a rock near by. Beautiful. We went around the island, many seabirds on the point, puffins! Tons, everywhere, great birds! On Aats point there was a sea lion rookery, Martin said about 300, big bulls, small pups. About 5-6 came and checked us out, I was quite nervous, the young bulls are unbelievably huge. We battled our way to the light house on cape Decision, took some photos, then really battled to Howard Cove. We camped on the backside of the island, good view of the conditions, slim on wandering wildlife. There are brown bears in these parts, north of the Black bears. Kuiu is an incredible island. Coronation was the best! Next to Dall, my two favorites so far - everything has been so outstanding, I hate to make any of it seem less memorable. We have bagged 7-8 capes, made nearly 400 miles (396) and been out 22 days now. Today is solstice, the longest day of the year. Supposed to be a big celebration in Fairbanks, oh well, its beautiful here. I am good, sore, well fed, looking forward, still, to Goddard. Once we get onto Baranof, all will be well and in the home stretch.

6/23 Howard Cove to Baranof Island/?? cove

Bear on the mainland when we woke up got us nervous, we packed in 30 min., record time. Howard Cove to tackle the crossing. We went up to Crowley Bight, saw 3 black bears and 2 deer on the shore - decided not to land. We were too low on water to risk crossing in case we found a campsite without so we went on up to Table Bay. Landed on the SW side, found very little water, merky but enough to be safe. We crossed right from there, took a N, NW bearing for the cape. The weather was perfect, the day on the beach at Howard was a good choice. The 22nd the pressure was high still, lots of wind/surf. Too rough. 23rd it was glassed out, the calm between high and low pressures. We had a very light S, SW wind all the way across. Very small swell, mostly just a little left over from the winds. Lots of birds across. It got a little squirrelly at the cape but the weather was so good we had to pass up Port Alexander. (I would have liked to paddle the Chatham Straight area, Kuiu and Baranof/Chichikof area. This region is very beautiful. So off Cape Ommaney there was a rip which ran probably west, quite far out. We snuck right through next to the rocks, lots of sea birds) it was rough but only for about 5 min., each point up the coast that
day was a bit squirrelly, the cape effects the coast way north. We paddled into Little Puffin Bay and got water and ate. Totally beautiful spot, we were so happy to have made such a great crossing! (We saw tons of S. lions on "sea lion rocks", what a surprise. Had to sneak through the rocks inside to avoid large mammals and rip - a bit of an adrenaline high but all went fine, dodging rocks and trying not to disturb outcast bulls a few feet away on rocks.) Baranof topo is a bit different than the others, much higher/snow on top still. The weather is amplified by the dramatic terrain. We camped in no name bight, a hole-in-the-wall type opening with islands and white cliffs. We perched rather than camped, tucked in the trees. Hard carry, I dropped the boat, almost fell on seaweed, all that good stuff. We got in around 8pm or so, started at 8am - 12 hour day, ughh!

6/24 Cove to Sevenfathom Bay Cabin 42
We got up and packed, ocean looked rough but the pressure had gone down and we thought it might get worse. Mostly we wanted to get away from the cape influence and go to Goddard. Martin slipped on the kelp while we did our carry, almost went in completely. We had a tough time, really low tide, lots of slippery kelp. We got rained on good too. Finally made it into the boat and out the entrance and boy was the sea rough. Hard start right off. We made it out and down the coast, big following sea, maybe 12 ft max. "Chaotic Sea" as Dr. Stroup would have said. I don't think he would have been out in it, but we had Goddard on the brain. We got down to Walker Channel, through the Slate Islands about 5:30 (didn't leave camp until about 12:30) We took a brief break and then went on to Sevenfathom Bay where we found the cabin much to our delight! 2 yrs. old, excellent condition. Next day we dried out, washed clothes and laid around a bit. Waiting for the 6pm high tide then we're off to Goddard. I could stay here for a while - great place/great location.

6/25 Sevenfathom to Goddard 6
Got off from Sevenfathom with ease, we were sore/lazy and took our time to Goddard. The seas were still rough so we took the inside route; about 3 extra miles but very beautiful! Pulled right up at Goddard, still high tide, brewed up dinner with the ease and grace of seasoned paddlers/campers, pitched and then hit the hot springs. Felt SO great! The water shortage was evident there too, not much cold water for the tubs. We met a guy who was solo fishing from Bellingham (later we ran into the blonde from Edna Bay who had heard from him, we think, how we had done, small world!) Anyway, was nice to talk with another person, get the news, ect. We had been
anxious to speak with the fishing boat who passed us in the channel, but he hadn't stopped. This close to town, people tend to think your from Sitka rather than Muzon! We got a weather report and general info from the Bellingham guy, nice person. Can't imagine solo fishing all summer.

6/26  Goddard to Sitka  24

Next morning we got up, ate some granola and got packed floating. I took a tub, Martin was feeling dehydrated but was not drinking as much water as I thought he should. Headache, ect. we were both anxious to get to Sitka. A bit snappy. Had a good run, took our sweet time, stopped on a beach where I got tons of urchin spines and shells while Martin laid in the sun a bit. On to Sitka, we got nailed by the afternoon W winds around the islands off town. Got soaked and a bit pummeled but didn't care because we were close to town and the sun was out and warm. We pulled up at the tourist's seasonal dock after almost being squished in the harbor, very busy! It was such a shock to be there, we were dazed. 2 cruise ships in and just mobs of wandering, blabbering people from far away places and mind sets. It was culture shock, or culture exploitation shock. Very weird. We laid our things out on the dock and rested for a few, sun felt great! We ended up bumming around till late, didn't know exactly where the youth hostel was, etc. So we camped at the R/V spot and hauled our boat up. Next morning, 6/26 we met Dave Musgrave, he walked by and started rapping with Martin, turns out they knew each other from Fairbanks, Dave's ex-wife was Martin's adviser. Small state. Spent a night with Page and Joe (friends of Joe and Joan) nice people, Page was a bit fried with work. We hitched back to town, made some calls, saw Liz drive by and located Steve Will and family. Really nice people! Wonderful kids, Clea and Alexis, sled dog reject Radio and cats Danger & Sara, Family friend Bert. We aimed to leave Saturday evening but the ferry left a tad early and we paddled slow so we missed it. Oh well, back to the Will's house for 4th of July, fireworks went on for ever and then some. Clea was wide awake when we got home, silly girl. Waffles in the mom. Also spent time with Boyd Detrickson and got some deer meat, fish seaweed, seal oil, etc. He is an interesting man, learned some from him. Got the ferry on time and jumped on, met some cool people, missed the stop at the hot springs in Tenikee at 2am (should have gone, Tenikee burnt down shortly after).
Appendix 6

Kenai Peninsula and Kodiak Log:
   Dates, mileage, weather, personal comments.
Recorded and edited by Spinnaker Wyss-Johnsen

7/22
   Went with Kimmer to the Homer turnoff and waited until the
   ferry had already left before we got a ride. Picked up by Lisa and
   Peter Brondz, kayakers from Bird Creek. Stayed with them at their
   friend Michelle's house.

7/24
   Paddled across the inlet from the end of the Homer spit to the
   Kenai Wilderness Lodge, then to the Center for Coastal Studies
   (where Conrad was very helpful in my pursuit of info) and then into
   Halibut Cove. Neat place, highliners and artsie trip. Lots of money
   there but some nee people. Lamas and snappy horse. We stayed one
   night, went to the cafe and ate salmon shark, delicious!

7/26
   Paddled to Hesketh Island, got some great photos of the two
   traditional style boats there, made by Gregor in Homer. Spent the
   night then on to Seldovia.

7/28
   Left the beach about 12, nasty weather. Met Peter and Lisa
   about mid channel, they were headed back to Hesketh, we went on to
   Port Graham.

7/29
   In Port Graham, got up and ate berries, went to town and
   visited with people through the 31st. Wonderful people, learned
   tremendous stuff, traditional style village.

8/2-8/4
   Stayed with the Cleary's and got our gear together.

8/4
   left Cleary's and traveled down the coast to Cape Chiniak,
   stopped at the salmon stream and was totally amazed! So many fish!
   Continued on around the point to get away from the salmon and road.
8/5
Got up too late, winds SW and swell, we came around the corner and are camped on the bight on the Cape facing E. Nice spot, weather is a bit snotty so we'll stay out of it, big fog bank rolling in.

8/6
We stayed in camp, nasty weather.

8/7
Paddled to bight near Cape, left hand side of Ugak bay. Good paddle but we battled winds for a long time coming toward the bay. I also got a sunburn but didn't realize it because of the breeze, was spacey and headachy, felt really bad. Dehydrated! Good camp, nice bay with lake behind beach. Dinner was interrupted by sighting a bear down the beach. Didn't come but made us nervous. We had stopped on the beach and shot the gun so I'm confident about using it now. Need to experiment with the bear spray.

8/8
Paddled into Old Harbor, really nice people. Spoke with many on various issues. Jeff Peterson is in the tour biz and the lodge is great, also Ocean Bay has a dig going on, good tour possibilities.

8/12
More wind, made it to the beach East of Russian Bay. Passed some fishermen waiting for the tide, told us that the wind was blowing 40 miles/hr and why the hell were we trying to battle it? Good question, we landed on the first good spot and camped. Saw a few foxes, lots of bear sign but no bears.

8/13
Got up about 7am, on the water by 7:50, looked good, wind actually at our backs! Got nasty after we were about half way across the bay toward Akhiok. Really rough, N winds 3/4 of the way. Saw set netters in their skiff picking nets, asked if we were O.K., pretty fun, we were totally jazzed by the big following weather. Akhiok is great, staying in the city building, visited with Ephram and others.

Don't really know the date.
Spent maybe two days in Akhiok, part of two days with Larry Matvay at his camp which was incredible. Really nice people and we got to listen to story after story about Larry's life and experiences.
I guess he's in his 80's now, still trekking along. Paddled to the cape but was too rough, next day we paddled to Ayakulik and met up with the ADF&G workers. I got really bad strep throat and high fever, lay low and take antibiotics. Is good to be in a cabin, 60 knot winds and 20 foot seas.

8/25

Came from Karluk yesterday, really rough conditions, NE winds against us all the way. I am in the tent, in Larsen bay. We got in late last night and have not ventured out of camp yet. I think I'm sick from the antibiotics, had a similar reaction when I had an ear infection and took this amoxicillin stuff. Really burned out, the bad weather is making the end of this trip a bit obnoxious. Journal entries are getting really sparse, I just don't have the energy, nor do I want to think about the difficult paddles we've had.

Met some really nice people, Roy and his family at Amook lodge, got a Banya and some good food. Bears come right to the salmon stream in town and people here can't believe we are camped out. The bears have plenty to eat, the don't come to the beach, at least not yet.

8/27

At Cape Ugat, John Jackoski's set net camp. Really nice people, two hands from Hawaii, talking about walking around barefoot and I realize I have no calluses left! We had cream cheese and cracker, I could have eaten the whole bar of cream cheese, craving fat like crazy. The weather has not gotten better, is getting colder and rougher. Time to get off the ocean.