and Non-Endangered Cetaceans: There are at least 17 cetacear species which may occur in the proposed sale area. Seve of these species and one avian species are considered to b endangered. As defined in the Endangered Species Act of 1973. an endangered species is any species which is in danger of extinction throughout all or a significant portion of its range, whereas a threatened species is a species which is likely to become endangered species within the foreseeable future. Species protected by the act are those for which the Secretary of the Interior has officially listed or proposed to list via the Federal Register, as endangered or threa-Listed endangered species which may occur in the proposed reported in the Federal Register (Vol. 44, No. the gray whale (Eschrichtius robustus), humpback (Megaptera novaengliae), fin whale <u>(Balaenoptera</u> lus), sei whale <u>(Balae</u>r physa (Balaenoptera orealis), blue whale enoptera musculus), sperm whale macrocephalus), right whale (Eubalaena glacialis), and the Aleutian Canada Goose (Branta canadensis leucopareia).

5. Endangered Species

Other species listed as endangered may occur in various locations of the Gulf of Alaska or are possible transients through southcentral Alaska, including the peregrine falcon (Falco peregrinus anatum and short-tailed ross (Diomeda immutabilis). latter None of the known to make significant use of or have been recently reported in or near the proposed sale area Peregrines observed in the Kodiak area are most likely <u>F</u>. <u>peregri</u>nus pealei which is not a listed Previous reports of the occurrence of F. p. anatum have been determined to most likely be a light phase of <u>F</u>. <u>p</u>. <u>pealei</u> (MacIntosh, 1980; personal communication, National Marine Fisheries Service, Kodiak). If F. p. tundrius would occur ocally in the proposed sale 60 area, use would probably be by wintering birds. Mammalian species discussed herein are also protected under the Marine Mamma Protection Act of 1972, and the Aleutian Canada goose is also protected by various acts and treaties

There are no animal species officially listed as "threatened or proposed for listing in the proposed sale area. Also, there are no listed endangered plants in the area.

Cetaceans which are not endangered but which occur in or near the proposed sale area are the beluga whale (Delphinapterus leucas), killer whale (Orcinu orca), minke whale (Balaenoptera

acutorostrata). Dall porpoise (Phocoenoides dalli), and harbor (Phocoena phocoena) Species less well known and less Frequently observed, but which may occasionally occur in or near the proposed sale area includ beaked whales (Bering Sea beaked whale, <u>Mesoplodon</u> stejnegeri; goosebeak whale, Ziphius cavi-rostris; giant bottlenose whale erardius bairdii); the Pacific dolphin (Lagenorwhite-sided hynchus obliquidens); northern right whale dolphin (Lissodelphis borealis)

Endangered Species

Gray Whale: The gray whale only in the north Pacific and adjacent waters of the Arctic Ocean (Rice and Wolman, 1971). The primary summer range of this species is in the Bering Sea, Chukchi Sea, and western Beaufort Sea (Rice and Wolman, 1971). east Pacific stock of grav whales migrate through the Gulf of Alaska and Kodiak area during April, May, and June, and again during the fall migration November and December (Berzin and Rovnin, 1966; Rice and Wolman, 1971). According to Rice and (1971:127), southward migrating gray whales swim within a few kilometers of shore until reaching southern California. Nemoto (1964) suggested that gray whales also migrate through narrow straits between islands and the mainland.

Sightings shown on graphic suggest movements of grav whales through Stevenson Entrance to the west of Shuvak Island. The extent of their incursion into lower Cook Inlet is not well documented, but probably of minor importance. Migrants are often seen near the Barren Islands, and it is likely that some grav hales move through Kupreanof Strait, Unfortunately little research on cetaceans has been done in Shelikof Strait and thus information is limited regarding the area

Little empirical information exists to verify that gray whale migration is restricted to the route shown in graphic 12. However, it is evident that this species characteristically migrates close to shore in much of its range. For example, percent of the entire gray whale population was estimated travel within 1.9 kilometers of shore at certain points along the California coast (Rice and Wolman, 1971:110). It can be assumed that the migration behavior of animals in the Gulf of Alaska pproximates that observed to the south, and therefore, a most probable location of the migration corridor is illustrated as hown on graphic 12. It is possible that a few gray whales south of Kodiak and including the overwinter in the Gulf of Alaska (Berzin and Roynin, 1966; Fiscus,

et al., 1976), but it is unknown to what extent this would occur near the proposed sale area. Although peak numbers of gray whales would occur during migration during months men tioned above, the gray whales could occur in the Kodiak Island area anytime from March through November (Fiscus, et al., 1976)

The gray whale, like the hump back, fin, blue, sei, and right whales, is a summer range feeder During summer, gray whales build up fat lavers while feeding in he northern part of their range Throughout the fall migration and winter, they survive primarily of stored body fat reserves until subsequent return to the summer range (Gilmore, 1959; Rice and Wolman, 1971). Little, if any food is consumed by gray whale during migration (Rice and Wol-1971:127). However, then is recent evidence (Norris, 1980) subsidiary summer lations of gray whales do not migrate to the northernmos ranges, but feed at scattered subarctic locations. The exten to which waters in or near the proposed sale area are used for such purposes is unknown. Breed ing and calving occurs off Baja California, during the winter season (Gilmore, 1959; Rice and Wolman, 1971).

Unlike other baleen whales, th grav whale is a bottom feeder with benthic amphipod crustaceans as its preferred food (Nemoto 1959; Rice and Wolman, 1971; Pivorunas, 1979), Polychaete worms and molluscs are other benthic food items of this species and schooling fish may also be eaten (Rice and Wolman, 1971; Ridgway, et al., 1972)

Population estimates vary between researchers. Fiscus, et al. (1976), estimated the total population at approximately 11,000 animals. Recent counts at Unimak Island estimated 13,677 grav whales migrated out of the ring Sea in 1979 (Anonymous, 1980). Other estimates have placed their total abundance at approximately 15,000. Regardles: difference in population estimates, the species may be approaching pre-exploitation levels of abundance.

Humpback Whales: In the north Pacific, the humpback whale is distributed from the equator, north to 70° N. latitude in the Chukchi Sea (Ridgway, 1972; Rice, 1974). The summer range of this population extends along the coast from Vancouver northward to the southern part of the Chukchi Sea (Berzin and Rovnin, 1966). In the Gulf of Alaska, humpback whales concentrate in three regions: (1) the Portlock and Albatross Banks to eastern Aleutians; (2) Montague Strait and the Prince William

Sound area; and (3) the inland waters of southeastern Alaska. Stephen's Passage, and Frederick Sound (Berzin and Rovnin, 1966: Fiscus, et al., 1976; Mercer, Braham, and Fiscus, 1977). Near the proposed sale area, humpbacks have been sighted repeatedly between Shuvak Islands and the Barren Islands and between Kodiak Island and the Trinity Islands (Calkins, 1979; Calkins, personal communication, 1979). From 1958 to 1976, many sightings of humpbacks were recorded in late spring east of Kodiak Island Fiscus, et al., 1976). The extent to which such records are biased by variance in observer effort and occurrence is unknown. but it is possible that humpback occurrence in Shelikof Strait is greater than indicated by exsting data. As shown on graphic 12, at least one sighting of a humpback whale was made recently near Uyak Bay. Humpbacks have been sighted as early as March off the Alexander Archipelago with peak occurrences during May for the Portlock and Albatross Banks area and Prince William Sound (Fiscus, et al., 1976: lercer, Braham, and Fiscus, 1977). Fall migration may begin as early as September (Berzin and Rovnin, 1966; Ridgway, 1972) from northern waters in the Bering but southward migration out of the Gulf of Alaska and Kodiak area usually starts in December to wintering grounds off Mexico and the Hawaiian Archipelago (Fiscus, et al., 1976). Berzin and Rovnin (1966) and Hall and Tillman (1977) suggested that some humpbacks may remain in the Gulf of Alaska during mild winters as indicated by occasional winter sightings. The northward nigration of this species occurs in early March (Wolman, 1972; Fiscus, et al., 1976). Fetal growth curves indicate breeding occurs from October through April.

The humpback whale feeds euphausiids and sometimes small fish such as herring and cod (Nemoto, 1959: Nemoto and Kasuya 1965; Wolman, 1978) by engulfment According to (1972), evidence indicates that umpback whales are primarily summer feeders.

The north Pacific population of humpback whales has been protected from commercial whaling since 1966. Evidence indicates that this population is increasing, with the estimated north acific population now at about 1.400 animals (Fiscus, et al.,

Fin Whale: The fin whale is widely distributed in the northeastern Pacific with the Gulf of Alaska representing a significant portion of its summer feeding range (Fiscus, et al., 1976). Concentrations occur during May to August from 144° W. to 150° W.

longitude and 56° N. to 59° N. latitude, including part of Portlock Bank and from an area near the Shumagin Islands to the Trinity Islands (Berzin Rovnin, 1966; Fiscus, et al. 1976)

During spring migration, fin whales first occur in southeastern Alaskan waters in March and peak in April. Peak occur rences in the Kodiak Islandnorthern Gulf of Alaska begin in Mav (Fiscus, et al., 1976) Although fall migration of fin whales begins in Sentember in the Bering Sea, this species will remain in the Aleutian and Gulf of Alaska waters until November with some fin whales possibly winter ing in the southeastern Aleutian nd Gulf of Alaska area (Berzin and Rovnin, 1966). From extrapolation of fetal growth curves. breeding apparently occurs from September through March.

The food sources of f.a whales in the north Pacific include euphausiids as well as herring and capelin (Nemoto, 1959; Nemoto and Kasuya, 1965; Ridgway, 1972). Fin whales, like blue whales feed by engulfment of large swarms or schools of prey moto, 1959; Pivorunas, 1979).

The population of fin whales in the eastern north Pacific has been estimated at 9,000 animals (Rice, 1974); other estimates of the north Pacific stock range up to 16,000 animals (Ohsumi and Wada, 1974; as cited by Fiscus, et al., 1976).

As shown on graphic 12, sightings of fin whales have occurred relatively nearshore east of Kodiak Island in Swar Cook Inlet, and Shelikof Strait. Relative use of these areas is unknown, but since the species is generally considered an offshore. continental shelf inhabitant (Fiscus, et al., 1976), it is most likely that occurrence abundance of this species is greatest to the east Island in waters of the Gulf of

Sei Whale: The sei whale occurs the Pacific, Atlantic, and Antarctic Oceans (Ridgway, 1972). In the Gulf of Alaska, the summer distribution of the sei whale is similar to that of the fin whale (Rice, 1974), A concentration area of this species is just east of Portlock Bank in the Gulf of Alaska. Peak numbers occur during May and June southeast of the Aleutian Islands (Nishiwaki, 1966; Berzin and Rovnin, 1966) Migration periods and routes are similar to that of the fin whale Fetal growth curves indicate breeding occurs from October to March.

The principal food source of sei whales in the Gulf of Alaska is small copepods <u>(Calanus)</u>, which

the sei whale catches by skimming the water surface (Nemoto, 1959; Nemoto and Kasuva, 1965; Pivorunas, 1979). Other food sources the north Pacific include euphausiid crustaceans and herring, sandlance, and pollock (Ridgway, 1972).

The set whale population within the north Pacific is estimated to be about 8,600 animals (Tillman, 1976, as cited by Fiscus, et al. 1976). Pre-whaling estimates of sei whale abundance in the north Pacific range from 40,000 42,000 animals (Fiscus et al. 1976).

Fiscus, et al. (1976), described the sei as an offshore, continental shelf inhabitant. As shown on graphic 12, occasional sight ings occur nearshore on the east side of Kodiak Island. Since no systematic surveys of large cetaceans have been performed in Shelikof Strait, it is difficult access the extent of sei occurrence there. However, in light of what is known about th species, waters east of Kodiak Island are probably more important habitat to the population at large than areas of lower Cook Inlet and Shelikof Strait.

Blue Whale: In the north Paci fic, the blue whale is distributed on the west from Baja California north to the Berin Sea (Ridgway, 1972; Berzin and Rovnin, 1966; Nishiwaki, 1966) In its summer range, this species occurs in relative abundance in an area just south of the Aleutian Islands from 160° W. longitude to 175° W. longitude (Rice 1974; Berzin and Rovnin, 1966). It is also distributed from an area north of 50° N latitude extending southeast of Kodiak Island across the Gulf of Alaska and southeastern Alaska Vancouver Island (Berzin and Rovnin, 1966) Large concentrations of this species once occurred in the northern part of the Gulf of Alaska southwest of Prince William Sound, in the Portlock Banks (Nishiwaki, 1966), and west of the Queen Charlotte Islands and the Alexander Archipelago (Berzin and Rovnin, 1966).

GRAPHIC 12

ENDANGERED SPECIES & NON – ENDANGERED CETACEANS

III. B. 5.

According to Berzin and Rovnin (1966), blue whale spring migration begins in April-May as whales travel north along the American shore of the Pacific. Rice (1974) reported that all blue whales seen off California were less than 80 kilometers from shore and some were only 3 kilometers from shore, with many in shallow water between 50 and 200 meters deep. Whaling records indicate a peak occurrence of blue whales in the Aleutians in June and July (Rice, 1974). Fall migration of the blue whale begins September, moving south (Berzin and Roynin, 1966) to wintering areas off Baja California and near the equator (Fiscus, et al.,

the blue whale is unknown. Three recent confirmed sightings were recently made in the Gulf of Alaska, one near Chirikof (Consigliari, 1979. Personal communication, National Marine Fisheries Service, Seattle).

The principal food of blue whales in their summer range is small euphausiid crustaceans (Nemoto. 1959; Nemoto and Kasuya, 1965; Berzin and Rovnin, 1966; Ridgway 1972). Food is obtained by engulfment, and therefore, they require dense swarms of plankton Nemoto, 1959; Pivorunas, 1979)

The blue whale population in the north Pacific has been reduced by commercial whaling from an estimated pre-whaling population of 6,000 (Rice, 1974) to 1,600 animals (Wada, 1973, as cited by Fiscus, et al., 1976). Although blue whales have been protected since 1966, no significant recovery has been detected (Tillman, 1975; as cited by Fiscus, et

Fiscus, et al. (1976), described the species as primarily an oceanic (shelf slope and off the continental shelf) inhabitant It is unlikely that waters of lower Cook Inlet or Shelikof Strait are of major importance to the species.

Right Whale: This species is robably the most rare of the endangered whales. Three separate populations of the right whale have been recognized: the north Atlantic, the north Pacific. and the Southern Hemisphere populations (Pivorunas, 1979). The north Pacific population was distributed on the western side of the Pacific from California north as far as the Bering Strait. However, the northern extent of their present range is considered to be the southeastern Bering Sea (Berzin and Rovnin, 1966; Rice, 1974). The entire Gulf of Alaska from Vancouver Island-Alexander Archipelago to the eastern Aleutians is within the right whales' summer range and encompasses the "best" whaling grounds for this species (Rice, 1974; Fiscus, et al., 1976). In the north Pacific, the area of greatest seasonal utilization by right whales is probably the northern Gulf of Alaska between 145° to 151° W. longitude south to about 50° N. latitude (Berzin and Rovnin, 1966)

The route and timing of right whale migration is unknown. According to Berzin and Rovnin (1966) the right whales of the north Pacific do not follow a restricted migration route, but move north along a broad front Whaling records indicate this species occurred (and may occur) in the Gulf of Alaska and Kodiak area from May to September (Fiscus, et al., 1976). There are no

sightings in the Gulf of Alaska. Three right whales were taken by Japan on Albatross Bank near Kodiak in 1961 for research (Fiscus, et al., 1976). A consighting of the right whale off Hawaii occurred in farch 1979 (Rice, 1979. Personal communication. National Marine Fisheries Service, Seattle). The breeding season of this species is unknown.

The primary food source of right whales is small copepods and euphausiids (Omura, et al., 1969) 1976 Watkins and Schevill, Pivorunas, 1979). Unlike most baleen whales, the right whale feeds exclusively on plankton (Nemoto, 1959) by skimming discrete patches of plankton on the surface and subsurface within 10 meters depth (Nemoto, 1959 Watkins and Schevill. 1976: Pivorunas, 1979).

Although right whales have been protected from commercial whaling since 1937, this species is still endangered. The population for the entire north Pacific is estimated at about 150 to 200 animals (Wada, 1973, 1975, as cited by Fiscus, et al., 1976). ter figure is possibly an overestimation. The species may be on the verge of extinction in the north Pacific.

Fiscus, et al. (1976), described right whales as offshore, continental shelf inhabitants. In consideration of recent sighting history, and knowledge of previranges, (e.g., as presented by Berzin and Roynin, 1966) it is unlikely that lower Cook Inlet and Shelikof Strait are of major importance to this species, although the area immediately east of Kodiak Island was (and may be) used by the species on a seasonal basis

Sperm Whale: The sperm whale, the only endangered toothed whale, is distributed in the Pacific from the equator north to the Cape Navarin region in the Bering Sea (Berzin and Rovnin, 1966). In the Gulf of Alaska. the greatest number of sperm whales regularly occurs off Kodiak Island to the west along the Aleutian Chain as far as the Commander Islands (Berzin and Rovnin, 1966), south of Kodiak Island, and just east of Portlock Bank to about 146° W. longitude (Nishiwaki, 1966; Berzin and Rovnin, 1966)

Migration of sperm whales north to Alaskan waters begins in March and continues through May along several migration routes (Berzin and Rovnin, 1966). Mature males migrate to more northern latitudes, but females and young males seldom migrate above 50° N latitude (Berzin and Rovnin. 1966). Fall migration begins in September with most whales leav-

1976). The breeding season of records of recent confirmed ing the Gulf of Alaska by the end of November (Berzin and Rovnin, 1966: Fiscus, et al., 1976). The breeding season and location of breeding and calving are unknown

> Like other whales the distribution of sperm whales is dependent on the location of food sources. The primary food source of sperm whales is several species of souid and fish (Okutani and Nemoto, 1964; Berzin and Rovnin, 1966) In the eastern Gulf of Alaska, fish is apparently the predominant food of sperm whales, and souid is the predominant food in the Aleutian coastal waters (Okutani and Nemoto, 1964). The feeding method of sperm whales is unknown: however, evidence indicates this species may feed near the ocean bottom (Heezen, 1957).

The north Pacific population of male sperm whales has been estimated at about 90,000 animals (Fiscus, et al., 1976). Although total population of both sexes combined is believed to be about 150,000 animals, an estimate for the Gulf of Alaska has not been reported.

The regions of highest concentration of sperm whales are generally associated with a sharp increase in water depth such as the underwater slopes off the Aleutian Islands (Berzin and Roynin, 1966). As for the blue whale, Fiscus, et al. (1976), described the sperm whale as primarily an oceanic (shelf slope and off the continental shelf) inhabitant. Graphic 12 uses the shelf break as an approximation of the landward boundary of an area in which sperm whales would most likely occur. However, as shown, occasional sightings may occur relatively nearshore. It is unlikely that Shelikof Strait or lower Cook Inlet areas are of major importance for this species.

<u>Aleutian Canada Goose</u>: Aleutian Canada geese once bred from the eastern Aleutian Islands to the Kuril Islands. Today the only known breeding population of the species utilizes Buldir Island and appears to winter in Califor nia. Reintroductions of the birds have occurred and are planned for various locations in the Aleutian Islands (Springer, et al., 1977). Estimates abundance in 1975 placed the population of this species at about 800 birds. Springer, et al. (1977), estimated the spring population at about 1,150 birds During the fall, some Aleutian Canada geese migrate eastward along the Aleutian Chain (Bellrose, 1976). Recent observations of the species have been reported in the Semidi Islands, suggesting migrants may pass to the south of Kodiak Island. There have been no sightings of the species by researchers conducting marine bird and waterfowl surveys in the

lower Cook Inlet and Shelikof Strait vicinity. It is not certain to what extent the migration is transoceanic or coastal

Non-Endangered Cetaceans

Beluga: The beluga, or white whale, is circumboreal. In the north Pacífic region, the beluga ranges from the Gulf of Alaska throughout the Okhotsk and Bering Seas and the Arctic Ocean. The movements and distribution of the belugas in the Gulf of Alaska are generally unknown. Belugas enter estuaries and rivers in summer. or as soon as the ice moves off shore (Klinkhart, 1966).

Belugas feed from midwater to the bottom primarily on fish such as salmon, smelt, flounder, sole, sculpin, blenny, and lamprey, and shrimp, mussel:, crustaceans, and squid. Although there is little basis for determining the beluga population str us in Alaska, the population of belugas in the northwestern Cilf of Alaska has been estimated to be about 350 (Scheffer, 1972; Fiscus, et al., 1976). The overall population has been estimated to be between 32,000 and 58,000 (USDC, 975)

There are about 1,000 to 1,500 belugas in Bristol Bay and an unknown number northward along the coast of Alaska. Sergeant and Brodie (1975) estimated at least 30,000 animals in the North American Arctic, Murray (1979). referring to Klinkhart, stated that approximately 300-400 beluga whales populate Cook Inlet. et al. (1979), sug-Hamilton, gested that 500 beluga occur in Cook Inlet. There is some evidence that the Cook Inlet population is taxonomically distinct from other populations and it is likely to be geographically Killer whales are frequently isolated from Bristol Bay populations. Movements of belugas in Cook Inlet appear to follow a general pattern of distributional shifts towards upper Cook Inlet in late spring and summer. Sightings shown on graphic 12 reflect this trend. Heaviest use occurs in the central inlet area (Murray, 1979), with concentrations observed near Kalgin Island. Little of substance is about breeding/calving areas, but according to Murray (1979), calving may occur in large estuaries in the western portion of upper Cook Inlet. Winter distributions in Cook Inlet are possibly a function of ice cover, but poorly understood Kamishak Bay is noted for winter sightings of beluga whales (Ham ilton, et al., 1979). A limited amount of evidence exists which suggests that some Cook Inlet belugas may move out of the inlet to the east and Yakutat Bav Sightings also indicate the rrence of this species in Shelikof Strait, but this area is probably of less importance than Cook Inlet. According to Hamil-

ton, et al. (1979), few extensive areas of suitable beluga habitat appear to exist in areas adjacent, but outside of Cook Inlet Thus, Cook Inlet has been depicted as the area of most probable occurrence of beluga whales on graphic 12.

Killer Whale: The killer whale is the most widely distributed marine mammal in the world. inhabiting all oceans and ranging north and south to polar ic (Rice, 1968; Scheffer, 1971) Scheffer (1972) estimated the population of killer whales in northwestern Gulf of Alaska to vary from 10 to 100. Fiscus, et al. (1976), do not provide an estimate of abundance. Sightings shown on graphic 12 have been of single animals to groups as large as 20, with an average group size of about 5 animals. The Strait of Georgia in British Columbia, Prince William Sound in the Gulf of Alaska, and Puget Sound in Washington State are killer whal concentration areas. Killer whales are found throughout the Gulf of Alaska during summer months and may shift to the south during winter. However, they are probably best considered a resident species.

Although it has not been possible to establish any orderly pattern of movement or migration (Pike and MacAskie, 1969, as reported by Scheffer, 1972), killer whale migratory habits and movement: are probably dependent on food distribution and supply. Thei food consists of fish (cod. herring, capelin, flatfish, sardine, salmon. and tuna), squid, octopus, other cetaceans, pinnipeds and seabirds (Scheffer, 1972 Nishiwaki, 1967).

sighted east of Kodiak Island They have also been observed in Shelikof Strait and lower Cook Inlet. Due to their predatory nature, their most probable occurrence would be in areas of concentration of prey, such a near sea lion or other marine mammal rookeries.

Minke Whale: The minke whale inhabits all oceans of the world except in equatorial regions, ranging into the polar pack ice zones of both hemispheres. Three distinct populations are recognized: north Pacific Ocean. north Atlantic Ocean, and Southern Hemisphere. During summer in the north Pacific, minke whales range from Baja California (about 20° N. latitude) north along the Pacific Rim into the Bering and Chukchi Seas and down to Kyukyu Islands (Nishiwaki, 1966). They winter from central California t central Mexico.

Minke whales are relatively common in the northern gulf and are known to concentrate in areas of

Island and Prince William Sound regions. Fiscus, et al. (1976: 27), stated that estimates of abundance for this species were impossible to make due to lack of information. Minke whales, smallest of the baleen whales, feed mostly on euphausiids, but also eat small fish.

Minkes have been observed in at least 33 locations in the Gulf of Alaska (Calkins, et al., 1975), and are frequently observed nearshore, east of Kodiak Island (graphic 12). The extent of their use of Shelikof Strait and lower Cook Inlet is uncertain. Fiscus, et al. (1976), describes the species as inhabitants of both coastal and offshore (continental shelf) areas.

Dall Porpoise: Dall porpoise distributed widely in the north Pacific, range from California (about 30° N. latitude) along the Pacific Rim to Japan, including the Bering (to about 62° N. latitude) and Okhotsk Seas (Nishiwaki, 1967). They are probably the most common cetacean seen in the Gulf of Alaska, with sightings both nearshore and offshore.

Although there are no Dall porpoise population estimates for the north Pacific, Scheffer (1972) and Fiscus, et al. (1976), estimated an abundance of about 2,000 in the Gulf of Alaska Dall porpoise feed on squid. pelagic, and deepwater fish.

The Gulf of Alaska population apparently makes shifts in distributions from east to west in spring, with most sightings occurring in May to the east of Kodiak Island. Incursion of these cetaceans into lower Cook Inlet and Shelikof Strait is not unusual. Concentrations have been sighted north of Perenosa Bay and east of Shuyak Islands (Easton and Spencer, 1977).

Harbor Porpoise: Harbor porpoise are found in the north Pacific from southern California to the Beaufort Sea (Point Barrow) on the American side, and along the Siberian coast south to the Sea Japan on the Asiatic side (Nishiwaki, 1967). Harbor por poise are the smallest cetacean in the gulf; they generally fre quent sheltered bays, mouths of large rivers, harbors, other nearshore waters, and occasionally enter rivers. Their migration pattern is unknown

Scheffer (1972) and Fiscus, et al. (1976), have estimated the harbor porpoise population in th Gulf of Alaska to be about 1,000 They feed primarily on bottomfish such as cod, herring fry, flounder, and occasionally on inver tebrates, such as squid, clams and crustaceans.

Although sightings of this species are infrequent, Shelikof Strait and lower Cook Inlet are likely habitats for the harboy porpoise and have been reported to occur throughout shallow water of Cook Inlet (Easton and Spencer, 1977). Hamilton, et al. (1979), listed the harbor porpoise (along with Dall porpoise, beluga, and killer whales) as one of the most common cetaceans in lower Cook Inlet.

Beaked Whales: Three beaked whales inhabit Alaskan waters: Bering Sea beaked whale, goosebeaked whale, and the giant bottlenose whale. All three beaked whales are endemic to the north Pacific. They range from Californía north to Alaska and Bering Sea around St. Matthew Island and off (Nishiwaki, 1966; Rice, 1971) Seasonal movements and densities are unknown (Fiscus, et al 1976). They feed mostly on deenwater fish and souid: Fiscus et al. (1976), describes three species of offshore and oceani inhabitants. Thus, it is unlike ly that lower Cook Inlet or Shelikof Strait are of major importance to these species

North Pacific White-sided Dol-The white-sided dolphin is widely distributed and common in the north Pacific from Panama on the American side north along the Pacific Rim and down to about 20 N. latitude on the Asiatic side re have been several sightings of this dolphin in Alaska: ther was one from the Valdez region and one from Montague Strait (Miller and Kellogg, 1955, as cited by Scheffer, 1972). In addition, more than 2,000 white sided dolphins were sighted about 130 miles south of Yakutat, Alaska, by National Marine Fish eries Service pelagic fur seal investigators, and 12 were sighted near the 1800-meter isobath off Yakutat Bay (Calkins, et al., 1975). Fiscus, et al. (1976 202) reported a sighting of 17 animals offshore approximately 3 miles southeast of Cape Yakataga There is little information on the numbers, food habits, and specific migration routes of this species. It is unlikely that lower Cook Inlet or Shelikof Strait are of major importance to the species. However, it is reasonable to assume that this species could occur offshore east Kodiak Island and the Kenai Peninsula.

at 10,000+ animals. These dolphins have been reported from 30° to 50° N. latitude in the north Pacific. and have been observed most frequently near the conti nental slope, sea mounts, and banks. Their diet consists prim arily of squid and miscellaneous fish. As determined for the white-sided dolphin, it is un likely that lower Cook In et or Shelikof Strait are of major importance to the right whale dolphin.

Northern Right Whale Dolphin

ittle is known about the distri bution of this oceanic dolphin Scheffer (1972) suggested that this species may enter Alaska waters, and Nishiwaki (1966) showed its distribution in the Gulf of Alaska. No estimate of their abundance in the Gulf of Alaska is available. Fiscus, e (1976:41), estimated the entire north Pacific populati

III. DESCRIPTION OF THE AFFECTED ENVIRONMENT

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