ALASKA Tidelines

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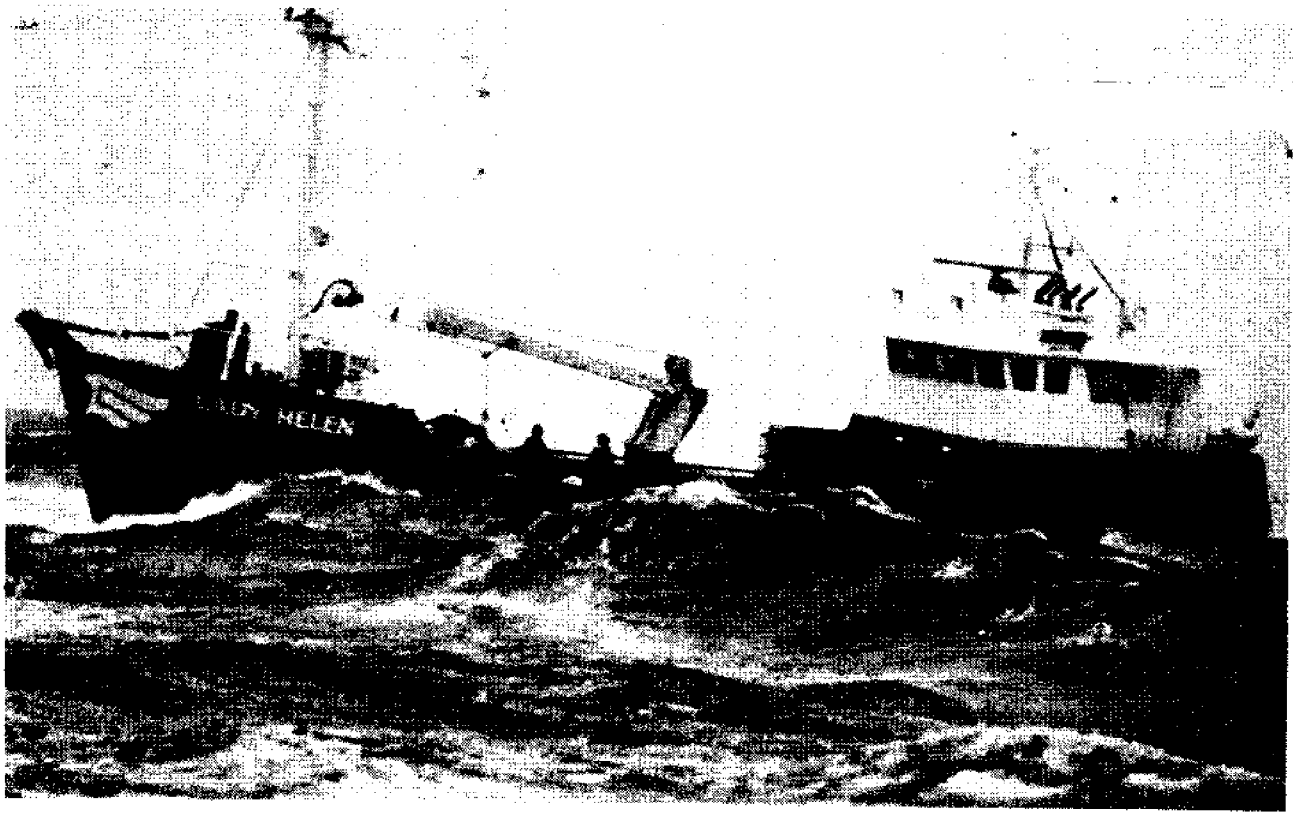
ALASKA'S SCARIEST FISHERY



F/V LADY HELEN of Kodiak, owned by Captain Frank Tennison

Photo by Captain Mitch Sutton of the F/V MISS LINDA of Kodiak

The four men huddled in the wheelhouse stared at the wind gauge in disbelief.

130 miles an hour!

Outside, icy sleet lashed the windows as mountainous waves slammed across the bow, almost drowning the big crab boat in a wild white froth.

Suddenly above the screaming of the wind the radio crackled alive:

"Mayday! Mayday!* Five feet of ice buildup. Going down. Must abandon ship."

The last position was relayed to Coast Guard headquarters, 600 miles away at Kodiak. But the men listening in the wheelhouse several hundred miles southwest of the striken vessel glanced at each other. What possible chance?

Now they raced for the shelter of Atka Island. If their luck would just hold out a little longer...

*"Mayday" is an international distress signal, probably taken from the French word, m'aider (ma-DAY), meaning "help me."

"I have Atka on the radar!" The skipper tuned the controls to measure the distance to the nearest mountain: "Six more miles to go." Another half hour.

The boat entered a bay on the lee of the island and cautiously moved toward the protective embrace of steep slopes dropping into the sea. The skipper's eyes never left the screen as the vessel crept forward, probing the raging blackness with radar fingers and sonar toes. At last he knew he could approach no closer, and told the crew to prepare to drop anchor.

The first man to step out into the full force of the wind was blown off his feet. Ice covered everything. Slowly they worked their way across the slick, pitching deck and released the anchor.

Before dropping into a sleep of sheer exhaustion, the youngest crew member—who had waited so long at Dutch Harbor for his first berth on a crab boat—muttered to himself, "Never again."

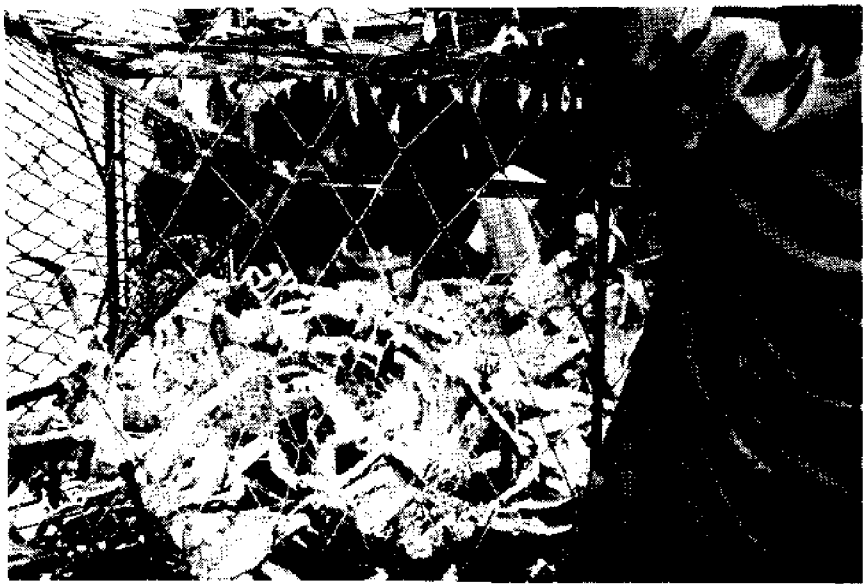


Photo by Steve McCutcheon

Why take such risks? To catch the giant king crab, most valuable of all Alaska's crab species *(see pages 4-5)*. The king is in his prime during the fall and winter months when the weather is at its worst. And this is where he lives, deep down beneath some of the wildest waters in the world.

Men and boats are lost every season. Accurate figures are not yet available for this year, but so far at least seven fishermen are missing and presumed dead. Boats have iced up and turned over; others have run on the rocks when the man at the wheel fell asleep from exhaustion. Just since the first of October, the Coast Guard has responded to some 60 calls for help from vessels in distress *(see page 6)*.

But for those who make it, the rewards are great. When all the reports are in, this year's king crab catch may be the second highest on record *(see graph, page 3—after do it)*. In the Eastern Bering Sea alone, fishermen pulled in 108 million pounds of red king crab, plus 5-6 million pounds of the smaller blue kings—the largest harvest for that area on record. Counting the take from Alaska's other king crab fisheries (Kodiak, Adak, Dutch Harbor, Sand Point, Cook Inlet, Prince William Sound and Southeast), the state's overall total could reach 150 million pounds.

That would add up to a whopping $134 million for North Pacific fishermen, who received an average $.90 a pound for whole crab *(see page 7.)* And since crews work for a share of the profits, even the greenest deckhand on one of the better boats could make $40,000 in three weeks' time.

It's hard to believe that such a valuable fishery was left pretty much to the Japanese and Russians until after World War II. In 1946, the first American king crab fishing and processing vessel *Deep Sea* was built by Lowell Wakefield of Kodiak, the industry's pioneer catcher-processor. Interest spread rapidly, first to Cook Inlet and then to other parts of the state. Each year the catch increased until it reached a peak in 1966, then dropped off sharply, forcing a cutback in seasons and limits to let the stock build back.

Today king crab fishing is big business—with big boats. Most are new steel vessels up to 150 feet or more, with a price tag in the millions of dollars. They are equipped with huge circulating seawater tanks that can keep tens of thousands of crabs alive until they reach market. And the vessels are crammed with the latest electronic equipment —radio, radar, sonar—plus the direction-finding system called loran which helps guide them to their string of crab pots on the trackless seas.

But despite such mechanical marvels, there is no machine that can sort out the crabs, and unload those pots, and rebait them, and shove them back into the sea again. Only people can do that. And out on an icy rolling deck in 80 knot winds with a crab pot swinging overhead like a deadly pendulum—that's where the horrors begin.

Each pot is like an accident waiting to happen. It is made of heavy steel rods, seven feet square and three feet deep, laced with nylon mesh. Empty it weighs about 700 pounds. When loaded with crab it can top a ton.

The pots are fished on 600 to 1,000-foot lines, each marked with a buoy. The buoy is hooked along side the crab boat. The line is run through a hydraulic block which pulls the pot to the surface where a boom swings it aboard. Then muscle power takes over.

Crab boats carry a deck crew of three or four. Each has a job to do, working at full speed. The most experienced man usually coils the yards of buoy line as it spews off the block at the rate of several feet a second. The man working the block often cuts the sleeves off his foul weather clothes to lower the chance of getting caught in the gears. Cold wet arms are better than no arms at all.

The huge pot is grappled down to the deck. The door is unhooked and the crabs are pulled out hand-over-hand. Legal sized males are thrown into the live tank and the rest are pitched overboard back into the sea.

Perhaps the spookiest job remains. Some poor deckhand has to crawl inside the empty crab pot, remove the old bait can with its rotten remains of chopped herring, and replace it with a fresh one. With decks awash in heavy seas, pots have gone overboard and straight to the bottom with crewmen trapped inside.

Big crab boats may fish 300-400 pots, set in strings one-eighth to one-quarter mile apart, or sometimes spotted around an area where the skipper has located a school of crab. Six pots can be worked in about an hour in so-so weather (it is almost never "good") or four an hour in bad weather. Since each pot should be checked every couple of days,

crews work almost non-stop, snatching food on the run and a few winks of sleep stretched out on the galley floor in full rain gear.

Work days may last 18-20 hours, sometimes round-the-clock, for a week at a time until the live tanks are full. Then it's back to Dutch or Kodiak to unload at the steaming processing plants, where work goes on at its own hectic pace—12 hour shifts, seven days a week.

When pots come up light or full of undersized or female crab that can't be kept, they must be moved to better fishing grounds. The empty pots are carefully stacked on deck, tied together and fastened down securely. A loose runaway pot can do a lot of damage in a storm. And a shifting stack of pots can flip a boat over in heavy seas, especially if there are icing conditons.

And the frustrating part, in this frantic fishery, is that when pots are on deck, they aren't catching anything. Seasons are short to begin with in most areas. And they are often closed down early by the Department of Fish and Game after a certain number of pounds have been taken.

So it is a race to get the crab and make the money. There are big payments to meet on those million dollar boats. A string of crab pots, at about $600 apiece, can cost more than vessel and gear combined in another fishery. And insurance runs high in these hazardous waters.

Is it worth the risk? Well, not for everybody. Certainly not for the weak at heart. But oldtimers know that there is no such thing as an "easy" fishery in Alaska. And they are willing to take the bigger risks for a chance at the top money.

For the young crew member, pocketing that $40,000 "share" check after a few weeks' work can make up for a lot of lost sleep, sore muscles, and terrifying memories that won't go away. What's more, there's the satisfaction of knowing that he was tough enough—and lucky enough—to make it in Alaska's scariest fishery.

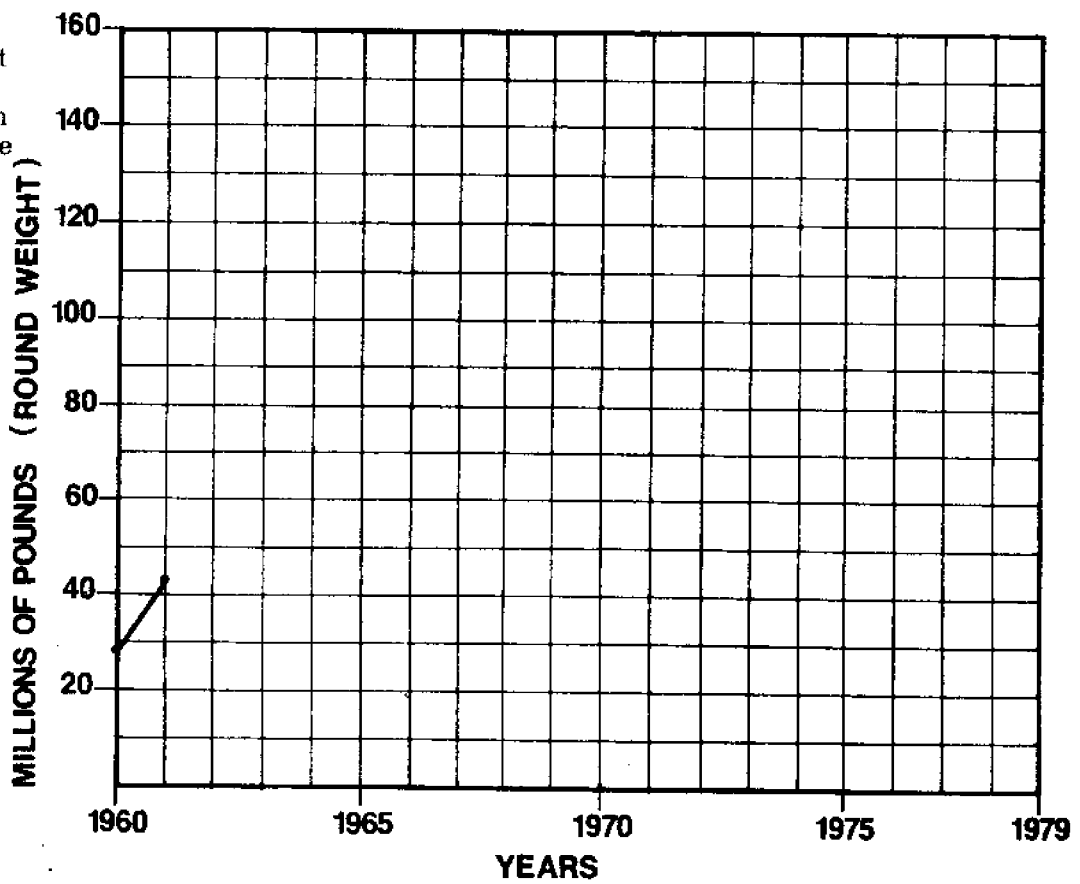
—Adapted and updated from "Crab Fishing is Not for the Weak at Heart," by Alan C. Paulson in *Alaska Today*, Vol. 6, 1978. University of Alaska.

KING CRAB CATCH: Do It Yourself Graph

Is Alaska's king crab catch going up or down? See for yourself. Below are figures showing the number of pounds caught since 1960. Mark each year's catch on the graph at right. (The first two are in to get you started.) Then connect the points, using a ruler.

YEAR	POUNDS
1960	28.5 million ✓
1961	43.4 million ✓
1962	52.7 million
1963	78.7 million
1964	86.7 million
1965	131.6 million
1966	159.2 million
1967	127.7 million
1968	81.8 million
1969	57.7 million
1970	52 million
1971	70.7 million
1972	74.4 million
1973	76.8 million
1974	95.2 million
1975	100 million
1976	105.8 million
1977	99.4 million
1978	122.9 million
1979	143 million*

*Preliminary



Source: Alaska Department of Fish and Game

Now, what does your graph tell you?

1. In 1960, Alaska's young king crab fishery really began to take off. It grew each year until reaching a peak in _____.

2. Crab stocks declined because of overfishing, and the catch dropped sharply for the next (how many?) _____ years.

3. Clearly more management was needed. And in 1970 the Alaska Department of Fish and Game stepped in, raising size limits and ordering seasonal closures. Since then the trend has been generally _____ (up/down).

4. Last year's king crab harvest was the best since _____. That makes it the (1st/2nd/3rd) _____ best in the history of Alaska's king crab fishery. *(Answers on page 8)*

CAN YOU IDENTIFY THE "BIG 3" OF ALASKA'S CRAB FISHERIES?

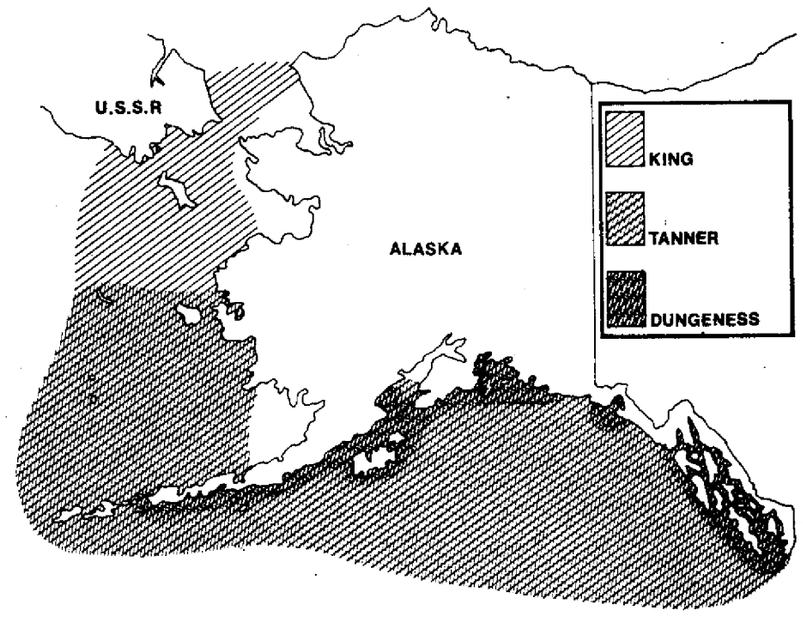
How do scientists classify and identify the millions of different plants and animals in the world? They often use a kind of "yes/no" system called a dichotomous key (right).

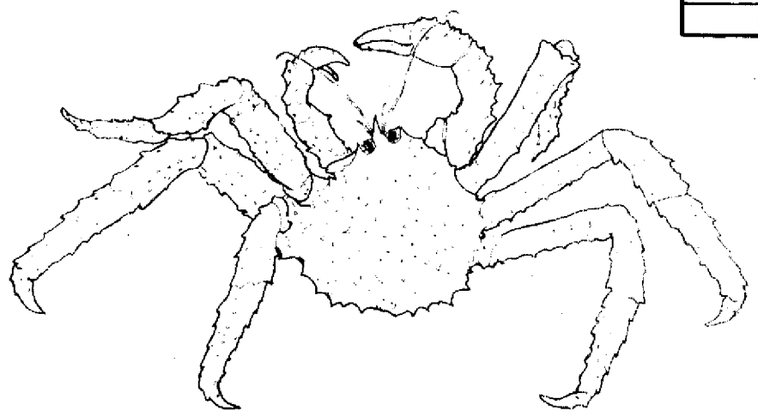
The word dichotomous (die-KOTT-oh-muss) means "divided into two parts," like the pairs of descriptions shown on this chart. The idea is to choose the description that best fits the plant or animal you want to identify, and follow the directions until you find out what it is.

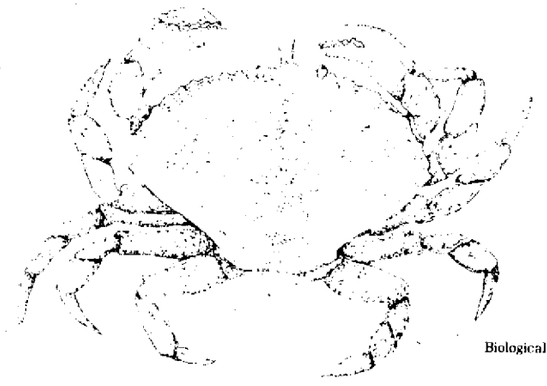
Pictured below are the three most important species in Alaska's commercial crab fisheries. See if you can identify each one by using the key. Then write its name in the space under the drawing.

A DICHOTOMOUS KEY FOR IDENTIFYING CERTAIN CRABS

	Description	Directions
1.	(a) Thick shell with large round sharp spines.	Go to 3
	(b) Shell fairly smooth, or with small spines.	Go to 2
2.	(a) Walking legs (stretched out) much longer than width of body shell.	Go to 4
	(b) Walking legs (stretched out) short when compared to width of body shell.	Go to 3
3.	(a) Right claw larger than left claw.	Go to 4
	(b) Claws both the same size.	Go to 5
4.	(a) Four pairs of walking legs jointed to bend towards the front of the body.	Go to 5
	(b) Only three pair of walking legs, jointed to bend towards the back of the body.	King crab
5.	(a) Claws slim and sharply pointed.	Tanner crab
	(b) Claws large and heavy.	Dungeness crab







Biological Sketches by Ann C. Schelt

1. _____

Paralithodes camtschatica
(pair-uh-lith-OH-deez kam-CHAT-eh-kuh)

Not a "true" crab, but a member of the family of stone crabs (*lithodes* means "like stone" in Greek). Stone crabs have only three pairs of walking legs, in addition to a small fourth pair tucked in under the back of the body shell (carapace).

The largest and most important of Alaska's commercial crab species, they may weigh as much as 25 pounds and measure up to 6 feet from leg-tip to leg-tip. Commercially caught males average 5-10 pounds.

Adults spend most of the year in deep water, but move to shallower areas in early spring where the females molt and are mated. Females carry the eggs for about a year before they hatch into tiny shrimp-like larvae. Several months and several molts later, they take on the crab shape and sink to the bottom. Young crabs of this species have a strange habit of piling on top of each other into "pods," probably as a means of protection. These pods may be made up of thousands of crabs which move along the ocean floor like a great living red ball.

2. _____

Chionoecetes bairdi
(ki-on-oh-SEET-eez bear-die)

First harvested by the Japanese and other foreign fishing fleets, these crabs are marketed under the name, snow crab. They have come into their own as a major Alaska fishery only within the past 10 years, and much remains to be learned about their life-cycle and habits.

This species belongs to the true crab family of "short-tail" crabs, which have four pairs of walking legs. Long and slender, adults may stretch to 2½ feet, but reach a top weight of only about 5 pounds within a life span of about 14 years. Commercially caught male crabs average 3-4 pounds.

They live in the very deep waters of the continental slope, but move closer to shore once a year for spawning and molting. The eggs hatch the following year and after a series of molts, sink to the bottom and assume the adult form. Adults are colored bright pink when newly molted, and brown when their shells are old.

Another species that looks like this crab's little brother also is caught by fishermen in the Bering Sea. It is *Chionoecetes opilio* (oh-PEEL-ee-oh), almost identical to *C. bairdi*, only smaller.

3. _____

Cancer magister
(From Greek: *cancer* **= "crab"**
***magister* = "chief")**

This medium-sized "true crab" is found in shallow coastal waters all the way from the Alaska Peninsula and the Aleutians to the Mexican border. Its common name comes from a fishing village in Washington State.

Adult crabs in Alaska waters average 2-3 pounds. Only males with a shell width of 6½ inches or more may be taken. (To tell the difference: the abdominal flap is narrow on males, and wide and fan-shaped on females.)

Sought by both commercial and sport fishermen, they can often be caught with dipnets or by hand in shallow waters. They also like to bury themselves in soft mud or sand, and sometimes are left stranded after the tide has gone out. Look for semi-circular depressions in the sand, and dig carefully. Pick them up only by the back of the body shell because those big claws pack a mean pinch.

Career Corner:

MEET CMDR. STREEPER

Here are some samplings from news wires in Alaska during just one week last January:

1. Three survivors from the crab boat *Gemini*, which iced up and sank four days ago, have been spotted on a life raft in the North Pacific about 150 miles south of Cold Bay.

2. Two South Korean fishing vessels are caught in Bering Sea pack ice near the rocky shores of St. Matthew Island.

3. A tanker outbound from Valdez with 800,000 barrels of oil has lost its power and is drifting helplessly in winds up to 90 miles an hour on Prince William Sound.

Pretty hairy stuff, right? And those are just the beginnings of the news stories. What happens next? Who will pluck those three men from that tiny life raft bobbing around in the open sea? Who is trying to break through the ice to free those fishing vessels? And who is standing by that drifting tanker, directing efforts to get a line aboard?

Personnel of the 17th U.S. Coast Guard District, that's who. Among other duties, they are responsible for Search and Rescue (SAR) missions and law enforcement activities in Alaska waters from the Southeast Panhandle to the International Dateline, and from halfway to Hawaii to the North Pole.

The Coast Guard Air Station and Support Center on Kodiak Island is headquarters for these operations. There, air and sea units work together in patrolling the vast area, answering calls for help and keeping an eye on foreign fishing vessels within the 200-mile limit to make sure that they are following treaty rules.

The surface chores are handled by the cutters *Confidence*, *Storis* and *Citrus*. Flight operations are carried out with a modest fleet of six bulky long-range C130s, backed up by three medium-range HH3F helicopters and four smaller HH52 helicopters.

As operations officer, it is Commander John Streeper's task to plan, schedule, and generally juggle the aviation equipment around to take care of problems as they arise. And during weeks like that one last January, things can get a little hectic.

"Our biggest problems are weather and communications," he told *Tidelines*. "Wind, weather and seas can change very rapidly and usually, it seems, for the worse. Added to that are the great distances involved.

"But we try to do the most with what we have. For example, we'll do two or more jobs with one flight. When the weather is so bad the aircraft can't fly, we wind up using surface vessels. All our resources are used to their limits."

That goes for personnel as well. Crews are on 30-minute standby round the clock and they, too, do "double duty." The crews maintain the aircraft they fly, a responsibility which tends to make for a safe ship.

Cmdr. Streeper enlisted in the Coast Guard right after graduating from high school in Cuyahoga Falls, Ohio. "At that time I really had no idea what I wanted to do. But I'd always been interested in boats and planes and the marine environment —and the Coast Guard offered so many options.

"I got training in electronics. I learned to fly. I made several trips to the Arctic and Antarctic aboard the icebreaker *West Wind*. I went to Officers Candidate School."

This is Cmdr. Streeper's third tour of duty in Alaska, and this time, he says, "I'm here for as long as I can stay. I like the climate here—I've never been fond of hot weather. The people here are hardy and independent and friendly. Flying is more of a challenge than in the Lower 48, although I don't get out as much now as I used to."

Despite the enormous headaches of the job, there are rewards as well. Last year, for example, during the worst weather months from October through March, Kodiak's SAR records show that 63 lives and more than $16 million in property were saved in the 177 cases in which they were invovled.

And what about those cases in the news last January? By week's end, they read like this:

1. Three survivors of the *Gemini* were picked up by a Coast Guard helicopter just before dark on Saturday, and are now reported in good condition at an Anchorage hospital.

2. The cutter *Storis* is breaking through the ice towards two trapped South Korean fishing vessels.

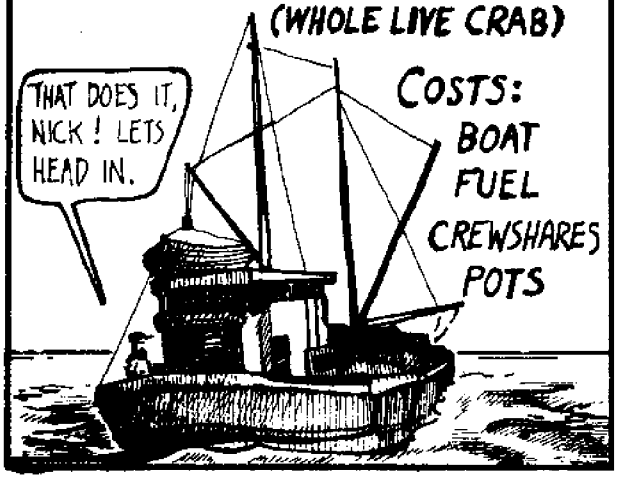
3. An oil-laden tanker finally got its engines restarted late Friday as it drifted close to the rocky shoals off Fairmount Island. It is limping back to Valdez with a Coast Guard escort.

KING CRAB PRICES —

FROM TRAP TO TABLE*

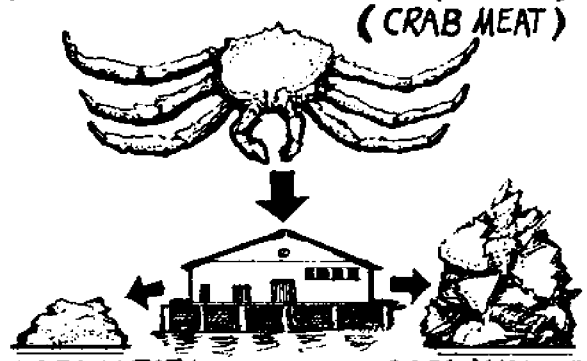
*ALL COSTS, PROFITS & PRICES VARY FROM DAY-TO-DAY, COMPANY-TO-COMPANY, AND AREA-TO-AREA. THOSE SHOWN HERE ARE APPROXIMATE.

FISHERMAN: $.90 lb (WHOLE LIVE CRAB)



COSTS:
BOAT
FUEL
CREWSHARES
POTS

BUYER (Processor): $4.50 lb (CRAB MEAT)



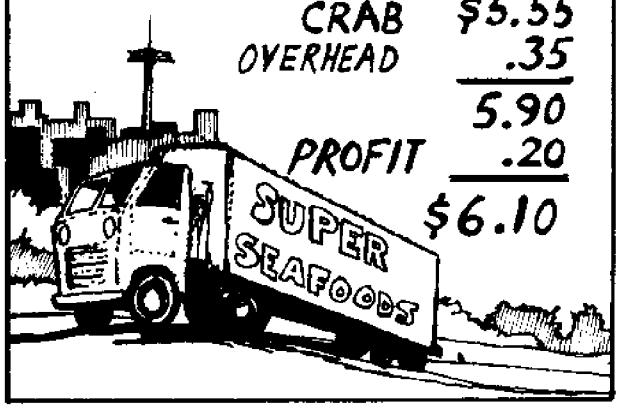
20% MEAT 80% WASTE

5 lbs. WHOLE CRAB = 1 lb. CRAB MEAT

PROCESSOR: $5.55 lb

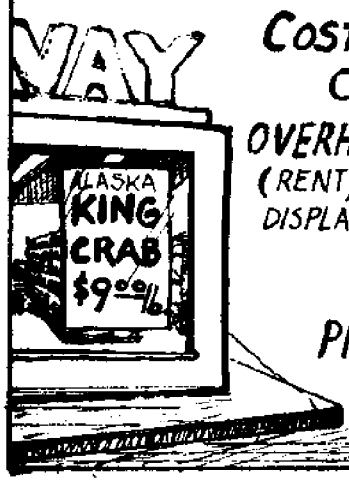
COSTS:	
CRAB	$4.50
PROCESSING	.30
OVERHEAD	.48
SHIPPING	.05
BROKERAGE	.12
	5.45
PROFIT	.10
	$5.55

WHOLESALER: $6.10 lb



COSTS:	
CRAB	$5.55
OVERHEAD	.35
	5.90
PROFIT	.20
	$6.10

RETAILER: $9.00



COSTS:	
CRAB	$6.10
OVERHEAD (RENT, LABOR, DISPLAY, LOSS)	1.15
	7.25
PROFIT	1.75
	$9.00

GOOD DEVILED CRAB

Cook ½ c. chopped onion & ½ c. thin sliced celery in 2 T. butter until soft. Stir in 1 T. flour, ½ t. each salt & dry mustard. Slowly add 1 c. milk & cook until smooth. Season with 1 t. Worcestershire sauce, 2 t. lemon juice & couple drops hot sauce. Stir in 2 hard-cooked eggs, chopped, 1 c. fine bread crumbs, & 2 c. crab meat. Place in casserole & bake at 400° about 30 mins.

March Issue: Who Flies Underwater?

Dear Spout,

I liked your article about Steller's sea cow *(Tidelines, November, 1979)*. Could you give me the address of the people organizing the expedition to find the sea cow? Do you think I could go if I had the right qualifications?

Tommy Sadowski
Anchorage

Dear Tommy,

The two main organizers of the search for the sea cow are well-known British explorer Col. Blashford-Snell and Western Michigan University Prof. Ted Banks.

We asked Professor Banks how things were coming along.

Actually, he said, it is the British who have been most active in getting the expedition going. And while the biggest problem right now is money (as usual), he said that BBC (British Broadcasting Corp.) has expressed an interest in filming such a search and might provide at least some of the needed support.

If funding can be found, the expedition could be held either this summer or next summer.

Professor Banks has led scientific and student expeditions into the Aleutians for many years. He said that students would be included on the sea cow hunt, too.

We asked about age limits: "I suppose they should at least be in high school. But then we've had people on expeditions as young as 9 years of age and as old as 81."

How about qualifications? "Well, not everybody has to be a scientist. But they should have camping and boating experience. And they should be adaptable people—young in mind."

Space is limited, of course. But if you want to give it a try, write: American Institute for Exploration
Attn: Prof. Ted Banks
1809 Nichols Road
Kalamazoo, Michigan 49007

Good luck!

CRABBY CROSSWORD

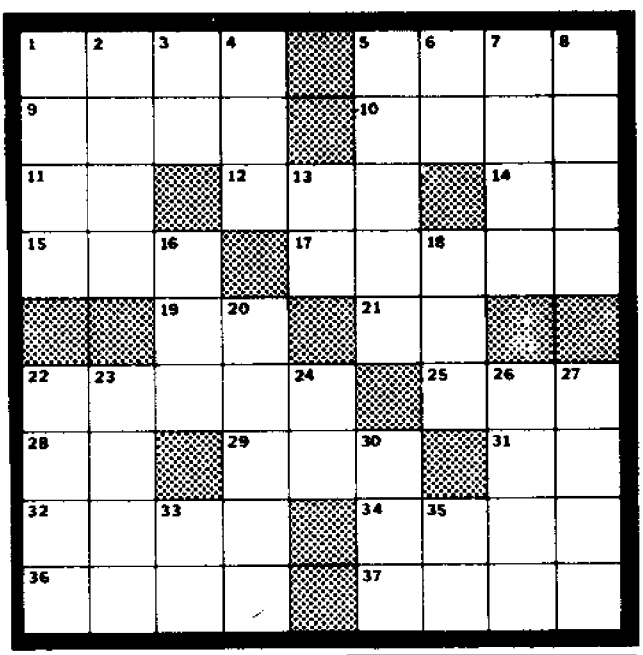
Starred (*) words are based on information in this issue.

ACROSS

* 1. The largest and most valuable of Alaska's crab species is the ____ crab.
* 5. Tanner crab is marketed under the name ___ crab.
* 9. This year's king crab catch may reach 150 million pounds when the season ____ throughout Alaska.
10. "To ____, or to have not."
11. Yukon Territory (abbr.).
12. Alaska Nurses' Association (abbr.).
14. Add these letters to make a word plural.
*15. Another international distress signal, besides Mayday.
*17. "True" crabs' legs are jointed to bend toward the ____ of the body.
19. An exclamation of dislike or disappointment, as in "____ shucks."
21. Elevation (abbr.).
*22. An electronics signal system crab fishermen use to locate their pots is called ____.
25. Alaska Unemployment Division (abbr.) (backwards).
*28. Tanner and Dungeness crab have ____ (in Roman numerals) pairs of walking legs.
*29. This year's king crab harvest in the Eastern Bering ____ was a record.
31. Social Security (abbr.).
*32. When full grown, (1 across) can span six ____ from leg-tip to leg-tip.
*34. Members of the "stone" crab family, including the king crab, have legs that are jointed toward the ____ of the body.
36. One of the five Great Lakes.
*37. Female crabs usually carry their ____ for nearly a year before they hatch.

DOWN

* 1. "Yes/no" charts for identifying and classifying plants and animals are called dichotomous ____.
2. Proposition meaning "to go in."
3. North Dakota (abbr.).
4. General Services Administration (abbr.).
* 5. Crewmen aboard crab fishing boats usually are paid by a ____ in the profits.
6. North America (abbr.).
* 7. A good way to cook (1 across) legs is to split them, baste with butter, and broil them in the ____.
* 8. The Coast Guard's Search and Rescue and law enforcement responsibility extends ___ to the International Dateline.
13. No Fish (abbr.)
*16. One of the Coast Guard's most important missions in Alaska is ____ (abbr.).
*18. Tanner crabs are pink when newly molted, and brown when their shells are ___.
*20. On the market, 20% of a whole king crab is meat; 80% is ____.
*22. Much is still to be learned about the ____ cycle of the tanner crab.
*23. King crab catches dropped sharply in the 1960s, probably due to ___ fishing.
24. Northeast (abbr.).
*26. United States Coast Guard (init.).
*27. A person who want answers to questions about Alaska's water world ____ Spout.
30. Adult Basic Education (abbr.).
33. Egg Island (init.).
35. Attorney General (abbr.).



Dec.-Jan. X-Word

(Answers to graph questions: 1-1966. 2-four. 3-up. 4-1966/second.)

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