

Executive Director's Report

AP Officers

The AP will select their Chairman and Vice-Chairman at this meeting and the Council needs to confirm the new officers for 1995. Also, Chairman Lauber has given preliminary approval for Ragnar Alstrom to take Harold Sparck's place on the AP (at Harold's request due to illness). Ragnar has attended this April's AP meeting, but needs to be confirmed by the Council for the remainder of 1995.

Magnuson Act Reauthorization

There have been several hearings on Magnuson Act amendments since the January Council meeting. The House Subcommittee on Fisheries, Wildlife and Oceans held a hearing in Washington, D.C. on February 23, and the Senate Subcommittee on Oceans and Fisheries held a hearing in Anchorage on March 25. Chairman Lauber testified only at the Senate hearing and his testimony is item B-1(a). I sent to you on March 9 a comparison of H. 39 and S. 39, provided by Larry Six at the Pacific Council, and to save space, I have not put additional comparisons in your notebooks. If you want additional information or a copy of the bills, please let me know.

I have been told that a staff draft from the House will be available this week and a House markup by May 3. The Senate version will not be completed until early summer. I am hoping that we can have the final proposed legislation in time for review at our June meeting and by all the councils at the chairmen's meeting here in Alaska on July 10-12. It is anticipated that reauthorization will be completed by the end of summer.

June Council Meeting

Just a reminder that the June meeting is in Dutch Harbor the week of June 12. The AP and SSC will begin Monday, June 12, and the Council on Tuesday, June 13. Some of the SSC members will not be able to attend because they made other commitments for that week, which originally was free when the Council earlier intended to meet the week of June 19. Consequently, SSC Chairman Quinn has requested that a special meeting of the SSC be scheduled for June 8-9 or 9-10 in Juneau or Anchorage. I hope to use the June 9-10 dates in Anchorage but should have an update for you after consulting with the SSC and industry.

A final note on the June meeting. When we made the decision to go to Dutch Harbor, we had a guarantee from Markair for reduced airfares. I understand that Markair is no longer providing jet service to Dutch, so we will need to deal with Alaska Airlines which could be quite a bit pricier. We're working on this problem and I will update you as new information becomes available.

Rats III!

Each April for the past two years there has been news in your Council notebooks about rats and the potential for infestation of important waterfowl nesting areas. This year is no exception. Item B-1(b) is an article from the Anchorage Daily News about how fatal this situation could be for nesting areas if rats leave a ship, even when it is sinking, because they can swim. The Canadians are now trying to reclaim some islands from rat infestations, but efforts are being made to stop the problem in the Pribilofs and elsewhere before it occurs. The article is very interesting and should be distributed widely to the fishing fleet.

North Pacific Fishery Management Council

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**RICHARD B. LAUBER, CHAIRMAN
NORTH PACIFIC FISHERY MANAGEMENT COUNCIL**

Statement Before

**SENATE COMMITTEE ON COMMERCE, SCIENCE, AND
TRANSPORTATION**

SUBCOMMITTEE ON OCEANS AND FISHERIES

FIELD HEARING ON REAUTHORIZATION

MAGNUSON FISHERY CONSERVATION AND MANAGEMENT ACT

**March 25, 1995
Anchorage, Alaska**

SUMMARY TESTIMONY

Richard B. Lauber
Chairman, North Pacific Fishery Management Council
March 25, 1995
Before the
Senate Subcommittee on Oceans and Fisheries

Mr. Chairman and members of the Subcommittee, thank you for this opportunity to comment on S. 39. S. 39 leaves intact a key concept, that regional fisheries problems require regional solutions developed by those closest to the resources.

The North Pacific Council has addressed some very controversial issues such as bycatch, allocations, and conservation. We take great pride in the abundant fisheries off Alaska. The groundfish resource has sustained annual harvests of 3 to 4.5 billion pounds for the past 25 years. The harvest would have been higher if caps on regulatory discards of halibut and crab had not closed the groundfish fisheries. We also have maintained a 2 million metric ton harvest cap in the Bering Sea even though stock abundance has increased. For 1995, the groundfish resource off Alaska could yield safely over 7 billion pounds, but the harvest will be much less. We attribute this sustained abundance to five basic practices that exemplify precautionary management: peer-reviewed scientific advice, defined overfishing levels, conservative harvest levels, complete catch reporting, and comprehensive observer coverage.

We are developing measures to reduce waste and discard, and believe we can meet the schedules identified in the bill. Please note, however, that revised Section 313 directs the council to reduce discards in "each fishery management plan under its jurisdiction." Perhaps this could be focused more on groundfish, because our plans defer crab and salmon management mainly to the State of Alaska.

We appreciate the bill's references to fishery dependent communities. The North Pacific Council introduced the community develop quota (CDQ) concept in 1992 with our inshore-offshore allocation of pollock. We reserved a part of the Bering Sea and Aleutians pollock harvest for disadvantaged communities in the region. The program has been immensely successful in bringing economic benefits, jobs, and fisheries-related infrastructure to a region that had not enjoyed benefits from the groundfish resource. We may continue CDQs past 1995 when taking final action on extending the inshore-offshore program this spring. We also have CDQs for sablefish and halibut.

Concerning individual transferable quotas (ITQs), S. 39 provides for a national lien registry and for processor quotas, both good steps in the right direction. The Council, however, may have concern over the Secretary or a national advisory panel developing stringent ITQ guidelines. It may be best for councils to develop regional solutions for their fisheries. I cannot imagine, for example, that NMFS would have thought of authorizing CDQs in their guidelines like we have established for pollock, sablefish, and halibut.

Regarding conflict of interest, my concerns are detailed in the attached statement. I would note that the proposed recusal mechanism with a "designated" official making a determination on votes could bring an already protracted process to a standstill. We need a very narrow range of potential instances when a conflict of interest can be called, and then leave it up to the Council's voting membership.

One last item I would emphasize is our inability to control the rogue, "system-be-damned" fisherman who decides to exploit a management void, as we had happen this February with scallops outside three miles. The State manages scallops and we have no plan yet. Please consider language offered by the Pacific States Marine Fisheries Commission that would extend State authority to the EEZ in certain instances, if the council agrees.

Mr. Chairman, this summarizes my attached statement. We've not had the opportunity to consider S. 39 as a council, but I believe my fellow members would concur with most of my views. Also, I have not touched on the fisheries disaster relief provisions. I hope we never need them for Alaska fisheries.

Thank you for this opportunity to comment.

EXTENDED REMARKS

Richard B. Lauber
Chairman, North Pacific Fishery Management Council
Before the
Senate Subcommittee on Oceans and Fisheries
March 25, 1995

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Introduction

Thank you for the opportunity to comment on behalf of the North Pacific Fishery Management Council. The Council has not had the opportunity to review S. 39, but from the discussions we have had on various proposed Magnuson Act provisions over the past two years, I believe that in general the Council members would concur with most, if not all, of my comments.

At the outset, I would like to commend you and your staff for having captured most of the issues of key importance, particularly to the North Pacific Council, without having gone overboard on any single issue. I am particularly pleased that you held off those who, at the onset of this reauthorization process, were calling for complete overhaul of the regional Council system, if not a gutting of the Magnuson Act, and for changes in the composition of the North Pacific Council.

Much of the call for restructuring of the Council process, or even its complete dissolution, has come from those that have feared for the very fish stocks that we manage. Certainly, NMFS' reports on the number of overfished stocks in the U.S. EEZ gave everyone reason for concern. But sometimes the brush can paint too broadly, and with crises and stock depletions in one region of the nation, we lose sight of the fact that resources in other areas are in better shape.

As I am sure you are aware and can take great pride in, annual North Pacific groundfish harvests have been sustained in the 1.3 - 2.0 million metric ton range (3-4.5 billion pounds) for the past 25 years, and could have been higher if not for prohibited species-related closures and the conservation-oriented harvest cap on Bering Sea and Aleutians fisheries. For 1995, the biologically safe yield from the fisheries is about 7.3 billion pounds based on the best scientific information.

Five basic principles have guided the North Pacific Council's precautionary management of groundfish: peer-reviewed scientific advice, defined overfishing levels, conservative harvest levels, comprehensive observer coverage, and complete catch reporting. All our scientific recommendations from our plan teams are peer reviewed by our Scientific and Statistical Committee. Every one of our harvest levels are set within bounds established by our scientists. We have conservative overfishing definitions in our plans. That was concluded by NMFS in a nationwide review. No definition was considered risky.

We have the most comprehensive observer program in the U.S. and the only program under the Magnuson Act that collects fees to support observers. With these observers, we are able to verify catch reports coming in from the fleet and provide estimates of discards, thus giving us a better understanding of the total removals from the fisheries. Overlay these monitoring programs on conservative harvesting limits such as we have in the Bering Sea fisheries, and we think we have a program that will provide for sustainable fisheries into the future.

Many of the proposed amendments to the Magnuson Act in S. 39, will lend guidance to and work hand-in-hand with programs we have already initiated or are now considering for North Pacific fisheries. With that noted, I would offer the following comments on specific provisions of S. 39.

Findings, Purposes, Policy, Definitions and National Standards

The bill would strengthen habitat protection by modifying the Magnuson Act's findings and policy statements. It would add language on being "non-wasteful" to Purpose 6 and definitions on bycatch, essential habitat, economic discards, fishery dependent communities, limited access, individual transferable quotas that could include processor shares, regulatory discards, and overfishing, as well as enhance the optimum yield definition to protect ecosystems and rebuild fish stocks. Addressing overfishing problems and rebuilding would be given emphasis in the National Standards, and Councils would be required in National Standard 5 to consider, rather than promote, efficiency. An eighth standard would be added concerning fishery dependent communities.

I believe the North Pacific Council would support these modifications. We are proceeding already to develop measures to reduce waste and discard, and certainly we are aware that habitat must be maintained in good condition to sustain fisheries resources. As will be noted below, identifying essential habitat will require funding and research above that available now. We appreciate the bill's references to fishery dependent communities and to processor individual quotas, as those tools are currently in use or under consideration by the Council.

Roll Call Votes

This change to Section 302(e), enabling a member to request a roll call vote, would have little impact on the North Pacific Council. Roll call votes are standard procedure for our Council on all significant issues. Individual votes are identified in the minutes of the meeting.

Negotiated Conservation and Management Measures

This new Section 302(i) essentially would codify a process we have used already on issues such as bycatch, limited entry, and the observer program. We have found it very useful to establish committees of diverse interest groups to develop alternative approaches to management and conservation problems. Rarely, however, is such a group able to settle on one particular solution. Normally, a range of alternatives is developed, and then the Council must determine which is the preferable solution. Often that will be a mixture of elements from the range of alternatives. Because this approach is already used by our Council and likely by other Councils, it is not entirely clear why this practice must be codified in the Act.

Changes to Council Procedures

Section 302(j) would be augmented to prevent agenda changes no closer than 14 days before a Council meeting, and only if approved by at least two Council members. Second, written statements and oral testimony would need to include the submitter's qualifications and interests. Third, meeting minutes would need to be detailed and contain all statements and reports "filed, issued, or approved by the Council." H.R. 39 has similar requirements.

Concerning agenda changes, we attempt to publish our agenda well in advance of meetings, but some last minute changes are inevitable as new problems crop up. If an issue is of sufficient importance to require immediate redress, we make every attempt to notify all industry associations in advance by fax or phone. Rarely have we had a complaint. I believe the system needs to be responsible, but also responsive. If this provision needs to be added, it should apply just to items on which final action is contemplated.

Concerning statements of qualifications and interest, our Council sometimes asks witnesses about their interests and affiliations when they testify, if they are not highly evident. We also place all letters on an issue into the meeting notebooks. We have found, however, that there is a considerable range of sophistication in testimony presented to the Council, from the law firm that assiduously follows all procedures, to the local fisherman or native who hand scrawls a quick letter about what she or he likes or dislikes about an issue or the Council. The

fisherman may not know that his qualifications and interests must be stated. If this new requirement on including qualifications and interests means that the less sophisticated statement cannot be distributed to the Council, it could disenfranchise the "little guy" from the process, something I am sure our Council would not want to see happen.

Concerning detailed minutes and inclusion of reports, we would only note that we keep a good set of summary minutes, though they certainly are not verbatim as are those of some of the other Councils. And yet we rarely if ever have had a complaint about them. All meetings are taped and these are available to the public. And finally, to be required to keep all statements filed, issued, or approved by the Council bound with the minutes, rather than just available at the Council office for inspection, would create a significant paperwork problem if the term "statements" includes all formal scientific reports presented at a meeting. Because everything we do is so public, and all reports are offered freely to the public, we fail to see the need for this amendment. If a particular Council is having problems along these lines, possibly that needs to be addressed rather than changing the Act.

Disclosure and Recusal

We are fully aware that there is a prevailing national sentiment to address the conflict of interest issue. A major concern, however is that the proposed recusal mechanism, with a "designated" official making a determination on every vote, will bring an already protracted process to a standstill, especially in the thicket of the many convoluted amendments and main motions that frequently precede a final decision. First, there is the problem of where someone will draw the line in defining "significant and predictable effect," and how to define "minority of persons within the same industry sector or gear group." Strictly speaking, a Council member whose gear group has 100 vessels would have to recuse himself on any issue affecting 49 vessels, even though that is still a very large number, and the person could be said to be representing a large industry group as the Magnuson Act originally intended. Given the state of our data bases, it may be very difficult even to determine when an issue is affecting just a minority of persons.

The language agreed upon by the Council chairmen was that a member must recuse if the vote would "disproportionately advantage that member beyond other individuals participating in a particular fishery." That language would allow industry to still be involved, which is the basic philosophical underpinning of the Act, but if a Council member voted on an issue that only affected himself and a few others, then it would be out of bounds, whereas a Council member voting for something that advantaged him and many others, would be O.K. "Few" might mean 1-3 interested parties, and "many" might mean more than 8-10 other parties.

Language in both the House and Senate bills would take away the industry vote much of the time, and also could upset voting balances on some Councils, particularly the North Pacific. Perhaps also, recusal could only be required on final votes, and then only on matters that had obvious and significant allocational results. We also agree with the Council chairmen that determinations of conflict of interest during a meeting should be made by majority vote of the Council. We agree with the appeals deadline of 10 days in S. 39, and 30 days for Secretarial review of the appeals. Those are within the Council chairmen's guidelines of 15 and 30 days recommended from our May 1994 Chairmen's meeting.

FMP Provisions

I do not believe that the Council would object to any of the new required or discretionary provisions offered by S. 39 to Sections 303(a) and (b). All seem consistent with the direction our Council is heading. We would note, however, that becoming more responsive to essential habitat concerns will require more research and funding by NMFS to identify those habitats and determine their exact roles in sustaining fisheries. In many cases, for example in spawning drainages for salmon, essential habitat may be very obvious and thoroughly studied. But

to identify essential marine habitat in the North Pacific, especially as envisioned in new Section 305 on ecosystem management, definitely will require considerable research and funding.

Concerning overfishing definitions, they are already in each of our fishery management plans as required by 50 CFR 602. Addressing overfishing is more a struggle of political wills than of not having the appropriate tools in the Magnuson Act.

An eleventh discretionary provision would be added to Section 303(b) concerning management measures that provide a harvest preference or other incentives within gear groups for fishing vessels with lower bycatch. For the past year, the North Pacific Council has been considering a harvest priority proposal which would offer a reward fishery on a reserved harvest quota to those fishermen that fished cleanly and met other criteria in the early season fishery. NOAA General Counsel has just sent us a legal opinion stating that fishermen could not be excluded from the reward fishery until all of their appeals procedures have been exhausted, which could take two to three years. While I think that many Council members would like to find a true incentive approach to lower bycatch, unless the appeals problem can be resolved, harvest priority and reward fisheries may not be viable solutions.

Individual Transferable Quotas

New Section 303(f) would place many new requirements on the development of ITQs. Many of these new provisions, such as minimizing effects on fishery dependent communities, establishing a lien registry, and identifying the list of potential ITQ holders as owners, fishermen, crew and processors, are a step in the right direction. But I do not believe that it is a good idea to assign responsibility for developing ITQ guidelines to the Secretary and a national advisory panel, and after three years, requiring all ITQ programs to be consistent with the guidelines.

If the Secretary develops tight guidelines that significantly bind the Councils, then Congress has relinquished regional controls over limited entry. The Councils need to be able to address regional problems with regional solutions. What may be appropriate for the wreckfish fishery off Florida, may not have any application to groundfish off Alaska. I can imagine that there would have been few provisions for community development programs, as we have for sablefish and halibut, if this Magnuson Act amendment had been added several years ago, and the North Pacific Council had been compelled to follow some set of Secretarial guidelines.

Conversely, if the guidelines are too broad and lack definition, the Secretary will have considerable flexibility in interpreting proposals forwarded by the Councils, and will be able to dictate the type of programs that would be acceptable, thus contravening the intent of current Section 304(c)(3) (or as amended by S. 39, Section 304(e)(4)). Other than authorizing the lien registry, minimizing impacts on fishery dependent communities (which is very hard to define), clarifying that processors and crew may be holders of individual transferable quotas, that the term ITQ may apply to either fishing or processing quotas, that leasing and auctions are allowed, and that ITQs are not property rights, design and development of limited entry programs should be left up to the Councils.

Plan Review and Implementation

S. 39 would reduce the total time for implementing plan amendments by 20 days from 145 days (which includes a 30-day APA cooling period) under the current Act, to 125 days as amended. Regulations could be implemented in as little as 95 days (up to 140 days). These are positive steps in the right direction, however, the Councils have found that it is no longer when the clock stops ticking, so much as when it starts ticking, that makes the difference in how quickly regulations are implemented. So long as the Regional Director can dictate when an amendment package is structurally complete and ready to undergo review, NMFS always will have control of the processing

schedule. Unless that procedural defect can be fixed, NMFS and NOAA GC will be able to circumvent the intent of the Act.

Fees

S. 39 expands considerably the fee authority of the Councils, mandating fees for any ITQ program to cover the costs of managing the fishery and enforcement. The North Pacific Council has endorsed an expansion of fee collection authority, especially to fund comprehensive rationalization. Other Councils have done so as well. This endorsement is contingent on the fees coming back to the region from which they were collected, as S. 39 would require.

S. 39 would require that those fees be placed on the sablefish and halibut IFQ fisheries. We agree that the Councils and Secretary should be allowed to determine which value, exvessel or processed, to use as the basis for assessing the fee, since both are specified in the legislation. One final comment on the issue of fees: the North Pacific Council also has voiced concern that any fees imposed by the administration take into account the fees being collected for the observer program. Thus, if ITQs are developed for the pollock fishery, the Council should have the latitude to structure the fee program mandated by any new amendments in the Magnuson Act, taking into account the fees already being paid out in the pollock fisheries for observer coverage.

Ecosystem Management

S. 39 would add a comprehensive new Section 305 on ecosystem management that would require an annual status of stocks report, recovery plans for overfished stocks, identification of essential habitat, gear evaluation and notification requirements, and changes to promulgate emergency rules for 180 days, and renew them for another 180 days. Other than the increased funding and research noted above for identifying essential habitat, I do not believe that the North Pacific Council would object to any of the measures in new Section 305, except the 10-year requirement for rebuilding plans. The Council already produces annual stock assessment reports that are peer reviewed by our Scientific and Statistical Committee, has overfishing definitions in our plans, and has implemented a 14-year rebuilding plan for Pacific ocean perch, a species in very low abundance since it was fished down by foreign fisheries in the 1970s. We are now in the process of examining what can be done to rebuild crab stocks. We believe our management and conservation of the groundfish resources have been exemplary, embodying the principles of precautionary, risk averse management.

State Jurisdiction - Addressing the Scallop Problem

As you may be aware, we had a problem in February with a scalloper fishing for scallops in the Gulf of Alaska EEZ when the State of Alaska had closed all other waters. We have deferred management to the state and do not yet have a formal plan in place. The scalloper, having no state permits, decided to take advantage of this management void and fish as fast as he could before we put in an emergency closure. The same thing could happen with crab and we need to address the issue in the Act.

Perhaps you could consider the language offered by the Pacific State Marine Fisheries Commission and Pacific Council which would amend Section 306 on State jurisdiction to specifically establish and/or clarify the authority of the states to manage species harvested in the EEZ that occur in both the state territorial waters and the EEZ in the absence of a Council FMP, and also amend the section to enable a state, with the concurrence of the appropriate Council to establish landing laws or regulations for species landed from the EEZ as well as state waters.

To do this, alternative language was offered last year that added a new Section 306(a)(4): In any fishery for which no fishery management plan is approved under this title and in which a State has an interest in the

conservation and management of that fishery, a State may enforce its laws and regulations relating to harvesting and landing fish caught in the EEZ adjacent to that State.

North Pacific Fisheries Conservation

This part of S. 39 has comprehensive amendments on reducing waste in North Pacific fisheries, requiring full retention and utilization, reducing regulatory discards, and enhancing observer coverage. The North Pacific Council already implemented or is developing many of the types of measures identified in this revision of Section 313, and probably would support the provisions. We would offer one note of caution, however, relating to the use of the phrase "each fishery management plan under its jurisdiction," which is also in H.R. 39. Most of these amendments have to do directly with the groundfish fisheries. Our concern is that the Council also has management plans for salmon and crab, but has deferred management to the State of Alaska. Literally read, both bills would require the Council to develop bycatch measures for the State's salmon and crab fisheries, which would be a pretty tall order to fill, and could ruffle considerable numbers of feathers now being taken care of by the Alaska Board of Fisheries. Possibly the language could be changed to apply to groundfish, which is where we have the major responsibility.

Concerning giving incentives and harvest priorities to reduce bycatch, I would only reiterate earlier comments that NOAA General Counsel has informed us that allegedly "dirty" fishermen would have 2-3 years of appeals procedures before they could be barred from a reward fishery. This would tend to make harvest priority less attractive as a management approach.

On the issue of enhanced observer coverage, proposed Section 313(i)(1)(A) would increase observer coverage to 100% on all vessels that can safely accommodate observers. Now 100% observer coverage is only required on vessels over 125 ft. Those between 60 and 125 ft long have 30% coverage, though many would be safe for observers. I realize that S. 39 would only require this enhanced coverage if funding is available, but we are finding that, as more needs for observers are identified, not only in the groundfish fishery, but in the crab fishery, increased fee levels and funding may be needed. I doubt that many in industry would want to advocate increasing the present 2% cap on fees for observers, but we are quickly overrunning that cap as observer requirements proliferate. And finally, concerning Section 313, the North Pacific Council has recommended the language in the attachment to enhance confidentiality of observer data. It would be good if we could get that change to the Act.

Thank you for allowing me this opportunity to comment on this important reauthorization and amendment to the Magnuson Fishery Conservation and Management Act.

NORTH PACIFIC FISHERY MANAGEMENT COUNCIL**Recommended Amendment to Magnuson Act**

SECTION TO BE AMENDED: Section 303(d). Confidentiality of Statistics.

RECOMMENDATION: Amend Act to maintain confidentiality of information collected by Section 313, North Pacific Fisheries Research Plan.

SUGGESTED LANGUAGE: 303(d) CONFIDENTIALITY OF INFORMATION.—Any information submitted to the Secretary in compliance with any requirement under subsections (a) and (b) or under section 313, including any information reported by an observer under subsection (b)(8) or section 313, shall not be disclosed if disclosure would significantly impair the commercial interests of the person from whom the information was obtained; except—

- (1) to Federal employees and Council employees who are responsible for management plan development and monitoring;
- (2) to State employees pursuant to an agreement with the Secretary that prevents disclosure of such information; or
- (3) when required by court order.

The Secretary shall, by regulation, prescribe such procedures as may be necessary to protect such information from disclosure. Nothing in this subsection shall be interpreted or construed to prevent the use for conservation and management purposes by the Secretary, or with the approval of the Secretary, the Council, of any information submitted in compliance with a requirement under subsection (a) or (b) or Section 313. This provision applies to any such information submitted to the Secretary since March 1, 1977.

[Legislative history would state that the "person" from whom observer information was obtained is the vessel owner, operator, or crew member.]

RATIONALE: Information recorded by observers for a specific vessel and trip must be protected from disclosure. We have a problem in the North Pacific wherein copious information collected by observers on vessel safety conditions, MARPOL violations, and general living conditions onboard a vessel, and other types of information, may be accessible through a Freedom of Information Act request. NMFS and NOAA GC have not given us a firm opinion on the issue, but they have encouraged us to suggest an amendment to the Magnuson Act that would clearly designate observer reports as confidential. This would be particularly important to all Councils if Section 313 is extended to cover other regions of the U.S.

THE

RAT ZONE

Below: Poly-
nesian rats
approach a
Yausan
albatross on
Krure Atoll
in the South
Pacific.

Brown rats swarmed over the shipwreck. They scabbled down the hatches and ravaged the holds, consuming edible material throughout the abandoned fish processor. The air filled with the scratchy patter of their tiny feet, the hellish chorus of their frantic squeaks. The fetid stench generated by the defecation of thousands of one-pound rodents was overpowering.

"The rats were everywhere," says Craig Magone, foreman of a salvage crew. "They were crawling up and down on everything, and they weren't afraid of us at all."

The Korean ship Chil Bo San No. 6 went aground in a winter storm six years ago on a remote shore of Unalaska Island, some 800 miles southwest of Anchorage in the Aleutian Chain. By the time a crew came aboard to remove the last of the fuel and toxic

waste that summer, generations of Norway rats had reproduced and taken over.

"You'd open up a cabinet or something like that, and they'd jump out on your shoulder," says Magone. "You'd go to reach for something, and your hand would brush one of them. Or they'd bite you."

The crew from Dutch Harbor-based Magone Marine, owned by Craig's brother Dan, would not sleep aboard the vessel for all the rats, choosing to camp on the beach instead. At one point, they brought a case of common rat poison along and deployed a packet. But the rats soon tore into the unopened case. The next day it was all gone — everything — both the poison and the package it came in.

Though some animals died, the overall population was hardly affected. The rats thrived.

When the ship — wrecked on the edge of the stormy North Pacific — later broke up, Magone says, many rats no doubt made it ashore. "I saw one jump off the stern and swim to the beach," he says. "I know they didn't all drown."

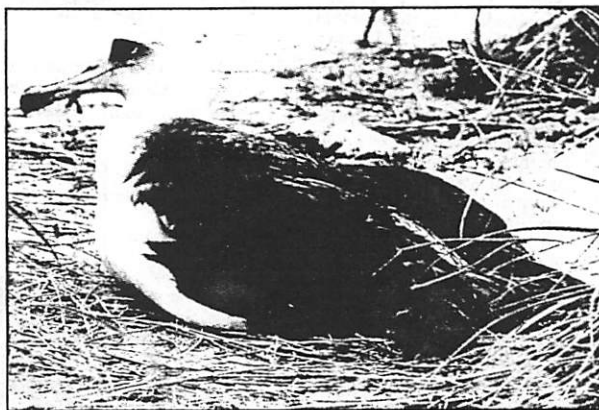
The incident fell short of an environmental catastrophe only because Unalaska Island already had rats, brought there in the early 1800s by Russian traders. Shipwrecks and moored vessels have introduced rats to 20 other Aleutian islands, as well as Kodiak and a few islands in south-east Alaska.

Still, the wreck of the Korean fish processor was a jarring reminder of a daily threat to Alaska's 3,000 wilderness islands, home to some of the richest bird-nesting habitats on earth.

"The number one thing that the Fish and Wildlife Service worries about is the introduction of rats," says Art SOWLS, the federal biologist who studies Bering Sea and Aleutian birds for the Alaska Maritime National Wildlife Refuge. "If rats were to get on an island, they would severely reduce the population of sea birds — and they would essentially be there forever."

Rats have already infested 82 percent of the world's islands, almost always because of ship traffic. Once established on an island without natural predators, rats destroy millions of birds and other animals, often driving scores of species to local extinc-

Continued on Page 8



Art SOWLS

BY

DOUG

O'HARRA

RAT ZONE

Continued from Page 7
tion. They permanently alter the habitat.

"Predators have caused 70 percent of all bird extinctions on islands, and rats were responsible for most of these extinctions," according to a report written by Sowls and other biologists in Homer about the danger posed by rats to Alaska's islands.

But Alaska contains some of the world's last untouched nesting paradises. Sowls' worst nightmare goes like this: A ship in the Aleutians breaks open and disgorges breeding rats on Buldir Island, summer home for some 3 million to 4 million birds, one of the largest nesting populations in the Northern Hemisphere.

What happens next could lead directly to the worst environmental disaster in Alaska history.

"If rats got on Buldir Island, they would probably wipe out those birds forever," Sowls says. "From a marine sea bird standpoint, that would be far worse than the Exxon Valdez."

No less alarming is the prospect of rats reaching the Pribilof Islands, where the construction of new harbors and a rapidly expanding commercial fishing industry has brought increasing numbers of processors, old freighters and boats close to land. In the summer, most of the world's northern fur seals and at least 2.5 million sea birds come to the islands to breed.

"The introduction of rats to the Pribilofs would be a wildlife nightmare," Sowls says. "They would destroy much of the bird life and may introduce disease to the seals. Once on the island, rats would be there forever."

In response, Sowls and other federal biologists have organized an emergency rat spill plan — including a squad of volunteer rat commandos that would hit the beachhead of any rat invasion with poisons and traps. On the Pribilofs, Sowls and locals have placed a network of baited traps throughout the harbors. They've even encouraged wild foxes to overrun St. Paul harbor in the hope they'll immediately devour any rat that makes it ashore.

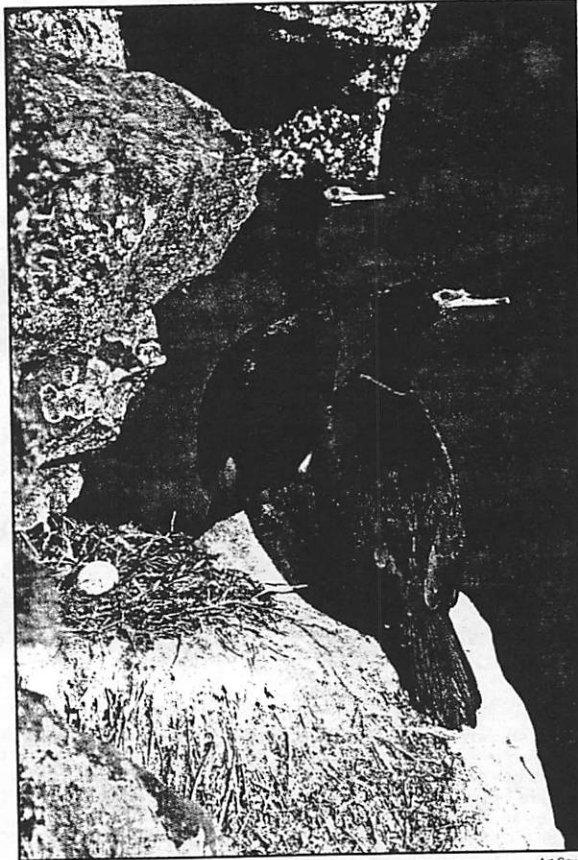
"The foxes are our first line of defense," says St. Paul harbormaster Andrey Mandregan. But will it be enough?

"There is no guarantee it will work," Sowls adds.

Welcome to Rat Planet Earth

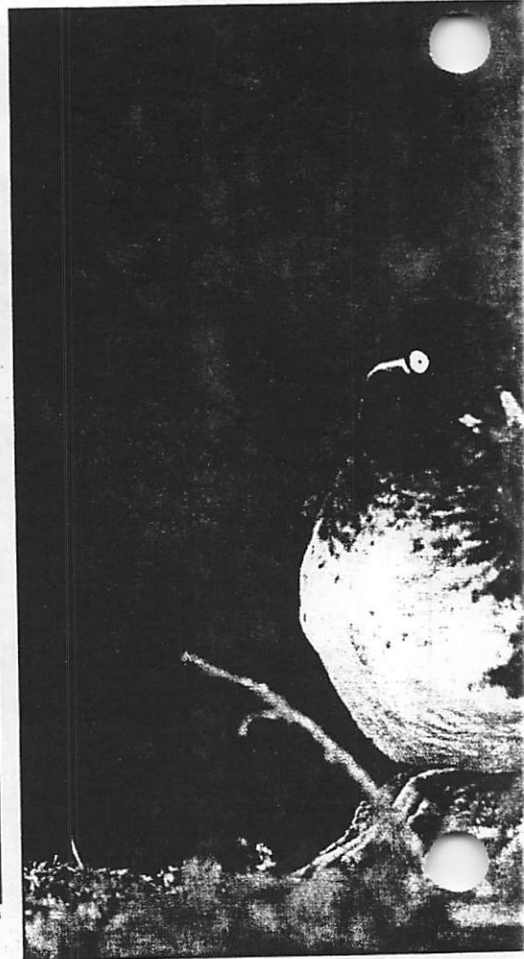
As a species of mammal, Norway rats may be the ultimate survivors. Like other rodents, brown rats are among the most adaptive animals that have ever lived. "With the sole exception of humans, the most successful and abundant mammals on earth

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Art Sowls

Red-faced cormorants nest on St. Paul Island. New harbors in the Pribilofs have made the islands susceptible to a rat infestation, experts say.



Parakeet auklets on St. Paul Island.



Art Sowls

A rat information station at St. Paul was built by local students.

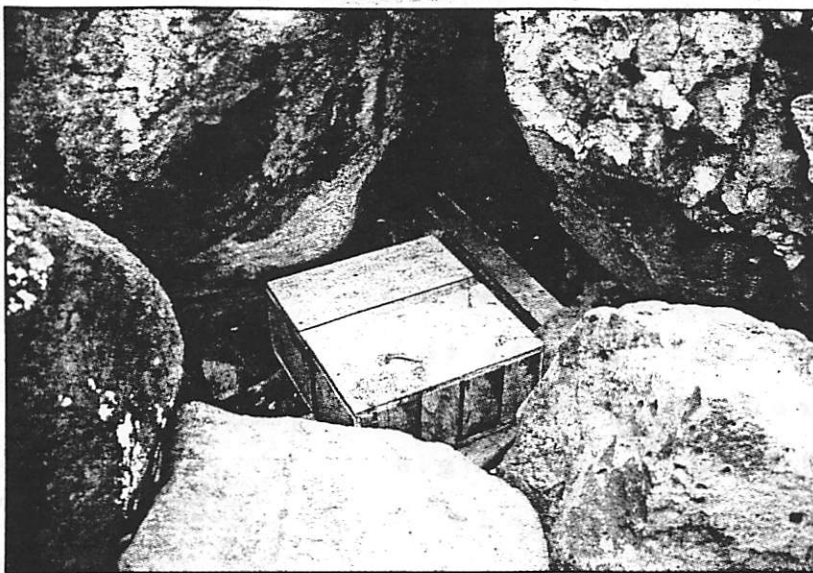


RAT ZONE

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today are the commensal rats and mice," reads a 1994 report by the U.S. Department of Agriculture.

Rats and mice tend to live commensally, at the expense of humans, and three species — the Norway rat, the black rat and the house mouse — have followed humans all over the world, eating and fouling billions of dollars' worth of food, destroying property and spreading disease. Of the three, the Norway rat is the largest and most aggressive. It's the only rat known to survive in Alaska, with populations found in Nome and several other seaside towns — as well as Fairbanks. For reasons no one can explain, Anchorage doesn't appear to have any.

Adults range up to 10 inches long and can weigh more than a pound. They have naked tails slightly shorter than their bodies, and their fur is



Rat poison has been distributed around St. Paul harbor to help prevent an invasion.

usually a coarse shade of brown. (White rats used in laboratories are usually albino Norway rats.) Originally a burrowing animal from the Mongolian steppes, the Norway rat began spreading across Asia thousands of years ago. By the 11th century, the large rodents had reached Europe, bringing numerous diseases, including the bubonic plague. In the 14th century, the Black Death killed an estimated 25 million Europeans, about one-fourth of the population.

When Europeans began traveling the oceans in search of trade and conquest, the Norway rat accompanied them. They now have nearly worldwide distribution, thriving practically everywhere that humans live. Some scientists estimate there are more Norway rats in the United States than people.

As loathsome as they might appear to people, Norway rats are actually finely tuned predators and scavengers with keen senses, capable of discerning odors and sounds far beyond human capacities. Their extraordinary sense of taste enables them to detect minute differences in their food — a phenomenon that makes killing them difficult because they quickly become "bait shy" of poisoned food that tastes bad or makes them sick.

Their eyesight is specialized for nighttime activity. They can see movement and recognize shapes in what would seem total darkness to a human.

Norway rats are strong diggers and good climbers, extraordinarily agile, able to jump three feet straight up or across openings of nearly 10 feet. Their bodies are pliable and can squeeze through tiny holes. They can swim well enough to catch fish. They can remain underwater for up to 30 seconds at a time, thus they can readily swim through the water seal in toilets, emerging into houses and buildings by this route," according to a report on rats.

Like most rodents, they love to chew. The hard enamel on their teeth, which never stop growing, allows them to chew through aluminum sheathing, wood, mortar and some concrete. Few human structures are impervious to rats.

They are territorial animals, quick to learn, insatiably curious — yet often strangely fearful of unknown objects (like traps). Unless something spooks them, they like to travel down well-used "runs" on their way to forage. Some scientists say they live in hierarchical "societies" with dominant males and local "customs" about what's good to eat and what isn't. Individuals don't live long — most wild rats survive less than a year — but they make up for their meager life span with a furious reproductive rate. A single female might produce 40 offspring a year in the wild.

Since each generation reaches sexual maturity in three months, given an ideal habitat — with plenty to eat and no predators, like an Aleutian bird colony — a single breeding pair could engender 2 million descendants within three years, according to Sowls.

As predators, they are opportunistic, chewing up almost anything, but they prefer to feed on animals or animal remains. They'll attack lambs and piglets. They've been known to bite helpless people or babies. They've even killed elephants in Germany by chewing holes into their feet that never healed. Still, according to Grzimek's Animal Encyclopedia, Norway rats prefer to eat fish, mice, smaller rats, garbage — and birds. Scientists say half the 54 species of animal that rats prey on are sea birds.

When attacking birds, Norway rats will gnaw off legs, break necks, eat eggs and devour chicks. They'll climb on the back of large nesting birds and burrow directly into their bodies while they're still alive. Scientists found 28 dead auklets in single rat burrow on Kiska Island, suggesting they'll kill far more than they eat.

"They're just the biggest, most vicious of the rat species that are commensal with man," says Sowls.

Rat Island Beachhead

For thousands of years, most of the western Aleutian Islands were utterly free of terrestrial mammals, with the exception of the first Alaskans. In many instances, that made the archipelago a paradise for nesting sea birds. "Most of Alaska's 38 species of breeding sea birds nest on islands to avoid predatory land mammals," wrote Homer biologist Edgar Bailey in a 1993 report on the introduction of foxes onto Alaska islands.

The situation was the same throughout the world: The very isolation of island habitats made them virtual refuges, allowing sea birds to nest and reproduce on the ground without becoming prey. Then the humans came — to tiny atolls in

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RAT ZONE

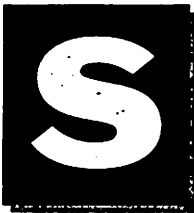
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the South Pacific, to the Kerguelen archipelago of the Indian Ocean, to the Aleutians — bringing rats and other small mammals. And the birds died out or were forced to nest only in inaccessible locations and in greatly reduced populations.

"Predation by exotic species on islands worldwide has historically been responsible for the decline or extinction of more sea bird populations than any other factor," Bailey wrote.

About 1780, a Japanese sailing ship wrecked on what later became known as Rat Island — about 1,300 miles southwest of Anchorage in the Aleutians. Norway rats soon overran that island, prompting the Russians to name it only a few years later.

"I'm sure at one time it was a tremendous bird colony," says Sowlis. "Now it essentially has nothing except a lot of rats who can survive by eating tidal (food). There's no chance of recovery."

What precisely happened on Rat Island will never be completely known — the island is large enough to have supported millions of nesting sea birds. But the fate of British Columbia's Langara Island — which became infested with Norway rats



Since each generation reaches sexual maturity in three months, given an ideal habitat — with plenty to eat and no predators, like an Aleutian bird colony — a single breeding pair could engender 2 million descendants within three years, according to Sowlis.

in the early 1950s — has been watched closely by Canadian scientists and suggests a chilling scenario.

Located in the Queen Charlotte Islands just across from Alaska in the mouth of the Dixon Entrance, 12.7-square-mile Langara was once considered one of Canada's largest sea bird colonies, summer home to "immense" numbers of ancient murrelets and five other species of sea bird, according to a recent study. Then a shipwreck in the early 1950s brought rats.

Within four decades, the island was environmentally devastated.

The Norway rats wiped out four bird species — two kinds of auklets and two kinds of petrels. A few tufted puffins managed to survive on an offshore islet. What once might have been "millions" of ancient murrelets — one of Canada's largest concentrations — had dropped to about 24,000 pairs. A species of deer mouse disappeared, too, as well as the smaller black rat, which had reached

the island by the 1940s but hadn't devastated bird populations. In all, species that depended on the birds for food have left the island, including eagles and other raptors. Even the island's vegetation has diminished.

The same process occurred earlier in the Aleutians, beginning in 1828 with Unalaska Island, where Russian traders had established one of their largest settlements decades earlier. Gradually, rats invaded another 19 Aleutian islands as well as Kodiak, with most infestations dating from the early years of World War II. The most recent episode was the apparent arrival of rats on Little Kiska Island, verified in 1990.

Though these rat infestations drastically reduced sea bird populations, they were limited because they were accidental. But the intentional introduction of foxes — first by Russian trappers, later by American fur farmers — ended up wiping out birds on hundreds of islands anyway.

By the 1920s, records show, foxes had been introduced to 455 islands stretching from southeast Alaska through the tip of the Aleutians, according to Bailey. Making matters worse for indigenous birds, fur farmers often released arctic ground squirrels, European hares and other rodents to serve as fox food. Throughout the area, bird populations suffered, with certain species of bird disappearing from many islands.

"Few nocturnal nesting sea birds occur on any islands ... that are or recently were inhabited by foxes," Bailey wrote. "The greatest species diversity and abundance of nocturnal sea birds in Alaska is on fox-free Buldir Island."

Fortunately for birds, the price of fox pelts crashed in the 1930s, and most fox farms were abandoned. Foxes were trapped or died off on about 390 islands — in many cases because they had destroyed the bird populations and couldn't find enough to eat. Beginning in 1949, federal biologists began killing foxes on Amchitka Island in an effort to save the Aleutian Canada geese — which, by then, survived only on Buldir Island, according to Bailey.

Since then, foxes have been eliminated on 21 additional islands and now remain on only 46 islands where they were introduced, according to Bailey. Where foxes were eliminated, sea birds in general and Aleutian Canada geese in particular showed "spectacular" increases in population.

Most islands in the refuge are once again safe for birds. But with the rapid increase in trans-Pacific shipping and Bering Sea fishing, an older and more persistent threat returned. The rats.

What if it Happened Again?

It was the shipwrecks and close calls that got the scientists thinking. Large cargo ships running aground year after year off the Aleutian, Pribilof and Shumagin islands. Fishing boats swamping. Processors driven on the rocks. Tramp freighters losing power and drifting helplessly in high seas.

The wrecks included the Chil Bo San No. 6 — the Korean vessel saturated with rats. But there were other accidents near pristine islands — a grain ship that grounded between two small islands in the Shumagins, a Greek ship that grounded off St. Matthew Island. There seemed little doubt that such ships carried rats. Yet luckily, none appear to have established themselves ashore.

But that luck could run out. "It's absolutely for sure that eventually it's going to happen," says Dan Magone, who operates

a marine salvage company out of Dutch Harbor and has seen rats on scores of ships. "Random ships crash out here in random places. It's only a matter of time."

To Art Sowls — the lanky, plain-spoken federal bird biologist from Homer — it's like an equation that leads inevitably to disaster. Add to it the opening of two new harbors in the Pribilofs in 1990, with most boats able to dock at shore for the first time, and the threat of rat infestation seems imminent. The horror of it actually keeps him awake at night.

So a few years ago, the Fish and Wildlife Service launched a campaign to raise awareness of the potential problem — issuing warnings and asking for information. They began to collect information about rats from around the world.

What they found out scared them. Rats seem to target certain particularly vulnerable species with small eggs or prolonged nesting periods — common Alaska sea birds like storm petrels, auklets, murrelets and puffins. They found that rats might be especially damaging to the cliff-nesting red-legged kittiwakes of the Pribilofs — home to 90 percent of the world's population.

Worst of all, there seems to be little chance of recovery if that occurs. Though scientists in New Zealand have developed techniques for destroying rats — eradicating them from 45 small islands and islets near their country — they've never been successful on any island larger than a square mile.

"Though the threat of oil spills captures everyone's attention, the ecological repercussions from rats becoming established on certain islands are far worse," the U.S. scientists wrote. "Once rats disperse on any sizable island, eradication is not possible. Therefore, quick action is necessary to exterminate any rats which come ashore before they disperse."

The Fish and Wildlife Service developed two approaches — aggressive monitoring and total extermination.

In the Pribilofs, they developed an extensive rat prevention campaign after meeting with local leaders and fish processors. St. Paul passed a detailed rat prevention law that, among other things, prohibits ships with rats from coming within three miles of the harbor. All ships are now required to have rat prevention under way, with traps and good sanitation.

At present, about 100 traps are set in the vicinity of St. Paul harbor and another 100 traps at St. George harbor. Scores of additional traps have been placed inside the harbor-based processing ships and in onshore plants. There have been meetings and training sessions. Paradoxically, wild foxes have been encouraged to infest the harbor in the hope they will quickly devour any rat that scrambles down a line. (Scientists believe foxes are indigenous to the Pribilofs and other Bering Sea islands, having reached them over the ice; they coexist with the islands' cliff-dwelling birds.)

So far, Sowls says, no live rats have appeared in either village. A dead, mummified rat was found in St. Paul in September 1993, in a case of freight. A single rat was seen trying to crawl down a line from a vessel, but harbor personnel responded quickly, chasing it back onto the boat. Then the vessel was ordered out of the harbor, according to harbormaster Andrey Mandregan. Rat droppings have been found in packing crates, there has been some rat-damaged cargo. But, so far, no rats.

"It's all, 'Catch the first one,'" Sowls says. "We

need to keep people looking and be aware."

But if the worst happens — and rats get through the protective ring of traps and foxes on the Pribilofs or get ashore on another island through shipwreck — then the rat attack would begin.

"We're forming a team of people who would go if a ship were to go aground on an island," Sowls says. "Basically what we'd do is clean up the rats like you would an oil spill."

How long can Anchorage stay rat-free?

A few weeks ago, a tiny, brown rodent was brought to the Anchorage environmental sanitation office. The chance that it might be a Norway rat alarmed city health officials.

"It was a small rodent, mouse in size, that was basically brown," says Robert Baker, the city's program manager of environmental sanitation. "Was it a house mouse variation or an immature Norway rat? We couldn't answer it."

The rodent was sent to the museum at the University of Alaska Fairbanks, and experts there quickly informed the city that the specimen was, in fact, a small, dead house mouse.

Anchorage was still rat-free and, amazingly, appears to be the largest port city in the Northern Hemisphere without a population of rats, according to biologists and health officials.

"I've been in this job for eight years, and we have never yet had a verified report of a wild Norway rat or roof rat in the city in that time," Baker says. "And there have never been any in the recollection of the people I work with."

There have been rumors. A rat supposedly jumped out of a cargo van somewhere in town, but workers quickly killed it. Ken Perry, who operates a statewide pesticide company, says he's talked to people who say they've spied rats over the years, but "they're very, very seldom seen." Other reports have turned out to be indigenous muskrats or the European house mouse, according to Baker.

The stakes are high. Like elsewhere in the world, rats could cause millions of dollars in damage at the 1,300 Anchorage establishments that store or sell food. They could spread disease, kill birds and other indigenous wildlife. They could cause fires by chewing through wiring inside walls.

"I take it very seriously," Baker says. "There is a law in the city that says you cannot own or possess a rat without a special permit." Only the University of Alaska Anchorage currently has such a permit, he says.

From a rat point of view, Anchorage ought to be prime real estate. It's not too cold, there's plenty to eat and there are lots of buildings to hide in. After all, rats live in Fairbanks, hanging out near the Tanana River and the dump, according to Perry. Norway rats also infest ports like Nome, Kodiak, Ketchikan, Juneau and Sitka.

Why not Anchorage?

"In biology, when you have a situation like this, you ask two questions," Baker says. "Is it because the species couldn't get there because of a barrier? Or could the species get there and not survive? I think the answer to the first question is pretty obvious. There is no barrier."

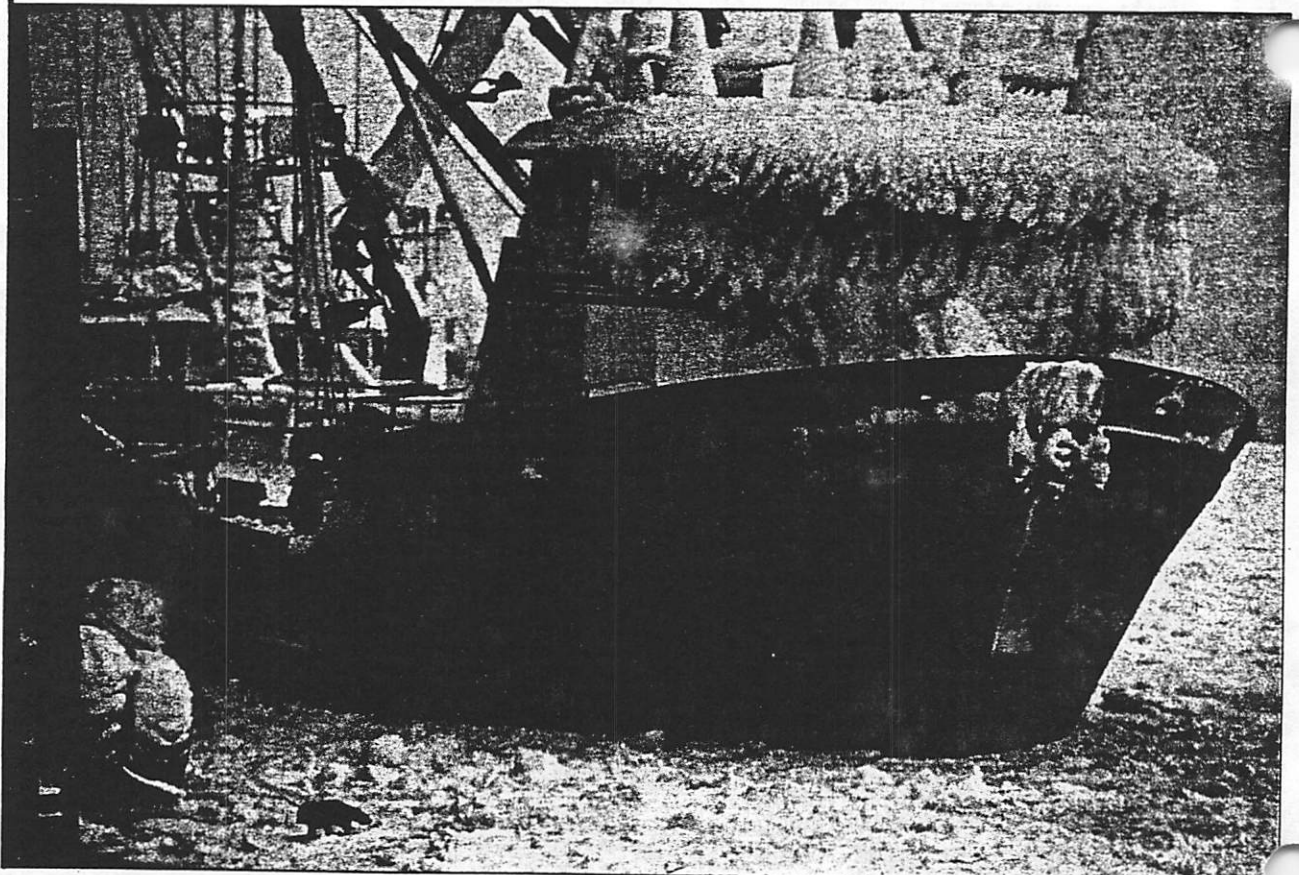
So does Anchorage have some mysterious environmental virtue that keeps it rat-free?

"That's the question," Baker says. "I don't have an answer for you. No one else has an answer for you, either."

In January, the U.S. Fish and Wildlife Service received an emergency one-year exemption from the federal Environmental Protection Agency to distribute two potent rat poisons on remote islands in the event of a rat spill, and the state pesticide program has certified about 20 people to work with the poisons. The state is also working to obtain permanent authorization to use the poisons on the islands, says Carl Kalb, an environmental specialist with the program.

The substances — Brodifacoum and Bromethalin — would be placed inside tubes that would be spread out in a grid pattern over the beach near the shipwreck. Traps would be employed as follow-up, baits replaced as needed, dead rats removed. Scientists would return to make sure the rats were truly gone.

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BOB HALLINEN / Anchorage Daily News file photo.

Foxes have been encouraged to live and feed around St. Paul harbor in the hope they'll kill rats attempting to leave ships.



RAT ZONE

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In the environmental assessment of the plan, there was discussion of the possibility that other animals might eat the poisons — which cause internal hemorrhaging or nervous system breakdown. Yet the stakes were so high that the scientists argued it was worth the risk.

"The worst case imaginable, in which a few eagles succumbed after eating poison baits or rats, would be minuscule when considered in terms of rats becoming established on an important sea bird island," the biologists wrote. "Any losses of eagles would be temporary, whereas rats colonizing all but a tiny island would be permanent."

What if — despite all of the plans and poisons — rats still manage to overrun an island? Is there really no other solution?

Next summer, the Canadian Wildlife Service will find out. It has proposed trying to kill off rats on Langara Island and two nearby islets. But it won't be easy.

One plan calls for 50 to 60 people to spend two months on the island deploying 3,000 to 4,000 bait stations — at an estimated cost of \$1 million. A variation involves fewer people but would take 10 months. No one knows if either plan will work. Langara is almost 13 times bigger than the largest New Zealand island where similar rat eradication strategies worked.

"If it works, it will be the biggest island in the world where rats have been eliminated," Sowls says.

Depending on what happens, Alaska scientists might try the same approach on four-mile-long Shemya Island — site of a U.S. Air Force base in the process of closing. Since World War II, the rugged, black-rock island has been infested with rats.

No one knows if these heroic and expensive approaches will work. Protection of Alaska's wilderness islands probably means keeping rats from ever establishing that first beachhead.

"It's scary," says Sowls. "We basically have to prevent them from getting on at all. I'm not confident that we're going to be successful." ■

□ Doug O'Harra is staff writer for *We Alaskans*.