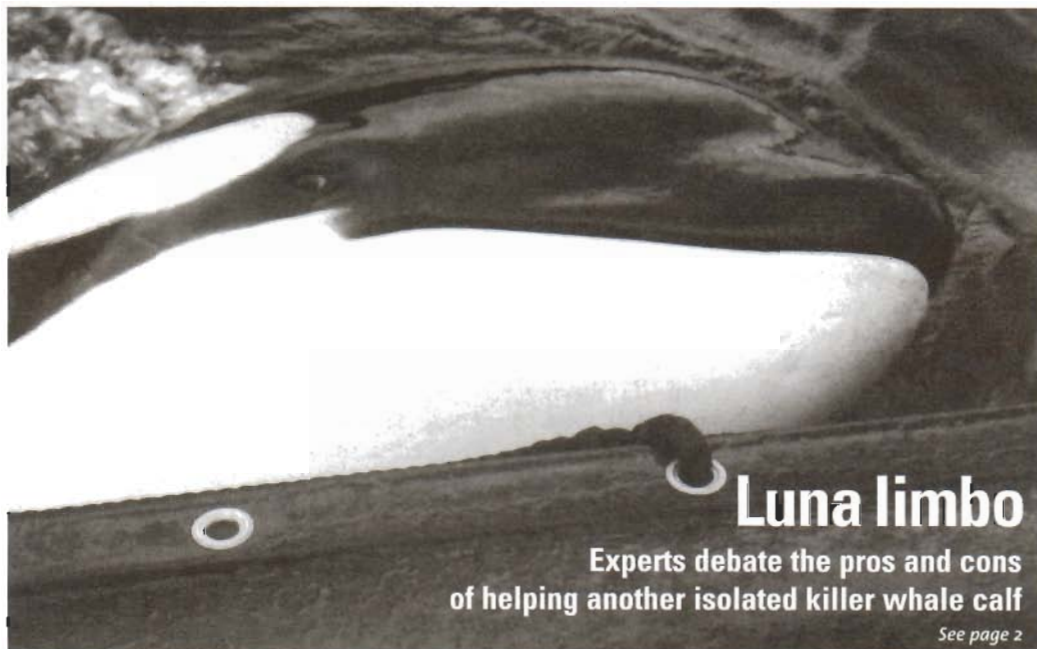


THE Blackfish Sounder

NEWSLETTER OF THE BRITISH COLUMBIA WILD KILLER WHALE ADOPTION PROGRAM



Luna limbo

Experts debate the pros and cons of helping another isolated killer whale calf

See page 2

Whenever you're lucky enough to observe a wild animal in its natural environment you can always learn something. The case of Springer (A73), the orphaned calf who was captured, rehabilitated and returned to her home waters in Johnstone Strait in 2002 (see story, p.3) was unique from the beginning. When I got involved in the rescue, I knew we'd learn a lot about Springer but I had no idea how much we'd learn about killer whales in general.

The first surprise came as soon as Springer was released. She headed toward some nearby whales, all close relatives, came within about 30 metres of them, and then stopped. It was clear she'd got some kind of message that things weren't quite right. She floated there for a few minutes, looking at them look at her. Then the other whales turned in one direction, and Springer turned in the other. Over the next few days, Springer shadowed the other whales at a distance. At times when they got excited, usually at the rubbing beach, she'd approach. But as soon as the whales quietened down and formed into matriline she was on her own again. After several days of this, she managed to form an

affiliation with a young female, Nodales (A51), and later, Nahwitti (A56). These new bonds were her tickets into a group, although we don't yet know whether they've lasted.

What has this taught us? All along, we'd been focusing on how Springer was going to take to other whales. But the real question was whether other whales would accept her. Also, Springer reminded us how incredibly social killer whales are. For an individual killer whale, being a member of a group is all-important. We see that in two other isolated killer whales—Luna (L98), pictured above, and Keiko. Like Springer, they crave social contact, even if they have to get it from humans. And like Springer, Keiko cautiously mixed with wild whales but was not immediately accepted. These striking similarities offer us valuable insights into the behavioural biology of this fascinating animal.

Lance Barrett Lennard

Dr. Lance Barrett-Lennard
Senior Marine Mammal Research Scientist
Vancouver Aquarium Marine Science Centre

Visit our website!
www.killerwhale.org

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The B.C. Wild Killer Whale Adoption Program, hosted by the Vancouver Aquarium Marine Science Centre, is an ongoing research and conservation effort for the protection of wild killer whales and their habitat.



VANCOUVER AQUARIUM
MARINE SCIENCE CENTRE

FIELD NOTES

I'll take that!

What do you do when a wild killer whale steals half your catch off your fishing line, and then comes back for the rest? That was the dilemma facing three anglers off southern Vancouver Island in summer 2001 when they tried to reel in a large sockeye salmon. After the killer whale had chomped off half the fish, the fishermen pulled the remains into the boat. But the whale wanted the rest. It rubbed along the side of the boat, alarming the fishermen so much that one of them smacked it on the head with a fishing net. As they started up the boat's engine, the whale again hit the boat, pushing it sideways. The fishermen motored off, scared but unharmed. Although the boat wasn't damaged, the fishermen were badly shaken—literally.

Chasers become the chasees

Killer whales may be the top predator of the oceans, but even they have bad days. In fall 2001 in Monterey Bay, California

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Orca experts swap notes in France

Last September, the Fourth International Orca Symposium took place in France and most of the world's killer whale scientists were there. The last symposium was held in Victoria, B.C. in 1990, so there was plenty to talk about.

"The fields that have really moved ahead in 12 years are genetics, acoustics and contaminant analysis," says the Vancouver Aquarium's Dr. Lance Barrett-Lennard, who was on the organizing committee. "These three fields have really advanced killer whale research to a whole new level of sophistication."

Papers presented at the symposium described killer whale research findings from areas as far-flung as Antarctica, Norway, Russia, Mexico, Argentina, New Zealand, the U.S. and, of course, B.C. Here are a few research highlights (only lead researchers are listed):

- **Killer whale acoustics using a towed hydrophone array.** Conventional underwater acoustic recordings don't indicate the direction of a sound source, so researchers can't discern which individual in a group is vocalizing. This study, working with B.C. resident killer whales, successfully linked sounds to individual whales. The study gives field researchers a better tool for recording and analyzing the significance of killer whale communication. (Dr. Ari Shapiro, U.S.)

- **Reassessment of killer whale social organization.** Early in B.C.'s killer whale studies, the late Dr. Michael Bigg defined a resident pod as "a group of individuals within a common community that travel together 50 per cent or more of the time." But field data from the last 13 years shows that this doesn't hold true in the long-term. Instead, the matriline (a mother and all of her offspring) are the fundamental unit of social

organization in northern residents. The term "pod" is still useful as a loose indication of who travels with whom, but not as a formally defined social unit. (Dr. John Ford, B.C.)

- **Killer whales in the Crozet archipelago.** Studies on transient-type killer whales off these remote southern Indian Ocean islands have continued on and off for years. A new population viability analysis reveals that these killer whales are in trouble, with low birth and calf survival rates. Causes may include the decline of their main prey—large whales and southern elephant seals—and interactions with the Patagonian toothfish (also known as Chilean sea bass) long-line fishery. (Eric Poncelet, France)

- **Satellite tracking of killer whales.** Killer whales have been studied in herring wintering grounds in northern Norway since 1983. To learn more about their seasonal movements and diving behaviour, researchers have attached satellite-linked dive recorders and radio tags to six killer whales (with some attachment difficulties). Early results show that the whales follow herring for at least seven months of the year, and that their range may be as much as 300,000 sq km. (Dr. Tiu Simila, Norway)

- **Killer whales and the red tuna fishery.** Killer whales and tuna fishermen in the Strait of Gibraltar have been interacting for at least 500 years in a labyrinth fishery—a form of cooperative fishing where a maze of nets funnels the fish into a catch area. The whales are welcomed by the fishermen because they chase the tuna into the nets. But the whales are considered pests by a bigger troll fishery that began in the 1960s. This interaction, and depletion of tuna stocks from overfishing, is a growing problem in the region. (R. de Stephanis, Spain)

Luna limbo Experts debate the pros and cons of helping another isolated killer whale calf

What should be done with Luna?

Luna, or L98, is a three-and-a-half year-old male juvenile from the endangered southern resident community. Since July 2001, he's been living alone deep inside Nootka Sound on the west coast of Vancouver Island. He somehow got separated from his pod and is either unwilling or unable to find his way out.

Despite his isolation, Luna has a number of things in his favour. He's healthy and seems to have a steady food supply. His mother (L67) is still alive; in fact, she had a new calf last fall. And he's within his pod's home range, although his family has never been seen that far inside the Sound.

Scientists had hoped that Luna would reunite with his pod last spring when they returned to southern Vancouver Island waters. But that didn't happen. Instead, Luna moved even deeper into the Sound and developed a fondness for boats, docks and people—increasing his risk of injury and compromising his chances of a successful reunion with his family.

For two months last summer, the Victoria-based Marine Mammal Monitoring (M3) program patrolled Luna's "zone," intercepting boats and

asking them to steer clear. Often, they ended up rescuing trespassers when the young whale came to their boat and rubbed it or pushed it around like a bathtub toy.

This winter, Luna spent a lot of time near the boat dock at Gold River, attracting even more human attention—people were touching and feeding him—despite pleas from fisheries officers and others to keep away. Fed up, the RCMP laid harassment charges in February against a woman for petting the whale. The charge carries a maximum fine of \$100,000.

Meanwhile, a Canadian-U.S. scientific panel is considering various options for Luna's future. "It's a lot more complicated than the Springer situation," says Dr. John Ford (Fisheries and Oceans Canada, Nanaimo). "Luna appears to be healthy and eating well. His biggest problem right now is humans, and it's up to all of us to manage that."

The first question facing the scientific panel, says Ford, is whether Luna is even interested in returning to his family group. "People are making a lot of assumptions about that. But I'm not completely convinced his separation was an accident. Maybe there's something wrong with him and he was

Cont'd on page 4

It's wait and see for Springer fans

Where's Springer? That's the big question we're hoping will be answered sometime late this spring when her relatives return to the waters off northeastern Vancouver Island. Fingers are crossed that Springer will be with them.

Springer (A73) is the orphaned calf who last summer became the first wild killer whale to be reunited with relatives. Only time will tell whether Springer survived the winter and whether the reintroduction has stuck for the long-term.

Springer's saga began sometime in early 2001 when her mother, Sutlej (A45), died and the 18-month-old calf—the equivalent of a human toddler—became separated from the rest of her immediate family, headed by grandmother Kelsey (A24). In January 2002, Springer turned up in Washington's Puget Sound, alone, in poor health, and well outside her family's range.

Last June, after months of public debate, Springer was captured and nursed back to health. One month later, she was transported by high-speed catamaran back to Johnstone Strait, her family's core area. She was released the next day when some relatives—great aunt Yakat (A11) and her family—swam by.

Springer's rescue was an international, multi-organization effort involving scientists, veterinarians, animal care specialists and

volunteers from both the U.S. and Canada. Her unprecedented journey home also gained worldwide media attention.

In the week following her release, Springer made several approaches to boats—a dangerous habit she'd acquired in Puget Sound. But eventually family ties proved stronger, thanks to two teenage female relatives, Nodales (A51) and Nahwitti (A56), who took turns acting as her surrogate mother. Nahwitti is a member of A4 pod, which includes Springer's family. Nodales, an orphan who raised her little brother, Surge (A61), is from closely related A5 pod.

Over the next three months, Springer bounced back and forth between these two females and their families. This may be because she was an orphan and not on as tight a leash as most calves her age. Or it may be that the re-bonding process still had some way to go.

Most northern residents leave the Johnstone Strait area in the fall. We still don't know where they go for the winter, but it's a critical time because food is less plentiful. A4 and A5 pod whales usually reappear in B.C. waters in May or June.

When last seen on Oct. 6, Springer was travelling with a large group of A-clan whales. "She was spry with lots of play behaviour, and showed no sign of going toward boats," said the sighting report. "She appears to have blended in wonderfully with her clan."

"She appears to have blended in wonderfully with her clan."



From front: A61, A51, Springer, A43, A60, and A69.

Transients dine on minke



Minke, foreground, and T11.

It's a whale-eat-whale world out there, as residents of Saltspring Island near Victoria learned in gory detail last October.

It all began when an islander enjoying a sunny morning in Ganges Harbour discovered a 10-metre minke whale wedged against the rocks and bleeding so badly that the surrounding water was red.

Four killer whales—later identified as transients Pachena (T12), Nitinat (T12A), T11 and T11A—were circling nearby. As a crowd gathered to watch, the killer whales took turns pushing and biting at the minke, which would weakly thrash with its tail and struggle even more against the rocks.

Minkes are the smallest of the baleen whales and are often seen off southern Vancouver Island in the summer months. Although they're very fast swimmers, this whale had made the mistake of turning into a dead-end bay.

Just after 2 p.m.—watched by hundreds onshore and fisheries officials on boats nearby—the minke shoved off the rocks and made a dash for freedom. The transients pursued, ramming it and jumping on top of it. Within 45 minutes, the exhausted minke rolled over and died.

The whales fed on the carcass for several hours, observed by researchers, including the Vancouver Aquarium's Dr. Lance Barrett-Lennard, who scooped up tissue samples. "It was the first time any of us had witnessed a successful attack on a large whale," he says.

ELLEN HARTLACHER

BOB LANGRISH/SOUNDERS PHOTOGRAPHY

Luna limbo

Cont'd from page 2

rejected by his pod. Or perhaps he didn't want to be with them anymore. We just don't know."

In deciding whether an intervention is the best course of action, the scientific panel must consider whether transporting Luna to the waters off Victoria—L pod's core summer area—would be in his best interest.

"What if they ultimately didn't reunite?" asks Ford. "We could be doing Luna a real disservice by taking him from an area where he's clearly able to make a living and is doing quite well, and putting him into an area he's not familiar with and where he could be at even greater risk of negative interactions with boats and people.

"We'd all like to see him back in his pod," Ford stresses, "but we don't want to inadvertently put him in a worse predicament than he's in now. And there's a real possibility of that happening if we don't think this through properly."

PODPOURRI

Killer whales don't stop at the Alaska-Russia border, and neither does research. Since 1999, the Far East Russian Orca Project (FEROP) has been studying killer whale numbers, acoustics and behavioural ecology along the Kamchatka coastline. So far, the project has identified 150 resident whales in the region. Despite the study's infancy, the Russian government has granted permits to capture up to 10 killer whales in its waters in 2003 for sale to the aquarium industry. Scientists argue that too little is known about wild populations to justify the decision. A killer whale capture industry in B.C. and Washington waters from 1965-75 was halted when studies revealed there were only a few hundred, not the thousands assumed when permits were granted.



LANCE BARRETT-LENNARD

Alaskan killer whales

Killer whale studies begin in Western Alaska

How many killer whales are there in western Alaska, and what populations do they belong to?

Those questions may be answered in the coming years, thanks to field work now underway in the region stretching from Seward westward to the Aleutian Islands. The study is led by Dr. Lance Barrett-Lennard of the Vancouver Aquarium and Craig Matkin of Alaska's North Gulf Oceanic Society.

Last summer, Vancouver-based biologist Damian Power headed one of the project's three field teams, spending two months photographing, recording and biopsy-sampling killer whales off Kodiak Island, about 200 miles west of Anchorage.

Preliminary analysis of the field data shows that most of the resident killer whales photographed off Kodiak have also been seen in the Prince William Sound-Kenai Fjords area, where Matkin has been doing long-term studies. For years, researchers have been curious about several resident pods that intermittently show up in Prince William Sound.

"Until now, we had no idea where they were coming from," says Barrett-Lennard. "Damian's work clearly shows that the two regions share a common population of residents, but each pod has its own preferred area. That's similar to what we have in B.C."

Another early result is that there may be no overlap of resident or transient killer whales from the Kodiak-Prince William Sound-Kenai Fjords area with whales photographed in the other part of the project in the eastern Aleutians. This suggests there's a population break somewhere along the Alaskan peninsula. If that's true, this means there are at least four distinct resident populations along the North Pacific coast, not three.

The transient picture is a little sketchier because encounters are fewer, but there may be no overlap there, either, suggesting there are also four distinct transient populations along the North Pacific coast.

This summer, studies will continue off Kodiak Island and field work will begin at False Pass, a narrow channel used by marine mammals as a shortcut into the Bering Sea. Both sites present physical challenges, even for veteran field researchers.

"You're almost always in some kind of sea, which makes biopsy sampling and photography difficult, and it's harder on your boat and your body than anywhere else," says Barrett-Lennard. "It shows us how spoiled we've been in the sheltered waters where we usually work."

Smart seals know who their friends are

When it comes to sensing danger, harbour seals are smarter than we thought.

A study published last fall in the international science magazine *Nature* revealed that harbour seals learn to tell the difference between sounds made by harmless resident killer whales, and those of transient killer whales who want to eat them.

The study was conducted by Volker Deecke, a research associate with the Vancouver Aquarium, in collaboration with Dr. Peter Slater of the University of St. Andrews in Scotland and Dr. John Ford (Fisheries and Oceans Canada, Nanaimo).

B.C. waters are home to resident and transient killer whales. They look the same, but they sound very different. Residents—whose fish prey can't hear them—are very vocal and have a complex system of distinct dialects. Transients are much quieter with a smaller range of calls that sound very different from those of residents. Their marine mammal prey has very good hearing.

Biologists have long believed that animals instinctively steer clear of all predators. But this

study shows that seals can discriminate between sounds that mean danger, and sounds that are harmless.

To find this out, Deecke played back recordings of killer whale calls at several seal haulouts in B.C. waters and then counted the number of seals still at the water surface at 20 second intervals. When he played local resident calls, there was very little reaction. But when he played transient calls, most of the seals quickly dove underwater and headed for the relative safety of rocks, kelp beds or shallows.

"That was interesting, but we kind of expected that," says Deecke. The surprise came when he played the unfamiliar calls of harmless, fish-eating residents from Alaska. The seals panicked—as much as they had for the transients.

What this shows, he says, is that the seals have learned over time to trust the calls of local resident killer whales. It's called selective habituation—learning what not to fear—and doesn't require experience with the predator. "This is pretty smart," says Deecke, "because the seals don't waste energy fleeing from every killer whale they hear."



VOLKER DEECKE

Harbour seals

Coming soon!

Don't be surprised if you visit a conservation organization in the U.S. or Canada in the near future and find a B.C. Wild Killer Whale Adoption Program package in their gift shop. To increase revenue, we're in the process of developing a retail package for the program. More revenue means more funds and that means more and better wild killer whale research.

The package is being test-marketed at the Vancouver Aquarium Marine Science Centre's Clamshell Gift Shop and so far has been well-received. We expect to continue processing the majority of our adoptions via snail mail, phone, and Internet, but we hope the retail package will become an important addition to our fundraising efforts.

FIELD NOTES

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researcher Nancy Black and colleagues were surprised to see eight transient killer whales—known to hunt grey whales—being chased by about 20 Risso's dolphins. Risso's are deep-ocean dolphins about half the size of killer whales. It's not known what started the pursuit, but it continued at high speed for about 40 minutes before the Risso's dolphins caught up to the killer whales and circled them. The killer whales bunched up into a tight group, almost like they were caught in a net, says Black. Then they broke loose and the Risso's tore after them. The chase went on for a little while longer before both parties went their separate ways.

Harbour seal buffet

Killer whales continue to remind us how little we know about them by showing up in strange places. Early in January this year, 11 transient killer whales swam into Hood Canal, a 90 km long body of water in Puget Sound, just opposite Seattle. Over the next eight weeks they chowed down on the canal's harbour seal population, possibly eating as many as 600. Local residents were intrigued with the visitors, and so were whale researchers. Transient killer whales rarely stay in one spot for more than one or two days, probably because their prey becomes too wary. Furthermore, most of these whales aren't usually seen outside southeastern Alaska. Prominent among them was adult male T74, a whale rarely seen at all. The only other adult male in the group—and the only "local"—was one of our adoption whales, Pender (T14).

It's been a bumper year for offshores

Offshore killer whales have made four known visits to the waters surrounding Vancouver Island in the last year.

One group of 20-30 was seen in early April 2002 off Victoria and a slightly larger group was spotted a few days later in Johnstone Strait. Then, in September, a group of about 60 spent almost two weeks off eastern and southern Vancouver Island. And this March, a group of over 30 were seen off Port McNeill near Johnstone Strait.

The frequency and location of these sightings is unusual—they're not seen very often and when they are, it's usually off the Queen Charlotte Islands. "The encounter rate has really increased from the 1980s when we first became aware of them," says Dr. John Ford (Fisheries and Oceans Canada, Nanaimo). "Something is clearly going on in that they're turning up more and more in inside waters."

To date, at least 230 individual offshores have been photographed in B.C. waters.

Offshores are the third and least known type of killer whale found off the B.C. coast. They usually travel in groups of 25 or more, and their calls are different from those of residents and transients. Genetic studies show they're more closely related to residents than transients. They're believed to spend most of their time on the continental shelf, probably feeding on fish.

Researchers have photographed offshore killer whales from California all the way to the Aleutian Islands, and some of the same individuals have been identified at both ends of that range.



Offshore killer whales in Saanich Inlet, September 2002

U.S. pitches in money for southern residents



VALENTINE SHORE

From front, L74, L3 and L84

Discussion continues in the U.S. over what should be done to help the recovery of the southern resident killer whale population.

Last June, NOAA Fisheries, the U.S. government body responsible for marine mammals, turned down a request by conservation groups to list southern residents under the federal Endangered Species Act, despite years of decline, because they don't constitute a "significant population segment" and are therefore not eligible for endangered species protection.

NOAA Fisheries has proposed instead that southern residents be declared "depleted," arguing that a depleted status conservation plan would give the whales virtually the same protection as a recovery plan under the Endangered Species Act. Depleted status would make the southern residents a "strategic stock" and "allow development of conservation or management measures to alleviate impacts to areas of ecological significance."

A final ruling on the depleted designation is expected soon, with a conservation plan following afterwards. Meanwhile, the U.S. federal budget in February included \$750,000 for research on southern residents. The state of Washington has added another \$100,000.

The southern resident population—made up of pods J, K and L—is seen in the summer months off southern Vancouver Island and northern Washington State. The population has declined steadily from a high of 99 in 1995 to only 80 in 2002. This winter, at least five new calves have been born, but one has already disappeared. The cause of the decline is unknown, but the main suspects are depleted food resources, pollutants, and noise and boat disturbance.

In Canada, the southern residents are classified as endangered by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). Work will begin on a recovery plan for all of B.C.'s resident killer whales in the coming year, in coordination with U.S. efforts.

"...something is clearly going on in that offshores are turning up more and more in inside waters."

Population Update

Based on the 2002 field season, here's our annual update on adoption program whales:

In the A30 matriline, A75, who is the first calf of **Blinkhorn** (A54), survived its first critical year and can now join our adoption program. We've named it **Cedar**, after Cedar Island in the entrance to Knight Inlet.

In the A11 matriline, **Kiltik** (A52) had her first calf, A76, early in the field season, but it wasn't seen in a subsequent sighting and may not have survived.



Licka (A8)

In A5 pod, we continue to lose old friends. Forty-nine year-old matriarch **Licka** (A8) is missing and presumed dead. So is **Foster** (A26), a 31-year-old male who

was believed to be her younger brother. Foster's big brother and constant travelling companion, **Top Notch** (A5), died in 2000.



Cedar (A75)

The 38-year-old male **Izumi** (B8) was not seen in one poor encounter with B-pod and is considered missing. So is the 23-year-old male **Tribune** (I37). Other resident whales that are miss-

ing and presumed dead are seven-year-old **Salal** (D18), and 40-year-old male **Dawson** (G11).

There's a new arrival among our adoption program transients. Thirteen-year-old **Tasu** (T2C) is a first-time mom with the arrival of T2C1. The calf will be named in 2004 if it is seen in the 2003 field season. All other transients on our list are doing fine. In fact, some of them—notably **Pachena** (T12), **Nitinat** (T12A) and **Pender** (T14)—are making newspaper headlines (see the Field Notes section).

Keiko turns up in Norway

The world's biggest movie star continues to make headlines.

Keiko the killer whale surprised everyone last September by following a fish-boat into a Norwegian fjord, six weeks after he was permanently released from his pen in Iceland—1,600 kilometres away.

The 25-year-old whale, star of the hit movie *Free Willy*, is at the centre of the world's first attempt to reintroduce a captive killer whale back into the wild. After a worldwide fundraising campaign, he was freed from a Mexican amusement park and returned to his native Icelandic waters in 1998. There, he was kept in a large pen where staff from Ocean Futures, the organization responsible for his care, began his schooling on how to be a wild whale.

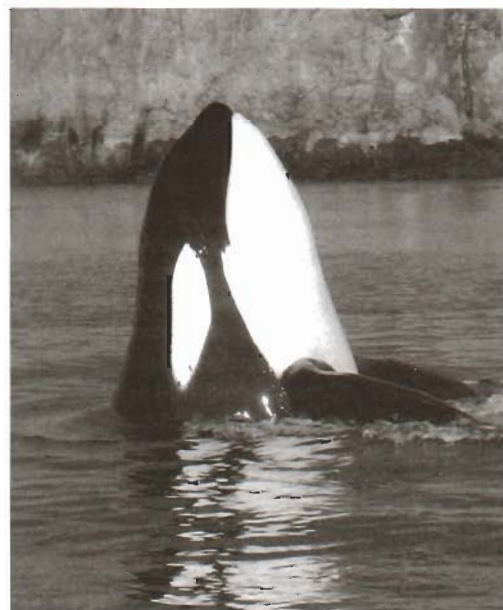
By 2000, Keiko was taking chaperoned "walks" in the open ocean, sometimes interacting with wild whales as they followed spawning herring. Last July, he joined a group of about 40 wild whales and stayed near them, swimming up to 160 km a day. DNA tests showed that the whales weren't members of his immediate family.

Keiko's arrival in Norway—alone but in good health—fueled more controversy. Curious Norwegians petted and fed him, swam with him, and even climbed on his back. Keiko seemed to enjoy it all, much to the dismay of Ocean Futures staff. "This is a big step back because we've been trying to take his attention from above the water to below it," said one of his trainers.

For updates on Keiko go to: www.oceanfutures.com/keiko

In November, Keiko was led to a remote Norwegian bay where he spent the winter under supervision. This spring, he's being taken on more "walks" in the hope that he'll once again join wild whales. Skeptics abound, but his caregivers remain optimistic.

"This is an animal who has demonstrated a remarkable capacity to survive, who rises to every challenge that humans have placed before him," says Charles Vinick, executive vice president of Ocean Futures. "Is the story of Keiko over? No. Do we know how it's going to end? No."



BLAIR MOTTI/OCEAN FUTURES

Keiko

On guard for the whales

Two new programs for watching the whalewatchers have been launched in recent years off Vancouver Island.

The Marine Mammal Monitoring program, begun in 2001 and known as M3, aims to educate boaters about etiquette when watching whales and other marine mammals and monitor on-the-water activities to make sure the welfare of the animals is paramount.

The program, run by the Veins of Life Watershed Society, sends a Victoria-based zodiac out on the water to work with local whalewatch operators and recreational boaters. "Be Whale Wise" brochures handed out to recreational boaters give easy-to-follow guidelines on how to behave around whales and other marine life.

The M3 program works cooperatively with Soundwatch, a similar initiative run by the Friday Harbor Whale Museum on nearby San Juan Island in the U.S. The transboundary area is the summer range of southern resident killer whales, which are under increasing whalewatching pressure.

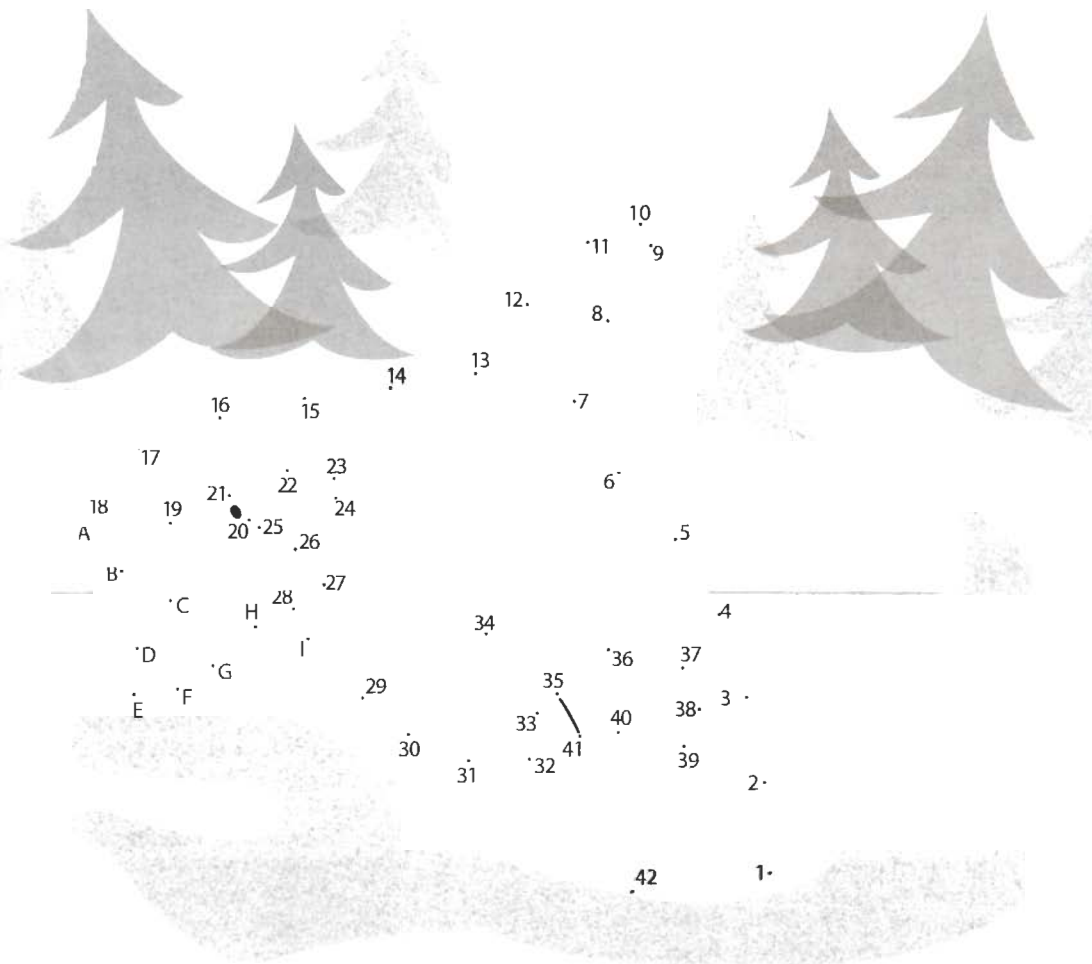
For copies of the "Be Whale Wise" brochure go online to www.salishsea.ca/m3/M3home, e-mail m3@salishsea.ca or call (250) 383-2086.

And summer 2002 was the debut season for Straitwatch, a monitoring and education program in Johnstone Strait off northeastern Vancouver Island, a core area for northern resident killer whales.

Straitwatch is run by the Johnstone Strait Killer Whale Interpretive Centre Society, a non-profit group dedicated to marine-based education, research and interpretive programs. Straitwatch can be reached by e-mail at straitwatch@telus.net.

Both Straitwatch and M3 are funded in large part by Environment Canada's Habitat Stewardship Program.

Kids' Page ...connect the dots!



PODPOURI

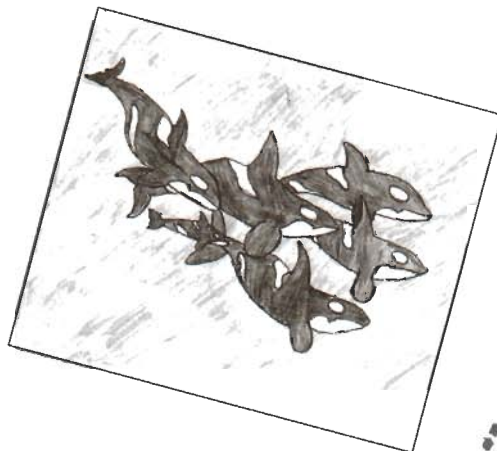
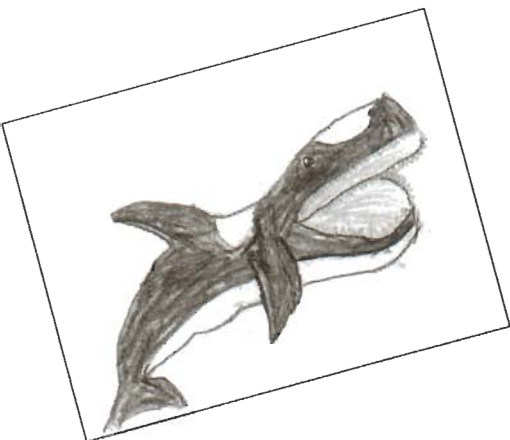
Five Alaskan transient killer whales, nicknamed the "Kodiak killers," have quite an appetite for Steller sea lions. They once consumed two sea lions in 35.5 hours of observation. At that pace, they could be eating 480 sea lions over the course of a year. Steller sea lions are endangered in western Alaska—probably due to food stress or oceanographic changes—and there's mounting evidence that killer whales may be a significant factor in their recovery.

THANKS

Thank you to everyone who has donated their time and energy to the adoption program throughout the years. And a very special thank you to **all whale adopters** for continuing to make this program possible.

Your Artwork

Thank you to all the talented young artists who contributed some great killer whale drawings. Sorry we can't show them all, but here's a sampling: (from left) **Peter Gysbers, age 8 (Hamilton, Ontario)** and **Christina Meagher, age 12 (Oakville, Ontario)**.



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