

## Threats to the Ecosystem

A diver at Kure Atoll (right) surveys coral reef bleaching. The recent influx of researchers can pose a threat to the ecosystem.

In 2003, more than 100 scientists met in Honolulu at the invitation of NOAA, to identify research priorities for the management of the islands. Most cited vessel traffic as a key ecosystem threat.

Increased access leads to increased potential for errors, shipwrecks, and landings that can introduce invasive species, disrupt habitat, and violate cultural sites.

Threats include:

- Lack of enforcement and monitoring; no requirement for automatic Vessel Monitoring Systems; lack of significant penalties for violations of conservation regulations;

- Opening the NWHI to new commercial activities, including the live fish trade; bioprospecting; ecotourism, extreme sports, air tours of monk seal and bird breeding grounds; liveaboard sailboat tours;

- Opening the closed lobster fishery; expanding bottomfishing; trolling; the establishment of coral reef fisheries.

- Recreational fishing;
- Cruise ship access;
- Increased public attraction to the refuge through the World Heritage and National Marine Sanctuary designation processes;

- The “research gold rush” which began with Reserve designation; lack of prioritization of research for conservation needs; lack of monitoring, oversight; increase in disturbance to monk seals; lobster “research” by commercial fishing vessels;

- Military use, sonar, war games, hazardous materials dumping;

- Lack of required invasive species inspections for all vessels and equipment;

- Dumping and marine debris;
- Shipwrecks, vessel groundings
- Inadequate permitting process: lack of permit review by recognized ecosystem scientists; and the lack of public oversight;

- Shipwrecks and vessel groundings.



Jim Margolis/ U.S. Fish and Wildlife Service

## ISLES OF CORAL

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no-take marine reserves are established elsewhere,” according to another NOAA report, *The State of Coral Reef Ecosystems*, published in 2005. “The nearly pristine condition of the (northwestern islands) allows scientists to study how unaltered ecosystems are structured, how they function, and how they can most effectively be preserved.”

Coral reefs in the three northwesternmost islands — Kure, Midway and Pearl and Hermes — suffered bleaching in 2002. When coral polyps are stressed by temperatures that exceed their tolerance level, they can lose their algae (which provides pigment), turn white, and die.

### KURE TOLL *Mokupapapa*

A near-perfect ring of coral surrounding a lagoon, Kure Atoll is located 1,300 miles west-northwest of Honolulu — farther from the equator than any other shallow-water coral reef in the world.

As Kure aged, coral reefs gradually grew as the central island eroded away. All that's left are a necklace of reefs and low sandy islets, and crescent-shaped Green Island in the southeastern part of the lagoon.

The oldest island in the Hawai'i Archipelago, Kure Atoll lies at the so-called Darwin Point — the position on the earth where the slow growth rate of shallow-water coral matches the slow erosion and sinking of coral reefs. When the growth of coral occurs at a slower rate than erosion, the Kure will sink forever beneath the sea. Kure is growing at .2 millimeters per year.

Kure Atoll is managed as a state wildlife sanctuary. Bird and dolphin surveys, marine debris removal, and invasive vegetation control and native plant species replanting are the main

management actions.

Rats were eradicated from the island in the past. Introduced big-headed ants and scale insects are a potential threat as are introduced invasive plants.

Hawaiian grouper are more abundant here than in other parts of the NWHI. A large group of spinner dolphins lives in the atoll.

### MIDWAY ATOLL *Pihemanu*

Best known for its role in World War II, Midway is about 1,270 miles northwest of Honolulu, Close to the Pacific Ocean's centerpoint, it is on the opposite point on earth from Greenwich, England. It is not part of the state of Hawai'i.

The atoll consists of two major islands (Sand and Eastern), small sand islets, and a fringing coral reef. It is about 6 miles in diameter. The ancient volcano has sunk 500 feet beneath the ocean.

Midway was discovered in 1859 and claimed by the United States. Since then, its physical environment has endured significant change.

The U.S. blasted a shipping channel through the reef, and Pan Am Clippers landed at its air strip. It was the scene of a major naval battle on June 3, 1942, between Japan and the United States, and later served as a U.S. submarine base.

The coral reefs here are more than 400 meters thick, and their deep chasms, caves and corridors in the reef create habitat for a wide variety of fish, several of which are unique to Midway. *Pocillopora* and *porites* coral are abundant.

Since 1996, the U.S. Fish and Wildlife Service has managed the Midway Atoll National Wildlife Refuge. Nearly 2 million birds nest here, including the world's largest breeding colony of moli (Laysan alba-

tross), and the second largest colony of ka'upu (black-footed albatross). Hawaiian monk seals, green sea turtles and spinner dolphins frequent Midway's blue lagoon.

### PEARL AND HERMES REEF *Holoikauaua*

This low coral atoll is made up of as many as eight islets, five of which are permanent, and almost 300,000 acres of coral habitat. The reef encloses an elliptical lagoon. The maximum elevation is ten feet.

The reef was unknown to westerners until 1822 when a British whaling ship, the Pearl, ran aground. Its sister ship, the Hermes, ran aground while trying to help the Pearl. These wrecks were discovered in 2004.

It is home to 160,000 birds of 17 species, including one-fifth of the world's black-footed albatross.

Marine debris carried by ocean currents have heavily marred Pearl and Hermes. The debris damages reefs, entangles fish and marine mammals, and may be introducing alien species to the NWHI. Green sea turtle sand monk seals nest and pup here.

### LISIANSKI ISLAND *Papa`apoho*

Lisianski Island, is a low, sandy island measuring approximately one mile long and 0.6 mile wide, with a land area of 0.6 square miles. Maximum elevation is 40 feet.

It lies near the north edge of Neva Shoal, a large area varying in depth to 60 feet. It has about 310,000 acres of reef habitat. The island was “discovered” in 1805 by Capt. Urey Lisianski, a Russian explorer. During the same period, Lisianski was visited by expeditions harvesting fish, turtles, guano, bêche-de-mer (sea cucumbers), and sharks, as well as monk seals. More concentrated exploitation of the island



Jim Maragos/ U.S. Fish and Wildlife Service

## Seabird Stopover

The masked booby, at right, is the largest of the boobies. Two white terns, above, are small robin-sized birds that are able to hover in one spot, like fairies, which is why they are also called fairy terns. The islands provide habitat for more than 30 species and 14 million breeding sea birds, wintering shorebirds, and endangered endemic songbirds and waterfowl. For some bird species, the islands support the world's largest colonies, such as the Laysan Albatross. The islands have been a National Wildlife Refuge since President Teddy Roosevelt designated them for protection in 1909.



Jim Maragos/ U.S. Fish and Wildlife Service

took place during the

plants is currently occurring as well as efforts to remove invasive *verbena* and *cenchrus* weeds. It is the northernmost spot where *acropora* corals occur in the islands.

### MARO REEF *Ko'anak 'a*

Maro Reef is an irregular reef network with no distinct atoll or fringing reef. It is approximately 12 miles by six miles in size. It has about 500,000 acres of reef habitat. There is only a small awash rock and no terrestrial wildlife.

Few monk seals or sea turtles occur or give birth here because of the lack of haul-out spots. There are unusually large populations of galapagos and other sharks.

### GARDNER PINNACLES *Puhahonu*

Gardner Pinnacles has a total land area 0.01 square miles and a maximum elevation of 190 feet. It has about 600,000 acres of reef habitat.

The two volcanic rocks serve as roosting and breeding sites for smaller populations of 12 species of seabirds, including blue-gray noddies. Coral diversity is high but abundance is low because of the lack of shallow water habitat and the predominance of high wave energy from the exposure to the open sea on all sides.

## FRENCH FRIGATE SHOALS

### *Kanemiloha'i*

French Frigate Shoals, a crescent shaped coral atoll about 12 miles by 18 miles, opens to the west. The largest land area in the shoals is Tern Island; a number of smaller islets are scattered along the westerly reef of the crescent. There are two exposed volcanic rocks called La Perouse Pinnacles.

French Frigate Shoals has the highest breeding populations of monk seals and green sea turtles and the highest coral diversity in the northwestern islands.

This is the only spot where all 18 species of seabirds that nest in the islands nest.

### MOKUMANAMANA (Necker Island)

Mokumanamana Island (Necker Island) is about 0.7 miles long by 0.2 miles wide. The rocky, fish-hooked shaped island consists of two parts connected by a low isthmus. Total land area is 0.07 square miles, and the maximum elevation is 276 feet.

It has about 380,000 acres of reef habitat. The whole island is designated as critical habitat for three endemic endangered plants. Nine insects are endemic to the island as are one trap-door spider and one land snail.

About 60,000 seabirds from 16 species nest or roost on the island. There is a large colony of blue-gray noddies. Observations of seals at the island suggest that the species has occurred there regularly for at least a century, although likely for much longer.

Both Mokumanamana and Nihoa have low coral diversity (less than 20 species) because of high wave action and scour.

### NIHOA ISLAND

Nihoa Island, the easternmost point of the northwestern islands, is a precipitous remnant of a volcanic peak, about 1,500 feet long. It has about 142,000 acres of reef habitat.

The whole island is designated as critical habitat for endangered plants and two endangered and endemic birds: the Nihoa millerbird and Nihoa finch.

More than 500,000 seabirds nest on the island. The island supports the largest known colony of 'ou (Bulwer's petrel) in the world. It also supports the largest Hawaiian colonies of 'iwa (great frigatebirds), 'a (brown boobies), 'a (red-footed boobies), noio (black noddies), blue-gray noddies, noio-koha (brown noddies) and manu-o-Ku (white terns).

There are at least 17 insects, six ticks and mites, a trap-door spider, and six land snails endemic to just this island. Recent outbreaks of the grasshopper *Schistocerca* are a concern for endangered plants and the birds and invertebrates that rely on this habitat. ■

## U.S. Makes Little Progress Toward Protecting Oceans

The chairmen of two separate commissions that recommended changes in U.S. ocean policies are critical of the slow pace in implementing those recommendations.

James Watkins, chair of the U.S. Commission on Ocean Policy, and Leon Panetta, chair of the Pew Oceans Commission, wrote a joint letter to President Bush to point out that some progress has been made, but said they they "feel strongly that these actions are proceeding at a pace that does not reflect the urgency of the situation."

Slow progress toward implementing needed reforms and "very limited" funding are "jeopardizing a rare opportunity for this nation to make fundamental changes in ocean policy."

In a report card attached to their letter, they were highly critical for the lack of reforming ocean governance at the federal level.

"Many of the reasons for declining ocean and coastal ecosystem health are due to failures in our governance approaches and structures, including fragmented laws, confusing and overlapping jurisdictions, and the lack of a clear National Ocean Policy."

They also found insufficient support for ocean research, and the lack of new funding for ocean policy and programs.

"Funding for essential ocean programs, outlined above, remains woefully insufficient and is far outpaced by current and future challenges. Failure to provide even the modest funding increases recommended by the Commissions, compounded by funding rescissions in important ocean programs, jeopardizes the economic and ecological benefits our nation receives from its oceans and coasts. New investment must be made so that we can address ocean and coastal issues effectively," the joint report said.



# THE HAWAIIAN MONK SEAL



Jim Maragos/U.S. Fish and Wildlife Service

## The twists and turns of monk seal science How it became the most endangered pinniped in the Pacific

Wespac apparently feels it is under no obligation to tell the truth. At least, not in January 2005, when Wespac trotted out an obscure study to make a case for lobster fishing in the proposed Northwestern Hawaiian Islands National Marine Sanctuary.

Wespac said the study is proof that lobster fishing won't take food away from the highly endangered Hawaiian monk seal, which lives in the islands almost exclusively. The seal has suffered an steep decline and an alarming rate of starvation in recent years.

At a packed public meeting in January 2005 in Honolulu, Wespac stated that "conclusive evidence the fishery indirectly effects (sic) monk seal foraging is unfounded." For this, it cited a 1998 study by a 1998 University of Hawai'i researcher named Gwen Goodmanlowe, who had published a paper, *Diet of the Hawaiian monk seal*, in the journal *Marine Biology*.

In a report, Wespac claimed her results showed lobster and bottomfish "do not constitute a significant component of the natural diet of Hawaiian monk seals."

Goodmanlowe says she did not say that.

*Cascadia Times* interviewed Goodmanlowe, now at the California State University, Long Beach, by email. She says Wespac's interpretation of her study is wrong.

The study did not say monk seals don't eat lobster. The way her study was designed, it was not even possible to reach any kind of conclusion about lobster in monk seal diets.

The study did say blubber studies are needed "so that the occurrence of lobsters in the (monk seal) diet can be accurately identified."

In 1999, Goodmanlowe wrote another paper that further examined monk seal nutrition. In this paper, she found that seals she examined may be lacking essential amino acids that are commonly found at relatively high levels in lobster. Seals that lack the amino acid can have problems with brain functions. She said this finding indicated that lobsters "may be more beneficial nutritionally" to monk seals than other prey.

By then, NOAA Fisheries had already hired a Canadian researcher from Nova Scotia to do the blubber studies that Goodmanlowe recommended.

The scientist, Dr. Sara Iverson, said other studies did not accurately measure lobster in monk seal diets because the animal spits out the shells or so thoroughly digests them that they are impossible to find in scat.

She said the best place to find clues to what's in a monk seal's diet is to analyze what's in the blubber.

She went public with her preliminary data at least three times. At the end of 1998, Iverson presented preliminary findings to the Hawaiian monk seal recovery team showing that the seals do, in all probability, eat lobster.

"Although this is preliminary (how many times can I say that word?), lobster has definitely come through and sometimes quite largely (especially at French Frigate Shoals)," she wrote in a Nov. 13, 1999 email to NOAA Fisheries scientists.

She presented a similar oral report at a December 1999 meeting of the Hawaiian monk seal recovery team where she said lobster may represent 20 to 25 percent of the prey consumed by sub-adult seals of both sexes, and by adult females.

This was too much for Wespac to

swallow. On March 6, 2000, Simonds wrote a letter to a top NOAA official complaining that Wespac's science advisors did not see any conclusive evidence "of food limitation" in monk seals, despite compelling field reports (excerpted on Page 18) detailing case after case of monk seal starvation.

Simonds' letter also protested "the misrepresentation of results from fatty acid signature studies of monk seal tissue that prematurely suggest a proportionally high level of lobster in their diet."

Since then, the public has heard little from Iverson about monk seals. She did give a declaration in the lobster lawsuit before Federal Judge Samuel King. In it, she cautioned that her results were preliminary, and not to be used to make policy decisions regarding the seal.

She declined an interview about her data, and NOAA Fisheries rejected *Cascadia Times'* petition under the Freedom of Information Act to see her results.

### Back to the beginning

One might think the Hawaiian monk seal enjoys a cushy lifestyle. After all, the seal gets to hang out on the beautiful reefs and sandy beaches of the Northwestern Hawaiian Islands.

But that doesn't mean survival is easy. The waters around its haulouts are full of dangerous predators, including the large and powerful Galapagos and tiger sharks. Smaller monk seals also need to watch out for big male seals who on occasion beat up and kill the weaker animals.

But the most worrisome threat may be starvation, which has plagued the Hawaiian monk seal continually since

1988. That year, researchers began noticing large numbers of dead, emaciated young seals on the beaches of the main pupping grounds on French Frigate Shoals, according to field reports written at the time.

In 1990 and 1991, as the downward trend continued, NOAA scientists wrote in a report, "This population clearly is declining after 30 years of increase."

They were right. During the 1990s, the monk seal population at French Frigate Shoals declined by 55 percent.

Today, the starvation continues, and the aging population is failing to replace itself. As the older females die off, and with the population declining 5 to 6 percent a year, the species appears to be on track for a sudden and tragic collapse.

There are only 1,600 monk seals in the world, counting the 300 of the even more highly endangered cousin, the Mediterranean monk seal. A third group, the Caribbean monk seal, hasn't been seen since 1932. On earth, no other pinniped, a group of marine mammals that includes seals and sea lions, is so close to extinction.

It may be a coincidence, but the monk seal's decline paralleled the crash of one of its prey: the lobster. The main difference is that the lobster dropped much faster than the monk seal, at least so far.

You can't say Wespac wasn't warned. As long ago as 1980, the U.S. Army Corps of Engineers expressed the same concern and urged Wespac to be careful.

During the 1990s, the U.S. Marine Mammal Commission wrote at least a dozen letters to NOAA and Wespac warning that lobster fishing might be taking food away from starving monk

seals, and to take precautions.

In 2005, the commission found itself still fighting Wespac and its proposed lobster fishing.

In comments on that plan, it noted that lobster fishing in the northwestern islands showed “classic signs of overfishing and stock depletion.”

Catch levels in 1999, when the fishery had to be closed, were just 10 percent of levels taken in the mid-1980s.

“It is uncertain to what extent the depletion of the lobster stock has contributed to the decline of the monk seal population at French Frigate Shoals or to the species’ lack of recovery at other locations. This clearly reflects a case in which precautionary management requires that the fishery remain closed until unambiguous data indicate otherwise,” the commission wrote.

As always, Wespac dismissed the commission’s recommendation.

### Ignoring the data

Throughout the decline of the lobster and the monk seal, Wespac demonstrated a lack of commitment to caution and conservation, a stubborn refusal to listen to outside experts, a strong reliance on old-fashioned denial and a close allegiance to the lobster fishing industry.

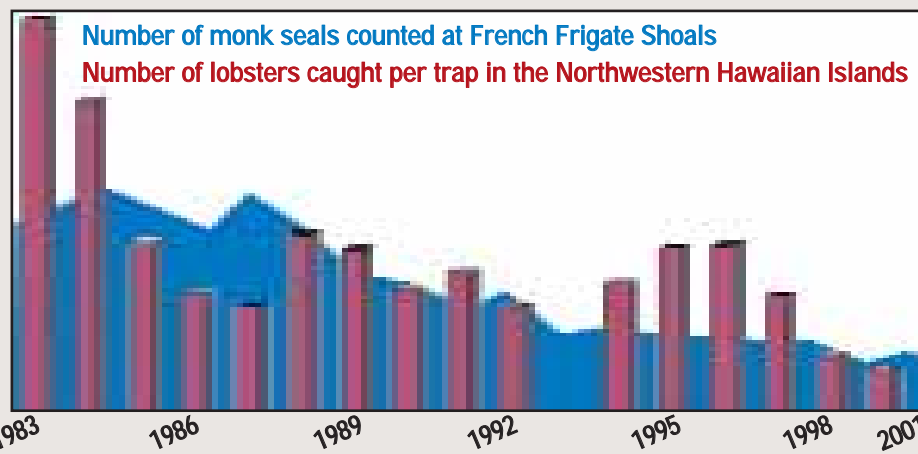
Wespac was not alone in its failure to protect these species. NOAA played a major role by failing to recognize and act on danger signs. But the record also shows that some scientists at NOAA were deeply troubled by the lobster fishery and its effects on the monk seal. According to emails contained in federal court records, these officials were overruled by their superiors, perhaps testimony to Wespac’s political clout.

U.S. ocean policies have also failed in the northwestern islands and with

## Twin Falls: The decline of lobsters and seals

Things were looking a lot better for lobsters and seals back in 1983. That’s the year Wespac took over the lobster fishery in the Northwestern Hawaiian Islands, and it’s been downhill both lobster and seal ever since. The chart below shows the

growing scarcity of lobster (red bars) as measured by the effort it took to trap one. It also shows the mean number of monk seals counted at the main breeding grounds on French Frigate Shoals each summer.



1983: 3.37 lobsters per trap. 1999: 0.36 lobsters per trap.

1985: 313 seals at French Frigate Shoals. 2002: 119 seals at French Frigate Shoals

### Lobster’s boom and bust

From 1985 to 1995, fishermen reported to federal authorities that they caught about 13 million lobsters in the NWHI, including legal and illegal lobsters. The legal lobsters were above a certain size. The illegal lobsters were either undersized or egg-bearing, which were not legal to retain. Wespac began allowing lobster fishers to retain undersized and female lobsters with eggs in 1996.

Year	Legal Catch	Illegal Catch	Total Catch
1985	2,034,164	704,891	2,739,055
1986	1,848,838	626,747	2,475,585
1987	802,206	413,965	1,216,171
1988	1,061,839	504,607	1,566,446
1989	1,166,032	655,799	1,821,831
1990	777,444	768,886	1,546,330
1991	167,054	235,823	402,877
1992	427,013	452,471	879,484
1993	0	0	0
1994	130,979	139,156	270,135
1995	38,257	63,563	101,820
Total	8,453,826	4,565,908	13,109,734

Source: NOAA Fisheries

marine mammals in particular. The Marine Mammal Protection Act, a weak law approved by Congress in 1972, created the Marine Mammal Commission, a toothless but diligent federal agency whose only means of protecting the animals rests with its power to persuade other government entities to do the right thing.

Wespac has shown that the commission is easily ignored even in the most dire circumstances, like those facing the monk seal. Wespac’s neighboring fishing council, the North Pacific Fishery Management Council in Alaska, has sim-

ilarly dismissed the mammal commission’s pleas to slow down fishing in areas where northern fur seals and Steller sea lions are in serious decline.

A review of federal documents by Environmental Defense reveals that Wespac at numerous points in its history allowed fishers to catch amounts of lobster far in excess of quotas, easily ignoring the Marine Mammal Commission even in the most dire circumstances. The fishery was not run with an eye for ecological sustainability; Wespac instead was obsessed with the personal profits of a few individuals.

Lobster fishing couldn’t have been better during the late 1980s. With a high price for lobster tail, fishers reported hauling 2.5 million lobsters on board in 1986, worth \$6 million. From 1985 to 1990, they caught more than 11 million.

Every year during the 1980s, Wespac set quotas that were exceeded by as much as 500 percent. In 1989, Wespac decided that it would be safe to catch 1 million lobsters a year. But that year, boat captains worried that the boom was going to bust. Of 16 boats, only three were clearly profitable, economists said at the time.

They were right to worry. As the chart above shows, in 1990, almost half the catch was comprised of illegal undersized lobster females with eggs, meaning the fishers, in theory, had to throw back about 50 percent of the haul.

By 1992, fishers were catching far more illegal lobsters than legal ones. That year, Jim Cook, who went on to be Wespac’s Chairman, and Ed Timoney, husband of an ex-Wespac council member, was fined \$40,000 and negotiated to pay a reduced fine of \$29,500 for keeping illegal undersized and female lobsters with eggs. Lobster fishing was closed in 1993.

By 1994, cost and revenue analyses indicated that, on average, lobster vessels showed losses of \$40,000 to \$55,000 per vessel per year.

In 1995, the fishery remained closed but one vessel was allowed to fish under an “experimental fishing permit” to assess stock conditions.

In 1995, Wespac decided that the solution to this problem was to let allow fishers keep all the lobsters. Everything was now legal, as far as Wespac was con-



Jim Mangos/ U.S. Fish and Wildlife Service

“I am really concerned about this. We spend an incredible amount of money each year, the seal still continues to decline, and we are considering allowing a fishery to develop and increase around one of the few haulouts that is increasing. I think we are shooting ourselves in the foot.”

—Michael Payne, NOAA Fisheries, Nov. 30, 1995 email to NOAA Fisheries Director William Fox



## Causes of Death

What happened to Hawaiian monk seal? Why is it dying? Field reports from scientists working for NOAA, the U.S. Fish and Wildlife Service and the state of Hawai'i shed some clues. Numerous dead seals were necropsied during 1989, when scientists said 30 years of population growth for the monk seal had ended. Field notes from that year revealed some of the threats the seals faced that year on their main breeding grounds on French Frigate Shoals:

**Case 1:** Yearling male found March 27 on Tern Island with a large, fresh shark bite wound in the muscle layer just behind his left foreflipper.

**Case 2:** Yearling female on French Frigate Shoals had been seen alive Jan. 26, emaciated, and breathing laboriously. Found dead Feb. 3 by Fish and Wildlife Service personnel who noted that the gastrointestinal tract was empty.

**Case 3:** Yearling male found desiccated March 24 by Fish and Wildlife Service personnel on Whaleskate Island. He was last seen Jan. 25 alive and emaciated.

**Case 4:** Nine-day-old female pup, found May 19 on Tern Island. Her mother had appeared with fresh shark-bite wounds and refused to nurse her pup.

**Case 5:** Yearling female was found dead May 30 on Trig Island. The right foreflipper was lacerated, probably from a shark bite. She was emaciated.

**Case 6:** Two-year-old female found dead on June 25 on Whaleskate Island. Body condition was emaciated. She was alive on June 14 at Disappearing Island.

**Case 7:** Three-year-old male found dead on July 21 at Tern Island. Body was emaciated.

**Case 8:** Immature, unknown sex, observed being attacked by large sharks on August 25 near East Island. From the length of the attack and the violence, blood, and "flying parts" observed, the observer concluded the seal had been killed.

Source: NOAA Technical Memorandum, December 1992, the Hawaiian Monk Seal at French Frigate Shoals, 1989

## Yearling female on French Frigate Shoals had been seen alive Jan. 26, emaciated, and breathing laboriously. Found dead Feb. 3 by Fish and Wildlife Service personnel who noted that the gastrointestinal tract was empty.

cerned. But under state law, retaining undersized and berried female lobsters was illegal.

Emails passed among senior NOAA officials at the time indicate they held strong doubts about letting fishers keep the young and the female lobsters. The impacts on monk seals was chief of their concerns.

Even the guy at the top, William Fox, the agency's director, was worried. In November 1995, he said in an email:

"As I pointed out... the potential effects on monk seals were inadequately

addressed in the (Wespac) biological assessment."

Fox was particularly concerned that lobster fishermen would engage in "high grading," the practice of throwing away small lobsters without counting them against the quota.

Fox "said the literature (research) indicates that monk seals feed predominantly on sublegal lobsters, therefore a decline in these would be more of a problem than a decline in the overall stock," according to an email by Sven Fougner, another NOAA Fisheries offi-

cial and the first executive director of Wespac.

Fox also believed that the seals moved around to areas with healthier lobster populations.

The lobster fishery wasn't being closely watched. Wespac never required independent observers to be on board any of the boats.

"We have stated that the relationship between lobsters as prey and seals is not well understood, but that lack of understanding should not be used to state that we do not know the impact and act as if there may not be one," said Michael Payne, a NOAA Fisheries official, in another November 1995 email. "Rather, it should prompt a conservative approach to re-opening this fishery until monk seal predatory habits and lobster are better understood.

"This is such an endangered species, with a trend that continues to decline, that to be anything other than very cautious is not prudent. ... It is not apparent to me why this fishery should be allowed unless monitored by observers, and a buffer is established that will protect a foraging area for seals.

"I am really concerned about this. We spend an incredible amount of money each year, the seal still continues to decline, and we are considering allowing a fishery to develop and increase around one of the few haulouts that is increasing. I think we are shooting ourselves in the foot."

NOAA Fisheries issued a biological opinion in 1996 that found a "continuing decline in pup production, and total seal counts over the past years, (which) is cause for significant concern." The agency attributed the decline to three factors, including the lobster fishery.

And yet, in the end NOAA Fisheries let Wespac reopen its lobster fishery in 1996 with new rules and created a "retain all" fishery allowing the capture of female lobsters with eggs and undersized juveniles. practices banned in the Main Hawaiian Islands. Female lobsters can take 8 years to reach reproductive maturity and their capture is banned in waters throughout the United States. This fragile fishery may be the only place in the country where their harvest has been legal.

The lobster fishery has historically been a spiny lobster fishery. The low-value slipper lobsters were never prized by the fishing industry. In the 1980s, the spiny population was plentiful. But as the spiny population was fished down, in 1998, fishers, for the first time, caught more slippers than spiny.

On October 16, 1998, the 87-foot Paradise Queen II, a lobster and longlining vessel, was fishing for lobster at Kure Atoll when it went aground on the seaward side of the fringing reef crest, southeast of Green Island.

According to a joint state and federal government inquiry, at the time of the grounding, the vessel carried 11,000 gallons of diesel fuel and a combined volume of 500 gallons of hydraulic fluids and oil.



## Searching for Answers

A government veterinarian, top photo, counted seven lobsters in the belly of a deceased monk seal, indicating that the lobster was important at least to this individual. In the bottom photo, an emaciated young monk seal awaits examination.





Jim Margolis/ U.S. Fish and Wildlife Service

The vessel was also carrying about 3,000 pounds of frozen lobster tails, 4,000 pounds of bait, 1,040 plastic lobster traps and 11 miles of lobster pot mainline.

The boat was not pulled off the reef because the ship's owner did

not allow government responders to remove the ship immediately after it ran aground. Once the ship broke apart, removal became impossible.

Two years later, researchers found broken coral, uprooted coralline algae structures, the bodies of two monk seals among piles of nets surrounding the decaying wheel house, some 600 lobster traps and hundreds if not thousands of lead fishing weights and fishing line.

The fishery staggered along until February 2000, when NOAA Fisheries officials had finally had enough. Environmentalists had filed a lawsuit accusing the agency of violating its duties under the Endangered Species Act to protect the monk seal. Despite the apparent low abundance of spiny lobster at many banks in the northwestern islands, the commercial fishery was continuing to target spiny lobsters.

NOAA declared that any spiny lobster-directed commercial fishing effort may be excessive.

Wespac responded with a letter stating that it "strongly opposes" the closure. "The Council requests that (NOAA Fisheries) immediately withdraw its proposal and allow the fishery to operate with a harvest guideline of no more than 130,000 lobsters," Simonds wrote in a letter.

For once, Simonds didn't get her way.

NOAA announced the closure would take effect on July 1. And on November 15, Federal Judge Samuel King ordered NOAA to keep it closed.

**"It stands to reason that fishing immediately adjacent to major monk seal colonies where juvenile seals first learn to feed would likely have the most significant impact. We believe that precautionary steps to suspend lobster fishing around all atolls supporting major monk seal colonies are both prudent and warranted." — John Twist, U.S. Marine Mammal Commission**

#### Who speaks for the monk seal?

The Marine Mammal Commission began warning NOAA and Wespac of its concerns about the lobster fishery as early as 1981.

It said Wespac's lobster fishing regulations "must include provisions for preventing adverse impacts on the Hawaiian monk seal and other endangered or threatened species, as well as provisions for preventing overfishing of the lobster stocks."

But Wespac NOAA preferred to listen to their own experts, and they allowed the fishery to keep chugging along.

In 1991, the commission noted that in 1990 the lobster stock had been reduced to 22 percent of its pre-fishery level in the late 1970s. "We are concerned, however, that the current definition of overfishing in this Plan may be lower than it should be, given recent trends in Hawaiian monk seal population levels and ecological relationships between lobsters and seals," the commission said.

In 1991, NOAA responded to the commission by noting that the lobster fishery, when compared with other lobster predators like sharks, and environmental stresses on the stocks, "is only a small component affecting the availability of lobster to the monk seal."

In 1994, the commission asked NOAA to close fishing near French Frigate Shoals. "Pups born at this atoll have been smaller at weaning than pups born at other islands and have suffered

very high mortality in their first year of life. Also, survivorship rates for pups and juveniles have declined substantially over the last five years," the commission's director, John Twist, wrote.

But Wespac was not persuaded. Neither was its Science and Statistical Advisory Committee. The committee claimed that there was "insufficient information at this time to support the concerns raised by the (Marine Mammal) Commission regarding the decline of the monk seal population at French Frigate and the lobster fishery; there should be no prohibition of lobster fishing around French Frigate."

The letters continued to come from the commission; they made no discernible impression on NOAA or Wespac. In 1999, Simonds sent this message to the commission's Twist:

"The basic assumption underlying your letter, as in your previous letters on this subject, continues to be that lobster fishing is adversely affecting monk seals due to competition for prey, either primary catch or bycatch. We are aware of no new information that suggests lobsters are important components of the diet of monk seals, and therefore continue to believe that the small (northwestern islands) lobster fishery does not have any significant impact on seals."

In a response dated May 1999, Twist admonished Simonds for failing to exercise due caution:

"When dealing with an endangered species and such uncertainty, we believe it is important for resource managers to

adopt precautionary measures pending resolution of the uncertainties. In this regard, it stands to reason that fishing immediately adjacent to major monk seal colonies where juvenile seals first learn to feed

would like have the most significant impact.

"We believe that precautionary steps to suspend lobster fishing around all atolls supporting major monk seal colonies are both prudent and warranted until such time as reliable information is available on the diets... of monk seals."

In January 2000, Wespac argued back through a press release with this headline: "Don't blame fisheries for monk seal decline."

Later that month, James Cook, Wespac's chairman, wrote to Penelope Dalton, NOAA Assistant Administrator of Fisheries, to complain about the criticism coming from the Marine Mammal Commission:

"Predictably, the small highly regulated and limited fisheries in the NWHI are demonized once again as a major source of danger to this seal population."

The day after Cook wrote the letter, NOAA announced its intent to close the fishery.

Cook, who nine years earlier had been caught and fined \$29,500 for poaching lobster, soon left the council because he had reached his term limit. He remained involved in Wespac's operations, however, as chair of Wespac's advisory panel. In 2003, his business partner Sean Martin joined the council. Interestingly, in 2004 Martin paid a \$7,000 fine for violating federal fishing laws.

## A political history of the northwestern islands

Members of the public have submitted more than 112,000 written and oral comments to federal and state officials over the past five years, during more than 30 hearings and at over 100 meetings and public comment opportunities. Public input has been consistently and overwhelmingly in favor of the strongest protection measures for the Northwestern Hawaiian Islands. A network of fishers, Native Hawaiian cultural practitioners, scientists, environmentalists, divers and Hawai'i residents known as the NHWI *hui* led the campaign. A January 2006 report by the *hui* recounts this history:

### October 2000

5,550 people send letters and faxes to Hawai'i Congressional delegation and Clinton White House, urging strong protections, national monument status, expressing concern about the ability of Department of Commerce to provide strong protections.

### December 2000

250 attend federal hearings throughout the islands on then-proposed Executive Order protections; more than 8,400 submit written comments. Fewer than 1 percent say the protections are too restrictive.

### December-January 2000

President Clinton issues two Executive Orders providing strong protections for the northwestern islands.

### August 2001

The Executive Orders are put on hold by Bush administration; 17,500 write to Secretary of Commerce urging support for strong protections.

### May 2002

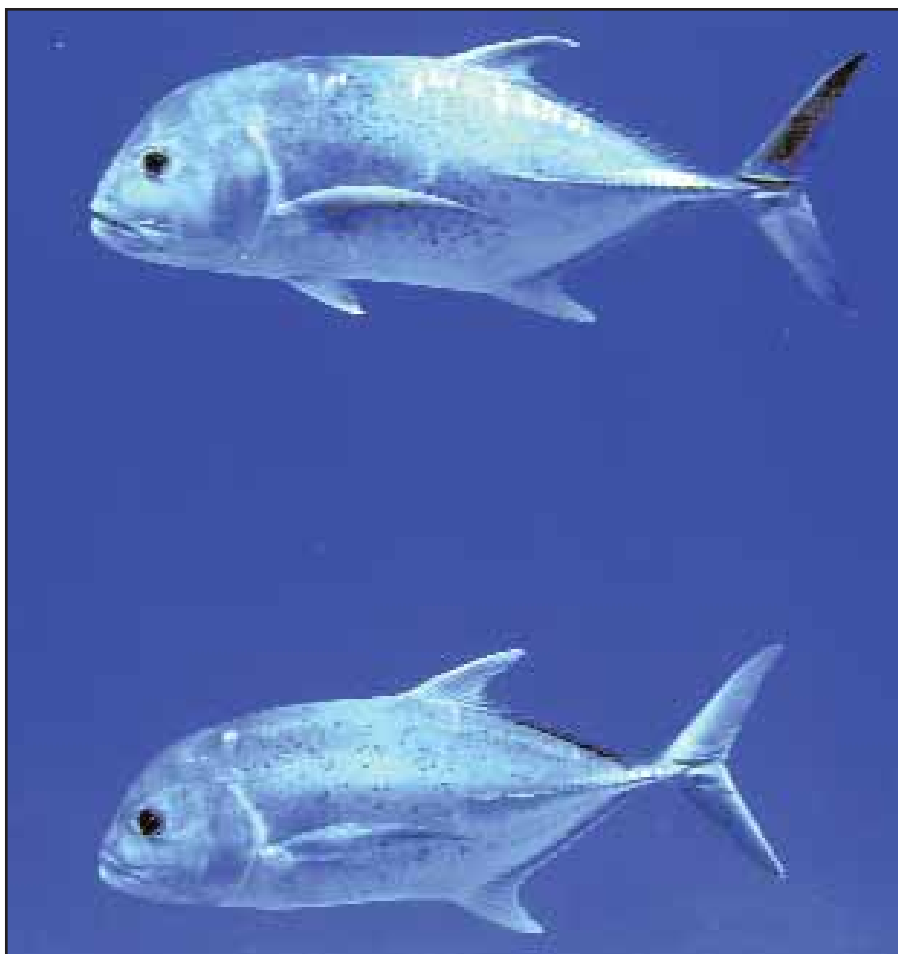
4,570 people write to Wespac opposing its plans to allow harvest of deep-sea coral and coral reef fish in NWHI. 1,000 people attend Sanctuary scoping meetings throughout the Islands. 11,100 people submit comments, overwhelmingly in support of the strongest possible protections and Native Hawaiian cultural rights.

### June 2003

1500 people send letters, faxes and emails to Secretary of Commerce expressing concern about Wespac's proposed fishing plans, insisting that it provide strong protections.

### May 2004

In response to weak NWHI plan proposed by NOAA, more than 25,800



Jim Maragos/ U.S. Fish and Wildlife Service

**Meet the Boff** Giant Trevallies, a bottomfish, at Pearl and Hermes Reef. Research suggests that the offspring produced by old, large females are more numerous than those produced by younger fish. The offspring of the old fish have also shown to have the greatest chance of surviving. This theory has come to be known as the BOFF (Big Old Fat Female) hypothesis which points out the big fish give the species a greater chance of enduring changing ocean conditions. Data collected by the federal government indicates that a decline in the mean weight of fish occurred from 1984 to 2003 for three species — uku, onaga and ehu — in the northwestern islands, an indication that fishing is continuing to deplete the stocks.

## ROGUES OF THE PACIFIC

(Continued from Page 9)

everybody. It said the new plan would apply to all federal waters surrounding the Hawaiian Islands. It added, however, that it could “expand these boundaries if and when supported by scientific data and/or management requirements.” Wespac didn't explain precisely where or why it wanted to expand its jurisdiction.

This proposal drew a pointed letter on December 2 from Peter Young, chair of Hawai'i's Department of Land and Natural Resources, and the state's designated representative on Wespac.

“To expand these boundaries beyond the EEZ (the U.S. exclusive economic zone) would mean including international waters, which is beyond the scope of Wespac's authority,” Young wrote in the letter, which was addressed to Simonds. “The only other possibility for expanding the boundary would be to include the waters managed by the state of Hawai'i.”

The state would surely oppose that, Young said in an interview.

The plan contained other errors. A proposed regulation for black coral fishing would violate a Wespac policy that was just two months old.

“Wespac can't even keep its own policies straight inside its own document,” said Dan Polhemus, director of Hawai'i's Division of Aquatic Resources.

Wespac was originally scheduled to take a final vote in March, but Executive Director Kitty Simonds moved it ahead to Dec. 20 with no explanation. The change came as a complete surprise to the state of Hawai'i. By speeding up the process, Wespac essentially prevented the state and the public from providing meaningful comment, Young said.

The state did not get a copy of the final plan until the 14th. Before then, it had seen only a draft that was missing two entire chapters and contained “numerous factual and typographical errors,” Young said in his letter to Simonds.

Wespac gave the state and the public almost no time to review the 1,200 pages of draft plans before public hearings began on the 12th. And it gave no one — not even Wespac council members — an opportunity to review the final plans at all. When the council voted on the 20th to approve the plans, they were still unfinished and incomplete.

On the last day of public hearings, Wespac provided a list of some of the errors which had been corrected in the plan. But Hawai'i officials said many more errors remained. People at some public hearings were reviewing different versions of documents than people at other hearings.

In an interview with *Cascadia Times*, Young said: “The state and the public should have an opportunity to see a completed final document before it is considered final. Mistakes could have been corrected if there was time. These documents are so important we have to make sure they are critically reviewed.

“There was an apparent urgency and yet no explanation as to why the urgency,” Young said.

The state urged Wespac to wait until it got things right. But Wespac Chairman Frank McCoy (of American Samoa) still demanded an immediate final decision on the 20th. “We're not putting in the so-called mistakes that everybody's calling mistakes,” he said. “It's basically misplaced words and that kind of stuff. I'm the chairman, I'm not ashamed to put this out.”

McCoy said he really didn't think there was such a rush. “We've had ample time to do this,” he said. “We voted on it a year ago, over a year ago, to start looking into this process. So, to say that we didn't have time to review this and review that, I'm not going to accept that.”

Stephanie Fried, of the conservation group Environmental Defense, said the public had been shut out of the process altogether. It was given no opportunity whatsoever to review a document that will

be changed. “The process leading to this meeting is a textbook example of why a federal investigation of Wespac is fully warranted,” she said.

A Wespac member from Guam did not seem bothered by the sudden rush. “I'm sorry that people want to wait until March,” said Manuel Duenas. “But I can't wait until March because there'll be another meeting in June and then another meeting in October and that's too much, way too much to finish waiting for this thing to go.”

Rick Gaffney, a Hawai'i-based recreational fisher on Wespac, called the entire process “flawed.”

“I think we'll be a laughingstock in the public's eye and I just don't think it's appropriate,” he said. “No one has explained to me why there's a rush to complete these final actions. Why are we forcing the situation in two weeks? It just doesn't make sense to me.”

It wouldn't be until eight weeks later that the reason for the rush would be made clear.

On February 21 2006, Wespac published a document titled “Measures for Fishing Regulations in the Proposed NWHI Sanctuary” and announced that it had made a deal with NOAA regarding fishing in the proposed sanctuary.

According to Wespac, NOAA had guaranteed “a high likelihood” that Wespac's new plans for fishing would be accepted for the proposed sanctuary as long as they included a temporary moratorium on the harvest of lobster, corals, and reef fish and caps on bottomfish and pelagic fishing. Wespac indicated that they had been told that they had until April 14 to submit the amended management plans and regulations to NOAA.

As always, Wespac declared its continuing resolve to allow the illegal fisheries as well as increase the number of active bottomfish permits, in violation of existing fishing caps put in place by the Executive Orders.



“The process leading to this meeting is a textbook example of why a federal investigation of Wespac is fully warranted.” — *Stephanie Fried*

## Defiance, Wespac-style

When Clinton signed the Executive Orders, he declared that their principle purpose would be to ensure “the long-term conservation and protection of the coral reef ecosystem and related marine resources and species of the Northwestern Hawaiian Islands in their natural character.”

The orders capped all bottomfishing to at current levels of take and effort and allowed the secretary of Commerce to make further modifications to ensure conservation of the area in its natural state. This meant that closed fisheries, like lobster, could not reopen, and that proposed fisheries for precious coral and coral reef species were barred.

They established small, yet significant Reserve Preservation Areas which are off-limits to fishing in federal waters shallower than 100 fathoms, except for permitted bottomfish fishers and sport fishers who are allowed to fish in most of these areas.

They also created a broadly representative Reserve Advisory Council which included federal and state representatives, scientists, fishers, Hawaiian cultural practitioners, educators, and environmentalists.

The 84.3 million acre reserve allows the small number of grandfathered fishers to continue in all but 139,000 acres.

Since most bottomfish fishing is reported to occur at depths between 50-150 fathoms, and since all active bottomfishers were grandfathered in at existing levels of catch, the Reserve Preservation Areas were expected to have a minimal effect on this fishery.

But Wespac immediately reacted to the orders by spreading false information about their economic impact on Hawai'i in an attempt to stir public opposition.

Wespac claimed the orders would cause a massive reduction in the area where bottomfishing is allowed area as well as a significant reduction in bottomfish revenues. Wespac also claimed that the public would pay much higher prices for fish.

At a public meeting in February 2001, Wespac presented a chart claiming that the bottomfishing revenue would decline by 67 percent in the eastern third of the northwestern islands, and by 57 percent in all other areas.

Wespac also said the orders would close fishing in 10 areas less than 100 fathoms in depth. In fact, the orders closed only five such areas.

When this was presented at a public meeting, members of the audience said that the underlying assumptions were incorrect, and that the dollar losses Wespac was claiming were grossly exaggerated.

Wespac officials revised their numbers for the closed areas on the spot and presented a newly printed chart.

Stephanie Fried of Environmental Defense, in a review of Wespac's manipulation of data, found that this new chart still incorrectly labeled areas as “closed” that were not in fact closed. “Unfortunately, the new chart still ignored the public comments pointing out that

half of the areas (Wespac) had labeled 'closed' were not actually closed by the EO,” Fried said in her report, “Search for the Truth.”

“On the new chart, almost every dollar value had been changed by Wespac staff — some markedly increased, some decreased — yet oddly all of the percentages of 'loss' remained the same,” she said. “These percentages of 'bottomfishery loss,' unchanged from the first flawed analysis, were then circulated in the news media, and apparently to state and federal officials, by Wespac and associates.”

In mid-February Wespac met to decide a strategy for fighting the orders and closures. According to the minutes of that meeting, Wespac called for a harvest in 2001 of 130,000 lobsters in the northwestern islands — in clear defiance of closures ordered not just by the White House but by NOAA and the federal court. It based its recommendation on advice from its Scientific and Statistical Committee, which viewed the closures as not necessary.



## Wespac pushes fishing in marine refuge

This cartoon, which appeared in the Spring 2006 issue of Wespac's quarterly newsletter, appears to encourage fishers to go to the Northwestern Hawaiian Islands to fish.

Wespac member Ray Tulafono of American Samoa said the Council could not change the terms and conditions of the executive orders, but it could “make a statement” that it disagreed with them.

Council Chair Judy Guthertz of Guam said that when the President created the coral reef reserve, he didn't consult with Wespac, and its input was basically ignored. According to the text of the Executive Order, however, the Reserve closures were based on a White House evaluation of input from Wespac, federal and state agencies and the public.

She said President Bush might be willing to change the executive orders. “It doesn't seem sensible to agree that the lobsters are not overfished and yet not let anybody fish for them,” she is quoted in the minutes.

But Judson Feder, a NOAA general counsel advising Wespac, suggested it might not be wise for Wespac to spend its limited resources on a fishery that may never be reopened for commercial activity.

And Dave Gulko, of the Hawai'i Division of Aquatic Resources, said lobster fishers would set as many as 130,000 traps in a concentrated area defined by Wespac itself as coral reef habitat in its Coral Reef

Ecosystem Fishery Management Plan. The impact of placing these traps and the method being used to place them on bottom habitat must be considered, he said.

After approving the lobster fishery, Wespac asked its staff to draft a letter asking NOAA Fisheries to “make every effort to clear up misstatements on fisheries, for example, disseminating correct information on Web sites, press releases, responding to wrong information, etc.”

The Council wrote to Secretary of Commerce Dan Evans, with a copy to President Bush, outlining its analysis the impacts of the executive orders on fishing and asked that the orders be revised so that the fishing could be kept open, and that the responsibility for managing them remain with Wespac.

Wespac also duped others with its false claims. As part of its campaign to undermine the historic reserve, distorting the facts to achieve this end, the fishery council drafted ghost-written letters for prominent Hawai'i Republican politicians to send to the Secretary of Commerce, Don Evans.

Linda Lingle — then head of the Hawai'i Republican Party and now Hawai'i governor wrote to Evans opposing the closures because of Wespac's allegations of negative economic impacts. She also called on the Bush Administration to reverse the executive orders.

“As the attached letter, drafted for me by the Western Pacific Fishery Management Council states, ‘I am extremely concerned that unless these executive orders are annulled, amended or interpreted to allow for sustainable fisheries, they will cause great negative socioeconomic impacts to the State of Hawai'i,’” she wrote, attaching the Wespac draft which was unsigned and written on plain paper without any letterhead. The Wespac letter claimed that the Reserve could “destroy virtually all other existing and potential fisheries in the federal waters surrounding Hawai'i.”

But seven months later, Lingle determined that the reserve had the widespread support of fishers, fish processors, Native Hawaiian cultural practitioners, divers, scientists and people throughout the islands who had united their communities to persuade the White House to protect the distant islands from the management abuses of Wespac and NOAA Fisheries. She then wrote to Evans, and “based on new information,” retracted her opposition to the Reserve. She urged the Administration to let the Executive Orders stand, unaltered.

Elected governor in November 2002, Lingle, the former mayor of Maui, has become one of the strongest supporters of protection for the islands.

On September 29, 2005, as governor, Lingle ordered all fishing closed in state waters of the NWHI and established an extraordinarily protective state refuge. The closures are now in effect.

And, in a stunning announcement, Lingle asked the federal government to order a similar closure in federal waters surrounding the Northwestern Hawaiian Islands, placing her at the lead of international coral reef protection efforts. ■

## A political history of the northwestern islands

(continued from page 20)

write to urge the plan be changed to ensure protection of NWHI and compliance with Executive Orders.

### July 2004

442 of the world's leading coral reef scientists from over 250 research institutes, universities, museums, governmental and multilateral agencies in 65 countries call for the strongest possible protections for the NWHI.

### July-August 2004

100 people attend hearings throughout the islands on the state's new plan for a NWHI refuge. Native Hawaiian community representatives call for no commercial activities, strict limits on public access, no fishing except for Native Hawaiian traditional practices. Only four individuals testify in support of commercial activities (fishing). 24,000 submit comments calling for the strongest possible protections.

### August 2004

Native Hawaiian consultation workshop attended by *kūpuna*, cultural practitioners, fishers, and other Native Hawaiian community members made these recommendations for the NWHI: no commercial activities, including the selling of resources or profit-driven activities; no recreational fishing; monitoring and enforcement; allow traditional cultural practices.

### January 2005

About 60 people testify at Wespac hearings on fishing in NWHI, held throughout the islands. The overwhelming majority oppose extraction in NWHI, except for Native Hawaiian traditional uses. Wespac places ads claiming that NWHI protections threaten Native Hawaiian rights and fishing rights. Native Hawaiian fishers clarify that commercial fishing is not a traditional Hawaiian cultural practice.

### May 2005

Rep. Ed Case, D-HI, cites overwhelming public input and special needs of the islands, and proposes the NWHI Refuge Act for federal waters allowing, no commercial use, observers on all boats, stiff penalties for violations, and a buyout of bottomfish fishers.

### December 2005

Wespac approves a new round of fishing plans that contain old, illegal schemes under a pretty cover. Wespac refuses to allow the public or the state of Hawai'i an opportunity to review the plans before final approval.



# ResourceDirectory

## THE NORTHWESTERN HAWAIIAN ISLANDS HUI

### 'Ilio'ulaokalani Coalition

'Ilio'ulaokalani Coalition, Inc. is an island wide grassroots organization comprised of kumu (master teachers) and loea (cultural experts) whose purpose is to link and apply traditional Hawaiian cultural principles, practices and skills to effect educational, social, environmental and economic change for the betterment and advancement of native Hawaiians and the community at large.  
www.ilio.org

### Environmental Defense-Hawai'i

Founded in 1967. Environmental Defense links science, economics and law to create innovative and equitable solutions to society's most urgent environmental problems. P.O. Box 520  
Waimanalo, Hawai'i 96795  
sfried@environmentaldefense.org  
www.ed.org/hawaii

### KAHEA: The Hawaiian-Environmental Alliance

KAHEA is network of activists throughout five main Hawaiian Islands. We address critical issues within our communities and 'ahupua'a (geographic and cultural demarcation from the uppermost land to the outer reef).  
P.O. Box 27112 Honolulu, Hawai'i 96827-0112  
(808) 524 8220  
kahea-alliance@hawaii.rr.com  
www.kahea.org

### The Sierra Club-Hawai'i

The Sierra Club is fighting to restore and protect this vital region for the next century and beyond.  
1040 Richards Street, Room 306, Honolulu, Hawai'i 96813  
wild@aloha.net

## OTHER CONSERVATION ORGANIZATIONS

### Conservation Council for Hawai'i

Conservation Council for Hawai'i is dedicated to protecting native Hawaiian plants, animals, and ecosystems. CCH is the Hawai'i affiliate of the National Wildlife Federation.  
www.conservation-hawaii.org

### Earthjustice Honolulu

Earthjustice established an office in Honolulu in 1988 to protect natural and cultural resources throughout Hawai'i and the mid-Pacific. Clients range from environmental organizations such as the Turtle Island Restoration Network to local citizen groups like Makawai Stream Restoration Alliance. 223 South King Street, #400 Honolulu, HI 96813  
(808) 599-2436  
eajushi@earthjustice.org  
www.earthjustice.org/regional/honolulu

### Marine Conservation Biology Institute

2122 112th Ave NE, Suite B-300, Bellevue WA 98004  
(425) 274-1180  
www.mcbi.org

### Oahu Game Fish Club and Waianae Fishing Club

These organizations petitioned for a federal investigation of Wespac. The site includes documents submitted to the Office of Inspector General, U.S. Department of Commerce.  
www.scottfoster.org/wespac

### Polynesian Voyaging Society

Pier 7, 191 Ala Moana Blvd. Honolulu, HI 96813  
Founded on a legacy of Pacific Ocean exploration, the Polynesian Voyaging Society seeks to perpetuate the art and science of traditional Polynesian voyaging and the spirit of exploration through experiential educational programs that inspire students and their communities to respect and care for themselves and each other, and their natural and cultural environments.  
www.pvs-hawaii.com

### The Ocean Conservancy

The Ocean Conservancy promotes healthy and diverse ocean ecosystems and opposes practices that threaten ocean life and human life. Through research, education, and science-based advocacy, The Ocean Conservancy informs, inspires, and empowers people to speak and act on behalf of the oceans.  
2029 K Street, NW Washington, DC 20006  
www.oceanconservancy.org

## STATE AND FEDERAL AGENCIES

### National Coral Reef Conservation Program

Supports effective management and sound

science to preserve, sustain and restore valuable coral reefs. ecosystems.  
www.coralreef.noaa.gov

### National Marine Sanctuaries Program

The mission of NOAA's National Marine Sanctuaries is to serve as the trustee for the nation's system of marine protected areas, to conserve, protect, and enhance their biodiversity, ecological integrity and cultural legacy.  
www.sanctuaries.nos.noaa.gov

### NOAA Fisheries Pacific Islands Regional Office

1601 Kapiolani Boulevard, Suite 1110, Honolulu, Hawai'i 96814  
swr.nmfs.noaa.gov/pir

### Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve

6600 Kalaniana'ole Hwy, #300 Honolulu, HI 96825  
(808) 397-2660  
Mokupapapa: Discovery Center for Hawai'i's Remote Coral Reefs  
308 Kamehameha Ave, #109 Hilo, Hawai'i 96720  
(808) 933-8195  
hawaiiireef@noaa.gov  
hawaiiireef.noaa.gov

### Pacific Islands Fisheries Science Center

The Pacific Islands Fisheries Science Center of the National Marine Fisheries Service (NMFS) is a part of the National Oceanic and Atmospheric Administration (NOAA). The Center administers scientific research and monitoring programs that support the domestic and international conservation



The northern fur seal, featured in *Breaking Point in the Bering Sea*, Spring 2005

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**State of Hawai'i Department of Land and Natural Resources**  
www.hawaii.gov/dlnr

**WESPAC**

A federal advisory council that prepares fishery management plans for the Western Pacific.

1164 Bishop Street, Suite 1400 Honolulu, Hawai'i 96813  
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info.wpcouncil@noaa.gov  
www.wpcouncil.org

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www.audubonportland.org

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orshores@teleport.com;  
www.oregonshores.org

**Columbia Riverkeeper**

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(509) 493-2808  
PO Box 1254, Hood River OR 97031  
(541) 387-3030  
721 NW 9th, Suite 300, Portland, OR  
Portland, OR (877) 252-6077  
www.columbiariverkeeper.org

**FLOW (Friends of Living Oregon Rivers)**

FLOW's mission is to provide legal oversight, monitoring and public education to help protect Oregon Waters from the impacts of pollution and development. P.O. Box 2478 Grants Pass, OR 97528  
www.oregonwaters.org;  
flow@oregonwaters.org  
541-251-3569

**Green Fire Productions**

Green Fire Productions has produced a new documentary, *Common Ground: Oregon's*

*Ocean*, that examines Oregon's ocean ecosystems and looks for ways to protect marine biodiversity and enhance fisheries. PO Box 14906, Portland, OR 97293  
(541) 486-4070  
www.greenfireproductions.org  
karen@greenfireproductions.org.

**Oregon Environmental Council**

Oregon's oldest statewide environmental group, OEC works to protect Oregon's clean water and air now and for future generations. We bring Oregonians together for a healthy environment.

222 NW Davis Street, Suite 309, Portland OR 97209-3900  
(503) 222-1963  
info@oeconline.org  
www.oeconline.org

**Oregon League of Conservation Voters**

OLCV educates voters and holds politicians accountable. With our sister organization, OLCV Education Fund, we coordinate the Oregon Conservation Network, a coalition of conservation groups that lobbies the Legislature. OLCV's Scorecard rates legislators' environmental voting record. OLCV's PAC endorses candidates and supports those in tough races with money and volunteers.

Jonathan Poisner, Executive Director  
320 SW Stark #415 Portland, OR 97204  
(503) 224-4011  
(503) 490-1234 cell  
(503) 224-1548 fax  
jpoisner@olcv.org

**Pacific Rivers Council**

Protects, restores rivers, their watersheds, and native aquatic species. Current programs emphasize aquatic conservation in forested watersheds.

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www.rainbowvideoandfilm.com.

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As the nation's leader in supporting grass-roots river and watershed conservation groups, River Network has published the second edition of its "Clean Water Act Owner's Manual," a comprehensive guide for people who want to clean up their rivers, streams and watersheds. It gives advice about how to use the Clean Water Act to solve real-world problems.

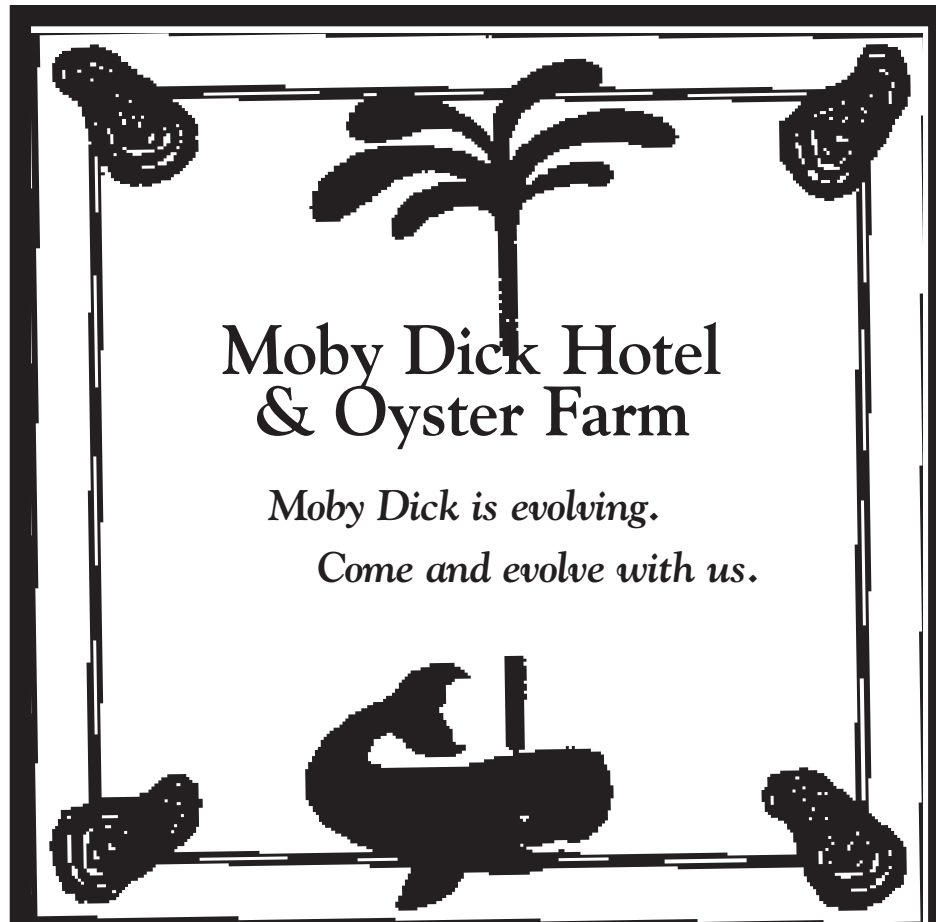
520 SW 6th Avenue #1130, Portland, OR 97204; (503) 241-3506  
info@rivernetwork.org;  
www.rivernetwork.org

**Tidepool**

Tidepool is the only daily on-line news service for the Cascadia Rainforest.  
www.tidepool.org

**Waterwatch of Oregon**

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