

Observations on the Abundance and Behavior of Seabirds South of O'ahu During The F/V Ehime Maru Relocation and Fuel Spill

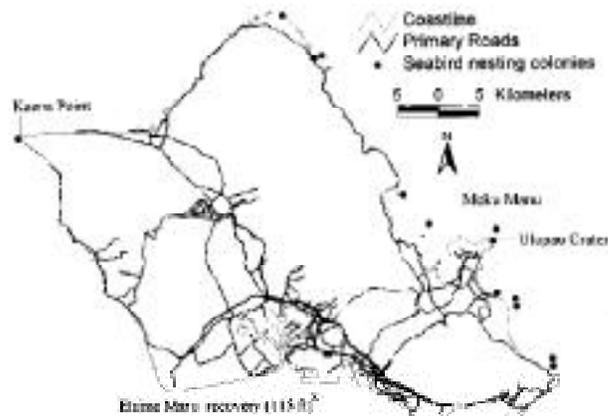
Eric A. VanderWerf¹, Linda Elliott², and J. Scott Fretz³

Abstract. The Japanese fishing training vessel F/V EimeMaru was accidentally struck and sunk by the Naval submarine U.S.S. Greenville nine miles south of O'ahu, Hawai'i, resulting in partial release of 55,000 gallons of diesel fuel. The remaining fuel was released when the vessel was relocated to shallow water to facilitate recovery efforts. We observed wildlife during the relocation from 11-14 October 2001 to document the abundance of seabirds in the area, watch for interactions between oil and wildlife, and help guide recovery of any wildlife that became oiled. Neither seabirds nor marine mammals avoided areas where oily sheen had formed, and they were not disturbed by the activities of numerous ships, skimmers, and helicopters. We observed 12 seabird species during the relocation of the F/V Ehime Maru. Three species, Red-footed Booby (*Sula sula*), Great Frigatebird (*Fregata minor*), and White Tern (*Gygis alba*), were more numerous close to shore, and two species, Brown Booby (*Sula leucogaster*) and Pomarine Jaeger (*Stercorarius pomarinus*), occurred only close to shore. Four species, Laysan Albatross (*Phoebastria immutabilis*), Newell's Shearwater (*Puffinus auricularis newelli*), Christmas Shearwater (*Puffinus nativitatus*), and Hawaiian Petrel (*Pterodroma phaeopygia*), occurred only far from shore. We observed 3 instances when wildlife contacted the sheen, involving 1 Red-footed Booby, 1 Wedge-tailed Shearwater (*Puffinus pacificus*), and a pod of approximately 35 spinner dolphins (*Stenella longirostris*). On one occasion a group of 18 Wedge-tailed Shearwaters appeared to be attracted to a fresh sheen area. Most oiled wildlife survey and recovery efforts focus on near shore areas and on species that nest locally; the impact of oil spills on non-breeding individuals may be overlooked due to their pelagic distributions.

INTRODUCTION

The F/V Ehime Maru was a Japanese fishing training vessel that was accidentally struck and sunk by the Naval submarine U.S.S. Greenville during a training exercise south of the Hawaiian island of O'ahu on 9 February 2001. In order to recover the remains of missing F/V Ehime Maru crewmembers, the U.S. Navy undertook a technically complex and logistically difficult operation to relocate the F/V Ehime Maru from the spot where it sank in 2000 feet of water 9 miles south of Diamond Head, O'ahu, to a site one mile south of the Honolulu airport's reef runway in 115 feet of water (Fig. 1), where divers could conduct recovery efforts. The website <http://www.cpf.navy.mil/ehimemarurecovery.html> maintained by the U.S. Navy Pacific Fleet Public Affairs Office provides a detailed summary of the

Fig. 1. Locations of the deep water (21.04.85 N, 157.49.46 W) and shallow water recovery sites (21.17.52 N, 157.56.40 W) of the F/V Ehime Maru and important seabird nesting colonies on O'ahu.



Ehime Maru sunk (2000ft.)X

event history and recovery efforts, including numerous press releases, images, and fact sheets. Following recovery efforts, the wreck was moved on November 24, 2002 to a final resting site 12 miles southwest of O'ahu in over 6,000 feet of water.

During the relocation and recovery effort there was high potential for interactions between wildlife and oil because approximately 55,000 gallons of diesel fuel was on the F/V Ehime Maru when it sank, and it was likely that any remaining fuel would be disturbed and released during the relocation operation. All of this fuel eventually was released into the ocean, causing a sheen that was visible for at least 28 days.

As part of a wildlife surveillance team, we made observations during the F/V Ehime Maru relocation from 11-14 October 2001 on board the Clean Islands, an Oil Spill Response Vessel operated by the Clean Islands Council, a nonprofit oil spill response organization. The purposes of our presence on the observation vessel were to document the abundance of seabirds in the area during the relocation effort, watch for any interactions between oil and wildlife, including seabirds, marine mammals, and sea turtles, and help guide efforts to recover any wildlife that became oiled. From an ornithological standpoint, these four days of continuous observation provided information about the variation in abundance and daily activity patterns of seabirds off southern O'ahu. Moreover, the predetermined timing of the fuel spill associated with the F/V Ehime Maru relocation allowed observers to be present during the release of fuel, providing a unique opportunity to observe the immediate response of wildlife to an oil spill. We hope this information is

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Field Trips for 2005

Here are our planned Field Trips for the year ahead. Our Board Members have each volunteered to lead a Field Trip this year. As these trips are still in the process of being arranged and confirmed, some dates and times are not yet set.

Field Trip information and updates will also be available on the HAS office answering machine (528-1432) and on our website, www.hawaiiadubon.com.

May 22: Honolulu Zoo: Wendy Johnson will lead a field trip not to be missed - Honolulu Zoo's Curator of Birds will give us a tour of some of the bird exhibits and of course the wonderful walk-through aviary (a fantastic close-up look at some very beautiful and unusual birds!). This trip is limited to 15 participants. Call the HAS office to register, 528-1432.

June (date TBA): Waikamoi Preserve on Maui with Jennifer Crummer. Please watch our website for trip scheduling, or check our office answering machine. As soon as this trip is scheduled, the information will be available from those two sources.

July 9 Kawai Nui Marsh: Wetlands bird walk with Ron Walker.

July (date TBA) Chevron Ponds with Sal Pagliaro. In 1992, the first Hawaiian Stilts on Chevron's property at Campbell Industrial Park were seen - standing fresh water attracts birds - so Chevron fixed up several ponds and began managing them. The US Fish & Wildlife Service has been monitoring them since

1993, and trapping cats & mongoose as well. Chevron and possible FWS personnel will give us a tour of this great place.

August (date TBA) Kuli'ou'ou: 'Elepaio search with Dr. Phil Bruner.

September (date TBA) James Campbell National Wildlife Refuge with Ron Walker

October (date TBA) 'Ihi'ihilauakea at Hanauma with Jennifer Crummer

November (date TBA) Sea Life Park seabird rehabilitation center with Arlene Buchholz

December (12/14 thru 1/5) 105th Christmas Bird Count.

Natural and Cultural History Tours of Kailua Ahupua'a and Kawai Nui Marsh

Sponsored by the Kawai Nui Heritage Foundation, 'Ahahui Malama I ka Lokahi and The Kailua Hawaiian Civic Club

Educational tours of Kailua Ahupua'a and Kawai Nui Marsh are offered to inform residents and visitors about the Hawaiian archaeological, historic and ecological resources of the marsh. There are also service learning trips for elementary through college age students to various sites around the marsh.

The tour groups meet at Ulupo Heiau next to the Windward Kailua YMCA at 8:30 am and walk as well as car pool to the various sites. Return trip is usually back at the Windward YMCA by 1:00 pm. A donation fee of \$5.00 for non-members and \$3.00 for members will be accepted for the tour. Monies are used to support cultural and ecological restoration work at Kawai Nui Marsh. Group size will be limited to 25 persons. Dates are as follows:

Sat. June 4	Ho'olaulea at Ulupo Heiau
Sat. September 3	Cultural and Natural History Tour of Kawai Nui Marsh.
Sat. October 1	Geology of the Kailua Ahupua'a
Sat. November 5	Archaeological & Historic Sites of Kawai Nui Marsh
Sat. December 3	Birds of the Marsh (Kawai Nui, Hamakua & Kaelepulu)

(Dates or tours may be subject to change depending on weather or other circumstances. Check update at website: <http://www.ahahui.net/>)

What To Bring: Backpack or Fanny-pack, walking shoes, water bottle, mosquito repellent, sunscreen, rainwear, hat or cap, sunglasses. Optional camera and binoculars.

Please call Chuck "Doc" Burrows for more information and to register for these educational tours at: **595-3922** or email: ahahui@hawaii.rr.com

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useful for determining when and where seabirds are most likely to occur in waters south of O'ahu, learning how they may behave during future spills, and increasing our understanding of how seabirds and other wildlife may be threatened by oil spills and other adverse conditions in the marine environment.

METHODS

From 11-14 October 2001 we tallied the numbers of all seabirds and marine mammals observed in two-hour blocks during daylight hours (0600-1800 hrs). When more than one observer was present, different observers covered the port and starboard sides of the vessel. We also recorded the direction each bird was traveling using a hand-held compass, its behavior, and the time when each species was first observed on each day. All observations were made with 10 x 42 binoculars or with the naked eye. Surveys at breeding and roosting sites on land were conducted before and after the Ehime Maru relocation to search for birds that had become oiled, but results of those surveys are not reported here.

The observation vessel spent the majority of 11 October repeatedly traversing a 1-mile-long linear transect near the Rockwater 2, the salvage and support ship for the F/V Ehime Maru relocation, in approximately 2000 feet of water nine miles south of Diamond Head (Fig. 1). After the F/V Ehime Maru was raised off the ocean floor on 12 October, the observation vessel followed the Rockwater 2 as it moved the F/V Ehime Maru during its 14-mile, 12-hour journey to a site in 115 feet of water one mile south of the reef runway of the Honolulu airport (Fig. 1). The observation vessel spent 13 and 14 October either traversing a linear transect directly downwind (southwest) of the Rockwater 2 or circling the Rockwater 2 in an attempt to contain fuel released from the F/V Ehime Maru.

We compiled data from each day and calculated the average number of birds of each species observed per two-hour period in deep versus shallow water. The spatial and temporal distributions of the five most common species (Wedge-tailed Shearwater, *Puffinus pacificus*; Red-footed Booby, *Sula sula*; Brown Booby, *Sula leucogaster*; Great Frigatebird, *Fregata minor*; and White Tern, *Gygis alba*) were examined with a two-way ANOVA for each species, with water depth (deep or shallow) and time of day (in six two-hour intervals) as factors. Sample sizes of other species were too small to allow statistical examination.

RESULTS AND DISCUSSION

Seabirds Observed

We observed 12 species of seabirds while on the Clean Islands

Table 1. Abundance of seabird species observed in deep water (2000 ft) 9 miles south of O'ahu and shallow water (115 feet) 1 mile from shore 11-14 October 2001. F-values calculated from two-way ANOVA for each species with water depth and time of day as factors. Abundance of uncommon species was not examined statistically due to small sample sizes.

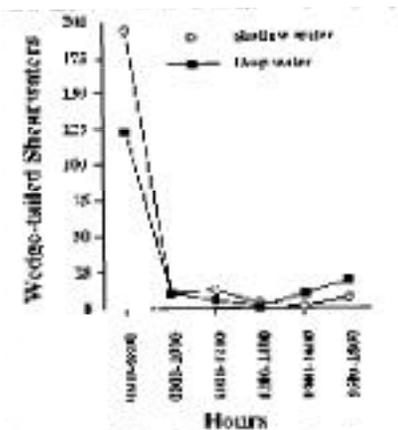
Species	Deep water, birds per 2-hr period	Shallow water, birds per 2-hr period	F _{1,12}	P-value
Laysan Albatross	0.08	0.00	--	--
Wedge-tailed Shearwater	28.17	37.67	0.18	0.68
Newell's Shearwater	0.08	0.00	--	--
Christmas Shearwater	0.08	0.00	--	--
Dark-rumped Petrel	0.08	0.00	--	--
Red-footed Booby	3.00	11.33	12.47	0.004
Brown Booby	0.00	3.50	7.54	0.018
Masked Booby	0.08	0.17	--	--
Great Frigatebird	0.25	1.08	3.56	0.036
Red-tailed Tropicbird	0.08	0.00	--	--
Pomarine Jaeger	0.00	0.00	--	--
White Tern	3.08	3.42	3.55	0.081

vessel from 11-14 October (Table 1). Three species, Red-footed Booby, Great Frigatebird, and White Tern, were more numerous in shallow water closer to shore than in deep water, and two additional species, Brown Booby and Pomarine Jaeger (*Stercorarius pomarinus*), were seen only close to shore. Great Frigatebirds and Pomarine Jaegers are piratic species that chase other seabirds, particularly boobies and Larids, respectively, and force them to relinquish their catch (Harrison et al. 1983). We observed frigatebirds and jaegers most often when feeding flocks of boobies were present, and these flocks occurred more often close to shore. Pomarine Jaegers are winter visitors to Hawaiian waters. Red-footed Boobies, Brown Boobies, White Terns, and their respective kleptoparasites comprised the bulk of the nearshore seabird community of southern O'ahu.

Four species, Laysan Albatross (*Phoebastria immutabilis*), Newell's Shearwater (*Puffinus auricularis newelli*), Christmas Shearwater (*Puffinus nativitatus*), and Hawaiian Petrel (*Pterodroma sandwichensis*), were seen only in at least 2000 feet of water. Laysan Albatross and Christmas Shearwaters nest in small numbers on O'ahu, at Ka'ena Point and Moku Manu, respectively (Harrison 1990). Newell's Shearwater and Hawaiian Petrel transit waters near O'ahu as they commute to and from breeding areas on other Hawaiian Islands. All four of these species forage pelagically and typically are found far from land (Harrison 1990, Warham 1996). More detailed information about the most commonly observed species is discussed in species accounts below.

Species Accounts

Fig. 2. Temporal abundance of Wedge-tailed Shearwaters in a deep water (2000 feet) site nine miles south of O'ahu and a shallow water (115 feet) site one mile south of O'ahu, 11-14 October 2001.



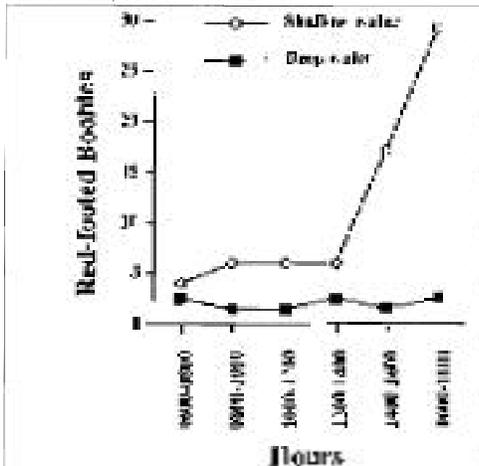
Wedge-tailed Shearwater. This was the only species that showed a strong temporal activity pattern, with a peak in abundance in the early morning and another much lower peak in the late afternoon (Fig. 2). The first individuals were observed each day at 0557, 0606, 0615, and 0610 hrs. In the morning all shearwaters were headed downwind to the west-southwest, and the first shearwaters heading northeast were observed consistently just before mid-day, at 1130, 1138, 1153, and 1155. After these times all birds observed were headed upwind to the northeast. The majority of Wedge-tailed Shearwater nesting colonies on O'ahu are located along the eastern and northern shores (Fig. 1; Harrison 1990, Whittow 1997, Smith et al. 2002), so birds seen in the morning headed southwest presumably were

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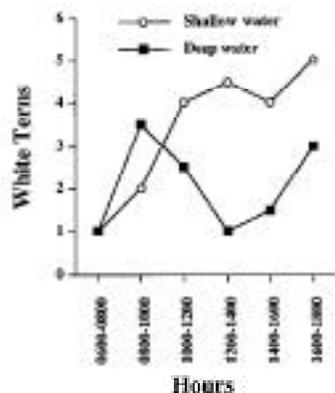
leaving their nesting areas, and birds headed northeast in the afternoon presumably were returning to nesting areas. The fact that the number of shearwaters was lower in the afternoon suggests that most birds returned to nesting colonies by another route, such as farther from shore or around the north side of the island, but it is also possible that they returned after dark when we were not able to observe them.

Fig.3. Temporal abundance of Red-footed Boobies in a deep water (2000 feet) site nine miles south of O'ahu and a shallow water (115 feet) site one mile south of O'ahu, 11-14 October 2001.



Red-footed Boobies were present throughout the day in both deep and shallow water, but their abundance was highest in shallow water in the afternoon (Fig. 3). Foraging flocks of up to 30 birds occasionally were seen over schools of fish. Red-footed Boobies nest on the eastern side of O'ahu at Ulupa'u Crater (Fig. 1), and have been reported to forage far out at sea (Harrison et al. 1983), but our observations indicate that on O'ahu they more often fed close to shore. The first Red-footed Boobies were observed each morning at 0722, 0706, 0700, and 0714, indicating they either leave their nesting colony later than Wedge-tailed Shearwaters or fly more slowly and require more time to reach the south shore, or both.

Fig.4. Temporal abundance of White Terns in a deep water (2000 feet) site nine miles south of O'ahu and a shallow water (115 feet) site one mile south of O'ahu, 11-14 October 2001.



Brown Booby. In the Northwestern Hawaiian Islands and at Aldabra Atoll in the Indian Ocean, Brown Boobies were reported to feed primarily inshore (Diamond 1978, Harrison et al. 1983), which is supported by our data. We observed small numbers of Brown Boobies in shallow water throughout the day, but none in deeper water. Adults and immatures of this species were often observed resting on buoys and channel markers.

White Terns were least numerous at sea early in the morning before 0800 and most numerous at sea in the late afternoon from 1600-1800 hrs. This observation is consistent with patterns of abundance at roost and nest sites on land directly inshore from the observation area, where White Terns are most numerous in the early morning and largely absent in the late afternoon until dusk (VanderWerf 2003). The deep water and shallow water distributions of White Terns exhibited somewhat opposite temporal patterns, with activity concentrated in deep water early in the day and in shallow water in the middle of the day, with a peak in both areas late in the day just before dusk (Fig. 4). Harrison et al. (1983) reported that 88% of the diet of this species consisted of inshore species.

WILDLIFE-OIL INTERACTIONS

Seabirds were observed frequently during the relocation of the F/V Ehime Maru and generally were not disturbed by activities of the numerous ships, skimmers, and helicopters present during the operation. Neither seabirds nor marine mammals avoided areas where oily sheen had formed on the surface of the water. We observed 3 instances when wildlife contacted the sheen, involving 1 Red-footed Booby, 1 Wedge-tailed Shearwater, and a pod of approximately 35 spinner dolphins (*Stenella longirostris*). On several occasions we observed foraging groups of Wedge-tailed Shearwaters circling low over areas where an oily sheen had formed. At 1135 hrs on 13 October a group of 18 Wedge-tailed Shearwaters appeared suddenly, circling directly over a small sheen area that we had not noticed. A few minutes later a helicopter began hovering over the spot, reported the presence of the sheen (but not the shearwaters), and directed oil skimmers to the area. In the previous 1.5 hours we had seen only 3 shearwaters, suggesting the shearwaters may have been attracted to the sheen, with 18 birds reaching it before the helicopter. One of these birds eventually landed in the sheen and repeatedly dipped its head in the water. Shearwaters and many other Procellariiformes have an acute sense of smell and rely on olfactory detection of volatile oils to locate prey over great distances (Warham 1990, 1996). Diesel fuel and other volatile petroleum products likely are detected by seabirds from great distances and could be confused as a food source. On 13 October at 1320 hrs two Red-footed Boobies flew very low near the sheen as they were chased by a Great Frigatebird. One booby landed about 30 meters from the edge of the sheen to escape the frigatebird and drifted into a windrow of sheen about 5 meters wide. The booby took off about 5 minutes later. At 0625 hrs on 14 October a pod of approximately 35 spinner dolphins passed close to one of the skimmers, then went towards shore directly through a large windrow of sheen.

It is likely that more wildlife, especially seabirds, came in contact with the sheen, but it was difficult at times to determine whether birds flying over or near the sheen actually landed and contacted the sheen. Our observations would have been enhanced by greater ability to move closer to areas where sheen was evident and birds were actively feeding.

Most of the seabirds observed in this study are species that breed or roost locally and return to land each night. However, many seabirds do not return to land for months during the nonbreeding season, and most seabirds do not begin breeding until they are several years old, with pre-reproductive birds

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International Migratory Bird Day 2005

Collisions: Clear the Way for Birds!



Art copyright David Sibley

In the IMBD 2005 artwork, David Sibley portrays the “Collisions” theme using an illusion of depth and layers. In the foreground is a selection of birds including Ovenbird, Common

Yellowthroat, White-throated Sparrow, Yellow-billed Cuckoo, Red Phalarope, and Swainson’s Thrush. These birds are mirrored in a plate glass window, a potential collision hazard. Reflected at a distance in this same window are Snow Geese, Blue-winged Teal and a Golden Eagle in flight through a crowded skyline of additional aerial obstacles, including buildings, communication and wind turbine towers, wires, and a plane. A complex piece of art for a complex issue!

Clear the Way for Birds!

Flight is a magnificent means of transportation, allowing bats, insects, birds and even humans to travel great distances. For many birds, however, a journey across the skies may be a veritable obstacle course of human-related hazards. International Migratory Bird Day (IMBD) is an opportunity to examine the obstacles birds may encounter in flight and explore the many ways we may minimize their impacts.

The towers erected for our cell phones and pagers, the lines that bring us power, our vehicles, the windows on homes and office buildings, and even sources of renewable energy, such as wind turbines, create obstacles for birds in flight. Collisions with these obstacles may cause the death of one bird or tens of thousands of birds in a single incident. Biologists estimate the combined death toll from aerial collisions may exceed 700 million birds each year and affects all types, from ducks, gulls, plovers, owls, and hawks, to woodpeckers, hummingbirds, warblers, sparrows, and finches.

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remaining at sea for years (Warham 1996). In most cases oiled wildlife survey and recovery efforts focus on nearshore areas and on locally nesting species because they may be affected most immediately and oiled individuals are observed most readily. The impact of oil spills and other environmental threats on nonbreeding individuals or species that nest in distant areas is difficult to determine due to their pelagic distribution and may be seriously underestimated. Any such impacts easily could go unnoticed without special efforts to survey offshore waters. If surveys of offshore waters are not conducted after future oil spills in Hawai‘i, data collected during this study could be used to estimate the number of pelagic seabirds that are likely to be affected.

Acknowledgements

We thank the staff of the Clean Islands Council and the crew of the Clean Islands, especially Captain Tim Sawyer and First Mate Paul Pollock, for their support and hospitality. For logistical, strategic, and communication support we thank Carolyn Winters and Tim Sutterfield of the U.S. Navy Pacific Fleet Environmental Office, John Hickey, Benton Pang, and Don Palawski of the U.S. Fish and Wildlife Service, and Greg Massey and Francis Oishi of the Hawaii Department of Land and Natural Resources. Valuable comments on the manuscript were made by John Hickey, Greg Massey, Don Palawski.

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What Exactly Is International Migratory Bird Day?

International Migratory Bird Day (IMBD), held annually on the second Saturday in May, is an invitation to celebrate and support migratory bird conservation.

Cause for Celebration

Each year, hundreds of thousands of people observe International Migratory Bird Day (IMBD). They will gather in town squares, community centers, schools, parks, and refuges across the Western Hemisphere to learn more about wild birds, take action to conserve birds and their habitats, and simply have fun.

Like any day of recognition, IMBD exists to focus attention on something important and marvelous — in this case, the journey birds undertake between their summer and winter homes. IMBD was created specifically to highlight the migration of nearly 350 species of migratory birds between nesting habitats in North America and non-breeding grounds in South and Central America, Mexico, and the Caribbean. However, the day serves as an opportunity to celebrate all the species of birds whose annual movements enliven our lands, waters and skies.

Migratory birds are some of the most beautiful, observable, and remarkable wildlife that share our world. Many know migratory birds as symbolic harbingers of spring and melodious songsters of the woods. Migratory birds are also an important economic resource, controlling insect pests and generating billions in recreational dollars.

Unfortunately, research has shown that many migratory bird species are in decline, facing a growing number of threats on their migration routes and in both their summer and winter habitats. Thus, IMBD, in addition to being a day to foster appreciation, is a call to action.

A Partnership for Birds

IMBD is the hallmark outreach event for Partners in Flight (PIF)—a unique, diverse consortium of individuals and groups who share a vision of healthy bird populations. Partners in this consortium include government agencies, conservation organizations, private businesses, academic institutions, chambers of commerce, and everyday citizens.

International Migratory Bird Day 2005 continued from pg. 29

The problem is urgent, and biologists, conservation organizations, communities and individuals are joining forces with industry representatives to unravel the causes of bird collisions and to explore ways of making a bird's journey safer. Individual participation in these efforts can have significant results. Small changes at home, involvement at work, and active contribution to your community can make a world of difference to bird conservation.

Learn More

The greatest challenge in reducing bird collisions is finding ways to alter the design and use of structures, equipment and vehicles while still having them serve their purpose. Also, in some cases, it's not quite clear why or under what conditions the collisions occur. Fortunately, studies are under way to develop solutions. Read up on the problems...and solutions...by visiting the IMBD website (www.birdday.org) and checking out their interesting links.

The 1993 creation of IMBD can be credited to a PIF member, the Smithsonian Migratory Bird Center, and the principal responsibility for its national coordination currently rests with two other partners, the National Fish & Wildlife Foundation and the U.S. Fish & Wildlife's Division of Migratory Bird Management.

In the decade it has existed, PIF has successfully developed research programs and management strategies to further bird conservation, in addition to promoting outreach and education via IMBD and other activities.

IMBD Today

The success of IMBD and other PIF programs stems from their positive, voluntary, grass-roots nature. A special day for migratory birds provides organizations, large and small, and individuals, young and old, with the impetus to take part in an enjoyable activity to support migratory birds. Activities might be a bird walk, a lecture, a class, or a festival.

For those already involved in migratory bird conservation, IMBD adds momentum to the cause, raising local activities to the level of an international movement.

In addition, IMBD provides celebrants with a focus in the form of an annual general theme. Themes have included the importance of wetland habitats, the effects homeowners have on bird conservation, the Peregrine Falcon and its celebrated recovery from an endangered status, shade-grown coffee, Important Bird Areas, and colonial bird conservation issues.

IMBD Information

web - <http://birds.fws.gov/imbdb>

phone - 703 /358-2318

IMBD Materials

web - <http://www.BirdDay.org>

phone - 1-866/334-3330

June 20th Program Meeting: Midway Atoll's Birds, Turtles and Seals with Sally Ann Marston

Sally Ann Marston has a B.S. in Wildlife Biology from The Evergreen State College, Olympia, WA. She will present a slide show of Midway's fauna from her 3 month stay as an intern for USFW Service in 1992. While on the atoll, she participated in numerous studies, including the breeding success of Laysan and Black-footed albatross, and numerous atoll-wide census of seals, turtles, and seabirds.

Along with Sally's talk, slides of monk seals, about 15 seabird species, shorebirds, and more unusual birds will be shown.

Program Meetings are held at the University of Hawai'i's St. John Lab (Botany Building Rm. 011) in the ground floor auditorium at 3190 Maile Way, where it intersects East-West Road. Program meetings take place from from 6:30pm to 8:30pm, refreshments are served, and HAS products will be available for purchase.

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U.S. District Court Enforces Settlement Allowing Kona Forest Refuge Access

U.S. District Judge Susan Oki Mollway has ordered two Big Island landowners to sign a written settlement agreement resolving longstanding access and other issues regarding the Kona Forest Unit of Hakalau Forest National Wildlife Refuge no later than February 28. The landowners verbally agreed to the settlement on March 19, 2004, but later raised several other issues and never signed the agreement.

Subsequent to a court hearing on Monday, February 14, Judge Mollway filed her order yesterday granting the U.S. Fish and Wildlife Service's motion to compel settlement of the agreement. Under the terms of the agreement, Nohea Santimer and Moani Zablan will grant the Fish and Wildlife Service access to the Kona Forest Unit along an existing road from Mamalahoa Highway to the northwestern corner of the refuge and along its northern boundary. The landowners will have 90 days to remove their property from refuge lands. The Service has agreed to pay the landowners \$120,000 when the final agreement is signed and the lawsuit has been dismissed.

"We purchased the 5,300-acre property in December 1997 to protect, conserve, and manage its habitat for the critically endangered 'alala or Hawaiian crow and numerous other endangered species," said Jerry Leinecke, project leader for Pacific island national wildlife refuges. "Since 2001, we have had no road access to Kona Forest. Although we have occasionally chartered a helicopter to allow us to conduct surveys and monitor the status of the refuge unit, we basically have not been able to actively manage or protect its resources for the past four years."

Once the last remaining habitat for 'alala in the wild, natural resource values have declined significantly during the past four years due to the Fish and Wildlife Service's inability to work

regularly on the refuge unit to erect fences, remove feral cattle and pigs, or control weeds, Leinecke said. The last sighting of a wild 'alala was in 2002, and biologists fear the only remaining birds are those in captivity at the San Diego Zoo's Keauhou and Maui Bird Conservation Centers.

A \$1 million grant from the Packard Foundation for habitat management fencing at the Kona Forest Unit had to be returned to the foundation last year because construction could not take place without access to the property. With no resolution to the access issue in sight, the refuge office in South Kona was closed in 2003 and the staff transferred to other locations.

"We are very grateful to District Judge Mollway, United States Attorney Edward Kubo, Jr., and Assistant U.S. Attorney Harry Yee for their efforts to resolve these longstanding issues," Leinecke said. "We look forward to getting back to work on the refuge; despite its deterioration over the past several years, it's still a vital piece in a network of lands on the Big Island that will ensure the survival of many of Hawaii's embattled native species."

The Kona Forest Unit was purchased from the Les Marks Trust in 1997 for \$7,780,000. Although the purchase agreement provided for access across remaining LMT lands, the landowners refused to grant the easements. In August 2002, Santimer and Zablan filed suit against the Secretary of the Interior and several Fish and Wildlife Service employees seeking resolution of their claims to relocate their property off of the refuge. This global settlement agreement resolves both the relocation and access issues between the two parties.

Source: USFWS News Release: dated February 16, 2005
 Contact: Barbara Maxfield, 808 792 9530 or 753 0440



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Calendar of Events

Monday, May 16 Board Meeting

Open to all members, 6:30 to 8:30pm at the HAS office. Education and Conservation Committees meet at 5:45pm before Board meetings.

May 22 Field Trip

Honolulu Zoo bird exhibits. See page 26.

June 20 Program Meeting. See page 30.

Got Binoculars?

by Ron Walker

Student birders need the extra pair of binoculars that may be sitting unused in your closet. The non-profit education organization, Moanalua Gardens Foundation (MGF), offers popular wetlands and waterbirds unit for students and teachers that culminates in a daylong adventure exploring Hawaiian wetlands. Since many children do not have access to binoculars to use for the field trip, MGF is attempting to build its own lending collection.

If you have a pair to donate, please call 839-5354. MGF and the young birders of Hawai‘i send their sincere thanks!

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