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News Release

Pacific Islands External Affairs Office

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Massive Albatross Nest Count Completed at Midway Atoll National Wildlife Refuge

Results may aid understanding of albatross population trends

A team of 21 volunteers worked through the holidays to complete a massive undertaking – a physical count of nearly half a million nesting pairs of Laysan and black-footed albatrosses at Midway Atoll National Wildlife Refuge. The total number of active Laysan albatross nests counted was 441,178, and the total for the black-footed albatross was 20,393.

The complete, direct nest count of Midway's Laysan albatrosses is only the fourth such effort in the past eight years, with previous efforts undertaken in 1996, 2000, and 2001. The results of the 2003 count reflect a 53.9 percent increase in nesting effort since 2001. Black-footed albatrosses, a species of particular concern, also were counted in 1991 and annually from 1994-2001. Numbers of nesting pairs of this species have not changed significantly during this period; their nesting effort since 2001 is up by only 7.2 percent.

Beginning on December 14, teams of four or five people each worked their way through assigned plots on all three islands armed with a mechanical counter and a can of spray paint to mark each counted nest. Dodging the underground burrows of other seabirds and struggling through alien vegetation, the volunteers worked at least 10-hour days and completed their task a full week earlier than expected.

Since the male and female albatrosses take turns incubating their eggs, all active nests are counted and the census is stated in terms of the number of breeding pairs. Nonbreeding individual birds are much more difficult to count and are not included, so actual albatross numbers on Midway are far higher than reported.

According to biologists, these counts provide only one piece of the puzzle for assessing long-term population trends. Albatrosses are long-lived species (up to more than 50 years) that produce an average of only one egg every two years. Sexual maturity typically occurs at 8-10 years of age, therefore this year's high breeding effort could reflect a Laysan albatross "baby boom" from the early to mid 1990s, enhanced by habitat improvements at Midway, favorable oceanographic conditions, or other environmental factors. The high numbers of Laysan albatross nests in 2003 also may reflect a much higher number of experienced breeders returning to Midway than in 2001.

"The results of the 2003 albatross count, when compared with the results of previous counts, suggest a complex and mysterious biological story," said Beth Flint, wildlife biologist with the U.S. Fish and Wildlife Service in Honolulu. "We are very pleased to see strong increases in numbers of nesting pairs of Laysan albatrosses this year because overall declines had been observed over the last ten years or so."

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Biologists caution that breeding can vary from year to year for a variety of reasons. “We just don’t know enough yet about albatross population dynamics to conclude that their total numbers are increasing,” explained Flint. “It could be that numbers have been down in recent years because of climate conditions, lack of available food, human impacts, or any of a number of other reasons.” Another unanswered question is why Laysan albatrosses had a greater increase in nesting effort this year than black-footed albatrosses.

“Mortality of albatrosses from collision with buildings, antennae, and other structures has declined since the Navy’s extensive cleanup and restoration efforts at Midway,” said Tim Bodeen, Midway Atoll Refuge Manager. “Midway became an ‘overlay’ refuge in 1988, while still under the primary jurisdiction of the Navy. After the closure of Naval Air Facility Midway Island in 1993, many changes occurred to reduce albatross mortality and create habitat for seabirds, monk seals, sea turtles, and other native species.” Since the Service assumed management of Midway, most arrivals and departures of aircraft take place at night, further reducing albatross mortality.

Albatross census information from other sites in the neighboring Hawaiian Islands National Wildlife Refuge will provide important context for analyzing the factors that may have played an important role in the increases. Those counts should be available within the next few weeks.

The 2003 count was carried out by a varied group of volunteers who hailed from California, Fiji, Hawaii, Oregon, and Tennessee. The volunteers included people with diverse backgrounds and professions, including among others an architecture student, a retired banker, fruit farmers, professional bird rehabilitators, a university accounting instructor, and an executive from an international conservation organization. Chugach McKinley, Inc., the Fish and Wildlife Service’s contractor on Midway Atoll, provided significant support for the volunteers.

Midway harbors the largest breeding population of Laysan albatrosses in the world (approximately 75% of the global population), and about 35% of the world’s population of black-footed albatrosses. Black-footed albatrosses breed in Hawaii and on islands off Japan. The core breeding range of this species occurs in the Northwestern Hawaiian Islands, where more than 95 percent of the world population nests.

The Laysan albatross, the most abundant North Pacific albatross, also has the core of its breeding range in the NWHI. Small colonies also occur in Japan, and two colonies were discovered in the mid 1980s in the Revillagigedo Islands off the Pacific coast of Mexico.

Black-footed albatrosses currently breed at 12 sites and are estimated to have a world population of about 57,000 breeding pairs. Since 1998, at least 75 percent of the world’s breeding population is counted directly each year by the Service in the NWHI. The remaining 25 percent of the population is counted less frequently, but all sites except one have been surveyed at least once since 1991. At Midway, Laysan Island, and French Frigate Shoals, the three sites where the Service conducts annual complete counts of nesting pairs, a 9.8 percent decline in the breeding population was recorded between 1996 and 2001.

Laysan albatrosses currently breed at 16 sites, and have an estimated breeding population of about 590,000 pairs. The Service conducts complete counts of this species at Midway when possible, and counts or sample densities of nesting birds are taken at French Frigate Shoals and Laysan Island every year. These monitoring sites account for 93 percent of the worldwide breeding population of this species. Between 1992 and 2002, the number of breeding pairs at all three sites combined has declined at an average rate of 3.2 percent per year. This rate represented a cumulative decline in annual breeding attempts of 32 percent over a ten-year period.