



'ELEPAIO

Journal of the
Hawaii Audubon Society

For the Protection of
Hawaii's Native Wildlife

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JUNE/JULY 2008

Results of Audubon's 108th Annual Christmas Bird Count

The Audubon Christmas Bird Count (CBC) is the oldest and largest citizen science event in the world. For over one hundred years people have gathered together during the winter holiday season to count birds, and in the process they have created a vast pool of information on the status and distribution of early winter bird populations. This year's count took place between December 14, 2007 and January 5, 2008, during which time over 57 million birds were counted in over 2000 separate counting events. Results from 1900 to the present are available through National Audubon Society's website, www.audubon.org/bird/cbc.

Hawaii Audubon Society would like to sincerely thank Arlene Buchholz, David Bremer, Michele Ho'okano, David Kuhn, Brenda Zaun, Jennifer Higashino, Arleone Dibben-Young, Eldridge Naboa, Nick Mitchell, Eric VanderWerf, Cynthia Rehkemper, David Zabriskie, Tom Wilkie, and Jonathan Shore for generously volunteering to organize, lead, and compile data for this past winter's Hawai'i Christmas Bird Counts. Many thanks also to all those who participated in the collection of this important data during this 64th annual CBC for Hawai'i!

MAIN HAWAIIAN ISLANDS 2007-2008 CBC RESULTS

Species	Kaua'i		O'ahu		Moloka'i	Maui		Hawai'i	
	Kapa'a	Waimea	Honolulu	Waipi'o	Kualapu'u	'Iao Valley	Pu'u o Kaka'e	North Kona	Volcano
Laysan Albatross, Mōlī	186 HC	4							
White-tailed Tropicbird, Koa'e kea	2	4			8				
Red-tailed Tropicbird, Koa'e 'ula					7				
Brown Booby, 'Ā	26	12	5						
Red-footed Booby, 'Ā	1263		432						
Great Frigatebird, 'Iwa	12	1	14						
Cattle Egret	65	79	98	370	41	19	11		
Black-crowned Night-Heron, 'Auku'u	18	9	40	17		4	3	4	
White-faced Ibis				1		1			
Cackling Goose	1 US								
Hawaiian Goose, Nēnē	198 HC	1						6 HC	
Brant			2		3			1	
Gadwall					5 US HC				
Eurasian Wigeon					2				
American Wigeon					4				
Mallard			110			7	14		
Hawaiian Duck, Koloa	196	24							
Hawaiian Duck X Mallard (hybrid)			101	38					
duck sp.						55			
Blue-winged Teal					1				
Northern Shoveler, Koloa mōhā		1	2	9	14	8		1	

Species	Kaua'i		O'ahu		Moloka'i	Maui		Hawai'i	
	Kapa'a	Waimea	Honolulu	Waipi'o	Kualapu'u	'Iao Valley	Pu'u o Kaka'e	North Kona	Volcano
Northern Pintail, Koloa māpu	16		4	3	10			1	
American Green-winged Teal					18 HC				
Ring-necked Duck			2		10 HC			7 HC	
Greater Scaup					2 US HC				
Lesser Scaup		2			20 HC	4		8	
Bufflehead					1	7 HC		1 HC	
Chukar							1		
Gray Francolin				19	4	16	7	2	
Black Francolin					6				
Erckel's Francolin		21		2				10	
francolin sp.				9					
Red Junglefowl	83	114			1	1	3		
Kalij Pheasant								3	4 LC
Ring-necked Pheasant	1	2					1		
Wild Turkey		1			10			7	5 LC
Hawaiian Hawk, 'Io								1	
Hawaiian Moorhen, 'Alae 'ula	69	12	19						
Hawaiian Coot, 'Alae ke'oke'o	15	28	19	90	77	87		51	
Black-bellied Plover				1					
Pacific Golden-Plover, Kōlea	155	17	492	471	86	33	18	117	
Hawaiian Stilt, Āe'o	114	19	174	116	131	48	30	115	
Wandering Tattler, 'Ūlili	5	3	20	17	1	5	1	7	
Bristle-thighed Curlew, Kioea					5 HC				
Ruddy Turnstone, 'Akekeke	5	2	205	127	32	1		59	
Sanderling, Hunakai		5	4	9	1	30			
Sharp-tailed Sandpiper		1							
small sandpiper sp.						2			

'Elepaio

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850 Richards Street, Suite 505
 Honolulu, HI 96813
 Phone/Fax: (808) 528-1432

E-mail: hiaudsoc@pixi.com Website: www.hawaiiadubon.com

Pacific Fisheries Coalition (PFC) (a project of HAS)
 Tel: (808) 262-6859 Website: www.pacfish.org

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Species	Kaua'i		O'ahu		Moloka'i	Maui		Hawai'i	
	Kapa'a	Waimea	Honolulu	Waipi'o	Kualapu'u	'Iao Valley	Pu'u o Kaka'e	North Kona	Volcano
Dunlin	1 US								
Ruff					3 US HC				
Long-billed Dowitcher	8								
Laughing Gull		1	1					1 US	
Ring-billed Gull		1		2		2 HC			
White Tern, Manu-o-Kū			11						
Rock Pigeon		19	66	98	8	16	14		
Spotted Dove	153	76	237	550 HC	78	23	9	25	
Zebra Dove	242	91	488	1174 HC	149	47	36	12	
Mourning Dove				24 HC					
Rose-ringed Parakeet			2						
Red-masked Parakeet			2						
Red-crowned Parrot				40 HC					
Barn Owl		1							1 US LC
Short-eared (Hawaiian) Owl, Pueo		1							
Mariana Swiftlet			9 HC						
Kaua'i 'Elepaio		16							
O'ahu 'Elepaio			10	10 HC					
Hawai'i 'Elepaio								7 HC	37
Sky Lark				3			3	2	
Red-vented Bulbul			330	233					
Red-whiskered Bulbul			14	45					
Japanese Bush-Warbler	1	4	4	42					
White-rumped Shama	12	6	17	33					
'Ōma'o									33
Hwamei	4	6		1		1	1		
Red-billed Leiothrix			128	24		1			1 LC
Japanese White-eye	54	85	151	177	26	17	13	7	3 LC
Northern Mockingbird		9		2	1				
Common Myna	336	134	767	1019	143	92	52	8	
Saffron Finch		2 US	1	33			2 HC	25	
Red-crested Cardinal	112 HC	15	183	126	11	4	7		
Yellow-billed Cardinal								2	
Northern Cardinal	8	25	22	63	8	12	5	3	1 LC
Western Meadowlark	5	1							
House Finch	31	48	138	210	36	15	14	3	
Yellow-fronted Canary			39						
Hawai'i 'Amakihi								225 HC	10 LC
O'ahu 'Amakihi			7	34					
Maui 'Amakihi							14		
Kaua'i 'Amakihi		8 LC							
'Anianiau		2 LC							

continued from page 37

Species	Kaua'i		O'ahu		Moloka'i	Maui		Hawai'i	
	Kapa'a	Waimea	Honolulu	Waipi'o	Kualapu'u	'Iao Valley	Pu'u o Kaka'e	North Kona	Volcano
'Akiapōlā'au									2 US
'Akikiki		1 LC							
Maui 'Alauahio							2		
'Akeke'e		2 LC							
'I'iwi		5 LC					5	47 HC	4 LC
'Ākohekohe							1 US		
'Apapane		86 LC	12	59			21	74	31 LC
House Sparrow	52	98	109	217	36	8	59	10	
Common Waxbill			297	488					
Red Avadavat			1	16					
African Silverbill					8			10 US HC	
Nutmeg Mannikin	239	8	8	190	83	33	83	6	
Chestnut Munia	32	40	3	102		2			
Java Sparrow	30		221	274		30	7		
Species	36	51	46	44	40	30	29	35	12
Participants	13	21	23	29	7	5	5	16	9
Party-Hours	20.5	13.5	44.75	41	20	8	8	5	5
Count Date	1/2/08	12/22/07	12/16/07	1/5/08	12/17/07	12/27/07	12/26/07	1/3/08	12/15/07

HC - High Count LC - Low Count US - Unusual Sighting

NORTHWESTERN HAWAIIAN ISLANDS 2007-2008 CBC RESULTS

Species	Laysan Island	French Frigate Shoals
Laysan Albatross, Mōlī	157411	3369
Black-footed Albatross	23606	2983
Black-footed Albatross X Laysan Albatross (hybrid)		1
Short-tailed Albatross	US CW	
Bonin Petrel	5000	19
Wedge-tailed Shearwater, 'Ua'u kani	8	1
Tristram's Storm-Petrel		16 HC
Red-tailed Tropicbird, Koa'e 'ula	1	10
Masked Booby, 'Ā	109	86
Brown Booby, 'Ā	81 HC	1
Red-footed Booby, 'Ā	325	1435
Great Frigatebird, 'Iwa	1054	758
Lesser Frigatebird		1
Laysan Duck	264	
Northern Pintail, Koloa māpu	11	
Bufflehead	2	
Pacific Golden-Plover, Kōlea	1020	127
Wandering Tattler, 'Ūlīlī	109	1
Bristle-thighed Curlew, Kioea	19 LC	
Ruddy Turnstone, 'Akekeke	2401	437

Species	Laysan Island	French Frigate Shoals
Sanderling, Hunakai	23	5
Ruff	3 HC	
Gray-backed Tern, Pākalakala	42 HC	1
Sooty Tern, 'Ewa'ewa	37	1
Brown Noddy, Noio kōhā	1901	54
Black Noddy, Noio	1595 HC	3441
Blue-gray Noddy		1
White Tern, Manu-o-Kū	84	82
Laysan Finch	311	
Species	27	22
Participants	4	7
Party Hours	14.25	6
Count Date	12/22/2007	12/22/2007
<i>HC - High Count</i>		
<i>LC - Low Count</i>		
<i>US - Unusual Sighting</i>		
<i>CW - Reported in the area during Count Week, but not reported during the count</i>		

Amazing Images Shed Light on Rare Hawaiian Shrimp

Amidst the water-filled cracks, crevices, and lava tubes of coastal Hawai'i exists a subterranean world few have ever seen. In these underground brackish and saline waters known as anchialine pools, rare native shrimp make their home. Scientists from Hawaii's Department of Land and Natural Resources (DLNR) have captured images of these rare biological gems known as anchialine pool shrimp.

"These images are some of the first of their kind for Hawaiian anchialine pool shrimp and open a window into the life history and behavior of the species. The more we learn about anchialine pool ecosystems, the better we can manage and preserve them for future generations," said Mike Yamamoto, aquatic biologist with the DLNR Division of Aquatic Resources.

Six species of anchialine pool shrimp were photographed, including *Callaismata pholidota*, *Antecaridina lauensis*, *Metabetaeus lohena*, *Procaris hawaiana*, *Palaemonella burnsi*, and *Halocaridina rubra*. *Halocaridina rubra*, known in Hawaiian as 'ōpae 'ula, is the only one of the six species that has a common name.

The six shrimp species range in size from 0.2 to 1.2 inches in length, and occur in a wide range of colors, from translucent green and yellow, to red, pink, white, banded, and transparent. 'Ōpae 'ula (*Halocaridina rubra*) is the most common species of anchialine shrimp in Hawai'i and can reach 10 to 15 years of age, an unusually long time for a tiny crustacean. This species is known to occur on the islands of Hawai'i, Maui, and O'ahu.

"Three of the six species of anchialine pool shrimp are candidates for listing as endangered or threatened under the Endangered Species Act. These include *Metabetaeus lohena*, *Procaris hawaiana*, and *Palaemonella burnsi*," said Lorena Wada, candidate conservation coordinator for the Fish and Wildlife Service in the Pacific Islands. "The Service is part of a cooperative effort to conserve and monitor anchialine pool shrimp and their habitats throughout the state."

Most anchialine pool shrimp inhabit an extensive network of water-filled cracks and crevices that lead to and from the actual pool. This factor has precluded researchers from obtaining more accurate population size estimates during surveys. In most cases, scientists note the presence or absence of a species in the habitat surveyed. Loss of shrimp species from suitable habitat is the best method, to date, to measure a species' decline since population sizes are not easily determined.

The three major threats to anchialine pool shrimp are habitat destruction and degradation, nonnative invasive species, and over collection for the aquarium trade.

"If you care about Hawaii's natural treasures we recommend that people leave the animals and their habitats alone," said Matt Ramsey, DLNR resource ranger. "For those who do visit an anchialine pool, please observe only and do not touch. Do not introduce any trash, or native or nonnative aquatic animals or plants into these pools. If you buy 'ōpae 'ula, please make sure that the vendor has the proper permits to sell the animals."

Anchialine pools are common worldwide, especially along neo-tropical coastlines where the geology and aquifer system are relatively young, and there is not much soil development. Such conditions occur notably where the bedrock is limestone



'Ōpae 'ula (*Halocaridina rubra*) red and white color morphs. Photo by Mike Yamamoto.



A shameful accumulation of trash found in one of the sinkholes. Let's all do our part to keep Hawaii's environment clean!

Photo by Tom Iwai.

or recently formed volcanic lava. Water levels in anchialine pools often fluctuate with tidal changes due to the coastal location and the connection with the ocean. Currently the state of Hawai'i has more than 650 anchialine pools, approximately 90 percent of which occur on the island of Hawai'i; however, very few of these pools are occupied by shrimp.

To view a fact sheet on the six shrimp species visit the Pacific Islands Fish and Wildlife Service's website at <http://www.fws.gov/pacificislands/anchialinefactsheet041608.pdf>.

Source: USFWS News Release dated April 16, 2008

Contact: Ken Foote, (808) 792-9535 or Deborah Ward, (808) 587-0320

Excerpts from the Journal of George C. Munro December 1890 to August 1891

Contributed by Ron Walker

On December 13, 1890, George Campbell Munro arrived in Honolulu after a voyage aboard the steamship *Mariposa* which left Auckland, New Zealand on the 1st of December. He was to assist ornithologist, Henry C. Palmer in collecting birds in Hawai'i under the sponsorship of Lord Walter Rothschild for the museum collection in Tring, England. His small handwritten journal of 314 pages chronicling his ornithological and cultural experiences in Hawai'i was never published. Through the courtesy of the family of Richard C. Towill, the Hawaii Audubon Society was allowed to copy the journal and present it here in a series of excerpts in the *'Elepaio*. We acknowledge the assistance of Marti Steele, Steven Bunting, and Charlotte Walker in transcribing and editing the journal and Dr. Robert Pyle for coordinating the project with the Bishop Museum. Copies of the original journal and typed transcriptions are available at the Bishop Museum archives and the Hawaii Audubon Society office.

From 1935 to 1937, Munro started the first comprehensive survey of the birds of Hawai'i and in 1939 he helped found the

"Honolulu Audubon Society" which eventually became the Hawaii Audubon Society.

Our series concludes with this excerpt from the "Journal kept by George C. Munro while studying and collecting natural history specimens in the Sandwich Islands."

Part 9: Last in the Series

Friday, July 24, 1891 (Northwestern Hawaiian Islands)

Saw a white headed petrel today looked a little smaller than the grey breasted species, the white breasted petrel we see only occasionally. A large black bird yellow across our bow a good distance ahead flew like a gull, about size of black-backed gull. We are about 500 miles from Midway. A dolphin about 4 feet long was caught with a hook & a piece of tin, it is very good eating, it is a beautiful fish when fresh caught; goonies are still about us several of them being this season's birds, one I noticed was much mottled belly (gray) in plumage.

The birds we have procured on this trip are:

Finch or "canary"

Fly catcher or "miller bird"

Honey eater or "red bird"

Rail or "walking bird"

Laysan duck

Curlew

Black "goonie"

White "goonie"

Wedge tailed shearwater

White breasted petrel

Christmas Isl. shearwater

Black petrel

Small black petrel

Red tailed tropic bird or "boatswains"

Frigate bird or man o war hawk

Large white gannet, masked gannet

Small white gannet, red-footed hook

Black backed gannet, brown booby

Pied tern or wide-awake (sooty tern)

Grey-backed tern, bridld. tern

White tern

Noddy tern

Noio

Teleopyza flavissima 1 male 1 female

T. cantanis

Tartare familiaris 11 males

Himatione fraithis 1 male

Porzana palmeri 1 male

Numenius Tahitiensis 1 male

Albatross 1 male

Albatross 1 male

Puffinis pacificus cuneatus 1 male

1 male

Puffinis nativitatus

Bulwer's petrel 1 male

1 male

Frigata aquila 1 male, 1 female

Sula cyanos 1 male

1 male

1 male

1 male

1 male, 1 female

1 male

Anous stolidus

Anous Hawaiiensis

State Proposes Natural Area Reserve at Poamoho on O'ahu

The Natural Area Reserve System Commission is recommending that a portion of the Poamoho Public Hunting Area become established as a State of Hawai'i Natural Area Reserve. The proposed reserve would consist of 1,311 acres of state-owned land currently part of the Ewa Forest Reserve. The purpose would be to afford further protection for the native resources found there including 25 rare plants, Federally and State listed endangered birds (O'ahu creeper, O'ahu 'Elepaio, 'Iwi and Pueo) and the Hawaiian Hoary Bat. Also, five species of endangered tree snails (*Achitinella*) have been reported there. The proposal cites invasive non-native plants, feral pigs and human disturbance as the primary threats to the native ecosystem existence and recovery.

For details, the draft nomination supporting the designation of this area into the Natural Area Reserve System and a map are available through Emma Yuen, Division of Forestry and Wildlife at (808) 587-4170 or at emmayuen@hawaii.gov for electronic copies.

On April 30th, 2008 a public hearing to receive comments about the proposal was held in the board room of the Department of Land and Natural Resources at which time the Hawaii Audubon Society testified in favor of the proposed designation.

HAS Field Trips

Contact the HAS Office at:
(808) 528-1432, hiaudsoc@pixi.com

Saturday, June 14

Hilton Hawaiian Village Bird Tour with Alice Roberts

Come explore the Hilton's beautiful grounds and ponds where we will discover a variety of fish and water birds. Meet at the Penguins at the Hilton Hawaiian Village at 9:00 a.m. Parking is not validated unless you eat lunch at a restaurant at the Hilton. Space is limited, call Alice to register, 864-8122.

HAS Program Meeting

Program Meetings are sponsored by HAS and the UH Biology Department, and are held at UH Mānoa's St. John lab building (Botany Building) in room 011 (ground floor auditorium). The address is 3190 Maile Way. Attendance is free and open to the public.

June 16, Monday, 6:30 – 8:30 p.m.

Shearwaters: Natural History and Black Point Colony Dr. Holly Freifeld

Holly Freifeld, Ph.D., is the Vertebrate Recovery Coordinator for the U.S. Fish and Wildlife Service in Honolulu, Hawai'i. She has contributed to the recovery of the Newell's Shearwater, Hawaiian Petrel, Laysan Duck, and Mariana Fruit Bat.

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		All other countries
		\$ 26.00
		\$ 28.00
		\$ 33.00

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HAWAII AUDUBON SOCIETY
 850 RICHARDS STREET, SUITE 505
 HONOLULU, HAWAII 96813-4709

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Calendar of Events

Saturday, June 14

HAS Field Trip

Hilton Hawaiian Village Bird Tour

With Alice Roberts

See page 41

Monday, June 16

HAS Program Meeting

Shearwaters: Natural History and Black Point Colony

With Dr. Holly Freifeld

See page 41

Table of Contents

Results of Audubon's 108th Annual Christmas Bird Count..... 35

Amazing Images Shed Light on Rare Hawaiian Shrimp 39

Excerpts from the Journal of George C. Munro 40

State Proposes Natural Area Reserve at Poamoho on O'ahu..... 41

HAS Field Trips..... 41

HAS Program Meeting 41