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## HIGHLIGHTS OF THE 1972 CHRISTMAS COUNT

By William P. Mull

The Hawaii Audubon Society (HAS) conducted its annual census of birds in the greater Honolulu area on December 17, as part of the National Audubon Society's nationwide census at Christmas time. This year, unlike last year's fine-weather respite, count-day conditions reverted to rain, as in the previous two years--but, thankfully, without the strong winds we had before.

This year, twenty-nine members and guests, in fourteen parties, covered selected census areas within the customary fifteen-mile-diameter circle centered near Nuuanu Pali and bounded by Aiea, Salt Lake, Diamond Head, Paiko Lagoon, Waimanalo, Mokena Peninsula and Kahaluu.

The teams identified 52 species and counted 14,559 individual birds within the Count area. Although these overall figures are little different from those of recent years, a few of the results are worth noting. The four "first records," detailed elsewhere, are of interest simply because they're "first." The Arctic loon seems to be a real "first," since we can find no loon record at all for Hawaii. The three parrots (salmon-crested cockatoo, eclectus parrot and Indian ring-neck parakeet), along with the population explosion of the red-vented bulbuls, might be of interest also to any fruit-growers among our readership, on Oahu.

Again we note that over half (30 out of 52) of the species recorded on the Count are not here naturally--but are the result of man's monkeying around with nature in Hawaii. Subjectively attractive as these malihini birds may be in our gardens and parks, we should not ignore the objective implications in their presence and their potential impact on our unique and decreasingly diversified native birds and ecosystems. Perhaps this is the most meaningful and portentous result of our 1972 Christmas Count.

### Notes on Unusual Records:

Arctic Loon (*Gavia arctica*): First record for Christmas Count--and, apparently, for Hawaii. A single bird was spotted by Neil Dickenson and observed through binoculars and scopes by him and Mae and William Mull for an hour in late morning at Salt Lake, as it rested, preened and dove a few times about 50-75 yards from shore and about 75-100 yards from the observers in flat light under an overcast sky with intermittent light rain. Plumage appeared intermediate between that for summer and winter adults: white throat, breast and sides; straight, light-bluish bill; light beige-gray crown and nape with darker gray forehead and base of neck; very dark back with white patches with fine, dark laddering. Length appeared to be half again that of nearby coots. Dickenson, an experienced observer of loons on the Mainland over many years, noted that the plumage was not the full winter plumage he was accustomed to on the Mainland, but that the bird was too small to be a common or yellow-billed loon and its bill too straight to be a yellow-billed or red-throated loon. All characters considered, the remnant light nape and laddered back-patches appeared definitive for the Arctic loon. Later, in the afternoon, the Mulls returned to observe the bird for twenty minutes in vigorous feeding activity along the shoreline, during which time it swam in rapid zigzags just under the surface of the shallow water--occasionally stopping to raise its head and neck clear

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HONOLULU CHRISTMAS COUNT  
17 December 1972

## A R E A S

	1	2a	2b	2c	3	4a	4b
Arctic Loon	.	.	1	.	.	.	.
Brown Booby	.	.	.	11	.	.	.
Red-footed Booby	.	.	.	.	.	.	.
Great Frigatebird	.	.	.	.	.	.	.
Cattle Egret	.	.	.	.	.	.	.
Black-crowned Night Heron	.	.	.	.	.	.	.
Hawaiian Duck (Koloa)	.	.	.	.	.	.	.
Pintail	.	.	53	.	.	.	.
American Widgeon	.	.	5	.	.	.	.
Shoveler	.	.	2	.	.	.	.
Lesser Scaup	.	.	2	.	.	.	.
Hawaiian Gallinule	.	.	.	.	.	.	.
Hawaiian Coot	.	8	82	.	.	.	.
Pacific Golden Plover	1	21	6	320	15	20	1
Ruddy Turnstone	.	.	5	83	.	.	.
Wandering Tattler	.	.	5	6	.	.	.
Sanderling	.	.	.	26	.	.	.
Hawaiian Stilt	.	.	19	50	.	.	.
Pomarine Jaeger	.	.	.	10	.	.	.
Brown Noddy (Common)	.	.	.	.	.	.	.
Spotted Dove	9	11	2	12	15	88	50
Barred Dove	47	25	1	14	47	347	150
Salmon-crested Cockatoo	.	.	.	.	.	1	.
Green-cheeked Amazon	.	.	.	.	.	.	.
Eclectus Parrot	.	.	.	.	.	1	.
Indian Ring-neck Parakeet	.	.	.	.	.	.	.
Red-vented Bulbul	.	25	.	.	.	.	.
Mockingbird	.	.	.	2	2	1	.
Chinese Thrush	.	.	.	.	.	.	.
Red billed Leiothrix	.	.	.	.	.	1	.
Shama Thrush	2	7	.	.	4	22	.
Japanese Bush Warbler	3	.	.	.	.	1	.
'Elepaio	13	.	.	.	3	5	.
Common Mynah	1	225	.	8	78	265	600
Japanese White-eye	28	39	.	.	78	112	11
'Amakihi	8	.	.	.	1	25	.
'Apapane	7	.	.	.	.	4	.
Ricebird	23	13	24	.	11	113	.
Orange Weaver (Bishop)	.	.	.	.	.	.	.
Yellow Weaver (Napoleon)	.	.	.	.	.	.	.
House Sparrow	.	14	13	110	102	112	1500
Java Sparrow	.	.	.	.	.	.	.
Cardinal	6	14	3	1	31	32	9
Brazilian Cardinal	2	23	.	9	11	16	75
House Finch	12	6	1	2	12	55	.
Green Singing Finch	.	.	.	.	.	.	.
Saffron Finch	.	.	.	.	.	.	.
Orange-cheeked Waxbill	.	.	.	.	.	.	.
Red-eared Waxbill	.	.	.	.	.	.	.
Cordon Bleu	.	.	.	.	.	.	.
Lavender Finch	.	.	.	.	.	.	.
No. of Individual Birds:	162	431	224	664	410	1221	2396
No. of Species:	14	13	16	15	14	19	8



A R E A S

	5	6	7	8	9	TOTAL
Arctic Loon	.	.	.	.	.	1
Brown Booby	.	.	.	.	22	33
Red-footed Booby	.	.	.	.	1615	1615
Great Frigatebird	.	91	.	.	893	984
Cattle Egret	.	.	5	353	850	1208
Black-crowned Night Heron	.	2	5	8	14	29
Hawaiian Duck (Koloa)	2	.	.	.	.	2
Pintail	.	.	.	18	.	71
American Widgeon	.	.	.	.	.	5
Shoveler	.	.	41	23	23	89
Lesser Scaup	.	.	.	.	.	2
Hawaiian Gallinule	.	.	2	4	.	6
Hawaiian Coot	.	1	16	9	.	116
Pacific Golden Plover	21	145	8	26	99	683
Ruddy Turnstone	.	30	5	.	16	139
Wandering Tattler	.	2	1	.	4	18
Sanderling	.	1	.	.	6	33
Hawaiian Stilt	.	15	3	.	54	141
Pomarine Jaeger	.	.	.	.	.	10
Brown Noddy (Common)	.	.	.	.	56	56
Spotted Dove	216	144	11	59	10	627
Barred Dove	569	518	26	41	24	1809
Salmon-crested Cockatoo	.	.	.	.	.	1
Green-cheeked Amazon	2	.	.	.	.	2
Eclectus Parrot	.	.	.	.	.	1
Indian Ring-neck Parakeet	1	.	.	.	.	1
Red-vented Bulbul	.	.	31	.	.	56
Mockingbird	1	5	2	.	.	13
Chinese Thrush	.	.	.	1	.	1
Red-billed Leiothrix	.	.	.	.	.	1
Shama Thrush	.	.	.	1	.	36
Japanese Bush Warbler	.	.	.	.	.	4
'Elepaio	.	.	.	.	.	21
Common Mynah	624	383	26	214	3	2427
Japanese White-eye	13	199	23	46	12	561
'Amakihi	.	.	.	.	.	34
'Apapane	.	.	.	.	.	11
Ricebird	11	66	54	51	3	369
Orange Weaver (Bishop)	3	.	.	.	.	3
Yellow Weaver (Napoleon)	1	.	.	.	.	1
House Sparrow	149	488	.	24	26	2538
Java Sparrow	.	24	.	.	.	24
Cardinal	12	49	17	26	4	204
Brazilian Cardinal	71	36	30	7	18	298
House Finch	21	43	1	2	1	156
Green Singing Finch	3	.	.	.	.	3
Saffron Finch	22	.	2	.	.	24
Orange-cheeked Waxbill	15	.	.	.	.	15
Red-eared Waxbill	17	2	.	.	.	19
Cordon Bleu	12	5	.	.	.	17
Lavender Finch	36	4	.	.	.	40
Pintailed Whydah	1	.	.	.	.	1
No. of Individual Birds:	1823	2253	309	913	3753	14,559
No. of Species:	23	22	20	18	21	52

Total hours on foot: 40.50  
Total miles on foot: 34.25

Total hours by car: 20.75  
Total miles by car: 126.00



Count taken in a circle, 15 miles in diameter, centered 2/5 mile ENE of Nuuanu Pali (21°22'N, 157°48'W) as in past years since 1954, to include Ulupau Head, Paiko Lagoon and Sand Island. Ocean, lagoons, ponds, swamp 20%; parks and residential areas 45%; valley forests 7%; ridge trails 28%.

Weather conditions: Overcast with occasional rain

Temperature: Around 70°F

Wind direction and velocity: NE, 0-10 m.p.h.

The following areas were covered in this year's count:

- 1 Aiea Trail
- 2a Moanalua Gardens, Nuuanu Valley
- 2b Salt Lake
- 2c Sand Island, Keehi Lagoon (offshore and bay through telescope)
- 3 Tantalus, Makiki Valley, Punchbowl
- 4a Manoa Valley, Waahila Ridge
- 4b Downtown (Ala Moana Park to Waikiki)
- 5 Kapiolani Park, Ewa slope of Diamond Head
- 6 Diamond Head Crater to Paiko Lagoon
- 7 Bellows Field, Kaelepulu Pond
- 8 Kawainui Swamp, Quarry Road and Kailua dump
- 9 Kaneohe Marine Corps Air Station, including Moku Manu and Mokolea Rock through telescope

Twenty-nine observers in 14 parties:

Butch Ball	Donald Huddleston	Francis Schaubert
William Brown	Doris Huddleston	Mrs. Francis Schaubert
Laura Casey	Unoyo Kojima	Eddie Smith
Susan Coiner	Eugene Kridler	Charles van Riper, III
Michael Conant	Brian McKnight	Jack L. Throp
Patrick Conant	Steven Montgomery	Charlotte Walker
William Cooke	Mae Mull	Dann Walker
Neil Dickenson	William Mull	Ronald Walker
Wayne Gagne	David Olsen	Julia Yoshida
Lawrence Hirai	William W. Prange, Jr.	

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# HONOLULU CHRISTMAS COUNTS

1963 - 1972

	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Arctic Loon	.	.	.	.	.	.	.	.	.	1
Black-footed Albatross	1	5	7	7	4	.	.	.	.	.
Wedge-tailed Shearwater	.	.	.	.	.	.	.	2	.	.
Red-tailed Tropicbird	.	.	.	.	2	.	.	.	.	.
White-tailed Tropicbird	.	.	.	3	.	.	.	.	1	.
Blue-faced Booby	.	.	5	1	.	2	13	2	3	.
Brown Booby	60	51	68	46	51	132	60	20	73	33
Red-footed Booby	739	580	240	430	1750	1700	2380	1438	1850	1615
Great Frigatebird	219	408	117	164	952	270	377	333	1156	984
Cattle Egret	.	.	15	.	34	87	151	158	1127	1208
Black-crowned Night Heron	15	51	31	19	18	23	49	9	38	29
Canada Goose	.	.	.	.	.	.	1	.	.	.
Hawaiian Duck (Koloa)	.	.	.	.	.	5	15	11	3	2
Pintail	25	.	38	29	77	.	54	111	18	71
American Widgeon	.	.	.	.	4	.	.	.	.	5
Shoveler	195	62	3	30	13	15	18	7	8	89
Ring-necked Duck	.	.	.	1	.	.	.	.	.	.
Lesser Scaup	.	.	.	1	.	.	3	2	12	2
Scaup (sp?)	.	2	2	.	1	7	2	.	.	.



## Honolulu Christmas Counts, 1963-1972 - Continued

	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Bufflehead	.	.	.	1	.	.	.	.	.	.
Duck (sp?)	.	.	.	.	.	.	10	.	.	.
Ring-necked Pheasant	.	.	1	.	.	.	.	.	.	.
Hawaiian Gallinule	6	14	8	5	1	7	2	6	5	6
Hawaiian Coot	101	61	33	47	19	31	151	92	73	116
Semipalmated Plover	.	.	.	.	.	.	1	.	.	.
Pacific Golden Plover	314	225	591	590	1093	574	637	599	483	683
Ruddy Turnstone	65	97	226	93	347	215	160	125	60	139
Common Snipe (Wilson)	.	.	.	1	.	.	1	.	.	.
Wandering Tattler	15	18	39	11	26	18	23	23	20	18
Bar-tailed Godwit	.	.	.	.	1	.	.	.	.	.
Sanderling	62	150	85	132	35	43	39	35	83	33
Hawaiian Stilt	201	123	115	189	90	25	101	128	177	141
Pomarine Jaeger	23	12	6	31	37	5	.	24	8	10
Glaucous Gull	.	.	.	.	.	.	.	2	.	.
Glaucous-winged Gull	.	.	.	.	2	2	.	.	.	.
Herring Gull	.	.	.	.	.	1	.	.	.	.
Ring-billed Gull	1	.	.	2	.	.	.	.	4	.
Laughing Gull	.	.	.	1	.	.	.	.	.	.
Unidentified Gull	.	.	.	.	.	1	.	.	.	.
Sooty Tern	5000	1600	4500+	.	6000	.	2	.	200	.
Brown Noddy (Common)	1	1	2	.	.	6	26	.	.	56
Black Noddy (Hawaiian)	.	2	.	.	27	5	.	1	.	.
White Tern (Fairy)	.	.	.	.	.	.	.	1	.	.
Spotted Dove	40	259	245	477	506	636	678	534	619	627
Barred Dove	157	1371	1028	1802	2184	1207	1694	1298	1275	1809
Short-eared Owl	.	1	2	2	3	.	.	.	.	.
Salmon-crested Cockatoo	.	.	.	.	.	.	.	.	.	1
Green-cheeked Amazon	.	.	.	.	.	.	.	.	4	2
Eclectus Parrot	.	.	.	.	.	.	.	.	.	1
Indian Ring-neck Parakeet	.	.	.	.	.	.	.	.	.	1
Shell Parakeet	.	.	.	.	.	.	.	3	.	.
Skyline	1	.	.	.	.	.	.	.	.	.
Red-whiskered Bulbul	.	.	.	.	2	7	.	.	4	.
Red-vented Bulbul	.	.	.	.	.	9	7	7	26	56
Mockingbird	5	11	22	7	9	12	4	2	7	13
Chinese Thrush	1	.	2	.	1	.	3	.	.	1
Red-billed Leiothrix	81	91	98	98	130	18	.	.	1	1
Shama Thrush	11	7	5	12	22	18	7	9	55	36
Japanese Bush Warbler	.	.	.	.	.	.	.	.	8	4
'Elepaio	42	27	24	39	36	20	22	4	27	21
Common Mynah	177	2871	2449	5825	6447	4265	4267	2981	2659	2427
Indian Hill Mynah	.	.	.	2	7	2	1	.	.	.
Japanese White-eye	107	298	222	235	260	300	227	287	487	561
'Amakihi	41	35	43	29	46	40	44	22	98	34
Hawaiian Creeper (Oahu)	.	.	.	.	.	2	.	.	.	.
'Apapane	26	57	32	42	26	19	17	9	59	11
Ricebird	49	289	333	551	647	196	238	451	438	369
Orange Weaver (Bishop)	.	.	.	3	2	.	9	6	4	3
Yellow Weaver (Napoleon)	.	.	.	1	.	.	2	1	.	1
Weaver (Orange or Yellow)	.	.	1	.	.	2	.	.	.	.
House Sparrow	71	1089	670	1111	1128	592	1294	1222	1459	2538
Java Sparrow	.	.	.	.	.	.	4	11	4	24
Cardinal	53	59	100	96	79	128	94	74	152	204
Brazilian Cardinal	12	85	210	246	274	122	158	202	186	298
House Finch	46	127	107	89	152	140	110	107	187	156



## Honolulu Christmas Counts, 1963-1972 - Continued

	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Strawberry Finch	.	.	.	4	.	.	.	.	.	.
Diamond Firetail Finch	.	.	.	1	.	.	.	.	.	.
Gray Singing Finch	.	.	5	22	37	18	6	9	3	.
Green Singing Finch	.	.	17	6	2	2	1	5	4	3
Saffron Finch	.	.	.	.	1	1	3	13	5	24
Orange-cheeked Waxbill	.	.	30	6	23	32	24	27	14	15
Red-eared Waxbill (Common)	.	.	6	2	7	29	12	13	13	19
Cordon Bleu	.	.	3	7	4	2	4	6	3	17
Blue-headed Cordon Bleu	.	.	.	.	.	.	12	8	.	.
African Firefinch	.	.	30	6	5	8	4	2	.	.
Lavender Finch	.	.	4	2	17	23	6	7	14	40
Pintailed Whydah	.	.	.	.	.	.	7	5	1	1
Senegal Combassou	.	.	.	.	.	.	1	.	.	.
No. of Individual Birds:	7963	10,139	11,820	12,557	22,641	11,024	13,236	10,454	13,218	14,559
No. of Species:	35	34	46	51	51	49*	53#	51	50	52

\*Unidentified gull excluded.

#Unidentified scaup and duck excluded.

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Notes on Unusual Records - Continued from page 77

of the water to breath and look around. William Mull returned to the lake the following day and four days later, but did not find the bird again on either occasion.

Salmon-crested Cockatoo (Kakatoe moluccensis) and Eclectus Parrot (Lorius roratus): First records for Christmas Count. Observed in the Paradise Park area of Manoa Valley by Butch Ball and Michael Conant. Identified by Ball, who works at Paradise Park and is familiar with the various caged parrots and other birds in the Park. These birds doubtless are either escapees from the Park or escapees from elsewhere on the island who were attracted to the Park by its caged parrot population. The potential viability of escaped parrots, even as breeding populations, in the Hawaiian environment makes such records of potential importance.

Indian Ring-neck Parakeet (Psittacula krameri manillensis): First record for Christmas Count. Observed by Jack Throp, Director of the Honolulu Zoo and an expert on exotic birds, in the Kapiolani Park area. Two of these birds have been observed recently in the area in company with the growing flock of green-cheeked amazons there--first recorded on a Christmas Count last year and now numbering fourteen or more, although only two were sighted on this year's Count.

Red-vented Bulbul (Pycnonotus cafer) and Saffron Finch (Sicalis flaveola): High counts. The red-vented bulbul count of 56 is more than double the previous Christmas Count high for this exotic-escape species (i.e., 26, last year). The saffron finch count of 24 is almost double the previous Christmas Count high for this exotic-escape species (i.e., 13, in 1970); also, two of this year's birds were found on the windward side of Oahu, which indicates an extension of range that is new. These indicated significant population (and range) increases for the two species are in accord with reported sightings and counts throughout the past year. Clearly, these are established breeding populations that are increasingly successful in Oahu's environment.

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Aiea Loop Trail:

Suddenly the car stopped, and five of us had to walk up the last few blocks to the Aiea Loop Trail. Shama thrush, cardinal, white-eye, mynah, and spotted dove were very active in the residential area. They were busily calling and flying among the trees.

Thick fog and rain did not bother the count too much. In fact 1972 count with 14 species is one of the better years. Only 1963 with 15 species did better. 1972 tied with 14 species. The lowest count was in 1967 with 8 species and next in 1969 with 9 species. Also, the fog softened the harshness from the ugly utility poles and wires.

Barred doves were everywhere. Since inclement weather kept the dog walkers away, the



birds were at home. They were walking all over the lower picnic area. I felt thankful for the nasty weather, which enabled the birds to feed peacefully. I was calling out, "Barred dove, spotted dove, Brazilian cardinal, plover, wait? yes! a plover!" I felt the tingling wonderful feeling. Only the mixture of peaceful beauty and gratitude can offer such feelings. I was thankful that Hawaii was still good enough for the plover to come back. I was just as excited as I was in 1969, when it was first reported from Aiea.

The next most numerous was the ubiquitous white-eye. Though the light was poor for bird counting, the presence of the white-eyes was obvious by the calls and the gregarious flights among the trees.

The Waikiki side of the Loop Trail was full of ricebirds busily feeding on the grass seeds. Of the 23 ricebirds counted, 14 were from this area. Also, leiiothrix was once plentiful in this area, but today none was seen nor heard. The highest count was 75 in 1964, then a gradual decline the next few years, then suddenly only 4 in 1968. So, for the last few years I especially looked for the leiiothrix, but sadly must report none. What happened? If you know anything about the causes of the decline and disappearance, please share your experiences with the other members.

Another bird of interest is the tit. The last time it was reported was in 1962. Man with his crowded recreational facilities has destroyed the habitat of this bird by cutting down the trees and clearing the underbrush, so we may never see the tit again in the picnic area. But the bush warbler may be taking its place. Last year was the first time it was reported from Aiea, and again this year there were three of them calling. This bird is spreading. Why? Is it good or bad? What is happening to the native ecosystem?

While the shama thrush was melodiously singing from the hau thicket at the heiau, a Brazilian cardinal was quietly adding to the natural symphony from the nearby koa tree. At a distance the N.A. cardinal was vigorously singing out its presence, while high in the Norfolk pine the house finch was singing and flying around as though to clear the fog. The calls of the spotted dove and the mynah added variation to the natural symphony.

Though no creeper nor pueo, 'elepaio was more numerous than that of the last three years. They were more curious along the Aiea Ridge than along the Loop Trail. Few of them came flitting down the branches to take a good look at the squeakers. It is a delightful experience to become a part of the great natural system where the birds come looking at us without any sign of fear.

'Amakihi and 'apapane were not as plentiful as that of last year, but somehow I felt that if the eucalyptus, lehua, and paperbark trees were in full bloom, may be the count can go into the hundreds as 489 'apapane were reported in 1956 and 225 in 1957. Is this only a dream? I hope not. I pray that we have not disrupted the natural habitat to such an extent that the native birds will never have a chance to make a comeback.

Kojima

#### Moanalua Gardens, Nuuanu Valley, Salt Lake, Sand Island, Keehi Lagoon:

1. Moanalua Gardens: The bulbuls were scattered throughout the park area, and moving from treetop to treetop during the hour we walked the area (6:55-7:50 a.m.). Some were flycatching at the southeast end of the park.

2. Nuuanu Valley: An hour and a half (12:35-2:00 p.m.) in the areas of the reservoirs and the beginning of Judd Trail netted meager results. Again, no gallinules in the ponds--only 8 coots and a female mallard that was undoubtedly an escaped domestic (not counted). Also, no native forest birds in the wooded areas along the road in the Judd Trail area. No wind, and perfect conditions--so we had to assume that the 'elepaio and 'amakihi just weren't there while we were.

3. Salt Lake: The hour and three-quarters we spent at the lake in the morning (10:40 a.m.-12:25 p.m.) was amply rewarded with scaups, pintails, shovelers, widgeons, coots and stilts concentrated around the mauka end--but all was eclipsed by the sight of that Arctic loon, who cooperated completely by staying on the surface and moving very little most of the time we watched and studied it. Our return in the afternoon (3:45-4:30 p.m.) was rewarded by the sight of the loon in a different configuration: rapidly swimming and darting back and forth just under the water, leaving its zigzag wake of ripples behind, so that we could easily follow its movements between brief glimpses of its streamlined head and neck when it surfaced every minute or so.



4. Keehi Lagoon and Sand Island: Two hours (7:58-10:05 a.m.) searching the shore areas and scoping the offshore waters and flats netted nothing unusual. The stilts and other shorebirds were plying the flats at a middling-low tide, the brown boobies were riding the offshore buoys and the pomarine jaegers were swooping low over the sewer out-fall--as is normal and expectable for the area at that time of year. Search as we would, no wayward Mainland gulls appeared on the flats or over the water.

William P. Mull

#### Waahila Ridge, Manoa Valley:

The weather on Waahila Ridge was good for sightings, although the low clouds made me depend more on hearing the songs. The wind was very light or absent, so I was able to hear birds a long way off. I listened for 'apapane and hoped to hear at least one, but I had no such luck. The 'ohi'a was not in bloom which may have something to do with it.

I asked my brother Mike and Butch Ball, who lives near Paradise Park, to look for escaped cage birds near the park. Their efforts were rewarded by finding a salmon-crested cockatoo, a dwarf macaw /species unknown; not listed in the count/ and an eclectus parrot.

Patrick Conant

#### Kapiolani Park, Ewa slope of Diamond Head:

There is a significant number of finches on Diamond Head; very difficult to count, but I have a distinct impression that there are many more. An absence was not seeing gray singing finches, once common, and fire finches. There are about 60 Java ricebirds /Java sparrow/, though I only saw a few on count day. There are 14 green-cheeked amazons; only saw two.

I didn't count nearly as many mynahs this year. These are resident roosting birds in the Zoo, so I would have expected not much change in the count unless my timing was off (counted too late) or that there is some actual difference in the population.

Mrs. Erdman said that there is a small number of pintailed whydahs (about 15), but I only saw one.

The finches on Diamond Head are covering a larger area than in previous years. There is a gradual spreading of the small species, orange-cheeked, red-eared, lavender and cordon bleu.

Jack L. Throp

#### Diamond Head Crater to Paiko Lagoon:

Same itinerary as in previous years with the following exceptions:

Diamond Head Crater was counted separately by Eddie Smith. More time was spent in the crater and more area covered than in the past year.

The hike behind Aina Haina was canceled owing to weather and low counts in previous years.

Paiko Lagoon was counted separately by Bill Cooke and Susan Coiner. Light conditions were poor and birds were widely scattered on reef owing to an unusually low tide.

William W. Prange, Jr.

#### Diamond Head Crater:

Of the 23 Java sparrows, four were fledglings and/or juveniles. (Wing quivering and parent feeding + juvenile plumage)

Of the 37 H.A. cardinals observed, 19 were males. Primary songs of the cardinal was very common and birds seem to be paired off and on territory.

The body of water heretofore inhabited by the Hawaiian duck is now completely drained and in its place a new pumping station.

Primary song of mockingbird heard sporadically.

Call notes and chattering of lavender finches and cordon bleus would indicate more birds than observed.

Terrain very dry but vegetation appears in good shape.

Observed 13 mongooses

Would have to state that the total number given for white-eyes is very conservative.

Eddie Smith



Bellows Field, Kaelepulu Pond, Kawainui Swamp, Kaneohe Marine Corps Air Station,

Moku Manu:

1. Inclement weather periodically hampered counting--rain, wind
2. Three hundred-plus frigates noted flying in from sea over KMCAS town at 1:25 p.m., circling over ponds. Included in the total recorded over Moku Manu.
3. Common noddies noted following fishing boat coming in towards Moku Manu.
4. Count of 850 egrets made at KMCAS roost is probably conservative--failing light, poor vantage point, more coming into roost as darkness fell.
5. Saffron finch, bulbuls seen at Bellows, scaup at Kaelepulu.

Ronald L. Walker

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Letter to AMERICAN BIRDS, National Audubon Society (NAS) by William P. Mull,  
15 January 1973: Our Endangered Endemic Subspecies Names

...We appreciate your explicit recognition, in your instructions for this count, of our special situation here--our bird populations and their environment are indeed different from the pattern on the Mainland. But we ask for more.

This difference is painfully apparent to us each time we compile our Christmas Count results for the NAS. The prospect of having our endangered endemic subspecies lumped together with their non-endangered cousins on the Mainland is a traumatic experience. We feel that these special birds are being deprived of their identity--an identity that must be recognized if they are to be saved from extinction. We ask that you consider Hawaii enough of a special situation to warrant subspecific nomenclature for its birds in your Christmas Count listing.

Three basic factors make our situation unique and worthy of unusual treatment:

(1) extreme geographical isolation, (2) extremely high endemism within native ecosystems and (3) extreme endangerment of the native biota. No other section of the National count area has a more unique and endangered bird population than that of Hawaii. Their singular evolutionary history and their unparalleled subjection to artificially introduced foreign species make the study and understanding (not to mention the conservation) of our native bird populations unrealistic and impossible at anything but the subspecific level.

If the purpose of Christmas counts is to help determine the status and trends of native bird populations throughout the National count area, with a view to recommending constructive actions in the interest of man and his biological environment, then the genetic diversity and ecological integrity of Hawaii's bird subspecies is relevant and important--and worthy of independent recognition. From this compiler's perspective, anything short of this recognition tends to reduce the Christmas census to a superficial exercise for the amusement of the participants.

Your poll of compilers last year on consistency and techniques of count coverage and reporting was well directed. We aim to improve and expand our coverage in these islands, so that our reported results will be more accurate, more comprehensive and, above all, more meaningful as a basis for effective conservation action. In planning and considering how to do this, we've concluded that improved procedures and broadened coverage will net us little in the way of conservation leverage unless our data are broken down to the subspecific level on all islands. In this respect, we find the U.S. Department of Interior "Red Book" (Rare and Endangered Fish and Wildlife of the U.S.) a practical and realistic model for the kind and level of data that are useful to us.

As is apparent from the fact that both the "Red Book" and American Birds give space to Hawaii's birds, our birds are of National importance. In fact, they are peculiarly important in terms of the "Red Book" determination that Hawaii has more endangered species and subspecies of birds than the rest of the Nation combined--and several times the number of extinct ones.

Our native birds are a National asset and a National resource, and we need National help to conserve and perpetuate them by giving special consideration and priority to their special status.

Four of the birds on our Honolulu Count list this year are endangered. One has specific status, which it will retain on the NAS count list as the Hawaiian Duck or Koloa (Anas wyvilliana). The three others have subspecific status as the Hawaiian Gallinule (Gallinula chloropus sandvicensis), Hawaiian Coot (Fulica americana alai) and



Hawaiian Stilt (Himantopus himantopus knudseni) and will lose their identity on the NAS list if precedent holds.

We ask that this year you retain these last three on your list under their sub-specific common names, as we have given them in our report to you. We would like to set this precedent now, so that it is applicable when we expand our coverage on the other islands and have to cope realistically with the product of adaptive radiation and speciation in our remarkable endemic family of honeycreepers (Drepanididae). Our Kauai Creeper (Loxops maculata bairdi) and Kauai 'Akepa (Loxops coccinea caeruleirostris) probably are, for all practical purposes, as isolated from their conspecific counterparts on Hawaii--Hawaii Creeper (L. m. mana) and Hawaii 'Akepa (L. c. coccinea)--as are the Hawaiian Gallinule, Hawaiian Coot and Hawaiian Stilt from their Mainland counterparts the (American) Common Gallinule (G. c. cachinnans), American Coot (F. a. americana) and Black-necked Stilt (H. h. mexicanus).

Another compiler and another group, from our Society, are facing this problem right now, in the final stages of pulling together and reporting to you the results of a highly competent and highly productive Christmas count they conducted on the Island of Hawaii in some of the best endemic rain forest habitat in the State. I hope you will consider their results, and the prospect of annual coverage of that and similar areas on other islands in the State, along with this letter in pondering our request. We want, and are determined, to do something better in both censusing and conserving Hawaii's unique avifauna. NAS can help a lot, just by favoring this small request. In fact, the same rationale and recognition might well be applied to some of the endangered Mainland bird subspecies also, with rewarding effect.

It is often said that counting birds won't save them--but we all know that count results can help. We think they can help a lot more, with a little more work and a little closer view of what we're really after. ...

\*\*\*\*\*

What is in a name? Which is preferable and why? If you know anything about the following bird names, please share your information with other members by writing to Kojima, 725-A 8th Ave, Honolulu, HI 96816: Laysan honeycreeper-Laysan honeyeater, Greater 'amakihi-Green solitaire, Grosbeak finch-Kona koafinch, Christmas shearwater-Christmas Island shearwater, Black noddy-Hawaiian noddy, Brown noddy-Common noddy, and the difference between noddy and tern.

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#### For Your Information

The letter s is not a part of the Hawaiian alphabet. It is not used as a plural marker in Hawaiian. The plural form is distinguished in other ways.

'U'ina, the hamzah, is a guttural break in pronunciation between two vowels...and it is represented by an inverted comma. ...This guttural is properly a consonant, and forms an essential part of the words in which it is found. Its presence or absence in Hawaiian words marks distinct terms /'Ou = Bulwer Petrel, 'O'u = Honeycreeper/. ...For clarity...the 'u'ina should be indicated when writing...

Introduction to the Hawaiian Language by Judd, Pukui, and Stokes

Editorial policy: No possessive form in the vernacular names of birds--Bulwer petrel not Bulwer's petrel.

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ALOHA to new members:

Junior: Polly Roth, 104 Susan Drive, Trenton, New Jersey 08638  
 Regular: Nicki Clancey, 152 Pauahilani Way, Kailua, Oahu 96734  
 Sadie J. Doyle, Bishop Museum Press, PO Box 6037, Honolulu, HI 96818  
 Herbert Kikukawa, 2133 Makiki Heights Drive, Honolulu, HI 96822  
 Randall M. Kuba, 230 Kaelepulu Drive, Kailua, Oahu 96734  
 Mrs. Helen Morris, 6532 Judy Lee Place, San Diego, Calif. 92115  
 RAdm. John G. Moyer, 4311 Kahala Ave, Honolulu, HI 96816  
 Grace Williams, 1049 Ilima Drive, Honolulu, HI 96817

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HAWAII'S BIRDS, a field guide, is available for \$2.00. Send in your orders to: Book Order Committee, Hawaii Audubon Society, PO Box 5032, Honolulu, Hawaii 96814.



VOLCANO, HAWAII CHRISTMAS COUNT  
30 December 1972

	A R E A S								Highest- Prior Count*
	1	2	3	4	5	6	7	8	TOTAL
White-tailed Tropicbird	.	2	.	.	.	.	.	.	2
Hawaiian Goose (Nene)	.	.	4	2	.	.	.	.	6
Hawaiian Hawk ('Io)	.	.	.	.	.	.	.	1	1
Chukar Partridge	.	.	23	.	.	.	.	.	23
Ring-necked Pheasant	1	.	.	.	.	.	.	.	1
Blue Pheasant	.	.	1	7	1	.	.	.	9
Pacific Golden Plover	5	6	.	55	.	2	.	.	68
Spotted Dove	.	.	.	.	.	2	.	.	2
Barred Dove	.	.	.	11	.	.	.	.	11
Skylark	.	6	1	9	.	.	.	.	16
Red-billed Leiothrix	4	.	.	.	.	4	6	2	16
Hawaii Thrush ('Oma'o)	.	.	.	5	.	9	200	168	382
Hawaii 'Elepaio	5	.	.	8	2	6	30	24	75
Common Mynah	.	8	.	11	.	.	.	.	19
Japanese White-eye	53	.	10	13	9	4	30	50	169
Hawaii 'Amakihi	1	.	45	7	43	.	20	12	128
Hawaii Creeper	.	.	.	.	.	.	.	1	1
Hawaii 'Akepa	.	.	.	.	.	.	.	13	13
'Akiapola'au	.	.	.	.	.	.	1	29	30
'Apapane	107	.	71	63	78	50	2000+	900+	3269+
'I'iwi	6	.	3	10	26	4	90	107	246
Ricebird	.	.	.	72	4	.	.	.	76
House Sparrow	.	2	.	.	.	.	.	.	2
Cardinal	13	.	.	5	1	.	.	.	19
House Finch	6	.	.	44	.	.	.	.	50
No. of Individual Birds:	201	24	158	322	164	81	2377+	1307	4634+
No. of Species:	10	5	8	15	8	8	8	11	25

\*Prior counts taken 1954-6, center of count circle  $\frac{1}{4}$  mile S of Hawaii Volcanoes National Park Headquarters. Number is greatest for respective species of these three counts.

#Lumped with Ring-necked pheasant in 1954-6 counts.

Total hours on foot: 38 $\frac{1}{2}$

Total hours by car: 18

Total miles on foot: 35

Total miles by car: 134

Count taken in a circle, 15 miles in diameter, centered on the summit of Kulani Cone (19°31'N, 155°18'W), to include Mauna Loa Trail to 8000' elevation, Puu Makaala, north half of Kilauea Crater and a portion of the 1942 lava flow. Virgin koa forest 15%, virgin 'ohi'a rain forest 30%, exotic tree plantations 5%, pastureland 20%, barren lava fields 10%, upland and alpine scrub 10%, koa savannah 10%. NEW COUNT.

Weather conditions: Clear to overcast, misting

Temperature: 37 - 75°F

Wind direction and velocity: SW, 0-5 m.p.h.

The following areas were covered:

- 1 Bird Park (Kipuka Puauulu) in Hawaii Volcanoes National Park (Ungers, Peterson)
- 2 Rim of Kilauea Crater (Ungers, Peterson)
- 3 Mauna Loa Trail 6600-8000' elevation (Gagne, Stevenson)
- 4 Keauhou Ranch and Volcano Golf Course (Smith, MacMillan, Jim Jacobi)
- 5 Mauna Loa Strip Road, 4000-6600' elevation (Gagne, Stevenson)
- 6 Wright Road and Upper Olaa Forest Reserve (Gagne, Stevenson)
- 7 Kulani Cone to Puu Makaala (Bankos, Hart)
- 8 Kilauea Forest Reserve (van Riper, Herkes, Jean Jacobi)

Fourteen observers in 5 parties: Paul Banko, Win Banko, Wayne Gagne, Al Hart, Janetta Herkes, Jean Jacobi, Jim Jacobi, Richard MacMillan, Donald Peterson, Eddie Smith, John Stevenson, Carolyn Unger, John Unger, Charles van Riper, III



## HIGHLIGHTS OF THE 1972 VOLCANO, HAWAII CHRISTMAS COUNT

By Wayne C. Gagne, Compiler

The Hawaii Audubon Society (HAS) conducted a new census of birds in the Kulani area of the Island of Hawaii on December 30, 1972, as part of the National Audubon Society's annual nationwide census at Christmas time. The weather was considered ideal on Count Day.

Fourteen members and guests, in 5 parties, covered selected census areas within a 15-mile diameter circle centered on Kulani Cone (19°31'N, 155°18'W) and bounded by the Mauna Loa Trail to 8000' elevation, Puu Makaala, the northern half of Kilauea Crater and a portion of the 1942 lava flow, with an elevational range of 2800-8400'.

The teams identified 25 species and counted about 4630 individual birds within the count area. These represent new highs for any Big Island count. Since this is a new count, these overall figures, and the breakdown figures for the occurrence and populations of individual species included can only be roughly compared with three Christmas counts of 1954-6 with an "epicenter"  $\frac{1}{4}$  mile south of the Hawaii Volcanoes National Park Headquarters, but not conducted since. The count center was moved to the summit of Kulani Cone so as to include what is considered certainly the finest remaining endemic forest bird habitat on the Island of Hawaii, rivalled only by Kipahulu Valley on Maui and the Alaka'i Swamp area on Kauai, and also to get a better altitudinal range and more diversity of habitat types. This adjustment was rewarded by sightings of 4 species on the U.S. List of Endangered Native Fish and Wildlife (nene, 'akepa, 'akiapola'au and 'io) and 4 species which are proposed candidates for the "Blue List of AMERICAN BIRDS". The latter are the Big Island subspecies of the 'oma'o, 'elepaio, 'amakihi and creeper. The creeper, 'akepa and 'akiapola'au almost certainly would not have made the count if the old "epicenter" was used. Significant also in this respect was the sighting of these 3 species almost exclusively in the magnificent, virgin koa forest of Kilauea Forest Reserve, which might be considered an endangered Hawaiian ecosystem in its own right, and an area tentatively slated to be logged in the next couple of years. The exception was a single male 'akiapola'au sighted by the Bankos and Al Hart near Puu Makaala. Even ignoring the incredible diversity and abundance of native forest birds, this koa ecosystem has all the requisite qualities of a State Natural Area Reserve, but unfortunately is the private property of the Bishop Estate.

The 'akepa and nene have never appeared in State Christmas Counts previously and so are also new to the national record. The new count circle is also known to include areas where sightings of 2 additional endangered species, 'o'u and Hawaiian dark-rumped petrel, have been recently sighted. So there was the prospect of sighting at least 6 endangered species, and 4 were actually sighted.

The top 4 species in populations recorded were the 'apapane, 'oma'o, 'i'iwi, and the Japanese white-eye; the first 3 being endemic forest birds. Almost half of the 25 (12) species recorded were introduced unnaturally by man, and about 8 of these are mostly denizens of man disturbed habitat.

In addition to the 'akepa and nene, it appears that the chukar partridge, an introduced game bird, can be added to the 32 year record of Christmas counts by the HAS. Counts for the 'apapane and 'i'iwi are the highest of any ever conducted in the State and those for the Pacific golden plover, barred dove, 'oma'o, Japanese white-eye, 'akiapola'au and ricebird are the highest of any count ever conducted on the Big Island. Counts for many of the introduced species appear significantly lower than prior Big Island counts but this is probably due to the containment of more man disturbed habitat in those counts. However, our lower counts for the creeper and leiothrix may be significant. The relative numbers for the tropicbird, 'io, plover, 'elepaio, 'amakihi, and 'apapane appear stable in comparison.

Seen during the count period but not on count day were a greater frigatebird by Eddie Smith on Keauhou Ranch, a pueo by Wayne Gagne on the Mauna Loa Strip Road, and several coveys of California quail by John Stevenson on the Volcano Golf Course. A special effort, without success, was made to find the pueo during an evening drive up the Strip Road, as one was seen the evening before the count. A juvenile Hawaiian dark-rumped petrel had been seen by the Bankos within the count circle, at Kilauea Crater, just prior to the count period.



NOTES ON UNUSUAL RECORDS

Hawaiian Goose (nene): First record for Christmas count. The species is on the U.S. List of Endangered Fish and Wildlife. The nene is making a slow comeback from its approach to the brink of extinction in the early 1950's, through the combined efforts of a loose consortium of international, federal, state and private individuals. Three pairs were sighted, 2 on the Mauna Loa Trail in Hawaii Volcanoes National Park at 6700' and 7200' in the alpine scrub at 8 AM (WG & JS) and the others by Smith's group ("The Mauna Loa Mothers") on the Keauhou Ranch in upland native scrub. Since this is their nesting season, these could be considered opportune sightings, since these birds are somewhat quiescent at this time.

Hawaiian Hawk ('io): On U.S. List of Endangered Native Fish and Wildlife. One individual, dark phase, was seen flying over the Kilauea Forest Reserve by van Riper, Herkes and Jean Jacobi. The species has been regularly sighted in this area and several pairs are apparent residents.

Chukar Partridge: First record for a Christmas count in the State. Several flocks were sighted, 23 total, by Gagne and Stevenson only between 6600'-8000' on the Mauna Loa Trail. Several were also heard giving their rapid "chuka-chka" song. This is a game bird that was first introduced in about 1923 and is now established on several islands.

Blue Pheasant: This species (or subspecies) was lumped with the ring-necked pheasant on prior Big Island Christmas Counts. This is another introduced game bird. Most of the male pheasants seen on the count appear to have the characteristics of the blue pheasant, although it is known to hybridize extensively with the ring-necked pheasant. It was seen on pasture land and on koa savannah in three areas.

Pacific Golden Plover (kolea): Highest count for a Big Island Christmas Count. Most were seen on pasture land and on the Volcano Golf Course in 4 areas by 3 parties.

Barred Dove: Highest count for a Big Island Christmas Count. This introduced species was still on the increase and spreading in the Big Island when the 3 prior counts were made during the 1950's. It now may have stabilized. These were seen on Keauhou Ranch pasture land.

Red-billed Leiothrix: Low count. This species was usually seen in the 1950's in the low hundreds. Since more habitat suitable to leiothrix was included in this count than prior counts, and since it appears to have declined on Oahu judging from Christmas Counts there over the years, our low count may indicate that a decline has also taken place on the Big Island, precipitated by unknown causes.

Hawaii Thrush ('oma'o): High count. A Big Island subspecies proposed to be placed on a "Blue List of AMERICAN BIRDS". Sightings were made by 4 parties mostly in undisturbed koa and 'ohi'a rain forest. It was easily identified by its characteristic song alone and is difficult to confuse with any other forest bird. The surprise here was that it outnumbered both the 'amakihi and 'i'iwi.

Japanese White-eye: High count. This species was sighted by 6 parties in 7 areas ranging from 3000-8000' elevation in alpine scrub, koa and 'ohi'a forest. This is the most common introduced forest bird. Its rise in numbers may correlate with an apparent decline in the numbers of leiothrix and creeper as it is an aggressive, ubiquitous species.

Hawaii Creeper: Low count. A Big Island subspecies proposed to be placed on a "Blue List of AMERICAN BIRDS". van Riper was able to study an individual at close range in flat light for over 15 minutes in the Kilauea Forest Reserve as it methodically worked over the main branches of a kolea tree (*Myrsine lessertiana*). This may be a declining subspecies. Previous Christmas Counts, centered near the National Park Headquarters, with less good forest habitat had as many as 8 sightings and this may also indicate a decline in the creeper's range. However, it must be emphasized that the creeper is exceedingly difficult to differentiate from the far more abundant and widespread 'amakihi unless close scrutiny is possible.

Hawaii 'Akepa: First record for Christmas Count; on U.S. List of Endangered Native Fish and Wildlife. All 13 were sighted in the Kilauea Forest Reserve by van Riper, Herkes, and Jean Jacobi. Males and females were sighted; the former were easily identified by their brilliant orange plumage, as they coursed through the tree tops of koa and 'ohi'a. van Riper is an experienced observer of this species. Others had seen the 'akepa in this forest on many prior occasions, one of its few "strongholds" on the Big Island.

'Akiapola'au: High count; on U.S. List of Endangered Native Fish and Wildlife. All



but one of 30 individuals were seen in the Kilauea Forest Reserve by van Riper's party. Both adults and immatures were sighted. This forest is also a "stronghold" for this species. van Riper is very familiar with this species. It can't be confused with any other forest bird once sighted. One male in bright yellow plumage was also seen at 3700' in the vicinity of Puu Makaala by a party of 3 observers (Win and Paul Banko, Al Hart). Win, who is an employee of the Office of Endangered Species, Bureau of Sport Fisheries and Wildlife, Dept. of the Interior and is working on the status of this and other native forest birds on the Big Island, considers this one of the most significant sightings of the whole count. This is because the bird was well below its present known range, 5000-6500' in the koa belt in this area. He has surveyed this area near Puu Makaala on several prior occasions without sighting it.

Hawaii 'Elepaio, Hawaii 'Amakihi: Big Island subspecies proposed to be placed on a "Blue List of AMERICAN BIRDS". The 'amakihi was the more ubiquitous of these two forest birds and was sighted at most stations between 8000' to 2400' by all parties except those on the rim of Kilauea Crater and in the Upper Olaa Forest Reserve. It seemed more partial to higher, drier native forest. The 'elepaio was sighted most frequently in the relatively undisturbed koa and 'ohi'a rain forests, although two were seen above 6000' on the Maunaloa Strip Road in a koa savannah.

Ricebird: Highest count for a Big Island Christmas Count. This is an introduced species which eats grass seed, hence the preponderance of individuals sighted on the Keauhou Ranch pastures.

'Apapane, 'I'iwi: Highest counts for a State Christmas Count. There are no surprises here. These two species were respectively the commonest and third commonest seen on the count. The high numbers are a reflection of the high percentage of suitable forest habitat in this count. The 'apapane was so numerous at some stations (Kilauea Forest Reserve, Puu Makaala) that its number could only be estimated. It is the most common native forest bird in the State. The numbers of 'i'iwi on Big Island remain strong in contrast to the situation on Oahu and Molokai where its populations appear in jeopardy.

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Letter from James R. Wolf, 1 January 1973

...A special treat in 1972 was a return visit to Hawaii in late June. The highlight was a three-day backpack in Haleakala. My hope was to search for the crested honeycreeper near Lake Wai Anapanapa, but the fog above Paliku turned me back. ...Still, it was a thrill to see the nene in the wild--also the short-eared owl. A few others on Maui were the black-necked stilt, leiothrix, creeper (?), 'apapane, 'i'iwi, and skylark.

The fairy tern was obligingly waiting for me at Ft. deRussy. I also tracked down a shama thrush along the Kapaa Old Quarry Road and a pair of 'elepaio on the Aiea Trail. ...

From John G. Hoyer, Kahala, Oahu, 20 December 1972

...I keep three feeders going in my side yard. Doves, cardinals, ricebirds, white-eyes, and very tiny house finches, escapees or releases from cages are the customers. ...

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#### FEBRUARY ACTIVITIES:

- 11 February - Field trip to study forest birds. Bring lunch, water, and if possible your car. Transportation cost (\$1.00) to be paid to the drivers. Meet at the State Library on Punchbowl Street at 8:00 a.m.  
Leader: Dr. William Wingfield, telephone 732-5884.
- 12 February - Board meeting at McCully Moiliili Library, 6:45 p.m. Members welcome.
- 19 February - General meeting at the Waikiki Aquarium Auditorium at 7:30 p.m.  
Speaker: Virginia Brooks, Conservation Council for Hawaii  
Topic: NA ALA HELE: The Prospects for a Statewide Trail System

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