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COMMON MYNA ON UPOLU: FIRST RECORD FOR THE WESTERN SAMOA ISLANDS

Ulf R. Beichle

Several Common Mynas (*Acridotheres tristis*, Fig. 1) were observed on the island of Upolu, Western Samoa, from 22 June to 9 August 1988. The first two birds were sighted near the Samoa Spare Parts Center in Apia, sitting on the pole of a power line. Further checks in the town area of Apia revealed several other birds. Mynas were observed at the following 11 sites: Congregational Christian Church; Prime Ministers Department; Roman Catholic Cathedral; Gold Star Building, Convent Road; Parliament House, Mulinuu; National Hospital, Motootua; Vaialele Street/Falealili Street; Mau Memorial, Vaimoso; LDS-Church Compound, Lepea; Vaitele, opposite brewery; and at Fagalii Village.

Common Mynas have not previously been recorded from any of the Western Samoan Islands. Jungle Mynas (*Acridotheres fuscus*, Fig. 2) however, have been present since 1972 or 1973, according to Klaus Stuenzner (pers. comm.), a Samoan citizen who caught one of these birds inside a warehouse. Watling (1978), Child (1979), and Pratt, Bruner and Berrett (1987) already reported *Acridotheres fuscus* on the island of Upolu. Dhondt (1976) gave an account of the Common Myna on Upolu, an error corrected by Child (1979), who noted that the myna present in Western Samoa was the Jungle Myna and not the Common Myna. Continuous field studies by the author (1977-1984) confirmed that the Common Myna did not occur in Western Samoa at that time. Robert L. Pyle kindly informed me of the observation by Robert E. Potter (1981) of a single Common Myna in American Samoa (Tutuila Island).

The distinctive characteristics of the two species are the yellow, bare skin behind the eye of the Common Myna in contrast to the nasal tuft of feathers of the Jungle Myna. Common Mynas can be easily overlooked as the yellow patch behind the brown eye could be confused with the bright whitish-orange eye of the Jungle Myna. The body of the Common Myna is brownish, while that of the Jungle Myna is blackish gray.

In eight of the sites mentioned two birds were observed, probably pairs; in one site two pairs were present, in another three birds, and in another only one bird.

Common Mynas were observed collecting food from garbage bins, among rocks on the Beach Road, and on lawns, like that in front of Apia Hospital. Nest building was

observed under the roofs of the Congregational Church, the Cathedral and the Gold Star Building.

Mixed flocks of Common and Jungle Mynas were observed on lawns. After sunrise, considerable numbers of Jungle Mynas that roost in trees outside Apia invaded the town area.

A total of 24 Common Mynas was counted. Repeated checks proved that this is a minimum figure. The birds were counted along transects. Double countings are unlikely, as the birds did not fly great distances and several pairs were observed simultaneously.

One bird of the pair at the Prime Minister's Department was limping because of a nylon thread around one leg. Another bird belonging to the pair at the Mau Memorial was limping for no obvious reason.

The increase of the Common Myna will be interesting to follow. Its numbers will likely rise as drastically as did those of the Jungle Myna in recent years. *Acridotheres fuscus* was first observed in 1972 or 1973. During my studies (1977-1984) I found the Jungle Myna concentrated in the town area, roosting in dense trees on the Beach Road,



Figure 1. Common Myna (*Acridotheres tristis*) in Apia.

Photo by U. R. Beichle



Figure 2. Jungle Myna (*Acridotheres fuscus*) in Apia.

Photo by U. R. Beichle

while a few occurred in urban areas and on plantations (especially in coconut plantations grazed by cattle). In 1988, large numbers of Jungle Mynas were seen all over Upolu. They did not occur on Savaii Island, except for one bird recorded on Salelologa (Reed 1980). Now flocks of 6 to 10 are present in the southeasterly part of Savaii.

The Common Myna will probably be "restricted to the proximity of human dwellings" (Watling 1982); in town areas or villages it might compete with the Jungle Myna. Apart from that, plantations with various food crops and lawns around houses might offer habitats where Common Mynas could compete with local Samoan bird species.

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Another Exotic Turtle Record for Hawaii

Jeffrey E. Lovich

Of the 22 established species of amphibians and reptiles reported from the Hawaiian Islands by McKeown (1978), 18 are known or suspected to have been introduced by man. The list of "exotic" species includes two Asian softshell turtles, *Trionyx sinensis* and *T. steindachneri* (McKeown and Webb 1982, Oliver and Shaw 1953, Webb 1980). I recently came across a specimen of the Chinese three-striped box turtle (*Cuora trifasciata*) in the National Museum of Natural History (USNM 80120) with locality data specifying "Hawaii: Oahu, Honolulu." The specimen was donated to the Smithsonian by the National Zoological Park and catalogued on 15 February 1930. The actual date of collection is not given but the animal was reportedly collected by "L.A. Whitney." The specimen appears to be a female and has a straight-line carapace length of 148 mm. The species is native to southern China, northern Vietnam, and Hainan Island (Iverson 1986). It should be noted that the genus *Cuora* has been confused with North American box turtles of the genus *Terrapene* (see McCoy and Richmond 1966). In fact, several specimens of *Terrapene* have recently been found near Hilo, Hawaii (Mull 1987). Although these two genera exhibit convergent morphologies, there are striking differences in pattern (Figs. 1 and 2).

When Chinese immigrants arrived in Hawaii in the 1850s they brought a number of exotic species with them (McKeown and Webb 1982). Established populations of two softshell turtles were noted by the early 1900s (Brock 1947, McKeown and Webb 1982, Webb 1980). Almost all importations occurred before World War II (Brock 1947, McKeown and Webb 1982) and most of these arrived in Honolulu (McKeown and Webb 1982). In view of the time and place of collection, and the sympatric distribution of *C. trifasciata*, *T. sinensis*, and *T. steindachneri* (Iverson 1986) it is very likely that the former species was also imported to



Figure 1. Photograph of an eastern box turtle (*Terrapene carolina carolina*) from Pennsylvania.

Photo by Jeff Lovich.

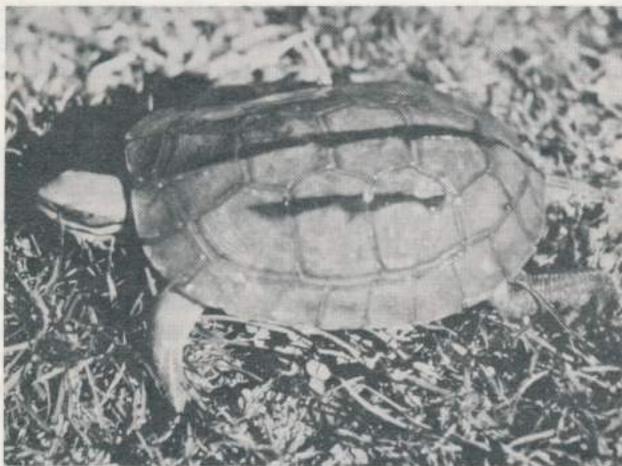


Figure 2. Photograph of a Chinese three-striped box turtle (*Cuora trifasciata*) of unknown provenance.

Photo by David Ross.

Hawaii at irregular intervals for food. In addition, the brightly colored flesh of *C. trifasciata* is prized by the Chinese as a putative aphrodisiac (Buskirk 1988). There is no evidence that a naturally reproducing population of *C. trifasciata* was ever established in Hawaii, but accidental or planned releases may have temporarily added this species to the state's herpetofauna.

ACKNOWLEDGEMENTS

An earlier version of this manuscript benefitted from critical reviews offered by Alan C. Ziegler and Allen Allison.

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The endangered 'Alala or Hawaiian Crow.

Photo by E. Brown

ERRATA -- 50TH ANNIVERSARY ISSUE

On page 71 of the November 1989 issue there is a photograph of the 'Alala or Hawaiian Crow. That photograph was taken by E. Brown, not Fern Duvall. Our apologies to the photographer.

We neglected to mention that the photograph (page 73) of Charter member Charles Matthew Dunn at the 40th anniversary banquet also depicts his wife who attended the banquet with him.



Mr. and Mrs. Charles M. Dunn at the Hawaii Audubon Society 40th anniversary banquet.

NATIONAL AUDUBON PRESIDENT BERLE GOES HAWAIIAN

Peter A. A. Berle, President of the New York-based National Audubon Society visited the Hawaiian islands in early November. The trip itinerary centered around meetings with Hawai'i Audubon leaders and volunteers on Kaua'i, Maui, O'ahu and the Big Island.

On O'ahu, Hawai'i Audubon board members and nominees to the 1990 board of directors hosted Berle and his wife Lila to dinner at a Waikiki restaurant, complete with torches and thatched roof. Hawai'i Audubon leaders had a first-hand opportunity to educate the president of the 570,000-member conservation organization about the unique flora and fauna of the islands as well as the conservation challenges Audubon faces here.

Throughout the week Berle met with various elected government officials and their agency representatives. He lobbied hard on local Audubon issues like the recovery of the critically imperilled 'Alala and the management of the natural resources of Kawai Nui Marsh on O'ahu.

In a meeting with Governor John Waihee and Department of Land and Natural Resources Chairman William Paty, Berle learned that for the first time in 10 years, Big Island McCandless Ranch owners would allow a site visit by biologists to search for evidence of the surviving wild 'Alala. This rare and unique species is historically known only from the Big Island and scientists estimate the population numbers less than 10, all thought to be on the

McCandless Ranch. Both Hawai'i Audubon and National Audubon advocate access to the Ranch by scientists to survey the crow population. The site visit, scheduled for November 20-21, is an important first start.

Management of the natural resources of Kawai Nui Marsh was the subject of a visit with Honolulu Mayor Frank Fasi, City Managing Director Jeremy Harris, and City Public Works Director Sam Callejo. Fasi's administration and Governor Waihee are negotiating a city proposal to sell Kawai Nui to the state. To date, the state has not given a clear response to the city. Conservationists worry that unless the issue of who will own the marsh is resolved, the marsh's potential to provide excellent habitat for Hawaii's four endangered waterbirds -- the Hawaiian Coot, Duck, Stilt, and Gallinule -- will remain untapped. Berle and Kokubun urged the Mayor and the Governor to come to a rapid resolution.

Berle paid a visit to Richard Chamberlain and partner Martin Rabbett on the set of the new dramatic series "Island Son," a medical drama set in Hawai'i. Audubon's Hawai'i State Office has been working with Chamberlain and Rabbett to introduce conservation themes into the new television series. Chamberlain is a seasoned and knowledgeable environmental activist. Before moving to Hawai'i he participated as a spokesperson in the successful campaign to give the Tuolumne River in California protective federal status. Chamberlain narrated a National Audubon television special on poaching entitled "Greed, Guns and Wildlife" which aired this year.

On Kaua'i, Fish & Wildlife park ranger Daniel Moriarty was presented with the annual Audubon

Conservation award by Berle. Hawai'i Audubon Vice President Peter Luscomb was on hand to congratulate Moriarty for his efforts to restore the coastal native plant communities of Kilauea Point through harnessing the volunteer support of the community.

On a short hike on a portion of the Kalalau trail along the Na Pali coast, Berle witnessed first hand the harassment of a pod of spinner dolphins by tour boat operators. At one point, dolphins in the pod were completely surrounded by 4 boats. Berle was shocked by the frequency of overflights of tour helicopters, which passed overhead once every 5 minutes during the hour-long hike.

The National Audubon Society recently developed The Audubon Travel Ethic which it now requires the operators of Audubon sponsored tours to follow. During his Hawai'i visit, Berle spoke at length with government representatives and reporters about this new Audubon policy, noting that it was particularly important to Hawai'i, with 6 million plus visitors a year. Berle is optimistic that the state will adopt similar principles, and discussed this idea with Governor Waihee. Under such a state policy, Hawai'i operators of boating, bicycling, hiking, snorkeling and diving, rafting, flying and other tours would be required to adopt ecologically sound practices.

After a week of travel through the islands, Berle said he had a greater appreciation for the tremendous job done by the leaders and volunteers of the Hawai'i Audubon Society. "The Hawai'i Audubon Society has been fighting for the protection of native wildlife for fifty years. I'm glad that the National Audubon Society, through the opening of its first field office in the islands, can now assist the chapter and, hopefully, contribute significantly to your achievements."

Dana Kokubun



NAS president Peter Berle and Honolulu Mayor Frank Fasi.

THE AUDUBON TRAVEL ETHIC

1. THE BIOTA SHALL NOT BE DISTURBED. The great attraction of Audubon tours is the opportunity to become an intimate and knowledgeable witness of nature. Fulfilling this objective, however, places demands upon the biota - - demands that grow as visitors and intimacy increases. On Audubon tours, the natural resource that gives value to the tour will not be place at risk:

- Fragile habitats shall not be stressed.
- Animals will not be harrassed nor approached too closely.
- Animal behavior shall not be inhibited.
- Plants shall be left to grow.
- Exotic species introductions will be avoided.
- Trails will be followed.
- Every effort will be made to minimize a visit's impact, and if that effort is inadequate, the visit will be curtailed.

2. AUDUBON TOURS TO NATURAL AREAS WILL BE SUSTAINABLE. Audubon will encourage local guides, land owners and conservation representatives to develop and implement long-term visitors plans to ensure the sustainable use of their wildlife habitats.

3. THE SENSIBILITIES OF OTHER CULTURES WILL BE RESPECTED. Audubon tours travel in areas of widely varying ethics and practices. On our trips we are the guests of these cultures and our opportunities are to learn and enrich our own understanding of human nature, not to intrude and criticize. In the long-run, our abilities to advance conservation will be strengthened by the bridges that understanding will establish.

4. WASTE DISPOSAL SHALL HAVE NEITHER ENVIRONMENTAL OR AESTHETIC IMPACTS. Containers and disposal practices will meet the highest environmental standards attainable. No dumping from ships will be tolerated. Land areas visited will be policed for litter.

5. THE EXPERIENCE A TOURIST GAINS IN TRAVELING WITH AUDUBON SHALL ENRICH HIS OR HER APPRECIATION OF NATURE, CONSERVATION, AND THE ENVIRONMENT. Audubon tours will be led by experienced and knowledgeable naturalists and guides, trained to enhance each visitor's appreciation of the natural history and conservation challenges of the areas visited. Tour groups will be small and adjusted to logistics, the fragility of surroundings, and the need for crowd control.

6. THE EFFECT OF AN AUDUBON TOUR SHALL BE TO STRENGTHEN THE CONSERVATION EFFORT AND ENHANCE THE NATURAL INTEGRITY OF PLACES VISITED. One constant theme in Audubon tours will be the challenges our natural biota now faces and the solutions that may be achieved. On tours, particularly to other countries, contacts will be sought and established with conservation organizations working in the areas visited. their representatives will be encouraged to speak to our tours and sought, when

appropriate, as local naturalist leaders and lecturers to accompany Audubon en route.

7. TRAFFIC IN PRODUCTS THAT THREATEN WILDLIFE AND PLANT POPULATIONS SHALL NOT OCCUR. Commerce and poaching deplete countless animal and plant populations, threatening many with extinction. Audubon tour leaders will undertake a sustained effort to educate members of their groups on the risks posed by trafficking in animal products. Such commerce will not be condoned.

DECEMBER PROGRAM: MYSTERY SPEAKER AND ELECTION RESULTS

Hawaii Audubon Society's annual meeting will be on Monday, 18 December at 7:30 P.M. at Bishop Museum's Atherton Halau. Officers and directors elected to serve in 1990 will be announced and there will be a special mystery speaker. Also, wildlife artist Patrick Ching will be present to autograph his new poster and note cards. Refreshments will be served.

WATCH FOR SPECIAL MAILING: WE NEED YOUR SUPPORT

In the next few days you will receive a special mailing comprising several components.

First is our annual fund appeal. The Hawaii Audubon Society is committed to protecting and enhancing Hawaii's native ecosystems and supporting environmental education and research that will benefit the protection of Hawaii's natural wonders. This costs money. Your tax deductible contribution will enable us to expand our efforts.

Second is a ballot for officers and directors for 1990. Please take the time to cast your vote.

Third, for Hawaii chapter members only, is a dues renewal statement. We value your membership and participation and hope you will extend your membership.

Your dues renewal, contribution, and ballot may be combined and returned in the envelope enclosed in the mailing.

Mahalo for your continued support!

ATTENTION ARTISTS AND PHOTOGRAPHERS...CALL FOR ENTRIES

Plans are underway for Hawaii Audubon Society's annual wildlife art exposition, contest, and sale. Once again, the event will be hosted by Pacific Island Arts Gallery in Haleiwa in late June 1990. Subject matter is limited to any species of mammal, bird, fish, invertebrate, or plant residing in the Pacific region, extending from northernmost Hawaii, east to the Galapagos, and all of Polynesia and Micronesia. Entry forms will be available later this month. To receive a form, send a self-addressed, stamped envelope to Wildlife Art Show, c/o Hawaii Audubon Society, 212 Merchant Street, Suite 320, Honolulu, HI 96813.

CHRISTMAS COUNT -- 1989

There will be 10 Hawaii Audubon Society Counts this year, including 2 days of counting on the island of Molokai for the first time. These Counts are always exciting, with records to be broken and new birds to be seen. We especially need people to attend Counts on the outer islands. The Counts have been scheduled to facilitate weekend visits to Kauai, Molokai, Maui, and Hawaii. For information on the Counts, contact the leaders listed below. The Counts, with dates and leaders, are as follows:

KAUAI:

Kapaa--Saturday, 30 December Barbara Stuart
826-9233
Lihue--Saturday, 16 December Winona Sears
822-3045
Waimea--call Marsha Erickson for Count date
335-9975

OAHU:

Honolulu--Sunday, Robert Pyle
17 December 262-4046
Waipio--Saturday, David Bremer
16 December 623-7613

MOLOKAI:

Friday & Saturday, Torrie Haurez
22 & 23 December 567-6713 or
567-6680
(transportation to and from airport can be arranged)

MAUI:

Puu o Kaka'e--Saturday, Fern Duvall
30 December 572-1584

HAWAII:

North Kona--Sunday, Regie David
17 December 329-9141
Volcano--Friday, Larry Katahira
15 December (training) 967-7416
Saturday,
16 December (Count)

1990 BIRDATHON SET FOR SATURDAY, 31 MARCH

Few people think of bird watching as a competitive activity, much less as a way of making money. But on 31 March Hawaii Audubon will hold its second annual Birdathon. Last spring's state-wide fun-filled event raised over \$5500 for Audubon programs in Hawaii. Several hundred Auduboners and their friends participated in the Birdathon.

Birdathon participants obtain pledges from sponsors who agree to contribute a certain amount of money for each species seen in a 24 hour period.

The Birdathon planning committee believes 1990's event can far surpass 1989's and has set a goal of \$16,000. New features in 1990 include celebrity birders and prizes for participants.

How can you help? Join us as a birder. All are welcome, novices and experts alike. We plan to bird on all the main islands. Sponsor a participant, and get your friends to do the same. Solicit local merchants for prizes. All contributions are tax deductible to the extent allowed by law.

If you can help or need more information, call Lynne Matusow on Oahu, 531-4260, or send the form below to Birdathon, Hawaii Audubon Society, 212 Merchant Street, Suite 320, Honolulu, HI 96813.

I will be a birder on March 31 _____

I will be a celebrity birder on March 31 _____

I will sign up celebrity birders _____

I will be a sponsor _____

I will sign up sponsors _____

I will solicit prizes _____

I will donate prizes _____

Name _____

Address _____

Home telephone _____

Office telephone _____

NOMINATING COMMITTEE FINAL REPORT

This year's Nominating Committee has presented a slate of officers for the December election. In addition to the Officers, 6 Directors are to be elected. The following members have been nominated:

President:	no nominations
1st Vice President:	Bruce Eilerts
2nd Vice President:	Phil Bruner
Treasurer:	Lynne Matusow
Corresponding Secretary:	Marjorie Ziegler
Recording Secretary:	Regie David
Directors:	Renate Gassmann-Duvall
	Casey Jarman
	Joe Kimmins
	Tod Lum
	Peter Luscomb
	Glenys Owen Miller
	Synthia Tang
	Patricia Tummons

Members will receive their ballots by mail, and results will be announced at the annual meeting in December.

AUDUBON LEADERS MEET IN ARIZONA FOR BIENNIAL CONVENTION

Leaders of National Audubon Society chapters nationwide gathered in Tucson, Arizona in September for the Society's biennial convention. Bruce Eilerts, President of Hawai'i Audubon and Dana Kokubun, National Audubon's Hawai'i state director, were among the conservationists who met with National Audubon President Peter A. A. Berle and other members of Audubon's staff of scientists, lobbyists, educators, and sanctuary managers, as well as chapter leaders from across the country.

The theme of the Audubon conference was "Our Southwest: Challenged by Growth." Discussions on a broad range of important environmental issues were offered, including water use, wetlands protection, public lands management and energy conservation.

Hawai'i Audubon President Eilerts met National Audubon President Peter Berle, newly appointed director of the U.S. Fish & Wildlife Service John Turner and internationally renowned ecologist Dr. Paul Ehrlich, author of *The Population Bomb*. Eilerts said of his visit, "It was inspiring and energizing. To hear about the experience of Audubon leaders across the country and to discover how they are different and similar at the same time was a real learning experience. In the future, I hope Hawai'i Audubon can send a representative to every biennial convention."

Field trips exploring Arizona's fantastically rich desert and forest areas were among the highlights of the gathering. Said Eilerts, "The best part was that it was a lot of fun. I took many birding trips into the spectacular Arizona desert and riparian areas and added dozens of birds to my 'life list'. And on the last day, I finally did get a roadrunner; a fairly common bird of the area to everyone, it seemed, but ME!"

Dana Kokubun

ENDANGERED SPECIES NEWS

In addition to the proposed rules to list four species of Hawaiian plants as endangered under the federal Endangered Species Act (see 'Elepaio 49:83), the U.S. Fish and Wildlife Service has proposed to list the Hawaiian plant, *Isodendron hosakae* (aupaka), and the Harcourt [Band-rumped] Storm Petrel, *Oceanodroma castro cryptoleucura*, as endangered species.

Comments on the listing of *Remya mauiensis*, *R. kauaiensis*, and *R. montgomeryi* (all endemic Hawaiian plants) as endangered species are due to the Service by December 1, 1989.

Comments on the listing of *Wilkesia hobbdi* (dwarf iliau), an endemic plant restricted to the Na Pali Coast of Kauai, were originally due by December 1, 1989; however, the comment period may be extended because the state Department of Land and Natural Resources has requested that a public hearing be held on this proposed listing. The Service will publish a public hearing notice possibly in the *Garden Isle* newspaper.

Comments on the listing of *Isodendron hosakae* are due to the Service by December 11, 1989 unless a public hearing is requested. The comment period for the proposed rule to list the Harcourt Storm Petrel has already expired unless a public hearing has been requested.

The HAS Conservation Committee will keep the membership informed on these listing proposals.

GAO REPORT ISSUED ON NATIONAL WILDLIFE REFUGES

In September 1989, the General Accounting Office released a report entitled "National Wildlife Refuges: Continuing Problems With Incompatible Uses Call For Bold Action." The report examined 16 NWR (none of which are located in Hawaii) and determined that Refuges "are frequently not the pristine wildlife sanctuaries implied by their name." According to the report, the Refuges host non-wildlife related activities, such as public recreation, mining, and grazing. Refuge managers state that managing such secondary activities increasingly diverts their attention from the professional wildlife management functions that they are trained to perform.

Many secondary uses not only distract the attention of wildlife managers, but directly harm wildlife resources despite U.S. Fish and Wildlife Service's own requirement that such uses be allowed only if they do not materially detract from the Refuges' ability to protect wildlife. Secondary activities often disturb wildlife habitat, disrupt breeding activities, and modify animal behavior patterns. The report identifies two primary reasons why the Service allows harmful secondary uses of Refuges. First, the Service responds to pressure from local public or economic interests. Second, the Service does not have full ownership or control of some of the Refuges.

Copies of the report (GAO/RCED-89-196) may be obtained from the U.S. General Accounting Office, P.O. Box 6015, Gaithersburg, MD 20877 (202/275-6241).

OCTOBER 17 HAS FIELD TRIP TO JAMES C

The 17 October 1989 HAS field trip to James Campbell Wildlife Refuge, Kahuku, Oahu began around 9:00 A.M. under an overcast sky. There was no wind and the heat and humidity were brutal, yet the group of birders persevered. The walk through the refuge was productive and everyone was able to observe Hawaiian Coot, Hawaiian Stilt and Hawaiian Gallinule, Hawaiian Duck and Black-crowned Night-heron in good numbers. Other species that were observed included Pacific Golden-Plover, Sanderling, Ruddy Turnstone, Wandering Tattler, Cattle Egret, Red-vented Bulbul, Ring-necked Pheasant, Red-Crested and Northern Cardinal, Barred and Spotted Dove, Common Waxbill, Red Avadavat, Nutmeg Mannikin, Common Myna, and House Sparrow. Some of the unusual species that the group got most excited over included Long-billed Dowitcher, Semipalmated Plover, Northern Shoveler, Green-winged Teals, and several Pectoral Sandpipers. Brown Booby, Brown Noddy and a flock of approximately twenty Koloa-like ducks were observed off-shore of the refuge. The field trip ended around noon as everyone ran for their air-conditioned cars and the nearest cold drink vendor.

Bruce Eilerts

MELE KALIKIMAKA: STOCKING STUFFERS FROM HAWAII AUDUBON

Published in September, the fourth edition of *Hawaii's Birds* is bigger and better than ever. It has 16 more pages with more species in greater detail than its predecessor, plus over 150 color photos and illustrations. Cost is \$10.20 per copy (\$8.95 plus \$1.25 postage).

Checklist of the Birds of Hawaii. Cost, \$2.00 per copy.

Field Card of the Birds of Hawaii. Cost, 25 cents per copy.

Fiftieth Anniversary T-shirt, available in small, medium, large, and extra large. Colors are pink, green and grey. Cost is \$12.00 per shirt (\$10.00 plus \$2.00 postage). Please indicate first and second choice of color.

Please make checks payable to the Hawaii Audubon Society. Send your order to Hawaii Audubon Society, 212 Merchant Street, Suite 320, Honolulu, HI 96813.

HELP NEEDED FOR PHONATHON

Hawaii Audubon Society's fund raising campaign is underway, with proceeds earmarked for protecting and enhancing Hawaii's native ecosystems, environmental education, and research that will benefit the protection of Hawaii's natural wonders. As part of the fund raising effort, we are running a phonathon. We will be making calls from a downtown Honolulu location on two week nights in January. We need your help in seeking pledges from members. Please call Lynne Matusow at 531-4260 if you can make phone calls.

NOTICE TO AUTHORS

The *'Elepaio*, Journal of the Hawaii Audubon Society invites authors to submit scientific articles on natural history of Hawaii and the Pacific. Scientific articles are subject to peer review. The *'Elepaio* also serves as a newsletter to inform members of conservation issues, Society events, and other subjects of interest to members. Manuscripts of articles and newsletter items may be sent to Editor, *'Elepaio*, Hawaii Audubon Society, 212 Merchant St., Suite 320, Honolulu, HI 96813. Articles not subject to peer review normally are published at least two months from the date of receipt by the editor.

Scientific articles should be typewritten and double-spaced. Three copies of text should be submitted. Any photographs should be submitted as photographic prints in color or black and white (they will appear black and white) and should be adequately cropped if cropping is required. Authors are advised to design their illustrations with the *'Elepaio* format and column size in mind (please look at a copy of the journal). Original copies of figures (e.g., maps, graphs) should be clear and clean, with lettering large enough to remain legible upon reduction to fit the newsletter format. An original and two good quality xerox copies of each illustration should be provided with the manuscript.

WELCOME NEW LOCAL MEMBERS

New Life Member:

Fern Duvall, Makawao, HI

New Local Members:

Myrnalee Angel, St. Helena, CA
 Donald Barniske, Brawley, CA
 Ellen Barth, Kaneohe, HI
 Ted Berghofer, Kailua-Kona, HI
 Karen Biglin, Phoenix, AZ
 Debra Callaghan, Honolulu, HI
 Robert Fahs, Honolulu, HI
 Kaelene Foo, Mililani, HI
 Cindy Foursha, Aiea, HI
 Alvin Garcia, Kamuela, HI
 Ceci Green, San Francisco, CA
 Diane Haselmayer, Sarnia, Ont.
 Don Hunsaker, El Cajon, CA
 Ty Ivey, Macon, GA
 Diane Kelsey, Tampa, FL
 Joe Kimmins, Honolulu, HI
 Laura King, San Francisco, CA
 Sharon Kobayashi, Waipahu, HI
 Ruth Glenn Little, Kaneohe, HI
 Craig Murata, Pearl City, HI

OFFICE VOLUNTEERS NEEDED

Volunteers are wanted to give one day a week (10:00 A.M. to 2:00 P.M.) Monday through Friday. No typing or other machine operation required. Call George Campbell at 941-1356.

'ELEPAIO WELCOMES STUART LILICO AS NEW MANAGING EDITOR

Stuart Lillico becomes Managing Editor of the *'Elepaio* in January. Before retiring to Hawaii in 1970 he served as editor, writer, and reporter on newspapers and magazines in China, Japan, Washington, D.C., and Baltimore, followed by 20 years overseas with the USIS. In Honolulu he edited Hawaiian Shell News (the newsletter of the Hawaiian Malacological Society) for 15 years. Stuart will be working with outgoing Managing Editor Suzan Harada, Scientific Editor Sheila Conant, and volunteers Lynne Matusow and Marjorie Ziegler to organize the production and editing of the *'Elepaio* so that the journal will continue to enjoy its good reputation as both a scientific journal and members' newsletter.

News items and articles should be sent to the Hawaii Audubon Society, 212 Merchant Street, Suite 320, Honolulu, HI 96813. Stuart hopes to get the *'Elepaio* about two months ahead of schedule. This means that all announcements of programs and field trips need to be submitted much sooner than has previously been the case.

HAWAII AUDUBON SOCIETY BOARD OF DIRECTORS 1989

President	Bruce Eilerts	599-4795
1st V.P.	Fern Duvall	572-1584 (Maui)
2nd V.P.	Peter Luscomb	261-3645
Treasurer	Lynne Matusow	531-4260
Recording Sec.	Marjorie Ziegler	247-5318
Directors	Wm. Gilmartin	943-1221 (days)
	Tod Lum	548-8850 (days)
	Robert Pyle	262-4046

COMMITTEES

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Grants and Scholarship	John Engbring	541-2749
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	Robert Pyle	
Membership	Robert Pyle	262-4046
	Susan Schenk	
Programs	Glenys Miller	261-0558
Publications	Bruce Eilerts	599-4795
Publicity	Vacant	
Sales	Martha McDaniel	235-6636

'ELEPAIO

The 'Elepaio is the monthly journal of the Hawaii Audubon Society. It publishes both scientific and popular articles and announcements of interest to members.

Managing Editor	Suzan Harada	845-6704
Scientific Editor	Sheila Conant	948-8241 (days)
Mailing	George Campbell	941-1356
	Elizabeth Edwards	
	Alan Ziegler	247-5318

PEOPLE'S WATER CONFERENCE #6

People' Water Conference #6 will be held Saturday, January 13, 1990 from 8:00 A.M. to 3:30 P.M. State Capitol Auditorium. The conference will address two major immediate concerns:

1. Water control designations.
2. Surface runoff as pollution.

Speakers and panelists include Dr. Thomas Dunne, Dr. Saul Price, Kazu Hayashida, Charles Reppun, Sally Raisbeck, and Dr. Maynard Hufschmidt.

Martha Black



Count me in!!!!!!

Join the 1989 Christmas Count, see details in this issue.

NAS ECOLOGY CAMPS AND WORKSHOPS

Interested in a great Audubon experience? Join distinguished naturalists and fellow students who share your interest in nature at an Audubon camp or workshop. Search for whirligig beetles and damselfly nymphs in a pond. Or followpaths blazed by mountain sheep. Or watch a quetzal in the cloud forest of Costa Rica. Brochures and registration forms for 1990 programs are available by calling Bill Gilmartin, 263-3611 or the Hawaii Audubon Society office, 528-1432.

INTERN OPPORTUNITIES AT NAS SANTUARIES

The National Audubon Society offers students and recent graduates an opportunity to gain training and experience in sanctuary management, while providing Audubon with much-needed help. Internships are available at participating Audubon sanctuaries in Maine, Connecticut, South Carolina, Kentucky, Florida, Arizona, and California.

Program benefits include:

- "hands-on" experience in wildlife sanctuary work
- valuable references and a stronger resume
- college credit, if desired
- personal instruction
- free housing
- eligibility for scholarship to Audubon Camps.

To learn more about intern and volunteer opportunities at Audubon sanctuaries, write:

National Audubon Society
Sanctuary Department
93 West Cornwall Road
Sharon, Connecticut 06069.

CALENDAR OF EVENTS

Dec. 11 (Mon.) Board Meeting at HAS office at 7:00 PM.
Call Bruce Eilerts for details at 599-4795
(eves.).

December Field trips will be the various annual
Christmas Bird Counts. Details inside.

Dec. 18 (Mon.) General Meeting at Atherton Halau,
Bishop Museum at 7:30 PM.
Program: Election results, speaker to be
arranged.

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HAWAII AUDUBON SOCIETY
212 MERCHANT STREET, SUITE 320
HONOLULU, HAWAII 96813



GREEN PRINT

AUDUBON HAWAII CONSERVATION NEWS

VOL. 1, NO. 4

DECEMBER 1989

Close Encounters of the Alien Kind

article by Patricia Tummons

"Invasion of the Aliens" could be a good title for a horror movie, but it is also a fair description of what has happened to Hawaii's native plants and animals. And forget any scary movie scripts. The havoc that can be laid at the doorstep of these invaders is as horrifying a scenario as any that might be dreamed up in Hollywood.

But the "aliens" in this script aren't from outer space. They're all earthlings that have found their way to Hawaii since the first humans arrived.

There's the *Euglandina rosea*, for example. A snail brought in to eat another invader, the giant African Snail, it found Hawaii's native tree snail more to its liking and is thought to be responsible for the extinction of at least half of the 41 recognized native snail species.

Or take the mongoose - please! It was supposed to eat rats in the canefields. But rats come out at night; mongoose prey during the day. Never did the twain meet. So the mongoose turned its attention to the eggs of native birds, instead.

The ancient Polynesian settlers brought with them rats, chickens, pigs and plants. The real invasion didn't begin, though, until the Hawaiian islands were "discovered" by the rest of the world. Farmers, ranchers, as well as horticulturists and foresters, brought



Illustration by Patricia Chung

The types of harm done by introduced species are many and varied. When feral pigs destroy rain forests for example, they do more than uproot a few tree ferns. Pigs also spread the seeds of some of the most obnoxious invader species, they rip up the soil.

In new species by the nurseries. Immigrants frequently brought with them favorite plants. Other invaders arrived as stowaways on the military and commercial cargo ships and planes. Accidental, sometimes even deliberate releases of caged birds and other species have added to the mix.

Consider this: About 900 alien plant species have become naturalized in Hawai'i, a figure roughly equal to the total number of native plant species. Of Hawai'i's 80 known species of birds, at least 45 have become extinct since human settlement.

Native invertebrates -- bugs, snails and the like -- have suffered too. Scientists believe that about 2,000 alien invertebrate species have become established here, many of which threaten the survival of some of Hawai'i's most unusual native creatures.

All areas are hard-hit. Disturbance brought about by development has caused native species to all but vanish from lowland areas, and introduced plants and animals have rushed to fill the void. Native species that live at higher elevations suffer too.

Because many of them have limited ranges, thriving in areas defined not by square miles, but by square feet, they are at especially high risk of extinction with the least disturbance to their habitat.

What You Can Do:

- **Educate yourself.** Learn which plants and animals are introduced pests. Watch [GREENPRINT](#) for future articles on particularly pesky types.
- **Volunteer to participate in a weed control program.** Help the state Department of Natural Resources in their *Clidemia* eradication program by spreading fungi that destroy this invasive shrub. Call the Department at 548-8850.
- **Share this article with a friend.** Let your friends, neighbors and families know about the dangers of introducing alien species to our fragile and unique environment and ask them not to introduce harmful species.

destroying habitat of native species, and they create washes and guilts that become breeding grounds for mosquitos that spread diseases to native birds.

The obstacles to getting rid of these alien invaders are huge. Hunters don't want to see feral pigs eradicated, for example, and the political pressure they have brought to bear on state agencies has made it difficult to aggressively tackle this pest.

Even supposing there is agreement on the need to do something, the range of options is limited. Physical eradication is almost impossible once the alien has reached the stage where it is defined as a pest. Pesticides tend to kill indiscriminately, besides bringing with them the risk of contaminating air, soil and water.

That leaves biological control, but that can be tricky. Sometimes pests brought in to control an invader species find a native species is more to their liking - remember the *Euglandina* snail?

Commercial interests have also limited the weapons available to fight alien species. Alien grasses are a serious threat to native species, but sugar growers and ranchers object to their eradication. The sugar growers fear that any control agent for unwanted grasses might also attack sugar cane, itself a grass. Ranchers, whose livestock feed on the alien grasses, don't agree that the alien grasses are a threat in the first place.

Another problem is laxity on the importation of materials that are veritable breeding grounds for alien insects and parasites. There is no good reason why polo ponies should not be subject to quarantine. Or why shipments of Christmas trees should not be fumigated. Sometimes even those people who should be most keenly aware of the threats of alien species -- curators of botanical gardens and the zoo -- have been careless. The result has been the introduction of a host of undesirable aliens, everything from chiggers and ticks to bloodsucking mites.

In short, there is no easy answer to what can be done to control alien species that have made pests of themselves. Action will have to occur on a variety of different levels. The accelerated listing of endangered and threatened native species by the federal government could help, since official listing can be used to force government to control alien species that compete with or prey on the endangered species.

At the state and county level too, more vigilance is required, especially in the area of controlling alien pests before they become unmanageable.

Saiki and Conservationists Seek Federal Dollars for Wildlife Research



Congresswoman Patricia Saiki

Hawai'i has the dubious distinction of being the endangered species capital of the world. Compounding this problem, Hawai'i also is short on trained wildlife professionals to manage and preserve our Hawaiian flora and fauna.

Congresswoman Pat Saiki energetically supported federal funding for a critically-needed wildlife research center in Hawai'i before Congress this year. Saiki and local conservation groups, including the Audubon Society, seek to expand the existing Cooperative Fisheries Research Unit at the University of Hawai'i to include wildlife research and training.

Last April, Congresswoman Saiki testified before the House Interior appropriations committee: "It is a well known fact in Hawaii that most of the state's native wildlife is either threatened, endangered or extinct. Our wildlife personnel are in short supply and many problems and questions remain unanswered. We need to cultivate wildlife professionals to help ensure the protection of natural areas and populations."

WHAT YOU CAN DO:

Phone calls and letters supporting the wildlife cooperative research unit are needed now. Call or write your Congressional representatives AND your state representative. Under federal funding requirements the state must contribute a portion of the total necessary funds.

Send your letters of thanks to Congresswoman Saiki and ask Representative Akaka, and Senators Inouye and Matsunaga for their active support of an appropriation for the wildlife research coop unit during the next budget cycle.

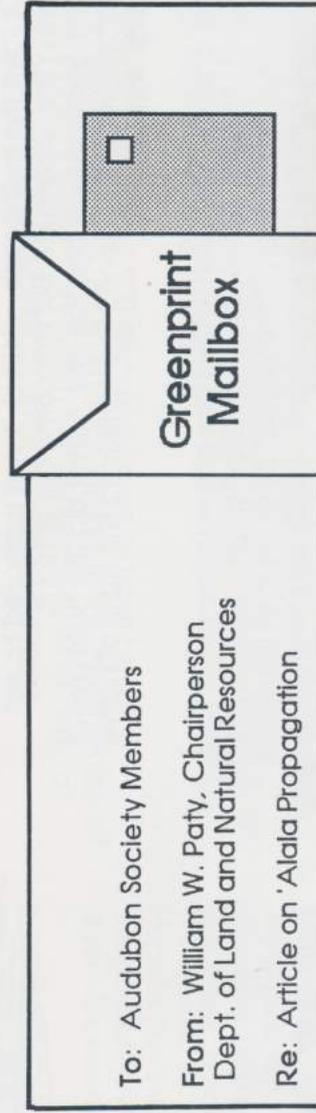
Following are the addresses for all Hawaii delegates:

The Hon. Daniel Inouye
United States Senate
722 Hart Senate Ofc. Bldg.
Washington, D.C. 20510

The Hon. Spark Matsunaga
United States Senate
109 Hart Senate Ofc. Bldg.
Washington, D.C. 20510

The Hon. Daniel Akaka
U.S. House of Representatives
2301 Rayburn House Ofc. Bldg.
Washington D.C. 20515

The Hon. Patricia Saiki
U.S. House of Representatives
1407 Longworth House Ofc. Bldg.
Washington, D.C. 20515



To: Audubon Society Members

From: William W. Paty, Chairperson
Dept. of Land and Natural Resources

Re: Article on 'Alala Propagation

Unfortunately, Saiki's request did not pass the gauntlet of a key congressional committee and the \$150,000 necessary to establish this important research unit was not appropriated. Hawai'i conservationists, including the Audubon Society, vowed to return with renewed vigor to the appropriations process in February 1990.

There are twenty-two wildlife research

cooperative units in the country, created in 1935 by the U.S. Fish & Wildlife Service. Their mission is to:

- 1) conduct wildlife research, 2) train graduate students to be wildlife professionals, and 3) provide information on wildlife to the public.

Aliens continued...

Another area where the state must boost its efforts is its enforcement of laws against bringing plants and animals into Hawai'i by placing more inspectors at ports of entry.

Still, given the huge numbers of people and shipments that arrive each day and the virtual impossibility of controlling what is brought in by mail, enforcement alone is not enough. It must be combined with a sweeping, effective education program, for visitors and kama'ainas alike.

This is not so difficult as it might seem. Nearly everyone arriving in Hawai'i comes by plane. A short professionally produced film on the problems of introduced species could be shown on every arriving flight. Scientists and environmentalists have been suggesting this for years. The time to act is at hand.

I am writing this article in response to the August Issue of Greenprint concerning our Hawaiian crow, the 'Alala. The tone of the article implies a lack of concern and activity on the State's part in regard to the recovery of the 'Alala. Let me set the record straight. The State of Hawaii is very concerned about the 'Alala. In the last ten years, the Division of Forestry and Wildlife has:

1. Developed and implemented techniques for captive propagation;
2. Created a permanent position and hired an expert aviculturist with training in crow biology;
3. Developed a state-of-the-art captive propagation facility at Olinda, Maui;
4. Produced five young 'Alala in captivity;
5. Captured eight wild crows from the wild;
6. Completed field studies and a report of life history, distribution, limiting factors and food habits, and
7. Set aside a 3,800-acre sanctuary at Puuwaawaa on Hawaii.

We are at a crucial period in our efforts to save the 'Alala. Inbreeding of the captive population of 'Alala at Olinda is a definite problem. We need new crows from the wild to augment the Olinda population. The State, in conjunction with the U. S. Fish and Wildlife Service, is currently negotiating with the McCandless Ranch to allow trained biologists to evaluate the number, structure and health of the crow population on their land. Without cooperation from the private landowner, efforts to save the crow will be much harder to implement.

I called off the capture of the wild crows last year because they were in nesting season at the time and not because the landowner objected. I also cancelled a helicopter survey because I thought it equally inappropriate to fly around and possibly disturb the wild flock during nesting.

If the landowner is not cooperative, we will have to search for different means to save the crow. While this is not our desire, we are willing to do what must be done to avoid the extinction of this species. We share a common goal in this endeavor. Polarization of the issues through a lack of communication will not help the 'Alala at this time. My staff will continue to keep you informed of the status of the 'Alala. Let us work together on this very difficult problem.