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HISTORY OF EXOTIC BIRDS IN HAWAII

By Andrew J. Berger

Professor of Zoology, University of Hawaii

First of Two Installments

With the destruction of the native vegetation in the lowlands, first for the cultivation of taro and sweet potatoes by the Hawaiians and later for the cultivation of sugarcane and pineapple by the Caucasian immigrants to Hawaii, the endemic forest birds became restricted to the high valleys and the mountains. Some of these mountain forests were almost totally destroyed by the goats, sheep, pigs, horses, and cattle released on the islands by Captains Cook and Vancouver.

How the sandalwood trade affected the native birds presumably will never be known. The harvesting of the large sandalwood trees for their aromatic heartwood was conducted at an intensive rate from 1810 until the supply became exhausted in the 1830s. The highly prized heartwood (which was decreed a royal perogative in 1812) became a major medium of exchange in Hawaii, and both Kamehameha II and III pledged so much of this valuable commodity to ship captains in return for goods that a debt of \$300,000 had been incurred by these two kings by 1824.

Serious efforts to develop sugarcane plantations were initiated by the mid-1830s, and these early efforts were given added impetus in 1849 because of a closer market for sugar in California after gold was discovered there. Similarly, the American Civil War provided another opportunity to expand sugar in Hawaii. Even before that time, however, widespread infanticide (William Ellis wrote in 1827 that two-thirds of all Hawaiian children were killed within their first year or two) and introduced diseases (such as smallpox, cholera, leprosy, measles, and veneral diseases) had so decimated the native Hawaiian population (from an estimated 300,000 in 1778 to about 45,000) that Chinese peasants were brought to the islands as plantation workers in 1852. As the years passed, more Chinese, Japanese, Filipinos, Portuguese, and other foreigners were imported to work the sugarcane fields. Despite fluctuations in the market for sugar and of related problems encountered in attempts to establish a policy of reciprocity with the government in Washington, the sugar industry continued to expand, thus necessitating the clearing of more native forests, particularly on the island of Hawaii. But sugar was important to Hawaii during the nineteenth century as it continues to be today, especially with some \$10,500,000 in annual "compliance payments" received from the Federal Government.

Whales also were important to the early development of Hawaii, beginning when the first animal was slaughtered in 1819. For nearly 50 years thereafter, the whaling industry brought trade and people to Hawaii, and placed Honolulu on Oahu and Lahaina on Maui among the busiest ports in the Pacific basin.

In one way or another, these three seemingly unrelated activities of sandalwood harvesting, sugar production, and whaling had an affect on the native birds. The first two resulted in the destruction of endemic vegetation, and all three added a factor that was instrumental in the later introduction of so many exotic birds and plants to the Hawaiian Islands: the permanent settling of foreigners in Hawaii. Whether the ship captain saw opportunities for business or retirement, or whether a sailor decided that he had had enough of the life before the mast, some of them decided to make Hawaii their home. And the same was true of many of the descendants of the early missionaries, both

theological and medical

Except in the marshes and ponds, where ducks, coots, gallinules, herons, and stilts were common, there were no birds at all in the lowland areas throughout most of the year. Not until the migrant Golden Plover and other shorebirds returned to Hawaii in late summer were birds to be seen by most people.

Writing of his experiences as a missionary from 1823 to 1825, C.S. Stewart complained about Honolulu and Waikiki that "the mountains are too distant to be reached in an hour's ramble; and the shore is lined only with fish-ponds and marshes. There is not a tree near us, much less groves, in whose shade we might find shelter from the heat of the torrid sun: no babbling brooks, no verdant lawn, no secluded dell or glade, for the enjoyment of solitude and thought; indeed, nothing that ever formed part of a scene of rural delight."

Mr. Stewart was no more favorably impressed by Lahaina, Maui: "The land begins to rise rather abruptly about three fourths of a mile from the sea, and towers into lofty mountains, three rude elevations of which, immediately east of Lahaina, are judged to be four thousand five hundred, or five thousand feet, above the level of the ocean. From the first swell of the rising ground, almost to the summits of these mountains, there is nothing to be seen but the most dreary sterility and sunburnt vegetation, intersected by gloomy ravines and frightful precipices.

"Every part of the island seen from Lahaina wears the same forbidding and desolate aspect, and after passing either point, the eye is met only by a barren sand-beach, occasionally interrupted by heaps of black lava, to which the wild dashings of a heavy

surf add double gloom.

"So far as our observation extends, this description is characteristic of the whole Islands. Instead of being the sunny and elysian fields which the imagination of many make them, they in fact are only vast heaps of rocks in the midst of this mighty ocean, with here and there, at long intervals, a rich and luxuriant valley and plain thronged with inhabitants. The outlines of the whole group are wild and romantic, and the thick and ever-verdant forests, which crown the heights of many of the mountains, give them a refreshing appearance. But to an eye accustomed to the varied beauties of an American landscape, to its widely cultivated fields, its stately groves, its spreading lawns, and broadly gleaming rivers, its gardens and enclosures, its farm-houses, country seats, villages, domes, and spires, a more melancholy place of exile could scarce be selected than the Sandwich Islands."

Similarly, George Washington Bates wrote in 1854 that "in ascending the elevated regions of the Hawaiian group, a traveler is sometimes more impressed with what there is not, than what he sees. One of these negative gratifications is the almost universal absence of singing-birds. Seldom does a feathered warbler utter his melody, announcing the approach or the close of the long summer days. In this relation there is little, if anything, to remind him of the gentle melody which sends its sweet echoes through the avenues of the Northern forests when the foliage is in its glory."

Obviously, Ellis, Stewart, and Bates never, or only rarely, entered the virgin 'ohi'a-treefern forests where the native forest birds were abundant, but the fact remains that the lowlands, where the foreigners lived and did their business, were destitute of songbirds, as well as of pleasing vegetation. Because many of the new residents viewed their life in a relatively "barren and depraved" land as a "melancholy place of exile," it is readily understandable that they wished heartily to import, not only familiar plants, but any colorful flower, shrub, or tree that would flourish in the Hawaiian environment.

And so we find that the editor of "The Polynesian" wrote on October 17, 1840 that "the broad avenues which now intersect the town /Honoluly, will become eventually fine streets. If they could be lined with trees, it would add much to the comfort of the pedestrian." Environmental matters in Hawaii seemed to move at a snail's pace then, as they do now, however, and, in commenting on the great increase in numbers of buildings in Honolulu, the editor concluded, nearly six years later, that "a person in traversing our streets receives an unfavorable impression from the great lack of verdue visible. The adobie walls with which most of the dwelling houses are surrounded, preclude the possibility of catching a glimpse of the interior. With a little attention trees might be made to grow in all of our public streets, which, without interfering with the passage of carriages, would be a great luxury to the pedestrian, and add much to the beauty and comfort of the town" ("The Polynesian" for July 18, 1846). I have the same feeling every time I drive to the Honolulu International Airport in 1974.

Action did follow eventually. The exact number of different kinds of exotic plants that were introduced during the following hundred years apparently is unknown, but it amounted to several thousand. St. John (1973) lists 4,643 species of exotic flowering plants in Hawaii. These flowers, shrubs, and trees were imported from Africa, Asia, New Zealand, Australia, and the Americas. The result is that, with the notable exceptions of the coconut palm and beach naupaka, virtually every plant that characterizes the tropical "Hawaiian Paradise" is a foreign plant, and only an expert botanist is able to find many truly endemic plants in the lowland areas of the Islands.

The majority of these foreign introductions added much to the beauty of the relatively barren lowland areas, and presumably caused no ill effects on either the native plants or birds. There are, however, some outstanding exceptions. Lantana (Lantana camara), a notorious tropical weed with attractive flowers, was introduced as a garden plant, but it has spread widely and now chokes out native vegetation. The blackberry (Rubus penetrans), also introduced as a garden plant, is an extremely serious pest in the Koke'e and Alaka'i Swamp regions of Kauai. At Koke'e the blackberry forms such impenetrable thickets that a machete is needed to cut a path through them. The blackberry, too, chokes out the native vegetation, and has spread along trails deep into the Alaka'i Swamp. An equally destructive exotic is the firetree (Myrica maya), which was imported from the Azores and Canary islands, in part, for reforestation but perhaps also to be used as fire wood. Attempts at eradication were made as early as the 1940s, but little progress has been made, and the firetree is a serious problem on Kauai, as well as on Oahu and Hawaii. Such weed plants as the blackberry and firetree could destroy the near-virgin Alaka'i Swamp forest, and the birds that inhabit it, just as effectively in the long run as the bulldozer.

Prickly pear cactus (Opuntia megacantha) was brought to Hawaii to serve as emergency food for cattle, but it was so successful that it eventually ruined large expanses of former pasture by forming dense stands 12 feet high. Fortunately, one of the early highly successful attempts at biological control of a pest resulted when a moth (Cactoblastus cactorum) was intentionally introduced, and much of the cactus has been destroyed by these insects. Some botanists have even predicted that the cactus will eventually be exterminated in Hawaii.

New residents in Hawaii also missed songbirds or garden birds, and one finds such pleas as appeared in "The Commercial Advertiser" for August 15, 1860: "Owners of vessels leaving foreign ports for Honolulu, will confer a great favor by sending out birds, when it can be done without great expense. We need more songsters here."

Some bird species had been favorite cage birds in the homelands of the Japanese, Chinese, and other foreigners who found a new home in Hawaii. Notable among these birds were the Red-billed Leiothrix (Leiothrix lutea), Chinese Thrush (Garrulax canorus), and Strawberry Finch (Amandava amandava). A number of Chinese thrushes "obtained their freedom at the time of the great fire in the Criental quarter of Honolulu in 1900, and took to the hills behind the city."

Well-to-do Caucasians imported and released a large number of foreign cage birds, both during the last century and the early part of the present century, and, in 1930, a group of kamaaina formed the Hui Manu or "bird society," whose sole aim was to introduce songbirds to Hawaii. It was the hope of the Hui Manu that the introduced birds would flourish and add both color and song to the gardens and heavily vegetated areas in such places as Manoa Valley, Nuuanu Valley, upper Makiki, and the Roundtop region of Honolulu. By 1942, the Hui Manu had imported the following species of birds: "Kentucky cardinals, Brazilian crested cardinals, Japanese flycatcher (Oruri), Japanese red robins, Japanese bush warblers, Japanese tits, Mongolian larks, yellow-breasted buntings, Narcissus flycatchers, Pope cardinals, mockingbirds, Dyal thrush, Shama thrush, Sunbirds, Mandarin ducks, Indigo bunting, Mon-pareil buntings, Japanese tumblers, butterfly or Mexican buntings." Apparently no investigation was conducted into the ecological requirements of these species before they were imported, and most of them did not survive.

The Hui Manu was disbanded in 1968 because of the "increasingly strict regulations to control the importation of birds for deliberate liberation, the lack of younger members, diminishing funds, and the feeling that, since its founding, the Hui Manu has served its purpose."

There were other reasons for introducing exotic bird species. Hunting has long been a popular sport, and turkeys were introduced as early as 1815; several other species of game birds were imported prior to 1855. Means for combatting insect pests were sought

after cattle ranching became important in the Islands, and the Common Mynah (Acridotheres tristis) was "introduced from India in 1865 by Dr. William Hillebrand to combat the plague of army worms that was ravaging the pasture lands" (Caum 1933). Similarly, the Cattle Egret (Bubulcus ibis) was released in 1959 "in the battle to control house flies, and other flies that damage hides and cause lower weight gains in cattle" (Breese 1959).

Moreover, one finds such prominent men as William Alanson Bryan, the first Curator of Birds at the Bernice P. Bishop Museum and later a professor of zoology in the College of Hawaii, writing in 1912 that nine species of introduced birds "are of far more economic importance than are all the native birds combined. Since there is but little to be expected from the native avifauna along the line of insect control, what is required is the judicious introduction of foreign birds to feed on our insect pests. We could thus form a second line of defense against insect invasions that will be a first aid to the plant and animal quarantine now maintained here by the territory and the nation."

To be sure, Bryan was speaking of insect pests of sugarcane and pineapple in the lowland areas. Nevertheless, his was a strange way of referring to the endemic forest birds after he had killed three of the few remaining Black Mamo on Molokai in 1907. Bryan obviously did not have a true appreciation either of the forest birds or of the unique Hawaiian ecosystems they inhabited. Even so, he did call for "judicious" introductions, and he added that "the intelligent introduction of birds into Hawaii or any other country is by no means the simple task that some have thought it to be. Three important questions with reference to their food habits must be settled definitely in advance of the liberation of any species of bird in the Territory. They are: (1) The food of the species at home. (2) What proportion of its food is injurious insects? (3) What its food will be when brought to Hawaii?"

Bryan also added that "the protection furnished by a large well equipped experimental aviary under the direction of an ornithologist familiar with conditions as they exist is without doubt the first and the most essential step in bird introduction, and one which should be the foundation of the work."

Unfortunately, Bryan's suggestions were ignored by both Territorial and private organizations.

Well-meaning officials may also have been misled by erroneous statements in the literature. Fisher referred to this when he commented in 1948 that "the movements for more and more birds has also been supported by unfounded generalized statements (Aviculture, 3:333-334, 1931; and 4:70-71, 1932) that exotic birds are not detrimental to the native species in Hawaii. To my knowledge no comprehensive study has ever been made of the interaction of an exotic and a native bird in Hawaii." His statement is still true today.

Caum (1933) also was unaware of the status and value of the endemic forest birds. He wrote: "However, it does seem that a controlled and restricted program, with a careful selection of candidates for liberation, would be attended with but little potential danger, especially in a country like Hawaii where the native birds still in existence are very rare and restricted to the deep forests and accordingly would not come into competition with any imported species inhabiting the lowlands."

Caum was aware, however, of the problem of "spreading avian diseases," and he remarked that "there is undoubtedly a great deal to be said in favor of stringent restrictions in any program of bird introduction, and as a general rule a complete ban is likely to be of greater benefit to the country in the end than is no control at all."

Despite Bryan's caution about "judicious introduction" and Caum's suggestion of a "controlled and restricted program, with a careful selection of candidates for liberation," we find an extreme, opposite official view expressed only four years after Caum's paper was published. Frank H. Locey, President of the Board of Commissioners of Agriculture and Forestry, writing in the January 1937 issue of Paradise of the Pacific, dismissed the endemic forest birds with this brief, and totally unfounded, statement: "Due to various causes most of the native birds are extinct today." Some of his other statements explain further the chaotic status of introduced birds today.

"I want to establish so many birds here that the hunters will not be able, legally, to kill them off."

"Things are different in the 1930's than in the 1850's. Today we are strong for any kind of a bird that is either useful, beautiful, or melodious, and that will not injure anything Hawaiian. We now also protect our birds with laws and law-enforcement. Public opinion favors birds today."

"Hawaii can be transformed into a universal aviary, a bird haven where every known species of birds, not injurious to Hawaii, will propagate and thrive under the conditions of their natural habitats."

"'Go to Hawaii to see Birds!' will be the popular slogan."

If the consequences of this philosophy had not been so serious, those remarks might be classified among the best examples of policital paternalism in Hawaii—something for everyone and nothing injurious to Hawaii or Hawaiians. Unfortunately, the information (one cannot say "knowledge") behind the remarks demonstrates what are probably the most superficial and naive ideas on both endemic birds and exotic birds (both game and non-game) ever expressed in Hawaii. Unfortunately, too, this philosophy still persists in 1974 in some official and unofficial circles in the State.

Records of Foreign Bird Introductions

"Many times has the statement been made that the bird life of Hawaii appears to consist almost exclusively of the mynah, the sparrow, and the dove. The series of notes here presented is prepared in an attempt to refute this statement." Thus did Edward L. Caum begin his 1933 work on "The Exotic Birds of Hawaii," the first thorough treatment of that subject. He discussed 93 foreign species that had been released, or had escaped from cages, in Hawaii, in addition to two birds from the Leeward Islands that had been brought to Honolulu. The Laysan Rail (Porzanula palmeri) was released on the plantations of the Oahu Sugar Company in 1904 "for the purpose of assisting in the destruction of the cane leafhoppers," but these flightless rails were unable to survive the depredations of mongooses and other predators. Large numbers of Laysan Finches (Psittirostra cantans) were brought to Honolulu as cage birds as early as 1888; some of these escaped, but the species never became established.

Record keeping on the releases of foreign birds has been so poor that only the minimum number of species can be tabulated. Caum explained the problems he encountered in preparing his list. "It has been only within the past few years that any definite records of bird introduction have been kept, and many of these are not entirely comprehensive. For instance, it is recorded that on March 5, 1921, there were imported from the Orient for Maui County 28 pheasants, 502 doves, and 3 partridges, and on June 5 of the same year 75 pigeons, 100 doves, and 100 quail, with no notation as to species or kinds. A record like this does not greatly help in a tabulation of species, and there are many reports no more definite...." "Early records are extremely fragmentary and scattered, and many contain no definite notation as to when a given species made its appearance in Hawaii. As early as 1855 Mr. J.W. Marsh, in an address given at the Fifth Annual Meeting of the Royal Hawaiian Agricultural Society, said that 'a record of the introduction of new species of birds is still a desideratum.' Note the word 'still.' His statement holds good today; after almost 80 years such a record is still a desideratum. Had it not been so at that time and for many years thereafter, the task of compiling the present data would have been considerably simplified. Unfortunately, Mr. Marsh neglected to mention any of the species he had in mind, but from contemporary newspaper accounts it is known that during the time of the Royal Hawaiian Agricultural Society, 1850 to 1867, enthusiasm for bird introduction was great."

According to Caum, the records of the Royal Hawaiian Agricultural Society for the years 1857 through 1866 were lost. Moreover, for many years the only clues to the importation of foreign birds are to be found in newspaper accounts, which usually are inaccurate, and often are totally useless.

Despite Mr. Caum's careful work and his explanation of the importance of maintaining accurate records of introductions, Harvey I. Fisher found it pertinent to emphasize this point again only 15 years later. And, politicians being what they are, it is necessary to do so again in 1974, because the Quarentine Division of the State Department of Agriculture has destroyed all past records and now keeps current records on file only five years before destroying them. There is still no permanent record!

One is reminded of a passage in <u>The Great Extermination</u>, a book about the fate of many of Australia's unique plants and animals. "'I left school to become a public servant-never mind in what department,' said Mr. Ryan. 'My very first duty was performed in the dust of an attic above one of the oldest government offices in Melbourne. I was shown an enormous heap of files, told to list the name and number of each one, and then to toss them into sacks to be taken away to be burned or pulped. They were very old legal files, tied up in faded rotten red tape. They were of course entirely handwritten with quill pens on

stiff parchment-like paper....At that time, my only thought was what a dull and dusty job it was. But looking back, I see that it was a piece of officially directed vandalism, and that what I was so thoughtlessly consigning to the flames was the stuff of history.'"

A.J. Marshall, the editor of the book, added: "A point to be made here is that the destruction of these documents, valueless and at the same time priceless, put money into the pockets of no-one. Their destruction was the price of official stupidity and insensitivity. The senior Australian civil servant—'never mind in what department'—who ordered their incineration is probably a charming little man, who is very kind to his dog, children and perhaps even his wife. He has his dog 'put to sleep' (as he says) when it grows old. He is willing to scrape a bit to send the girl away to school, and the boys too, to some place equally 'good.' He cherishes his wife's acquaintanceship with Mrs. Poop—Jones. He is a 'sound man' who empties his in—tray with commendable celerity. He is also an insensitive fool, and it is people like him, as well as the frank money—grubbers, that our—and his—grandchildren will revile if they are made sufficiently educated and aware to care." Marshall subtitled his book "A guide to Anglo-Australian Cupidity, Wickedness, and Waste." The only objective subtitle for a comparable book on Hawaii would have to be "A guide to Caucasian—Oriental—Polynesian Cupidity, Wickedness, and Waste."

What the Record Tells Us

We can be sure that a minimum of 160 different kinds of foreign birds have gained their freedom in Hawaii since the first Common Pigeons or Rock Doves (Columba livia) were reportedly released in 1796. This total of 160 species does not include those mentioned only by common name in newspapers—such as the "28 little sunbirds" that Mr. Lewis brought back from Malacca in 1939 ("Honolulu Advertiser," June 7), and the "Australian Ostrich or Emu" that Mr. Taner brought to Honolulu in 1853 ("The Polynesian," October 22).

Of these foreign introductions, 108 species failed to survive, whereas the available evidence suggests that about 50 species are now established as breeding birds (Berger, 1972). The failures included such a divergent lot as the Great or Fishing Cormorant (Phalacrocorax carbo), Great Curassow (Crax rubra rubra), Western Gull (Larus occidentalis), Micobar Pigeon (Caloenas nicobarica), Japanese Lark (Alauda arvensis japonica), Hagpie-lark (Grallina cyanoleuca), Blue Miltava (Muscicapa cyanomelana), Willy Wagtail (Rhipidura

leucophrys), and about 50 species of game birds.

Very little has been written about the length of time that introduced species survived in Hawaii before they died out. We know more about the Pale-headed Rosella (Platycercus adscitus), (also called the Blue-cheeked Parakeet by early writers), than for most species, but we don't know if it still survives. Edward Caum wrote that a single pair of these birds "was liberated by Capt. James Makee about 1877 near Ulupalakua, Maui. Capt. Makee has stated that they stayed near the house until they had raised one chick, and that the three then went into the forest." When H.W. Henshaw published the last section of his birds of Hawaii in 1904, he wrote that the Pale-headed Rosella "was detected by /Henry/ Palmer in 1892 on Haleakala, Maui, and several specimens were secured. In June of 1901 the writer found the bird to be by no means uncommon in the forest on the slopes of Haleakala at an altitude of about 6,000 feet. This locality, above Olinda, was somewhere near the place where the bird was found by Palmer." George Munro wrote in 1944 that he spent about a week in the Olinda forest in 1928 and saw these birds several times, and that he collected a specimen for the Bernice P. Bishop Museum. Apparently no one else has reported seeing this species since that time. To be continued

NEW EXOTIC BIRD FOR OAHU
By Douglas Roselle & Erika Wilson

The YELLOW-FACED GRASSQUIT (Tiaris olivacea) is a member of the Fringillidae family of Passeriformes; its native range is the Gulf coast of Mexico, the West Indies, Central America and northwest South America. This species is a small seed-eater of 4 inches in length, having a high-pitched call note and a trilling song. The male's upperparts are olive brown, as are the lower underparts; there are no wing-bars and the tail is plain. The head is black with a bright yellow stripe running above the eye; the throat is also bright yellow while the breast has a black bib. The female, as is usual in this family, has a plainer plumage; only a faint yellow throat and stripe above the eye are present on an otherwise greenish brown body.

While hiking above Pacific Palisades in late August, Douglas Roselle heard a song he didn't recognize. Soon he spotted the source--a bird he had never seen before. He wrote

down careful descriptions of the male and female plumage, as well as notes on the song. He found a matching description in Peterson's A FIELD GUIDE TO THE BIRDS OF MEXICO, naming the bird as the Yellow-faced Grassquit. Several times in the following months he tried unsuccessfully to take photographs of this species. On October 27, 1974, Doug Roselle and Erika Wilson went to the same area, again to try and take photographs.

The trail above Pacific Palisades wanders through a mixed native and exotic forest, and then goes along a ridge which was burned over several years ago. The area now supports a heavy growth of young eucalyptus, large naupaka bushes, and tall grasses. Several times during the period of 7:00 am to 9:00 am they saw individual Yellow-faced Grassquits. One obliging male began feeding on grass seeds while perched in a young eucalyptus. Intermittent rain prevented them from taking any photographs, but the field marks of this species were clearly seen.

Editor's Note: BIRDS OF THE WORLD by Oliver L. Austin, Jr. page 299: The Yellow-faced Grassquit is typical of four species of the genus <u>Tiaris</u> found from Mexico to Brazil...The grassquits are among the few continental small birds also found widely through the West Indies. Grassquits build covered nests with a thick roof and side entrance. The male helps with nest building, which is part of the courtship. He usually starts the nest and the female finishes it.

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Field Notes from Erika Wilson: <u>Waipio Peninsula</u>—After the hike to see the new exotic above Pacific Palisades, Doug Roselle and I went to the Waipio Peninsula to bird (October 27, 1974). The tide was out at Walker Bay where we saw Hawaiian Stilt (1), Hawaiian Coot (6), Sanderling (2), Wandering Tattler (2), Ruddy Turnstone (6), Black-crowned Night Heron (4), and Golden Plover (20). Overhead flew numerous Cattle Egrets. We walked around behind the mangrove which edges the bay; many Cattle Egrets were in evidence. Our big discovery was a BARN OWL (Tyto alba) which we flushed twice from the mangrove thickets. The heart-shaped face and buffy coloring were unmistakable although unexpected. Dr. Berger (in HAWAIIAN BIRDLIFE) reported that some Barn Owls were released in the Hauula area of Oahu over ten years ago. In the same general area of Walker Bay we also saw Spotted Dove, Black-headed Hannikin, and Strawberry Finch. Further down the peninsula, in an area of heavily flooded sugar cane fields, we flushed Pintail (6), Hawaiian Stilt (3), and Golden Plover. Unfortunately it began to rain heavily, but before we retreated Doug saw many more ducks riding on the water, as well as other shorebirds.

Kapiolani Park—An hour's stroll through Kapiolani Park with Barbara Macauley on October 28, 1974, yielded the following species: Golden Plover, White Term, Rock Dove, Spotted Dove, Barred Dove, Common Mynah, Japanese White-eye, Red-crested Cardinal, House Sparrow, Java Sparrow, House Finch, Green Singing Finch, and Saffron Finch. The Green Singing Finches included a fledgling that kept up a steady clamor while quivering it wings. We noted that this species was eating the red berries of a banyan. Several days later, on the morning of November 5, 1974, under overcast skies I made a special visit to Kapiolani Park to see the Pin-tailed Whydah. I saw several small flocks feeding among the grasses in the open parts of the park. The males were in various stages of molt from their breeding plumage of black and white to their eclipse plumage of mottled browns and rufous caps edged with black.

Cemetery at Pensacola & Wilder Sts.—The park-like habitat of this cemetery provides living space for urban birds such as the Spotted Dove, Barred Dove, Red-whiskered Bulbul, Common Mynah, Japanese White-eye, House Finch, Ricebird, House Sparrow, Kentucky Cardinal, and Red-crested Cardinal. On November 5, 1974, I saw a Java Sparrow in the cemetery with House Sparrows and Common Mynahs. This sighting represents a further extension of the range of the Java Sparrow in Honolulu.

Field Trip to Makiki Loop Trail by Erika Wilson: A successful field trip was held on October 13, 1974; eleven people walked the Makiki Loop Trail under beautiful skies. At the head of the trail, at the State Arboretum, we saw Spotted Dove, Red-crested Cardinal, Kentucky Cardinal, Red-whiskered Bulbul (first for some of the bird-watchers), and Shama Thrush. The pair of Shama Thrushes we observed were staying close to a natural cavity in a tree about 50 feet above the ground; we saw one bird enter the cavity and later exit, so this was probably a nest site. A little further on we saw Japanese White-eyes and House

Finches. On the trail proper, along the ridge we watched a pair of Ricebirds building a nest of grasses about 30 feet above the ground in an introduced tree of the acacia group. The grass blades brought by the pair were about three times as long as the birds, which made them seem comical, but we also admired their dexerity in weaving the grasses into a nest.

During a rest stop along the same ridge someone spotted a lovely White-tailed Tropic-bird sailing over our heads. Its pure white plumage marked with black stood out against the blue sky. Numerous Japanese White-eyes crossed our path during the remainder of the hike and the melodies of the Shama Thrush filled the air. Near the end of the trail we had the crowning experience of seeing an 'Elepaio. The individual was probably an immature bird, as it lacked the black throat patch of an adult bird. It looked at us curiously, a compliment we returned with the help of our binoculars.

Testimony on various proposed Environmental Protection legislative measures pertaining to the Implementation of Environmental Impact Statement viz: H.B. 1792, H.B. 1794 & H.B. 2067* to Rep. Jean King, Chairwoman, House Environmental Protection Committee from President Wayne C. Gagne, 22 February 1974

...For several weeks our Society has been examining proposed legislation relating to environmental impact statements. In examining this legislation, close comparisons were made among H.B. 1792, H.B. 1794 and H.B. 2067. During several of these comparisons we worked closely in meetings with other members of the recently established Environmental Coalition. It became clear that H.B. 1792 "RELATING TO STATE ENVIRONMENTAL POLICY AND ITS IMPLEMENTATION BY ENVIRONMENTAL IMPACT STATEMENTS", provided the best vehicle for this legislation.

H.B. 1792 has the immediate benefit and advantage of having been patterned after the tried-and-true, four year old National Environmental Policy Act. It is also straightfoward and fairly comprehensive. We found little that should require amendment in this bill, save for the possible addition of some wording in the paragraph beginning on line 15, page 4 to the effect that the responsible public official follow the guidelines established and to be developed by the Federal Council on Environmental Quality. This should serve to alleviate some imprecision regarding the handling of an environmental impact statement once it is initially drafted. H.B. 1792 is an essential piece of environmental legislation. It must be passed this session. Please give it your highest appraisal. ...

*Act 246 (HB 2067, HD 1, SD 1, CD 1) Environmental Impact Statements; effective 15 June 1974

HONOLULU STAR-BULLETIN, 31 July 1974, page A-18: Assessing the Impact

A new venture into the control of environmental quality in Hawaii is ready to start now that Acting Gov. George Ariyoshi has nominated and the Senate has confirmed the first-time membership of a new environmental Quality Commission.

...Environmental impact assessments (ETAs) will be required for any projects that may have significant environmental effect and: (1) Involve State or county lands or funds, (2) Involve conservation district land, (3) Involve the shoreline area or anything 300 feet seaward from it, (4) Involve historic sites, (5) Involve the Waikiki-Diamond Head area, & (6) Amend existing county general plans and result in designations other than agriculture, conservation or preservation. These assessments will be prepared under Act 246 of the 1974 Legislature. They will take into consideration environmental policies in a companion law, Act 247, which makes it a State goal to conserve Hawaii's natural assets and enhance them where possible. ...

The new commission ought to assume the responsibility of trying to develop procedures that are adequate for proper assessment of environmental effects, yet not overburdened with red tape, and capable of meshing smoothly with other project review requirements. It work will be trail-blazing. If it succeeds at all well, it is likely that the category of projects subject to review will be further expanded in future years. The Commission also will lay the groundwork for future efforts to add to the review procedures tests of the "carrying capacity" and measures of whether any areas or systems in the State are "at overload" or "in danger of overload." With the help of a Federal team that visited Hawaii last week, the Office of Environmental Quality Control and the Hawaii Environmental Simulation Laboratory are trying to develop these carrying capacity criteria.

The federal agencies are so interested they may be willing to supplement a \$100,000

state appropriation for this work, because they see it as trail-blazing for the nation. Florida is moving in a similar direction but focusing on physical criteria. The Hawaii "carrying capacity" planners hope to consider both physical and social criteria. ...

Honolulu Christmas Count: December 22, 1974 marks the birding event of the year in Honolulu, the annual Christmas Count. You can help take census the birds in one of the following nine areas within the count circle: 1-Aiea Trail; 2-Moanalua Gardens, Keehi Lagoon, Sand Island, and Nuuanu; 3-Tantalus, Makiki, and Punchbowl; 4-Manoa, U.H., and Ala Moana Park; 5-Kapiolani Park and Na La'au Arboretum; 6-Interior of Diamond Head, Kaimuki, Aina Haina, and Paiko Lagoon; 7-Kaelepulu Pond, Bellows Field, and Waimanalo; 8-Kawainui Swamp, Quarry Road, and Kailua; 9-Kaneohe, Nuupia Pond, and Ulupau Head.

A count circle is fifteen miles in diameter, which means we have 176.6 square miles to cover! Last year twenty participants did a fine job, but we need more people to do the birds justice, especially in the windward area and in the mountains above Honolulu. Within the circle there is tremendous habitat variety; last year forty-eight species were recorded. Join the Christmas Counters by calling Erika Wilson at 523-1843 in the evenings.

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Big Island Christmas Count: The Hawaii Audubon Society Volcano Christmas Count will be on 14 December this year. This Count Area on the southeast slopes of Mauna Loa is a 15-mile-diameter circle centered at Kulani Cone, near the community of Volcano. The Count Area includes such varied native habitats as alpine scrub at 8,000', fresh lava flows at 3,000', and koa and 'ohi'a-tree fern rain forests in between. Over 10 species of endemic Hawaiian birds live in the Count Area, and more than half of them are rare and/or endangered. Experienced observers are encouraged to participate in this exciting and important annual bird census. For details, contact William P. Mull, PO Box 275, Volcano, HI 96785(Tel:967-7352)

HAWAII'S ENDANGERED FOREST BIRDS, developed by a task force of scientists from the Hawaii Department of Natural Resources and the U.S. Fish and Wildlife Service, is an informative-attractive pamphlet with maps showing normal range and critical habitats. A copy will be displayed at the general meeting. For further information and extra copies write to Bureau of Sport Fisheries and Wildlife, PO Box 698, Kailua, HI 96734 or Department of Land and Natural Resources, Division of Fish and Game, 1179 Punchbowl St., Hon., HI 96813. A copy of this pamphlet was sent to all junior members, and I hope you have found it very interesting. Robert Clancey wrote, "I liked it very much." Any comments from other members? Grenville Hatch says, "I was much interested in the maps, and in the plea for the habitat, which is, of course, the crucial point." Please share your ideas by writing to Kojima, 725-A 8th Ave.

Another interesting publication PURPLE MARTIN NEWS, North America's backyard journal, which was generously sent to us by Jerome J. Pratt, a regional (Sonoran Southwest) columnist for this continental newspaper, will be available for your reference at the general meeting. For further information write to The Griggsville Wild Bird Society, Purple Martin Junction, Griggsville, IL 62340.

ALOHA to New members:

Marian Lutz, 2516 Stadium Drive, Logansport, Indiana 46947 Senckenbergische Bibliothek (Zeitschriften-Abteilung DFG), Beckenheimer Landstrasse 134-138, D-6000 Frankfurt/am Main, Germany

DECEMBER ACTIVITIES:

- 9 December Board meeting at McCully-Moiliili Library, 6:45 p.m. Members welcome.
- 16 December Annual meeting at the Waikiki Aquarium Auditorium at 7:30 p.m.

 Program: (1) Elect officers (2) Work out details of the Christmas bird count (3) Talk by David Gray on Nature Conservancy, Its Role in Protecting the Wildlife of Kipahulu Valley, Maui. (color slides)
- 22 December Christmas bird count

HAWAII'S BIRDS, a field guide, is available for \$2.50 postpaid, AIRMAIL 65¢ extra. Send in orders to: Book Order Committee, Hawaii Audubon Society, PO Box 5032, Honolulu, HI 96814.

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PHAINOPEPLA, Vol. 25, No. 1, August 1973, page 2: Remote from universal nature, and living by complicated artifice, man in civilization surveys the creature through the glass of his knowledge and sees thereby a feather magnified and the whole image in distortion. We patronize them for their incompleteness, for their tragic fate of having taken form so far below ourselves. And therein we err, and greatly err. For the animal shall not be measured by man. In a world older and more complete than ours, they move finished and complete, gifted with extensions of the senses we have lost or never attained, living by voices we shall never hear. They are not brethren, they are not underlings; they are other nations, caught with ourselves in the net of life and time, fellow prisoners of the splendour and travail of the earth. -- Henry Beston, OUTERMOST HOUSE

INTERNATIONAL WILDLIFE, Vol. 4, No. 6, Nov-Dec 1974, page 48: The Schweitzer Legacy-The deeper we look into nature the more profoundly we know that we are united with all life. Man can no longer live for himself alone.

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