'ELEPAIO

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NESTING SEASONS OF SOME INTRODUCED BIRDS IN HAWAII

by Andrew J. Berger

Very little has been published about the nesting activities of Hawaii's many introduced birds (Berger 1972a). As a result, we know little about the length of the nesting season for most species. For a number of species, among them the Greater Necklaced Laughing-thrush (Garrulax pectoralis), Western Meadowlark (Sturnella neglecta), Lavender Fire-finch (Estrilda caerulescens), Orange-cheeked Waxbill (E. melpoda), Red Munia (Amandava amandava), and Eastern Black-headed Munia (Lonchura malacca atricapilla), the first nest has yet to be reported in Hawaii.

Hawaii is unusual in that active nests of birds can be found in every month of the year. A few introduced species actually nest throughout the year. Although I have not made an intensive study of the Spotted Munia (Lonchura punctulata), I have found active nests of this species in every month except August. It probably nests during that month also. It is possible that the House Sparrow (Passer domesticus) nests throughout the year, but there have been no studies of this ubiquitous species that would confirm this supposition. Schwartz and Schwartz (1949) thought that both the Spotted Dove (Streptopelia chinensis) and the Barred Dove (Geopelia striata) might nest throughout the year in Hawaii.

Most introduced species undoubtedly do have a definite, limited breeding season as they do in their native lands. For only a very few species, however, do we know the limits of the breeding season in Hawaii because so few nests have been reported. I summarize below all references that I have gathered from personal notes, communications with other workers, and the pages of the 'Elepaio. FALL AND EARLY WINTER NESTERS Several species are of special interest because they begin to nest during the fall and early winter when daylengths are decreasing. These species include the Barn Owl (Tyto alba), Cordon-bleu (Uraeginthus angolensis), Red-cheeked Cordon-bleu (U. bengalus), Warbling Silverbill (Lonchura malabarica cantans), Java Sparrow (Padda oryzivora), and Yellow-fronted Canary (Serinus mozambicus).

Barn Owl. On 29 January 1969, near Kamuela, Hawaii, J. L. Dorigan and J. L. Moehring found a young Barn Owl about 3 weeks old on the ground about 20 feet below a cliff nest containing at least two other owlets (Berger 1972a: 202). John Leper found a nest with three eggs in a lava tube at South Point, Hawaii, during May 1972. I have been unable to locate any other records of Barn Owl nests in Hawaii.

Cordon-bleu. I found a Cordon-bleu nest under construction in a kiawe (*Prosopis pallida*) tree in the Na Laau Hawaii Arboretum, Oahu, on the outer slopes of Diamond Head on 9 October 1971. This nest was inaccessible and I do not know if the adult birds were successful in fledging young. I flushed an adult from another inaccessible nest in a kiawe tree the same day.

Red-cheeked Cordon-bleu. On 10 October 1976, I found a nest with five small young; this nest had been built about 9 feet from the ground in an olive tree (*Olea europea*) at La Pietra, Oahu. On 20 October, two young flew from the nest as I was climbing the tree and two others flew off before I could place my hand over the opening of the nest. Warbling Silverbill. The only published nesting records for this species are those of Berger (1975a). He found nests on the Big Island in February, March, April, and November. This species undoubtedly has a long breeding season in Hawaii.

Java Sparrow. Lawrence Hirai watched a pair of Java Sparrows carrying nesting material at Klum Gymnasium on the Manoa campus of the University of Hawaii on 21 November 1976; the nest was being built in a space between the roof and the wall of the building. Gordon Mark hand-raised a nestling Java Sparrow that had fallen out of its nest on 10 December 1976; this nest had been built in a horizontal pipe of the old engineering building on the campus. I visited this area with Mark on 15 December 1976, and we heard nestlings calling from another nest that had been built in an unused electrical outlet. On 4 December, I had watched a pair that seemed to be investigating potential nesting holes in monkeypod trees in Kapiolani Park, Oahu.

I have seen juvenile Java Sparrows from November to April as follows: 24 November (1973), 2 December (1976), 10 December (1974), 22 December (1971), 23 February (1977), 16 March (1974), 14 April (1976), and 27 April (1972).

Yellow-fronted Canary. The first nesting in Hawaii of this species was reported by Berger (1977a) from Kapiolani Park. He found the first nest (containing one small nestling and an unhatched egg) on 22 November 1976. He found a second nest (three eggs) on 10 December 1976, and a third nest (two eggs) on 12 February 1977. C. J. and Carol Ralph found a nest under construction on 16 January 1977.

LATE WINTER THROUGH SUMMER NESTERS Species which apparently begin to nest in late winter and continue into summer months.

Melodious Laughing-thrush (*Garrulax* canorus). William H. Meinecke found a nest with three eggs in the Waianae Range, Oahu, on 30 March 1934 (notes in the Bernice P. Bishop Museum). C. Robert Eddinger found nests on Kauai between 18 April and 21 July (Berger 1972a: 211). van Riper (1973) mentioned two nests with three eggs and four nestlings, respectively, that he found on Kauai on 1 and 2 May 1971. During 1972, on Hawaii, he found three nests: 4 May (three eggs), 2 June (three eggs), and 15 June (three nestlings).

Red-billed Leiothrix (Leiothrix lutea). The Leiothrix is now uncommon on Oahu; in the past, nests with eggs or young were found between 3 March and 20 June (Berger 1972a: 213). On Hawaii, Fisher and Baldwin (1947) reported nests from early March through June; the earliest hatching date was 14 March; the latest 16 June. I found three nests with eggs in the Mauna Kea Game Management area on 15 June 1968. I found two nests (each with three eggs) in the Kilauea Forest Reserve on 24 June 1971, and 23 July 1970; both of these nests had been built near the ends of tree fern fronds (Berger 1972b). The latest date is for that of a nest with two feathered young in Kipahulu Valley, Maui, on 5 August 1967.

Red-whiskered Bulbul (Pycnonotus jocosus). The history of this species in Hawaii was summarized by Berger (1975b). Mary Roberts wrote of a pair that nested in a croton bush in her yard in Makiki during 1971; one young bird fledged from the first nest presumably on 20 April; two young left the second nest on 14 August. On 27 April 1975, a pari of Redwhiskered Bulbuls with a fledgling (tail about one-half grown) flew into a plumeria tree outside my window on Huelani Drive in Manoa. I watched a pair with two adultsized young on Oahu Avenue in Manoa on 5 March 1977, and Sue Gaffney found a nest with three eggs in Nuuanu Valley on 7 May 1977.

Red-vented Bulbul (*Pycnonotus cafer*). Charles and Hilde Kaigler reported "two young red-vented bulbuls in the eucalyptus tree outside our Anoai Place house" on 28 August 1972 ('Elepaio, October 1972: 38), and Peggy Hodge wrote of fledgling Redvented Bulbuls being fed at a bird feeder in Lanikai on 21 January 1975 ('Elepaio, March 1975: 107). Earlier reports are of little value because they give no information except for the year of nesting.

Berger (1975b) discussed nests found on the Manoa campus of the University of Hawaii: 19 May and 10 July 1972, 2 May 1973, 4 April 1974, and 21 March 1975. I have seen fledglings on the campus on 12 May (1972), 25 August (1972), and 31 August (1976). Peggy Hodge found a nest with three young in Lanikai on 11 May 1975. Pyle (1976) wrote of a pair that nested successfully "... in June in a potted plant hanging under the eaves of a home in Kailua. Another nest, presumably by the same pair, was built in the same place in July. Two young fledged on July 30, and one full grown chick was left dead in the nest." These records suggest a nesting season lasting at least from January through August.

Mockingbird (*Mimus polyglottos*). Although the Mockingbird is an abundant species on several islands, there appear to be no nesting records in the 'Elepaio. I found a nest with three eggs near Makena, Maui, on 25 April 1964 (Berger 1972a: 216). Lawrence Hirai found a nest with three eggs on the Manoa campus on 26 March 1974, and Cindy Foursha showed me a nest with three eggs at Radford Terrace on 7 May 1977. The earliest date I have for a fledgling is 27 March (1969), when I found one bird just out of the nest on the Manoa campus.

Shama (Copsychus malabaricus). Richard C. Tongg photographed the nest and four eggs of the Shama in a woman's purse on Kauai during April 1970 (Berger 1972a: 219). I have found the following nests on Oahu: with four eggs, 31 March 1974; two nests, one with three eggs, the other with four eggs, on 20 April 1976. These three nests were in cavities in trees. Susan Monden found a fledgling Shama still unable to fly on a Tantalus trail on Oahu on 18 July 1970, and Frank Richardson collected a juvenile Shama on Kauai on 24 August 1960 (Berger 1972a: 218).

Japanese Bush Warbler (*Cettia diphone cantans*). Berger (1977b) told of the first two nests found in Hawaii on 12 and 17 April 1977.

Japanese White-eye (Zosterops japonica). Guest (1973) studied the White-eye on the Manoa campus during 1972 and 1973. She found the nesting season to last from February to July (1972) or August (1973). Berger (1972a) presented records of nests on Kauai (April through June) and Hawaii (March through May). The nesting season undoubtedly is longer than those records suggest.

Common Myna (Acridotheres tristis). Eddinger (1967) studied 25 nests on the Manoa campus during 1966. The dates of egg-laying extended from 7 March to 25 July. Clutch size varied from two to five eggs. I witnessed a pair copulating on the ground on 24 February 1964. I found a myna that had just left its nest on the campus on 25 August 1972; mynas were feeding large young in a nest built in an air conditioner in Snyder Hall, University of Hawaii Manoa campus, on 23 August 1969. Incubation lasts for 13 days; the young remain in the nest from 29 to 35 days.

Saffron Finch (*Sicalis flaveola*). Cindy Foursha found a nest under construction at Radford Terrace, Oahu, on 18 April 1977. The first egg of a two-egg clutch was laid on 25 April.

Red-crested Cardinal (*Paroaria* coronata). This species has a very long breeding season that lasts from mid-December to at least the first week in September. C. Robert Eddinger watched a stub-tailed fledgling being fed by two adults on 8 January 1967. There may be annual variation in the beginning of the nesting period, but nests and fledged young are common by February and in the following months. The latest date on which I have found a nest is 31 August 1976; the young left this nest after 6 September. Clutch size is either two or three eggs.

Yellow-billed Cardinal (Paroaria capitata). The first reference to this species in Hawaii is that of Brian A. Pelley who saw a bird in Kailua-Kona, Hawaii, on 24 November 1973 ('Elepaio, February 1974: 95-96). Reginald D. David wrote to me on 25 July 1975 saying that he also had seen this species in Kona. Collins (1976) wrote about finding adults and juvenile birds near Honokahou Pond on 11 March 1976. A long-time resident of Kona told Collins that he remembered having seen this species "since the time he immigrated in 1930." Patrick and Sheila Conant saw adults and two brown-headed fledglings at Honokahou on 11 July 1976 ('Elepaio, September 1976: 37). C. Fred Zeillemaker ('Elepaio, December 1976: 65) saw Yellow-billed Cardinals at Opaeula Pond, Hawaii, on 10 March, 6 May, 9 June, and 26 August 1976; he saw an immature bird there in June. George C. Campbell found the first nest about 20 feet from the ground in a kiawe tree on 3 May 1977 at Honokahou Harbor; an adult apparently was incubating on this nest.

Cardinal (*Cardinalis cardinalis*). Very little has been published on the nesting of this common species. Cardinals begin their territorial singing before mid-December, which suggests that this is the onset of the nesting season (Berger 1972a: 236). I found four nests near Makena, Maui, on 26 April 1964; two nests contained two eggs each, and two nests held three eggs each. I flushed a female from a nest in Kipuka Ki, Volcanoes National Park on 22 July 1970; this nest, about 20 feet from the ground, was in such a slender mamaki (*Pipturus*) tree that there was no way to check the contents. I have found recently fledged young on Hawaii from 24 March to 11 August. On Oahu, I have records of nests with eggs from 10 April (1966) to 17 July (1972). Clutch size was three eggs in five nests and four eggs in four nests. I observed copulation on 19 February (1966).

House Finch (Carpodacus mexicanus frontalis). Hirai (1975) studied the House Finch on the Manoa campus from January 1972 through July 1974. He found 257 nests built in 26 different plant species. He reported a nesting season lasting from mid-February through August. Average clutch size was 4.2 eggs with a range of two (two nests) to five (31 nests) eggs. Hirai found nesting success to be low: 17-percent success in 1972 and 1974 and 30 percent in 1973. The scant data available on nesting of the House Finch on other islands as of 1970 have been summarized by Berger (1972a). van Riper (1976) wrote that the breeding season on the island of Hawaii extends from early March to late July; average clutch size of 14 nests was 3.9 eggs; incubation periods varied from 12 to 14 days.

House Finches in Hawaii not uncommonly build their nests in vegetation on the lanais of condominiums. I have seen nests on lanais on the 8th, 20th, and 32nd floors of condominiums.

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VOLUNTEERS NEEDED TO HELP THE SOCIETY

Several volunteers are needed to help with various aspects of the Society's work. If you have some spare time to devote, please contact Bob Pyle (262-4046) or any board member. We need the following:

 An indexer for the 'Elepaio, a monthly task of a couple of hours.

2. A liaison person with National Audubon (to transmit information on matters of concern to Hawaii).

3. An archivist to help maintain the Society's files at the Bishop Museum.

4. Mailers, staplers, folders, etc. to assist the committee in getting out the 'Elepaio one day a month.

INDUSTRIAL FORESTRY FOR HAWAII

by Mae E. Mull

Since the fall of 1976 a renewed drive has been underway for State commitment to a large-scale industrial forestry program. At the annual Hawaii Forestry Conference held in Honolulu in November 1976 Governor Ariyoshi issued a call for a timber industry based on a 200,000-acre industrial forest to be planted over a 30-year period. The proposal is the "Level B" program contained in *Forestry Potentials for Hawaii*, published in 1976 by the Department of Land and Natural Resources, the Department of Planning and Economic Development, and the U. S. Forest Service.

About two-thirds of the tree farm system would be on State-owned lands, with the remaining one-third on lands in private ownership. The 200,000 acres of plantations would be divided almost equally between production of pulpwood and sawlogs. *Eucalyptus* trees of Australian origin on 105,000 acres, with a 10-year harvesting cycle, would be the principal source of pulp for export as chips or for fuel in local power generation. Hardwood trees such as Australian toon and Queensland maple, along with a small percentage of native koa, on the other 95,000 acres may provide sawtimber for local manufacture or export 40-75 years after planting.

In this program job opportunities and agricultural diversity through tree farming take precedence over both economic feasibility and the valuable functions of existing native forests. Development costs to the plantation landowner would average about \$1,200,000 a year for 30 years, with the first small net return of \$100,000 not projected until after 20 years. Since private landowners will be slow to take such substantial long-term invest investment risks, the State is expected to lead as principal investor with public funds to demonstrate the profitability of industrial forestry in Hawaii. Market quality, favorable price competition and dependabel demand for exotic timber products are admittedly less than assured.

The effects of such extensive tree planting on native forest ecosystems is not seriously evaluated in the proposal. Conversion of diversified 'ohi'a forests could have a drastic impact on endemic birds, plants, and invertebrates. The loss of native habitats is implicit in the industrial plan: "Program B would require about 110,000 acres of land presently occupied by native forest types" (p. 60). Replacing native ecosystems with

tree crops is "assumed compatible" with threatened and endangered plant and animal species even though the plan admits that the "critical habitats of endangered and threatened plant and animal species have not yet been determined" (p. 60). With sharp focus on justifying a timber industry that would equal the size of the 200,000 acres in sugar production, the plan gives uneven treatment to the adverse impacts on the natural environment or contorts some into a "beneficial impact" (pp. 58-61). It is less than realistic for the plan to estimate as "beneficial" the impacts on watershed protection, esthetics, wildlife habitat, recreation and forest protection when 110,000 acres of native forest are to be cleared for monoculture farming. Compare, for example, the barren ecological desert of an Eucalyptus plantation with the rich complexity of plant and animal life forms in a mature 'ohi'a forest.

Most of the former koa forests in an upper elevation belt on the Big Island have been logged over and put to grazing use-thus foreclosing regeneration of that high quality, highly valued native hardwood. The koa farming aspect of thr program would have positive effects in the long run and warrants support: "It is anticipated that a large proportion of the pasture land to be reforested is suitable for koa and will be planted . to that species" (p. 60). However, if the other life forms in a natural koa system are not present and cannot be restored, it is premature for the plan to suggest that koa plantings alone "may have a beneficial effect on native bird populations," particularly in a plantation under intensive koa management.

Currently, industrial forestry plans are moving in two directions, the first being the "Conceptual Plan and Guidelines for Selecting Tree Planting Sites for Industrial Wood Production." An information meeting soliciting public input on this Division of Forestry proposal was held in Hilo on July 27, 1977. In determining "those lands which are physically capable of growing trees as a commercial crop," the guidelines give top priority to "Conservation District lands presently classified as commercial forest lands on existing forest type maps" (p. 1). The real threat to native forests becomes apparent when you realize that practically all native forests not having officially protected status are classified as "commercial forest lands" by federal and State foresters.

These guidelines recognize an important environmental constraint in site selection: where "modification of the forest would likely lead to immediate or eventual extinction of a native ecosystem or of individual species of native flora and fauna" (p. 1). Fine! But is there a biological information base available so that such forests would be excluded from planting by sound decision making? Assurance of this sort is lacking elsewhere in the guidelines when underplanting and strip planting of exotic hardwoods in the existing forest are proposed as a means of protecting wildlife habitat and retaining native forest values (p. 4). Contrary to the guidelines view is the ecological position that such practices result in ecosystem degradation and the loss of native forest values.

In comments at the Hilo meeting, I affirmed previous HAS positions that Hawaii's remnant forests which are essentially native in character should be unavailable as new planting sites for exotic timber. The human environment on our small, oceanic islands is enhanced by the valuable functions fulfilled by native forests, including ecosystem stability through natural diversity of species, biological investigation laboratories, watershed protection, soil retention and erosion control, recreation (nature appreciation, hiking and pig hunting) and preservation of a singular natural heritage. Hawaii residents can no longer afford the unnecessary and unprofitable loss of native forest resources.

Tree farming should be confined to the Agricultural District. In this vein, marginal or unproductive agricultural lands could be suitable tree planting sites for fiber forestry, fuel forestry or hardwood production--if the economic cost-benefit ratio is favorable.

Another project of concern is the resurrection of the "Reforestation Project within Portions of the Waiakea, Upper Waiakea and Olaa Forest Reserves" on the island of Hawaii. This project, which called for bulldozers "smashing in place most of the existing large vegetation," was withdrawn after strong public protest in late 1973 and early 1974. Strangely, the discredited planting scheme is being revived even though the solid arguments then for not destroying rich 'ohi'a rain forests have greater validity today. The two forests totalling 5,300 acres are off Stainback Highway (the road to Kulani Prison) between 2300'-3300' elevation and are separated by neglected timber plantations of unknown economic value. The upper forest is notable for its exceptionally tall 'ohi'a trees and high honeycreeper and 'Oma'o populations. Rare endemic plants and insects are known to occur in these forests. Bird observations along the U. S. Fish and Wildlife

Service transects that run through the area and the thorough botanical survey that is underway will provide essential information for the environmental impact statement that must be prepared if the Division of Forestry decides to proceed with the project.

September 15, 1977

H.A.S. Representative Island of Hawaii

ALOHA TO NEW MEMBERS

The society welcomes the folling new members: Regular -- William N. Bigler, Honolulu; Yeikko Jean Nowaki, Honolulu; David E. Pfanner, Bangkok. Junior -- Andrew N. Bigler (13), Honolulu. Life -- Amy Lou Duncan, Apple Valley, Calif.

DONATIONS

Mahalo nui loa for donations to help the society recieved from William N. Bigler. Your generous kokua is greatly appreciated.

PROPOSED NEW BY-LAWS IN THIS 'ELEPAIO

A proposed new Constitution and By-Laws for the Hawaii Audubon Society is included in this issue of the 'Elepaio. They were prepared by the By-laws Committee during April, May and June, 1977. The Senior Vice-President of National Audubon Society, Paul Howard, reviewed them in August and confirmed they are acceptable for a chapter of National. The HAS Executive Committee, at its meeting September 12, 1977, approved them in final form for: (1) mailing to members in the October 1977 'Elepaio; (2) presentation at the regular business meeting of the Society on October 17, 1977; and (3) a vote on their adoption at the regular business meeting on November 21, 1977.

If these are adopted at the regular business meeting on November 21, the Executive Committee will proceed with steps to convert Hawaii Audubon Society from an Affiliate to a Chapter of National Audubon Society.

The Society's present Constitution and By-laws may be found in the November 1974 'Elepaio (p. 56), with amendments in the January 1975 'Elepaio (p. 83). PROPOSED NEW CONSTITUTION AND BY-LAWS for the HAWAII AUDUBON SOCIETY

CONSTITUTION

ARTICLE I

NAME

The organization shall be known as the Hawaii Audubon Society (hereinafter called SOCIETY). It was founded by George C. Munro and first organized by Charles M. Dunn in 1939. The emblem of the SOCIETY shall be the native Hawaiian bird 'Elepaio, which typifies that friendliness to man which the SOCIETY reciprocates in its attitude toward all wildlife.

ARTICLE II

PURPOSE

Section 1. This SOCIETY is formed to further the protection and conservation of Hawaii's native wildlife, and the ecosystems which support it. The purpose and objectives of this SOCIETY shall be to engage exclusively in educational, scientific, literary, and charitable pursuits, and said purposes and objectives shall conform to the provisions of Section 501(c) (3) of the Internal Revenue Code.

Section 2. The aims of the SOCIETY are: (1) to arouse public appreciation of the beauty and economic value of wildlife and to stimulate action to preserve and protect it; (2) to preserve an adequate breeding stock of all native wildlife for the enjoyment and material benefit of mankind; (3) to preserve environmental conditions of ample food, water and cover on the maintenance of which all wildlife is dependent for survival; (4) to foster public education and research on Hawaii's native wildlife; (5) to fix guardianship responsibilities on Federal, State or competent private agencies for safeguarding all species threatened with extinction.

Section 3. This SOCIETY is not organized, nor shall it be operated, for pecuniary gain or profit, and it does not contemplate the distribution of gains, profits or dividends to the members thereof, or to any private shareholder or individual, except as grants or scholarships to aid in the study of Hawaiian wildlife which may be awarded from time to time to students or researchers who may also be members of the SOCIETY. The property, assets, profits, and net income of this SOCIETY are irrevocably dedicated to charitable purposes and no part of the property, assets, profits or net income of this SOCIETY shall ever inure to the benefit of any director, officer, or member thereof, or to the benefit of any private shareholder or individual, except as grants or scholarships as noted above. Upon the dissolution, or upon the abandonment, the copyrights and other assets of this SOCIETY remaining after payment of, or provision for, all debts and liabilities of this SOCIETY, shall be donated to the Bernice P. Bishop Museum or other Hawaiian society, or to the Nation Audubon Society (hereinafter called NATIONAL SOCIETY) or its successor, or to such corporation or corporations, association or associations, fund or funds, or foundation or foundations having similar objectives and purposes presently set forth in Section 501(c)(3) of the Internal Revenue Code.

BY-LAWS

ARTICLE I CONSTRUCTION

Section 1. The SOCIETY shall be autonomous and shall possess all the powers permitted to non profit organizations under the laws of the state of Hawaii.

Section 2. The masculine pronoun, as used hereinafter shall mean the masculine or feminine, wherever applicable.

ARTICLE II MEMBERSHIP

Section 1. Any person interested in the purposes and objectives of the SOCIETY may become a member of the SOCIETY upon payment of dues.

Section 2. The classes of membership and membership dues of this SOCIETY shall be the same as that of the NATIONAL SOCIETY. In addition, residents of Hawaii and members of the SOCIETY at the time of chapterization with the NATIONAL SOCIETY, shall have the option of membership in the SOCIETY only, at dues established by the Board of Directors of the SOCIETY.

Section 3. Each member shall have the right to cast one vote at the annual meeting and at any regular or special meeting of members on any motion that may properly be brought before such meeting, including the election of officers and directors. Members in the Family Class of Membership shall be entitled to two votes per family, provided that at least two members of the family are present in person or proxy at the time of the meeting.

Section 4. Membership dues shall be payable at the time of application and, except for Life Members, yearly thereafter. In the case of Life Members, dues shall be paid in full in one sum, except as may be provided otherwise in the By-Laws of the NATIONAL SOCIETY.

Section 5. Should renewal of membership dues not be paid within six months after due date, a member so in default shall be dropped forthwith from the rolls.

ARTICLE III GENERAL MEMBERSHIP MEETINGS

Section 1. Regular meetings of members shall be held on the 3rd Monday of each month, unless otherwise determined by vote of the Board of Directors, but such regular meetings shall be held not fewer than six times in any calendar year. Section 2. The annual meeting of members shall be held on such date in December each year as may be determined by vote of the Board of Directors.

Section 3. Special meetings of members may be called by the President or pursuant to resolution of the Board, or by petition of not less than one-tenth (1/10) of all members entitled to vote.

Section 4. Notice of the annual meeting, special meetings, and regular meetings, at which SOCIETY business is to be transacted, shall be given not less than fifteen (15) days nor more than fifty (50) days before the date of the meeting. Such notice is given when deposited in the United States mail, with proper postage thereon, and directed to the member at his address of record.

Section 5. Notice of a special meeting of members shall state the purpose or purposes for which the meeting is called.

Section 6. Twenty-five (25) voting members shall constitute a quorum at any meeting of members at which SOCIETY business is to be conducted. The members may be present in person or by proxy.

ARTICLE IV BOARD OF DIRECTORS

Section 1. The control and conduct of the business of the SOCIETY shall be vested in its Board of Directors. The decisions of the Board are subject to approval of the membership of the SOCIETY at any regular or special meeting, or by mail.

Section 2. The Board shall be comprised of not less than two (2), nor more than six (6) elected Directors and, ex-officio with full voting rights, the elected officers of the SOCIETY.

Section 3. The Directors shall be elected for the term of one year, or until the following annual meeting, whichever comes first, by a plurality of the voting members of the SOCIETY present in person or by proxy at the annual meeting of members.

Section 4. No one individual shall serve for more than four (4) consecutive terms as a member of the Board.

Section 5. If by reason of resignation or death, or for any other reason, vacancies exist whereby the Board has not the full complement of Directors, the Board may proceed to elect a Director or Directors to fill such vacancies and the Director or Directors so elected shall serve until the next regular meeting of members. When for such purpose a Director has been elected for less than a full term, such part term shall be disregarded with respect to his qualifications for re-election for additional consecutive terms, as set forth in Section 4 above.

Section 6. There shall be at least five regular meetings of the Board of Directors in any one calendar year, and not more than one regular meeting in any one month. The dates for the regular meetings shall be determined by the Board at its first regular meeting following the annual meeting of members.

Section 7. Special meetings of the Board shall be called by the President or by the Recording Secretary upon request of the majority of the Board. Notice of a special meeting may be given in person or by telephone not less than three (3) nor more than ten (10) days prior to the date of the meeting or, if by mail, not less than ten (10) nor more than twenty (20) days prior to the date of the meeting.

Section 8. A majority of the Board shall constitute a quorum at any meeting of the Board.

Section 9. The President or, in his absence, the First Vice President or, in his absence, the Second Vice President, shall act as Chairman at any meeting of the Board. In the absence of the above officers, the Board shall designate any other member of the Board to act as Chairman at such meeting.

ARTICLE V OFFICERS

Section 1. The officers of the SOCIETY shall be a President, a First Vice-President, a Second Vice-President, a Recording Secretary, a Corresponding Secretary and a Treasurer, and such other Officers as as may be determined by the Board of Directors.

Section 2. All officers shall serve for one (1) year terms, or until their successors are elected, and no individual may hold the same office for more than two (2) consecutive terms.

Section 3. The officers shall be elected for their respective terms by a plurality of the voting members of the SOCIETY present, in person, or by proxy, at the annual meeting of members.

Section 4. If by reason of resignation or death, or for any other reason, an office shall become vacant, the Board may proceed to elect, by majority vote, such officer to fill the vacancy and the officer so elected shall serve until the next annual meeting of members. When, for such purpose, an officer has been elected for less than a full term, such part term shall be disregarded with respect to his qualifications for re-election for a full term or for additional consecutive terms, as set forth in Section 2 hereinabove.

Section 5. The President shall direct and administer the affairs of the SOCIETY as its executive head and shall supervise all phases of its activities, subject to instructions by the Board. He shall also be an ex-officio member of all committees. He shall preside at all meetings of members and of the Board.

Section 6. The Vice-Presidents shall assist the President to carry out his duties. In the absence of the President, the First Vice President shall direct and administer the affairs of the SOCIETY and supervise all phases of its activities, subject to instructions by the Board, and shall preside at meetings of members and of the Board. In the absence of both the President and First Vice President, the Second Vice President shall have these responsibilities. 42

Section 7. The Recording Secretary shall keep a record of all proceedings of the SOCIETY and of the Board of Directors. He shall see that notices of all meetings are sent to members.

Section 8. The Corresponding Secretary shall conduct all the correspondence of the SOCIETY except such correspondence as, by instructions of the Board or at the discretion of the President, shall be conducted by another member of the SOCIETY. He shall preserve all correspondence of the SOCIETY.

Section 9. The Treasurer shall have custody of the SOCIETY's funds. He shall disburse such funds as may be ordered by the Board. He shall report to the Board at its regular meetings or as requested. He shall prepare the required annual IRS statement for tax-exempt organizations, and shall prepare general excise tax statements required by the State. He shall prepare an annual report on the financial condition of the SOCIETY for presentation to the members at the annual meeting of members. The annual report shall be published in the 'Elepaio and a copy shall be forwarded to the NATIONAL SOCIETY. The annual report shall be duly audited by an auditing committee of three members appointed by the President. The Auditors' report shall be presented to the Board at its first meeting following the annual meeting of members.

Section 10. All withdrawals from, or checks drawn on, the SOCIETY's accounts shall be signed by at least two members of the BOARD OF DIRECTORS having their signatures on file at the appropriate bank. At least three members of the Board, including the President and Treasurer, shall have their signatures on file at the bank.

ARTICLE VI AREA REPRESENTATIVE

Section 1. The President, with approval of the Board, may appoint official representatives of the SOCIETY for the islands of Hawaii, Kauai, Maui, Molokai, or Lanai, or for other areas in the Pacific region, or elsewhere as determined by the Board. No more than one representative shall be appointed for each area. A representative must be a member of the SOCIETY and must reside in the area he represents. Area representatives serve until resignation or until their appointments are terminated by the Board.

Section 2. Written statements or letters prepared, or other actions taken, by Area Representatives in behalf of, or in the name of, the SOFIETY, shall be consistent with relevant policies of the SOCIETY as developed by the Board. Area Representatives shall inform the President of all such actions, in advance when feasible or otherwise promptly afterward, and shall send copies of written statements to the editor of the 'Elepaio.

ARTICLE VII NOMINATING COMMITTEE

Section 1. The Board of Directors shall annually appoint, not later than three (3) months prior to the next annual meeting of members, a Nominating Committee, to consist of not less than three (3) members. The names of the members of the Nominating Committee shall be made known to the members through the SOCIETY's newsletter, or other publication, or by mail, or at a regular meeting of members, not later than one (1) month after the Nominating Committee has been constituted. Suggestions for nominations of Officers and Directors may be submitted to the Nominating Committee by any member of the SOCIETY.

Section 2. The Nominsting Committee shall nominate candidates for Officers and Directors to succeed those whose terms expire at the next annual meeting. The Committee's report shall be published in an issue of the 'Elepaio distributed to members prior to the annual meeting, and shall be presented to the membership at a regular meeting of members not later than one (1) month nor earlier than two (2) months prior to the annual meeting.

Section 3. Nothing contained herein shall be construed to prevent nomination of Officers and Directors from the floor at the annual meeting, with the prior ∞ nsent of the nominee.

ARTICLE VIII OTHER COMMITTEES

Section 1. The President, with the approval of the Board of Directors, shall appoint chairmen of Standing Committees who, in turn, may select their own committee members with recommendations and suggestions from the Board. Terms of office shall be for one (1) year, or until their successors are appointed; but no member shall serve as Chairman of the same committee for more than three (3) consecutive years.

Section 2. The President, with the approval of the Board of Directors, may appoint Special or Task Force Committees whose terms of office will be determined by the length of the assignment to be done.

Section 3. The Standing Committees may be as follows and may include such other committees as may be constituted by the Board of Directors to carry out the functions of the SOCIETY:

CONSERVATION COMMITTEE

The Conservation Committee shall keep informed on local, state and national governmental policies and actions affecting the antural environment and conservation of Hawaii's native wildlife. It shall draft and recommend the SOCIETY's conservation policy to the Board. It shall carry out the conservation policy as approved by the Board and endeavor to coordinate the actions of the SOCIETY with the policy and activities of the NATIONAL SOCIETY insofar as conservation measures and policies of national scope are concerned. It shall keep the NATIONAL SOCIETY informed of such actions. One of the Board members shall serve as Chairman of the Conservation Committee.

PUBLICATIONS COMMITTEE

The Publications Committee shall include the editor of the 'Elepaio, and shall publish the 'Elepaio at least six (6) times a year, for the members of the SOCIETY. The Publications Committee shall prepare any other publications helpful to the SOCIETY's program. One of the Board members shall serve as Chairman of the Publications Committee.

EDUCATION COMMITTEE

The Education Committee shall maintain close contact with the Educational Services Division of the NATIONAL SOCIETY. It shall encourage schools and colleges within the SOCIETY's territory to conduct courses in, or otherwise stress, natural history, ecology and conservation. It shall, through other means, inform and educate the public about the natural environment, and Hawaii's native wildlife.

MEMBERSHIP COMMITTEE

The Membership Committee shall keep the SOCIETY's membership records and shall conduct membership campaigns to enroll new members. It shall endeavor to retain those members who have become delinquent in the payment of their dues.

FIELD TRIP COMMITTEE

The Field Trip Committee shall plan, organize and arrange for the proper conduct of field trips that may be participated in by members of the SOCIETY and others interested in the purposes and aims of the SOCIETY.

FINANCE COMMITTEE

The Finance Committee shall plan the annual budget of the SOCIETY, assist the Treasurer in the preparation of financial reports, and make recommendations and carry out plans for obtaining financial support

PUBLICITY COMMITTEE

The Publicity Committee shall publicize, through newspapers, radio, TV and other publicity media, the purposes, aims and program of the SOCIETY.

ARTICLE IX COMMITMENTS

This SOCIETY shall not enter into any commitments binding upon the NATIONAL SOCIETY without written authorization by the NATIONAL SOCIETY, nor shall the NATIONAL SOCIETY, without written authorization by this SOCIETY, enter into any commitments binding upon this SOCIETY.

ARTICLE X DISCONTINUANCE

This SOCIETY may terminate its status as a Chapter of the NATIONAL SOCIETY upon six (6) months' notice in writing to the NATIONAL SOCIETY, and the NATIONAL SOCIETY may terminate the status of this SOCIETY as a Chapter of the NATIONAL SOCIETY upon six (6) months' notice, in writing, to this SOCIETY. In the event of such notice of termination by either this SOCIETY or the NATIONAL SOCIETY, the allocation of dues by the NATIONAL SOCIETY to this SOCIETY shall cease on expiration of the six (6) months' period. However, members of this SOCIETY shall remain members of the NATIONAL SOCIETY for the balance of the term for which dues have been paid.

ARTICLE XI AMENDMENTS

The Constitution and By-Laws may be amended by a majority vote of members present in person or by proxy at any regular or special meeting of members duly called pursuant to the provisions of ARTICLE III Section 4 hereinabove. The notice of such meeting shall recite the wording of each proposed amendment.

ARTICLE XII PARLIAMENTARY AUTHORITY

In procedural matters not covered by these By-Laws, Robert's Rules of Order shall govern.

PUBLICATIONS OF THE SOCIETY

HAWAII'S BIRDS by the Society (1975). This is the best field guide to our birds, and includes colored illustrations of all native and well-established exotic species. (Postpaid, add 32¢ for airmail) . . . \$3.50

PRELIMINARY LIST OF THE BIRDS OF HAWAII by R. L. Pyle (1977). An authoritative compilation of all species naturally occurring in Hawaii as well as those introduced by man currently established as viable populations. Gives an excellent summary of each species' status.

(Postpaid). \$1.00

"CLEAN" VS "DIRTY" SPECIES WHAT BIRDS CAN BE IMPORTED INTO HAWAII?

The Lacey Act gives the Secretary of the Interior authority to decide what wildlife (defined as vertebrate animals plus molluscs and crustaceans) is potentially injurious to U.S. agriculture, citizens, forestry, and wildlife, and prohibit its entry to the U.S. As originally written, the legislation specified that the Secretary compose a list of injurious species, which would be prohibited entry, while all other species could be shipped at will. In 1973 it was proposed to amend this section of the regulations to require that the Secretary list the "low risk" species, which could be imported without permits, and prohibit entry of all other species, except as provided for in special permits for zoos, research, etc. This proposal was aired at hearings, revised, and aired again in 1975, resulting in further changes, which were recently published as a proposal in the Federal Register on 7 March 1977. As a result of pet industry, aquaculture, and hobbyist concerns expressed at the second set of hearings, this latest proposal reverts to the "dirty list" approach, allowing importation of all species except a few designated as injurious. This list is very short. The only birds listed are the bulbuls, starlings, and mynahs, the Japanese White-eye, Quelea quelea, and Java Sparrow.

Hawaii Audubon Conservation Chairman Dr. Frank Howarth submitted written testimony on behalf of Hawaii Audubon strongly opposing the "dirty list" approach and urging adoption of the low risk list. Here is part of what he said:

...Biological pollution, the establishment of a foreign species of animal or plant, is a forever thing. Unlike most other forms of pollution, in which the ecosystem starts to recover once the perturbation is stopped, the eradication of exotic animals and plants is virtually an impossible task. The few instances where an established animal has been eradicated are rare, and the circumstances exceptional. Biological pollution goes far beyond the initial perturbation because it is self reproducing and perpetrating, and can invade native ecosystems in perverse ways, far beyond man's ability to control it.

Hawaii, unfortunately, is the worst example in all the world of the ravages of introduced biota. We submit that biological pollution in Hawaii is our most serious pollution problem. Our loss has been both aesthetic and scientific in the loss of our native species and ecosystems, and in the economic loss of potential commercial, agricultural and tourist development. For example, recent efforts to develop a seed production industry for varieties of small grains for mainland plantings was completely foiled by several species of birds, all introduced as cage and pet birds and purposely or inadvertently released and established.

History is so full of other examples of injurious foreign wildlife that we are flabbergasted at the tepidness of this proposal. We are in favor of the rationale of the previous proposal to list permitted wildlife only...

Listing of permitted animals, but with provision for the service to add or remove animals as new information becomes available, is the only workable solution. We must close the barn door on most plant and animal introductions if we are to maintain a viable agriculture and future options for economic development, and to enjoy and develop the aesthetic and scientific resources of our native ecosystems.

... The public must be educated on the value of such restrictions. Keeping wildcaught animals as pets, perhaps to be released when the novelty wears off, for the recreational enjoyment of a few people, is both inhumane and an unwise risk to our resources ...

The present ["dirty"] list is untenable. It is so reduced that it is beyond the scope of our testimony to comment on it. For example, to single out just one species of white-eye when the whole family Zosteropidae, with few exceptions of oceanic island endemics, is characterized by the amazing ability to aggressively colonize new habitats is nonsensical. ...

In conclusion, we respectfully urge you to kill this proposal and return to the proposal for a "clean" permitted list. ...

Thank you very much for the opportunity to present this testimony.

/s/ Francis G. Howarth [Ed. note ____ The outbreak of the highly contagious Newcastle disease in late August on Oahu points up the need for good controls. One can only speculate with some trepidation the effect this disease might have on our native avifauna.]

CRITICAL HABITAT DETERMINATION FOR PALILA IS FINALIZED

In December 1976, the Director of the Fish & Wildlife Service issued a Proposed Rulemaking describing a specific area on Mauna Kea as a proposed Critical Habitat for the Palila (See 'Elepaio, April 1977, p. 104-105). Comments and suggestions from the public were solicited. In the Federal Register for August 11, 1977, the Final Rulemaking was published, which determined and defined Critical Habitats for the Palila and for five additional North American species. Some significant excerpts from the published Final Rulemaking are as follows:

Following issuance of the Proposed Rulemaking, "letters in support of the proposed designation of Critical Habitat for the Palila were received from the Governor of Hawaii, the State Forester of Hawaii, the U.S. Forest Service, the Golden Gate Audubon Society, and three other parties. The New York Zoological Society also supported the designation, but suggested that the area in question be more precisely described. The International Council for Bird Preservation recommended that the Critical Habitat area be enlarged to include former portions of the range of the Palila, where the species might be restored under proper management. The Service would be prepared to propose designation of such areas when warranted by appropriate data. Professor Sheila Conant of the University of Hawaii recommended specification of an upper elevation limit for the Critical Habitat zone. Although the background section of the Service's proposal did indicate that the Critical Habitat zone extended to 10,000 feet, and it was the Service's intention to delineate only the area below that elevation, the legal designation contained no reference to such a limit. This problem has been dealt with in the final rulemaking." "The palila depends on the area delineated below for food, shelter, and nesting sites; it cannot survive without the mamane and naio trees found therein. Moreover, the delineated area apparently contains the world's entire known population of palila, and supports most of the large and intermediate-sized mamane and naio trees on Mauna Kea. This area is large enough to allow space for the population to expand and includes a full range of altitudinal and geographical sites needed by the palila for normal life cycle movement.

Such movement is the response of the species to shifting seasonal and annual patterns of flowering, seed set, and ensuing pod development. " ... "The effects of Critical Habitat determination involve primarily Federal agencies. In accordance with Section 7 of the Act, such agencies, and only such agencies, are required to insure that actions authorized, funded, or carried out by them do not adversely affect the Critical Habitat of Endangered or Threatened species ... This designation does not automatically prohibit any particular action, and it is likely that many kinds of Federal actions involving the areas in question would not be expected to be detrimental to these species."... "The Director has considered all comments and data submitted in response to the proposed determination of Critical Habitat ... The Director also has considered other information received by the Service, both prior to and subsequent to the publication of the proposed Critical Habitat determinations in the Federal Registers ... Based on this review, the areas delineated below are determined to be Critical Habitat for the species indicated [Palila]."

FISH AND WILDLIFE SERVICE FINDS ALMOST 40 'O'U ON BIG ISLAND

(Excerpts from an article in the Honolulu Star-Bulletin, August 22, 1977)

by Harry Whitten

Ornithologists conducting a survey of endangered native birds in the Hamakua area of the Big Island have seen more 'O'u, a yellow-headed honeycreeper, than ever tallied before on a count.

By the end of the survey in late August, they had counted almost 40 of the endangered birds, according to Eugene Kridler, endangered species coordinator of the U. S. Fish and Wildlife Service.

The significance of the count can be realized from information on the 'O'u in "Hawaiian Birdlife", the authoritative book by Andrew J. Berger.

Berger said the bird was seen on the Big Island in 1961 and not seen again until 1970. It had not been seen on Maui for years and is believed to be extinct on Oahu, Molokai, and Lanai. A few 'O'u have been seen in Kauai's Alakai Swamp. Kridler said ornithologists have seen quite a few 'Akepa and Hawaiian Creeper, two other endangered birds, at the 3,500-4,900-feet levels, more than 60 Hawaiian Hawks, but fewer 'Akiapola'au than expected.

They had hoped to find some birds considered to be extinct but had no such luck.

This summer's survey was on the northeastern slope of Mauna Kea, from Honokaa to the boundaries of Hawaii Volcanoes National Park, and in the Hilo, Upper Waiakea, Olaa, Upper Olaa, and Kilauea Forest Reserves.

A survey was made last summer in the Ka'u Forest Reserve. Next year survey teams hope to work in the Volcanoes National Park, in Puna, and on the west coast of the Big Island, Kridler said.

The surveys were designed primarily to get data on endangered birds, including such matters as their distribution and their habitat, but observations were also made on rare and endangered plants.

Kridler said botanists in the survey found one plant that was believed to have been extinct, a lobelia named *Clermontia pyrularia*, and several others that are endangered. The botanists will finish their survey by the end of September.

J. Michael Scott was the survey leader, with Cameron Kepler assistant leader. Both are wildlife biologists of the U. S. Fish and Wildlife Service.

To conduct the surveys, 204 miles of transects were laid out, two miles apart, and with 2,700 observation stops.

The survey is a joint venture of the Fish and Wildlife Service, State Fish and Game and Forestry Divisions, with help from the U. S. Forest Service.

KANEOHE MARINES WIN MAJOR CONSERVATION AWARD

An article in the Honolulu Star-Bulletin, 12 September, 1977 by Harry Whitten

For some time conservationists have realized that often the military does a better job than civilians in conserving natural resources on land it controls.

Latest evidence of military conservation efforts was the announcement last week that the Kaneohe Bay Marine Corps Air Station had been chosen as 1976 winner of the Secretary of Defense's Environmental Quality Award. This is the highest award any military installation can receive for conservation. The Oahu station won top honors among 243 military installations around the world and was also the first Marine station to win the award.

The selection committee noted the Kaneohe MCAS's cooperative work with State and local officials.

Conservation on military lands is important in view of the amount of land they encompass -- something like 26 million acres in the United States, or enough to make a state the size of Tennessee.

Of 109 species of wildlife on the U.S. endangered list, 36 are found on military reservations. Several endangered species of birds are found on military reservations in Hawaii, including the Hawaiian Stilt, Hawaiian Gallinule and Koloa on the Kaneohe MCAS.

Programs for the Birds

Environmental programs at Kaneohoe MCAS have included wildlife, water conservation, pollution control, wind energy experimentation, beautification, and recycling.

Nuupia Ponds, an old Hawaiian fishpond, turned into a wildlife sanctuary at the air station, has about 100 Hawaiian Stilt, or Ae'o. The world population of this endangered bird was estimated at 1,500 in 1970.

The station's Co. D, 3rd Amphibious Assault Battalion, has driven its amphibious assault vehicles through the marshlands surrounding the ponds to form small mud islands on which the stilt can nest safely.

The KMCAS Rod and Gun Club has trapped approximately 2,200 mongooses in a two-year period and turned them over to the University of Hawaii for medical research projects. The small mammals prey on birds and their eggs.

The station's Boy Scouts have built rafts that serve as artifical islands in the ponds where the birds may evade predators.

The Koloa-maoli, or Hawaiian Duck, another endangered bird, has been relased in the ponds, which also serve as habitat for the Black-crowned Night Heron ('Auku'u) and migratory shorebirds in winter.

The KMCAS has controlled mosquitoes in the ponds by introducing two species of fish, the gambusia and tilapia.

The station is also home for the Redfooted Booby, which nests in large numbers in bushes near Ulupau Head.

A bird recovery team was established to help care for many injured birds found on the station or in the nearby community.

FIELD TRIP TO MANANA ISLAND, AUGUST 14, 1977

by Omer Bussen

About twenty-five persons were ferried across relatively calm seas between 7:30 and 8:30 a.m. by Bob Bourke of Sea Life Park to begin our annual August trip to Manana. Landing was made with wet behinds and, unfortunately, one cut knee. Half the group circled the rim with me and the second half with C. J. Ralph. Wading ashore, we found the remains of a dead rabbit in the sand. One observer soon reported seeing six live rabbits. Crabs were numerous, scurrying between the sea and their holes marked by large cones of excavated sand. We were all surprised by their size. Two pincer-tipped arms found on the sand were about ten inches long. One crab was dragging toward its burrow something which proved to be a dead, very young Wedge-tailed Shearwater chick.

A Wandering Tattler was seen and/or heard several times during the morning, and groups of three and later five Ruddy Turnstones were seen. A single Red-footed Booby was seen flying offshore. Two Bulwer's Petrel chicks were found in holes in the rocky cliff just above the seaside shelf on the Kailua side of our landing site.

As we started up the left side of the island we saw many Wedge-tailed Shearwaters with eggs or chicks in their burrows. The real surprise was to see at least 175 out in the open in the center of the crater, calling with their characteristic moans. It was still fairly cool and overcast, after the previous day's record heat (at Honolulu Airport). By 9:30, as the sun emerged, they mostly retired to their burrows.

There were Common Noddies everywhere on the rocky slopes, as expected. Some were defending eggs, and a few were sheltering chicks. Young birds of all stages were seen, from one just hatched, with egg tooth in evidence, to those that had lost all or nearly all of their down, but were still unable or unwilling to fly. The last described birds seemed especially numerous.

Sooty Terns were very much in evidence, with groups on the ground of 75 and 225 counted. Some were performing an interesting behavior, crouching with wings raised at the wrist and bowing toward each other. A single white-flecked immature Sooty Tern was seen.

Attaining the windward rim, we were surprised to find a Wedge-tailed Shearwater on an egg right on the windy crest, in the lee of a small rock, and another in an even more exposed spot. We were enthralled by a squeaking Wedge-tailed Shearwater chick still within its shell. A small hole was in the shell but the membrane inside had not been broken.

A Black-crowned Night Heron was seen in one of the thirty coconut palms in the crater. Noddies also perched on the branches, up to five on a single frond. A high point of the morning was three White-tailed Tropicbirds who circled over the second party and spent much time on the cliffs below, starting to land, then taking off again.

About 11:30 the first boatload returned to shore, and by 1:30 p.m. all observers were safely ashore, sunburned and happy.

GLEANINGS FROM THE TECHNICAL LITERATURE

BOOBIES FROM HAWAII WINTERING AROUND JOHNSTON ATOLL

Winter Distribution of Juvenile and Older Red-footed Boobies from the Hawaiian Islands

> by Brian A. Harrington, The Condor, 79:87-90, 1977

Johnson Atoll is a treeless island some 800 miles SW of Honolulu. Since Red-footed Boobies require trees in which to roost, they generally did not winter in significant numbers on Johnston. However, in the mid-1960's a radio tower was built, and the boobies discovered it was a good substitute tree. Now more than 6000 boobies winter there. Boobies breed on many Pacific islands, including the Hawaiian chain. The Hawaiian breeders are distinct in that almost all adults are light morphs, while about 90% of those of other islands are dark morphs. In this study the author reports that the boobies wintering on Johnston are almost all light morphs, so probably are Hawaiian birds. He also found that there was an increase in booby numbers in November and December caused mostly by birds older than 1.5 years. As the season went on, the birds' pelagic distribution shifted closer to the atoll. The author speculates that this was due to young birds at sea learning of the availability of the "artificial tree."

C.J. and C.P. Ralph

ROSE SCHUSTER TAYLOR SCHOLARSHIP AWARDED

Upon recommendation of the Scholarship Committee (S. Conant, C.J. Ralph and R. Shallenberger), the Executive Board voted unanimously to award the Rose Schuster Taylor Scholarship to Ms. Dana R. Peterson for the academic year 1977-78. Dana, a senior in Zoology at the University of Hawaii at Manoa, is keenly interested in Hawaiiana, particular-Director of the Manaly natural history. wainui Research Project during the summer of 1976, she organised its successful grant application, coordinated activities of nine other student researchers and edited the Project Report issued in late 1976. She also advised the South Kona Research Project, another National Science Foundation student project that completed its field studies in August 1977.

Her future plans include graduate study in environmentally sound urban planning and the organisation of two research coordination projects, one in natural sciences and one in community oriented multidisciplinary research.

Ho'omaika'i and Pomaika'i oi, Dana!

MAHALO TO THE BISHOP MUSEUM

July 25, 1977 Acting Director

Dr. Frank J. Radovsky, Acting Director Bernice P. Bishop Museum Honolulu, Hawaii 96818

Dear Dr. Radovsky:

This month the Hawaii Audubon Society is converting from mimeograph to the photooffset method for printing its journal, the 'Elepaio, and thus will no longer need to use the Bishop Museum's mimeographing facilities.

This letter is to convey our very grateful appreciation to the Museum for its interest and kokua in providing these services which have enabled the Audubon Society to publish the 'ELEPAIO as its primary activity. A separate letter with more detail and acknowledgements has been sent by our retiring editor, Unoyo Kojima. Her untiring efforts and the generous cooperation of the Museum are the key reasons why the Hawaii Audubon Society has continued to thrive for almost 40 years.

Mahalo nui loa!

Sincerely,

/s/ Robert L. Pyle President

NOMINATING COMMITTEE FOR 1978 OFFICERS

Hawaii Audubon President Robert L. Pyle has appointed the following members to serve on the Nominating Committee to select candidates for officers for the year 1978: Dr. Sheila Conant (Chairman), 3663 Alani Drive, Honolulu 96822; Dr. Francis Howarth, 1558 Monte St., Honolulu 96819; and Ms. Maile Stemmerman, 46458 Haiku Plantation Drive, Kaneohe 96744.

The Executive Committee at its meeting September 17 approved these appointments to the Nominating Committee. The Committee's list of nominees will be presented at the November general meeting and voted on at the annual meeting in December. The list also will be published in the December 'Elepaio. Additional nominations, with the prior consent of the nominee, may be made from the floor at the annual meeting. Members may vote by mail or proxy if unable to attend the annual meeting.

Nominations will be made for the following: President, two Vice-Presidents, Treasurer, Corresponding Secretary, Recording Secretary, and two Members-at-Large.

Members whishing to suggest a candidate (including themselves) for a society office are urged to contact one of the nominating committee members.

BIRD OBSERVATIONS NEEDED

As the migration season is upon us, we need birders to be on the alert for arriving birds. Observers should send reports of unusual birds to Dr. Robert L. Pyle (741 N. Kalaheo Ave., Kailua 96734, or telephone: 262-4046). Especially needed are observations from the neighbor islands. All observations will be edited by Dr. Pyle and included, when possible, in the 'Elepaio. They will also form the foundation of the Hawaii Regional Report in American Birds, edited by C. J. Ralph and Dr. Pyle.

Observations are needed not just on rare vagrant species which seldom reach the islands, but also on the changes in abundance of non-migratory residents, both native and exotic. To be most useful, such observations should be taken regularly over a given time period. For example, the value of such regular observations was shown by the Honolulu Christmas Bird Count which, this past year, documented the incredible rapid increase that had taken place in several species, including the Red-vented Bulbul and Java Sparrow. Other observations, more short term in nature, are extremely interesting and should also be reported.

Octor HAWAII AUDUBON SCHEDULE OF EVENTS Oct. 9 5 Trail, featuring both forest birds and a number of interesting native plants. Meet at the State Library on Punchbowl St. at 7 a.m. ber of interesting native plants. Meet at the State Library on Punchbowl St. at 7 a.m. Bring binoculars, lunch, water, and if possible, your car. Transportation cost (50¢) to be paid to the drivers. For more information call Dick Davis, 247-3922.

Oct. 10. Board meeting at the Waikiki Aquarium Auditorium, 7 p.m. Members welcome.

Oct. 17. General membership meeting, 7:30 p.m. at the Waikiki Aquarium Auditorium. or. Shella Conant will be presenting a talk entitled "Don't Shine the Light on the Food," an account of a week-long expedition into the depths of the Alakai Swamp on Kauai. During the expedition a number of extremely rare species were encountered. Everyone welcome.

Nov. 13. Field trip, probably to L Trail and Kawainui Swamp. Details to be Nov. 13. Field trip, probably to Likeke given in the next 'Elepaio.

Aquarium Auditorium, 7 p.m. Members welcome.

HAWAII AUDUBON SOCIETY P. O. Box 22832 HONOLULU, HAWAII 96822

HAWAII AUDUBON EXECUTIVE BOARD

President Dr. Robert L. Pyle
V. Pres. (Conservation) Dr. Francis G. Howarth
V. Pres. (Education and Program)
Dr. Robert J. Shallenberger
Treasurer Timothy A. Burr
Recording Secretary Leilani Pyle
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Membership Secretary Linda Murakami
Book Order Secretary Polly Carlstead

'ELEPAIO EDITORIAL COMMITTEE

Robert L. Pyle, C. John Ralph (Editor), Carol Pearson Ralph, Maile Stemmerman, and John F. Walters.

IF NOT A MEMBER, PLEASE JOIN US

Regular Member 3.00 Junior Member (18 and under) . . . 1.00 Life Member 100.00 (Payable in \$25 annual installments)

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