

'ELEPAIO

Journal of the
Hawaii Audubon Society



For the Protection of
Hawaii's Native Wildlife

VOLUME 40, NUMBER 5

NOVEMBER 1979

40th ANNIVERSARY ISSUE

With the front page reproduced here, the first issue of the 'Elepaio was issued 40 years ago this month.

The present issue chronicles the progress, the tribulations, and some unique Hawaiian flavor of 40 years of the Hawaii Audubon Society.

Please enjoy the issue and join us in the events listed below.

The Elepaio

Official Organ of THE HONOLULU AUDUBON SOCIETY
Honolulu, Hawaii, U.S.A.

"Elepaio"

Vol. I No. 1

November
1939

MAN'S INTRODUCTION TO BIRDS
By George C. Munro

According to the theory of evolution man's earliest introduction to birds came as he was changing from a vegetable to an animal diet. It can readily be believed birds had a great deal to do with man's mental development. His brain had to be exercised to circumvent the native wariness of birds in their capture for food.

As man advanced in the scale of intelligence the hunt became a game. The sporting instinct grew and competition was a spur to advancement in mankind. It is hoped this instinct will never die out but will be diverted in man into channels not harmful to his fellow residents of the world. As with war with his fellow man, likely another development of the sporting instinct, the desire for hunting and killing of animals for sport many believe will eventually disappear entirely.

It is not known that bird's feathers and song featured in the development of aesthetics in mankind but it is possible they did. It might easily be claimed that birds by their appreciation of beauty in song and feathers led mankind in aesthetics. Science now claims that birds are essential to man's continued life on this planet.

The question now arises are birds appreciated as they should be, in their beauty of form, action, feathers, song and usefulness? This is one part of the education of young people which should have more attention. Fortunately the Honolulu Audubon Society and the Iiui Menu are working to this end here. We hope also to see many Junior Audubon Societies established. Scholarships are given by local societies in gift or loan and it might be suggested that a provision accompany one of these that a course in ornithology be taken. A professor of ornithology is much needed in our community at the present time.

Officers:
J. ARCY NORTHWOOD
President
CHARLES M. DUNN
Secretary-Treasurer
EDWIN H. BRYAN, JR.
Advisor
GEORGE C. MUNRO
Advisor

40TH ANNIVERSARY SCHEDULE OF EVENTS

Friday, Nov. 2. Buffet and social at Sea Life Park, 6 p.m. Telephone reservations accepted at 261-3741 or 262-4046.

Saturday, Nov. 3

7:00-11:00 a.m. Pelagic Trip #1.
9:00-12:00 a.m. Kaelepulu Canal Clean-up
12:00-4:00 p.m. Pelagic Trip #2

12:30-4:00 p.m. Oahu Waterbird Trip
7:30 p.m. "Galapagos" wildlife film

Sunday, Nov. 4.

dawn- ?? Big Day Bird Count.
7:00-11:00 a.m. Pelagic Trip #3.
7:30 a.m.-4:00 p.m. Forest Bird Trip
12:00-4:00 p.m. Pelagic Trip #4.

FOR DETAILS SEE INSIDE BACK PAGE

"BOTH WAYS THRU THE LOOKING GLASS"

by Robert Shallenberger

It is no simple task to reflect back on 40 years of growth in the Hawaii Audubon Society. The activities and directions of HAS have been as diverse as the list of people who have been involved in what began as an idea and has grown gradually into a viable, respected force in the conservation community. The primary purpose of this 40th anniversary 'Elepaio is to shed some light on the past role of HAS in conservation, education and research and, with this historical perspective, to look into the future.

The Beginnings

In 1939, following a series of letters to the paper and editorials on the need for Island bird protection, Charles M. Dunn issued a call for persons interested in forming a society for that purpose to meet at the Library of Hawaii. The first meeting of the Honolulu Audubon Society was held in March, 1939. In the first monthly meetings of the Society, officers were elected and decisions were made regarding activities the Society would undertake, such as monthly bird walks. The Society affiliated with the National Audubon Society and dues were set initially at \$1.00 per year.

The first 'Elepaio was published in November, 1939. The first page of that issue is reproduced in this, the 473rd issue of the 'Elepaio. Officers and members of the Society were listed in the first issue. As can be seen from this list, reproduced below, some of these are still active members in the Society.

Officers and Members

J. d'Arcy Northwood	President
Charles M. Dunn	Secretary-Treasurer
George C. Munro	Advisor
Edwin H. Bryan, Jr.	Advisor
Mrs. James R. Judd	Vice-President
Riley H. Allen	Vice-President
Raymond S. Coll	Vice-President
Kenneth J. Williams	Vice-President

Members

Col. Leopold G. Blackman	Clara Burnett
Walter Donaghho	O.J. Burnett
Mrs. Juliettee Leslie	Otto Degener

Mrs. Edgar J. Walker	Genevieve Hatch
Mrs. J.E. Fredericks	Evelyn Johnson
Mrs. Wanita Hughes	Richard S. Kelley
Mrs. Ernest C. Ebert	Edna Reese
Richard Northwood	L. Stan-leigh
Margaret Shafferath	May Taylor
Mrs. Max Shafferath	George Tivy
Dr. Morton E. Cummings	Sophie E. Willard
Hung Chun Seung	David Woodside

The outbreak of the war had mixed effects on the Society. Meetings at night were forbidden for a period, and field trips were continued but restricted by the lack of gasoline. Gas masks were even the order of the day for birders on some wartime field trips. The war took many members to exotic islands in the Pacific, and several years of the 'Elepaio reflect the observations of these naturalists in the field.

In May, 1946, the name of the Society was changed to the Hawaii Audubon Society in an attempt to draw in more members from outer islands and to reflect more accurately the "scope of our interests." The activities of HAS broadened widely in conservation, education and research. The years since the war have been highlighted by an expanding involvement by the HAS and its members in these fields.

Conservation

HAS began as a focal point for those interested in the conservation of Hawaiian birdlife, yet the Society quickly adopted a policy "For the Better Protection of Wild Life in Hawaii" that reflected a broader conservation interest and a recognition of the ecological interrelationships of various species in a natural environment. Concern regarding the adverse impacts of exotic species in an island environment led the Society to make a clearer definition of conservation policy when its motto was changed in 1975 to "For the Protection of Hawaii's Native Wildlife."

The history of HAS involvement in conservation issues reflects the shifting focus described above. Early conservation efforts involved protection of waterbird habitats, migratory birds, and offshore seabird nesting islands. This has continued to the present. However, the Society has changed its attitude towards the introduction of birds. The Society cooperated with the Hui Manu Society, established for the purpose of introducing exotic birds to the islands, from the very first. As late as 1944, HAS presi-

dent J. d'Arcy Northwood encouraged HAS members to join the Hui Manu, "if only to show their appreciation of the fine work of that Society in introducing so many beautiful birds" ('*Elepaio* 4:20). Shortly thereafter, another active member, Ms. Hazel Peppin, described the work of Hui Manu as a "gift that has added immeasurably to the charm of Hawaiian life" ('*Elepaio* 4:26). Yet, George Munro, only three years later, noted the mixed blessings of introduced birds by citing the adverse impacts on industry and dispersal of exotic plants, while noting that the introduction of new birds by the Hui Manu Society had helped to encourage sentiment for the protection of birds ('*Elepaio* 7:24). It was not until 1957, however, that Grenville Hatch, former HAS president, noted that accumulating evidence of exotic bird problems suggested the need for a reevaluation of the Society's "previous neutral stand on importations" ('*Elepaio* 17:58). More than a decade later, in 1968, the Hui Manu Society dissolved itself by vote of its Board of Directors, citing as reasons the increasingly strict importation regulation, the lack of young members and diminishing funds.

Some conservation issues with which HAS has been intimately involved have recurred throughout the history of the Society. Wetlands and waterbirds were a focus from the start and are covered in some depth in an article by Richard Coleman in this '*Elepaio*. Early HAS involvement in seabird protection



Boat coming through the surf on an Audubon field trip to Manana Island.

contributed to the passage of regulations by the Board of Commissioners of Agriculture and Forestry to set aside Manana and Moku Manu islands as seabird sanctuaries. Interest in these unique areas remained kindled by George Munro's numerous articles on seabirds in the '*Elepaio* over the years. Seabird conservation efforts accelerated in 1971 with HAS resolutions to improve protection of Oahu's islets, ultimately providing the impetus for recent expansion of State regulatory authority to include more than 40 islets throughout the Main Islands in the State Seabird Sanctuary.

The issue of axis deer importation to the Big Island first reared its ugly head in 1950. Continuing involvement of HAS and other groups in this heated debate ultimately led to Act 195 in the 1970 State legislature that established the Animal Species Advisory Commission, in part to review the axis deer issue in depth. To this day, HAS continues its input into this commission's activities, often through the voice of HAS members that have served on the commission.

The legislative arena has been a focus of HAS energy in conservation issues since the early beginnings. Recommendations to vote for specific conservation-minded candidates in the early 40's were followed by formation of the first legislative committee of HAS in 1945. Legislative involvement was intermittent through the 50's and 60's, but became particularly active in the early 70's with the intense efforts of Bill and Mae Mull, Wayne Gagne and others. Society members played an important role in developing Act 139 of the 1970 legislature, establishing the Natural Area Reserve System Commission. Society influence continued with Act 49 of the 1972 legislature, the State's Endangered Species Conservation Act. HAS members became familiar faces in State legislative committee hearings in the early 70's, and respect for the Society's consistent and educated input on a myriad of conservation issues grew appreciably during this period.

There have been times when particularly significant conservation issues in recent years have forced the Society to put up or shut up. HAS has joined with others in litigation to stop projects or to encourage agencies to obey the law. These have included the reef runway in Keehi Lagoon (destroying Hawaiian Stilt feeding habitat), construction of a private residence within the Paiko Lagoon State Wildlife Sanctuary, and management of feral sheep herds on Palila critical habitat on Mauna Kea.

Education

Environmental education is an important conservation tool. The Society has pursued this education role through several vehicles.

Since its beginning the *'Elepaio* has served as the Society's primary vehicle to achieve its education goal. Elsewhere in this issue, C.J. Ralph traces the development of the *'Elepaio* and highlights the striking thread of continuity in this journal from its modest beginnings to the present. Anyone who has conducted serious biological research in the Islands is well aware that the 40 volumes of *'Elepaio* hold within them a vast storehouse of accumulated knowledge, virtually indispensable to the scientist and a delight to read for anyone interested in Hawaiian natural history. This is largely a credit to the dedication and perseverance of editors and their many assistants over the years, and the continuing input from such a wide variety of contributors. It is interesting to note, and, I think, a worthy direction to follow, that the *'Elepaio* over the years has spanned a wide range of natural history and conservation topics as well as a broad geographic scope, encompassing dozens of Pacific islands and beyond.

Education as a Society objective has taken several other forms over the years as well. Publication of the first checklist of birds of Hawaii (by Ed Bryan) began in the April 1941 issue of the *'Elepaio*, and was revised in 1957. Bob Pyle totally updated the list in April 1977 as a "Preliminary List of the Birds of Hawaii." Field guides to Hawaiian birds had their beginnings with George Munro's book, *Birds of Hawaii*, first published in 1944. *Hawaiian Birds*, a publication issued by the Department of Public Instruction in 1949, was written by former president and *'Elepaio* editor Grenville Hatch. The interesting story behind the first edition of *Hawaii's Birds* in 1967 is told in some detail elsewhere in this *'Elepaio*. Building on the fine work of Mike Ord, other members revised and reprinted *Hawaii's Birds* in 1971, 1975 and 1978. Nearly 100,000 copies have been sold to date. This publication has clearly been the life blood of the Society, providing the primary source of income to support other conservation, education, and research activities in the last decade.

An important phase of the education process has been the monthly lectures and field trips of the Society. Like the *'Elepaio*, the evening talks have spanned the globe and the sphere of natural history. With the

exception of wartime constraints, there have been few breaks in the continuity of field trips or monthly lectures since the beginning. Several members of the Society have also shared their experience and knowledge of natural history in numerous formal and informal lecture series, tours, classes, teachers' workshops and other forums over the years.

Our cooperation with other conservation groups over the years has often manifested itself in combined efforts towards educational objectives. The Society was a charter member in the organization of the Conservation Council for Hawaii in 1950, and HAS has worked closely with this group over the years, most recently in the celebration of Wildlife Week each spring. HAS and other groups have worked together to produce a series of informative posters and other narrative materials each year to join in this nationwide event.

Research

It is surprisingly difficult to find research expressed as a primary Society objective in the early *'Elepaio*, yet the journal quickly became a repository for field research data, beginning with the prolific George Munro. This distinguished scientist published in virtually every issue of the *'Elepaio* in its early years, and his articles continued to appear in dozens of subsequent issues, even up to and including the month in which he died, December 1963.



George Munro banding on Moku Manu with Dave Woodside assisting (ca. 1939).

Whether they anticipated the eventual value of their efforts or not, charter members of the Society began the first group research with the first recorded field trip, and more systematically with the first Christmas Count in 1939. Although the war years disturbed the continuity in field work, Christmas Counts restarted in 1944 and have followed every year to date. The most recent count included six separate count circles on four islands. Data gathered on these counts and other field trips have proved very valuable in documenting population trends in various bird species, particularly the rise and fall of exotic birds on the island of Oahu.

Members of the Society, including those not institutionally trained in scientific fields, have frequently assisted other researchers in field studies over the years. The history of ornithological research in forests and wetlands of Hawaii is told in detail in articles by Sheila Conant and Richard Coleman in this *'Elepaio*. They demonstrate in common a rapidly growing interest in field research in the Islands, particularly in the last decade. In company with that growth has been a greater involvement of researchers in the administration and activities of the Society. Some view this with apprehension. I personally find it encouraging.

Book sales have also enabled the Society in recent years to play a more instrumental role fulfilling research, as well as conservation and education, objectives. HAS funds have contributed to several recent field studies of endangered birds, and hopefully the scope of HAS support will broaden as more funds become available.

In Retrospect

Looking back, it is apparent that the history of HAS has been a history of individuals, people sharing goals and concerns, but most of all, people sharing a delight in the natural world. Most distressing, however, is the really very small total number of individuals over the years that have played a significant role in the growth of HAS. Twenty years ago, at a banquet dinner celebrating the 20th anniversary of the Society, then President Joe King noted that the "larger part of the activity of the Society falls on very few in spite of a considerable membership list" (*'Elepaio* 19:68). His words ring just as true today, and will probably ring true tomorrow. An exception is the production of this journal. No less than a dozen members

participate each month in getting the *'Elepaio* to you. Hopefully, this spirit will spread to other of our activities. More of our membership should share in the satisfaction, mutual enjoyment, and personal gratification that grow with serious involvement and commitment to the Society and its conservation objectives.

It would be ludicrous and misleading to ignore the frustration of numerous conservation setbacks over the years. It would also be unrealistic to paint a rosy historic picture that totally disregards the periods of internal dissent, particularly those instances when the very fibre that binds the Society together has been threatened. Some among us feel we are now in such a period. Some of this dissent has focused on what has been characterized as a major shift in Society objectives. The most seriously divisive recent event in HAS history was the decision to become a chapter of the National Audubon Society in 1977. The issue of chapterization had been debated off and on over the years, particularly as the NAS grew exponentially in size and influence in the last decade. The recent, heated debate focused on the potentially adverse effect that NAS involvement would have on the effectiveness of HAS in meeting its unique objective "for the protection of Hawaii's native wildlife". Cited as reasons to avoid chapterization were dilution of efforts, additional membership costs, and added bureaucracy with an organization uninterested in our local concerns. It was predicted that HAS would lose local members and with it, our credibility as a viable conservation organization. At this early date, the predictions appear to be wrong. At the same time, our membership ranks have swelled with the inclusion of several hundred resident members of NAS, and some of these are gradually becoming more active in the Society. Equally important, however, has been growing support of HAS by the National organization. NAS has joined with HAS in litigative action in the past, but most recently and probably most influentially in the recent Palila court case. The NAS has also played an important role in recent HAS efforts to insure protection of Kaula Island and Kealia Pond. NAS also provided our Society with an important nationwide platform for our conservation programs with the participation of several HAS members in the March, 1978, NAS Western Regional Conference at Asilomar, California, where the theme was "Alaska and Hawaii--A Question of Stewardship". Certainly there is considerable room for additional growth in our relationship with NAS, and many major

areas where national support will increase our effectiveness. It is also a two-way street, and our recent involvement in the Alaska Lands issue and the Endangered Species Act debate suggests that our influence can be felt far outside our State, particularly in the U.S. Congress through our legislators.

The Future

So, what lies around the corner? Will the 80th anniversary 'Elepaio read much the same as this, or will there even be an 'Elepaio in 2019? Frankly, we should be far more concerned with the immediate future, the time over which we have direct control by the actions we take today.

Looking back nearly nine years in the 'Elepaio, I stumbled on an article I wrote as a very green graduate student and an equally green Hawaii resident ('Elepaio 31:61). I offered some words of advice at that time. At least some of these words are equally applicable today, but I won't repeat the article here.

On the conservation front, our continuing key to success and improved effectiveness will be our willingness to do our homework, to be thoroughly professional in our efforts, and to be knowledgeable in the most efficient means to make our case. Familiarity with the maze of regulatory authority and the politics of decisionmaking is paramount. Consistency in policy and familiarity with previous testimony will command deserved respect, yet we must not be afraid to reevaluate Society positions in the light of new evidence. Internal debate, even conspicuous opposition within our ranks, will be the continuing sign that HAS is alive and active, and unafraid to debate the many conservation issues that are not clearly black or white.

Battles will be won and lost in the future. Balancing the growth in our credibility and our effective membership will be even greater pressures that adversely impact diminishing native ecosystems. The courts and the legislature will demand more of our time, and among our ranks will develop effective conservationists as well versed in the intricacies of environmental litigation as in the variability of bird song. It is likely that our overall conservation objectives will not change appreciably, but our influence can increase if the HAS opts to take on a more lion's share of the responsibility for developing and implementing conservation programs. This will take the form of innovative legislation, expanded coopera-

tion with other organizations, and perhaps even a "hands on" approach to wildlife habitat acquisition and management.

Education will grow in relevance as a Society objective. Perhaps some of the early Society ideas that tried and failed will be rekindled with some vigor as their value is recognized. Among these are the Junior Audubon Society, the active Society library of natural history materials, the bird study meetings, wildlife film series, and others. Our assistance in educational pursuits, as in support of students in natural history fields, will grow with the availability of funds, but only if we recognize this worthwhile objective. It has always been my hope that funds generated through sales of *Hawaii Birds* and other publications be reinvested in the continuing development of additional educational materials. Our recent decision to provide financial support in the production of a major field guide to Pacific Island birds was an important step in this direction.

It is doubtful that the Society will ever become a major research entity in itself, nor is it desirable that this should occur to the detriment of other conservation efforts. Yet, at the same time, the significance of the 'Elepaio as a repository for research data and a forum for scientific debate can continue to grow without dilution of other Society objectives. I anticipate that HAS will be involved in the publication and distribution of longer, more substantial research reports as well. As funds permit, the Society's support of field research will continue to grow. Emphasis will inevitably be directed to projects with resource management applicability, particularly when threatened or endangered species are involved, but the variety and geographic scope of research topics will be broad.

Whether or not the "predictions" discussed here do prove true will depend far more on the energy and commitment of the few that keep the ball rolling than on the growing list of card carrying, but inactive, members.

I am encouraged by what the future holds in store. The Society has become a respected, conscientious voice for conservation in Hawaii, although we've only scraped the surface of our potential. We welcome your participation in the next decade. More than ever, we need your ideas, your enthusiasm, and your energy.

169 Kuulei Road
Kailua, Hawaii

40 YEARS OF THE 'ELEPAIO

by C. John Ralph

Since the first issue of the *'Elepaio* appeared, 40 years ago in November 1939, our journal has published about 3800 pages, containing about 2½ million words. In this issue we are taking a look at what impact those words have had and recalling some high points of these past 40 years. As present editor, I have "searched for my roots" by perusing and enjoying the past issues of our journal. Here I will share some of my findings.

Regularity of Issue

In its first two years of existence the *'Elepaio* appeared somewhat irregularly. What is now Volume 1 spanned issues from November 1939 until May 1941, a total of 17 months. Then, in June 1941 began monthly publication that was to continue uninterrupted save January 1942. Amazingly, that issue was only a month delayed, combined in a January-February 1942 issue that soberly called for a place for Hawaii Audubon in the war and urged members in those unsettled times still to "remember the watchword of the Society: Conservation." This call by President Northwood at the height of anxiety about the threat to the islands, symbolizes more to me than anything else the dedication that has carried the Hawaii Audubon Society through the years.

Content of the 'Elepaio

Since that one delayed issue in January 1942, the *'Elepaio* has been issued regularly each month for more than 450 issues. The editors have come and gone, the volume numbers have changed, but as I look back over the volumes, there has been an amazing constancy.

The number of pages per volume speaks of some interesting changes in the Society. Until about 1965 each volume ran between about 60 and 85 pages. Then, in Volume 25, the average number of pages suddenly jumped over 100. Another jump in 1972 brought it up to about 150 pages per volume, our present level.

It is interesting to attempt to determine what made the *'Elepaio* jump in length in 1965. Perusing the volumes just before and just after, one finds pretty much the same material: a series by Professor Frings on pesticides and their use and misuse; an article on Galapagos birds; and an interesting discussion

between Dean Amadon, now of the American Museum of Natural History, and Professor Frings about the age-old question, "Why aren't there gulls in Hawaii?" Some of these are a bit longer than similar articles before 1965, but certainly of the same tenor. 1965 is, however, the beginning of the period that our dedicated former editor, Unoyo Kojima, first became involved with the *'Elepaio*. Her efforts, coupled with increased environmental awareness, probably resulted in the *'Elepaio*'s increase in content.

Perhaps easier to explain is the jump in the early 1970's, when the environmental movement gathered steam. Chronicles of Audubon's battles and reprints of letters augmented the always dominant natural history aspects.

In general the content of the *'Elepaio* has been remarkably consistent. I came to this conclusion by classifying each article in a few volumes as either natural history, conservation, or Hawaii Audubon business and tallying the number of pages devoted to each category. For instance, Volume 2 (79 pages), by my rough count, was about 78% natural history, 11% conservation, and 11% Audubon business. Volume 35 (1974-5) was 57% natural history, 31% conservation, and 12% Audubon business (a total of 148 pages and about 97,000 words). The most recent volume, 39 (1978-9), was 58% natural history, 21% conservation, and 21% Audubon business (154 pages, about 110,000 words). Our shift to photo offset in Volume 39 allows more words on each page, thus resulting in actually only a 6% drop in conservation; the increase going to natural history and Audubon business. Thus over the years there have been only slight shifts in the proportion of various subjects.

Past Editors

I compiled, as best I could, a list of the editors of the *'Elepaio* since 1939. At times this was more difficult than others because editors, it seems, sometimes have an amazing reluctance to acknowledge their labors in the journal. There may be some reason for this that escapes me. In any event, in Table 1 are listed the editors or co-editors since 1939. Miss Charlotta Hoskins obviously has set the record, being an editor or co-editor for about 19 years, beginning in 1945! Several others served for more than one term. Between 1949 and 1965 no editor(s) served more than three consecutive years. In 1965 the *'Elepaio* entered a period of editorial stability, when Unoyo

Kojima joined with Ms. Hoskins and kept the 'Elepaio going for 12 years. Many of us remember, marvel at, and appreciate Ms. Kojima's stalwart efforts. For one thing, we make more typographical errors now in one issue than she did in 12 years!

Table 1. Editors of the 'Elepaio, and their years of service.

1939-1945	J. D'Arcy Northwood
1945-1949	Charlotta Hoskins
1949-1951	Priscilla Harpham
1951-1952	Margaret Titcomb
1952-1953	Charlotta Hoskins
1953-1954	Margaret Titcomb
1954-1956	Priscilla Harpham
1956-1959	Grenville Hatch
1959-1961	Margaret Newman
1961-1962	Grenville Hatch
1962-1964	Charlotta Hoskins, Margaret Newman and Euphie G.M. Sheilds
1964-1965	Charlotta Hoskins and Euphie G.M. Sheilds
1965-1977	Unoyo Kojima and Charlotta Hoskins
1977-	C. John Ralph

Future Course of the 'Elepaio

In writing this article I thought I would set myself the task of predicting the course of the 'Elepaio over the next 40 years. However, having looked at the past 40 years, I find that the consistency, issue by issue, volume by volume, argues strongly that 40 years from now the 'Elepaio will not have changed markedly from the present. It certainly has changed amazingly little in the past 40 years.

Over the past two years, while I and the present editorial committee have been at the helm, it has become obvious that the nature of the 'Elepaio is governed by you, the members and contributors. Some of you are interested in conservation above all else; some of you in the business of Hawaii Audubon, its field trips, etc.; and some of you mostly in the natural history of Hawaii and the Pacific. We will try to serve all of you by presenting material of interest to all of you.

However, we can only publish what is submitted to us. We cannot write the entire journal. So we encourage you to send us articles or notes of interest to you.

The purpose of the 'Elepaio will, I think, remain threefold:

1. Historical--an archival record of Hawaii Audubon's activities and major positions on important conservation issues.
2. Natural history--a journal of discoveries and observations on all aspects of Hawaiian and Pacific natural history.
3. Conservation--As President (and Editor) Northwood said, this is our main goal: to guide opinion through education "for the protection of Hawaii's native wildlife."

All of these goals overlap to some extent, but they should all be kept in mind as we enter our fifth decade of service to the Pacific region, especially Hawaii, its wildlife, and its people.

Postscript

As I mentioned above, it is often very difficult to determine who the 'Elepaio editor was during certain periods. This difficulty was nothing compared to the impossibility of knowing who the helpers were. I wish to make certain that this isn't the case now. Each month, more than a dozen people contribute a minimum of three or four hours (some much more) to get the 'Elepaio to you. Their names are listed in most issues. It might be instructive to outline the process that takes place each month, resulting in your copy in the mailbox.

Manuscripts and articles received in the mail are screened and some are sent out to appropriate persons for review. The lion's share of reviewing manuscripts has been done by the Editorial Committee and outside reviewers. Most notable among these have been Andy Berger, Phil Bruner, Cam Kepler, Doug Pratt, Charles and Sandy van Riper, Mike Scott, Ed Shallenberger, Rob Shallenberger, Dave Woodside and Al Ziegler. Thanks are due these and many others for their advice and prompt return of manuscripts.

The reviewers read the material, making comments. If necessary the article, especially a more lengthy manuscript, is returned to the author with these comments for revision. When the final version is received, it is marked up for the typists, setting the format and style to be consistent with our usage. Then the typists come and spend their spare hours, including weekends and evenings,

typing up the neat columns that you read. Then the proofreaders sit down and try to catch the few mistakes that inevitably creep in. These errors are corrected by still others. Over most of a weekend, the final product is cut up, last minute articles, notices of field trips, etc. are added, and, after the page layouts are decided upon, pasted up. The story does not stop there. The page layouts are taken to the printer. When they are picked up, in a marathon session, labels or addressograph imprints are placed on each copy. (Behind this step is the tireless maintenance of membership records, both local and national.) Then the entire issue is sorted by zip code into bundles and taken down to the post office.

As a very rough (and probably conservative) estimate, I suspect that the entire process takes over 100 person-hours each month. I am personally continually grateful to all these people, and the Society stands greatly in their debt.

3467 Alani Drive
Honolulu, Hawaii 96822

ALOHA TO NEW MEMBERS

The Society welcomes the following new members and hopes that they will join in our activities to further the protection of Hawaii's native wildlife:

Joint with National: C. and B. Anderson, Yona, Guam; Cindy Arakawa, Pahoa; Island Dakine, Honolulu; W. Dieter Engel, Napili; M. J. Ferreira, Kailua-Kona; John W. Hatton, Honolulu; Becky Keahilihau, Hilo; Frederic A. Lanes, FPO San Francisco, Cal.; Ted Pettit, Kailua; Christa Russell, Hawaii National Park; Helene Takemoto, Honolulu; Teresa Wang, Honolulu; Betty L. Wolfram, Honolulu; and James W. Wong, Honolulu.

OTTO DEGENER AWARDED MEDAL

Dr. Otto Degener was awarded the Willdenow medal on September 10 at the 300th Anniversary of the founding of the Berlin Botanical Garden and Botanical Museum. Dr. Degener is a charter member of Hawaii Audubon and has studied plants in Hawaii since 1922. Dr. Isa Degener has long been his co-worker in all his scientific endeavors. The Drs. Degener have brought world attention to Hawaiian flora and its plight. Hawaii Audubon and its members join the scientific community in congratulating the Degeners on this award.

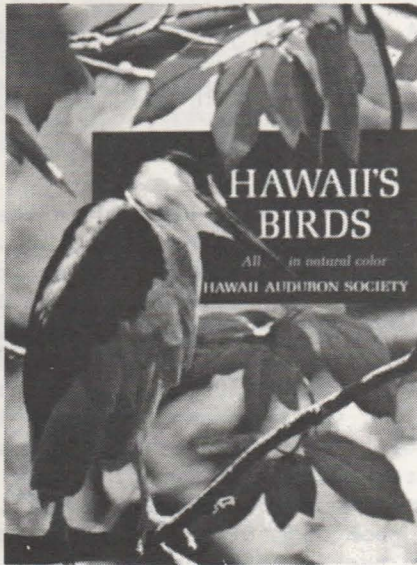
A SHORT HISTORY OF THE SOCIETY'S BOOK, HAWAII'S BIRDS

by W. Michael Ord

When I first arrived in the Islands in March, 1961, from Washington, D.C., my first recreational endeavour was to look for a field guide to birds of the Hawaiian Islands. Prior to arriving in Hawaii, I had never been west of Texas and had little or no idea of what type of bird life existed in the Islands. As many of you may know, the only illustrated material available at that time was George C. Munro's *Birds of Hawaii*. While its illustrations were good for field work, the size of the book didn't lend itself to being taken into the field on every birding trip. It is nevertheless a book every birder in Hawaii should own.

By the latter part of March 1961, I had finally tracked down the Hawaii Audubon Society through the Bishop Museum and quickly joined the group, eager to learn the best birding places on Oahu. It became apparent very early that while Hawaii had had some very good birders through the years, there was a limited selection of places to go, and little deviation from previously established field trip locations. Additionally, the Society's first field guide, *Hawaiian Birds*, was long out of print and unfortunately limited to pen and ink drawings of birds which were difficult to use in the field. The field guide would, however, fit in a back pocket, which was particularly useful for someone with little or no knowledge of birds in Hawaii. Ms. Grenville Hatch, with assistance from Society members, was primarily responsible for *Hawaiian Birds*. It was this field guide that instilled in me a desire to see the Hawaii Audubon Society come out with a new field guide. Such a guide would meet a novice or a seasoned birder's desire for use in the field, although they would need to know where to go for maximum results.

The next few years were good birding years, though little was done about seriously rewriting *Hawaiian Birds*. Most of my spare time was spent exploring the Islands for new birding places and looking for birds that had not been seen for many years. The work of Dr. Frank Richardson and John Bowles, et al., confirmed that many of our endemic forest birds could still be found if someone took the time and effort to look for them. A new field guide needed this information if it was to reflect the true situation in the 1960's.



Cover of
1967 and
1971
editions.

Additionally, I had become interested in bird photography and color photographs of living birds seemed like the best way to illustrate a guide. The trials and tribulations of bird photography could be the subject of a lengthy article in its own right, but I don't intend to dwell on it. Suffice it to say, if I had known what I was getting into, there might never have been the first edition of *Hawaii's Birds*.

In the very early stages of rewriting the Society's field guide, I asked John Bowles to assist me with the Hawaiian and scientific names of the birds to be included in detail. Migratory birds, introduced game birds, and other introduced birds (whether intentionally or otherwise) would be mentioned by their English names only. It quickly became apparent that the chances of getting good photographs of drepanids would be the pleasure of someone other than myself. I could rarely take the time off from work that was necessary. When I could, I had to contend with the mountain's weather, which can be unpredictable, to say the least. I therefore asked Dr. Hubert Frings if he would be so kind as to take photographs of the Hawaiian honeycreepers from the excellent colored plates in both Wilson and Evans' as well as Rothschild's works. While the majority of other photographs used were my own, I was fortunate during the earlier years to induce two very good friends to take up bird photography (Dr. Philip Ashmole and Dr. Warren King), who in their work obtained photographs which I would never have been able to get myself. Gene Kridler, of the U.S. Fish and Wildlife Service, was also particularly helpful. Ironically, the bird that gave me the most trouble was the Skylark. I eventually purchased a slide from a Mr. Potter in England.

Once the difficult birds had been photographed, we concentrated on whipping the text into shape and searching for better photographs. The text was basically the easiest part of the entire task, as it could be done whenever there was a few minutes. Most of this was done in conjunction with invaluable help and suggestions from both Dr. and Mrs. Frings.

When I think back, I feel that most of us must have been a bit naive and overly confident in what we were doing. There was never any doubt in our minds that we wouldn't get the job finished. The fact that the Society only had several thousand dollars in its savings account didn't daunt us at all. The sobering facts of life came home to roost, so to speak, when we received our first estimate of what the book was going to cost the Society. We were short approximately \$15,000. The Society's Board of Directors was, in essence, the book committee, finance committee, and any other committee needed. I recall we were somewhat short of ideas, but since I worked for a bank, it was assumed that a bank loan was highly possible and perhaps the only solution. It didn't take long to find out that while the bank thought it was a good community project, it was not as convinced as we that it was going to get its money back. Unsold books were of little collateral bene-



Cover of
1975
edition.

fit. Back to the drawing board. It was decided that maybe we could get financial support from some of the Island foundations. We wrote a letter to each of the foundations outlining what we were trying to do, what we had to do it with, and appealed to their generosity for funds to help make up the deficiency. The McInerny Foundation, the Samuel N. and Mary Castle Foundation, the Frear Eleemosynary

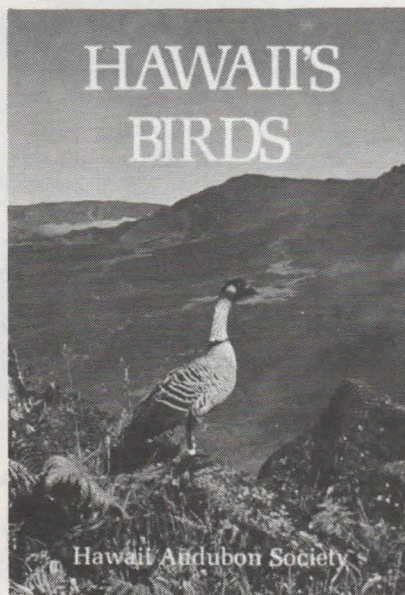
WETLANDS, WATERBIRDS, AND HAWAII AUDUBON

by Richard A. Coleman

The preservation of Hawaii's wetlands and endemic and migratory waterbirds has been a focal point of the Hawaii Audubon Society since its inception in 1939. Society members have passed resolutions, accumulated natural history data, developed legislation, published pertinent articles, and remained at the forefront of conservation efforts to protect diminishing habitat as well as resident waterbirds.

Concern for Hawaii's dwindling wetland habitat was evident even before HAS began. The early Hawaiians expanded the natural wetland marshes and ponds on most of the main islands with an extensive system of coastal fishponds and large-scale wetland taro farming. Over 200 shallow fish ponds and an estimated 25,000 acres of taro sustained a Hawaiian population believed to number over 300,000 people, prior to the discovery of the Hawaiian islands by Europeans in the late 18th century.

"The whole distance to the village of Whyteete is taken up with innumerable artificial fishponds extending a mile inland from the shore,... the ponds are several hundred in number and are the resort of wild ducks and other waterfowl" (Bloxham, A. [1925]. Bishop Mus. Spec. Publ. 10). This 1824 des-



Cover of
1978
edition.

Trust, and the Juliette M. Atherton Trust came through with funds, while the others pleasantly declined for various valid reasons. We were still about \$10,000 short and getting a little discouraged by now. It was at this point that I think I can safely say that Ray Helbig, who had put us in touch with Crocker Publishing Company in San Francisco, finally saved the day for us. I had explained our plight to him, and in turn he worked out an arrangement that satisfied Crocker and induced them to proceed with the printing of the book. Basically, six of us each pledged a personal guarantee of \$1,000 to Crocker. This guarantee stated that we would either, through the sale of books or by putting in personal funds (if the book sales were too slow), make Crocker whole upon delivery of the books. Ray Helbig, in turn, committed to buy 5,000 books for a preferred wholesale price, which actually gave us sufficient funds (along with other book sales during the delivery period), to pay off Crocker Publishing, and for each of us to get back our personal guarantee. The book ended up selling better than our wildest expectations and put the Society on the road to financial solvency.

In conclusion, putting *Hawaii's Birds* together was a fun experience made possible by great cooperation from Society members and other good birding friends.

1178 Hunakai St.
Honolulu, HI 96816



Rick Coleman and Tim Burr banding a stilt.

Photo by R. J. Shallenberger

cription of Waikiki was soon to change with the accelerating influx of different races and the subsequent decline in population of native Hawaiians. New dietary preferences dictated a decrease in taro production, and many fishponds were abandoned.

The wetland taro habitat was replaced, in part, by rice paddies. Hunters complained that this rice culture "absorbed marsh and taro lands, driving ducks away from their usual places of resort, particularly in Waikiki, Manoa, Kalihi and Ewa" ('*Elepaio* 28:32-33). Local production of rice quickly declined in the early 20th century as California rice growers out-competed the local growers and as introduced seed-eating birds attacked the crop. Most of the agricultural wetlands have subsequently been converted to dryland crops or drained and filled for urban development. The loss of wetland habitat only aggravated the impact of increased hunting of waterbirds by man.



Tim Burr conducting an experiment in metamorphosis.

Photo by R. J. Shallenberger

Early Hawaiians captured waterbirds for food and to use their feathers, but the impact of this harvest was less significant than it might have been had firearms been available prior to the arrival of Europeans. Recognizing the accelerating impact of hunting, and suspecting that birds played a role in the control of army worms the State provided protection for many wetland birds as early as 1881. Yet hunting continued for other species, with bag limits in the early part of this century running as high as 25 ducks per day. Populations of "nor'west ducks" (migratory waterfowl) and native Koloa declined in



Bob Pyle helps researchers by marking a stilt with paint. *Photo by R. J. Shallenberger*

response. Coots, plentiful in marshes of all main islands, were usually ignored by sportsmen "owing to the absence of flavor in their flesh and the toughness of their tegumentary covering" ('*Elepaio* 28:33).

Alarmed by the low populations of Koloa, officials closed hunting for this native species in 1925 but left it open for migratory species. The Chief Territorial Warden, realizing that similarity of appearance between Koloa and other hunted species still created jeopardy, recommended that all duck hunting be stopped in 1928. Yet duck hunting continued until 1939, and hunting for other wetland species terminated only with the onset of war in 1941.

Coincidental with (or perhaps related to) the ban on duck hunting was the formation of the Honolulu Audubon Society, later to become the Hawaii Audubon Society. One of the first official acts as a conservation organization was directed at wetland habitat preservation. A resolution passed in June 1939 called for establishment of a bird sanctuary at Kaelepulu Pond (now the Enchanted Lakes development) on Oahu. Letters sent to the owners (Bishop Estate) asked for preservation of the area and recommended exclusion of cattle from the pond's edge. Although Bishop Estate appeared sympathetic to the cause, and the habitat sustained very large populations of waterbirds over the next 15 years, deterioration due to drainage and urban development began and continues to this day.

Among the Society's earliest political efforts was a concerted effort in 1941 to convince the "powers that be" that the Migratory Bird Treaty Act applied to Hawaii and that migratory species, including waterfowl,

should also be protected by Territorial law. Such a law was not passed until October 1942, in large part the result of HAS efforts. One indication of the Society's interest in having its way in the political arena was a note published in the September 1941 *'Elepaio*: "We shall soon be voting again, let us remember the friends of the birds, foremost being Senator Francis Brown. And on the other side, Rep. Lindsley Austin, who wants to shoot plover."

Perhaps incensed by the deterioration of habitat at Kaelepulu Pond and losses elsewhere in the State, the Society again rallied in the cause of wetland preservation behind its president, Margaret Titcomb, beginning in 1960. Her early statements regarding the biological value of Paiko Lagoon for Hawaiian Stilt and the educational value of the site fell on deaf ears in State government for several years, but ultimately led to the appropriation of more than one million dollars to acquire land and develop habitat. Her statements remained largely unchanged in the more recent testimony of HAS leaders in a fight to preserve the integrity of Paiko lagoon by preventing construction of a private residence in its midst. Although the debate was heated, and the house was ultimately built, focus of the issue in the public eye probably had long-term positive benefits for the conservation movement.



Paiko Lagoon State Sanctuary with newly-built, and strongly-opposed, house on spit.

In the midst of the Paiko Lagoon controversy, HAS became involved in several other wetland issues, with mixed results. In 1973, as a co-plaintiff with three other conservation groups and several individuals, the HAS filed a suit against the Department of Transportation to prevent loss of valuable feeding habitat for stilt and migratory shore-

birds resulting from construction of a reef runway in Keehi Lagoon. As a result of this suit, mitigation areas were constructed in Pearl Harbor and subsequently have become units of the Pearl Harbor National Wildlife Refuge, administered by the U.S. Fish and Wildlife Service. These areas now provide critical nesting, loafing, and feeding areas for stilt, and also support smaller populations of Hawaii's other endangered waterbirds.

Other wetland and waterbird issues in which the HAS has been involved include the construction of a generating plant at Kealia Pond (Maui), an injection well sewage plant at Kanaha Pond (Maui) and a proposed dredging and development project at Kaloko Pond (Hawaii). HAS vocal concern for the protection of other wetland sites, particularly ponds at Kahuku, Oahu, played an important role evidencing public support for establishment of National Wildlife Refuges on three islands. The Society again rallied behind the U.S. Fish and Wildlife Service more recently when the General Accounting Office made public its distorted arguments against Federal acquisition of Kealia Pond as a National Wildlife Refuge.

In addition to these more obvious battles, some won and some lost, the Society has played a continuing critical role in wetland and waterbird conservation through the dissemination of factual information in the *'Elepaio* and other Society publications. Included in this category are the continuing field trip reports and data from annual Christmas Counts that are so important to successful management of waterbirds in this state. Eager members have participated in several semi-annual waterbird counts in association with State and Federal biologists and have assisted researchers in their continuing studies of our endemic waterbirds.

We anticipate that waterbirds and wetlands will continue to be a worthwhile focus of HAS effort as pressures to urbanize remaining habitat accelerates. By comparison to the relatively inconspicuous and inaccessible forest birds, our endemic waterbirds afford the greatest opportunity for public awareness of the very special values of Hawaii's unique wildlife and the problems that threaten their continued survival. A conservation ethic that develops from a kindled interest in and appreciation of wetland wildlife will be felt far beyond the limits of the marsh.

HAWAIIAN FOREST BIRDS: A SURVEY OF RECENT FIELD RESEARCH

by Sheila Conant

Of the nation's 70 endangered and threatened birds, 31 species and subspecies are endemic to Hawaii. Of these, 19 are forest birds, and three others, the 'Io (Hawaiian Hawk), 'Ua'u (Hawaiian race of the Dark-rumped Petrel), and 'A'o (Newell's race of the Manx Shearwater), are known or thought to breed in forested areas on the main Hawaiian islands. By 1939, when the Hawaii Audubon Society was formed, 21 species and subspecies of endemic Hawaiian birds had become extinct. A 22nd species, the Laysan Rail, was gone by 1944. Since that time, no additional species are thought to have become extinct. In fact, some (e.g., the Molokai Thrush, the Maui Nukupu'u) have been "rediscovered", and one entirely new species was described in 1974 by Tonnie Casey and James Jacobi. Both are students and Society members. During its first 40 years, preservation and study of Hawaiian forest birds have been major activities of Hawaii Audubon Society members.

Several major factors have been suggested as contributing to the demise of Hawaii's unique bird forms. Among these are habitat destruction or alteration, predation by introduced mammals, exotic diseases, and competition with introduced birds. No doubt all have played some role in extinction and endangering of the avifauna. But only recently have any intensive studies aimed at evaluating these factors been undertaken.

In this brief survey of recent field research on Hawaiian forest birds, it is impossible to mention every scientist and project that has contributed something to our knowledge of those species. I have tried to include work that will be familiar to Society members, from our charter members to our newest, and to mention, especially, the work in which members have actively participated.

With the publication of several major, descriptive works (e.g., Rothschild's *Avifauna of Laysan*, 1893-1900; Wilson and Evans' *Aves Hawaiiensis*, 1890-1899), at the turn of the century, research on Hawaii's forest birds nearly came to a standstill. George Munro, who assisted in some of the field work leading to the above-mentioned publications, single-handedly carried on studies of Hawaiian forest birds in the early decades of this century.

In the early years of Hawaii Audubon, he was one of the most active and effective Society members in promoting conservation measures. His 1944 book, *Birds of Hawaii*, provided the first updated summary work on the Hawaiian avifauna since Perkins' *Fauna Hawaiiensis* published in 1903. Munro's book is full of fascinating life history information, and is still popular today. It contained the results of his extensive field work from 1935-1937, during which he unhappily noted the continuing decline of the forest avifauna since the 1880's.

After Munro's book was published, forest birds again received little attention. Long-time member Walter Donagho, who had occasionally assisted Munro, continued active field observations in the forties and fifties. During the two decades following World War II, Paul Baldwin's studies of Hawaiian forest birds stand out as one of the most important contributions resulting from field studies of the forest passerines. In addition to his studies of the ecology and behavior of honeycreepers, Baldwin, as a naturalist for the National Park Service, provided valuable data on bird distribution on Maui and Hawaii during the forties and fifties.

In the late fifties and early sixties, two other important works appeared: Dean Amadon's (1950) systematic review of the drepanidids (honeycreepers) and Frank Richardson and John Bowles' (1964) survey of Kauai birds. Both papers stimulated questions in need of further research, particularly on evolutionary relationships of honeycreepers and the status of very rare species.

The 1960's saw quite a change in the amount of scientific research on Hawaii's birds. Andrew Berger, arriving at the University of Hawaii in 1964, immediately began active field work, concentrating much of his efforts on studies of forest birds. In 1972, 28 years after the publication of Munro's book, Berger published *Hawaiian Birdlife*, a much-needed update on the status and biology of birds in Hawaii. In the years following his arrival, Berger's students expanded the scope of work: Sheila Conant's (1977) study of the Oahu 'Elepaio and Robert Eddinger's (1970) extensive work on 'Apapane, 'I'iwi, 'Amakihi, and 'Anianiau on Kauai were the first life history and breeding biology studies of native forest birds ever undertaken. During the early seventies, National Science Foundation (NSF) grants to Hawaii's International Biological Program (IBP) allowed Berger and his students to continue: Sandra Guest (1973) working on the Japanese White-eye, and Lawrence Hiral (1975) working

on the House Finch, conducted the first in-depth studies of the biology of introduced bird species. At the same time Charles van Riper III (1978), with amazing zeal and dedication, was conducting detailed research on the ecology of the 'Amakihi and the Palila on Mauna Kea. Also Sheila Conant (in press) returned as an IBP researcher to study the distribution and ecology of forest birds on Mauna Loa. Several of these students were supported by small grants from Hawaii Audubon Society, and three have served or are now serving on the Society's Executive Board.

In 1973, two mainland Society members, Lawrence Richards and Walter Bock, published the results of field and laboratory studies of the feeding apparatus and behavior of the genus *Loxops* ('Amakihi, 'Ākepa, 'Anianiau, Creepers). Both of these researchers have also published other work on anatomy and evolutionary relationships of the drepanidids.

In recent years, students from mainland universities have come to Hawaii to pursue thesis research. Of these, one of the best known to Society members is Douglas Pratt, ornithologist-artist, whose several years of field studies of Hawaiian birds have led him



Doug Pratt conducting field work in Alakai Swamp, Kauai.

to new ideas about their classification. In addition, he has delighted bird enthusiasts, as well as made his living, with his beautiful paintings, some of which appear in the Society's book, *Hawaii's Birds* (1978).

The sixties also saw an increase in forest bird research by government-employed biologists. Until then, David Woodside (a Society charter member), a fondly remembered field assistant of George Munro, stands out as one of the few state-employed biologists who gained considerable experience with Hawaiian forest birds. During the sixties,

the U. S. Fish and Wildlife Service (USFWS) biologists Eugene Kridler, John Sincock, and Winston Banko came to Hawaii. They were often joined by State Fish and Game biologists David Woodside and Ronald Walker, as well as Andrew Berger, on memorable expeditions to study Hawaiian birds. Kridler, recently retired, later devoted much of his energies to seabird and waterbird protection and administration of Hawaii's Office of Endangered Species. Winston Banko, originally from USFWS, now under contract to the National Park Service, often accompanied by his son Paul, searched for rare forest birds, and was rewarded with the rediscovery of the Maui Nukupu'u in Kipahulu Valley in 1967. On that same expedition was Richard Warner, whose publications (1960, 1968) have brought critical attention to foreign diseases and the ravages of feral goats and sheep as factors contributing to the demise of forest birds.

A quiet man who has enjoyed some of the most exciting moments in the history of modern Hawaiian ornithology is USFWS biologist John Sincock of Kauai. Sincock's work, begun in the sixties, resulted in the rediscovery of the nesting grounds of the threatened 'A'o (Newell's race of the Manx Shearwater; Sincock and Swedburg 1969), the discovery of the nest of the Kauai 'Ō'ō, and sighting of all of the Alakai Swamp's elusive avian denizens except the 'Akialoa.

As if the discovery of the nest of the only extant 'Ō'ō weren't enough to thrill the ornithological world, Tonnie Casey and James Jacobi, two enthusiastic students, travelled to Maui in the summer of 1973 on an NSF grant, hiked into the high, cold, wet, cloud forests of the northeastern slopes of Haleakala, and



Ron Walker and Tonnie Casey in Upper Hana Rain Forest, haunt of the Po'ouli.

discovered a new species of Hawaiian forest bird, the Po'ouli. The Hawaii Audubon Society proudly supported the publication of the description of this remarkable new bird by the Bishop Museum Press (Casey and Jacobi 1974). Both of these young biologists are still actively doing field research in Hawaii today.

Biologist and beachcomber Joan Aidem, encouraged by zoologist Alan Ziegler at the Bishop Museum, made the startling discovery of a fossil of an extinct, large, flightless goose at Mo'omoni Dunes on Molokai in 1972, and began the ball rolling in avian paleontology in Hawaii. Also in 1972, two entomologists and a botanist made a significant paleontological find on Maui. Frank Howarth (former Society Vice-president), Wayne Gagne (former Society President), and Betsy Harrison Gagne were clambering about in a lava tube when they discovered the bones of three extinct birds: two rails and the world's only flightless ibis. Since 1972 Storrs Olson and Helen James of the Smithsonian Institution, laboring over sandscreens and specimens, have made numerous exciting finds on several islands.

Developments in forest bird research in the mid- and late seventies have been extensive and fast-breaking, due in large part to support from several government agencies. During 1975 and 1976, the U.S. Department of Agriculture supported Lawrence Hirai's (1977) survey of Lanai birds as part of the environmental assessment for their fruit fly eradication program. Since 1974, Michael Scott of USFWS has directed the most methodical ornithological surveys of Hawaiian forests ever undertaken.

He has been aided by John Sincok and lately Cameron Kepler of Maui, as well as numerous, eager, aspiring ornithologists who count untold numbers of birds each summer.

C.J. Ralph of the U.S. Forest Service (currently *'Elepaio* editor) with a crew of young workers has begun intensive studies of the ecology of Hawaiian forest birds, concentrating on the island of Hawai'i. The study, in its third year, has amassed much data on several endangered forest birds and their environment.

The first attempt to breed an endangered Hawaiian passerine began in 1973, when Winston and Paul Banko brought three 'Alalā chicks into captivity. The breeding project was later taken over by the State Division of Fish and Game and is now being supervised by Barbara and Ah Fat Lee at the Pōhakuloa facility, where Ah Fat Lee has been supervising the rearing of Nēnē, Koloa, Laysan Teal, and now, the Marianas Mallard.

The National Park Service has contributed to the study of native forest birds by funding extensive distributional surveys of Park lands conducted by Sheila Conant (Society Director) and graduate student Maile Stemmermann (Society Vice-president; Conant and Stemmermann 1979). In addition, Charles van Riper III, with the help of Sandra Guest van Riper, is now in the third year of an intensive study of bird diseases sponsored by the Park Service.

One final source of support for recent studies of Hawaiian forest birds has been research funded to prepare Environmental Impact Statements (EIS's). During the preparation of EIS's for the U.S. Army and the State Department of Transportation, Robert Shallenberger (Society President) and other ornithologists conducted surveys and ecological studies of forest birds, concentrated on O'ahu (Shallenberger and Vaughn 1978) and at Pōhakuloa on Hawai'i (Shallenberger 1977). The O'ahu studies have generated a fresh enthusiasm for studying the few remaining native passerines of this most densely (human) populated island. Its remnant forests, in many ways, are no less challenging than those of the ornithologically richer islands, and their accessibility, Shallenberger hopes, should stir scientists and amateurs alike to become better acquainted with its poorly known avifauna.

As scientists pursue long-term, often difficult, studies aimed at defining the status and habitat requirements of native Hawaiian forest birds, Hawaii Audubon Society



Maile Stemmermann banding an Hawaiian Thrush at Keauhou Ranch.

Photo by R.J. Shallenberger

conservationists have pursued equally challenging goals in the public domain, striving to ensure protection for rare or endangered forest birds and the ecosystems upon which they depend for survival.

The problems facing us in the conservation of Hawaiian birds are tremendous, and hope runs thin for numerous species. Nevertheless, it is clear that research on some of the most important questions facing us has finally begun and has gathered momentum in recent years. The financial support that makes much of this research possible has been generated as a result of endangered species legislation and environmental regulations passed in the late 1960's and early 1970's. As such, this research support can ultimately be traced to the public, particularly to the kinds of people who are active members of the Hawaii Audubon Society. The constant dedication and enthusiasm of our members "for the better protection of native Hawaiian wildlife" has made ornithological research a reality and conservation a stronger hope.

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'ELEPAIO

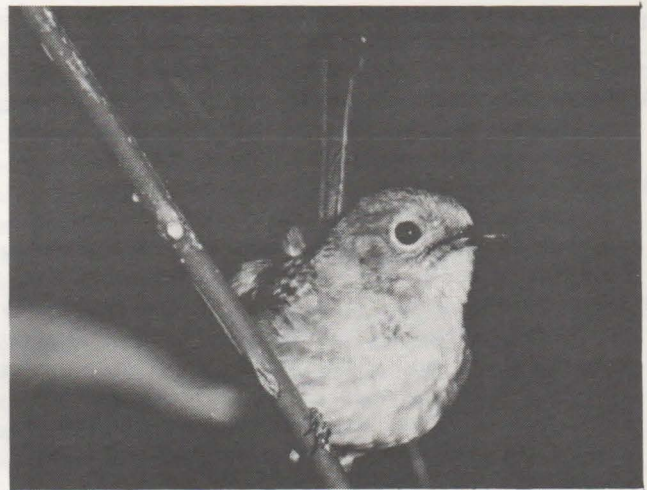
by Angela Kay Kepler

Fine mists swirl around the precipitous cliffs of Nuuanu Valley, Oahu, and move rapidly seawards, engulfing successive tracts of lush, pristine rain forest on their way.



Kaneloa, a friend, and a *kahuna* (priest) don their bulky, but effective, ti-leaf rain-coats and continue plodding along an indistinct muddy track towards a small valley adjoining the upper reaches of the main valley. Their destination is an exceptionally fine stand of majestic koa trees (*Acacia koa*), Hawaii's largest native and second most common tree. Ever since he was a young boy, Kaneloa had accompanied his father up to these tall, stately koas, trimming unhealthy branches and clearing away unwanted weeds and shrubby understory plants. Now it is time for him to select one of these "family" trees in order to carve a new fishing canoe. Although koa trees are abundant on Oahu, many have twisted trunks and wide-spreading branches creating picturesque or grotesque shapes, aesthetically beautiful but unsuitable for canoes. As they traverse a steep mountainous ridge, barefooted, the men, familiar with the names and habits of birds around them, keep a sharp lookout for an especially auspicious one, one whose presence will soon become of utmost importance to their activities.

A variety of scolding and churring notes, followed by clear whistles, "*ele-pai-o*," "*ono-ka-ia*," soon reveal an 'Elepaio's presence, and a small, 5½" rusty and brown speckled bird with whitish underparts alights daintily on a twig only a few feet from them. Perkily and inquisitively it cocks and fans its long tail, revealing a prominent white rump and matching, white-spotted wing-bars across its slightly drooping wings. The men enjoy its apparent friendliness and tameness, and as they resume walking, followed a short way by the 'Elepaio, they observe its movements closely. Flitting restlessly, it searches diligently for insects, caterpillars, millipedes and spiders--up into the high tree-crowns or down again to pursue a fly on the wing, capturing it with an audible bill-snap. It gleans amongst leaves in low shrubbery and once pounces onto a sleeping moth hiding in the ground-litter. Bash, bash - the moth is soon thrashed to death and swallowed in a few big gulps.



Oahu 'Elepaio.

Photo by Sheila Conant

Men, 'Elepaios and other creatures are presided over by Kupulupulu, god of the koa forest. Any wanderer in Hawaiian forests is in his domain; every rustling footstep and motion is heard by his acute ears and judged accordingly. Even though these men are not strangers here, they respect the forest, its inhabitants and its unseen powers. The *kahuna*, with his incantations and appropriate offerings, acts as a mediator between gods and men, lessening the latter's fears.

Beneath their chosen tree, a towering, giant koa, 97' tall and 4' in diameter, Kaneloa's party deposit their meager belongings, simple tools of stone, wood and shell; foods consisting of dried poi wrapped in ti-leaf

bundles, cooked bananas and sun-dried fish; *kapa* (bark-cloth) for sitting on, sleeping on and wearing; and animals for sacrifice.

"O Kupulupulu - the god!

Here is the pig,

Here is the chicken,

Here is the food," chants the kahuna in a monotone.

As the hefty men chop away at the koa's base with their stone adzes, they utter:

"O Ku Akua.

Take care while the tree is falling,

Do not break our boat,

Do not let the tree smash and crack."

Many hours later, the enormous trunk trembles, its sickle-shaped leaves and sturdy branches rustle and creak, and a tabu of silence falls on the party as they scoot away. With a sharp crackle of breaking wood followed by a resounding crash, the koa tumbles directly to the ground, its fall eased as it smashes through the understory. The formerly peaceful atmosphere is disturbed, and birds scatter, 'Amakihi and "Apapane scold harshly; an 'Oma'o (thrush) flashes by; and after the noise subsides, a pair of Nukupu'u enters the clearing to search for grubs and weevils dislodged from the disturbed vegetation. However, the only bird of any immediate significance to the Hawaiians is the 'Elepaio, who represents the Goddess Lea in her avian disguise. Wife of the chief god of canoe-makers, Lea was sometimes human (a demigod), but on appropriate occasions could transmute into an 'Elepaio. She had heard the kahuna's chant:

"O Lea!

Listen now to the axe.

This is the axe which is to cut the tree for the canoe,"



Ko'olau Mountains on Oahu.

Photo by R.J. Shallenberger

and now responds by arriving to check out the perfectness of this koa log for a sound fishing canoe. Swiftly the 'Elepaio springs onto the fallen trunk as the men stand by with bated breaths. It hops around, poking here and there, grabs a caterpillar, a spider, a beetle, then spends time pulling another grub from a small crack in the thick bark. For twenty minutes the little bird continues in this manner, apparently enjoying its tasty (and plentiful) repast. Finally the kahuna sadly announces:

"*Ua 'elepaio ka wa'a. Auwe!*" ("The 'elepaio has made its decision. Too bad!")

The men understand. This magnificent koa is useless; it harbors defects; their canoe cannot be constructed from it despite the fact that Kaneloa has tended it for 32 years. They must choose another.

Leaving it to rot, they muster renewed strength to check out another favored tree and then return home to their village near our present Honolulu. Three days later, with a fresh black pig and other offerings, they carefully repeat all the proscribed procedures; this time the gods smile somewhat more favorably. Goddess Lea, disguised as another 'Elepaio, flies to the fallen log, inspects it briefly by tapping the wood and, finding no food, runs directly from one end to the other and whistles "*ele-pai-o, ono-ka-ia.*"

Good--the ultimate sign has now been given; the kahuna can proclaim the log flawless. But watch...the bird now flies up into the air and circles tightly above the tree trunk. "She requests us to turn the tree," notes the kahuna. "The opening must be on the lower side." The men run for extra assistance and with great difficulty, heave over the log. Once again Lea alights, runs swiftly along the tree's entire length, whistles, then flits off into the forest. Quickly the kahuna dons his special white *malo* (loincloth), leaps onto the log, adze in hand, and prays loudly and fervently to Kupulupulu and a pantheon of lesser gods of the forest and of wood-carving, including Lea:

"Stand up in your strength!

Here is the canoe, a solid log.

Arise! Stand up!

Shape the canoe!

Grant us a canoe

That shall be as swift as a fish

To sail in stormy seas,

When the waves toss on all sides."

As the work continues over the next few weeks, chopping off the crown and lateral branches, shaping with fire and adzes and hauling with 'ie'ie (a climbing vine) and

sturdy hau (*Hibiscus tiliaceus*) ropes, several 'Elepaio stay close by, constantly gleaning from adjacent vegetation. It almost seems as if Lea is guarding the laborers, protecting them from evil spirits that seem to abound particularly in Nuuanu Valley, and perhaps blessing the canoe during every phase of its construction.

Near the end of their work, in their temporary shelter (built from arched noni timbers and thatched with overlapping ti leaves), the men relax and "talk story". The last bird to call in the surrounding forest is the 'Elepaio, and as its cheerful notes linger in their minds, they speak of its habits and powers.

Kaneloa relates a riddle: "*Owai ka manu kahea i ka ia?*" ("What bird sings about fish?")

His friend replies, "Elepaio, of course. *Ono ka i'a:* fish is delicious."

They all laugh heartily, jokingly calling each other 'Elepaio, alluding to the fact that they too long for the taste of fish, but are too lazy to tramp back down the mountains to catch some!

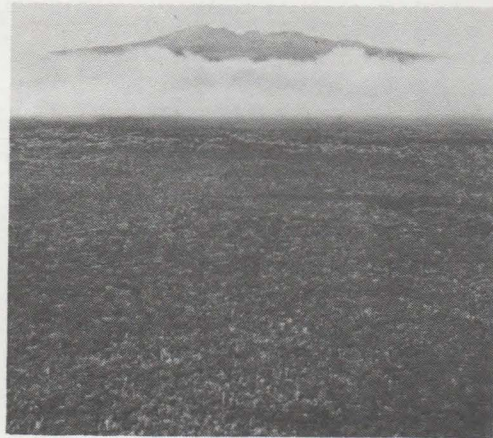
Kaneloa's friend knows a story about Pikoi, the famous rat-shooter from Kauai, who once shot ten rats with only one arrow. At that time, another skilled archer, Mainele, became very jealous of this and decided to display his own skill, in the hope of marrying King Keawenuiaumi's daughter, who resided on the Big Island. Mainele was required to shoot some 'Elepaio from tall trees in the royal garden. Secretly Pikoi travelled to witness the shooting event. Unfortunately, Mainele failed miserably and, while onlookers jeered, Pikoi stepped forward and requested a chance to display his skill. It was granted, and he then set a calabash of water at the base of the particular tree containing the 'Elepaio. Using the calabash as a mirror, he focused on the birds' precise location, killed all with one arrow and, as his prize, married the king's daughter.

The kahuna recounts a colorful stock of more supernatural stories involving kind (or mischievous) deeds displayed by 'Elepaio. One tells of an 'Elepaio giving advice to a farmer as to an appropriate time and place for planting bananas; in another, the bird's voice heralds the time for a departed spirit to return to earth; and in the final ones, the 'Elepaio's early mating or "cock-crowing" interrupts many heroic midnight enterprises of humans, demigods, ghosts, and fairies.

Originally dubbed "Sandwich Flycatcher", the 'Elepaio (*Chasiempis sandwichensis*) is unique to the Hawaiian Islands. Our only representative of a very large family of Old World Flycatchers (*Muscicapidae*), common in

Europe and Asia, its closest relatives today reside in Melanesia. Since it travelled thousands of miles across open ocean, here to evolve into a new species, it is quite puzzling to discover that it has adopted sedentary habits, restricting itself to three of our eight major islands. In fact, the three races of Hawaii, Oahu, and Kauai were so distinct that once they were classified as three separate species. To further confuse matters, the 'Elepaio breeds in various juvenile plumages, so that young, adult, white-faced, and chestnut-faced types formerly totalled six species!

There is no scientific evidence to date that the 'Elepaio ever occurred on other islands, but considering its popularity in Hawaiian mythology (especially its prime importance in canoe-making rituals), it seems likely that the bird once inhabited forests of Maui, and possibly even Molokai and Lanai. In fact, the largest canoes ever reported originated in Kipahulu Valley, Maui; each hull measured 120' long and 9' deep! Could such canoes have been constructed without propitiations to, and omens from, Goddess Lea?



Forests of Big Island with Mauna Kea in background. Photo by R.J. Shallenberger

In times past, the 'Elepaio dwelt in forests from sea level to 9,000'; no other native bird encompassed such a wide altitudinal range or embraced such a large number of climatic zones. With widespread forest destruction, the introduction of avian malaria and other diseases, most native birds have suffered a drastic decline or extinction, but somehow the 'Elepaio has managed to survive and adapt to changing conditions, developing at least a partial immunity to malaria. It still prefers native humid woods and forest edge, not venturing out into open pastures or arid lava flows, but is remarkably tolerant of introduced trees, inhabiting stands of *Eucalyptus* (Australian gums), guava,

paperbark, and others. Its nesting success and density seem to be lower here than in native ohia forest, but birds still survive (as above) and reproduce sufficiently to maintain viable populations.

In February 1967, three hundred years after 'Elepaio helped Kaneloa shape his canoe, a short, attractive, young lady hikes around



Oahu 'Elepaio nest with egg and young.
Photo by Sheila Conant

Oahu's lush southern valleys, checking out these same birds. Sheila Conant, who has replaced the "alarmed ostrich" look of the ti-leaf capes with a sleeker, waterproof nylon parka, and the insipid taste of dried poi with tuna sandwiches, is a Master's Degree student from the University of Hawaii, studying the breeding biology of these rather common, endearing birds. Her study area, East Manoa Valley, harbors introduced plants such as Java plum, dense guava thickets, and palm grass, which mingle with remnants of the original tall forest cover, kukui, ti, and some ferns. No longer do enormous koa trees or vast stretches of pristine 'ohi'a forest exist on Oahu. Gone too are the Oma'o, Nukupu'u, and most native birds, replaced by exotics such as Red-billed Leiothrix, House Finches, Northern Cardinals, and Red-crested Cardinals.

Two 'Elepaio scold each other vociferously as they chase around the ripening guava fruit. Sheila plucks a soft, yellow one and enjoys its sweetness as she marks another spot on her map indicating territorial en-



Sheila Conant during rain forest research.

counters between 'Elepaio pairs (she finds later that their average defended territory size is 4.9 acres). "Ele-pai-o, ono-ka-ia", whistles another bird. She listens intently, not for good or bad omens, but to decide on the quality recording that this particular male's sound will produce. It will be fine. The male, donned in his bright, breeding plumage, flits closer and fans his tail, whistling loudly and clearly into her microphone, and the Nagra tape-recorder whirrs softly. During their nesting season, and especially during courtship, these little birds increase their singing frequency, and right now Sheila suspects a nest in the immediate vicinity. Just as she begins her search, a male whisks by carrying lichen in his bill. His mate, only a few feet away, carefully selects a strand of silken spider web and winds it around her bill and rictal bristles (whiskers). They both fly directly to a Java plum tree where, six feet up in a forked branch, lies their neat, ornate nest. Sheila inspects the tiny structure, a mere 2½" in diameter, just like a hummingbird's, and admires its intricacy and softness. It has been laboriously constructed from fine rootlets, mosses, and grasses, skillfully bound together with lichens, spider webs, and spider egg-cases, which strengthen it without sacrificing flexibility. The female adds more spider web with a deft wiping motion of her head, then sits in the almost-completed cup, shaping it with her body, pushing and gently smoothing its inner and outer surfaces. Later, as an added touch, she returns with a beakful of soft *pulu*, the glossy "wool" from

the bases of treefern fronds that the Hawaiians used for stuffing pillows and mattresses. Two small white eggs with reddish spots soon occupy the nest's interior and, as summer progresses, another generation of 'Elepaio is reared in our beautiful islands.

Many insects, gleaned from rotten wood, are fed to the developing 'Elepaio nestlings by their parents and, as Sheila watches their progress, she is reminded of ancient Hawaiians such as Kaneloa, who depended greatly on this behavior to evaluate the soundness of tree-trunks destined to be shaped into canoes. The kahuna with Kaneloa was not relying wholly on an empty superstitious belief; his decision was based on an astute biological fact, but whether or not he was aware of that, we do not know.

Occupying a definite but not prominent place in ancient mythology, our native 'Elepaio, a demigod, was greatly respected by *ali'i* (royalty) and commoner alike. Its feathers were never used from ornamentation and its flesh was rarely eaten. Always endearing and friendly, this bird was willing to offer advice or assistance to humans and was apparently loved by all. For this reason, the Hawaii Audubon Society adopted the 'Elepaio as its emblem, a bird which, in the words of their Constitution, "typifies that friendliness to man which the Society reciprocates in its attitude toward all wildlife." On this 40th Anniversary of the Society in Hawaii, we can definitely all applaud the actualization of its goal, and wish them every success in future activities and ventures.



Big Island 'Elepaio. Photo by Mark Collins

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ANNIVERSARY WEEKEND EVENTS

Here is a grand, something-for-everyone assortment of activities for our 40th anniversary weekend. We hope to meet you at one (or more) of the events. Bring your friends too.

FRIDAY, NOVEMBER 2

We will have all of Sea Life Park to ourselves for the whole evening, complete with no-host cocktails (6:30), porpoise show (7:30), buffet supper (8:00), illustrious speakers, prizes and original paintings by Doug Pratt on display. The park opens at 6 p.m. Tickets are \$10 and reservations by phone at 261-3741 or 262-4046.

SATURDAY, NOVEMBER 3

Pelagic Trip #1 leaves Pokai Bay marina in Waianae at 7 a.m. on the R/V MANTA for four hours looking for seabirds and porpoises. Bring binocs food and beverage (261-3741).

Kaelepu Canal Clean-Up along Hamakua Drive in Kailua starts at 9 a.m. Help us keep this haunt of Hawaiian Gallinule and Hawaiian Coot clean. Bring garbage bags and, if you have one, a small boat. (261-3741)

Pelagic Trip #2 leaves Pokai Bay at 12 noon. See above for details.

Waterbird Field Trip to various refuges on Oahu leaves at 12:30 from the Kaelepu Canal Clean-Up. We should see a good assortment of migrants and natives (261-3741).

"Galapagos" film by John Wilson from the National Audubon Society Film Series at the Mid-Pacific Institute auditorium in Manoa at 7:30 p.m. Refreshments. Admission at the door: \$3 adults; \$2.50 senior citizens, active military and students; \$2 under 18. repeated Tuesday, November 6, 7:30 P.M.

SUNDAY, NOVEMBER 4

Big Day Bird Count starts as early as you can and goes as late as you can...object: to see as many species as possible. See if your team can beat the record of 53 species. Bob Pyle (262-4046) is the organizer.

Pelagic Trip #3 leaves Pokai Bay at 7 a.m. See above for details.

Forest Bird Field Trip to either Mt. Kaala tramway or Kipapa Trail will leave the State Library on Punchbowl St. at 7:30 a.m. Bring your lunch, binoculars, and water to drink. Contact Maile Stemmermann for details (949-3430 or leave messages at 948-8617).

Pelagic Trip #4 leaves Pokai Bay at 12 noon. See above for details.



A 1945(?) Audubon field trip on Oahu. Any help in identifying the participants?

Photo by R.J. Shallenberger

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 * see the front page and inside back page *

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