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## STATUS OF THE COMMON TERN (Sterna hirundo) IN THE TROPICAL PACIFIC, WITH A NOTE ON RECORDS OF THE BLACK-NAPED TERN (Sterna sumatrana) IN HAWAII.

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The Black-naped Tern has had a long history of nonoccurrence in Hawaii. W.A. Bryan (1901) first reported the species on the basis of two specimens taken at Mana, Kauai, by Mr. A.F. Judd during the winter of 1892-93. He evidently believed that these birds were adults in winter plumage judging from a footnote given in his paper.

Henshaw (1902) reported that a third specimen was taken 24 December 1901 at Hakalau (Hawaii) by a Mr. Beverage. This specimen was compared with the earlier Black-naped Terns (then known as *Sterna melanauchen*) by Bryan who remarked that hejudged Henshaw's bird "to be adult while ours are more immature." Henshaw's specimen was subsequently purchased by the Bernice P. Bishop Museum in Honolulu; in the annual list of accessions for 1904 (Brigham 1905), it is listed as No. 4223 "*Sterna melanauchen*" from Hawaii, a number the specimen bears to this day. Bryan's two specimens apparently were obtained later by the Bishop Museum as these birds now bear the numbers 4424 and 4425.

Mention of these records appears several other times in the ornithological literature. In his synopsis of avian distribution in Hawaii, Perkins (1903) noted Bryan's record and remarked that the Black-naped Tern "will probably be found as a straggler on other of the islands." Implication of either Henshaw's report or of both his and Bryan's accounts subseqently appeared in regional works (Blackman 1944, Munro 1944) as well as in a more academically oriented checklist of the Birds of Hawaii (E.H. Bryan and Greenway, 1944). Bryan and Greenway listed the records from Kauai and Hawaii as *Sterna sumatrana sumatrana*, evidently feeling it certain that the birds would belong to the race occurring in the Indian Ocean (Peters 1934).

At least three additional references to the occurrence of the Black-naped Tern in Hawaii apparently are based on these records. E.H. Bryan (1958) again check-listed these records as *Sterna s. sumatrana*; Peterson's (1961) comment in Appendix II of his *Field Guide to Western Birds* apparently also refers to those records; and the mention of two old records for Hawaii in King's (1967) guide to tropical pacific seabirds is based on Bryan (1901) and Henshaw (1902). Berger (1972, 1981) and Pyle (1977) do not mention the species.

About 1962 the three specimens of "Black-naped Terns" apparently were examined by R.A. Falla, who re-identified them as the Common Tern, *Sterna hirundo*. Several years ago, Clapp borrowed these specimens from the Bishop Museum and

he and Laybourne recently re-examined them. All three are clearly immature Common Terns. Thus, the Black-naped was reported as occurring in Hawaii over a span of 65 years (1902-1967) but these records are invalid. Olson and James (1982) recently discovered unquestionable fossil evidence, probably of a single individual, on Molokai and suggested that this species may once have bred in Hawaii but became extinct prehistorically.

The two specimens of "Black-naped Terns" reported by Bryan (1901) are now severely soiled, so much so that most of the entire head of both is nearly black. These specimens are much larger than any Sterna sumatrana, and the wing pattern is nothing like that of S.sumatrana. Arctic (Sterna paradisaea), White-fronted (S. striata), Forster's (S. forsteri), Aleutian (S. aleutica) and Roseate (S. dougallii) terns are also excluded on the basis of wing-pattern or size or both. The specimen obtained by Henshaw is in better condition than the other two and more resembles an Arctic Tern in its plumage. The lengths of the tarsus and middle toe without claw of this specimen (19.9 and 16.5 mm., respectively) are more characteristic of Common Terns; the tarsi of Arctic Terns are typically shorter (ca. 13.5-17 mm) than those of Common Terns and are shorter than the middle toe (ca. 15.2-16 mm) whereas the tarsi of Common Terns (ca. 17.5-20 mm.) are typically longer than the middle toe (ca. 16.9-17.3 mm) (Ridgway 1919). Further, the culmen length



Common Tern at Bellows Air Force Station, Oahu, 7 April 1981 Photo by Peter Donaldson

(35 mm) of Henshaw's bird is longer than those of six first-year Common Terns from the same season (30.2 to 34.9 mm) and much longer than six first-year Arctic Terns for the same season (24.5 to 31.7 mm) measured by us.

The subspecific identity of the three Hawaiian specimens is less clear, and we have been unable to make a completely satisfactory identification. The depth of the bill in all three specimens tends to be less than in *Sterna h. hirundo* (and the bill appears thinner than is typical for that race). Consequently, we think it likely that these birds belong to the race *Sterna hirundo longipennis* that breeds in northern and eastern Siberia south to Kamchatka, the northern Kuriles, Amurland, Sakhalin, Ussuriland, and Manchuria. This race migrates through Japan and eastern China and has wandered to both the Commander and Aleutian Islands (Vaurie 1965).

This brings us to the present status of the Common Tern in Hawaii. King (1967) regarded this species as a possibly regular but rare migrant in Hawaii and indicated that there was one record and one sighting for the state. King's statement is apparently based on two reports (Ludwig 1961, Lupton 1961) of a banded bird captured in Hawaii, and also a number of pelagic sightings of unidentified *Sterna* that were possibly this species or the Arctic Tern (see King 1970, Clapp 1975). Berger (1981) reiterates King's statement and cites the banded bird recovered in Hawaii.

The tern reported by Ludwig and Lupton was banded at Grassy Island in Thunder Bay, three-fourths of a mile from Alpena, Michigan on 27 June 1960. Raymond J. Kramer collected the bird at Paiko Lagoon, Oahu on 25 April 1961, after the bird had been seen in that vicinity for 10 days, according to Ludwig (1961). Lupton (1961) mentioned this specimen, but there are some discrepancies between his and Ludwig's accounts. Lupton stated that the tern was seen about a week earlier than 9 April, and an editorial note appended to Lupton's report stated that the immature tern was shot 27 April instead of 25 April. This record was not on file on microfiche at the Bird-Banding Laboratory, at Patuxent, Maryland (Ronald E. Reynolds, pers. comm.). Ludwig (pers. comm.) assured us that the bird was collected on 25 April and subsequently deposited in the Bernice P. Bishop Museum but this specimen was not found during a recent search of the collections (Carla Kishinami, pers. comm.). While we do not doubt the validity of the record, adequate documentation of it apparently has been lost. The area of origin for this bird allows us to safely ascribe it to the race (Sterna hirundo hirundo) breeding there (A.O.U. 1957)

Several other sight records of Common Terns in Hawaii were made after the appearance of King's (1967) field guide. Mull (1973) and five others saw a tern that they believed to be this species on 23 February 1973, at a stabilization pond opposite Kanaha Pond, Maui. She described the bird as "in non-breeding plumage with an incomplete black cap extending from the eyes to the back of the head. The light gray mantle and wholly white underparts distinguished it form the Arctic Tern." Although these characteristics may distinguish Arctic Terns from Common Terns in most instances, the USNM collection contains two Arctic Terns, one from Antarctica (USNM 536539-16 February 1973), the other from Florida (USNM 527750-21 May 1977), that are so white on the underparts that theywould be indistinguishable from Common Terns in the field; nor is the difference in the coloration of the upperparts from those of Common Terns great enough so that they might be safely identified as Arctic Terns on the basis of visual observations alone. Consequently, we feel that the tern seen on Maui in 1973 should best be considered an unidentified *Sterna*.

Zeillemaker (1977) reported that he had seen a Common Tern at Kealia Pond, Maui, 29 September 1976, but provided no supporting details. Zeillemaker (pers. comm.) stated that this bird was in adult plumage with a complete black cap, a white underbody, a bicolored bill and when standing on the ground had tarsi that did not appear notably short. The bird was seen flying as close as 100 meters and was compared with plates in field guides at the time of observations. Our conversation with Zeillemaker convinced us that the bird that he had seen was indeed a Common Tern and likely a representative of the nominate race.

Subsequent reports of Common Terns from Hawaii and Oahu from December 1980 through July 1982 may consist of multiple reports of no more than two birds. One was seen repeatedly from 14 December 1980 through 19 March 1981 at Lokoaka Pond, in Hilo, Hawaii. Our examination of detailed observations made of this bird by Peter Paton convinced us that the bird was properly identified. On 7 April 1981, Peter Donaldson took many photographs of what was believed to be a Common Tern at Bellow's Air Force Station on Oahu. Paton examined Donaldson's photographs (numbers 158, 159, and 183, Rare Bird Documentary Photo file, Hawaii Audubon Society [hereafter RBDPF]) and believed that this bird might well have been the one he saw on Hawaii (Pyle and Ralph 1981). We also examined the best of these photographs and concur that the bird was an adult Common Tern in winter plumage.

Two other observers subsequently saw a strange tern at Bellow's Air Force Station on 11 and 18 April 1981, variously reporting it as a Least Tern (*Sterna antillarum*) and a Graybacked Tern (*Sterna lunata*). It seems highly likely that this was the bird photographed earlier by Donaldson.

On 7 June 1981 Gilbert S. Grant saw and photographed a tern along the beach at Lanikai, about 2 km north of Bellows Air Force Station. From his photograph (RBDPF 184) we identified the bird as a Common Tern, apparently in identical plumage to that photographed by Donaldson. On 12 July an unidentified *Sterna* was seen by Richard Coleman at Lanikai Beach. We believe all of these sightings were of a single individual.

The following winter David Woodside reported that a Common Tern was present 1 January 1982 at Kii Pond, James Campbell National Wildlife Refuge, about 45 km north of Lanikai. This bird was seen there regularly thereafter until 6 May when Coleman saw two there (Pyle in press). Both were present through at least July. A single individual was also seen at Bellows Air Force Station by Phillip Bruner on 24 and 26 April and by Coleman at Lanikai Beach on 24 April (Pyle in press). We cannot properly evaluate these sightings because no description accompanied these records, but in the light of earlier records, have no reason to disbelieve them.

Few of the records of Common Terns from other areas of the tropical Pacific can be satisfactorily assigned to race. A nestling banded at Lost Mountain Lake, Saskatchewan, and thus surely S. h. hirundo, was found 26 November 1960 at Aitutaki Island in the Cook Islands (Houston 1962, 1963). Finsch and Harlaub (1867) stated that a specimen of longipennis from the Fiji Islands was held by the British Museum, but they did not examine the specimen. We did not find this specimen listed in the Catalogue of the Birds of the British Museum (Saunders and Salvin 1896), know of no other records of Common Terns from Fiji, and suspect that the 1867 report may have been in error.

Baker (1951) cited Finsch (1875) to the effect that Heinsohn and Kubary had obtained specimens of *S. hirundo longipennis* in Palau (now known as Belau) but neither Baker nor we have seen these specimens. Finsch (1875) said, however, that the two specimens obtained by Kubary were probably of this form but had been lost. The description of the only surviving Beluan specimen, collected by Heinsohn (Hartlaub and Finsch 1872), provides enough information so that we believe it was adequately identified as a Common Tern. The description is not sufficiently detailed so that we can confirm the bird's racial identity as *S. h. longipennis*, but this race is the one we would expect to occur in Belau, and we feel no qualms about accepting the record.

Clapp collected another Common Tern (USNM 494473), 10 November, 1964 on Envbor Islet, Jaluit atoll, Marshall Islands. This bird was reported by Amerson (1969) as Sterna hirundo nigripennis, the subspecific name evidently a lapsus for longipennis. We recently re-examined this specimen, which had no subspecific designation on the label, and believe that it is a representative of the nominate race, Sterna h. hirundo. We base our decision on the angle of the bill at the gonys which is sharper in most specimens of S. h. hirundo we examined than it is in the usually thinner-billed longipennis. Pratt et. al. (1977) reported a specimen of Common Tern collected 23 June 1977 near the airport at Yap in the Caroline Islands. We examined this specimen (number BYU-H 2024 in the collection of Brigham Young University, Hawaii Campus) and discovered that it is not a Common Tern but is instead a Whiskered Tern (Chlidonias hybrida) (Clapp and Laybourne, in 1983).

Common Terns reportedly have been seen at a number of other locations in the tropical Pacific, but few of these records are well documented. Anderson (1981) saw individuals of either this species or the Arctic Tern in the Marshall Islands at Ujelang Atoll in October and December 1975 and in February 1976, and at Kwajalein Atoll in January 1976. Woodbury (1962) reported that "John Roberts saw an Arctic Tern at about 1830 hours flying along the oceanside beach on the north end of Enewetok (Fred) islet [Enewetak Atoll], May 8, 1962. Because of its size and color pattern, he had no doubt of its identity (John Bushman)." From this description we can not tell whether this bird was an Arctic Tern or a Common Tern and suggest that this record be disregarded.

The first, and so far only, report from the Mariana Islands was of four birds seen feeding at tidal marsh about four miles north of Apra Harbour Naval Base on Guam, 24 April 1960 (King 1962). King remarked that the four terns were all in "a transition stage between winter or immature and breeding plumage" but provided no additional details that would help to substantiate the identification. Up to four Common Terns were seen at Ponape Island in the Eastern Caroline Islands from 17 November 1978 through 25 February 1979 (Engbring and Owen 1981). The detailed description that accompanies this sight record adequately documents the specific identification but does not allow a racial determination.

Sterna hirundo longipennis has also been reported to occur at Marcus Island to the west of the Northwestern

In summary, there are few adequate records of Common Terns from the tropical Pacific, and there are even fewer instances in which we can satisfactorily determine the racial affinities of those seen. Satisfactory records of the Common Tern are now available from the Belau, Marshall, Eastern Caroline, Cook, and Hawaiian Islands, but there is apparently only one well documented record for each of these except for the Hawaiian Islands. The race *longipennis* which is the one most likely in the western Pacific apparently has straggled as far east as Hawaii, and the race *hirundo* that breeds in North America and the eastern Palearctic west to west central Asia (A.O.U. 1957) has occurred south to the Cook Islands and west to the Marshall Islands.

In conclusion, because so few of the specimens we examined proved to be correctly identified and because so many of the published sight records were not adequately documented, we recommend that future reports of unidentified *Sterna* in Hawaii or elsewhere in the tropical Pacific be subjected to rigorous scrutiny before they become part of the ornithological record. Although some sight records are valuable, they cannot be adequately verified at a later date. Good photographs may often provide adequate documentation of occurrence, but some species are so difficult to distinguish that nothing but a scientific specimen is entirely satisfactory for re-evaluation of an earlier record.

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For information and application forms, write to: Dr. Sheila Conant, Scholarship Committee, Department of General Science, 2450 Campus Road, Honolulu, HI 96822. The deadline for applications will be June 1, 1983.

# THE RED-VENTED BULBUL ON THE ISLAND OF HAWAII

Richard N. Williams

Precise information concerning introduction of exotic species into new environments is often unavailable in the literature. Of particular interest to the research biologist or the biological historian are specifics on dates of introductions, method of introduction (natural or man-aided), introduction sites, numbers of organisms introduced per location, and information concerning the parent population. Information of this nature is often difficult to reconstruct and becomes increasingly so over time. In a recent review, for instance, I was unable to answer many of the above questions for the introductions of the Red-vented Bulbul (Pycnonotus cafer bengalensis) and the Red-whiskered Bulbul (P. jocosus) on Oahu, species which have been on Oahu less than 20 years (Williams 1983). In this article, however, I provide detailed information on an apparent man-aided introduction of the Red-vented Bulbul to the island of Hawaii. A chronology and summary of events is as follows:

> -August/September 1982. First observation of the Red-vented Bulbul on Hawaii.

Two (2) bulbuls were first observed by local residents of the Kona Coast View Subdivision (see Figure 1). Residents referred to the birds as "black cardinals".



Figure 1. Map of the island of Hawaii. Closed circle denotes location where the Red-vented Bulbul was first observed north of Kona.

-1 December 1982 (approximate date). Local resident alerted the Hawaii Department of Lands and Natural Resources (DLNR).

A local resident of the Kona Coast View Subdivision contacted a Hawaii District biologist of the Division of Forestry and Wildlife (DOFAW), DLNR concerning the identity of the "black cardinal".

-6 December 1982. Honolulu office of DOFAW notified.

A telephone conversation occurred between the Hawaii District biologist and the Honolulu office DOFAW wildlife staff about the "black cardinal". Honolulu DOFAW biologists drafted a memorandum to the DOFAW Administrator concerning the possible occurrence of the Red-Vented Bulbul on the Big Island and suggested procedural steps to investigate the reports and eradicate the birds if the population was small.

-3 January 1983. Letter from DOFAW Administrator to Hawaii District Biologist.

This letter authorized the investigation phase of the procedures with the following goals: 1) determine if the "black cardinal" was indeed the Red-vented Bulbul and to 2) estimate the population size and determine if eradication by DOFAW personnel was feasible.

-5 January 1983. Memorandum from Hawaii District biologist to DOFAW Administrator.

A biologist from the Hawaii District office of the DOFAW visited the Kona site and observed one (1) Red-vented Bulbul. Local residents had reported observing only one bird since the time of Hurricane Iwa (24 November 1982). The biologist also reported that local residents were protective of the birds and he expected hostility if birds were to be shot.

-7 February 1983. Letter from Chairman of the DLNR to Chairman of the Hawaii Department of Agriculture (HDA), Honolulu.

The Red-vented Bulbul has been noted as an agricultural pest in other locations (Watling 1978), therefore, DLNR felt that the problem might fall under the jurisdiction of the Hawaii Department of Agriculture. The letter included all information to date on the

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Big Island bulbuls, requested that the birds be eliminated as soon as possible and offered DOFAW Hawaii District personnel to assist in the project.

-15 February 1983. Letter from the HDA Chairman to the Chairman of the Hawaii DLNR.

This letter indicated that HDA personnel felt that the Red-vented Bulbul problem on the Big Island fell under DLNR jurisdiction and should be handled as such. No offer of assistance in the eradication program was tendered by HDA.

-31 March 1983. Letter from DOFAW Administrator to Hawaii District Biologist.

This letter authorized the elimination of the Red-Vented Bulbul of the Big Island and suggested that the eradication take place as soon as possible. It also requested that DOFAW personnel be sensitive to local residents' feelings concerning the bulbuls but that personnel take time to adequately explain the pestiferous nature of the Red-vented Bulbul and the DOFAW's responsibility and commitment to prevent exotic species, such as the bulbul, from becoming established in the wild.

-April 1983. Implementation of the Eradication Program.

A Hawaii District biologist visited the Kona site on a weekly basis throughout April. No bulbuls were observed during this period. Nevertheless, the DOFAW plans to continue monitoring the area in an affort to insure that the bulbuls are eliminated from the Big Island. District personnel also have met with many of the local residents and now feel that the residents understand and support the eradication program.

A review of the chronology reveals that four months elapsed from the time the DOFAW was first contacted until an authorization for eradication was delivered to the Hawaii District biologists. Most conspicuous in this process was the lack of action by DOFAW over two four-week spans from 6 December to 3 January and from 5 January to 7 February, as well as a six-week hiatus from 15 February to 31 March. Each time, the process seems to have been delayed in the office of the Administrator of the DOFAW. During this same period, December to March, the Redvented Bulbul on Oahu moves from a noisy



Red-vented Bulbul

Photo by Rick Williams

conspicuous courtship stage into a quieter, more secretive nesting stage. This behavioral change may be one possible explanation of why Hawaii District personnel have been unable to locate the bulbuls in the Kona Coast View Subdivision. Certainly, other explanations are also possible.

The Hawaii Revised Statutes (1982) define the arenas of jurisdiction for both the Hawaii Department of Agriculture (Title 11, Chapter 142) and the Department of Land and Natural Resources (Title 12, Chapter 191) with respect to birds that constitute an agricultural pest. There is considerable overlap in the two sets of guidelines, but nowhere is one department indicated as having primary responsibility in this area over the other department. Consequently, it might be argued that a joint effort by the HDA and the DLNR to share the manpower and logistic expenses of the eradication program might have been a more equitable approach to the problem than developed. One cannot fault the HDA, however, for their prompt response (15 February) to the 7 February letter of inquiry from the DLNR regarding jurisdiction on this matter.

No direct evidence exists to establish the introduction of the Red-vented Bulbul in the Kona area as a man-aided event; however, this seems the probable method in view of certain circumstances. Although bulbuls are strong fliers, they seldom fly long distances or fly at great heights above the ground (Ali and Ripley 1971). Bulbuls are not noted for their ability to disperse across open-water barriers (Watling 1977). Red-vented Bulbuls have not been reported from Molokai, Lanai or Maui, and it seems unlikely that bulbuls would have dispersed naturally to the Big Island without first invading and establishing base populations on these islands. Finally, the proximity of the bulbuls to the Kona residential areas suggest a man-aided introduction from a parent population on Oahu.

In summary, bulbuls have been introduced to many tropical and subtropical habitats in the last century (partly due to their popularity as cage birds) and arewell-recognized as both rapid colonizers and pest species (Turbott 1956, Long 1968, 1981, Hardy 1973, Carleton and Owre 1975, Watling 1977, 1978). Only in New Zealand (Turbott 1956) and California (Hardy 1973) were the birds recognized as a pest species and deliberate eradication programs initiated. To my present knowledge, only the New Zealand program has been successful in eliminating them. In Florida, Carleton and Owre (1975) reported that bulbuls attracted wide attention and were zealously protected by local residents. Today, the Redwhiskered Bulbul is well-established in Florida and is too numerous for an eradication program to be feasible.

Hopefully, the action of the Hawaii Department of Land and Natural Resources will suffice to eliminate the Red-vented Bulbul and dispense with the possible threat it poses to both the agricultural industry and the native avifauna of the Big Island. Because the Red-vented Bulbul and the Red-whiskered Bulbul are becoming increasingly abundant on Oahu, it seems reasonable to expect that one or the other will appear again on the outer islands. Prompt action by concerned citizens in alerting the DOFAW biologist of new and/or unusual bird observations on the outer islands will greatly aid in suppressing the dispersal of bulbuls from Oahu to the neighbor islands. Persons to be contacted concerning these observations are as follows: Hawaii, Jon Giffin (885-4250), Ron Bachman,

(961-7307); Maui, Meyer Ueoka (244-4352); Lanai, Bill Kwon (565-6688); Molokai, Bill Puleloa (567-6696); Kauai, Tom Telfer (245-4444); Honolulu, Tim Burr (548-5921), Marie Morin (548-5921), Ralph Saito (548-2861).

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School address: Department of Zoology Brigham Young University Provo, UT 84602 Local address: 2157 Atherton Road Honolulu, HI 96822

## HAWAIIAN WILDLANDS - \$60 AN ACRE

#### Dear Members and Friends:

We all know Hawaii's wildlife is spectacularly unique. We all know that if we want to protect our beautiful, vanishing Hawaiian birds, plants and insects we need to protect their habitats. But as concerned individuals, it is hard to know what we can do to help.

The Nature Conservancy of Hawaii's proposed Waikamoi Preserve on the slopes of east Maui is our chance to do something very personal and very tangible to protect the wild Hawaii we all love so much. For only \$60 an acre, we each can help the Nature Conservancy of Hawaii buy the perpetual management rights for 5,230 acres of habitat for Maui akepa, Maui parrotbills, crested honeycreepers, dark-rumped petrels, nene, the majority of the known Hawaiian fruitflies, and hundreds of endemic plant and insect species, including many yet undescribed. Owning the perpetual management rights will mean that the Nature Conservancy will have authority and responsibility to protect and restore the native character of the land. The Conservancy's management program will focus on controlling feral pig and goat populations, introduced weeds, and bird predators like cats and rats. Meanwhile, Haleakala Ranch, the landowner, will retain title to the land and surface water rights in a cooperative venture dedicated to the conservation of Waikamoi.

The enclosed brochure tells you more about Waikamoi Preserve and the Nature Conservancy of Hawaii. The Nature Conservancy needs \$300,000 to purchase the rights for this magnificent preserve. The deadline is 25 August 1983. Pledges and cash-in-hand now account for about half of the needed funds. The HAS Board of Directors has voted unanimously to donate \$6,000 to protect 100 acres of Waikamoi. We hope that you, our friends and fellow conservationists will add to this fund as you are able.

Strong, local, popular support will help the Nature Conservancy convince charitable foundations and corporations to join in. As federal and state budgets for wildlife habitat acquisition and management are cut, it falls to us - private individuals, conservation organizations, business and foundations - to do the job. Any amount will help. Sixty dollars will save an acre. Waikamoi is just one step in a long-range effort to protect all of Hawaii's native ecosystems. Please make your donation payable to the Nature Conservancy of Hawaii and send it in the envelope provided. All contributions are tax-deductible. If you have any questions, you can call the staff at the Nature Conservancy (537-4508) or Audrey Newman, HAS Conservation and Finance Committee Member (732-7572).

Eventually, portions of the preserve will be open to the public, so you will be able to visit "your acre". Better than that, future generations will still have a piece of wild Hawaii to cherish and enjoy. It is our Hawaii. This is our chance.

> Aloha aina, HAS Board of Directors

#### LETTER OF SUPPORT FOR WAIKAMOI PRESERVE FUND

May, 1983

To the Editors:

Hawaii is a veritable evolutionary showcase. The Hawaiian Finches (formerly Hawaiian honeycreepers) offer a striking example of adaptive radiation that far exceeds that of the Galapagos Finches which provided Darwin with much of his inspiration. Drosophila flies, land snails and many groups of plants and insects in Hawaii offer comparable, if not more spectacular, examples.

The semitropical forests of Hawaii, like tropical forests everywhere, are threatened with destruction. These forests provide habitat for thousands of species. Currently twenty species of birds are endangered in Hawaii and as many as 900 plants have been proposed as either endangered or threatened. More importantly, entire communities may be eliminated.

Increasing human population, with its attendant urban sprawl, clearing of land for crops, cattle pasture and other uses, as well as the presence and continued influx of exotic plants and animals, are the biggest threats to Hawaii's native plants and animals.

The Hawaii chapter of The Nature Conservancy (TNC) recently initiated a Hawaii Forest Bird Project. They have utilized recently acquired information to identify the most valuable habitat for endangered forest birds and they are now seeking to preserve these lands in as close to their natural state as possible.

We have all worked in Hawaii and feel that TNC's effort may be the last hope for saving these upland forests from uses which are inconsistent with the long-term survival of Hawaii's forest communities. TNC presently has a commitment to acquire a conservation easement in perpetuity on 5,230 acres on Maui. The cost of this easement is \$60 per acre. Because of our interest in Hawaii's native flora and fauna and our belief that TNC's conservation efforts will provide a real opportunity to make a difference and are based on solid scientific information, we have each pledged to protect at least one acre of this land.

We are writing this letter in the hope that others will pledge a similar amount. Protection of these upland forests (home of the Maui Parrotbill, Crested Honeycreeper, Maui Nukupuu and Maui Akepa) will protect hundreds of other species and the integrity of several communities. With these communities intact, man will keep open a window on evolutionary processes that might otherwise be closed forever.

We ask persons interested in contributing toward the acquisition of the Waikamoi Preserve on Maui to send their tax-deductible contributions to: The Nature Conservancy of Hawaii, 1024 Nuuanu Avenue, Suite 201, Honolulu, HI 96817. Please state that your contribution is for the Waikamoi Preserve.

Signed,

Dean Amadon, David B. Ames, Ronald E. Bachman, Paul Baldwin, Reginald Barrett, Andrew J. Berger, Timothy Burr, F. Lynn Carpenter, Hampton L. Carson, John H. Carothers, Dale Coggeshall, Sheila Conant, John T. Emlen, Wayne Gagné, Derral Herbst, Francis G. Howarth, Hugo Huntzinger, Angela K. Kepler, Cameron B. Kepler, Ernest Kosaka, Eugene Kridler, Charles H. Lamoureux, Lloyd L. Loope, Richard MacMillan, Marie Morin, Dieter Mueller-Dombois, Roger T. Peterson, H. Douglas Pratt, Jr., Robert L. Pyle, C. John Ralph, Fred L. Ramsey, Ralph W. Schreiber, Charles W. Schwartz, Elizabeth Schwartz, J. Michael Scott, John L. Sincock, Charles P. Stone, Daniel D. Taylor, P. Quentin Tomich, Charles Van Riper III, Ronald L. Walker, David L. Woodside, C. Fred Zeillemaker, Melvaleigh Zeillemaker.

### REPRINTS OF ARTICLES

Reprints of articles in the 'Elepaio are available to authors and others at the following rate if ordered before publication date: for 100 copies, \$10 per page of the article. For each additional 100 copies, add \$3 per page.

## KANEOHE MARINE CORPS AIR STATION FIELD TRIP REPORT

Magnificent weather greeted 33 members and guests of the Society upon arrival at the Kaneohe Marine Corps Air Station on the morning of May 8. This trip, arranged by Peter Donaldson and led by Tim Burr, covered two sites on the Station and was completed in three hours. Staff Sergeant Bob Torres, MCAS Community Relations Officer, was our very helpful and much appreciated guide throughout the tour.

First stop was at the Red-footed Booby colony at Ulupau Head, where high cliffs afford a spectacular view of the Koolau Range, Moku Manu (island), deep blue sea, and seabirds soaring in all directions. Brilliant sunshine was tempered by mild ocean breezes. With the expert guidance and direction of Sgt. Torres, cars were quickly parked and small groups conducted individually to the area where numerous Red-footed Boobies were seen at close range. The sergeant's concern for the welfare of these nesting birds was very evident. Viewers with cameras had ample opportunity to photograph parents and fuzzy young together in their nests without disturbing them.

Much of the time at the booby colony was given to watching the constantly changing birdlife that swirled about Moku Manu and over the colony. Species noted were: Red-footed, Brown, and Masked Booby; Great Frigatebird; Brown Noddy; Sooty and Gray-backed Tern; and Red-tailed Tropicbird.

Leaving the booby colony, the party drove to Nuupia Pond. A considerable number of American Golden Plover were seen, most of them in breeding plumage. Some observers were surprised to see so many, as most individuals of this species have already left for points north. Also seen at the pond: Black Noddy, Hawaiian Stilt (some on artificial islands recently built), Ruddy Turnstone, Wandering Tattler and Black-crowned Night-Heron. The tour ended here with a very pleased group of birders.

The Hawaii Audubon Society greatly appreciates the continuing courtesy of the Kaneohe Marine Corps Air Station in making available these stimulating visits. Thanks go to Colonel C. D. Robinson, Commanding Officer; First Lieutenant M. A. Wilkowski, Public Relations Director; and to Sergeant Torres for his outstanding assistance.

George Campbell

## JUNE PROGRAM:

### PREHISTORIC HAWAIIAN BIRDS

The program for the Monday, 20 June, general meeting will be *Prehistoric Hawaiian Birds*, by Dr. Alan C. Ziegler, Head of the Division of Vertebrate Zoology at Bishop Museum.

Dr. Ziegler will talk about the initial and subsequent finds of prehistoric bird remains on various Hawaiian Islands, with an update on very recently discovered new sites on Maui and Oahu. He will discuss theories on how several of these prehistoric birds became flightless and describe the subsequent fate of a large portion of the prehistoric avifauna.

The meeting will be held at McCully-Moiliili Library at 2211 S. King St., Honolulu, at 7:30 p.m.

## ENVIRONMENTAL EDUCATION GRANTS ANNOUNCED BY THE NATIONAL AUDUBON SOC. EXPEDITION INSTITUTE

A scholarship and grant program for high school, college, and graduate students has been announced by the National Audubon Society Expedition Institute. The 1983 awards are designed to defray a student's expenses while attending school or completing a project, internship, or summer program of the student's choice.

Application forms and instructions for grants up to \$500 are available until July 15, 1983. Send a self-addressed, stamped #10 envelope to: Scholarship Committee, National Audubon Society Expedition Institute, RFD #1 Box 149B, Lubec, Maine 04652. Applications must be received by August 1, 1983.

Past Audubon Expedition Institute scholarships have made possible for many deserving students the fulfillment of immediate education and career goals, including attending seminars, conferences, workshops, travel programs, interning in conservation organizations or participating in the Expedition Institute.

The Expedition Institute, a B.S./M.S. travel/study environmental education program, uses social and natural environments as a classroom. The Institute is one of many educational programs sponsored by the National Audubon Society.

## MANANA ISLAND

#### FIELD TRIP

The second of four Manana (or Rabbit) Island fild trips is scheduled for Sunday, June 19.

Each trip is limited to 30 people, so call the trip leader early for reservations: DATE ALTERNATE LEADER PHONE 19 June 26 June Maura Naughton 254-1896 23 July 30 July Stewart Fefer 235-8290

There will also be a trip in August, which will be announced in a later issue.

As of last week, all trips still had openings.

We will meet at the Makai Pier, just north of Sea Life Park at 7:30 a.m. and return around 1 to 2 p.m. Be prepared to get wet!!! (Last year we waded through waist-deep water.) Seal your camera gear, binoculars, and other valuables in double plastic bags or other waterproof containers. Also, please wear tennis shoes or tabis; a jump from the boat without them can provide a painful introduction to sea urchins. Finally, the boat ride will cost \$5 per person; please bring the exact amount in cash to pay the boat-pilot.

#### VOLUNTEERS NEEDED

---Volunteers are needed for Saturday and/or Sunday July 9 and 10 to help 2-3 other Hawaii Audubon members oversee the Audubon booth at the Waimea Arboretum Foundation Plant Sale and Exhibition. Volunteers will dispense information and sell publications. "Time-sharing" with others will provide the opportunity to visit the other activities at the plant sale. Call Leilani or Bob Pyle (262-4046). ---Another volunteer is needed to help with the monthly mailing of the 'Elepaio. Call George Campbell for more details (941-1356). .--- A volunteer is needed to fill and mail occasional orders for back issues of 'Elepaio. Most back issues are kept at the Bishop Museum, but the extras of recent issues could be kept at home. Call Dick Smith (262-4784) or Bob Pyle (262-4046).

---Volunteers are always needed to assist with proofreading, typing, or writing for the 'Elepaio. A volunteer is especially needed to compile a five-year index from the yearly indices. Call Marie (533-7530).

#### JUNE FIELD TRIP

On Sunday, 12 June, Leilani Pyle will lead a field trip to Lyon Arboretum in Honolulu. This trip offers the possibility of seeing the introduced Indian Hill Mynahs, cockatoos, and both species of bulbuls. The native Apapane and Amakihi are also often seen in the arboretum.

Bring binoculars if available and be prepared for rain. Meet at the State Library on Punchbowl Street at 7:00 a.m. Call the leader, Leilani Pyle, at 262-4046 for further information.

## HELP WITH 'ELEPAIO

The July issue of '*Elepaio* will be pasted up during the week of June 13 to 19. If you would like to participate, please call Peter Galloway at 847-3511 (ext. 156) or Marie Morin at 533-7530 for more information. No experience necessary; everyone welcome!

#### IF NOT A MEMBER, PLEASE JOIN US

JOINT MEMBERSHIP

(National and Hawaii Audubon Socie	eties)
Individual	25.00
Family	32.00
Sustaining	50.00
Supporting	100.00
Contributing	250.00
Donor	500.00
Life (single payment)	1500.00
Dual Life (single payment)	2000.00

Special rates for full-time students and Senior Citizens (65 years of age or older) are available. Please write for application form.

#### LOCAL MEMBERSHIP

(Hawaii Audubon Society Only)

Regular\$	6.00
Junior (18 and under)	3.00
Subscriber (non-Hawaii residents)	6.00
Life	150.00
(payable in three equal annual instal	lments)

New members who send in dues between January and September will receive, *if they request them*, all back issues of the *'Elepaio* for that year. After September, the dues are counted for the following year.

## HAWAII AUDUBON SOCIETY

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#### ELEPAIO

Editors.....Marie Morin, Peter Galloway (Send articles to Marie Morin, 1415 Victoria St. #1515,Honolulu, Hawaii 96822)

#### FREE TRIP

National Audubon Society is looking for Audubon members qualified to lead natural history tours this summer to Alaska, the Amazon, Belize, Costa Rica, Galapagos Islands, Great Britain, Greenland, Hawaii, Israel, Kenya, New Guinea, and Trinidad and Tobago. The volunteer naturalists will not receive any pay, but all their expenses will be paid from the trip's starting point. (They must pay their own way to the city from which the trip leaves. For example, the Costa Rica trip departs from Miami.) Those interested should call Gene Wilhelm, the Society's vice president for education, at Audubon headquarters in New York, (212) 546-9123.

	CALENDAR OF EVENTS
June 12	(Sun.) Field trip to Lyon Arbore- tum. See page 107. Leilani Pyle, Leader (262-4046).
June 19	(Sun.) Manana Island field trip. See page 106. Maura Naughton, Leader (254-1896).
June 20	(Mon.) General meeting with speaker Alan Ziegler. See page 106. 7:30 p.m., McCully-Moiliili Library, 2211 S. King St.
NOTE :	No Board meeting this month.

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