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MICRONESIAN MEGAPODE REDISCOVERED ON SAIPAN

by H. Douglas Pratt and Phillip L. Bruner

The Micronesian Megapode (*Megapodius laperouse*) is an endangered bird species found in the Mariana (*M. l. laperouse*) and Palau (*M. l. senex*) Islands of the western Pacific. Probably because of egg predation by man (Greenway 1967), these birds have not fared well on islands populated by subsistence-economy man. Megapodes construct large, conspicuous mounds of earth, rock, or sand in which to lay their eggs. Heat from the sun and from decaying vegetation placed in the mound with the eggs is sufficient for incubation. Parental care of the young is minimal or nonexistent. The mounds are frequently located on beaches where they readily fall prey to prying human hands. Adult birds are seldom taken (Baker 1951). Thus the nominate race of this species has gradually disappeared from the larger, inhabited islands of its former range throughout the Marianas. Baker (1951) documented its disappearance from Guam before the twentieth century and from Rota, Tinian, and Saipan somewhat later, with none recorded on these islands since about 1930. Falanruw (1975) reported megapodes only from the smaller islands north of Saipan and from Aguijan (south of Tinian), where Robert P. Owen (pers. comm.) saw megapodes in 1955. We did not find any on Guam, Rota, or Tinian during a previous visit in 1976. However, Owen (pers. comm.) received unconfirmed reports from residents of Tinian that megapodes were present there in 1974. On Saipan, we did not identify the bird in 1976, but in retrospect several large, unseen birds we flushed from the ground along the Bañadero Trail below Suicide Cliff may have been megapodes.

Saipan is the most populous and most developed of the Marianas north of Guam. Thus we were quite amazed to find Micronesian Megapodes there in the summer of 1978. We were observing and tape recording birds in the Marpi area of northern Saipan early in the morning of 6 July. Each of us, working independently

in the forests below the infamous Suicide Cliff, heard what we believed to be calls of megapodes. We had spent the previous week at Palau, where we had become familiar with the vocalizations of the megapode. Pratt was able to tape record a lengthy series of vocalizations of the Saipan birds and by playback was able to lure the birds into view to confirm the identification. These recordings constitute physical documentation of the Micronesian Megapode's occurrence on Saipan since they also contain, among the megapode calls, voices of a combination of species unique to the island (e.g. *Cleptornis marchei*, *Ptilinopus roseicapillus*, *Zosterops c. conspicillatus*, etc.). The recordings will be deposited at the Library of Natural Sounds, Cornell University Laboratory of Ornithology. On every morning visit to this site between 6 and 10 July, we either heard or saw megapodes in the forest. In addition, Bruner saw a single bird just north of Profile Beach on the eastern side of the island on 6 July.

Vocalizations and Behavior

The voice of the Micronesian Megapode in the Marianas has not been previously described, but Marshall (1949) discusses that of the Palau bird. Calls of the two subspecies differ somewhat but are similar in overall pattern and quality. On Saipan, foraging megapodes utter a loud *skeek* at intervals. Occasionally the calls become more frequent and build in intensity to a loud "crow": *Skeek - keek - keet!* This vocalization is often answered by a second bird with a rising series of low, chuckling notes: *kuk-kuk-kuk - kuk - kuk - keet - KEET!*, resembling the cackle of a hen but terminating in loud notes similar to those of the first bird's "crow." This performance is regular enough that it probably serves as a means of contact between a foraging pair, as suggested by Falanruw (1975).

Perhaps one call is given by the male, the other by the female. Megapodes on Saipan were most vocal in the early hours after dawn and fell silent after about mid-morning.

Greenway (1967) summarized the limited information on the Micronesian Megapode's habits. Although generally considered poor fliers, the birds do take to the wing when disturbed or pursued. Their takeoff is rather noisy and apparently labored, but we have seen the Palau subspecies fly distances of several kilometers between small islands seemingly without difficulty. Bruner flushed two megapodes from a tree at dawn on 8 July, so the birds probably roost in trees. The bird attracted by playback of calls on 6 July responded by flying to a perch about 5 m over the trail but quickly dropped down to the ground. The birds are very agile on foot and progress rapidly over the jagged coral rubble of the forest floor.

Status and Conservation

Whether the Micronesian Megapode was never fully extirpated on Saipan, or whether our recent sightings are the result of a recolonization, cannot be determined. We favor the latter possibility, however, in view of the severity of the World War II struggle for control of the island. Habitat destruction was extreme (Baker 1946) and survival of a relatively large, edible bird under siege conditions seems highly unlikely. Furthermore, competent observers searched for the birds since the war without success (Marshall 1949; Owen, pers. comm.). Yet we found the birds to be relatively conspicuous because of their loud calls in 1978.

We observed at least seven Micronesian Megapodes in northern Saipan. This number probably reflects only a small fraction of the total population present since apparently suitable habitat covers at least a third of the island. Still, the number of megapodes on Saipan may not be large. The discovery of this Endangered Species on this island, after an apparent absence of half a century, is particularly significant for the species' prospects for survival. Saipan is modernizing rapidly with an expanding tourist industry. Its people have now irrevocably embraced a cash economy, making essentially obsolete such activities as the gathering of megapode eggs for food. Most present-day residents of Saipan would not recognize a megapode nest mound. Thus the factor that most contributed to the birds' original demise (Greenway 1967) has been removed.

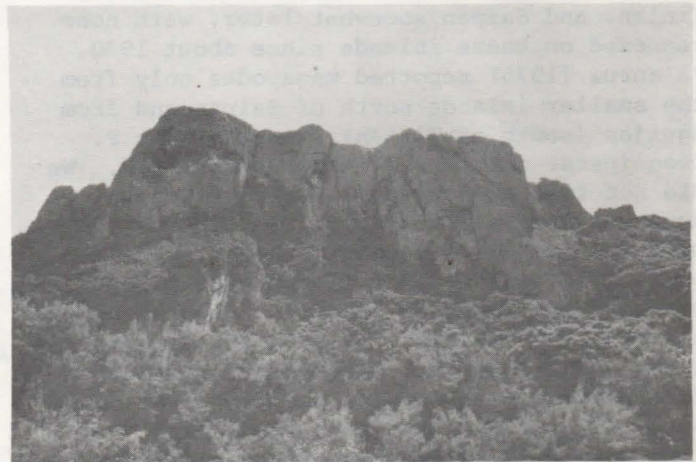
But the very developments that remove the

older threat may create a new impediment to the species' recovery. Most of our sightings occurred in an area heavily visited by tourists. We first found the birds within 100 m of the Last Japanese Command Post, a site visited almost daily by tour buses. Such visitation probably is not inimical to the megapode's existence. However, if increasing tourism results in construction of visitor facilities (hotels, condominiums, golf courses, etc.) in the Marpi area, with the usual disregard for native flora and fauna, this intriguing species could once again disappear from the island. But ecologically sound management of the area, along with measures to educate both residents and visitors about natural history, could make the megapode itself a tourist attraction. Fortunately, most of Marpi is public property, and developers must observe the strictures of the Endangered Species Act of 1973.

Certainly, our observations are a basis for some optimism for at least one Endangered Species. With the reappearance of the Micronesian Megapode, the original known avifauna of Saipan is intact, an almost miraculous situation, considering the island's sad history. We hope that future developments will take into account the preservation of this unique natural heritage.

Acknowledgements

Our visit to Saipan in 1978 was subsidized by grants from the Frank M. Chapman Memorial Fund, Louisiana State University Museum of Zoology, and Brigham Young University Hawaii Campus. Recording equipment was furnished by James Gullede of the Cornell



Suicide Cliff, Saipan. Site of rediscovery of Micronesian Megapode.

Photo by R.J. Shallenberger

University Laboratory of Ornithology.
Robert P. Owen Chief Conservationist of the
Trust Territory of the Pacific Islands, will-
ingly shared his knowledge with us.

Literature Cited

- Baker, R.H. 1946. Some effects of the war on
the wildlife of Micronesia. Trans. 11th
N. Amer. Wildlife Conf.: 205-213.
- Baker, R.H. 1951. The avifauna of Micronesia,
its origin, evolution and distribution.
Univ. Kansas Publ. Mus. Nat. Hist. 3:1-
359.
- Falanruw, M.V.C. 1975. Distribution of the
Micronesian Megapode *Megapodius laper-
ouse* in the Northern Mariana Islands.
Micronesica 11: 149-150.
- Greenway, J. C., Jr. 1967. Extinct and van-
ishing birds of the world. Dover Publ.,
Inc. New York. xvi + 520 pp.
- Marshall, J.T., Jr. 1949. The endemic avi-
fauna of Saipan, Tinian, Guam, and Palau.
Condor 51:200-221.

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NOMINATING COMMITTEE REPORTS

At the November Board meeting the
nominating Committee, consisting of Michael Ord,
Carol Ralph and Sheila Conant, presented the
following slate of officers for 1979:

President	Robert Shallenberger
1st V. P.	Maile Stemmermann
2nd V. P.	C. J. Ralph
Treasurer	Larry Hirai
Corresponding Secretary	John Walters
Recording Secretary	George Campbell
Director	Robert L. Pyle
Director	Rey Larsen

As stated in the by-laws, these officers
and directors "shall be elected ... by a plu-
rality of the voting members of the Society
present in person or by proxy at the annual
meeting of members." The annual meeting will
be December 18. Proxies may be mailed to the
Recording Secretary at the Society's post
office box.

KEALIA POND IN JEOPARDY !

The Director of the U.S. General Account-
ing Office has recently written to the Secre-
tary of the Interior recommending strongly
against acquisition of Kealia Pond on Maui for
a National Wildlife Refuge. The arguments
against acquisition in the letter are largely
unfounded. The "facts" in the letter were
gathered during a recent GAO nationwide study
of the effects of the Endangered Species Act
on Federal agencies. The report of that study
is not expected to be completed for several
months, yet, for unexplained reasons, the GAO
decided to single out Kealia Pond at this time.
The letter could seriously impair efforts to
protect wildlife at Kealia, and support from
members of the Hawaii Audubon Society is
needed immediately to correct this problem.

The GAO letter was made public, appar-
ently by Mayor Cravalho, in two recent Hono-
lulu newspaper articles, even before local
Fish and Wildlife Service (FWS) officials
were aware of it. The article in the Star-
Bulletin (Nov. 10) was particularly misleading,
as it stated that the FWS had abandoned plans
to acquire the pond.

Maui Mayor Cravalho was quoted extensive-
ly, making it clear to a knowledgeable reader
where the GAO had gathered its "facts". Mayor
Cravalho has been a strong opponent to FWS
acquisition of the pond for many years. If
the GAO letter is successful in stopping the
refuge at this stage, there will be one less
major obstacle in the way of Mayor Cravalho's
plans for unlimited expansion of aquaculture
facilities and possibly construction of a
deep draft harbor. It is interesting to note
that county and State officials were request-
ing the Corps of Engineers to restart its
study of south Maui harbor alternatives at the
same time they were convincing the GAO that
aquaculture was the only commercial develop-
ment planned for the pond area.

MANY ERRORS IN GAO'S LETTER

Conclusions in the GAO letter are based
almost entirely on erroneous information.
For example:

(1) Kanaha Pond is enough. Kanaha Pond,
on the opposite side of the island, is depict-
ed as giving waterbirds adequate protection on
the island. This is based on the inference
that Kanaha's present "sanctuary" status
assures its future protection. In fact, this
status is in name only, and the agency with
jurisdiction (State Department of Transporta-
tion) refuses to transfer control to the De-

partment of Land and Natural Resources or to the FWS to insure some degree of true sanctuary status.

(2) Kealia is already a sanctuary. The GAO letter states that Kealia does not meet FWS land acquisition criteria because it presently has "sanctuary" status and conservation zoning, thus affording it adequate permanent protection. The facts are that Kealia was only a "sanctuary" by revocable agreement with the principal landowner (Alexander and Baldwin), and even this agreement has now expired! Additionally, anyone who has followed the implementation of our land use laws knows the assumption that conservation zoning provides any protection is idealistic, misguided, or just ridiculous.

(3) Kealia will be protected. The GAO letter further states that the State and County will "consider improving the pond to enhance its potential as a waterbird habitat if Federal acquisition does not occur". Although the state has made some recent sincere steps in upgrading its waterbird conservation activities, its overall track record indicates that it still has a long way to go. The county has certainly shown no indication of sincere conservation efforts.

(4) Stilts and Coots aren't Endangered. The letter goes on to cite recent statewide waterbird count data as evidence of secure populations of stilt and coot, and suggests that the two species are no longer deserving of Endangered status and protection. They use this argument against FWS acquisition. What they gloss over are the pitfalls in using



Kealia Pond, Maui, showing the existing aquaculture facilities on the right.

Photo by Greg Vaughn

fragmentary count data as the primary indicator of the security of each species. They also ignore the fact that perpetuation of endangered waterbird populations in their present distribution is a prime objective that is proposed by the Hawaiian Waterbirds Recovery Team. Preservation and effective management of the few remaining optimum waterbird habitats, including Kealia Pond, are necessary to compensate for past, ongoing, and inevitable future alteration of other wetlands in the State.

WRITE NOW TO SAVE KEALIA !

As members of the HAS, each of us can help now by writing in support of FWS refuge acquisition to the Secretary of the Interior (Honorable Cecil D. Andrus, Washington, D.C. 20240) and by writing letters criticizing the GAO recommendations to our congressional representatives and senators. The Department of Interior has until December 30, 1978, to formally answer the points raised in the GAO letter, so it is critical that our input be forthcoming immediately.

- - R. J. Shallenberger

HAWAII BIRD OBSERVATIONS MARCH THROUGH JULY, 1978

by Robert L. Pyle

The three-year dry spell continued into March as Honolulu's rainfall came to less than half the monthly normal. But in April, May and June, a series of gentle rains from unusually wet trade winds boosted spring rainfall to nearly three times normal at Honolulu and brought welcome relief to most parts of the main islands. July turned dry, however, and cumulative rainfall for the year is still well below normal. The weak remnants of tropical storm CARLOTTA passed through the central islands at the end of June; and FICO, at full hurricane strength, brushed by Hawaii Island July 21. No unusual birds were reported after either storm.

Laysan Albatross--The colony near Kilauea Lighthouse, Kauai Is. (hereafter, K.), built up to a winter high population of at least 20 in mid-March. Counts were down by late March, with none seen after April 17 except one ex-



Laysan Albatross near Mokolea Point, Kauai in January, 1978. Photo by Spencer Gushiken

tremely late bird on May 26 (GVB). Two were seen flying just beyond the breakers at Haena, 18 km west of Kilauea, on March 19 (EW). The species also apparently tried to breed at Barking Sands, K. (TT, GVB).

Excitement over this species returning to the main Hawaiian Is. was further spurred by reports of its appearance on Oahu (hereafter, O.). In April, two birds alighted for several minutes on the Kahuku Golf Course (PLB), at the north tip of O. At about the same time, a freshly dead but emaciated specimen was picked up along the coastal highway near Waikane, O. (PLB). These were the first recorded occurrences of albatross on O. itself (apart from off-shore islets). Also, one was reported April 27 about 20 km off Waianae, O. (JFW), during a ten-day oceanographic cruise.

At Midway Atoll, an avian pox disease afflicted many albatross chicks during early spring. Game wardens had destroyed at least 586 chicks by April 7. Many chicks recovered, however, and the outbreak subsided after spraying and cutting of the vegetation which was thought to be supporting the flies responsible for spreading the virus (NB-C).

Black-footed Albatross--Several individuals were seen daily during the oceanographic cruise mentioned above (JFW).

Shearwaters and Petrels--An estimated 100 Wedgetailed Shearwaters (including one dark-phased bird), 1 Mottled Petrel and 4 Bulwer Petrels were sighted from a marlin fishing boat about 3 miles off Honokohau Harbor, Hawaii Is. (hereafter, H.), on June 11 (PP).

Hawaiian (Dark-rumped) Petrel ('Ua'u) (En)--An injured bird, discovered on May 21 in a taro field at Hanalei NWR, K. was the first reported occurrence on K. in many decades. A few 'Ua'u also were found again on

the highest ridge of Lanai Is. (hereafter, L.) on May 27 this year (LH). The USF&WS summer survey team heard two on the slope of Hualalai mountain, H., in May (TAB).

White-tailed Tropicbird--Groups of 3 (on May 13) and 4 (on May 20) were sighted over Chinaman's Hat islet, off Kualoa Park, O. (DS). White-tails are known to have nested on this islet in the past. A single bird over University of Hawaii campus May 13 (JFW), and 2 soaring near the Pali tunnel May 28 (CC) are interesting locality sightings for O. An unusually high count of 12 was recorded in the back of Maunalei Gulch, L., on July 24 (PJC). Some made curious passes over the observer as he stood on an exposed ridge, a few coming close enough (40 ft) for him to hear their wingbeats.

Red-tailed Tropicbird--One flew by Ulupau Head, O., several times during the HAS trip June 11. Three were seen at the same locality July 29 (RL et al.).

Blue-faced Booby--Five adults, including 2 with large chick, on Moku Manu islet, off O., were studied with a high-powered scope from Ulupau Head on June 11 (HAS). Five were seen there again July 29 (RL, RLP).

Great Frigatebird--Frigates are commonly seen around K. and O. Islands, but are much less frequently seen around the islands further to the southeast. Thus, a group of 25 watched swirling over Hapuna Beach Park, H., on June 28 (PP) was an unusually large congregation for that area.

Cattle Egret--More than 50 individuals roosted this spring in rushes at Kanaha Pond, Maui (hereafter, M.) (CBK), and a flock of 45 was seen feeding in a recently harvested sugar cane field at Pukalani, 15 km from Kanaha (ND). These are high counts for M.

Glossy/White-faced Ibis--The individual resident on O. since Sept. 1976 was seen through the spring at Honouliuli Unit, PHNWR (GDB et al). It has yet to develop any distinguishing color on its face.

Brant--The bird wintering at Kealia Pond, M., was last reported March 14 (JBG) and March 20 (CBK).

Emperor Goose--A pair sighted at Anaehoomalu Park, H., April 16 to 20 (WFN - see 'Elepaio 39(1):9, and 39(2):15-16; 1978), could well have been the same ones that were at Lahaina, M. in December.

Hawaiian Duck (Koloa) (En)--At the wet pasture along Hamakua Drive in Kailua, O., an adult seen with 6 ducklings on March 29 still had 6 immatures with her April 24 and 6

flying young on May 6 (JL), a notable nesting success. Up to 6 other adults also were present on those dates, and two still remained on June 1 and 11 (JL). Two adults with 7 young were reported on Kahana Stream, O., inland from the highway, on May 21 (fide JL, no further details). Also on O., 12 birds at Punamano Pond, JCNWR on April 11 (RAC) and 11 birds at Waipio April 22 (RL) were encouragingly high counts. At Hanalei NWR, K., a long time haunt of this species, the population peaked in mid-March with a high count of 107 on March 21 (GVB).

Pintail--One bird in eclipse male plumage was at Aimakapa Pond, H., July 20 (RLP). A few other summering birds were found on the statewide waterfowl count in mid-July (fide TAB).

Green-winged Teal--Nine were still present at Waipio, O., March 12 (RL). One bird remained there through the summer, with sightings June 11 (HAS), 24 (RL) and July 9 (WMO, RLP). Six at Kii Pond, JCNWR, March 4 had dwindled to 3 on April 8 (RL). One was seen at Hamakua Drive, O., March 5 (RL, RLP).

Garganey--The drab Garganey found in January at Waipio, O., had developed into good male plumage when seen there again March 12 and 13 (RL, RLP, DS). Two males turned up at Kakahaia NWR, Molokai, on April 12 (RAC).

Blue-winged Teal--This duck appeared at more localities than usual this winter. Two birds remained until mid-March on 3 different Ponds: at Waipio, O.; at Kanaha, M.; and at Hanalei NWR, K. (RL, RLP, CBK, GVB). An unprecedented count of 12 stopped briefly at Honouliuli Pond, JCNWR, on March 20 (RAC).

scaup (sp)--Observers on the statewide waterfowl count July 28 found 14 scaup on H., 2 males and 2 females at Lokuaka (=Nakaqawa) Pond near Hilo, and 5 males and 5 females on a pond at the Shipman ranch near Keaau.

Hawaiian Hawk ('Io) (En)--Six of these birds found between Akaka Falls and Laupahoehoe, H., on April 8 (ND) is an unusually high count. On the opposite side of the island, a pair of hawks and another single bird were reported along the highway south of Kailua-Kona March 17 (EW).

Golden Eagle--The elusive bird that has inhabited the higher mountains of K. since 1967 was spotted again in mid-April from the highway bridge at Kalihi Wai (ND).

Steller Sea Eagle--The photographs taken by GHB of the sea eagle at Kure Atoll in February were adequate to identify it as an immature Steller Sea Eagle (CJR). In mid-March the bird moved 115 km eastward to Midway Atoll, where it divided its time between Eastern and

Sand Islands (NB-C). It was last seen there in early May (GM).

Hawaiian Gallinule ('Alae-'ula) (En)--At the flooded pasture along Hamakua Drive in Kailua, O., 2 pairs of gallinules successfully raised 4 chicks each during April and May (JL). Fourteen gallinules were present May 6, and 18 were counted there on 3 weekends in July. The latter included a new brood of 4 chicks (JL).

Hawaiian Coot ('Alae-ke'oke'o) (En)--One pair reared at least 3 and possibly 4 young at the Hamakua Drive pasture (see above) during May. One of the adults had a red frontal shield (JL). By June 16 only one fully grown chick remained, as the flooded area where the birds had nested was drying rapidly (JL). The water soon disappeared completely, although the canal bordering the pasture remains a suitable nesting area for coots. At a little overrun pond within Kanaha Pond Sanctuary, M., 18 adults and 13 young (including 3 fledged broods) were present March 20. Thirteen adults and 10 young, including 2 new broods, were found there April 14 (CBK). At Waipio, O., 7 were found in the South Pond complex July 9 (RLP, WMO).

Black-bellied Plover--Single black-bellies were at Kii Pond, JCNWR, O. on March 4 (RL) and March 15 (RAC); and at Waipio March 25 and April 22 (RL).

Killdeer--The bird resident at Waipio was seen there March 3 (DS) and April 22 (RL), but has not been found since. This stray visitor had been seen on most visits to Waipio since July 1976.

Common Snipe--One was flushed from the Kii Pond area, JCNWR, March 15 (RAC, TAB).

Bristle-thighed Curlew--Two curlews were still present at Kii Pond, JCNWR, in early June (RAC), where they had overwintered for the first time in recent years. Three were



Bristle-thighed Curlews Photo by R.A. Coleman

seen in late March on the lawn of the Laie campus of Brigham Young University, six km from Kii Pond (PLB). Curlew sightings away from the Kii Pond area are very rare indeed. The lone bird present through spring along the northeast shore of L. was still there June 16, 26 and July 1, but was not seen thereafter (PJC).

Greater Yellowlegs--A yellowlegs in the flooded pasture along Hamakua Drive, Kailua, O., on March 5 was identified as a Greater by the large size in close comparison with Golden Plovers and Tattlers, by the loud, ringing 3-noted call (once 4-noted) given repeatedly, and by the long, reasonably heavy and very slightly upturned bill (RL, RLP). There were no more sightings during March, but it or another was seen there again April 1 (RL).

Lesser Yellowlegs--One bird at Honouliuli Unit, PHNWR, O., on March 14 (GDB) was the last report for the spring season.

Wandering Tattler--Five in winter plumage were seen together June 9 and 10 on Waihee River, M., above the water take-out, about 3 miles up from the sea (SC). This observation is especially interesting because of the summer date, the five together, and the locality on an inland mountain stream. From one to 4 separate individuals were seen during the summer at most of the regularly-visited ponds on Oahu (GDB et al.), and at Kealia Pond, M., and Opaepa Pond, H. (RAC, GVB).

Ruddy Turnstone--Up to 50 turnstones were reported regularly through the summer at Honouliuli Pond, JCNWR (GDB, RAC), with smaller numbers to be found on most of the ponds on Oahu.

Dunlin--Six of these birds, in handsome spring plumage, were at Waipio March 3 (DS). Five were there March 12 (RL), and one was found at Honouliuli Pond, PHNWR, April 18 (RAC, TAB).

Sanderling--This species is reported in summer much less frequently than the other shorebird migrants. Two at Waiawa Pond, PHNWR on July 28 (GDB) could have been returning fall transients.

dowitcher, sp?--The 3 birds wintering at Waipio were still there March 12, but only one was found April 22 (RL). Five were at Honouliuli March 20, and 4 on April 18 (RAC), the last date that they were reported there. Four were at Kanaha Pond, M., March 20 (CBK).

Hawaiian Stilt (Ae'o) (En)--Stilt nesting this spring at the newly developed areas on PH & JCNWR's was successful beyond all expectations. Heavy rains flooded out some of the nests in mid-May, but re-nesting was well underway by month's end (RAC). This demon-

strates how quickly the birds utilize new nesting sites and suggests that lack of such sites may well have been a primary factor limiting their population growth. Five stilt nests this spring at the remnant of Salt Lake, O. (RL), is also encouraging. Three juveniles were among the 113 stilts counted in the taro fields of Hanalei and Waiole Valleys, K., on March 31 (PK).

Northern Phalarope--One bird was reported at Honouliuli Pond, PHNWR, March 7 and 8 (RAC, GVB). This species is extremely rare in Hawaii.

Western/Slaty-Backed Gull--Two birds identified as one of these two species were found at Kanaha Pond, M., on March 20 (CBK, JP fide DS). Four of this type also were present on Kure Atoll from at least March 9 through April 19 (MR). A good photo of one bird was obtained, and measurements and a few primaries were taken from another that died.

Herring Gull--The first-year bird on Maui was at Kanaha Pond March 13 (JBG) and last seen at Kealia Pond March 20 (CBK).

Ring-billed Gull--Two Ring-bills were reported at Kealia Pond, M., on March 14 (JBG).

Laughing Gull--A bird judged to be a second-year Laughing Gull turned up at Kaunakakai sewage pond, Molokai, on May 17 (RAC).

Bonaparte Gull--The single birds wintering at Kealia Pond, M., and Aimakapa Pond, H., were last seen, respectively, on March 20 (CBK) and April 18 (RAC).

Least Tern--One bird was at Honouliuli Pond in mid-June (GDB), and 2 were found there July 28 (RAC). One immature was seen at Waiawa Pond, PHNWR, June 17 (RL), and 3 birds were found there June 27 (RAC). Four were at Kii Pond, JCNWR, July 4 (PP, RL). Unlike other regular waterbird migrants, this species in recent years has been reported in largest numbers in summer and early fall, with only scattered sightings of lone individuals after September.

White Tern--Seven birds together, in Kapiolani Park, O., March 12 (EW) was a good count. More than 1000 of these beautiful terns, against a clear blue sky, "flocking" and harassing the Stellar Sea Eagle at Kure Atoll in early May was an unforgettable spectacle (GM). Smaller numbers exhibited the same behavior around a kite in the sky and a flag on a flagpole (GM). At Sand Is., Midway, nesting seemed to be later than in previous years. Only a few chicks had hatched by April 7, and on May 5 more than half the population was still incubating (NB-C). One pair was observed incubating in Kapiolani Park, O., for a long period in July (DM).

Barn Owl--One was seen well and photographed April 7, sitting in a tree along Chain of Craters Road, H. (ND). Two observers reported Barn Owls coming to small boats at sea: one 15 km off Waianae, O., on April 26 (JFW), and one on May 29 in mid-channel between Kauai and Oahu (LRW). A juvenile was seen perched on a pineapple plant in Palawai Basin, L., July 24 (PJC). A Barn Owl and a Hawaiian (Short-eared) Owl were observed actively hunting over one field near Kilauea, K., at 8:45 a.m. on March 21, sometimes as close to each other as 15 m (EW).

Vanikoro (Edible-nest) Swiftlet--At least 2 were watched for 20 minutes on Manana Trail, O., by many observers on the HAS trip July 9 (see 'Elepaio, 39(3):33, 1978).

- - To Be Continued Next Month



Short-eared Owl Photo by R.J. Shallenberger

ALOHA TO NEW MEMBERS

The Society wishes to welcome the following new members and urge them to participate in the Society's activities.

Local Members: Roland Asakura, Kahului; Rosie Embry, Honolulu; Wilma Henke, Honolulu.

Subscribers: Richard Eakin, Portland, Maine; Larry Sansone, Los Angeles; George Sharpe, Portland, Maine; Joseph Zell, Los Angeles, California; and Mrs. J. Claude Evans, Dallas, Texas.

MAHALO FOR CONTRIBUTIONS

The Society thanks the following for contributions to help the work of the Society. Mrs. J. Claude Evans, Thelma Hensley, C.J. Ralph and Robert Wilson.

GLEANINGS FROM THE TECHNICAL LITERATURE

PERSPECTIVE ON THE BULBUL

Observations on the Naturalised Distribution of the Red-vented Bulbul in the Pacific (with Special Reference to the Fiji Islands)

by Dick Watling

Notornis 25:109-117, 1978

As Christmas bird counts over the last few years have shown, the Red-vented Bulbul (*Pycnonotus cafer*) population on Oahu is growing dramatically. Between 1974 and 1977 counts of this species increased from 50 to 212, to 453, to 744 individuals. It was first recorded in Hawaii only 12 years ago, in 1966, but it is now abundant or common in many parts of Oahu.

As Watling reports in this article, this bulbul has enjoyed similar success on a variety of other Pacific Islands. The subspecies of Red-vented Bulbul found on the Pacific islands is *P. c. bengalensis*, whose natural range is the Himalayas. There it lives in second growth habitats, and some of its food plants, from which it eats the fruits, are familiar tropical weeds on many Pacific islands, e.g. lantana and guava. In Fiji the bulbul has been blamed for the spread of the guava, but Watling disagrees, saying bulbuls eat little of this fruit, while man, horses, and cattle carry many seeds around.

As birders here may have noticed, the bulbul is a feisty bird. This characteristic initially led to its introduction to Fiji. Watling points out that in India, bulbuls are highly prized as fighting birds, much as roosters are elsewhere. In a contest the two birds are tethered on a perch, and the fight sometimes ends with the death of one bird. Besides being used in gaming, bulbuls feature in Indian poetry, folklore, and literature. Many Indians immigrated to Fiji around 1903, and they must have taken their bulbuls with them, because this is when these birds appeared in the wild there.

Watling's research finds that the bulbul also has traveled as a cage bird and established wild populations in Tonga, where a prince hoped it would control insects; in Samoa, where a shipment headed for New Caledonia from Fiji was re-routed during World War II; in New Zealand, where it was subsequently eradicated as a possible pest; in the suburbs of Melbourne, Australia; and on Oahu, Hawaii. In Fiji, Tonga, and Samoa the species has

spread to islands other than that of its initial introduction, but it may have been aided by man. It is not obvious why this adaptable and prolific bird has not dispersed on its own power to other Hawaiian islands yet.

C. P. Ralph

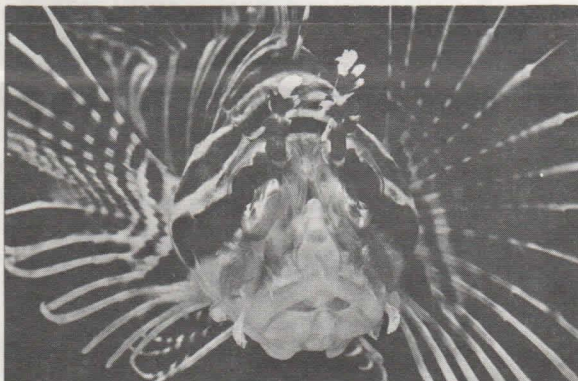
ENVIRONMENTAL APPRECIATION PHOTOGRAPHY CONTEST/PROGRAM

Thursday, December 7, 7:30 p.m.
McCully-Moiliili Library

Three experienced photographers, Rob Shallenberger, Gregory Vaughn and Hank Kuiper, will share their special techniques for getting high-quality photos of big and little critters and of landscapes. Then they will judge an Environmental Appreciation Photo Contest.

Anyone (amateur) is invited to bring their best color slides taken in Hawaii in any of the following categories:

- (1) landscapes
- (2) animal life
- (3) plant life
- (4) conservation problems and solutions



Each slide should be labeled with the category, title, and photographer's name. Slides will be registered at the beginning of the program and returned at the end. Three slides will get prizes in each category. First prize will be a free color enlargement.

This program is being co-sponsored by the Oahu Chapter, Conservation Council for Hawaii and the Hawaii Audubon Society. Any questions can be directed to Peter Galloway at 947-4045.

BOARD VOTES TO JOIN GRAZING SUIT

At its October meeting the Hawaii Audubon Society Board voted to support the suit of Alan C. Ziegler and Mae E. Mull against the Hawaii Department of Land and Natural Resources

(*'Elepaio* 39(5):50-51, 1978). This suit asks DLNR to prepare an Environmental Impact Statement to document the effects of the issuance of a grazing permit on some Mauna Kea lands of DLNR. The Audubon Board voted to join the suit if Dr. Ziegler and Mrs. Mull request our participation.

HAWAII FEATURED IN AMERICAN BIRDS

Observations from Hawaii have become a regular feature of *American Birds*, a National Audubon publication. A subscription form is included in this issue of the *'Elepaio* for Hawaii Audubon members.

The Hawaii regional report is written by R. L. Pyle and C. J. Ralph and includes a summary of the more important and interesting observations made in the state each season. Many additional features, outlined in the brochure, make this an extremely interesting journal to read. Anyone with more than a casual interest in birds should subscribe.

BOOK REVIEW

A GUIDE TO NORTH AMERICAN BIRD CLUBS

Jon E. Rickert. 1978. Avian Publications, Inc. Elizabethtown, KY. 575 p. About \$12.50

So your're planning a trip to Bottineau, North Dakota, and want to go birding there? Here is a book to help you find out where the birds are. A glance at its map of North Dakota tells you that the Turtle Mountain Audubon Society Chapter is in Bottineau, the text reports when and where it meets, what it publishes, where and how frequently it goes on field trips, and how to write or phone people in the club. This type of information is given for over 835 bird clubs from Alaska to Panama. Maps of the states and provinces of the U.S. and Canada help you pick the clubs in the area you need. Some centers of high ornithological culture have telephone numbers with tape recordings advising callers of the whereabouts of rare birds. These numbers are also in this book.

Hawaii Audubon is featured in the book and apparently has the distinction of having more publications than any other society.

This catalogue should be useful to travelling birders as a way to contact local enthusiasts or as a guide to good birding spots. It also should help bird clubs be in touch with each other, to cooperate on ventures or to compare policies and procedures.

C. P. Ralph

MUNRO BEQUEST RECEIVED

The Hawaii Audubon Society in early November received a generous bequest of \$5000 from the estate of Mrs. Jessie Gallagher Munro, wife of the pioneer Hawaiian ornithologist, Dr. George C. Munro. The Board has gratefully received the bequest and is now exploring ways of utilizing the funds in such a way that would be relevant and meaningful to the memories of Dr. and Mrs. Munro.

NOTE TO CONTRIBUTORS TO THE 'ELEPAIO

All contributions concerning natural history and conservation are welcomed, especially those pertaining to the Pacific area. The Editorial Committee wishes to encourage material from the Pacific Islands, such as the Trust Territory, Guam, American Samoa, and other areas. Articles on all natural history subjects are solicited.

It would facilitate the processing and review of your contribution if it could be submitted typewritten and double spaced, although this is not a requirement. All articles of a scientific nature are sent out for comments to at least two reviewers familiar with the subject.

To insure proper handling and rapid publishing of your contribution, it should be mailed to the Editor: C.J. Ralph, 3467 Alani Drive, Honolulu, HI 96822.

NATIONAL AUDUBON CONVENTION SET

The National Audubon Society's biennial National Convention will be from June 29 through July 1, 1979 in Colorado. The outstanding conference facilities of the YMCA of the Rockies, near Estes Park, will be used. Key environmental issues will be addressed, and special sessions for chapter officers and official delegates are being planned. In addition, there will be art shows, a special Audubon book and gift store, and exhibits open throughout the conference. Pre- and post-Convention field trips will be available.

The dates were specifically chosen with the thought that many members might want to combine their Convention plans with a family vacation in the Rockies. Also, the weather and scenery and birding should be superb at that time. Although at this early date the detailed plans are in preliminary stages, full information and registration forms will be available in January. All Audubon chapter members are invited to attend.

PUBLICATIONS OF THE SOCIETY

HAWAII'S BIRDS by the Society (1978). This is the best field guide to our birds, and includes colored illustrations of all native and well-established exotic species. \$3.25 plus postage: 48¢ (surface mail) or 67¢ (air). Hawaii residents only: add 13¢ for tax.

FIELD CHECKLIST OF BIRDS OF HAWAII by R. L. Pyle (1976). A pocket-size field card listing 125 species found in Hawaii with space for notes of field trips. (Postpaid) \$.25 (ten or more, 10¢ per copy)

GUIDE TO HAWAIIAN BIRDING by members of the Society and edited by C.J. Ralph (1977). Where to go and some idea of what you are likely to see. For the islands of Kauai, Oahu, Lanai, Molokai, Maui and Hawaii. (Postpaid) \$ 1.00

PRELIMINARY LIST OF THE BIRDS OF HAWAII by R. L. Pyle (1977). An authoritative compilation of all species naturally occurring in Hawaii as well as those introduced by man which are currently established as viable populations. Gives each species' status. (Postpaid) \$1.00

ENDANGERED WATERBIRDS OF THE HAWAIIAN ISLANDS by R. J. Shallenberger (1978). Hawaiian Stilt, Coot, Gallinule and Duck, each described in 2 pages of photos and text. Covers description, ecology, status, and distribution. (Postpaid) \$.50

BIRD OBSERVATIONS DUE

Any bird observations of interest for the fall period, August 1 to November 30, should be submitted for publication now. Many of the observations will be included in Dr. Pyle's seasonal account in the 'Elepaio, and some will be included in the Hawaii Region report in American Birds, edited by Drs. C. J. Ralph and Robert Pyle. Please submit any observations to Dr. Robert L. Pyle, 741 North Kalaheo Ave., Kailua, HI 96734.

DETAILS OF AUDUBON EVENTS

(Christmas Counts are detailed in the last issue of the 'Elepaio)

AUDUBON REGULAR MEETING FIRE IN HAWAIIAN FORESTS

Monday, Dec. 18 - 7:30 p.m.
McCully-Moiliili Library

"The Role of Fire in a Hawaiian Montane Ecosystem" by Terry Parman, a slide presentation summarizing the results of a three-year study of plant succession after fire, including an assessment of the ecological role of fire in this native ecosystem. This is a controversial subject and Mr. Parman is probably the leading expert on the field in Hawaii. The library is at 2211 South King St., between the University and Punahou exits off the freeway. Parking on the makai side.

BIG ISLAND SPECIAL PROGRAM DEEP SEA MINING

Thursday, Dec. 7, 7:30 p.m.

A special program on "Deep Sea Mining, Manganese Nodule Refining and the Environment" by Bill Reich will be given in Room #1, Wentworth Hall, Hilo College. Mr. Reich is a member of the Hawaii County Energy Advisory Committee and a past president of the Hawaii Island Chapter of the Conservation Council. The program is jointly sponsored by the Conservation Council of Hawaii (Hawaii Island Chapter), Sierra Club (Moku Loa Group), Honua Hawaii, Hawaii Audubon Society (Is. of Hawaii Representative), and Hilo College (Continuing Education and Community Service, Mary Matayoshi, Director).

COASTAL FLORA FEATURED

Thursday, Dec. 14, 7:30 p.m.
McCully-Moiliili Library

A slide show on Hawaii's coastal plants entitled "Na Mea Ulu Ma Kahakai o Hawai'i", will feature Hawaii's unique and interesting coastal flora.

The slide show was prepared by Bert Kimura of Leeward Community College and Ken Nagata of Lyon Arboreum under a special project funded by the Sea Grant College Program. Kimura and Nagata will also discuss some of their findings from extensive field surveys conducted in Hawaii. One of the purposes of their work was to docu-

ment the status of coastal plants considered as threatened or endangered.

The program is sponsored by the Conservation Council for Hawaii and the Sea Grant Advisory Program at the University of Hawaii.

Copies of the slide show will be made available for use by the public later this year. For more information, call the Marine Advisory Program at 948-8191.

MAUI CHRISTMAS COUNT DETAILS

Friday, December 22

The new Christmas Bird Count on Maui will be called the Puu o Kali Count, centered on the south rim of Puu o Kali, a cinder cone on the west flank of Haleakala. The circle includes Kealia Pond, a haven for the endangered Hawaiian Stilt and Coot; Puu Olai, a lookout for pelagic sea birds; Polipoli Mountain Park, where honeycreepers, including the Maui Creeper, can be found; alpine scrub to the 8800 foot level on the southwest rift zone of Haleakala, home to Chukar and other exotic game birds; the up-country Kula area; and lowland kiawe scrub and sugar cane fields.

This year the count will be conducted on Friday, December 22. All interested persons should contact John F. Walters, RR 1 Box 518, Kula, HI 96790 (phone 244-9181 ext. 103, or 878-1987). Maui birds have never before been the objects of a Christmas count, and we eagerly anticipate the results.

IF NOT A MEMBER, PLEASE JOIN US

JOINT MEMBERSHIP

(National and Hawaii Audubon Societies)

Individual	\$ 18.00
Family	21.00
Sustaining	30.00
Supporting	50.00
Contributing	100.00
Donor	250.00
Life (single payment)	1000.00
Dual Life (single payment)	1500.00

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	\$ 3.00
Junior (18 and under)	1.00
Subscriber (non-Hawaii residents)	3.00
Life	100.00

(payable in \$25 annual installments)

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HAWAII AUDUBON SCHEDULE OF EVENTS
(For details, see inside back page)

- Dec. 7 (Thurs.) Special Program, Hawaii Island.
On deep sea mining and the environment by
Bill Reich at Hilo College; 7:30 p.m.
- Dec. 7 Special Program on coastal flora at the
McCully-Moiliili Library at 7:30 p.m.
- Dec. 11 (Mon.) Board meeting at Tim Burr's, 46-
458 Kahuhipa St., Kaneohe (235-4036) 7 p.m.
- Dec. 16 (Sat.) Waipio, Oahu, Christmas Bird
Count. M. Stemmermann, Compiler (235-1693).
- Dec. 16 Lihue, Kauai, Christmas Bird Count.
W. Sears, Compiler (822-3045).
- Dec. 17 (Sun.) Honolulu, Oahu, Christmas Bird
Count. R.L. Pyle, Compiler (262-4046).
- Dec. 17 Kapaa, Kauai, Christmas Bird Count.
D. Kawahara, Compiler (822-3271).
- Dec. 18 (Mon.) REGULAR MEETING. *The Role of
Fire in a Hawaiian Montane Ecosystem*, by
Terry Parman. McCully-Moiliili Library,
2211 South King St., at 7:30 p.m.
- Dec. 22 (Fri.) Puu o Kali, Maui, Christmas Bird
Count. New Count! John Walters, Compiler
(244-9181 xt. 103 or 878-1987).
- Dec. 30 (Sat.) Volcano, Hawaii, Christmas Bird
Count. L. Katahira, Compiler (967-7416).

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