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First Record of Tristram's Storm-Petrel in the Southeastern Hawaiian Islands

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INTRODUCTION

Tristram's or Sooty Storm-Petrel (Oceanodroma tristrami) is a small seabird that ranges across the subtropical central and western Pacific Ocean and nests in Hawaii and Japan. In Japan, the species nests in the Volcano, Izu, and possibly the Bonin Islands (USFWS 2005). In the Hawaiian Archipelago it nests only in the Northwestern Hawaiian Islands (NWHI); there are no known nesting colonies or records of birds in the Southeastern Hawaiian Islands (Pyle and Pyle 2009). The total breeding population in Hawaii is relatively small, about 10,000 pairs, with the largest colonies located on Nihoa, Laysan, and Pearl and Hermes, smaller colonies on Necker, French Frigate Shoals, and possibly Lisianski (Rauzon et al. 1985, Harrison 1990, USFWS 2005). Birds have been also observed recently on Midway and Kure and may recolonize those islands now that rats have been eradicated (USFWS 2005). Tristram's Storm-Petrel is somewhat unusual among Hawaiian seabirds because it nests during the winter months, with eggs laid between December and February and chicks fledging in April and May (Slotterback 2002). Nests are placed in rock recesses, amongst rocky scree, under guano piles, or in burrows under vegetation (Rauzon et al. 1985, Slotterback 2002). Adults are active at colonies only at night.

OBSERVATIONS

On 8 April 2010, a storm-petrel was found washed up in the surf at Kualoa Beach Park on the eastern side of Oahu, and it was taken to Carolyn Blackburn for rehabilitation and eventual release. Unsure of the bird's species, Carolyn sent photographs to Beth Flint of the U.S. Fish and Wildlife Service and Lindsay Young and Eric VanderWerf. Lindsay visited Carolyn at her rehabilitation facility on April 10 to take measurements and photographs. After examining the photographs and measurements, it was clear that additional information was needed to determine the identity. Lindsay and Eric returned on 12 April 2010 to examine the bird again and take more photographs and measurements.

The bird was mostly dark grayish-black in color, except for some gray on the rump and a diagonal grayish band across



the upper surface of the inner wing that extended to the carpal joint (Figure 1). The legs were fairly short and did not extend beyond the tail, and the legs and feet were entirely dark gray. The tail was slightly forked and had no white band. There was a noticeable peak on the forehead formed by feathers that gave the bird a square-headed appearance. There was no wing molt, but the innermost tail feather on each side had remnants of a sheath at its base. The plumage looked very fresh overall, with little wear evident anywhere. The following body measurements were taken: total length = 232 mm; wing span = 495 mm; wing chord = 151 mm; tail length (outermost rectrix) = 78 mm; tail length (innermost rectrix) = 65 mm; depth of tail fork = 13 mm; exposed culmen = 20 mm; tarsus length = 29 mm; mass = 103 g.

The bird's appearance and measurements did not seem to match any species at first. It lacked the white tail band characteristic of Band-rumped Storm-Petrel (*Oceanodroma castro*), the only storm-petrel that nests in the Southeastern Hawaiian Islands, so that species could be ruled out. Leach's Storm-Petrel (*Oceanodroma leucorhoa*) is a fairly common visitor to Hawaiian waters (Pyle and Pyle 2009), but most individuals of that species also have a white band on the tail. There are several all-dark storm-petrels that occur in the Pacific, including an all-dark subspecies of Leach's Storm-Petrel (*O. l. chapmani*), which were potential candidates, none of which have been recorded in

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Hawaii previously. However, the mass of the bird in question, 103 g, was much greater than reported for all storm-petrel species except Tristram's (70-112 g; Onley and Scofield 2007), which evidently is the heaviest storm-petrel species in the world. Polynesian Storm-Petrel (Nesofregatta fuliginosa) is the next heaviest, with a maximum reported mass of 86 g, and has variable plumage color, but also has several distinctive features that this bird lacked, including long legs that extend beyond the tail, and oval, paddle-shaped wings. Several measurements of the bird in question were shorter than reported for Tristram's in the Literature (Onley and Scofield 2007, Warzybok et al. 2009), inleuding wing span (560 mm), wing chord (172-192 mm), tail length (103 mm), and depth of the tail fork (36 mm) and closest to Leach's (450-480 mm, 140-167 mm, 80 mm, and 16 mm, respectively), but the bird's mass was so much higher than reported for Leach's (38-50 g, average = 45 g; Onley and Scofield 2007) that Leach's seemed unreasonable.

After much deliberation, we realized that the very fresh plumage indicated it was a juvenile bird, raising the possibility that the flight feathers were either not completely developed or that juvenile Tristram's have shorter flight feathers than indicated in the literature. Peter Pyle later pointed out that downy tips to feathers on the nape and back are visible in Figure 1, and that adult Tristram's would have sequential wing molt in April, confirming that the bird was indeed a juvenile. The date on which it was found, 9 April, would be early for juveniles of most seabird species in Hawaii, which fledge mostly in the summer or fall, but would fit with Tristram's, which nests during the winter. Beth Flint of the USFWS provided dates on which the first fledged juvenile Tristram's were recorded on Tern Island, French Frigate Shoals in previous years, which were 19 April 1999, 20 April 2000, 19 April 2001, and 1 April 2003 (USFWS unpubl. data), and thus consistent with the idea that this was a recently fledged Tristram's. Finally, to confirm whether recently fledged juveniles might have shorter flight



feathers than adults, we asked researchers who have worked with the species for measurements. The wing chord of two juvenile Tristram's Storm-Petrels salvaged from Tern Island in April and May 2007 measured 139 mm and 156 mm and their tail lengths were 67 mm and 89 mm. These values fell on either side of the mystery bird's measurements, indicating juvenile Tristram's do indeed have shorter flight feathers than adults, or that these feathers are not fully developed when the birds leave the nest, thereby eliminating the apparent contradiction in measurements and explaining the reduced fork in the tail compared to adult specimens.

There are no previous records of Tristram's Storm-Petrel in the Southeastern Hawaiian Islands (Pyle and Pyle 2009), so this bird represents the first documented occurrence of the species in this area. This observation combined with a record of Tristram's from the Farallon Islands off California on 22 April 2006 (Warzybok et al. 2009) indicates the species may range farther east in the Pacific than previously realized. The bird presumably came from one of the colonies in the NWHI, but it is also possible that it fledged from an undiscovered colony

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somewhere in the Southeastern Hawaiian Islands. Perhaps the most likely possibility is Moku Manu, an isolated rocky islet off the tip of Mokapu Peninsula. Moku Manu is located only 13 km southeast of Kualoa Beach where the bird was found, and the bird could have been carried from there by prevailing trade winds. Moku Manu is rat-free and harbors many species of nesting seabirds and has suitable nesting habitat for Tristram's Storm-Petrel. Nesting storm-petrels are easily overlooked because they nest in small underground cavities and are active at colonies only at night.

The bird appeared healthy and alert and was not injured. It had substantial breast muscle and the keel was not exposed. It was fed 6-8 smelt and provide B1 and other vitamins daily and maintained a steady body weight throughout its captivity. The bird was released on the morning the 15th of April into a small rocky recess at the Hawaii Audubon Society's Freeman Seabird Preserve at Black Point. It was gone the next morning, but remarkably, it returned on 17 April, and then left again the following morning. Seabirds imprint on their natal nest site several weeks before fledging, so it is unlikely it imprinted on Black Point, but it is curious that it returned to the site. There is no information about the age of first breeding in Tristram's Storm-Petrel, but other species of storm-petrels may begin breeding when they are 3-5 years old, and this bird should be looked for at Black Point in the future.

ACKNOWLEDGMENTS

We thank Peter Pyle, Mark Rauzon, Alvaro Jaramillo, Ian Jones, and Mike Ord for assistance in identifying the bird, Beth Flint for providing fledging dates from Tern Island, and Andrew Titmus and David Hyrenbach of Hawaii Pacific University for providing measurements of birds salvaged from Tern Island. The manuscript was improved by comments from Peter Pyle.

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Figure 1. Juvenile Tristram's Storm-Petrel that washed ashore at Kualoa Beach Park, Oahu on 8 April 2010. Photographed on 12 April 2010. The bird was healthy and was released on 15th of April.

Upcoming Field Trips

October Fieldtrip with O'ahu Army Natural Resources Program You must complete the OANPR volunteer forms in order to participate.

Saturday 22,2011

Location: Palikea (Southern end of Waianae Mountain

range, along the summit trail)

Meeting time: 8:00 a.m.

Meeting location: (exact meeting location will be emailed to

confirmed sign-ups)

Hiking: Approx. 4 miles round trip, along a summit

trail with several changes in elevation (some

steep areas with steps).

Difficulty Rating: Moderate. There are a few areas with steep

drop-offs on side of trail, so hike is NOT

appropriate for acrophobic.

We will be controlling invasive weeds within Project:

the native forest. We will use small hand tools

(hand saws and pruners) and will apply a

caution-labeled herbicide (Garlon4) to the cut stems of weeds with drip applicator bottles. All tools and gloves will be provided.

Highlights: Palikea is home to several species of native forest birds, including the Oahu 'Elepaio, 'Apapane, and 'Amakihi. A juvenile I'iwi was observed here by OANRP staff in 2009. This beautiful native forest is also home to endangered kahuli tree snails, happy face spiders, and large variety of rare native plants.

To sign up and for more details about the OANRP volunteer forms for future trips with HAS and OANRP contact Casey at hiaudsoc@pixt.com or at 808 528-1432

November trips will include Brigham Young University of Hawai'i Museum of Natural History and James Campbell National Wildlife Refuge please contact us at the HAS office to sign up and for more info!

HAWAII'S SEABIRDS NEED YOUR HELP!

Each fall, after seabird fledglings mature, they make their first night-flight to the sea in search of feeding grounds. Unfortunately, many fledglings are attracted to unshielded artificial lighting, often circling the lights until they land from exhaustion or crash into nearby infrastructure (including utility poles and wires and buildings). Once grounded, the birds often fall victim to non-native mammals such as mongoose, cats, and dogs, as well as vehicular traffic. This seasonal issue is referred to as "fall-out" and affects Newell's shearwaters, Wedge-tailed shearwaters, Hawaiian petrels, Bulwer's petrels, and several other seabirds. Each fall, hundreds to thousands of seabird fledglings are injured or killed across the main Hawaiian Islands as a result of fall-out.

While state and federal agencies as well as partner organizations are working to address the issue, the problem is far from solved. Here's how you can help!

⇒IF YOU FIND GROUNDED SEABIRD FLEDGLINGS, USUALLY FROM SEPTEMBER 15 TO DECEMBER 15, PLEASE COLLECT THEM AND DROP OFF WITH THE ORGANIZATIONS LISTED BELOW

IMPORTANT: Many seabirds nest at coastal areas and beaches, and young small fluffy chicks often sit unattended at or near nest sites, which may be holes, crevices, or shady spots – these chicks are not lost or abandoned. Do not move or collect young seabird chicks from their ocean-side nests, these are not matured or grounded fledglings making their first flight. In contrast, fall-out birds are normally located at places with bright night-time lighting such as parking lots, stadiums, roadways, parks, or under utility wires – but not at unlit beaches.





Matured seabird fledgling = okay to collect

Young seabird chick = do not collect

PROCEDURE: Approach the fledgling from the rear and gently pick it up with a towel. Place it in a covered and ventilated box. Do NOT give it food or water.

- ☐ Kauai: Save Our Shearwaters Aid Stations
 - More information can be found at:http://www.kauaihumane.org
- ☐ Oahu: Sea Life Park Rehabilitation Center
 - More information can be found at: http://www.sealifeparkhawaii.com/
- ☐ Maui: Save Our Seabirds
 - o Jay Penniman, 808-280-4114
 - o More information can be found at: mauinuiseabirds.org
- - o Russell Kallstrom, 808-553-5236 (day), 808-553-9850 (night)
- ☐ Lanai: Save Our Seabirds
 - o Christine Costales, 808-559-0436
 - o More information can be found at: lanainativespeciesrecovery.org
- Big Island: Three Ring Ranch
 - o More information can be found at: http://www.threeringranch.org/

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⇒VOLUNTEER AT THE SEA LIFE PARK SEABIRD REHABILITATION FACILITY ON OAHU

Volunteers may assist Rehabilitators in the intake, care, feeding, and release of injured seabirds. Other responsibilities may include cage cleaning, medical treatment assistance, food preparation, and various other duties.

Contact Sea Life Park at: 808 259 2500 41-202 Kalanianaole Highway Waimanalo, Oahu, Hawai'i, 96795

Guidelines for seabird friendly lighting can be found at:

⇒ USE SEABIRD FRIENDLY LIGHTING AT HOME AND URGE LOCAL BUSINESSES AND MUNICIPALITIES IN YOUR COMMUNITY TO USE SEABIRD FRIEDNLY LIGHTING TOO

http://www.state.hi.us/dlnr/dofaw/fbrp/shearwaterlights.htm
 http://darkskysociety.org/ under the "Good Lights for Good Nights" section

Mahalo to: Keith Swindle of the U.S. Fish and Wildlife Service, and Fern Duvall, Jay Penniman, Norma Creps and Lauren Goodmiller of the Division of Forestry and Wildlife.

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PLEASE LET US KNOW IF YOUR ADDRESS CHANGES.

Plants Considered Harmful to Birds

(Excerpts of Plants Found in Hawai'i)

Submitted by Ron Walker

Sources: Adapted from American Medical Association Handbook of Poisonous and Injurious Plants (Chicago: American Medical Association, 1985): R. Dean Axelson, Caring for your Pet Bird (Poole Dorset, England: Blandford Press, 1984); Gary Gallerstein, Bird Owner's Home Health and Care Handbook (New York: Howell Book House, 1984); Greg J. Harrison and Linda R. Harrison, eds., Clinical Avian Medicine and Surgery, (Philadelphia); W.B. Saunders, 1986): and John M. Kingsbury, Poisonous Plants of the United States and Canada (Englewood Cliffs, N.J.: Prentice-Hall, 1964).

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Plant Name Scientific Name		Parts Known To Be Poisonous	
Amaryllis	Amaryllidaceae`	Bulbs	
Balsam Pear	Memordica charantia	Seeds, Rind of Fruit	
Bird of Paradise	Caesalpina spp.	Seeds	
Buckthorn	Rhamnus spp.	Fruit, Bark	
Buttercup	Ranunculus spp.	Sap, Bulbs	
Calla Lily	Zantedeschia aethiopica	Leaves	
Caladium	Caladium esculentum	Leaves	
Castor Bean	Ricunis communis	Beans, Leaves	
Coral Plant	Jatropha gossyplifolia	Seeds	
Daphne	Daphne spp. (Wikstromia foetida)	Berries	
Datura	Datura spp.	Berries	
Eggplant	Solanaceae	All Parts but Fruit	
Elephant's Ear (Taro)	Colocasis spp.	Leaves, Stem	
English Ivy	Ilex aquifolium	Berries, Leaves	
Mushroom (certain species)	Amanita spp.	All Parts	
Holly	Ilex spp.	Berries	
Hydrangea	Hydrangea spp.	Flower Bud	
Iris (Blue Flag)	Iris spp.	Bulbs	
Java Bean (Lima Bean)	Phaseolus spp.	Uncooked Beans	
Jerulalem Cherry	Solanum pseudocapsicum	Berries	
Jimsonweed (Thornapple)	Datura spp.	Leaves, seeds	
Lantana	Lantana spp.	Immature Berries	
Lobelia	Lobelia spp.	All Parts	
Marijuana	Cannabis sativa	Leaves	
Mistletoe	Santalales spp.	Berries	
Morning Glory	Ipomoea spp.	All Parts	
Nightshades (all types)	Solanum spp.	Berries, Leaves	
Oleander	Nerium oleander	Leaves, Branches, Nectar of Blosso	
Philodendron	Philodendron spp.	Leaves, Stem	
Poinsettia	Euphorbia heterophylla	Leaves, Flowers	
Pokeweed (Inkberry)	Phytolacca spp.	Leaves, Roots, Immature Berries	
Potato	Solanum turberosum	Eyes, New Shoots	
Rhododendron	Rhododendron spp.	All Parts	
Rosary Pea (Indian Licorice)	Abrus precatorius	Seeds*	
Sweet Pea	Lathyrus latifolius	Seeds and Fruit	
Tobacco	Nicotinia spp.	Leaves	

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*Seeds imported to make necklaces and rosaries.

The 112th Christmas Bird Count: Wednesday, December 14, 2011 to Thursday, January 5, 2012

We are currently looking for count leaders and volunteer counters for our Statewide Christmas Bird Counts! Please contact us at hiaudsoc@pixi.com if you would like to participate in a count this year!

From December 14 through January 5, tens of thousands of volunteers throughout the Americas take part in an adventure that has become a family tradition among generations. Families and students, birders and scientists, armed with binoculars, bird guides and checklists go out on an annual mission - often before dawn. For over one hundred years, the desire to both make a difference and to experience the beauty of nature has driven dedicated people to leave the comfort of a warm house during the Holiday season.

This year marks the Hawaii Audubon Society 68th year. We will be having counts state wide. Please let your local contact person know you will be participating. If you would like to lead a count this year or in the future please contact the HAS office. For some of the counts we will be hosting this year, please check our website at www.hawaiiaudubon.com.

This one day event in our area is a great opportunity to meet other birders and volunteers near you. It is also a great chance to learn some new birding skills as well as collecting valuable data for Hawai'i. So please remember to sign up and we look forward to counting with you this Holiday season!

From feeder-watchers and field observers to count compilers and regional editors, everyone who takes part in the Christmas Bird Count does it for love of birds and the excitement of friendly competition -- and with the knowledge that their efforts are making a difference for science and bird conservation everywhere.

We look forward to having you join us!

Oahu Christmas Bird Counts

Make your plans for the upcoming Christmas Bird Counts (CBC). There will be two CBCs on Oahu during the 2011-2012 season.

Honolulu Count

Saturday, December 17, 2011

This count covers east Oahu from Waimanalo on the east to Aiea on the west and from Diamond Head on the south to Kaneohe on the north.

Compiler Peter Donaldson Email: pdnldsn.bird@mac.com Phone: 808-456-5662 (home)

Waipio Count

Monday, January 2, 2012 (Since New Year's Day is a Sunday, this day is a holiday).

This count covers central Oahu from the leeward slopes of the Koʻolau Mountains on the east to the Waianae Mountains on the west and from Pearl Harbor on the south to halfway between Wahiawa and Haleiwa on the north.

Compiler David Bremer

Email: bremerd001@hawaii.rr.com

Phone: 808-623-7613 (home)

If you are interested in leading or volunteering for a count please contact us at the HAS office or check our website updates 808-528-1432, hiaudsoc@pixi.com, hawaiiaudubon.com



Adopt-A-Shearwater

Just in time for the holidays! Give your loved ones a symbolic Adoption of a Wedge-Tail Shearwater!!

Your \$50 adoption includes an Adoption Certificate, a Wedge-Tail Shearwater and Freeman Seabird Preserve Information Card, a decal and photo of a Wedge-Tail Shearwater Chick!

Adopt today! For more info please contact us at hiearcs.nih.google.com and include yourand/or gift holder's name, street address, and email address so we can send updates on the shearwaters at Freeman Seabird Preserve. Adoption payments can be mailed to Hawaii Audubon Society, 850 Richards St., suite 505, Honolulu, HI 96813 or via our website at www.hawaiiaudubon.com.

Adopt Today!



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Calendar of Events

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Service trip with OANRP

Please be sure to have your OANRP volunteer forms completed in order to participate

Christmas Bird Count December 14th – January 5th

Please contact the HAS office or check our website for updates on counts and to sign up!

Adopt-A-Shearwater

Adopt today! Symbolic adoptions make great gifts!!

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