

## MTR of PSD's TRP Highlights for March 24-28, 2014

Denise Parker recently received reviewer comments from the journal *Micronesica* on her co-authored paper entitled "Variability in Reception Duration of Dual Satellite Tags on Sea Turtles Tracked in the Pacific Ocean" (Parker, Balazs, Rice and Tomkiewicz). Only minor revisions were recommended, and Denise is working on completing the short list of comments and resubmitting the paper for final acceptance. Denise Parker also recently assisted collaborators of various TRP/EOD projects to help manage their satellite data and give constructive input to manuscripts in progress, as well as produce mapping updates for satellite tags currently deployed.

Sarah Alessi has been training with Devon Francke and Shawn Murakawa to learn critical aspects of the OTDPS database and how to verify records. She also assisted staff with transporting, examining, and caring for a green turtle stranded from Haleiwa on Oahu's North Shore. Sarah has also continues to scan an array of archival TRP documents.

On March 20, 2014, Devon Francke and Sarah Alessi attended a mandatory JIMAR Equal Employment Opportunity / Sexual Harassment Prevention Training Seminar through RCUH. Devon also attended the session provided for supervisors.

Devon Francke continues to make progress updating and validating records within the Oracle Turtle Database Processing System (OTDPS). Since March 18, 2014, Devon has updated fields within 6,282 records from the "Nearshore" and "Stranding" databases of OTDPS.

On March 24, 2014, a subadult green turtle became the first case for captive rehabilitation in the IRC/TRP turtle holding tanks. The turtle stranded the previous day in Haleiwa having been seriously entangled in monofilament fishing line. Good Samaritans of the public removed the line prior to arrival by after-hours UH Marine Option Program affiliates. The turtle was taken to contracted clinical veterinarian Dr. Robert Morris, who assessed and treated the turtle's injured left flipper and swollen eye. Amputation surgery was deemed inappropriate as x-rays indicated the fishing line injury did not extend into the humerus bone. At the IRC, the turtle has been under daily care and observation, receiving antibiotic injections and eye ointment, with harmonious assistance from Aaron Moriwake, Robert Dollar, and other IRC staff. The turtle has been steadily improving and, pending veterinary authorization, will be released during the week of March 31, 2014. This will be the 859th Hawaiian sea turtle rescued, rehabilitated and released since 1990. The IRC turtle tanks have proven to be highly effective in the care of this turtle.

In recent weeks, Shandell Brunson and George Balazs have been in close contact with Pearl Harbor Natural Resources Manager, Cory Campora, in regards to sea turtle strandings in the Pearl Harbor/Hickam area. There have been at least three dead turtle strandings in this area over the past month. Two appeared to be caused by boat impact and the third was found entangled in fishing line. Since 1982, there have been 46, or 0.7% of strandings, inside Pearl Harbor. PIRO Irene Kelly recently requested and was sent a summary and case-by-case listings of these strandings. The proximity and partnership with U.S. Navy personnel will allow TRP to further develop research collaborations. In addition, preliminary arrangements have been made with Chad Yoshinaga to periodically undertake small-boat turtle surface sighting surveys in less traveled areas of Pearl Harbor.

#### MTR of PSD's TRP Highlights for March 17-21, 2014

On March 17, 2014, Shandell Brunson traveled to Hilo, Hawaii, to conduct a training session for Marine Option Program research partners at the University of Hawaii involved in sea turtle stranding response. Shandell's training included demonstration necropsies of two green turtles. The faculty leader of the Hilo-based TRP partnership is Ms. Jennifer Turner, newly appointed to this important position by the Dean of Marine Sciences. Future stranding response and necropsy training sessions are in the planning stages for the two major partnerships (MOP and NOAA Sanctuary) present on Maui.

Devon Francke continues to make commendable progress updating and validating records within the Oracle Turtle Database Processing System (OTDPS). Since March 12, 2014, Devon has updated fields within 8,641 records, all from within the "Nearshore Database" of OTDPS.

Devon Francke, with input from George Balazs and Shandell Brunson, recently successfully completed the FY2015 JIMAR Proposal within TRP-MTR for submission to Dr. Jeffrey Hare, Deputy Director of PIFSC JIMAR.

On March 17, 2014, Sarah Alessi worked with Todd Jones and Shawn Murakawa in a PIFSC/PSD TV video media outreach celebrating the 110th Anniversary of the Waikiki Aquarium. Six juvenile green turtles captive-bred from Sea Life Park Hawaii were highlighted in the filming that discussed Todd's research at the Aquarium relating to green turtle somatic growth rates and energetics.

On March 19, 2014, Raymond Clarke of PIRO and George Balazs met to exchange information on an array of sea turtle conservation and research projects of mutual interest.

George Balazs recently coordinated with his four staff members to ensure prominence and consistency in the use of the name 'Turtle Research Program' in all address/affiliations, such as at the end of emails and on business cards.

Shandell Brunson will be the acting leader for PSD's MTR component of the Turtle Research Program starting March 20 and ending at noon on March 26, 2014 while George Balazs is on annual leave.

#### MTR of PSD's TRP Highlights for March 10-14, 2014

For the preparation of the 2013 NMFS annual ocean-capture research report, Devon Francke worked with Shandell Brunson and George Balazs to create a data table detailing sea turtle ocean capture "takes" performed during the calendar year 2013. Both Shandell and George met with TRP permit coordinator Todd Jones to convey the data to him and provide clarifications.

Since February 26, 2014, Devon Francke has scanned and electronically saved 77 TRP historical paper documents to reduce hard copy documents needing to be shelved in the IRC. During the same

time period, Devon has scanned disposed of 529 Nearshore hard copy ocean-capture data records from the Kapoho, island of Hawaii study site.

Devon Francke has been working with new JIMAR hire Sarah Alessi to provide training to her on various aspects of TRP/MTR's Oracle Turtle Database Processing System (OTDPS), including data entry, querying, and data validation within the nearshore, nesting, and stranding databases. Sarah will be continuing the data validation tasks started by Irene Nurzia-Humburg before her departure in February 2014.

Sarah Alessi has been updating and entering an array of forms as well as processing Laniakea (Oahu) green turtle basking counts, necropsy reports, and scanning research documents. Along with Devon Francke and Shandell Brunson, Sarah participated in the unpacking and organizing of necropsy, veterinary laboratory, and office materials relating to the move to the IRC.

Denise Parker presented a summary of historic and current TRP satellite tags for the monthly TRP meeting convened by Division Chief Frank Parrish. Denise has finalized the data sets for all 46 New Caledonia juvenile loggerhead turtles released pelagically in 2012. These data have been transferred for analysis to Post-Doctorate Fredrick Christiansen and Dr., Graham Hays (Deakin University Australia). Fredrick and Graham's collaboration with Balazs, Parker and EOD involving the examination of movements and 'hotspot' areas for pelagic loggerhead turtles in the South Pacific. Data were also compiled for the remaining PNPA juvenile loggerheads released in 2011 that ceased transmitting after 734 to 850 days covering mainly looping non-linear distances of 12,000 to 18,000 km. Denise also recently updated maps for the sub-adult loggerhead rehabilitated and released from Tahiti but currently in waters near Kiribati north of the equator. Two sub-adult green turtles released in collaboration with SPREP from Fiji have also been tracked and maps updated. Both turtles are currently still within Fijian waters. Denise continues to create standardized finalized maps and manage the voluminous MTR satellite tracking database.

Shandell Brunson met with Siri Hakala to discuss and implement procedures for FY14 budget tracking for the Turtle Research Program.

On March 11, 2014, George Balazs, Kyle Van Houtan and Steve Gallagher attended a late afternoon presentation on climate change at the Hawaii Convention Center by Mr. Anote Tong, President of the Republic of Kiribati. Kyle and George were introduced to President Tong by Mr. Gallagher thereby providing the opportunity for brief conversation about potential collaborative research of sea turtles by the PIFSC. Kiribati consists of 32 low-lying coral atolls and one raised coral island spread over 3.5 million km<sup>2</sup>, hosting a population of 102,000 people.

Encouraging progress has taken place in recent days aimed at 1-2 personnel being able to systematically monitor green turtle nesting at East Island, French Frigate Shoals, during the 2014 breeding season. Former JIMAR MTR employee Joseph Spring has expressed high interest in such an assignment linked to the monk seal tent camp to be established on Tern Island from mid-June to mid-September 2014. George Balazs and Charles Littnan met to discuss such an arrangement of cooperation. As a follow-up, George and Shandell met with Jessie Lopez to discuss transportation potentials to and from FFS. Shandell is in the process of computing costs (hence funding needs) for such a project. Monitoring of nesters was not possible during the 2013 season due to major damage

to US Fish and Wildlife Service buildings on Tern Island from a micro-burst storm during December 2012. Tern Island has been without USFWS presence since that time, except for two short damage assessment visits. Prior to 2013, PIFSC PSD personnel collected green turtle nesting abundance data for 40 consecutive seasons at East Island, dating back to 1973. This dataset is one of the longest running and most robust of its kind globally.

The MTR component of the PSD's Turtle Research Program is continuing to adjust very favorably and in harmony to the IRC working environment. Protocols for the tasks of turtle stranding response and necropsies based at and out of the IRC will be refined during coming weeks.

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MTR of PSD's TRP Highlights for March 31-April 4, 2014

Shandell Brunson recently met with Kyle Van Houtan to discuss progress of her draft publication titled "Strandings and Ocean Captures of the Hawksbill Sea Turtle (*Eretmochelys imbricata*) in the Hawaiian Archipelago."

Progress is being made toward journal submission of the John Davenport et al. (Jones, Work and Balazs) manuscript entitled "Pink spot, white spot: the pineal skylight of the leatherback turtle skull and a possible role in the phenology of feeding migrations."

George Balazs recently reviewed a lengthy manuscript for journal submission on sea turtle morphology for Hualing Chen and coauthors of Shenyang Normal University, Peoples Republic of China. The paper results from Mr. Chen's graduate studies as staff scientist at the Gangkou Huidong National Sea Turtle Reserve in PRC.

Devon Francke continues to make progress updating and validating records within the Oracle Turtle Database Processing System (OTDPS). Since March 26, 2014, Devon has updated fields within 2,223 records from within the "Stranding" database, and has verified 115 records within the "Nesting" database of OTDPS. In addition, Devon continues to train Sarah Alessi in contributing to essential tasks relating to OTDPS.

Plans are proceeding on schedule for hiring Joseph Spring in early June 2014 under a not-to-exceed 15 week JIMAR position to monitor nesting abundance at East Island, French Frigate Shoals.

On April 1, 2014, the first stranded green turtle rehabilitated by TRP at the IRC was successfully released back into the wild. This was the 859th Hawaiian sea turtle documented as having been rescued, rehabilitated, and released since 1990 when comprehensive record keeping for this activity was initiated. Number 859 stranded on March 23, 2014 in Haleiwa entangled in monofilament fishing line. After 8 days of antibiotic treatments for an injured flipper, and application of antibiotic ointment to a swollen eye, TRP's attending clinical veterinarian Dr. Robert Morris cleared the turtle for release.

On April 3, 2014, the first turtle necropsy session was conducted at the IRC by TRP. Dr. Thierry Work USGS Wildlife Disease Specialist led the session assisted by his veterinary intern (Tomomi

Nakao from Hokkaido University), Kyle Van Houtan, Shandell Brunson, George Balazs, Sarah Alessi, Shawn Murakawa, and Devon Francke. A juvenile hawksbill and green turtle were comprehensively examined. As per normal procedures, formal necropsy reports of findings will be submitted to TRP by Dr. Work. The IRC facilities for necropsy of sea turtles were found to be well-suited and convenient with no major problems encountered. Some minor issues will be smoothed out easily with the passage of time and experience.

#### MTR of PSD's TRP Highlights for April 7-11, 2014

Sarah Alessi continues to be trained on protocols for verifying records in OTDPS and on how to use Data Trawler software to pull specific records. Also, Sarah recently picked up and transported an olive ridley stranded and shipped frozen from Nature Conservancy staff on Molokai for necropsy assessment.

Devon Francke has been steadily progressing on his multi-authored manuscript entitled "Habitat and environmental influences on juvenile green turtle diving behavior in a coastal neritic habitat." This manuscript derives from Devon's master's thesis completed in 2011 at the Hawaii Pacific University.

On April 8, 2014, Devon Francke attended two JIMAR supervisory training classes at the Hawaii Employers Council. The first training class, "Avoiding Sexual and Other Harassment Claims," focused on the prevention and handling of harassment complaints and investigations. The second training class, "Interviewing and Selecting" detailed how to prepare for and run structured interviews with potential job applicants.

During recent days Kyle Van Houtan and George Balazs have met several times to discuss and coordinate projects (present and future), and programmatic issues of common interest, including Status Review Team issues.

On April 7, 2014, Thierry Work and George Balazs met for 2 hours to go over existing cooperative projects and refine overall plans for the late August 2014 sea turtle health assessment and foraging ecology workshop under the Living Marine Resources Panel Meeting China/USA Bilateral.

The following link from 2013 was recently made known to TRP documenting the severe harassment and probable fatal outcome of a monk seal's discrete 'attention' directed at a juvenile green turtle in the near shore water of Maui.

<http://www.hawaiinewsnow.com/story/21799561/video-monk-seal-tosses-and-toys-with-sea-turtle-off-maui>

During the morning of April 10, 2014, Shandell Brunson, Devon Francke, Sarah Alessi, and George Balazs conducted TRP's first major turtle necropsy session at the IRC consisting of small and large turtles collected for stranding research. The facility proved to be very well suited for the task as voiced by each staff member. A few modest issues arose that have been or will soon be addressed and corrected. The electrical box in proximity to the drain of the necropsy table needs to be fitted with added water-proof protection. Ryan Nichols has been informed and will take corrective action.

During the afternoon of April 10, 2013, George Balazs and Shandell Brunson accompanied Naval Facilities personnel (Jessica Aschettino, Morgan Richie, Meredith Fagan) on a Protected Species monthly observational survey of portions of Pearl Harbor. Chad Yoshinaga skippered the NOAA small vessel for the survey and provided valuable information about Pearl Harbor. Very informative insights were gained into habitats involving Middle Loch and East Loch. Three green turtles were sighted at different locations, however intuition suggested that considerable numbers may be using the Harbor for foraging and underwater refugia benthic resting. Some creative planning with Chad, NavFac team, and TRP colleagues will be carried to devise more targeted investigations of turtles in Pearl Harbor.

On April 11, 2014, George Balazs participated in a 2-hour phone meeting of the Green Turtle Global Status Review Team.

From April 12-19, 2014, Shandell Brunson will serve as acting component task leader for George Balazs while he is on Official Travel participating in the International Sea Turtle Symposium.

#### Highlights for April 21-25, 2014

During the week of April 14-18, 2014, George Balazs and Kyle Van Houtan traveled to Louisiana to present papers and participate in the 34th Annual International Sea Turtle Symposium. About 780 people attended representing 73 nations. Useful research and conservation information was exchanged and numerous one-on-one side meetings were held relating to building additional partnership linked with the PIFSC.

Denise Parker recently provided science inputs to a manuscript she is coauthoring with Jennifer Cruce, Steve Kolinski, Karen Frutchey and George Balazs. Denise also gave technical support to research collaborators at City University of Hong Kong regarding satellite tracking of sea turtles in the China region and the Argos system.

On April 15, 2014, a green turtle was successfully returned to the wild following veterinary treatment. This was the 860<sup>th</sup> turtle documented as having been rescued, rehabilitated, and released in the Hawaiian Islands since 1990. Number 860 stranded on April 14, 2014 in Hanauma Bay with a fishing hook embedded in each front flipper.

Sarah Alessi continues to verify records within the nesting OTDPS database, as well as assist with stranding cases and continue her learning processes of other various TRP tasks.

Devon Francke also continues to make progress validating records within the OTDPS. Since April 3, 2014, Devon has verified 172 complete records within the nesting database of OTDPS.

On April 15, 2014, Devon Francke attended his third (of four) JIMAR supervisory training sessions at the Hawaii Employers Council. The first training class, "Building Employee Performance," focused on building a positive workplace to minimize and prevent employee performance problems, and how to apply positive discipline. The second training class, "Addressing Misconduct," detailed the purpose of providing discipline and how to conduct an investigation when misconduct occurs.

On April 22, 2014, George Balazs was interviewed by science writer Joseph Bennington-Castro on the topic of sea turtle mating behaviors, both globally for all species, and for green turtles in the Hawaiian Islands.

On April 22, 2014, George Balazs established lines of communication with Mr. Barney Choy and other staff at Hawaiian Electric Company thereby laying the foundation for observational and ocean capture research of sea turtles associated with the warm-water discharge at the Pearl Harbor Waiiau Power Plant, immediately across from the IRC.

On April 23, 2014, necropsies were conducted of two stranded green turtles salvaged during recent months inside Pearl Harbor. One of the turtles had been severely cut by a boat propeller while the other turtle died from fibropapilloma tumors and ingestion of fishing line. Dr. Cory Campora and Ms. April Teekell of Pearl Harbor NAVFAC observed the necropsies at PSD's invitation, as did Irene Kelly of PIRO.

From April 28-30, 2014, Shandell Brunson will head up TRP's mtr component while George Balazs is on annual leave.

#### Turtle Research Program Highlights for April 28 – May 2, 2014

Denise Parker and George Balazs recently discussed actions needed to advance a fledging co-authored manuscript that will elucidate all male and female satellite trackings accomplished to date that link French Frigate Shoals and the Main Hawaiian Islands. Denise also updated tracking data and created final maps for tags that have ceased transmissions among the New Caledonia loggerhead turtle group, as well as two Fijian green turtles tracked in collaboration with SPREP.

Denise Parker recently provided science inputs and data analysis support to Dana Briscoe and Larry Crowder on North Pacific juvenile loggerhead tracking data under analysis for manuscript preparation.

On April 29, 2014, a juvenile green turtle became the second case for captive rehabilitation in the IRC/TRP turtle holding tanks. The turtle stranded the previous day in Waimanalo having been seriously entangled in monofilament fishing line. Good Samaritans of the public removed the line prior to arrival by TRP staff. The turtle was taken to contracted clinical veterinarian Dr. Robert Morris, who assessed and treated the turtle's injured right front flipper and ingestion of fishing line. Amputation was deemed appropriate as the monofilament line had already severed the humerus bone and most of the surrounding tissue. X-rays confirmed that the turtle had ingested fishing line only and no hooks were present. At the IRC, the turtle has been under daily care and observation, receiving antibiotic injections, with harmonious assistance from Aaron Moriwake, Robert Dollar, and other IRC staff. The turtle has been steadily improving and, pending veterinary authorization, will be released during the week of May 9, 2014. This will be the 863th Hawaiian sea turtle rescued, rehabilitated and released since 1990. The IRC turtle tanks have proven to be highly effective in the care of this turtle.

Sarah Alessi continues to verify records within the Nesting database, assist with stranding cases, prepare for and assist with necropsies and learn other various TRP tasks. Specifically, she has worked with Shandell Brunson to map locations of turtles stranded in Pearl Harbor from 1982 to February 21, 2014, as part of the ongoing investigation by TRP and collaborators of turtle behavior and stranding events in the Pearl Harbor area.

Devon Francke continues to make steady progress validating records within the Oracle Turtle Database Processing System (OTDPS). Since April 23, 2014, Devon has verified 96 complete records within the nesting database of OTDPS.

Devon Francke has successfully completed the National Security Council Defensive Driving Course, thereby renewing his 3-year certification to operate government vehicles.

Ray Clarke recently met with George Balazs to discuss additional studies and technologies that could be ecologically enlightening relating to the voluminous use by green turtles of the Anahulu River in Haleiwa on Oahu's North Shore.

On May 1, 2014, TRP held its first longline observer training program at the IRC. Shandell Brunson led the sessions, assisted by George Balazs, Sarah Alessi and Devon Francke. 20 students participated in hands-on training involving taking skin biopsies for DNA, carapace measurements, and flipper tagging. In addition, Shandell gave an introductory talk to the group using PowerPoint slides. The IRC facilities proved to be excellent for the training and the event was deemed highly successful by the participants.

Devon Francke continues to make steady progress validating records within the Oracle Turtle Database Processing System (OTDPS). Since April 30, 2014, Devon has verified 133 complete records within the nesting database of OTDPS.

Sarah Alessi has been verifying records within the nesting database, assisting with stranding cases, preparing for and assisting with necropsies.

On May 6, 2014, Devon Francke was interviewed by Michaeli Hennessy, a Political Science and Strategic Journalism student at the University of Kansas. As part of her Information Management course in journalism, Michaeli is performing a research project on sea turtle conservation. Devon and Michaeli spoke about sea turtle strandings in the Hawaiian Islands, Hawaiian sea turtle population status, and current research being performed by the PIFSC's TRP.

Devon Francke recently wrote an official necropsy report for an olive ridley that stranded on Molokai on March 19, 2014. The turtle washed ashore alive tangled in a trawl net and was freed and released, but passed away soon thereafter due to injuries sustained from the entanglement. The report was written to 1) document a rare stranding event - there have only been 54 olive ridley strandings in the Hawaiian Islands and only 64 strandings of any sea turtle species on Molokai since 1980, and 2) to share the report with the many volunteers of The Nature Conservancy on Molokai who diligently assisted with the collection and transport of the turtle to Oahu for necropsy.



TRP continues to care for a green turtle at the IRC facility that stranded in Waimanalo on April 29, 2014 entangled in fishing line. This turtle is recovering and Dr. Robert Morris examined it May 8, 2014 as part of an on-going diagnosis to determine suitability for release back into the wild.

George Balazs was recently interviewed by Mr. Joseph Bennington-Castro of Live Science about sea turtle mating behaviors. The resulting article on this topic can be found at:

<http://www.livescience.com/45354-animal-sex-sea-turtles.html>.

On May 6, 2014, George Balazs visited the Hawaiian Electric Company's Waiiau power plant by invitation to meet with Senior Environmental Scientist Mr. Kirk Tomita and Environmental Scientist Derrick Fenske. The purpose of the visit was to view the plant's warm-water discharges and discuss possibilities for collaborative studies of sea turtles attracted within Pearl Harbor to micro-habitats of thermal preference. The meeting was very successful, resulting in the next step being an agreement for TRP staff to conduct observations from shore for 2-3 hours at a time starting an hour before sunset. The Waiiau facility is just 2 km north of the IRC. The planned work at the Waiiau power plant is part of a broader investigation of sea turtles and their habitats within Pearl Harbor, as reported upon in prior TRP highlights.

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#### Turtle Research Program Highlights for May 19-23, 2014

On May 20, 2014, Shandell Brunson led the first University of Hawaii Institutional Animal Care and Use Committee (IACUC) facility inspection for the NOAA IRC Sea Water System for sea turtles. Although official findings are yet to be communicated, the overall consensus was that the facility is of high standards and quality with excellent care provided to TRP's sea turtles undergoing rehabilitation.

Sarah Alessi recently prepared useful graphics illustrating historical sea turtle strandings occurring in Pearl Harbor region 1982-2014. Strandings are one part of a six-component Pearl Harbor Region Marine Turtle Initiative (PHRMTI) being developed that will eventually include: Ford Island near shore observations; Protected Species Transects (being undertaken by NAVFAC); Waiiau Power Plant near shore observations; snorkel surveys pending approvals (including live-animal captures); and historical scuba survey data collected by NAVFAC personnel.

Devon Francke continues to make steady progress validating records within the Oracle Turtle Database Processing System (OTDPS). Since May 14, 2014, Devon has verified 92 complete records within the nesting database of OTDPS.

On May 15, 2014, Devon Francke assisted in the recovery of a ~450 lb. stranded dead adult male monk seal on the beach near Kalaeloa, Oahu. The monk seal was seen alive, but lethargic the previous day. The stranding response team wrapped the animal in a body bag and transported it to the IRC to be necropsied the next day. Devon's contributions, including good cheer upon being requested to assist near the end of the normal working day, were greatly appreciated.

Shandell Brunson, assisted by George Balazs, has been devoting considerable time and talent to accomplish all the many things needed to facilitate and support JIMAR Joseph Spring for monitoring green turtle abundance at East Island, French Frigate Shoals, during the forthcoming nesting season. This effort is being made possible through the excellent cooperation and harmonious teamwork of the monk seal camp to be deployed at Tern Island. Joe will be a part of that team,

working side-by-side aiding monk seal biologists, when not spending nights on East Island. It is estimated that for the 100 days that the camp will be on Tern Island, Joe will spend a sum of 30-40 days on East Island.

George Balazs, Kyle Van Houtan, and Stacy Hargrove recently met in a conference call to discuss aspects of the paper presently in preparation entitled "Demographic features of Hawaiian green turtles at their migratory nesting colony of French Frigate Shoals." This manuscript, a TRP Center Milestone, brings together into one place significant vital rates for the nesting assemblage involving data gathered and analysis conducted over the past 40 years. The manuscript builds heavily on the NMFS PIFSC TM-40 by Nurzia-Humburg and Balazs issued 10 days ago. In addition, relevant Hawaii components of the SRT document, prepared by team members Van Houtan, Balazs, and Hargrove will be utilized. Recently Shawn Murakawa was invited, and accepted, to become a coauthor of the demographics paper using expertise she has in database extraction involving gender determinations resulting from 30 years of PIFSC green turtle necropsies. Shawn will be part of the next conference call planned to take place in about 10 days. It was decided during the call that progress is being made, but not at the rate originally anticipated due to many other duties needing to be addressed, exacerbated by TRP staff shortages, especially in the JIMAR arena (presently there are 2 personnel, previously there were 4). Hence, the due date for the manuscript will be requested to be moved from the end of June to the end of August.

#### Turtle Research Program Highlights for June 9-13, 2014

Shandell Brunson, George Balazs, Sarah Alessi, Devon Francke, and Shawn Murakawa have been working cooperatively, and in many cases intensively for the past 2 weeks in an array of tasks to prepare JIMAR Joe Spring for TRP's 3-month monitoring season of green turtles nesting at French Frigate Shoals (FFS). Joe will be linked to and supported in the field by the monk seal team living in tents on abandoned Tern Island. Periodically, as weather and monk seal duties will allow, Joe will be taken to East Island (6 miles distance) to work from a small portable campsite to achieve nightly turtle censuses and tagging. We envision Joe monitoring for 4-5 consecutive nights, and then 2-3 days back on Tern Island for rest and rejuvenation. Preliminary observations of the number of basking turtles, based on a recent several day visit to FFS by the US Fish and Wildlife Service, suggests that 2014 will be a huge nesting season. Joe Spring departs on the Hi'ialakai on June 16, 2014. During his 3 months at FFS his only communication will be by satellite phone supplied by TRP.

Devon Francke continues to make steady progress validating records within the Oracle Turtle Database Processing System (OTDPS). Devon has started validating Stranding Records this week, taking a short hiatus from Nesting Records. Since June 4, 2014, Devon has verified 75 complete records within the nesting database of OTDPS.

On June 9, 2014, Joe Spring and George Balazs had a lengthy, useful and successful meeting with Megan Duhr-Schultz of the US Fish and Wildlife Service pertaining to nesting turtle monitoring activities at East Island to ensure all policies and procedures would be followed.

Devon Francke and Sarah Alessi recently released a green turtle at Kaneohe Beach Park that had stranded at Kawela Bay, Oahu on May 25, 2014. The turtle had tumors on its front and hind right

flippers. After a few days of assessing and observing (under Dr. Robert Morris' oversight) the turtle's vigor and unimpaired swimming ability, the decision was made to release the turtle, which swam off strong. This turtle had stranded previously due to great lethargy on January 23, 2010, at Turtle Bay Resort, but was treated, tagged and released two days later after its energy level increased. The turtle did not have tumors at the time. Nevertheless, the natural regression of progressed tumors is well-known in Hawaiian green turtles.

Devon Francke, Sarah Alessi, and Shawn Murakawa recently met to discuss the procedure for verifying records within the Stranding database of OTDPS. The meeting was held to ensure that all three personnel would be verifying and validating all records the same way.

#### Turtle Research Program Highlights for June 16-20, 2014

A multi-authored major publication, significantly facilitated by the Turtle Research Program in collaboration with the National Institute of Standards and Technology, is now in-press with Environmental Science and Technology. The paper is titled "Investigating the potential role of persistent organic pollutants in Hawaiian green sea turtles" authored by Jennifer Keller, George Balazs, Francine Nilsen, Marc Rice, Thierry Work, and Brenda Jensen. The most significant finding of the research is the very low levels of organic pollutants found in the tissues of Hawaii's green turtles.

The green turtle with extreme excessive buoyancy currently being cared for at the IRC for the past 40 days will be taken to the Makai Animal Hospital on June 23, 2014 for additional diagnostics including digital X-rays. The animal has needed force-feeding therapy; however, significant weight loss has taken place. The prognosis for the turtle is not encouraging.

George Balazs has recently been appointed to serve on the Lui Bell Memorial Post-Graduate Scholarship Fund Trust Board for Marine Species Conservation, established two years ago by the Secretariat of the Pacific Regional Environment Programme (SPREP) based in Apia, Samoa.

On June 19, 2014, TRP personnel Sarah Alessi, Devon Francke, and George Balazs worked in collaboration with necropsy team lead, USGS Thierry Work, to host and teach 17 high school students and their teacher (Erron Yoshioka) about health and disease of sea turtles stranded in Hawaii. The students- all of which showed great interest in the subject matter- were part of the Western Pacific Regional Fishery Management Council's Marine Science Summer Course on Fishery and Resource Management.

George Balazs reports that he continues to spend all his time 1) making progress on the Hawaii green turtle demographics co-authored manuscript (a Center Milestone), making progress along with partners Jeffrey Seminoff SWFSC and Thierry Work USGS on the convening of the China/USA Bilateral Living Marine Resources workshop at the end of August (a Center Milestone), and revisions of several manuscripts moving forward for journal submission and/or publication.