

Items needed for next season:

- Parachute cord for tents, 1000 ft per camp per Jessie
- Goal Zero replacement
- Red Emergency Sheet
- Lightning protocol

Completed items needed for July cruise - packed and delivered to Erik, put on Sette

- DC Adapter and/or external battery (Summer)
- SOPs for nest excavation AND IDing embryo stages - COMPLETED by Cam printed/laminated and in buckets for delivery
- Surprises - COMPLETED by Cam in buckets for delivery
- Send instructions for PIT tag scanner (yellow one) so they can change it to decimal rather than hexadecimal - COMPLETED by Cam printed/laminated in buckets for delivery
- Cam texted Marylou to see if they want another marine battery or if the trickle charger is enough. They do not need a marine battery.
- Headlamps (waterproof, red filter) - COMPLETED by Shawn in buckets
- Tent stakes (rebar, 2-3 feet in length, with a flat square piece of metal on top) - COMPLETED ON SHIP
- Tent Poles, - COMPLETED ON SHIP
- PIT tag scanner - COMPLETED by Shawn, in buckets
- Trickle charger for battery - COMPLETED by Shawn in buckets
- 8 dataloggers (from Rose) - COMPLETED by Shawn, in buckets
  - And batteries and extra supplies to relaunch dataloggers in buckets
- Send instructions for PIT tag scanner (yellow one) so they can change it to decimal rather than hexadecimal - COMPLETED by Shawn (sent email 6/20 as attachment, resent as text on 6/30/17)
- 6 battery-powered personal fans (if possible rechargeable through GoalZero with USB or something). - COMPLETED by Shawn in buckets
- 2 medium bottles of Goo-Gone (or equivalent industrial strength sticky-remover).- COMPLETED by Shawn in buckets
- 6 Fly traps/sticky ribbon - COMPLETED by Shawn in buckets
- 2 bottles Raid (and/or traps) for ants/cockroaches (Summer confirmed with Jessie that Raid is ok in monument) - COMPLETED by Shawn in buckets
- Need a cutting tool for next year - Cam texted ML to confirm if she needs one for this season and if so, what kind. If we have a line cutter lying around that would be helpful. Lots of old fishing nets and lines on the islands that they are trying to cut up to prevent females from being entangled while nesting. - COMPLETED by Shawn in buckets
- Melatonin and Benadryl to help with falling asleep and getting more sleep - COMPLETED by Shawn in buckets
- 3 Eye mask for day-time sleeping - they only have one that they share. - COMPLETED by Shawn in buckets

Call #12, 10 August 2017

|   | <b>East</b>  | <b>Tern</b>                             |
|---|--|---|
| Total <b>Males</b> Mototooled                             | NA   | NA                                      |
| Total Females Mototooled                                  | 402  | 277                                     |
| Females with nesting activity - not confirmed laying eggs | 408  | 299                                     |
| Females confirmed nesting - eyes on eggs                  | 290  | 179                                     |
| Nests with egg counts<br>Mean (range for both islands)    | 511 observed nests   |   |
| Average basking females per day                           | Stopped counting   | 0.2                                     |
| Average nesters per night                                 | 5.5  | 5                                       |
| Average # of new nesters each night                       | 2  | 0                                       |
| # of clutches with egg counts                             | 268  | 90                                      |
| Average # of eggs/nest (range)                            | 80 (3-147)   | 84 (24-128)                             |
| # of females with multiple clutches counted               | <ul style="list-style-type: none"> <li>• 57 multiple clutches</li> <li>• 2 turtles 4 clutches</li> <li>• 1 female eyes on eggs with 6 clutches every 11-12 days with 80 eggs/nest</li> </ul> | 9<br>(1 turtle with 3 clutches counted) |
| Total # of nests excavated                                | 58 (~4-6 excavations/day)  | 22                                      |
| Hatching success (range)                                  | 84% (39-100%)  | 80% (48-100%)                           |
| Emergence success (range)                                 | 68% (33-89%)   | 77% (48-93%)                            |

- Priority for remaining days
  - Nightly surveys
  - Excavate datalogger nests
  - Excavate non-logger nests
- Incubation period for second datalogger nest was 59 days
  - 3 dataloggers from known nests have been retrieved
  - At day 63 with other datalogger nests, will excavate at day 75
- The 18 dataloggers deployed from previous years were not found
- Should they deploy dataloggers on Tern?
  - Marylou will count have many extra Tidbits (need to bring back 20 for Rose, AS)
  - Marylou will determine high nesting density areas for deployment
- Satellite tagged Gin turtle was seen on East on 8/8 nesting (last seen on 6/25)
- Packed up half of the gear from East camp and will breakdown tent by next week



Call #11, 3 August 2017

- East: ML and JW, Tern: Alex
- Satellite tagged turtles (past 20 days)
  - 166317 @ Ewa Beach/Pearl Harbor
  - 166318 @ Gin, but doesn't go N of East Island
  - 166319, departed July 23, currently SW of Kauai, ~150 mi off shore
  - 166320 @ Tern (NE side), stays N of East Island

|  | East   | Tern                                       |
|--|--|--|
| Total Males Mototooled                                       | NA   | NA   |
| Total Females Mototooled                                     | 402  | 277  |
| Females with nesting activity<br>- not confirmed laying eggs | 408  | 299  |
| Females confirmed nesting -<br>eyes on eggs                  | 290  | 179  |
| Nests with egg counts<br>Mean (range for both islands)       | 511 observed nests   |  |
| Average basking females per<br>day                           | 1.3  | 0.4  |
| Average nesters per night                                    | 9  | 10   |
| Average # of new nesters<br>each night                       | 0.1  | 1  |
| # of clutches with egg counts                                | 249  | 87   |
| Average # of eggs/nest<br>(range)                            | 80 (3-147)   | 84 (24-128)                                |
| # of females with multiple<br>clutches counted               | <ul style="list-style-type: none"> <li>• 57 multiple clutches</li> <li>• 2 turtles 4 clutches</li> <li>• 1 female eyes on<br/>eggs with 6 clutches<br/>every 11-12 days with<br/>80 eggs/nest</li> </ul> | 9<br>(1 turtle with 3 clutches<br>counted) |
| Total # of nests excavated                                   | 33 (~4-6 excavations/day)  | 10   |
| Hatching success (range)                                     | 78% (33-97%)   | 79% (48-95%)                               |

|                           |              |              |
|---------------------------|--------------|--------------|
| Emergence success (range) | 68% (33-89%) | 77% (48-93%) |
|---------------------------|--------------|--------------|

- What should they be doing during the day if there aren't any excavations to do?
  - **work on turtle storage room upkeep/organization, inventory of gear which will stay there**
- Maybe Alex can stay out on East 5 days, break at Tern for 2 days- depending on what monk seal field personnel are willing to do **\*PRIORITY IS EXCAVATION OF DATALOGGER NESTS**
  - The last data loggers went out into nests July 20th and 21st so Alex should be able to excavate all nests
- Excavated nests with dataloggers have been (and will be) downloaded and will be deployed in historical sites
- Incubation period for first datalogger nest was 55 days!
- No one on East for ~3 days when ship is coming to pick up field campers
- Bring back items (tent and rain flies) that are damaged that need repair or replacement

Call #10, 28 July 2017

- East: Marylou and Alex, Tern: JW
- Message in a bottle is highlight of the week
- Email acting up - ML needs to trouble shoot
- Interesting nesting turtle
  - Laying in body pit and eating sand for about 2 hr - got some video footage

|   | East   | Tern                                     |
|---|--|--|
| Total <b>Males</b> Mototooled                             | No additional males  | No additional males                      |
| Total Females Mototooled                                  | 407 (1 more than last week)  | Same as last week                        |
| Females with nesting activity - not confirmed laying eggs |  | 291                                      |
| Females confirmed nesting - eyes on eggs                  | 287  | 167                                      |
| Nests with egg counts<br>Mean (range for both islands)    | 231 (51 females with 2 clutches counted, 8 turtles with 3 clutches counted)<br>Avg 80 (3-147) eggs | 78 clutches<br>Avg 84 (128 highest eggs) |
| Average basking females per day                           | 3.2  | 2.8                                      |
| Average nesters per night                                 | 16   | 15.5                                     |
| # of new nesters each night                               | 0  | 0.5                                      |

- Tern
  - 2 excavations this week
- East
  - 14 excavations of nest with unknown females
    - 74% (39-97%) hatching success
  - Unhatched eggs are always at the top of the nests above all of the broken/hatched eggs
- Trig - nothing new, not seeing turtles from Trig or Gin on other islands
- Gin - nothing new, not seeing turtles from Trig or Gin on other islands
- Got monk Seal scat sample
- Did some chores on Tern
- Alex taking photos of high/low tides
- Questions:
  - Alex's burm project - notate slope of different sectors and how turtles behave in those areas (e.g. female goes all the way up the beach to nest)
  - Turtle room -

- Will bring back stuff that won't be useful if left on Tern
- Think about how to bring back data to enter when Alex will need the datasheets for the rest of the season??? - T. Todd



Call #9. 20 July 2017

- Tern: Marylou, East: Jan Willem and Alex
- Updates from Marylou
  - Supplies dropped off today from Sette
  - Two monk seal pups born on East on night survey - one pup missing by the next afternoon

|   | East   | Tern  |
|---|--|---|
| Total Males Mototooled                                    | No additional males  | No additional males   |
| Total Females Mototooled                                  | 401  | 274   |
| Females with nesting activity - not confirmed laying eggs |  |   |
| Females confirmed nesting - eyes on eggs                  |  |   |
| Nests with egg counts<br>Mean (range for both islands)    | 179<br>30 turtles with multiple clutches counted<br>86 (3 - 148) | 55<br>6 turtles with multiple clutches counted<br>84 (24 - 128) |
| Average basking females per day                           | 8-9  | 8-9   |
| Average nesters per night                                 | 31   | 28  |
| # of new nesters each night                               | 0.8  | 1   |

- 4 excavations on Tern - unknown females, 80% success rate (68-93%)
- 5-6 excavations on East - unknown females, lots of unhatched eggs (~25%) with different stages of embryonic growth
- Incubation periods of known females (currently at 40 days)
- Zero turtles on Gin during 2 surveys
- 2 females on Trig (one from Tern) during 2 surveys
- Sat tagged turtles
  - Gin turtle at Gin but did detour over to East for a few days
  - Tern turtle is hanging out NE of Trig
  - East turtle is hanging out on NE tip of Tern
  - East turtle (PTT 166317) is just West of Oahu. We will look for her basking on Oahu
- Questions from Marylou
  - While doing excavations if there are live hatchlings keep them on moist sand, shade, and dark bucket. Don't let them cook in the sun



- Not fertilized, fertilized, and complete turtle embryo is covered in skin with eyes
- Laying female, data collection priorities: temporary ID, permanent ID (flipper, pit), tissue sample (especially for brand new turtle), size measurements (especially for already known turtle)
- Get weight and size of freshly laid eggs (NOT unhatched eggs at excavation)
- C66 turtle found off Maui. Going to check to see if Alex might have put the temporary paint on it on Trig (since 'C' is for Trig)

Call #8, 13 July 2017

- East: Marylou and Jan Willem, Tern: Alex
- Cloudy/stormy - vertical lightning last night - a few km away, large squalls coming by
  - No survey last night on East or Tern
  - Lightning protocols??? - stay in tent, crouch down, don't touch anything else
    - Find out what monk seals do - ask Jessie - Cam sent email to Jessie to see if they have an lightning storm SOP
  - Anti Static mats for them to sit on?
- Hatchlings each night
  - A few in tents due to light on to do data entry, turned off light, herded them back out

|   | East  | Tern  |
|---|---|---|
| Total Males Mototooled                                    | No additional males                                       | No additional males                                     |
| Total Females Mototooled                                  | 396   | 274   |
| Females with nesting activity - not confirmed laying eggs | 403<br>(including turtles from Tern, Gin, Trig mototools) | 287<br>(lots of turtles from other islands coming over) |
| Females confirmed nesting - eyes on eggs                  | 249   | 106   |
| Nests with egg counts<br>Mean (range for both islands)    | 137<br>70-90 mean (5-137 range)                           | 50  |
| Average basking females per day                           | 8   | 10  |
| Average nesters per night                                 | 31  | 25  |
| # of new nesters each night                               | 0.8   | 2-3   |

- Tagging at Trig and Gin
  - Very few if any baskers left on islands, but next to monk seals so they cannot approach
  - Trig n = ~6; Gin n = ~6
  - \*\*\*In the future need to coordinate with monk seal program getting onto Trig island
- Cam send email answering questions - Sent
- Cam send email with meeting minutes from MTBAP meeting - Sent
- Cam send email with meeting minutes from FFS call - Sent
- Questions
  - Put PIT tag sticker on vial rather than handwriting previous PIT tag from previous years

- Write into data logs highest level of nesting activity per night
- ML to send us: What is the incubation length time frame for nests with known laying dates???
- Power situation at East and Tern is good. Can charge goal zero during the day while monk seal team is gone. Cannot charge laptop using goal zero. So no laptop use on Tern
- East Island has completely changed
- Check with Shawn Farry if Weather Port platform tent needs to be moved due to erosion
- Alex's project - Getting GPS locations of egg chambers and nests that are dug up by other females
- Need to discuss what Alex can do alone on East - week on East then week on Tern
- Satellite tag movement updates - Summer looked at movements. Will report during next weeks phone call



Call #7. 6 July 2017

\*\*\*Cam to email Erik letting him know # and type of packages to give to FFS turtle camp -

**COMPLETED BY CAM**

\*\*\*Cam emailed Jenn Lynch to confirm that she wants the whole nest contents removed and placed into a bag and frozen with minimal handling and she does NOT want unhatched eggs opened in whole clutches that are bagged and brought back here - **COMPLETED BY CAM**

- Marylou and Alex on East as of today. Jan Willem on Tern
- Fourth of July celebration with all three campers on Tern
  - Two nights of sleeping
  - Full day of hanging out
  - Bathed
  - Fresh baked bread and burgers
  - Watched Independence Day
- First nest excavation yesterday - Questions **T. Todd to answer questions sent via email**
  - 82 eggs, 17 didn't hatch - opened to look at different developmental stages, bagged whole clutch,
  - BAG WHOLE CLUTCHES OF KNOWN FEMALES WITH DATA LOGGERS IN NESTS
  - Wait 48-72 hr between first emergence and excavation (to allow for second emergence). Can wait ~1 hr after first emergence if you can't wait
  - \*\*\*5 nests from EACH island do not open eggs, try to get these clutches later in the season so that the clutch is more fresh
- Night survey on Tern last night with all 3 of them - able to tag females and count eggs
- Many turtles nesting this season first sighted in the 80s.
- 3 turtles captured in water at Molokai and 1 at Midway now nesting on East
- 30 nests at Lisianski, tagged 7 turtles so far

|   | East                | Tern                         |
|---|---------------------|------------------------------|
| Total Males Mototooled                                    | No additional males | No additional males          |
| Total Females Mototooled                                  | 389                 | 272                          |
| Females with nesting activity - not confirmed laying eggs | 376                 | 253                          |
| Females confirmed nesting - eyes on eggs                  | 218                 | 86                           |
| Nests with egg counts (range)                             | 90                  | 32 (all 10 data loggers out) |

|                                 |    |   |
|---------------------------------|----|---|
| Average basking females per day | 31 | 26 (yesterday only 6 females, very few males basking) |
| Average nesters per night       | 46 | 34  |
| # of new nesters each night     | 2  | 11  |

- Gin/Trig - mototooled 1 additional turtle, 3-5 turtles basking/day
- For future seasons - protocol for monk seal people to write down numbers of turtles basking on atolls
- Only one Sat Phone is working. Still capable of using VHF radio and InReaches

Call #6, 29 June 2017

- Marylou on Tern. Jan and Alex on East

|   | East  | Tern                     |
|---|---|--------------------------|
| Total Males Mototooled                                    | No additional males   | No additional males      |
| Total Females Mototooled                                  | 386   | 258                      |
| Females with nesting activity - not confirmed laying eggs | 289   | 251                      |
| Females confirmed nesting - eyes on eggs                  | 215   | 81                       |
| Nests with egg counts (range)                             | 56 (individual females)<br>(# of eggs 26-138)<br>Turtles laying eggs in the 20s are nesting closer to sunrise | 26 (6 with data loggers) |
| Average basking females per day                           | 106   | 31                       |
| Average nesters per night                                 | 51<br>(both islands up from last week)  | 40                       |
| # of new nesters each night                               | 3.6   | 8                        |

- 18 East nesting turtles also nesting on Tern
- 14 Tern nesting turtles also nesting on East
- Trig mototooled turtles seen on Tern
- Gin mototooled turtles seen on East



- Airplane from last week was coast guard plane taking FWS people to look at damage of water tower collapse on Tern
- Ship - coming mid July
  - Can put samples from Alex's necropsy on ship to bring back to HNL
    - Turtle was up trying to nest, and was still up when Alex went to bed
    - Turtle had eggs inside, but not sure if she was about to lay another clutch (as she had just laid before death)
    - Due to turtle getting stuck and dying in the cracks at 'turtle mosoleum'
    - Parts of Tern Island that are death traps
  - Tent stakes - look at email to see minimum
  - Plus all of the other items list above
- Resighted nesters from previous years
  - 12 - basker since 1982 on East, nesting since 1982
  - Couple others 25 and 27 years
  - 21 or 24 - captured on Moloki in 1984 at 42.0 SCL, nested in 2011
  - 41- captured on Hawaii Island 1998, nesting 2012 on east
  - 108 - caught in 1989 with tumors, 2008 nested with tumors, 2014
  - 131 - Oahu 2000 with tumors, 2012 nesting but no tumors
- Two turtles with FP on Tern. Tear duct tumors.
- **Send ML details on how to set hexadecimal on pit tag reader rather than as an attachment - Shawn**
- Photos on East and Tern because of king tides
  - South Beach totally different looking due to erosion from king tide
- Start saving eggs/hatchlings (almost fully developed) that females dig up
  - YES especially if nest has data logger in it with skin sample from mother
- **Did we give them SOP on how to do nest excavations??**
  - HOW to store hatchling samples? Flipper clip in SS
  - Hatching success - Need to train Alex on how to determine hatching success and emergence rate
  - Embryo stage
    - **Send SOP**
  - 10 full nests from East and Tern - bag everything and freeze
  - Collect: whole eggs, hatchling, and shell pieces
- Gin sat tag turtle is nesting on East
- **\*\*\*\*Look at Sat tags to see where the females are nesting- Summer**



Call #5 22 June 2017.

- Marylou and Jan on East. Alex on Tern
- New Satellite phone cannot connect to the network, not making phone calls
  - Good paperweight ;-)
- Marylou will keep the 'Marylou' InReach from now on. Alex and Jan will swap out for the 'Alex' InReach
- History on sighted turtles
  - Turtle seen patty-cakeing but not laying was first sighted nesting in 1989. Last nested in 2000. 28 years as known nester
  - Mototool #2 - First sighted in 2007 then every 3 years.
  - Several Mototooled females have PIT tag discrepancies
    - #21 and #24 have the same PIT tag number
    - A few others where a few digits of PIT tag number might have been swapped
    - Marylou to double check data

|  | <b>East</b>         | <b>Tern</b>         |
|--|---------------------|---------------------|
| Total <b>Males</b> Mototooled                                | ~80                 | ~80                 |
| Total Females Mototooled                                     | 372                 | 240                 |
| Females with nesting activity<br>- not confirmed laying eggs | 242                 | 200                 |
| Females confirmed nesting -<br>eyes on eggs                  | 161                 | 59                  |
| Nests with egg counts<br>(range)                             | 10 nests<br>(69-94) | 7 nests<br>(33-110) |

|                                 |     |    |
|---------------------------------|-----|----|
| Average basking females per day | 106 | 43 |
| Average nesters per night       | 46  | 31 |
| # of new nesters each night     | 5.5 | 19 |

- Tern
  - Basking turtles per day are decreasing: 70 down to 20 in past 8 days
- East
  - Basking turtles per day are decreasing 150 down to 40 in past 8 days
- Dataloggers
  - Put out all new ones, n = 40, likely completed by June 10th
    - # of eggs in nest not counted
    - WANT TO TRY TO EXCAVATE THESE NESTS
  - Had to clean data loggers from last year, will download data today, n = 10
    - MAKE SURE TO COUNT THE NUMBER OF EGGS IN THE NESTS THESE ARE DEPLOYED IN
  - Sending 8 loggers on ship.
    - MAKE SURE TO COUNT THE NUMBER OF EGGS IN THE NESTS THESE ARE DEPLOYED IN
- Trig
  - Jan was there for a few hours
  - 6 turtles mototooled, not many turtles there at that time
    - Usually 60-70 turtles basking in the afternoon
  - Monk seal people have been writing down if there are mototooled turtles basking
    - One was from Tern
- Gin
  - Mototooled 5 turtles
  - Don't think that Monk seal people have seen any mototooled turtles from other islands
  - \*interesting that basking turtles on Gin do not have mototooled IDs from other islands. Good that a sat tag was deployed on a basking turtle on Gin so we can see where she's nesting
- Turtle T103 nested on East, tried to nest on Tern the night before
- Ship leaves Oahu July 6th, arrival at FFS on July 9th
- Goals:
  - Count # of eggs for 50 females and repeat nests of those 50 individuals if possible
  - Do an assessment on Gin and Trigg if possible
- Seawall is collapsing on Tern, water towers falling over - BE CAREFUL
  - T20 turtle keeps getting trapped, three times now

- A prop plane has flown over the island three days in a row, for several hours, cloud height, not commercial airline height
- King tide - take pics
- Emerged hatchlings - use scale to obtain mass and measure carapace length (SCL) with small digital calipers
  - It is okay to collect them into a bucket to obtain these measurements, but make sure they are released the same night of emergence before the sun comes up
  - Keep in mind that the main goals are to obtain (1) the total number of nesters for the season - mototool, (2) permanent tagging of nesting females - PIT and flipper tags, (3) # of eggs in nests
- NEED TO GET REBAR STAKES FROM MIKE BURNS. Complete.



#### Call #4 on 15 June 2017

- Marylou on East with Alex. Jan is on Tern
  - They change islands every Monday
  - Tern - will surveys 5 nights/week
- Weather: hot and muggy today. Nights are windy and rainy.
- 5 mom pup monk seal pairs on East
- Basking female satellite tagged on Gin
  - **Summer: To confirm that the sat tag is transmitting. COMPLETED. It is transmitting**
- Egg counts on 2 Tern turtles only
  - Going forward, once most of turtles are tagged, start counting eggs
  - **Summer: To confirm how many nests we want egg counts on?**
- All new data loggers deployed, n = 40
  - Trying to get old data loggers downloaded so they can deploy those too
- Cryovials
  - Using PIT tag sticker
  - If no sticker then handwriting: PIT tag, Mototool number, date, and island name
- Males mototooled (total for season) - East: 80 and Tern: 70
- Females mototooled (total for season) - East: 357 and Tern: 164
  - 332 nesting females (activity, not confirmed egg laying) on East
  - 84 nesters on Tern - only 1 week of night surveys, experimental
  - Max number of females nesting in one night - East: 69 and Tern: 30
  - Max # nests with eggs on one night - East: 17 and Tern: 4
  - Females digging up lots of nests
  - Some females are false patty-caking and not laying eggs!
    - One female tagged from previous season
    - Another female dug a different nest and laid eggs the same night
    - **Summer: To confirm if there are females which are not actually laying nests in a season but are doing nesting activity (3 females in two nights)?**
    - Because of this 'false paty-caking' some GPS locations are of false nests because they thought that patty-caking meant egg laying
  - Some basking females from Tern nesting on East and vice versa AND 2 Tern nesters basking on Gin
  - 4 or 5 females basking on Gin
- Summer trying to get sat phone working again
- The turtle field camper on Tern will go to Trigg once per week with Monk Seal team
  - Jan mototooled many baking turtles on Trigg Island - yesterday
- Field camper inquisitive question - Diversity in shell colors and patterns - why?
  - George: "In doing some reading this morning I noted Cam's FFS Call #4 notes the inquiry about 'diversity of shell colors and patterns'. The best way to answer this question- one that commonly arises- is via Jack Frazier's 1971 paper attached -with color plates. Back then the verdict was out if such color

differences were tightly linked in some genetic manner to diverse stocks coming together to nest in one place. That indeed seemed logical, but subsequent work over the decades has shown not to be the case. So, why are colors so different? Within the same size/age class- nesting females for example- they do indeed show variation- like Jack showed. But from my perspective that degree of variation doesn't exist at FFS- though there are some color/pattern variations between individuals. Two things seem pretty sure, however- colors/patterns can change over time with a turtle- even an adult; and, environment/diet can and does affect colors/patterns- shown definitively in captive turtles held under varying conditions.

Bottom line- variation in the wild is normal and can change over time. But it's not genetically related to the extent known at present."

- **Shawn: Send instructions for PIT tag scanner (yellow one) so they can change it to decimal rather than hexadecimal. Complete. Sent by email**



### Call #3 on 8 June 2017

- Marylou on Tern. Jan and Alex on East (did not call in).
- New satellite phone connected to email not working. Can put SIM card in old satellite phone and that phone can make calls to Honolulu, but can't make calls between sat phones.
- BATTERY POWER/CHARGING IS A MAJOR ISSUE - need to revisit this for next year and **\*\*\*purchase a trickle charger\*\*\*** Check to make sure this is still functioning for next season
  - VHF radio powered by trickle charger (provided by monk seal group) now, hook up between Goal Zero and Marine Battery. Took extra solar power charger to help power it too.
    - **Send another marine battery or trickle charger along with other gear on cetacean cruise - COMPLETE, Shawn purchased and we will send up on cetacean cruise**
    - Have 3 handheld VHF radios for keeping in contact with each other on East
    - Base station VHF reaches Tern, but this
  - DELL laptops take up a lot of battery power!!! Stopped using laptops unless checking email.
  - Three solar panels can charge one laptop per day and it only lasts 2 hr.
  - Charging smaller electronics not as often
  - Maybe get external battery for laptop?
- Have Marylou be the POC so that no 'balls are dropped' and so that we are more efficient with responding to concerns
- Tern - 2 day/night survey
  - Mototooled: 142 females, 65 males
  - Nesting: 42
    - 1 had sat tag - same female they sat tagged on Tern, remigration interval 14 days
    - 20 females last night
- East
  - Mototooled: 310 females, 68 males
  - Basking: 150-200 turtles (males and females)
  - Nesting: 152
    - 3 nights: 38, 49, 41
  - 4 mom/pup pairs on on East
    - First night on east - Entangled monk seal which later pupped
    - Gnarly shark bites
    - Got away and disentangled
    - Came back later pupped right in front of tent and remains there today - keeping survey log with levels of disturbance
    - **\*\*\*Need a cutting tool for next year\*\*\***
  - 10% of turtles were laying eggs



- Last night Jan processed 9 females (start to finish) while laying eggs
- Deployed 20-25 data loggers into nests
  - Control data loggers go into historical locations NOT next to nests with data loggers
- Map
  - Not sure where tombs are on map - can ask shawn what Marylou meant by this
- Baskers
  - If resighted, just write down mototool number no need to copy resight data into larger datasheet...use the resight data to help determine if they need further processing (flipper, PIT, skin sample, etc).
  - Males flush easy. Should they put them in a box to do full work-up?
- Recording coordinates of confirmed nests is priority, if you think the behavior will lead to a nest then get the GPS coordinates
  - How many confirmed nests per night?
- Priority is IDing females with mototool rather than getting tag into already mototooled turtle. Currently no need to stick with female to confirm nest.
- Adjusting survey schedules so that they don't miss nesting turtles
- **Supplies Needed**
  - **PIT tag scanner - need to determine if need to buy new ones or just need wet-dry bags?**
  - **\*\*\*\*Waterproof headlamps\*\*\*\*** - don't get the one with the wheel, Summer knows what type of headlamp Marylou DOES NOT want - **COMPLETED by Shawn**
- Last sat tag, priority is to put it out on Jin - trying to work this out with Shawn Farry's schedule
- Datasheet Example from last year
  - Codes different from last year to this year - use codes on this year's datasheet
- Keep consistent - date of survey will be for the night of survey (even when it changes dates at midnight)

### Call #2 on 1 June 2017

- Marylou, Alex, and Jan all on East Island. Tonight will be their third night on island
  - Marylou will return to Tern to assess the best method of conducting surveys on Tern solo
- Partial surveys yesterday
  - Afternoon: mototooled \*only\* 167 baskers: 135 females and 32 males
    - Female (LHF: 4233400066 and RHF: 422D536E60) had lateral tag (TDR or acoustic) still attached. Shawn to look up previous history to determine if the transmitter should be removed or if it is still transmitting. - this is L2, COMPLETE will present at next call and provided brief background to Marylou via email
  - Night: 9 pm to midnight, 8-10 turtles up at once, all false-pitting therefore none mototooled
    - .. 2 females were baskers tagged on Tern!!!
- Suggested steps for tagging nesting females
  - Assess the situation, try to mototool the females when they are laying
  - If you attempt to mototool the turtle and she spooks, don't fret, she might come back that night and you can try again.
  - At least paint a number on her
    - You could put this on a specific scute (e.g. 4th left lateral) or use various symbols (e.g. triangle) to represent a specific date that you painted her with the number.
    - Then you could mototool the female during the day if you see her basking
  - Single PIT and singler flipper tag on different flippers for all turtles (nesters/baskers/males/females) - *will reassess at end of June*
  - Sat tag females showing nesting behavior even if you don't see them lay eggs (or if they do false nesting).
- Review of basking turtles on Tern (n = 17 total)
  - n = 10 were previously tagged as nesters on East
  - n = 5 were captured in-water: n = 1 Hawaii, n = 3 Oahu, n = 1 Molokai
  - n = 2 not found in database, still looking
- MAIN GOAL AT THE END OF SEASON IS THE NUMBER OF NESTING FEMALES - so try to make mototooling the nesters the priority
  - But, great job on all of the baskers mototooled!
- General discussion
  - Trigg Island doesn't look like good nesting habitat as it is pointy and narrow. Unlikely any nests would survive if laid on Trigg
  - HIMB tags used until at least 2009. Maybe even more recently - Nesters: 1997 for nesters (1998 first year PITs were used), Ocean Capture: 2016 Anahulu - COMPLETE
- Answers to questions asked via email
  - Use the last 4 digits of the serial number as an ID for the GPS without a label



- Breakdown the platform for the denver tent and store it at Tern at the end of the season
  - **T. Todd will ask for permission to leave it on the island - we will revisit this topic at the end of the season**
- **Shandell will send more tent stakes. Request for 2-3' rebar (n = 6+) - COMPLETED. Shandell ordered tent stakes and they will be brought up on the cetacean cruise which leaves ~ July 6th**
- Prioritize nesters at night rather than re-sighting of baskers seen earlier in the day
- Do not sat tag the nesting female on Tern which is missing partial flipper for both hind flippers
  - It is okay to help her (and any other females) dig the hole to deposit the eggs in
- **Action Items**
  - **Shawn - How many total turtles mototooled last year (in addition to the 80 nesters)? - COMPLETE 118**
  - **Shawn - East Island map has several 'T' drawn on it. What do those represent? - T represents "Tournefortia" bushes - COMPLETE, provided answer to Marylou in an email**
  - **Send tide chart more closely related to East island as Honolulu calendar with tides is not helpful.**
    - **T. Todd to contact FWS to see if they are collecting tidal data at Tern - Cam contacted Jessie for info: Jason Klem from UH has a tidal gauge at Tern; at PHR the tides were about an hour off the Honolulu one**
      - **See if campers can figure out the offset by marking the high tide line with wood sticks to figure out the time of high tide and whether it is earlier or later than the Honolulu tide chart they have - perhaps Shawn Farry has an idea of the offset?**
      - **George: "FFS offset is about 8 min from Honolulu. That information was/is correct based on published data, no change from when I started going there 40+ years ago. If Marylou has noted discrepancies, it may be from some oddities of the 'Spring King' tides in recent weeks."**
  - **Be prepared with a joke of the week to provide to the field team at the next call**
    - **Cam has prepared some just in case**
  - **Jan requests news headlines email each week if possible**
    - **Cam sent a few highlights**
  - **Alex to provide preferred address for check to be mailed to - COMPLETE. Cam sent to Shannon**