

For background information see:

http://www.nwfsc.noaa.gov/research/divisions/cb/ecosystem/marinemammal/satellite_tagging/blog.cfm

Introduction

On 29 December 2012 an adult male Southern Resident Killer Whale (SRKW), K25, was implant tagged with a satellite transmitting device, and subsequently tracked with nearly daily locations until 4 April 2013. K pod made its reappearance in inland waters of Washington on 8 July for the first time known since 29 December 2012. The 8 July 2013 photos collected by the Center for Whale Research show that the tag deployed on K25 had detached, although the anterior attachment dart was observed protruding from the fin. Although this outcome was unexpected based on a redesign and extensive testing of the tags in 2012, previous experience with attachment breakage that occurred on transient killer whales and a few other medium-size cetacean species indicates that the long-term presence of a surgical grade titanium dart does not pose a health risk to the whale. A NWFSC purchase order was issued to the Center for Whale Research on 19 September 2013 to provide opportunistic monitoring during the months when the whales are typically in inland waters during fall 2013 and summer 2014.

The scope of work required collection of high resolution photographs of the dorsal fin at the tag attachment site of K25 for purposes of tissue assessment, and the deliverables include transfer of all photos collected and any observations on animal behavior or body condition. After each encounter Dr. Brad Hanson was notified by email of the work accomplished with relevant photo attachments (if any). This report summarizes all of the encounters with K25 between the 19 September 2014 and 7 July 2014 study period.

Materials and methods

Encounters are conducted with SRKW's by deployment of a small boat (19-25' Boston Whaler) with one or more experienced killer whale researchers equipped with high resolution digital cameras and telephoto lenses (e.g., Nikon D800 and 200mm f2 lens; D300S and 80-200 f2.8 lens),

whenever feasible and killer whales are reported in the inland marine waters of Washington State. GPS position for each photo taken is embedded in the metadata whenever possible. It is not always possible to determine killer whale ecotype based upon sighting reports, so vessel deployments are frequently made that encounter non-SRKW ecotypes and non-K25 documentations. Even with the experienced SRKW photo-ID specialists, the focus of effort on a specific whale (K25) can be quite challenging.

Results

K25 tag attachment site documentation was accomplished on eight days during the current study period: 19 Sep 2013, 23 Sep 2013, 20 Oct 2013, 31 Oct 2013, 28 Nov 2013, 13 April 2014 (the first and only known time K pod came into inland marine waters in the spring of 2014), 2 July (the first time K pod came into inland marine waters in the summer of 2014, and 7 July 2014.

Date : 19/09/2013

Sequence: 1

Encounter Number: 69



Enc Start time: 08:18 AM

Enc End Time: 01:13 PM

Vessel: Orca

**Observers: Dave Ellifrit, Erin Heydenreich,
Kathy Babiak**

Pods or ecotype: Resident

List individuals present (Orca ID's):

J,K,L (except L54's, L88 and L84)

Location: Haro Strait

Begin Lat/Long:48.31.27/123.09.88

End Lat/Long: 48.39.71/123.12.88

Encounter Summary:

Whales were reported around 7:30 AM off the south end of San Juan Island. We departed Snug at 8:10 and encountered whales off Bellevue Point at 8:18 AM. The whales were spread out in mixed small groups and singles. They were moving slowly north making long dives and milling close to shore. L94, L113 and L119 were observed chasing a salmon off Pile Point. We continued to move up island as the whales went north, eventually seeing all of J pod, K pod and all the L's except for the six L54's L88 and L84. We ended our encounter at 1:30 PM at Tip Top hill on Stuart Island with the J17's, L12's, L95, and L82 with her calf L116.

Enlargement of tag attachment site:



No unusual behaviors were noted for K25 during this encounter.

Date : 23/09/2013
Sequence: 1
Encounter Number: 70
Enc Start time: 12:19 PM
Enc End Time: 01:52 PM
Vessel: Chimo
Observers: Ken Balcomb, Carl Safina,
Kathy Babiak
Pods or ecotype: SRKW K sub and L sub
List individuals present (Orca ID's):
K22, K25, K37, L83, L91, L92, L116
Location: Haro Strait
Begin Lat/Long: 48.32.9/123.10.3
End Lat/Long: 48.28.5/123.05.2

Encounter Summary:



We heard resident calls, including K pod, on the Orcasound hydrophone around 11:30 AM and scrambled for "Chimo" to see if we could find K25 for updating his photos. With luck, he was the fourth whale we saw, and we

spent about forty minutes trying to get close enough to him to photograph. He seems to give one a tail view whenever we get within 200 yards; but, we finally did get good photos of his right side. He was actively foraging a couple of times during our time with him. All of the whales were very spread out and heading generally southeast, with occasional quick circling indicating foraging. We did not see any fish scales in the swirls left behind the whales. Rain commenced when we were off Kanaka Bay, so we came back to port. The mission was to update K25, and we did that, so we conserved fuel by returning early.

Notes-Comments: The NWFSC crew was out today collecting fish scale samples for diet studies.

Date: 20/10/2013

Sequence: 2

Encounter Number: 73

Enc Start time: 12:33 AM

Enc End Time: 04:12 PM

Vessel: Orca

Observers: Dave Ellifrit, Erin Heydenreich, and Tim Morris

Pods or ecotype: Southern Residents

List individuals present (Orca ID's):

J2,J14,J16,J17,J19,J22,J26,J27,J28,J31,J32,
J34,J35,J36,J37,J38,J39,J40,J41,J42,J44,J45,J46,
J47,J49,K12,K13,K14,K16,K20,K21,K22,K25,
K26,K27,K33,K34,K35,K36,K37,K38,K42,K43,
K44,L22,L25,L41,L47,L53,L55,L72,L77,L82,
L83,L85,L87,L89,L90,L91,L92,L94,L95,L103,
L105,L109,L110,L113,L115,L116,L118,L119

Location: Haro Strait

Begin Lat/Long: 48.31.48/123.10.15

End Lat/Long: 48.34.96/123.12.09

Encounter Summary:

We left Snug Harbor at 12:17 PM and encountered whales heading north at 12:33 PM off Lime Kiln Point, San Juan Island. J2 was in the lead traveling

and milling offshore. We continued down island and found L92, K21, K16, K35, J14 and J40 in a tight group inshore. They were shortly joined by L53,



L72, L105 and J45. K12, L47, L115, K25 and K34 were all spread out off Hannah Heights milling and moving slowly north. We spotted a larger group a little further down island and found the J10's, J11's, J28, J46, J35, J47, K22's, L22, L95, L41, L25, L94 and L113 also all milling in a loose group. We turned north and headed toward Open bay to try to catch some of the whales we missed. We found more mixed groups, many of them taking long dives. We eventually saw all of J, K pod and most of L pod except the L54's, L84 and L88. We caught up with most of the L4's at the end of our encounter off Open Bay. We didn't see L86, L106 and L27 but we assume they were there and we just missed them. We ended our encounter off Kellett Bluff, Henry Island at 4:12 PM. This is our second encounter with J pod where we did not see J8. She is considered missing at this point, but we will continue to look for her in the following weeks.

Date: 31/10/2013

Sequence: 1

Encounter Number: 76

Enc Start time: 02:25 PM

Enc End Time: 04:05 PM

Vessel: Orca

Observers: Dave Ellifrit

Pods or ecotype: J and K

List individuals present (Orca ID's):

**J14,J16,J17,J22,J26,J27,J28,J31,J32,J34,J35,
J36,J37,J38,J39,J40,J41,J42,J45,J46,J47,J49
K13,K14,K20,K25,K26,K27,K33,K34,K36,K38,
K43,K44**

Location: Haro Strait

Begin Lat/Long: 48.28.01/123.06.20



End Lat/Long: 48.24.90/123.11.35

Encounter Summary:

After receiving reports of residents heading east towards San Juan Island, Dave Ellifrit launched "Orca" and arrived on scene a little west of Kanaka Bay at 2:25 PM. J and K pods (L87 was seen by other boats) were very spread out and foraging in singles and small loose mixed groups. J26 and K26 were both seen chasing salmon within fifty yards of one another. Around 3:00 PM, small groups began forming as the whales started heading southwest. J and K pods continued traveling southwest spread out

in mixed groups and “Orca” left them a few miles south east of Seabird Pt. on Discovery Island at 4:05 PM.

Date: 28/11/2013

Sequence: 1

Encounter Number: 80

Enc Start time: 10:05 AM

Enc End Time: 01:08 PM



Vessel: Chimo

Observers: Ken Balcomb, Dave Ellifrit,
Jeanne Hyde, Gail Richard

Pods or ecotype: SRKW

List individuals present (Orca ID's):

J,K,L, except L12's

Location: Haro Strait

Begin Lat/Long: 48.27.68/123.07.71

End Lat/Long: 48.35.78/123.14.56

Encounter Summary:

What a wonderful Thanksgiving Day gift! Last night there were southern resident calls on Lime Kiln hydrophone, and we hoped that the whales

would be around for Turkey day. Jeanne Hyde spotted fins in the distance out by Beaumont Shoals on Thanksgiving morning, so we invited her along and headed out in search, leaving Snug Harbor in "Chimo" at 9:38 AM. Sea conditions were great, and within a half hour we spotted several groups of whales in mid-Haro strait heading toward San Juan Island. It was a Super-pod (minus the L12's) that was coming in after a long hiatus in visitation since Halloween. The whales travelled in mixed groups up Haro Strait, criss-crossing and further mixing as they swam toward the Canadian Gulf Islands. By sunset, they were passing Thieve's Bay on the west side of Pender Island, still spread out in groups that checked out areas behind the islands enroute.

Notes-Comments: All of the whales that we saw appeared healthy, but no new babies were observed. Due to the extreme spread, we cannot be sure if any whales were missing, other than the entire subgroup of nine whales in the "L12's" that apparently did not come in to Haro Strait. The wanderer, L87, was present today and was now escorting J2. He sure does seem to prefer swimming with older females ever since his mother died in 2005. I'm sure glad that we saw him as a baby in 1992 with his mom (L32); otherwise, we would not know to which pod he "belongs". He has earned the nickname "Harold" that I gave him awhile back, and he is going through the "Maude's".

K25 was acting rather elusive, and it is beginning to seem that he does not like approaches to his right side.

Date: 13/04/2014

Sequence: 1

Encounter Number: 9

Enc Start time: 11:50 AM

Enc End Time: 03:20 PM

Vessel: Orca

Observers: Dave Ellifrit

Pods or ecotype: K Pod

List individuals present (Orca ID's):

K12,K13,K14,K16,K20,K21,K22,K25,K26,K27,
K33, K34,K35,K36,K37,K38,K42,K43,and K44

Location: Juan de Fuca Strait and Haro Strait



Begin Lat/Long: 48.17.67/123.28.38
End Lat/Long: 48.26.94/123.01.85

Encounter Summary:

At 9:15 AM, Ken Balcomb observed a large group of whales from shore in the Strait of Juan de Fuca off Sooke (approx. lat. 48.17/ long. 123.42), and he called Dave Ellifrit at home at 9:35 AM. Dave launched "Orca" at Snug Harbor and arrived on scene at 11:50 AM about two miles southeast of Race Rocks. K pod was all together in a loose group heading easterly at 5-6 knots. The K12s, K16s, and K21 soon moved well ahead of the K13s and K14s. By the time the whales made progress to the south of Trial Island, the K13s took the slightly more northerly route while the K14s spread out and moved about a mile or more south of them, paralleling their course. By this time the leaders were nearing Seabird Point, Discovery Island, although well south of Discovery Island. Around 2:25 PM, "Orca" moved back up to the leaders and found the K16s and K21 a few miles off Eagle Point, San Juan Island heading slowly toward Salmon Bank. As "Orca" moved slowly north the K12s and K14s were traveling spread out heading down island off Eagle Point. "Orca" ended the encounter at 3:20 PM with the K13s porpoising - quickly headed down island near Eagle Point, San Juan Island.

Date : 02/07/2014

Sequence: 1

Encounter Number: 33

Enc Start time: 02:28 PM

Enc End Time: 04:47 PM

Vessel: Orca

Observers: Erin Heydenreich and Dave Ellifrit

Pods or ecotype: Residents

List individuals present (Orca ID's): K pod (19), J pod(25), L pod (19)
(minus L12's, L54's, L88,& L84)

Location: Haro Strait/Swanson Channel

Begin Lat/Long: 48.38.64/123.12.10

End Lat/Long: 48.36.27/123.12.31

Encounter Summary:

We heard rumors of K pod over the whale-watch radio in mid-afternoon.



The last time K pod was seen was on April 13th when they came in here briefly (Encounter 9) and ventured into Puget Sound overnight for a one day visit. It was very lumpy and windy for early July, so we drove down island to take a closer look from shore. We confirmed that K's were there

and went out in “Orca” shortly after the whales passed the Center for Whale Research in tight groups at 2:15 PM. We encountered whales soon thereafter in Haro Strait off Speiden Channel heading north. We first encountered the K13's with a few J's in a tight group. We next encountered the K14's also in a tight group. As the whales crossed boundary Pass toward the Pender Bluffs, we went back to the K13's to try to get some better tag-attachment shots on K25, but the lighting was not favorable for good photography. It was much too backlit for anything to show up well on a black dorsal fin. We ended our encounter in Swanson Channel, British Columbia with the J16's, K14's, the J10's, J11's, and K21 in a tight group going north. As we headed back toward San Juan Island, we spotted some more whale watch boats off Henry Island, just south of Battleship, and we briefly encountered the L4's and L47's followed by L90 and L92. It was getting a little too rough to keep going, so we quit there, just North of Kellett Bluff, Henry Island at 4:47 PM with the L's headed south.



7 July 2014

Most recently, Ken Balcomb encountered SRKW's in Haro Strait on 6 and 7 July 2014 and focused efforts on obtaining high resolution digital

photographs of K25 tag attachment site. The SRKW's were very spread out during both days, and K25 was seen occasionally by the whale-watch fleet, but went far south in the Strait of Juan de Fuca in the evening of the 6th, not to be found again by sunset. Early in the morning of 7 July, the SRKW's were again spread over tens of square miles in Haro Strait. Ken observed K25 from the Center for Whale Research in mid-Haro Strait heading north at 0800 and launched in "Orca" at for response. By the time K25 was found, he was moving back south in front of the Center for Whale Research and was seemingly very reluctant to allow a vessel approach to his right side. His dives were long and his path was erratic (evasive?) but he generally kept moving southeast in Haro Strait to the vicinity of Andrews Point where a mini-greeting took place between members of K from the north and J pod from the south.

Enlargement of tag attachment site:



We will continue to monitor the tag attachment site of K25 for the remainder of our population assessment season, and report our findings to NWFSC.

