2018

CAPTURE OF RUSSIAN ORCA

An adult male orca surfaces inside the buoys of the capture net, with a capture pontoon boat nearby. Screen grab from supplied video.

Report on assessment of video taken 26 August 2018
Sea of Okhotsk, Russia
Prepared by Dr Ingrid N. Visser

EXECUTIVE SUMMARY

Prepared 10 October 2018

I am a qualified marine mammologist with a PhD in the study of orca (also known as; killer whales; kasatka; *Orcinus orca*). I have viewed approximately 1hr 20 minutes of video, taken on or around the 26th of August 2018, from the shore of the Sea of Okhotsk, Russia.

The video shows the capture of at least three, possibly four orca. There are three other orca filmed outside the net (giving a *total of six or seven orca*).

The composition of the orca filmed was comprised of;

INSIDE THE NET:
x1 adult male orca
x1 female-size orca
x juvenile orca
possibly x 1 very young (neonate; less than 6 months old) orca calf

OUTSIDE THE NET:
x2 female-size orca
x1 sub-adult male orca

It appears that, *if present,* the **neonate drowned**, based on the extremely long period of the video in which it was not seen to surface (at least 9 minutes and 38 seconds).

It appears that the **juvenile may have drowned**, based on it last being observed entangled in the net and it was not seen in any of the other subsequent videos.

It appears that the adult **male may have died** (he appeared to be tied up alongside one of the boats, but does not move and is no blows are observed).

It is my professional opinion that these animals were extremely harassed during the capture process which possibly resulted in the deaths of individuals and severely compromised the welfare of the whole group during the process.

Given the long-term and strong social bonds that these sentient and intelligent animals have, the orca who outside the net would have suffered as well, not only from witnessing the event but also from consequences of potential deaths and removal of their pod mates.

Research has been conducted on Russian orca which shows that there is a limited population and *any* harvesting will be detrimental to the species in Russian waters. Comparative populations of orca, where harvesting has occurred have shown little to no recovery.

Additionally, the keeping of orca in captivity has proven to be overwhelmingly harmful to the animals. They are long-lived and wide-ranging animals and are clearly not suited to confinement. There is no genuine educational or conservational benefit to keeping of this species for public display or research, rather their display is driven purely by commercial factors.

RECOMMENDATIONS

- ***All captures of orca in Russian waters must cease immediately & no new permits issued.***
- ***Any orca taken during the 2018 Russian capture season should begin immediate rehabilitation and subsequently be returned their pods.***

QUALIFICATIONS:
I am a qualified orca biologist and founder of the Orca Research Trust (www.orcaresearch.org) and I have conducted research on free-ranging orca for more than two decades, completing a PhD. I have observed captive orca in all facilities where they are currently on public display around the world.

BACKGROUND:
In mid-September 2018, I was contacted by the non-profit Sakhalin group "Ocean Friends" in reference to orca captures that took place or around the 26th of August 2018. The capture process was filmed by a videographer who wishes to remain anonymous, whilst standing on the shore at from the shore of the Sea of Okhotsk, Russia. I have been asked to comment on five videos (with a total of approximately 1 hour and 20 minutes) and to assess the welfare situation that occurred during the capture process. In the time between this request and the date of my report I have reviewed the videos many times, often frame-by-frame, in order to give an accurate assessment of what can be viewed in these capture videos. Additionally, without any request by the group, I have made broad recommendations based on the knowledge I have gained during my career researching both wild and captive orca and my assessment of this current video evidence.

ASSESSMENT
Additional Information: The videos are taken from the shore, approximately 700m-1km away from the capture. At times, this distance and a 'haze' effect make the actions of the animals and people difficult to determine, however the overall impression of events is very clear. For example, the blows (exhalations) of the orca are often visible, as are their dorsal fins. There are no time-code on the videos, therefore times given below are 'elapsed time' from the start of each video. There is no indication of the time gap between the subsequent videos. The first four videos appear to be in chronological order and closely spaced, based on the state of the tide, the position of the net and boats. The fifth video appears to follow after the fourth, but the time gap between these videos appears to be of longer duration.

Water depth is estimated to be less than 4m deep, based on the location (close to shore and the shallow nature of the capture area). Further evidence of the water depth is evidenced by the shallow sandbanks visible to the rear of the capture zone (displayed by a discolouration of the water). Such shallow waters enhance the chances of captures, should reduce the number of drownings and provide little if any chance for the animals to escape. They also increase the likelihood that the animals will be struck by the capture vessels if they are driven recklessly. Based on the video, it appears as if the tide was dropping.

Boat noise is known to mask the calls (between individuals) and echolocation (involved in navigation processes) of orca, as well as cause behavioural changes (avoidance). Details regarding these issues can be found in the following publications: (Bain and Dahlheim 1994, Erbe 2002, Morton and Symonds 2002, Williams, Bain et al. 2002, Williams, Trites et al. 2002, Foote, Osborne et al. 2004).

Boat strikes are known to be an issue for orca. Some examples of this can be found in the following publications: (Ford, Ellis et al. 1994, Visser and Fertl 2000, Laist, Knowlton et al. 2001, Van Waerebeek, Baker et al. 2007, Ritter 2012). Given that the water in this area is approximately 4m deep, there was little room for the orca to manoeuvre in, particularly the adult male, who's dorsal fin is visible throughout most of the videos.

Entanglement in nets is well recognized as a cause of drowning for orca. Some examples of this can be found in the following publications: (Heyning, Lewis et al. 1990, Barlow, Baird et al. 1994, Fertl and Leatherwood 1997, Reeves, McClellan et al. 2013). During video #1 it appears that the adult male and possibly the female-sized orca become entangled at least once each. Additionally, the juvenile (and/or the neonate, if there) become entangled.

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Video #1 (duration 22mins:56seconds)

The capture process is underway. There are seven boats comprised of;

- x3 inflatables, black/dark grey coloured, approximately 4-5m in length. x1 person.
- x1 hard-sided, silver coloured (likely aluminium hull), approximately 5-6m in length. x1 person.
- x3 trimarans, (x2 with blue and x1 with grey pontoons), each vessel has three pontoons with a flat platform across the top, on which the nets lay and people stand. x4 people on each one and x3 (+ one of the inflatable boat skippers who transfers later to this vessel), x7 on the third.

Overview VIDEO #1: *boats are driving recklessly and fast around, between or over the orca; netting process begins; various orca become entangled. Total head-count 6 (possibly 7) orca. A neonate (new born) orca entangled in net, seen trying to surface with net completely encompassing whole body. This young neonate orca is not observed in any of the other four videos (i.e., it likely drowned).*
ISSUES*:*
* Fast boats could cause injuries in the very shallow (approximately 4m deep) water.
** Entanglements observed.
*** Very young calf [neonate] entangled and likely drowned.

DETAILS OBSERVED FROM Video #1.

The net was deployed to enclose the orca, but at approximately 04m18s it appears that there is one female-sized orca outside the net, whilst two (an adult male and a presumed adult female) are inside. By 04m26s the catchers have begun to haul the net back onto the trimarans. At 04m35s there is another orca female-sized orca surfacing beside one of the black inflatable boats, again, outside the net. This gives a *head-count of 4 orca* at this stage (i.e., 1 adult male and one female inside the net; 2 female-sized orca outside the net).

By 03m13s the boats have corralled the orca using excessive speed and noise and at one point nearly hit one of the orca.

After corralling the orca, the black inflatable boats and the aluminium boat depart the frame and return with the third blue trimaran. By 11m17s the adult male orca has begun straining against the nets in an apparent attempt to escape. The floats along the top of the net can be seen moving as he strains and pushes against the underwater portion of the net. Concurrently, there appears to be at least one female-sized orca entangled in the net at the right side of the frame, close to one of the blue pontoon net boats.

Between 11m23s-11m26s, one of the catchers can be observed using a camera to take video or film of the entanglement.

At 11m27s, alongside the entangled orca, there is a second much smaller sized (estimated, compared to the inflatable boats, to be approximately 2.5-3m in length) and grey coloured, orca. In my professional opinion this is a very young (less than six-month old) calf, however, due to the distance from the camera, it cannot be ruled out that this orca is a juvenile. The white net over the black body gives the impression of a grey body. However, give the apparent size difference between this animal and the juvenile seen later at 17m20s (see below), I refer to this animal as the 'neonate' (new born) to distinguish the two. This
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now gives a *head-count of 5 orca* (i.e., 1 adult male, 1 female and 1 neonate inside the net; 2 female-sized orca outside the net).

At 11m40s the neonate can be seen trying to surface through the net and struggling to take a breath. At 11m42s the female-sized orca (the presumed mother) begins to move away from the neonate. By 12m0s the presumed mother is separated from the neonate by approximately 5 body lengths as the aluminium boat approaches. At this point the presumed mother has now turned back towards the neonate, whilst the adult male continues to thrash around due to his entanglement. By 12m05s the captain of the aluminium boat has rushed to the front of the vessel and frantically begins to haul the section of the net in which the neonate is entangled, above the surface of the water. That boat is quickly joined by two of the black inflatable boats and by 12m16s one of the captains from the inflatable boat is also hauling in the net.

At 12m39-40s the neonate can be seen raising its head again and the white eye patch is clearly visible.

At 12m47s the second inflatable boat captain begins hauling the net also, so there are now three vessels and three captains hauling the net whilst the neonate and presumed mother continue to struggle as they are entangled. There are a series of attempts by the neonate to raise its head above the surface. The net has become enfolded and apparently has ballooned underwater and has entirely wrapped the body of the neonate and the female.

At 12m54s the neonate again attempts to surface and lifts its head into the air but is completely enveloped in the net. By 13m05s the presumed mother disentangled herself and begins to move towards the neonate. The catchers continue to lift the net above the surface, apparently in an attempt to locate the neonate. At 13m07s the videographer begins to zoom out and the wide-angle view of the whole scene precludes any close-up assessment of the neonate, but both the presumed mother and adult male are documented moving towards the neonate.

At 13m18s both the presumed mother and the neonate are seen to surface approximately 5m to the left of the black inflatable boat and the aluminium boat. From this point forward in the video the neonate is not seen in this video again (i.e., 9 minutes and 38 seconds of video) and then not seen at all in video #4, which has a duration of 17m52s. A nenoate of this size would weigh more than 200kg and would sink upon death, although later it would resurface due to gases from decomposition.

At 13m22s both catchers abandon their attempts to pull up the net by hand and by 13m26s move to the back of their vessels. They then return alongside the trimaran. The captain on one of the inflatable boats retrieves a pole/hook from the trimaran and moves at speed along the net and hooks up the net (at 14m02s). At 14m00s, two other orca (one is a subadult male) appear outside the net. This now brings the *head-count to 6 orca* (i.e., 1 adult male, 1 female and 1 neonate inside the net; 2 female-sized and one sub-adult male orca outside the net).

During this period the adult male orca changes direction and heads away from the neonate (i.e., towards the left of frame and the second trimaran), then reverts and heads back. By 14m20s the adult male is swimming parallel with the sub-adult male and female-sized orca (who are still outside the net).

Next, the videographer zooms in and pans to the middle of the net, focusing on the adult male and the trimaran at the right. At 15m09 seconds we see one of the black inflatable boats heading fast (in excess of 20 km/hr) across the screen as it then exits left of frame. By 15m27s the camera is now pointed back to the zone where the neonate was last seen entangled in the net, where black inflatable boat and the aluminium boat remain as the crew members still try to lift the net.

At 15m32s the aluminium boat begins to speed away to the left of frame. At 15m37s he has driven at speed over the top of one of the female-sized orca, as he has entered the net area. The adult male is observed circling the trimaran. At 15m38s one of the black inflatables is seen departing the trimaran and now has a captain and a crew member and it heads over towards the area where the neonate was last observed.

At 16m12s one of the inflatable boats is brought alongside the trimaran in the middle of frame and then hauled up onto the platform deck of the trimaran. At 16m22s the aluminium boat can be seen drifting with the wind/current or driving backwards, from left to right. During this time the adult male can be seen swimming around and behind the trimaran.

At 17m20s the camera is repositioned so that the adult male, one female-sized orca and a juvenile orca can all be seen just to the right of the trimaran. The juvenile is approximately twice the size of the neonate observed at 11m27s, is not pale grey in colour like the neonate, but is black and white with an area of pigmentation behind the dorsal fin (called the saddle patch). Of note is that saddle patches are not typically visible until after 6 months of age. The juvenile's dorsal fin is approximately half the size of the female-sized orca's dorsal fin and is falcate in shape. This now brings the *head-count to 7 orca* (i.e., 1 adult male, 1 female, 1 neonate and 1 juvenile inside the net; 2 female-sized and one sub-adult male orca outside the net).

Due to the distance from the shore, it is not immediately apparent if the female-sized orca and the juvenile are inside or outside the net, until between 17m43 and 17m48s when the juvenile swims in front of the floats, obscuring them and confirming that these two orca are inside the net. Likewise, the adult male can be seen passing in front of some of the floats, confirming that he is inside the net (e.g., see 19m25-19m27s).

At 19m40s the camera begins to pan from right to left and these boats can be observed:
x1 trimaran at the net edge (with one inflatable boat on its deck)
x1 trimaran approaching the scene from the right
x1 aluminium boat (inside the net)
x1 inflatable boat (outside the net, still holding part of the net out of the water, x2 crew)
x inflatable boat (outside the net, still holding part of the net out of the water, x1 crew)

At 20m22s a crew member aboard the trimaran that approached from the right, uses a boat hook to hook into the net and a second crew members does the same thing. They begin to haul the net onto their boat and by 20m46 seconds a significant portion of the net is now visibly pulled tight and raised above the water. This relives the pressure on the net and the captain in the inflatable boat at the right of frame hauls in more net into his boats. During this period the adult male orca and the female-sized orca can be seen swimming around the trimaran with the inflatable on its deck.

By 21m00s the camera is pointed at the net hauling team, which now also includes the aluminium boat crew. The net hauling process results in the boats all moving towards the other trimaran as the net is removed from the water. One of the inflatables (with x2 crew) begins to move rapidly along the floatline by hauling hand-over-hand along the floats.

At 21m58s the third trimaran (grey coloured pontoons) enters the frame from the right and continues past the net hauling and other trimaran, out of frame. By the end of the video the distance between the two trimarans has approximately halved compared to when the net hauling process began.

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OVERVIEW of Video #2, #, #4 & #5.

Video's 2,3,4 & 5 were assessed in the same manner as Video #1. However, rather than give details through the duration of each video, broad overviews are given.

Video #2. (<u>duration 22mins:56seconds</u>)

The net hauling process is underway. From placement of the vessels and the position of the net (raised out of the water) at the start of the video and comparing it to the end of the previous video (i.e., #1), it appears that no significant time has passed (i.e., less than a minute, more likely only seconds, if any time at all).
18m59s the juvenile orca can be seen struggling as it is entangled in the net.

Neonate not observed for duration of video

Video #3, (<u>duration 04m55s</u>)

01m55s juvenile still entangled.

Neonate not observed for duration of video.

Adult male orca entangled in nets, fishermen try to disentangle.

Female-sized orca, whilst alongside adult male orca appears to flip one of the inflable boats. The water level continues to drop, so that the female-sized orca has its dorsal fin continuously exposed too.

Video #4, (<u>duration 17m52s</u>)

Juvenile not observed for whole duration of video.

Neonate not observed for whole duration of video.

Adult male orca still entangled.

Video #5, (<u>duration 01m49s</u>)

Juvenile not observed for whole duration of video.

Neonate not observed for whole duration of video.

Adult male appears to be lashed to the side of one of trimarans in the video#5 and may be either moribund or dead. The tide has dropped considerably and he is likely stranded. More of his body is exposed than in the earlier videos.
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REFERENCES

Bain, D. E. and M. E. Dahlheim (1994). Effects of masking noise on detection thresholds of killer whales. Marine Mammals and the Exxon Valdez. T. R. Louglin. San Diego, Academic Press**:** 243-256.

Barlow, J., R. W. Baird, J. E. Heyning, K. Wynne, A. M. Manville, L. F. Lowry, D. Hanan, J. Sease and V. N. Burkanov (1994). "A review of cetaceans and pinniped mortality in coastal fisheries along the west coast of the USA and Canada and the east coast of the Russian Federation." Report of the International Whaling Commission **15**: 405-425.

Erbe, C. (2002). "Underwater noise of whale-watching boats and potential effects on killer whales (*Orcinus orca*), based on an acoustic impact model." Marine Mammal Science **18**(2): 394-418.

Fertl, D. C. and S. Leatherwood (1997). "Cetacean interactions with trawls: A preliminary review." Journal of Northwest Atlantic Fishery Science **22**: 219-248.

Foote, A. D., R. W. Osborne and R. A. Hoelzel (2004). "Whale-call response to masking boat noise." Nature **428**(29 April): 910.

Ford, J. K. B., G. M. Ellis and K. C. Balcomb (1994). Killer whales, ships, and care-giving behaviour. Killer whales: The natural history and genealogy of Orcinus orca in British Columbia and Washington State. Vancouver, University of British Columbia Press**:** 83.

Heyning, J. E., T. D. Lewis and C. D. Woodhouse (1990). "Odontocete mortality from fishing gear entanglements off Southern California." Presented to the International Whaling Commission Workshop on passive fishing nets and traps **La Jolla, California, 22-25 October 1990. SC/090/G24**.

Laist, D. W., A. R. Knowlton, J. G. Mead, A. S. Collet and M. Podestà (2001). "Collissions between ships and whales." Marine Mammal Science **17**(1): 35-75.

Morton, A. B. and H. K. Symonds (2002). "Displacement of *Orcinus orca* (L.) by high amplitude sound in British Columbia, Canada." ICES Journal of Marine Science **59**: 71-80.

Reeves, R. R., K. McClellan and T. B. Werner (2013). "Marine mammal bycatch in gillnet and other entangling net fisheries, 1990 to 2011." Endangered Species Research **20**: 71-97.

Ritter, F. (2012). "Collisions of sailing vessels with cetaceans worldwide: First insights into a seemingly growing problem." Journal of Cetacean Research and Management **12**(1): 119-127.

Van Waerebeek, K., A. N. Baker, F. Felix, J. Gedamke, M. A. Iniguez, G. P. Sanino, E. Secchi, D. Sutaria, A. van Helden and Y. Wang (2007). "Vessel collisions with small cetaceans worldwide and with large whales in the Southern Hemisphere, an initial assessment." Latin American Journal of Aquatic Mammals **6**(1): 43-69.

Visser, I. N. and D. C. Fertl (2000). "Stranding, resighting and boat strike of a killer whale (*Orcinus orca*) off New Zealand." Aquatic Mammals **26**(3): 232-240.

Williams, R., D. E. Bain, J. K. B. Ford and A. W. Trites (2002). "Behavioural responses of male killer whales to a 'leapfrogging' vessel." Journal of Cetacean Research and Management **4**(3): 305-310.

Williams, R., A. Trites and D. Bain (2002). "Behavioural response of killer whales to whale-watching: Opportunistic observations and experimental approaches." Journal of Zoology **256**: 255-270

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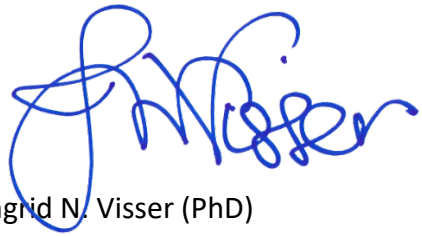

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