

**Male–Male Sexual Interactions Between an Adult and
a Calf Killer Whale (*Orcinus orca*) of the Falkland Islands**

Supplementary Material

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Full Description of the Event

The following is a description of our observation from drone footage. In the description, “close distance” means approximately 5 to 10 m, while “very close distance” means approximately 1 to 5 m. Video clip extracted from the UAV footage is available in the “Supplemental Material” section of the *Aquatic Mammals* website. At 19:17:57, OV begun following the PU pod (plus TO) at close distance, swimming mostly on his side or belly up. At this stage, no extruded penis was visible. At 19:18:32, PI left the PU pod and approached OV, swimming at close distance with him, while the rest of the PU pod continued moving at a slow pace. At 19:18:43, OV presented his erect penis while swimming on his side, and PI went close to OV’s belly and penis while the rest of PU pod (plus TO) was swimming in front of them at 10 to 30 m distance. At 19:18:47, OV was on his side, and PI passed below him belly up (no penis extruded at this stage for both males). Both were swimming behind the rest of the individuals of the PU pod plus TO. At 19:19:03, NE started circling OV and PI, showing play behaviours, including fast raising of the tail and sharp turns; then, NE played with a piece of kelp. At this point, NE was playing alone and not interacting with either PI or OV. At 19:19:21, PI, who was below OV, left him, and went close to NE and started playing with him. Meanwhile, the PU pod with TO continued slow swimming, while MI went under PU and probably started suckling. At this point, OV was separated from both PI and NE, and was following the rest of the PU pod, but he showed no sexual or social interaction with PU, TA, or MI. At 19:20:37, NE and PI moved close to the other individuals of the PU pod (plus TO), started circling them, and continued to play together. Then, PI presented his erect penis and briefly passed below NE belly up. At 19:20:48, NE and PI separated from each other, and NE moved away from the rest of the killer whales.

At 19:20:54, TO left the PU pod and went briefly side-by-side to OV and then rejoined the PU pod. At 19:20:59, PI returned to OV, and they started swimming together either side-by-side or both belly up at very close distance, following the PU pod (plus TO). At 19:22:19, PI left OV and went close to TO briefly, swimming below him, but without an erect penis and showing no sexual behaviour or interaction. At 19:22:42, PI returned to OV, and at 19:23:07, began following him closely with an erect penis. They continued swimming either on their sides or belly up; PI maintained the erection for ~30 s. At 19:25:47, PI left OV alone, and OV was observed swimming alone until 19:27:04.

At 19:27:05, OV swam on his side, passing close to TO and PU while they were lying on the sandy bottom. OV did not interact with them. At 19:27:34, PI returned to OV and struck him on the back with his side. Next, the three younger calves of the pod (PI, NE, and MI) passed close to OV while TO and PU were joined by TA and all three were

still lying on the sandy bottom. At 19:27:52, OV started following the three calves (PI, NE, and MI) who were swimming just ahead of him; at times, NE and OV were belly up but not close to each other. At 19:28:14, NE separated from the others, while PI and MI continued swimming, followed by OV. They passed above the largest/oldest male, PN, who was lying on the sandy bottom (OV, at times, belly up); no interactions happened between PN and any other killer whales. At 19:28:29, MI rapidly left the other killer whales and departed, while PI and OV kept slowly swimming a circle above PN, both either on their sides or belly up.

At 19:28:22, OV was slowly following PI, just behind him (both horizontal, belly down) with PN still on the bottom; PI defecated once. At 19:29:27, OV moved belly up below PI and defecated multiple times. At 19:29:58, OV was belly up very close to PI with an erect penis for at least 40 s. At 19:30:23, PI turned belly up and moved away from OV (who remained with an erect penis for another 10 s). At 19:32:23, OV, who was swimming alone on his side, crossed paths with TA but did not interact with her. At 19:32:26, PI returned to OV, and they swam together side-by-side, both of them belly up but without erect penises, slowly following TA. At 19:32:52, PI returned close to TA staying belly up, both moving towards the shore, while OV remained behind them following slowly. At 19:33:20, PI and TA slowed down and were joined by OV swimming on his side; they were floating at the surface, almost motionless, very close to shore.

At 19:34:40, a group of gentoo penguins (*Pygoscelis papua*) came close to the killer whales, and PI briefly chased them while the other killer whales were resting at the surface. At 19:35:09, NE arrived and moved towards PI, and then both turned on their sides and circled OV and TA; NE left soon after. At 19:35:27, TA moved away from OV, who remained with PI. At 19:35:58, PI was belly up at the side of OV and very close. At 19:36:17, PI was belly up below OV and in contact with his belly; his penis was erect. At 19:36:40, they switched positions, with PI turned belly down and OV turned belly up with his penis erect; and then he placed himself below PI.

At 19:37:11, the UAV left the killer whales to land for battery replacement. At 19:43:07, the UAV returned to the killer whales. PN was following the PU pod (plus TO), and OV was not in frame. At 19:43:22, OV moved towards PN, and both followed the PU pod which was moving in circles very slowly; at least two calves suckled (under PU). PN was closer to the pod than OV. TA and NE left and rejoined the group several times. At 19:48:27, PI moved away from the pod; he passed close to PN but did not interact with him. He reached OV and started swimming with him; they were both belly up or on their sides at times.

Between 19:48:52 and 20:02:00, the UAV was flying on the other killer whales present in the observation, following PN as focal animal; therefore, we do not have a recording of OV and PI during this period. After that, the UAV returned for battery replacement.

OV focal video recording resumed at 20:11:50 when OV and PI were swimming side-by-side, at times with PI belly up, slowly following TO and NE. OV did not interact with the other killer whales, but PI went very close to NE, turned belly up, and swam below him for 30 s but without erection. At 20:14:40, PI moved towards OV, turned belly up and started following him at close distance; OV was on his side. At 20:15:30, PI was still below OV, with his penis erect for 8 s, while OV turned on his side. At 20:15:38, they switched positions, and OV turned belly up (but without an erection) and moved below PI, who was belly down. At 20:16:05, PI moved fast towards the PU pod and OV followed him. At 20:16:33, PI joined the PU pod (plus PN) and placed himself between PU (with MI suckling) and TA; at this time, OV joined the pod. At 20:16:45, all individuals of PU pod were together, floating almost motionless. The two males, OV and PN, were slowly circling the pod without any sexual behaviour displayed. At 20:17:16, TO also joined the pod (still floating at the surface), and the three males slowly circled the pod, again showing no sexual behaviour.

At 20:18:54, PI moved towards OV, turned belly up, and started following him at close distance; at the same time, NE moved close to TO. At 20:19:09, PN departed, PI continued following OV, at times belly up, and NE continued following TO; all these movements were at very low speed. At 20:19:29, the UAV started following OV alone because the other killer whales moved away from him in different directions. At 20:19:59, PI, NE, and TA moved towards OV, but only PI remained close to him. At 20:20:10, PI swam belly

up below OV, following him, while OV at times turned belly up or on his side. At 20:20:43, PI moved away from OV at high speed (belly up), and OV turned belly up and started following him (moving very fast and into deeper water). At 20:21:14, NE briefly appeared in the frame, passed close to PI, and then left again. At 20:21:35, OV and PI both slowed down, OV circled PI for a while, then PI moved away towards the shore and OV remained alone. At 20:22:45, a group of gentoo penguins briefly appeared and were slowly chased by both PI and OV, who were coming from different directions. At 20:22:53, NE crossed OV's path; OV turned on his belly and started following NE, who was swimming at low speed. At 20:23:25, PI moved towards NE belly up but did not interact with him, then moved towards OV and started swimming belly up very close to OV. Meanwhile, NE was circling OV and PI. At 20:23:53, OV moved away from PI and NE and remained alone, swimming slowly and frequently surfacing. At 20:25:11, PI moved close to OV, turned belly up, and swam below OV at very close distance. At 20:25:43, PI changed direction (still belly up); OV followed him belly up, at first slowly and circling each other, then swimming fast, with OV chasing PI (both still belly up). At 20:26:11, PI moved fast (belly down) towards the PU pod, and OV followed him (also belly down and moving fast). At 20:27:22, PI joined the PU pod. OV followed the pod, with everybody swimming very slowly. At 20:28:43, PI went below PU, probably suckling, while OV carried on following the pod. At 20:28:50, the whole pod changed direction except for NE, who slowly kept moving in the same direction followed by OV. At 20:29:06, the PU pod, without NE, departed while OV continued following NE. At 20:29:19, NE joined the PU pod, followed by OV. OV remained with the other killer whales until 20:30:19 and then departed (in deeper water), leaving the UAV's view.