Orion's Rescue, Rehabilitation, Release & Post Release Monitoring

Rescue

Orion, a six week old female, moulted grey seal pup, was rescued on the 26th of October 2013 from Hawker´s Cove near Padstow by the British Divers Marine Life Rescue (BDMLR) marine mammal volunteer medics.

She was found with open wounds to her rear flippers and the left-hand side of her body. She only weighed 25kg, compared to an average weight of 45 to 50kg for a 3 to 4 week old seal pup.

She was taken to the BDMLR's holding facilities for initial treatment and care until a pen was made available for her a few days later at the Cornish Seal Sanctuary's (CSS) hospital in Gweek on the 30th of October 2013.

Photo credit: Dan Jarvis BDMLR – CSGRT – 27th October 2013

A blue coloured antiseptic was used to ensure all her wounds were fully treated. The dye remained on the wound under most conditions, so that treated areas could be quickly identified each day.

Rehabilitation

At the CSS Orion spent a few weeks in the hospital being cared for by the Animal Care Team until her blood test results came back from the Head & Head Veterinary Practice in Helston showing negative with no further signs of infection.

After a few weeks in the hospital, Orion's wounds had healed, so it was time for her to be moved out of the hospital and introduced to the outdoor nursery pools for the next stage of her rehabilitation. This meant she was on the road to recovery and ready to mix with other seal pups, as well as having a deeper pool to swim in.

Pups in the nursery pools begin to learn how to behave in the wild, interacting with other seals and also competing for their fish. These are all vital skills they need when they are released back into the wild. Each rehabilitated seal released from the CSS is given a coloured ID tag with a unique number on the rear flipper (*males are tagged on the left flipper and females tagged on the right flipper*). Each year the Sanctuary changes the colour of the tags.

There was a mix up with Orion and she was tagged by mistake on the left flipper with an orange tag, numbered 158, and was labelled as a male (but as you will read later, Orion, has demonstrated she was definitely a female).

After a few weeks in the nursery pool, she was moved into the convalescent pool with the resident seals and other rescued seal pups.

Rehabilitation is not always easy, some seal pups arrive at the CSS in a very bad way, so to see the transformations that pups go through is incredible. It is all down to the amazing patience and dedication of the skilled animal care team.

Release

It is always a good day when the Animal Care Team return the rescued seal pups back to the wild where they belong, but at the same time it is a bit emotional saying goodbye after being with them for three months or more.

When a seal pup reaches their ideal target release weight of at least 30kg+ it is time for them to return to the wild. On the 17th of February 2014, after a final weight check, it was decided the time had come for Orion, along with other rescued seal pups, Miranda, Mars, Moon, Indus, and Crater to be returned to the wild, so they were taken to a beach at Carbis Bay where they quickly swam off.

Post Release Monitoring

Post release monitoring provides information on survivorship, breeding, and lifelong movements. Initially the unique flipper tag helped Cornwall Seal Group Research Trust (CSGRT) build up a photo ID catalogue page of Orion's unique fur pattern. This then gets memorised by CSGRT's volunteer photo ID teams. However, as there was a mix-up with Orion's tag number when it was attached to her flipper, it took a while for the fur pattern match to be confirmed. Over the years, the numbers wore off Orion's tag and it became more frequently hidden as her rear flippers grew bigger. But CSGRT were able to continue to identify Orion from her unique fur pattern. Traced rehabbed seals like Orion can be accurately aged and we can learn fine scale data – for example about the individuality of seals in terms of size. Older seals are not always bigger. At the time of writing her story up, we know Orion was 9 years old.

By monitoring the behaviour of seals after release back into the wild, the CSS, BDMLR and CSGRT can define and update best practice standards and policies for rescue, rehab and release. These are shared with the international rescue community. Find out more by reading our collaborative paper published about this work along with the RSPCA 'Post release monitoring of rehabilitated grey seal pups over large temporal and spatial scales' (https://doi/10.1111/mms.12885). Available via this link:https://drive.google.com/file/d/192Rv95k47Kyb-quko9U-wtDwzO365meP/view?usp=share_link

The first wild re-sighting of Orion was on the 1st of September 2014 as she hauled out to rest at the West Cornwall sensitive seal site. At 11 months old, Orion was moulting for the first time. Her old fur was breaking down and losing the pigment that made her pattern, so CSGRT had to read her tag number from the remote clifftop with a big zoom lens

Photo credit: Sue Sayer - CSGRT – 1st September 2014

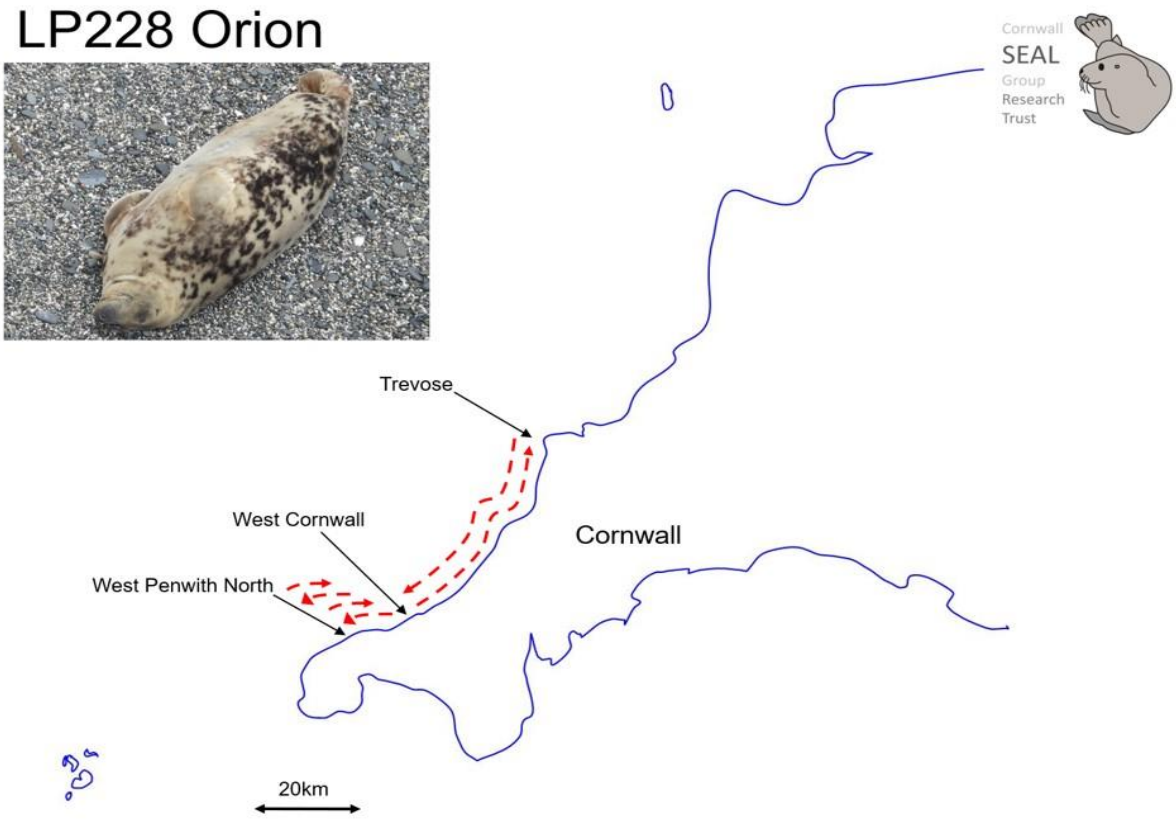
So far, CSGRT have identified Orion 241 times! Below is Orion's sightings calendar – the numbers represent monthly ID confirmations showing when she was seen in the wild at a number of sites along the north Cornish coast covering a range of at least 55km.

Trevose
West Cornwall East
West Cornwall
St Ives & St Ives Bay
West Penwith North

Orion	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total
Jan		2		1	5	3	3 2	5 4	7 1	33
Feb				2	1	3	3	1	1 3	14
Mar		1		1	2	2 2		2	1	11
Apr		1 1				1 1	2	1	2	9
May		1		1 2	1	1	1 1		1	9
Jun				1	1	6		4	2	14
Jul						4	1 2	3 2	3	15
Aug			1	3	4	4	2	8 1	3	26
Sep	1			2	1	2	1 5	10 1	8	31
Oct		2	2	4	1	5	8	5	2	29
Nov	1	1	1	3	2	3 1	8	7		27
Dec				5	2	5	5	5 1		23
Total	2	7	4	29	24	45	45	61	22	241

By her next sighting at 14 months old, Orion had still not grown her new fur coat, so was looking even plainer than before and even had a few bald patches.

Photo credit: Sue Sayer – CSGRT – 19th January 2015



This data represents a huge team effort of 38 different survey volunteers over nearly nine years since Orion's rescue by BDMLR and release from the CSS in 2014. In addition, multiple volunteers will have processed the survey photos in order to make all Orion's IDs independently verifiable and scientifically robust. Then this information gets digitised ready for entry into CSGRT's database (also designed and created by expert volunteers).

Photo credit: Terry Carne – CSGRT – 2nd May 2017

Seals across the southwest of England are oblivious to how lucky they are having a team of amazing volunteers giving them a voice and being wonderful ambassadors - sharing their stories with planning and policy decision makers, as well as raising public awareness.

For more information about the work of CSGRT's multi award winning marine conservation charity visit their website or sign up for free newsletters and watch talks on YouTube.

Many seals on CSGRT's database are identified at multiple sites. CSGRT volunteer Photo ID Hub teams cover the whole of the southwest from Somerset to Dorset.

Orion's story got super exciting when she reached the age of seven years old.

All the teams were delighted when Orion became a mum for the first time. She gave birth to a pup on the 16th of September 2020. Sadly though, CSGRT volunteers who were monitoring the pupping site reported that her pup went missing during its weaning phase.

The sad fact is that this is not unusual for first time mums. No-one teaches them how to be a mum, nor shows their pup how to suckle. Extreme weather events create storm surges that can wash pups off beaches and unless their mums see this happen, they have no idea about where to look to find their missing pup. Without mum's milk the pups starve.

Photo credit: Sue Sayer – CSGRT – 7th October 2020

Photo credit: Sue Sayer – CSGRT – 22nd October 2020

For whatever reason, CSGRT think Orion lost her pup. When she was next identified, she still looked pretty fat. If she had she been suckling her pup for 15 to 21 days (the usual weaning age for pups), she would have been emaciated with protruding hip bones. So very sad.

The following year on the 10th of September 2021, Orion gave birth to a beautiful second pup. This time she was more prepared and experienced. We are delighted to say that this pup put on weight quickly from Orion's rich milk and was successfully weaned. After this, mum returned to the mainland haul out on the 9th of October 2021.

Photo credit: Sue Sayer – CSGRT – 13th September 2021

A pup will stay with its mum for up to 3 weeks until it sheds it's whitecoat. Then it must learn very quickly how to fend for itself. Mums don't feed during nursing, so pups must teach themselves what to eat and how to catch it, which is a really challenging task!

Photo credit: Sue Sayer – CSGRT – 23rd September 2021

Photo credit: Sue Sayer – CSGRT – 4th October 2021 – Beachmaster DP528

Throughout Orion's nursing period, she was looked after and protected by her local dominant male – Beachmaster DP528 'Moment boy' (shown above chilling just offshore).

Orion gave birth to her third pup on the 4th of September 2022. This beautiful pup was also successfully weaned and Orion returned to her mainland haul out on the 6th of October 2022.

CSGRT volunteers recorded an interesting encounter on the 5th of September 2022 as Orion prevented another mum, ‘Flag’ on the same beach from hauling out as she tried to go past Orion to feed her own pup. It seems Orion is an excellently protective mum.

Pup is thinking ‘who is my mum’ – even the mums seem unsure. Orion and Flag both trying to protect the same first week old pup that turned out to be Orion’s.

Photo credit: Sue Sayer – CSGRT – 5th September 2022

Mum Orion behind boulders and hiding her own pup

Photo credit: Sue Sayer – CSGRT – 12th September 2022

Orion looks so contented in this photo; she is now resting after giving birth for the third year.

Photo credit: Sue Sayer / Kate Hockley – CSGRT – 6th October 2022

Photo credit: Sue Sayer / Kate Hockley – CSGRT – 18th November 2022

By Orion's return to the mainland haul out beach, she was looking a lot thinner and her pattern was fading as she was once again starting to moult her old fur coat straight after weaning her pup.

Grey Seals (*Halichoerus grypus*)

Grey seal adults may be up to 2.5 metres in length and weigh up to 250kg, with males tending to be larger than females. The coat colour is variable shades of grey, brown and silver with the back tending to be darker than the underside.

Males tend to be darker and plainer than females and older males may also have an arched ‘Roman’ nose that is both longer and wider, whereas a female´s nose has finer facial features.

Male grey seals reach sexual maturity at six to ten years, Females at five to six years. Seal mums give birth to their pups in the autumn and early winter (depending on where they are around the UK coastline). The first British pups are born on the Scillies and mainland Cornwall in August and September and the time of pupping is progressively later as you move clockwise around the British Isles, with the latest pups being born off the east coast of Scotland and England in late December.

At birth, grey seal pups weigh around 13kg and are covered in long creamy white fur. A strong bond is formed between mother and pup at birth, and a mother can recognise her pup from its call and smell.

For the first three weeks of their lives, pups suckle from their mothers five to six times a day, for up to 10 minutes at a time. The milk is very rich in fat and the pups rapidly put on weight.

The mother tends to remain just offshore between suckling bouts and rarely feeds herself, losing up to a third of her body weight before the pup is weaned. Grey seal pups are weaned around the time or after losing their baby coat at approximately two to three weeks of age. At this point, they weigh 45 to 50kg; almost four times their birth weight. The pups need to live off these fat reserves whilst learning to feed, which may take several months to get good at.

The adult females become fertile at around the time of weaning their pups, and mate with the adult males (beachmasters), who hold territories during the pupping season. Beachmasters may mate with several females on their patch in one season. Mating can take place on land or in the water. Females delay implanting their fertilised eggs for up to three months, whilst they get fat and fit again after pupping; their pregnancies last for around 8 months. As a result, pups are born at the same time each year. Pups are very individual, and some prefer to stay on land until they are weaned, whereas other spend more time learning to swim with their mothers.

Thank you for caring and for helping us to protect our globally rare, UK speciality, wild seals.

Case Study for Orion was produced by Joyce and Barry Williams
Reviewed / Edited by Sue Sayer – CSGRT
Words by Sue Sayer - CSGRT / Joyce Williams CSS & CSGRT volunteer

Websites:
BDMLR https://bdmlr.org.uk/
CSGRT http://www.cornwallsealgroup.co.uk/ and http:sealresearchtrust.com/
CSS https://sealsanctuary.sealifetrust.org/en/ https://www.sealsanctuary.co.uk/corn1.html

A wonderful mum 'Orion' takes a well-earned rest!

Photo credit: Sue Sayer / Kate Hockley – CSGRT – 12th September 2022

November 2022