

MINKE WHALE PHOTO-ID CATALOGUE

For the west coast of Scotland



2 INTRODUCTION

Foreword



The waters of western Scotland are highly productive, supporting an abundant and diverse variety of marine life, making them important feeding grounds for minke whales in the Northeast Atlantic. The long-term research carried out by the Hebridean Whale and Dolphin Trust (HWDT) has shown the west coast of Scotland to be an area of global importance for these vulnerable marine mammals.

Thanks to the continuous effort of HWDT's research expedition volunteers, wildlife tourism businesses and the Whale Track community sightings network, we now have a better understanding of Hebridean cetaceans and how they use our local waters. HWDT has used these valuable contributions to create this important research resource which spans 30 years of data collection.

This substantial time span makes this photo-identification catalogue unique, providing significant insights into the lives of individual minke whales who return to Hebridean seas year-on-year. Some minke whales in this catalogue have been recorded for almost three decades. These much-loved whales have the longest documented sighting histories in Europe – confirming that the waters of western Scotland are world-class habitats which need to be better protected and restored.

ALISON LOMAX, HWDT DIRECTOR

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Compiled by Dr Lauren Hartny-Mills, Science and Conservation Manager, Hebridean Whale and Dolphin Trust.

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INTRODUCTION

About Us

The Hebridean Whale and Dolphin Trust (HWDT) is the trusted voice and leading source of information for the conservation of whales, dolphins and porpoises (cetaceans) in the Hebrides. Established in 1994, HWDT is a registered charity based on the Isle of Mull, in the heart of the Hebrides. Evidence is the foundation of effective conservation. HWDT has pioneered practical, locally-based education and scientifically rigorous long-term monitoring programmes on cetaceans in the Hebrides for the past 30 years.

Our long-term research has critically advanced the understanding of species that visit seasonally or are resident in the Hebrides. We provide data to the Scottish Government to inform protection measures for minke whales, Risso's dolphins, harbour porpoises, and basking sharks across Hebridean seas.

We are dedicated to enhancing the knowledge and understanding of the Hebridean marine environment as a basis for the lasting conservation of local species and habitats. Amidst the global biodiversity and climate crises, our mission has never been more critical.



PHOTO-IDENTIFICATION

One of the tools HWDT use to monitor whales and dolphins is photo-identification. This is a non-intrusive research method, which uses photographs of markings or features on the animal's body to identify individual animals. Each year, HWDT analyses thousands of photographs from our community sightings network, Whale Track, and dedicated surveys on our research vessel Silurian to identify which individuals have been seen.



Over the past 30 years, this information has built an important long-term picture about whale movements on the west coast of Scotland, helping us assess the tendency of individuals to remain or return to particular areas. HWDT also monitors scars, injuries and parasites to provide valuable evidence about their health and the threats they face. These insights into their lives are vital to inform suitable conservation measures.

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About the Catalogue

In this catalogue, we present 308 minke whales that have been recorded on the west coast of Scotland over the past 30 years (1990 to 2020). All of these animals have permanent, unique features that allow them to be identified. We will introduce some of the most frequently seen whales, and show how you can get involved and contribute to the catalogue.

> Photographs are a powerful tool helping to conserve marine wildlife in the waters of western Scotland. They are fundamental to our understanding of cetacean movements and the threats they face in the Hebrides. This catalogue is a testament to the dedicated community of citizen scientists who diligently submit their photographs and sightings to HWDT.



Key Highlights

STATISTICS

CONTRIBUTORS TO THIS CATALOGUE



#FD27 KNOBBLE RECORDED 62 TIMES SINCE 2002

308 **ANIMALS IN THIS CATALOGUE**

CONSERVATION IMPACT

Marine Protected Areas Tackling entanglement driven by our data

HWDT provides evidence to policy makers to identify important areas for cetaceans and basking sharks on the west coast of Scotland.

Our data have contributed to the identification of a number of Marine Protected Areas (MPAs) across the region, including the Sea of the Hebrides MPA for minke whales. This photo-identification catalogue shows that some individuals, like Knobble, return to this MPA year after year, highlighting the importance of the area to this species.

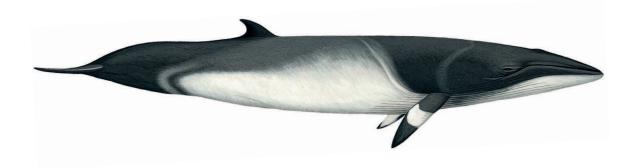
in Scottish waters

Entanglement in static fishing gear is a global problem for marine animals and a growing concern in Scottish waters; it is the single largest cause of death for minke whales and 22% of individuals from this catalogue have scars to suggest that they have been entangled.

HWDT are a founding partner of the Scottish Entanglement Alliance (SEA), which aims to improve the understanding of marine animal entanglement in creel lines in Scottish waters and work closely with the fishing industry to develop sustainable mitigation strategies.

6 SPECIES SPECIES 7

MINKE WHALE



WHEN TO SEE THEM



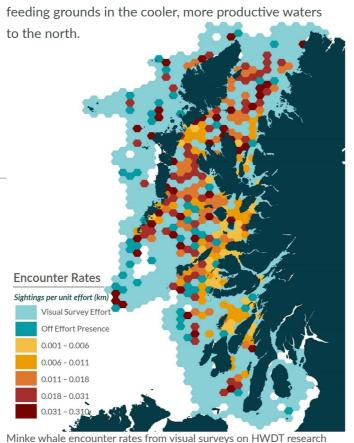
Minke whales migrate to feed in the productive waters off the west coast of Scotland. They are frequently seen in coastal waters between April and October, and can occasionally be seen during the winter months too. Their migration patterns are not fully understood, and they are thought to migrate between winter breeding grounds to the south of the British Isles and summer feeding grounds in the cooler, more productive waters to the north.

WHERE TO SEE THEM

Minke whales are one of the most widely distributed baleen whales and can be found from the subtropics to polar waters in the Northern Hemisphere.

Off the west coast of Scotland, they can be seen throughout inshore waters. Encounter rates are highest around the Small Isles and east of the Outer Hebrides throughout the Minch and Sea of the Hebrides.

Minke whales are generally seen alone or in small groups, but they are known to aggregate at productive feeding grounds.



Minke whale encounter rates from visual surveys on HWDT research vessel *Silurian*, 2003 to 2017 (HWDT Hebridean Marine Mammal Atlas).

HOW TO SPOT THEM

Growing to between 7 and 10 metres, minke whales are the smallest baleen whales found in Scottish waters. The dorsal fin and back are dark grey, and the underside is bright white. A paler area ('chevrons') rises up behind the pectoral fins and bright white bands extend across each pectoral fin ('minke mittens'). The sickle-shaped dorsal fin, two-thirds of the way down the body, is visible at the same time as the blow hole when surfacing. Unlike most other baleen whales, the minke whale's blow is rarely visible at sea and they do not lift their fluke out of the water ('fluking').



THREATS

Entanglement	Entanglement in static fishing gear is a global threat and the single largest cause of death for minke whales in Scotland. Minke whales can also become entangled in marine litter, causing injury and deformation. There are whales in the catalogue that show evidence of being entangled in fishing gear (BS33) and marine litter (BW30).
Whaling	Minke whales are a target species for commercial whaling in the North Atlantic pursued by Norway and Iceland. Minke whales hunted in these regions are believed to be from the same population as the animals in this catalogue.
Ship strikes	Collisions with ships also pose a threat to baleen whales. There are some reports of minke whales being killed by ship strikes in UK waters.
Underwater noise	Like all cetaceans, minke whales are susceptible to disturbance and injury from underwater noise.

WHAT WE HAVE LEARNT

Between 1990 and 2020, 308 recognisable individual animals have been identified during 607 encounters. A third (33%) of these whales have been seen more than once - some over many years and others numerous times. A whale named Snowy has visited the region over an astonishing 27-year period – the longest known history of sightings for this species in Europe. Equally remarkable, a whale known as Knobble holds the title for the most frequently recorded minke whale in the Hebrides, having been spotted more than 60 times since 2002, mostly in the waters around the Isle of Mull. The return of some individuals, year after

year, highlights the importance of the area to this species. These data are now being analysed in more detail to learn more about the site fidelity of minke whales on the west coast and identify any specific areas of importance. We will also be collaborating with researchers across the north east Atlantic to strengthen understanding of minke whale movements across the region. This information is essential to inform the development of suitable conservation and management measures for minke whales and protect these animals throughout their range.

8 HOW TO HOW TO

HOW TO

Contribute to the Catalogue

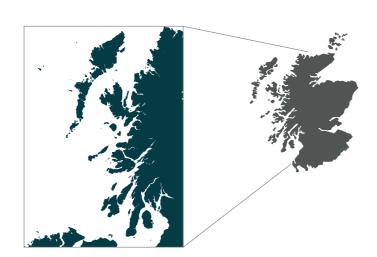
Every sighting submitted to the catalogue contributes to our long-term understanding of minke whale movements and the threats they face, providing the evidence needed for their protection. Contributing to the catalogue is easy through Whale Track. Anyone can get involved.

Report your sightings on Whale Track and upload up to 100 photos for each sighting by using the photo portal. Alternatively, email them to us with the date, time and location (coordinates) of the encounter. To help build a better picture of the identifying features of each individual, send in as many photos as you can.

SUBMIT PHOTOS VIA:

APP — ON THE <u>APPSTORE</u> AND <u>GOOGLE PLAY</u>

WEB — WHALETRACK.HWDT.ORG EMAIL — SIGHTINGS@HWDT.ORG



WHAT AREA IS COVERED?

The minke whales in this catalogue have all been reported off the west coast of Scotland. The area covered includes the waters from Cape Wrath in the north, down to the Kintyre peninsula in the south and out to St Kilda in the west.

WHAT MAKES A GOOD PHOTO FOR IDENTIFICATION?

A good photo for identification clearly shows the identifying features. Unlike other baleen whales, minke whales do not often show their fluke when diving so marks on the dorsal fin are used for identification. Not all minke whales have distinct marks on their dorsal fin though, so marks on their bodies are also used as an identification feature. For the best chance of finding a match, take photos of as much of the animal's body from the head to the tail as possible and make sure to photograph all individuals that you can see, not just the most identifiable ones. Here are our top three tips on what makes a great photo. Even if you haven't got the perfect shot, it may still be possible to find a match.



The image is in focus and the photograph has high resolution allowing you to zoom in to see the detail of any identification feature.



The image is well lit and has a good exposure. It's best to have the sun behind you so all identification features are clearly visible.



To facilitate matching, ideally the animal would be photographed when they are parallel and from a low platform to avoid any distortion.

RESPONSIBLE WATCHING

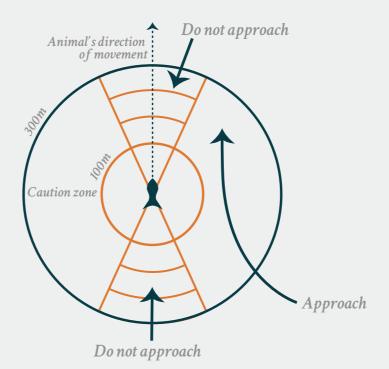
To help you watch and photograph wildlife responsibly at sea or from the shore, please follow the <u>Scottish Marine Wildlife Watching Code (SMWWC)</u> and choose a <u>WiSe</u> accredited operator for any trips you take. This will help you have the best wildlife experience with minimal disturbance to the animals and ensure you stay within the law.

Slow down

When you see a whale, dolphin or porpoise, slow down to 6 knots or less and maintain a steady speed and direction of travel.

Keep your distance

Stay 100 m away from the animals or 400 m if animals are feeding or calves are present. Approach at an oblique angle, never from in front or behind. Always leave plenty of room for the animals to leave, letting them control the encounter.



Reproduced from the Scottish Marine Wildlife Watching Code.

Don't overstay your welcome

Limit encounters to 15 minutes. When leaving, maintain a slow and steady course until you are away from all members of the group. If the animals remain with you, steadily reduce your speed, until they end the interaction.

Three's a crowd

Give animals plenty of space and do not overcrowd them. If there are other boats in the area, try to all stay on the same side of the animals to avoid boxing them in. If more boats arrive, consider moving on and remember the saying 'two's company, three's a crowd' applies here.

Signs of disturbance

If the animals show signs of disturbance, such as repeated avoidance or sudden changes in behaviour, such as bunching together or tail slaps, move away slowly and take an alternative route.

It is an offence to deliberately or recklessly disturb any whale or dolphin. Please report any incidents of disturbance to the Wildlife Crime Unit by phone on 101.

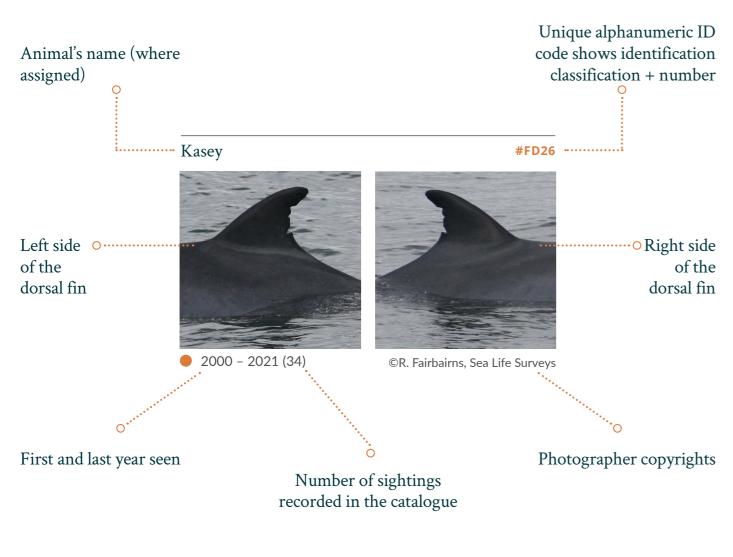
Download the full Scottish Marine Wildlife Watching Code here

10 HOW TO HOW TO 11

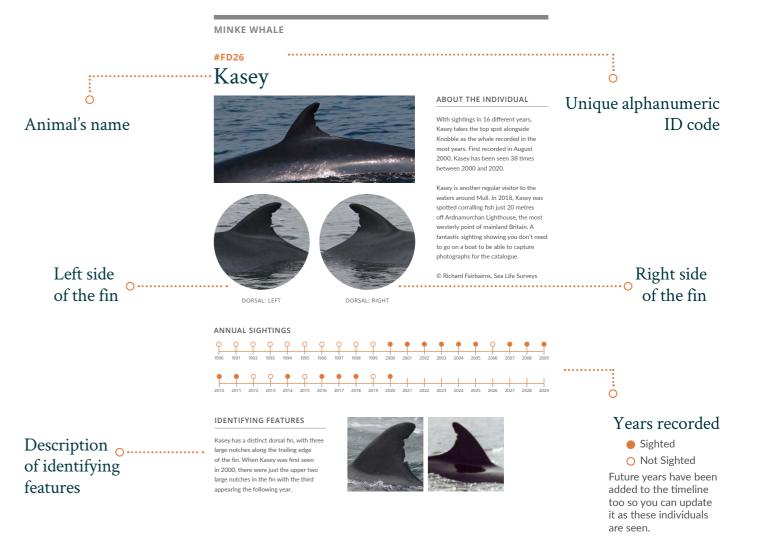
HOW TO

Use the Catalogue

Every animal is assigned to an identification classification group when they are first added to the catalogue (see table on page 11). This describes their primary identification feature and is represented by the first two letters in the ID code. For example, the primary identifying feature for FD26 is distinctive fin notches (FD) and it was the 26th animal catalogued with that feature. The catalogue is arranged by the identification classification. When matching to the catalogue you may wish to skip straight to the section that best describes the animal you have seen. If you can't find a match, look through the other animals in the catalogue. Some individuals may have accrued additional identifying features since they were last recorded and may be in a different section of the catalogue.



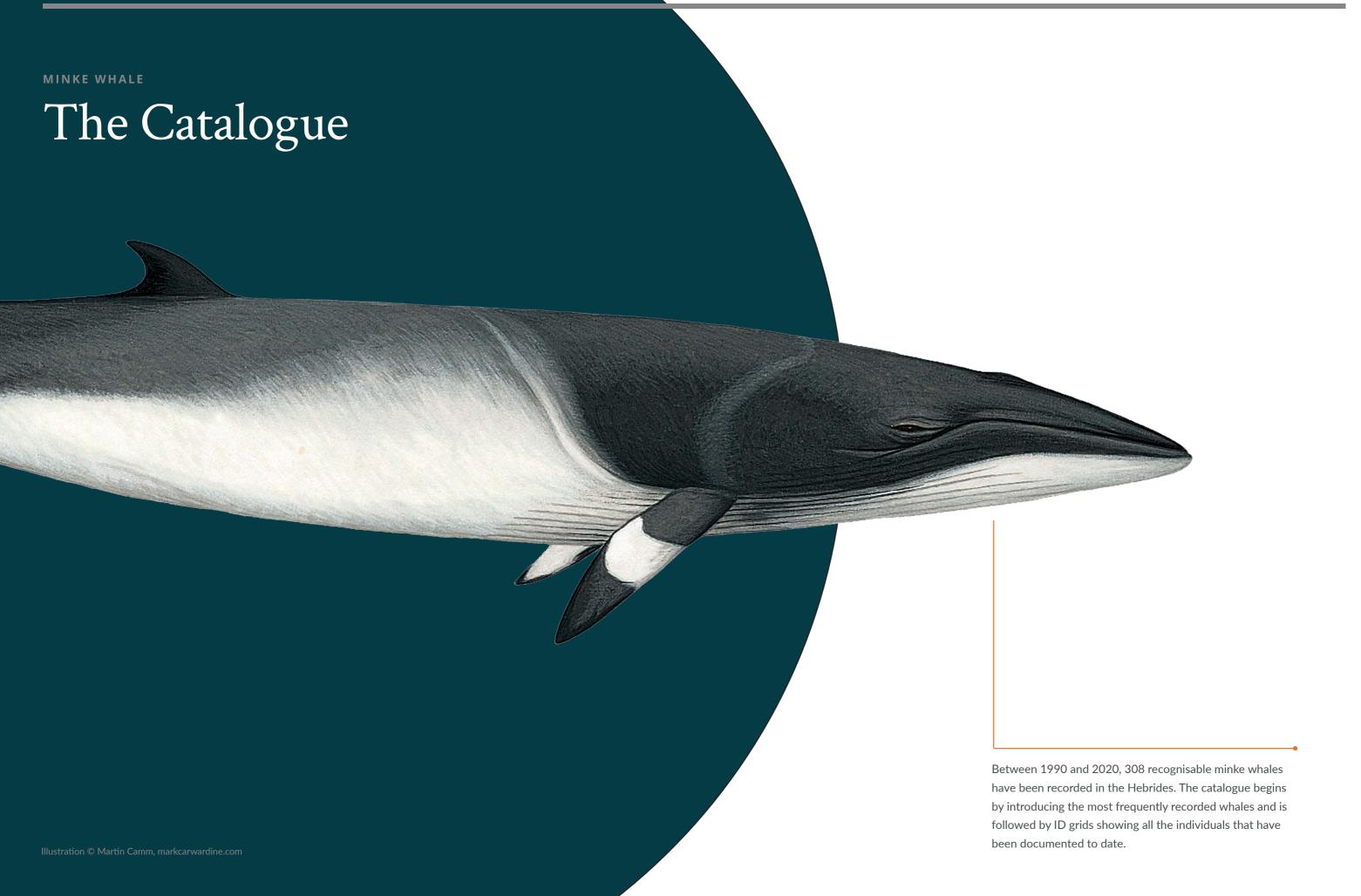
All individuals in the catalogue will be displayed as tiles in a grid (as above). The most frequently recorded minke whales will also have a dedicated profile page at the start of the catalogue (as shown on page 11).



IDENTIFICATION CLASSIFICATIONS

C	Code	Definition	Description
	FD	Distinctive fin notches	Individuals identified primarily by large indentations in the trailing or leading edge of the dorsal fin.
	FS	Distinctive fin nicks	Individuals identified primarily by small indentations in the trailing or leading edge of the dorsal fin.
	FSH	Unusual fin shapes	Individuals identified primarily by a distinctive dorsal fin shape.
	FM	Distinctive fin marks	Individuals identified primarily by lesions and scars on the dorsal fin.
	BS	Distinctive body scars	Individuals identified primarily by lesions, scars and indentations on the animal's body.
1	BW	White oval scars	Individuals identified primarily by the presence of small white oval scars on the animal's body.

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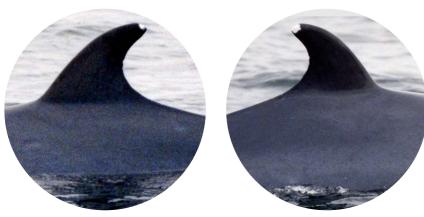


MINKE WHALE

#FM02

Snowy





DORSAL: LEFT

DORSAL: RIGHT

ABOUT THE INDIVIDUAL

With sightings covering an astonishing 27-year period, Snowy, has the longest known history of sightings for minke whales in Europe!

Snowy has been recorded 11 times between 1994 and 2020. There are a few gaps in Snowy's sightings history particularly between 2002 and 2015. Where did Snowy go? There is still so much to be discovered. More photographs, whether past or present, can add important pieces to the puzzle and strengthen our understanding of the movements of whales like Snowy.

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ANNUAL SIGHTINGS



IDENTIFYING FEATURES

Snowy has a very distinctive white mark on the tip on the dorsal fin, the only whale in the catalogue with this kind of marking. Snowy also has two small nicks in the trailing edge of the dorsal fin and some scars on their body.



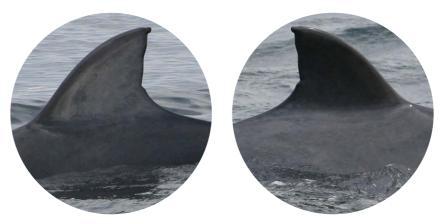


MINKE WHALE

#FD27

Knobble





DORSAL: LEFT

DORSAL: RIGHT

ABOUT THE INDIVIDUAL

With 62 sightings since 2002, Knobble is the most frequently seen animal in this catalogue. Often seen in the waters around Mull during July and August, Knobble has been recorded most years for two decades.

Knobble is a local celebrity with a dedicated song on YouTube, stars in a children's book and even has a Facebook page!

There is still much to be discovered even about record breaking whales like Knobble, such as their sex or where the whale goes in the winter.

© Ewan Miles and Andy Tait, Sea Life Surveys

ANNUAL SIGHTINGS



IDENTIFYING FEATURES

As the name might suggest, Knobble's main identifying feature is a knobble, which is located on the tip of the dorsal fin. This along with two notches and an almost straight trailing edge of the fin, makes Knobble easily recognisable.





MINKE WHALE

#FD26

Kasey





ABOUT THE INDIVIDUAL

With sightings in 16 different years, Kasey takes the top spot alongside Knobble as the whale recorded in the most years. First recorded in August 2000, Kasey has been seen 38 times between 2000 and 2020.

Kasey is another regular visitor to the waters around Mull. In 2018, Kasey was spotted corralling fish just 20 metres off Ardnamurchan Lighthouse, the most westerly point of mainland Britain. A fantastic sighting showing you don't need to go on a boat to be able to capture photographs for the catalogue.

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ANNUAL SIGHTINGS

DORSAL: LEFT



DORSAL: RIGHT

IDENTIFYING FEATURES

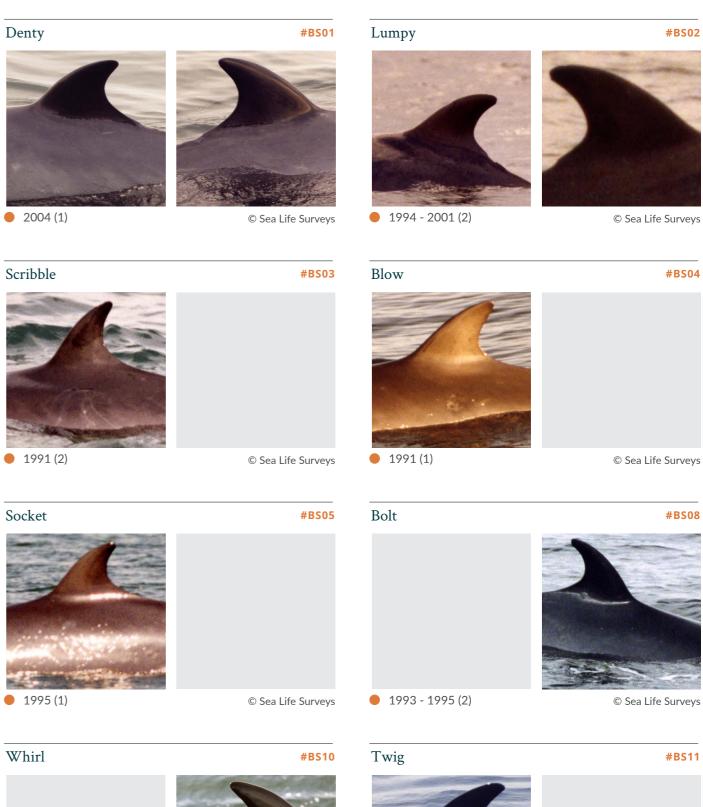
Kasey has a distinct dorsal fin, with three large notches along the trailing edge of the fin. When Kasey was first seen in 2000, there were just the upper two large notches in the fin with the third appearing the following year.





MINKE WHALE

1997 (1)



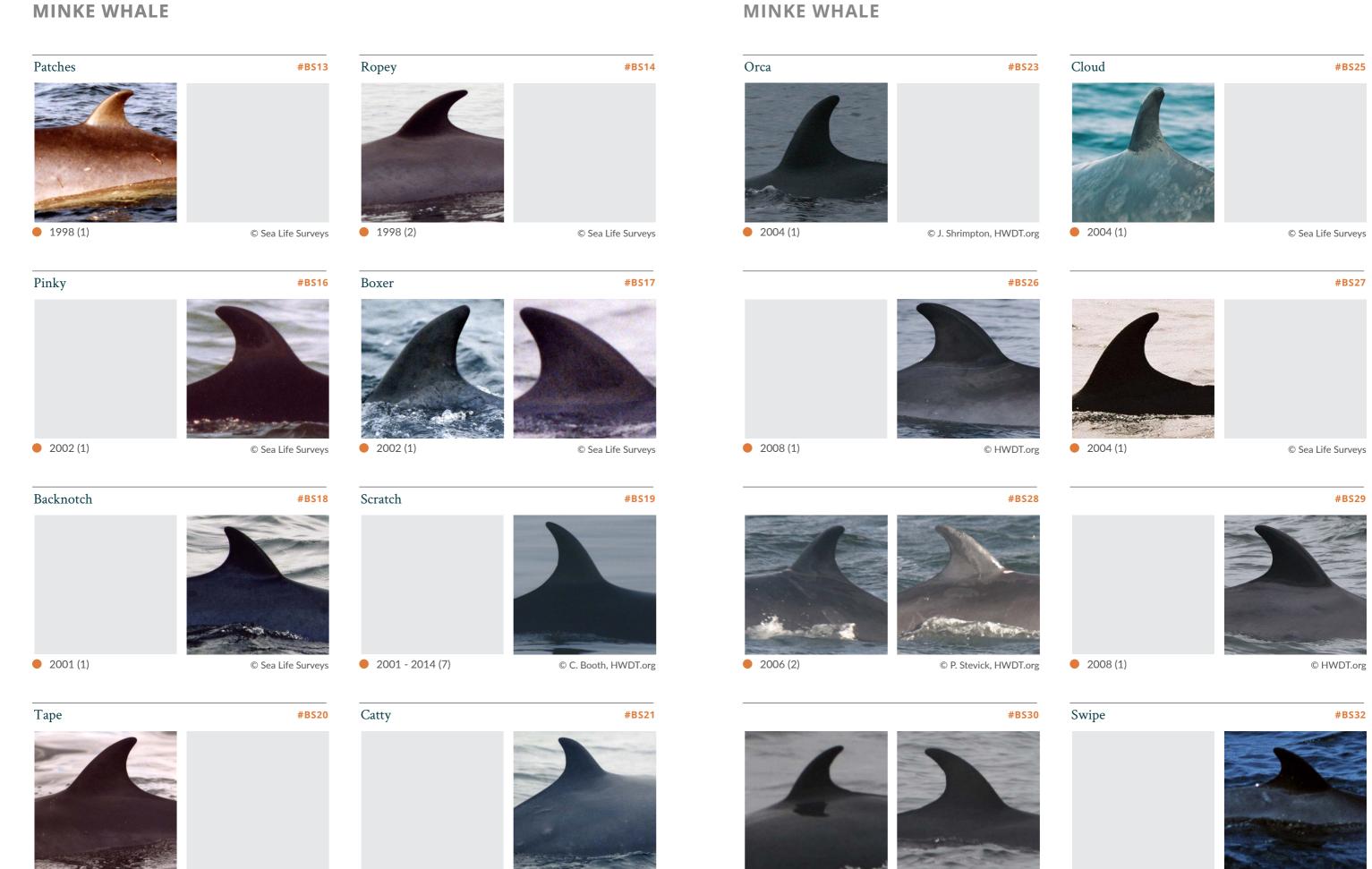


ea Life Surveys 9 1997 (1) © Sea Life Surveys

1999 (1)

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2008 (1)

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2004 (2)

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#BS34

#BS36

#BS38

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MINKE WHALE 2008 - 2017 (27) © K. Froud, HWDT.org **2011 (1)** © O. Harries, HWDT.org

2013 (1)

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Victory

2009 (1)

2012 (1)

#BS33

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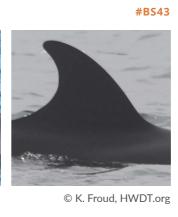


MINKE WHALE









#BS49

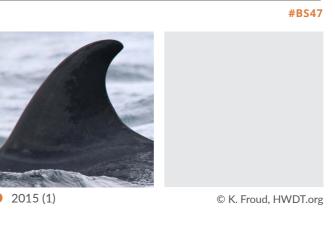
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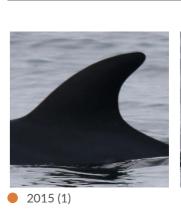






2015 (1)













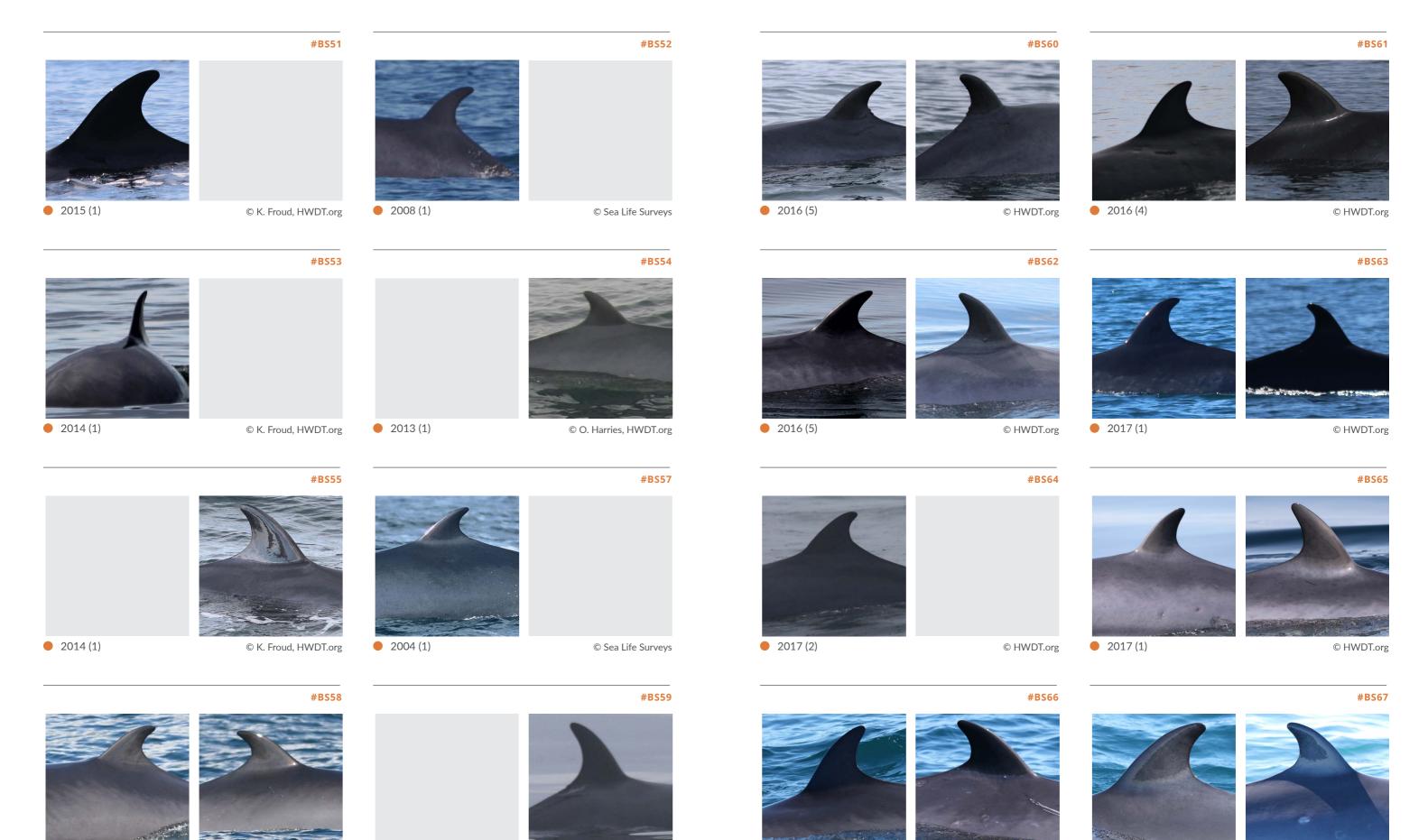
MINKE WHALE

MINKE WHALE

2012 (1)

2016 (3)

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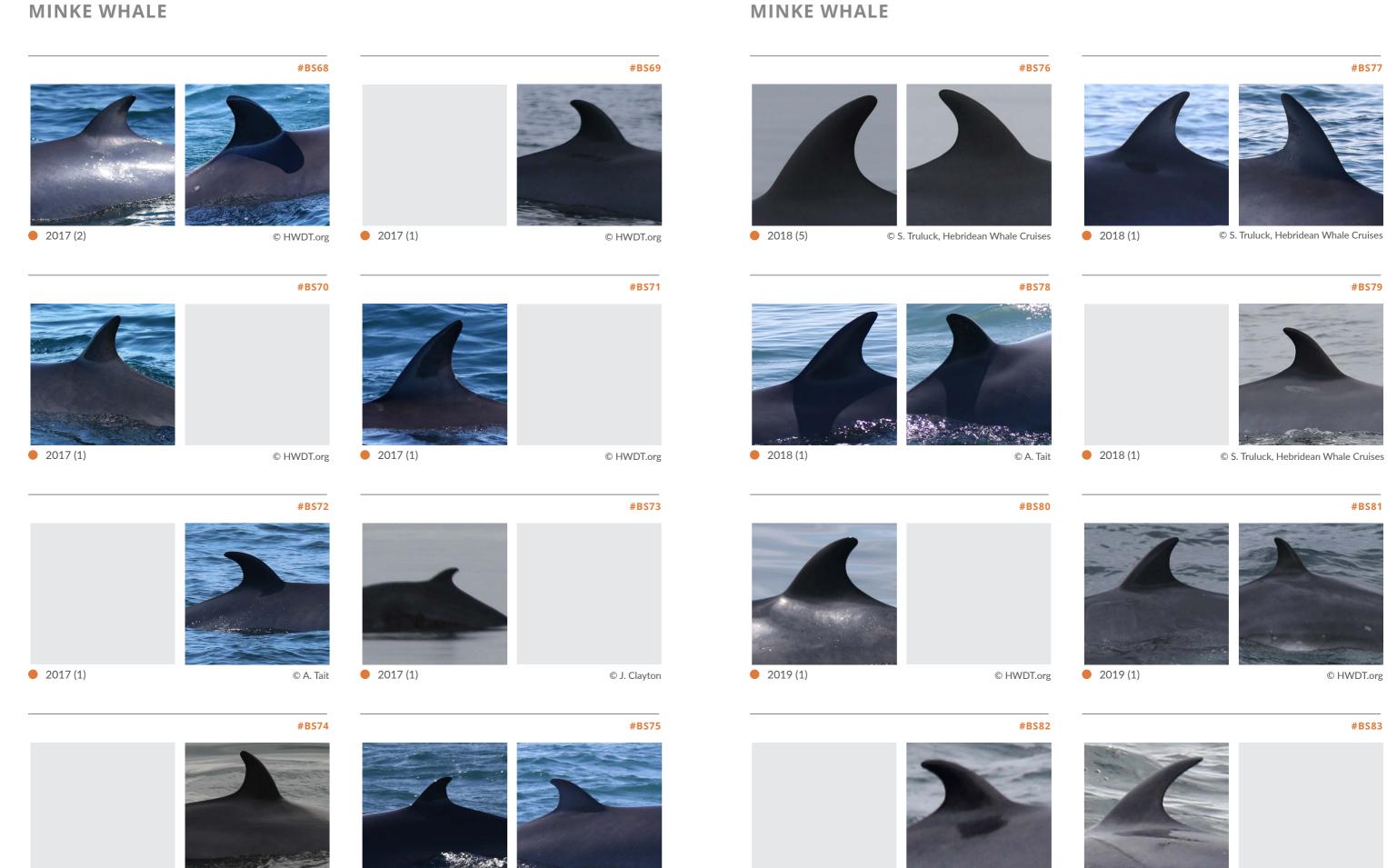
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2019 (1)

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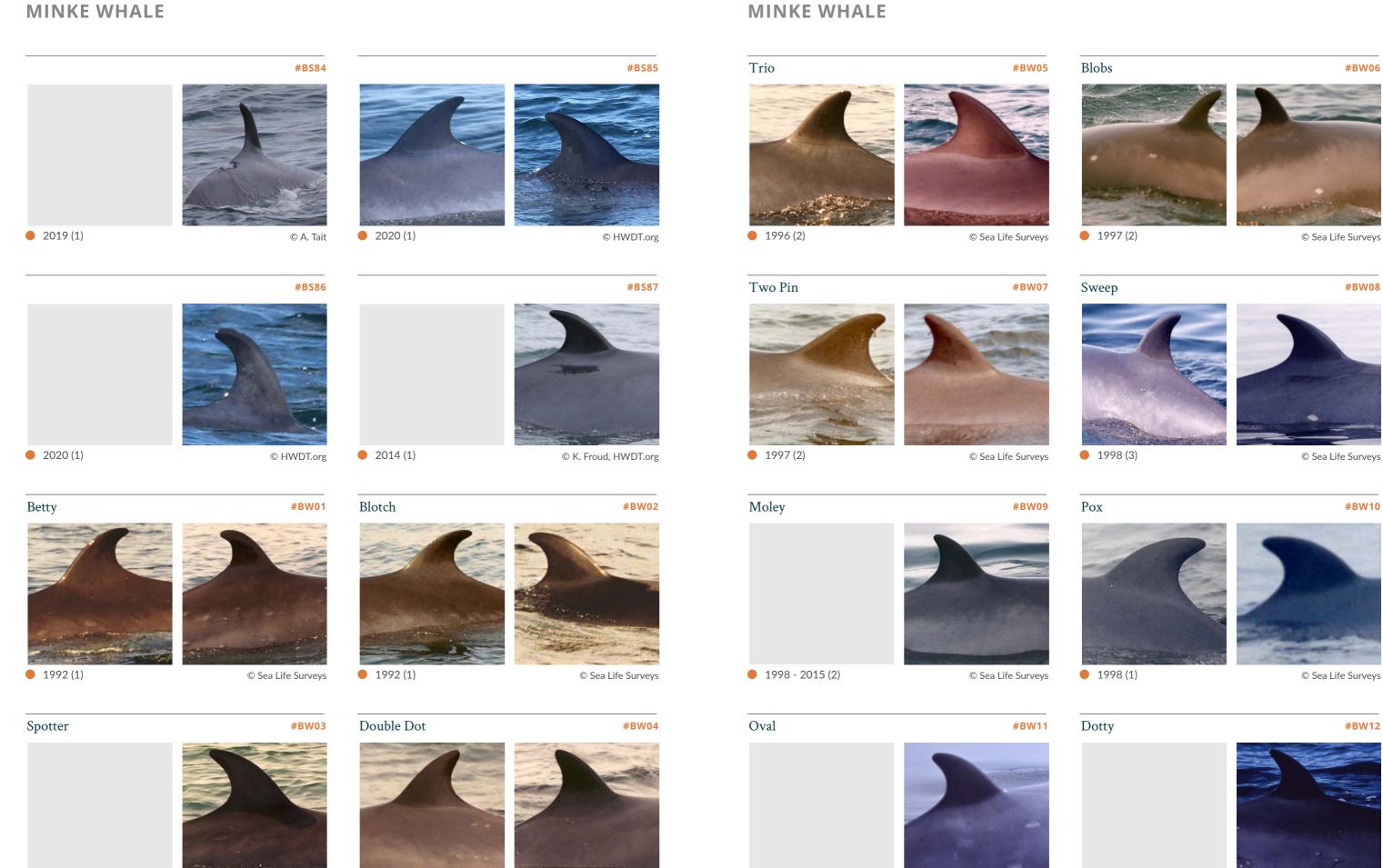
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2018 (1)

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MINKE WHALE

1994 (1)



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1995 (2)

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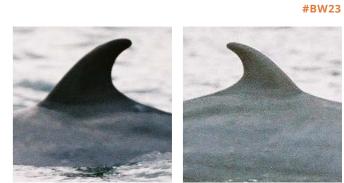
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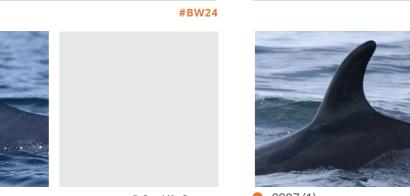
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MINKE WHALE







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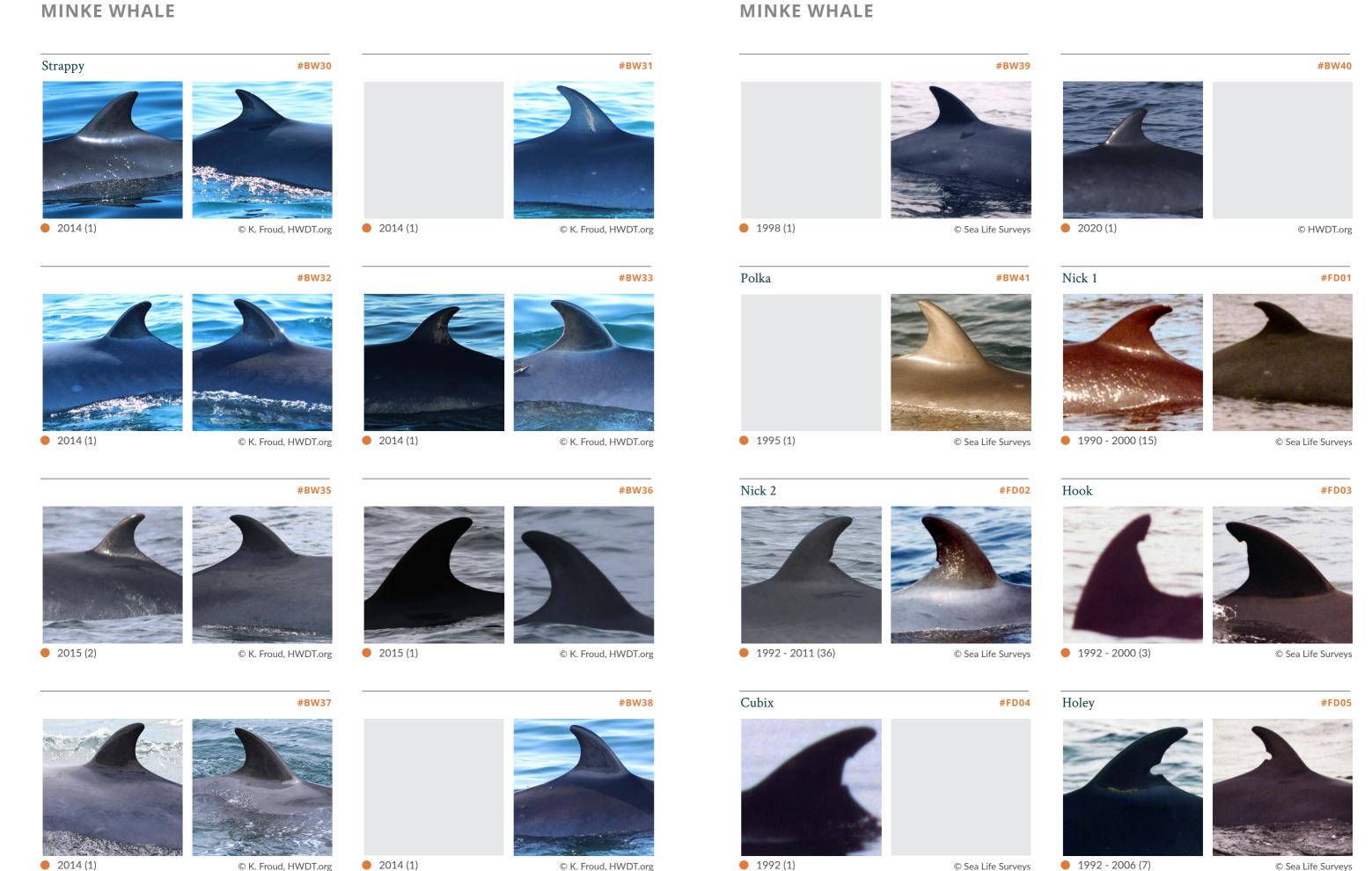
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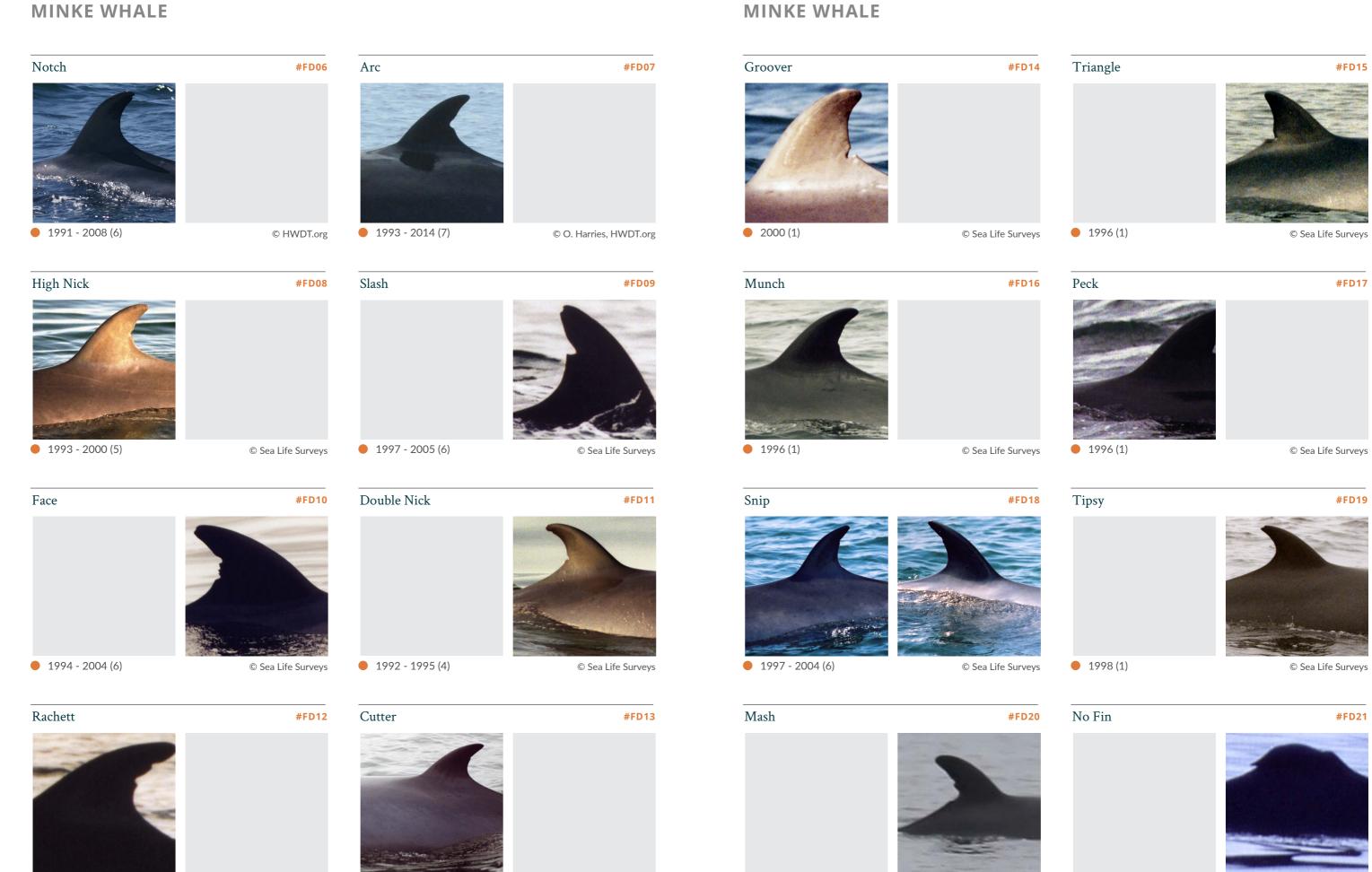




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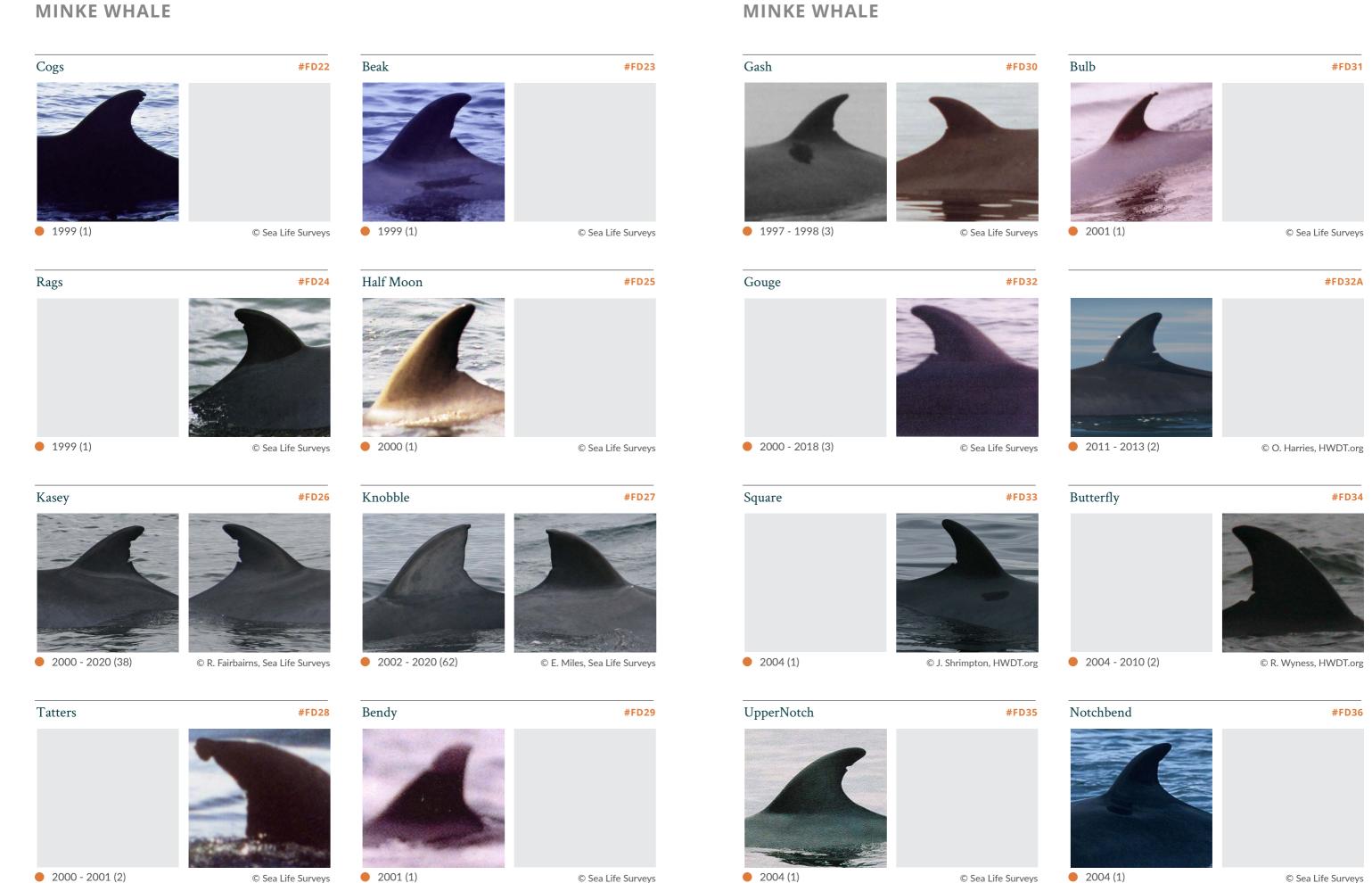
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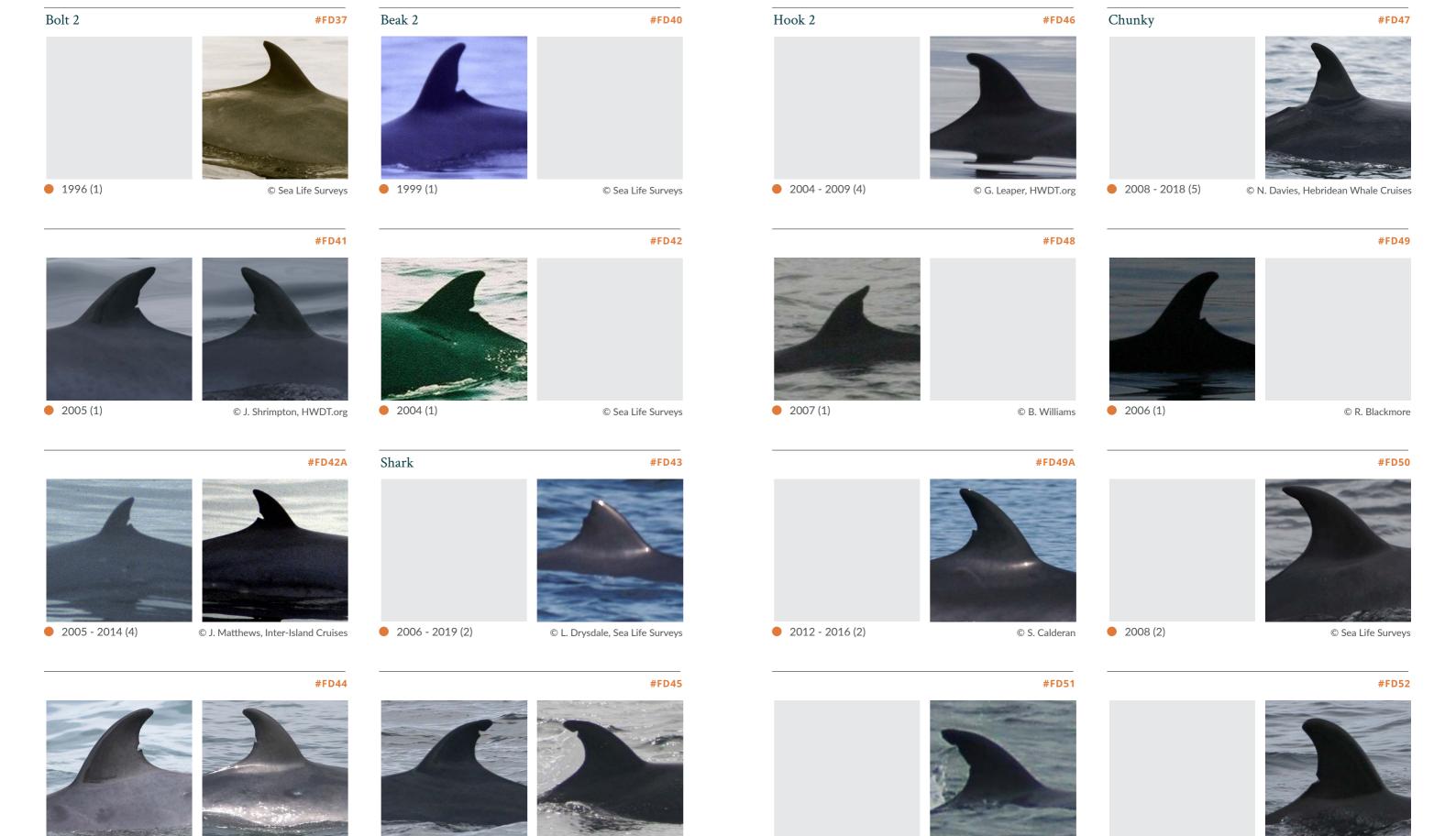


MINKE WHALE

2006 - 2018 (8)

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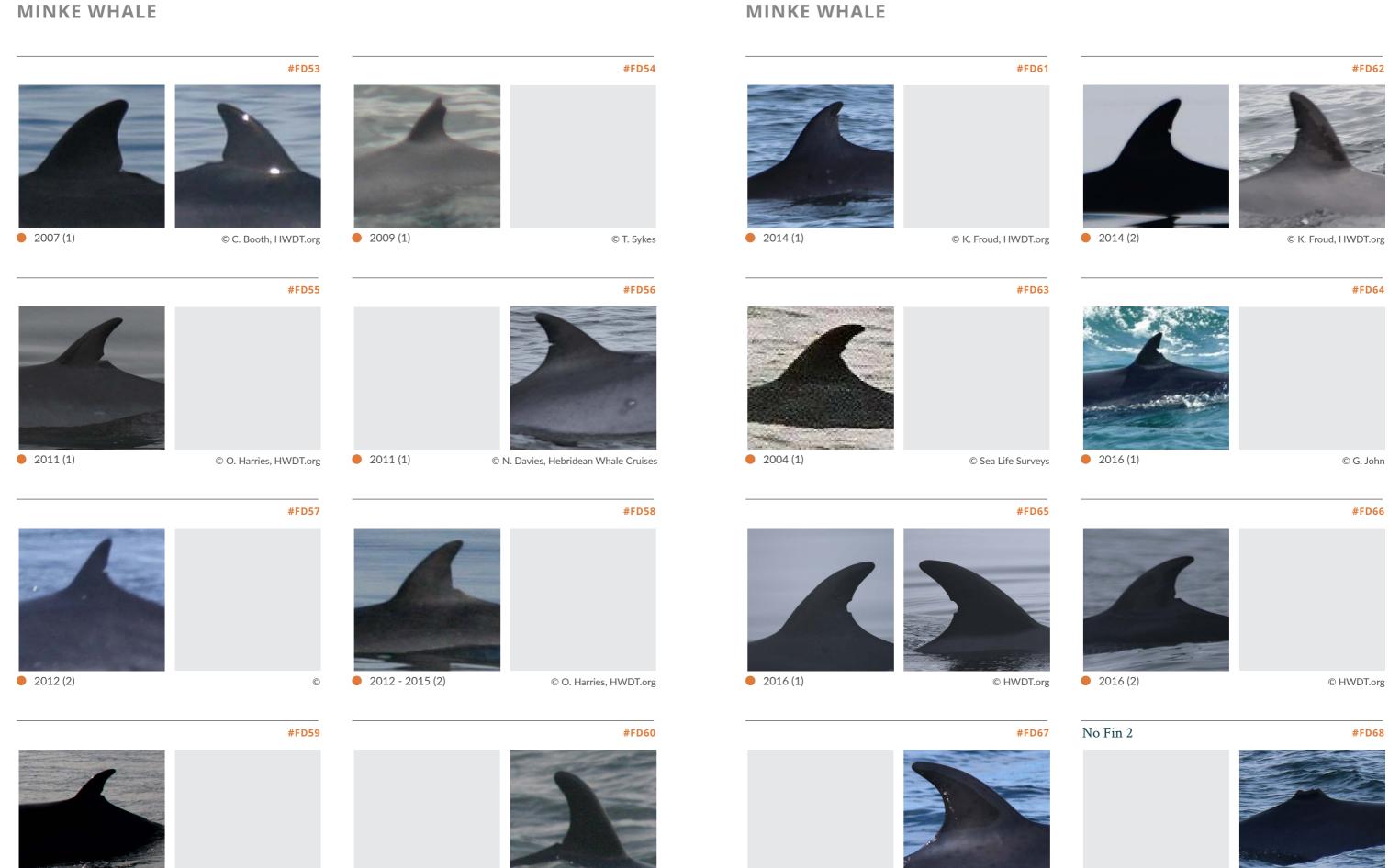
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2017 (1)

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2017 - 2020 (2)

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© N. Robinson

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MINKE WHALE

#FD77 #FD69 #FD70 #FD78 **2017 (1) 2018 (1)** © HWDT.org **2017 (2)** © HWDT.org **2018 (1)** © A. Tait, Sea Life Surveys © A. Tait, Sea Life Surveys #FD71 #FD72 #FD79 #FD80 **2017 (1) 2018 (1)** © A. Tait, Sea Life Surveys 2018 (1) **2017 (1)** © K. Wycherley, Sea Life Surveys © A. Tait, Sea Life Surveys © A. Tait, Sea Life Surveys #FD73 #FD74 #FD81 #FD82 **2018 (1)** © HWDT.org **2018 (1)** © HWDT.org 0 2019 (2) © HWDT.org **2019 (2)** © HWDT.org #FD75 #FD76 #FD83 #FD84

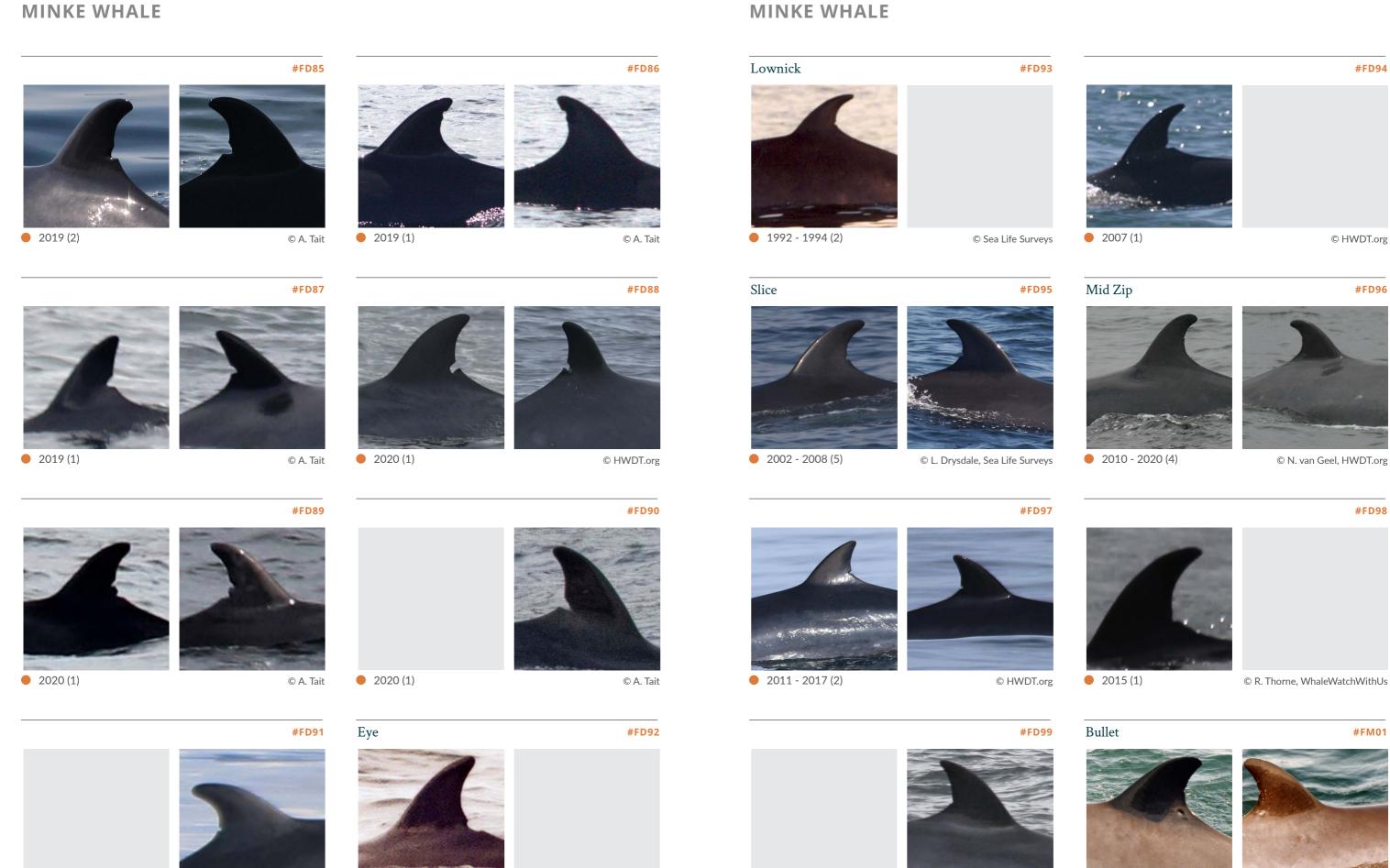
2019 (1)

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MINKE WHALE

#FM13 Snowy #FM02 #FM04 #FM12 2017 (1) **1994 - 2020 (11)** © Sea Life Surveys **2009 (1) 2016 (3)** © Sea Life Surveys © HWDT.org © HWDT.org #FM05 #FM06 #FM14 #FM15 **2003 (1)** 0 2020 (2) © HWDT.org **2014 (1)** © K. Froud, HWDT.org **2018 (1)** © S. Truluck, Hebridean Whale Cruises © A. Tait #FM08 #FM09 #FM16 #FM17 **2015 (1)** © K. Froud, HWDT.org **2003 - 2014 (2)** © HWDT.org **2009 (1)** © G. Leaper, HWDT.org **2015 (1)** © K. Froud, HWDT.org Top Notch #FM10 #FM11 #FM18

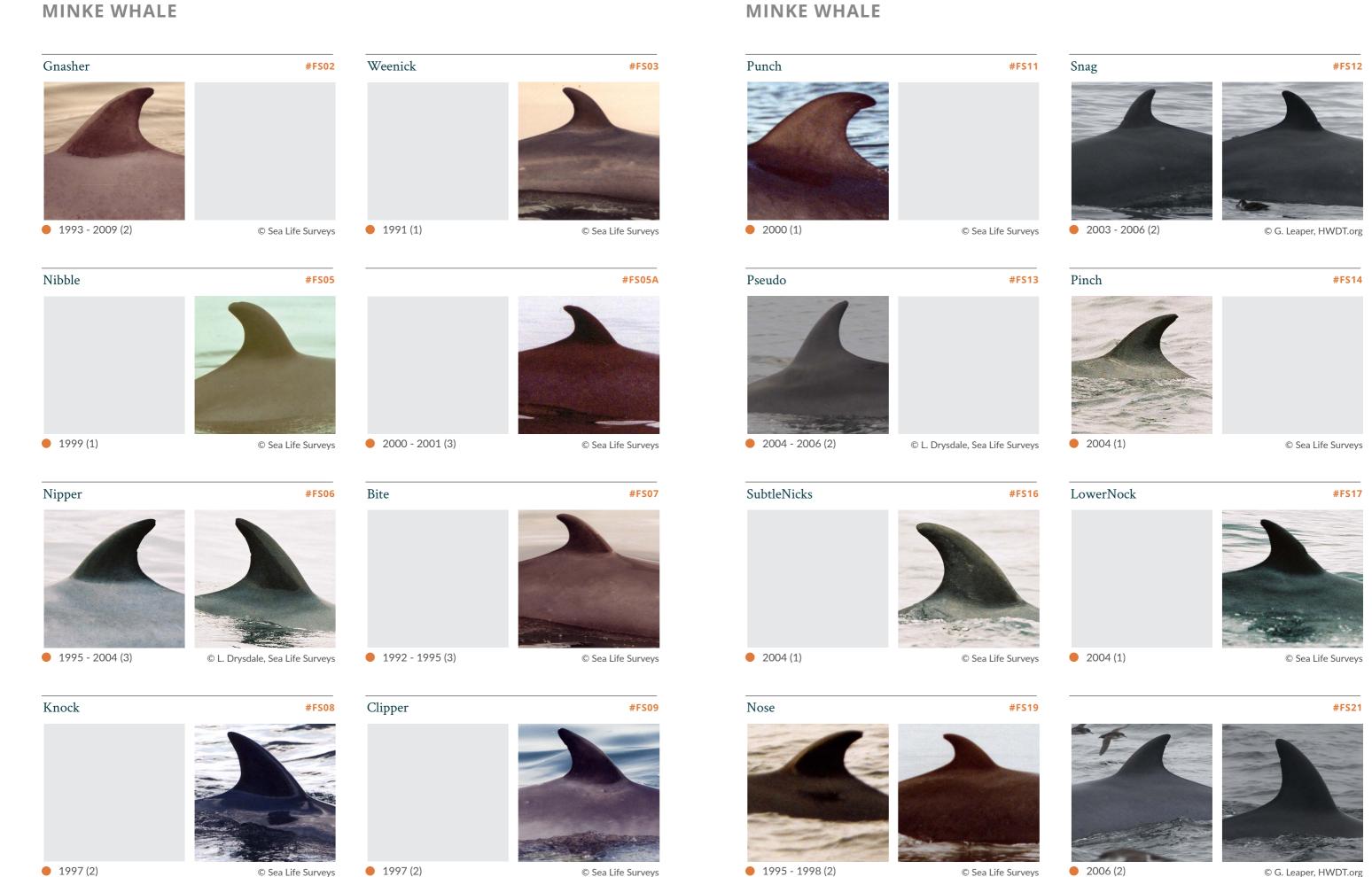
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1993 - 2015 (13)

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MINKE WHALE

MINKE WHALE

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#FS22 #FS23 #FS30 #FS32 **2009 (1) 2004 (1) 2010 (1) 2011 (1)** © L. Drysdale, HWDT.org © Sea Life Surveys © R. Fairbairns, Sea Life Surveys © O. Harries, HWDT.org #FS24 #FS25 #FS33 #FS34 **2012 - 2018 (5) 2006 (1) 2006 (1)** 2012 (1) © R. Pickering, HWDT.org © L. Drysdale, Sea Life Surveys © Sea Life Surveys © Sea Life Surveys #FS25A #FS26 #FS35 #FS37 **2013 (1)** © O. Harries, HWDT.org **2006 (1)** © L. Drysdale, Sea Life Surveys **2014 (1)** © K. Froud, HWDT.org **2011 - 2015 (2)** © K. Froud, HWDT.org #FS27 #FS28 #FS41

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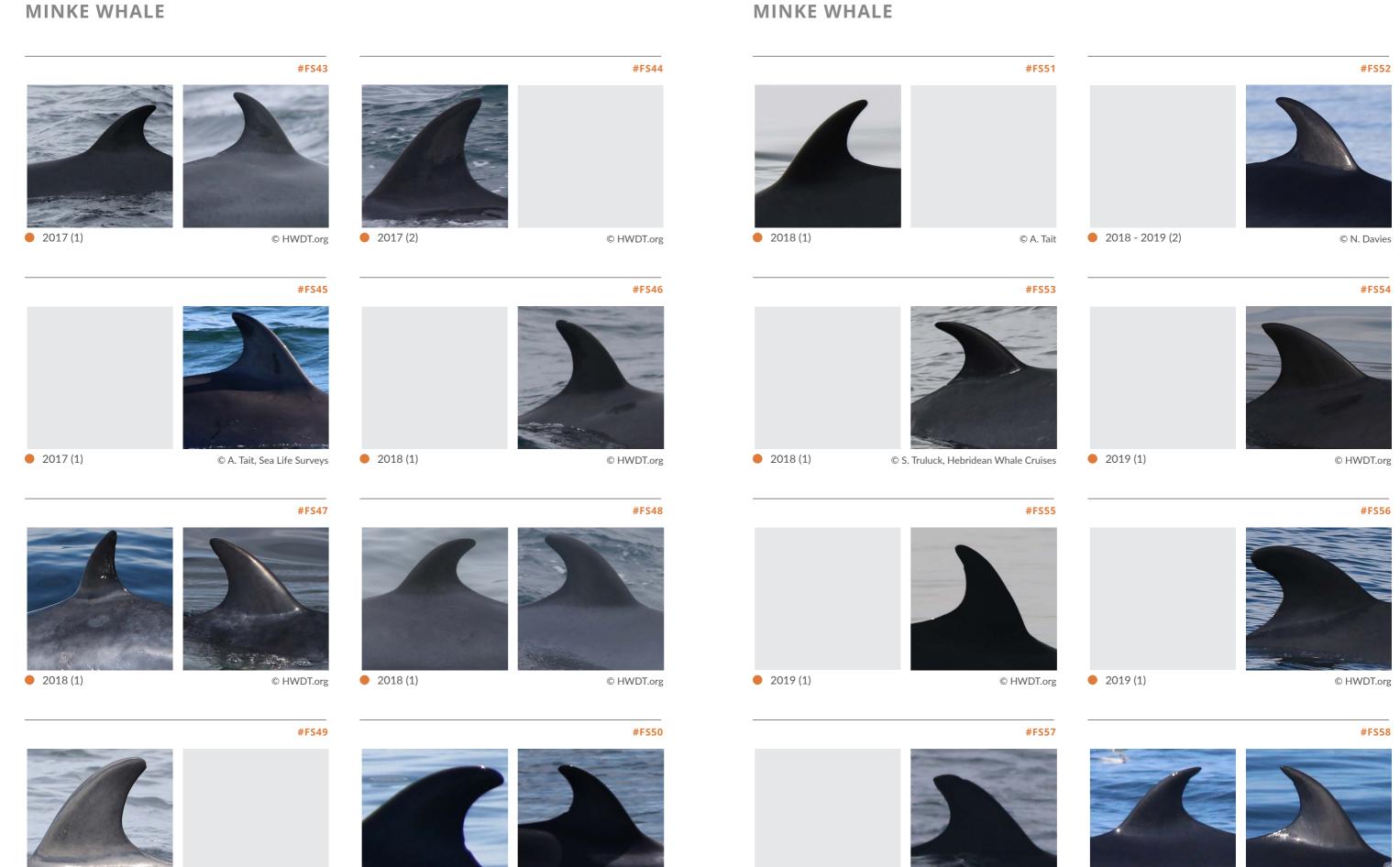
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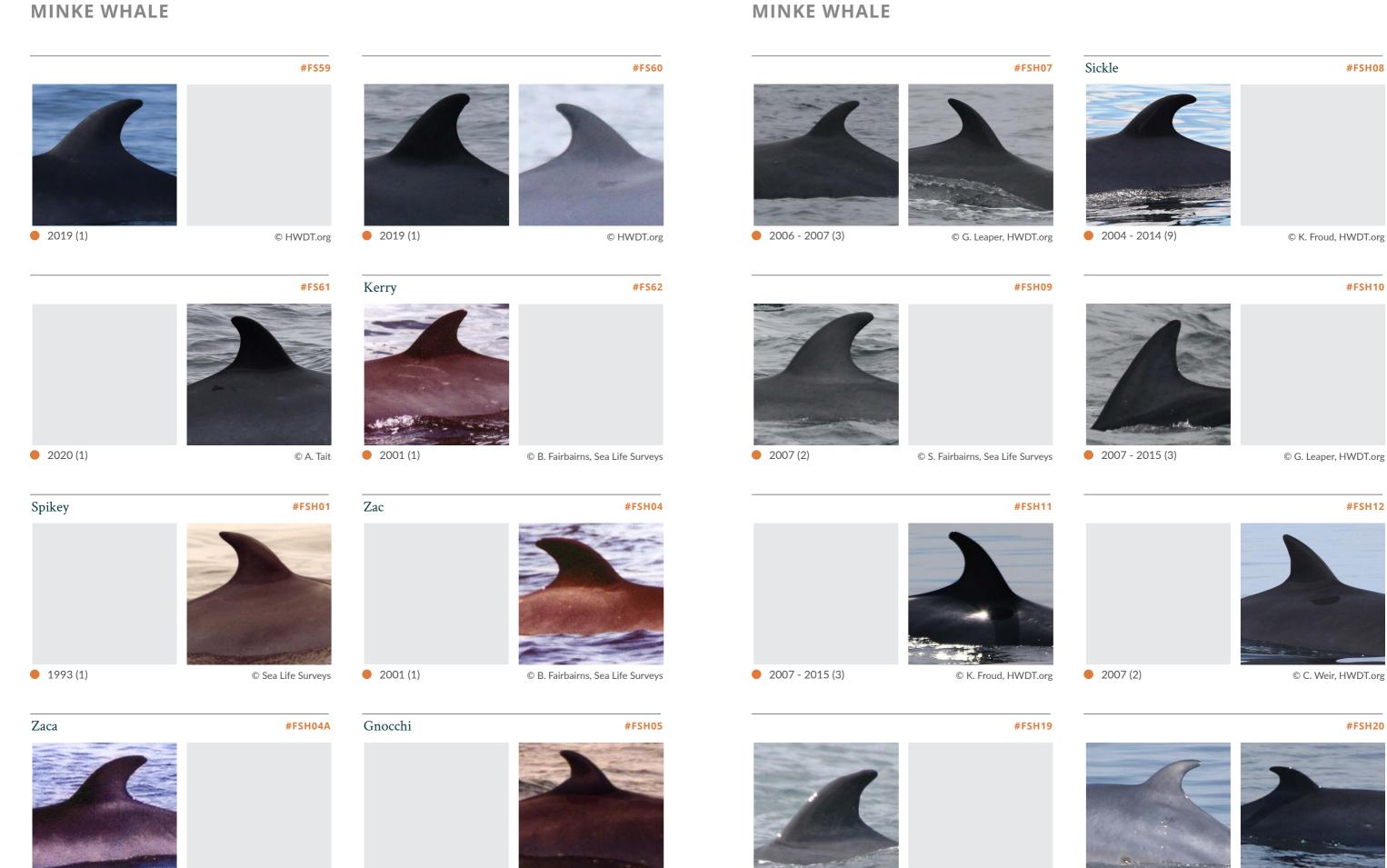
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#FSH31

MINKE WHALE





#FSH22



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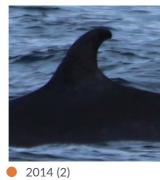
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#FSH25



#FSH24



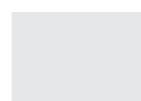


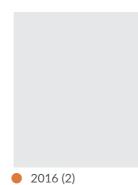


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#FSH26

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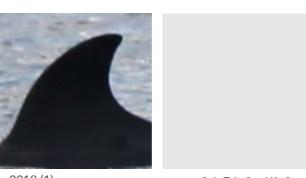
MINKE WHALE

#FSH28





#FSH30







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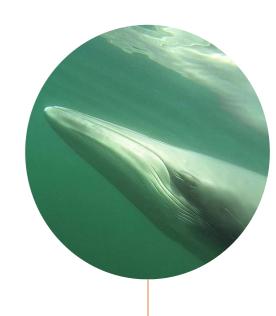
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