

Humpback Whales of Kenai Fjords National Park



North Gulf Oceanic Society

Edited by Nicole Abeln

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Humpback Whales in Kenai Fjords

Humpback whales are movers and shakers in Alaska. Although they are relatively slow swimmers as cetaceans go (3 knots is typical), they make extended migrations to southerly breeding/calving grounds and move extensively within their northern and southern range. They have a large presence in the ecosystem, consuming tons of prey ranging from small fish to small shrimplike euphausiids. Although still classified as endangered, they have made a dramatic recovery in numbers in recent decades. With close to 25,000 individuals in the North Pacific, they are over ten times as numerous now as they were when first protected from whaling in the early 1960s, although it is likely they are still less abundant than in pre-whaling days.

What has contributed to their success? First they appear to be able to take advantage of a multitude of foods. Small fish are often consumed, including herring, sand lance, and capelin, the three most common “feed fish” in the Kenai Fjords region. But they are also capable of feeding on the large shoals of small, shrimp-like euphausiids, which can form dense patches deep below the surface during the long daylight hours of summertime. This may require long dives of ten minutes or more and to depths of over several hundred feet. They are capable of doing this for hours at a time, punctuated with long resting intervals at the surface. Humpbacks at times engage in complex, coordinated feeding behavior. In 2010 we watched the first true bubble-net feeding observed in Kenai Fjords, a strategy commonly employed by humpbacks in southeastern Alaska. For a group of humpbacks to share a bubble net, a group of four or more whales dives down to a school of small fish. They circle the fish and one whale swims beneath, releasing a perfect circle of bubbles that rise and surround the fish, producing a “net” the fish won’t swim through. As the whales encircle the fish and move them up to the surface, they produce characteristic calls that coordinate their efforts and also identify the behavior as true bubble-netting. On the surface a large ring of bubbles appears and shortly thereafter the entire group of whales lunges with mouths agape through the center of the ring where the fish are trapped against the surface -- a very nifty way to concentrate a school of fish! Humpbacks use bubble curtains and circles of bubbles in many other ways to herd fish, but bubble-netting is a unique procedure.

Humpback whales are not the “gentle giants” they were once pictured to be; on the southern breeding grounds males occasionally aggressively spar with other males in competitive surface active groups. Adults actively defend themselves against killer whales on the northern feeding grounds by banding together to protect calves and juveniles. They use their flukes and huge pectoral fins in defense. They have the largest pectoral fins of all the great whales. We have even watched humpbacks aggressively pursuing killer whales that are attacking or feeding on gray whales. We are not sure why they are involved in this seemingly risky behavior. Humpbacks will also come to the aid of another humpback under attack. Since they can’t outswim the killer whales, they have evolved to join in groups, stand their ground, and fight when attacked using their flukes and huge pectoral fins.

The primary migratory destination of humpback whales from Kenai Fjords is Hawaii, where typically they spend only 1-3 months, although mothers with new calves may stay longer. The migration itself takes a nearly a month in each direction as they steadily move along at about three knots. They are truly residents of their Alaskan feeding grounds where they spend most of their year. Calves are

born in Hawaii and make the long migration to Alaska when only months old. There, they become attached to the particular feeding region used by their mother. Although there are some wanderers, humpbacks are generally return to the same feeding grounds their mother brought them to as calves. Generations of humpbacks have used Kenai Fjords as their feeding region and will hopefully continue to do so, with each generation maintaining the longstanding tradition. The pattern is reflected in their maternally inherited DNA as feeding populations in different regions of Alaska can be differentiated genetically.

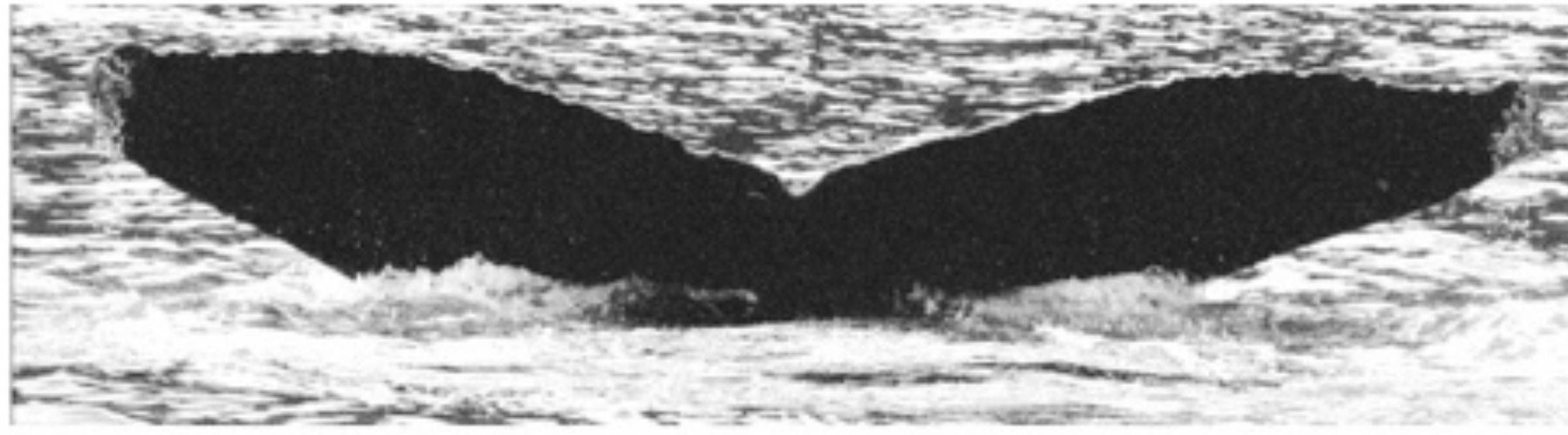
It is a wonder, delight, and handy characteristic that the underside of each humpback fluke is unique and provides a permanent means to identify that whale. Like a permanent name tag, the pattern solidifies over the calf's first year. Differences in the mostly black flukes can be subtle and limited to the shape and pattern along the trailing edge. Some flukes are not only unique, but eye-catching and complex. One of our favorites is KFY 54, whose fluke is reminiscent of a van Gogh painting. In this catalogue, flukes are arranged by the amount of white in the fluke. Black flukes get an "X" designation; those with about 35%-65% white a "Y" designation; and those with over 65% white a "Z" designation.

Enjoy using this catalogue when you roam through the waters of Kenai Fjords. Be aware that it is illegal to get closer than 300 feet from the whales, or to cause them to alter their behavior. When you spot a humpback, slow down and keep a sharp look-out; other whales, including calves, may be even closer to your boat. Unfortunately, a few of the humpback whales in this catalogue bear deep scars from boat propellers on their back. Use a telephoto lens when taking photographs so that a close approach is unnecessary. If you do get photographs of humpback whale flukes, you can contribute them to or research effort by emailing them to whalesalaska@gmail.com, also, you can visit <http://www.alaskawhalesightings.com/> where you can check on recent whale sightings before you leave on your trip.

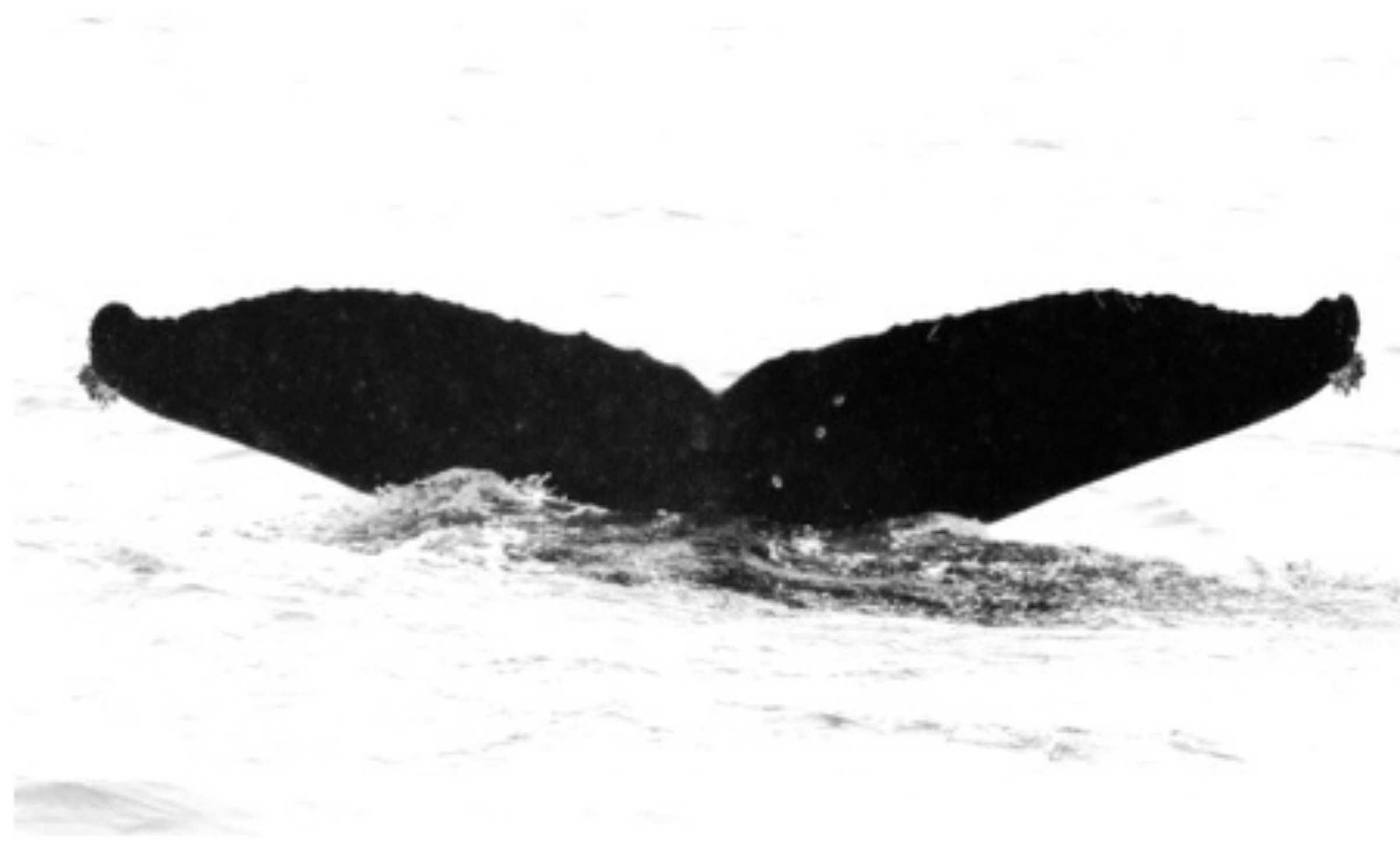
Enjoy! Craig Matkin, Executive Director, North Gulf Oceanic Society, Homer, Alaska

Acknowledgements

Without the exchange of information with vessel operators from all the Kenai Fjords tour companies, our field work would be much more difficult. Thanks to you all. Dan Olsen made many contributions to the catalogue and maintains a web-based database of photographs and sightings from tour boat passengers, skippers, and crew. His initial volunteer efforts resulted in the creation of this catalogue. Olga von Ziegesar inspired this work with her catalogue of Prince William Sound humpback whales, covering nearly three decades. Eva Saulitis contributed many field hours and photographs to the effort. Thanks to funding over the years from the Alaska Sea Life Center and *Exxon Valdez* Oil Spill Trustee Council, without which the field effort would have been impossible, and thanks to Kenai Fjords National Park for help in obtaining photos and educating the public. We would like to thank the tour boat skippers in Kenai Fjords who have educated their passengers about the biology and conservation of humpbacks, have behaved responsibly and courteously around whales, and have encouraged their passengers to photograph and enjoy them from a legal distance.



KFX1 (X49) F



KFX2 (X143)



KFX3 (X104)



KFX4 (X141)



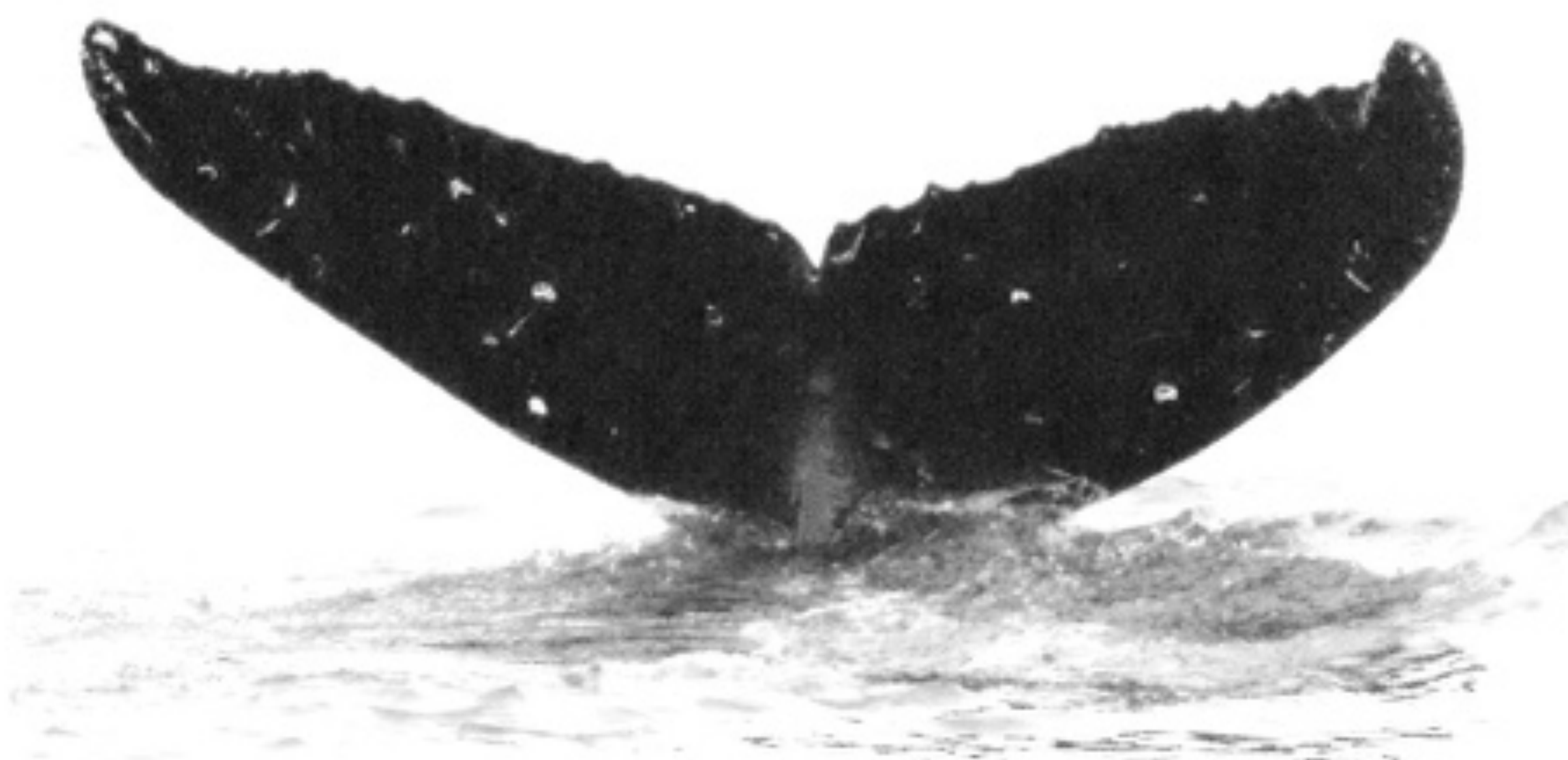
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KFX6



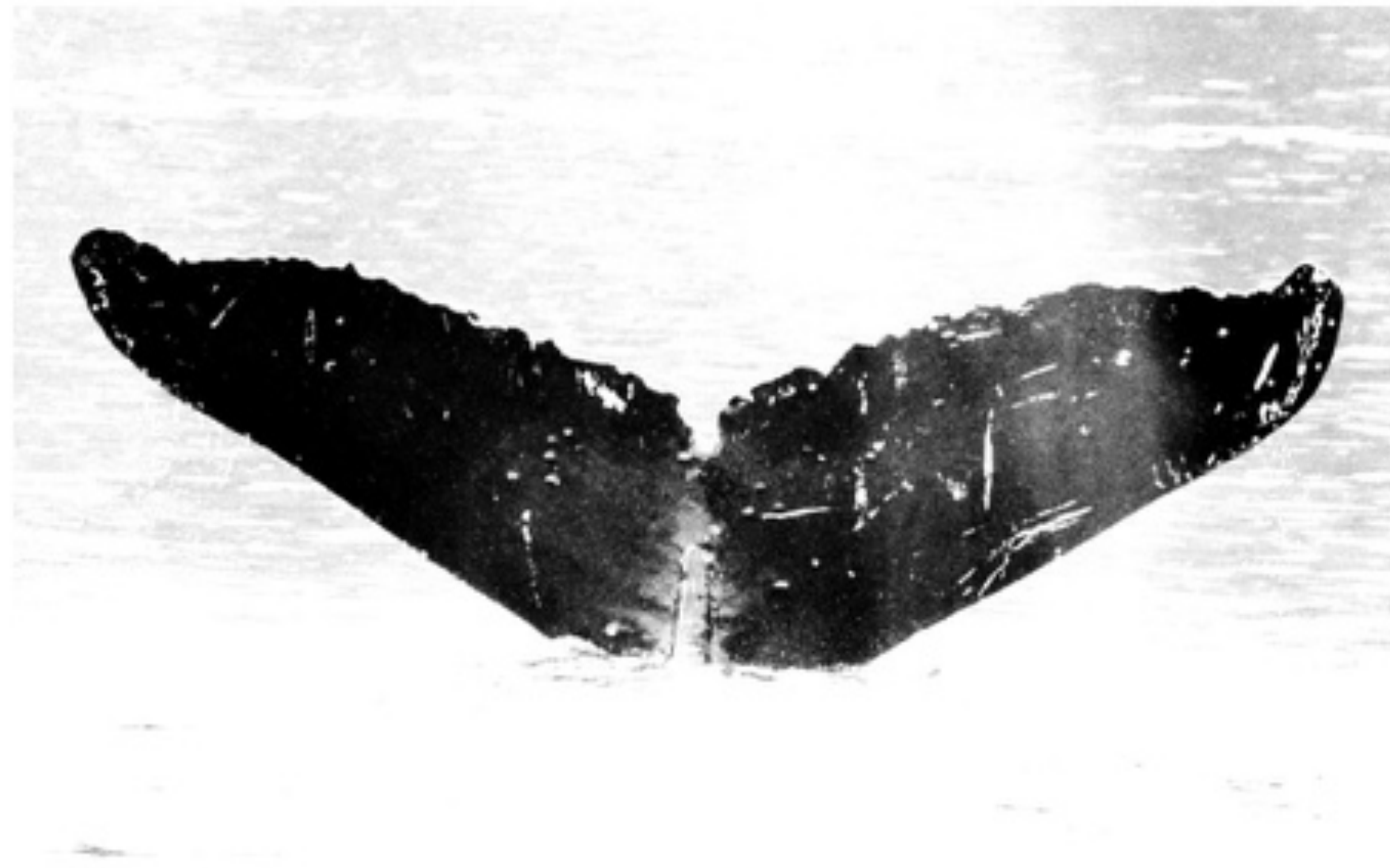
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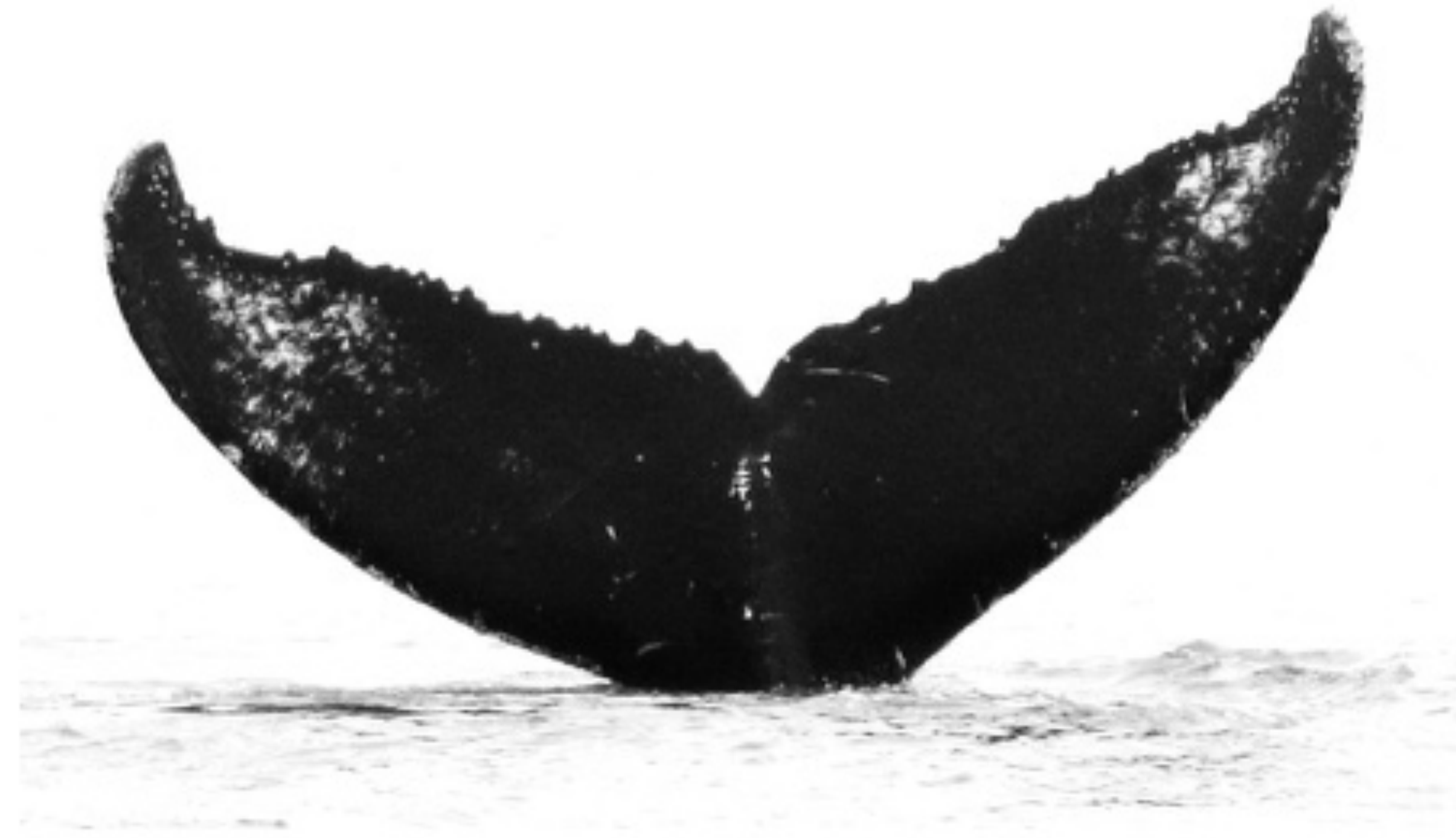
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KFX9 (X75)



KFX10



KFX11 (X9)



KFX12 (X204)



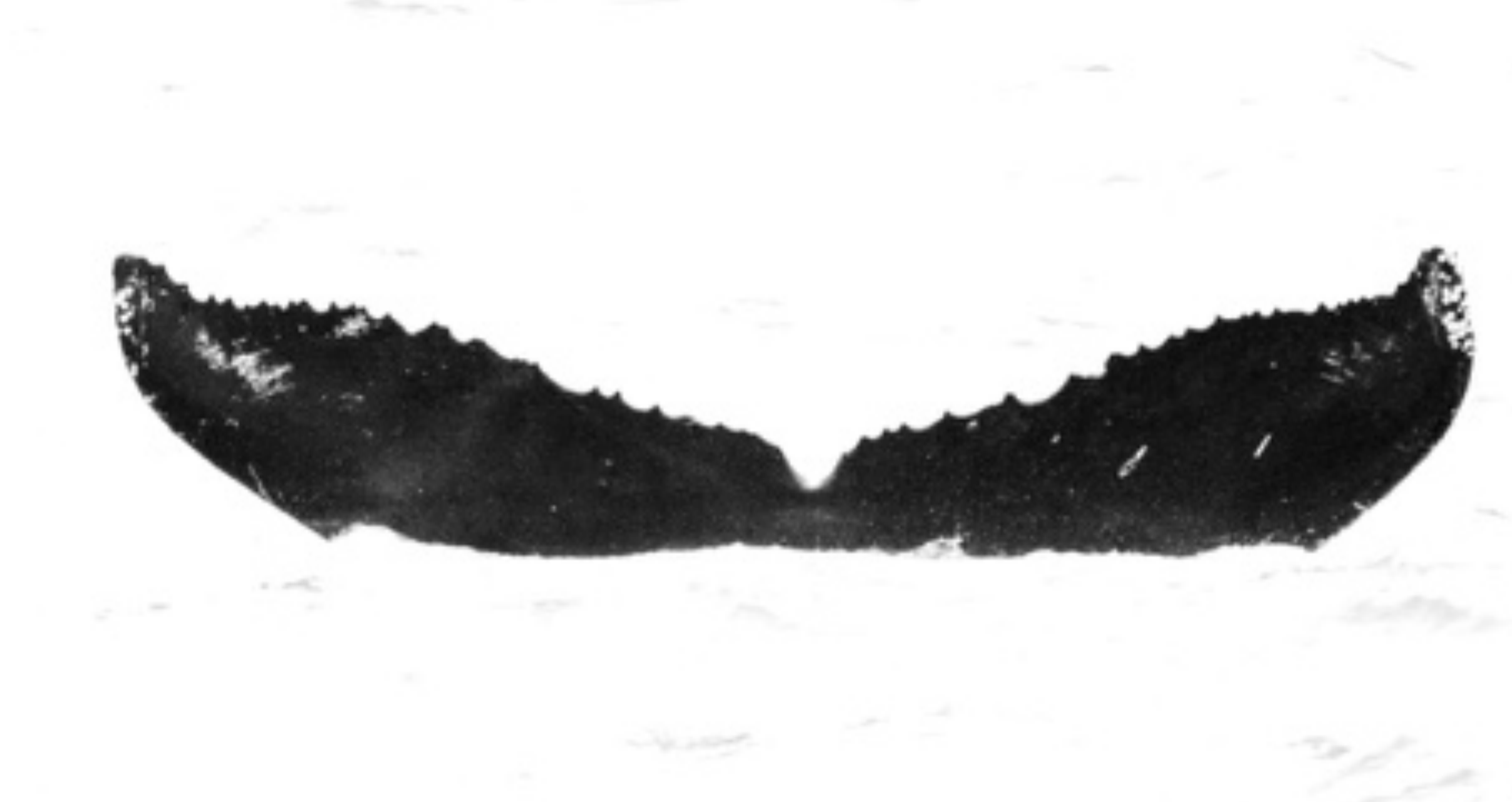
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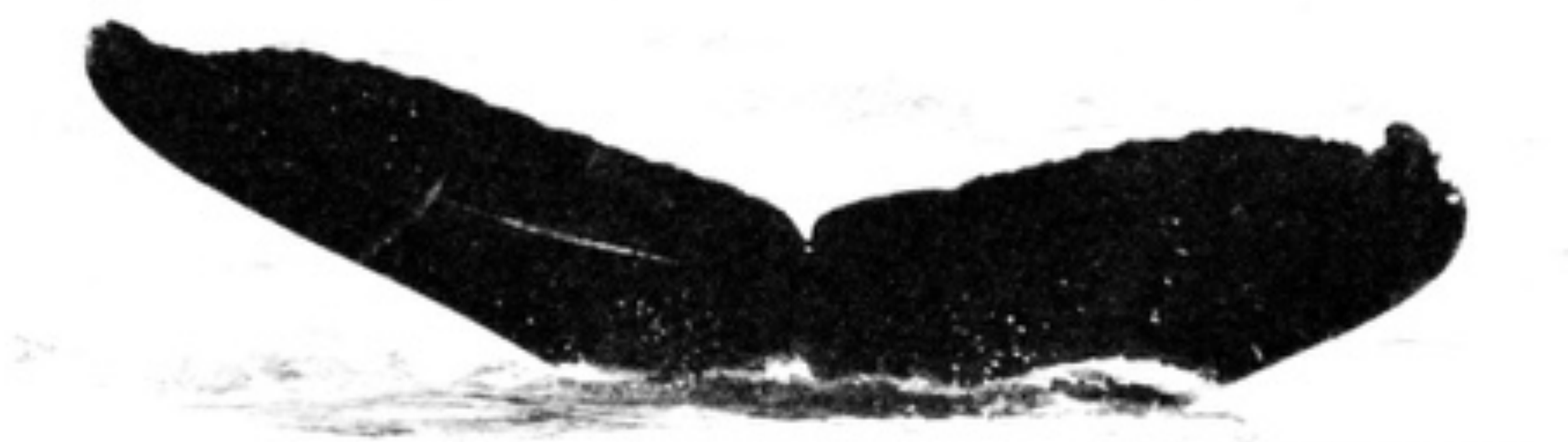
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KFX15 (X193)



KFX16 (X50) F



KFX17



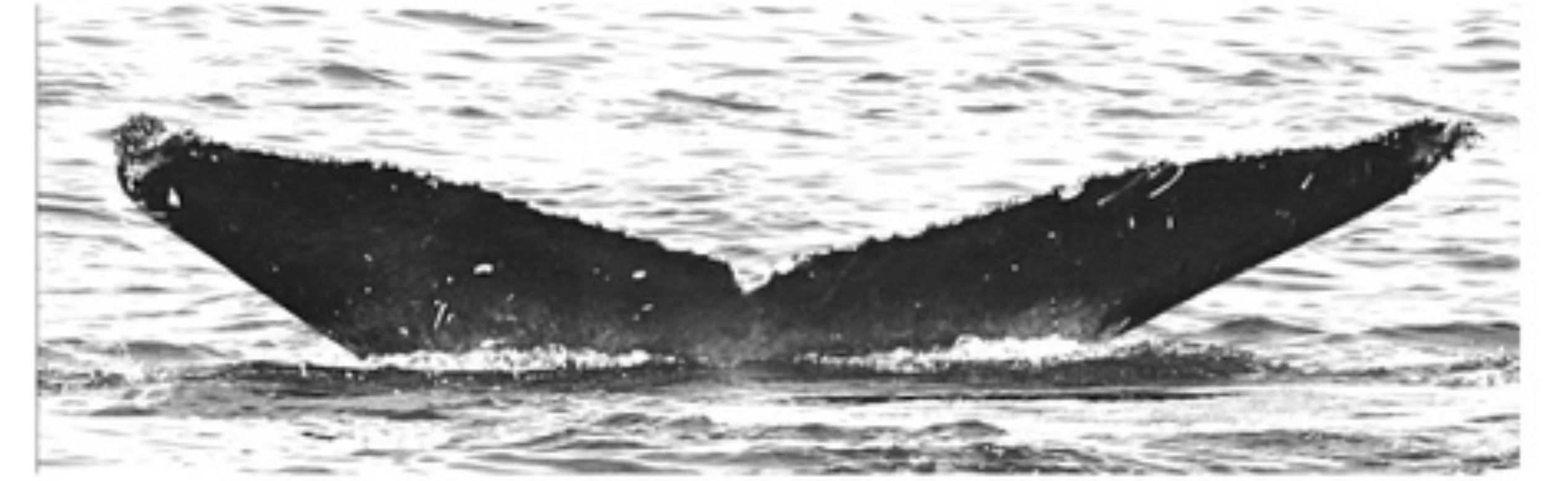
KFX18 (X70) M



KFX19 (X207)



KFX20



KFX21



KFX22



KFX23



KFX24



KFX25 (X34) F



KFX26



KFX27 (X62)



KFX28 (X96)



KFX29 (X162)



KFX30 (X93)



KFX31



KFX32



KFX33 (X98)



KFX34



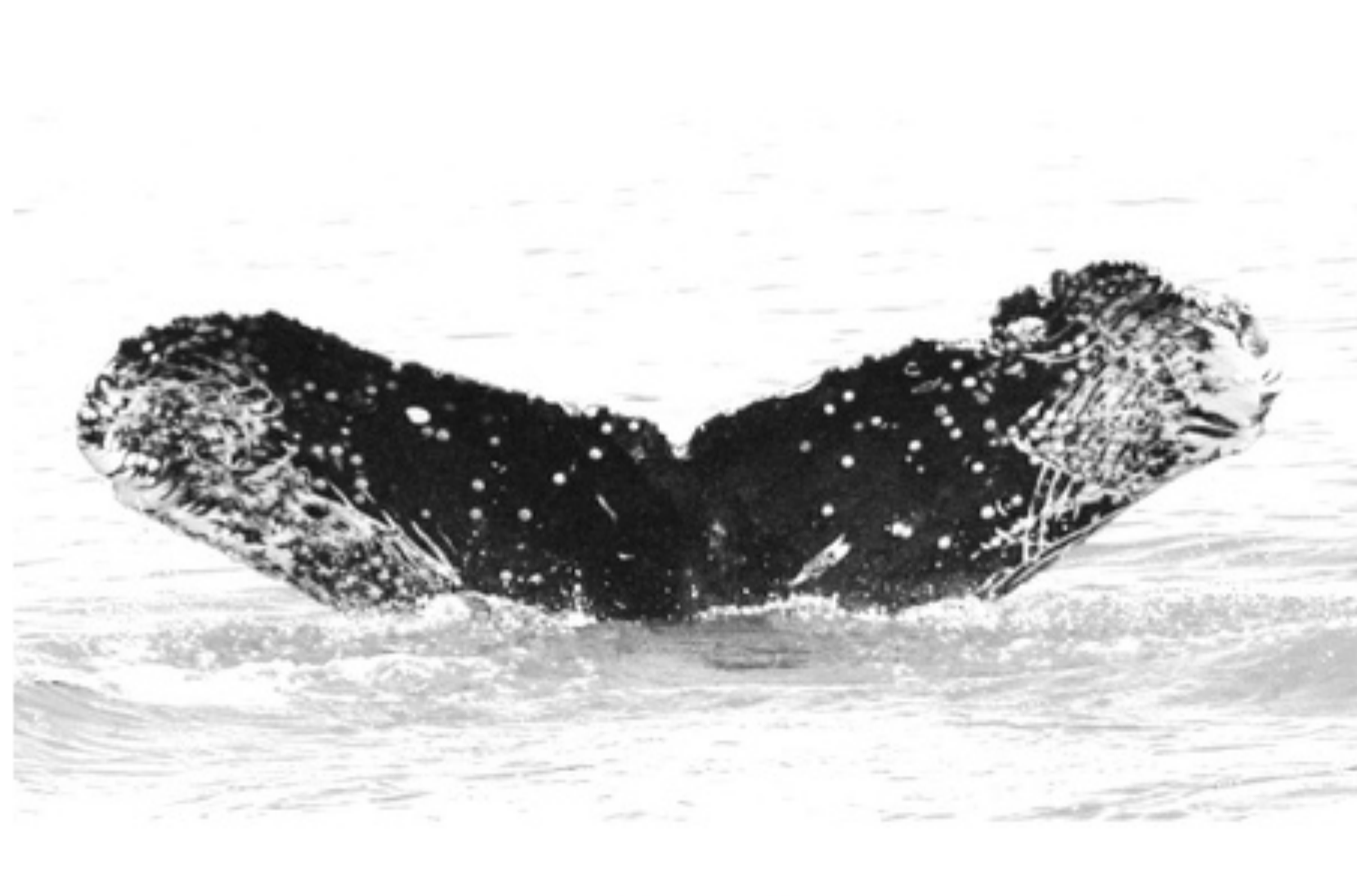
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KFX36 F



KFX37 (X214)



KFX38 (X180)



KFX39 (X173)



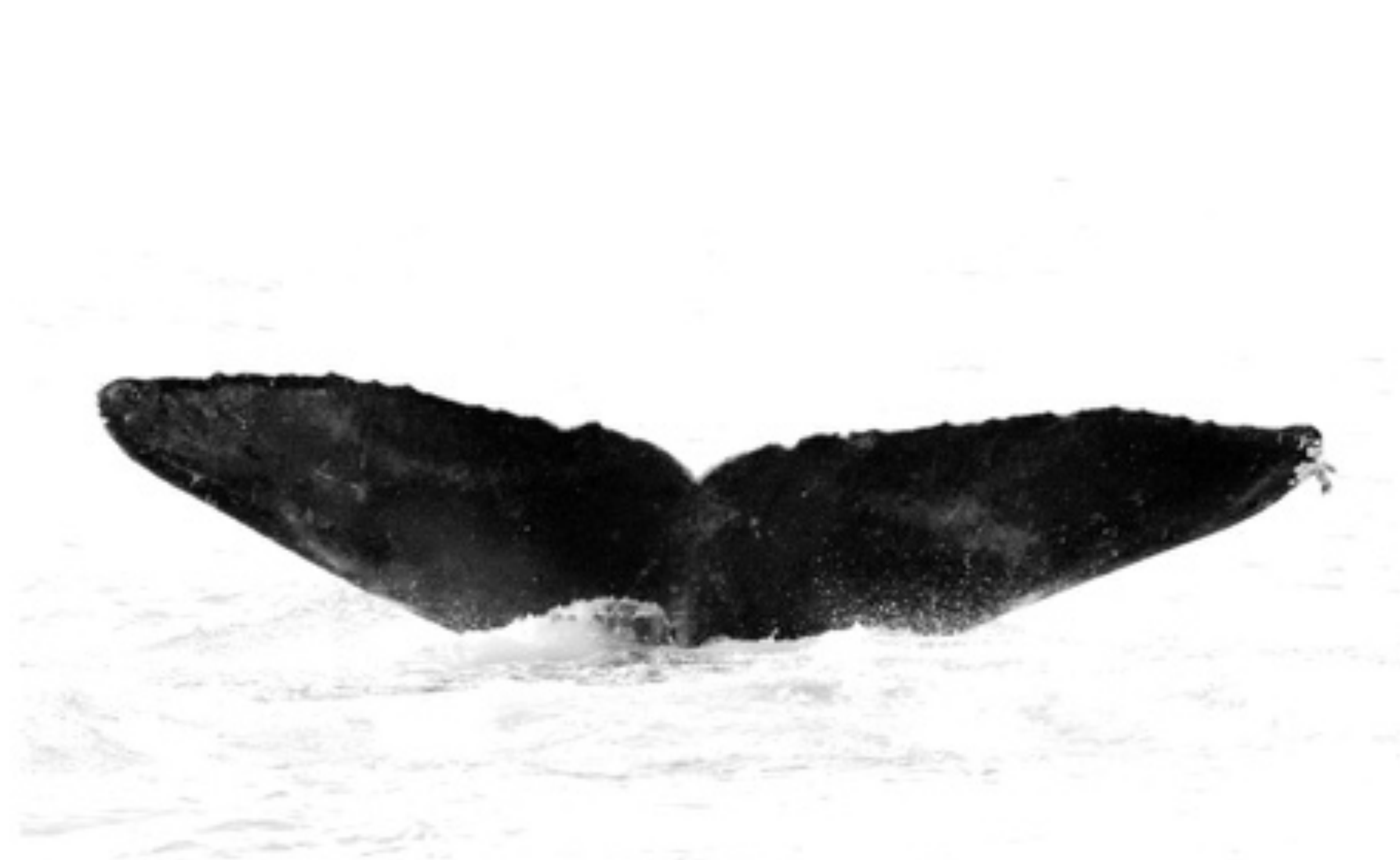
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KFX41 (X58)



KFX42



KFX43



KFX44 (X77)



KFX45 (X165)



KFX46 (X166)



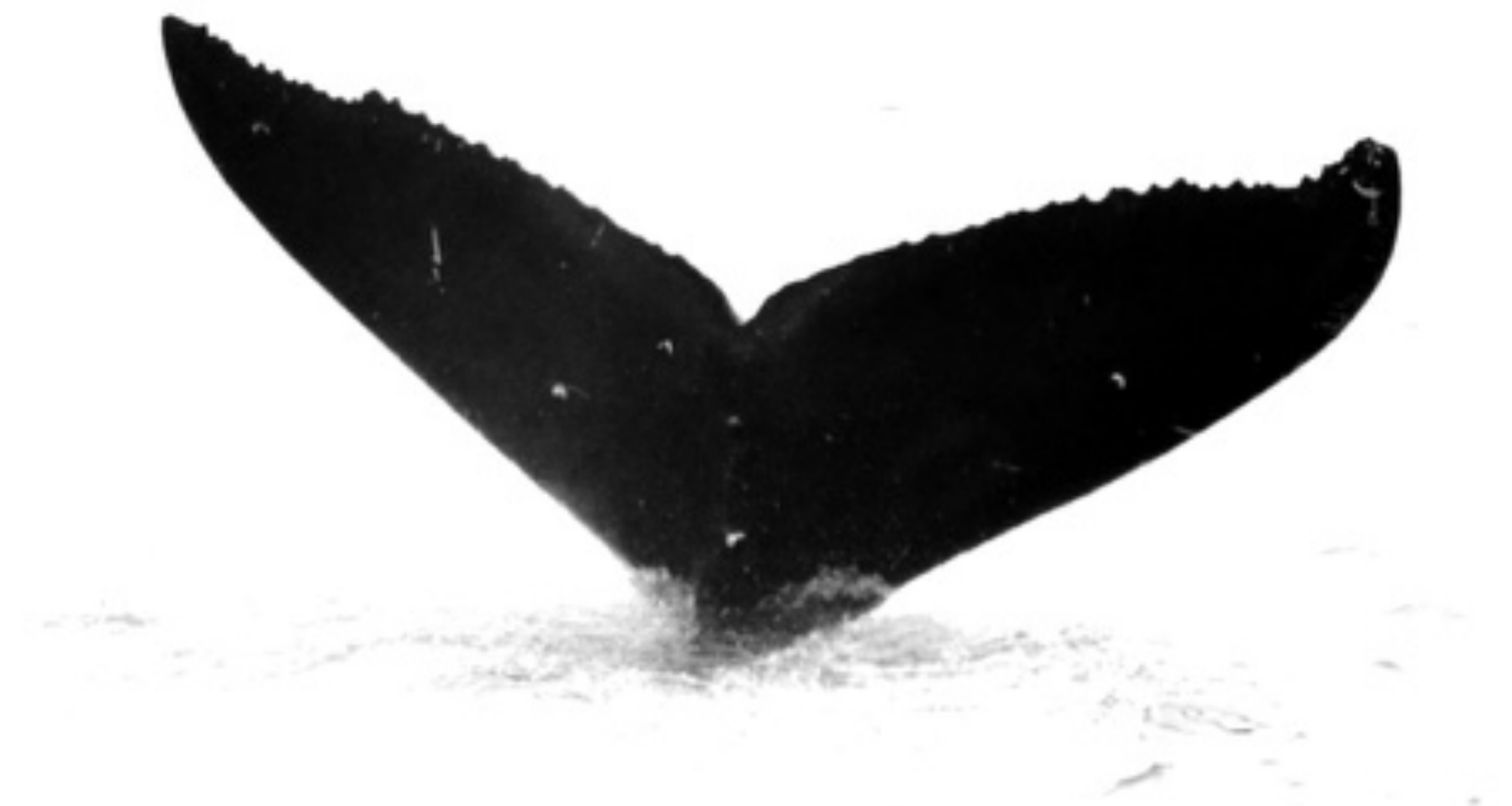
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KFX48 (X181)



KFX49 (X216)



KFX50



KFX51 (X215)



KFX52 (X212)



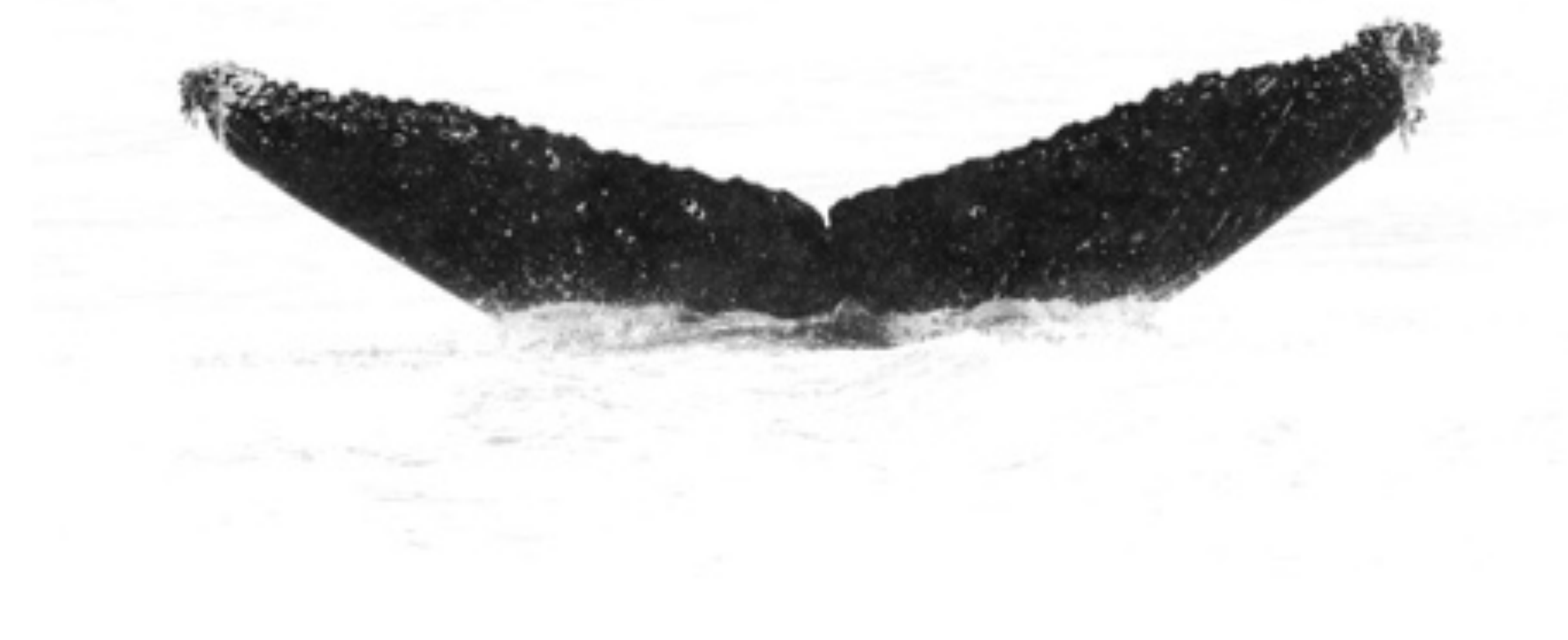
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KFX54



KFX55



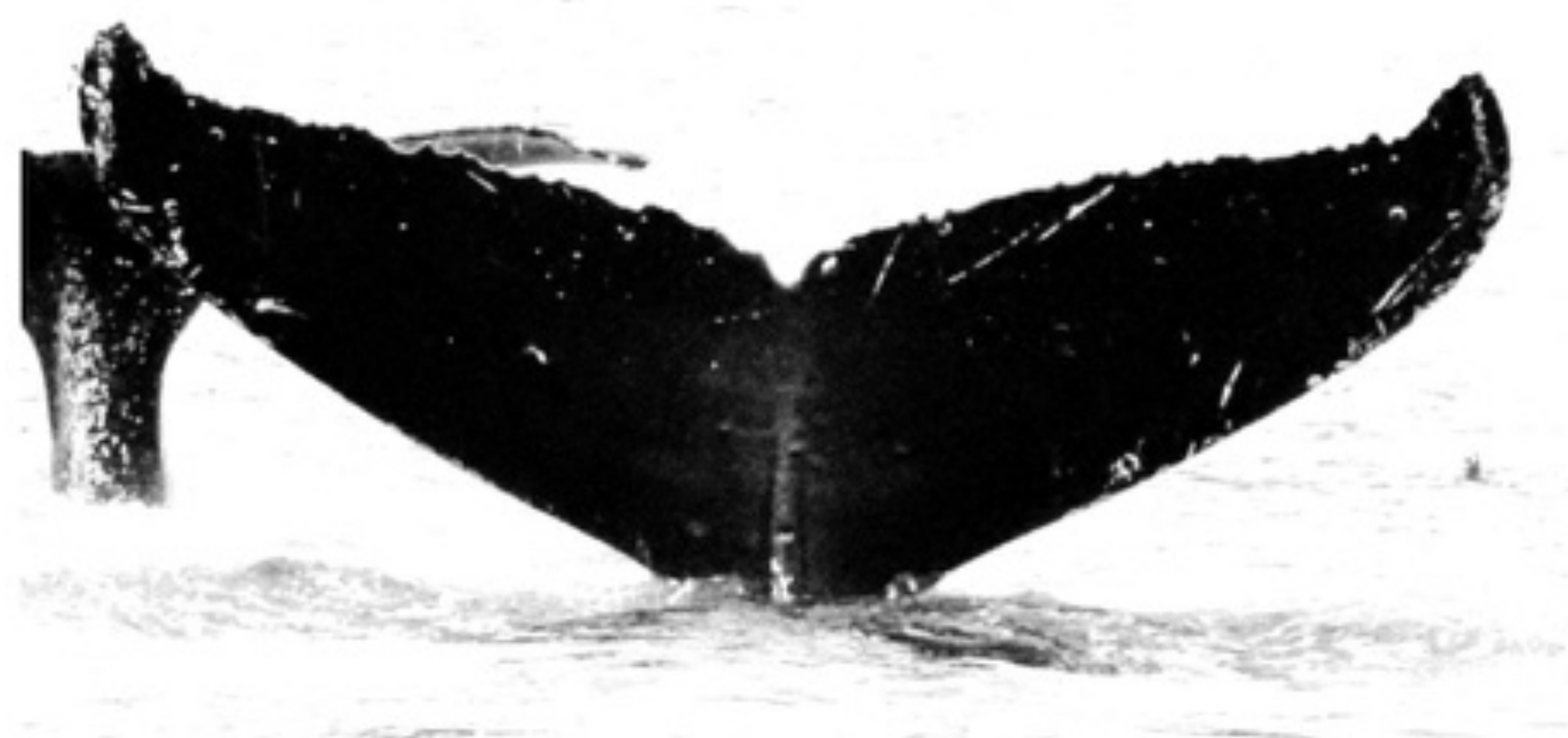
KFX56



KFX57 (X229)



KFX58



KFX59 (X244)



KFX60 (Y63)



KFX61



KFX62



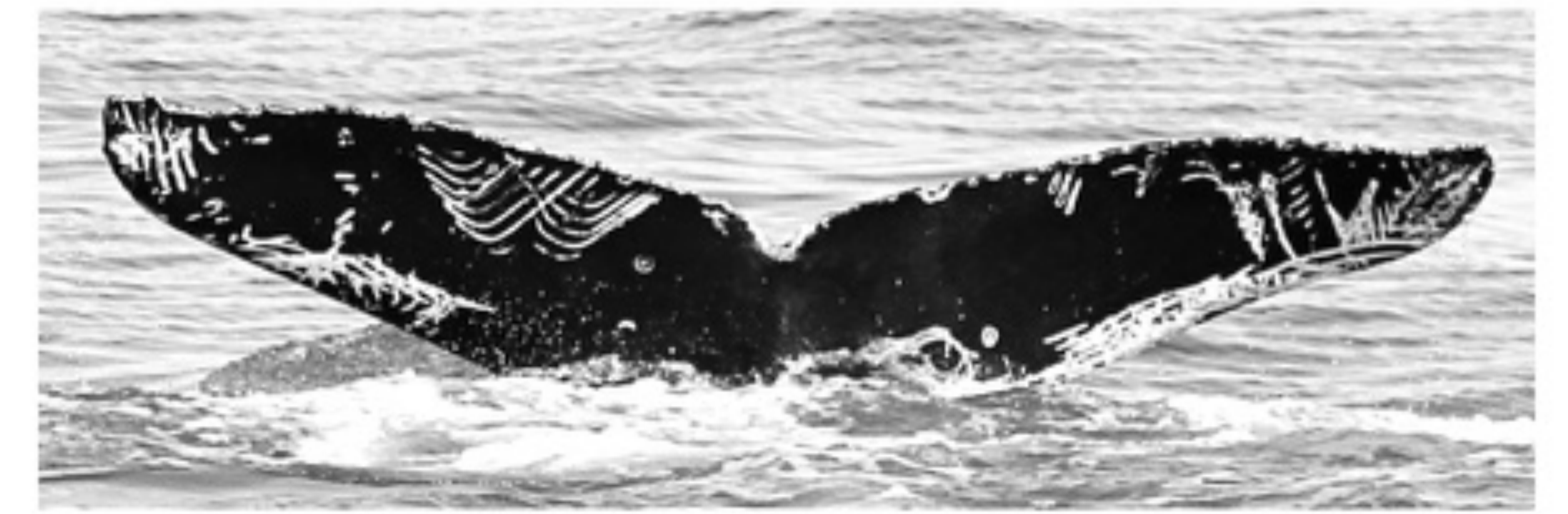
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KFX64



KFX65



KFX66



KFX67



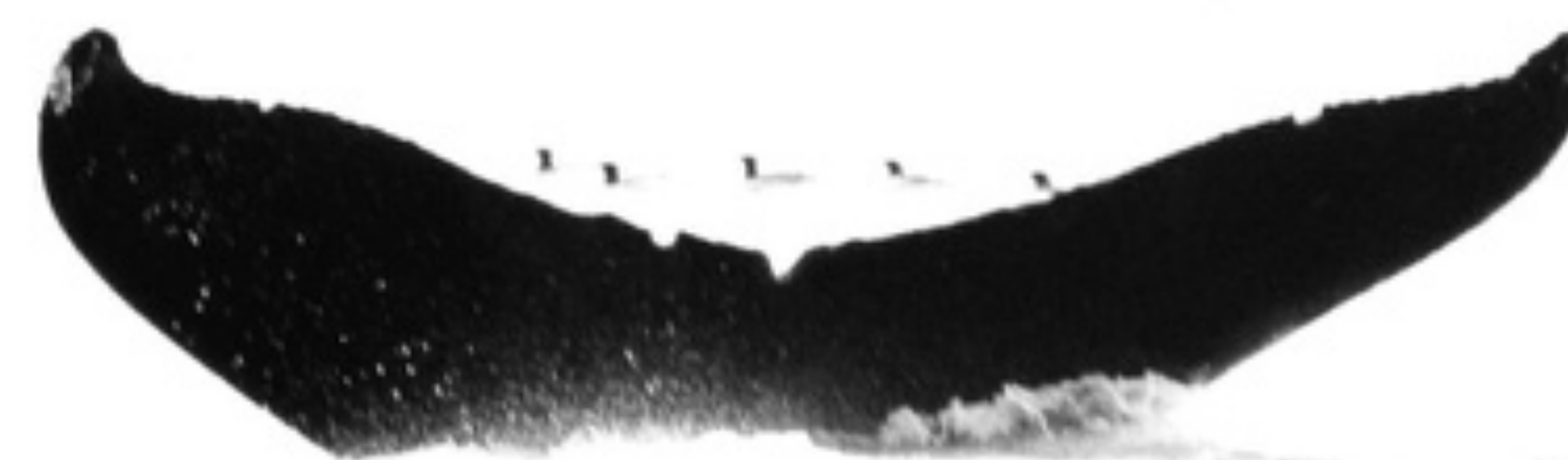
KFX68



KFX69



KFX70



KFX71 (X210)



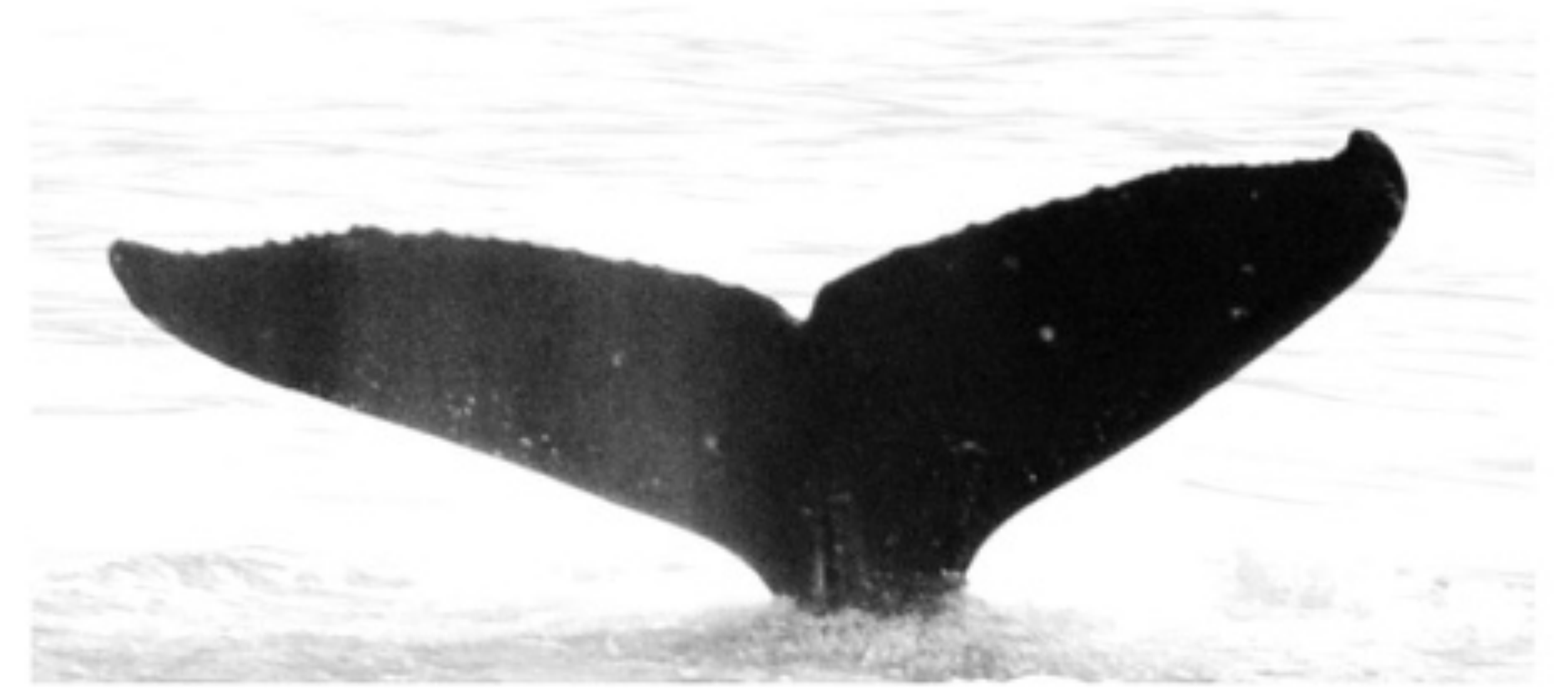
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KFX74



KFX75



KFX76



KFX77



KFX78



KFX79



KFX80



KFX81



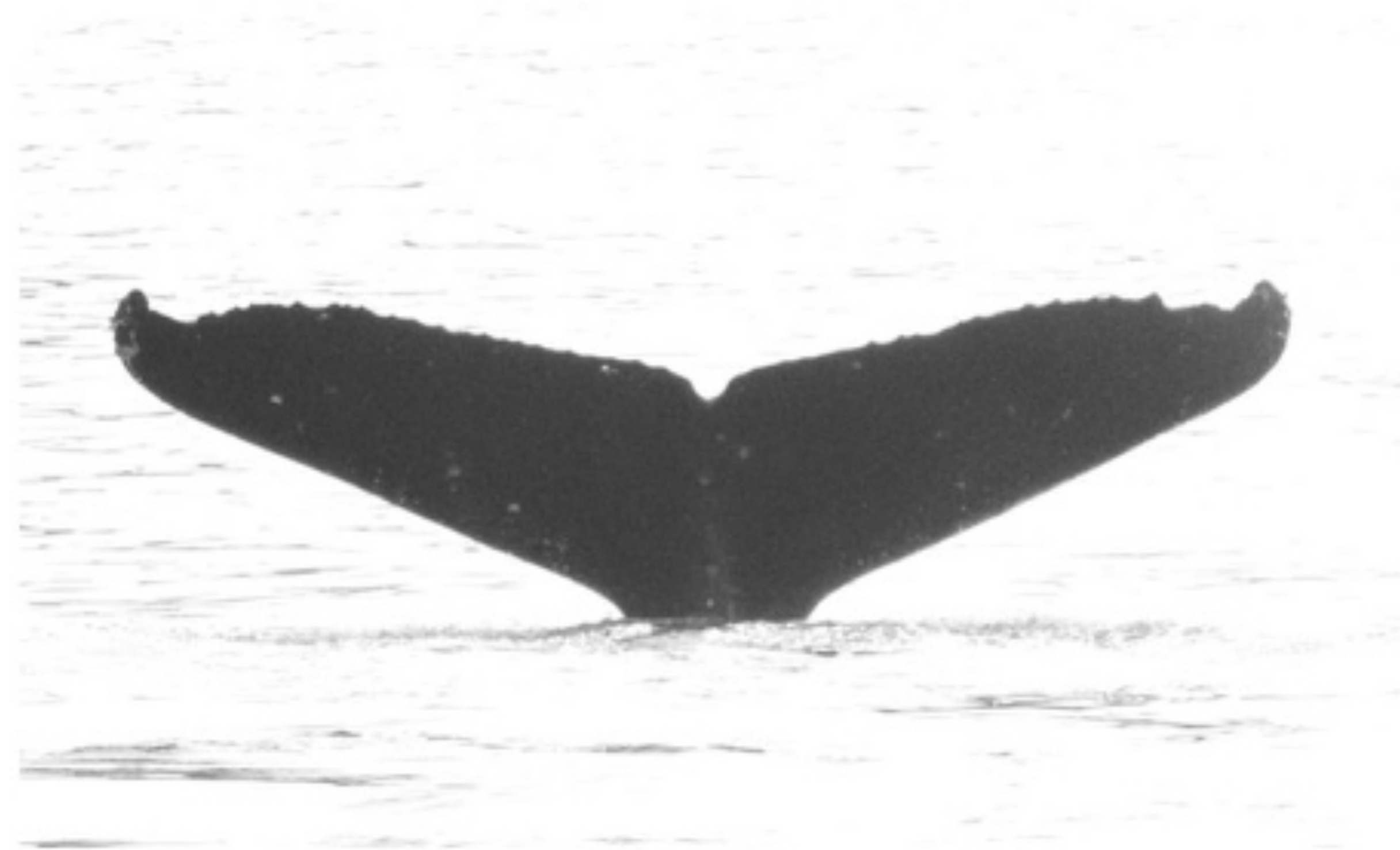
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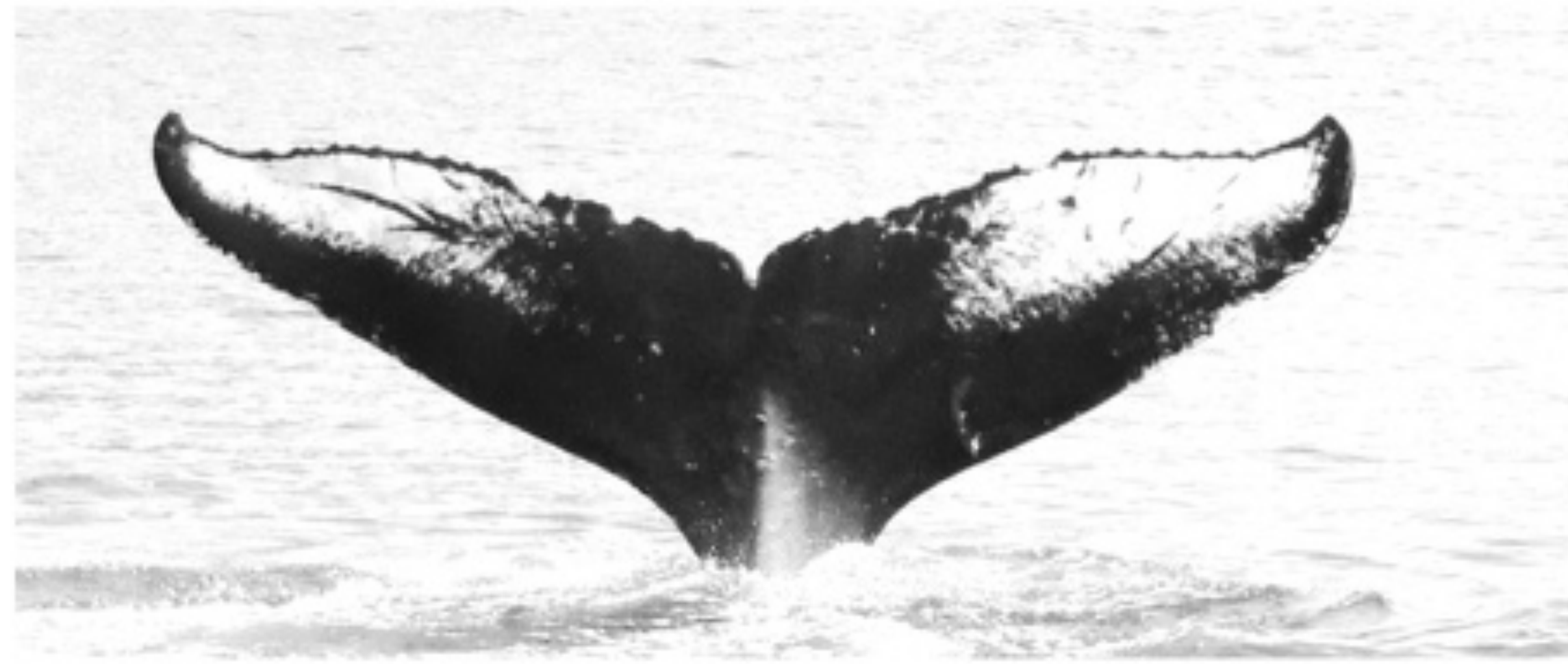
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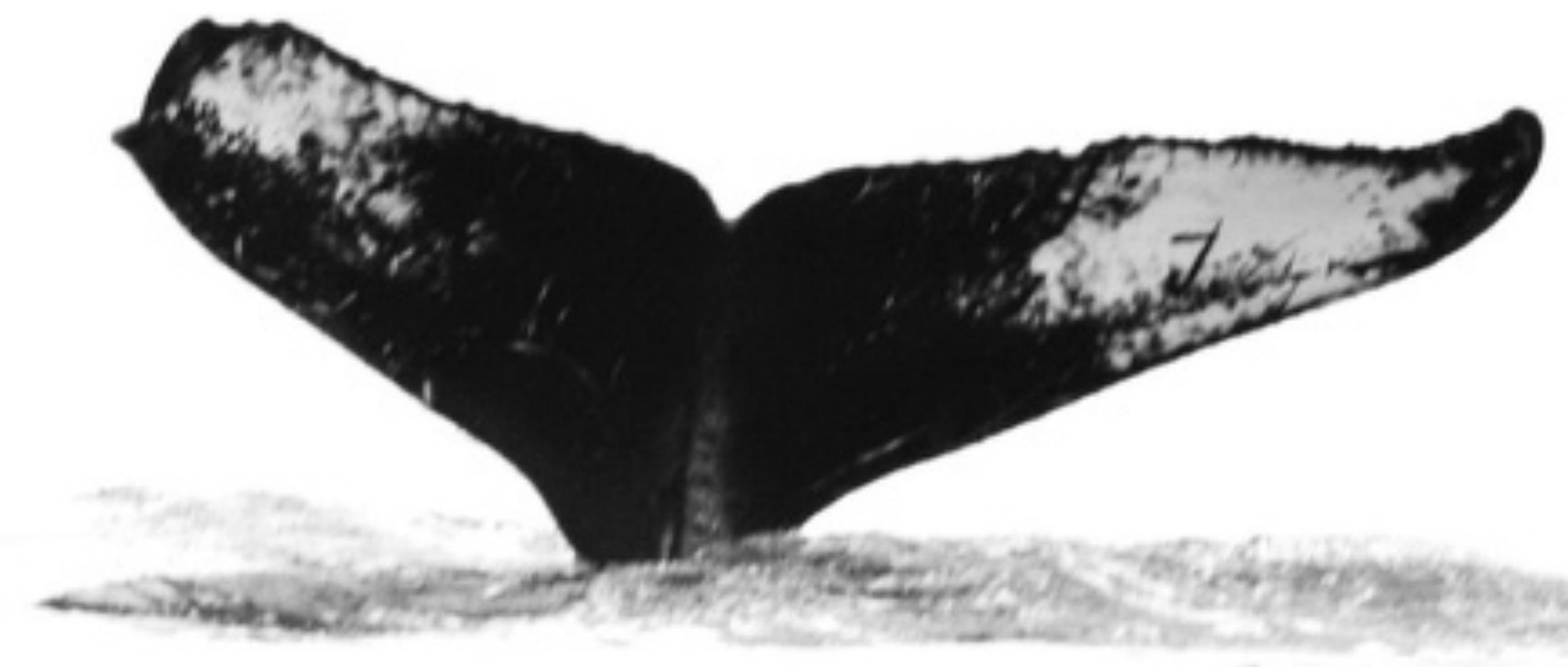
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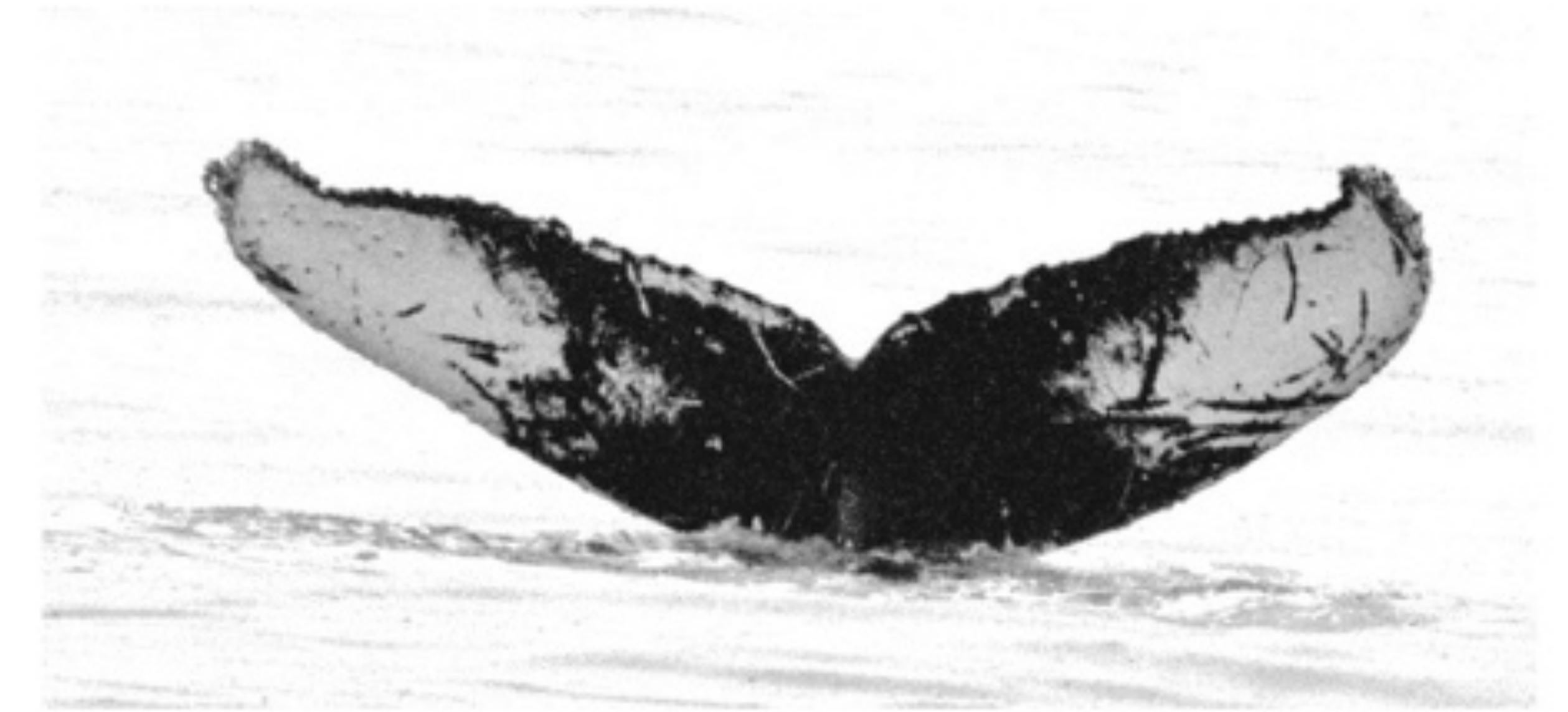
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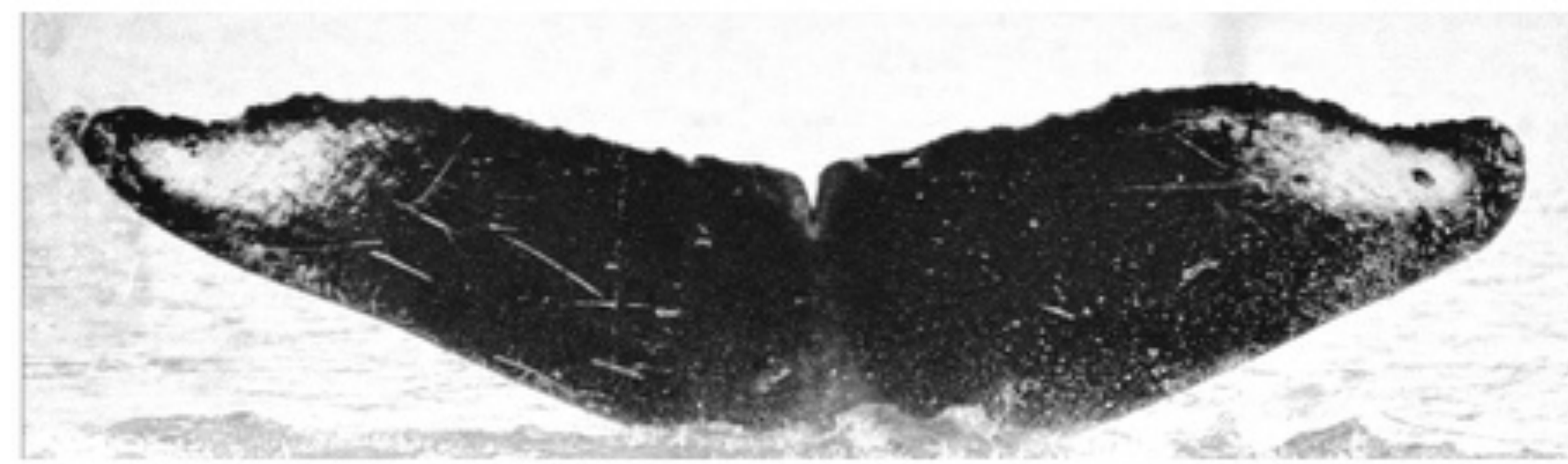
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KFY2 (Y145)



KFY3 (Z79)



KFY4 (Y76) F



KFY5 (Y98)



KFY6 (Y114)



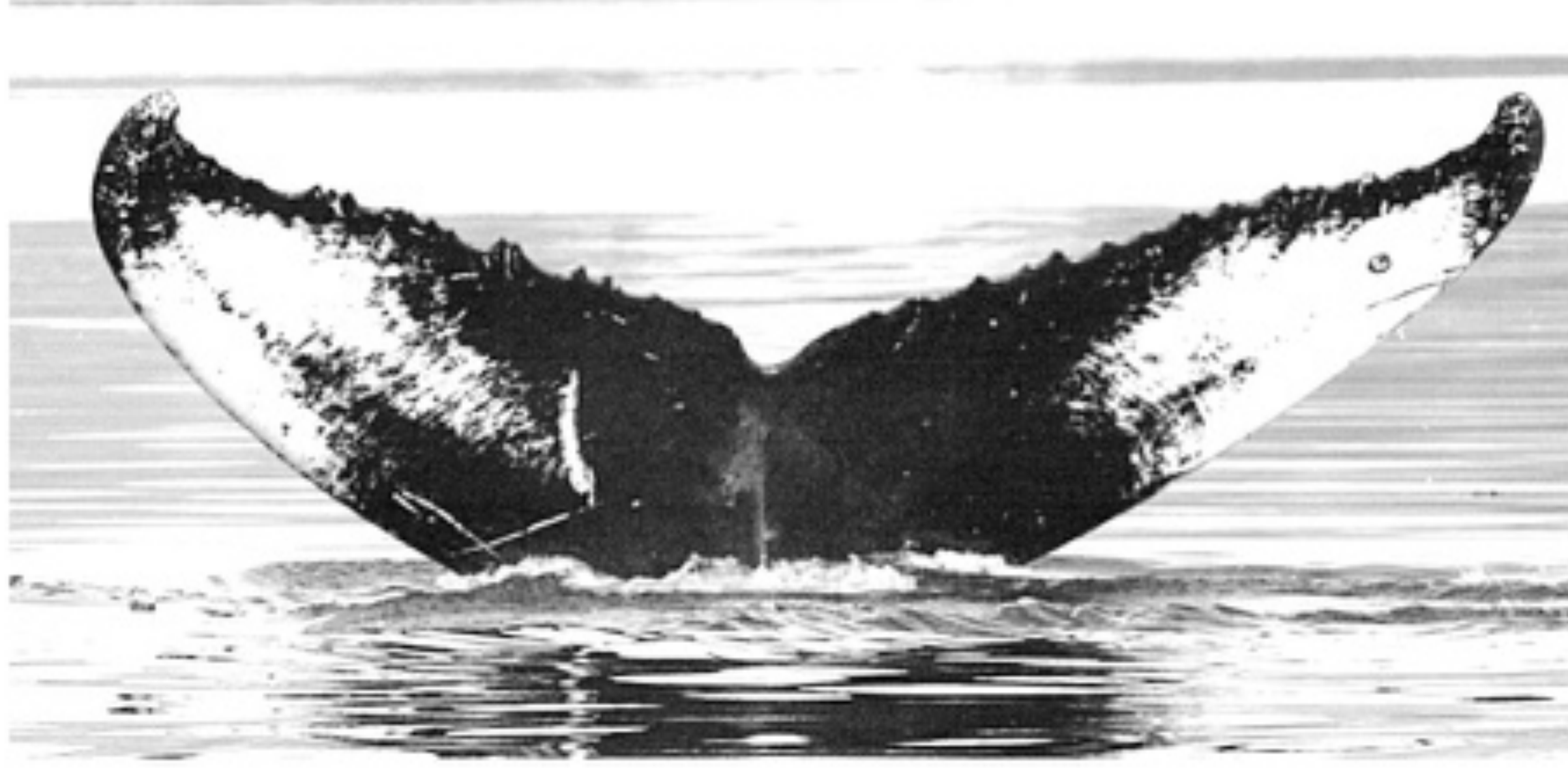
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KFY8



KFY9



KFY10 (Y2) F



KFY11



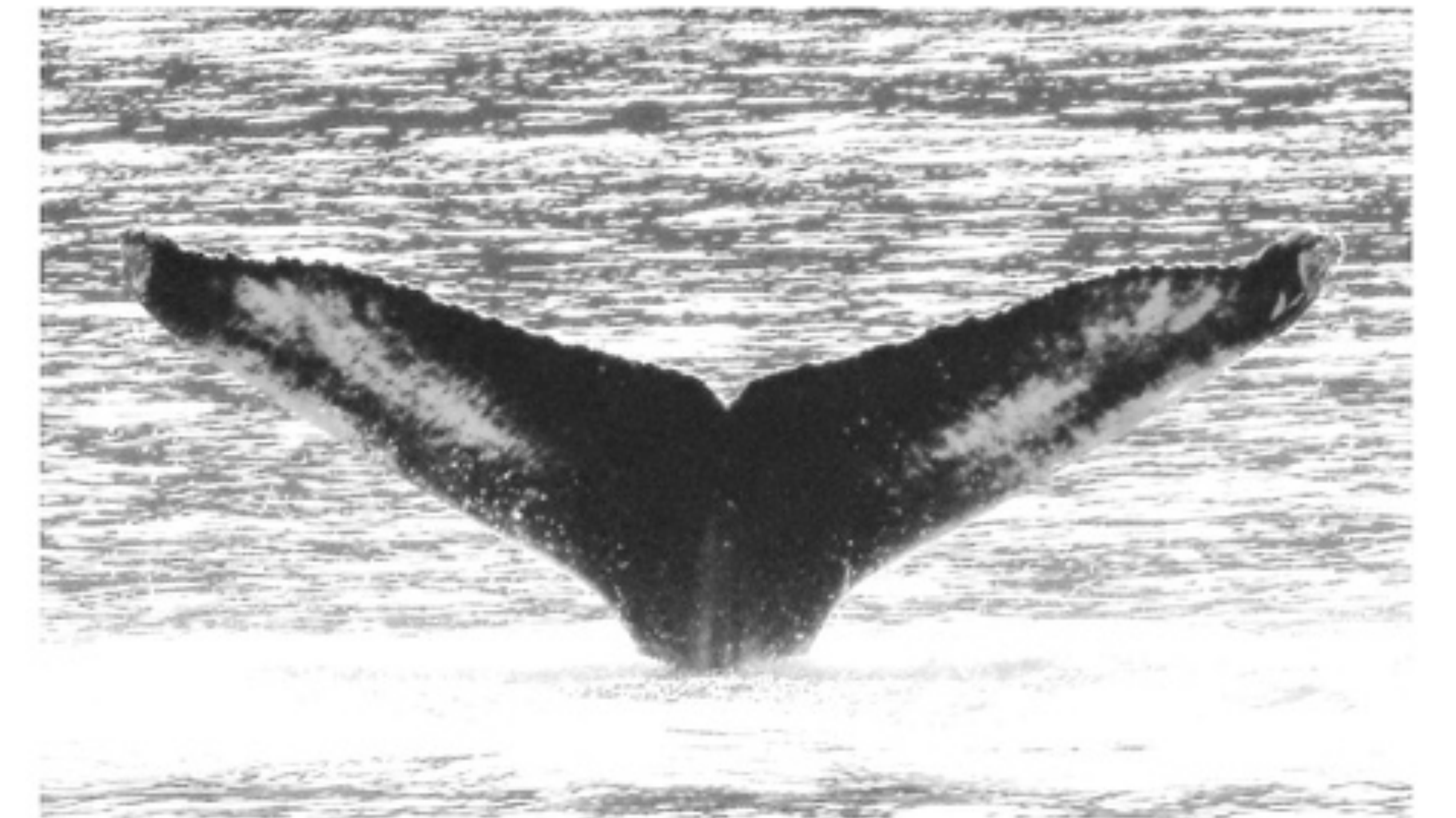
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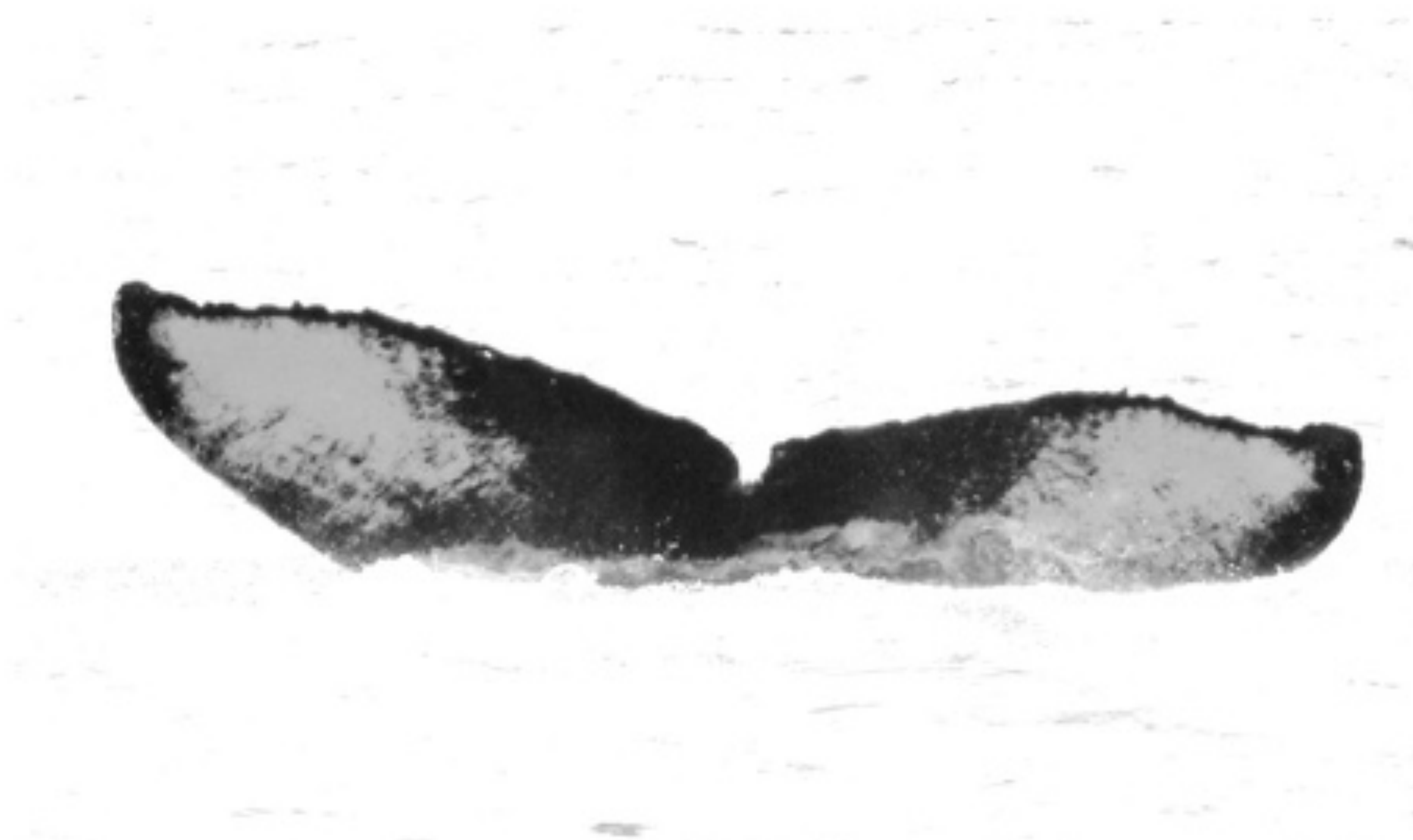
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KFY14 (Y161)



KFY15 (Y117)



KFY16



KFY17



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KFY19 (Z13)



KFY20



KFY21 (Y158)



KFY22



KFY23 (Z67)



KFY24 (Y49) F



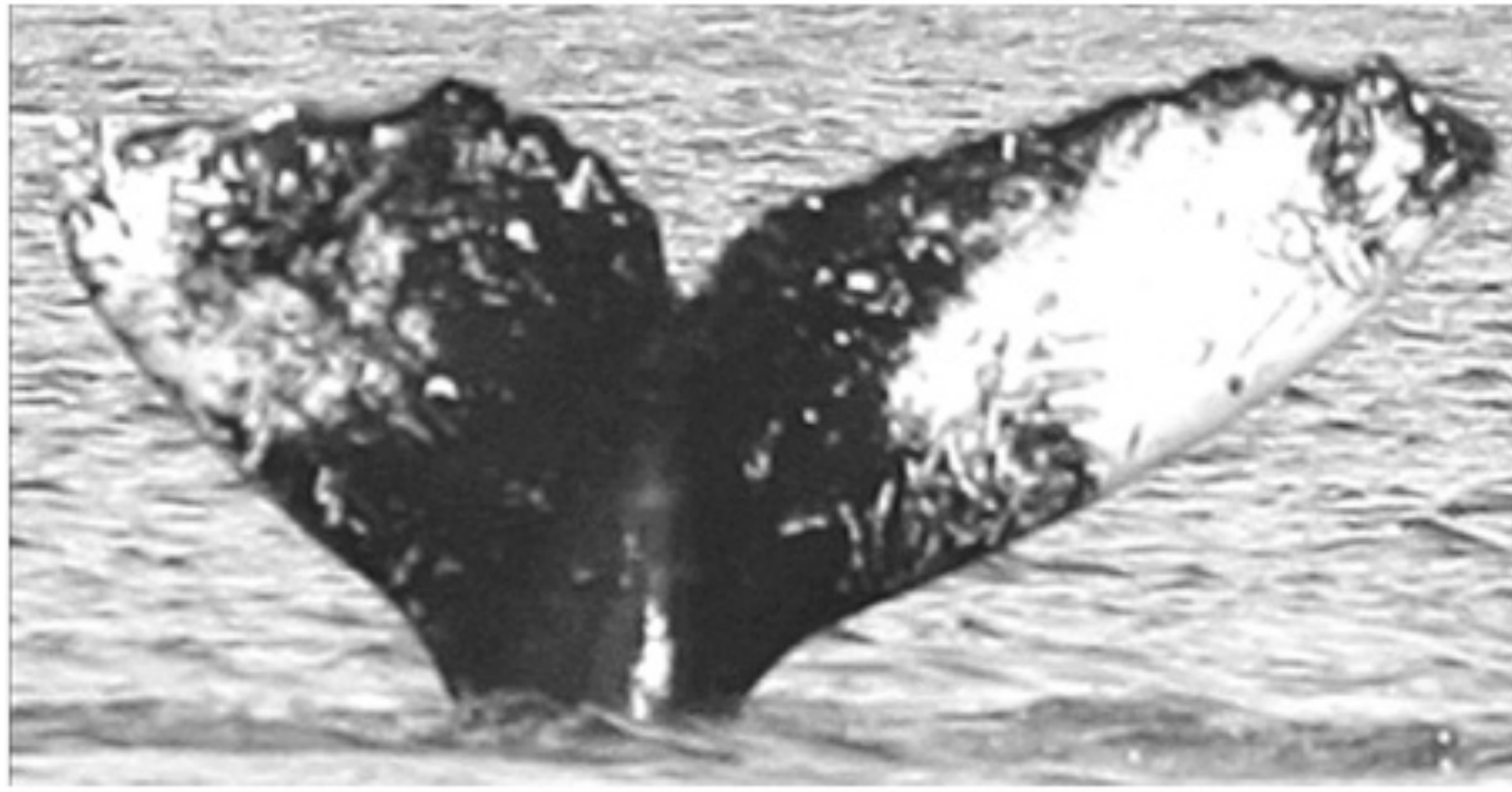
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KFY26



KFY27 (Z12) F



KFY28 (Y58)



KFY29



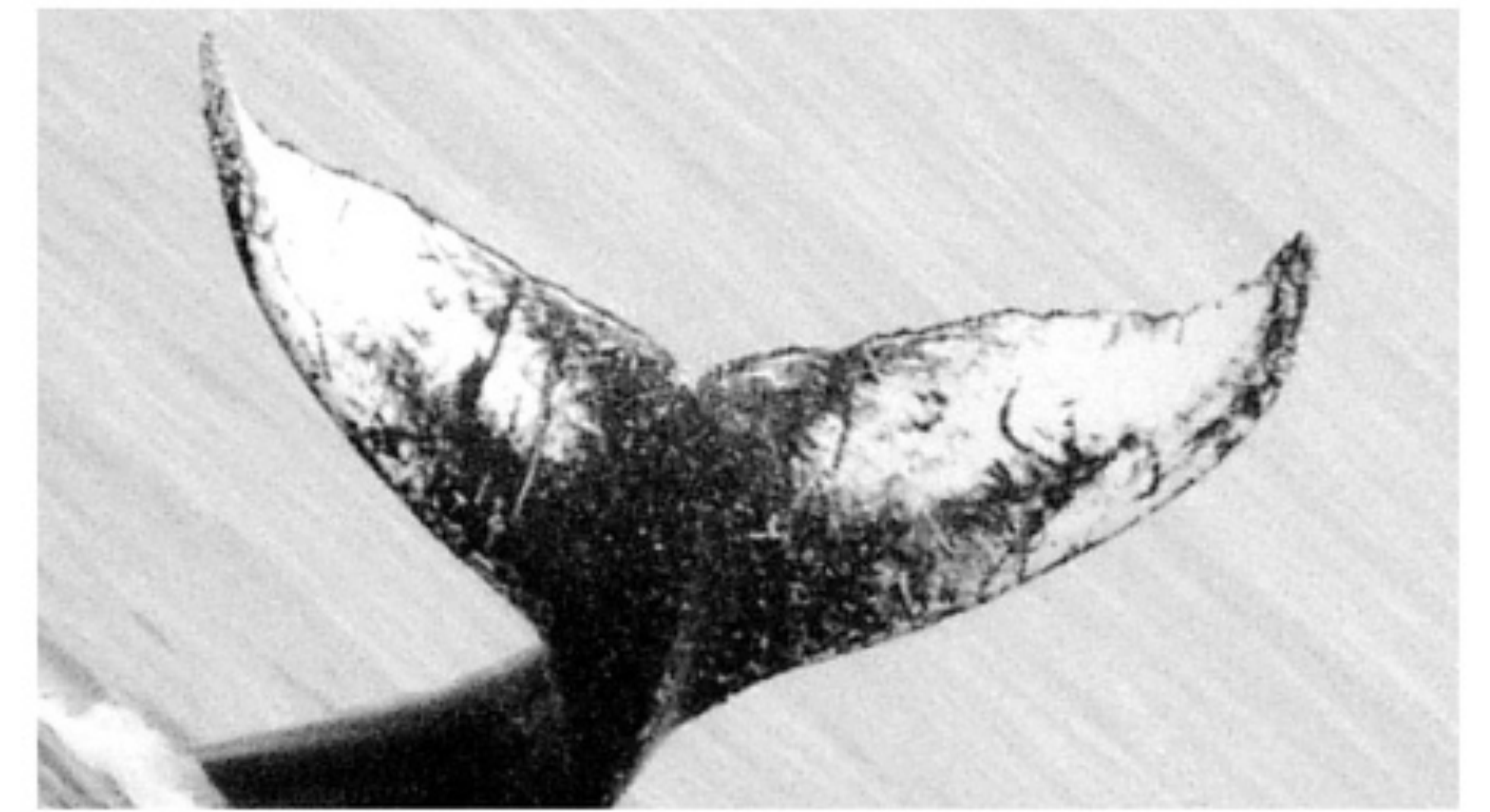
KFY30 (Y10) M



KFY31 (Y89) F



KFY32 (Y137)



KFY33 (Z49)



KFY34



KFY35



KFY36



KFY37 (Y87) M



KFY38 (Y5) F



KFY39 (Y113) F



KFY40 (Y62) M



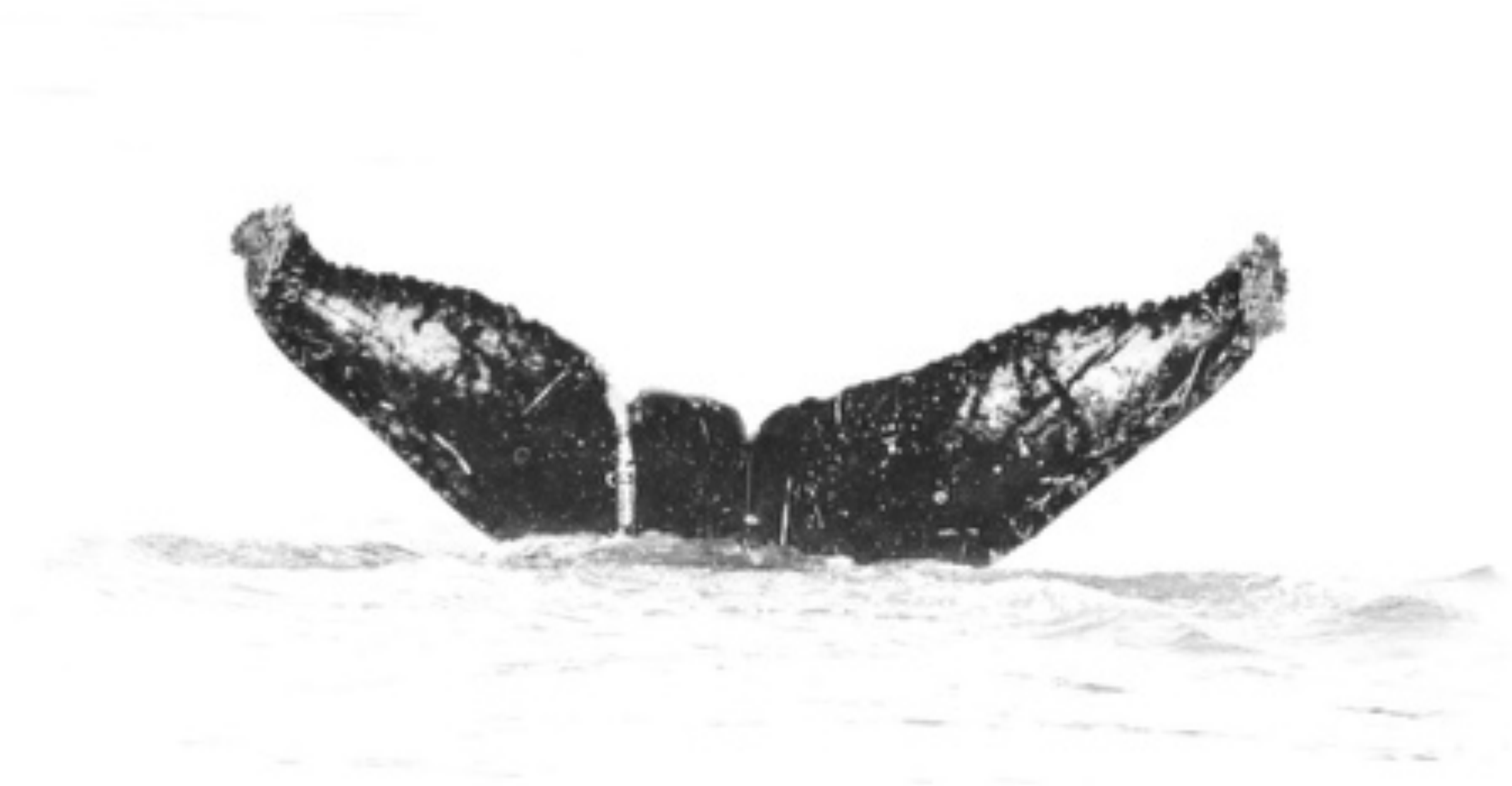
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KFY42 (Y38)



KFY43 (Z36)



KFY44



KFY45 (Y193)



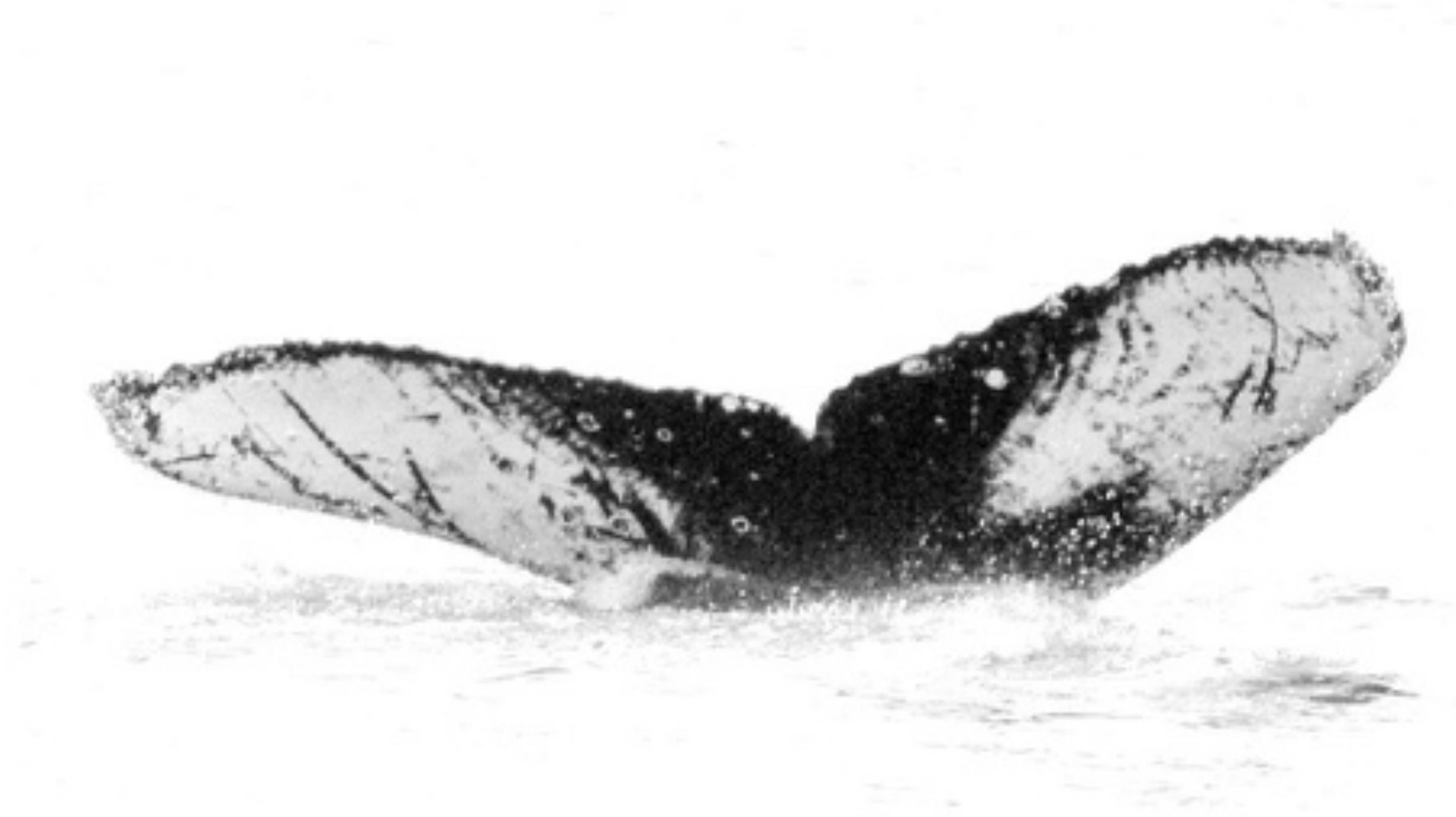
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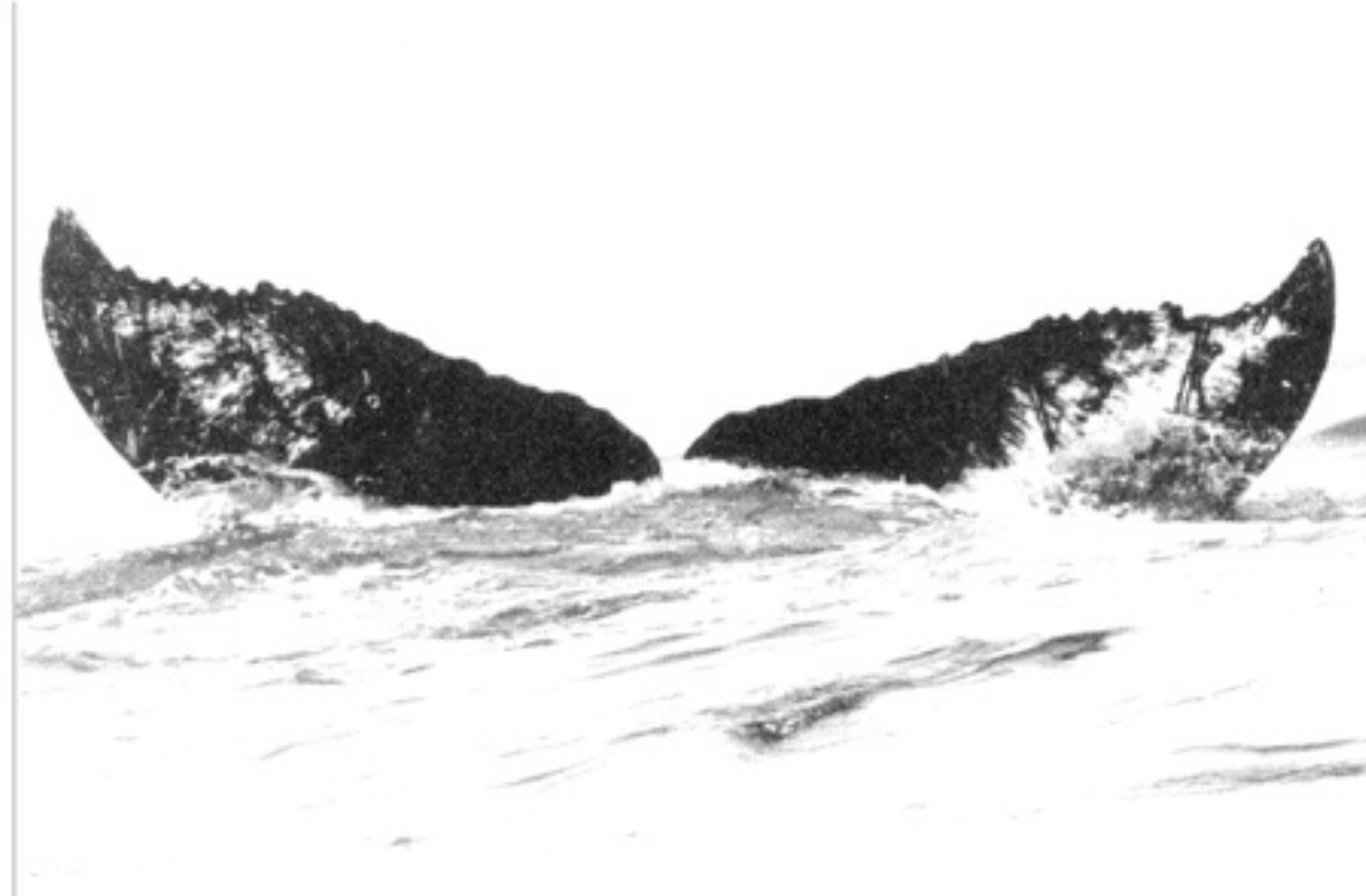
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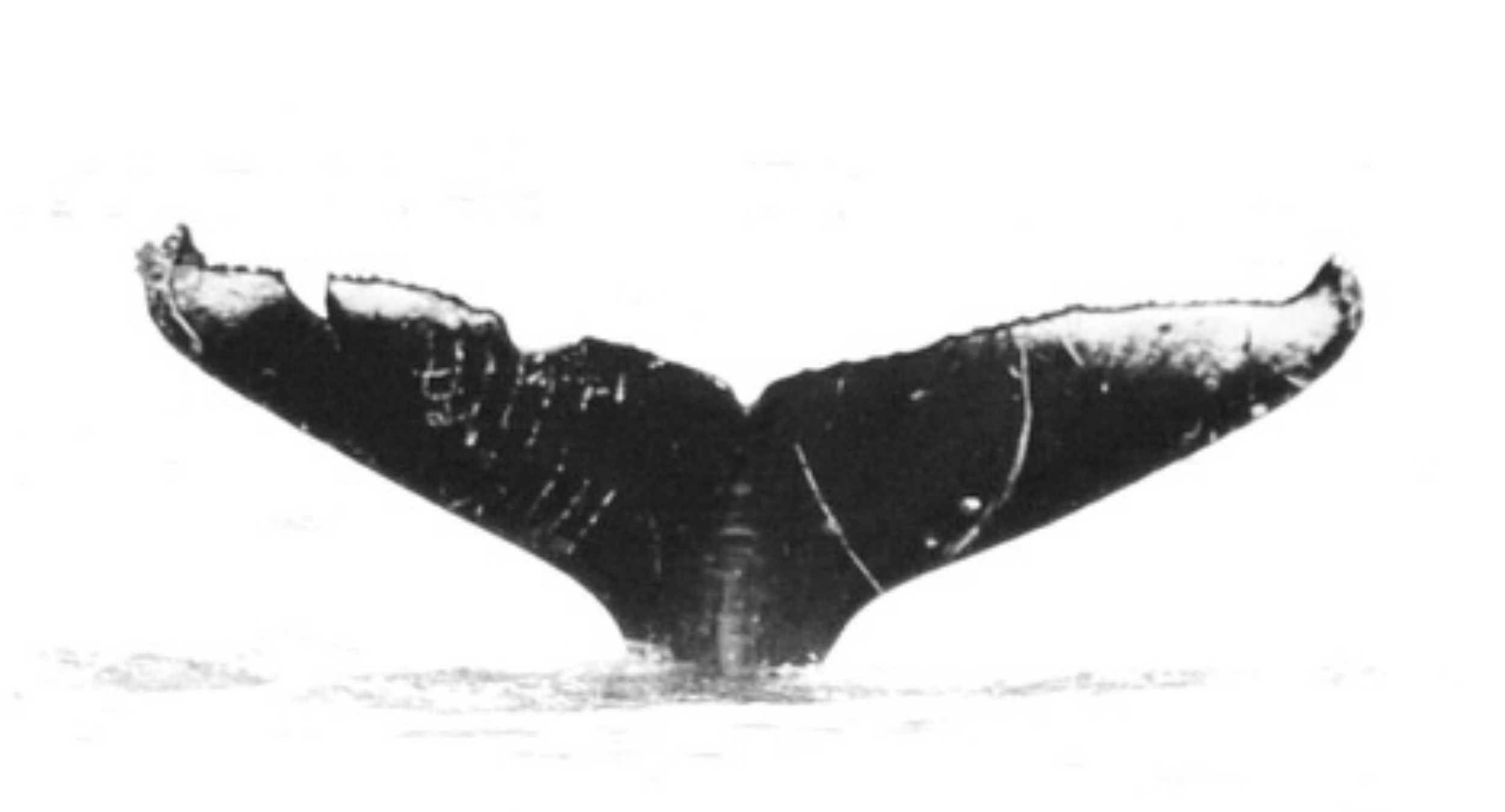
KFY48 (Y109)



KFY49



KFY50 (Y112)



KFY51 (Y141)



KFY52



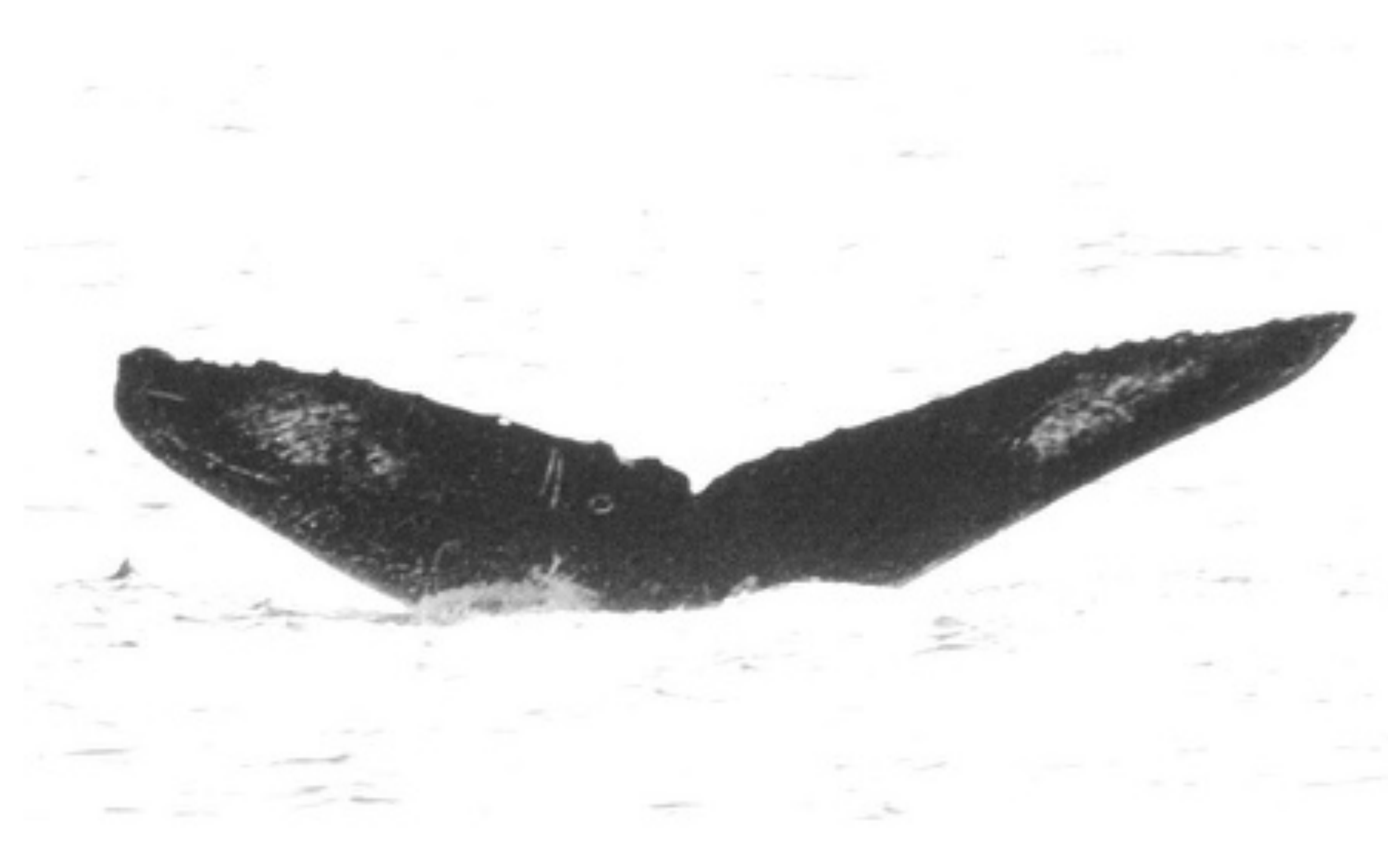
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KFY54



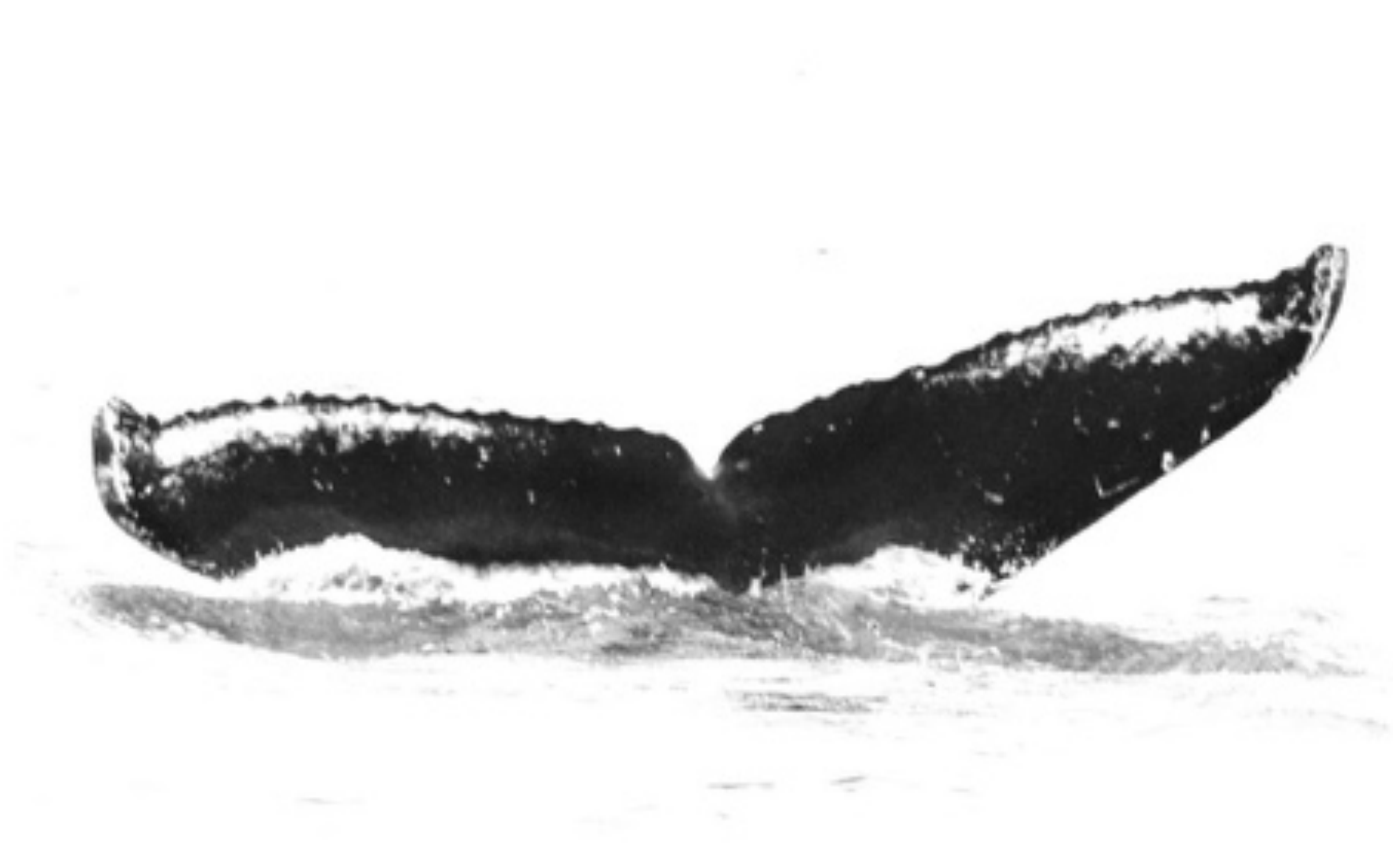
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KFY56 (Y142) F



KFY57 (Y167)



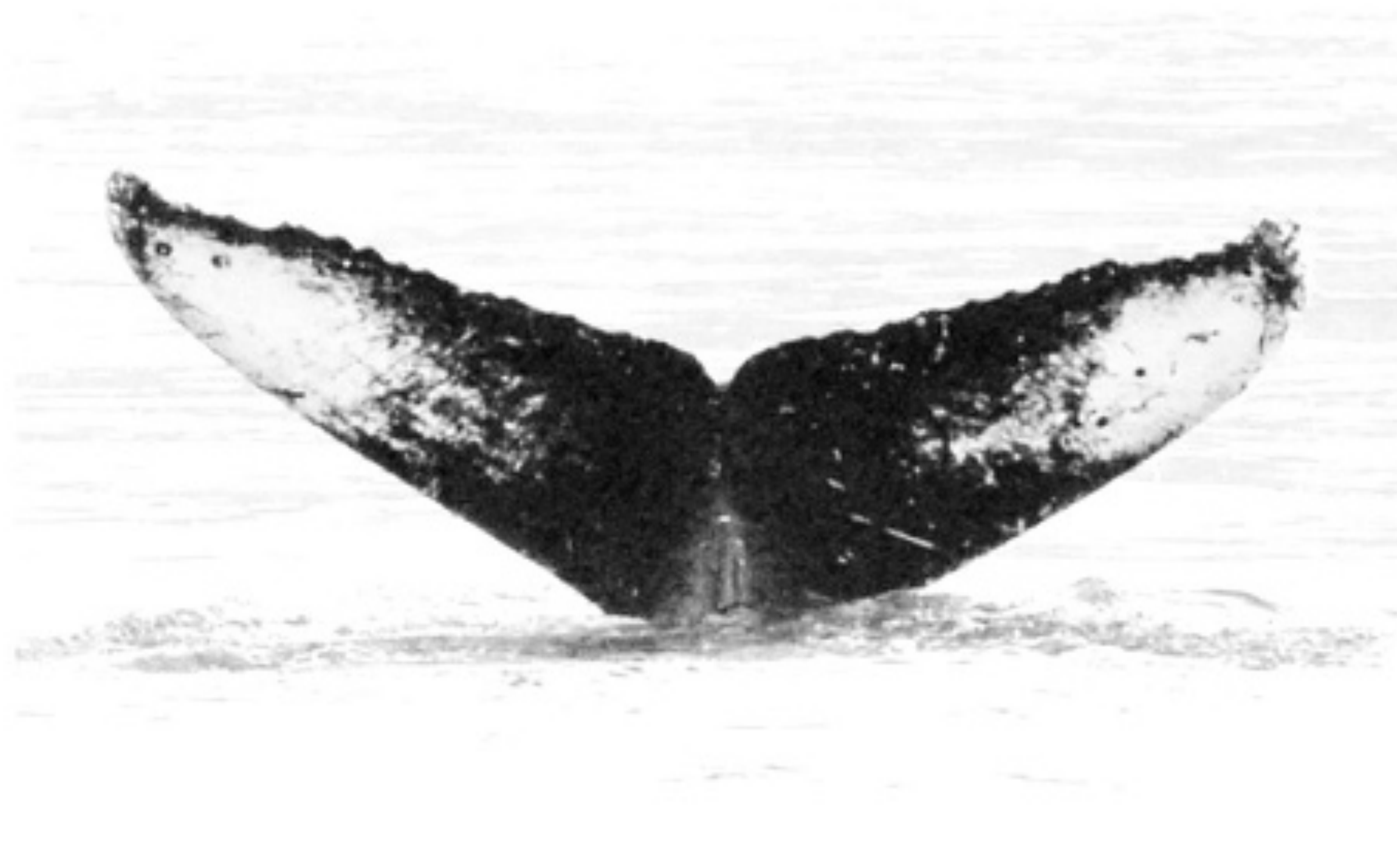
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KFY59 (Y166)



KFY60 (Y59)



KFY61



KFY62



KFY63 (Z50)



KFY64



KFY65 (Y174)



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KFY67 (Y79)



KFY68 (Y192)



KFY69



KFY70



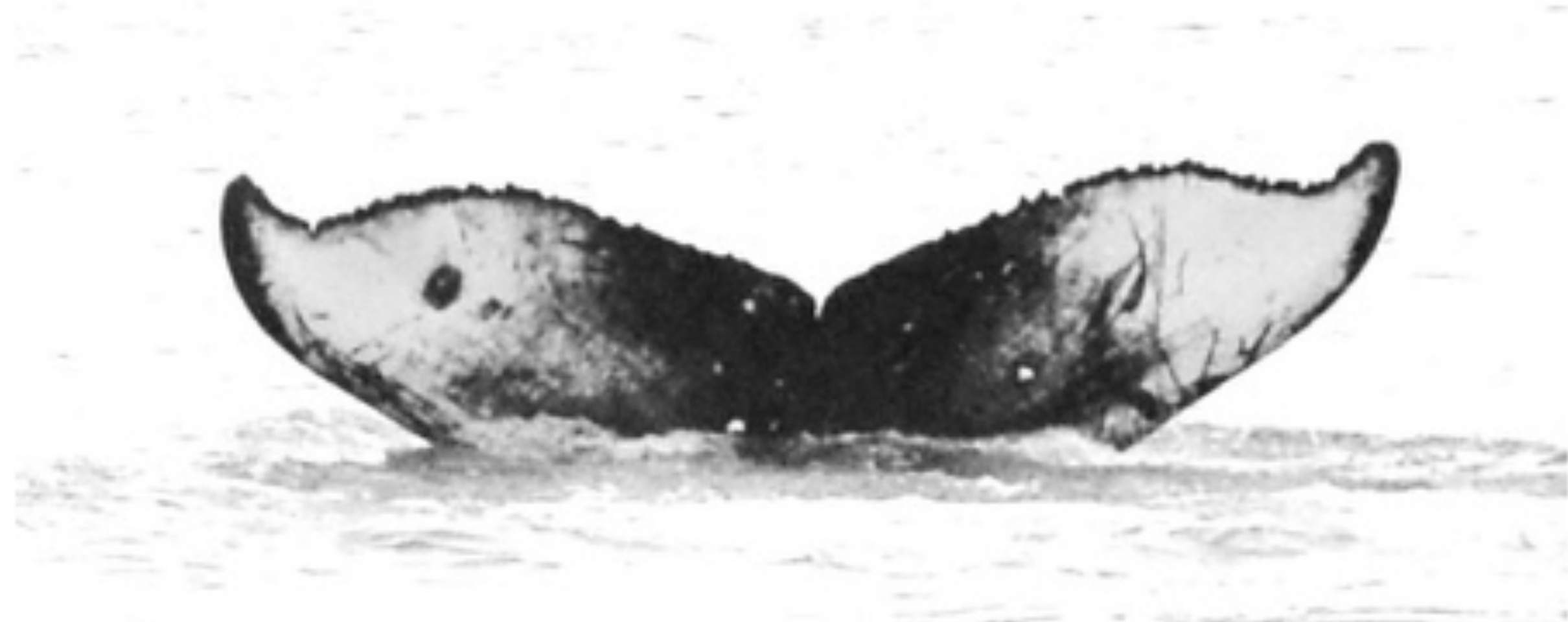
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KFY72



KFY73



KFY74



KFY75



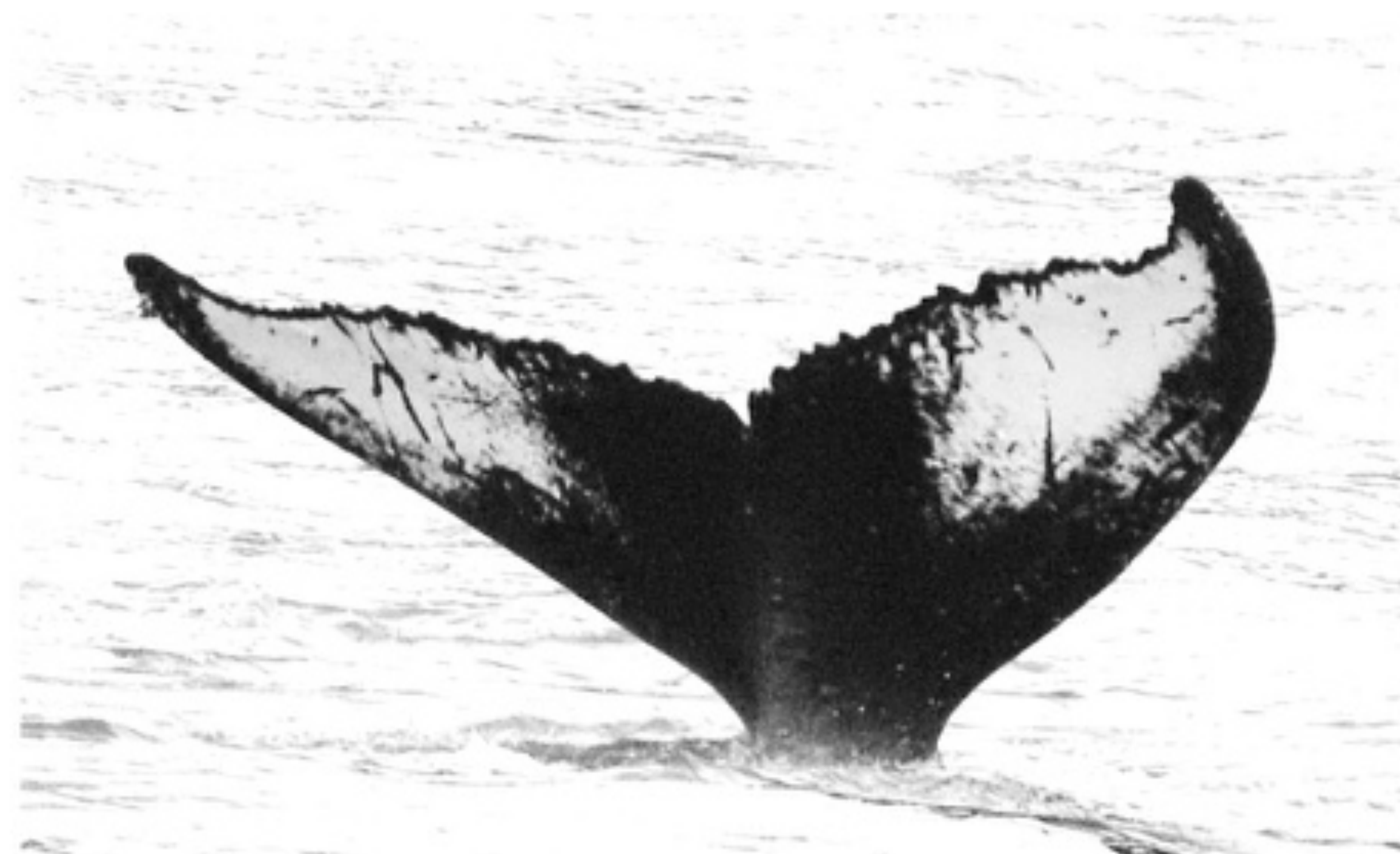
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KFY77



KFY78



KFY79 (Z84)



KFY80



KFY81



KFY82



KFY83



KFY84



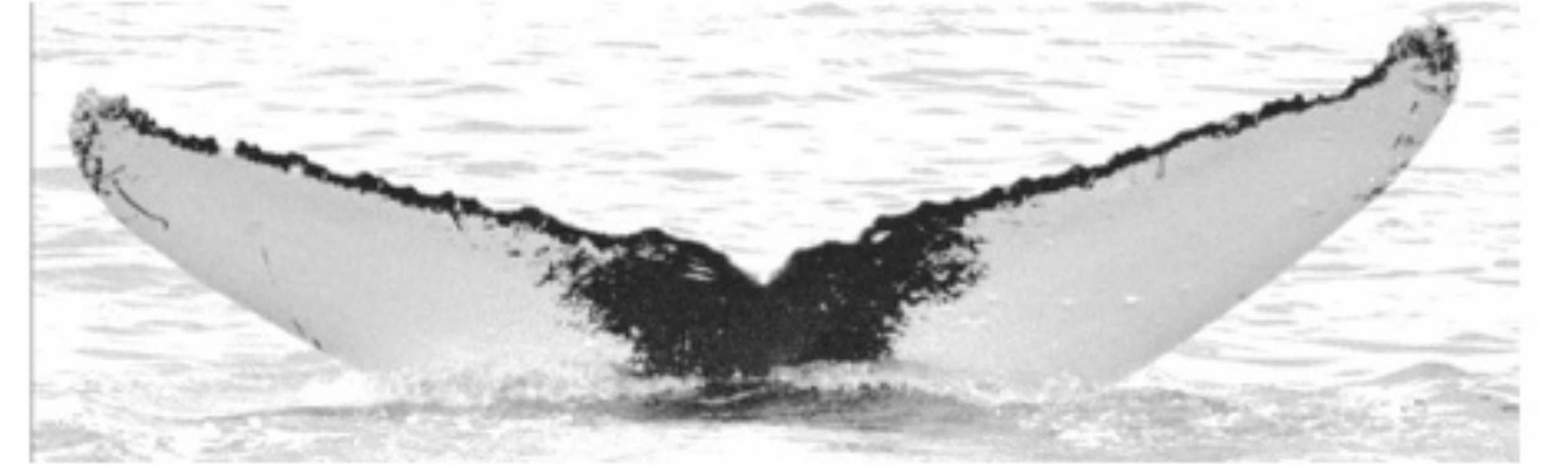
KFY85



KFZ1



KFZ2 (Z80)



KFZ3



KFZ4 (Z69)



KFZ5 (Z54)



KFZ6 (Z108)



KFZ7 (Z58)



KFZ8 (Z68)



KFZ9 (Z51)



KFZ10 (Z32)



KFZ11 (Z49)



KFZ12 (Z110)



KFZ13 (Z70)



KFZ14 (Z34)



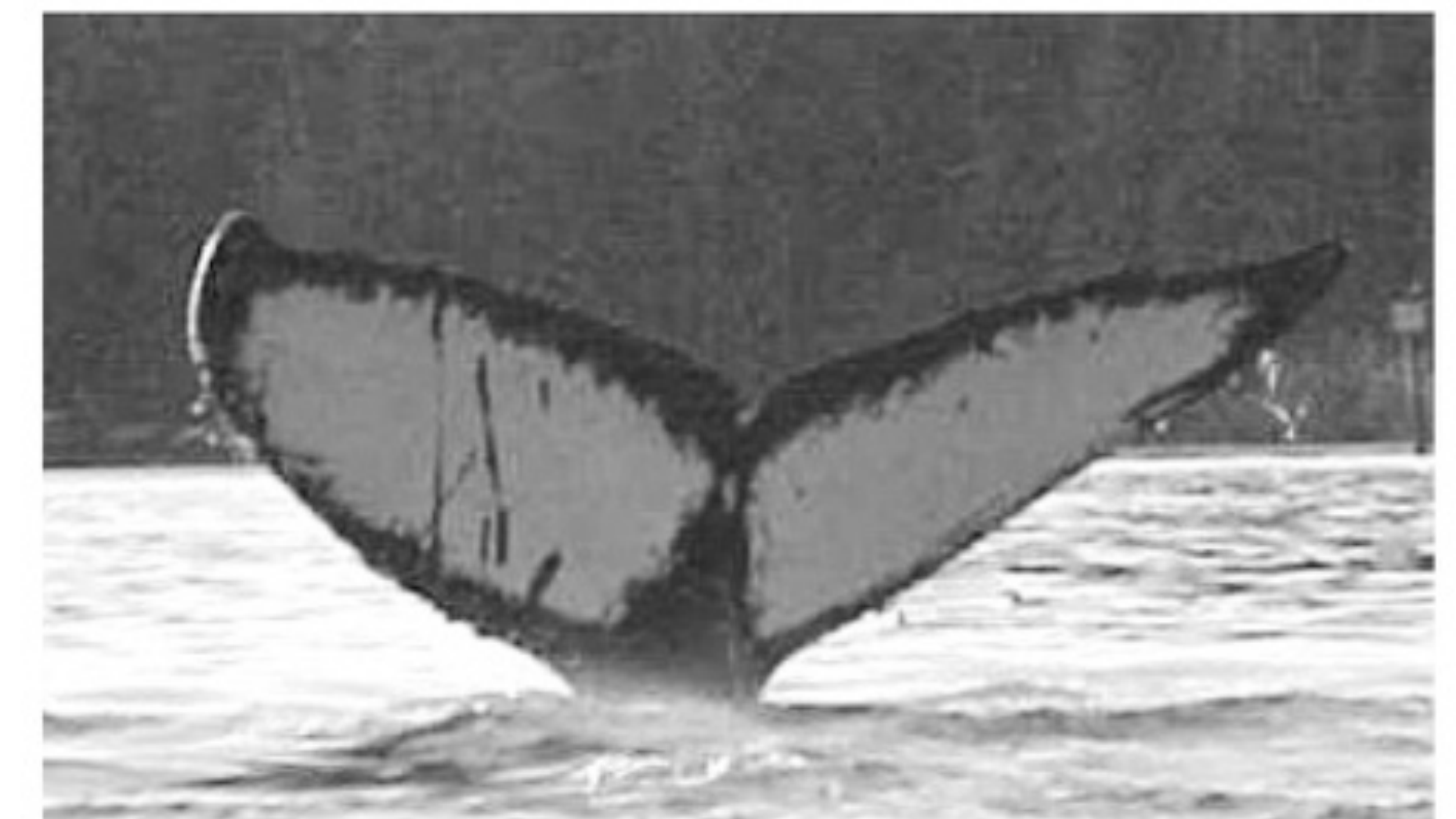
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KFZ17 (Z89)



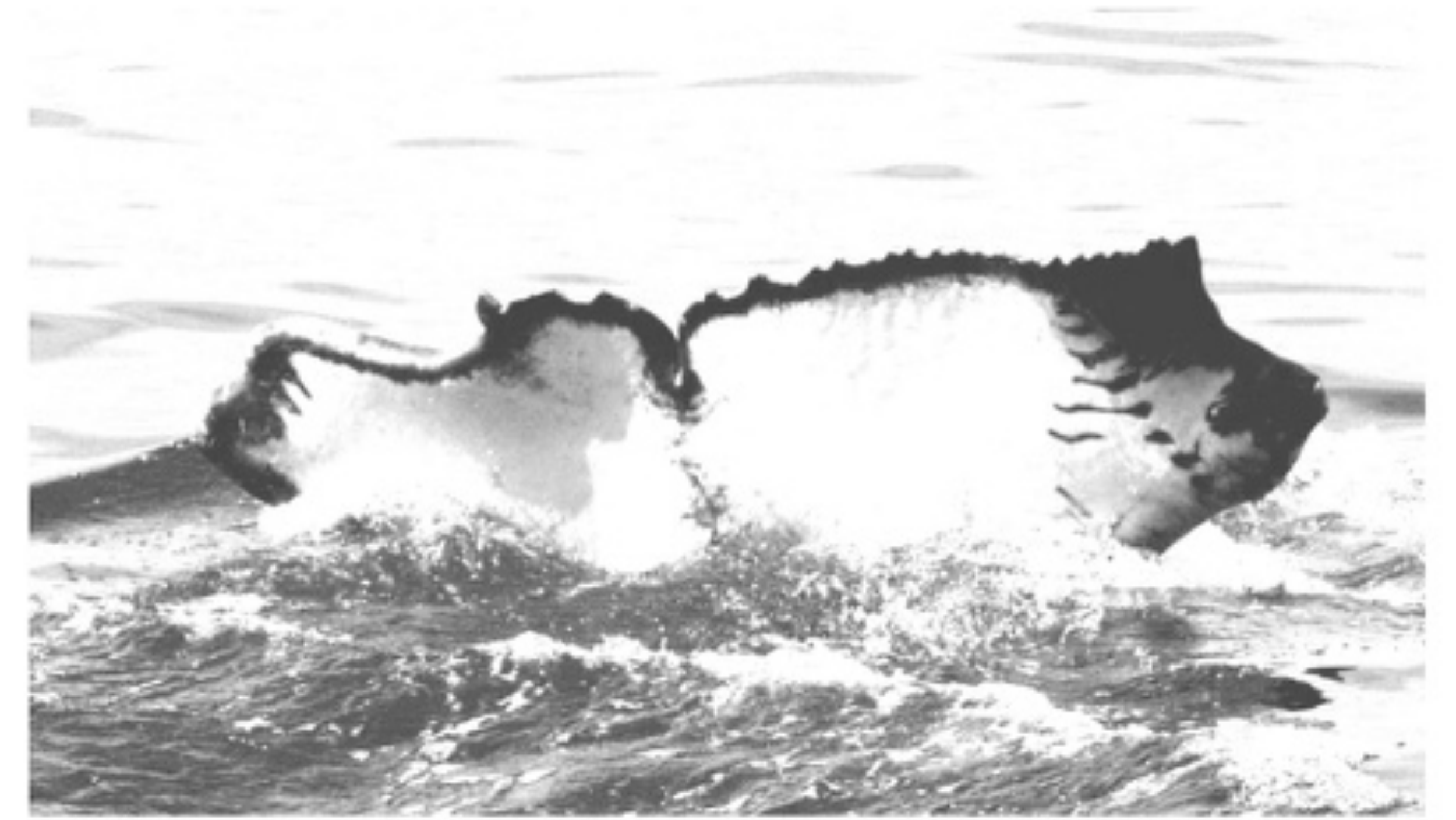
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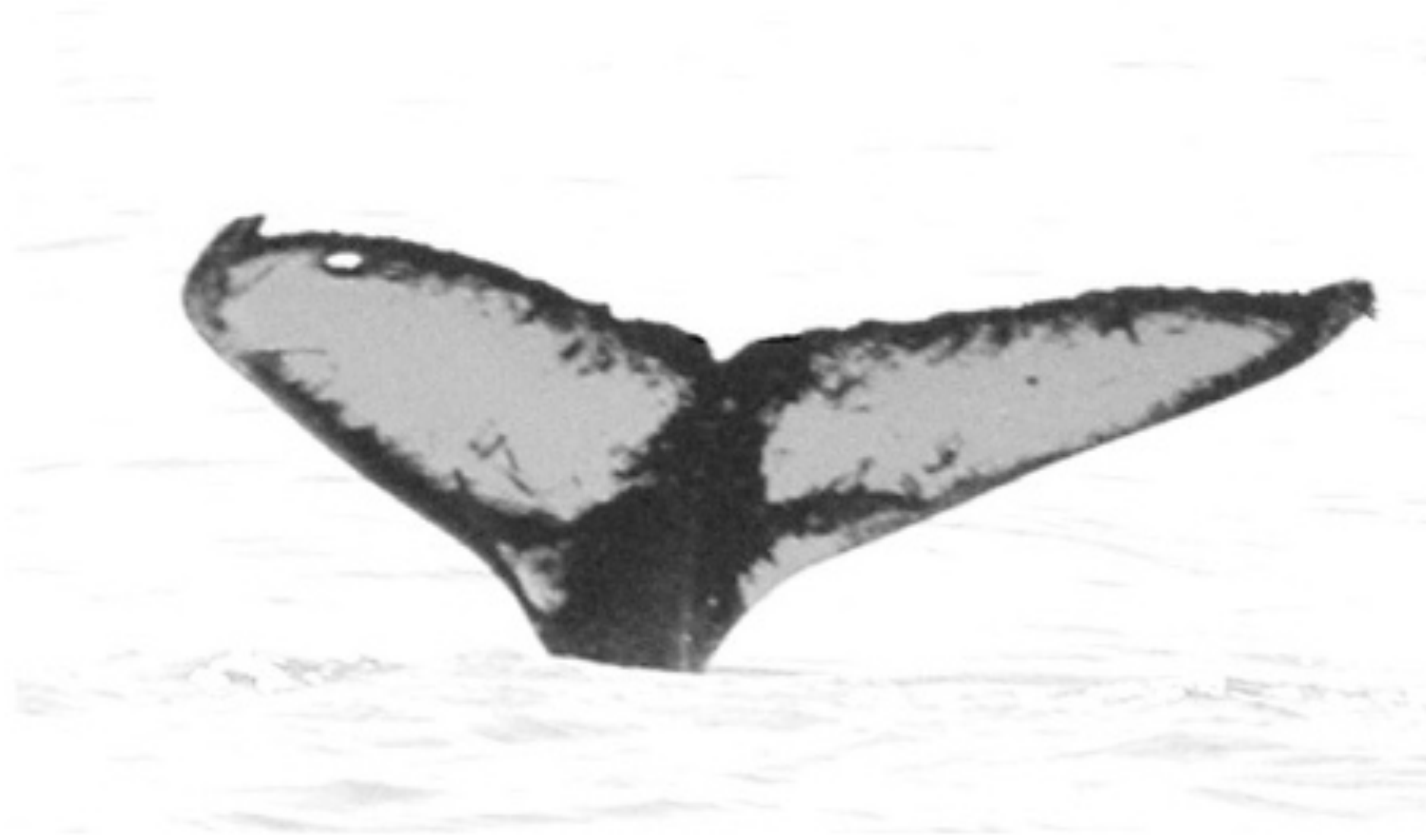
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KFZ20 (Z109)



KFZ21 (Z115)



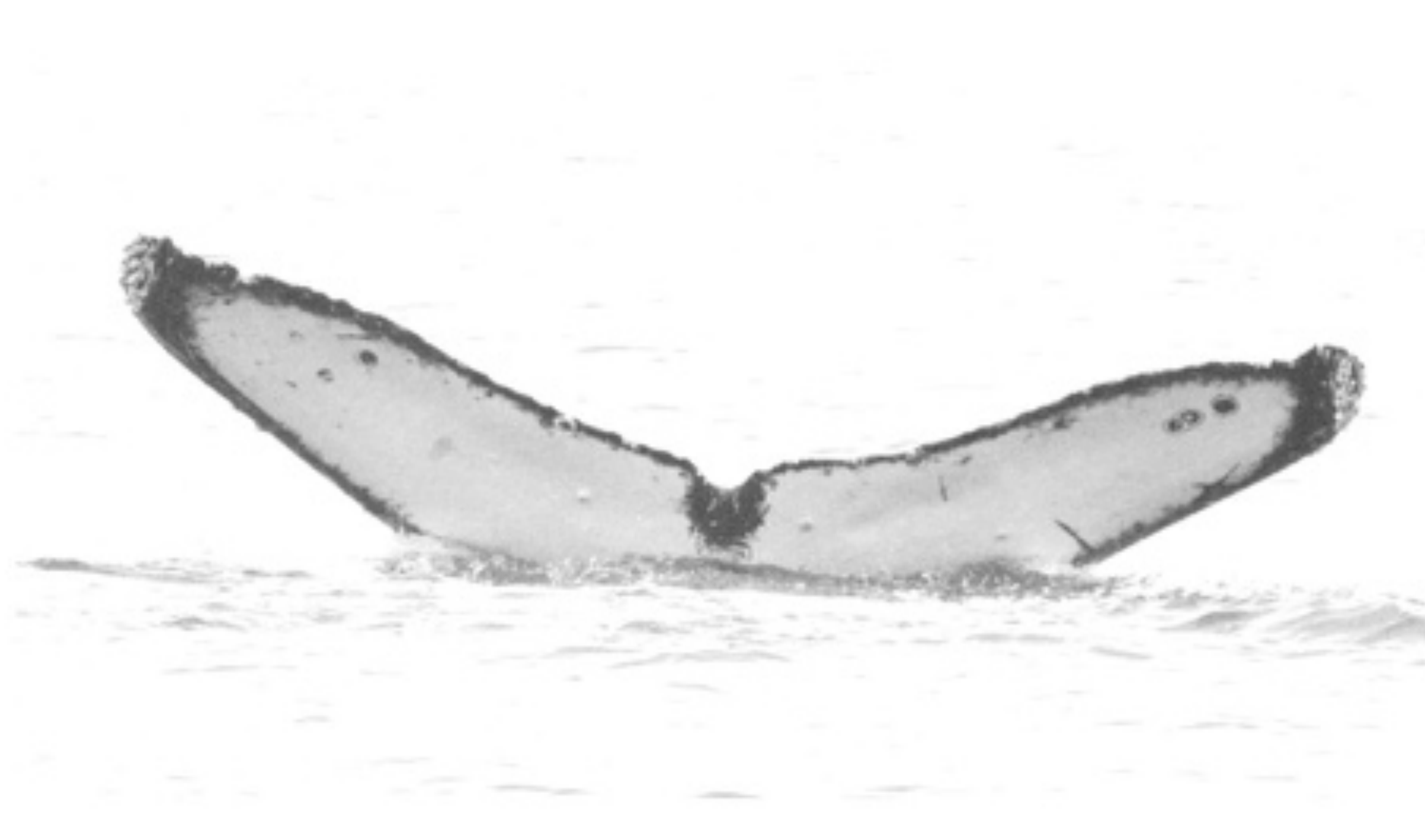
KFZ22 (Z93) F



KFZ23 (Z114)



KFZ24 (Z111)



KFZ25 (Z120)



KFZ26 (Z122)



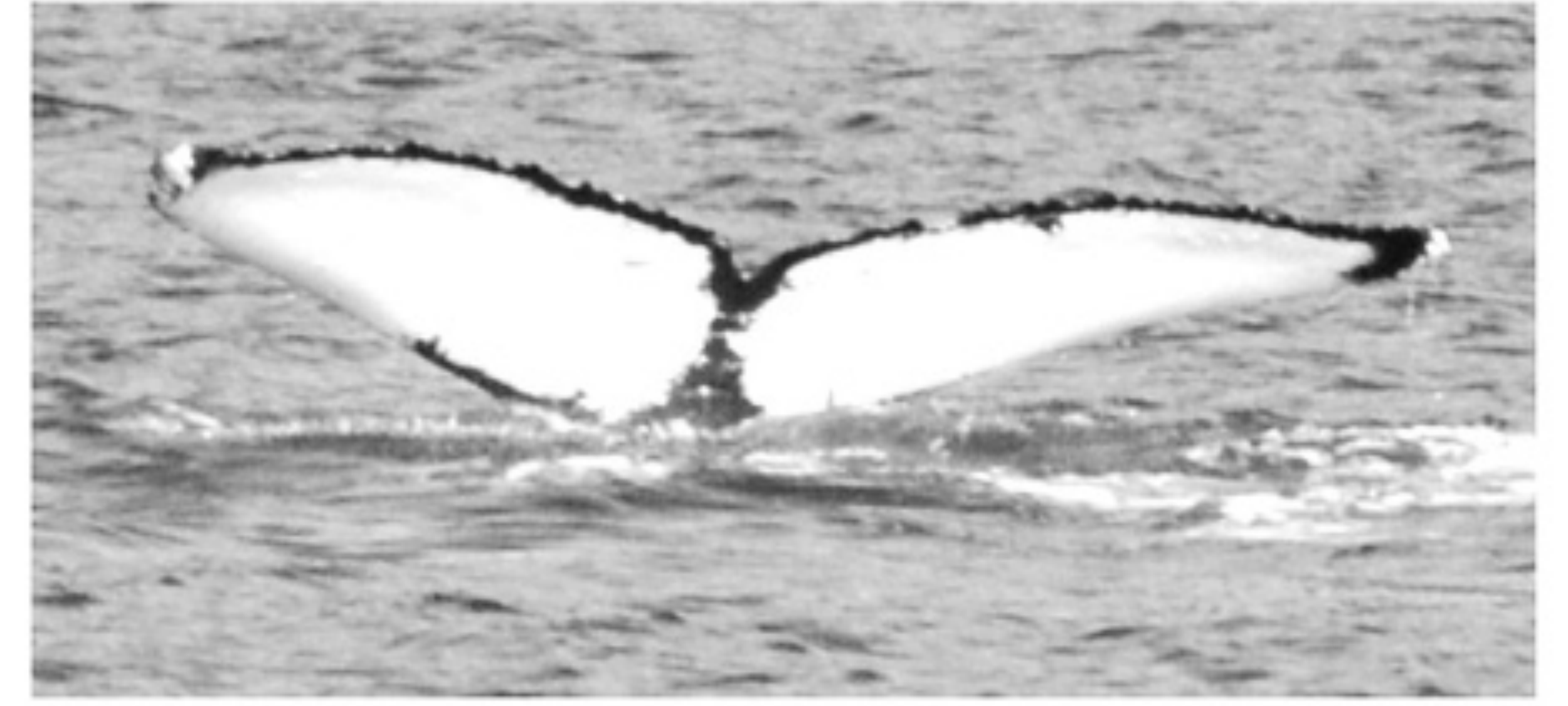
KFZ27



KFZ28 (Z15) F



KFZ29



KFZ30



KFZ31



KFZ32 (Z87)



KFZ33 (Z41) F



KFZ34 (Z2) F



KFZ35 (Z37)



KFZ36 (Z59)



KFZ37 (Z92)



KFZ38 (Z29)



KFZ39



KFZ40 (Z99)



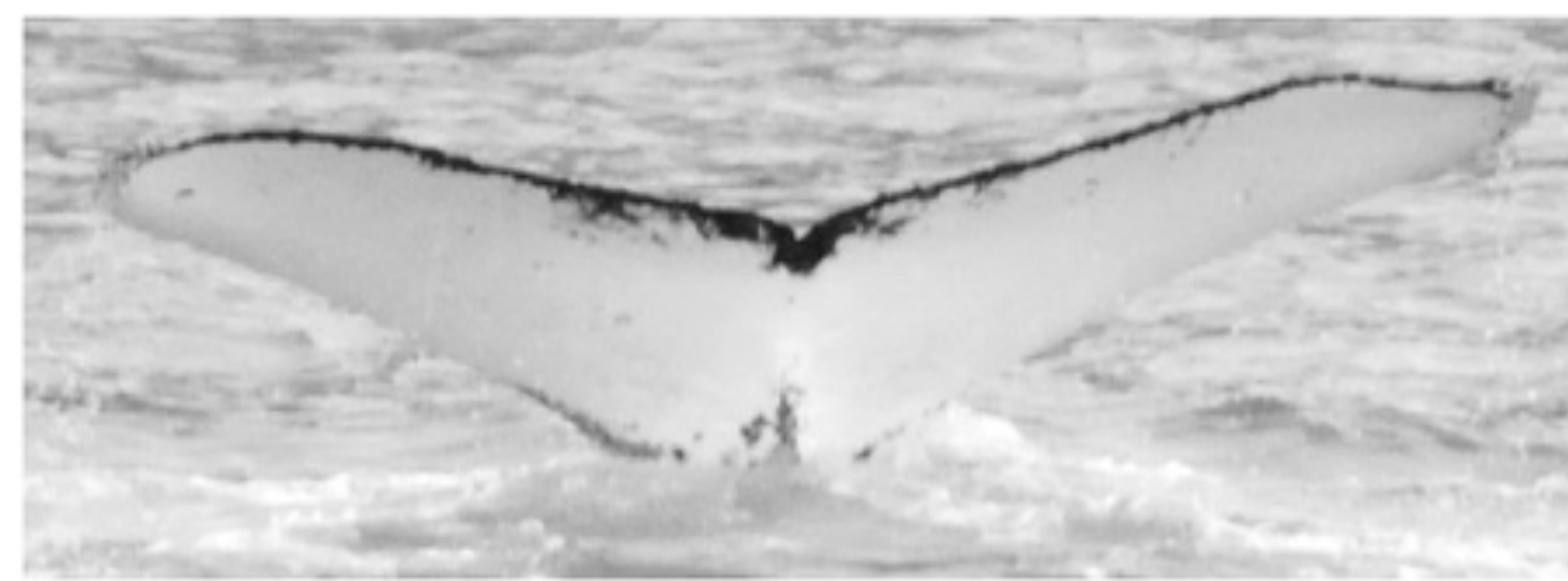
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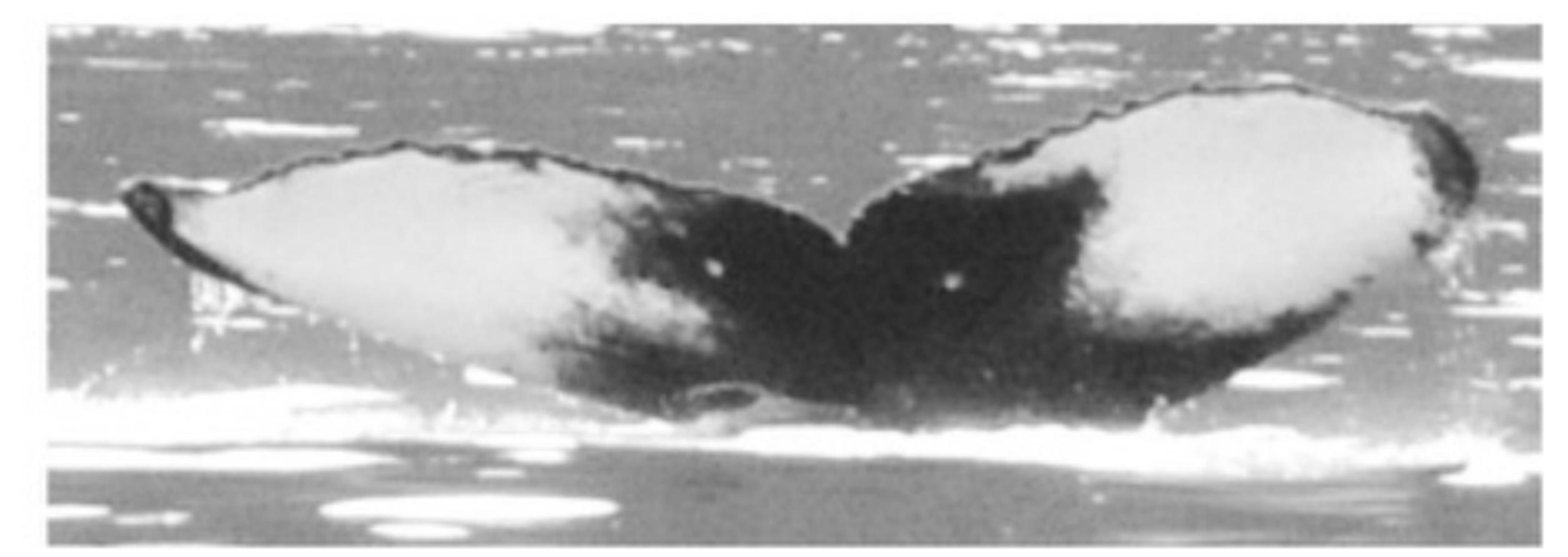
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KFZ43



KFZ44 (Z95)



KFZ45



KFZ46 (Z113)



KFZ47



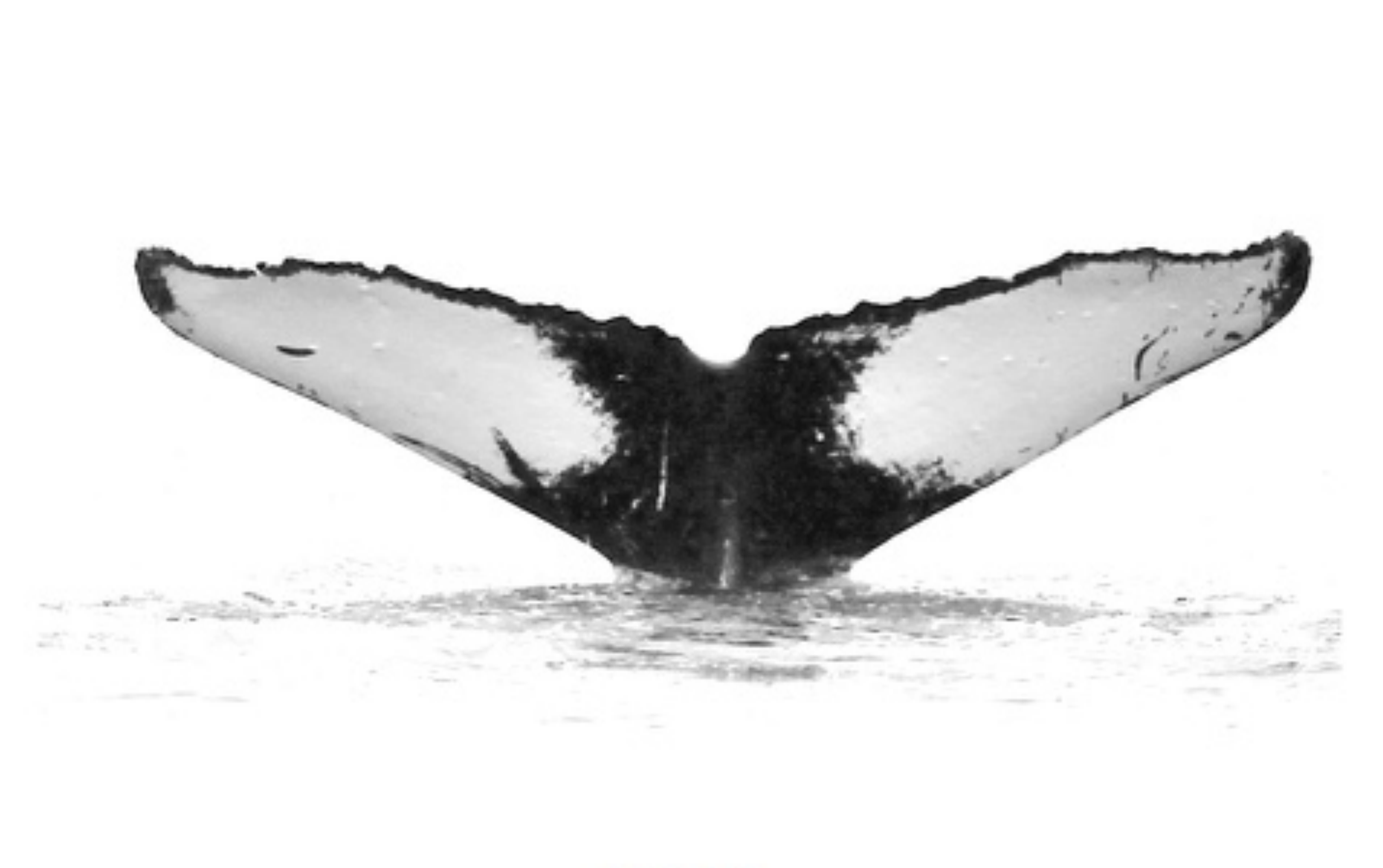
KFZ48 (Z64)



KFZ49



KFZ50



KFZ51



KFZ52



KFZ53



KFZ54