Supporting Information S1. Photographs of the new records presented in this study.

S1a. *Balaenoptera brydei* from Madeira (Portugal)

Data provider: Filipe Alves, CIIMAR-Madeira / Oceanic Observatory of Madeira

Individual local ID: OOM_Bbr051

Photographer: Nicolau Abreu

S1b. *Balaenoptera brydei* from Madeira (Portugal)

Data provider: Filipe Alves, CIIMAR-Madeira / Oceanic Observatory of Madeira

Individual local ID: OOM_Bbr052

Photographer: Nicolau Abreu

S1c. *Balaenoptera borealis* from Berkeley Sound (Falkland Islands)

Data provider: Caroline Weir, Falklands Conservation

Individual local ID: FCON1121-1

Photographer: Caroline Weir

S1d. *Balaenoptera physalus* from Long Island (USA)

Data provider: Arthur H. Kopelman, Coastal Research and Education Society of Long Island

Individual local ID: (Photos AHK_4643and AHK_7279)

Photographer: Arthur H. Kopelman

S1e. *Balaenoptera physalus* from Long Island (USA)

Data provider: Arthur H. Kopelman, Coastal Research and Education Society of Long Island

Individual local ID: (Photo AHK_9013)

S1f. *Delphinus delphis* from Hauraki Gulf (New Zealand)

Data provider: Krista Hupman, Massey University

Individual local ID: C877

Photographer: Krista Hupman

S1g. *Delphinus delphis* from Hauraki Gulf (New Zealand)

Data provider: Krista Hupman, Massey University

Individual local ID: C1201

Photographer: Krista Hupman

S1h. *Delphinus delphis* from Hauraki Gulf (New Zealand)

Data provider: Kelly J. Robinson, SMRU, University of St Andrews

(http://www.kjrwildlifephotography.com/)

Individual local ID: (Photo NZ13_DSC0243)

Photographer: Kelly J. Robinson

S1i. *Delphinus delphis* from Madeira (Portugal)

Data provider: Rita Ferreira, Oceanic Observatory of Madeira

Individual local ID: (Photo 2017-02-07_Dd_RFerreira(2))

Photographer: Rita Ferreira

S1j. *Delphinus capensis* from Algoa Bay (South Africa)

Data provider: Jared Towers, World Cetacean Alliance

Individual local ID: (Photo JRT_9920)

Note: Individual with bent dorsal fin on the left.

Photographer: Jared Towers

S1k. *Stenella coeruleoalba* from Gulf of Corinth (Greece)

Data provider: Giovanni Bearzi and Silvia Bonizzoni, Dolphin Biology and Conservation

Individual local ID: #04_S11259

Photographer: Giovanni Bearzi / Silvia Bonizzoni

S1l. *Stenella coeruleoalba* from Gulf of Corinth (Greece)

Data provider: Giovanni Bearzi and Silvia Bonizzoni, Dolphin Biology and Conservation

Individual local ID: #05_S11208

Photographer: Silvia Bonizzoni

S1m. *Stenella coeruleoalba* from Gulf of Corinth (Greece)

Data provider: Giovanni Bearzi and Silvia Bonizzoni, Dolphin Biology and Conservation

Individual local ID: #03_S12422

Photographer: Giovanni Bearzi / Silvia Bonizzoni

S1n. *Stenella clymene* from Gulf of Guinea (between Gabon and São Tomé and Príncipe)

Data provider: Mike Ambler, Ketos Ecology

Individual local ID: (Photo V019_Clymene(27))

Note: Individual with bent dorsal fin at the surface on top.

Photographer: Mike Ambler

S1o. *Feresa attenuata* from Hawaii (USA)

Data provider: Robin W. Baird, Cascadia Research Collective

Individual local ID: HIFa547

Photographer: Chuck Babbitt / Seth Conae

S1p. *Tursiops truncatus* from Madeira (Portugal)

Data provider: Ana Dinis, CIIMAR-Madeira / Oceanic Observatory of Madeira

Individual local ID: OOM_Tt479

Photographer: Claudia Gomes

S1q. *Tursiops truncatus* from Evoikos Gulf (Greece)

Data provider: Giovanni Bearzi and Silvia Bonizzoni, Dolphin Biology and Conservation

Individual local ID: #01_T14003

Photographer: Giovanni Bearzi / Silvia Bonizzoni

S1r. *Tursiops truncatus* from Hawaii (USA)

Data provider: Robin W. Baird, Cascadia Research Collective

Individual local ID: HITt302

Source: Cascadia Research Collective

S1s. *Tursiops aduncus* from Ponta do Ouro (Mozambique)

Data provider: Angie Gullan and Diana Rocha, Dolphin Encountours Research Center

Individual local ID: CAT

Photographer: Angie Gullan

S1t. *Tursiops aduncus* from Ponta do Ouro (Mozambique)

Data provider: Angie Gullan and Diana Rocha, Dolphin Encountours Research Center

Individual local ID: FIN

Photographer: Angie Gullan

S1u. *Lagenorhynchus albirostris* from Faxafloi Bay (Iceland)

Data provider: Marianne H. Rasmussen and Chiara G. Bertulli, University of Iceland

Individual local ID: DEM30 - Kink

Photographer: Nina Strueh

S1v. *Grampus griseus* from Canary (Spain)

Data provider: Chloé Yzoard, University of La Laguna

Individual local ID: (Photo P4264614)

Photographer: Chloé Yzoard

S1w. *Grampus griseus* from Azores (Portugal)

Data provider: Jared Towers, World Cetacean Alliance, and Karin Hartman, Nova Atlantis Foundation

Individual local ID: (Photo JRT_7115)

Photographer: Jared Towers

S1x. *Globicephala macrorhynchus* from Sea of Cortez (Mexico)

Data provider: Jared Towers, World Cetacean Alliance

Individual local ID: (Photo JRT_1009)

Photographer: Jared Towers

S1y. *Globicephala macrorhynchus* from Madeira (Portugal)

Data provider: Filipe Alves, CIIMAR-Madeira / Oceanic Observatory of Madeira

Individual local ID: OOM_Gma752

Photographer: Filipe Alves

S1z. *Phocoenoides dalli* from British Columbia (Canada)

Data provider: Jared Towers, Cetacean Research Program

Individual local ID: (Photo JRT_5954)

Photographer: Jared Towers

S1aa. *Pseudorca crassidens* from Hawaii (USA)

Data provider: Robin Baird, Cascadia Research Collective

Individual local ID: HIPc044

Source: Cascadia Research Collective

S1ab. *Pseudorca crassidens* from Hawaii (USA)

Data provider: Robin Baird, Cascadia Research Collective

Individual local ID: HIPc127

Source: Cascadia Research Collective

S1ac. *Orcinus orca* from British Columbia (Canada)

Data provider: Jared Towers and John Ford, Cetacean Research Program

Individual local ID: I41

Note: Northern resident individual.

Photographer: Jared Towers

S1ad. *Orcinus orca* from British Columbia (Canada)

Data provider: Jared Towers and John Ford, Cetacean Research Program

Individual local ID: T037A4

Note: Transient (Bigg's) individual.

Photographer: M. Malleson

S1ae. *Orcinus orca* from British Columbia (Canada)

Data provider: Jared Towers and John Ford, Cetacean Research Program

Individual local ID: T072

Note: Transient (Bigg's) individual.

Photographer: Jared Towers

S1af. *Orcinus orca* from British Columbia (Canada)

Data provider: Jared Towers and John Ford, Cetacean Research Program

Individual local ID: T127

Note: Transient (Bigg's) individual.

Photographer: B. Wright

S1ag. *Orcinus orca* from British Columbia (Canada)

Data provider: Jared Towers and John Ford, Cetacean Research Program

Individual local ID: U112

Note: Transient (Bigg's) individual.

Photographer: M. Malleson

S1ah. *Orcinus orca* from British Columbia (Canada)

Data provider: Jared Towers and John Ford, Cetacean Research Program

Individual local ID: U041/T180

Note: Transient (Bigg's) individual.

Photographer: Jared Towers

S1ai. *Orcinus orca* from Vesterålen (Norway)

Data provider: Eve Jourdain, Norwegian Orca Survey

Individual local ID: NKW-063

Photographer: Daniela Numberger

S1aj. *Orcinus orca* from Vesterålen (Norway)

Data provider: Eve Jourdain, Norwegian Orca Survey

Individual local ID: NKW-709

Photographer: Eve Jourdain

S1ak. *Orcinus orca* from Vesterålen (Norway)

Data provider: Eve Jourdain, Norwegian Orca Survey

Individual local ID: R478

Photographer: Eve Jourdain

S1al. *Orcinus orca* from Vesterålen (Norway)

Data provider: Eve Jourdain, Norwegian Orca Survey

Individual local ID: NKW-776

Photographer: Eve Jourdain

S1am. *Orcinus orca* from Vesterålen (Norway)

Data provider: Eve Jourdain, Norwegian Orca Survey

Individual local ID: NKW-863

Photographer: Eve Jourdain

S1an. *Orcinus orca* from Iceland

Data provider: Filipa Samarra, Marine and Freshwater Research Institute, and Marie-Thérèse Mrusczok, Orca Guardians Iceland

Individual local ID: IS053 (Marine and Freshwater Research Institute), and SN090 (Orca Guardians Iceland)

Note: IS053 was identified during 27 occasions in Vestmannaeyjar, Grundarfjördur and Kolgrafafjördur between 1999 and 2015, and SN090 was identified during eight occasions in Snæfellsnes between 2014 and 2016.

Photographer: Marie-Thérèse Mrusczok

S1ao. *Orcinus orca* from Iceland

Data provider: Filipa Samarra, Marine and Freshwater Research Institute, and Marie-Thérèse Mrusczok, Orca Guardians Iceland

Individual local ID: IS181 (Marine and Freshwater Research Institute), and SN135 (Orca Guardians Iceland). This is likely the same individual but we could not confirm it based on the photo-identification. To avoid a false negative we considered it to be the same whale but it could be different due to the nature of the assessment (associations rather than confirmed photographic match).

Note: IS181 was identified during two occasions in Grundarfjördur on 2013, and SN135 was identified once in Snæfellsnes on 2015.

Source: Icelandic Orca Project

S1ap. *Orcinus orca* from Vestmannaeyjar (Iceland)

Data provider: Filipa Samarra, Marine and Freshwater Research Institute

Individual local ID: IS268

Source: Icelandic Orca Project

S1aq. *Orcinus orca* from Keflavík and Ólafsvík (Iceland)

Data provider: Filipa Samarra, Marine and Freshwater Research Institute

Individual local ID: IS006

Source: Icelandic Orca Project

S1ar. *Orcinus orca* from Vestmannaeyjar (Iceland)

Data provider: Filipa Samarra, Marine and Freshwater Research Institute

Individual local ID: IS118

Source: Icelandic Orca Project

S1as. *Orcinus orca* from Vestmannaeyjar (Iceland)

Data provider: Filipa Samarra, Marine and Freshwater Research Institute

Individual local ID: IS251

Source: Icelandic Orca Project

S1at. *Orcinus orca* from Grundarfjördur and Húsavík (Iceland), and Fair Isle (Scotland), Yell Sound and off Bard, Bressay (Shetland, Scotland)

Data provider: Filipa Samarra, Marine and Freshwater Research Institute

Individual local ID: IS202

Photographer: Cathy Harlow

S1au. *Orcinus orca* from Sagres (Portugal)

Data provider: Sara Magalhães, Mar ilimitado

Individual local ID: OOR_SGR_008

Photographer: Sara Magalhães

S1av. *Orcinus orca* from South Georgia (Antarctica)

Data provider: Jared Towers, Government of South Georgia and South Sandwich Islands

Individual local ID: (Photo 1415 SAS 24 05 JATO 91 KSP 9789)

Photographer: Jared Towers

S1aw. *Orcinus orca* from Port Elizabeth (South Africa)

Data provider: Rainer Schimpf, Expert-Tours

Individual local ID: (Photo 05DC-846)

Photographer: Rainer Schimpf