SC/67b/RP33

SH - Antarctic blue whale catalogue comparison of new photographs from 2014-2020

.

INTERNATIONAL
WHALING COMMISSION

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135 Station Road, Impington, Cambridge, UK, CB24 9NP;
Tel: +44 1223 233397 - Fax: +44 1223 232876
E-mail: secretariat@iwc.int

PROJECT PROPOSAL REQUEST

1. PROPOSAL TITLE

Antarctic Blue Whale Catalogue: comparison of new photographs from 2014-2020

2. BRIEF OVERVIEW OF THE PROPOSAL AND ITS EXPECTED OUTCOME

In year one (2019) this project will compare the identification photographs of an estimated 45 individual Antarctic blue whales, collected during ICR cruises 2014-2017, to the Antarctic Blue Whale Catalogue. These identifications would increase the size of the catalogue (458 individuals) by almost 10%. In year two (2020) additional photos representing approximately 12 ID's are expected from collaborating scientists and citizen scientists that will be compared to the Catalogue. The expected outcome is an expanded data set that may improve estimates of population abundance and reveal new information on movement patterns.

3. RELEVANT IWC SCIENTIFIC COMMITTEE GROUPS OR SUB-GROUPS

SH – The sub committee on Southern Hemisphere whale stocks is considering a new assessment of Antarctic blue whales. Data from the Antarctic Blue Whale Catalogue can be used to produce new, relevant information regarding stock structure, linkages between feeding and breeding grounds, and to estimate abundance.

PH – The Antarctic Blue Whale Catalogue is one of the primary catalogues endorsed by the IWC SC, and all of its data feed into the Southern Hemisphere Blue Whale Catalogue. The development, maintenance, and improvements of these catalogues are a regular focus of the PH ad hoc Working Group.

4. TYPE OF PROJECT (PLEASE TICK)

Research project	X
Modelling	
Workshop/meeting	
Database creation/maintenance	X
Compilation work/editing *(e.g. on whalewatching regulations, SOCER, etc.)*	
Other *(please specify below)*	

5. BRIEF DESCRIPTION OF THE PROPOSAL AND ITS CONNECTION WITH SCIENTIFIC COMMITTEE RECOMMENDATIONS (DO NOT EXCEED 1500 WORDS)

(A) BACKGROUND, RATIONALE, AND RELEVANCE TO THE PRIORITIES IDENTIFIED BY THE IWC SCIENTIFIC COMMITTEE:

The population status of Antarctic blue whales (*Balaenoptera musculus intermedia)* is of concern to the Scientific Committee. To date, the population has not recovered to its pre-exploitation size. In 2006 the IWC conducted an in-depth assessment of this population, but the results that were generated are now over ten years old (e.g. Branch, 2007) and the Commmittee is considering a new population assessment (IWC, 2017).

The Antarctic Blue Whale Catalogue was established in 2007; photographs from the IWC IDCR/SOWER cruises, obtained from Areas I-VI, formed the foundation of the catalogue (Olson, 2010). The sighting histories of individual Antarctic blue whales from photo-ID provide data for a capture-recapture estimate of abundance as well as information on the movement of individual blue whales within the Antarctic region (e.g. Olson et al. 2016; Olson et al. 2018). The Scientific Committee has recommended that the catalogue continue to add photo-identification data as it becomes available in order to increase the size of the data set, which will subsequently improve the results from these types of analyses.

Branch, T.A. 2007. Abundance of Antarctic blue whales south of 60°S from three complete circumpolar sets of surveys. *J. Cetacean Res. Manage.* 9: 87–96.

IWC 2017. Annex H: Report of the Sub-Committee on Other Southern Hemisphere Whale Stocks. *J. Cetcean Res. Manage. (Supp.)* 18:230-263.

Olson, P.A. 2010. Blue whale photo-identification from IWC IDCR/SOWER cruises 1987/1988 to 2008/2009. Paper submitted to the IWC Scientific Committee. IWC SC/62/SH29.

Olson, P.A., Double, M.C., Matsuoka, K., and Pastene, L.A. 2016. Photo-identification of Antarctic blue whales 1991-2016. IWC SC/66b/SH11.

Olson, P.A**.**, Kinzey, D., Double, M.C., Matsuoka,K., Pastene, L.A. and Findlay, K. 2018. Capture-recapture estimates of abundance of Antarctic blue whales. IWC/SC/67B/SH08.

(B) SPECIFIC OBJECTIVES OR TOR AND DELIVERABLES/OUTCOMES:

Objectives:

(1) Identify/confirm identifications of 45 individual Antarctic blue whales from photos contributed by ICR.
(2) Compare newly identified individuals with the Antarctic Blue Whale Catalogue.
(3) Quality code the new identifiation photos.
(4) Update the catalogue database of sighting histories.

Deliverables:

(1) A report to IWC SC meeting 2019 summarizing results.
(2)

(C) METHODOLOGICAL APPROACH/WORK PLAN/ADMINISTRATIVE DETAILS

Antarctic blue whale photographs will be examined for unique natural markings and identified as individuals following methods outlined in Sears *et al.* (1990) and Gendron and Ugalde de la Cruz (2012). Identification photos will be selected for each whale, an identification number assigned and cross-referenced with ICR numbers. Identification photographs will be compared within and between years, and then to the entire Antarctic Blue Whale Catalogue. Sightings data will be added to the sighting database. Identification photos (the best left side and best right side for each individual whale) will be coded for quality using a four-tier system representing photo quality ranging from excellent (code 1) to poor (code 4).

Ultimately this is a collaborative effort between the applicant (Paula Olson) and scientists from ICR. We have a history of working together and have produced 6 joint papers for submission to the IWC SC since 2013.

Gendron, D. and Ugalde de la Cruz, A. 2012. A new classifcation method to simplify blue whale photo-identification technique. *J. Cetacean Res. Manage.* 12: 79-84.

Sears, R., Williamson, J.M, Wenzel, F.W., Bérubé, M., Gendron, D. and Jones, P. 1990. Photographic identification of the blue whale (*Balaenoptera musculus*) in the Gulf of St. Lawrence, Canada. *Rep. Int. Whal. Commn*., (Special Issue) 12: 335-342.

(D) SUGGESTIONS FOR OUTREACH

Please, note that successful proponents will be requested to produce ad hoc material that will be used by the IWC Secretariat for dissemination and outreach.

6. TIMETABLE FOR ACTIVITIES AND OUTPUTS

Specify the timetable for project activities and expected out puts separately. For projects with multiple distinct elements please indicate interim goals and timeframes. Add as many rows as you need to the tables below. If publications are an expected output please note whether you will submit the manuscript to the IWC's Journal of Cetacean Research and Management.

Activity to be undertaken	Key person(s)	Start(mm/yy)	Finish (mm/yy)
Comparison of Antarctic blue whale photographs and associated cataloging and database maintenance	Paula Olson	September 2018	March 2020

Expected outputs	Completion date (mm/yy)
Paper with results submitted to IWC Scientific Committee meeting 68A 2019	April 2019
Paper with results submitted to IWC Scientific Committee meeting 68A 2019	April 2020

7. RESEARCHERS' (OR STEERING GROUP) NAME(S) AND AFFILIATION

Please, also specify if the project team has any direct connection (e.g. same research group or institute, collaborator on common project) with people involved or likely to be involved in taking the funding decision (e.g. IWC SC heads of delegations, SC convenors, etc.). Add as many rows as you need to the table below.

Name	Affiliation	Connection with decision
Paula Olson	SWFSC/NOAA/USA	SC Convenor

8. TOTAL BUDGET

Breakdown into: (1) salaries/wages (include name/position of each individual and breakdown of time and duties i; (2) travel/subsistence expenses (breakdown by person and justification) unless for IPs for workshops where a total estimate based on an average for the total number of IPs is acceptable; (3) services (e.g. aircraft/vessel time, consultancy fees, ARGOS fees, etc.; (4) reusable capital equipment (e.g. reusable equipment such as a hydrophone, cameras, etc. Note that this equipment will have to be registered at the IWC Secretariat and will remain property of the IWC at the end of the project), (5) expendable capital equipment (e.g. consumables, tags, stationery), (6) shipping costs, (7) insurance costs, (8) in kind co-funding (specify whether other funding is available for personnel/name, equipment, venues, etc.). Note that "Overheads" are not admissible. Add as many rows as you need to the table below.

Type	Detailed description	Cost in GB pounds 2019	Cost in GB pounds 2020
(1) Salaries (by person)	Analyzing photos, comparison of ID photos, photo quality coding, compiling sighting history data, database maitenance, uploading to Southern Hemisphere Blue Whale Catalogue, production of report	3,000	800
(2) Travel/subsistence (by person or est. total for IPs)			
(3) Services (by item)			
(4) Reusable equipment			
(5) Consumables			
(6) Shipping (by Item)			
(7) Insurance (by item)			
(8) Co-funding			
(9) Other			

Total			

9. DATA ARCHIVING/SHARING

Please state your plans for data archiving and sharing. Note that data collected primarily under IWC grants are considered publicly available after an agreed period of time for publication of papers, usually about two years. The work of the IWC depends on the voluntary contribution of data to the various databases and catalogues IWC supports. Please consult the Secretariat (secretariat@iwc.int).

Not applicable

10. PERMITS (PLEASE TICK)

Do you have the necessary permits to carry out the field work and have animal welfare considerations been appropriately considered?	N/A
Do you have the appropriate permits (e.g. CITES) for the import/export of any samples?	N/A

If 'Yes' please provide further details and enclose copies where appropriate:

Appendix 2 – DRAFT SCORING SHEET

If a project presents multiple primary objectives which are achieved using sub-projects, a sheet should be used to evaluate each single sub-project. Note that not all criteria are equally applicable depending on the nature of the project (e.g. field work versus workshops).

IWC SCIENTIFIC COMMITTEE PROPOSALS FOR FUNDING - REVIEW CRITERIA - TEST				
TITLE OF THE PROJECT/sub-projects:				
PRINCIPAL INVESTIGATOR:				
Key criteria		**Explanation of scoring**	**Score**	**Supporting Remarks**
Relevance to Scientific Committee priorities				
1	How well aligned are the scientific outcomes of the project/activity with the current SC priority areas?	1 - Not aligned/poorly aligned (e.g. too vague or generic reference to general SC priorities) 2 - Reasonably aligned (e.g. some aspects may be vague or links are not clear) 3 - Well aligned (e.g. outcomes clearly deliver in the most part on priority areas, may also address longer term or potential future issues). 4 – Closely aligned (e.g. of interest for multiple sub-groups or delivers on specific SC high priority topics/recommendations in the immediate or short term).		
2	To what extent will the outcomes of the project/activity contribute to improvements in the conservation and management of cetaceans?	1 -Not at all 2 - Poorly 3 - Reasonably or over the longer term 4 - Well or over the medium term 5 - Excellently or to almost immediate effect		
Note: if in each of the two above key criteria under this section the project does not score singularly at least 2 points, do not proceed in further evaluation. Of course, proposals within a sub-group would only be developed if in their estimation scores were of 4 or above.				
Approach and methodology				
3	What degree of scientific merit/value is there in carrying out the work?	1 - Not demonstrated or of low scientific value 2 - Useful/basic scientific value 3 - Very good scientific value 4 - Excellent/innovative scientific value		
4	Is the proposed methodology scientifically sound and feasible in terms of field and analytical methods?	1 - Feasibility unrealistic & poor methodology or not properly addressed 2 - Feasibility & methodology acceptable but would benefit from some substantial amendments		

		3 - Feasibility & methodology good, some small changes beneficial 4 - Feasibility & methodology excellent or a highly promising innovative approach to an important question facing the Committee		
5	What is the likelihood of success based on the proposed overall approach and methodology?	1 – No chance of success 2 - Low chance of success/better approaches available 3 - Medium chance of success/some changes to the approach necessary 4 - High chance of success/little or no changes to the approach necessary		
5a	Are objectives of the research likely to be achieved within the proposed time-frame?	1 – No or unlikely 2 – Partially or potentially ambitious 3 - Yes with some minor suggestions 4 – Yes		
5b	Are any proposed intermediary targets timely and achievable?	1 – No or unlikely 2 – Partially 3 - Probably 4 - Yes		
5c	Is the proposed time-frame/work necessary (e.g. can the project produce results in a shorter time period)?	1 – No or unlikely 2 – Partially 3 - Probably 4 - Yes		
5d	Is the sample size adequate to achieve the stated objectives?	1 – Not demonstrated/not properly addressed 2 – No or unlikely (too low/too high) 3 – Probably (additional analysis needed) 4 - Yes		
6	Is the project likely to affect adversely the population(s) involved?	1 - Not properly addressed/ unknown 2 - Yes severely 3 – Possibly at a low level 4 - No		
6a	**IF YES**, are analyses provided on simulations of the effects using different time-frames for the project if applicable?	1 – No 2 – Partially 3 - Yes		
Note: if in each of the above key criteria under this section the project does not score singularly at least 2 points, do not proceed in further evaluation. Of course, proposals within a sub-group would only be developed if in their estimation scores were of 3 or above.				
Project team and Project management				

7	To what extent does the team have the relevant expertise, experience, and balance?	1 – Poor or not demonstrated 2 – Sufficient 3 - Very good 4 - Excellent		
8	Contingency plan: To what extent have potential problems/risks been considered and appropriate mitigation proposed?	1 – Poor or not demonstrated 2 – Sufficient but could be improved 3 - Fully or requiring only minor suggestions or not applicable		
Value for Money				
10	Does the project represent good value for money?	1 – No or significant amendments would be needed 2 – Yes but with some minor amendments 3 – Yes		
11	Have sufficient links been made to the wider research community/other organisations/capacity building.	1 – No 2 – Some but significant amendments needed 3 – Yes but with some minor additions 4 – Yes or not applicable		