

SPARQL Micro-services

TDWG 2018

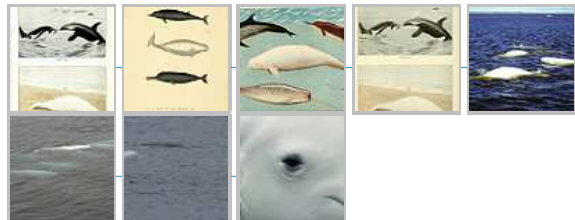
This page demonstrates the use of SPARQL micro-services [1] to integrate, within a single SPARQL query, data from the TAXREF-LD Linked Data taxonomic register [2] with photos from Flickr, articles from the Biodiversity Heritage Library, traits from The Encyclopedia of Life trait bank, audio recordings from the Macculey Library, and music tunes from MusicBrainz. The SPARQL results are transformed into HTML using the SPARQL Template Transformation Language [3].

Data gathered about: [*Delphinapterus leucas*](#)

Images from TAXREF-LD and [Flickr EoL group](#)



Images from TAXREF-LD and [Flickr EoL group](#)



Articles from the [Biodiversity Heritage Library](#)**Heide-Jorgensen, Mads-Peter**

Age and sex distributions in the catches of belugas, *Delphinapterus leucas*, in West Greenland and in western Russia. Zeitschrift für Säugetierkunde : im Auftrage der Deutschen Gesellschaft für Säugetierkunde e.V. (2001).

**Lockyer, Christina**

Age and sex distributions in the catches of belugas, *Delphinapterus leucas*, in West Greenland and in western Russia. Zeitschrift für Säugetierkunde : im Auftrage der Deutschen Gesellschaft für Säugetierkunde e.V. (2001).

**Neuhaus, Walter**

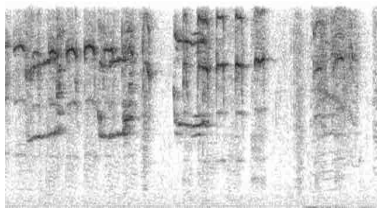
Die Bedingungen für das Sehen des Weißwals, *Delphinapterus leucas* Pall., in Wasser und Luft. Zeitschrift für Säugetierkunde : im Auftrage der Deutschen Gesellschaft für Säugetierkunde e.V. (1985).

**Goethe, Friedrich**

Ein Weißwal, *Delphinapterus leucas* (Pallas, 1776), im Jadebusen. Bonner zoologische Beiträge : Herausgeber: Zoologisches Forschungsinstitut und Museum Alexander Koenig, Bonn. (1995).

Traits from The [Encyclopedia of Life trait bank](#)

total life span	480	http://purl.obolibrary.org/obo/UO_0000035
inter-birth interval	1003.75	http://purl.obolibrary.org/obo/UO_0000033
milk solids	41	http://purl.obolibrary.org/obo/UO_0000187
milk lipids	26.9	http://purl.obolibrary.org/obo/UO_0000187
Ash Content	0.83	http://purl.obolibrary.org/obo/UO_0000187
body length (VT)	4249.83	http://purl.obolibrary.org/obo/UO_0000016
gestation period duration	394.24	http://purl.obolibrary.org/obo/UO_0000033
weaning age	689.92	http://purl.obolibrary.org/obo/UO_0000033
body mass	1381640.73	http://purl.obolibrary.org/obo/UO_0000021
onset of fertility	2104.57	http://purl.obolibrary.org/obo/UO_0000033
body mass	57000	http://purl.obolibrary.org/obo/UO_0000021
total life span	40	http://purl.obolibrary.org/obo/UO_0000036
inter-birth interval	1004	http://purl.obolibrary.org/obo/UO_0000033
prenatal development duration	416	http://purl.obolibrary.org/obo/UO_0000033
litters per year	0.3	http://ncicb.nci.nih.gov/xml/owl/EVS/Thesaurus.owl#C74924
body temperature	308.95	http://purl.obolibrary.org/obo/UO_0000012
weight	66000	http://purl.obolibrary.org/obo/UO_0000021
weaning age	679	http://purl.obolibrary.org/obo/UO_0000033
onset of fertility	2283	http://purl.obolibrary.org/obo/UO_0000033
onset of fertility	1644	http://purl.obolibrary.org/obo/UO_0000033
weight	1.43e+06	http://purl.obolibrary.org/obo/UO_0000021
water temperature	14.365	http://purl.obolibrary.org/obo/UO_0000027
water temperature	7.367	http://purl.obolibrary.org/obo/UO_0000027
water silicate concentration	3.312	http://purl.obolibrary.org/obo/UO_0000064

Audio recordings from [Macculey Library](#)

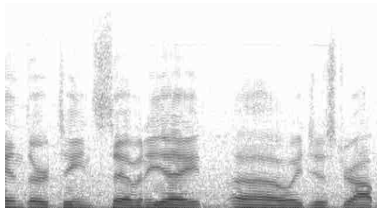
NOTES: ?????LNS notes: ?Confidence interval assigned by MLNS. 11Apr2006MLM. Reel box notes: "Good baby sounds at 880-960. 5:30pm."



NOTES: ?????LNS notes: ?Confidence interval assigned by MLNS. 11Apr2006MLM. Reel box notes: "Edwina Threshold Experiment; 4/15/77; 35kHz, 85dB; Nagra; LC-10; ch.1- DATA, Ch.2 - voice; 7.5ips." Index by counter numbers included in reel box.



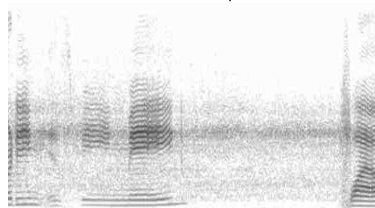
NOTES: ?????LNS notes: ?Confidence interval assigned by MLNS. 11Apr2006MLM. Reel box notes: "Sea World July 26, 1977; Belugas; all systems on; Nagra; LC-10- amplifier." Edwina and Kojack. Index by counter numbers included inside reel box. Other Behaviors: Squeals.



NOTES: ?????LNS notes: ?Confidence interval assigned by MLNS. 11Apr2006MLM. Reel box notes: "10-13-78. 2:16 to 2:45PM. NMFS plane ride. Original. Beluga whales". SEAOCEAN.



NOTES: ?????LNS notes: ?Confidence interval assigned by MLNS. 11Apr2006MLM. Reel box notes: "Beluga, Vancouver, Aug 1974." Beluga birth; three distinct vocalizations. See letter in reel box.



NOTES: ?????LNS notes: ?Confidence interval assigned by MLNS. LC-10 Sonobuoy. 11Apr2006MLM. Reel box notes: "Belinda; 15ips; Nagra; LC-10; made while removing Belinda from tank. All systems on. Good tape." Includes index by counter numbers in reel box.

Subject: <http://taxref.mnhn.fr/lod/taxon/60932/10.0>

http://eol.org/pages/328541/data#data_point_42780023
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<https://musicbrainz.org/work/1111957e-a3af-4ee3-8fdc-628c363a5c51>
<https://musicbrainz.org/work/9aec62a1-4a35-4fe8-ae65-8b4e42460753>
[https://musicbrain](https://musicbrainz.org/work/bdce0503-16b2-4fb3-8b14-857988515beb)

