

lit-tag-viewer User Guide

Created: June 6, 2025

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What is lit-tag-viewer?

The [lit-tag-viewer app](#) allows users to search, visualize, and summarize a tagged literature database created using the lit-tag-builder app (“lit-tag database”).

The [Search database](#) feature enables filtering based on paper criteria (*author, publication year, title*), notes criteria (*keywords in user notes*), and tag criteria (*user-defined categories*). Papers that meet the selected criteria are displayed in a table and can be exported to .csv or .bib files.

The [Summary plot](#) feature supports visualization of the full or filtered database. The app generates a bar graph displaying the number of papers (y-axis) for any paper or tag criteria (x-axis). Users also have the option to create a stacked bar graph with a color key to visualize two categorical variables.

The [Summary table](#) feature supports the creation and export of tables with user selected fields from the lit-tag database.

The [Reports](#) feature generates a downloadable file (.html, .pdf, .docx) that summarizes the full or filtered database. In addition to basic bibliographic information, reports can include the paper abstract, tags, and notes.

The [lit-tag-builder](#) app is a separate standalone application for creating a lit-tag database that can be viewed with the lit-tag-viewer.

Recommended citation for the lit-tag-builder and lit-tag-viewer apps: McElhany, P., Grabb, K. C., Wood, M. M., Howe, J. (2025). “Lit-tag-builder and Lit-tag-viewer: Apps for creating and viewing a database of annotated literature references”, NOAA Fisheries. [add URL]

Using lit-tag-viewer

Load database

Before using lit-tag-viewer, two files must be loaded: 1) a **lit-tag database .csv file** made using the lit-tag-input app and 2) a **lit-tag tag categories .xlsx file** that contains tag categories, tag names and tag value options.

Creator-provided files

Users may interact with versions of lit-tag-viewer that the creator has pre-loaded with the database .csv file and categories .xlsx files. For example, a creator may publish a public version of lit-tag-viewer pre-loaded with files specific to a particular database project. In this case, simply click “Load Database”. A table with the authors, year and title of all the references in the database will appear on the right side of the window. You can download the pre-loaded database .csv and categories .xlsx file by clicking “Download database” and “Download tag categories”, respectively.

mcdr-lit-tag-viewer

Load database

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Database name: mcdr_lit_tag_db
Database date: 2025_06_13_1742_UTC
Categories name: categories_9

Load database

Download database

Download tag categories

author	publication_year	title
Adkins, Jess F.; Naviaux, John D.; Subhas, Adam V.; Dong, Sijia; Berelson, William M.	2021	The Dissolution Rate of CaCO ₃ in the Ocean
American Geophysical Union	2024	Ethical Framework Principles for Climate Intervention Research
Arrieta, Jesús M.; Weinbauer, Markus G.; Lute, Carolien; Herndl, Gerhard J.	2004	Response of bacterioplankton to iron fertilization in the Southern Ocean
Aspen Institute Staff and Energy and Environment Program	2016	A Code of Conduct for Marine Carbon Dioxide Removal
Assmy, Philipp; Henjes, Joachim; Klaas, Christine; Smetacek, Victor	2007	Mechanisms determining species dominance in a phytoplankton bloom induced by the iron fertilization experiment EisenEx in the Southern Ocean
Aumont, O.; Bopp, L.	2006	Globalizing results from ocean in situ iron fertilization studies
Bach, L.; Tasmitt, T.; Baldry, K.; McGee, J.; Laurenceau-Cornec, E.; Strzepek, R.; Xie, Y.; Boyd, P.	2023	Identifying the Most (Cost-)Efficient Regions for CO ₂ Removal With Iron Fertilization in the Southern Ocean
Bach, Lennart T.; Boyd, Philip W.	2021	Seeking natural analogs to fast-forward the assessment of marine CO ₂ removal
Bach, Lennart T.; Gill, Sophie J.; Rickaby, Rosalind E. M.; Gore, Sarah; Renforth, Phil	2019	CO ₂ Removal With Enhanced Weathering and Ocean Alkalinity Enhancement: Potential Risks and Co-benefits for Marine

“Load Database” tab when the files are pre-loaded

User-provided files

Alternatively, users may utilize lit-tag-viewer to view any database and category files they have saved locally on their computer. To load the database, click browse and select the appropriate .csv file on your local hard drive. To load the categories, click browse and select the appropriate .xlsx file on your local hard drive. Once both fields are marked “Upload complete” under the file name, click the “Load database” button. A table with the authors, year and title of all the references in the database will appear on the right side of the window.

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Database File

Browse...

mcd_rlit_tag_db_2025_06_04_195i

Upload complete

Categories File

Browse...

categories_8 (1).xlsx

Upload complete

Load database

Download database

Download tag categories

author	publication_year	title
Adkins, Jess F.; Naviaux, John D.; Subhas, Adam V.; Dong, Sijia; Berelson, William M.	2021	The Dissolution Rate of CaCO ₃ in the Ocean
Ali, Asad; Shen, Pei Kang	2020	Nonprecious metal's graphene-supported electrocatalysts for hydrogen evolution reaction: Fundamentals to applications
Arrieta, Jesús M.; Weinbauer, Markus G.; Lute, Carolien; Herndl, Gerhard J.	2004	Response of bacterioplankton to iron fertilization in the Southern Ocean
Aspen Institute Staff and Energy and Environment Program	2016	A Code of Conduct for Marine Carbon Dioxide Removal
Assmy, Philipp; Henjes, Joachim; Klaas, Christine; Smetacek, Victor	2007	Mechanisms determining species dominance in a phytoplankton bloom induced by the iron fertilization experiment EisenEx in the Southern Ocean
Aumont, O.; Bopp, L.	2006	Globalizing results from ocean in situ iron fertilization studies
Bach, L.; Tasmitt, T.; Baldry, K.; McGee, J.; Laurenceau-Cornec, E.; Strzepek, R.; Xie, Y.; Boyd, P	2023	Identifying the Most Cost-Efficient Regions for CO ₂ Removal With Iron T., Tamsitt, V., Baldry, K., McGee, J., Laurenceau-Cornec, E. C., Strzepek, R. F.,
Bach, Lennart T.; Boyd, Philip W.	2021	Seeking natural analogs to fast-forward the assessment of marine CO ₂ removal
Bach, Lennart T.; Gill, Sophie J.; Rickaby, Rosalind E. M.; Gore, Sarah; Renforth, Phil	2019	CO ₂ Removal With Enhanced Weathering and Ocean Alkalinity Enhancement: Potential Risks and Co-benefits for Marine Pelagic

“Load database” tab with an example database loaded.

Search database

The “Search database” tab can be used to filter the full database to identify a subset of references that meet user-selected criteria.

The left side of the window displays the “Paper table (filtered).” Before filtering criteria are supplied, the full database will be displayed. After filtering, the table will be updated to display only those papers that meet the filtering criteria. The center of the window displays the search criteria that may be applied by the user. The right of the window displays the selection criteria that have been applied, the number of papers meeting those criteria, and the export functionality for saving filtered databases.

To filter papers, enter search terms and/or select criteria checkboxes, then click the “Select papers” button. Clicking “Clear criteria” will reset search criteria.

Filtered databases may be downloaded as .csv or .bib files by clicking the appropriate “Export selection” button after entering a field name in the “Export filename” text field.

Filter by “Paper criteria”

Users may search by author name or keywords in the title or abstract. Strings of keywords are allowed, and multiple search terms should be separated by a semi-colon. Search strings are case sensitive.

Filter by “Notes criteria”

Users may search by keywords in notes provided by the database reviewer. Strings of keywords are allowed, and multiple search terms should be separated by a semi-colon. Search strings are case sensitive.

Filter by “Tag criteria”

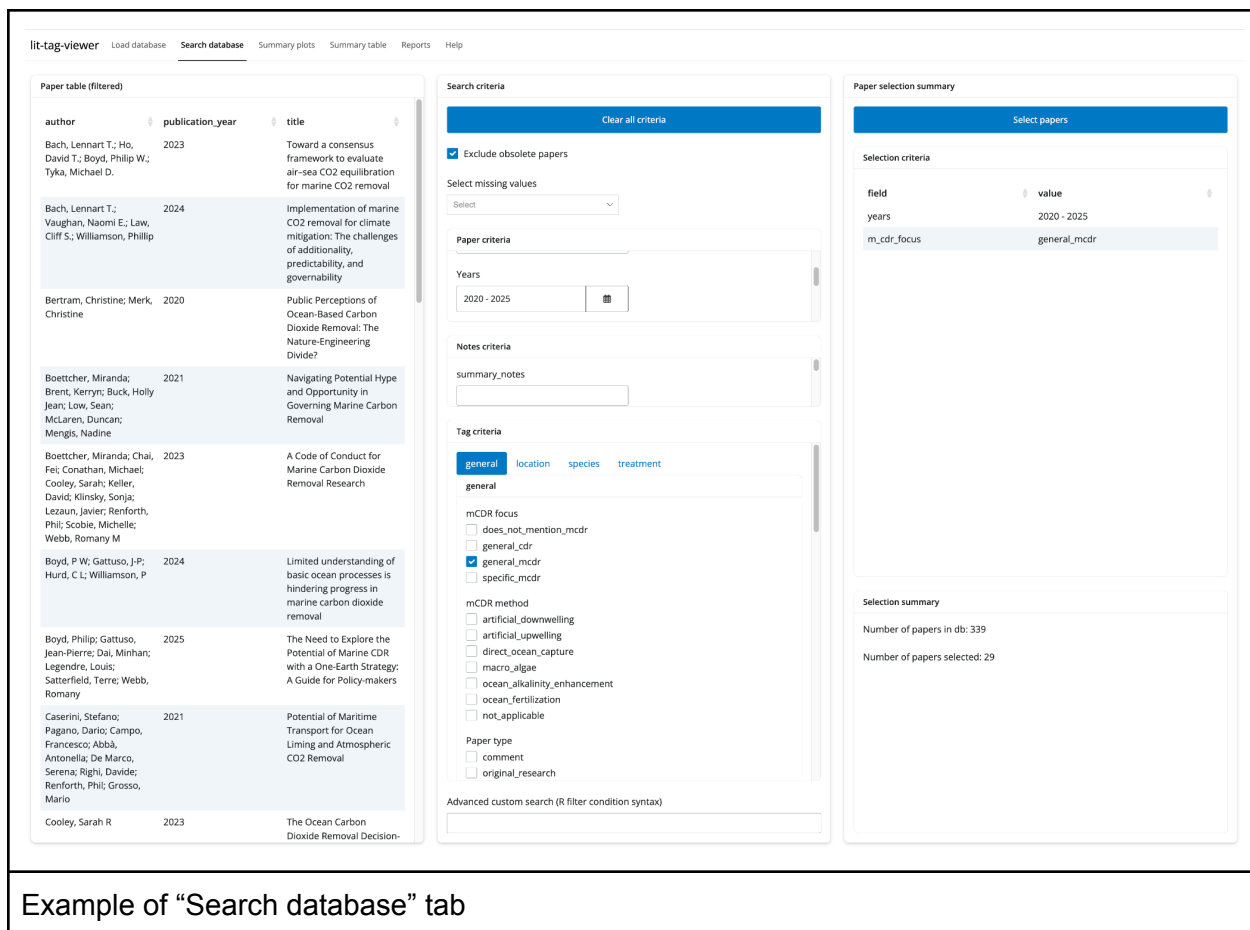
Users may filter by one or more tag categories by selecting checkboxes associated with tag values. The tag categories and values are those supplied in the **lit-tag tag categories .xlsx file**.

Advanced custom search

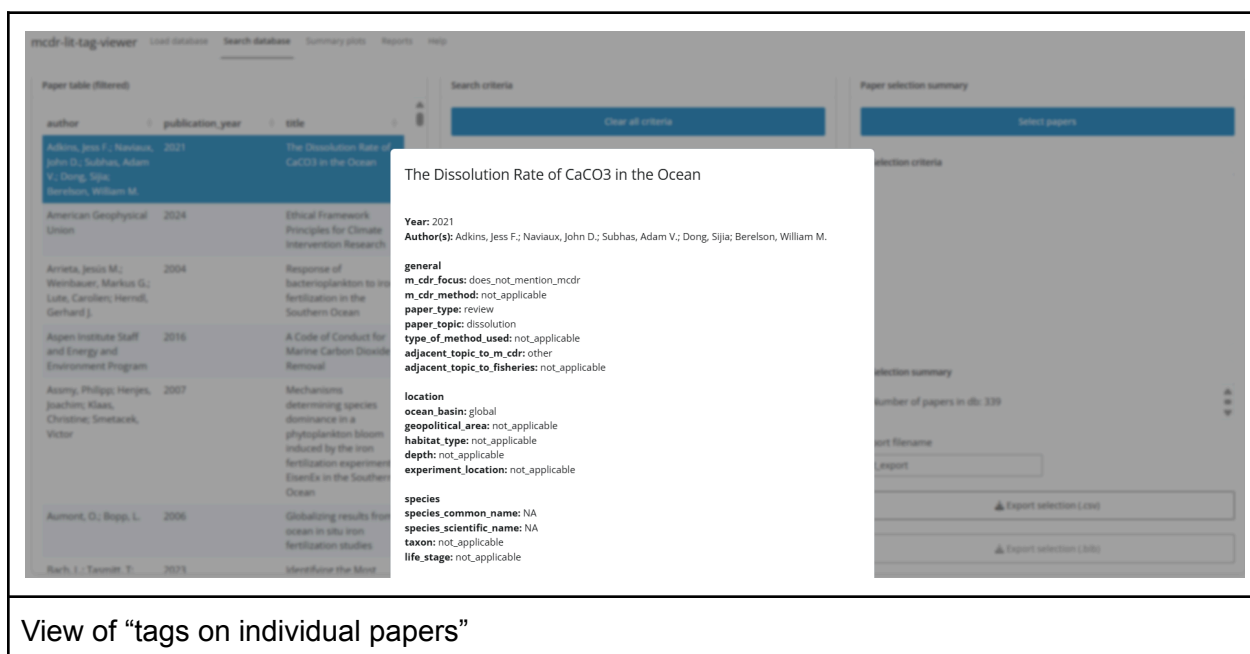
More complicated searches of the database can be done by entering an advanced custom search. The syntax for the search is that used in the R tidyverse “filter” function. All the base R and tidyverse functions are available for search. Searches may often want to use the “str_detect” function.

View tags on individual papers

In the search tab, selecting a paper from the table of filtered papers in the left panel will bring up a window with the tags, notes and abstract specific to that paper. To close the tab, click “Dismiss” at the bottom.



Example of “Search database” tab



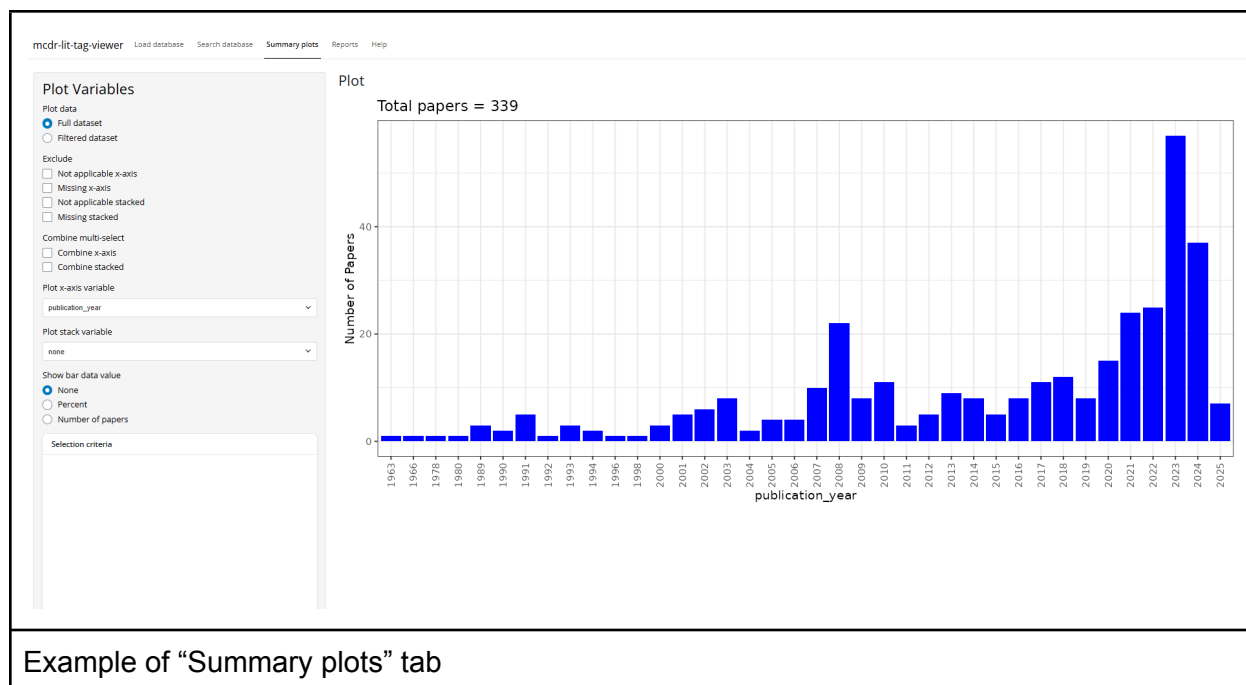
View of “tags on individual papers”

Summary plots

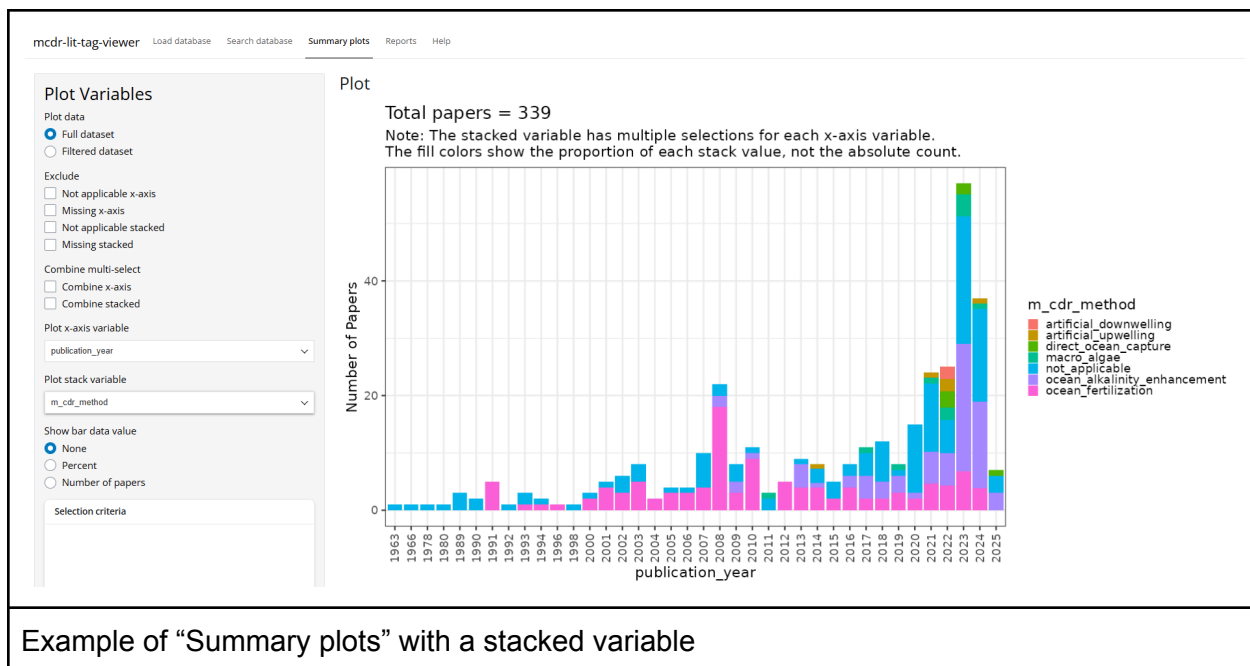
The “Summary plots” generates bar graphs and stacked bar graphs for bibliographic information and tag categories. The user may select “Full dataset” to plot data for the entire database, or may select “Filtered database” to plot only the filtered database currently selected in the “Search database” tab.

Plots are generated by selecting an x-axis variable in the “Plot x-axis variable” dropdown menu. A stack variable may also be selected under “Plot stack variable” to visualize two categorical variables together. Percentage or number of papers represented by each bar may be added by making the appropriate selection under “Show bar data value.” Users may optionally exclude “not applicable” or missing values from the plot.

When plotting stacked variables, users may also opt to “Combine multi-select” for the x-axis and/or stack variable. This option can be applied when, for example, the stacked variable has multiple selections for each x-axis variable. The default plot will show the proportion of each stack value, not the absolute count. Applying “Combine stacked” will instead show the absolute count and separate stack variables for each combination of multiple selections.



Example of “Summary plots” tab



Example of “Summary plots” with a stacked variable

Summary table

A summary table can be created with user selected fields showing either the complete data set or the filtered data set. The column order can be changed by clicking and dragging the column header. The table can be sorted by clicking on the header of the column to be used for sorting. The summary table can be downloaded as a .csv file.

lit-tag-viewer

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Summary data

☐ Full dataset
 ☒ Filtered dataset

Summary variables

6 options selected

Summary download filename

Untitled

Download summary table (.csv)

Selection criteria

field	value
years	2020 - 2025

author	publication_year	title	m_cdr_focus	summary_notes	doi
Adkins, Jess F.; Naviaux, John D.; Subhas, Adam V.; Dong, Sijia; Berelson, William M.	2021	The Dissolution Rate of CaCO ₃ in the Ocean	does_not_mention_mcdr	Despite decades of research, no consensus exists on how CaCO ₃ dissolution rates relate to saturation state in the ocean. This review uses a new, sensitive method and insights from freshwater studies to show that dissolution depends on thermodynamics and surface interactions, not just saturation. Their framework explains inconsistencies in past data and highlights a shift in dissolution mechanisms that may speed up CaCO ₃ breakdown in sediments.	10.1146/annurev-marine-041720-092514
American Geophysical Union	2024	Ethical Framework Principles for Climate Intervention Research	general_cdr	Ethical framework for climate solutions - relevant to overall mCDR	10.22541/essoar.172917365.53105072/v1
Bach, L.; Tasmitt, T.; Baldry, K; McGee, J; Laurenceau-Cornec, E; Strzepek, R; Xie, Y; Boyd, P	2023	Identifying the Most (Cost-)Efficient Regions for CO ₂ Removal With Iron Fertilization in the Southern Ocean	specific_mcdr	Evaluates five physical and biogeochemical requirements for successful OIF-based CDR. -Finds that cost-effective OIF is limited to the Antarctic Shelf; offshore regions are inefficient. -High uncertainty reflects limited understanding of key ocean processes. -Legal challenges complicate implementation near Antarctica. -Constraints limit OIF's scale and climate impact.	https://doi.org/10.1029/2023GB007754
Bach, Lennart T.; Boyd, Philip W.	2021	Seeking natural analogs to fast-forward the assessment of marine CO ₂ removal	specific_mcdr	Advocates for using natural analogs to assess mCDR methods alongside models and experiments. -Highlights four selection criteria for analog quality (scale, abruptness, control.	10.1073/pnas.2106147118

Example summary table.

Reports

The Reports tab allows users to generate and output summary reports for the full database or the filtered database currently selected in the “Search database” tab.

Users may enter a report title and author, and opt to sort the report by author, publication year, or title. The default settings produce a report that includes basic bibliographic information, paper_url, abstract, tags, missing_tags, not_applicable_tags, notes, and pagebreaks. Users may customize the report contents by selecting only desired elements.

Click the “Show report” button to view the report on the right side of the window.

To save the report to your computer as an .html, .pdf, or .docs file, edit “Report filename” and select your preferred file format. Click the “Download report” button.

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Report title:
Demo Report

Report author:

Report data
☐ Full dataset
☒ Filtered dataset

Report sort order
author

Include in report
☒ paper_url
☒ abstract
☒ tags
☐ missing_tags
☐ not_applicable_tags
☒ notes
☒ pagebreaks

Show report

Report filename:
untitled

Report download file type:
☒ html
☐ pdf
☐ docx

Download report

Demo Report

PUBLISHED

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Response of bacterioplankton to iron fertilization in the Southern Ocean

2004

Arrieta, Jesús M.; Weinbauer, Markus G.; Lute, Carolien; Herndl, Gerhard J.

[Paper URL](#)

Abstract: We studied the bacterial response to Fe fertilization over 3 weeks during the second iron-enrichment experiment (EisenEx) in the Southern Ocean. Bacterial abundance in the Fe-fertilized patch increased over the first 12 d following Fe release and remained about twice as high as outside the Fe-fertilized patch until the end of the experiment. Bacterial production peaked a few days after each of the three Fe releases inside the Fe-fertilized patch, reaching rates two to three times higher than outside the patch. Besides the peaks in leucine and thymidine incorporation following Fe release, bacterial production was not significantly higher inside the patch than outside, suggesting direct limitation of bacterial growth by Fe. Bacterial aminopeptidase activity roughly followed the increase in bacterial abundance, whereas cell-specific α - and β -glucosidase were higher inside the Fe-fertilized patch. The diversity of α -glucosidases was determined by capillary electrophoresis zymography. The different α -glucosidases showed much higher activity levels inside the patch than in the surrounding waters, and three additional α -glucosidases constituting 35% of the total α -glucosidase activity were present inside the Fe-fertilized patch from day 9 onward. No major changes in response to Fe fertilization were detected in the phylogenetic composition of the bacterioplankton community, as determined by 16S rDNA fingerprinting, indicating a remarkable adaptation of the bacterioplankton community to episodic iron inputs. This stability on the phylogenetic level is contrasted by the dramatic qualitative and quantitative changes in ectoenzymatic activity.

mcdr_focus: specific_mcdr. **mcdr_method:** ocean_fertilization. **paper_type:** original_research. **paper_topic:** biological_ecological_impacts: environmental_impacts: mcd_pilot: species_sensitivity. **type_of_method_used:** field_study. **adjacent_topic_to_fisheries:** lower_trophic_nutrient_dynamics. **ocean_basin:** southern_ocean. **habitat_type:** open_ocean. **depth:** mid_depth: surface. **experiment_location:** field. **taxon:** microbes: phytoplankton. **exposure:** mineral. **chemical_mineral_added:** iron_sulfate. **response_observed:** response(s)_observed.

Example of “Reports” tab

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