

A georeferenced dataset of freshwater crustaceans and associated environmental variables across Chile

Received: 23 April 2026

Accepted: 29 July 2026

Published online: 06 August 2026

Cite this article as: Ríos-Escalante, P.R., Esse, C., Correa-Araneda, F. *et al.* A georeferenced dataset of freshwater crustaceans and associated environmental variables across Chile. *Sci Data* (2026). <https://doi.org/10.1038/s41597-026-08031-3>

Patricio R. De los Ríos-Escalante, Carlos Esse, Francisco Correa-Araneda & Carlos López

We are providing an unedited version of this manuscript to give early access to its findings. Before final publication, the manuscript will undergo further editing. Please note there may be errors present which affect the content, and all legal disclaimers apply.

If this paper is publishing under a Transparent Peer Review model then Peer Review reports will publish with the final article.

A georeferenced dataset of freshwater crustaceans and associated environmental variables across Chile.

Patricio R. De los Ríos-Escalante^{1,2,*}, Carlos Esse³, Francisco Correa-Araneda⁴, Carlos Lopez⁵

1) Departamento de Ciencias Biológicas y Químicas, Facultad de Recursos Naturales, Universidad Católica de Temuco, Casilla 15-D, Temuco, Chile

2) Núcleo de Estudios Ambientales UC, Temuco, Chile

3) Unidad de Cambio Climático y Medio Ambiente (UCCMA), Instituto Iberoamericano de Desarrollo Sostenible (IIDS), Universidad Autónoma de Chile, Chile.

4) Centro de Gestión y Tecnologías del Agua, Universidad de la Frontera, Temuco, Chile.

5) Escuela Superior Politécnica del Litoral (ESPOL), Centro del Agua y Desarrollo Sustentable, Campus Gustavo Galindo, Guayaquil, Ecuador.

* Author for correspondence, email: prios@uct.cl

ORCID Profiles:

Patricio R. De los Ríos-Escalante: <https://orcid.org/0000-0001-5056-7003>

Carlos Esse: <https://orcid.org/0000-0002-5030-3275>

Francisco Correa-Araneda: <https://orcid.org/0000-0001-6670-6661>

Carlos Lopez: <https://orcid.org/0000-0001-5267-7257>

Abstract

We present a comprehensive georeferenced dataset of freshwater crustaceans across continental Chile, integrating species occurrence records with associated environmental variables. The dataset includes representatives from major crustacean groups inhabiting inland waters, such as Branchiopoda and Copepoda, compiled from multiple literature sources and field studies. For each record, we provide taxonomic identification, geographic coordinates, habitat type, and physicochemical parameters including conductivity, salinity, chlorophyll concentration, altitude, and depth where available.

This dataset spans a broad latitudinal gradient, encompassing diverse climatic and ecological regions, making it a valuable resource for studies on biodiversity patterns, biogeography, ecological modelling, and climate change. All records were curated, standardized, and validated to ensure consistency and usability. The dataset is openly available in a public repository and is

intended to support future ecological and environmental research, that may support future ecological research and evidence-based environmental management.

Background & Summary

Freshwater ecosystems in Chile are characterized by strong environmental gradients driven by latitudinal variation, topography, and climatic heterogeneity¹. These systems host diverse crustacean assemblages, including microcrustaceans and macroinvertebrates such as..., which play key role in ecosystem functioning and trophic dynamics^{1,2}.

Despite their ecological importance, data on freshwater crustacean distribution and associated environmental conditions in Chile remain fragmented across studies^{1,3}. This limits large-scale analyses of biodiversity patterns, ecological responses to environmental gradients, and long-term monitoring efforts¹.

To address this gap, we compiled a comprehensive dataset integrating species occurrence records with environmental variables across Chilean inland waters. The dataset includes georeferenced records for multiple crustacean taxa and associated physicochemical parameters, enabling analyses of species-environment relationships and supporting reproducible ecological research.

By consolidating dispersed information into a standardized and curated format, this dataset provides a valuable resource for researchers working in ecology, biogeography, conservation, and environmental sciences.

Methods

Data compilation

Data were compiled from published literature, technical reports, and available datasets focusing on freshwater crustaceans in Chile⁴⁻⁹⁶ (Fig. 1) in a range from 1974 to 2018. Records were included when they contained at least taxonomic identification and geographic information. Occurrence records were compiled through a systematic search of the available scientific literature and biodiversity repositories. Literature searches were conducted using Web of Science Core Collection, Scopus, Google Scholar and SciELO. Additional occurrence records were obtained from GBIF and original taxonomic publications cited in the retrieved literature.

Searches were performed using combinations of taxonomic and geographic keywords, including, "freshwater crustaceans", "Copepoda", "Branchiopoda" and "Chile", connected using Boolean operators (AND, OR) where appropriate. Reference lists of retrieved publications were also examined to identify additional relevant studies.

Records were included when they represented freshwater crustacea occurring within continental Chile and provided sufficient taxonomic and locality information to allow georeferencing. Marine records, duplicate occurrences, records lacking interpretable locality information, and taxonomically ambiguous records were excluded from the final dataset.

Taxonomic standardization

Species names were standardized and validated using recognized taxonomic backbones, including GBIF Backbone Taxonomy ([“https://www.gbif.org/es/”](https://www.gbif.org/es/); accessed March 2026); World Register of Marine Species ([“https://www.marinespecies.org/”](https://www.marinespecies.org/); WoRMS, accessed March 2026); Integrated Taxonomic Information System ([“https://www.itis.gov/”](https://www.itis.gov/); ITIS, accessed March 2026). Synonyms were resolved, and invalid or ambiguous names were excluded or corrected when possible (see Supplementary Material)

Georeferencing

Geographic coordinates (latitude and longitude) were recorded directly from source materials or inferred when necessary. All coordinates were standardized to decimal degrees (WGS84 datum).

Original geographic information was obtained from published literature and biodiversity repositories and was reported in heterogeneous formats, including decimal degrees, degrees–minutes–seconds (DMS), Universal Transverse Mercator (UTM) coordinates, and descriptive locality names. To ensure consistency across the dataset, all geographic information was standardised to decimal latitude and longitude referenced to the World Geodetic System 1984 (WGS84; EPSG:4326), which is the coordinate reference system adopted by Darwin Core and GBIF. Coordinate conversions from DMS and UTM to decimal degrees were performed using QGIS (version 3.x) and independently verified in Google Earth Pro.

When original publications did not provide geographic coordinates, occurrence records were georeferenced manually using the locality descriptions reported by the original authors. Coordinates were inferred by locating sampling sites through Google Earth Pro, GeoNames, official Chilean cartographic resources provided by the Instituto Geográfico Militar (IGM), hydrographic maps, and other authoritative geographic gazetteers. Whenever precise sampling positions could not be determined, coordinates were assigned to the centroid of the reported locality or water body. All inferred coordinates were visually inspected against the original locality descriptions to minimise georeferencing errors and ensure geographic consistency.

To improve data transparency and facilitate future reuse, each occurrence record was assigned an estimate of spatial uncertainty following Darwin Core recommendations. Records containing original geographic coordinates were considered to have relatively low positional uncertainty, whereas records georeferenced from locality descriptions were assigned larger uncertainty values according to the spatial precision of the available information. These uncertainty estimates are

reported in the field *coordinateUncertaintyInMeters*, allowing users to evaluate the suitability of individual records for spatial analyses.

The published dataset retains coordinates in the geographic coordinate reference system WGS84 (EPSG:4326), expressed as decimal latitude and longitude, following the GBIF and Darwin Core standards. Users requiring projected coordinate systems for spatial modelling (e.g. UTM or World Mercator projections) may readily transform the coordinates into alternative coordinate reference systems using standard GIS software according to the objectives of their analyses.

Environmental variables

Environmental parameters associated with each record were compiled when available, including:

- decimalLatitude
- decimalLongitude
- Surface (km²)
- Maximum depth (m)
- Altitude (m a.s.l)
- Salinity (g/L)
- Conductivity (mS/cm)
- Chlorophyll concentration (µg/L)

All variables were standardized to consistent units.

Habitat classification

Habitat types were categorized into standardized classes (coastal ephemeral lagoons, lagoon, lake, reservoirs, salt works, shallow lagoon, shallow saline lagoon, wetland) to ensure comparability across records.

Data Records

- The complete dataset has been deposited in Zenodo⁹⁷ and is publicly available at <https://doi.org/10.5281/zenodo.19702727>. The repository contains the CSV file including the following fields:
- Phylum
- Subphylum
- Class
- Order
- Family
- Genus
- Specie
- Geographical distribution
- Site
- decimalLatitude
- decimalLongitude
- Surface (km²)
- Maximum depth (m)
- Altitude (m a.s.l)
- Salinity (g/L)
- Conductivity (mS/cm)
- Chlorophyll (µg/L)
- Kind of habitat
- Reference

Each row represents a unique occurrence record with associated environmental data when available.

All occurrence records were compiled exclusively from openly accessible scientific publications, biodiversity repositories and publicly available data sources. Data reuse complies with the corresponding terms of use and licensing conditions established by the original providers. Appropriate attribution is provided through the bibliographic references and the reference field associated with each occurrence record.

Each occurrence record is directly linked to its original bibliographic source through the Darwin Core field bibliographicCitation, allowing complete traceability of every occurrence included in the dataset.

Technical Validation

Several quality control procedures were implemented to ensure data reliability:

1. **Taxonomic validation**

Species names were cross-checked against authoritative taxonomic databases (GBIF, WoRMS, and ITIS) to ensure validity and consistency.

2. **Geographic validation**

Coordinates were inspected for errors (e.g., impossible values, outliers) and verified against known species distributions where possible.

3. **Environmental consistency**

Environmental variables were checked for unrealistic values and standardized across all records.

4. **Missing data handling**

Missing values were retained as NA and documented to preserve dataset integrity.

Usage Notes

This dataset can be used for:

- Biodiversity and biogeographic analyses
- Species distribution modeling
- Ecological niche modeling
- Climate change impact assessments
- Comparative freshwater ecology

Users should consider that not all environmental variables are available for every record, and sampling effort may vary across regions.

Data Availability Statement

The dataset is publicly available in Zenodo (DOI: <https://doi.org/10.5281/zenodo.19702727>)

Code Availability

No custom code was used in the generation of this dataset. Standard data processing and curation procedures were applied.

References

1. De los Ríos-Escalante, P. R., & Woelfl, S. A review of zooplankton research in Chile. *Limnologia*, **100**, 126079 (2023). <https://doi.org/10.1016/j.limno.2023.126079>
2. De los Ríos-Escalante, P. Crustacean zooplankton communities in Chilean inland waters. *Crust. Monogr.*, **12**: 1-109 (2010).
3. De los Ríos-Escalante, P., Meruane, J., Morales, M. C., Rudolph, E., Fuentealba, C., & Boxshall, G. Zoogeography of Chilean inland water crustaceans. *Latin American J. Aq. Res.*, **41**: 846-853. (2013). <http://dx.doi.org/103856/vol41-issue5-fulltext-5>
4. Zúñiga, O., Wilson, R., Amat, F., & Hontoria, F. Distribution and characterization of Chilean populations of the brine shrimp *Artemia* (Crustacea, Branchiopoda, Anostraca). *Intern. Journ. Salt Lake Res.*, **8**: 23-40. (1999). <https://doi.org/10.1023/A:1009056621535>
5. Zúñiga, L. Sobre *Diaptomus diabolicus* Brehm (Crustacea: Copepoda, Calanoida). *Not. Mens. Mus. nac. Hist. nat., Santiago de Chile*, **19**: 3-9. (1975)
6. Zúñiga, L. R. & Domínguez, P. Observaciones sobre el zooplancton de lagos chilenos. *An. Mus. Hist. Nat. Valparaíso*, **10**: 107-120. (1977)
7. Zúñiga, L. R. & Domínguez, P. Entomostracos planctónicos del lago Riñihue (Valdivia, Chile): distribución temporal de la taxocenosis. *An. Mus. Hist. Nat. Valparaíso*, **11**: 89-95. (1978).
8. Zúñiga, L. R. & Araya, J. M. Estructura y distribución especial del zooplankton del embalse Rapel. *An. Mus. Hist. Nat. Valparaíso*, **15**: 45-57. (1982).
9. Wölfl, S. Untersuchungen zur Zooplanktonstruktur einschliesslich der mikrobiellen Gruppen unter besonderer Berücksichtigung der mixotrophen Ciliaten in zwei südchilenischen Andenfußseen: 1-242. (Doctoral Thesis, University of Konstanz). (1996).
10. Villalobos, L. Determinación de capacidad de carga y balance de fósforo y nitrógeno de los lagos Riesco, Los Palos, y Laguna Escondida en la XI región. (Technical Report Fisheries Research Foundation-Chile, FIP-IT/97-39.). (1999).
11. Villalobos, L. Distribution of *Daphnia* in high mountain and temperate lakes of South America. *Verh. Internat. Verein. Theor. Ang. Limnol.*, **25**: 2400–2404 (1994). <https://doi.org/10.1080/03680770.1992.11900652>
12. Villalobos, L., Parra, O., Grandjean, M., Jaque, E., Woelfl, S. & Campos, H. River basin and limnological study in five humic lakes of the Chiloé Island. *Rev. Chilena Hist. Nat.*, **76**: 563–590. (2003a). <http://dx.doi.org/10.4067/S0716-078X2003000400003>

13. Villalobos, L., Woelfl, S., Parra, O. & Campos, H. Lake Chapo: a baseline of a deep, oligotrophic North Patagonian lake prior to its use for hydroelectricity generation: II. Biological properties. *Hydrobiologia*, **510**: 225–237. (2003b).
<https://doi.org/10.1023/B:HYDR.00000008647.51685.4d>
14. Villalobos, L. & Zúñiga, L. Latitudinal gradient and morphological variability of copepods in Chile: *Boeckella gracilipes* Daday. *Verh. Internat. Verein. Theor. Ang. Limnol*, **24**: 2834–2838. (1991). <https://doi.org/10.1080/03680770.1989.11899176>
15. Vávra, W. Süswasser Cladoceren. *Hamburger Magalhaensische Samm.*, **5**: 1–25. (1900).
16. Thomasson, K. Araucanian lakes. Plankton studies in North Patagonia with notes on terrestrial vegetation. *Ac. Phytogeog. Suecica*, **47**: 1–139. (1963)
17. Soto, D., Campos, H., Steffen, W., Parra O., & Zúñiga, L.. The Torres del Paine lake district (Chilean Patagonia): a case of potentially N-limited lakes and ponds. *Arch. Hydrobiol.*, **99**: 181–197. (1994).
18. De Los Ríos, P. Efectos de las disponibilidades de recursos energéticos, estructurales y de protección sobre la distribución y abundancia de crustáceos zooplanktónicos lacustres chilenos: 1–163. (Doctoral Thesis, Austral University of Chile, Science Faculty, Valdivia). (2003).
19. Schmid-Araya, J. M. & Zúñiga, L. R. Zooplankton community structure in two Chilean reservoirs. *Arch. Hydrobiol.*, **123**: 305–335. (1992).
<https://doi.org/10.1127/archiv-hydrobiol/123/1992/305>
20. Sars, G.O. Contributions to the knowledge of the fresh-water Entomostraca of South America, as shown by artificial hatching from dried material. 1. Cladocera. *Arch. Math. Natur.*, **23**: 1–102. (1901).
21. Ruiz, L.R. & Bahamonde, N.N. Cladóceros y copépodos limnicos en Chile y su distribución geográfica. Lista sistemática. *Mus. Nac. Hist. Nat., Santiago, Chile, Publ. Oc.*, **45**: 5–48. (1989).
22. Rogers, C., De los Ríos, P. & Zúñiga, O. Fairy shrimp (Branchiopoda) of Chile. *J. Crust. Biol.*, **28**: 543–550. (2008). <https://doi.org/10.1651/07-2953.1>
23. Ramos, R., Trapo, C., Flores, F., Brignardello, A., Siebeck, O. & Zúñiga, L. Temporal succession of planktonic crustaceans in a small temperate lake (El Plateado, Valparaíso, Chile). *Verh. Internat. Verein. Theor. Ang. Limnol.*, **26**: 1997–2000. (1998).
<https://doi.org/10.1080/03680770.1995.11901092>
24. Pezzani-Hernández, S. Cladóceros del embalse del río Yeso (Crustacea, Cladocera). *Not. Mens. Mus. nac. Hist. nat., Santiago de Chile*, **16**: 3–9. (1970).
25. Muñoz-Pedrerros, A., De los Ríos, P., Gonzalez-Urrutia, M. Zooplankton of a mountain river and highland bogs in a wetlands complex in Atacama, an Altiplano desert, in northern Chile. *Crustaceana* **92**: 429–444. (2019). <https://doi.org/10.1163/15685403-00003882>

26. Muñoz-Pedreros, A., De los Rios-Escalante, P., & Möller, P. Zooplankton of the highland bogs of Putana, a desert wetland of the high Puna, northern Chile. *Crustaceana*, **88**: 1235-1244. (2015). <https://doi.org/10.1163/15685403-0000348>
27. Muñoz-Pedreros, A., De Los Rios, P., & Moeller, P. Zooplankton in Laguna Lejía, a high-altitude Andean shallow lake of the Puna in northern Chile. *Crustaceana*, **86**: 1634-1643. (2013). <https://doi.org/10.1163/15685403-00003265>
28. Mrázek, A., Süßwasser-Copepoden. *Ergebn. Hamburger Magalhanischer Samm.*, **2**: 1-29. (1901).
29. Löffler, H. Zür Systematik und Ökologie der chilenischen Süßwasserentomostraken. *Beitr. Neotrop. Fauna*, **2**: 145–222. (1961). <https://doi.org/10.1080/01650526109380627>
30. Kotov, A.A., Sinev, A.Y. & Berríos, V.L. The Cladocera (Crustacea: Branchiopoda) of six altitude water bodies in the North Andes, with discussion of Andean endemism. *Zootaxa*, **2430**: 1–66. (2010). <https://doi.org/10.11646/zootaxa.2430.1.1>
31. Kotov, A. A., Paggi, J. C., & Elías-Gutiérrez, M. Redescription of *Ilyocryptus brevidentatus* Ekman, 1905 (Anomopoda, Cladocera, Branchiopoda). *Hydrobiologia*, **481**: 1-18. (2002). <https://doi.org/10.1023/A:1021210414160>
32. Kotov, A.A. & Štifter, P. Notes on the genus *Ilyocryptus* Sars, 1862 (Cladocera: Anomopoda: Ilyocryptidae). 6. South American *I. denticulatus denticulatus* Delachaux, 1919 and *I. denticulatus freyi* subsp.n. *Arth. Sel.*, **14**: 207– 218. (2005)
33. Kotov, A.A. & Štifter, P. Cladocera: family Ilyocryptidae (Branchiopoda: Cladocera: Anomopoda). Guides to the identification of the microivertebrates of the Continental Waters of the world. Vol. 22. Kenobi Productions, Ghent & Backhuys Publishers, Leiden, 172 pp. (2006).
34. Kořínek, V. & Villalobos, L. Two South American endemic species of *Daphnia* from high Andean lakes. *Hydrobiologia*, **490**: 107–123. (2003). <https://doi.org/10.1023/A:1023418713559>
35. Kiefer, V., Mitteilungen von den Forschungsreisen Prof. Rahms. Mitt. VIII. Cyclopiden. *Zool. Anz.*, **115**: 244-249. (1936).
36. Heine-Fuster I., Vega-Retter, C., Sabat, P. & Ramos-Jiliberto, R. Osmoregulatory and demographic responses to salinity of the exotic cladoceran *Daphnia exilis*. *J. Plank. Res.*, **32**: 1405–1411. (2010). <https://doi.org/10.1093/plankt/fbq055>
37. Hegna, T.A. & Lazo-Wasem, E.A. *Branchinecta brushi* n. sp. (Branchiopoda: Anostraca: Branchinectidae) from a Volcanic Crater in Northern Chile (Antofagasta Province): A New Altitude Record for Crustaceans. *J. Crust. Biol.*, **30**: 445–464. (2010). <https://doi.org/10.1651/09-3236.1>
38. Hann, B.J. Revision of the genus *Daphniopsis* Sars 1903 (Cladocera-Daphniidae) and a description of *Daphniopsis chilensis*, new species, from South America. *J. Crust. Biol.*, **6**: 246–263. (1986). <https://doi.org/10.1163/193724086X00073>

39. Fuentes, N., & Gajardo, G. A glimpse to Laguna de los Cisnes, a field laboratory and natural monument in the Chilean Patagonia. *Lat. Am. J. Aquat. Res.* **45**: 491–495. (2017). <http://dx.doi.org/10.3856/vol45-issue2-fulltext-24>
40. Ekman, S. Cladoceren aus Patagonien, gesammelt von der schwedischen Expedition nach Patagonien 1899. *Zool. Jahr. Abt. Syst. Geogr. Biol. Tier.*, **14**: 62–84. (1900).
41. Dumont, H. J. & Pensaert, J. A revision of the Scapholeberinae (Crustacea: Cladocera). *Hydrobiologia*, **100**: 3–45. (1983). <https://doi.org/10.1007/BF00027420>
42. Dumont, H. J., & Martens, K. The freshwater microcrustacea of Easter Island. *Hydrobiologia*, **325**: 83–99. (1996). <https://doi.org/10.1007/BF00028269>
43. Domínguez, P. Contribución al estudio de los Cladóceros Chilenos. I: Cladóceros del Lago Chungará. *Not. Mens. Mus. nac. Hist. Nat., Santiago de Chile*, **17**: 3–10. (1973).
44. Domínguez, P. & Zúñiga, L. Análisis fenológico de los cladóceros limnéticos (Crustacea: Entomostraca) de la laguna El Plateado (Valparaíso). *An. Mus. Hist. Nat. Valparaíso*, **9**: 35–44. (1976)
45. De Los Rios-Escalante, P., & Mansilla, A. On the geographic distribution of *Boeckella brevicaudata* (Brady, 1875)(Copepoda, Calanoida) and its species associations in seasonal ephemeral pools in the Magallanes region (53° S, Chile). *Crustaceana*, **87**: 540–550. (2014). <https://doi.org/10.1163/15685403-00003308>
46. De los Ríos-Escalante, P., Quinán, E., & Acevedo, P. Inland water microcrustacean assemblages in an altitudinal gradient in Aysen region (46 S, Patagonia Chile). *Brazilian J. Biol.*, **74**: 8–15. (2014a). <https://doi.org/10.1590/1519-6984.08212>
47. De los Rios-Escalante, P., Munoz-Pedrerros, A., & Moeller, P. A null model to study community structure of microcrustacean assemblages in north Patagonian urban wetlands (39–41° S, Chile). *Crustaceana*, **87**: 1377–1385. (2014b). <https://doi.org/10.1163/15685403-00003352>
48. De los Ríos-Escalante, P., & Mansilla, A. Inland water crustaceans in two Chilean protected areas: Parrillar Lake and Magallanes National Reserves, 53° S (Chile). *Crustaceana*, **88**(9), 1055–1059. (2015). <https://doi.org/10.1163/15685403-00003463>
49. De los Rios-Escalante, P., Hauenstein, E., Romero-Mieres, M., & Acevedo, P. Use of null models to explain crustacean zooplankton assemblages in waterbodies of Alerce Andino National Park (41 S, Chile). *Crustaceana*, **85**: 713–722. (2012). <https://doi.org/10.2307/23240253>
50. De los Ríos Escalante, P., Gonzalez, J. F., Górski, K., Habit, E. M., & Ruzzante, D. E. Crustacean zooplankton assemblages in inland waters of southern Patagonia (Alcalufes National Reserve), Chile (49–51 S). *Crustaceana*, **89**: 1639–1647. (2016). <https://doi.org/10.1163/15685403-00003587>

51. De los Ríos, P., Mancilla, A., & Vega, M. Species co-occurrences based on a presence/absence null model for Copepoda and cladocerans in Patagonia and Tierra del Fuego lakes and ponds. *Biologia, Bratislava*, **65**: 1019-1027. (2010a). <https://doi.org/10.2478/s11756-010-0123-6>
52. De los Ríos, P., Adamowicz, S. J., & Witt, J. D. Aquatic fauna in the driest desert on earth: first report on the crustacean fauna of the Loa river (Atacama desert, Antofagasta region, Chile). *Crustaceana*, **83**: 257-266. (2010b). <https://doi.org/10.1163/001121609X12596543952333>
53. De los Ríos-Escalante, P., Carreño, E., Hauenstein, E., & Vega, M. Actualización de la distribución de *Boeckella gracilis* (Daday, 1902)(Crustacea, Copepoda) en la región de la Araucanía (38° S), Chile, y un modelo nulo para comprender sus asociaciones específicas en su habitat. *Latin American J. Aq. Res.*, **38**: 507-513. (2010c). <https://doi.org/10.3856/vol38-issue3-fulltext-15>
54. De los Ríos-Escalante, P., Hauenstein, E., & Romero-Mieres, M. Microcrustacean assemblages composition and environmental variables in lakes and ponds of the Andean region-South of Chile (37-39 S). *Brazilian J. Biol.*, **71**: 353-358. (2011). <https://doi.org/10.1590/S1519-69842011000300003>
55. De los Ríos-Escalante, P., & Rueda, T. Crustaceans in freshwater bodies in a coastal protected area (41 S, Katalapi Park, Chile). *Crustaceana*, **87**: 1469-1472. (2014). <https://doi.org/10.1163/15685403-00003351>
56. De los Ríos-Escalante, P., & Acevedo, P. Crustaceans in four pristine north Patagonian Andean shallow ponds (Parque Tagua Tagua, 41 S, Chile). *Crustaceana*, **87**: 1273-1277. (2014). <https://doi.org/10.1163/15685403-00003350>
57. De los Ríos Escalante, P., & Acevedo, P. First Observations on Zooplankton and Optical Properties in a Glacial North Patagonian Lake (Tagua Tagua Lake, 41° S Chile). *Polish Journal of Environmental Studies*, **25**: 453-457. (2016). <https://doi.org/10.15244/pjoes/59369>
58. De los Ríos Escalante, P. A null model to study community structure of microcrustacean assemblages in northern Chilean shallow lakes. *Crustaceana*, **84**: 513-521. (2011). <https://doi.org/10.1163/15685403-00003352>
59. De los Ríos, P. A null model for explain crustacean zooplankton species associations in central and southern Patagonian inland waters. *An. Inst. Patagonia*, **36**: 25-34. (2008).
60. De los Ríos, P. Richness and distribution of crustacean zooplankton species in Chilean Andes mountains and southern Patagonia shallow ponds. *Polish J. Env. Stud.*, **14**: 817-822. (2005).
61. Soto, D., & De los Ríos, P. Influence of trophic status and conductivity on zooplankton composition in lakes and ponds of Torres del Paine National Park (Chile). *Biologia, Bratislava*, **61**: 541-546. (2006). <https://doi.org/10.2478/s11756-006-0088-7>
62. De los Ríos, P., Pizarro-Araya, J., Alfaro, F. M., & Zuleta, C. First descriptions of aquatic crustaceans in coastal plains in northern Chile (Huentelauquen, 31 S, Coquimbo region, Chile). *Crustaceana*, **92**: 73-81. (2019). <https://doi.org/10.1163/15685403-00003825>

63. Sigvardt, Z. M., Rogers, D. C., De los Ríos, P., Palero, F., & Olesen, J. First molecular phylogeny of Laevicaudata (Crustacea: Branchiopoda) with description of a new species of *Lynceus* from Chile and an updated key to species in the Americas. *Inv. Syst.*, **33**: 597-617. (2019). <https://doi.org/10.1071/IS18073>
64. De los Ríos, P., Figueroa-Muñoz, G., & Parra-Coloma, L. Null models for explaining inland water crustacean zooplankton communities in Chile. *An. Biol.*, **68**: 161-172. (2018). <https://doi.org/10.1163/15707563-17000135>
65. De los Ríos, P., Hauenstein, E., Acevedo, P., & Jaque, X. Littoral crustaceans in mountain lakes of Huerquehue National Park (38 S, Araucania region, Chile). *Crustaceana*, **80**: 401-410. (2007). <https://doi.org/10.1163/156854007780440885>
66. De los Ríos, P., Rogers, D. C., & Rivera, N. *Branchinecta gaini* Daday, 1910 (Branchiopoda, Anostraca) as a bioindicator of oligotrophic and low conductivity shallow ponds in southern Chilean Patagonia. *Crustaceana*, **81**: 1025-1034. (2008). <https://doi.org/10.1163/156854008X360789>
67. De los Rios, P. R., & Zúñiga, O. Comparación biométrica del lóbulo frontal en poblaciones americanas de *Artemia* (Anostraca, Artemiidae). *Rev. Chilena Hist. Nat.*, **73**: 31-38. (2000). <http://dx.doi.org/10.4067/S0716-078X2000000100004>
68. De los Ríos, P., & Soto, D. Crustacean (Copepoda and Cladocera) zooplankton richness in Chilean Patagonian lakes. *Crustaceana*, **80**: 285-296. (2007). <https://doi.org/10.1163/156854007780162433>
69. De los Ríos, P., & Roa, G. Species assemblages of zooplanktonic crustaceans in mountain shallow ponds of Chile (Parque Cañi). *Zoologia (Curitiba)*, **27**: 81-86. (2010). <https://doi.org/10.1590/S1984-46702010000100012>
70. De los Rios-Escalante, P., & Gajardo, G. Potential heterogeneity in crustacean zooplankton assemblages in southern Chilean saline lakes. *Brazilian J. Biol.*, **70**: 1031-1032. (2010). <https://doi.org/10.1590/S1519-69842010000500016>
71. De los Rios, P., & Crespo, J. Salinity effects on the abundance of *Boeckella poopoensis* (Copepoda, Calanoida) in saline ponds in the Atacama Desert, Northern Chile. *Crustaceana*, **77**: 417-423. (2004). <https://doi.org/10.1163/1568540041643328>
72. De los Ríos, P. & Contreras, P. Salinity level and occurrence of centropagid copepods (Crustacea, Copepoda, Calanoida) in shallow lakes in Andes mountains and Patagonian plains, Chile. *Polish Journ. Ecol.*, **53**: 445-450. (2005).
73. De los Ríos, P., & Carreño, E. First report of *Branchinecta* (Anostraca) in seasonal coastal pools in the Araucania Region (Puaucho, 39 S, Chile). *Crustaceana*, **91**: 1219-1230. (2018). DOI: 10.1163/15685403-00003821
74. Crespo, J. E., & De los Rios, P. A new locality for *Artemia* Leach, 1819 (Branchiopoda, Anostraca) in Chile. *Crustaceana*, **77**: 245-247. (2004). DOI: 10.1163/156854004774003592

75. Campos, H., Steffen, W., Agüero, G., Parra O., & Zúñiga, L. Limnological studies in Lake Villarrica. Morphometry, physics, chemistry and primary productivity. *Arch. Hydrobiol., (Suppl.)* **71**: 37-67. (1983).
76. Campos, H., Steffen, W., Agüero, G., Parra O., & Zúñiga, L. Limnology of Lake Riñihue. *Limnológica*, **18**: 339-357. (1987a).
77. Campos, H., Steffen, W., Agüero, G., Parra O., & Zúñiga, L. Estudios limnológicos en el lago Caburgua (Chile). *Gayana, Botánica*, **44**: 61-84. (1987b).
78. Campos, H., Steffen, W., Agüero, G., Parra O., & Zúñiga, L. Limnological study of Lake Llanquihue (Chile): morphometry, physics, chemistry and primary productivity. *Arch. Hydrobiol., (Suppl.)* **81**: 37-67. (1988).
79. Campos, H., Steffen, W., Agüero, G., Parra O., & Zúñiga, L. Estudios limnológicos en el lago Puyehue (Chile): morfometría, factores físicos y químicos, plancton y productividad primaria. *Med. Amb.*, **10**: 36-53. (1989).
80. Campos, H., Steffen, W., Agüero, G., Parra O., & Zúñiga, L. Limnological study of Lake Todos los Santos (Chile): morphometry, physics, chemistry and primary productivity. *Arch. Hydrobiol., (Suppl.)*, **117**: 453-484. (1990).
81. Campos, H., Steffen, W., Agüero, G., Parra O., & Zúñiga, L. Limnological study of Lake Ranco (Chile). *Limnológica*, **22**: 337-353. (1992a)
82. Campos, H., Steffen, W., Agüero, G., Parra O., & Zúñiga, L. Limnological studies of Lake Rupanco (Chile): morphometry, physics, chemistry and primary productivity. *Arch. Hydrobiol., (Suppl.)*, **90**: 85-113. (1992b)
83. Campos, H., Soto, D., Steffen, W., Agüero, G., Parra O., & Zúñiga, L. Limnological studies in Lake del Toro, Chilean Patagonia. *Arch. Hydrobiol.*, **99**: 199-215. (1994a).
84. Campos, H., Soto, D., Steffen, W., Agüero, G., Parra O., & Zúñiga, L. Limnological studies in lake Sarmiento, a subsaline lake from Chilean Patagonia. *Arch. Hydrobiol.*, **99**: 217-234. (1994b).
85. Campos, H., Bucarey E., & Arenas, J. Estudios limnológicos del lago Riñihue y río Valdivia (Chile). *Boln. Soc. Biol. Concepción*, **48**: 47-67. (1974).
86. Brehm, V. Eine neue Boeckella aus Chile. *Zool. Anz.*, **118**: 304-307. (1937)
87. Brehm, V. Mitteilungen von den Forschungsreisen Prof. Rahms. Mitteilung VI. Über die Cladocerenfauna des Titicaca und über einige neue Fundstellen bereits bekannter Copepoden. *Zool. Anz.*, **114**: 157-159. (1936).
88. Brehm, V. Mitteilungen von den Forschungsreisen Prof. Rahms. Mitteilung IV. Über eine mit *Pseudoboeckella valentini* Scott nächstverwandte *Pseudoboeckella* aus Chile: *Pseudoboeckella gibbosa* sowie über eine weitere neue *Pseudoboeckella* und *Alona*. *Zool. Anz.*, **112**: 116-123. (1935d)

89. Brehm, V. Mitteilungen von den Forschungsreisen Prof. Rahms. Mitteilung III. Copepoden aus Cajon del Plomo in der Kordillere von Santiago, 3.330 m. *Zool. Anz.*, **112**: 73-79. (1935c)
90. Brehm, V. Mitteilungen von den Forschungsreisen Prof. Rahms. Mitteilung II. Gibt es in der chilenischen Region Diaptomiden? *Diaptomus diabolicus* nov. spec. *Zool. Anz.*, **112**: 9-13. (1935b)
91. Brehm, V. Mitteilungen von den Forschungsreisen Prof. Rahms. Mitteilung I. Zwei neue Entomostraken aus der Wüste Aracama. *Zool. Anz.*, **111**: 279-284. (1935a)
92. Berrios, V. & Sielfeld, W. Superclase Crustacea. Guías de Identificación y Biodiversidad Fauna Chilena. Apuntes de Zoología, Universidad Arturo Prat, Iquique, Chile, 32 pp. (2000)
93. Bayly, I.A.E. The fauna of athalassic saline waters in Australia and the Altiplano of South America: comparison and historical perspectives. *Hydrobiologia*, **267**: 225–231. (1993). <https://doi.org/10.1007/BF00018804>
94. Bayly, I.A.E. Fusion of the genera *Boeckella* and *Pseudoboeckella* and a revision of their species from South America and Subantarctic islands. *Rev. Chilena Hist. nat.*, **65**: 17-63. (1992).
95. Araya, J.M. & Zúñiga, L.R. Manual taxonómico del zooplancton lacustre de Chile. *Bol. Limnol. Univ. Austral de Chile*, **8**: 1–110. (1985).
96. Andrew, T. E., Cabrera, S., & Montecino, V. Diurnal changes in zooplankton respiration rates and the phytoplankton activity in two Chilean lakes. *Hydrobiologia*, **175**: 121-135. (1989). <https://doi.org/10.1007/BF00765123>
97. De los Rios-Escalante, P. R., Esse, C. & Correa-Araneda, F. Inland water crustacean zooplankton geographical distribution in Chile. Zenodo. (2026) <https://doi.org/10.5281/zenodo.19702727>

Acknowledgements.

The present manuscript was financed by projects VIPUCT-2022REG-PR-03 and MECESUP UCT 0804, ANID ATE220060, FONDECYT regular 1231551 and 1240447. The authors also express their gratitude to M.I. and S.M.A. for their valuable comments for improving the manuscript.

Author contributions

These authors contributed equally

Competing interests

The authors declare no competing interests.

Figure caption:

Figure 1. Geographical distribution of freshwater crustacean occurrence records included in the dataset across continental Chile.

