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The dataset of the *Lichenotheca Veneta* by Vittore Trevisan (1818–1897)

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Keywords: Digitization, exiccatum, historical collections, lichens.

SUMMARY

The *Lichenotheca Veneta* is a collection of lichen *exiccata* published in 1869 and preserved in its original form at the Museum of Natural History "Giancarlo Ligabue" of Venice. The collection, which contains 268 specimens belonging to 188 species, 123 genera, 45 families, 22 orders and 7 classes, was recently digitized and published online in the form of a web portal. The dataset, which contains a record for each specimen along with one or more digital images of each specimen, is available through the Global Biodiversity Information Facility (GBIF).

INTRODUCTION

The *Lichenotheca Veneta* is a collection of lichen *exsiccata* published in 1869 (Trevisan 1869) by Vittore Trevisan, earl of Saint Leon (Padua, 1818 - Milan, 1897), a botanist specialized in cryptogams. This is one of the few collections of *exsiccata* published in Italy and containing lichens, alongside the *Lichenes Italici Exsiccati* (10 volumes; Massalongo 1855-1856) of Abramo Massalongo, and the Erbario Crittogamico Italiano (2 series, 30 and 10 volumes; Ardissone et al. 1858-1867, De Notaris and Baglietto 1868-1885).

The *Lichenotheca Veneta* is organized into four unbound volumes of herbarium sheets, each hosting a specimen. It hosts 268 specimens. The specimens are glued to the sheets, or preserved inside paper envelopes. Each specimen is associated with a typewritten label, with the scientific name, synonyms, and notes. The localities of collection are mostly generic (e.g., *ad arborum truncos in prov. Vicetina*, which means on the tree trunks in the area of the province of Vicenza, N Italy), and thus it is meaningless to georeference them a posteriori (this issue was discussed in Martellos et al. 2024). Almost all the specimens were collected by Trevisan himself in Veneto and Friuli Venezia Giulia administrative regions and in the province of Mantua. This historical collection is known to exist in its original and complete form in the Museum of Natural History "Giancarlo Ligabue" of Venice only, since most of the few copies which were originally published were dismembered, and the specimens were stored in other collections.

In recent years, it has become pivotal to mobilize natural history specimen data by means of digitization (Heindrick et al. 2020), and especially to make them interoperable in global aggregators, such as the Global Biodiversity Information Facility (GBIF 2025). While several digitization efforts are underway globally, Italy is still lagging behind, even though recent efforts are being carried out at national and local level (Martellos and Seggi 2024). The *Lichenotheca Veneta* was recently digitized (Martellos et al. 2024) in the framework of the digitization activities of the Museum, and published online: https://dryades.units.it/lichenothecaveneta/en/. The publication of the dataset in the GBIF is another step aimed at increasing the accessibility of this collection, since physical access is possible on motivated request only, while shipment of the specimens is not foreseen, given their historical and cultural relevance.

MATERIALS AND METHODS

Specimen data were standardized to the Darwin Core (Wieczorek et al. 2012) with image metadata formatted according to the Simple Multimedia extension.

Taxonomic names have been aligned to the GBIF taxonomic backbone using the rgbif R package (Chamberlain and Boettiger 2017) and listed in the scientificName field. The original identification, reported on the specimen label, has been maintained in the verbatimIdentification concept. Since the dataset includes mostly historical records, 113 uncommon species names could not be fully matched to the GBIF nomenclature. In these cases, alignment was limited to a higher taxonomic rank (e.g., genus or family).

While all specimens have the locality of collection reported on labels, georeferentiation a posteriori was not performed due to the vagueness of the locality descriptions. Examples include phrases like "*Ad arborum truncos in prov. Vicetina*" (on tree trunks in the province of Vicenza, Italy) or "*Ad rupes et saxa in montibus*" (on rocks and cliffs in mountains), which lack precise spatial references.

RESULTS

Geographic coverage

Most of the specimens were collected in Italy (264), with three specimens collected in the Republic of Mauritius and one in Mexico.

Taxonomic coverage

According to the nomenclature backbone of the GBIF, the specimens in the dataset belong to 188 species, 123 genera, 45 families, 22 orders and 7 classes.

The distribution of taxa and specimens among phyla, classes, orders, families and genera is displayed in a Krona graph (Figure 1., Ondov et al. 2011) available as an interactive pie chart in the supplementary materials (Suppl. Material 1).

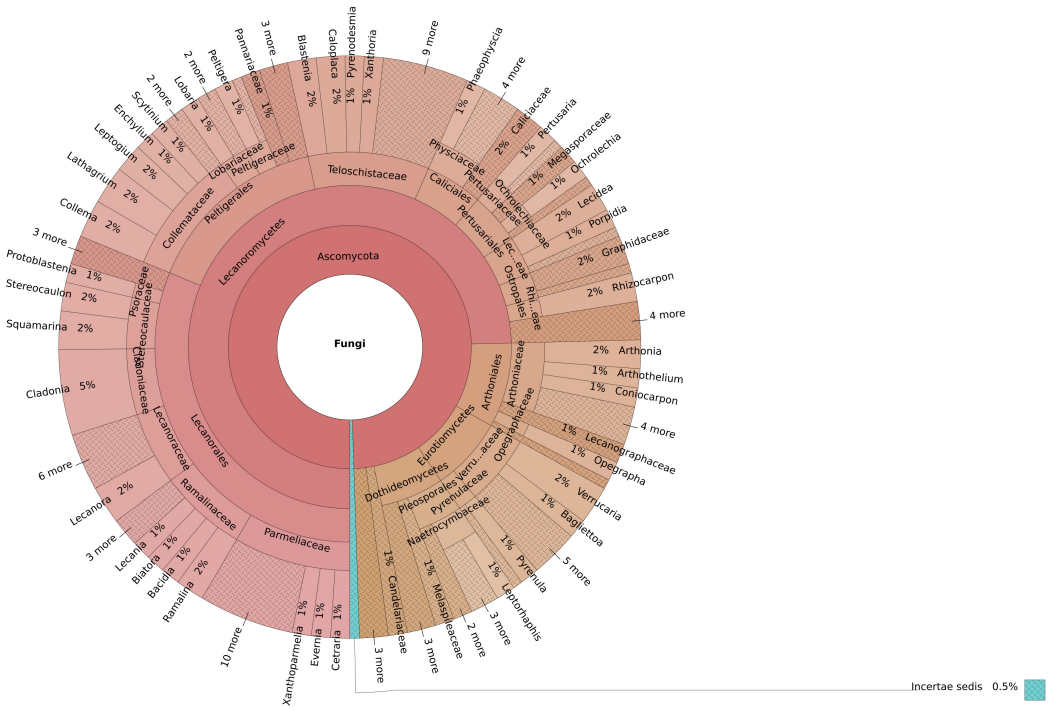


Figure 1. Krona graph of the distribution of taxa and specimens among phyla, classes, orders, families and genera.

Data resources

Resource link: https://doi.org/10.15468/5kgu74

Data set name: The Lichenotheca Veneta by Vittore Trevisan (1869)

Download URL: https://www.gbif.org/occurrence/download?dataset_key=776f18ae-9dcb-49e6-ab32-55b3fc345286

Data format: Darwin Core

Cite as: Museo di Storia Naturale di Venezia Giancarlo Ligabue (Fondazione Musei Civici di Venezia) (2025). The Lichenotheca Veneta by Vittore Trevisan (1869). Occurrence dataset https://doi.org/10.15468/5kgu74 accessed via GBIF.org on 2025-04-08

The following tables (Table 1 and 2) list the column labels used in the dataset, in accordance with the Darwin Core standard:

Table 1. Labels with description of the Occurrence Table.

Column label	Column description
occurrenceID	Unique identifier for the occurrence record
catalogNumber	Identifier assigned to the specimen in the collection
verbatimIdentification	Original taxonomic identification as recorded on the specimen label
nameAccordingTo	Source (e.g., publication) providing the taxonomic name on the specimen label
otherCatalogNumbers	Additional identifiers linked to the specimen for exsiccata
locality	Description of the location where the specimen was collected

taxonRemarks	Synonyms and notes or comments related to the scientific name on the specimen label
basisOfRecord	Category of the record (PreservedSpecimen for all records)
country	Name of the country where the specimen was collected
countryCode	Code of the country
eventDate	Date when the specimen was collected
scientificName	Current accepted name according to the GBIF backbone
kingdom	Taxonomic kingdom
phylum	Taxonomic phylum
class	Taxonomic class
order	Taxonomic order
family	Taxonomic family
genus	Taxonomic genus

Table 2. Labels with description of the Multimedia Extension Table.

Column label	Column description
occurrenceID	Identifier linking the multimedia file to the occurrence record
identifier	URL of the image associated with the specimen
type	Media format (stillImage for all the records)
license	Usage license for the media
creator	Person who created the media
created	Date when the media was created
rightsHolder	Entity owning rights to the media

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