Package 'rbhl'

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Title Interface to the 'Biodiversity' 'Heritage' Library

Description Interface to 'Biodiversity' 'Heritage' Library ('BHL')
(<https://www.biodiversitylibrary.org/>) API
(<https://www.biodiversitylibrary.org/docs/api3.html>). 'BHL' is a
repository of 'digitized' literature on 'biodiversity'
studies, including 'floras', research papers, and more.

Type Package

Version 0.9.2

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URL <https://github.com/ropensci/rbhl> (devel)

   <https://docs.ropensci.org/rbhl/> (documentation)

BugReports <https://github.com/ropensci/rbhl/issues>

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rbhl-package	*rbhl*

Description

R interface to the Biodiversity Heritage Library API.

You need an API key to use the Biodiversity Heritage Library API. Get your BHL API key at http://www.biodiversitylibrary.org/getapikey.aspx. Put your API key either in your .Renviron file (or similar) with the name BHL_KEY, or in your .Rprofile file with the name bhl_key, and the we'll use your API key without you having to enter it every time you run a search.

See rbhl-defunct for defunct functions.

Author(s)

Scott Chamberlain

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bhl_authorsearch   *Author search*

Description

Return a list of authors that match (fully or partially) the specified search string.

Usage

```
bhl_authorsearch(name = NULL, as = "table", key = NULL, ...)
```

Arguments

name	full or partial name of the author for which to search (last name listed first, i.e. 'Darwin, Charles') (character)
as	(character) Return a list ("list"), json ("json"), xml ("xml"), or parsed table ("table", default). Note that as="table" can give different data format back depending on the function - for example, sometimes a data.frame and sometimes a character vector.
key	Your BHL API key, either enter, or loads from your .Renviron as BHL_KEY or from .Rprofile as bhl_key.
...	Curl options passed on to crul::HttpClient()

Details

The namessearched are those contained in MARC 100a, 110a, 111a, 700a, 710a, and 711a library records.

Examples

```
## Not run:
bhl_authorsearch(name='dimmock')
bhl_authorsearch(name='Jones')

## End(Not run)
```

---

bhl_bioherlib   *Search BHL across many API methods.*

Description

Search BHL across many API methods.

Usage

```
bhl_bioherlib(
  method = "GetPageMetadata",
  pageid = NULL,
  ocr = FALSE,
  names = FALSE,
  as = "table",
  key = NULL,
  ...
)
```

Arguments

method	The API method to use.
pageid	The identifier of an individual page in a scanned book.
ocr	return ocr text of the page (logical). Default: FALSE
names	return the names that appear on the page (logical). Default: FALSE
as	(character) Return a list ("list"), json ("json"), xml ("xml"), or parsed table ("table", default). Note that as="table" can give different data format back depending on the function - for example, sometimes a data.frame and sometimes a character vector.
key	Your BHL API key, either enter, or loads from your .Renviron as BHL_KEY or from .Rprofile as bhl_key.
...	Curl options passed on to crul::HttpClient()

Examples

```
## Not run:
bhl_bioherlib(method='GetPageMetadata', pageid=1328690, ocr=TRUE,
  names=TRUE)
bhl_bioherlib(method='GetPageMetadata', pageid=1328690, ocr=TRUE,
  names=TRUE, as="xml")
bhl_bioherlib(method='GetPageMetadata', pageid=1328690, ocr=TRUE,
  names=TRUE, as="list")

## End(Not run)
```

---

bhl_getauthormetadata   *Get metadata about an author*

Description

Get metadata about an author

Usage

```
bhl_getauthormetadata(
  id,
  id_type = "bhl",
  pubs = FALSE,
  as = "table",
  key = NULL,
  ...
)
```

Arguments

`id`	(numeric) the identifier of an individual author
`id_type`	(character) the type of identifier (bhl, biostor, viaf). Default: "bhl"
`pubs`	(logical) TRUE to return the subject's publications. Default: FALSE
`as`	(character) Return a list ("list"), json ("json"), xml ("xml"), or parsed table ("table", default). Note that `as="table"` can give different data format back depending on the function - for example, sometimes a data.frame and sometimes a character vector.
`key`	Your BHL API key, either enter, or loads from your `.Renviron` as `BHL_KEY` or from `.Rprofile` as `bhl_key`.
`...`	Curl options passed on to crul::HttpClient()

Details

You may choose to include a list of the author's publications. The BHLType element identifies the type of each publication (Title or Part).

Examples

```
## Not run:
bhl_getauthormetadata(87509)
bhl_getauthormetadata(87509, pubs = TRUE, verbose = TRUE)
bhl_getauthormetadata(87509, as = "json")

## End(Not run)
```

---

bhl_getcollections	*Get a list of collections which are used to group titles and items. A single collection may contain either titles or items, but not both.*

Description

Get a list of collections which are used to group titles and items. A single collection may contain either titles or items, but not both.

Usage

```
bhl_getcollections(as = "table", key = NULL, ...)
```

Arguments

as	(character) Return a list ("list"), json ("json"), xml ("xml"), or parsed table ("table", default). Note that as="table" can give different data format back depending on the function - for example, sometimes a data.frame and sometimes a character vector.
key	Your BHL API key, either enter, or loads from your .Renviron as BHL_KEY or from .Rprofile as bhl_key.
...	Curl options passed on to crul::HttpClient()

Examples

```
## Not run:
bhl_getcollections()
bhl_getcollections(as = 'list')
bhl_getcollections(as = 'json')
bhl_getcollections(as = 'xml')

## End(Not run)
```

---

bhl_getinstitutions   *GetInstitutions data*

Description

GetInstitutions data

Usage

```
bhl_getinstitutions(as = "table", key = NULL, ...)
```

Arguments

as	(character) Return a list ("list"), json ("json"), xml ("xml"), or parsed table ("table", default). Note that as="table" can give different data format back depending on the function - for example, sometimes a data.frame and sometimes a character vector.
key	Your BHL API key, either enter, or loads from your .Renviron as BHL_KEY or from .Rprofile as bhl_key.
...	Curl options passed on to crul::HttpClient()

Details

Get a list of institutions which have contributed to BHL in some way. These institutions may fill roles such as contributors, rights holders, and scanning institutions.

Examples

```
## Not run:
bhl_getinstitutions()

## End(Not run)
```

---

bhl_getitemmetadata   *Return metadata about an item.*

Description

You may choose to include a list of the item's pages.

Usage

```
bhl_getitemmetadata(
  itemid = NULL,
  pages = TRUE,
  ocr = FALSE,
  parts = FALSE,
  as = "table",
  key = NULL,
  ...
)
```

Arguments

itemid	item id (character)
pages	return the items pages (TRUE/FALSE)
ocr	(logical) TRUE to return the ocr for the item's pages. Setting this to TRUE apparently doesn't return any actual ocr text, but leaving parameter here for now.
parts	(logical) TRUE to return the item's parts. Setting this to TRUE apparently doesn't return any parts text, but leaving parameter here for now.
as	(character) Return a list ("list"), json ("json"), xml ("xml"), or parsed table ("table", default). Note that as="table" can give different data format back depending on the function - for example, sometimes a data.frame and sometimes a character vector.
key	Your BHL API key, either enter, or loads from your .Renviron as BHL_KEY or from .Rprofile as bhl_key.
...	Curl options passed on to crul::HttpClient()

Examples

```
## Not run:
bhl_getitemmetadata('16800', TRUE)
bhl_getitemmetadata('16800', TRUE, as='xml')
bhl_getitemmetadata('16800', TRUE, as='json')
bhl_getitemmetadata('16800', TRUE, as='list')
bhl_getitemmetadata(20419, pages=FALSE, parts=TRUE)

## End(Not run)
```

---

bhl_getlanguages   *Get a list of languages in which materials in BHL have been written.*

Description

Get a list of languages in which materials in BHL have been written.

Usage

```
bhl_getlanguages(as = "table", key = NULL, ...)
```

Arguments

as   (character) Return a list ("list"), json ("json"), xml ("xml"), or parsed table ("ta-
                ble", default). Note that as="table" can give different data format back de-
                pending on the function - for example, sometimes a data.frame and sometimes
                a character vector.

key   Your BHL API key, either enter, or loads from your .Renviron as BHL_KEY or
                from .Rprofile as bhl_key.

...   Curl options passed on to crul::HttpClient()

Examples

```
## Not run:
bhl_getlanguages()
bhl_getlanguages('json')
bhl_getlanguages('xml')
bhl_getlanguages('list')

## End(Not run)
```

bhl_getpagemetadata *Return metadata about a page.*

Description

You may choose to include the OCR text and a list of names found on the page

Usage

```
bhl_getpagemetadata(
  page = NULL,
  ocr = FALSE,
  names = FALSE,
  as = "table",
  key = NULL,
  ...
)
```

Arguments

page	page number to get
ocr	return ocr text of the page (TRUE/FALSE)
names	return the names that appear on the page (TRUE/FALSE)
as	(character) Return a list ("list"), json ("json"), xml ("xml"), or parsed table ("table", default). Note that as="table" can give different data format back depending on the function - for example, sometimes a data.frame and sometimes a character vector.
key	Your BHL API key, either enter, or loads from your .Renviron as BHL_KEY or from .Rprofile as bhl_key.
...	Curl options passed on to crul::HttpClient()

Examples

```
## Not run:
bhl_getpagemetadata(page=1328690, ocr=TRUE)
bhl_getpagemetadata(page=1328690, ocr=TRUE, as='json')
bhl_getpagemetadata(page=1328690, ocr=TRUE, as='xml')
bhl_getpagemetadata(page=1328690, ocr=TRUE, as='list')

## End(Not run)
```

bhl_getpartmetadata   *Return a list of an item's pages.*

Description

Return a list of an item's pages.

Usage

```
bhl_getpartmetadata(partid, key = NULL, ...)
```

Arguments

partid	The identifier of an individual part (article, chapter, etc) (numeric)
key	Your BHL API key, either enter, or loads from your .Renviron as BHL_KEY or from .Rprofile as bhl_key.
...	Curl options passed on to crul::HttpClient()

Examples

```
## Not run:
bhl_getpartmetadata(10409)

## End(Not run)
```

bhl_gettitlemetadata   *Get title metadata*

Description

Return metadata about a title. You may choose to include a list of the items (books) associated with the title.

Usage

```
bhl_gettitlemetadata(titleid = NA, items = FALSE, as = "list", key = NULL, ...)
```

Arguments

titleid	the identifier of an individual title (numeric)
items	(logical) TRUE of FALSE (default) to inclue items
as	(character) Return a list ("list"), json ("json"), xml ("xml"), or parsed table ("table", default). Note that as="table" can give different data format back depending on the function - for example, sometimes a data.frame and sometimes a character vector.

key   Your BHL API key, either enter, or loads from your `.Renviron` as BHL_KEY or
                from `.Rprofile` as `bhl_key`.

...   Curl options passed on to crul::HttpClient()

Examples

```
## Not run:
bhl_gettitlemetadata(1726, items = TRUE)
bhl_gettitlemetadata(1726, as='list')
bhl_gettitlemetadata(1726, as='xml')

## End(Not run)
```

---

bhl_namemetadata   *Get basic title, item, and page metadata for each page on which the
                           specified name appears.*

Description

Get basic title, item, and page metadata for each page on which the specified name appears.

Usage

```
bhl_namemetadata(
  namebankid = NULL,
  name = NULL,
  id_type = NULL,
  as = "list",
  key = NULL,
  ...
)
```

Arguments

namebankid   (numeric) (not used if 'name' specified) NameBank identifier for a name

name   (character) (not used if 'namebankid' specified) a complete name string

id_type   (character) the type of identifier (namebank, eol, gni, ion, col, gbif, itis, ipni,
                worms). Not used if name is specified

as   (character) Return a list ("list"), json ("json"), xml ("xml"), or parsed table ("ta-
                ble", default). Note that `as="table"` can give different data format back de-
                pending on the function - for example, sometimes a data.frame and sometimes
                a character vector.

key   Your BHL API key, either enter, or loads from your `.Renviron` as BHL_KEY or
                from `.Rprofile` as `bhl_key`.

...   Curl options passed on to crul::HttpClient()

Examples

```
## Not run:
res <- bhl_namemetadata(name = 'poa annua linnaeus')
str(res)
# bhl_namemetadata(namebankid = 3501464)

## End(Not run)
```

---

bhl_namesearch   *Search for a particular name.*

Description

Names both with and without NameBank identifiers are returned.

Usage

```
bhl_namesearch(name = NULL, as = "table", key = NULL, ...)
```

Arguments

name	species name (character)
as	(character) Return a list ("list"), json ("json"), xml ("xml"), or parsed table ("table", default). Note that as="table" can give different data format back depending on the function - for example, sometimes a data.frame and sometimes a character vector.
key	Your BHL API key, either enter, or loads from your .Renviron as BHL_KEY or from .Rprofile as bhl_key.
...	Curl options passed on to crul::HttpClient()

Examples

```
## Not run:
bhl_namesearch('poa annua')
bhl_namesearch(name='helianthus annuus')
bhl_namesearch(name='helianthus annuus', as='xml')
bhl_namesearch(name='helianthus annuus', as='json')

## End(Not run)
```

---

bhl_openurl *Not sure how this differs from their other API...*

Description

Not sure how this differs from their other API...

Usage

```
bhl_openurl(
  genre = NULL,
  title = NULL,
  aufirst = NULL,
  aulast = NULL,
  date = NULL,
  spage = NULL,
  issue = NULL,
  version = 0.1,
  as = "list",
  key = NULL,
  ...
)
```

Arguments

genre	Book genre
title	Book title
aufirst	First author
aulast	Last author
date	Date of publication
spage	Start page
issue	Issue number
version	One of 0.1 or 1.0
as	(character) Return a list ("list"), json ("json"), xml ("xml"), or parsed table ("table", default). Note that as="table" can give different data format back depending on the function - for example, sometimes a data.frame and sometimes a character vector.
key	Your BHL API key, either enter, or loads from your .Renviron as BHL_KEY or from .Rprofile as bhl_key.
...	Curl options passed on to crul::HttpClient()

Examples

```
## Not run:
bhl_openurl(
genre="book",
title="Manual+of+North+American+Diptera",
aufirst="Samuel Wendell",
aulast="Williston",
date=1908,
spage=16)

bhl_openurl(genre="book", title="Manual+of+North+American+Diptera",
    aufirst="Samuel Wendell", aulast="Williston", date=1908, spage=16)

bhl_openurl(genre="book", title="Manual+of+North+American+Diptera",
    aufirst="Samuel Wendell", aulast="Williston", date=1908, spage=16,
    as='xml')

## End(Not run)
```

---

bhl_pages   *Get many OCR-generated pages given a single item id*

Description

Get many OCR-generated pages given a single item id

Usage

```
bhl_pages(itemid, key = NULL, ...)
```

Arguments

itemid	the item id (character). Required
key	Your BHL API key, either enter, or loads from your .Renviron as BHL_KEY or from .Rprofile as bhl_key
...	Curl options passed on to crul::HttpClient()

Examples

```
## Not run:
x <- bhl_publicationsearch('Selborne', year=1825, collection=4,
  language='eng')
bhl_pages(itemid = x$ItemID[1])

## End(Not run)
```

---

bhl_pagesearch   *Search an item for pages containing the specified text*

Description

Search an item for pages containing the specified text

Usage

```
bhl_pagesearch(id, text, as = "table", key = NULL, ...)
```

Arguments

id	(integer) BHL identifier of the item to be searched
text	(character) the text for which to search
as	(character) Return a list ("list"), json ("json"), xml ("xml"), or parsed table ("table", default). Note that as="table" can give different data format back depending on the function - for example, sometimes a data.frame and sometimes a character vector.
key	Your BHL API key, either enter, or loads from your .Renviron as BHL_KEY or from .Rprofile as bhl_key.
...	Curl options passed on to crul::HttpClient()

Examples

```
## Not run:
bhl_pagesearch(22004, "dog")
bhl_pagesearch(22004, "dog", as = "json")

## End(Not run)
```

---

bhl_publicationsearch *Publication search*

Description

Publication search

Usage

```
bhl_publicationsearch(
  q = NULL,
  full_text = FALSE,
  page = NULL,
  as = "table",
  key = NULL,
  ...
)
```

Arguments

q	(character) the text for which to search
full_text	(character) TRUE for a catalog plus full-text search; FALSE for a catalog-only search. default: FALSE
page	(integer) page to return
as	(character) Return a list ("list"), json ("json"), xml ("xml"), or parsed table ("table", default). Note that as="table" can give different data format back depending on the function - for example, sometimes a data.frame and sometimes a character vector.
key	Your BHL API key, either enter, or loads from your .Renviron as BHL_KEY or from .Rprofile as bhl_key.
...	Curl options passed on to crul::HttpClient()

See Also

Other publication-search: bhl_publicationsearchadv()

Examples

```
## Not run:
bhl_publicationsearch('cocos island costa rica birds')
bhl_publicationsearch('poa annua')
bhl_publicationsearch('helianthus annuus')

## End(Not run)
```

---

bhl_publicationsearchadv

Publication search advanced

Description

Publication search advanced

Usage

```
bhl_publicationsearchadv(
  title = NULL,
  titleop = NULL,
  authorname = NULL,
  year = NULL,
  subject = NULL,
  language = NULL,
  collection = NULL,
  notes = NULL,
  notesop = NULL,
  text = NULL,
  textop = NULL,
  page = NULL,
  as = "table",
  key = NULL,
  ...
)
```

Arguments

title	(character) a title for which to search
titleop	(character) 'all' to search for all specified words in the title fields; 'phrase' to search for the exact phrase specified
authorname	(character) an author name for which to search
year	(integer) a four-digit publication year for which to search
subject	(character) a subject for which to search
language	(character) a language code; search will only return publications in the specified language
collection	(character) a collection id; search will only return publications from the specfied collection
notes	(character) one or more words for which to search in the publication notes
notesop	(character) 'all' to search for all specified words in the notes field; 'phrase' to search for the exact phrase specified
text	(character) one or more words for which to search in the text of the publications
textop	(character) 'all' to search for all specified words in the text field; 'phrase' to search for the exact phrase specified
page	(integer) 1 for the first page of results, 2 for the second, and so on
as	(character) Return a list ("list"), json ("json"), xml ("xml"), or parsed table ("table", default). Note that as="table" can give different data format back depending on the function - for example, sometimes a data.frame and sometimes a character vector.
key	Your BHL API key, either enter, or loads from your .Renviron as BHL_KEY or from .Rprofile as bhl_key.
...	Curl options passed on to crul::HttpClient()

See Also

Other publication-search: `bhl_publicationsearch`()

Examples

```
## Not run:
bhl_publicationsearchadv(title = "cocos island", titleop = "all",
  authorname = "gifford", year = 1919)
bhl_publicationsearchadv(title = "cocos island", authorname = "gifford")

## End(Not run)
```

---

bhl_subjectmetadata   *Get metadata about a subject*

Description

Get metadata about a subject

Usage

```
bhl_subjectmetadata(subject, pubs = FALSE, as = "table", key = NULL, ...)
```

Arguments

subject	(character) he subject for which to return metadata
pubs	(logical) TRUE to return the subject's publications. Default: FALSE
as	(character) Return a list ("list"), json ("json"), xml ("xml"), or parsed table ("table", default). Note that as="table" can give different data format back depending on the function - for example, sometimes a data.frame and sometimes a character vector.
key	Your BHL API key, either enter, or loads from your .Renviron as BHL_KEY or from .Rprofile as bhl_key.
...	Curl options passed on to `crul::HttpClient()`

Details

You may choose to include a list of the subject's publications. The BHLType element identifies the type of each publication (Title or Part).

Examples

```
## Not run:
bhl_subjectmetadata(subject = "water")
x <- bhl_subjectmetadata(subject = "water", pubs = TRUE)
head(x$Publications[[1]])

## End(Not run)
```

---

bhl_subjectsearch   *Return a list of subjects that match (fully or partially) the specified*
                             search string.

Description

Return a list of subjects that match (fully or partially) the specified search string.

Usage

```
bhl_subjectsearch(subject, as = "table", key = NULL, ...)
```

Arguments

subject	the full or partial subject for which to search (character)
as	(character) Return a list ("list"), json ("json"), xml ("xml"), or parsed table ("table", default). Note that as="table" can give different data format back depending on the function - for example, sometimes a data.frame and sometimes a character vector.
key	Your BHL API key, either enter, or loads from your .Renviron as BHL_KEY or from .Rprofile as bhl_key.
...	Curl options passed on to crul::HttpClient()

Examples

```
## Not run:
bhl_subjectsearch('diptera')
bhl_subjectsearch('diptera', "json")

## End(Not run)
```

---

rbhl-defunct   *Defunct functions in rbhl*

Description

- bhl_getpartendnote(): BHL removed this API method.
- bhl_gettitleendnote(): BHL removed this API method.
- bhl_booksearch(): method removed in API v3, see bhl_publicationsearch()
- bhl_partsearch(): method removed in API v3, see bhl_publicationsearch()
- bhl_titlesearchsimple(): method removed in API v3, see bhl_publicationsearch()
- bhl_getauthorparts(): method removed in API v3, see bhl_getauthormetadata()
- bhl_getauthortitles(): method removed in API v3, see bhl_getauthormetadata()

- bhl_getitembyidentifier(): method removed in API v3, see bhl_getitemmetadata()
- bhl_getitempages(): method removed in API v3, see bhl_getitemmetadata()
- bhl_getitemparts(): method removed in API v3, see bhl_getitemmetadata()
- bhl_getpagenames(): method removed in API v3, see bhl_getpagemetadata()
- bhl_getpageocrtext(): method removed in API v3, see bhl_getpagemetadata()
- bhl_getpartbyidentifier(): method removed in API v3, see bhl_getpartmetadata()
- bhl_getpartnames(): method removed in API v3, see bhl_getpartmetadata()
- bhl_getsubjectparts(): method removed in API v3, see bhl_subjectmetadata()
- bhl_getsubjecttitles(): method removed in API v3, see bhl_subjectmetadata()
- bhl_getpartbibtex(): method removed in API v3
- bhl_gettitlebibTex(): method removed in API v3
- bhl_gettitlebyidentifier(): API method merged in API v3, see bhl_gettitlemetadata()
- bhl_gettitleitems(): API method merged in API v3, see bhl_gettitlemetadata()
- bhl_getunpublisheditems(): method removed in API v3
- bhl_getunpublishedparts(): method removed in API v3
- bhl_getunpublishedtitles(): method removed in API v3
- bhl_namecount(): method removed in API v3
- bhl_namelist(): method removed in API v3
- bhl_namegetdetail(): method renamed - see bhl_namemetadata()

---

rbhlmethods	*Data.frame of all the BHL API methods from the BHL website.*

Description

Data.frame of all the BHL API methods from the BHL website.

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