Package 'natserv'

October 13, 2022

Title 'NatureServe' Interface

Description Interface to 'NatureServe' (<https://www.natureserve.org/>).
Includes methods to get data, image metadata, search taxonomic names,
and make maps.

Version 1.0.0

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URL <https://docs.ropensci.org/natserv>,
<https://github.com/ropensci/natserv>

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

LazyData true

VignetteBuilder knitr

Language en-US

Encoding UTF-8

Depends R(>= 3.2.1)

Imports crul (>= 0.7.0), jsonlite, tibble

Suggests testthat, knitr, vcr

RoxygenNote 7.1.0

X-schema.org-applicationCategory Taxonomy

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X-schema.org-isPartOf https://ropensci.org

NeedsCompilation no

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R **topics documented:**

natserv-package   *natserv*

Description

Interface to NatureServe https://www.natureserve.org/

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nat_states   *A data.frame with 49 rows and 2 columns*

Description

- state (character) state 2 letter abbreviation

- state_name (character) state full name

---

ns_altid *Get taxon by uid, id, or elCode*

Description

Get taxon by uid, id, or elCode

Usage

```
ns_altid(uid = NULL, id = NULL, el_code = NULL, ...)
```

Arguments

uid	(character) A NatureServe taxon id (The taxon's Element Global UID)
id	The primary key value (ELEMENT_GLOBAL_ID) of the record within Central Biotics
el_code	The Biotics Element Code (ELCODE_BCD) of the record
...	Curl options passed on to verb-GET

Details

see https://explorer.natureserve.org/api-docs/#_taxon_data_model for details on the response data

Value

A list with lots of elements

References

https://explorer.natureserve.org/api-docs/

Examples

```
## Not run:
ns_altid(uid = "ELEMENT_GLOBAL.2.154701")
ns_altid(id = "154701")
ns_altid(el_code = "PDRAN0F010")

## End(Not run)
```

---

ns_ecohier   *Get a summary of the upper level hierarchy for an Ecosystem record*

Description

Get a summary of the upper level hierarchy for an Ecosystem record

Usage

```
ns_ecohier(uid, ...)
```

Arguments

uid	(character) A NatureServe taxon id (The taxon's Element Global UID)
...	Curl options passed on to verb-GET

Details

see https://explorer.natureserve.org/api-docs/#_taxon_data_model for details on the response data

Value

A list with lots of elements

References

https://explorer.natureserve.org/api-docs/

Examples

```
## Not run:
ns_ecohier("ELEMENT_GLOBAL.2.683060")

## End(Not run)
```

---

ns_export   *Search exports*

Description

Search exports

Usage

```
ns_export(
  text = NULL,
  text_adv = NULL,
  status = NULL,
  location = NULL,
  record_type = NULL,
  record_subtype = NULL,
  modified_since = NULL,
  format = "json",
  lang = "en",
  ...
)

ns_export_status(id, ...)
```

Arguments

text	(character) basic text search, equiavalent to `text_adv` with `matchAgainst="allNames"` and `operator="similarTo"`
text_adv	(list) advanced search, must specify the following three elements: `searchToken`, `matchAgainst`, and `operator`. see https://explorer.natureserve.org/api-docs/#_advanced_text_search_par
status	(character) conservation status, one of G1, G2, G3, G4, G5, GH, GX, GNR, GNA, GU. case insensitive
location	(list) location, country and sub-country. specify either `nation` OR `nation` and `subnation`. each expects a two-letter ISO code
record_type	(character) limit results by record type, one of "species" or "ecosystem"
record_subtype	(character) limit results by record sub-type, one of: "class", "subclass", "formation", "division", "macrogroup", "group", "alliance", "association", "terrestrial_ecological_system"
modified_since	(character) search for records modified since a given time. value must be a date and time with a UTC offset in ISO 8601 format. optional
format	(character) output format, one of "json" or "xlsx"
lang	(character) language, one of "en", "es", or "fr"
...	Curl options passed on to verb-GET
id	(character) a job id, from output of ns_export()

Value

ns_export() returns a single character string (a job id) ns_export_status() returns a list of metadata concerning the status of the export

References

https://explorer.natureserve.org/api-docs/

Examples

```
## Not run:
x <- ns_export(text = "robin")
res <- ns_export_status(x)
str(res)
res$state
res$data$errorMessage
res$data$url

w <- ns_export(text_adv = list(searchToken = "western",
  matchAgainst="allScientificNames", operator="startsWith"))
m <- ns_export_status(w)
head(jsonlite::fromJSON(m$data$url))

## End(Not run)
```

---

ns_id   *Get taxon by uid*

Description

Get taxon by uid

Usage

```
ns_id(uid, ...)
```

Arguments

uid	(character) A NatureServe taxon id (The taxon's Element Global UID). required.
...	Curl options passed on to verb-GET

Details

see https://explorer.natureserve.org/api-docs/#_taxon_data_model for details on the response data

Value

A list with lots of elements

References

https://explorer.natureserve.org/api-docs/

Examples

```
## Not run:
ns_id("ELEMENT_GLOBAL.2.154701")

## End(Not run)
```

---

ns_search_comb *Combined search*

Description

Combined search

Usage

```
ns_search_comb(
  text = NULL,
  text_adv = NULL,
  status = NULL,
  location = NULL,
  record_type = NULL,
  record_subtype = NULL,
  modified_since = NULL,
  page = NULL,
  per_page = NULL,
  ...
)
```

Arguments

text	(character) basic text search, equiavalent to `text_adv` with `matchAgainst="allNames"` and `operator="similarTo"`
text_adv	(list) advanced search, must specify the following three elements: `searchToken`, `matchAgainst`, and `operator`. see https://explorer.natureserve.org/api-docs/#_advanced_text_search_pa
status	(character) conservation status, one of G1, G2, G3, G4, G5, GH, GX, GNR, GNA, GU. case insensitive
location	(list) location, country and sub-country. specify either `nation` OR `nation` and `subnation`. each expects a two-letter ISO code
record_type	(character) limit results by record type, one of "species" or "ecosystem"
record_subtype	(character) limit results by record sub-type, one of: "class", "subclass", "formation", "division", "macrogroup", "group", "alliance", "association", "terrestrial_ecological_system"
modified_since	(character) search for records modified since a given time. value must be a date and time with a UTC offset in ISO 8601 format. optional
page	(integer) Zero-indexed page number; default: 0. optional
per_page	(integer) Records per page; default: 20. optional
...	Curl options passed on to verb-GET

References

https://explorer.natureserve.org/api-docs/

See Also

Other search: `ns_search_eco()`, `ns_search_spp()`

Examples

```
## Not run:
ns_search_comb(text = "robin")
ns_search_comb(text_adv = list(searchToken = "western",
  matchAgainst="allScientificNames", operator="startsWith"))
ns_search_comb(status = "G1")
ns_search_comb(location = list(nation = "US"))
ns_search_comb(location = list(nation = "US", subnation = "VA"))
ns_search_comb(record_type = "species")
ns_search_comb(record_subtype = "macrogroup")
ns_search_comb(modified_since = "2020-04-30T00:00:00+0000")
ns_search_comb(page = 0, per_page = 2)

## End(Not run)
```

---

ns_search_eco   *Ecosystem search*

Description

Ecosystem search

Usage

```
ns_search_eco(
  text = NULL,
  text_adv = NULL,
  status = NULL,
  location = NULL,
  ecosystem_taxonomy = NULL,
  record_subtype = NULL,
  modified_since = NULL,
  page = NULL,
  per_page = NULL,
  ...
)
```

Arguments

text	(character) basic text search, equiavalent to `text_adv` with `matchAgainst="allNames"` and `operator="similarTo"`
text_adv	(list) advanced search, must specify the following three elements: `searchToken`, `matchAgainst`, and `operator`. see https://explorer.natureserve.org/api-docs/#_advanced_text_search_pa

status	(character) conservation status, one of G1, G2, G3, G4, G5, GH, GX, GNR, GNA, GU. case insensitive
location	(list) location, country and sub-country. specify either `nation` OR `nation` and `subnation`. each expects a two-letter ISO code
ecosystem_taxonomy	
	(character) the classification code of the higher level (ancestor) ecosystem. E.g.'s: "1" (Class code), "1.B" (Subclass code), "1.B.2" (Formation code), "1.B.2.Nd" (Division code), "M886" (Macrogroup key), "G206" (Group key), "A3328" (Alliance Key)
record_subtype	(character) limit results by record sub-type, one of: "class", "subclass", "formation", "division", "macrogroup", "group", "alliance", "association", "terrestrial_ecological_system"
modified_since	(character) search for records modified since a given time. value must be a date and time with a UTC offset in ISO 8601 format. optional
page	(integer) Zero-indexed page number; default: 0. optional
per_page	(integer) Records per page; default: 20. optional
...	Curl options passed on to [verb-GET](#)

References

https://explorer.natureserve.org/api-docs/

See Also

Other search: [ns_search_comb()](#), [ns_search_spp()](#)

Examples

```
## Not run:
ns_search_eco(text = "robin")
ns_search_eco(text_adv = list(searchToken = "bird",
  matchAgainst = "allNames", operator="similarTo"))
ns_search_eco(status = "G1")
ns_search_eco(location = list(nation = "US"))
ns_search_eco(location = list(nation = "US", subnation = "VA"))
ns_search_eco(ecosystem_taxonomy = "M067")
ns_search_eco(record_subtype = "macrogroup")
ns_search_eco(modified_since = "2020-04-30T00:00:00+0000")
ns_search_eco(page = 0, per_page = 2)

## End(Not run)
```

---

ns_search_spp   *Species search*

Description

Species search

Usage

```
ns_search_spp(
  text = NULL,
  text_adv = NULL,
  status = NULL,
  location = NULL,
  species_taxonomy = NULL,
  record_subtype = NULL,
  modified_since = NULL,
  page = NULL,
  per_page = NULL,
  ...
)
```

Arguments

text	(character) basic text search, equiavalent to text_adv with matchAgainst="allNames" and operator="similarTo"
text_adv	(list) advanced search, must specify the following three elements: searchToken, matchAgainst, and operator. see https://explorer.natureserve.org/api-docs/#_advanced_text_search_pai
status	(character) conservation status, one of G1, G2, G3, G4, G5, GH, GX, GNR, GNA, GU. case insensitive
location	(list) location, country and sub-country. specify either nation OR nation and subnation. each expects a two-letter ISO code
species_taxonomy	
	(list) species taxonomy. either a list with level and scientificTaxonomy (a scientific name), or with just informalTaxonomy (a vernacular name). possible level values: "kingdom", "phylum", "class", "order", "family", "genus"
record_subtype	(character) limit results by record sub-type, one of: "class", "subclass", "formation", "division", "macrogroup", "group", "alliance", "association", "terrestrial_ecological_system"
modified_since	(character) search for records modified since a given time. value must be a date and time with a UTC offset in ISO 8601 format. optional
page	(integer) Zero-indexed page number; default: 0. optional
per_page	(integer) Records per page; default: 20. optional
...	Curl options passed on to [verb-GET](#)

References

https://explorer.natureserve.org/api-docs/

See Also

Other search: ns_search_comb(), ns_search_eco()

Examples

```
## Not run:
ns_search_spp(text = "robin")
ns_search_spp(text_adv = list(searchToken = "bird",
  matchAgainst = "allNames", operator="similarTo"))
ns_search_spp(status = "G1")
ns_search_spp(location = list(nation = "US"))
ns_search_spp(location = list(nation = "US", subnation = "VA"))
ns_search_spp(species_taxonomy = list(scientificTaxonomy = "Animalia", level = "kingdom"))
ns_search_spp(species_taxonomy = list(informalTaxonomy = "birds"))
ns_search_spp(record_subtype = "macrogroup")
ns_search_spp(modified_since = "2020-04-30T00:00:00+0000")
ns_search_spp(page = 0, per_page = 2)

## End(Not run)
```

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