

Package: alboFr (via r-universe)

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Title Get French Data on Tiger Mosquito Colonisation

Version 0.0.0.9000

Description Get French Data on Tiger Mosquito (Aedes Albopictus)
colonisation in France from the online map at
<https://signalement-moustique.anses.fr/signalement_albopictus/colonisees>.

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```
fetch_tiger_mosquito_page
```

Fetch raw HTML page from the ANSES tiger mosquito colonisation map

Description

Downloads the HTML source code from the official ANSES tiger mosquito map with configurable connection timeout, automatic retries with exponential backoff and jitter, and a descriptive User-Agent header.

Usage

```
fetch_tiger_mosquito_page(
  url = source_url_tiger_mosquito,
  timeout = 60,
  max_retries = 3,
  retry_delay = 5,
  user_agent = NULL,
  sleep_func = Sys.sleep
)
```

Arguments

<code>url</code>	The URL of the webpage to fetch. Defaults to the official ANSES tiger mosquito colonisation page.
<code>timeout</code>	Connection timeout in seconds. Default is 60.
<code>max_retries</code>	Maximum number of fetch attempts. Default is 3.
<code>retry_delay</code>	Base delay in seconds between retries (uses exponential backoff with jitter). Default is 5.
<code>user_agent</code>	Custom User-Agent header string. Defaults to <code>alboFr/<version> (R <version>; <platform>)</code> .
<code>sleep_func</code>	Internal function used for delays during backoff. Defaults to <code>Sys.sleep</code> .

Value

A single character string containing the raw HTML content encoded in UTF-8.

Examples

```
## Not run:
# Fetch page with custom timeout and retries
page_html <- fetch_tiger_mosquito_page(timeout = 30, max_retries = 2)

# Reuse fetched page across data and metadata extraction
data <- get_tiger_mosquito_colonisation_in_france(page = page_html, output = "geojson")
meta <- get_tiger_mosquito_colonisation_metadata(page = page_html)

## End(Not run)
```

```
get_tiger_mosquito_colonisation_in_france
```

Get latest tiger mosquito colonisation data in France from the online map

Description

Get latest tiger mosquito colonisation data in France from the online map at https://signalement-moustique.anses.fr/signalement_albopictus/colonisees.

Usage

```
get_tiger_mosquito_colonisation_in_france(
  output = c("sf", "geojson"),
  page = NULL,
  timeout = 60,
  max_retries = 3,
  retry_delay = 5,
  user_agent = NULL
)
```

Arguments

output	The output format. Can be either "sf" or "geojson".
page	Optional pre-fetched HTML page source code (as a character vector of lines or a single string). If NULL (the default), the page will be downloaded automatically.
timeout	Connection timeout in seconds when downloading the page. Default is 60.
max_retries	Maximum number of download attempts. Default is 3.
retry_delay	Base delay in seconds between retries (exponential backoff with jitter). Default is 5.
user_agent	Custom User-Agent header string. Defaults to alboFr/<version> (R <version>; <platform>).

Value

If output = "sf", an sf object with the tiger mosquito colonisation data in France. All polygons that exist on the map are covering the territories where the tiger mosquito (*Aedes Albopictus*) has already been detected in France. If output = "geojson", a GeoJSON in a character vector with the tiger mosquito colonisation data in France. Using the 'geojson' option allows to use the package without the sf package. You can therefore just save the resulting string to a text file. See examples.

Examples

```
## Not run:
# get the latest data in `sf`
x <- get_tiger_mosquito_colonisation_in_france(output = "sf")
```

```

# save the data to GeoPackage file with `sf`
if (interactive()) {
  library(sf)
  st_write(x, "tiger_mosquito_colonisation_in_france.gpkg")
}

# fetch once and reuse page for both data and metadata
page_html <- fetch_tiger_mosquito_page()
x_sf <- get_tiger_mosquito_colonisation_in_france(output = "sf", page = page_html)
x_meta <- get_tiger_mosquito_colonisation_metadata(page = page_html)

# get the latest data in `geojson`
x <- get_tiger_mosquito_colonisation_in_france(output = "geojson")

# save the data to text file
if (interactive()) {
  writeLines(x, "tiger_mosquito_colonisation_in_france.geojson")
}

## End(Not run)

```

```
get_tiger_mosquito_colonisation_metadata
```

Get source metadata for tiger mosquito colonisation data

Description

Fetch metadata from the ANSES online map page, including the official update date displayed on the page when it can be parsed.

Usage

```

get_tiger_mosquito_colonisation_metadata(
  page = NULL,
  timeout = 60,
  max_retries = 3,
  retry_delay = 5,
  user_agent = NULL
)

```

Arguments

page	Optional pre-fetched HTML page source code (as a character vector of lines or a single string). If NULL (the default), the page will be downloaded automatically.
timeout	Connection timeout in seconds when downloading the page. Default is 60.
max_retries	Maximum number of download attempts. Default is 3.

retry_delay	Base delay in seconds between retries (exponential backoff with jitter). Default is 5.
user_agent	Custom User-Agent header string. Defaults to alboFr/<version> (R <version>; <platform>).

Value

A named list with source_url, source_official_update_date, and fetched_at.

Examples

```
## Not run:
# Fetch metadata directly
meta <- get_tiger_mosquito_colonisation_metadata()

# Reuse a pre-fetched page
page_html <- fetch_tiger_mosquito_page()
meta <- get_tiger_mosquito_colonisation_metadata(page = page_html)

## End(Not run)
```

get_tiger_mosquito_dataset_hash

Compute a canonical dataset hash for tiger mosquito GeoJSON data

Description

Compute a SHA-256 hash for the set of GeoJSON features. The hash is stable to feature order, whitespace, and JSON formatting changes.

Usage

```
get_tiger_mosquito_dataset_hash(x)
```

Arguments

x A GeoJSON string or path to a GeoJSON file.

Details

Individual feature SHA-256 hashes are computed (using 15-digit coordinate precision and radix-sorted properties) and then sorted in byte-wise order using `sort(..., method = "radix")`. A SHA-256 digest is then computed over the resulting canonical FeatureCollection structure.

Value

A SHA-256 hash as a character vector of length 1.

`get_tiger_mosquito_feature_hashes`*Compute canonical feature hashes for tiger mosquito GeoJSON data*

Description

Compute one SHA-256 hash per GeoJSON feature after normalising JSON object ordering and excluding archive-added fields.

Usage

```
get_tiger_mosquito_feature_hashes(x)
```

Arguments

x	A GeoJSON string or path to a GeoJSON file.
---	---

Details

Canonical feature hashing follows these normalization rules:

- **Radix key ordering:** Object keys are sorted using `order(..., method = "radix")` to ensure byte-wise (C-locale) deterministic ordering regardless of session `LC_COLLATE` settings.
- **15-digit coordinate precision:** Geometry coordinates are serialized with `digits = 15`, preserving IEEE-754 double precision for stable coordinate representation across platforms while absorbing minor floating-point printing artifacts across snapshots.
- **Excluded metadata:** Archive-added and metadata attributes (`feature_hash`, `source_url`, `source_official_update_date`, `fetched_at`, `data_canonical_sha256`, and `previous_data_canonical_sha256`) are removed prior to hashing.

Value

A character vector of SHA-256 hashes, one per feature.

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