

# Package ‘avesperu’

March 27, 2026

**Title** Access to the List of Bird Species of Peru

**Version** 0.1.1

**Description** Provides access to the species checklist published in 'List of the Birds of Peru' by Plenge, M. A. and Angulo, F. (version 23-03-2026) <<https://sites.google.com/site/boletinunop/checklist>>. The package exposes the current Peru bird checklist as an R dataset and includes tools for species lookup, taxonomic reconciliation, and fuzzy matching of scientific names. These features help streamline taxonomic validation for researchers and conservationists.

**License** MIT + file LICENSE

**Suggests** DT, ggplot2, knitr, readxl, rmarkdown, scales, shiny, testthat (>= 3.0.0), withr, writexl, xml2

**VignetteBuilder** knitr

**Config/testthat/edition** 3

**Encoding** UTF-8

**RoxygenNote** 7.3.3

**URL** <https://github.com/PaulESantos/avesperu>,  
<https://paulasantos.github.io/avesperu/>

**BugReports** <https://github.com/PaulESantos/avesperu/issues>

**Depends** R (>= 3.5)

**LazyData** true

**Maintainer** Paul E. Santos Andrade <paulefrens@gmail.com>

**Imports** cli, parallel

**NeedsCompilation** no

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**Repository** CRAN

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aves\_peru\_2025\_v4      *aves\_peru\_2025\_v4*

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### Description

The `aves_peru_2025_v4` dataset provides an updated tibble of bird species recorded in Peru, based on the most recent taxonomic revisions by the South American Checklist Committee (SACC).

### Usage

`aves_peru_2025_v4`

### Format

A tibble with 1,917 rows and 6 columns:

**order\_name** Taxonomic order to which the bird species belongs.

**family\_name** Taxonomic family to which the bird species belongs.

**scientific\_name** Scientific name of the bird species.

**english\_name** English common name of the bird species.

**spanish\_name** Spanish common name of the bird species.

**status** Category indicating the species' status, based on the following codes:

- X: Resident species.
- E: Endemic species. A species is considered endemic to Peru until a record outside its borders is published.
- NB: Non-breeding (migratory) species. Species that occur regularly in Peru but only during their non-breeding period.
- V: Vagrant species. Species that occasionally occur in Peru but are not part of the usual avifauna.
- IN: Introduced species. Species introduced to Peru by humans (or have colonized from introduced populations elsewhere) and have established self-sustaining breeding populations.
- H: Hypothetical species. Records based only on observations, specimens of dubious origin, or unpublished photographs or recordings kept in private hands.
- EX: Extinct or extirpated species. Species that have gone extinct or have been extirpated from Peru.

## Details

This object is kept as a historical dataset. For the current checklist, use `aves_peru_2025_v5`.

This version reflects dramatic taxonomic changes and category updates based on published articles, photographs, and sound recordings archived in accredited institutions. It also includes a classification criterion following the SACC guidelines. Species without a specific code are considered resident species, equivalent to the "X" category of the SACC.

- **Total species:** 1,917
- **Distribution by status:**
  - X: 1,547 species
  - E: 120 species
  - NB: 139 species
  - V: 85 species
  - IN: 3 species
  - EX: 0 species
  - H: 23 species

These updates reflect the SACC's continuous evaluation process, which now recognizes several former subspecies as full species.

## Author(s)

Data compilation: Manuel A. Plenge Package implementation: Paul Efren Santos Andrade

## References

Plenge, M. A. Version (29-09-2025) List of the birds of Peru / Lista de las aves del Perú. Unión de Ornitólogos del Perú: <https://sites.google.com/site/boletinunop/checklist>

## See Also

For more information about the data, visit: <https://sites.google.com/site/boletinunop/checklist>

## Examples

```
# Load the dataset
data("aves_peru_2025_v4")
```

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aves\_peru\_2025\_v5      *aves\_peru\_2025\_v5*

---

### Description

The `aves_peru_2025_v5` dataset provides an updated tibble of bird species recorded in Peru, based on the taxonomic revisions by the South American Checklist Committee (SACC) as of December 22, 2025.

### Usage

```
aves_peru_2025_v5
```

### Format

A tibble with 1,919 rows and 9 columns:

**order\_name** Character. Taxonomic order to which the bird species belongs.

**family\_name** Character. Taxonomic family to which the bird species belongs.

**genus** Character. Genus name of the bird species.

**species\_epithet** Character. Specific epithet (species name without genus).

**scientific\_name** Character. Complete scientific name of the bird species (binomial nomenclature: genus + species epithet).

**english\_name** Character. Common name in English.

**spanish\_name** Character. Common name in Spanish (Peruvian usage).

**status** Character. Conservation and occurrence status category in Spanish. See Details section for complete descriptions.

**status\_code** Character. Original SACC status code. Values: X, E, NB, V, IN, U, EX. See Details section for code definitions.

### Details

This object is kept as a historical dataset. For the current checklist, use `aves_peru_2026_v1`.

All records are based on published evidence (specimens, photographs, videos, or recordings) deposited in accredited institutional collections. The dataset follows strict inclusion criteria established by the SACC and the Unión de Ornitólogos del Perú (UNOP).

#### Dataset Summary:

- **Total species:** 1,919
- **Version date:** December 29, 2025
- **SACC baseline date:** December 22, 2025

#### Distribution by Status:

Status	Code	Count	Description
Residente	X	1,549	Resident breeding species
Endémico	E	118	Endemic to Peru
Migratorio	NB	140	Non-breeding migrants
Divagante	V	86	Vagrant species
Introducido	IN	3	Introduced species
No confirmado	U	23	Unconfirmed records
Extirpado	EX	0	Extirpated species

### Status Categories (Detailed):

#### *Residente (X - Resident):*

Species that breed in Peru and maintain permanent or seasonal populations. This is the default category for species without a specific status code.

#### *Endémico (E - Endemic):*

Species whose entire known range is within Peru. A species is considered endemic until a published record documents its occurrence outside Peruvian borders.

#### *Migratorio (NB - Non-breeding):*

Species that occur regularly in Peru but only during their non-breeding period. These are typically austral or boreal migrants that breed elsewhere.

#### *Divagante (V - Vagrant):*

Species that occur occasionally in Peru and are not part of the regular avifauna. These represent extralimital records or irregular visitors.

#### *Introducido (IN - Introduced):*

Species introduced to Peru by humans (directly or colonized from introduced populations elsewhere) that have established self-sustaining breeding populations.

#### *No confirmado (U - Unconfirmed):*

Records that lack definitive published evidence. This includes:

- Sight records without corroborating physical evidence
- Specimens of dubious or uncertain origin
- Unpublished photographs or recordings in private collections

#### *Extirpado (EX - Extirpated/Extinct):*

Species that have gone extinct globally or have been extirpated from Peru.

### Taxonomic Authority:

The taxonomic sequence and species limits follow the South American Checklist Committee (SACC) of the American Ornithological Society, reflecting the committee's decisions through December 22, 2025.

To compare this local dataset version against the latest UNOP checklist available online, run [unop\\_check\\_update\(\)](#).

### Note

This dataset is updated periodically as new species are documented and taxonomic revisions are published. Check the UNOP website for the most current version.

**Author(s)**

Data compilation: Manuel A. Plenge & Fernando Angulo Package implementation: Paul Efrén Santos Andrade

**Source**

Data compiled by Manuel A. Plenge and Fernando Angulo (UNOP). For corrections or updates, contact: chamaepetes@gmail.com

**References**

Plenge, M. A. & F. Angulo. Version 29-12-2025. Lista de las aves del Perú / List of the birds of Peru. Unión de Ornitólogos del Perú: <https://sites.google.com/site/boletinunop/checklist>

**See Also**

- UNOP Checklist: <https://sites.google.com/site/boletinunop/checklist>
- SACC: <http://www.museum.lsu.edu/~Remsen/SACCBaseline.htm>
- [search\\_avesperu](#) for species name validation

**Examples**

```
# Load the dataset
data("aves_peru_2025_v5")

# View structure
str(aves_peru_2025_v5)

# Summary by status
table(aves_peru_2025_v5$status)
```

---

aves\_peru\_2026\_v1      *aves\_peru\_2026\_v1*

---

**Description**

The `aves_peru_2026_v1` dataset provides the most current and comprehensive tibble of bird species recorded in Peru, based on the taxonomic revisions by the South American Checklist Committee (SACC) as of February 27, 2026.

**Usage**

```
aves_peru_2026_v1
```

## Format

A tibble with 1,925 rows and 9 columns:

- order\_name** Character. Taxonomic order to which the bird species belongs.
- family\_name** Character. Taxonomic family to which the bird species belongs.
- genus** Character. Genus name of the bird species.
- species\_epithet** Character. Specific epithet (species name without genus).
- scientific\_name** Character. Complete scientific name of the bird species (binomial nomenclature: genus + species epithet).
- english\_name** Character. Common name in English.
- spanish\_name** Character. Common name in Spanish (Peruvian usage).
- status** Character. Conservation and occurrence status category in Spanish. See Details section for complete descriptions.
- status\_code** Character. Original SACC status code. Values: X, E, NB, V, IN, U, EX. See Details section for code definitions.

## Details

All records are based on published evidence (specimens, photographs, videos, or recordings) deposited in accredited institutional collections. The dataset follows strict inclusion criteria established by the SACC and the Unión de Ornitólogos del Perú (UNOP).

### Dataset Summary:

- **Total species:** 1,925
- **Version date:** March 23, 2026
- **SACC baseline date:** February 27, 2026

### Distribution by Status:

Status	Code	Count	Description
Residente	X	1,552	Resident breeding species
Endémico	E	119	Endemic to Peru
Migratorio	NB	140	Non-breeding migrants
Divagante	V	90	Vagrant species
Introducido	IN	3	Introduced species
No confirmado	U	21	Unconfirmed records
Extirpado	EX	0	Extirpated species

### Status Categories (Detailed):

#### *Residente (X - Resident):*

Species that breed in Peru and maintain permanent or seasonal populations. This is the default category for species without a specific status code.

#### *Endémico (E - Endemic):*

Species whose entire known range is within Peru. A species is considered endemic until a published record documents its occurrence outside Peruvian borders.

***Migratorio (NB - Non-breeding):***

Species that occur regularly in Peru but only during their non-breeding period. These are typically austral or boreal migrants that breed elsewhere.

***Divagante (V - Vagrant):***

Species that occur occasionally in Peru and are not part of the regular avifauna. These represent extralimital records or irregular visitors.

***Introducido (IN - Introduced):***

Species introduced to Peru by humans (directly or colonized from introduced populations elsewhere) that have established self-sustaining breeding populations.

***No confirmado (U - Unconfirmed):***

Records that lack definitive published evidence. This includes:

- Sight records without corroborating physical evidence
- Specimens of dubious or uncertain origin
- Unpublished photographs or recordings in private collections

***Extirpado (EX - Extirpated/Extinct):***

Species that have gone extinct globally or have been extirpated from Peru.

**Taxonomic Authority:**

The taxonomic sequence and species limits follow the South American Checklist Committee (SACC) of the American Ornithological Society, reflecting the committee's decisions through February 27, 2026.

To compare this local dataset version against the latest UNOP checklist available online, run `unop_check_update()`.

**Note**

This dataset is updated periodically as new species are documented and taxonomic revisions are published. Check the UNOP website for the most current version.

**Author(s)**

Data compilation: Manuel A. Plenge & Fernando Angulo Package implementation: Paul Efrén Santos Andrade

**Source**

Data compiled by Manuel A. Plenge and Fernando Angulo (UNOP). For corrections or updates, contact: [chamaepetes@gmail.com](mailto:chamaepetes@gmail.com)

**References**

Plenge, M. A. & F. Angulo. Version 23-03-2026. Lista de las aves del Perú / List of the birds of Peru. Unión de Ornitólogos del Perú: <https://sites.google.com/site/boletinunop/checklist>

**See Also**

- UNOP Checklist: <https://sites.google.com/site/boletinunop/checklist>
- SACC: <http://www.museum.lsu.edu/~Remsen/SACCBaseline.htm>
- [search\\_avesperu](#) for species name validation

## Examples

```
# Load the dataset
data("aves_peru_2026_v1")

# View structure
str(aves_peru_2026_v1)

# Summary by status
table(aves_peru_2026_v1$status)
```

---

run\_avesperu\_app      *Run a TNRS-style Shiny app for avesperu*

---

## Description

Launches an interactive Shiny application for batch resolution of bird scientific names against the avesperu checklist. The interface is inspired by the BIEN TNRS workflow, but uses the local avesperu dataset and matching engine.

## Usage

```
run_avesperu_app(
  host = "127.0.0.1",
  port = NULL,
  launch.browser = interactive()
)
```

## Arguments

host                    Host interface passed to `shiny::runApp`. Default: "127.0.0.1".

port                    Port passed to `shiny::runApp`. Default: NULL (Shiny selects a free port).

launch.browser        Logical; passed to `shiny::runApp`. Default: `interactive()`.

## Details

The app supports:

- Batch input via pasted text or uploaded CSV/TXT/TSV files
- Name parsing and standardization
- Exact or fuzzy matching through [search\\_avesperu](#)
- Interactive review of matches and export of results and metadata

Synonym retrieval is not currently available because avesperu ships the accepted Peru checklist, not a synonymy backbone.

**Value**

The value returned by `shiny::runApp`.

**Examples**

```
## Not run:
run_avesperu_app()

## End(Not run)
```

---

search_avesperu	<i>Search for Bird Species Data in the Birds of Peru Dataset</i>
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---

**Description**

This function searches for bird species information in the dataset provided by the `avesperu` package, given a list of species names. It supports approximate (fuzzy) matching to handle typographical errors or minor variations in species names using optimized `agrep()` matching. The function is optimized for both small and large lists through intelligent pre-filtering and optional parallel processing, while maintaining exact `agrep()` precision.

**Usage**

```
search_avesperu(
  splist,
  max_distance = 0.1,
  return_details = FALSE,
  batch_size = 100,
  parallel = TRUE,
  n_cores = NULL
)
```

**Arguments**

<code>splist</code>	A character vector or factor containing the scientific names of bird species to search for. Names can include minor variations or typos.
<code>max_distance</code>	Numeric. The maximum allowable distance for fuzzy matching. Can be either: <ul style="list-style-type: none"> <li>• A proportion between 0 and 1 (e.g., 0.1 = 10%)</li> <li>• An integer representing the maximum number of character differences</li> </ul> Default: 0.1.
<code>return_details</code>	Logical. If <code>FALSE</code> (default), returns only a character vector of species status. If <code>TRUE</code> , returns a detailed data frame with complete reconciliation information including taxonomic data and matching distances.
<code>batch_size</code>	Integer. Number of species to process per batch when handling large lists. Useful for memory management and progress tracking. Default: 100 species per batch.

parallel	Logical. Should parallel processing be used for large lists? Automatically disabled for small lists. Requires the parallel package. Default: TRUE.
n_cores	Integer or NULL. Number of CPU cores to use for parallel processing. If NULL (default), uses detectCores() - 1 to leave one core free for system operations.

### Details

The function performs the following steps:

1. Validates input and converts factors to character vectors
2. Standardizes species names using `standardize_names()`
3. Identifies and reports duplicate entries in the input list
4. Uses intelligent pre-filtering to reduce search space:
  - Filters by string length (mathematically guaranteed to preserve matches)
  - Optionally filters by first character for very large candidate sets
5. Performs precise `agrep()` fuzzy matching on filtered candidates
6. Calculates exact edit distances using `adist()`
7. Selects the best match (minimum distance) for each query
8. For large lists (>`batch_size`), processes in batches with optional parallelization

### Value

The return value depends on the `return_details` parameter:

**If `return_details = FALSE` (default):**

A character vector with the same length as `splist`, containing the conservation/occurrence status for each species. NA values indicate no match was found.

**If `return_details = TRUE`:**

A data frame (tibble-compatible) with the following columns:

**name\_submitted** Character. The species name provided as input (standardized).

**accepted\_name** Character. The closest matching species name from the database, or NA if no match found within `max_distance`.

**order\_name** Character. The taxonomic order of the matched species.

**family\_name** Character. The taxonomic family of the matched species.

**english\_name** Character. Common name in English.

**spanish\_name** Character. Common name in Spanish.

**status** Character. Conservation or occurrence status (e.g., "Endemic", "Resident", "Migrant", "Vagrant").

**dist** Character. Edit distance between submitted and matched names. Lower values indicate better matches. NA if no match found.

### Warning

For very large lists (>10,000 species) with parallel processing enabled, ensure sufficient system memory is available. Each parallel worker maintains a copy of the reference database (~5-10 MB).

**See Also**

[agrep](#) for the underlying fuzzy matching algorithm

**Examples**

```
# Basic usage - returns status vector
splist <- c("Falco sparverius", "Tinamus osgodi", "Crypturellus soui")
status <- search_avesperu(splist)
print(status)

# Get detailed reconciliation information
details <- search_avesperu(splist, return_details = TRUE)
print(details)

# Exact matching only (no fuzzy matching)
exact_results <- search_avesperu(splist, max_distance = 0)

# Handle species with typos
typo_list <- c("Falco sparveruis", "Tinamus osgoodi", "Crypturellus sui")
corrected <- search_avesperu(typo_list, return_details = TRUE)

# View submitted vs accepted names
print(corrected[, c("name_submitted", "accepted_name", "dist")])
```

---

show_progress	<i>Determine whether to show progress bar Return logical TRUE/FALSE depending on options and interactive session</i>
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---

**Description**

Determine whether to show progress bar Return logical TRUE/FALSE depending on options and interactive session

**Usage**

```
show_progress()
```

---

unop_check_update	<i>Check whether the local dataset is up to date against UNOP</i>
-------------------	---

---

**Description**

This function compares the local dataset version date stored in `aves_peru_2026_v1` against the latest update date published on the UNOP checklist website. It is designed to be called explicitly by the user, or enabled through the `avesperu.check_updates` option.

**Usage**

```
unop_check_update(verbose = interactive())
```

**Arguments**

`verbose` Logical. If TRUE, prints a summary with cli alerts. If FALSE, returns the result silently. Default: `interactive()`.

**Value**

An invisible named list with the fields `success`, `is_up_to_date`, `has_update`, `current_version_date`, `online_version_date`, `checked_at`, `source_url`, and `message`.

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