Package 'rebird'

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Description A programmatic interface to the eBird database

Title Interface to eBird

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URL http://github.com/ropensci/rebird

Imports RJSONIO, httr, RCurl, plyr

Collate 'ebirdgeo.R' 'ebirdhotspot.R' 'ebirdloc.R' 'ebirdnotable.R' 'ebirdregion.R' 'ebirdtaxonomy.R' 'getlatlng.R' 'nearestobs.R' 'rebird-package.R'

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rebird-package *rEbird: an R package for access to the eBird database.*

Description

An R package to interface with the eBird webservices.

Details

Package:	reBird
Type:	Package
Version:	0.1
Date:	2012-10-13
License:	MIT
LazyLoad:	yes

This package provides an R interface to the recent eBird database.

Author(s)

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Examples

```
#see functions.
```

ebirdgeo *Sightings at location determined by latitude/longitude*

Description

Returns the most recent sighting date and specific location for the requested species of bird reported within the number of days specified and reported in the specified area.

Usage

```
ebirdgeo(species = NULL, lat = NULL, lng = NULL,
  dist = NULL, back = NULL, max = NULL, locale = NULL,
  provisional = FALSE, hotspot = FALSE, sleep = 0, ...)
```

Arguments

species	Scientific name of the species of interest (not case sensitive). Defaults to NULL, so sightings for all species are returned. See eBird taxonomy for more information: http://ebird.org/content/ebird/about/ebird-taxonomy
lat	Decimal latitude. value between -90.00 and 90.00, up to two decimal places of precision. Defaults to latitude basd on IP.
lng	Decimal longitude. value between -180.00 and 180.00, up to two decimal places of precision. Defaults to longitude basd on IP.
dist	Distance defining radius of interest from given lat/lng in kilometers (between 0 and 50, defaults to 25)
back	Number of days back to look for observations (between 1 and 30, defaults to 14).
max	Maximum number of result rows to return in this request (between 1 and 10000, defaults to all).
locale	Language/locale of response (when translations are available). See http://java.sun.com/javase/6/docs/api/j (defaults to en_US).
provisional	Should flagged records that have not been reviewed be included? (defaults to FALSE).
hotspot	Should results be limited to sightings at birding hotspots? (defaults to FALSE).
sleep	Time (in seconds) before function sends API call (defaults to zero. Set to higher number if you are using this function in a loop with many API calls).
...	additional parameters to be passed to curl.

Value

A data.frame containing the collected information:

"comName": species common name

"howMany": number of individuals observed, NA if only presence was noted

"lat": latitude of the location

"lng": longitude of the location

"locID": unique identifier for the location

"locName": location name

"locationPrivate": TRUE if location is not a birding hotspot

"obsDt": observation date formatted according to ISO 8601 (e.g. 'YYYY-MM-DD', or 'YYYY-MM-DD hh:mm'). Hours and minutes are excluded if the observer did not report an observation time.

"obsReviewed": TRUE if observation has been reviewed, FALSE otherwise

"obsValid": TRUE if observation has been deemed valid by either the automatic filters or a regional viewer, FALSE otherwise

"sciName" species' scientific name

Author(s)

Rafael Maia <rm72@zips.uakron.edu>

References

http://ebird.org/

Examples

```
## Not run:
   ebirdgeo('spinus tristis', 42, -76)
   ebirdgeo(42,-76, maxResults=10, includeProvisional=T, hotspot=T)
## End(Not run)
```

`ebirdhotspot` *Recent observations at hotspots*

Description

Returns the most recent sighting information reported in a given vector of hotspots.

Usage

```
ebirdhotspot(locID, species = NULL, back = NULL,
  max = NULL, locale = NULL, provisional = FALSE,
  sleep = 0, ...)
```

Arguments

`locID`	(required) Vector containing code(s) for up to 10 regions of interest; here, regions are the locIDs of hotspots. Values that are not valid or are not hotspots are ignored.
`species`	Scientific name of the species of interest (not case sensitive). Defaults to NULL, in which case sightings for all species are returned. See eBird taxonomy for more information: http://ebird.org/content/ebird/about/ebird-taxonomy
`back`	Number of days back to look for observations (between 1 and 30, defaults to 14).
`max`	Maximum number of result rows to return in this request (between 1 and 10000, defaults to all)
`locale`	Language/locale of response (when translations are available). See http://java.sun.com/javase/6/docs/api/j (defaults to en_US)
`provisional`	Should flagged records that have not been reviewed be included? (defaults to FALSE)
`sleep`	Time (in seconds) before function sends API call (defaults to zero. Set to higher number if you are using this function in a loop with many API calls).
`...`	additional parameters to be passed to curl

Value

A data.frame containing the collected information:

"comName": species common name

"howMany": number of individuals observed, NA if only presence was noted

"lat": latitude of the location

"lng": longitude of the location

"locID": unique identifier for the location

"locName": location name

"locationPrivate": TRUE if location is not a birding hotspot

"obsDt": observation date formatted according to ISO 8601 (e.g. 'YYYY-MM-DD', or 'YYYY-MM-DD hh:mm'). Hours and minutes are excluded if the observer did not report an observation time.

"obsReviewed": TRUE if observation has been reviewed, FALSE otherwise

"obsValid": TRUE if observation has been deemed valid by either the automatic filters or a regional viewer, FALSE otherwise

"sciName" species' scientific name

Author(s)

Rafael Maia <rm72@zips.uakron.edu>

References

http://ebird.org/

Examples

```
## Not run:
   ebirdhotspot(locID=c('L99381','L99382'),'larus delawarensis')
   ebirdhotspot('L99381', max=10, includeProvisional=T, hotspot=T)
## End(Not run)
```

`ebirdloc` *Recent observations at a locality Returns the most recent sighting information reported in a given vector of locations (including non-hotspots).*

Description

Recent observations at a locality Returns the most recent sighting information reported in a given vector of locations (including non-hotspots).

Usage

```
ebirdloc(locID, species = NULL, back = NULL, max = NULL,
  locale = NULL, provisional = FALSE, sleep = 0, ...)
```

Arguments

locID	(required) Vector containing code(s) for up to 10 regions of interest; here, values that are not hotspots are returned. Values that are not valid are ignored.
species	Scientific name of the species of interest (not case sensitive). Defaults to NULL, in which case sightings for all species are returned. See eBird taxonomy for more information: http://ebird.org/content/ebird/about/ebird-taxonomy
back	Number of days back to look for observations (between 1 and 30, defaults to 14).
max	Maximum number of result rows to return in this request (between 1 and 10000, defaults to all)
locale	Language/locale of response (when translations are available). See http://java.sun.com/javase/6/docs/api/j (defaults to en_US)
provisional	Should flagged records that have not been reviewed be included? (defaults to FALSE)
sleep	Time (in seconds) before function sends API call (defaults to zero. Set to higher number if you are using this function in a loop with many API calls).
...	additional parameters to be passed to curl

Value

A data.frame containing the collected information:

"comName": species common name

"howMany": number of individuals observed, NA if only presence was noted

"lat": latitude of the location

"lng": longitude of the location

"locID": unique identifier for the location

"locName": location name

"locationPrivate": TRUE if location is not a birding hotspot

"obsDt": observation date formatted according to ISO 8601 (e.g. 'YYYY-MM-DD', or 'YYYY-MM-DD hh:mm'). Hours and minutes are excluded if the observer did not report an observation time.

"obsReviewed": TRUE if observation has been reviewed, FALSE otherwise

"obsValid": TRUE if observation has been deemed valid by either the automatic filters or a regional viewer, FALSE otherwise

"sciName" species' scientific name

Author(s)

Rafael Maia <rm72@zips.uakron.edu>

References

http://ebird.org/

Examples

```
## Not run:
ebirdloc(c('L99381','L99382'))
ebirdloc('L99381', 'larus delawarensis', max=10, provisional=T, hotspot=T)

## End(Not run)
```

`ebirdnotable` *Notable sightings*

Description

Returns the most recent notable observations by either latitude/longitude, hotspot or location ID, or particular region.

Usage

```
ebirdnotable(lat = NULL, lng = NULL, dist = NULL,
  locID = NULL, region = NULL, regtype = NULL,
  back = NULL, max = NULL, locale = NULL,
  provisional = FALSE, hotspot = FALSE, simple = TRUE,
  sleep = 0, ...)
```

Arguments

`lat`	Decimal latitude. value between -90.00 and 90.00, up to two decimal places of precision.
`lng`	Decimal longitude. value between -180.00 and 180.00, up to two decimal places of precision.
`locID`	Vector containing code(s) for up to 10 locations of interest.
`region`	Region code corresponding to selected region type. For supported region and coding, see https://confluence.cornell.edu/display/CLOISAPI/eBird-1.1-RegionCodeReference
`regtype`	Region type you are interested in. can be "country" (e.g. "US"), "subnational1" (states/provinces, e.g. "US-NV") or "subnational2" (counties, not yet implemented, e.g. "US-NY-109"). Default behavior is to try and match according to the region specified.
`dist`	Distance defining radius of interest from given lat/lng in kilometers (between 0 and 50, defaults to 25)
`back`	Number of days back to look for observations (between 1 and 30, defaults to 14).

max	Maximum number of result rows to return in this request (between 1 and 10000, defaults to all).
locale	Language/locale of response (when translations are available). See http://java.sun.com/javase/6/docs/api/j (defaults to en_US).
provisional	Should flagged records that have not been reviewed be included? (defaults to FALSE)
hotspot	Should results be limited to sightings at birding hotspots? (defaults to FALSE).
simple	Logical. Whether to return a simple (TRUE, default) or detailed (FALSE) set of results fields.
sleep	Time (in seconds) before function sends API call (defaults to zero. Set to higher number if you are using this function in a loop with many API calls).
...	additional parameters to be passed to curl.

Value

A data.frame containing the collected information:

"comName": species common name

"howMany": number of individuals observed, NA if only presence was noted

"lat": latitude of the location

"lng": longitude of the location

"locID": unique identifier for the location

"locName": location name

"locationPrivate": TRUE if location is not a birding hotspot

"obsDt": observation date formatted according to ISO 8601 (e.g. 'YYYY-MM-DD', or 'YYYY-MM-DD hh:mm'). Hours and minutes are excluded if the observer did not report an observation time.

"obsReviewed": TRUE if observation has been reviewed, FALSE otherwise

"obsValid": TRUE if observation has been deemed valid by either the automatic filters or a regional viewer, FALSE otherwise

"sciName" species' scientific name

"subnational2Code": county code (returned if simple=FALSE)

"subnational2Name": county name (returned if simple=FALSE)

"subnational1Code": state/province ISO code (returned if simple=FALSE)

"subnational1Name": state/province name (returned if simple=FALSE)

"countryCode": country ISO code (returned if simple=FALSE)

"countryName": country name (returned if simple=FALSE)

"firstName": observer's first name (returned if simple=FALSE)

"lastName": observer's last name (returned if simple=FALSE)

"subID": submission ID (returned if simple=FALSE)

"obsID": observation ID (returned if simple=FALSE)

"checklistID": checklist ID (returned if simple=FALSE)

"presenceNoted": 'true' if user marked presence but did not count the number of birds. 'false' otherwise (returned if simple=FALSE)

Note

`ebirdnotable` requires that either latitude/longitude, location ID, or region be passed to the function. Multiple entries will result in the most specific being used. If none is supplied, defaults to lat/lng based on your IP.

Author(s)

Rafael Maia <rm72@zips.uakron.edu>

References

http://ebird.org/

Examples

```
## Not run:
ebirdnotable(lat=42,lng=-70)
ebirdnotable(locID = c('L99381','L99382'))
ebirdnotable(region='US', max=10)
ebirdnotable(region='US-OH', regtype='subnational1')

## End(Not run)
```

---

ebirdregion *Recent observations at a region Returns the most recent sighting information reported in a given region.*

Description

Recent observations at a region Returns the most recent sighting information reported in a given region.

Usage

```
ebirdregion(region, species = NULL,
  regtype = c("country", "subnational1", "subnational2"),
  back = NULL, max = NULL, locale = NULL,
  provisional = FALSE, hotspot = FALSE, sleep = 0, ...)
```

Arguments

region	(required) Region code corresponding to selected region type. For supported region and coding, see https://confluence.cornell.edu/display/CLOISAPI/eBird-1.1-RegionCodeReference
regtype	Region type you are interested in. can be "country" (e.g. "US"), "subnational1" (states/provinces, e.g. "US-NV") or "subnational" (counties, not yet implemented, e.g. "US-NY-109"). Default behavior is to try and match according to the region specified.
species	scientific name of the species of interest (not case sensitive). Defaults to NULL, in which case sightings for all species are returned. See eBird taxonomy for more information: http://ebird.org/content/ebird/about/ebird-taxonomy
back	Number of days back to look for observations (between 1 and 30, defaults to 14).
max	Maximum number of result rows to return in this request (between 1 and 10000, defaults to all)
locale	Language/locale of response (when translations are available). See http://java.sun.com/javase/6/docs/api/j (defaults to en_US)
provisional	Should flagged records that have not been reviewed be included? (defaults to FALSE)
hotspot	Should results be limited to sightings at birding hotspots? (defaults to FALSE).
sleep	Time (in seconds) before function sends API call (defaults to zero. Set to higher number if you are using this function in a loop with many API calls).
...	additional parameters to be passed to curl

Value

A data.frame containing the collected information:

"comName": species common name

"howMany": number of individuals observed, NA if only presence was noted

"lat": latitude of the location

"lng": longitude of the location

"locID": unique identifier for the location

"locName": location name

"locationPrivate": TRUE if location is not a birding hotspot

"obsDt": observation date formatted according to ISO 8601 (e.g. 'YYYY-MM-DD', or 'YYYY-MM-DD hh:mm'). Hours and minutes are excluded if the observer did not report an observation time.

"obsReviewed": TRUE if observation has been reviewed, FALSE otherwise

"obsValid": TRUE if observation has been deemed valid by either the automatic filters or a regional viewer, FALSE otherwise

"sciName" species' scientific name

Author(s)

Rafael Maia <rm72@zips.uakron.edu>

References

http://ebird.org/

Examples

```
## Not run:
ebirdregion('US','Setophaga caerulescens')
ebirdregion('US-OH', max=10, provisional=T, hotspot=T)
## End(Not run)
```

---

ebirdtaxonomy *eBird Taxonomy*

Description

Returns a data.frame of all species in the eBird taxonomy for the given combination of categories. The default category is "species". Any taxon with the category of 'species' may be used as a parameter in service calls that take a scientific name. Any taxon not in this category will be rejected by these services at this time.

Usage

```
ebirdtaxonomy(cat = NULL, locale = NULL, ...)
```

Arguments

cat	Species category. String or character vector with one of more of: "domestic", "form", "hybrid", "intergrade", "issf", "slash", "species" , "spuh". For more info about the meaning of species categories, see http://ebird.org/content/ebird/about/ebird-taxonomy
locale	Language/locale of response (when translations are available). See http://java.sun.com/javase/6/docs/api/j (defaults to en_US).
...	additional parameters to be passed to curl

Value

A data.frame containing the collected information:

"comName": species' common name

"sciName": species' scientific name

"taxonID": Taxonomic Concept identifier, note this is currently in test

Author(s)

Andy Teucher <andy.teucher@gmail.com>

References

http://ebird.org/

Examples

```
## Not run:
ebirdtaxonomy()
ebirdtaxonomy(cat=c("spuh", "slash"))
## End(Not run)
```

`getlatlng` *get latitude and longitude from ip address*

Description

Returns the most recent and nearest reported sighting information with observations of a species.

Usage

```
getlatlng()
```

Value

a vector of length 2 with lat, lng in that order

Author(s)

Andy Teucher <andy.teucher@gmail.com>

References

http://ipinfo.io

Examples

```
## Not run:
getlatlng()

## End(Not run)
```

`nearestobs` *Nearest species sightings*

Description

Returns the most recent and nearest reported sighting information with observations of a species.

Usage

```
nearestobs(species, lat = NULL, lng = NULL, back = NULL,
  max = NULL, locale = NULL, provisional = FALSE,
  hotspot = FALSE, sleep = 0, ...)
```

Arguments

`species`	(required) Scientific name of the species of interest (not case sensitive). See eBird taxonomy for more information: http://ebird.org/content/ebird/about/ebird-taxonomy
`lat`	Decimal latitude. value between -90.00 and 90.00, up to two decimal places of precision. Defaults to latitude basd on IP.
`lng`	Decimal longitude. value between -180.00 and 180.00, up to two decimal places of precision. Defaults to longitude basd on IP.
`back`	Number of days back to look for observations (between 1 and 30, defaults to 14).
`max`	Maximum number of result rows to return in this request (between 1 and 10000, defaults to all).
`locale`	Language/locale of response (when translations are available). See http://java.sun.com/javase/6/docs/api/j (defaults to en_US).
`provisional`	Should flagged records that have not been reviewed be included? (defaults to FALSE).
`hotspot`	Should results be limited to sightings at birding hotspots? (defaults to FALSE).
`sleep`	Time (in seconds) before function sends API call (defaults to zero. Set to higher number if you are using this function in a loop with many API calls).
`...`	additional parameters to be passed to curl.

Value

A data.frame containing the collected information:

"comName": species common name

"howMany": number of individuals observed, NA if only presence was noted

"lat": latitude of the location.

"lng": longitude of the location.

"locID": unique identifier for the location

"locName": location name

"locationPrivate": TRUE if location is not a birding hotspot

"obsDt": observation date formatted according to ISO 8601 (e.g. 'YYYY-MM-DD', or 'YYYY-MM-DD hh:mm'). Hours and minutes are excluded if the observer did not report an observation time.

"obsReviewed": TRUE if observation has been reviewed, FALSE otherwise

"obsValid": TRUE if observation has been deemed valid by either the automatic filters or a regional viewer, FALSE otherwise

"sciName" species' scientific name

Author(s)

Rafael Maia <rm72@zips.uakron.edu>

References

http://ebird.org/

Examples

```
## Not run:
nearestobs('spizella arborea', 42, -76)
nearestobs('spizella arborea', 42,-76, max=10, provisional=T, hotspot=T)
## End(Not run)
```

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